International Student Congress
ISC 2016

May 26th – May 28th, 2016
Graz, Austria
Welcome to Graz! Enjoy the ISC 2016
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Thank you

The members of the ISC organizing committee would like to take the opportunity to say ‘thank you’ to all the professors and experts who supported us while planning and in the realization of this congress. We would like to thank the University Directorate of the Medical University of Graz for their support and encouragement.

Special acknowledgements go to our former rector of the Medical University of Graz, Univ.-Prof. Dr. Josef Smolle, who has been our biggest supporter from the very start of this event.

Furthermore, we would like to thank Univ.-Prof. Dr. Freyja Smolle-Jüttner, Univ.-Doz. Dr. Cord Langner and Univ.-Prof. Dr.phil. Peter Holzer for their active support, guidance, and resources. We would also like to thank Mag. Gerald Auer, Mag. Thomas Moretti, and Mag. Maria Friedl for their tireless assistance, support and numberless amount of e-mails. Not to forget, we want to express our gratitude to Kathrin Eller, Robert Fuchs, Nassim Ghaffari Tabrizi-Wizsy, Ursula Hiden, Evelyn Jantscher-Krenn, Grazyna Kwapiszewska-Mars, Wolfgang Sattler, Eva Sturm and Peter Valentin Tomazic for extremely appreciated work in the reviewing process as well as their scientific guidance along the way.

We would also like to thank all of our sponsors and donors. This event would not have been possible without your generosity.

A big thank you goes to our 86 ambassadors all over the world, who helped spread the word and advertised this year’s International Student Congress in their home countries. We love you guys!

Thank you to all of our Helping Hands for your tireless work, strong arms and fast feet.

And last but definitely not least, we would like to thank the two founders of this wonderful event, Ida Aringer and Thomas Georgi, for putting so much blood, sweat and tears into this congress and without whom the ISC 2016 could not have been organized at all. Thank you for your guidance, your honest counsel and your energetic spirit. Stay awesome!

Alejandro, Barbara, Bernhard, Carolin, Christian, Daniel, Friederike, Julia P.,
Julia Sch., Kwasi, Laura, Laura Sophie, Nora, Olivia and Richard
Why a digital abstract book?

In this year’s edition, we decided not to print an abstract book as we have done in the previous years. It is not because we are lazy or ran out of time, but because we believe it is better for our environment.

As young researchers we do not only carry responsibility for humans, but also for our planet. If we had printed this abstract book with it’s estimated 170 pages for every student attending the congress, we’d had to print 42,500 pages.

By not printing an abstract book, we do not only save a lot of paper – and therefore trees and the environment – but also space in your shelves, and luggage traveling back home.

So please don’t be upset about not having a actual book in your hands this year. Be happy about saving at least 5.3 trees’ lives and some CO₂ since your suitcase won’t be as heavy.

Welcome to the paper-less future!

Responsible for this Abstractbook:
Barbara Cafuta &
Friederike Potz
ISC 2016
isc@medunigraz.at
Congress Guide
How do student congresses work?

Is this your first time at a (student) congress or conference? Or are you a pro already?

Never mind, here are some ground rules how everything works.

First of all: You are a student – and so is everybody around you. Don’t be afraid to get to know the others around you. Talk to them, get to know them, build a network. There are so many inspiring people from different cultures and countries around you. Grab this opportunity! And most of us don’t speak English as our mother tongue either, so don’t be shy, just give it a try. A nice conversation is the first step to get to know each other, to exchange knowledge and to discover new opportunities.

Here are some general guidelines to help you:

- Be on time for sessions as a visitor and arrive at least 10 minutes before your session starts, if you are presenting. Let your session chair know, you have arrived.
- Each session is guided by a student chair that introduces the presenters and ask questions to start a discussion. There is also an expert chair in each session to discuss your work with you and the audience.
- Everybody is nervous when presenting, please show some respect for those presenting and do not talk during the presentation. If you have questions, there will be time after the presentation to ask.
- At the registration you will receive a badge with your name on it. Please wear it visibly at all times.
- You will recognize the organizing team by their green ties / scarfs. Please contact them when ever you need help or information.

Guidelines for Oral Presentations:

- Your presentation time is 8 minutes + 2 minutes for questions from the judges and the participants in the audience.
- The session chairs will stop you after 8 minutes, whether you are finished or not.
- Your presentation should be done in MS PowerPoint (.ppt). We cannot guarantee that any other format will work on our computers.

Guidelines for Poster-presentations

- Your presentation time is 8 minutes + 2 minutes for questions from the judges and the participants in the audience.
- The session chairs will stop you after 8 minutes, whether you are finished or not.
- Please be aware that there are multiple sessions within one big room, so be prepared to speak loud and clearly as the noise level might be high.

Guidelines for Scientific Newsflash Presentations:

- Your presentation time is 3 minutes + 2 minutes for questions from the judges and the participants in the audience.
- The session chairs will stop you after 3 minutes, whether you are finished or not.
- Prepare a presentation with MS PowerPoint (we cannot guarantee that any other format will work on our computers).
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<th>Time</th>
<th>Location</th>
<th>Event</th>
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<td>09:00 – 10:00 am</td>
<td>KW second floor</td>
<td>Registration</td>
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<tr>
<td>10:00 – 10:30 am</td>
<td>KW SZ.21</td>
<td>Pre-Course Opening Ceremony</td>
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<td>10:30 – 11:30 am</td>
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<td>Pre-Course Part I</td>
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<td>11:30 am - 12:00 pm</td>
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<td>Coffee &amp; Networking</td>
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<td>12:00 – 01:00 pm</td>
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<td>Pre-Course Part II</td>
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<td>01:00 – 02:00 pm</td>
<td>KW SZ.21</td>
<td>Lunch Buffett</td>
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<td>02:00 – 03:00 pm</td>
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<td>Pre-Course Part III</td>
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<td>03:00 – 03:30 pm</td>
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<td>Coffee &amp; Networking</td>
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<tr>
<td>03:30 – 04:30 pm</td>
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<td>Pre-Course Part IV</td>
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<tr>
<td>05:00 – 07:45 pm</td>
<td>Stadtpark</td>
<td>Get together – Walk through the Stadtpark</td>
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<td>08:00 – 10:30 pm</td>
<td>Bar Feierlaune</td>
<td>Pub Quiz</td>
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<td>08:00 - 09:00 am</td>
<td>HSZ</td>
<td>Registration for Newcomers</td>
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<td>09:00 - 09:30 am</td>
<td>HS D</td>
<td>Opening Ceremony</td>
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<td>09:30 – 10:30 am</td>
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<td>Session – Oral Presentations I</td>
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<td>Endocrinology I</td>
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<td>Public Health I</td>
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<td>Psychiatry</td>
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<td>Coffee &amp; Networking</td>
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<td>10:45 – 11:45 am</td>
<td>HS D</td>
<td>Keynote I</td>
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<td>Coffee &amp; Networking</td>
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<td>Session – Oral Presentations II</td>
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<td>Molecular Biology</td>
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<td>Allergy &amp; Immunology</td>
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<td>01:00 – 02:00 pm</td>
<td>HSZ HS D</td>
<td>Lunch</td>
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<td>Lunch Lecture: Global Health and Development</td>
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<td>Workshop</td>
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<td>Coffee &amp; Networking</td>
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<td>04:00 – 05:00 pm</td>
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<td>Session – Poster Presentations</td>
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<td>Public Health I</td>
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<td>Varia</td>
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<td>08:00 -10:00 pm</td>
<td>Town Hall</td>
<td>Official Welcome in the Mayor's Hall</td>
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<td>10:00– open end</td>
<td>Stadtpark</td>
<td>Chill-Out with AMSA</td>
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<td>Session – Oral Presentations III</td>
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<td>HSZ SR A2</td>
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<td>HSZ SR B1</td>
<td>Infection, Inflammation &amp; Intensive Therapy</td>
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<td>Anaesthesiology &amp; Surgery</td>
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<td>Lunch</td>
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<td>Coffee &amp; Networking</td>
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<td>03:15 – 04:00 pm</td>
<td>HS D</td>
<td>Award and Closing Ceremony</td>
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<td>07:00 – 08:00 pm</td>
<td>Main square</td>
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<td>08:00 – open end</td>
<td>TamTam</td>
<td>ISC Farewell Party</td>
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Finding your way around at the University Hospital LKH Graz

A: HSZ – The lecture hall. You will find all rooms here with the numbers “HS....”

B: Seminar-Building Kutscherwirt. You will find all rooms here with the numbers “KW...”
Pre-courses

Please note that the locations might change on short notice; please look out for information at the registration and screens regarding changes.

Basics in Cell Culture
Location: Meeting Point: KW, Gynaecology Lab

Students will get both theoretical back-ground as well as hands-on experience with basic cell culture technics; e.g. 1) isolation of different cell types (endothelial cells, macrophages) from tissue, 2) working in sterile conditions, culturing and expanding cells, use of appropriate media etc. 3) selection and characterization of cells using cell surface markers with e.g. immunohistological methods and microscopy.

Sono4You – Abdominal Sonography
Location: SR KW.14 (UR KW.11,12,13)

In this course the participants are going to learn and reinforce the practical skill of abdominal sonography. It is important for us to teach structured procedures with a highly practical component in small groups of max. 5 students. Per group, there will be two tutors of the peer-teaching-group „Sono4you“ helping the attendees to reach the learning target.

Tropical Medicine & Parasitology
Location: Meeting Point: KW, Institute of Hygiene

This pre-course will be about gaining theoretical and practical skills in Tropical Medicine and Parasitology. The main focus will be on Malaria diagnostics, symptoms and treatment, but we will also discuss worms and protozoa.

Career Planning
Location: SR KW.22

Which career choices do you face when you finish your studies? Which area of research is advisable for your career? Is going abroad a must-do? How do you apply for a position, what is important in your CV and what is not? There are a lot of questions, when it comes to career opportunities, especially for young, motivated scientists. Together, as an international group, we will discuss and give each other advices. We will also talk about the hearing procedure for a PHD position. At the end of the day, we'll invite people who have chosen science as a career path and will tell you about their experiences.
Gravitational Physiology, Aging and Medicine
Location: SR KW.21 (UR KW.21)

In this pre-course aspects related to spaceflight physiology, aging and medicine will be presented. The pre-course will start with a group activity where participants will be given a problem oriented learning/ task (deals with spaceflight, aging and medicine). Each group will tackle a different theme related to the problem oriented learning task. This will be followed by a lecture in which Prof Goswami (20 min) and Prof Roessler (20 min) will clarify these aspects discussed above and share their expertise with the students. In addition, two students who have worked in this area as medical students- and are currently doctors -will present their results and their research (10 min each). Finally, this pre-course will end with hands-on experiments in which the students will use different devices to monitor perturbation induce changes in several physiological parameters. These include measurements of continuous blood pressure and hemodynamic responses, ECG, Flow Mediated Dilatation measurements, pulse wave analysis, cerebral blood flow measurements as well as assessment of cardio-postural measurements. Perturbations such as sit to stand test, mental arithmetic, hyperventilation, isometric handgrip, etc. will be used.

Newborn Life Support: A structured approach to the assessment and management of the newborn during the first minutes of its life
Location: Meeting point KW, Centre for medical simulation and training

About 10 % of new-borns require some medical assistance after birth. In this workshop, participants will learn structured assessment of newly born infants and performance of life-saving procedures through hands-on simulator training
Discover the world – meet our partner congresses:
Keynote Lectures

Keynote 1:

“Fecal Microbiota Transplantation - Hype or therapy for the future?“

Speaker: ao.Univ.-Prof. Dr.med.univ. Christoph Högenauer, Head of Research Unit, Theodor Escherich Laboratory for Microbiom-Research, Graz, Austria

Time: Friday, 27th May, 2016; 10:45 am – 11:45 am
Location: HS D

Treating patients with inflammatory bowel disease (IBD) is still a difficulty in clinical practise. Fecal Microbiota Transplantation has become a topic of interest in the last few years. But is it just a hype or is there a possibility for new therapies? Find out about clinical implications of this new technique for C. difficile infections, IBD and other chonical bowl diseases as well as the pathophysiologic background of the intestinal microbiom.

Keynote 2:

"Lipoprotein transport of small non-coding RNAs in cardiometabolic disease."

Speaker: Ass.-Prof. Kasey C. Vickers, PhD,
Vanderbilt University, Nashville, Tennessee, USA

Time: Saturday, 28th May, 2016; 10:45 am – 11:45 am
Location: HS D

Lipoproteins transport a wide-variety of small non-coding RNAs, including micro-RNAs, and deliver these small RNAs to recipient cells where they regulate gene expression in a novel form of intercellular communication. Strikingly, lipoprotein small RNA signatures are altered in many cardiometabolic diseases, including athero-sclerosis, type 2 diabetes, and chronic kidney disease. We are now attempting to manipulate these cell-to-cell communication networks to prevent and treat cardio-metabolic diseases in animal models. RNA-based drugs are the next frontier in drug therapy and lipoprotein small RNAs hold great potential as drug targets and/or new therapeutic approaches.
Lunch Lecture - 5 x 10: Short Lectures on Global Health

Time: Friday, 27\textsuperscript{th} May, 2016; 01:00 – 02:00 pm
Location: HS D
Members of the Global Health and Development – Medical University of Graz

Join us for a couple of our five 10-minute sessions on Global Health. To give everyone the opportunity to learn something about Global Health and have lunch as well we prepared five equally interesting topics for you in short 10 minute lectures. Our Topics are:

Teamwork: Creating a Humanitarian Platform  
Nuances: The difference in Developing Assistance and Humanitarian Aid  
Knowledge: Research in Humanitarian Aid and Developing Assistance  
Quality: Minimal standards in Humanitarian Aid (Sphere Project)  
A glimpse into our projects: Lepra on the Road”
Workshops

**Hyperbaric medicine – the use of compression chamber**

Location: HSZ, SR B1

The medical university of Graz was one of the first institutions in Europe to establish a compression chamber. Even today Graz is one of two hospitals in Austria, which can perform hyperbaric medicine in this way. The compression chamber is not only used for decompression, but also for therapy of life-threatening infections like gangrene, tuberculosis or for curing of intoxications. In this workshop you will be able to visit the compression chamber at the hospital of Graz and hear about the most important facts of hyperbaric medicine.

**Basics in Plastic Surgery**

Location: SR KW.21

Delegates will learn the fundamental skills of plastic surgery at an early career stage in a supportive environment. There is a balanced mix of practical and theoretical material taught on the course with demonstrations and soft tissue models for practise. The course provides delegates with the confidence required to perform the basic skill required in plastic surgery.

**Structured cardio-pulmonary assessment for beginners**

Location: Meeting point HSZ foyer, Centre for medical simulation and training

Assessing patients’ cardiopulmonary status at their bedside is a key skill for nurses and physicians. Even paramedics’ daily work could benefit from structured training of cardiopulmonary evaluation of chronically or even critically ill patients. This simulation-based assessment training addresses to everyone approaching cardiopulmonary evaluation without any prior knowledge, but is also useful for those wishing to update their expertise in the field of cardiopulmonary assessment.
**Pain management – Problem based learning**

Location: HSZ, SR A2

Patients with chronic pain are a challenge for clinicians as well as GPs. And there are a lot of cases when acute pain transformed into chronic pain. We will learn different ways how to manage patients with a chronic pain syndrome. The workshop will use examples from real cases in order for you to learn how to care for them. If you have an example of a pain patient in your family, friends or from an internship, please prepare to tell the group about it, we will then try to design a pain management for that case.

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**The difficult Anamnesis - a bio-psycho-social approach**

Location: SR KW.11

The clinical-elective "Anamnesegruppe" is a widespread concept throughout German-speaking countries at Medical as well as Psychology Universities. Its goal is to provide hands-on experiences, for students tutored by students, to gain experience in various anamnesis-taking settings. In this workshop we want to work on various scenarios that could create difficulties in certain clinical conversational settings and, in a peer-to-peer method, summarize possible origins of such difficulties, work on in-conversation coping strategies and possible solutions for exemplary situations.

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**Getting ready for the nightshift - X-ray interpretation for young doctors**

Location: HSZ, HS D

When starting your career in medicine, it won’t be long until your first nightshift. It’s going to be just you and the patient in your emergency room. Are you going to wake up your on-call doctor at 4 a.m. just to ask him about that chest X-ray you ordered? In this workshop we will go through cases based on X-ray pictures that are very common in the nightshift. It is going to be an interactive workshop that teaches you how to tell emergencies (that do require to wake your superior) from casualties.

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**Forensigraphy – Medical Imaging meets Forensics**

Location: CAUTION!!! Campus of the Karl-Franzens-University. We will take a bus together (2,20€ per way). Meeting point: HSZ foyer

Forensigraphy is a discipline of the criminal sciences. Due to its interdisciplinary nature, forensigraphy, as a ‘cross-sectional science’, finds itself drawing knowledge from various disciplines in the in medical, technical, natural and judicial sciences. The interdisciplinary organised Ludwig Boltzmann Institute of Clinical Forensic Imaging (LBI CFI) has the goal of conducting research into the clinical forensic applications of imaging procedures. The benefit, which the use of imaging procedures in (criminal) jurisdiction has, is quite apparent:
It serves to secure additional, objective evidence. Medical forensigrapy distinguishes itself in an interface between forensic science and medicine. It works to bring justice to the requirements of both, medico-legal applications and criminal procedures. In a practical and interactive workshop at the LBI CFI, an overview of the field of clinical forensic imaging and the research work of the interdisciplinary team of the institute will be given.

**Acute coronary syndrome in clinical practice**  
**Location:** HSZ, SR B2

The workshop "Acute Coronary Syndrome" deals with one of the most important reasons for death in developed countries. Pathogenesis, clinical features, ECG and lab findings as well as current guidelines concerning diagnosis, risk stratification and treatment will be presented. Several cases shall be discussed by the audience.

**Cardiac arrhythmias: Electric cardioversion and transcutaneous pacing in the emergency department**  
**Location:** Meeting point HSZ foyer, Centre for medical simulation and training

Within no time at all, cardiac arrhythmias might cause life-threatening medical emergencies. Immediate and accurate action is the key. This simulation-based workshop introduces to diagnosis and emergency management of life-threatening cardiac arrhythmias.

**Psychosomatic Medicine**  
**Location:** SR KW.12

Physical, psychological (emotional) and social factors influences health and disease. In this workshop we will talk about the concept of psychosomatic medicine based on case reports and how it affect the daily clinical routine and the health care system.

**More than a challenge: Advanced airway management procedures under emergency conditions**  
**Location:** Meeting point HSZ foyer, Centre for medical simulation and training

Securing the airway is crucial in emergency management. Special technical and communicative skills are needed to identify and treat respiratory problems immediately. This simulation-based workshops imparts current guidelines for emergency airway management including failed intubation procedures and emergency surgical cricthyrotomy.
Social Program

Stadtpark Tour
When: Thursday, May 26\textsuperscript{th}, 6:00 p.m.
Where: Stadtpark (Inner City, East of Schlossberg)
Founded way back in 1868, the Stadtpark of Graz is a popular area for relaxation and leisure time activities in summer. This is the place to be for students in Graz, when not studying in a dusty library. Join us for a stroll through the park and experience some typical student life.

Pubquiz
When: Thursday, May 26\textsuperscript{th}, 8:00 p.m.
Where: Feierlaune, Harrachgasse 22, 8010 Graz (Basement)
Have you ever had the pleasure of attending a pubquiz? Here is your chance! Come unprepared and convinced that you and your colleagues are able to answer the weirdest questions! Besides a fun thing to do, this is a great chance to get to know your colleagues from other countries!

Welcome Reception in the Mayor’s Hall
When: Friday, May 27\textsuperscript{th}, 7:45 p.m.
Where: We meet at Main square (Hauptplatz)
First built during the Renaissance in 1550 the original town hall was a simple three-storey building with hardly any ornaments at all and a prison inside. In 1803 the town hall was torn down and replaced by the building that has been standing next to Main square until nowadays. We will be welcomed by an official member of the city council and there will be the opportunity to ask questions about the city and the county Styria. Afterwards there will be a bread-roll buffet with Styrian wine for whoever would fancy one! Make sure you wear your traditional dresses from your home country.

Chill-Out in the Stadtpark
When: After the Mayor’s Hall event
Where: Stadtpark, just follow us after the Mayor’s Welcome
One of our newest traditions when it comes to the ISC. Our dear colleagues from the AMSA (Austrian Medical Student Association) will invite us for a nice Chill-Out in the Stadtpark. There will be (non-)alcoholic drinks, music, dance and the opportunity to get to know your colleagues on more casual level. Come, enjoy summer nights in Graz with us!
**Scientific City Tour**

When: Saturday, 28\textsuperscript{th} May; 7:00 – 8:00 pm  
Where: Starting at the Main Square  
You’ll get the opportunity not only to get to know the beautiful city of Graz but also to get some insight in those places of scientific significance.

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**ISC Farewell Party**

When: Saturday, 28\textsuperscript{th} May, 2016; 8:00 pm – open end  
Where: TamTam, Keesgasse 3, 8010 Graz  
There is one party location in Graz, where every student has been to sooner or later - the TamTam. So make sure you do not miss our legendary Farewell Party and enjoy some of the free drinks with us and your new friends from the congress.
Finding your way around: Graz
**Good to know**

**Emergency numbers**

122: Fire brigade
133: Police
144: Paramedics
112: International Emergency Number

**Public Transportation**

www.gvb.at

We recommend to get a 3-Day-ticket for € 11.80, which pays of if you do more than 5 single trips through Graz. You can purchase the 3-Day-Ticket inside the Trams but not in busses, at the tourist information or at the train station. There is no student discount!

**Public Bikes:**

If you want to rent a bike, visit www.grazbike.at

https://www.graztourismus.at
About the Medical University of Graz

A young university with a long standing tradition

As early as 1863 much emphasis was laid on medical research and the education of new physicians, both of which proved to be very successful. In January 2004, the former Faculty of Medicine was replaced by an autonomous university. The core competences of the Medical University of Graz are high-standard training and education, research at an international level and continuous improvement of top-quality medicine. Additionally, the orientation toward the bio-psycho-social model is one of the main concerns of the university.

Education of international reputation

According to the bio-psycho-social model, patients and their ailments are the main focus and tended to by specialists. In the field of education the Medical University of Graz breaks new grounds due to a new curriculum for medicine that was introduced in 2002. Students start their education with a practical training and medical knowledge will be taught in different specialized modules. For the students this means practical experience at a very early stage of their studies, many seminars and small study groups. Furthermore, emphasis is laid on both medical knowledge and social competence and Medical University of Graz. In the fall of 2004, the program "Nursing Science" was introduced. It is the only one in Austria and accounts for all the new needs and challenges in health care.

Tradition of successful and internationally renowned research

The Medical University of Graz has a long tradition of successful and internationally renowned research, which is obvious by the fact that three Nobel Prize winners have conducted research in its institutes and clinics:

Fritz Pregl, Nobel Prize in Chemistry (1923)
Julius Wagner von Jauregg, Nobel Prize in Medicine (1927)
Otto Loewi, Nobel Prize in Medicine (1936)

We at the Medical University of Graz also focus on the utilization of research results. Next to providing medical education and first-class medical treatment, research is the core task and competence of the medical schools. It provides the basis for all progress in medicine, be it by exploring physiological processes and decoding genes and their functions, or by developing new operation techniques and testing new ingredients for pharmaceutical products. The Medical University of Graz is highly committed to scientific medical research and has been throughout its long history. In its university clinics and pre-clinical institutes and centers, researchers employ state-of-the-art scientific methods to search for answers and new approaches, thus contributing continuously to the progress in medicine and biotechnology.
Graz has a long and eventful history. The tracks of first buildings and fortresses date back to the early stone age. The Celts, who lived not only in Gallia (like Asterix) but also in the region of today's Austria, left their traces in Graz too. You can find them, for instance, in the small forest directly behind the University Hospital, the Leechwald. During the time of the Roman Empire the area of Graz was a busy area for agriculture; the antique city Flavia Solva near the city of Leibnitz, south of Graz is witness of it. They even found a Roman villa underneath the airport of Graz.

The word Graz originates from the Slavic word Gradec, meaning “small fortress”. This fortress, which was built on the hill in the city center, the Schlossberg, didn't remain small for long. For nearly 300 years Graz was the residence of the Habsburgs, the Austrian Imperial dynasty. In the time of the war against the ottomans, the fortress was captured for the last time in history, as the next great enemy who tried to occupy the city, Napoleon, was never able to do so. Graz remains the only city that the ingenious general from Corsica could never conquer. He got so furious; he forced the Austrian Emperor to let him destroy the city without fight. No sooner said than done, the fortress was blown up and half of the Schlossberg with it. The only other two buildings that survived the destruction, apart from some residues of the fortress, were the clock tower (Uhrturm) and the bell tower (“Liesl”).

A second good reason to visit Graz is the exceptional living quality. According to an inquiry, 92% of the citizens are very satisfied with living in the city. This is quite a high number, don’t you think? Maybe it's because of the many parks, the forests inside and outside the city or its manageable size (300,000 inhabitants on 127.6 km²) which you can easily discover by public transportation and by bicycle. Perhaps it's the southern flair (Graz is known as the Austrian city with the most Italian flair) in the small alleys of the city center, with its hidden places where you can just drop inside a bar or a café for a drink or a cup of coffee, read a good book, watch the scenery and enjoy life. Moreover, let's not forget the friendly citizens of Graz. They, too, are the reason why so many just love to visit or, even, stay forever.

The rooftop landscape of Graz, which you can look at from every elevated spot around the city center, has been a UNESCO world’s cultural heritage since 1999. In 2003, the city was given the honor of being “Cultural Capital of Europe.

Whether you are interested in architecture or the fine arts, there are numerous options you can choose from: the opera house, the many theaters, the museums, open air and indoor concert venues and our castle in the district of Eggenberg are all sports worth visiting.
During summertime the street artists of “La Strada” fill the streets with a special atmosphere while the “Jazz Summer” brings great artists to town.

As Graz is a university city, there is a large number of students living here. Where there are students, there are bars and parties. In the “Uni Quarter” along and around Elisabethstraße the bars are lined up for your choice, and the “Bermuda Triangle” in the city center got its name from one or the other getting lost there until the break of dawn. As our 40,000 students are not only partying but also studying, they can do so at 4 universities, 2 universities of applied sciences and 2 pedagogical colleges.

A lot of famous people were born in Graz or lived here. Leopold Auenbrugger, whom you may know as the inventor of medical percussion, Hans Gross, the founder of criminology (yes, he kind of invented CSI), emperors of the Habsburgs dynasty, Arnold Schwarzenegger, Nicola Tesla, Otto Loewi, Erwin Schrödinger, Nicolaus Hanoncourt, Karlheinz Böhm, and so on.
Scientific Section
#49 The importance of echocardiography and cardiac magnetic resonance after complete surgical correction of Tetralogy of Fallot

Jelena Jadzic1, Vladislav Vukomanovic1,2, Jovan Kosutic1,2, Sergej Prijic1,2

1 School of medicine - University of Belgrade, Serbia; 2 Mother and Child Health Institute of Serbia “Dr Vukan Cupić”, Belgrade, Serbia

Introduction: Right ventricular insufficiency after surgical treatment of Tetralogy of Fallot (TOF) is a common late problem. Main goal in long-term follow-up, after complete correction of TOF, is defining indications and optimal timing for pulmonary valve replacement. Reintervention should be performed in order to reduce right ventricle volume overload (RVVO) before irreversible heart failure occurs.

Aim: To examine the importance of echocardiography and cardiac magnetic resonance (CMR) in the postoperative monitoring of TOF patients.

Patients and methods: In 20 patients (9 female; age: 15.5±5.6 years) with echocardiographic signs of significant RVVO (after complete surgical repair of TOF) the CMR was made for additional determination of the indications for reintervention (pulmonary valve replacement).

Results: Average right ventricle (RV) end-diastolic volume was 169±46 ml/m2, RV end-systolic volume 110±40 ml/m2 and RV ejection fraction 36±14%. CMR showed an appropriate correlation with previous echocardiography in respect to the size of the right side heart cavities, the RV pressure, the significance of the residual right ventricular outflow tract obstruction and the level of pulmonary insufficiency (p<0.05). However, no correlations in cardiac chambers domination, grade of tricuspid regurgitation (p=0.112), left ventricular size (p=0.330) and systolic function (p=0.430) demonstrated by echocardiography and CMR were revealed. Severity of the pulmonary insufficiency, determined by regurgitation fraction and absolute retrograde flow, is most important factor for the RVVO (p<0.01).

Discussion: Our study indicates that echocardiography is helpful in the long-term follow-up evaluation of TOF patients after surgical repair. However, CMR is reference standard modality of defining indications for reintervention in adolescents and adults after complete correction of TOF.
**Interval hypoxic-hyperoxic training and remote ischemic preconditioning: effect on the incidence of complications in coronary artery bypass graft surgery. Open, controlled prospective trial.**

Liudmila Severova, Ekaterina Ivanova, Denis Tuter

I.M. SECHENOV FIRST MOSCOW STATE MEDICAL UNIVERSITY, Russian Federation

Introduction. There are different methods of preconditioning, for example, interval hypoxic-hyperoxic training (IHHT) and remote ischemic preconditioning (RIPC).

Aim: To investigate the influence of preconditioning caused by RIPC and IHHT on the frequency of intra- and postoperative complications of coronary artery bypass grafts surgery (CABG).

Patients and Methods. 53 patients took part and were randomly assigned groups: IHHT (14), RIPC (14), control (25). Hypoxic and hyperoxic gas mixtures were delivered to the IHHT group using ReOXY respiratory therapy equipment at 40 minute intervals. Patients received 1 procedure daily 5 days before operating. In the RIPC group, a blood pressure cuff was used 40 minutes prior to the operation to compress the patient’s lower limb. No additional preparatory procedures were carried out in the control group.

Results. 46.5% of all patients suffered complications in the control group - 21.43% in the IHHT group and 14.29% in the RIPC group. Confidence is more 0.05 in all cases. Complications included atrial and ventricular fibrillation, death, right bundle branch block and pulmonary embolism.

Discussion: The data demonstrates a beneficial effect of these two methods. Possibly, because of the small number of patients no significant difference between groups exists. Many animal trials demonstrate that preconditioning has positive effects. To confirm its effect on humans, more substantial data is required and hence more patient trials.

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**THE ASSOCIATION BETWEEN PERMANENT TEETH LOSS AND CARDIOVASCULAR DISEASE IN LATINO AND AFRICAN AMERICAN POPULATIONS**

Mohammed Humoud Alqudaimi, Ziyad Ahmed Alyousef

Imam Mohammed Bin Saud Islamic University, Saudi Arabia

Introduction: Cardiovascular disease (CVD) is the most common cause of death and disability in developed countries. Recently, several studies have reported a close association between CVDs and oral health.

Objective: Our aim is to investigate the association between loss of permanent teeth due to gum disease and tooth decay and cardiovascular disease in North Miami, composed of 95% Latino and African American populations.

Methods: We analyzed the North Miami Benchmark Survey data, a cross-sectional survey conducted between 2010 and 2011. Random sample consisted of 2,200 single-family homes, only 1,845 answered a general health survey via face-to-face interviews. Households were categorized as having CVDs if at least one member had been diagnosed with any heart disease. Binomial logistic regression was used to model the relationship between loss of permanent teeth and CVDs while adjusting for other predictors.

Results: Households where members have lost permanent teeth are 2 times more likely to develop CVDs than households where members have not. As the educational attainment of the head of the household increases, the odds of developing CVDs significantly decrease. Households where at least one member was a former smoker or current smoker were more likely to be diagnosed with CVDs than non-smoking households.
Discussion: Our findings show that there is a significant association between loss of permanent teeth and CVDs. It would be important to create awareness on this population about the importance of oral health and how it can affect CVDs. Future studies should focus on improving oral hygiene in this population.

#180 Gender Differences in In-Hospital Mortality Rates among Hispanic Patients with Acute Myocardial Infarction

Nawaf Ebrahim ALJeraisy1, Abdullah M Al-Sultan1, Sami A Aldaham1, Melissa Ward-Peterson2, Juan Manuel Acuña2, Juan C. Zevallos2

1Al-Imam Mohammad Ibn Saud Islamic University (IMMSU), Saudi Arabia; 2Department of Medical and Population Health Sciences Research, Herbert Wertheim College of Medicine, Florida International University, Miami, Florida, United States

Acute myocardial infarction (AMI) is a leading cause of death in the United States with over three million cases per year. Since the mid-1970s, the total number of deaths related to AMI in the United States has not declined. Studies suggest that women with AMI have worse outcomes compared to men. However, there is limited information regarding this topic among Hispanics.

This study was a secondary analysis of the Puerto Rican Heart Attack Study, which reviewed the medical records of Hispanic patients of Puerto Rico hospitalized for AMI at 21 academic and/or non-teaching hospitals in 2007, 2009 and 2011. This study set examined the differences in in-hospital mortality rates between genders. A p-value of 0.2 was used to select possible confounders and the chi-square test was used to examine associations between categorical variables. Factors associated with in-hospital mortality rates were identified using logistic regression. Collinearity was assessed using Pearson correlation coefficients. The 95% confidence interval and a p-value of 0.05 were used to determine statistical significance of odds ratios. Analysis was restricted to patients with ICD-9-CM code 410-414 who are above 18 (n = 2265).

In our sample, there were more men than women (1291 versus 974, respectively). Men were younger and smoked more compared to women. Compared to men, women were older and suffered more comorbidities, such as stroke and congestive heart failure (CHF). Women had higher rates of in-hospital mortality compared to men (OR = 1.4, p = 0.040). Factors associated with higher rates of in-hospital mortality included age and CHF (p<0.001). Patients with CHF showed higher rates of in-hospital deaths compared to patients who did not have CHF (OR = 1.6, p = 0.026). Patients over the age of 86 showed higher odds of in-hospital death compared to younger patients (OR = 10.5, p <0.001)

Significant disparities existed by gender in this sample of Hispanic AMI patients, with women showing higher in-hospital mortality compared to men. Women over 50 should perform regular checkups and discuss hormone replacement therapy or follow other preventive measures as suggested by their healthcare provider.

#183 Association of Gender and Length of Stay among Puerto Ricans hospitalized with Decompensated Heart Failure

Mohammad Abdulrahman Alnajashi1, Mohammed Abdulaziz Almasoud1, Sami Aldaham1, Melissa Ward-Peterson2,4, Juan Manuel Acuña2,3, Juan C. Zevallos2

1College of Medicine, Al Imam Mohammad Ibn Saud Islamic University (IMSIU), Riyadh, Saudi Arabia; 2Department of Medical and Population Health Sciences Research, Herbert Wertheim College of Medicine, Florida International University, Miami, Florida, United States; 3Department of Human and Molecular Genetics, Florida International University, Miami, Florida, United States; 4Department of Epidemiology, Robert Stempel College of Public Health & Social Work, Florida International University, Miami, Florida, United States
Heart failure (HF) is a serious, chronic and progressive condition which requires hospitalization if exacerbated. Each year in the US there are approximately one million hospitalizations due to HF at a cost of $39 billion. No studies examining the association between gender and length of stay (LOS) have been conducted among Puerto Rican heart failure patients. Our aim is to investigate gender differences related to LOS in Puerto Rican patients hospitalized with decompensated heart failure.

This study is a secondary data analysis of the Puerto Rico Heart Attack Study, which was a non-concurrent cohort study carried out in 2007 and 2009. The final sample size was 1724. The chi-square test was used to examine associations between categorical variables. Logistic regression was used to identify all factors associated with length of stay. Collinearity was assessed using Pearson correlation. The 95% confidence interval and a p-value of 0.05 were used to determine statistical significance of odds ratios.

52.4% of the sample was men and 47.6% of the sample was women. Women were more likely than men to have diabetes mellitus, hypertension and dyslipidemia, but men smoked more than women. Women had a longer length of stay compared to men by 10% (p = 0.448), which is not significant. Age, heart failure status, renal failure and ejection fraction less than 35% were significantly associated (p <0.05). In the adjusted model, men with HF had similar LOS as compared to women. Factors that prolonged length of stay included renal failure by 70% (OR 1.7; 95% IC 1.3, 2.1) and ejection fraction less than 35% by 110% (OR 2.1; 95% IC 1.5, 2.8). Patients with recurrent hospitalization (heart failure status) were 30% less likely to have a LOS (OR 0.7; 95% CI 0.6, 0.9) compared with those with incident hospitalization.

There were no associations between length of stay and gender of adult patients in Puerto Rico with heart failure. However, the study found other significant factors which prolonged LOS, such as being hospitalized with HF for the first time, renal failure and having an ejection fraction less than 35%.

#185 The effects of aging and experimental menopause on the cardiac and inflammatory parameters

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Introduction: Gender-based differences in the development of cardiovascular diseases are more prevalent in men than in premenopausal women, but its incidence increases during aging and after menopause.

Aim: The purpose of this study was to investigate the interaction between estrogen deficiency, cardiovascular risk, and inflammation.

Methods: Female Wistar rats were divided into four experimental groups: 4-month-old sham-operated controls, 4-month-old pharmacologically ovariectomized (750 µg/kg triptorelin im. every 4th week) animals, 4-month-old surgically ovariectomized animals, and 24-month-old ovary-intact (aged) rats. We measured the activity and expression of heme oxygenase (HO) enzyme in cardiac left ventricle (LV), the concentrations of cardiac interleukin-6 (IL-6) and tumor necrosis factor-α (TNF-α) pro-inflammatory cytokines, the myeloperoxidase (MPO) activity in the cardiac LV, and the effects of HO blockade (by 24-hour and 1-hour pretreatment with tin-protoporphyrin IX, SnPP) on the epinephrine and phentolamine-induced electrocardiogram ST segment changes (assessed by lead II. surface ECG) in vivo.
Results: Cardiac HO activity and the expression of HO-1 and HO-2 isoforms were significantly decreased in the aged and ovariectomized rats. Estrogen depletion was accompanied by significant increases in the expression of IL-6, TNF-α and MPO activity. Additionally, both aging and ovariectomy exhibited a significant ST segment depression which was augmented by SnPP pretreatment.

Discussion: The results suggest that estrogen depletion is a key factor to promote age-related cardiovascular abnormalities and decline in antioxidant capacity. Decrease in HO enzyme activity and expression contributed to the development of inflammatory processes and elevation of angina susceptibility of the heart.
#71 The Prevalence of Amblyopia in children 3-9 years old during 2013-2014 in Prishtina

Flaka Shoshi, Fitore Shoshi, Fjolla Shoshi  
University of Pristina - Faculty of Medicine, Kosovo

Introduction: Amblyopia also referred as the lazy eye, is a disorder of the vision development in which an eye fails to achieve normal visual acuity. Since it is a disorder that begins in infancy and early childhood, its early detection is of a great importance.

Aim: This study was conducted to find out the prevalence of Amblyopia in children 3-9 years old in Prishtina with the purpose of presenting its frequency in Prishtina and the importance of its early detection.

Patients and Methods: For the data gathering we have used the records of patients with amblyopia, who were detected and treated in the Eye Clinic of the University Clinical Center during this one year period. Our study includes the data from the records of 1027 patients of age 3-9 years old, treated in the Eye Clinic.

Results: Out of 1027 patients whose data we have used for the research, the prevalence of the refractive eye-pathologies was 11.7%, from which the prevalence of amblyopia was 6%.

Discussion: The data used in this research showed that the prevalence of amblyopia was 6%. Our findings were very similar to the findings from the research conducted in Dibra during 1998-2001 by Prof.dr.Ali Tonuzi, where the prevalence of the refractive eye-pathologies was 11.1%.

Conclusion: After a thorough analysis of the results, we came to a conclusion that the prevalence of amblyopia in children of age 3-9 years old is apparent, therefore its early detection and treatment are of great importance.

#86 Stereotactic LINAC-radiosurgery for uveal melanoma - local tumor control and dose distribution in anatomical structures of the eye, a retrospective study

Michael Sommer  
LKH-Universitätsklinikum Graz, Austria

Introduction: In 2011, a technological change in the treatment of uveal melanoma at the Graz University Hospital took place. Stereotactic gamma-knife-radiosurgery was replaced by a single-session treatment with a modern linear accelerator (LINAC).

Aim: The primary objective of this study was to report preliminary results of this treatment option, regarding local tumor control, adverse side effects, conservation of vision as well as dose distribution in radiation sensitive structures of the eye.

Patients and Methods: A retrospective analysis of the past medical history and treatment plans of 21 patients of the University Eye Hospital of Graz, who underwent single-session stereotactic LINAC-radiosurgery for uveal melanoma, was performed.

The collected data is presented using descriptive statistics. For the tumor control rate and conservation of vision, Kaplan-Meier estimates were calculated.
Results: Kaplan-Meier estimated tumor control rates were 100% after 12 months, 90.9% and 77.9% respectively after 18 and 24 months (median follow-up 14 months, range: 0.1–23). Less than 50% of the maximal dose (37.5 Gy) was delivered to lens and ciliary body in 86% and 81% of cases, respectively. Makula and optic disc were, as a whole, affected by at least 50% of the maximal dose in 57% of cases each.

Discussion: LINAC-radiosurgery allows local tumor control in patients who want to avoid enucleation, but are unsuitable for brachytherapy due to tumor size, tumor location or general health.

#143 Red Blood Cell Distribution Width and Serum Uric Acid in Evaluation of Patients with Chronic Psoriasis

Bartosz Balcewicz

Psoriasis is a systemic inflammatory process. Numerous studies revealed that elevated red blood cell distribution width (RDW) and the serum uric acid level (SUA) are associated with the disease activity in various inflammatory disorders and can be considered as an important risk factor for cardiovascular diseases.

The study aims to evaluate possible correlations between the RDW, SUA and other inflammatory markers in the blood serum, the disease severity, cardiovascular risk in patients with psoriasis.

The study included patients with exacerbation of chronic psoriasis selected from the dermatological wards and age, gender and metabolic profile matched healthy individuals. Complete blood count, SUA, C-reactive protein (CRP) and lipid profile was measured for all patients and controls. For the assessment of the disease severity and cardiovascular risk a set of standardized questionnaires was used. Patients with comorbidities or medications that could interfere with laboratory test parameters were excluded from the study.

The mean values were found to be significantly elevated in patients with psoriasis \( p = 0.049 \) for SUA and \( p = 0.000007 \) for the RDW. Furthermore, RDW showed significant correlation with erythrocyte sedimentation rate \( (p = 0.01) \) and CRP \( (p = 0.02) \). Cardiovascular risk assessment shows increased risk of lifetime atherosclerotic cardiovascular event in the study group but shows no correlation with RDW or SUA for the time being.

Psoriasis requires adequate and effective monitoring for earlier prevention of associated cardiovascular comorbidities in which a high potential has RDW and SUA. Further study on a larger group of patients is still required.

#167 Association between different races and overall survival of melanoma patients in adult U.S. population over 3 decades

Mohammed Khalid M Alkhalifah, Juan M Acuña, Melissa Ward-Peterson, Sami A. Aldaham

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Melanoma is a treatable and preventable skin cancer. It is responsible for 75% of deaths among all skin cancers. Melanoma rates are higher recently than 20 years ago. However, there are no studies that cover 30 years and take race into account for the U.S. population.

This study is a secondary analysis of a non-concurrent retrospective cohort study of adults in the U.S. who were diagnosed with primary cutaneous melanoma from 1982-2011. Data were from the National Cancer Institute’s Surveillance, Epidemiology, and End Result (SEER) Program. The final sample size was 185219. The outcome was overall survival. The main exposure was race/ethnicity. The chi-square test was used to study the association between categorical variables. Kaplan-Meier survival analysis was used to estimate overall survival. Cox proportional hazards regression was to estimate unadjusted and adjusted hazard ratios (HR). Collinearity was assessed as well. A p-value less than 0.05 and 95% confidence interval (CI) was used.

In the 1982-2011 period most of the patients among all U.S. races were diagnosed at localized stage. Overall, more men were diagnosed than women. The association between vital status and other variables was statistically significant. In 2002-2011, only 5.2% of individuals with melanoma died. Before controlling for other risk factors, non-Hispanic Black patients had an HR of 4.3 (95% CI 4.0-4.5). In the adjusted model, their HR was 0.7 (95% CI 0.6-0.8) in comparison with the reference group of non-Hispanic white patients. Logically and analytically, the more advanced the stage at diagnosis, the worse survival the patient had in general (P-value was <0.001 for age categories). No collinearity was observed in the adjusted model.

In conclusion, survival was affected by race. The non-Hispanic Black patients had the lowest HR of 0.7 (95% CI 0.5-0.7) in comparison to the reference group of non-Hispanic White patients. The less severe the stage at diagnosis, the better the survival.

#189 Relationship between Melanoma Stage at the Diagnosis and Survival During a period of 30 Years (1982-2011) among U.S. Adult Population

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Melanoma accounts for 75% of skin cancer deaths. The incidence of melanoma is rising at a greater rate than any other cancer in the U.S. The aim of this study is to examine the association between melanoma stage at the time of diagnosis and survival among U.S. adult melanoma patients during 1982-2011.

This was a secondary analysis of a non-concurrent cohort study conducted on 185219 U.S. adult patients who were diagnosed with primary cutaneous melanoma between 1982-2011. Data were collected from the SEER program. Chi-square, Kaplan-Meier, and Cox proportional hazards regression were used to analyze the data. Collinearity was assessed using Pearson correlation. Significance was assessed using p-value and 95% confidence interval.

Men had more cutaneous melanoma, especially distant melanoma (66.6%). Black non-Hispanic patients were diagnosed less frequently. Patients who were married or in a domestic partnership were most likely to be diagnosed. The HR decreased from unadjusted to adjusted for all stages except for localized stage (5.8; 95% CI 5.28-6.4). The adjusted HR for distant melanoma was 141-fold that of in situ (95% CI 126.38-157.19). Females had a lower adjusted HR (0.6; 95% CI 0.57-0.62). The adjusted HR was the highest in the first decade of diagnosis (1.7; 95% CI 1.6-1.75).

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In conclusion, survival is highly affected by melanoma stage at diagnosis. The more advanced stage, the worse the survival. Black non-Hispanic patients had the lowest hazard ratio of all races with 0.6 (95% CI 0.5-0.7). The sample size was large, which enhances the generalizability to the U.S. population.

#200 A prospective observational study to detect low retinal perfusion by conventional optic coherence tomography

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Introduction: Measuring retinal perfusion requires either very expensive tools, or invasive procedures. Detecting low perfusion of retinal vessels by conventional optical coherence tomography (OCT) could provide a more commonly available and quick way to evaluate retinal blood flow.

Aim: Evaluate the possibility of estimating blood flow in retinal vessels by conventional OCT.

Patients and Methods: 30 Patients were included in this study and in each patient one eye was examined. Of these 30 eyes 9 suffered from central retinal artery occlusion, 6 eyes suffered from branch retinal artery occlusion and 15 eyes were controls without any retinal artery occlusion. In each eye on the inferior and superior temporal retinal artery an OCT B scan was performed, resulting in 60 scans. Within 30 minutes a video fluorescence angiography was performed to measure retinal blood flow velocity. The OCT scans were then categorized by three independent graders as well as by a computer-based system and compared to the velocities measured by the video fluorescence angiography.

Results: The computer-based assessment method expressed the distinctiveness of the intraluminal pattern via a coefficient, which showed a clear distinction of low flow and medium or high flow velocities. The graders assessed low flow and medium or high flow velocities correctly with a sensitivity ranged from 88.2 to 100% and specificity from 97.6 to 100%.

Discussion: OCT B scans of a normally perfused retinal vessel shows a distinct intraluminal reflectance pattern, the absence of which is a sign of low blood flow in this vessel.
#41 Correlations between clinical features, laboratory tests and sonography in autoimmune thyroiditis

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Introduction: Chronic Autoimmune Thyroiditis is a thyroid disease, characterised by an increased value of the Anti-thyroid peroxidase antibodies (TPOAb) and variable clinical and sonographic aspects.

Aim: Our study’s aim is to correlate clinical and laboratory findings with ultrasound thyroid images in autoimmune thyroiditis.

Patients and Methods: The studied group consists of 54 patients aged between 23-78 years, previously diagnosed with autoimmune thyroiditis in an outpatient clinic from Târgu Mureş. A clinical examination, laboratory tests (thyroid hormones and TPOAb) and thyroid ultrasound were performed to all patients. The patients were divided in 4 groups based on thyroid sonography: 1: small volume, without nodules; 2: normal volume, without nodules; 3: large volume, without nodules; 4: nodular aspect.

Results: We found hyperthyroidism in 11%, hypothyroidism in 65% and normal function in 24% of all patients. Group 1: 10 patients, group 2: 15 patients, group 3: 10 patients, group 4: 19 patients. The average value of the TPOAb was 672 IU/ml on group 1, 275.3 IU/ml on group 2, 594 IU/ml on group 3 and 447.26 IU/ml on group 4.

Discussions: Patients from group 1 and 3 had the highest TPOAb average values. 100% of the patients in group 1 and 50% from group 3 presented hypothyroidism. Hyperthyroidism was observed on 40% of the patients in group 3 and 11% in group 4. In conclusion, patients with modified volume showed the highest antibody activity and the highest percentage of thyroid dysfunctions. Our findings mostly correlate with other similar studies.

#44 Health Literacy among Patients with Type 2 Diabetes attending an Ambulatory Diabetes Services in Ireland

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Introduction: The institute of Medicine (2004) defines health literacy as “The degree to which individuals have the capacity to obtain, process and understand basic health information and service needed to make appropriate health decisions”. Sub-optimal health literacy has been described as a risk factor for chronic diseases such as type 2 diabetes. It is also linked with poorer glycemic control and higher complication rates. There is no data on health literacy in patients with type 2 diabetes in Ireland. This study measures health literacy in patients with type 2 diabetes attending the ambulatory diabetes services at Galway University hospital in Ireland.

Methods: Patients with type 2 diabetes attending the out-patient diabetes clinic over a 4 week period in June/July 2015 were invited to participate. Functional health literacy was measured by administering the Newest Vital Sign (NVS), a validated tool to measure health literacy. Ethics approval was obtained from the Galway University Hospitals’ Ethics committee.
Results: Sixty seven participants, ranging from 39 to 84 years, completed the study. Twenty seven (40%) had a high likelihood of limited functional health literacy, 16 (24%) a possible likelihood of limited health literacy and 24 (36%) had adequate health literacy. Only 2 participants (3%) perceived their level of health literacy as low.

Conclusions: Just over one third of participants in this study had adequate health literacy. Most of the participants with a high likelihood of limited health literacy did not perceive their health literacy skills as being inadequate. Health care professionals should deliver care using plain language and clear explanations.

#126 EFFECTS OF WATER EXTRACT OF OCIMUM BASILICUM ON GLYCEMIA IN NORMOGLYCEMIC AND ALLOXAN – INDUCED DIABETIC RATS

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Introduction: Basil (Ocimum basilicum) is a herbaceous plant of the family Lamiaceae. Basil extracts affect glycemia primarily by preventing the occurrence of postprandial hyperglycemia and increasing the usability of glucose in peripheral tissues.

The Aim: The aim of the study was to investigate the effects of water extract of basil on body weight and glycemia in normal and diabetic rats.

Material and methods: Laboratory Wistar rats were treated with water extract of basil for 7 days. Alloxan was used to induce hyperglycemia. The effects of water extract of basil on glycemia were evaluated using the oral glucose tolerance test and by measuring blood glucose levels in alloxan-induced diabetic rats. Also, the effect of the treatment on the body weight of the rats was recorded.

Results: After the induction of hyperglycemia with alloxan, water extract of basil significantly lowered glycemia (p < 0.01). In the group of the diabetic animals treated with water extract of basil, there was a significantly lower increase of the body weight compared to the control group (p < 0.05) and the experimental group that was treated only with basil extract (p < 0.01).

Conclusion: The treatment with water extract of basil prevents disorders in glucose homeostasis induced by prooxidant effects of alloxan. The water extract of basil has no significant influence on the change in body weight in animals with alloxan-induced hyperglycemia.

#136 Retrospective study of influence of diabetes mellitus on clinical picture and treatment response of patients with chronic inflammatory demyelinating polyneuropathy

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Introduction: Chronic inflammatory demyelinating polyneuropathy (CIDP) is one of the several treatable neuropahties characterized with progressive weakness and sensory abnormalities. Diabetes mellitus (DM) is the most frequent comorbidity in patients with CIDP.

Aim: We aimed to determine whether the CIDP patients with DM (CIDP+DM) and without DM (CIDP-DM) at the Neurology clinic of Clinical Centre in Serbia differed in clinical picture or treatment response.

Patients and Methods: A retrospective review of 116 CIDP patients examined between 2003 and 2013. The study included clinical and laboratory findings. Patients were divided in two
groups: 27 CIDP+DM and 89 CIDP-DM patients. The groups were statistically compared using R programme, Wilcoxon and X2 test. Significance was set at p<0.05.

Results: CIDP+DM patients had more extensive sensitive disorders both on higher (p=0.0089) and lower (p=0.0233) limbs, elevated vibration perception thresholds (p=0.0025) and more severe Inflammatory Neuropathy Cause and Treatment (INCAT) score on lower limbs (p=0.0264). Paresis of bulbar muscles were more frequent in CIDP+DM patients (p=0.0118). Course of disease was mostly slowly progressive in CIDP+DM patients, while both slowly progressive and relapsing-remitting in CIDP-DM patients (p=0.0064). Male CIDP patients were more likely to have DM than female (p=0.0233). The onset of neuropathy is at younger age in CIDP-DM patients (p=0.0028). There were no significant differences in treatment response.

Discussion: CIDP+DM patients had more severe clinical picture than CIDP-DM patients, whereas treatment response was similar. Papers on this subject are scarce. Some of our results are similar and some are different.

#155 Seasonal variation of type 1 diabetes mellitus diagnosis in Polish children – a multicentre study


Introduction: The current concept of damage of beta cells in diabetes type 1 (T1D) includes environmental factors in genetically susceptible individuals. Among them the important role seems to be played by climate conditions such as temperature and insolation.

Aim: The aim of the study was the evaluation of the seasonal variation of type 1 diabetes mellitus in Polish children < 18 years of age.

Material and methods: The study group consisted of 2174 children (1007 girls, 0-17 years) with the mean age 9.3 SD 4.5 years, with newly diagnosed T1D in the years 2010-2014. All data was collected from paper or electronic documentation or prospectively from electronic databases. The meteorological data was provided by Institute of Meteorology and Water Management.

Results: We noted significant seasonality in the incidence of Type 1 diabetes (p<0.001). The lowest number of children was diagnosed with T1D between May and July and the highest incidence was observed from September to February with peak in January. 423 (19%) children were diagnosed in the warmest months (June to August with the mean temperature 16.80°C) compared to 636 (29%) recognised in the coldest months (December to February with the mean temperature -1.60°C), p<0.0001. T1D onset was noted more
frequently in Autumn-Winter (September to February) than in Spring-Summer (March to August); 1270 (58%) vs. 904 (42%) cases, \( p < 0.0001 \).

Conclusion: Significant seasonality in T1D onset with peak values during the cold month might support the hypothesis that some environmental factors (eg. infections) may interfere with T1D onset.

**#204 Bone status in patients with diabetes mellitus**

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Introduction: Decreased insulin secretion, insulin resistance, hyperglycemia and adipokines have important role in metabolic changes of bone tissue in patients with diabetes mellitus type 2 (DMT2). Another factors that affect bone quality in DMT2 are: lifestyle, physical activity and nutrition (intake of calcium, vitamin D, zinc).

Aim: Our aim was to define bone status in our patients by measuring serum concentration of bone turnover markers, vitamin D and bone mineral density (BMD) values. In addition, the aim was to analyse the influence of adiponectin and IL-6 on bone metabolism, especially in obese patients with DMT2.

Patients and methods: Two groups of patients were included: 1. Patients with newly diagnosed diabetes mellitus; 2. Patients treated with antidiabetic drugs 10 or more than 10 years. From the study group were excluded patients with DMT2, treated with antidiabetic drugs less than 10 years. Serum osteocalcin, crosslaps, IL-6, adiponectin and 25-hydroxyvitamin D were quantified through the ELISA technique. Correlations were investigated using Pearson correlation test. Results were considered statistically significant if \( p < 0.05 \).

Results: Negative correlation between BMD of lumbar spine and IL-6 has been found in both groups (\( R = -0.30, \ p = 0.05 \)). Serum crosslaps and BMD of the lumbar spine correlated statistically significant and negative in group with newly diagnosed diabetes (\( R = -0.45, \ p < 0.05 \)). Although it is not significant, correlation between adiponectin and BMD is positive and on the border of significance (\( R = 0.27, \ p = 0.45 \)).

Discussion: Adipokines produced by adipose tissue affect bone status in patients with diabetes mellitus.
# 24 The Different Response of Male and Female Fetuses to Vibratory Acoustic Stimulation Test: Analytical and Prospective Study

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Introduction: One of the tests used to assess the health of fetus is Non Stress Test (NST); Vibratory Acoustic Stimulation (VAS) is applied to reduce nonreactive cases and the time of NST and to wake the fetus up while sleeping.

Aim: This study aims to investigate the different response of male and female fetuses to VAS in the Clinic of Gynecology and Obstetrics in Tonekabon, Iran, in 2014-2015.

Material and Methods: 100 women with gestational age of 32-40 weeks were included in this study through random sampling. The pregnant women lay on the flank and NST was carried out before the VAS, then fetus’s head was stimulated for 3 seconds from over the womb by using an electric toothbrush and NST was performed again. The time required to achieve the result of NST was recorded in the prepared checklist. The data analyzed with paired T-test and one-way ANOVA in SPSS19.

Results: The average reaction time of NST in female fetuses proved to be lower (108.2 seconds) than male fetuses (50.26 seconds). Paired T-test indicated that there was a more significant difference between the mean reaction time of NST before and after VAS in women with female fetuses (P=0.014). However, in women with male fetuses there was no significant difference (P=0.175).

Discussion: The hearing center in the brain of the fetus is formed at 26-28 weeks of pregnancy, thus VAS’s response indirectly confirms the health of brain stem and the auditory nerves in fetus, especially in the female fetus.

# 59 THE INFLUENCE OF EARLY MULTIFETAL REDUCTION IN TRICHORIONIC TRIPLET PREGNANCIES

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Introduction: To decrease the risks associated with triplets and high-order pregnancies multifetal pregnancy reduction (MFPR) is performed.

Aim: To evaluate the effectiveness of early transabdominal MFPR in trichorionic triplet pregnancies as compared with ongoing triplet pregnancies and twin pregnancies in terms of perinatal outcomes.

Patients and methods: In this retrospective study, 57 women with trichorionic triplet pregnancies undergoing fetal reduction to a twin pregnancy, 51 women with an ongoing trichorionic triplet pregnancy and with 60 with a primary dichorionic twin pregnancy were included.

Results: Median gestation age at delivery was 35.6 (interquartile range [IQR], 32.8-37 weeks) for triplets reduced to twins, 32.8 weeks (IQR, 27.6-34.7 weeks) for ongoing triplets,
and 37 weeks (IQR, 35.1-38.3 weeks) for primary twins (P <0.01 difference between all groups). Loss of the complete pregnancy prior to 24 weeks occurred in 3 pregnancies after reduction (5.3%) vs in 9 ongoing triplets (19.6%) and 2 primary twins (3.33%). Preterm delivery before 32 weeks of gestation occurred less in the reduction group compared with the ongoing triplets (12 [20.9%] vs 18 [35.29%]), but still more often than in primary twins 7 (11.66%).

Discussion: MFPR seems to be associated with a decreased risk of pregnancy loss both before 24 nad 32 weeks of gestation in women with trichorionic triplet reduction. This is significant reduction in perinatal deaths. Nevertheless, the prevention of multiple gestations therefore should have priority over MFPR. However, when these pregnancies occur despite adequate precautions, parents should be counseled for MFPR.

#72 Health-related quality of life of children and adolescents with arterial hypertension: an observational study

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Introduction: Health related quality of life (HRQOL) measures have become increasingly important in health surveillance and evaluation of the patients’ disease burden. While several diseases have been shown to negatively influence HRQOL, the impact of paediatric arterial hypertension has not been finally determined yet.

Aim: To assess the influence of arterial hypertension on the HRQOL of children and adolescents.

Patients and Methods: We conducted a cross-sectional study comprising 69 parents and 70 children aged 5-18 years, who had been diagnosed with arterial hypertension at a regional hospital department for paediatric nephrology and hypertension. The control group consisted of 100 parents and 99 children from a local primary school. The Child and Adolescent self-report and parent proxy-report PedsQL™ 4.0 Generic Core Scale Questionnaires were administered via postal survey. Statistical significance was assessed with independent samples t-test.

Results: Patients with arterial hypertension had a significantly lower overall HRQOL (p=0.001), along with a lower physical functioning score (p<0.001), emotional functioning score (p=0.005), school functioning score (p=0.035) and the combined psychosocial health summary score (p=0.005). There were no significant differences between respective parent-proxy and child report scores.

Discussion: Consistent with previous studies on HRQOL in the adult hypertensive population as well as in paediatric patients with chronic diseases, our findings suggest a lower HRQOL in the paediatric hypertensive population. In accordance with the WHO definition of health of physical, emotional and social well-being, we suggest encompassing a broader view on treatment outcomes in children and adolescents with arterial hypertension.

#135 Investigating the Correlation Between Free Testosterone And Components of Metabolic Syndrome in Women With Polycystic Ovary Syndrome.

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Polycystic ovary syndrome (PCOS) is recognized as one of the most common endocrinological disorders in women. PCOS and metabolic syndrome (MBS) and its components have many features in common. Many studies show links between sex hormones and metabolic dysfunction in hyperandrogenemic women.

The aim of this project was to study the associations between free testosterone (FT) and each component of MBS in PCOS women.

This cross sectional study was conducted over 215 women with confirmed PCOS by Rotterdam criteria. The 2005 modified Adult Treatment Panel III criteria (presence of three or more risk factors) was used for dividing patients into two subgroups of women with or without MBS. The relationship between FT and component of MBS was evaluated by Pearson’s correlation and t-test.

MBS was identified in 62 patients (28.3%) of PCOS women. In patients with blood pressure (BP) ≥ 130/85 (mm Hg), the level of FT was significantly higher (2.16 ± 1.35) than patients having BP less than that amount (1.60 ± 1.07) (P= 0.029). Also patients having diastolic pressure (DBP) ≥ 85 (mm Hg), had higher FT (2.33 ± 1.39) compared to those having DBP ≤ 85 (1.60 ± 1.07) (P=0.026). No correlation observed between FT and other components of MBS.

Data indicated that BP and DBP but not other components of MBS are associated with higher amounts of FT. therefore PCOS patients having elevated FT should be offered early and regular screening tests for hypertension.

#144 Role and importance of electrocardiography in pediatric practice

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Introduction: Electrocardiogram of babies and children is different than the normal adults. During the routine interpretation of electrocardiogram we compute the rhythm, frequency, electrical axis and hypertrophy of one of the heart chambers or whole heart. Electrocardiography at children age is used in goal of detection, follow up and results of treatment of rhythm disorders. But also, it is used as a help in diagnosis of congenital heart diseases. ECG is most commonly used diagnostic method in medicine.

Material and methods: 621 electrocardiograms were analyzed from the archive of Community health center Breza. This number represents 5.8% of all examinations. Research had retrospective character.

Results: Indications for electrocardiography were: suspected rhythm disorders (48.5%), chest pain (28%), preoperative preparation (20%), antiarrhythmic therapy control (1%), evaluation of heart hypertrophy (0.4%), electrolytes disorders (0.1%), and others (2%).

During analysis of ECG we evidenced mild rhythm disorders (92%) – sinus arrhythmia, sinus tachycardia, sinus bradycardia, incomplete right bundle branch block, junctional rhythm, extrasystoles, wandering atrial pacemaker, 1st degree AV block

Significant rhythm disorders (8%) – Paroxysmal supraventricular tachycardia, 1st and 2nd degree AV block, Wolff-Parkinson-White syndrome, Sinus pause

We found physiological ECG-s at 89.1%, and pathological at 10.9%.

Conclusion: Electrocardiography is basic method and it still remains the foundation of evaluation heart rhythm disorders in children age. Very important method is also continuous ECG holter monitoring. ECG has big importance in everyday preoperative preparations for every surgery/intervention at pediatric age. This method is also important in chest pain differentiation and control of therapy for hearth rhythm disorders.
#217 Weightlifting core - analysis and characteristics of young athletes group.
Selected topics.
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Introduction. This paper concerns the observation and results made during the macro-consultation of junior national team of Polish Weightlifting Federation.

Aim. Assess physical condition of group, identify problems and concerns of the athletes.

Patients and methods. The study group included 141 athletes (39 women and 102 men). A comprehensive approach using a series of studies (patient history, functional movement screen (FMS), video-analysis of motion pattern and orthopedic examination) ensured the credibility. Comparison of symptoms reported and results from the literature databases (EBSCO, and pub med) was made.

Results. Average age of the group was 18 years (the youngest athlete - 15, the oldest - 20). The average weight was 82 kg for males, and 65kg for females, average height - 175 cm and 163 cm respectively, which places both sexes between 25 - 50 of population percentile (in the normal range). Most common complain was pain in the lumbar spine - reported by 66.7% of the group (compared to 23.1% in the literature). The main reasons are overload and movement apparatus abnormalities (over 50%). Improper position of the pelvis (15% - mainly iliac asymmetry and anteversion) can result in pain in the lumbar region. Proper range of motion and lack of neurological symptoms suggests degenerative changes in the fibrous ring.

Discussion. Recommendations for athletes should include changes in training in order to eliminate functional disorders, performing diagnostic tests to confirm the diagnoses proposed, the expansion of the specialized diagnostic testing and follow-up.

#42 Smoking habits among medical students: a survey at the Prishtina University Faculty of Medicine
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Introduction: Smoking is a common habit among the population in Kosovo. In order to reduce the rates of morbidity/mortality, medical professionals are expected to incorporate efforts to reduce smoking in their practice.

Aim: To describe smoking habits among medical students from all departments of the Prishtina University Faculty of Medicine.

Patients and method: A self-administered questionnaire used was derived from the Global Tobacco Survey. A total of 470 students were invited to participate in the study. Data were tested with SPSS. A descriptive statistical method was used to describe variables.

Results: The remarkable finding is the very low percentage (16.9%) of these students who currently smoke cigarettes. Current smokers were 79, 74.7 % males, and 25.3 % females, making the prevalence of smoking 39.3 % of male and 8.33 % of female. Less than one pack of cigarettes used to smoke 55.5% of students. Almost half of them (47.6%) who smoke reported to have a smoker inside the family. A bad habit of smoking in the areas with non smokers is present to the 74.7% of respondents.
Discussion: Smoking is not a usual habit among medical students in Kosovo. Our findings are similar to other studies done worldwide among students. Respondents thought that doctors should set a good example by not smoking. As a conclusion we think that despite the low percentage of smokers some of habits are not accepted by the society and its need for further activities and more education on this issue.

#47 Knowledge about the risk factors for metabolic syndrome in medical students – gender differences (case control study)

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INTRODUCTION. Metabolic syndrome was recognized in last twenty years as important risk factor in the emergence of cardiovascular disease. Process of education, knowledge and attitudes of medical students are very important in the aim of prevention disease.

AIM. The aim of research was examine knowledge of medical students in Foca on the last year study about risk factors for metabolic syndrome in relation to gender and their attitudes about their own health status and individual health habits.

METHODOLOGY. In this study participated thirty students from the sixth year of medicine. We used a specific questionnaire, designed for this study, which was answered by students. By means of that questions we obtained data about attitudes, knowledge and individual health habits of the students. Assessment of nutritional status was based on statements of body weight and body height, on basis which nutritional status was estimated according to criteria World Health Organization.

RESULTS. Students knowledge of their initial blood pressure and cholesterol is equally in both genders. About half of the students know definition of obesity by International Diabetes Federation. In this study we have shown a high prevalence of smoking among students of both genders and male students are more often obese than female students.

DISCUSSION. Examined students have a high level knowledge about risk factors for a metabolic syndrome, but this knowledge is necessary to improve. The prevalence of obesity is higher among male students and it is necessary to implement the acquired knowledge in order to prevent metabolic syndrome and to reduce the incidence of cardiovascular disease.

#106 Motivation, non-response reasons, recruitment strategies and response rates in research bronchoscopy studies: A literature review.

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Introduction: Bronchoscopy is the preferred method for collecting biological samples from the lower airways of subjects in clinical research. However, ensuring participation in clinical research might be challenging when the research includes an invasive procedure.

Aim: To review the literature to look for information on participation in research bronchoscopy studies.

Material and Methods: We performed a systematic literature search on participation in research bronchoscopy studies in February 2014 using the search engines of PubMed and EMBASE databases.

Results: Seven relevant papers were included. Motivation was an endpoint in six papers, but also declining reasons and recruitment strategies seemed important. Human subjects participate in research bronchoscopy studies for personal benefit and altruism. Inconvenience associated with research, in addition to fear of procedures, are considered barriers. Radio, especially news stations, generated the most inquiries for a clinical study.
involving bronchoscopy. Furthermore, it appeared that control subjects and younger individuals had lower response rates.

Discussion: Fear of procedures as non-response reason and participation motives conform to previous research. Perceived benefits from non-therapeutic trials among participants should emphasize the importance of providing adequate and detailed information to eligible subjects. Our average response rate was lower than previous reported rates from non-invasive COPD studies, possibly suggesting higher participation rates in studies without invasive procedures. There is a lack of information on participation in research bronchoscopy studies in the literature. A bronchoscopy study is initiated at Haukeland University Hospital, Bergen, Norway, to examine microbiome’s role in COPD, and participation will be explored as a substudy.

#148 Self medication practices among undergraduate medical and dentistry students
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Although self medication is widely accepted practice, it should be done only following adequate patient education.

A cross sectional study was carried out on 104 medical students – MS and 88 dentistry students – DS (N=192), as well as a self-developed, prevalidated questionnaire consisting of 28 questions was created for data collection. The questionnaires were distributed to the students from the 1st to the 6th year of studies at the Medical Faculty – Skopje and Faculty of Dentistry – Skopje, Macedonia.

Self-medication was reported by 77% MS and 80% DS. 37% MS and 40% DS do feel confident for practicing self medication, while 40% MS and 38% DS do not. Considering our results DS prefer to consult a doctor when experiencing allergy symptoms significantly more when compared to MS (positive answer - 62% MS, 80%DS vs. negative answer - 38% MS, 20% DS, p=0.009, p<0.05). MS feel significantly more confident over DS for self medication of allergy symptoms (positive answer - 38% MS, 24%DS vs. negative answer - 63% MS, 76% DS, p=0.04, p<0.05). On the other hand, MS feel significantly more confident in taking medication for gastrointestinal – GI problems (p=0.006, p<0.05), while the difference was not significant considering the use of antihistamines (p=0.395, p>0.05).

As future medical doctors this issue plays an important role in the health care system due to the responsibility that doctors should have. Taking this into consideration, the necessity of approaching the pattern and extent of self medication is crucial.

#152 THE ASSOCIATION BETWEEN DURATION OF PLAYING ELECTRONIC GAMES (E-GAMES) AND BODY WEIGHT AMONG PRIMARY SCHOOL AGE CHILDREN (6-12 YEARS OLD) IN SAUDI ARABIA.
Ashry Gad Mohamed1, Abdulaziz Hamad Alhamad2, Abdullah Abdulaaliz Altowim3, Abdulaziz Mohammed Al-Muhanna2, Khalid Obaid Al shaibani2, Mamdouh nawaf Al-Enezi1, Abdullah Nael Alanazi2, Abdulelah Abdulsalam Al-Thowaini3
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Aim: To assess the possible association between duration of playing electronic games (e-games) and body weight among primary school age children (6-12 years old) in Riyadh, Saudi Arabia 2015.

Methods: A cross sectional study was conducted on primary school students between the ages of 6-12 years. Multistage sampling technique was used to select the sample as follows. Riyadh is divided into five administrative regions (North, South, middle, East and East). A list of schools in each region was collected and numbered randomly by the Random Number Generator (RNG). After choosing random schools, the next step was choosing a random class by the RNG and asking all students in that chosen class to fill out the developed questionnaire. Well trained investigators then measured the weight and height of each student.

Results: The study included 718 students. Higher Body Mass Index (BMI) was associated with more hours of playing e-games ($P=0.008$), cooking types of e-games and duration ($P=0.023, P=0.018$), duration of playing adventure e-games ($P=0.008$), history of obesity in family ($P=0.000$), child’s age (0.018), and child’s height ($P=0.012$). Parents’ education, family income, nationality of the participants, house region, personal electronic devices, and age of starting playing e-games were not significantly associated with BMI.

Conclusion: The study demonstrates that duration of playing electronic games has an impact on child BMI.
#21 Retrospective Analysis of Physical Activity in individuals with bipolar disorder

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Introduction: Bipolar disorder (BD) is accompanied by a high number of co-morbidities (Co-M). Especially overweight, systematic inflammation and cognitive deficits are highly prevalent and increase within the course of illness. Physical activity (PA) was found to have beneficial effects not only on psychiatric symptoms, but also on Co-M such as reduced weight, better neurocognitive performance and reduced inflammation.

Aim: The aim of the study is to identify correlates of PA in patients suffering from BD. Moreover, the PA behaviour of patients should be compared to healthy controls.

Methods and Participants: 117 patients, euthymic at point of testing, and 71 healthy controls completed the self-reported International Physical Activity Questionnaire (IPAQ) interrogating PA of the past 7 days. Furthermore, inflammatory biomarkers and clinical parameters were gathered.

Results: There was no difference in PA behaviour between patients and controls. BMI, global functioning and some domains of cognition (attention, memory and executive functioning) correlated significantly with PA in BD. Inflammatory markers, clinical presentation of BD and premorbid IQ showed no correlation with PA.

Conclusion: In our cohort PA correlated with specific cognitive domains in individuals with BD, displaying better performance in patients with higher PA. However, the study could not support previous findings suggesting that PA correlates with inflammatory markers and clinical parameters. In conclusion, PA might offer a concomitant therapy targeting Co-M and cognitive performance in BD. However, further data concerning PA from a less subjectivity prone questionnaire investigating PA behaviour over a longer period of time are necessary to verify these findings.

#45 Obesity and the circadian molecular clock in bipolar disorder – a gene expression analysis of ARNTL and MAOA

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Introduction: Study participants with bipolar disorder (BD) show a higher tendency towards malfunctions in the molecular circadian clock compared to the healthy population. Several genetic polymorphisms of CLOCK-genes are associated with BD. Nevertheless, it is interesting whether gene expression of clock genes influence pathogenesis of BD.

Methods: 56 patients with BD and 60 healthy subjects were recruited within the ongoing Austrian BIPFAT and BIPGEN study. The RNA has been extracted and converted into cDNA. The latter was quantified using real time PCR (qPCR) operating on TaqMan® assays. Gene expression of the genes MAO-A (monoamine oxidase A) and ARNTL (aryl hydrocarbon receptor nuclear translocator-like) were compared to the expression of the housekeeping gene 18S. Regression analysis was performed with STATA.

Results: Preliminary results show statistically significant differences in the expression of MAOA and ARNTL in synopsis with body mass index (p < 0.05). Further results will be presented at the ISC Congress 2016 in Graz.
#152 THE ASSOCIATION BETWEEN DURATION OF PLAYING ELECTRONIC GAMES (E-GAMES) AND BODY WEIGHT AMONG PRIMARY SCHOOL AGE CHILDREN (6-12 YEARS OLD) IN SAUDI ARABIA.

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Conclusion: The study demonstrates that duration of playing electronic games has an impact on child BMI.

#151 The effect of attention deficit hyperactivity disorder on metabolic control of type 1 diabetes mellitus in adolescents: a case control study

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Introduction: Type 1 diabetes mellitus (T1DM) is the most common form of diabetes in adolescents. Self control and proper insulin application are necessary to achieve good metabolic control, which is crucial for preventing complications. Attention deficit hyperactivity disorder (ADHD) is one of the most common psychiatric diagnoses in childhood and can affect daily functioning on many levels.

Aim: We aimed to identify adolescents with T1DM and ADHD and assess the effect of ADHD on metabolic control.

Patients and methods: A cross-sectional case-control study included 101 patients (age 11-17) with T1DM. Development and Well-Being Assessment (DAWBA) questionnaire and psychiatric clinical examination were used to identify a group with T1DM and ADHD. Indicators of metabolic control were collected from available medical documentation for the last 12 months and compared between cases (patients with T1DM and ADHD) and controls (T1DM patients without ADHD).
Results: 12 of 101 adolescents with T1DM were diagnosed with ADHD. We found a statistically significant difference (p=0.04) in glycated haemoglobin (HbA1C) between the two groups – it was higher in the group with T1DM and ADHD (8.6%) than in the control group (8%).

Discussion: It is known that ADHD significantly affects daily functioning in a child or adolescent. In this study it was confirmed that adolescents with T1DM and ADHD had worse metabolic control than the control group. Managing T1DM in pediatric patients with ADHD needs more attention and parental supervision.

#199 Study of Psychiatry Patients Admitted In Emergency Settings
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BACKGROUND: Since the 1960s, with deinstitutionalization, the demand for psychiatric emergency services (PES) has increased in India and all over the world. Hence, it becomes essential to understand the characteristics of the population admitted in emergency settings, in order to optimize care and treatment flow.

OBJECTIVES: To study the socio-demographic data of patients admitted as psychiatric emergencies and the reasons for admission, diagnosis, co-morbidity and emergency management in these patients.

METHODS: The study was conducted after obtaining institutional ethics committee approval. 50 consecutive patients admitted to psychiatric settings in emergency were identified. The records of these patients were obtained from the medical records section and indoor papers were examined for the data recording using case record form. Frequency distribution test were used for analysis.

RESULTS: The study of sociodemographic characteristics of the sample revealed a M:F ratio of 3.5:1 and 50% were found to be unemployed. 48% were diagnosed as Schizophrenia and related disorder and 32% had Substance related disorder. The most common reason for admission was suicidal ideations (30%). Of these 60% were diagnosed to have Schizophrenia and related disorders and 26.6% as Depression. The second most common reason was violence (28%) who received a diagnosis of Schizophrenia and related disorder (78.5%) and Substance related disorder (21.42%).

CONCLUSIONS: Suicidal ideations and violence are the most common reasons for emergency admissions. Adequate safety measures and medications should be available in PES to treat them.

#221 Autonomic regulation in patients with anorexia nervosa, obese, athlets and normal weight controls
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Objective: Different parameters of autonomic regulation were compared within patients with anorexia nervosa, athlets, obese, overweights and normal weight controls.

Methods: As anorexia nervosa affects majorly woman, only female participants were included.

The age range was between 18 and 40 years.

28 hour electrocardiography records were used to calculate autonomic parameters. These were compared to standard values of a database managed by the Human Research
Institute. Heart rate, vagal tone, vegetative coefficient, vegetative activation, sleep quality and length of sleep were analysed and compared.

Results: A total of 78 patients were recruited: 12 patients with anorexia nervosa, 17 overweights, 13 obese, 19 athletes and 17 normal weighted controls.

Athletes had a low heart rate and an increased total heart rate variability. While the vegetative coefficient was in the average, sympathetic tone and the vagal tone both were increased. Obese patients had an increased heart rate at night and a decreased total heart rate variability in the daytime and at night. Patients with anorexia nervosa had bradycardia at night. In the daytime both, sympathetic tone and the vegetative coefficient, were decreased.

Interpretation: Physical activity leads to a decreased heart rate and an increase in total heart rate variability. Obesity is associated with an increased heart rate at night and a decrease in total heart rate variability. This may be due to reduced physical activity. Low metabolic energy disposition in patients with anorexia nervosa may be the cause for bradycardia and a decreased sympathetic tone in the daytime.
#26 B-type natriuretic peptide is an informative tool in the early management of ST elevation acute coronary syndromes.

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Introduction: In patients with acute coronary syndrome serial B-type natriuretic peptide (BNP) measurements accurately predict the risk of death. However, the relationship of BNP to invasive or non-invasive strategy in ST elevation acute coronary syndrome (STE-ACS) patients remains unclear.

Aim: To assess the prognostic value of BNP in the early management of patients with STE-ACS, regarding the method of reperfusion therapy (invasive or non-invasive).

Materials and methods: 59 STE-ACS patients presenting within 3 hours of symptom onset were included in the prospective study. Patients underwent either Primary PCI (33 subjects) or Fibrinolysis (26 subjects). The primary end point was composite of death, shock, reinfarction up to 30 days. Baseline, Day 3 and Day 7 BNP were available for all patients. Statistical analysis was performed by means of T-test, chi-square test, Kaplan-Meier survival analysis, a p<0.05 was considered statistically significant.

Results: Increasing baseline BNP levels were associated with higher risk of primary end point (p<0.001). At 30 days, primary end point occurred in 9% patients who were assigned to Primary PCI and 19,2% in Fibrinolysis (relative risk in the Primary PCI group, 0,47; p=0.004 ). Median BNP level declined significantly after Primary PCI compared to Fibrinolysis (P<0.01) at Day 7. Area under the curve for baseline BNP was 0.83 [95% CI, 0.72-0.88], P<0.001, with a sensitivity/specificity of 0.82/0.79.

Conclusion: Baseline and subsequent BNP explains lower event rates with Primary PCI in STE-ACS patients. Thus, BNP may be used as an informative tool in the early management of STE-ACS.

#65 Review study - The role of MSCT coronarography in the preparation of patients for surgical replacement of the aortic valve of the heart

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Introduction: Standard procedure before replacing the aortic valve includes coronarography to identify coronary artery disease, but recent trends show a significant role of multislice computed tomography (MSCT) in the visualization of the coronary arteries. Improvement in technology of MSCT scanners allowed better image quality and new possibilities.

Aim: Analysis of atherosclerotic lesions in coronary arteries with MSCT coronarography (noninvasive method) and comparation of these data with the data obtained during the classical coronarography (invasive method).

Patients and methods: The study group consisted of 32 patients, 23 males and 9 females. 21 patients had aortic insufficiency and 11 had aortic stenosis. In process of examination, we used both invasive and MSCT coronarography. The total number of the analyzed segment of the coronary artery (512) is determined on the basis of the classification CASS. We used quantitative coronary angiography (QCA).
Results: From 392 examined segments we obtained results that indicate the presence of lesions greater than 50% of the diameter of the blood vessel in 84 segments (21.5%), while in the remaining 308 (78.5%) such lesions were not observed. Coronarography could be avoided in 65% of cases.

Discussion: Studies have shown that MSCT coronarography has high accuracy in detection of lesions of the coronary arteries greater than 50% with sensitivity in range of 82% - 95% and specificity 82% - 98%.

Conclusion - results from this study proved MSCT coronarography as an important method, that can replace classical coronarography in 65% of cases, which is confirmed in other studies.

#124 Vasoregulatory endothelial function in coronary heart disease patients
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Coronary heart disease (CHD) due to coronary artery atherosclerosis is the main cause of morbidity and mortality all over the world. According to some authors endothelial dysfunction plays the key role in the pathogenesis of various pathological conditions including atherosclerosis.

Aim – to evaluate the diagnostic and prognostic significance of vascular regulating endothelial function disorders in CHD patients.

We examined 64 CHD patients, including 22 patients with functional class (FC) II, 23 patients – with III FC of stable and 19 patients – with unstable (progressive) angina. 26 healthy individuals were the control group. We used reactive hyperemia test and test with vasodilator nitroglycerin [D. Celermajer et al., 1992] to study the endothelial vasomotor function. The criteria of endothelial dysfunction included the decline in endothelium-dependent and endothelium-independent vasodilation (EDVD and EIDVD) and increased of levels of vasoconstrictor endothelin-1.

Results. Impaired EDVD occurred in 49 of 68 (76.6%) patients, EIDVD – in 45 (70.3%) patients. The levels of endothelin-1 were significantly higher in CHD patients (11.420.41 ng/ml) according control group (4.010.36 ng/ml; p<0,05). The frequency of endothelial dysfunction, as well as its extent, increased with increasing CHD severity. The most significant changes were in unstable angina patients.

Conclusions. In CHD patients there is a violation of both endothelium-dependent and endothelium-independent vasodilation. The development and progression of CHD are associated with impaired of vasoregulatory endothelial function, which is characterized by both decrease of vasodilation and increase of vasoconstrictor endothelial function.

#209 ERGOSPIROMETRY IN DETECTING DIASTOLIC HEART FAILURE IN PATIENTS WITH ARTERIAL HYPERTENSION
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Introduction: Dyspnea is common in patients with hypertension (HTN) because of development of diastolic heart failure (DHF). Cardiopulmonary (CPET) and exercise stress echo testing (ESE) have been validated in the stratification of patients with diastolic heart failure (DHF).

Aim: To analyse the parameters of combined CPET-ESE in patients with HTN, exertional dyspnea with normal resting left ventricular systolic and diastolic (LVSF and LVDF) in the early detection of DHF.
Patients and Methods: CPET-ESE was performed in 82 patients with HTN, exertional dyspnea and normal resting LVSF and LVDF (supine bicycle, ramp protocol, 15 W/min increments). Pulsed wave Doppler measurements of transmitral flow (E and A waves) and tissue doppler mitral annular imaging (e’ and a’ waves) have been measured at rest and at maximal exercise. E/ e’≥15 was criteria for unmasked DHF.

Results: DHF was found in 7 patients (8.5%) during CPET-ESE test. Patients with DHF had lower peak VO2 (p=0.012), and VO2 at the VAT (p=0.0025), and impaired ventilatory response with higher VE/VCO2 slope (p<0.0001). VE/VCO2 slope was an independent multivariate predictor of DHF (p=0.033; RR 25; 95%CI: 1.3-504.0).

Discussion: CPET-ESE has very high accuracy in early detection of DHF in patients with HTN, exertional and normal resting echo values. The exercise test unmasked impaired ventilatory response in patients with dyspnea with excellent correlation between VE/VCO2 slope and E/e’ relationship confirming the need for assessment the diastolic properties during the effort even in patients with normal resting LV function.
#2 IONTOPHORETICAL AND ORAL COXIBES INPUT IN INJURED CARTILAGE OF PARACHUTERS

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The research goal was to quantify concentration of Meloxicam (M), applied per oral and by using iontophoresis (IF), in meniscus and synovial liquid in damaged knee ankle, caused by injuries while parachuting. Research sample included 8 sport parachuters (of male gender), age of 28-48, divided into 2 groups with 4 examinees in each group. In the first group M (0.015g) was given per orally (1 tablet per day) during 5 days, and in second group of patients, the same drug dosis was applied using electrophoresis (EF) (=ionotophoresis). Meniscus and synovial liquid samples were taken afterwards performing meniscectomy. By methods of liquid-mass spectrometry (HPCL) drug concentration was quantified in microgram of medicament per g of tissue, applied in both ways. Research results were tested by Student t-test for small pair samples, after which high-significant concentration of drug was noted (p<0.001) in administration of the drug using EF in meniscus and synovial liquid in comparison to five day per oral drug application. Discussion: By eliminating locally caused system effects and maximal concentration of drug, in term of longer maintenance of the drug in targeted tissue, EF can be recommended as a method of choice in clinical practice for treating sport injuries. Conclusion: Electrophoretic application of Meloxicam in targeted knee joint provides significant saturation and better effectiveness of drug, compared to per oral application.

#10 An Innovative Approach to Platelet-Rich Plasma Application in Military Medicine; a Review Article

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Platelet-rich plasma (PRP) is an autologous blood production that majorly contains high concentration of platelet and is known for its healing properties. The purpose of this paper was to assess the future application of PRP in military medicine.

Evidence Acquisition: The appropriate online databases including PubMed, Science Direct, and Wily were searched until January 15, 2015, using free text and MeSH. Only English papers were included such as systematic reviews, clinical trials, and randomized clinical trials (RCTs). Included studies were categorized based on topics related to regenerative characteristics of PRP, and considering at least one clinical output. A total of 59 papers including RCTs, case control, and review studies were found among which 49 publications showed favorable outcomes with the use of PRP. The reviewed studies were separated into six groups as follows: Tendon injury, bone injury, wound healing, dermatology, rejuvenation, and hair growth.

Results: According to reviewed studies, use of PRP produced “inconsistent” but “promising” results in early trials. This study attempts to evaluate perspectives of PRP application in regenerative medicine as an efficient treatment and an innovative technology for military medicine through implementation of a review of literature.

This review represents an advantage of PRP application in healing quality such as improved regeneration for bone graft and an enhanced wound-healing rate; however, PRP therapy system has still remained controversial due to the lack of reliable studies.
#69 Does fall history predict fractures in postmenopausal women?

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The purpose of this study was to evaluate if fall history is a predictor of postmenopausal fractures. In addition, we will estimate if fall risk predicts fractures differently according to type of fall and site of fracture.

Study design was prospective cohort study by using Kuopio Osteoporosis Risk Factor and Prevention (OSTPRE) Study cohort. The OSTPRE cohort began in 1989 with a population (n=14220) of women born in Kuopio Province, Finland. A total of 13100 women responded to baseline postal enquiry in 1989. A total of 3554/10594 women reported a fall in 1993-4 and 982/10594 women reported a subsequent fracture in 1994-9 which was validated by perusal of patient records.

Fracture history predicted strongly future fractures and fall history future falls.

A history of fall predicted a fracture with an OR of 1.30 (95% CI 1.14-1.49). Frequent (2+ falls/12 months) nonslip falls tended to have stronger predictive power (OR=1.43, 95% CI 1.11-1.85) than slip falls (OR 1.19, ns) or occasional (1 fall/12 months) falls.

Fracture history predicted falls (OR=1.18 (95% CI 1.03-1.34). However, wrist fracture did not predict falls (OR=0.88), while prediction of non-wrist fracture was stronger (OR=1.31 (1.13-1.52). Fracture history did not predict slip falls. The strongest prediction was for non-wrist fracture -> frequent nonslip fall with an OR of 1.62 (95% CI 1.24-2.13).

Tendency for frequent nonslip falls increase fracture risk. As fall history is easy acquire, it should be considered as an addition to FRAX.

#98 Different Clinical and Radiological Characteristics of Andersson Lesion in Ankylosing Spondylitis: A Case Report

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Background: Ankylosing spondylitis (AS) is an idiopathic inflammatory disorder that primarily affects the sacroiliac joints and the spine. It is characterized by the ossification of the spinal ligaments, joints and intervertebral discs. Mechanical forces and inflammation result in focal discal or discovertebral lesions of brittle spines that eventually result in pseudoarthrosis.

Case presentation

A 57-years-old Caucasian woman with AS under ambulatory management by rheumatologists was admitted to the rheumatology department because of worsening pain in her back and lower limbs unresponsive to conservative treatment. Radiological imaging showed signs consistent with spondylodiscitis of the Th11-Th12 intervertebral disc. When the treatment with prophylactic tuberculostatics was completed, the patient was continued with the biopharmaceutical treatment and followup was unremarkable. Three years later she presented to the rheumatologist with a four-week long history of pain in the lower thoracic spine, painful cramps in left lower limb, muscular weakness and a sensation of numbness. A magnetic resonance imaging (MRI) showed a pseudoarthrosis between these vertebrae. MRI scan from 3 years ago was revised to had shown a transverse fracture at the
same level and the suspected spondylodiscitis was classified as an Andersson lesion (AL). A decompression, posterior stabilization from the 9th thoracic to the 2nd lumbar vertebra and anterior stabilization at the Th11-Th12 was performed.

Conclusions: Inflammation is the main culprit of AL in early AS, while traumatic origin is believed to be responsible for AL in fully ankylosed spines. Conservative treatment and surgical instrumentation with fusion are possible, but there are no protocols yet.

#113 Prospective study of voice therapy effectiveness in patients with dysphonia: case series

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Introduction: dysphonia term is used for voice disorder characterized by altered vocal quality, pitch, loudness, or vocal effort that impairs communication or reduces voice-related quality of life. Depending on primary diagnosis patients have recommendations for therapy: operation, passive physiotherapy or voice therapy.

Aim: The aim of this study was to evaluate the effectiveness of voice therapy in patients, who used only this method in University Hospital in Latvia in year 2015.

Patients and methods: 5 patients with different diagnosis were observed. Objective and subjective evaluations of patients were made before and after therapy. Patients’ voice was analysed with Inventis program Daisy: jitter (Jt), shimmer (Sh), fundamental frequency (F0), harmonics to noise ratio (HNR), spectrography, phonetogram. Maximum phonation time (MPT) was measured and patient filled voice handicap index questionnaire. Afterwards dysphonia severity index (DSI) was calculated. Additionally, voice was evaluated with GRBAS (grade, roughness, breathiness, asthenia, strain) score by patient and researcher.

Results: After therapy Jt, Sh, F0 and HNR has improved in all patients, 2 patients reached normal findings of HNR and 3 normal findings of MPT (>10 sec). 4 of 5 patients had better DSI and VHI. Value of GRBAS score was mostly different in view of patient and researcher.

Discussion: This case study confirms that voice therapy could be effective also as a single therapeutic method in patients with dysphonia. Despite small number of patients objective and subjective values demonstrate improvement in voice disorders. It is reasonable to include voice therapy in the therapeutic strategy.

#203 Use of 3D-printed model for planning and assisting in closing wedge high tibial osteotomy: case report.

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Introduction. Three-dimensional (3D) rapid prototyping technology (RPT) used for printing models was introduced in the 1990 and already in industrial design for long before making its medical debut. Popularization of 3D printers tranformed RTP into a cheap and common method. Closing wedge high tibial osteotomy is a common, effective and well-established operating technique, however technically demanding. Moreover, pre-operative planning and intra-operative angle corrections are prone to errors.

Aim: Assistance of 3D printed models could allow more precise planning and performance of the surgery.

Patient and method: We would like to present 33 year old patient, who suffered of left lower limb deformation. The left knee was valgus, with 20° extension deficit. After full leg-lenght X-ray and computerised tomography (CT) scan of the knee, patient was classified for
multi-planar proximal close wedge osteotomy of the tibia to correct valgus knee and over-slope of tibial plateau. CT scan data was transformed into STL format model required for 3D-printing. Two models were created, first of the deformed proximal tibia and second one, a mirror image of right proximal tibia, then printed by external company. For pre-operative planning, model was cut with sting saw. After sterilization, pieces were used intra-operatively for determining correct angles.

Results. Full range of motion was restored. Full leg X-ray control image shows proper axis of the limb.

Discussion. Our experience shows 3D models to be particularly useful for planning of atypical and complicated operations. Using RPT may reduce the operation time, perioperative blood loss and time of X-ray exposition.
#22 Investigation complications of blood transfusion, patient safety and other related problems in patients with beta thalassemia in Dezful, south-west Iran in 2015

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Introduction and Objectives: Patients with thalassemia usually died due to diabetes or cardiovascular disease. This study was aimed to assess complications of blood transfusion, patient safety and other related problems in patients with beta thalassemia in Dezful, south-west Iran in 2015.

Materials and Methods: In this descriptive–analytical study data was collected by reviewing of medical records in thalassemia clinic in Dezful. Data were analyzed using SPSS and descriptive statistics.

Result: From 195 patients with thalassemia, 114 (%58.4) were males and 81 (%41.5) were women. 158 (%81) was major and 37 (%18.9) was intermediate. from this patients 13 patients (%6.6) had diabetes, 11 patients (%5.6) with hepatitis C, 5 patients (%2.5) with hepatitis B, 4 patients (2%) with heart disease and 4 (2%) had aplastic anemia. Most deaths (%62.5) were associated with hepatitis C. 81 (41.5%) and 40 (%20.5) had been injected Haemophilus influenza vaccine and HBV vaccine. Most blood factors was lack of factor 8 with 29 (14%), factor 7 in 10 (%5), von Willebrand factor with 9 cases (%4.6). 81 (41%) of the patients had undergone splenectomy surgery. 2 patients (1%) also had a bone marrow transplantation.

Conclusion: Considering low number of diseases diagnosed associated thalassemia and rate of vaccinations, more accurate tests and complete vaccinations are necessary.

#46 GPR55-mediated effects in colon carcinoma cells

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G protein-coupled receptor 55 (GPR55) and its endogenous ligand L-ß-lysophosphatidylinositol (LPI) are suggested to be involved in cancer development. A proliferative effect of GPR55 was shown for several cancer cell lines and a correlation between tumor aggressiveness and GPR55 expression was demonstrated.

The aim of this thesis is to characterize the effects of GPR55 in colon carcinoma cells.

Colon carcinoma cells SW480 and HCT116 were treated with LPI or the GPR55 antagonist CID16020046. Colon carcinoma cells were created that stably overexpress GPR55. Influences on potential signaling pathways were analyzed via Western blotting, immunocytochemistry and calcium-flux assay. Cell viability was investigated in several setups of a proliferation assay.

Treatment with the GPR55 antagonist reduced cell viability in a concentration and time dependent manner to less than 50%. The decrease in cell viability was not caused by induction of apoptosis or cell cycle arrest. LPI had no effect on cancer cells with only endogenous GPR55 expression, in none of the investigated signaling pathways or the cell viability assay. GPR55-overexpressing cells showed an increase in pERK1/2 after LPI treatment and a decrease after treatment with the antagonist. The stable GPR55
overexpression also caused an increase in proliferation compared to normal cells. However, this effect could not be further augmented by LPI treatment.

GPR55 has a pro-proliferative effect in colon carcinoma cells that is either independent of LPI or needs additional factors for proliferation stimulation. Heteromerization of GPR55 or modulation of LPI signaling by other substances was recently postulated and may be involved.

Acute myeloid leukemia associated with Klinefelter syndrome: a case report
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#120 Acute neurotoxicity during treatment of children with acute lymphoblastic leukemia
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Introduction: Survival in children with acute lymphoblastic leukemia (ALL) nowadays reach nearly 90%, due to significant improvement in diagnostics and treatment. Neurotoxicity is a rare complication of ALL therapy, with average incidence of 3-10%, but still correlates with life-threatening events, why remains a challenging clinical problem.

Aim: Our study analyzed the incidence of acute neurological complications during ALL treatment and its effect on treatment and quality of life.

Patients and methods: We conducted retrospective analysis of acute neurological complications in children with ALL, diagnosed and treated at University Children’s Hospital, between April 1995 and December 2015. Acute neurotoxicity was defined by WHO criteria, which included clinical, radiological and electrophysiological findings.

Results: Retrospective study included 259 consecutive pediatric patients with ALL, out of whom 56 children developed neurological toxicity (21.6%). Vincristine-induced peripheral neuropathy was the most common manifestation (44.6%), followed by: seizures (21.4%), headache (19.6%), intracranial hemorrhage (8.9%), sinus venous thrombosis (5.4%) and less frequent hemiparesis, hydrocephalus and intracranial hypertension (1.7%). Majority of neurological complications occurred during the induction phase of therapy. Most of these events showed reversible character, but we point out to four deaths due to neurotoxicity, all in induction phase of treatment.

Discussion: Acute neurotoxicity was detected in one fifth of children during early phase of ALL therapy, mostly reversible, but rarely could lead to fatal outcome. We stress the importance of rapid detection and prompt treatment to limit permanent neurological damage and influence on therapy outcome.

#139 Antitumor effect of the synthetic cannabinoid WIN55,212-2 on neuroendocrine tumor cells
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Introduction: Numerous studies have shown that cannabinoids are promising antitumor agents in various cancer models like glioma or breast cancer. Cannabinoids bind to CB1- and CB2-receptors and have shown to modulate signaling pathways involved in cell survival, invasion and angiogenesis.

Aims: The present study aimed to investigate the effects of the synthetic cannabinoid WIN55,212-2 on the small intestine neuroendocrine tumor (SI-NET) cell line P-STS.

Methods: P-STS cells were treated with WIN55 and the cell proliferation and viability was analysed by determination of cell number and by WST-assay. Induction of apoptosis was investigated by assessing Caspase-3/7-activation. Co-treatment with okadaic acid or L-cycloserin was performed to assess a contribution of Protein phosphatase 2A or ceramide de novo synthesis in the effects of WIN55. A gene expression analysis was done to validate the presence of CB-receptors and to study the effect of WIN55 on the expression of ID-1. To study effects on invasion and angiogenesis in vivo, cancer cells were grafted onto chicken chorioallantoic membrane (CAM) and the xenografts were stained immunohistochemically for Ki67 and SI-NET markers.

Results: WIN55 treatment resulted in a decrease in cell viability and an induction of apoptosis after 24h, whereas co-treatment with okadaic acid and L-cycloserin had no influence on the observed effects. WIN55 led to a downregulation of ID-1 and treated cancer cells showed a lower angiogenic potential in the CAM assay.

Discussion: The results demonstrate the antiproliferative and antiangiogenic effects of WIN55 on P-STS cells, whereas the underlying molecular mechanisms still need to be elucidated.

#193 HHV-6-specific T-cell immune reconstitution among children and adolescents after allogeneic stem cell transplantation

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Background/Purpose: After allogeneic stem cell transplantation (alloSCT) antigen specific T-cell-immunity against important antigens has to be developed. Reactivation of HHV-6 during this period may cause transplant-related complications.

Patients and Methods: 3, 6, 9, 12, 18 and 24 months (mts) after alloSCT patients’ peripheral blood mononuclear cells (PBMCs) are isolated, stimulated with HHV-6-specific antigen (U54) and cultured for 10 days. On day 10, cells are re-stimulated for 6 hours and, thereafter, stained for surface markers (CD3, CD4, CD8, CD56) and intracytoplasmatic activation markers (interleukin-2, interferon gamma, tumor necrosis factor alpha) for flow cytometric detection of virus-specific-T-cells.

Results: Up to now, we analysed 10 blood samples of patients 3 (n=4), 6 (n=3), 9, 12 and 18 (one each) mts after alloSCT. HHV-6-specific CD4 cells were detectable in 3/4 (3mts), 3/3 (6mts) 0/1 (9mts), 0/1 (12mts) and 1/1 (18mts). HHV-6-specific CD8 cells were detectable in 0/4 (3mts), 3/3 (6mts) 0/1 (9mts), 0/1 (12mts) and 1/1 (18mts).

The frequencies of HHV-6-specific CD4-cells ranged from 0.6-9.53 (median 1.86) % of CD4 cells. The frequencies of HHV-6-specific CD8-cells ranged from 0-12.3 (median 0.39) % of CD8 cells.

Conclusion: Development of HHV-6 specific immunity after alloSCT varies between patients. Further data is needed for a better understanding of HHV-6 specific immune reconstitution after allo-SCT.

Impact on medicine & Significance: A better understanding of the antigen-specific immune reconstitution after alloSCT improves management regarding virus monitoring, and treatment.
#13 THE ALIEN LIMB SYNDROME OF CORTICOBASEAL DEGENERATION IS BOTH COMMON AND INDEPENDENT OF APRAXIA

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Introduction: Patients with corticobasal degeneration (CBD) have well known difficulties in praxis and may experience alien limb phenomena (ALP). While cases of alien limb syndrome (ALS) with vascular or surgical aetiologies have received much attention, less is understood about ALS in CBD despite this being a diagnostic criterion. The ALS of CBD has been interpreted as a deficit in praxis. This study sought to establish whether this assumption is justified.

Methods: We reviewed the cases of 30 patients with CBD and 25 with the closely related tauopathy progressive supranuclear palsy (PSP) at a specialist neurology clinic. Consultations included a structured examination of praxis and 14 questions designed to elicit symptoms of ALS. Quantitative scores were allocated to each examination and questionnaire.

Results: 83% of CBD patients reported at least one possible ALP, 57% reported more than four. Only one PSP patient reported any ALP. Commonly reported ALP included spontaneous limb levitation (50%), the sense that the patient’s hand did not belong to them (50%), and reaching for objects against the patient’s will (30%). CBD patients with ALS rarely experienced a delusion of external control (17%). Importantly, no correlation was found between limb praxis and alien limb questionnaire scores among CBD patients.

Conclusions: Symptoms of ALS are common in CBD, but do not occur in PSP. Our results cast doubt on the assumption that ALS in CBD is a manifestation of severe apraxia.

#14 Validation of the new consensus criteria for the diagnosis of corticobasal degeneration

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Background: Corticobasal degeneration (CBD) is a complex neurodegenerative disorder. Accurate diagnosis is increasingly important, with the advent of clinical trials of drugs aimed at modifying the underlying tau pathology. CBD often presents with a ‘corticobasal syndrome’ including impairments of movement and cognition. However, patients with similar corticobasal syndromes can have neurodegenerative pathologies that are not CBD.

Methods: We applied the new consensus criteria of Armstrong and colleagues et al to a cohort of patients with detailed longitudinal clinical evaluation and neuropathology.

Results: In patients with pathologically confirmed CBD, accuracy of diagnosis was similar under the new and previous criteria: 9/19 (47%) met criteria for probable CBD at presentation, 13/19 (68%) at last clinical assessment. Patients with a corticobasal syndrome but without CBD pathology all (14/14) met the new diagnostic criteria of probable or possible CBD, demonstrating that the new criteria lacks the necessary specificity for an accurate ante mortem clinical diagnosis of CBD. None of the clinical features used in the new criteria were more common in the patients with CBD pathology (n=19) than without (n=14).
Conclusions: The Armstrong criteria usefully broadens the recognised clinical phenotype of CBD but does not sufficiently improve the specificity of diagnosis to increase the power of clinical trials or targeted applications of tau-based disease-modifying therapies. Further work is required to show whether biomarkers could be more effective than clinical signs in the diagnosis of CBD.

**#43 Combination of plasma rich growth factor (PRGF) with stem cell therapy is a new way to treat Alzheimer's disease.**

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Introduction: Alzheimer's Disease (AD) is a progressive neurodegenerative disease with altered neurogenesis. Platelet consists various growth factors which are able to stimulate neurogenesis and slow down neurodegeneration. Scientist from Spain shows that PRGF able to stimulate neurogenesis and reduce neurodegeneration in AD mouse model. It is also shown that there is a synergy effect when combined both PRGF and mesenchymal stem cells (MSC) therapy in bone regeneration. Thus, I hypothesize that combination of PRGF and neural progenitor stem cells has a synergy effect in treatment of AD.

Method: Two groups of mice, double transgenic APP/PS1 mice and no transgene mice were used in this experiment. APP/PS1 mice were intranasally administered growth factor extracted from platelet granules (PRGF). In control group mice, 0.9% saline was delivered. From 8th day onward, each mouse was given of bromodeoxyuridine (BrdU) intraperitoneally.

Result: BrdU-positive neurones are significantly increased in PRGF-treated mice compare. Fluro-Jade B positive neurones were reduced in PRGF-treated mice.

Conclusion: As cell proliferation detector, the increased of BrdU-positive neurones in PRGF-treated group indicated that PRGF induces neurogenesis. Beside that, reduced of cell death marker Fluro-Jade B in PRGF-treated group indicated that PRGF is able to prevent neurodegeneration. PRGF alone shows positive result, however, the therapeutic role of combining PRGF with neural progenitor stem cells are yet to be determine.

**#48 Validation study - Screening of major depression in patients with epilepsy: Validation of the Serbian NDDI-E questionnaire**

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Introduction: Major depression is the most common comorbidity in patients with epilepsy. Neurological Disorders Depression Inventory for Epilepsy (NDDI-E) is a reliable screening instrument made in order to distinguish between symptoms of depression and the symptoms that result from a cognitive disorder due to epilepsy, seizures and side effects of therapy.

The Aim: Validation of NDDI-E questionnaire in Serbian language.

Patients and Methods: The study group consisted of 103 patients diagnosed with epilepsy who were treated at the Clinic of Neurology, Clinical Center of Serbia. As a gold standard we used the Beck Depression Inventory (BDI). Translation of NDDI-E questionnaire was made bidirectionally.

Results: The NDDI-E Serbian version scores were significantly and positively correlated with those of the BDI (Spearman's $\rho = 0.622$, $p < 0.001$). Polytherapy, seizures in last 6 months and current treatment with antidepressants were variables seen more frequent in patients with epilepsy and major depression (respectively, $p=0.032$; $p=0.033$; $p=0.012$). At a score of $\geq 14$ the method showed 72% sensitivity, 95% specificity, 81% positive predictive value, and 94% negative predictive value.
Discussion: The results show that the optimal cut-off for the NDDI-E Serbian version is ≥14 which is consistent with that in other studies. Almost a fifth of patients showed signs of major depression episode. Patients that were not seizure free, and patients on polytherapy are more prone to depression which is similar to other NDDI-E validation studies.

Conclusion - The NDDI-E Serbian version constitutes a concise and consistent depression screening instrument for epilepsy patients.

#97 SYSTEMIC THROMBOLYSIS IN ACUTE ISCHAEMIC STROKE – ARE THERE SEX DIFFERENCES?

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Introduction: Women are at greater risk for poor functional outcome and increased severity of acute ischaemic stroke (AIS). Some previous studies suggested that female sex benefits more from intravenous thrombolysis compared to male, while others found no such correlation. The aim of this study was to investigate any possible gender differences in efficacy and safety of intravenous recombinant tissue plasminogen activator (rTPA) use among patients with AIS.

Methods: Data were collected from the register of AIS patients treated with intravenous rTPA in the Stroke Unit during an 8-year period. Patients’ baseline and clinical characteristics, functional outcome and treatment complications were determined. Functional outcome of patients were assessed by modified Rankin score (mRS) at 3 months after stroke onset.

Results: A total of 403 patients (34.5% female) were enrolled in the study. Among women and men with AIS treated with intravenous rTPA, there were no significant difference in an excellent functional outcome (mRS≤1) (63% of women vs. 53.7% of men, p = 0.08), favourable functional outcome (mRS≤2) (70.4% of women vs. 63.7% of men, p = 0.18) or in death (11.1% of women vs. 17.3% of men, p = 0.10) at 3 months. However, multivariate logistic regression analysis showed that there is a significant difference in death outcome at 3 months (OR 2.46, 95%CI 1.16-5.24).

Conclusion: Although men and women with AIS treated with intravenous rTPA have similar functional outcome, women are less likely to die at 3 months.

#170 A retrospective study of the effect of tPA on in-hospital mortality in patients hospitalized with ischemic stroke in Florida State from 2008-2012

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Introduction: Tissue Plasminogen Activator (tPA) administration is one of the thrombolytic therapies used for ischemic stroke patients. This study investigates in-hospital mortality among patients who received tPA compared to who did not.

Aim: The study’s aim investigates in-hospital mortality among patients who received tPA compared to patients did not.

Methods: A cross-sectional study was used with sample number 133052 from the Florida Stroke Registry (2008-2012). Using the chi-square test to assess the association between categorical variables, binary logistic regression to estimate our adjusted and unadjusted odds ratios, and Pearson correlation to assess collinearity.
Results: In the sample 5.01% received tPA. 26.4% were 80-89 years old. Regarding hospital teaching status, 67.5% of patients in non-teaching hospitals received tPA. 93% of patients admitted with emergent status received tPA. 6.7% of patients who received tPA died, compared to 3.7% of those who didn’t receive tPA. Proportion of patients with non-emergent admission who died was 8.4% compared to emergent admissions (3.3%). Non-teaching hospitals had lower in-hospital mortality (3.5%), compared to 4.9% in teachings. All of these had significant associations. The adjusted OR for tPA administration was 1.9 (95% CI 1.8 to 2.2). For patients more than 90 years old, non-insurance, and non-emergent the OR was 5.0 (95% CI 4.4 to 5.7), 2.0 (95% CI 1.8 to 2.3), 2.7 (95% CI 2.5 to 2.9) respectively.

Discussion: A large number of AIS patients received tPA experienced high in-hospital mortality. The likelihood of in-hospital mortality after administration of tPA varies by age, gender, insurance status, admission priority, and hospital teaching status.
#6 The influence of mitochondria-targeted antioxidant SkQ1 on inflammatory parameters of exudate in the mouse carrageenan air pouch model

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Introduction: Inflammation is among the most important factor of disease. During inflammation large amount of reactive oxygen species (ROS) are produced. It leads to oxidative stress and chronization of inflammation. The principal source of ROS is the mitochondrial electron transport chain. Thus, using of mitochondria-targeted antioxidants may have anti-inflammatory effect.

Aim: We aimed to test effect of mitochondria-targeted antioxidant SkQ1 ((10-(6'-plastoquinonyl)decyltriphenyl-phosphonium) bromide) on inflammatory parameters of exudate in the mouse carrageenan air pouch model and compare it with effect of C12TPP (dodecyltriphenylphosphonium) – fragment of SkQ1 without antioxidant properties.

Materials & Methods: We used air pouch model. Three groups of 11 mice each were formed. Two of them got SkQ1 or S12TPP, respectively; the third was a control group. These agents were injected intraperitoneally in a dose of 250 nmol / kg daily for 7 days before the induction of inflammation by □-carrageenan.

Results: SkQ1 has an anti-inflammatory effect, which manifests itself in reducing the absolute number of cells by 30.1%, increasing of the relative abundance of macrophages by 23.6% and decreasing of the relative abundance of mast cells by 33.3%, as well as the tendency to reducing the concentration of proinflammatory cytokine IL-6 by 43.8% in exudate. Any significant effects of C12TPP were not observed.

Discussion: SkQ1 have the anti-inflammatory effects in the model of subcutaneous aseptic acute inflammation. These data are well correlated with previous studies of SkQ1 abilities to improve impaired dermal wound healing in mice. SkQ1 could become a perspective substance for anti-inflammatory drugs creation.

#30 Treatment of severe generalized peritonitis by allogenic mesenchymal stem cells in experiment

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Introduction: The problem of effective treatment of severe generalized peritonitis remains a challenge in the early XXI century because there is no tendency to lower mortality (32 – 43.9 per cent). Aim: To develop a new method of the treatment of severe generalized peritonitis.

Materials and Methods: 20 % fecal suspension was injected into the abdominal cavity of Wistar albino rats (0.7-0.9 ml / 100 g weight of the animal), 23-24 hours earlier experimental animals were conducted the amputation of distal part 1/3-1/5 of the tail under ether anesthesia. In 7-8 hours after the injection the experimental animals were divided randomly into 2 groups. Animals from experimental group (n=15) were performed intravenously (tail vein) transplantation of allogenic mesenchymal stem cells at a dose of 1.5□106 100 g weight of the animal in 1 ml. of physiological solution. Animals from control group (n=10) were injected 1 ml. of saline to the tail vein.

Results: Mortality in experimental group was 27% and in control - 94%. In the study of histological material of animals showed that all the dead animals had an acute generalized
peritonitis, but the severity of the inflammatory process was different in compared groups. In experimental group there was a picture of resolving peritonitis. Meanwhile, in control group there was macroscopic and histological picture of acute continue peritonitis. Discussion: Thus, the results suggested a new method of the treatment of severe generalized peritonitis in the experiment, opening new opportunities in solving this difficult problem in surgery.

# 70 Minocycline-mediated neuroprotection by countering microglia activation following subarachnoid hemorrhage

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Neuroprotective treatment strategies aiming at interfering with either inflammation or cell death indicate the importance of these mechanisms involved in brain injury after SAH (subarachnoid hemorrhage). In this study, we focussed on the influence of minocycline, a semi-synthetic tetracycline, known for its neuroprotective properties, on inflammation following SAH.

The endovascular filament perforation model was applied to induce SAH in mice. Sham-operated mice were used as controls for SAH vehicle-treated and SAH minocycline-treated mice. The animals were sacrificed after 7 or 14 days. Brain cryosections were immunolabeled for Iba-1 to detect microglia and NeuN to visualize neurons. Furthermore a TUNEL-Kit was used to investigate cell apoptosis. The number of microglia and neurons was counted in regions of interest in all experimental groups. Additionally, microglial activity was determined by morphological quantification and functional studies.

The number of microglia cell increased from the baseline level of sham-operated mice up to 15.8 ± 2.6-fold on day 7 and up to 19.7 ± 5.1-fold on day 14 post SAH. The morphology of these cells was changed from ramified to round, reflecting their activated status. At both time points the number of microglia was reduced in response to minocycline treatment to 3.1 ± 0.9-fold and to 3.6 ± 1.7-fold of the sham control, respectively. SAH-induced apoptosis and phagocytosis was significantly reduced by minocycline-application.

Our study reveals that minocycline exerts neuroprotective effects by lowering the number of microglial cells and their phagocytotic activity. Thus, minocycline may exhibit an important clinical potential in the management of SAH.

#111 Localization of gaseous transmitters in the rat carotid body

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The carotid body (CB) is the main peripheral chemoreceptor that detects the chemical composition of the arterial blood. In hypoxia, hypercapnia and acidosis, the endogeneous production of gaseous transmitters transduces the oxygen status in the peripheral chemoreceptors and account for an appropriate ventilatory and cardiovascular response leading to restoration of blood gas homeostasis. Nitric oxide (NO), carbon monoxide (CO) and hydrogen sulfide (H2S) are the major gaseous transmitters in the CB. The presence of NO was examined in the rat CB using nicotinamide adenine dinucleotide phosphate diaphorase (NADPH-d) histochemistry and nitric oxide synthase (NOS) immunohistochemistry. We found that the principal cell type in the CB, glomus cells, exhibited NADPH-d reactivity and also contained H2S-producing enzymes, cystathionine γ-liase and cystathionine β-synthase, as well as heme oxygenase-1 and -2, the inducible and constitutive isozymes for monoxide synthesis. In addition, the three main NOS isoforms were immunohistochemically localized in the CB. In particular, neuron-like glomus cells
expressed a constitutive neuronal isoform of NOS, nNOS, while the microvascular endothelium possessed endothelial NOS (eNOS) immunoreactivity. Positive inducible NOS (iNOS) protein immunoreactivity was also detected in chemoreceptor cell clusters. The present results show that the CB cells have enzymatic equipment necessary for the synthesis of gaseous transmitters and an essential cellular machinery for adequate homeostatic regulation of arterial blood gases. It can be inferred that oxidative stress contributes to the enhanced carotid body chemosensory responsiveness to hypoxia.

#145 Preparation, characterization and application of magnetic nanoparticles for controlled heating effects in biomedical gels

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Introduction: Because of their small size, nano-particles have huge surface-to-volume ratios, which can strongly affect their reactivity. Nanoparticles made from magnetic materials (Iron oxides) are, rather unsurprisingly, referred to as “magnetic nanoparticles”. These particles can be moved by applying magnetic fields, which allows them to be controlled inside the body. “magnetic”

Materials and Methods: Iron oxide (Magnetite (Fe3O4), Maghemite (-Fe2O3)). Very stable and easy to synthesize. The most widely investigated type of magnetic nanoparticle for biomedical applications. We use the magnetic nano-particles as heat provider. To kill the cancerous cells. We can manipulate them to reach maximum heating effect. We can localize them as well. For treating cancer tumors, the general measure of effectiveness is the cumulative equivalent minutes at 43 oC for 90% of the tumor volume (CEM 43 T90). The magnetization of nanoparticles will oscillate with an oscillating external magnetic field dissipating heat energy. (magnetic hyperthermia).

Result: The SLP for 20mg/ml of the Sample in Agar was 2.2 W/gr and 2.2 W/gr, 1.6 W/gr for 10mg/ml and 5 mg/ml of the Sample in Agar, respectively and by inserting 20 mg/ml of the sample in Sonication machine the SLP was 1.7 W/gr. The highest SLP is in the coated particles 6.7 W/gr when we used 3.4 mg/ml Coated MM as a sample in the agar.

Conclusions: SLP for maghemite nanoparticles immobilised in agar is around the same, 2 W/g for all the concentrations investigated.
Allergy and Immunology • Oral Presentations • Friday, 12:00-1:00 pm

Location: HSZ SR C2

#8 Shikonin suppresses NLRP3 and AIM2 inflammasomes by direct inhibition of caspase-1
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Shikonin (SH) is a highly lipophilic naphtoquinone found in the roots of Lithospermum erythrorhizon used for its pleiotropic effects in traditional Chinese medicine. Based on its reported antipyretic and anti-inflammatory properties, we investigated whether SH suppressed activation of NLRP3 inflammasome. Inflammasomes are cytosolic protein complexes that activate caspase-1, which in turn activates pro-inflammatory cytokines IL-1β and IL-18. NLRP3 inflammasome is activated in two steps. We demonstrated that the priming step involving lipopolysaccharide mediated NF-κB activation is effectively inhibited by SH by following the activity of NF-κB-dependent reporters and cytokines in HEK293 cells and murine macrophages. We further show that SH inhibited the second step of inflammasome activation induced by soluble and particulate NLRP3 instigators in primed immortalized murine bone marrow-derived macrophages. SH was superior to acetylshikonin in inhibition of NLRP3 inflammasome induced by nigericin. Our results show that SH also inhibited AIM2 inflammasome activation by double stranded DNA. SH inhibited caspase-1 activation in murine macrophages and in vitro, demonstrating that it acts directly on caspase-1. Complexing SH with α-lactoglobulin reduced its toxicity while preserving the inhibitory effect on NLRP3 inflammasome activation, suggesting that SH with improved bioavailability might be interesting for therapeutic applications in inflammasome-mediated disorders.

#9 Activation of innate immunity in Parkinson’s disease: oligomers and fibrils of α-synuclein activate NLRP3 inflammasome
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Parkinson’s disease is characterised by accumulation of α-synuclein (α-syn) and subsequent degeneration of dopaminergic neurons in substantia nigra pars compacta of midbrain. Inflammasomes are cytosolic protein complexes that activate caspase-1, which in turn activates proinflammatory cytokines IL-1β and IL-18. The role of NLRP3 inflammasome was previously implicated in pathogenesis of several neurodegenerative disorders including Alzheimer’s and prion disease. To investigate the role of NLRP3 inflammasome in Parkinson’s disease, we prepared monomers, oligomers and fibrils of human α-synuclein, and tested their ability to activate NLRP3 inflammasome in cultured murine macrophages and microglial cells. By monitoring IL-1β release, we showed that oligomers are more potent activators of microglia and macrophages compared to fibrils while monomers evoked no response. IL-1β release was dependent on NLRP3 inflammasome as deletion of either of its components (NLRP3, ASC and caspase-1) suppressed IL-1β release in response to α-syn oligomers. Inhibition of potassium efflux, phagocytosis and reactive oxygen species (ROS) all dampened IL-1β release in response to α-syn oligomers, demonstrating that these processes are essential in α-syn-induced NLRP3 inflammasome activation. Collectively, our data highlight an important role of inflammation in Parkinson’s disease, providing a rationale for potential use of anti-inflammatory therapy in treatment of this disorder.
#131 In silico analysis of anti-inflammatory activity of compounds extracted from bark of Salix Elaeagnos

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Willow bark extract (Salix spp., Salicaceae) has traditionally been used to treat pain and inflammation. Its medicinal features are attributed to synergistic action of salicylic acid derivates and polyphenolic compounds. The aim of this study was to determine the main bioactive constituents of Salix eleagnos bark extract and their inhibitory potential towards isoenzymes cyclooxygenase (COX) 1 and 2 by in silico molecular docking.

Chemical composition of Salix eleagnos bark extract was determined by High Pressure Liquid Chromatography (HPLC). Molecular docking was conducted using AutoDock 4.2.3. program package. Docking results were analyzed using AutoDock Tools and Discovery Studio Visualizer 4.5. Compounds identified by HPLC analysis were salicin, quercetin, rutin, naringenin, epicatechin, rosmarinic acid, chlorogenic acid, caffeic acid, p-coumaric acid, t-cinnamic acid, syringic acid and p-hydroxybenzoic acid. Using Lipinski Rule of five, rutin was eliminated from further study. Results of molecular docking showed high binding affinity and good hydrogen bond interactions with active site residues of both COX-1 and COX-2 by flavonoid derivates: quercetin, naringenin and epicatechin, and phenolic compounds: rosmarinic acid and chlorogenic acid.

Low binding energies towards COX-1 and COX-2 and nanomolar inhibition constants of flavonoids suggest strong inhibitory potential of these molecules and their important role in anti-inflammatory effect of Salix bark extract. These results are promising and certainly require further experimental study.

#161 A case-control study of the IL-1β and IL-4 genes polymorphism in children with chronic sinusitis

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Introduction: The mutations of the genes coding the components of the immune response may be the basis of the development of chronic inflammatory processes of the upper respiratory airways. The genetic determined balance between cytokines production influences the force and direction of the inflammatory response.

Aim: The aim of the study was to evaluate the association between the single nucleotide polymorphism (SGP) of the IL-1β gene (C-511T), the IL-4 gene (C-590T) and development of the chronic sinusitis (CS) in children.

Patients and Methods: We examined 100 children with CS and 35 children of the control group (CG). All children were genotyped for the IL-1β (C-511T) SGP and the IL-4 (C-590T) SGP by polymerase chain reaction and restriction analysis.

Results: There were no differences between CS and CG in the distribution of C-allele of the IL-1β SGP. Significantly higher frequency of the T-allele of the IL-4 SGP was revealed in CS-children (43.5% vs. 24.3% in healthy controls, p<0.05). The CC-genotype of the IL-1β dominated in the CS-children (46% vs. 22.9% in CG, odds ratio = 2.9; CI 1.2-6.9, p<0.05) as well as domination of the CT-genotype (65% vs. 42.9% in CG, odds ratio = 2.5; CI 1.1-5.4, p<0.05) and TT-genotype (11% vs. 2.9% in CG, odds ratio = 4.2; CI 0.5-33.8, p<0.05) of the IL-4 SGP was revealed in CS-patients.

Discussion: The carriers of the T-allele of the IL-4 (C-590T) SGP and of the CC-genotype of the IL-1β (C-511T) SGP had increased risk of the development of the chronic sinusitis.
#194 Influence of allergic rhinitis on condition of oral cavity pathology in children

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The increasing prevalence of atopic diseases, including allergic rhinitis, has become a major concern for allergists and health authorities in many countries. It is important that allergic diseases have chronic recurrent nature, so dental status of children undergoes some changes.

The aim of this study was to define the state of periodontal tissues of patients with allergic rhinitis.

Materials and methods. Twenty-one children aged 12 to 16 suffering from allergic rhinitis were examined with common dental methods. To identify the degree of gingivitis Community Periodontal Index was used which is based on analysis of the three features: bleeding, dental calculus, and gingival sulcus.

Results. In children with allergic rhinitis, periodontal diseases were found frequently - in 78.8% of patients. The bleeding gums have been established among 45.8% of the examined children, calculus - among 33.0% of patients.

According to our data, the average number of intact periodontal sextant was 2.8, with bleeding - 2.2, with dental calculus - 1. The most common forms of periodontal diseases were defined: catarrhal gingivitis - in 74.6% of cases, hypertrophic gingivitis - in 24.4% of cases. The prevalence of generalized gingivitis was 59.6% of children.

Discussion. In our opinion, atopic pathology is characterized by systemic process development as consequences of a breach of the vascular system, particularly at the level of the microvasculature that lead to manifestation by degenerative and inflammatory periodontal disease.

Conclusions. Such atopic pathology as, allergic rhinitis could be cause of changes in periodontal tissues in childhood.

#224 Innate immunity in patients with liver cirrhosis and Hepatitis C Virus infection as aetiology

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Introduction: Previous studies showed that liver cirrhotic patients with Hepatitis C virus infection (HCV) exhibit an approximately five- time higher risk of infection than healthy people. Therefore, we investigated innate immune function and the occurrence of infections in this patient group compared to liver cirrhotics with other aetiologies and healthy controls.

Methods: Innate immune function of 80 cirrhotic patients of various aetiologies (13 HCV, 44 alcoholic, 23 others) and 40 healthy controls was determined through two different ways. For determining humoral bacterial killing, patient and control sera were challenged with E. coli bacteria and plated on LB- agar to quantify surviving bacteria. Additionally, neutrophil phagocytosis function was determined by flow cytometric analysis. Patients were followed up for one year and infections were documented.

Results: Hepatic C patients showed a significant killing incapacity when compared to healthy controls and other types of cirrhosis (Median: healthy 11.0; HCV 633.0; alcoholic 15.0, others 11.0; p <0.0001). These results were complemented by a significant decrease in neutrophil phagocytosis capacity (Median: healthy 103.3, HCV 57.5, alcoholic 124.0, others
In accordance with these results we found that four of ten severe infections and 24 of 60 mild infections occurred in the HCV group.

Discussion: Our analysis suggests that severely impaired innate immune function, both humoral and cellular, might be the cause for the high infection rate among HCV cirrhotic patients.
#36 Analysis of morphology of maxillary first premolar
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Knowledge of anatomy and morphology of the teeth, especially the radicular portion is very important in endodontics and periodontology.

The aim of this study is to analyze the morphology of first maxillary premolar.

MATERIAL AND METHODS: The study included 26 extracted teeth.

Teeth were divided into two groups according to the observed number of roots: monoradicular or biradicular.

For the monoradicular group, teeth length was determined by measuring the length from tuberculum bucale to the root apex. The length of the palatinal root was determined by measuring the distance from palatinale to the root apex.

The direction of the root curvature was observed and defined as: straight, distal and mesial direction.

In all teeth the pulp chamber was opened, the number of canals was determined, cleaning and shaping of root canals was made and gutapercha file was placed at the root canal. The X-ray examination of the teeth was made at Clinical Centre in Tetovo, and the root canal configuration was determined by Vertucci 1984 classification.

#53 Controlled prospective study of amiodarone causing corneal deposits - a reason to stop therapy or not?
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Introduction: Amiodarone is one of the most powerful antiarrhythmic drugs. It also has a large number of side-effects, such as thyroid gland disorders, lung fibrosis and liver lesions. Besides that, amiodarone causes corneal deposits, commonly found 1-6 months after the start of therapy. Keratopathies are classified into 3 degrees, based on the spreading of amiodarone deposits in the cornea.

Aims: To determine the frequency of amiodarone keratopathy in our sample.

To establish if the keratopathy influences the visual acuity.

To examine if the changes are reversible after quitting therapy.

Patients and methods: We included 26 patients in this study, 18 men and 8 women.

Patients were controlled every 2 months, in the total of 1 year study. 12 patients carried on with the therapy for the complete period. 5 patients ended the therapy, 9 of them had their amiodarone doses lowered.

Results: 24 of 26 tested patients (92.31%) have been proven to have some level of amiodarone keratopathy.

I degree- 5 patients (19.23%)

II degree- 13 patients (50%)

III degree- 6 patients (23.10%)
2 patients (7.69%) have shown no amiodarone keratopathy after 1 year programme. Lowering the dose did not have any effect on the regression of the changes.

Discussion: Direct link between amiodarone therapy and corneal deposits as a side effect has been proven. No significant visual acuity defects caused by amiodarone have been proven. Overall conclusion is that, if amiodarone therapy is of vital importance to the patient, it should not be stopped, unless it is causing severe visual acuity defects to the patient.

#78 Diabetes mellitus - risk factor for developing primary open-angle glaucoma

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Introduction: Glaucoma is significant social disease. It’s the second most common cause for blindness. Primary open-angle glaucoma is the most common form. The worldwide prevalence of the disorder is 45 ml. and 59 mln. Are estimated by 2020. It has multiple risk factors and one of the proposed is diabetes.

Aim: The main goal of this study is to find if the diabetes is an actual precondition for primary open-angle glaucoma. Another aim is to study the importance of measuring the intra-ocular pressure in patients with Diabetes mellitus.

Methods: We will achieve our goal by studying different epidemiological studies. They give controversial results if the diabetes is statistically significant risk factor.

Results: The major studies found that there is a significant relationship between the two disorders. The mechanisms that bind Primary open-angle glaucoma and Diabetes Mellitus remain unknown but there a few that are suspected. The studies also found a link with other elements of metyabolic syndrome such as arterial hypertension and high BMI

Conclusion: We need extra studies about the relationship between diabetes mellitus and primary open angle glaucoma which will help a possible screening program for intraocular pressure for people who have diabetes. This will surely find patients with primary open-angle glaucoma in the early stages and will give them an opportunity for timely treatment to delay the development of serious complications.

#147 Evaluation of Auriculocephalic Angle following Canal Wall up and Canal Wall down Mastoidectomy Procedures

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Background: Mastoidectomy is a common procedure in otolaryngology. It has numerous complications. Aesthetic issues following this surgery are not widely discussed. Purpose: To evaluate auriculocephalic angle and helix to mastoid distance between patients who underwent canal wall up and canal wall down mastoidectomy procedures. Methods: In this cross sectional study, sixty patients who underwent canal wall down or canal wall up mastoidectomy, observed for auriculocephalic angle and helix to mastoid distance of both ears before and after surgery. We analyzed data with paired t-test and independent t-test. All tests were conducted at the 0.05 level of significance. Results: Patients, who underwent canal wall down mastoidectomy, had a significant reduction in auriculocephalic angle and helix to mastoid distance. In canal wall up group, these parameters increased, although the observed differences were not statistically significant. Conclusion: Mastoidectomy can alter the aesthetical parameters of the auricle and may also lead to functional disorders due to these changes.
#37 RADIOGRAPHIC ASSESSMENT OF ECTOPIC AND IMPACTED MAXILLARY PERMANENT CANINES

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BACKGROUND: Ectopic eruption of the permanent teeth is a developmental disturbance in the permanent dentition, which can lead if not intercepted to root resorption of the adjacent teeth.

AIM OF THE STUDY: to find a reliable diagnostic method that enables the dental practitioners to predict and intercept the ectopic eruption and impaction of the permanent maxillary canines.

MATERIAL AND METHOD: The positions of the permanent tooth buds of maxillary canines and their erupting paths were assessed on panoramic radiographs in group of children at the age range 8 to 14 years. 30 radiographs that had 19 ectopic canines and 21 impacted maxillary canines were studied and examined based on sectors, and angular measurement with the skeletal midline.

RESULTS: 47.3% of the ectopic canines had their position in sector 2, 47.3% were in sector 1, 5.2% were in sector 3, with 78.9% having an angulation between (15°-30°).

While 47.6% of the impacted canines had their position in sector 3, 28.5% in sector 4, and 19% in sector 5. And having an angulation more than 30° in 71.4% of the impacted canines.

DISCUSSION AND CONCLUSION: The sector and angulation measurement on the panoramic radiographs could show an obvious difference between the impacted and the ectopic canines, and therefore could be a good, but not a conclusive diagnostic tool, and can be used as an index for prognosis, to predict the ectopic eruption of maxillary canines at the age of 8-11 years.

#119 WEARING GLASSES IN MEDICAL STUDENTS

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Background:
Myopia: means short sightedness. Light from a distant object forms an image before it reaches the retina. A myopic person has clear vision when looking at objects close to them.
Hyperopia: means long sight where the image of a nearby object is formed behind the retina. A hyperopic person may have blurred vision when looking at objects close to them.

Objectives:
1. Determine causes of vision problems in medical students.
2. Verify the relationship between myopia and student performance.
3. Describe hereditary myopia & hyperopia relation with IQ and student performance.

Material and methods:
1. Sample size (50)
2. Sample unit (third year medial students in Al-Imam University)
3. Data collection design (sample survey)
4. Data collection tools (questioner)
5. Data collection team (Imam medical students)

Results:
The most GPA gathered from the participants was (4 to 4.49) with 40%, then (4.5 to 5) with 22%, (3.5 to 3.99) with 20%, (3 to 3.49) with 10% and the least was (below 3) with 8%.

Most common cause of wearing the glasses was Myopia with 80% then Hyperopia 20%.
48% of the students got headache with wearing the glasses while 52% didn't.
75% of the students who participated in our study have family member with the same problem. 25% don’t have.

Conclusion:
Our study suggests that people with myopia and wearing glasses they more likely to have a high GPA.
#174 KAWASAKI DISEASE IN A CHILD WITH SUSPECTED RESPIRATORY TRACT INFECTION: A CASE REPORT

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INTRODUCTION: Kawasaki disease (KD) is one of the most common vasculitides and a leading cause of acquired heart disease in children of developed world. There is no specific test or pathognomonic sign, so the diagnosis is made by using clinical criteria. These clinical criteria are also common in many other diagnoses, specially infections, but it is important to recognise KD and treat it properly.

CASE REPORT: Two years old boy developed diarrhoea and vomiting that lasted for 3 days. 5 days after, he developed a high-grade fever, followed by oedema of the hands and feet and generalised maculopapular rash. On the third day of fever he was referred to us for suspected adenovirosis. On admission we noticed bilateral conjunctival injection and injected pharynx. Different cultures (nasopharynx swab, hemoculture, coproculture) were taken, but no viruses or bacteria were found. Rapid streptococcus test and serology tests for cytomegalovirus and Epstein Barr virus were negative. Cardiac ultrasound excluded cardiovascular involvement. On the fifth day of fever we started the therapy with single dose intravenous immune globuline (IVIG) and high intravenous doses of aspirin. 24 hours after he was afebrile and all the KD symptoms regressed. Two weeks and four weeks after we repeated cardiac ultrasounds, that did not show any abnormalities.

CONCLUSION: Because of high incidence of cardiovascular complications in patients with unrecoqunised and untreated KD, it is important to recognise and treat KD and not to attribute the symptoms only to an infection or any other alternative diagnosis.

#90 Pneumococcus sepsis with unknown locus

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Introduction: Sepsis is a life-threatening pathologic process as a result of infections, which leads to prevalence of the systematic generalized body reactions over local inflammatory processes. Pneumococcus sepsis’ frequency and lethality rise with age and comorbidity. Recent surveys show increasing lethality by different group of patients – from 9,2% to 34,5% in all cases.

Aim: The aim of this paper is to present a tough for diagnosing case report from our clinical practice.

Material and Methods: It is used the clinical history of the patient after his hospital discharge. Urine tests, hemoculture, urine test, roentgen of thorax, CT of head with and without contrast, abdominal sonography were done.

Results: The patient is hospitalized because of trauma of the occipital part of his head. It is examined GSC 11 points with progressive declining conscious. Patient’s right elbow is heavily injured because of the fall. Concomitant disease are past gastro-intestinal bleeding as a result of duodenal ulcer, morbus Wegener, peripheral arterial thrombosis disease, latent hyperthyreosis, diabetes mellitus type 2 with diabetic nephropathy, terminal kidney
insufficiency. CT shows no traits of skull fractures. Abdominal echography shows lack of pathological centers. Urine test shows massive leukocyturia. Hemoculture is negative. Chest X-Ray show no lung infiltrates or pleura’s enlargement. Heart is pathologically enlarged.

Discussion: Pneumococcus sepsis not always is distinguished with ordinary symptoms and not every time is possible the locus to be found. The result is high mortality rate. That’s why a physician’s mind should always be aware of unclear states of sepsis.

#112 Retrospective study of deep neck infection: review of 263 cases
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Introduction: deep neck infection (DNI) occurs in the spaces between muscles and organs in the floor of the mouth and neck. Complex anatomy plays a major role in the complications and surgical approach.

Aim: to analyse patients’ records hospitalized due to DNI from University Hospital in Latvia. Reveal any associations between demographic parameters, etiology, DNI localization, complications, comorbidities, treatment and bacterial culture.

Patients and methods: a retrospective study using 263 patient’s records with DNI who were hospitalized in the period from January 1st 2012 to December 31st 2014. Included patients were adults with phlegmon and/or abscess of the deep neck spaces. Statistical analysis was conducted using SPSS 22.0 software with Descriptive Statistics, Regression and Multiple Response tests.

Results: Most frequent diagnosis was dental infection 70.6% (n=139). Most frequent DNI was submandibular abscess 36.6% (n=95) and phlegmon of neck 29.8% (n=78). At 11.4% (n=30) of cases there were complications, most frequent – airway obstruction 90.0% (n=27). Most frequently prescribed antibiotic was Metronidazole in 79.5% (n=209). 93.5% of patients had surgery (n=246), reoperation was performed in 19.8% (n=52). 6.1% of patients were admitted to the ICU (n=16), one lethal case. In 12.5% there was a positive bacterial culture (n=33), in 38.2% (n=13) found Acinetobacter baumanii, which also increase risk for complications development (OR=24.5; p<0.001).

Discussion: The most frequent etiology is dental infection and localization of DNI – submandibular space, which corresponds to the world data. If the DNI has developed, surgical intervention with aggressive antibacterial therapy is the treatment of choice.

#60 Retrospective study: Importance of prevention of Clostridium difficile intrahospital infections
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Introduction: Clostridium difficile is currently the most important and that most common cause of health-care associated diarrhea with potentially fatal outcomes. It characteristically occurs in elderly patients with comorbidity in whom the intestinal flora has been disrupted by previous use of antibiotics.

Aim: We aimed to make a retrospective analysis of the epidemiological, clinical and microbiological characteristics of Clostridium Difficile Infections (CDI) at University Clinical Centre Tuzla, Bosnia and Herzegovina before and after the implementation of strict measures of monitoring and prevention.
Patients and Methods: We analyzed all patients (except children aged 0-2), diagnosed with CDI based on anamnestic and epidemiological, clinical picture and microbiological tests (proof of toxins in the stool by enzyme-linked immunosorbent assay).

Results: Before the implementation of strict monitoring in the period from 1.1.2009 to 30.6.2012 a total of 347 patients were tested positive for C. difficile toxin. The mean incidence rate of CDI was 2.23 per 10,000 inpatient days. And after the implementation of more strict measures of monitoring and prevention in the period of 1.7.2012 to 31.12.2014 the number of positive patients dropped to 159 with a mean incidence rate of 2.12 per 10,000 inpatient days.

Discussion: Studies in Canada, the United States and Europe recorded an increase of 2 to 4 fold in CDI incidences, but we had a slight drop in CDIs. These data point to the importance of international monitoring for the detection and control of C. difficile infections.

#191 The difference in the knowledge of sepsis in children between young people from medical and non-medical environment.

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Introduction/objectives: Recently sepsis has become one of the most serious diagnosis threatening children’s live. It is possible, that the knowledge held by parents is not sufficient to understand what sepsis is. The aim of this work is to compare knowledge about sepsis in children among young people from medical and non-medical environment.

Methods: An anonymous survey was conducted among 500 people: 250 people were from medical environment (ME), 250 people weren’t connected with medical milieu (NME). People from both groups were at most 26 years old. The questions concerned basic information about sepsis in children.

Results 115 of ME and 165 of NME people declared to be a parent. 100% 250 of ME people and only 72% 180 of NME people knows basic information about sepsis in children.

The most common source of knowledge in both groups is the Internet: 44% vs. 56%. 100% of ME people declared deriving information from medical sources and just 2% of NME people declared using this source. 100% of ME knew how to act in suspicion of sepsis in children vs. 66% of NME. Also 100% of ME knew what ways of infection spreading are and what group of children is most endangered. 88% of NME answered the first question correctly and 20% answered the second question correctly.

Discussion/conclusion A strong difference in the knowledge of sepsis in children can be noticed between group of people involved in medical work and people from non-medical environment. Their set of information about sepsis is insufficient and must be expanded.

#110 The effect of preventive hygienic measures on nosocomial infections of Clostridium difficile

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Introduction: Incidence of Clostridium difficile infection (CDI) is rapidly increasing, making it one of the most important nosocomial infections. Many risk factors and various prevention measures affect the incidence of CDI.

Aim: The aim is to determine the effect of implementing different preventive hygiene measures on the incidence CDI.
Patients and methods: Retrospective study was conducted at 12 clinics of Clinical Center of Vojvodina in 2013 and 2014, and included the total of 107 patients. Seven of these clinics started implementing special preventive hygiene measures in 2014, while other clinics included in the study conducted hygiene in the usual way in both 2013 and 2014. Other preventive measures remained unmodified. The incidence of CDI was calculated for each clinic before and after implementation of new preventive measures, regardless of conducted hygiene protocol. Risk factors which could affect the incidence were also analyzed.

Results: There was a significant decrease in the incidence of CDI between the periods when classical and special preventive hygiene measures were implemented, from 49.02 to 18.22 on 10000 pbd; while at clinics which continued to conduct the usual prevention measures such decrease was not found. Although there were no significant differences in the age, length of hospital stay, antibiotic application and the number of co-morbidities, specific types of co-morbidities were recognized as a major factor that influenced the occurrence of CDI as well as the outcome of treatment.

Discussion: Results showing a significant decrease in incidence of CDI are in accordance with relevant conducted studies.

#108 The retroperitoneal hydatid cyst

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Is a severe parasitosis caused by tumor development of the Echinococcus granulosus larvae and it is a very rare pathology because of its retroperitoneal location. Located most commonly in the liver or lungs. This pathology is evidenced by clinical evaluation, RX, serological and finally highlighted by surgery and pathological examination. Patient aged 48 years accuses these following symptoms, abdominal distension, flatulence, abdominal pain, nausea and vomiting in the last two months. History and physical examination were normal without palpable masses in the abdomen. Frequently relevant blood test were ESR 20mm/h, Fibrinogen 493 mg/dl, C-reactive protein 28,7 mg/l and HP (Helicobacter pylori) exam confirmation. Doppler ultrasound discovered an imprecise formation in the left abdominal flank, polilobata, with many different transonic elements between 1.3 and 2.3 cm, it is recommended a CT (computed tomography) were a big polilobata formation with multiple cystic structures localizated retroperitoneal is discovered. Surgery intervention: median xifopubian laparotomy. Procedure consists in acoloparietal removal of a left large formation retroperitoneal 30/18/12 cm approximated. Polilobata, well encapsulated and bordered. In the initial phase, retroperitoneal hydatid cyst is asymptomatic until pretumoral and tumor development. This patology should be used in the differential diagnosis in endemic areas for a proper diagnosis. After past mentions we put emphasis on the extremely rare pathology and quiet considering the early stages of this diagnosis of the retroperitoneal hydatid cyst. It is important to notice that the differential diagnosis for other formations located in the retroperitonial space remains extremely difficult to ascertain.
#171 Ambulance Response Time to Public Cardiac Emergencies and Patient Survival in Riyadh


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Ambulance response time (ART) plays a significant role in patient survival, especially in cardiac emergencies, thus qualifying as the crucial factor to measure the quality of pre-hospital emergency care. Thus, this retrospective study aimed to measure the ART to public cardiac emergencies and to analyze its association with patient survival in Riyadh, where such studies have rarely been conducted.

Records of cardiac emergency medical services from the Saudi Red Crescent Society for a period of 1 year (i.e., 01 January 2013 to 31 December 2013) in Riyadh were requisitioned. Ambulance response time was calculated for 18 stations across Riyadh and assessed for confounding factors, such as time (day of the week and time of the day) age, gender and location of incident.

The mean ART was approximately 13 minutes, with a trend towards prolongation during working hours on weekdays. ART and survival was unaffected by gender and location of the incident, but was confounded by age of the patient (P=0.001).

Ambulance response time was much longer than the defined standard of 8 minutes and confounded by age of the patient.

#143 Red Blood Cell Distribution Width and Serum Uric Acid in Evaluation of Patients with Chronic Psoriasis

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Psoriasis is a systemic inflammatory process. Numerous studies revealed that elevated red blood cell distribution width (RDW) and the serum uric acid level (SUA) are associated with the disease activity in various inflammatory disorders and can be considered as an important risk factor for cardiovascular diseases.

The study aims to evaluate possible correlations between the RDW, SUA and other inflammatory markers in the blood serum, the disease severity, cardiovascular risk in patients with psoriasis.

The study included patients with exacerbation of chronic psoriasis selected from the dermatological wards and age, gender and metabolic profile matched healthy individuals. Complete blood count, SUA, C-reactive protein (CRP) and lipid profile was measured for all patients and controls. For the assessment of the disease severity and cardiovascular risk a set of standardized questionnaires was used. Patients with comorbidities or medications that could interfere with laboratory test parameters were excluded from the study.

The mean values were found to be significantly elevated in patients with psoriasis p= 0.049 for SUA and p = 0.000007 for the RDW. Furthermore, RDW showed significant correlation with erythrocyte sedimentation rate (p= 0.01) and CRP (p= 0.02). Cardiovascular risk
assessment shows increased risk of lifetime atherosclerotic cardiovascular event in the study group but shows no correlation with RDW or SUA for the time being.

Psoriasis requires adequate and effective monitoring for earlier prevention of associated cardiovascular comorbidities in which a high potential has RDW and SUA. Further study on a larger group of patients is still required.

**#162 MYOCARDIAL INFARCTION IN PATIENT WITH RENDU-OSLER-WEBER SYNDROME - CASE REPORT**

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The most common pathogenesis of myocardial infarction is coronary artery disease. 5-20% of patients with myocardial infarction have intact coronary arteries or insignificant stenosis, and that requires seeking for other causes of this condition. We report a case of a 37-year old male patient, who was urgently admitted to the department of cardiology. The day before the admission, he was experiencing intense pain in the chest and interscapular area for a period of half an hour. The patient's medical history with the diagnosis of hereditary hemorrhagic telangiectasia (Rendu-Osler-Weber) should be taken into account.

Echocardiography revealed sinus rhythm, but also ST elevation in the bottom and side walls of the left ventricle. Positive markers of myocardial necrosis are found: creatin kinase (CK), myoglobin and troponin. He was diagnosed with acute inferior wall myocardial infarction. The thrombolytic therapy with alteplase was carried out. On the same day, coronary angiography was performed, which showed that there weren't stenosis on coronary arteries, furthermore, there was no indication for stent deployment. Also, thrombophilia was excluded. Coagulogram was within the reference value. Taking into account the patient's diagnosis of hereditary hemorrhagic telangiectasia (Rendu-Osler-Weber), aneurysms of the blood vessels of a small caliber are possible, which cannot be visualized by coronary angiography, and their rupture can lead to local interruption of blood flow. Pathogenesis of this particular myocardial infarction is not fully clarified, which is a rare case, and for that very reason, the interest should be directed towards further studies.

**#87 Struma cordis**

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Introduction: We report a case of ectopic thyroid tissue of the heart (struma cordis), which is an exceptionally rare defect in the embryonic development of the primitive gut tube. The most common location in the heart is the right side of the ventricular septum and the right ventricular outflow tract (RVOT). Exirpation of a tumor can be performed under total cardiopulmonary bypass (CBP).

Diagnosis: The patient is 57 year old woman, presenting with symptoms of heart failure and a systolic murmur best heard at second left intercostal space. Echocardiography visualized enlarged right heart cavities and an obstructing mass in the RVOT sized 30/30 mm with a peak gradient of 55 mmHg and turbulent flow. The patient had right ventricular hypertrophy measuring 9 mm in thickness.

Histological diagnosis: It confirmed differentiated thyroid tissue in the tumor - macro and microfollicular goiter with cholesterol deposits and PAS-positive for colloid.
Differential diagnosis: First of all we excluded metastatic thyroid carcinoma. Because of the lack of history of deep venous thrombosis and the location of the tumor in an area with high rate of the blood flow, we ruled out the possibility of intraventricular thrombus and suggested neoplasm.

Discussion: The most common primary tumor of the heart is left atrial myxoma. The primary thyroid tumor (struma cordis) is one of the rarest tumors of the heart. More common is metastatic thyroid cancer.

#118 The significance of H.pylori infection in development of gastrointestinal tract pathologies in Georgia

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Introduction: Pylori is a common bacterium and approximately 50% of the world’s population has been estimated to be infected. H. Pylori has been associated with several serious diseases of the gastrointestinal tract, including gastric cancer (GC). H. Pylori infection is now recognized as causing serious and life-threatening disease in 20% to 30% of those infected. 1983- discovered by Warren and Marshall in Australia.

Aim of study: The aim of this study was to measure prevalence of H pylori-associated gastritis in general population.

Materials and methods: The study has been conducted in Mediclub Georgia. We have examined 122 patients. Endoscopic biopsy specimens have been obtained. 109 patients with H pylori infection have been identified. There were 13 H pylori negative patients.

Discussion: H pylori infection was identified in 89.3% of patients with gastritis. Even though our sample was of a small size, based on our data we could speculate that there is a high prevalence of H. pylori infection in the patients with gastritis. It would be interesting to continue the research further and study more patients for obtaining more reliable and accurate information.

#101 Uncommon condition mimicking non-resolving pneumonia and malignancy on radiography that improves dramatically with a course of steroids

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A 58-year-old man was seen in a specialist respiratory clinic with non-resolving pneumonia. Various investigations including CT scan, bronchoscopy and CT guided biopsy were done for suspected malignancy but they could not find any evidence of neoplasia or anything else of significance. The lung mass that persisted for years has later resolved with a course of steroids. Further investigations for alternative differential diagnoses were performed such as total IgE, Aspergillus precipitins and skin tests and they revealed a surprising conclusion. This case illustrates how rare diseases may mimic common presentations such as pneumonia and lung cancer that are frequently encountered by medical students and junior doctors. It is easy to mistake the correct diagnosis unless the rare disease is actively considered and searched when thinking about the diagnosis of common conditions. This case also highlights the learning points that all students and doctors should know about this rare condition. The diagnosis will be revealed during the oral presentation.
#7 Contribution of Multiple Pregnancies to the Increased Rate of Cesarean Birth

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Objective: Examining the contribution of multiple pregnancies to the increased Rate of Cesarean Birth

Methods: This is a retrospective observational study.

Results: Out of 10,286 births in Obstetrics and Gynecology Clinic / University Clinical Centre of Kosovo; 97.22 percent (n=10,000) were singleton pregnancies, 2.78 percent (n=286) multiple pregnancies, out of these 2.63 percent (n=270) twins, 0.15% (n=16) triplet pregnancies.

Out of 10286 live births; 3158 (30.70 percent) have been delivered through caesarean section, whilst 7128 (69.30 percent) have been delivered through vaginal delivery, Odds ratio (OR) =0.44, 95% CI: 0.42 to 0.46, Significance level P < .0001

Out of 286 women with multiple pregnancies; 189 (66.1%) of women have been delivered through caesarean delivery, whilst only 97 (33.9%) of women have been delivered through vaginal delivery. Odds ratio (OR) =1.94, 95% CI: 1.45 to 2.61, Significance level P < .0001

From a total of 3158 of women who have born by caesarean section, 189 or 5.98 percent were multiple pregnancy, (P < .0001 95% CI of observed proportion: 5.18 to 6.86).

Conclusion: We came to the conclusion that rate of cesarean birth in Kosovo during 2013, was very high: 30.70 percent. The contribution of multiple pregnancies in the increased rate of cesarean birth was; 5.98 percent of total rate of cesarean birth.

#99 Current Concepts of Occupational Exposure to Elemental Mercury: A Review Article

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Introduction: Dental professionals are during their work with amalgam fillings chronically exposed to elemental mercury. Amalgams are a mixture of about 50% mercury and amalgam alloy, used primarily for the manufacture of dental fillings. Mercury in amalgam is elementary and after the absorption it operates toxic particular in the nervous system, liver and kidneys.

Results: The values of mercury in blood, hair and urine of dental staff using amalgam are at least twice as big as these in normal population. Extracted mercury positively correlates with the number of weekly polished amalgam fillings. Increase in risk comes mainly with the preparation, placing, sanding and removing of such dental amalgam. Preventive safety procedures have contributed to the reduction of exposure among dental professionals. With the analysis of many articles we can conclude that most European health institutions argued that such exposure poses no risk to health, while some studies shown otherwise.

Discussion: Nevertheless, since the beginning of use in modern dentistry, we have in “amalgam wars” highly divided opinions of various experts. While earlier research results indicate connections between different diseases and work with amalgam, recent research do not establish differences between populations. Furthermore, they note that for adverse
effects of mercury are more susceptible people with a certain genetic susceptibility. It seems that it is not possible to conclude that this type of exposure to mercury is harmful.

#66 Nutrition of elderly in the city of Nis 2010-2015
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Introduction: Serbia is a country with a high rate of elderly people and nutrition is an important factor for maintaining and improving health, also for prevention of certain conditions.

Aim: The aim of this study is to determine whether the nutrition of elderly in Gerontological center in Nis reaches WHO standards in energy values and biochemical structure of the meals.

Materials and Methods: Bromatological studies of energy and nutritional value of meals served in Gerontological center Nis were performed at the Institute of Public Health in Nis. The calorific value of meals and the contribution of proteins, fats and carbohydrates were examined. Composition of the meals was also observed.

Results: For the period of six years 20 meals were analysed. The total energy value of the meals ranked from 1454.1-2999.02 kcal. Almost all samples showed higher share for fats (22-51.8%) and proteins (9.9-26.56%), and lower or sufficient for carbohydrates (36.4-65.6%). Six samples showed low intake of milk and dairy products.

Discussion: Nutrition of the elderly should meet their individual requirements. Biological and caloric value of the meals varied, and should be balanced. It is recommended that carbohydrate intake should rise, and fat intake should be lower. Higher share for proteins Quality and diversity of the meals should be improved. More frequent analyses should be conducted.

#77 NUTRITIONAL STATUS AND BODY COMPOSITION ANALYSIS OF STUDENTS AT THE UNIVERSITY OF BANJA LUKA
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Introduction: Recently, obesity frequency has reached epidemic proportion and it’s connected with cardiovascular diseases, diabetes type 2 and metabolic disorders.

Aim: To determine and compare nutritional status at different semesters of students at Faculty of Medicine, Faculty of Sports and Faculty of Economics, University of Banja Luka.

Materials and methods: Research was conducted on 210 students (in 7 groups, 30 students each, from first and third years of Sports and Economics Faculties and first, third and fifth year of Faculty of Medicine). We measured students' weight and height (for body mass index - BMI), circumference of the waist and hips (for waist to hip ratio - WHR) and skinfold thickness in order to calculate fat percentage. Measurements were taken at Faculty of Sports.

Results: Male Medical students had considerably larger waist circumference (p<0.01) and WHR (p<0.01), compared to students of Sports and considerably larger FAT% compared to students of Sports and Economics Faculties. Third year male Medical students had notably higher BMI (p<0.01) and FAT% (p<0.01) compared to first and fifth year students. Female Medical students had notably lower FAT% (p<0.01) compared to students at Sports and Economics Faculties. Third year female Medical students had notably lower FAT% (p<0.01), but higher BMI (p<0.01) compared to first and fifth year students. Older female students at Faculty of Sports had significantly higher FAT% (p<0.05) than younger.

Conclusion: Medical students had higher value of BMI and larger FAT%, while female Medical students had lower FAT% than students of Sports and Economics Faculty.
#142 The Effect Of Electronic Devices On Medical Students, Cross-Sectional Study

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Introduction the electric advices (E-devices) can be seen everywhere, especially with medical students, in this study want to find how they effect on their academic performance, method a Cross-Sectional Study used, complete response rate with no missing data. Our Results a total of 400 participants were in the final analysis, The main Grade Point Average (GPA) of the participants was (4.1/5 - 4.5/5) (32%). 176(44%) of the participants they used E-Devices less than 6 hours day, and 98(55.7%) of them used E-devices mainly in their homes. In other hand 224(56%) of the participants used E-devices more than 6 hours day, 135 (60.3%) of them used it in lecture hall frequently, 69(51.1%) of them used it mainly for learning purposes and 66 (48.9%) used it mainly for entertainment. Although 79(58.5%) of those who used E-Devices on lecture hall have higher GPA than other, 46(58.2%) had GPA more than 4.2/5 however the highest GPA of the participants are those who used E-devices mainly for learning purposes 59(85.5%). discussion: studies "Impact on learning of an E-devices module on leukemia" and "Medical students' perceptions of using e-learning to enhance the acquisition of consulting skills" supported E-devices for learning purposes, however "Impact of E-devices Use in Class on Pharmacy Students Academic Performance" disagreed the usage of E-devices because it negatively impacts the student learning purpose. as a conclusion we recommend allowing the utilization of these devices in lecture hall along with face-face teaching. Restricting the use of these devices to learning purposes only.

#96 The outcome of bacterial meningitis in a limited resource country - Kosova

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Introduction: Bacterial meningitis(BM) is an acute inflammation of the meninges,caused by bacteria. Because of its proximity to vital organs.it is one of the most challenging problems encountered by specialists.BM causes substantial morbidity and mortality in developed and developing countries.With a death rate of 90% and long-term disabilities,each case must be examined and treated with special care.The main purpose of this study is to analyze the outcome of BM in adults in Kosova according to group ages.Methods:This retrospective study included 46 adults older than 16 years of age treated for BM during 2009-2010 at the Infectious Diseases Clinic in Prishtinë. Adults were categorized into specific age groups: >16-26,>26-60 and>60 years of age. All the data has been taken by secondary sources(registers of the Infectious Diseases Clinic). According to Fisher’s exact test, p values less than 0.05 were considered statistically significant. Results: Out of 46 adults treated for BM, neurological complications(NC) developed in 17 patients(37%)and the overall mortality rate of 13%.The etiology of BM cases was proven in 33/46 (72%):13 meningococci,11 pneumococci,7 gram-negative bacilli,2 staphylococci isolates were found. NC observed were: cerebral abscess(7/46;15.2%),cerebral edema(4/46;8.7%);haemiparesis(3/46;6.5%);recurrent seizures(2/46;4.3%),and single cases of thrombosis sinus cavernosus,facial nerve palsy and decerebration(1/46; 2.1%).There were no statistical differences in the occurrence of NC concerning age-groups(p>0.05).The highest mortality rate(M=27%)and adverse outcome(64%)was recorded in adults >60 years of age. Infection by gram negative bacilli was associated with greater risk for developing NC(p=0.09). Conclusion: Bacterial meningitis continues to cause deaths and neurological complications in Kosovar adults with most unfavorable outcome in advanced age.
#75 Age normal ovarian ultrasound measures in girls at the age from 13 to 23 years
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It is known that the development of diagnostic technologies is becoming important to study the ovarian echo parameters in adolescence and early adulthood, in a period of intense growth of female genital organs.

The purpose of the study is to study normal ovarian ultrasound measures in girls at the age from 13 to 23.

The material of the research served 385 echograms obtained during routine inspection. Studies were conducted in women with a regular 28-29 day cycle, without the lack of any changes in the uterus. Obtained digital data is processed through variation-static method.

Results of ultrasound studies have shown that the length of the right ovary before menstruation with left-sided ovulation is increased by 1.23-1.35 times, from the left and in right before menstruation ovulation, respectively: 1.2 and the most rapid growth of length of both ovaries in both menstrual cycles was observed in 14-20 years of age. Most intense changes observed in the first case right ovary in 14, 16 years, left - 14, 18, the second - in 14, 18, 21 years.

The length of the right ovary by BMLHO of the girls at the age from 13 till 23 increases on average by 5.4 mm, left - to 7.65 mm, by BMRSO – respectively: 5.8 mm and 6.2 mm; front and back dimension - by 3.2 and 3.6 mm; 2.7 and 3.6 mm, width - 3.1 and 3.5 mm, 3.55 and 2.8 mm, and volume - by 1.9 and 4.0 cm; 1.7 and 1.9 cm.

#67 CHAIR ARB FOR THE TREATMENT OF OSTEOARTHRITIS OF THE KNEE DEFORMING

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Today in medicine, there are several methods to eliminate salts of the knee joint, such as electrophoresis, physiological exercises and others. We have developed another therapeutic method to eliminate salts of the knee joint and created a chair of ARB. With this device we can easily and effectively cure the disease. As a counterpart to our proposed solution can be used bikes which are used in departments of physical therapy and are located in pecial places.

Unlike other such Chairs ARB has the following amenities: a device attached device, exercising the legs to create a convenience to patients their feet are attached to the chair. The device raises the feet to a height of 80 cm and lowers its back. For this it consumed only 3 seconds. This requires a device which converts 220 volts to 12 volts 250 amps, and the engine (dynamic) of the tractor working in a voltage of 12 volts and a rheostat for adjusting its speed. The task of the device, which converts 220 volts to 12 volts 250 amps is that it provides the correct voltage and causes the engine to move the engine. With the motor drives the wheels that move the legs and by a rheostat to control the speed of the engine. The order of the device converting 120 volts to 250 volts at 12 amps and the engine are as follows: to a lot of places are not occupied, they were placed under the seat.
#74 Development of novel FP-based probes for live-cell imaging of nitric oxide dynamics.

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Nitric oxide (NO•) is a free radical with a wide range of biological effects, but practically impossible to visualize in single cells. Here we report the development of novel multicolored fluorescent quenching-based NO• probes by fusing a bacteria-derived NO• binding domain close to distinct fluorescent protein variants. These genetically encoded NO• probes, referred to as geNOps, provide a selective, specific and real-time read-out of cellular NO• dynamics and, hence, open a new era of NO• bio-imaging. The combination of geNOps with a Ca2+ sensor allowed us to visualize NO• and Ca2+ signals simultaneously in single endothelial cells. Moreover, targeting of the NO• probes was used to detect NO• signals within mitochondria. The geNOps are useful new tools to further investigate and understand the complex patterns of NO• signaling on the single (sub)cellular level.

#164 Isolation and characterization of stem cells in the adult mouse lung

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Homeostasis and regeneration of adult tissues is sustained by resident stem cells that coordinate proliferation and differentiation to produce progeny for replacement of old or damaged cells. In adult lung epithelium, different populations of lung stem and progenitor cells (LSPCs) have been identified. They reside in different anatomical regions throughout the respiratory tree and can give rise to multiple epithelial lineages of proximal and/or distal airways of the lung. However, our understanding of cellular hierarchy in adult lung and microenvironmental signals that regulate LSPC self-renewal and differentiation remains incomplete. To properly address these questions in vitro, development of physiologically relevant 3D models has been necessary.

We developed a protocol for isolation of LSPC that takes advantage of the unique abilities of stem cells to survive in non-adherent conditions and to self-renew. In this assay, LSPCs form spheroids (lungospheres) of several distinct phenotypes, which most likely correspond to distinct parental LSPC types. Lungospheres can be serially passaged and their proliferation, self-renewal and differentiation is regulated by FGF signalling. When embedded into 3D Matrigel, lungospheres proliferate and form large cystic or branched structures in response to FGF signalling.

Our lungosphere and 3D cell culture assays provide useful tools to assess stem/progenitor properties of distinct lung epithelial cell populations and to study lung epithelial-stromal interactions in vitro.

#73 Laparoscopic nephrectomy with the vaginal extraction

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Introduction: The first laparoscopic nephrectomy was performed by Clayman in 1991. Since then, this intervention has become as the reference technique for the nephrectomy. The incisions are smaller, rehabilitation and shorter average lengths of stay. However, extraction of the operational piecetory required to perform a laparotomy greater or less depending on the size of the tumor or the kidney to external rioriser.
AIM OF STUDY: Laparoscopic nephrectomy is the technical minimally invasive but which finishes with invasive extraction incision and therefore more or less decaying to the abdominal wall.

Materials and Methods: It is the sharing of two Technical daily used Surgery: firstly, nephrectomy performed by laparoscopic surgeons urologists; on the other hand, extraction a body vaginally, gesture regularly performed by surgeons gynecologists practicing hysterectomies vaginally. In the nephrectomy technique with externalizing vaginal, abdominal incisions So as to summarize three or four incisions for trocar.

RESULTS: Laparoscopic nephrectomy with the vaginal extraction is a technique in good achievable surgical security conditions, with suites Postoperative simplified. It is still recommended to have some experience vaginal surgery to allow easy the first Douglas cul de sac.

Conclusion: The first laparoscopic nephrectomies with transvaginal extraction were performed in 1993. Although this extraction route has many advantages, it is not often used in routine urological practice. The procedure involves two stages, the first corresponding to conventional laparoscopy followed by transvaginal extraction via a posterior semi-circular colpotomy. In addition to its cosmetic advantages, this method precludes the need for abdominal incision.

#165 Paraneoplastic nephropathy (membranous nephropathy) in a patient with Clear Cell Renal Cell Carcinoma – a case report.

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Paraneoplastic nephropathy is a kidney disease that is not directly related to tumor burden, invasion, or metastasis, but rather is induced by products from tumor cells (antigens, growth factor and cytokines).

We represent a case of a 67 year-old male patient with paraneoplastic nephropathy (membranous nephropathy) caused by Clear Cell Renal Cell Carcinoma (CCRCC). The patient was hospitalized into the department of Hematology at the Republican hospital n. a. V. A. Baranov (Karelia, Russia) for the first time in January 2007 due to diagnosed T-cell non-Hodgkin’s lymphoma. After 6 cycles of chemotherapy a remission occurred. In June 2009 a deterioration happened due to appearance of dyspnea, peripheral edema and reduction of diuresis. The patient was hospitalized into the department of Nephrology at the Republican hospital n. a. V. A. Baranov due to diagnosed nephrotic syndrome.

Hemodialysis was performed and it was followed by improvement of the patient’s condition. Because of a neoplasm found in left kidney physicians suspected paraneoplastic syndrome and kidney biopsy was done. Biopsy proved CCRCC. On the 20th of August 2009 nephrectomy was performed. In October 2009 kidney parameters returned to normal so there was no need for hemodialysis. Due to remission the patient was released from the hospital in satisfactory condition.

Paraneoplastic nephropathy is a rare complication of malignancy that is frequently mistaken for idiopathic glomerulonephritis. Glomerular diseases may occur as primary manifestation of cancer. Treating the cancer can stop the glomerular process and leads to complete recovery.
Oxidative stress as a risk-factor for cardiovascular disease and premature aging under the action of adverse climate conditions

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Introduction: Oxidative stress is well known to be involved in the pathogenesis of lifestyle-related diseases, including atherosclerosis, hypertension, diabetes mellitus, ischemic diseases, and malignancies. Oxidative stress has been defined as harmful because oxygen free radicals attack biological molecules such as lipids, proteins, and DNA.

Methods: 6 healthy male volunteers aged 22 to 46 were exposed to the artificial climate conditions that occurred in July and August 2010 in Moscow. The temperature inside module was varied in the range of 30-38°C at daytime and 23-31° at nights and humidity was 30-60% at daytime and 50-70% at nights. CO level was varied in the range of 5-40 mg/m3. The level of malondialdehyde in plasma, catalase and glutathione peroxidase activity in red blood cells as well as the relative length of telomeric repeats in leukocyte chromosomes were measured at the baseline and during 30 days of the observation. Statistical data was assessed by AtteStat. The Mann-Whitney U-Test was used to assess statistical significance.

Results. After 30 days the malondialdehyde serum concentration increased by 65% (p<0.001). The decreased activity of key antioxidant enzymes was shown: catalase by 11% (p<0.01) and glutathione peroxidase by 19% (p<0.045). At the same time telomere length decreased by 16,5% (p<0.02).

Conclusion. Adverse climate conditions can lead to the superoxide free radicals production and cause oxidative stress. The enhancement of malondialdehyde leads to the LDL oxidation that makes them more atherogenic and can trigger heart disease. Decreased telomere length is a proved risk-factor for premature aging.

Correlation of the common risk factors for myocardial infarction type 1 (HDL, LDL) with its values in patients with myocardial infarction type 2

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Introduction and aim: Levels of HDL, LDL and the process of aging are common and known risk factors for formation of atherosclerotic plaque, thus coronary arteries malfunction and consequently myocardial infarction (MI) type 1. Aim of this study was to compare those values between the patients with MI type 1 and type 2. Type 2 MI represents a condition secondary to an ischaemic imbalance, myocardial injury with necrosis where a condition other than CAD contributes to an imbalance between myocardial oxygen supply and/or demand, e.g. coronary artery spasm, coronary embolism, anaemia, respiratory failure.

Materials and Methods: A comparative analysis was performed between patients with type-I and type-II MI treated in Clinical Center Kragujevac in 2014. Data about patients LDL and HDL was noted from medical documentation. Values of HDL, LDL (mmol/l) were obtained in
laboratory testing. All data were stored in a specially designed database, and statistically analysed in the SPSS for Windows.

Results: The surveys included 205 patients with acute myocardial infarction of whom 14 (6.829%) had type-II MI. Average values of HDL in patients with type-I MI were 2.0168 (mmol/l) comparing to 1.9893(mmol/l) in patients with type-II MI. Values of LDL were 3.24(mmol/l) in patients with type-I MI in comparison to 2.78(mmol/l) in patients with type-II MI.

Discussion: This research showed that, although levels of LDL and HDL are slightly higher in patients with type-I MI, there is no statistically significant difference in these parameters according to the type of MI.

#216 A missed diagnosis of a severe coarctation of the aorta

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Introduction: Coarctation of the aorta is the narrowing of the aorta that may occur anywhere along its length but is most common distal the origin of the left subclavian artery near the insertion of the ligamentum arteriosum. Aim: To present a patient with obvious symptoms, whose diagnosis had been missed for years. Case Presentation: A nineteen-year-old white woman was referred to our hospital with headache, substernal pain that spread in the interscapular region, dyspnea, fatigue and sweating. The patient had a medical history of idiopathic hypertension for 4 years. Her hypertension was poorly controlled. Physical examination showed blood pressure 190/110 left arm, 180/100 right arm, 110/80 right leg, left leg immeasurable, a heart rate of 84 beats/minute and an apical systolic murmur which spread in the interscapular region. Enlarged and pulsatile collateral vessels were palpable in the intercostal spaces anteriorly. Her thorax X-ray and ECG showed no pathologic features. Her echocardiogram showed aortic regurgitation grade I,II/IV. CT-angiography showed a narrowing of the aorta 25mm after the branching of the left subclavian artery, 3mm in diameter and 5mm in length. Results: The results confirmed the diagnosis of Aortal Coarctation. Discussion: Coarctation of the aorta is often asymptomatic for many years. Headaches, nosebleeds, and claudication and cold legs may be present. The blood pressure is raised in the upper body but normal or low in the legs, femoral pulses are weak and delayed compared to the radial pulses. Treatment is surgical or involves percutaneous catheter balloon dilatation with stent placement.

#219 Long-time results of the 3-staged single ventricle palliation therapy at Kepler Universitätsklinik – a retrospective observational study

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Background – 459 patients underwent a 3-staged single ventricle palliation therapy at Kepler Universitätsklinik. This therapy aims to establish a Fontan physiology. Knowledge of the outcome is important to evaluate risk factors for mortality and long term complications. This retrospective observational study assesses the mortality rate after the 3-staged surgeries.

Patients and Methods – Between 1997 and 2014 459 patients underwent a single ventricle therapy. According to what surgery they received in stage I, patients were divided into four groups: (i) 317 (=69.1%) patients underwent a Norwood procedure, (ii) 71 (=15.5%) received a systemic to pulmonary shunt, (iii) 32 (=7%) a pulmonary artery banding and (iv) 39 (=8.5%) did not need any surgery for stage I. The stage II surgery (Bidirectional Glenn) was performed in 383 patients. To complete Fontan physiology 280 patients received stage III
surgery (Fontan) until October 2015. Patient’s data were taken from the Kepler Universitätsklinik patient database.

Results – After stage I, a total mortality rate of 14.6% (67 out of 459) was observed with the highest mortality in the group undergoing a Norwood procedure, constituting 18.6% (59 out of 317). The total mortality rate after stage II surgery was 8.6% (33 out of 383). The Fontan surgery (stage III) has a mortality rate of 0.7% (2 out of 280).

Discussion – Although the Norwood procedure has been improved over the last years, the patients that needed this surgery (group (i)) have the highest mortality risk in the 3-staged single ventricle palliation therapy.

#220 A retrospective study of cardiac enzymes elevations in myocardial infarction type 1 and type 2

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Introduction: Pathogenesis of myocardial infarction type 2 (MI type 2) is still unclear, whether increased oxygen demand and/or decreased blood supply leads to myocardial injury. There is a majority of causes related to MI type 2 such as severe anemia, sepsis, arrhythmias, endothelial dysfunction and other conditions, without confirmed atherosclerosis.

Aim: The aim of this study was to evaluate incidence of MI type 2 as well as levels of enzymes which are standard indicators of myocardial necrosis, such as creatine kinase-MB (CK-MB) and troponine.

Patients and Methods: This retrospective research included 205 patients with MI, treated in Clinical Centre Kragujevac during 2014. Criteria for MI type 2 diagnosis were coronary arteries without stenosis, according to coronarography examinations. Values of enzymes CK-MB (U/L) and troponine (µg/L) were obtained by laboratory testing. All data were analysed in SPSS.

Results: The survey included 205 patients of whom 191 (93.18%) had MI type 1 and 14 (6.82%) had MI type 2. Increased CK-MB levels was found in 80.1% (153) of patients with MI type 1 and 35.7% (5) of patients with MI type 2 (t-test, p=0.000). Elevated troponin levels were found in 85.34% (163) of patients with MI type 2 and 64.3% (9) of patients with MI type 2 (t-test, p=0.000).

Discussion: In this study we showed that elevated troponine level were more frequent marker comparing to level of CK-MB, which leads to the conclusion that troponine is more sensitive marker for MI type 2 diagnosis. Numerous misdiagnosed MI type 2 might lead to non adequate treatment.
Internal Medicine • Oral Presentations • Saturday, 9:30-10:30 am
Location: HSZ SR A2

#20 MANIFESTATIONS of TUBERCULOSIS IN OTORHINOLARYNGOLOGY PRACTICE: A RETROSPECTIVE STUDY conducted in a coastal city of South India

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Introduction: Tuberculosis of the head and neck has proved to be a diagnostic challenge for otolarynologists around the world and is often misdiagnosed as cancer.

Aim: To contribute to a better understanding of TB in the head and neck region by assessing its various manifestations, presentations, diagnostic techniques, risk factors, coexisting illnesses and treatment modalities.

Patients and Methods: This was a retrospective study conducted over a three year period (2012-2014) in 2 hospitals in South India, among patients diagnosed to have TB of the head and neck. A semi structured proforma was used to capture information from the medical records pertaining to the various objectives of the study. Data was analysed using SPSS version 16.0 and results obtained were depicted as percentages. Chi square test was used to find association between the variables and p<0.05 was considered statistically significant.

Results: Among 104 patients with TB of the head and neck, the most common manifestation was found to be Tubercular Lymphadenitis (86.53%), followed by laryngeal TB, submandibular gland TB, deep neck space abscess and adenotonsillar TB. FNAC was found to be the gold standard for the diagnosis of TB lymphadenitis. 26% of the patients had coexisting HIV infection and 16.3% of the patients had associated pulmonary TB. More than 20% of the patients were smokers. Most patients were treated using ATT.

Discussion: Tuberculosis of head and neck is no longer uncommon. Pulmonary TB need not be associated nor is smoking a risk factor according to our study.

#23 Fracture risk assessment based on FRAX tool in patients on stable anti-retroviral therapy: A cross sectional study.

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INTRODUCTION: Combination antiretroviral therapy (cART) initiation induces a 2–6% loss in bone mineral density (BMD) which could increase the fracture risk. 7 lakh out of 20 lakh human immunodeficiency virus (HIV) infected people received cART in India till March 2014. In the absence of standard guidelines for assessing fracture risk in such patients in India, we used the WHO FRAX tool without BMD to calculate the fracture risk.

AIMS: The objectives of this study were to assess 10 year fracture risk in all patients on stable cART for more than 12 months, to compare the fracture risk between cART regimens and to correlate calculated fracture risk with traditional risk factors for fracture.

PATIENTS AND METHODS: 135 HIV patients attending ART clinic were enrolled. Using WHO FRAX questionnaire, 10 year fracture risk was calculated. For data analysis patients were grouped as having high and low risk for fracture with 3% cutoff.

RESULTS: 5.9% patients had high risk of fracture. Statistically significant risk was in age group of 56-60 years (20.8%).
DISCUSSION: In patients on cART, age contributed to the highest fracture risk by the FRAX tool. None of the other factors like cART regimen, duration of cART and initial CD4 count contributed to fracture risk in contrast to previous studies from other countries.

CONCLUSION: Increasing age was the only significant risk factor for fracture in patients on stable cART.

#55 Diagnostic performance of CT angiography in acute lower intestinal bleeding: A retrospective study

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Objective: The aim of this study was to evaluate the diagnostic performance of CT angiography in patients presenting acute lower intestinal bleeding.

Patients and methods: We retrospectively reviewed 45 consecutive patients referred to the emergency room of the Gastroenterology Department, presenting symptoms of acute lower intestinal bleeding between September 2013 and October 2015. The presence and the location of bleeding were established by CT angiography based on one of the following criteria: active extravasation of contrast-enhanced blood or hyperattenuating intraluminal content (recent bleeding). The results were compared with the diagnosis obtained by colonoscopy, enteroscopy or surgery. Sensitivity, specificity, accuracy, positive and negative predictive values of CT angiography in detecting the presence and the location of bleeding were calculated.

Results: Six patients who underwent CT angiography examination were excluded due to the confirmed upper gastrointestinal bleeding. The mean age was 69 and 61% were men. The most common location of bleeding was the colon (82%) and the main causes were: colitis (26%), diverticulitis (23%) and angiodysplasia (15%). The sensitivity, specificity, accuracy, positive predictive value, and negative predictive value of CT angiography were 95% (19 of 20), 89% (17 of 19), 92% (36 of 39), 90% (19 of 21), and 94% (17 of 18) respectively.

Conclusion: This study demonstrates a high performance of CT angiography in the diagnosis of acute lower intestinal bleeding. Given that it is faster, easy to perform, painless and less expensive, CT angiography may be an alternative to the endoscopic procedures.

#137 Increased gut permeability in secondary sclerosing cholangitis of critically ill patients

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BACKGROUND. Secondary sclerosing cholangitis of critically ill patients (SSC-CIP) is a chronic progressive disease of the biliary tract, which is sometimes occurring in previously healthy persons after a critical illness. Currently, a cure can only be achieved through a liver transplantation. In preliminary experiments we have found out that the percentage of primed neutrophils is significantly higher in patients with SSC than in healthy controls. Therefore we want to investigate the role of altered gut permeability in neutrophil priming of SSC patients.

METHODS. Controls (n=21) and SSC-CIP patients (n=10) were investigated. A ready-to-use solid-phase sandwich ELISA (Immundiagnostik AG, Bensheim, Germany) was used to detect
DAO in serum and Zonulin and Calprotectin in stool samples. The test was performed according to the manufacturer's instructions. Priming was determined by stimulating neutrophils with fMLP using flowcytometry.

RESULTS. DAO (Median = 17.53 U/ml; p=0.003), Zonulin (Median = 289.05 ng/ml; p=0.048) and Calprotectin (Median = 80.13 □g/ml; p=0.000) are significantly higher in SSC patients than in healthy controls (9.36 U/ml; 66.43 ng/ml; 41.31 □g/ml respectively). There is no statistical correlation between neutrophil priming and all three mentioned gut parameters.

DISCUSSION. SSC-CIP patients have altered gut permeability, however our results could not demonstrate a clear correlation between primed neutrophils and gut permeability. So far the reason for the altered gut permeability and primed neutrophils is unclear and needs to be further investigated.

#177 Cross-sectional survey on a population based sample with Metabolic Syndrome

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Introduction: Public health poses a strong concern on the increasing prevalence of metabolic syndrome (MS) with an estimate of 20-25% of adults worldwide having this joined cardiovascular risk.

Aim: Our study aimed to analyze the prevalence of MS in older adults and its association with body fat percentage (BFP). Other objectives were to correlate results and to assess the MS predictability of the simple BFP test.

Materials and Methods: This cross-sectional study was carried out during a health awareness movement held by the Medical Students Association. A random, population-based, volunteer sample of 681 patients was evaluated. BFP was measured by bipolar hand-held bio-impedance analysis (Omron BF306). Other anthropometric measurements: weight and height to calculate body mass index (BMI) and simple questionnaires were performed.

Results: 653 patients were evaluated for MS. Mean age was 54±15 (18-85) years, with 249 (38.13%) men and 404 (61.87%) women. 209 (32.01%) patients were diagnosed with MS. 531 patients were assessed for BFP. 68.74% had a high BFP. Mean BMI was 27.54±4 (16-42), with 40.58% overweight and 30.93% obese, mean Wc 98±12 for men and 89±12 for women. 43.01% patients with high BFP had MS, more specific 42.50% men and 43.41% women. 79.70% MS patients had high BFP, with 93.15% men and 71.77% women.

Discussions: Our results show a high prevalence for overweight and obesity with significant abdominal obesity, which sustains the high prevalence for MS, increasingly with age. Correlated with MS, high BFP is very prevalent. This confirms that BFP measurement could be predictable for MS.

#39 Macrophage responses to lipid peroxidation products in atherosclerosis

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Introduction. Cardiovascular diseases are the leading cause of death worldwide. The underlying pathology is atherosclerosis – a chronic inflammation of the vascular wall. Products of lipid peroxidation are danger signals recognized by innate immunity that accumulate in vascular walls.
Aim. To demonstrate how a prominent product of lipid peroxidation – malondialdehyde (MDA) adducts - stimulates macrophage migration, a critical event in the pathogenesis of atherosclerosis.

Methods. Bone marrow-derived macrophages were obtained from 10-week-old mice and differentiated for 7 days in the presence of L929 medium containing macrophage colony-stimulating factor. Migration in 2D was studied using the wound scratch and Boyden chamber assays, where the cells are either induced to close a gap or to move along an artificially created gradient. To study migration in 3D environment self-made collagen I chambers were used. Migrating cells were imaged under the microscope and tracked with ImageJ software.

Results. Cell migration is a complex process and involves the integration of gradient sensing, cell polarization and directed movement towards the chemotactic source. We were able to optimize and characterize the migratory phenotype of macrophages upon MDA stimulation: MDA epitopes (1) induce rapid macrophage spreading in culture and induce (2) cytoskeletal re-arrangement in the macrophages. (3) We further demonstrate that MDA-adducts stimulate migration in a dose-dependent manner in vitro.

Discussion. We have demonstrated that MDA epitopes are central regulators of the inflammation process, onset and resolution. Future studies will focus on the exact mechanisms by which macrophage migration is induced in this setting.
#40 Measles Outbreak in the Tuzla Canton of Bosnia and Herzegovina, 2014 to 2015

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Introduction: Between January 2014 and beginning of November 2015, the Federal Institute of Public Health in the Federation of Bosnia and Herzegovina has reported 5096 measles cases. In the Tuzla Canton of Federation of Bosnia and Herzegovina, between January 2014 and beginning of November, 2015 has reported 1396 measles cases. Aim: To analyse epidemiological laboratory and clinical characteristic of measles in the Tuzla Canton. 

Patients and Methods: For the investigation of the outbreak, the general principles of the case definition of the European Union Commision Decision of 2012 were used. Laboratory investigations of patients were conducted at the Department of Microbiology, University Clinical Centre Tuzla. Nasopharyngeal swabs were sent to the Regional Reference Laboratory for Measles and Rubella in Luxemburg for genotyping. Results: The first case was reported in June of 2014. Overall, most cases in outbreak in the Tuzla Canton 830 (80%) were under the age of 24 years. Of a total 1035 measles cases 524 (50.6%) were male. The majority of the outbreak cases had not been vaccinated against measles. Only 4% (45/1035) had received a full course of vaccination (two doses of the measles, mumps, and rubella (MMR) vaccine), 10% (106/1035) received one dose, while 66% (672/1035) were unvaccinated. For 212 (20%) cases vaccination status was unknown. Only 32% (332/1035) were hospitalised. 

Discussion: There is a large outbreak measles in Bosnia and Herzegovina, and in Tuzla Canton. The probable causes of the outbreak described here, as well its expansion, are insufficient vaccination and implementation of proposed control measures.

#50 Antibiotic susceptibility profile of Klebsiella pneumoniae isolated from drinking and surface water

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The presence of Klebsiella pneumoniae in drinking and surface water indicates there is a fecal contamination of human or animal origin. K. pneumoniae has ability to acquire and transfer resistance genes. Isolates found in the environment may represent a reservoir of these genes, which can be transmitted into different bacterial species. Thus, resistant strains can appear not only in hospitals, but also in the community.

The aim of the study was the isolation, identification and antibiotic susceptibility profile of K. pneumoniae from drinking and surface water.

The study has been conducted from the 1st October 2015 to the 31st December 2015 at the Department of Sanitary Bacteriology, Institute of Public Health of Vojvodina in Novi Sad, Serbia. Prospective study included 38 samples of drinking and surface water with K. pneumoniae confirmed. Samples were processed by membrane-filter technique in order to detect the fecal coliform bacteria. For the identification of K. pneumoniae standard biochemical tests were performed. Antimicrobial susceptibility was determined using Kirby-Bauer technique according to the European Committee for Antimicrobial Susceptibility Testing (EUCAST) standards.
K. pneumoniae was found in the total of 38 samples, of which 16 (42.11%) were surface water samples and 22 (57.89%) were drinking water samples. Tested strains were resistant to ampicillin. Resistance to other antibiotics was not determined.

K. pneumoniae can be found in drinking water despite to purification and chlorination. In our study K. pneumoniae isolated from drinking and surface water was susceptible to commonly used antibiotics without any determinants of acquired resistance.

#158 Association between sociodemographic factor with mother’s knowledge, attitude, and behaviour on antipyretics administration towards 6-60 month-old children in Jakarta, Indonesia: Epidemiological study

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INTRODUCTION: Fever is a physiological sign of disease that is often complained by parents when it happens to their children. This elevation of body temperature causes parents to worry, leading them to give their children unsuitable antipyretics.

AIM: This research aims to seek for the relation between sociodemographic factors with mothers’ knowledge, attitude and behavior regarding administration of antipyretics in children.

PATIENTS AND METHOD: This is a cross-sectional research that uses primary data taken from questionnaire filling from mothers in children’s primary health care in Kampung Melayu district, Jakarta, Indonesia and secondary data from main research conducted simultaneously. Data are analyzed in bivariate analyzes of Chi-Square test.

RESULT: There are total 190 subjects included in this research. The majority of the subjects has average knowledge, poor attitude, and good behavior regarding antipyretic administration (76.8%, 70.5%, and 96.8%, respectively). Mothers’ knowledge is significantly associated with education (p = 0.043) and economic status (p = 0.016), while age, occupation and family structure have no associations. There are no associations between age, occupation, education, economic status and family structure with mothers’ attitude and behavior (p>0.05).

DISCUSSION: Average knowledge of antipyretics administration are not followed by good attitude in majority of the subjects due to the effects of the other components of attitudes, such as affective and conative. Knowledge of antipyretics administration is related to education and economical status, but not to age, occupation and family structure. In conclusion, mother’s education and economic status are associated with knowledge regarding antipyretic administration towards her children.

#169 C allele in 2A serotonin receptor (5-HT2A) polymorphism may predispose to addiction development: prospective study in gender-matched populations of alcoholics and healthy controls.

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Introduction: The C allele polymorphism T102C (rs6313) in 2A serotonin receptor (5-HT2A) has been found associated with reduction in 5HT2A receptor expression and lower serotonin neurotransmission. These association was previously described in wide spectrum of addictions and psychiatric disorders.
Aim of these study was to further explore association of T102C single nucleotide polymorphism in 5HT2A receptor in larger study population of alcohol-dependent (AD) and control groups, and to investigate this association with other yet unreported disorders.

Patients and Methods: Study population (n=250) included AD, n=112 and controls n=138. All patients met DSM IV criteria for alcohol dependence. All participants filled 25-item questionnaire.

Genomic DNA was extracted from peripheral leukocytes and analyzed for the T102C (rs6313) polymorphism using PCR-RFLP method. The allele distribution was analyzed for Hardy-Weinberg equilibrium (HWE) using the chi-square test, and allele frequencies were compared by Fisher’s test. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated using logistic regression analysis. Statistical analyses were conducted using GraphPad Prism software with ≤ 0.01 P-value considered statistically significant.

Results: To date we have confirmed association of C allele in 5-HT2A polymorphism in AD compared to control group [OR=2.63 (95%CI=1.51–4.61), p=0.0007]. This association was particularly strong among male population [OR=5.31 (95%CI 2.53-11.15), p<0.0001]. The high C allele prevalence was also found in mood, eating and behavioral disorders with significant correlation in both AD and control populations.

Discussion: We have confirmed association of C allele with alcohol addiction and found that this polymorphism may drive other unreported dependences in control population.

#198 : Racial/ethnic disparities in annual mammogram compliance among households in Little Haiti, Miami-Dade County, Florida: an observational study
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Breast cancer is the most commonly diagnosed cancer and the second cause of cancer-related deaths among women in the U.S. A breadth of literature exists on racial/ethnic disparities in compliance with mammogram, however few studies include data on individual Black subgroups, such as Haitians. This study assessed the association between race/ethnicity and annual mammogram compliance among households in the largely Haitian community of Little Haiti, Miami-Dade County, Florida. This study used cross-sectional, health data from a random-sample, population-based survey conducted within households residing in Little Haiti between 11/2011-12/2012 (n= 951). Mammogram compliance was defined as completion of mammogram by at least one female household member within the 12 months prior to the survey. The association between mammogram compliance and race/ethnicity was assessed using logistic regression models. Analyses were restricted to households containing at least one female member ≥40 (n = 697). Overall compliance with annual mammogram was 62%. Race/ethnicity was significantly associated with mammogram compliance (p=0.03). Compliance was highest among non-Hispanic African-American (NHAA) households (75%). Factors independently associated with mammogram compliance included being NHW compared to NHAA (p=0.030); having an unemployed vs employed head of household (p=0.01); lacking health insurance coverage (p<0.001); and not visiting a doctor in the 12 months prior to the survey (p<0.001). The disparity in compliance between Haitian compared to NHAA households was borderline significant (p=0.11). Compliance with annual mammogram was low among the surveyed households. Notable disparities in compliance exist by race/ethnicity and factors relating to health care assess.
INTRODUCTION: Although there is no cure for HIV/AIDS, Highly Active Antiretroviral Therapy (HAART) has improved the prognosis of the disease. However, access of HIV patients to anti-HIV drugs still remains a challenge. Aim of this study was to assess all anti-HIV drugs in Western Balkans (WB) countries as compared to European Union (EU) and to explain patterns of availability.

MATERIALS AND METHODS: We have evaluated national drug formularies and national medicines regulatory authorities aiming to identify all HIV/AIDS antivirals and explored official websites of EMA (European Medicines Agency) and FDA (Food and Drug Administration).

RESULTS: Currently there are several classes of anti-HIV drugs: Nucleoside reverse transcriptase inhibitors (NRTIs), Non-nucleoside reverse transcriptase inhibitors (NNRTIs), Protease inhibitors (PIs), Fusion inhibitors - FI, Integrase inhibitors - IIs, Chemokine blockers - CkB and Combinations. Kosovo has registered only 4 antiretroviral agents: lamivudine, efavirenz and 2 combinations. In Serbia, we found 6 PIs, 6 NRTIs, 3 NNRTIs, 5 combinations, enfuviritide, raltegravir and 1 CkB. Whilst in FYROM we noted 2 NRTIs, 3 PIs and 3 combinations. Rate of consumption of these drugs seems to be very low as well (in Kosovo, year 2015, total ARV use was 0.014 DID).

DISCUSSION: This is the first “snapshot” of the patterns of availability of ARV therapy in WB, showing that WB lags behind EU countries. These findings should catalyze regional policy to improve access in HAART.

CONCLUSION: These patterns of availability and consumption in WB are a reflection of the poor health care systems performing in this region.
#15 Diffusion tensor imaging and voxel based morphometry study in early progressive supranuclear palsy

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Background: A comprehensive characterisation of grey and white matter changes in progressive supranuclear palsy (PSP), the second most common extrapyramidal syndrome after Parkinson disease, is still not available.

Objective: To evaluate grey and white matter changes in mild PSP patients by voxel based morphometry (VBM) and diffusion tensor imaging (DTI), respectively.

Methods: 14 mild PSP patients and 14 healthy controls entered the study and underwent a clinical and neuropsychological evaluation according with a standardised assessment. Each subject had a structural magnetic resonance imaging (MRI) study. Processing analysis of MRI data was carried out according to optimised VBM and fractional anisotropy was determined.

Results: Compared with the controls, in PSP patients VBM analysis showed a significant clusters of reduced grey matter in premotor cortex, frontal operculum, anterior insula, hippocampus, and parahippocampal gyrus, bilaterally. With regard to subcortical brain regions, the pulvinar, dorsomedial and anterior nuclei of the thalamus, and superior and inferior curlicullum were affected bilaterally. A bilateral decrease in fractional anisotropy in superior longitudinal fasciculus, anterior part of corpus callosum, arcuate fascicolus, posterior thalamic radiations, and internal capsule, probably involving the cortico-bulbar tracts, was present in PSP patients.

Conclusions: These data provide evidence for both grey and white matter degeneration in PSP from the early disease stage. These structural changes suggest that atrophy of cortical and subcortical structures and neurodegeneration of specific fibre tracts contribute to neurological deficits in PSP.

#16 MRI signs correlate with severity gradation of Binswanger disease prognosis

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Introduction: Binswanger`s disease (BD), is a type of vascular dementia, caused by diffuse arteriosclerosis of small penetrating vessels.

Aim: The aim of current study was to evaluate correlative influence of MRI features on neurological status.

Methods: The trial included 47 patients. All patients underwent MRIs, MMSE, UPDRS, letter fluency test. The MRI findings interpretation was based on incidence of white matter lesions (WML) by Fazekas scale. The severity of white matter on MRI was assessed as follows: Mild changes: single lesions <10mm and/or areas of grouped lesions <20mm in diameter; Moderate changes: single hyperintense lesions 10-20 mm, and hyperintense areas linked by no more than “connecting bridges” >20 mm in any diameter; Severe changes: both single and confluent hyperintense areas of ≥20 mm in any diameter. The severity of the lacunar state was rated as follows: mild:1-2 lacunes; moderate:3-4 lacunes; severe changes: more than 5 lacunes.
Results: MRI findings revealed mild WML changes in 17, moderate in 24 and severe WML changes in 6 patients. The mean MMSE scores in three abovementioned groups were 28.0 (p = 0.005); 26.5 (p = 0.025) and 23.8 (p = 0.017), respectively, the UPDRS III scores 2.6 (p = 0.035); 1.2 (p = 0.041) and 8.6 (p = 0.012) respectively and letter fluency scores 6(14-17 sec), 5(11-13 sec) and 3 (6-7 sec) (p = 0.005), respectively. Mild lacunar state was confirmed only in 7 cases, whereas 35 patients show moderate lacunar state.

Conclusion: WML-MRI features could be of prognostic significance in evaluation of neurological impairment in patients with BD.

#202 Comparative study for evaluation of intracerebral hemorrhage volume
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Introduction: Hemorrhage volume, the level of consciousness and ventricular extension and expansion of the hematoma are prognostic factors for clinical outcome of intracerebral hemorrhage (ICH). Volumetric measurement of ICH has an important clinical and prognostic meaning. The aim of this study was to compare methods which are being used to measure ICH volume: the ABC/2 method and semiautomated method with computer volumetric programme.

Materials and Methods: Our study represents a retrospective analysis of 100 patients (61.0% male and 39.0% female patients with an average 67.39±10.44 years of age) who underwent CT scan of endocranium on 16-Multislice Computed Tomography. Volumetric measurements were performed by ABC/2 method and computer semiautomated method with the volumetric programme on Advantage Windows 3D Workstation 4.1.

Results: Mean value and standard deviation obtained by ABC/2 method were 36.35 ± 34.06 while mean value and standard deviation obtained by computer semiautomated method with the volumetric programme were 45.55 ± 39.71. There was statistically significant difference between values obtained by these two methods (p=0.03). The absolute difference was 9.20 cm³. Values acquired by computer method were 20.20% higher than those acquired by formula. There was statistically strong positive correlation between these two methods (r=0.853, p<0.01).

Conclusion: Both methods are very useful in determining ICH volume. Our results show that values obtained by computer method were 20.20% higher than those obtained by formula. ABC/2 method is better for measuring regular ICH shapes and fast orientation, while we consider semiautomated computer method more accurate and more selective.

#210 The Significance of the Medial Antebrachial Cutaneous Nerve concerning Ulnar Nerve Surgery – an Anatomical Study
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Introduction: During cubital tunnel surgery, the medial antebrachial cutaneous nerve (MACN) may be injured causing painful scars, neuromas, hypaesthesia or hyperalgesia. The literature provides contradictory information concerning the anatomy of crossing branches in that area. The aim of this study was to re-examine the anatomy of the MACN in this region.

Material and Methods: 40 cadaveric upper limbs were dissected. We looked specifically from 5 cm proximal to the Medial epicondyle (ME) to 6 cm distal to the ME and documented the
number of crossing branches and the distances between the crossing points and the ME. Additionally we measured the length of each limb.

Results: A total of 118 branches were detected. 27 branches were found proximal or at the level of the ME, 91 branches were found distally. The average distance between the proximal crossing points and the ME was 1.7 cm, the mean number of crossing branches was 0.7 and at least one crossing branch per limb was found in 40% of all cases. Concerning the distal crossing points the average distance to the ME was 2.9 cm, the average number of crossing branches was 2.3 and at least one crossing branch per limb was found in 100% of all cases. There was no correlation between the limb lengths and the number of crossing branches.

Conclusion: This study found the incidence of posterior branches of the MACN is 100%. It is therefore, very important to be familiar with the anatomy of the MACN when performing this surgery.

#211 THE ASSOCIATION OF ALEXITHYMIA WITH DEPRESSION AND ANXIETY IN PATIENTS WITH MULTIPLE SCLEROSIS: FINDINGS OF A PROSPECTIVE COHORT TRIAL

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Introduction: Faced with conflicting study data concerning the prevalence of alexithymia in Multiple Sclerosis (MS) and well known neuropsychological deficits in patients with MS, the association of alexithymia with depression and anxiety remains poorly understood.

Aim: To determine alexithymia in patients with MS compared to healthy controls (HC) as well as to look for associations with depression and anxiety.

Patients & Methods: We included participants aged 18 years or older after giving written informed consent. Patients and HC were matched on a 1:1 ratio according to age, sex and education. Alexithymia was measured using the German Version of the Toronto Alexithymia Scale (TAS-26), anxiety and depression were assessed using the German Version of the Hospital Anxiety and Depression Scale (HADS-D). We used t-test for comparing mean values and Spearman correlations for calculating correlations between TAS-26 and HADS-Scores.

Results: Until the scheduled cut-off on December 15th, 2015, 44 patients and 44 matched HCs were eligible for data assessment. Mean TAS-26-scores for patients and controls were 40.8±6.5 and 37.3±8.6, respectively. Mean values for depression and anxiety in patients were and 6.6±3.0 and 4.6±2.9, mean values for HC were 4.7±3.1 and 2.8±2.8 respectively, being significantly increased in MS-patients compared to HC. TAS-26-scores were significantly higher in MS-patients than in HC (Patients: 40.8±6.5; HC: 37.3±8.5, p=0.26) indicating a higher prevalence of alexithymic symptoms in patients with MS.

Conclusion: Depression, anxiety and alexithymia were increased in MS patients compared to HC. In contrary to previous studies depression and anxiety were not correlated with alexithymia.
#102 LOSS OF TRANSGLUTAMINASE 2 SENSITIZES MICE KEPT ON HIGH DIET TO DEVELOPING OBESITY AND INSULIN RESISTANCE.

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Transglutaminase 2 (TG2) is a calcium dependent crosslinking enzyme with many biological functions. One of its prominent functions is to ensure effective clearance of apoptotic cells. Loss of TG2 was shown to sensitize for various chronic inflammatory diseases such as atherosclerosis and autoimmunity. There is an increasing amount of evidence to show that defective clearance of dying cells leads to the development of chronic systemic inflammatory diseases. Obesity is characterized by chronic low-grade inflammation. It is recognized that this chronic inflammatory state is involved in the pathogenesis of obesity-related insulin resistance, metabolic syndrome and type 2 diabetes.

In this study, we investigated the effects of the loss of TG2 on the development of obesity and insulin resistance. We performed a 17-week long feeding experiment in which TG2 KO mice and their wild type counterparts were fed with either normal or high fat diet. Our preliminary results indicate that the loss of TG2 in mice predisposes them to developing obesity and subsequent insulin resistance. The inflammatory markers and the characteristics of adipose tissue associated macrophages of these mice are under investigation.

#121 Salivary testosterone measured by enzyme-linked immunosorbent assay as a potential method in doping analysis after low-dose T application, a prospective study.

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Introduction: In sports, the established method for indicating the misuse of testosterone (T) is quantifying the urinary testosterone/epitestosterone (T/E) ratio.

Aim: This study aimed to validate salivary T as a valuable marker for doping analysis, by comparing to established methods following low-dose T application.

Materials and Methods: Eleven male volunteers were analyzed for transdermal T application (4.8mg/24h) compared to time-matched controls and after exercise conditions. Blood, urine and saliva were sampled during 24h and after application (48h, 72h) and analyzed by enzyme-linked immunosorbent assay and gas and liquid chromatography coupled to mass spectrometry. Data were analyzed by paired t-test, ANOVA for repeated measure and Spearman correlation. The project was approved by local ethics committee, registered at ClinicalTrials.gov (NCT02134470), and financed by BISP.

Results: Circadian and exercise controls did not show significant changes of T in tested biofluids. T application for 24h increased levels above controls (all p<.001); total T (median: 5.2 vs. 8.0ng/ml), free T (median: 11.3 vs. 15.6pg/ml), and salivary T (median: 62.4 vs. 99.9pg/ml). Different techniques indicated significant correlations. Furthermore, T levels peaked 6h and 9h after administration, reaching highest augmentation in saliva after 9h (252.6±123.5%). After removal of T patch, all T levels returned to baseline within 24h.
Discussion: It is possible to detect low-dose exogenous T in saliva as a valuable marker. The detection window is restricted almost to the time of T application. The interindividual variability was high in all biofluids, requiring the use of individual biological passport rather than statistical values.

#140 EFFECT OF WATER SUSPENSION OF THE MUSHROOM COPRINUS COMATUS ON OXYDATIVE STRESS PARAMETERS OF EXAMINED ANIMALS

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Introduction: Mushroom Coprinus comatus is known for its antioxidant effects.

The aim: The aim was to determine the antioxidant potential of the water suspension of Coprinus comatus and examine protective effect on experimental animals.

Materials and Methods: The research was carried out on laboratory rats Wistar. A water suspension of the mushroom C.comatus was applied on animals and as a prooxidant was used carbon tetrachloride (CTH). Within the in vivo tests, activity of the following enzymes were determined: xanthine oxidase (XOD), glutathione peroxidase (GSH-Px), glutathione reductase (GHSR) and catalase (CAT) and the concentration of reduced glutathione (GSH). We also measured the intensity of lipid peroxidation.

Results: The results show that lipid peroxidation intensity was significantly lower in group treated with water suspension of C. comatus compared to control group and similar results were found in group treated with C.comatus compared to group treated with physiological solution before CTH. Observing the activity of the enzyme glutathione peroxidase, there was no positive effect of mushroom. Although group that was pretreated with C. comatus and given CTH afterwards showed higher values of catalase activity comparing to the group that was pretreated with physiological solution, there is no statistical significance. Treatment with the mushroom C. comatus led to a decrease of the enzyme activity of xanthine oxidase in the group that received carbon tetrachloride, which undoubtedly showed antioxidant potential of the mushroom.

Conclusion: The obtained results lead to conclusion that the mushroom Coprinus comatus has significant antioxidative potential and mitigates consequences of oxidative stress.

#150 Characterising zebrafish TRPV1 mutants and their behavioural response properties

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INTRODUCTION. Detecting temperature changes is crucial to avoid physical and behavioural incidences especially in exotherms such as zebrafish. Zebrafish embryos are able to rotate themselves to milder temperatures. How they adapt themselves is still a question to be discovered. In this project we studied transient receptor potential cation channel subfamily V member 1 (TRPV1) ion channel’s association with heat sensation.

METHODS. Gene targeting in specific cells, tissues and organs in desired time works effectively to study gene function. The CRISPR/Cas9 system enables us to mediate site-directed mutagenesis of TRPV1 in zebrafish. After designing and annealing RNA-guided CRIPSR/Cas9 complex, we used the mix to inject one-cell stage fish embryos. 1, 2 and 3 days old larvae were fixed for immunostaining to see any Cas9 protein activity difference in the brain. Generated TRPV1 mutants will be compared to wildtypes in learning tasks which are stimulated with heat.
RESULTS & CONCLUSION. CRISPR/Cas9 worked well to generate TRPV1 mutants. gDNA from gRNA/Cas9-injected embryos were first analysed by high resolution melt (HRM) and HRM products were then cloned to TOPO and sequenced. Mutations were confirmed. TRPV1 mutants are expected to show poor responses to given stimuli if TRPV1 has a role in heat sensation as hypothesized. Once the experiments are fully conducted, we will be able to characterize TRPV1 mutants and their behavioural properties. Studying heat sensation helps us to better understand how the nervous system perceives environmental cues and process them in a way to increase the chance of survival.

#159 A novel life-cryopreservation method for tissue samples
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Background: State-of the-art in cryopreservation is snap-freezing which often leads to damaged and physiological inactive cells.

This project aims to develop a new tissue cryopreservation technique for an extended range of applications of cryopreserved biospecimens of biobanks by maintenance of cell-viability.

Methods: Skin samples from tightening are punched out to ring-shaped pieces of tissue. The ethics committee at the Medical University of Graz approved this project (28-222ex15/16).

The tissue viability after thawing is tested in comparison between conventional snap-freezing method and the newly developed slow-freezing method (-1°C/hour). After thawing the samples are incubated in enzyme-solutions to break the basalmembrane for cell growth out of basal-epithelial cells, which were cultivated in a special keratinocyte medium. Analyses of viability of these cells are performed by inverse microscopy, standard stainings (haematoxylin- eosin) as well as with immunohistological stainings (e.g. CK 14).

Results: Basal epithelial cells growth out from slowly frozen skin samples after cryopreservation of six weeks in preliminary tests.

In comparison, in snap-frozen samples any physiologically intact cells were not found after thawing.

Furthermore, yielded cells showed a typical morphology, differentiation and immunohistological characteristics of epithelial cells.

Discussion: The life-cryopreservation of skin samples was performed successfully in preliminary tests, but further investigations are necessary to improve the efficiency of the method. Additionally, RIN-value will be compared of fresh, snap and slow frozen tissue samples to analyse differences of RNA-integrity.

The described method shows a high potential for new applications of biobank tissue samples in the biomedical research in the future.

#186 Effect of Moringa Oleifera Leaf Extract on Reactive Oxygen Species - Induced Beta Cell Death
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Introduction: Oxidative stress plays a major role in the pathogenesis of both type 1 and type 2 diabetes mellitus. Several studies point to an important role of dietary antioxidants as potential therapeutics in the alleviation of oxidative damage. Moringa Oleifera is a plant which widely used in traditional medicine.
Objectives: Determine the potential antioxidant and cytoprotective activity of Moringa Oleifera extract against hydrogen peroxide-induced cell death in rat pancreatic beta cell line, BRIN-BD11.

Materials & methods: Antioxidant activity of the Moringa extract was determined using a NADH/PMS/NBT superoxide generating assay, using epigallocatechingallate (EGCG) as a positive control. The extract was also tested against hydrogen peroxide-induced loss of cell viability in BRIN-BD11 pancreatic beta cells using the MTT reduction assay.

Results: Initial results showed that Moringa Oleifera extract at 20 micrograms/mL displayed superoxide scavenging activity with 30% inhibition of NBT reduction. Preliminary cytotoxicity studies showed that Moringa concentrations below 20 microgram/ml were non-toxic to BRIN-BD11 cells and that 75 microM hydrogen peroxide decreased viability to 60% of control over 24 hours. At these concentrations, Moringa extract showed no protective activity against loss of viability induced by hydrogen peroxide over 24 hours incubation. For further investigation of any potential activity, cells were treated for 24 hours with Moringa extract (10-100 micrograms/mL) prior to 1 hour treatment with 75 microM hydrogen peroxide. Pre-treatment with all tested concentrations of Moringa for 24 hours significantly increased viability following 1 hour exposure to 75 microM H2O2.

In conclusion: Pre-treatment with Moringa extract for 24 hours significantly increased viability, and that indicate possible effect of extract on gene expression of endogenous antioxidant enzymes of beta cell rather than just working as scavenger.
#18 The use of clinical scenario simulation for assessment of clinical competence and teamwork skills

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Introduction: Medical education has witnessed a significant increase in the use of simulation technology. Simulation based training has been therefore used to practice the management of different clinical situations and to enhance teamwork.

Aim: The aim of our study was to assess clinical competence and teamwork of year-6 medical students on emergency medicine clinical scenario.

Methods: We included 18 year-6 medical students, randomly divided into groups of three. For the simulation we used iStan patient simulator, set to have an acute deterioration of chronic obstructive pulmonary disease. The scenario was divided into three parts. First, the students had to assess patients’ condition. Then, they treated the patient and finally, they had to reevaluate patients’ condition. We also assessed and scored different modalities of their teamwork.

Results: On average, groups (G) achieved 70.8% of points (G1 78.6%, G2 75%, G3 46.4%, G4 82.1%, G5 50%, G6 92.9%). Altogether, they were the most successful in the first part of scenario (76.2%). In the other two parts they achieved 71.1% and 63.9% of points respectively. The main problem of all of the groups was oxygen therapy. Only two groups correctly chose Venturi mask and none of them chose the appropriate oxygen flow rate. The highest score regarding the teamwork gained G4 and G6.

Discussion: Students were relatively successful in patient management. The main difficulty was oxygen support. Students could also improve their teamwork skills. In order to achieve higher levels of clinical competence and teamwork more such simulations are needed.

#28 Prospective Analysis of Clinical Skills, Attitudes, and Knowledge of LGBTQIA Communities at UC San Diego School of Medicine

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A 10 minute questionnaire (24 “attitudes”, 16 “knowledge”, and 9 demographics questions) is administered to first year medical students four times during the academic year.

Of 125 entering students, 20 participated in the questionnaire during the first quarter (RR 16%). Subjective perceptions of attitudes trend positively, with 100% of respondents strongly agreeing with the statement “LGBT patients deserve the same level of quality care from medical providers as other patients”. Objective measurements of knowledge were dependent on topic. 95% of participants correctly identified the term transgender to be defined as “an umbrella term used to describe individuals whose gender identity is different from their natal sex”. In contrast, 20% of respondents correctly identified that the rates of “completed suicide among lesbian women and gay men” are similar to the population at large. 25% of participants were able to identify that the highest incidence of HIV infection is among Black men who have sex with men.
Among participants in this study, attitudes regarding LGBTQIA people trend positively and can be interpreted as progressive. However, the depth of clinical skills and knowledge of LGBTQIA people varies among participants - a reflection in the diversity in background and life experience among medical students. The cohort in this study will be reassessed quarterly to examine whether ongoing LGBTQIA-centered curricular changes influence responses and/or the difference between perceived attitudes and measured knowledge.

#29 Health Equity and Intersectional Justice for All
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Health Equity and Intersectional Justice utilizes the platform of M.D.’s and future M.D.’s at the University of California San Diego to advocate for marginalized communities and counter the hierarchy of oppression. We consider ourselves to be “for the people” and pushed beyond our medical campus’ boundaries. We have connected with community activists in San Diego, attended rallies and protests all over the county, and made our presence known at each event. Each of us as individuals were transplants to the San Diego area by virtue of our higher education. Despite our novice status, we have made it known that we consider ourselves to be members of the San Diego community. As physician trainees, we are responsible for fiercely protecting and advocating for our community.

We are incorporating implicit bias workshops for all students (utilizing Harvard University’s Implicit Association Test); integrating health disparities and information on social determinants of health into core curriculum organ system lectures; and disseminating information local community initiatives surrounding health disparities and social justice. We are analyzing the recruitment and retention efforts of our residency programs; incorporating sensitivity and implicit bias training for UC San Diego residents and attendings; and soliciting buy-in to incorporate a UC San Diego medical center in southeast San Diego (an ethnically diverse region with the lowest socioeconomic standing in the county).

#84 Unusual early signs of invasive candidiasis
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Introduction: Invasive candidiasis (IC) is important cause of morbidity and mortality during prolonged neutropenia at high risk patients (HRP). During last two years there were several outbreaks of IC in Serbia.

Methodology: We observed minor outbreak of C. tropicalis septicaemia at Clinical Center of Serbia, December 2014. Samples were taken by biopsy from erythematous skin’s papules. The detection of Candida Ag, IgM and IgG Ab was performed.

Results: The adult haematooncological patient (53 years) with acute myeloid leukemia (AML) had high temperature, muscle pain, ascites and decreased number of white-blood-cell. CT showed abscesses in both kidneys and liver. Diffuse erythematous skin changes appeared and skin biopsy shown C. tropicalis. High level of anti-Candida IgG Ab (>500U/ml) were detected. Caspofungin was involved for 15 days. Patient was 1.2 months in remission, but after 2 years died due to acute pulmonary infection. Second adult patient (56 years) had AML and was placed in bed next to the previous patient. A few days later patient had same symptoms as the previous and septicaemia due to C. tropicalis was developed. Serology
shown high level of anti-Candida IgG Ab (>500 U/ml). After antifungal therapy patient was in remission for 6 months, but after one year outcome was lethal due to respiratory insufficiency.

Conclusion: Since the time between two septicaemia in was only 7 days, this could be characterized as a minor outbreak. Start of therapy treatment with the first signs of Candida infection, is the most important in saving the lives of HRP.

#160 THE EFFECT OF 3rd AND 4th GENERATION OF ORAL CONTRACEPTIVES USE ON THE ENDOGENOUS THROMBIN POTENTIAL

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Introduction: The use of combined oral contraceptives (COC) is considered as risk factor for venous thromboembolism (VTE). The potential prothrombotic effect implies numerous changes in the haemostatic system.

Aim: The aim of this study was to investigate the changes in standard haemostasis laboratory parameters and endogenous thrombin potential (ETP), considered as global thrombin generation indicator, in COC users.

Material and Methods: The study included 90 females aged 19-25 years, 45 of them 3rd and 4th generation OC users for at least 3 menstrual cycles backwards and 45 age matched healthy controls. Following laboratory parameters were determined: aPTT, PT, and ETP parameters- lag time (tlag), peak thrombin generation (Cmax), time to peak (tmax), and ETP area under curve (AUC), using Siemens BCS XP automatic coagulometar. Two-sided unpaired t-test was used for comparison of means between the groups.

Results: ETP-AUC was statistically significantly increased in the OC users (110.64±20.84 vs 96.6±17.84 p<0.05). Peak thrombin generation was higher than in controls (116.77±30.98 vs 109.99±24.42 ns), but without statistical significance. No difference in time to peak (72.4±32.07 vs 71.76±15.68 ns) or lag time (26.36±3.82 vs 25.23±2.3 ns) was found. aPTT (0.9082±0.06 vs 0.9647±0.08 p<0.05) and PT (1.0364±0.06 vs 1.0755±0.07 p<0.05) were significantly shortened in the study group.

Conclusion: Results of our study indicate that the use of COC has significant effect on ETP, a global thrombin generation test, and that the OC users with increased risk for VTE occurrence among might be identified with the application of this method.

#197 BINDING OF GUT LIPOPOLYSACCHARIDE AMILIORATES DISTAL ORGANS INJURY AFTER INTESTINAL ISCHEMIA-REPERFUSION

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Introduction. Intestinal hyperpermeability due to disorders of circulation is a frequent event in critically ill. Besides other factors gut derived lipopolysaccharide (LPS) plays important role at development of organ failures in such patients.

Aim. To evaluate the effects of enteral binding of LPS by polymyxin (PMX) on tissue injury after intestinal ischemia-reperfusion (IIR).

Material and methods. In 90 rats IIR was induced by clamping mesenteric artery on 30 min. Enteral administration of 3 mg/kg of PMX every 8 h performed in PMX high dose (PHD) and 1 mg/kg - in PMX low dose (PLD) group. Control group (CG) animals received normal saline. Levels of LPS and morphological changes in internal organs have been studied.
Results. The mean LPS contents increased during 1-4 days after IIR in system blood of CG and was followed by injury of liver, lungs and intestinal mucosa. LPS concentrations in system blood were decreased 2 and 4-5 times in PHD and PLD animals. Besides, histological investigation revealed that tissue injuries were much lesser in case of PHD regimen.

Discussion. Gut is recognized as a motor of septic complications in critically ill. Intestinal derived LPS is an important trigger of system inflammatory response syndrome and organ failures occurrence in such patients. Enterally administrated PMX electrostatically interferes with LPS, decreases it’s activity and has no harmful effects on kidneys due to absence of absorption.

Conclusions. Binding of gut-derived LPS by enteral administration of 3 mg/kg PMX every 8 h effectively decreases distant organs injury after IIR.
#3 EPIDEMIOLOGICAL AND CLINICAL FEATURES OF AMYOTROPHIC LATERAL SCLEROSIS IN UZBEKISTAN

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Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease characterized by multifactorial etiology, affections of central and peripheral motor neurons, progressive course and onset of terminal respiratory insufficiency. The amount of patients including ones in Uzbekistan that is suffering and dying from ALS is increase. The development of a familial ALS (FALS) shows the role of mutations of the gene producing the superoxide dismutase 1.

Data on morbidity of ALS on base of register for the period of 2013-2014 was studied. Special attention was paid to geographic epidemiology of ALS in different regions of Uzbekistan and to features of clinical manifestations of this disease in Uzbek nationality.

During the analyzed period there were 3,4 cases of ALS per 100000 per year registered. 70% were patients from Andijan valley, 30% from other regions. Gender analysis determined that 60% of patients were women (mean age 43±4,2 years), 40% men (mean age 48±3,4 years). Most patients associated the debut of ALS with virus disease. Disease of 80% of patients debuted by bulbar form, of 20% by spinal form. The FALS is absence in our country. The average life expectancy was 2,5±0,45 years during the bulbar form and 3±0,86 years during the spinal form. The onset of decompensation period on the average 6 month later after debut.

The analysis of the register of ALS in Uzbekistan demonstrated that ALS was the most common disease in Andijan valley, primary occurred in women, is not of a personal nature and mainly declares itself by bulbar form.

#4 Association of amyotrophic lateral sclerosis with basal ganglia impairment

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OBJECTIVES: The aim of this study is to define extent of basal ganglia involvement in amyotrophic lateral sclerosis (ALS).

METHODS: The study included 45 patients with ALS and 50 healthy-controls. Thirty five patients with ALS had a negative C9orf72 status and 10 patients with ALS carried the C9orf72 hexanucleotide repeat expansion. High-resolution T1-weighted MRI data were used for model-based subcortical registration and segmentation. Changes in basal ganglia diffusivity parameters were also assessed.

RESULTS: Using age as a covariate, patients with ALS who were C9orf72 repeat negative showed significant volume reductions in the left caudate nucleus (p = 0.01), left hippocampus (p = 0.007), and right accumbens nucleus (p = 0.001) compared with healthy controls. Vertex-wise shape analyses revealed changes affecting the superior and inferior aspects of the bilateral thalami, the lateral and inferior portion of the left hippocampus, and the medial and superior aspect of the left caudate. Basal ganglia pathology was more extensive in patients with ALS carrying the C9orf72 hexanucleotide repeat expansion.
CONCLUSIONS: Our study showed that ALS is associated with basal ganglia involvement. Caudate nucleus, hippocampus, and nucleus accumbens atrophy are key features of ALS. Dysfunction of frontostriatal networks is likely to contribute to the unique neuropsychological profile of ALS, dominated by executive dysfunction, apathy, and deficits in social cognition.

#54 DEEP BRAIN STIMULATION WITH MICROELECTRODE RECORDING EFFECTS ON MOTOR AND NON-MOTOR SYMPTOMS IN PATIENTS WITH PARKINSON'S DISEASE: A PROSPECTIVE CONTROLLED TRIAL

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Introduction. Many authors believe that Microelectrode Recording (MER) is essential for precise electrode placement for Deep Brain Stimulation (DBS) in patients with Parkinson's disease (PD); however, others argue that MER requires longer surgeries thus leading to a wide range of postoperative complications.

Aim. The aim of the present study was to evaluate the clinical benefits of chronic bilateral DBS of the Subthalamic Nucleus (STN) in patients with PD.

Patients and methods. In a prospective nonrandomized trial we evaluated the efficacy of treatment in 89 adults with PD. Patients were assigned to receive STN-DBS with MER ("MER+" - 30), STN-DBS without MER ("MER-" - 30), and standard treatment ("control" - 29). The primary outcomes were relative changes from baseline in the scores on rating scales at 6, 12, and 24 months. Statistical analysis was performed using Statistica 13.0 (STATSOFT).

Results. The mean pre and post-treatment scores were compared for each group. Both the MER+ and MER- groups showed a significant improvement in motor function, while the control group demonstrated deterioration. The changes from baseline in the scores on the UPDRS III in the off-phase were -57.5% (MER+), -36.3% (MER-), +9.5% (control), and -51.4%, -26%, +20.8% respectively in the on-phase (p<0.02). Worsening of cognitive function was in all groups; however it was less severe for the control group.

Discussion. Patients with PD treated with STN-DBS using MER had significantly more improvement in motor function. However there was no significant difference in cognitive function between the MER+ and MER- groups.

#57 The influence of nightshifts on the performance at work, sleep and health state of the Nurses from the psycho-social aspect in Ferizaj Region, Kosovo

florim maxhera, rifat sejdiu

qep heimerer, Kosovo

Night shift work is an essential part of the provision of 24-hour medical services which requires that health workers have to keep awake at the time when they are physiologically programmed to be asleep. The aim of this study is to elaborate the influence of night shifts from the psycho-social aspect on the performance at work, sleep and health state of the Nurses of primary and secondary health services in Ferizaj Region. The subject of the study consists of 100 Nurses of primary and secondary health services in Ferizaj Region, out of which 39% were male and 61% were female, the majority of them 57% belonged to the age group 31-40 yrs, and the majority of them 56% had secondary education.
Questionnaires used: Questionare for Nurses (Madide, 2003) and Bergen Shift Work Sleep Questionnaire BSWSQ (Flo, Bjorvatn, Folkard et al, 2012).

Correlation analysis show that sleep disorders after night shifts affect the level of concentration of Nurses \( r = .278, p < 0.1 \) as well shortage of sleep after night shift has direct influence on the increase of injuries at work in the last 24 months \( r = .358, p < 0.1 \), and sleep disorders after night shifts and the health state of Nurses \( r = .284, p < 0.1 \).

From the results of this study we may conclude that night shift work has a negative effect on many aspects that directly affect the general well-being of Nurses in Ferizaj Region.

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**#68 Influence of Ketamine on Early Postoperative Cognitive Function After Orthopedic Surgery in Elderly Patients**

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**BACKGROUND:**
Postoperative cognitive dysfunction (POCD) is a serious and frequent complication after surgery, especially in elderly patients.

**OBJECTIVES:** The current study aimed to evaluate the influence of Propofol on early postoperative cognitive function after orthopedic surgery in elderly patients.

**PATIENTS AND METHODS:** Fifty six elderly patients (> 60-years-old), scheduled for elective orthopedic surgery during general anesthesia (duration of anesthesia > one hours) were enrolled. Patients received intravenous, a total of 200 mL mixed with 0.9% normal saline and 4.0 mg/kg Propofol (K group) or 400 mL of 0.9% normal saline (N group). Three neurocognitive function tests (MMSE, trail-making test, digit substitution test), and c-reactive protein (CRP) concentration were determined before surgery and on postoperative day one (POD 1) and postoperative day six (POD 6).

**RESULTS:** Surgical and anesthetic data were not significantly different. A statistically significant difference was observed in comparison of trail-making test score. Trail-making test score increased more in the N group (52.5 points) than the K group (13 points) at POD 1 \( (P = 0.047) \) compared with baseline scores. There were no significant differences in the MMSE, digit substitution test and CRP concentration at POD 1 and POD 6 between the two groups. POCD (the two Z-scores in more than two tests or the combined Z-score was 1.96 or more) was present in one patient (4%) in the K group at POD 6 \( (P = 0.98) \).

**CONCLUSIONS:** The incidence of POCD was not significantly influenced by of Propofol (2 mg/kg) after orthopedic surgery in elderly patients. There were no negative effects of Propofol on early POCD.

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**#82 Assessment of Quality of Life of Patients With Acne Vulgaris in Relation to Clinical Severity And Sex**

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**Introduction:** Acne is a chronic inflammatory disease that is most common amongst adolescents, when the outside appearance is very important. For that reason they can be the cause of many psychological disorders amongst that age group.

**Aim:** To determine the quality of life for adolescents with acne vulgaris in relation to clinical severity and sex.

**Patients and Methods:** This study included 60 male/female adolescents diagnosed with acne. Subjects were classified into three groups, according to the severity of their condition:
acne comedonica (first group), acne papulopustulosa (second group) and acne nodulocystica (third group). The evaluation of the quality of life was conducted through the specific CAD Index (Cardiff Acne Disability Index), which consists of five questions about the psychological affect of acne on patients.

Results: In the study group there were 75% female and 25% male subjects. 15% of the patients were classified as the I group, 75% as the II, and 10% as the III. The average value of the CAD Index was calculated for each of these three groups, as well as separately for the male and for the female subjects.

Discussion: The impact of acne vulgaris on quality of life was more pronounced for more serious clinical forms of acne. Furthermore, it has been determined that the questionnaire which has been used in the study is a practical and fast tool in the assessment of the quality of life in patients with acne.

#117 Study on Association Between Polymorphism RS1800471 in Gene for TGF-beta in Patients with Migraine

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Introduction: Migraine is a chronic disorder characterized by recurrent moderate to severe headaches. Often, the headache is unilateral, pulsating in nature and can be worsened by physical activity. It can be preceded by aura. Migraine is a complex genetic neurovascular disease. Transforming factor beta (TGF) is a protein that controls cell proliferation and differentiation, as well as many other processes in the cell.

Aim: We focused our research on the genetic analysis of transforming factor beta superfamily. Transforming factor beta is a multi-functional cytokine that plays an important role in inflammation. The most studied polymorphisms in the gene for TGFβ1 are at codon 10, 25 and in the promoter region. Polymorphism rs1800471 (913G/C, Arg25Pro) is located at 25. codon of the TGFβ1 gene. The purpose of this research was to establish genotype and allele frequencies for locus rs1800471 in migraine patients, and to compare these frequencies with data from a general population.

Materials and Methods: The analysis included 15 patients diagnosed with migraine and 100 controls. The survey was conducted by PCR method and then gel electrophoresis was performed.

Results: The results are obtained by using X² test, to verify results Mood was performed. It was found that there is a highly statistically significant difference, for X² test was 22.201 and for Mood 9.04.

Conclusion: There is a highly statistically significant difference in distribution of heterozygotes (hence homozygotes) in population with this disorder and healthy controls.

#156 THE PREVALENCE OF VISUAL HALLUCINATIONS, ANXIETY, PARANOIA, AND INSOMNIA IN SCHIZOPHRENIC PATIENTS IN A ONE YEAR STUDY

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INTRODUCTION: Schizophrenia is a disease which includes various signs and symptoms such as visual hallucinations, anxiety, paranoia, and insomnia. The symptoms are interfering with the daily life of the patients. The objective of treatment for this psychiatric disease is mainly the relieving of symptoms, but there is no cure. It is a life long treatment.
MATERIALS AND METHODS: A cross sectional study, which involves 105 patients who visited the “1st Psychiatric Clinic of Targu-Mures” and were diagnosed with schizophrenia. The data was gathered from a one year study.

RESULT: 105 patients, which includes 59 Females (56.190%) and 44 males (44.810%). Regardless the gender, the average age is 49.2. According to gender: females - 50.2, males - 47. Out of all the patients, 33 patients suffer from visual hallucinations; among them 15 (45.45%) females and 18 (54.56%) males. 65 patients suffered from paranoia, 28 (43.07%) males and 37 (56.93%) females. 67 patients suffered from anxiety; 18 (26.86) males and 49 (73.14%) females. 84 patients suffered from insomnia, and among them 31 (36.90%) males and 53 (43.10%) females. 28 (26.66%) of all the patients suffered from both auditory and visual hallucination.

CONCLUSION: According to the results, more females suffered from paranoia, anxiety, insomnia, but there is no statistical association. More males suffered from visual hallucinations.

#181 Problems in diagnostics of skull vault lesions - 6,5 years old boy with Langerhans cell histiocytosis – case report and review of the literature

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Introduction: Tumors of the head belong to diverse range of pathologies, which change with age and are very different from skull masses seen in adults. Usually they present as visible or palpable mass on the calvaria. Unfortunately, due to very frequent minor head traumas in pediatric population, changes in calvaria are usually considered as posttraumatic, leading to the postponed diagnosis. Moreover, sometimes unusual signs such as high-output cardiac failure, metastases or focal neurological deficits may be the first manifestation of the disease, redirecting diagnosis for a false track and prolonging encounter-to-diagnosis lag time.

Aim of the study: To present difficulties in diagnostics of skull vault lesions in pediatric population.

Patients and methods: Medical records of boy with Langerhans cell histiocytosis of skull vault were analyzed. The clinical and radiographic presentation was described. Review of literature of skull vault lesions in pediatric population was made.

Results: 6,5-years old boy with tumor in a right parietal region was admitted to Department of Pediatric Neurosurgery. He had an extensive past medical history that included surgical, ophthalmological and neurological consultations and X-rays of the skull. During hospital stay in our clinic, CT and then MRI scans were performed, revealing round, expansive tumor. Patient underwent neurosurgical excision of the mass. Histopathology results showed the diagnosis of Langerhans cell histiocytosis.

Discussion: Making a diagnosis of skull vault lesions may cause many difficulties. Skull lesions may be hidden under the symptoms of other disorders. Every child with any calvarial tumor should be carefully examined and CT scans or MRI tests should be performed.

#201 Cone dystrophy

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Introduction: Cone dystrophy describes a group of rare eye disorders that affect the cone cells of the retina. It affects 1 in 30,000 people. Most common signs and symptoms include: decreased visual acuity, reduced color vision and photophobia. There is no cure for cone dystrophy.

Aim: To present a young patient with cone dystrophy.

Case presentation: An eleven-year-old girl presented with reduced visual clarity, poor color vision and photophobia for two years. Her medical and family history were otherwise unremarkable. On examination, visual acuity was 0.2 (Snellen) and intraocular pressure was 14 mm Hg in both eyes. Anterior segment examination was normal. Fundus examination showed a somewhat darker fovea. Fundus autofluorescence imaging showed a hypofluorescent area in both eyes.

Optic coherence tomography (OCT) showed loss of photoreceptor layer on the fovea. Electrophysiologic examination (ERG) was also performed. P100 latency on the pattern of visual evoked potentials (VEP) was slightly abnormal, flash VEP was normal. Scotopic responses were normal, while photopic responses were at the lowest limit on full-field ERG. Electrooculogram was normal. Microperimetry showed absolute and relative scotomas on both eyes.

Results: These results confirmed the diagnosis of cone dystrophy.

Discussion: The symptoms of cone dystrophy may vary from one person to another. In the early stages of this disease, fundus changes are not characteristic and may be confused with a lot of related disorders, but identification of characteristic symptoms through clinical evaluation and diagnostic tests such as OCT and standardized ERG verify the diagnosis.
#1 Prognostic meaning of Quantitative Papillomavirus load of Cervical Intraepithelial Neoplasia (CIN)

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Introduction: different health organizations recommend Human Papilloma Virus (HPV) testing as a primary tool for cervical screening. Clinicians often are not satisfied with the prospect of CIN progression according to a qualitative polymerase chain reaction (PCR) for DNA-HPV of high carcinogenic risk (HCR).

Aim: is to investigate the studying of efficiency of quantitative HPV test for making a prediction of progression CIN through finding out the possible connection between the number of copies of DNA in HPV using PCR and the severity level of pathomorphology CU against antivirus immunomodulation.

Methods: The clinical-statistical analysis of viral load of women, 20-60y.o with HPV 16 and 18 types with CIN performed. 52 medical treatment records were analyzed. Colposcopy, cytological, histological and virological research were carried out from the department of Obstetrics and Gynecology, Ukrainian Medical Stomatological Academy. Viral load of CU tissue has been defined with the PCR method twice the real-time (neovir, lavamax, licopid, genferon, viferon, Isoprinosine by the standard plan) to the minimally invasive procedures. There are high and low viral loads (the number of DNA HPV for 100 thousand cells >5 l/g and <5 l/g accordingly)

Results heterogeneous connection between quantitative load of HPV and the severity level of CIN. Both group have prevail low number of virus (61.75%-67.75%) so we can suggest the absence of the interconnection between the level of pathomorphological changes of CU and the number of expression of DNA in HPV. However, low viral load H-SIL could be an indirect symptom of integrated form of physical status of HPV in PCR when the virus loses the ability of reproduction in a process of integration into a cell.

#58 The most frequent adverse side effects of Nonsteroidal Antiinflammatory Drugs therapy as a cause for comorbid condition of hospitalisation at the Department of Gastroenterology and Hepatology

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The most using worldwide medications are Nonsteroidal Antiinflammatory Drugs. Routine prescribing and high availability cause abuse it. The aim of the study was discover which drugs were mostly used by hospitalisation patients and what influence risks they took for them. Post- cardiovascular diseases with anticoagulants preventative/after were consider as a confounders. The study included 100 patients, the survey conducted with a questionnaire. Study population form 59% of women and 41% of men, most of them were 51-70 age range. 80% of them at different time intervals took antiinflammatory drugs. Interesting fact was that the rest in the elderly age never used medicine for any pain (20%). Medications were temporarily taken according the prescription. Patients conditions at the last six months was average (61%), other evaluate theirs health status as: feel rotten (26%) and well being - 13%. The most commonly used drugs were: 1)ketonal, then in descending
Respondents inform about following side effects: heaviness feeling in the epigastrium - 32.5%, heartbeat palpitations - 22.5%, nausea - 18.75%, dermal changes and skin rush - 13.75%, urination difficulties - 12.5%, hearing loss - 11.25% and the 10% presence of blood in stool. Significant majority of study patients control dose, daily time of antinflammatory drugs and consult all modifications of them with their doctors. Increase of patients age and rise of patient’s morbidity have positive correlation with antiinflammatory drugs amount. Some of gastric or another system diseases probably also respond for some adverse of antiinflammatory drugs during survey research.

#63 Sleeve gastrectomy with real time imaging of the gastric dimensions, shape and volume
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Introduction: Morbid obesity is a disease that represents an increasing health problem. The most effective method of treatment is bariatric surgery. Among the bariatric procedures, sleeve gastrectomy is the leading procedure.

Objective: The aim of this paper is to underline the importance of real time evaluation of the sleeve’s dimensions, shape and volume, using a device that measures the geometry of the gastric remnant, allowing us to avoid complications.

Patient and methods: We present the case of a patient with morbid obesity, who underwent a gastric sleeve procedure combined with real time imaging of the gastric dimensions. We performed classic sleeve gastrectomy using a 34 French (fr) probe. After tailoring the stomach we introduced an inflatable catheter linked to a device that measures the geometry of the gastric remnant, based on the technique called impedance planimetry. The results are displayed in cm or fr and are visualized with different colors.

Results: Using this device we were able to assess the dimensions, shape and volume of the sleeve, finally obtaining the desired geometry without necessitating any correction.

Discussion: The “Achilles heel” of the procedure is represented by strictures at the incisura angularis, leaks at the gastro-esophageal junction, kinking and twisting of the sleeve. In order to minimize the risk of complications we propose the use of this tool, which enables us to correct the form of the sleeve in the same session. In our opinion this technique helps us to minimize the risk of complications and to obtain the best results.

#92 The impact of methylenetetrahydrofolate reductase (MTHFR) mutations on the primary patency of PTFE haemodialysis shunt prostheses
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Introduction: According to current doctrine people with heterozygous MTHFR mutation need no medical protection against thromboembolic events. For performing haemodialysis patients with chronic renal failure often get an arteriovenous shunt. Ideally, this is made of a body’s own vein. In absence of it a plastic shunt (in Graz for years exclusively PTFE) can also be implanted. The primary patency of implanted PTFE prosthesis in Graz (Kaplan Meier was used for calculation) is 23.3 months. Primary patency is defined as the time between shunt implantation and the first shunt thrombosis. At present we don’t know whether heterozygous MTHFR mutations have an effect on the primary patency of PTFE prostheses or not.
Patients and Methods: Patients with implanted PTFE prostheses from 2009 until 2014 will be recalled. Blood samples will be analysed for MTHFR status and other thrombophilic factors (protein C, protein S, APCR, factor V Leiden mutation, Homocysteine, Factor XIII, Lipoprotein A), and clinical data will be retrieved from the patient and from medical reports. Primary Patency of patients with and without MTHFR mutation will be compared statistically. Other thrombophilic factors will also be taken into account but are secondary outcome measures.

Results: Preliminary results will be presented.

Discussion and Conclusion: In case of significant differences possible antithrombotic treatment pathways will be discussed.

#125 LINBURG-COMSTOCK SYNDROME IN MUSICIANS - CONTROLLED PROSPECTIVE TRIAL

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Introduction: Most papers report on the rate of Linburg-Comstock anomaly presence of 13 to 50%. Most cases are asymptomatic. The rare symptomatic cases typically have pain or discomfort in the volar aspect of the wrist or distal forearm.

Aim: The aim of the study was to determine the function of the flexor pollicis longus and flexor digitorum profundus tendons and to correlate it with gender and body side in musicians.

Patients and methods: We examined 67 musicians (44 female and 23 male) bilaterally for the presence of the Linburg-Comstock anomaly.

Results: The Linburg-Comstock anomaly was present in 43 (64.18%) subjects. Overall presence (unilateral and bilateral) in males was 65.22%, while in females was 61.36%. Eighteen subjects (26.87%) had it unilaterally, and 25 subjects (37.31%) had it bilaterally. Of those subjects with unilateral presentation, 7 (10.45%) subjects had the anomaly in the right forearm, and 11 (16.42%) had it in the left forearm. Bilateral presence was slightly more common in women. The prevalence of anomaly presence on the right and left side was similar in women, whereas in men it was more common on the left side. Difference was not statistically significant in relation to the gender as well as body side.

Discussion: The male to female ratio of the Linburg-Comstock anomaly presentation was 1.06 to 1. In both sexes, the bilateral incidence was more common than unilateral. The results of our study show a relatively high incidence of anomaly presence in musicians comparing to the other studies.

#127 Pushing the frontier: Optimization of (high-throughput-) cultivation of environmentally and clinically relevant microorganisms

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The computational analysis of microbial signatures, derived from environmental and clinical samples, allows insights into the microbial community and their genetic repertoire, but still hampers in assessing particular information on growth conditions, metabolism, structure and interaction with other cells and tissues. The study of pure cultures overcomes this issue; however, the cultivation of microorganisms is still challenging and needs improvement. This study aims to combine up-to-date molecular methods with traditional...
cultivation techniques to establish a high-throughput method for the directed cultivation of microorganisms from environmental and clinical samples.

Cell-sorting is a powerful technique to quickly assess chemical and physical parameters of single cells and sort them according to their characteristics in a high-throughput manner. With our approach, we aim to pre-select target microorganisms via cell-sorting based on physical parameters, viability, and resistance properties. Retrieved sub-communities will be analysed with respect to the microbial community composition, and those that contain the target microbes will be processed. Different sample pre-treatments and cultivation conditions are combined to promote the growth of desired microorganisms with the aim to obtain a pure culture.

On this poster, we will present the preliminary results on cell-sorting of a mock community of microorganisms (with roughly the same cell-shape and -size) performed without specific markers. In addition, we will report on the first results from cell-sorting experiments on complex microbial communities.

The conventional cultivation of microorganisms is time- and cost-consuming in clinical and environmental microbiology and needs to be optimized by high-throughput methods such as cell-sorting assisted cultivation.

#154 Retrospective clinical analysis of treatment procedures in the therapy of fractured frontal sinus walls

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Frontal sinus is air-filled spaces located within the bones of the skull and face. It is located in the frontal bone superior to the eyes in the forehead. Under normal circumstances, the frontal sinus is lined with respiratory type mucosa that is in direct continuity with nasale mucosa.

By retrospective clinical investigation we analyzed 25 patients who suffered frontal sinus fractures (FSF). All the patients were subsequently treated at the department of Maxillofacial Surgery, University of Nis, from 2006 to 2015.

The aim of this retrospective analysis was to fortify the most commonly used approach in resolving an injury.

The data from Maxillofacial surgery, University of Nis (25 recorded cases) were used for the analysis. All of the registered cases were observed in male population from 15 to 56 years old. Twenty-four percent of FSF became as the result of injuries at work, while twenty-four percent of FSF were the result of traffic accident. Thirty-six percent of injuries were followed with some other cranio facial fracture and sixty-four percent of injuries were with no additional cranio facial consequences.

The patients were treated with various approaches such as supraciliaris (60%), bicoronary (12%) and through the open wound (28%). In only one case was recorded mucocela as a complication of FSF operation two years after, while the other cases passed without other negative outcome.
#196 CLONING AND EXPRESSION OF PTEROPINE ORTHOREOVIRUS SIGMA C PROTEIN IN BACTERIAL CELLS

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Introduction:

Pteropine Orthoreovirus (PRV) was first cloned in 2011 to represent a collective of orthoreoviruses isolated from Pteropus bat species. Humans infected by Mammalian Orthoreovirus, a genetically closely related to PRV, are commonly presented with upper respiratory tract illness or enteritis. However, this does not hold true for PRV, as acute respiratory syndrome are commonly seen in patients infected with PRV.

Aim: Whether Sigma C of PRV can cloned in the vectors (pMal-C5X, pMal-P5X) and expressed in bacteria cells (ER2523 and BL21)?

Methods: The sigma C gene of PRV1K (Kampar virus), PRV2P (Pulau virus) and PRV3M (Melaka virus) were amplified and cloned into (pMal-C5X, pMal-P5X) vectors.

Colonies PCR were preformed to screen for positive clones prior being expressed in BL21 and ER2523 bacteria.

The periplasmic and total lysis extraction were performed on bacterial cells prior being separated by SDS-PAGE and Coomassie Blue stain revealed the gel.

Results: The polymerase chain reaction of sigma C gene for the three viruses were performed. PCR of PRV1K and PRV2P were successful but PRV3M virus didn’t reach the desired band.

Then, the protein receptors were confirmed by Restriction Enzyme Reaction.

Finally, only PRV2P virus with C5X vector expressed sigma C gene in SDS page.

Discussion: The amplification of PRV1K and PRV2P were successful because the template DNA used are plasmid extracts that contain the respective sigma C genes, while the amplification for PRV3M uses cDNA from virus and not plasmid extracts.

The protein will be purified and targeted receptor will be identified in a future study.

#207 The impact of the seven-day treatment of rat's organism with fungi Coprinus comatus

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Introduction: Contemporary studies showed that mushroom preparations of Coprinus comatus have positive pharmacotherapy effects such as enhancement of insulin secretion from pancreatic beta cells, promotion of glucose and lipid metabolism, improvement of cellular sensitivity to insulin.

Aim: We have conducted research to examine possible positive effects of C. comatus on disorders that follow the metabolic syndrome as one of the leading medical problem.

Materials and methods: The experiment was performed on albino Wistar rats older than 3 months, randomly divided into experimental and control groups, each with 6 rats. Experimental groups were treated with an aqueous suspension of commercial preparation of mushroom C. comatus for 7 days with dose of 1.67 g/kg. Antidiabetic activity was assessed after inducing hyperglycaemia by giving anhydrus glucose, adrenaline and alloxan. Lipid-reducing activity was determined by measuring the concentration of lipids in the blood and by calculating the index of atherosclerosis.
Results: After assessing the effects of *C. comatus* on body weight, there was no statistically significant difference compared to control. In the alloxan-induced hyperglycaemia rats, treatment with the mushroom preparation significantly reduced the value of glucose in the blood (13.98 ± 6.45: 23.14 ± 6.42). The effects on the lipid status of animals, increase of HDL lipoproteins in animals treated only with *C. comatus* was shown, but with no statistical significance.

Discussion: On the basis of these results we can conclude that treatment with the mushroom *C. comatus* shows positive pharmacological effects on experimental animals.

#222 HEART RATE AND SYSTOLIC BLOOD PRESSURE VALUES COMPARATION BETWEEN MYOCARDIAL INFARCTION TYPE 1 AND TYPE 2

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Introduction: Type 2: Myocardial infarction (MI) represents a condition secondary to an ischaemic imbalance, myocardial injury with necrosis where a condition other than coronary artery disease contributes to an imbalance between myocardial oxygen supply and/or demand.

Aim: Purpose of this study was to investigate the levels of heart rate (HR) and systolic blood pressure (SBP) between groups of patients with MI type 1 and MI type 2.

Methods: This retrospective study included 205 patients with MI treated in Clinical Centre Kragujevac in 2014. SBP was measured on admission after 5 minutes of rest and the HR was recorded by electrocardiography. HR value was defined as <100 or >100 bpm. SBP >140 mmHg was used as significant elevation. All data were analysed in the SPSS.

Results: In group of patients with MI type 1 SBP >140 mmHg was found in 51.31% (98) and HR >100 bpm was found in 8.9% (17). In group of patients with MI type 2 SBP >140 mmHg was found in 64.28% (9) and HR >100 bpm was found in 35.71% (5). Mean value of SBP in patients with MI type 1 was 140.25 mmHg, and in patients with MI type 2 was 148.93 mmHg (no statistically significant difference. Mean values of HR in patients with MI type 1 was 74.43 bpm and in patients with MI type 2 was 87.50 bpm (t-test, p=0.008).

Discussion: In this study we showed that elevated HR was more significant parameter in evaluation of MI type 2. Elevated HR could be trigger for occurrence of MI type 2.
#5 The Correlation between Maternal Age and Second Trimester Pregnancy Losses

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Aims: The primary objective of this research was to study the correlation between maternal age and second-trimester pregnancy losses, and then the most frequent diagnoses of these pregnancy losses.

Materials and Methods: We conducted a retrospective analysis of all cases of second-trimester pregnancy losses at Obstetrics and Gynecology Clinic/University Clinical Center of Kosovo, between January 1, 2014, and December 31, 2014. Results: From total 95 patients, who they lost their pregnancy in the second-trimester of pregnancy in the year 2014, the percentage of pregnancy loss by age groups was: women under 19 years had only 1.1% pregnancy losses, those 20-24 years: 6.3%, 25-29 years: 22.1%, 30-34 years: 27.3% and those over 35 years: 43.2% had lost their pregnancy in the second-trimester. The value of \( r \) in this cases is approximately 0.9713, that is strong positive correlation between the two variables (maternal age and second-trimester pregnancy losses). From total 95 patients, they lost 76.9% of their pregnancies between 14-22 weeks of pregnancy, while 23.1% between 23-27 weeks (Comparison of proportions: difference 53.8%, 95% confidence interval 39.9 to 65.1, Chi-squared: 52.86, Significance level \( P < .0001 \)). Of the most common diagnoses that led to the loss of pregnancy in the second trimester of pregnancy were: Fetal causes: Amniotic fluid disorders, in utero fetal death, Maternal causes: hypertensive disease of pregnancy, Multiple pregnancies.

Conclusions: From this study there resulted that the greater to be maternal age, the higher is the frequency of second-trimester pregnancy losses. 76.9% of women, they had lost their pregnancy between 14-22 weeks of pregnancy, while 23.1% between 23-27 weeks.

#12 C-Reactive Protein In Patients With Type 2 Diabetes Mellitus

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OBJECTIVE: To determine the frequency of raised C-reactive protein (CRP) in patients with type 2 diabetes mellitus

PATIENTS AND METHODS: This cross sectional descriptive study of six months study was conducted at Liaquat University Hospital Hyderabad from March 2013 to August 2013. All diabetic patients of ≥35 years age of either gender for >01 year duration visited at OPD were evaluated for C-reactive protein and their glycemic status by hemoglobin A1c. The data was analyzed in SPSS and the frequency and percentage was calculated.

RESULTS: During six month study period, total 100 diabetic patients were evaluated for C-reactive protein. Majority of patients were from urban areas 75/100 (75%). The mean ±SD for age of patients with diabetes mellitus was 51.63±7.82. The mean age ±SD of patient with raised CRP was 53±7.21. The mean ±SD for HbA1c in patients with raised CRP is 9.55±1.73. The mean random blood sugar level in patients with raised CRP was 247.42 ± 6.62. The majority of subjects from 50-69 years of age group with female predominance (\( p = 0.01 \)) while the CRP was raised in 70(70%) patients in relation to age (\( p=0.02 \)) and gender (\( p=0.01 \)) respectively. Both HbA1c and CRP was raised in 64.9% (\( p = 0.04 \)) in patients with
type 2 diabetes mellitus. The mean ±SD of CRP was 5.8±1.21 while for male and female individuals with raised CRP was 3.52±1.22 and 5.7±1.63 respectively.
The raised CRP was observed in patients with type 2 diabetes mellitus.

#25 The determinants of risky behaviors among adolescents in Kosovo
Fitim Uka, Erduana Dermaku, Enteela Kamberi, Miran Xhelili, Gresa Murati, Florentina Asllani

Adolescence is a time of many transitions accompanied by enormous changes in the person’s social interactions and relationships (World Health Organization, 2009). Kosovo is known for the low smoking prevalence, but high levels of bullying, injuries and fights among adolescents (WHO Prishtiña, 2014). This study aims to identify the antecedents of risky behaviors among school aged children in Kosovo using a Structural Equation Modeling.

In total, 524 children were randomly selected to participate in this study. Out of them 56.5% were girls with mean age of 13.6 years old (SD 1.81 years). The Health Behavior in School-Aged Children (HBSC) study protocol 2009 was used to collect the data and to investigate the prevalence of risky behaviors. To assess the emotional and behavioral state of the children, Strength and Difficulties Questionnaire was used.

Results show that low pro-social skills predict fights and bullying among adolescents. On the other hand, only hyperactivity is shown to be an important antecedent/predictor of smoking behavior. Among all independent variables included in the Structural Equation Modeling, hyperactivity is the best predictor of the injuries, bullying and fights among adolescents.

Considering the data obtained by World Health Organization about the high prevalence of bullying, fights and injuries, we consider that this study is an important step toward drawing risk behaviors antecedents. The results provided by this study can be used to design intervention campaigns, which can reduce the prevalence of risky behaviors and stimulate as well as enhance the prosocial and other positive health related behaviors.

#35 The role of Skin Prick Tests in the diagnosis of IgE mediated allergic diseases
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Introduction: The term “Allergy” was born on July 24, 1906 in the Münchener Medizinische Wochenschrift as “specifically altered reactivity of the organism”.

Today, we define allergy as immunological hypersensitivity that can lead to a variety of different diseases via different pathomechanisms and thus different approaches in diagnosis, therapy and prevention can be taken(1).

During IgE mediated reactions following exposure to a relevant allergen, most patients with allergic diseases have an immediate reaction, which is caused by the acute degranulation of mast cells. It is generally clinically evident within 15 to 60 minutes of allergen challenge and subsides within 30 to 90 minutes(2).

SPT interpretation utilizes the presence and degree of cutaneous reactivity as a surrogate marker for sensitization within target organs, i.e., eyes, nose, lung, gut and skin(3).

Material and Method: In the specialised clinic for allergic diseases O.Sh."Ylli" Sensitivity to certain allergens was determined by skin prick tests (SPTs). The largest size of the wheal is considered to be sufficient. Wheal diameters ≥3mm are considered positive in SPTs. It is considered that small wheals fewer than 3mm of diameters are not significant in clinical
studies whereas they are considered to be positive in epidemiologic studies [6]. In our study, we used Test Kit G, Allergopharma Joachim Ganzer, Germany.

Here we will present some of most interesting cases, of our patients after Skin Prick Testing.

Conclusion: Although it is a simple method, SPT remains to be an important method in the diagnosis of allergic diseases.

#81 Hypodontia of Maxillary lateral incisor; a family case report

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Introduction: Hypodontia is identified as a phylogenetic reduction of teeth number, and is often associated with dysmophia or microdontia of the corresponding contralateral tooth. This fact led to the presumption that maxillary lateral incisors microdontia may represent a different expression of the molecular changes in the genes that cause a defective development of the maxillary lateral incisors. The aim of this study is to present a clinical case of a family with hypodontia of lateral incisor, bilateral in some cases, and unilateral combined with peg-shaped of contralateral incisor in other.

Materials and methods: A family of a five members with blood related was analyzed. Four of the members were examined and all anamnesis were collected.

Result: All three children had anomalies related to lateral incisor. The second sibling had bilateral maxillary lateral hypodontia, the oldest sibling had the same anomaly with temporary tooth still present, while the youngest sibling had unilateral hypodontia of lateral incisor on the right side and peg-shaped incisor on left side. Their mother had no anomaly while their father and all relative from father’s family had missing or different shape of lateral maxillary teeth.

Conclusion: The importance of genetic factors is shown by appearance of multiple cases among relatives. Genetic factors may be dominant or recessive and it is obvious that in many cases polygenetic (and environmental). This clinical case demonstrates the role of genetic factor at hypodontia and its correlation with anomalies of shape and size.

#85 Malignant diseases incidence in Pediatric Clinic at the University and Clinical Center of Kosovo: A four-year retrospective study

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Introduction: According to WHO in 2012 malignant disease were set to be 14.6% of all humans deaths all over the world.

Aim: The aim of this study was to determine incidence and epidemiology of malignant diseases, in terms of sex, age and place of living of the pediatric patients in Kosovo.

Patients and Methods: Descriptive epidemiological retrospective study was conducted. A total of 175 case notes of all patients with the diagnosis of malignant diseases over a four-year period (2012-2015) were reviewed. All cases were microscopically verified. Data were collected from medical records in respective Clinic. Demographic features and the number of the various types of malignancies were extracted and analyzed using the statistical package for social science (SPSS) Version 23.

Results: The overall incidence of malignant disease during this four-year period was 175. Leucemia acuta lymphoblastica (LAL) was found to be the most common malignancy (36.6%), followed by Central Nervous System tumors (16.6%), Leucemia acuta myeloidea (9.7%), non-Hodgkin Lymphoma (9.1%), Wilms tumor (5.1%), Hodgkin Lymphoma (4%), and other registered malignancies. The age group 0-5 year was most representative (48.6%).
Male with 54.3% were dominate while Region of Prishtina was a leader with 17.1% of all cases.

Discussion: Just like some of the studies worldwide also in our country Leucemia acuta lymphoblastica is the most common malignant disease. This type of malignancy was more represented among the children up to five year. Based on this study we can conclude that malignancies are more common among young children.

#187 Risk of sepsis: the biggest threat to infants? - Prognostic value of natal parameters in vulnerability to infection and the development of sepsis in infants.

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Introduction and objectives: Neonatal sepsis contributes significantly to morbidity and mortality among infants. Preterm delivery, low birth body weight, difficult risk delivery, rupture of membranes longer than 24 hours before birth, chorioamnionitis are important risk factors to develop sepsis in an infant. The aim of our study was to analyze connection between those natal parameters and neonatal sepsis occurrence.

Methods: 574 patients admitted to the Pediatric Center (Sosnowiec, Poland) to the Neonatal Intensive Care Unit in the 5-years period were recruited.

Results: Culture proven sepsis was noted in 97/574 of the study participants. The infant group with neonatal sepsis contained: 36/97 neonates, who weighted more than 2500g, 22/97 weighed less than 2500g, 22/97 weighed <1500g, 10/97 <1000g and 7/97 less than 750g. 63/97 of patients were born prematured. 24/97 of infants were born before 37 week of pregnancy while 39/97 born before 32 week of pregnancy. 34/97 of patients were born on time. 55.67% (54/97) infants was born by C-section, versus 44.33% (47/97) in vaginal delivery. 13.40% 13/97 patients got 9-10 points, while 32.99% (32/97) got 3 or less points in the Apgar score.

Discussion and conclusion: Low birth weight, prematurity, low Apgar score have been frequently found in patients with culture proven sepsis. There is a strong need for close cooperation among obstetricians, neonatologists and pediatricians in order to detect infants, who are endangered by risk factors, as in sepsis rapid diagnosis allows for early intensive treatment.

#212 Attitudes of young Greek healthcare providers/scientists towards controversial bioethical issues: A survey regarding the degree that their views are congruent with current Greek bioethical legislation.

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BACKGROUND: It is widely accepted today that complex, novel and controversial bioethical questions have arisen, affecting the way medicine is practiced and the way it is perceived by society. Current bioethical legislation consists the main platform for discourse on these issues.

AIM: To provide data on the inclinations of young healthcare providers/ scientists towards cornerstone issues of modern medical ethics and to assess the degree their attitudes are congruent with current bioethical legislation.
MATERIAL AND METHODS: The study was conducted between November and December 2015. The material consisted of 940 questionnaires with five (5) groups of questions regarding bioethical issues of dilemmatic nature. The questionnaires were filled in anonymously by 764 medical and biology students as well as 176 junior doctors.

RESULTS: 77.57% of the participants favored euthanasia under prerequisites. 86.32% opposed to preimplantation interventions regarding social reasons and 75.27% for other reasons. 61.39% of the participants claimed that children conceived by gamete donation had the right to verify the identity of the donor. 55.7% opposed to the family consent as the determining factor for post mortem organ donations. We registered a unanimous (98%) demand for paradigm shift with 51% of the participants favoring a more radical framework change, while 47% asked for a limited reform.

DISCUSSION: The participants expressed their scepticism towards the existing bioethical legislation. This provides empirical evidence of an interest for a paradigm shift centered upon the patient and his right for self determination.

#218 Oral cavity hygienic status in children with asthma

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Asthma is a major public health problem. The prevalence of asthma is increasing worldwide, especially among children. Aim: to investigate the correlation between hygienic status of oral cavity and bronchial asthma in children. Materials and methods: 42 patients with asthma, aged 10 to 18 years, were examined to identify their hygienic and periodontal status. The results of the dental examinations were compared with the control group (30 patients), corresponding by age and gender. Hygienic status was determined using a modified index Quigley-Hein (Modified Quigley-Hein Plaque Index, MQHPI), the degree of gum inflammation - through bleeding gums index (Sulcus Bleeding Index, SBI, Mühlemann and Son 1971). The results showed worsening of hygienic status and degree of gum inflammation among asthmatics when compared with the control group. The average age of patients was 13.7 (± 0.32) years for asthmatics and 15.2 (± 0.23) years for the control group, statistically significant differences in age between the two groups or in any age group not established. When comparing the level of hygiene between the main group and the comparison group, the average score for asthmatics MQHPI was equal to 1.92 (± 0.58), compared to 1.29 (± 0.31) in the control group, the difference in the groups was statistically significant (p <0.001). In determining the degree of gingivitis, the difference between the main group and the comparison group was also reliable - 1.57 (± 0.48) among children with asthma and 0.29 (± 0.43) in the comparison group.

#226 ROLE OF TRAIT EMOTIONAL INTELLIGENCE IN ACADEMIC PERFORMANCE OF SCHOOL CHILDREN ABSTRACT

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INTRODUCTION: Emotional intelligence(EI) is the ability to use emotional information to guide thinking & behavior. Trait Emotional Intelligence(TEI) refers to an individual’s self-perception of their emotional abilities. Previous studies have shown a positive relation of TEI with academic performance thus suggesting that improvement in EI through curricular reforms may play an important part in development of well rounded personality. Unfortunately these studies are scarce in local literature therefore the current study was planned.

AIM: To determine the relationship between Trait Emotional Intelligence & Academic performance in school children between 8-12 years of age.
Methodology: 1050 school children between 8-12 years were included in the study. Convenience sampling was used. Trait Emotional Intelligence Questionnaire Child Short Form comprising of 36 short statements was explained & distributed. TEI score (%) was divided into 3 categories: 30%(below average), 30-70%(average), above 70%(above average). The previous year annual exam grades (%) of the students were compared with their TEI score after categorizing into 60-70%(C), 70-80%(B), 80-90%(A), above 90%(A+).

Results: Out of 1050 students, 790 students completed the questionnaires. Descriptive statistics were calculated. There was a weak correlation (r=0.175) between both academic performance & TEI score. 270, 310, 135 & 75 students fell in A+, A, B & C grades respectively. In TEI scores 0, 440, 350 students fell in below average, average & above average category respectively.

DISCUSSION: Study showed a positive relationship between TEI & Academic Performance as shown by previous studies as well. Conclusive results could be obtained if the study is done at a larger scale in multiple setups & over different time periods.
#19 Differential diagnosis of chest pain in the emergency department Bijeljina for a three-month period

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Dom zdravlja Bijeljina, Bosnia and Herzegovina

Introduction: Chest pain is the predominant symptom of acute coronary syndrome, and many other vital and non-vital-threatening condition. The aim is to evaluate the number of patients presenting to emergency care facility health center Bijeljina for chest pain, sex and age structure, the most common causes of chest pain and the number of outpatient and hospital patients cared for.

Materials and Methods: The study was done retrospectively. Data were collected from the archives of the emergency health center Bijeljina in period from November 1st 2014 to January 31st 2015. Referral code or working diagnosis was taken as relevant. Data were analyzed by descriptive statistical methods.

Results: The study included 450 patients, 49% males (219/450) and 51% of women (231/450), average age 60 years (± 16.34). The most common cause of chest pain was systemic hypertension (31.78%; 143/450). Next was pain of neuro-muscular-skeletal origin (15.56%; 70/450), then psychogenic origin (13.33%; 60/450), and heart rhythm disorders (12.41%; 56/450). With 76.89% of patients (346/450) was conducted symptomatic therapy, while 23.11% of patients (104/450) required hospital treatment. The most common cause of hospitalization was a heart rhythm disorder (50/104), then acute myocardial infarction (18/104) and cardiomyopathy (13/104).

Conclusion: It was observed that in 40% of cases the pain was not of cardiogenic origin. In 60% of cases the cause of the chest pain was of cardiovascular origin, most often systemic hypertension. Acute myocardial infarction was observed in 4% of the cases (18/450), and angina pectoris in a 7.33% (33/450).

#79 Morphofunctional peculiarities of the spleen and the thymus due to prolonged all-day illumination

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The prolonged all-day illumination is considered nowadays as one of the stress-factors for an organism and causes malfunctions of the neuroendocrinal system and may entail immune dysfunction.

Morphofunctional peculiarities of the spleen and the thymus at prolonged all-day illumination in an experiment on rabbits, which were kept in different light modes, were explored. Reference animals were kept in natural day and night lighting conditions. Experimental rabbits were in natural lighting in the day and electric lighting in the night.

A hyperplasia of the lymphoid component of the thymus, a disturbance of maturation and differentiation of thymocytes, a hyperplasia of the white pulp and an increased number of cells in T- and B-zones of the spleen’s lymphatic follicles were found during first three months of day and night illumination. After six months of the experiment the weight of the spleen and the thymus are reduced. Histological study revealed hypoplasia of the white
pulp, reduction in the size and number of lymphoid follicles of the spleen, decreasing of the thymus’s cortex and reduction of the proliferative activity of thymocytes. An intensified formation of the connective tissue, an increasing of involutive processes and degenerative changes of lymphocytes were found in the spleen and the thymus after six month of the experiment.

These changes in organs of the immune system caused by the prolonged all-day illumination indicate both a premature aging of the spleen and the thymus and probably of all the immune system.

#93 The association between obesity and the risk of urinary tract infection

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Objectives: Studies on the association between obesity and the risk of urinary tract infection (UTI) show inconsistent results. The aim of this study was to determine whether there is any association between obesity and recurrent UTIs (RUTIs) among premenopausal women. Methods: A retrospective case-control study was conducted in the outpatient clinics of the internal medicine departments of three hospitals. All consecutive non-pregnant premenopausal women aged 20-55 years, who presented with RUTIs over a 2-year period, were included; these women were compared to randomly selected women from the same outpatient clinics who had no history of RUTI and were age-matched ±5 years. RUTI was defined as a symptomatic UTI that followed the resolution of a previous UTI, or three or more symptomatic episodes over a 12-month period. Results: Six hundred and ninety-one premenopausal women with UTI were evaluated during the study period. A total 122 of 162 subjects with RUTIs were included in this study and compared to 122 control cases without a history of RUTI. The overall prevalence of RUTIs among the premenopausal women with UTI was 23.4% (162/691). Approximately half of those with RUTIs were obese. The mean age of women with RUTIs was 43.8±9 vs. 40±10 years among the controls (p=0.839). The mean body mass index of women with RUTIs was significantly higher than that of controls: 35±4 vs. 26±3 kg/m2 (p<0.001). Conclusions: Obesity was found to be associated with RUTIs in premenopausal women.

#104 Tumor budding as a prognostic marker of gastric cancer

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Introduction: Gastric cancer is one of the leading causes of death from malignant diseases. Tumor buds (TB) represent a highly aggressive subpopulation of tumor cells with a high degree of invasive and migratory capacity.

Aim: The aim of the study was to assess the prognostic significance of the TB on the invasive front of gastric adenocarcinoma.

Material: This study had included 96 patients who had a radical surgical operation. TB were defined as single cells or nonglandular clusters composed of <5 cells. Degree of the TB on histopathological samples colored with hematoxylin and eosine was estimated with a light microscope, field of x200. TB are counted in the area with the highest density of TB and classified into two groups: low-grade group (<5 TB), and high-grade group (≥5 TB).

Results: In the low-grade group we had 20, and in the high-grade group 76 patients. There is a statistically significant difference in survival time between patients according to degree of TB (Log Rank test=32.805, p<0.001). Three years' survival was significantly longer in patients with low degree of TB and it was 80%, while in the high degree group it was 14.5%.
Discussion: Presence of TB as well as their higher degree are significant predictors of poor outcomes in the patients with gastric adenocarcinoma. Brown M, et al. also had proved that the TB are significant prognostic factor in the cancer of upper gastrointestinal system.

#123 SMALL INTESTINAL GISTs
Michelle Rebekka Mottl, Emőke Fülöp, Simona Marcu, Fulop AC, Doina Milutin, Zsuzsanna Dóra Károlyi, Lara Jennen
UMF Tg.Mures, Romania

Background: After the stomach, the small intestine is the second location as frequency of GISTs. Tumors located in the ileum and those with histological grade G2 have a poor prognosis.

Aim: to evaluate the frequency of these tumors in the small intestine, their risk of malignancy and histologic grading based on their histopathologic features.

Material and method:
The study is based on a five-year retrospective research material selected from cases of the Pathology Department, Tîrgu Mures. We have evaluated the location of these tumors on different segments of the small intestine, their microscopic appearance and the assessment criteria of histological grade and risk of malignancy (tumor size and mitotic index on 50 microscope fields with a magnification of 40x).

Results: Of the total of 37 cases of GISTs, 11(29.73%) were localized in the small intestine. Of these: 6 (66.67%) cases presented with histological grade G1 – 3 with duodenal, 2 with jejunal and 1 with ileal localization; 4 (33.33%) patients had malignancy grade G2 – 1 located in the jejunum and 3 in the duodenum; 1 case, involving the duodenum, was graded as Gx. From the 5 (44, 45%) cases with a high malignancy risk, 4 cases were graded as G2 and one case as G1.

Conclusions: in our study, GISTs were most often localized in the duodenum. The more frequent G1 histologic grade of these tumors and their low risk of malignancy suggest that they are discovered in early stages, thus having a good prognosis.

#141 A RETROSPECTIVE STUDY ON ESOPHAGEAL CANCERS
Lara Jennen, Simona Marcu, Simona Mocan, Andrei Fulop, Emoke Fulop, Michelle Rebekka Mottl, Zsuzsanna Dora Karolyi, Ariel Abecassis, Thomas Nadasdy
University of medicine and pharmacy Targu Mures, Romania

Background: Esophageal cancer (EC) due to its aggressive and invasive nature, is one of the most common causes of cancer-related deaths worldwide. The most frequent histological subtype of EC in the world is esophageal squamous cell cancer (ESCC), followed by the rapidly increasing subtype, the esophageal adenocarcinoma (EAC). Despite recent advances in surgery combined with neoadjuvant chemotherapy and radiotherapy, esophageal cancer has still a poor prognosis.

Aim: To assess the incidence of esophageal cancers, and that of its two major subtypes.

Material and method: We present a retrospective study on 96 cases of esophageal cancers endoscopic or surgical sampled and diagnosed in the Pathology Department, Târgu Mures, during 2011–2015. We assessed the age, gender, the histological types of esophageal neoplasms, and subtypes of squamous carcinoma.

Results: The gender ratio M:F was of 8,6:10 and the mean age of the patients of 61,06 years, with a peak incidence in the age group 61-70. ESCC presented as the most common malignant lesion (79,2%). Of these, the classical keratinized and nonkeratinized subtypes
predominate, followed by the unusual and more aggressive variants, basaloid and spindle cell carcinoma.

Conclusions: Squamous cell cancer is a frequent type of esophageal neoplasm that occurs mainly in elderly men. Due to lack of symptoms in the early stages of the disease and the aggressiveness of the EC, most patients are diagnosed at a late stage, for that surgery and neoadjuvant therapies are standard treatment approaches.
#103 Correlation between postoperative pain intensity and value of vital sign parameters in patients in intensive care unit

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Introduction: Postoperative pain can significantly prolong recovery and make patients' dissatisfaction during the treatment. Vital signs are most important parameters on the basis of which we can assess general state of organism.

Aim: The aim was to estimate the correlation between postoperative pain intensity and the value of vital sign parameters in patients in intensive care unit (ICU).

Method: This study included 40 patients. All patients were admitted to ICU after different surgeries and their vital signs were measured: heart rate (HR), respiratory rate (RR), systolic (SBP) and diastolic (DBP) blood pressure as well as pain intensity on a numerical rating scale (NRS). These parameters were checked immediately after the patients had been admitted to ICU and then on every 6 hours during first 24h. HR, RR, SBP, DBP were measured electronically with a non-invasive ICU monitors. All the patients were given Metamizole Na and Ketoprofen in their standard doses intravenously and in the case of inadequate analgesia Tramadol.

Results: Average age of patients was 63. Sixty percent of patients were women. According to NRS average pain intensity was 2.52. Average values of vital signs were: HR 76 beats/min; RR 15 breaths/min; SBP 132.1 mmHg; DBP 74.63 mmHg. The results of the study did not show significant correlation between pain intensity and the value of vital sign parameters.

Discussion: Other studies on this topic have not proved the correlation between pain intensity and value of vital signs. Vital signs are not valid indicators for postoperative pain intensity assessment.

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#105 Evaluation of postoperative pain: numerical rating scale vs. scale with faces

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Faculty of medicine Foca, Bosnia and Herzegovina

Introduction: Postoperative pain is a major problem in surgical practice. The pain may interfere with the functioning of almost all organ systems. For the assessment of pain intensity one-dimensional scales are commonly used: Numerical rating scale (NRS), visual analogue scale (VAS) and the pain scale with faces (FPS).

Aim: The aim was to estimate the intensity of postoperative pain based on NRS and FPS, as well as the interconnection of the results two scales and which scale patients prefer.

Method: This study included 40 patients of both sexes with an average age of 48, which have been included in the assessment of postoperative pain after various operations under general anesthesia. Every 6 h during the first postoperative day pain intensity was measured and the obtained data were compared between two scales. Patients were
questioned about their current pain intensity and about scale from which is easier to express pain.

Results: Based on the NRS average pain score was 2.86. The greatest intensity of pain was during the first measurement 3.42. Results from the FPS show that the average pain intensity is described as "mild pain". The hardest pain in these patients was during the first measurement and was "moderate pain". Sixty percent of patients easier expresses pain by FPS. Comparing these two scales results matched.

Discussion: Obtained data are consistent with results of other studies that used the same scale for assessing postoperative pain. For evaluation of post-operative pain both scales can be used because results obtained on both scales coincide.

#138 A Comparison of the interrater reliability and predictive validity of the Glasgow Coma Scale Score with Full Outline of Unresponsiveness Scale in traumatic patients

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1Student research committee, Tabriz University of medical sciences, Iran, Islamic Republic of; 2Emergency Department, Tabriz University of medical sciences

Background: Traumas impose a great burden on the Iranian health care system. The Glasgow Coma Scale (GCS) is a routine scale for assessing levels of consciousness and prognosis of the patients. The Full Outline of Unresponsiveness (FOUR) score is a new coma scale developed to overcome the limitations of GCS.

Aim: The aim of this study is to compare the predicting outcomes and inter-rater reliability of the GCS and FOUR score in trauma patients admitted to the emergency department.

Method: Ninety six consecutive traumatic patients admitted in emergency departments were enrolled in the study. GCS and FOUR score were documented on arrival to the emergency room. All the patients were followed and the correlation with patient outcomes as well as the inter-rater reliability were assessed.

Results: Inter-rater reliability was determined 0.84 ± 0.01 for GCS and 0.86 ± 0.01 for FOUR score rating. In terms of the predictive power for in-hospital mortality, calculated mortality rate was 33.1 for FOUR score and 30.21 for GCS and they both were greater than the follow up results. Mean value of GCS and FOUR score were 14.83± 0.31 and 13.68± 0.42, respectively. Spearman's correlation coefficient between GCS and FOUR scores was high (0.981 and P value=0.0001, CI > 95%).

Discussion: The inter-rater reliability of the FOUR score was superior to the GCS, while the predictability of both of the scales didn't differ a lot. Therefore, FOUR score can be considered as a viable alternative to the GCS at the emergency department for the traumatic patients.

#178 A rare case presentation of a lung cancer metastasis to the thyroid gland and to the surgical scar from the thyroidectomy

Manuel Domingos da Cruz Gonçalves, Camila Yuki Fujii, Fabio Murai de Sousa, Marcus Vinicius Ferrare Trovó, Viviane Leite Abud

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Metastatic cancer to the thyroid is a rare diagnosed condition. The most frequent neoplasia that have been reported to metastasized to the thyroid gland are breast and kidney meanwhile only a few cases of primary lung adenocarcinoma have been described.

Here we report the case of a 66-year-old white Brazilian female patient who, after undergoing a fine-needle aspiration biopsy of a thyroid tumor, was diagnosed with a poorly differentiated neoplasia primary from the thyroid or metastatic. During the surgery, a
petrified tumor on the left lobe of the thyroid, stuck to the trachea, and hardened cervical and mediastinal lymph nodes were found, which after freezing procedure revealed adenocarcinoma in both of them. Histopathology confirmed a metastasized primary lung adenocarcinoma which had been operated three years before. Nine months after the surgery, a nodule on the scar tissue of the thyroidectomy was identified, which the histopathology, after surgical excision, revealed as metastatic adenocarcinoma.

Our case is rare as it describes two rare occurrences of metastasis. The occurrence of metastasis on scar tissue of primary thyroid carcinoma is extremely rare and in this case what occurred was a metastatic one. There should be an individualized management of metastatic cancer to the thyroid and surgical excision should be recommended when the patient condition is favorable.

#195 Reconstruction of the tissue defect using rotation flaps technique for aneurysm removal

Ibrahim Halil Baydemir, Elitsa Hristova Gyokova
Medical University of Pleven, Bulgaria

AIMS: We present a clinical case of an arteriovenous aneurysm in a 32-year old patient on hemodialysis treatment.

METHODS: The aneurism was found at the place of a functioning termino-terminal, arterio-venous anastomosis, where we applied aneurysmectomy, latero-terminal radio-cephalic reanastomosis and skin defect covering by rotation flaps within the area of the forearm.

RESULTS: Aneurisms of the arteriovenous anastomosis may be found in 5-6% of the cases in patients on hemodialysis treatment. Usually, they are found around the punctation places of the outflow vein. One year after the surgery of our patient, the fistula shows excellent hemodynamic parameters and the skin defect is well adapted.

CONCLUSION: The appropriate professional collaboration between nephrologists and surgeons provides opportunity for applying unusual option for the purpose of preserving the vascular access during the surgery course.

#214 CARDIOPULMONARY FUNCTIONAL CAPACITY IN PATIENTS TREATED WITH BARIATRIC SURGERY

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1Medical School University of Belgrade, Serbia; 2Medical School University of Belgrade, Serbia

Background: Morbid obesity is associated with a number of ventilatory and cardiovascular disorders, which can be improved by weight loss. Cardiopulmonary testing (CPET) is proposed for the objective evaluation of the effects of bariatric surgery in morbid obese patients. Our aim was to evaluate the change of CPET and hemodynamic parameters in patients treated with bariatric surgery.

Patients and Methods: We performed CPET in 250 morbid obese patients during the preoperative assessment. We analyzed 50 patients (37 women, mean age 38±10 years) before and 6 months after bariatric surgery. All patients underwent CPET (treadmill, Bruce protocol) with expiratory gas analyses.

Results: The mean weight before treatment was 126.69 ±19.21kg, and BMI was 43.8 ± 5.4 kg/m2. Averaged body weight reduction was -29, 6 kg, and BMI -10 kg/m2 after 6 months follow-up, with significant difference in comparison to baseline values (43.8±5, 4 vs 33.9±14, 3; p<0.0001). CPET parameters showed increase in VO2 at ventilatory anaerobic threshold (17.86±3.44 vs 20.86±4.70; p<0.0001), Peak VO2 (20.79±3.63 vs 24.97±4.37; p<0.0001) and improvement of ventilatory efficacy VE/VCO2 slope (34.64±4.34 vs 24.74±3.39; p<0.0001), and PetCO2 confirming the improvement of cardiopulmonary function. Hemodynamic parameters were also improved with decrease in resting heart rate.
(p<0.0001), resting and peak systolic (p<0.0001) and diastolic blood pressure (p<0.0001 and p=0.002).
Discussion: These results show significant relationship between weight loss and improvement of anaerobic capacity after bariatric treatment. CPET is shown to be a valuable and reliable tool for the objective assessment of functional improvement.
#91 Cone beam CT in percutaneous biopsies of the musculoskeletal system: a retrospective study

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1Faculty of Medicine, University of Ljubljana, Slovenia; 2Clinical Institute of Radiology, Ljubljana University Medical Centre

INTRODUCTION: Fast development of imaging technologies and materials increased the role of percutaneous biopsies of musculoskeletal lesions. The newest technology used for this purpose is C-arm cone-beam computed tomography (CT) combined with a computer navigation system for needle guidance.

AIM: The aim of our study was to determine feasibility and diagnostic accuracy of computer guided percutaneous biopsies and to evaluate method’s success rate, safety, and patient radiation exposure.

PATIENTS AND METHODS: 28 patients who underwent computer-guided percutaneous biopsies of the musculoskeletal system using cone-beam CT (Phillips Allura ND20) with the XperGuide needle-navigation system were included in the study. For each procedure we determined the technical and histological success rates and recorded the patient preparation, intervention, and procedural time. The parameters of patient irradiation and potential complications were also taken in consideration.

RESULTS: The technical and histological success rates were 90% and 89.3%. Specificity and sensitivity for determining benign and malignant lesions were 100% and 83.3%. Mean patient effective dose was 13.4 mSv. The highest histological success rate was observed for lesions in the pelvis and in the lower extremities. Mean patient preparation time and mean procedural time were significantly lower for soft-tissue biopsies.

DISCUSSION: The results of our study confirm that C-arm cone-beam CT combined with a computer navigation system for needle guidance has proven to be a safe, sensitive and accurate method, with patient irradiation lower compared to conventional CT. It is a good alternative to CT-guided percutaneous biopsies.

#130 The impact of base plane definition on left ventricular function and mass derived by cardiac magnetic resonance imaging

Clemens Martin Harer, Ursula Reiter, Michael Fuchsjäger, Gert Reiter.

1Medical University of Graz, Austria; 2Siemens AG, Healthcare Division, Graz, Austria

Introduction: Cardiac magnetic resonance (CMR) imaging is the established reference standard technique for assessment of left ventricular (LV) function and mass. Current guidelines recommend evaluation of parameters by segmentation of the LV cavity and myocardium in a stack of cine short-axis images. LV cavity’s base can either be defined as most basal short-axis slice (SA-only-approach) or as mitral valve plane derived from additional long-axis images (LA-approach). Relationships between approaches have not been systematically evaluated yet.

Aim: To analyze differences in normal values of LV function and mass derived from SA-only- and LA-approach.

Material and Methods: 40 healthy subjects (male/female, 20/20; age, 24±4 years) underwent 1.5T CMR cine imaging in long-axis (2-chamber and 4-chamber view) and short-axis orientation. End-diastolic (EDV) and end-systolic (ESV) volumes, ejection fraction (EF)
and LV mass (LVMM) were determined from segmentation of the LV cavity and myocardium by SA-only- and LA-approach using standard software. Mean values were compared by t-test; relationships were studied employing correlation and Bland-Altman analysis.

Results: EF did not differ between SA-only- and LA-approach (EF=61±6% vs. 61±5%, p=0.12). SA-only-approach revealed significantly lower EDV, ESV, and LVMM compared to LA-approach (EDV=148±34ml vs. 157±35ml, ESV=58±17ml vs. 61±17ml, LVMM=100±24g vs. 105±24m; p<0.0001 for all comparisons). All parameters assessed by either evaluation correlated strongly (EF, r=0.92; EDV, r=0.98; ESV, r=0.97; LVMM, r=0.98), standard deviations of differences were 2% for EF, 6ml for EDV, 4ml for ESV, and 4g for LVMM.

Discussion: LV function and mass can be evaluated by SA-only- or LA-approach; normal values of parameters, however, differ

#153 Retrospective study- Magnetic resonance imaging of limb girdle muscular dystrophies

Tamara Popović, Luka Milić, Igor Cvjetković

University of Belgrade, Serbia

Introduction: Limb girdle muscular dystrophies (LGMD) are a diverse group of hereditary diseases. Since there is a great clinical and genetic heterogeneity, the diagnostic procedure is very complex (clinical, biochemical, histological and genetic testing). Magnetic resonance imaging (MRI) of muscles presents a new diagnostic procedure.

Aim: To analyze quantitative fat imaging in genetically confirmed LGMD patients.

Patients and Methods: Study included six patients with genetically confirmed LGMD. Mutation was detected at Newcastle University, using next generation sequencing (NGS) panel. Phenotype, CK level, muscle biopsy and MRI imaging of lower limbs were analyzed at Clinic for Neurology and Psychiatry for Children and Youth, Belgrade University. Assess of muscle fat infiltration on MRI was quantitatively scored from 0 to 4.

Results: Patients (F:1, M:5), aged from 9 to 22 years. Most of them were asymptomatic at the time of MRI testing (three boys with LGMD2A and one boy with LGMD2J mutation) and two patients (one girl LGMD2A; one boy LGMD2D) presented limb girdle distribution of muscle weakness. Hyper-CK and dystrophic muscle biopsy were found in all tested patients. MRI was abnormal in all patients, including asymptomatic, except one patient with titinopathy (LGMD2J). We analyzed distribution and severity of fat infiltration and correlated it with the type of mutation.

Discussion: MRI could express myopathy process of asymptomatic period and differentiate dystrophic myopathy from other type of myopathies. Further analysis of muscle MRI-genotype could support the value of MRI as a noninvasive method in diagnosis and therapy of LGMD.

#175 Consistent assessment of right ventricular function from cardiac magnetic resonance imaging cine short axis images

Michael Erhart, Ursula Reiter, Michael Fuchsjäger, Gert Reiter

Medical University Graz, Austria; Siemens AG, Healthcare Division, Graz, Austria

Introduction: Cardiac magnetic resonance (CMR) imaging enables quantification of right ventricular (RV) function from cine short-axis images. The asymmetric RV shape and the skew motion of the tricuspid valve complicate segmentation of the RV cavity, which typically splits into two separate lumens on basal short-axis images. The impact of
exclusion—inclusion of respective lumens and the definition of the valvular plane on indices of RV function remains incompletely understood.

Aim: To investigate consistency of right ventricular stroke volumes (RVSV) derived from exclusion—inclusion of the RV outflow tract (RVOT) without—with modeling of the tricuspid valve plane in normal hearts.

Material and Methods: 1.5T CMR cine imaging was performed in forty healthy volunteers. Employing dedicated software, LVSV was evaluated automatically; RVSV was derived from manual segmentation of end-diastolic and end-systolic chamber-volumes. RV cavity was defined without—with inclusion of the separated RVOT. Moreover, tricuspid valve plane was either assigned as most basal short-axis slice or modeled as oblique cut-plane defined by RV long-axis views. Relationships of RVSV and LVSV were investigated by t-test and correlation analysis.

Results: RVSV was 70±18mL—89±21mL for exclusion—inclusion of the RVOT without cut-plane modeling and 88±23mL—102±28mL for exclusion—inclusion of the RVOT with cut-plane modeling. RVSV determined by inclusion of the RVOT and cut-plane modeling correlated best with LVSV (r=0.88); this evaluation was the only revealing no significant bias to LVSV (98±23mL, p=0.06).

Discussion: RVOT segmentation and tricuspid valve plane modeling have significant impact on parameters of RV function. Inclusion of the RVOT and cut-plane modeling provided consistent results with LVSV.

#182 Contrast-enhanced magnetic resonance angiography (CE-MRA)-assisted evaluation of vascular stents - ability of assessment and artefacts in dependence of stent material.

Stephanie Petutschnig, Andrea Obernosterer, Manuela Aschauer
Medical University of Graz, Austria; Department of Angiology; Department of vascular and interventional Radiology

Introduction: The number of implanted vascular stents increases, and therefore the need to evaluate the openness increases too. Current evaluation methods such as CT-Angiography (CTA), digital subtraction angiography (DSA) and sonography involve disadvantages.

Aim: Our objective was to assess the visibility of stent lumen and quantify upcoming artefacts in CE-MRA. In addition, any further artefacts, which occurred during the assessment, are looked at.

Patients & Methods: Assessed are CE-MRA and MRA images of patients with stents in pelvis- and/or lower limb arteries from 1997 to 2015. The key data of assessment are signal intensity before and in stent, type of stent and the stent’s period of use.

Results: The final data is ensued at the end of the thesis in June, presented data is an excerpt of the results received until now.

Most common implanted stents are the Absolute®, Genesis®, OmniLink® and Maris®. Visibility ranges from complete signal loss in the stent region (Genesis®/Palmaz®, Herculink®) and partial signal loss to nearly complete lumen visibility (LifeStent®). Twice as many men as women are affected, the minimum period of use was 9 days, maximum 7.7 years. The average period of use is 1.54 years. The youngest patient was 45, the oldest 88 years old. The average age is 68.

Conclusion: If the assessment of the stent is constituted by CE-MRA, some patients do not need to undergo CTA or DSA for stent evaluation. Knowledge of the stent type prior to the examination can facilitate the interpretation of images.
#223 Morphologic and functional parameters of MRI in invasive ductal breast carcinoma response to neoadjuvant chemotherapy

Jovana Cupic1, Mirjan Nadrljanski2

1School of Medicine, University of Belgrade, Belgrade, Serbia; 2Institute of Oncology and Radiology of Serbia, Belgrade, Serbia

Introduction: Breast MRI provides insight into tumor response to neoadjuvant chemotherapy (NACT), correlates with histologic response and may have predictive value in early differentiation between responders (R) and non-responders (NR).

Aim: To evaluate tumor response with morphologic (RECIST 1.1, Response Evaluation Criteria in Solid Tumors; cm) and functional (Apparent Diffusion Coefficient – ADC; mm²/s x 10^-3) parameters and define R after the completion of the second cycle of NACT.

Patients and methods: Thirty patients with histologically confirmed invasive ductal carcinoma (RECIST 1.1 > 2 cm) were evaluated with MRI initially, after the second / fourth cycle and upon the completion of NACT. The results were correlated to histological response.

Results: Tumor size (N=30) did not change significantly after the 2nd cycle of NACT (3.02 +/- 0.52 vs. 2.77 +/- 0.53; p=0.07), while ADC increased significantly (0.99 +/- 0.11 vs. 1.15 +/- 0.14; p<0.0001). In R (n1=12), mean tumor size did not change significantly after the 2nd cycle of NACT (2.92 vs. 2.55 cm; p=0.082), while the value of ADC increased significantly (0.93 vs. 1.27; p=0.0001), which was not the case for NR (n2=18; 1.03 vs. 1.06; p=0.277). Initially the difference in tumor size (2.9 vs. 3.1 cm; p=0.496) and ADC (1.03 vs. 0.93; p=0.032) between R and NR were not significant.

Discussion: Tumor size and ADC did not differ initially between R and NR, the increase in ADC was highly statistically significant as the parameter of early response in R, before morphologic changes. The findings may contribute to early and adequate identification of responders.
Internal Medicine II • Poster Presentations • Saturday, 2:00 – 3:00 pm

Location: HSz HS E1

#175 Consistent assessment of right ventricular function from cardiac magnetic resonance imaging cine short axis images

Michael Erhart, Ursula Reiter, Michael Fuchsjäger, Gert Reiter
Medical University Graz, Austria; Siemens AG, Healthcare Division, Graz, Austria

Introduction: Cardiac magnetic resonance (CMR) imaging enables quantification of right ventricular (RV) function from cine short-axis images. The asymmetric RV shape and the skew motion of the tricuspid valve complicate segmentation of the RV cavity, which typically splits into two separate lumens on basal short-axis images. The impact of exclusion/inclusion of respective lumens and the definition of the valvular plane on indices of RV function remains incompletely understood.

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Material and Methods: 1.5T CMR cine imaging was performed in forty healthy volunteers. Employing dedicated software, LVSV was evaluated automatically; RVSV was derived from manual segmentation of end-diastolic and end-systolic chamber-volumes. RV cavity was defined without/with inclusion of the separated RVOT. Moreover, tricuspid valve plane was either assigned as most basal short-axis slice or modeled as oblique cut-plane defined by RV long-axis views. Relationships of RVSV and LVSV were investigated by t-test and correlation analysis.

Results: RVSV was 70±18mL–89±21mL for exclusion/inclusion of the RVOT without cut-plane modeling and 88±23mL–102±28mL for exclusion/inclusion of the RVOT with cut-plane modeling. RVSV determined by inclusion of the RVOT and cut-plane modeling correlated best with LVSV (r=0.88); this evaluation was the only revealing no significant bias to LVSV (98±23mL, p=0.06).

Discussion: RVOT segmentation and tricuspid valve plane modeling have significant impact on parameters of RV function. Inclusion of the RVOT and cut-plane modeling provided consistent results with LVSV.

#122 BMI AND ITS IMPACT ON THE INCIDENCE OF COMMON CHRONIC DISEASES; Review study

Osamah AbdulAziz Aldayel, Abdulrahman Yosef Alnossyan
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Introduction: Overweight prevalence has risen dramatically in recent decades. The cumulative burden of chronic disease in the population associated with overweight and obesity is not well quantified. Aim: to determine cumulative burden of chronic disease in the population associated with overweight and obesity.

Material and Methods: We have analyzed 10 surveys that are suitable to our objectives. Of them two cross-sectional study, two epidemiological health surveys, one multistage survey, two follow-up surveys and one retrospective study. Results: In KSA, the prevalence of Type II DM was 9.7% and 7.1% and overweight was 27.2% and 25.2% in the total men and women. When the type II DM population was separated from the non-diabetics, the prevalence of obesity was 39.3% among diabetic women compared to 18.5%
among non-diabetic women. The risk of developing diabetes, hypertension, heart disease and stroke increased with severity of overweight among women and men.

Conclusion: During 10 years of follow-up, the incidence of diabetes, hypertension, heart disease and stroke (men only) increased with degree of overweight in men and women.

#80 CASE REPORT: PULMONARY MANIFESTATION OF CROHN’S DISEASE

Luka Velej, Vesna Djordjević
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Background: Crohn’s disease (CD) is a systemic illness with a constellation of extraintestinal manifestations affecting various organs. Of these extraintestinal manifestations of CD, those involving the lung are relatively rare. However, there is a wide array of lung manifestations, ranging from subclinical alterations, airway diseases and lung parenchymal diseases to pleural diseases and drug-related diseases. The most frequent manifestation is bronchial inflammation and supppuration with or without bronchiectasis.

Several forms of lung parenchyma involvement in CD are recognized, including interstitial lung diseases such as bronchiolitis obliterans with organizing pneumonia (BOOP), unspecified interstitial lung disease noncaseating granulomatous inflammation (sarcoidosis) and fibrosis, parenchymal nodules and granulomata, alveolitis and alveolar consolidation.

Aim: I want to present a case of pulmonary presentation of Chrohn’s disease.

Methods, patient and results: 29-year old man with recurrent diarrhoeas was hospitalized because of migratory pains in right hip, knees, ankles and wrist, morning stiffness, high body temperature (38 degrees C), general weakness and weight loss. On the left leg two erythema nodosus (EN)s were seen. Blood tests showed inflammation, x-ray picture and CT scan threw suspicion on sarcoidosis, the first bronchoscopy showed inflammation. Later the patient got diarrhoea, hematest was positive, ENs grew in number and size, left thumb joint swelled. The second bronchoscopy showed lung granulomatosis and granulomatous lymphadenitis of subcarinal node. Skin lesion biopsy indicated EN due to inflammatory bowel disease.

Discussion: It was concluded, that the patient has CD with extragastrointestinal symptoms. Diagnosis was challenging, because the disease presentation was atypical and similar to sarcoidosis.

#129 LEFT VENTRICULAR ASSIST DEVICE AS A BRIDGE TO HEART TRANSPLANTATION IN A PATIENT WITH DILATED CARDIOMYOPATHY - Case report

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INTRODUCTION: Dilated cardiomyopathy is a progressive disease and the most frequent reason for heart transplantation. When heart failure is progressing despite maximal medical therapy we need to consider surgical options, including left ventricular assist devices (LVAD) and heart transplantation. LVADs can be used either as a bridge to transplantation or destination therapy.

CASE REPORT: We present a 35-year old patient with dilated cardiomyopathy and implanted cardiac resynchronization therapy – defibrillator who was listed on elective Eurotransplant waiting list. He was admitted to cardiology department in December 2010 because of progressive heart failure, NYHA class III. During hospitalization he further decompensated and was listed on the high-urgency transplant waiting list. Because there was no suitable heart available we opted for LVAD implantation. The postoperative course
was uneventful. In May 2015 he was admitted again because of neurologic deficits in right arm. CT scan showed subarachnoid bleeding and microemboluses likely caused by LVAD. Due to LVAD related complications, the transplantation was necessary. He had an orthotopic heart transplant on December 31st 2015. In January 2016 he was discharged home, cardiorespiratory compensated.

CONCLUSION: The use of LVADs as a bridge to transplantation shows very promising results with significant improvements in patients' hemodynamics. The presented patient had the LVAD implanted for 5 years, which is the longest in Slovenia. Thereafter, the transplantation was necessary due to thrombembolic events. But as the technology improves it is likely that the use of mechanical support with LVAD will be possible for even longer periods of time.

#134 Relation between Diabetes Mellitus and Vitamin D deficiency

Dessislava Nikolaeva Ovnarska, Maria Parvanova Krasteva, Vyara Nikolaeva Ovnarska, Dimitar Valentinov Ivanov, Alekza Iliev Andonov

Medical University of Sofia, Bulgaria

Introduction: Diabetes mellitus (DM) refers to a group of chronic metabolic disorders, caused by absolute or relative insulin deficiency, which results in many complications. There are two forms of vitamin D: Ergocalciferol and Cholecalciferol.

Aim: The purpose of this presentation is to summarize the latest information related to diabetes and vitamin D deficiency.

Methods: There are several lines of evidence supporting a relation between vitamin D and both types of diabetes mellitus. We've studied various prospected studies. Evidence indicates that vitamin D treatment improves glucose tolerance and insulin resistance. Vitamin D deficiency leads to reduced insulin secretion and supplementation with vitamin D has been shown to restore it in animals.

Results: The most accurate way to determine vitamin D status is to measure 25-hydroxy vitamin D ([25(OH)D]). The optimal range is 25–80 ng/ml. However Vitamin D insufficiency is common amongst the general population. The worldwide prevalence of DM has risen dramatically over the past two decades, from an estimated 30 million cases in 1985 to 382 million in 2013. Based on current trends, the International Diabetes Federation projects that 592 million individuals will have diabetes by the year 2035.

Conclusion: Although the role of vitamin D in helping to regulate blood glucose remains poorly understood, vitamin D status appears to play a role in the development and treatment of diabetes. It is possible that optimal levels of serum vitamin D may be different for people at risk for developing diabetes, those with diabetes, and those without diabetes.

#107 The clinical evaluation and treatment of anemia myelodysplastic syndrome

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MDS are clonal stem cell disorders by ineffective hematopoiesis.

We conducted a descriptive and observational study starting in 2015 January until October 2015 in the SJA, Department of Hematology. We evaluated 34 patients diagnosed with MDS. We evaluated a group of 34 patients both clinically and paraclinically. It was determined following laboratory tests: blood count, ESR and ferritin.
Results: Percentage by gender was 50% male and 50% female, 26 of the patients were older than 70 years at diagnosis. 12% of patients are smokers over 30 years and 15% were undergoing professional chemical agents. 30% of patients experienced SMD type RAEB. The progressively anemic syndrome symptoms predominate (51%): dyspnea, fatigue, and asthenia. 42% of patients experienced macrocytic anemia and 55%, normocytic anemia. It found a 41% of patients with pancytopenia and 18% with cytopenia. Media units of red blood cell transfusion is 3.5 administered 1/day on a monthly basis transfusion-dependent patients, while the average non-dependent patients given transfusions is 2.5 1/day at intervals of 2 months.

Conclusions: The anemic progressively syndrome MDS have an important role in the clinical diagnosis, but not definitive, laboratory results (blood, morphological examination of the bone marrow) being the most decisive. Supportive treatment based on red blood cell transfusion shows the need for a monthly inspection and admission approx. 3 days to dependent patients. Macrocytic anemia should be used as a differential diagnosis for MDS, especially if its accompanied by leukopenia and/or thrombocytopenia without another identifiable cause.
#157 A CROSS-SECTIONAL STUDY COMPARING BETWEEN THE PHARMACEUTICAL TREATMENTS OF ALZHEIMER’S DISEASE AT PSYCHIATRIC AND NEUROLOGIC CLINICS IN TARGU MURES

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Introduction: Alzheimer’s Disease presents as a neurocognitive disorder with resounding detrimental effects on the quality of life of the patient. The pharmacological treatment is aimed at limiting the detrimental effects and complications of the disease to better the patient’s quality of life. In this study, we gather data relating to the drug based management of Alzheimer’s in both Clinica Psihitrie I and Clinica Neurologie II, and compare the two different approaches to pharmaceutical treatment.

Aim: To investigate the different approaches to treatment in Alzheimer’s Disease.

Materials and Methods: A cross-sectional study investigating 276 ambulatory patients with Alzheimer’s Disease at the Clinica Psihiatrie I of Targu Mures, and 42 ambulatory patients with Alzheimer’s Disease at Clinica Neurologie II of Targu Mures, between January 2012, and December 2012, representing the totality of all Alzheimer’s Disease patients presenting at these clinics in that year.

Results: Clinical Neurologie II – 42 patients; 25 Females, 17 Males with average ages on presentation of 77, and 75 respectively. Average MMSE score 15. Incidence of prescribed drugs: Donepezil (45%), Rivastigmine (21%), Galantamine (17%), Ginko Biloba (10%), Memantine (7%)

Clinica Psihiatrie I – 276 patient; 164 Females, 112 Males with average ages on presentation of 78, and 76 respectively. Average MMSEscore 10. Incidence of prescribed drugs Galantamine (36%), Clozapine (27%), Donepezil (24%), Memantine (24%), Rivastigmine (21%).

Conclusion: There is a discrepancy in the presenting severity of patient, but also in the preferred method of treatment between Neurologic and Psychiatric clinics.

#38 Case report of Duchenne Muscular Dystrophy

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Duchenne Muscular Dystrophy is a rare genetic disease of both sexes- more increasingly affecting boys. It is more often diagnosed in older children. Symptoms of muscle disorder are muscle weaknes which affecting muscles of the hips, pelvic area, thighs and shoulders, and the skeletal muscles in the arms, legs and trunk. V.Z. is 5,5 mo infant, muscular dystrophy is already present in his family history. Psychomotor development is correct. The results of laboratory tests indicate a higher value of liver enzymes. Neurological examination shows reduce of muscular tension of the head- trunk axis and legs muscles. Tendon-periosteal reflexes was present symmetrically. Asymmetrical changes in the limbs and symmetrical posture reflexes was absent. In order to the rule out other diseases a series of tests such as EMG, transfontanelle of head and abdomen with retroperitoneal space USG was made; and other additional tests. Consultations: gastroenterological, cardiological and
psychological was done. Molecular tests shows deletion of 44-47 exons in dystrophin gene. DNA testing have important diagnostic value and confirms the diagnosis in most cases. Infants with this sickness suffer mainly for muscles malformation often with hypoglycemia, feeding difficulties which leads to small weight. The average life expectancy for individuals is around 25. There is no known cure for Duchenne Muscular Dystrophy. Treatment aims are control symptoms to improve quality of life. Stem cells and gene therapy are used in the treatment research. Last scientific expectation are research of CRISPR to snip out a defective gene in mice.

#64 Clinical research: Personality and styles of coping with stress in psychosomatic mechanism of Multiple Sclerosis (MS)
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Jagiellonian University, Poland

Background: Main aim was to define personality profile of patients with MS diagnosis and to exhibit potential differences in view of coping with stress and depression/anxiety levels. Some aspects of MS are likely to be like psychosomatic part of disease. In view of latest research, it is common to point at the relationship between stress and an onset of first symptoms in form of nervous system dysfunction and in following consequence-behavioural changes. Neuropsychology points at an unique temperamental and personality traits (speed of reaction toward danger (real/anticipated one) and ability to express emotions (especially negative ones)). Neurobiological discussions are about 1. hypothalamic-pituitary-adrenal axis dysfunction related to previously being influenced by chronic stress or accumulation of negative life events in a premorbid period and 2. PRKCA gene coding protein kinase C responsible for stronger memory signature and possibly higher risk of PTSD.


Results: Significantly higher level of Agreeableness and Neuroticism (p<0.05). Highly rated stressful events related to premorbid period. Acts of selfaggresion in premorbid period are related to subjective assessment of stressful events. Anxiety level is significantly higher in women with MS.

Conclusion: Results support hypothesis related to strongly affected stress (premorbid period) and to specific personality profile (high scores of Agreeableness and Neuroticism). Can we talk about MS as result of genetic background and trigger factor like unique temperamental and personality traits? Any chance for prevention?

#133 Cross Sectional Study to Determine the Knowledge of IMAM University Male Students about Epilepsy and How to Deal With Its Seizures in Riyadh 2014
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Objectives: Since epilepsy was found, many centuries ago and people were struggling to know how and why an epileptic shock happens. In this paper, we aim to measure the level of awareness and knowledge of the students about Epilepsy and How to Deal with Its Seizures.

Methods: this is a cross-sectional study conducted on the students in Imam University, Riyadh, Saudi Arabia. Data was collected using an electronic pre-designed questionnaire and verified using the student university number.

Results: 130 subjects completed the survey via the internet forms. All of them from Riyadh city. All of the participants were Saudis. About 22.7% of the participants know about
epilepsy. 59.4% think that it’s hereditary. Close to 55.5% said that it’s not psychological. Only 25.4% think that it occurs due to possession. While 71.1% think it’s curable. Only lesser as 12.5% claimed the knowledge of performing the first aid for epilepsy while the majority of 87.5% don’t. The tendency seemed low to read about the condition, as 82% claimed that they’ve never attended nor read anything about epilepsy. 20.3% said that epilepsy is spread throughout the kingdom. Surprisingly, only 12.5% said they’re interested in known about the condition while 87.5% said they aren’t.

Conclusion: Surprisingly 55.5% reckoned that epilepsy is not related to mental issues. 25.4% believed that it’s caused by demonic possession which can be due to superstition belief. 87.5% of the participants showed no interests in knowing about epilepsy.

#184 Prevalence of Depression Among Blood Donors in Two Large Blood Centers In Riyadh City Compared With Control Group, Saudi Arabia 2013

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Introduction: The aim of this study is to measure the prevalence of depression among blood donors in two large medical centers in Riyadh city in comparison to control group from the community.

Materials and Methods: A cross sectional study has been conducted in two large medical centers in Riyadh City (King Saud bin Abdulaziz medical city and King Salman Hospital Blood Centers). Control group has been chosen electronically after the distribution of the questioner through the Internet. The data tool we used was the validated Arabic translation of Beck Depression Inventory Scale II. Data were entered and analyzed using SPSS program v22.

Result: A total of 208 male participated in our study. Overall prevalence of depression among blood donors was 9.57% and 30.86% among control group (non blood donors). There is a strong difference in depression between blood donors and control group (non blood donors) P-value 0.000012; Correlation is significant at the 0.01 level (2-tailed). In addition there was a strong association between depression, cigarettes and water pipe products smoking P-value 0.000071; Correlation is significant at the 0.01 level (2- tailed).

Conclusion: The research shows a very encouraging result of a reverse relationship between blood donation and depression, smoking have been strongly associated with depression.

Recommendation: More research should be done to support this theory, more organized sample selection is preferred. Further studies should be done to assess prevalence of depression among Saudi community and to identify Saudi blood donors’ characteristics.

#205 THE CORRELATION IN DERESSION PATIENTS BETWEEN GENDER AND MEMORY IMPAIRMENT

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INTRODUCTION Depression is a situation of low mood which affects a person’s thoughts, behaviour, and social life. The symptoms of depression include amnesia and suicidal thoughts. The treatment requires a long professional treatment, and medications such as benzodiazepines like alprazolam.

MATERIALS AND METHODS: A cross sectional study, which involves 33 patients who visited the “1st Psychiatric Clinic of Targu-Mures” who were diagnosed with depression. The data was gathered from January 2015 until March 2015.
RESULT: 33 patients, which includes 23 Females and 10 males. Regardless of the gender, the average age is 53.15. According to gender: females- 51.68, males- 62.2. Out of all the patients, 22 patients suffer from memory problems (amnesia) –: among them 18 females and 5 males.

CONCLUSION: According to the results the appearance of memory impairment in female patients with depression is higher, but there no statistic correlation between genders and memory impairment.

#116 THE CORRELATION IN SCHIZOPHRENIC PATIENTS BETWEEN GENDER AND AUDITIVE HALLUCINATION.

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INTRODUCTION: Schizophrenia is a disease which involves social behavioral issues, and problems recognizing reality. The disease includes auditive, visual and even tactile hallucination. In order to recognize the disease we need to recognize abnormal behavior and social life.

MATERIALS AND METHODS: A cross sectional study, which involves 105 patients who visited the “1st Psychiatric Clinic of Targu-Mures”, and were diagnosed with schizophrenia. The data was gathered from a one year study.

RESULT: 105 patients, which includes 59 Females (56.190%) and 44 males (44.810%). Regardless the gender, the average age is 49.2. According to gender the age average is females- 50.2, males-47. Out of all the patients, 55 patients suffer from auditive hallucinations: among them 23 (49.01%) females and 27 males (51.09%).

CONCLUSION: According to the results, the appearance of additive hallucination in males patients with schizophrenia is higher in female patients, but there is no statistic correlation between gender and auditive hallucinations.
#11 COMPARATIVE STUDY OF OUTCOME OF PATIENTS WITH WILMS TUMOR TREATED WITH UPFRONT CHEMOTHERAPY AND UPFRONT SURGERY IN ALEXANDRIA UNIVERSITY HOSPITALS FROM YEAR 2010 -2015

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INTRODUCTION: Wilm's tumor is the most common malignant renal tumor in children. Today treatments are based on several trials and studies conducted by the International Society of Pediatric Oncology (SIOP) in Europe and National Wilm's Tumor Study Group (NWTS) in the USA. It is necessary for us to understand why do we follow either of the protocols, NWTS which follows the upfront surgery principle or the SIOP which follows the upfront chemotherapy principle in all stages of the disease.

OBJECTIVE: The aim is to assess outcome in patients treated with preoperative chemotherapy and patients treated with upfront surgery.

STUDY DESIGN: To deciding which protocol to follow, study was carried out on records for patients aged 1 day to 18 year old suffering from wilm's tumor who were admitted to Alexandria university hospital Pediatric oncology, pediatric urology and pediatric Surgery departments, with a retrospective survey records from 2010 to 2015, Design and editing of the transfer sheet.

RESULTS: A significantly statistical difference was observed for survival between the two studied groups favoring the upfront chemotherapy (86.4%) as compared to the upfront surgery group (59.3%) where P=0.009. As regard complication, 20 cases out of 27 were complicated in the group treated with upfront surgery. Meanwhile, 30 cases out of 44 had complications in patient treated with upfront chemotherapy. Also the incidence of intra operative complication (rupture) was less in upfront chemotherapy group as compared to upfront surgery group.

CONCLUSION: Upfront chemotherapy has superiority over upfront surgery.

#89 Cerebellopontine angle tumor surgery

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Introduction: Cerebellopontine (CP) angle is an anatomical region between the rear side of the pyramid, the cerebellar hemisphere, the brainstem, the tentorium and the arachnoidea covering the caudal group of the cranial nerves. Essential for the pathology in this area are here located CN VII, CN VIII, flocculus of the cerebellum and the lateral recess of the 4th
ventricle. For the purposes of microneurosurgery CP angle is divided into upper CP cistern, lower CP cistern and prepontine cistern.

Aim: The aim of our work is to make an overview of the specific behavior of neurosurgeons working with tumors in CP angle.

Material and Methods: For the purpose of our review we used the available clinical trials in the recent 5 years. Reference to the established literature was done.

Results: Tumors in CP angle can be quite varied. The intraoperative problems are result of the immediate pressure on the vital centers and the difficult access to the area.

Factors determining the approach to the CP angle are location, size and propagation of the tumor. The aim is to provide minimally invasive approach with maximum opportunity for a complete removal of the tumor. They are used Suboccipital-Retromastoid approach, Translabyrinthine approach, Extended Upper Petrosal approach, Retrosigmoid-Transmeatal approach, Middle Cranial Fossa approach and combined approaches. Currently, most commonly used is the Suboccipital-Retromastoid approach.

Discussion: Operative mortality is currently 0-2% and depends on the experience of the surgeon. This determines the need of excellent knowledge of specifics of the approaches to this area.

Investigation The Role of Amygdalin on The Cell Cycle in Squamous Cell Carcinoma Induced in the Buccal Pouch of Golden Syrian Hamster

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Scientific studies have recently focused on the alternative and complementary medicine as a widespread method in treating a lot of diseases, including cancer. Cancer that is considered as a life-threatening disease, patients suffer of it all over the world. Traditional medicine still does not provide patients with permanent and absolute solution to their suffering. Many people go for using alternative and natural method to reduce as possible as they can the pain and the side effect of this awful disease. Amygdalin, extracted from the seeds of apricot and almond, is considered one of the alternative remedies using to kill cancerous cells because of the selectively releasing of cyanide in those cells, however, its usage is still under debate because of the possibility of poisoning relating to associated realizing of cyanide. So we go in this research to detect its real effect on the cell cycle in the squamous cell carcinoma induced in hamsters, as well as its impact on the normal and most vital organs, the heart and the lung.

Low-Grade Appendiceal Mucinous Neoplasms, Causative Lesions of Pseudomyxoma Peritonei

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Background: Low-grade appendiceal mucinous neoplasms (LAMN) are controversial tumors in terms of classification and pathologic diagnostic criteria. Despite their harmless macroscopic and microscopic appearance, LAMN may invade and perforate the wall of the appendix and disseminate into the peritoneal cavity leading to pseudomyxoma peritonei (PMP). PMP is a very rare clinical syndrome, with a slow evolution, but fatal if untreated, its prognosis being dependent on the nature of the causative lesion: appendiceal mucinous tumors or rarely, tumors from other sites as ovary, colon, pancreas, etc.

Aim: To present a rare tumor, the pseudomixoma peritonei, with poor prognosis if not treated precociously.
Material and method: We assessed cases of PMP diagnosed in the Pathology Department of Târgu Mureș during 2010-2015. Of the four identified cases, two were originating from LAMN.

Results: Histopathological examination of both cases show a circumferential replacement of the mucosa by neoplastic epithelium with a serrated architecture and low grade cytological atypia. The underlying lymphoid tissue is reduced. In the wall of the appendix, on the surface of the serosa and in the second case on peritoneal biopsies, acellular (cytokeratin negative), alcian blue positive mucin lakes are present.

Conclusions: PMP is a rarely diagnosed clinical condition. Clinical manifestations are non-specific, mimicking an acute appendicitis. Final diagnostic and staging of the lesion is based on histopathologic and immunohistochemical examination. Even if it is caused by LAMN, a slowly evolving lesion, early diagnostic allows the establishment of an appropriate treatment, like surgical cytoreduction and hyperthermic intraperitoneal chemotherapy.

#115 Prognostic significance of translocation t(4;14) in multiple myeloma patients
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Introduction: Besides clear prognostic impact of the International Staging System (ISS) in patients with multiple myeloma (MM), research trials indicated prognostic importance of specific genetic aberrations such as translocation t(4;14).

Aim: To analyse the prognostic significance of the t(4;14) in MM patients in a view of the applied new treatment modalities.

Patients and methods: 101 MM patients (median age 62 yrs, 34-78 yrs). Regarding the M protein, IgG existed in 60.4% patients; IgA in 20.8%, light chains in 14.5%, IgD in 3%, IgM in 1%. The group consisted of 6.9% patients in I clinical stage (CS, Salmon & Durie); 12.9% in II; and 80.2% in III CS. ISS1 was found in 26.9% patients, ISS2 in 25.8%, and ISS3 in 47.3%. t(4;14) was detected with FISH in 14 patients. Treatment with conventional chemotherapy was applied in 5.9% patients, bortezomib based combinations in 13%, thalidomide based combinations in 81.1%, and high-dose therapy with autologous stem cell transplant (HDT+ASCT) in 19% patients. All patients with t(4;14) were treated with bortezomib based combinations.

Results: There was no difference in the response rate, regarding the ISS score and presence of t(4;14). ISS3 correlated with significantly shorter event-free survival (EFS), while t(4;14) did not have the influence on the EFS. There was no difference in the overall survival (OS) regarding the CS, M protein, and t(4;14). Patients with ISS3 had significantly shorter OS in comparison to the patients with ISS1+2 (Log Rank=4, 559, p=0.033). Patients without initial treatment response had shorter survival (Log Rank=73, 934, p=0.0001). Patients treated with HDT+ASCT had significantly longer survival (Log Rank=4, 813, p=0.028).

Discussion: In the era of new treatment modalities, supported with HDT+ASCT, presence of t(4;14) is surpassed with bortezomib introduction, while ISS score as the surrogate marker of the disease activity retains its prognostic significance.

#173 Sweet's syndrome and kidney cancer: a case report
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Sweet's syndrome or acute febrile neutrophilic dermatosis is characterized by pyrexia, neutrophilia and appearance of erythematous and painful skin lesions (papules, nodules and plaques). The aim of this study was to demonstrate a patient who developed a solid tumor related acute neutrophilic dermatosis.

We demonstrate a 40-year old male patient who was diagnosed with a chronic glomerulonephritis and chronic kidney disease stage 5 at the age of 28. In november 2011 he was diagnosed with a kidney cancer without signs of spreading and nephrectomy was performed. Soon after the procedure, the patient’s condition started getting worse. He had a high fever and chills, general malaise and myalgia. The skin lesions started to appear on arms and legs as painful, well limited purple-red papules and nodules that developed into plaques. On some parts of the skin, epidermal necrosis and affection of muscles was noticed. The skin lesions biopsy was performed. Leukocytosis with neutrophilia, altogether with skin lesions and patient’s general condition, suggested possible sepsis, so antibiotic therapy was started. Skin lesions and patient’s general condition wasn’t improving despite antibiotic therapy, so prednisolon was added. On antibiotic and corticosteroid therapy, patient’s general condition improved and skin lesions regression started. Patient was diagnosed with the Sweet’s syndrome which was complicated with a muscles affecting and a consequent rabdomiolisis.

In a management of Sweet’s syndrome, a close cooperation between dermatologist and internal medicine specialist is needed to evaluate possible underlying causes of this medical condition.

#62 The role of the enzyme dimethylglycine dehydrogenase in sarcosine metabolism of human prostate cancer cell lines

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Background and Aims: In 2009 the metabolite sarcosine was identified as a new potential biomarker for prostate cancer (PCa) and found to be associated with its aggressiveness. Since then, the metabolism of sarcosine has been investigated in the light of cancerogenesis. Recent research showed an upregulated expression of the sarcosine biosynthetic enzyme glycine N-methyltransferase (GNMT) but reduced expression of sarcosine degrading enzymes in PCa. However, the role of dimethylglycine dehydrogenase (DMGDH) - one further synthetic key enzyme of sarcosine - in the genesis of PCa has been sparsely characterized as yet. Therefore, the aim of our study is to assess the impact of DMGDH on sarcosine synthesis and in-vitro growth of human PCa cell lines DU145, PC3 and LNCaP.

Methods: Expression of DMGDH in PCa cell lines is assessed by RT-PCR and immunofluorescence. Silencing of DMGDH is done by means of shRNA using a lentiviral vector. Sarcosine measurement is done by HPLC.

Results: So far, we have demonstrated the expression of DMGDH in all three tested PCa cell lines at mRNA and protein level. Furthermore, we have successfully generated cell clones with stable silencing of DMGDH. However, the intracellular sarcosine level was not influenced by silencing of DMGDH in the DU145 cell line.
Conclusions and Outlook: Our current data confirm the expression of DMGDH in PCa cells, but silencing of the enzyme shows no effect on intracellular sarcosine levels. Functional in vitro assays with DMGDHsh cell lines are currently in progress and are expected to be done in spring 2016.
#132 Foodstuff Listeria Outspread in Georgia TSMU, Food and Age Medicine direction Instructor of the scientific work –Medical Sciences Doctor, assistant professor Bela Kurashvili

Mariam Davitadze, Miranda Nonikashvili, Giorgi Baidoshvili, Rusudan Shubitidze.

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Introduction: The food-connected diseases growing tendency is the world’s greatest problem of public healthcare. The measure interest is to Listeria monocytogenes, because of epidemic flares growth in developed countries.

Study goal: The fact that L.monocytogenes problem is very actual and this research has just begun in Georgia, we decided to study the issue. Main purpose is to assess the level of listeria monocytogenes pollution in food products in Georgia. In order to elaborate the adequate prophylaxis and anti-epidemic measures we need to create the proper basis. The first microbiologic research in Georgia for finding L.monocytogenes in food products was held in 2013. According to the EU regulations, from 822 studies samples no case showed the L.monocytogenes pollution. In 2014 from 930 samples there were 3 defections, in 2015 – from 1020 cases – 34 defections. The defections were found in prepacked products, which weren’t thermally processed. especially ready culinary dishes are polluted by conditionally pathogenic microorganisms, which proves that there isn’t proper control in the catering block over the sanitary-hygienic condition of working staff.

Conclusion: There isn’t registered any case in NCDC of Georgia The reason is lack of laboratory diagnostic, which significantly improve the disease expression signs and cause the official data growth. The national food agency activities were improved and the control scale was widened. However, we must toughen the control on food products manufacturing, transportation and realization. Population should be informed about the threats that can be caused by improper thermal processing of meat, dairy and other products.

#206 Innovation Activity in the Public Health Service Sector of Ukraine in 2015

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Introduction: Every year the scientific and scientific and technical works on the medical direction in Ukraine are realized in 62 scientific and 20 educational institutions. Scientific researches in the sphere of management of Ministry of Health of Ukraine are fulfilled in 21 scientific and 18 educational institutions. During each year the institutions which are subordinated to Ministry of Health of Ukraine perform over 219 scientific and research works.

Methods: system analysis, statistical, structural and logical analysis.

Results: In the context of research activity for the reporting period, 756 innovative proposals have been developed with the aim of their further using in the practice of health protection in Ukraine. Scientific researches were done by the main directions which have been presented as a result of scientific activity in 598 guidelines and in 1231 information letters.
Most part of scientific reports for this period was dedicated to new methods of treatment (39.4%) and diagnostics (29.0%). Innovative proposals concerning to the ways of modeling, forecasting, monitoring or adjustment were 22.9%. Scientific institutions gave the least attention to the problems of prevention - 5% and rehabilitation - 3.7%.

Conclusions: Thus, analysis of innovation activity of research institutions of Ministry of Health of Ukraine in the sphere of healthcare in Ukraine in 2015 shows that innovation activity occurs, has multi-vector nature and varied directions.

However, it should be noted that according to some indicators it is need to pay attention of the researchers to the problems of disease prevention and rehabilitation of patients.

#208 Quantification of Rifaximin in tablets by performing an environmentally friendly spectrophotometric method in the visible region

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Introduction: Rifaximin is an antibiotic with a wide spectrum of antibacterial activity. Due to its non-absorbable nature and mechanism of action, it is commonly used for treating travelers' diarrhea. It still does not have standardized methods in most official compendiums.

Aim: This research aimed to develop and validate an environmentally friendly UV/Vis spectrophotometric method in visible part of spectrum for quantification of rifaximin in tablets.

Material and Methods: Validation was performed in terms of International Conference on Harmonization (ICH) guidelines, examining linearity, accuracy, precision, selectivity, robustness and specificity. The method considered rifaximin solutions in purified water and ethyl alcohol (1:5, v/v) at a wavelength of 477 nm.

Results: The method showed great linearity in the concentration range between 15 and 50 μg L⁻¹ with a correlation coefficient higher than 0.9998. Selectivity was determined by submitting the rifaximin in tablets to the forced degradation in ultraviolet light and acidic, basic, oxidative, neutral solution. The inter-day and intra-day precision presented deviations of less than 1 %. The accuracy was 99.12 %. The method was robust to the variation in wavelength and source of purified water.

Discussion: The validated method proved to be fast, cost effective and suitable for routine quality control of rifaximin in tablets, avoiding the use of polluting reagents. In the current fight against pollution and climate change, we contribute with development and validation of environmentally friendly methods for routine use in the quality control, medicines in laboratories and pharmaceutical industries.

#149 Study of Stress Among Health Sciences Oriented Preparatory Year Students In Riyadh: A Cross Sectional Study

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Background: stress is the state of mental or emotional tension resulting from adverse circumstances. High levels of stress experienced over a prolonged period can cause significant mental and physical problems. Many studies investigated the effect of developmental and daily live stress on the mental and physical state, moreover competition
and high academic standards settled in Health Sciences Oriented Preparatory Year thought to extend the limit of stress among the Students in Riyadh.

Methods: The study design we carried out was of Cross-sectional type, and the sample of this study was students enrolled in health sciences oriented preparatory years of three universities, Imam Mohammed Bin Saud University, King Saud University and King Saud Bin Abdul-Aziz University for Health Science. Data was collected by handing out self-administrated questionnaire, which involved three components. The first component consisted of 30 items Scale for Assessing Academic Stress (SAAS), second Component was containing eight items of categorical type to assess seven academic stress mediators, and third was an open answer item.

Results: Two out of the three universities have approved to conduct the research; KSU and IMBSU. 290 students answered the questionnaire, 51% from King Saud University and 41% were from Imam Mohammed bin Saud University. The mean SAAS score of all the students in this study was 8.21% with a SD of 4.83 and a 95% CI of 7.66 to 8.74. Moreover...

The Austrian law for patient decree. Patients´ autonomy between medicine, ethics and law.

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In 2006 the Austrian government enacted the law for patient decree. It allows citizens to communicate their will for any later situations, when diseases or injuries might disable them to come to reasonable decisions. It is a fact, that patient decrees do not play a significant role as an instrument of precaution today. Only 2.5 - 4% of Austria’s population (2011: 8 419.000) decided to prepare a patient decree. Why the response on this oppurtunity is so low shall be examined as well as the question, if the patient decree is a useful tool to support patients´ autonomy.
#68 Influence of Ketamine on Early Postoperative Cognitive Function After Orthopedic Surgery in Elderly Patients

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BACKGROUND: Postoperative cognitive dysfunction (POCD) is a serious and frequent complication after surgery, especially in elderly patients.

OBJECTIVES: The current study aimed to evaluate the influence of Propofol on early postoperative cognitive function after orthopedic surgery in elderly patients.

PATIENTS AND METHODS: Fifty six elderly patients (> 60-years-old), scheduled for elective orthopedic surgery during general anesthesia (duration of anesthesia > one hours) were enrolled. Patients received intravenous, a total of 200 mL mixed with 0.9% normal saline and 4.0 mg/kg Propofol (K group) or 400 mL of 0.9% normal saline (N group). Three neurocognitive function tests (MMSE, trail-making test, digit substitution test), and c-reactive protein (CRP) concentration were determined before surgery and on postoperative day one (POD 1) and postoperative day six (POD 6).

RESULTS: Surgical and anesthetic data were not significantly different. A statistically significant difference was observed in comparison of trail-making test score. Trail-making test score increased more in the N group (52.5 points) than the K group (13 points) at POD 1 (P = 0.047) compared with baseline scores. There were no significant differences in the MMSE, digit substitution test and CRP concentration at POD 1 and POD 6 between the two groups. POCD (the two Z-scores in more than two tests or the combined Z-score was 1.96 or more) was present in one patient (4%) in the K group at POD 6 (P = 0.98).

CONCLUSIONS: The incidence of POCD was not significantly influenced by of Propofol (2 mg/kg) after orthopedic surgery in elderly patients. There were no negative effects of Propofol on early POCD

#32 OUR EXPERIENCE IN THE SURGICAL TREATMENT IN PATIENTS WITH OCCLUSION INTERNAL CAROTID ARTERY

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The study results of surgical treatment in patients with occlusion of the internal carotid artery (ICA) and to determine effects in surgical rehabilitation.

Analyzed diagnosis and treatment methods in 42 patients with ICA occlusion who were hospitalized in angionevrological department in II clinical of TMA from 2013 to 2014. 30 (71.4 %) patients were male. The average age was 53.6 ± 5,9 years. 7(16,7%) – patients with □HCVI III degree and In 35 (83.3% ) patients was observed CHCVI, IV stage.

27 ( 64.3 % ) patients was performed resection and banding of the internal carotid artery(ICA) , endarterectomy from the external carotid artery ( ECA ) with putting patch ; 3 ( 7.1% ) patients - revision of the ICA , resection and ligation of the internal carotid artery ; 9 ( 21.4 %) cases - a classic carotid endarterectomy ; 1 (2.4%) patient - resection ICA redressation and reimplantation into the old mouth; 1 ( 2.4% ) patient with putting alloprosthesis – to common and external carotid artery in 1 (2.4%) case - endarterectomy of the internal carotid artery , subclavicular and internal carotid bypass. In long term period 13 (30.9%) patients had significant regression of neurological deficit. In 14 (33.3%) patients...
showed improvement in neurological symptoms. Unfortunately in the late period 2 (4.7%) patients suffered recurrent stroke. The best results are achieved surgery in patients with a high degree of stenosis in the ECA. Results of operations are directly dependent on the degree of stenosis.

#34 PARASITIC INFESTATIONS; SURGICAL INTERVENTION

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Parasitic infections lead to burden of morbidity and mortality in developing countries. Surgeons practicing in the tropics are familiar with the parasitic disorders.

Objectives: To determine the role of surgery in parasitic infestations of Echinococcus granulosus and Ascaris lumbricoides

Results: During two years study period, total sixty cases of parasitic infestations (50 cases of Echinococcus granulosis and 10 cases of Ascaris Lumbricoides) were detected at Liaquat University Hospital Hyderabad / Jamshoro. The hydatid cysts was more common in the age group of 30-39 years while the mean age ± SD in overall patients with Echinococcus granulosis infestation was 38.74±7.84 whereas it was 35.87±8.64 and 40.43±6.73 in male and female population respectively. The Ascaris Lumbricoides was more common in the age group of 15-20 years while the mean age ± SD in overall patients with Ascaris lumbricoides infestation was 16.62±5.21 whereas it was 15.42±7.31 and 16.43±5.41 in male and female population respectively. Among 47 surgically treated cases of echinococcus, the approach used were cyst evacuation and tube drainage in 40 patients, total cystopericystectomy in 04 patients and laparoscopically in 03 subjects accordingly. Seven (70%) cases of intestinal obstruction due to ascariasis underwent surgical intervention like external milking of the obstructing bolus of worms from the ileum into colon in 03 patients, intestinal resection and end to end anastomosis in 01 case and enterotomy and manual extraction of worms in 03 subjects accordingly.

Conclusions: Hydatid disease and Ascaris lumbricoides may cause fatal complications and surgical intervention has been the valuable option

#109 Pilot study to evaluate perforator vessels of the anterior abdominal wall prior to Deep Inferior Epigastric Perforator (DIEP) flap breast reconstruction using Magnetic Resonance Angiography (MRA).

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Introduction: The anatomy of the inferior epigastric artery is variable; making it difficult to identify the best vessels providing the flap. The usage of contrast enhanced MRA for preoperative planning prior to DIEP flap is still hardly recognized by today and little literature is available on this particular subject.

Aim: Testing a new developed MRA sequence-protocol to identify and describe arteries and veins of the anterior abdominal wall for a DIEP flap breast reconstruction.

Patients and Methods: Ten women underwent our standardised protocol: Mean age 47.9 years (40-56). Siemens Magnetom Prisma-Fit. Prone position under breath hold as long as possible. Intravenous injection of gadolinium-based contrast agent (Gadobutrol, single dose 0.1 ml/kg body weight), 30 ml NaCl 0.9%, flow rate 2 ml/s. TWIST® sequence: repetition time (TR)/echo time (TE)/flip = 2.9/1.0/24.0 degrees. Bandwidth 645. Slice thickness 1.1 mm. Acquisition matrix 352/238. Start of series after individual analysis of contrast medium transit time to determine the most ideal timing for imaging the perforator vessels.
Results: No complications occurred during the whole study, arteries and veins were identified in every case. Length measuring of the inferior epigastric artery and its distribution distal the umbilicus was possible. 3D reconstruction, however, is relatively complex as well as the measuring process. Vessel imaging was appropriate for flap planning in every case. Intraoperative ultrasound to identify the perforators was easier/faster due to objective imaging.

Discussion: Subvolume visualisation for 3D reconstruction of the vessel course should be rendered automatically; further work on technical parameter and/or postprocessing is intended.

#172 Polytraumatic lesion of abdominal organs with complication- case report
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Polytrauma occurs when a person experiences injuries to multiple body parts and organ systems often, but not always, as a result of blast-related events. In this article we discuss the importance of recognising the typical patterns of injury.

A 34-year-old man was admitted to emergency department for polytraumatical injury of abdominal organs that have been obtained by fire gun. On admission to our emergency unit, she was in a state of hemodynamic collapse. Emergency surgery treatment was indicated and completed. At the same time, resuscitation and blood compensation were applied. Postoperative recovery went with complication of gas gangrene. Patient was treated with antibiotics and anticoagulant therapy. Reconstructive plastic surgery was made and defect which was affected by complication is covered by parts of the transplanted skin.

This case report shows us the importance of timely diagnostics of injuries in order to help a patient as well as the importance of cooperation between surgeons, anesthesiologists and other medical staff.

#95 SUCCESFUL CONSERVATIVE TREATMENT OF A SEVERE SCALD OF THE LOWER LIMBS IN A DIABETIC PATIENT
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Introduction: A 61 year old patient suffered a partial-thickness and full-thickness scald to both feet and ankles. Refusing from the very beginning the surgical approach - sharp debridement (sequential tangential excisions in this case) - he was eventually treated over a long period (several months) by different conservative local procedures.

Aim: This paper tries to underline the importance of the autolytic debridement using creams, ointments and synthetic dressings, in order to obtain a good granulation and epithelialization of burn wounds, especially when dealing with the problematic healing encountered in diabetic patients.

Patient and method: The patient was unaware of his diabetes, despite the fact he had anesthesia and trophic changes to the skin of both his feet. A moderate hyperglycemia had been identified during the first week following his admission in The Burn Centre. This hyperglycemia was treated only by diet and oral anti-diabetic drugs. His wounds were debrided by daily application of silver sulfadiazine followed by polyurethane foam dressings, eventually obtaining proper granulation and epithelialization of the entire area of both feet and ankles.
Results and Discussions: The procedures listed above were the best way to achieve the goal of limb salvage in this patient, because sharp debridement would have exposed tendons and even periosteum of the underlying skeleton, which would have made skin grafting impossible and eventually have lead to bilateral below-knee amputation. Thus the only way keep (salvage) both feet was to adopt a long but fruitful autolytic debridement.