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**Press release**

**For immediate publication**

**Radiation against COVID-19:**

**New study explores UV-B irradiation in COVID treatment**

Graz, 30 June 2022: Masks are coming off and measures are being scaled back, yet there continue to be severe COVID cases whose optimal treatment remains the subject of research. A study codesigned by Peter Wolf from the Department of Dermatology and Venereology at Med Uni Graz is investigating the effect of irradiation with UV-B rays on a patient's condition. The findings of the pilot study give reason for confidence.

**UV rays for the immune system**

While most people are getting used to a life without (hardly any) COVID restrictions, the medical community emphatically continues to research the virus and its impact. Over two years after the start of the pandemic, treatment of severe COVID cases in hospitals is also a great challenge. Doctors worldwide are looking for effective, simple and practical solutions to give severely ill patients the best chance of recovering from the infection. "One option that has proven to work with other diseases that trigger excessive immune response is narrow-band UV-B therapy (NB-UV-B)," says Peter Wolf of the Department of Dermatology and Venereology at Med Uni Graz.

Deaths in connection with COVID-19 infection are often associated with a malfunctioning of the immune system. "The disturbed immune system is brought back into balance using narrow-band UV-B therapy. This treatment has been shown to be successful in other diseases such as graft vs. host disease (GVHD) or cutaneous lymphomas. This form of therapy also remains the state-of-the-art treatment for psoriasis—especially exanthematic types," explains Wolf. Initial positive results of the study, whose pilot phase is complete, indicate that UV-B therapy can help COVID-19 patients to recover from their illness.

**The pilot phase of the study**

For the study, 30 patients with severe cases of COVID-19 were randomly assigned to one of two groups. One was treated with narrow-band UV-B while the other received a placebo light therapy. The treatment was provided in addition to standard medical care that included antiviral drugs. The therapy employs a mobile UV-B device to administer radiation to about 27% of the surface of the patient's body over a total of eight days. A first cut-off point for the analysis was set at 28 days after treatment. After this time, disease progression in patients participating in the study was checked. In the group treated with narrow-band UV-B, 2 patients (13.3%) had died. In the placebo group, this was the case for 5 (33.3%). The specific mechanism active in UV-B therapy for COVID-19 is currently being investigated at the immunological level. Just as Peter Wolf had believed based on previously evaluated lab results, however, it does not seem to be directly associated with vitamin D. According to him, the study findings fit perfectly with those of a meta-analysis



that indicate low UV values due to the environment and season directly correlate with increased morbidity and mortality of patients with COVID-19.

## **Effective and uncomplicated**

The advantage of UV-B treatment lies not only in its effectiveness but also in its safety, comparably low cost, easy applicability and the possibility of administering it in hospitals or poorer regions that are not as well-equipped.

The results of this first study phase serve as the basis for a planned larger scale study that should deliver more precise and definitive data.

## **Further information and contact**

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## **Profile: Peter Wolf**

Peter Wolf is head of the Department of Dermatology and Venereology and directs the Photodermatology research unit at Med Uni Graz. He has many years of expertise as a dermatologist specializing in inflammatory skin diseases as well as clinical and experimental photoimmunobiology. He also focuses on the investigation of cellular mechanisms of photo(chemo)therapy, specifically pathogen participation in immune cells in order to develop new ways to treat psoriasis and other diseases with strong inflammatory components.

Link to the publication:

Pilot phase results of a prospective, randomized controlled trial of narrowband ultraviolet B phototherapy in hospitalized COVID-19 patients  
<https://onlinelibrary.wiley.com/doi/10.1111/exd.14617>