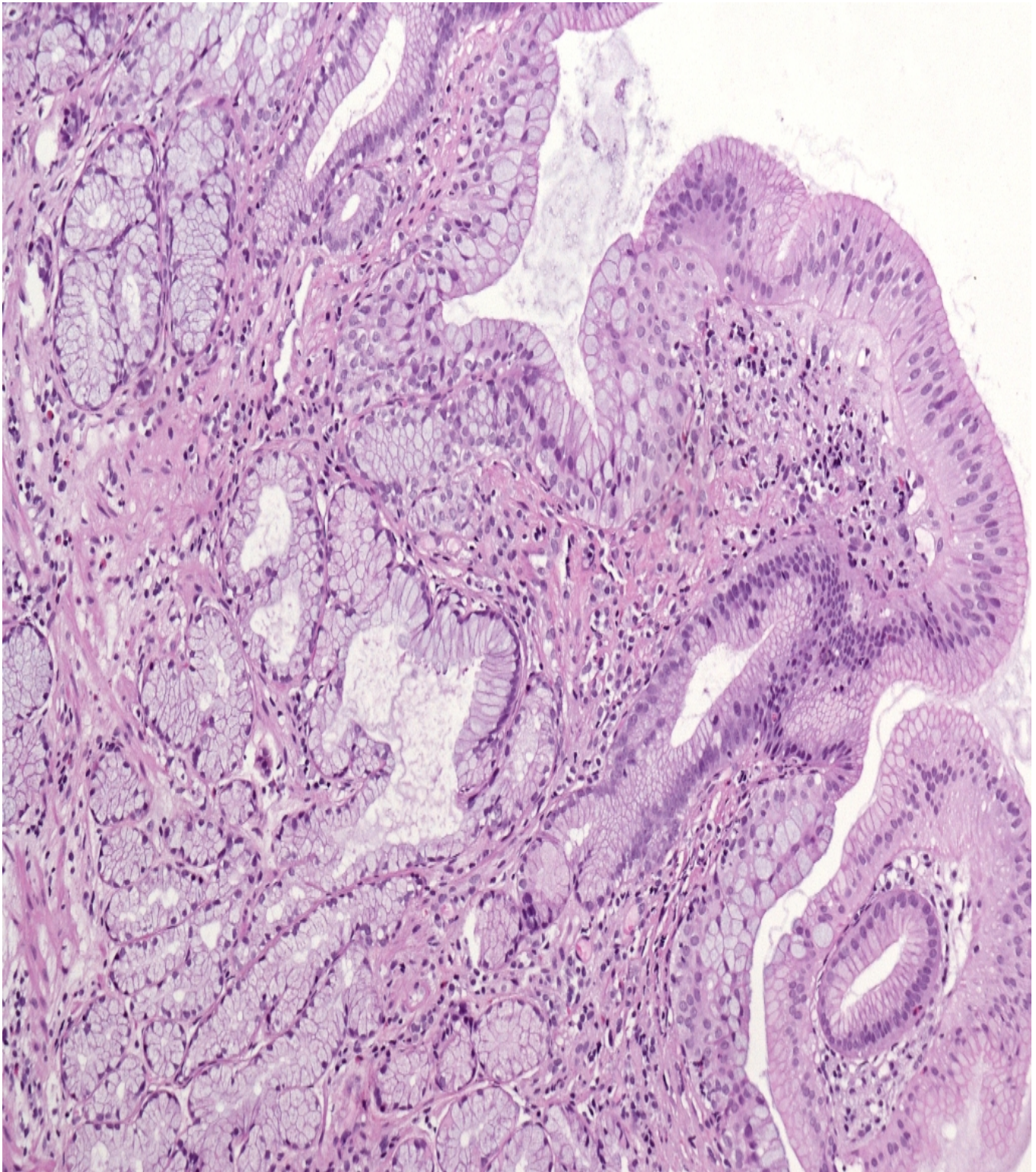
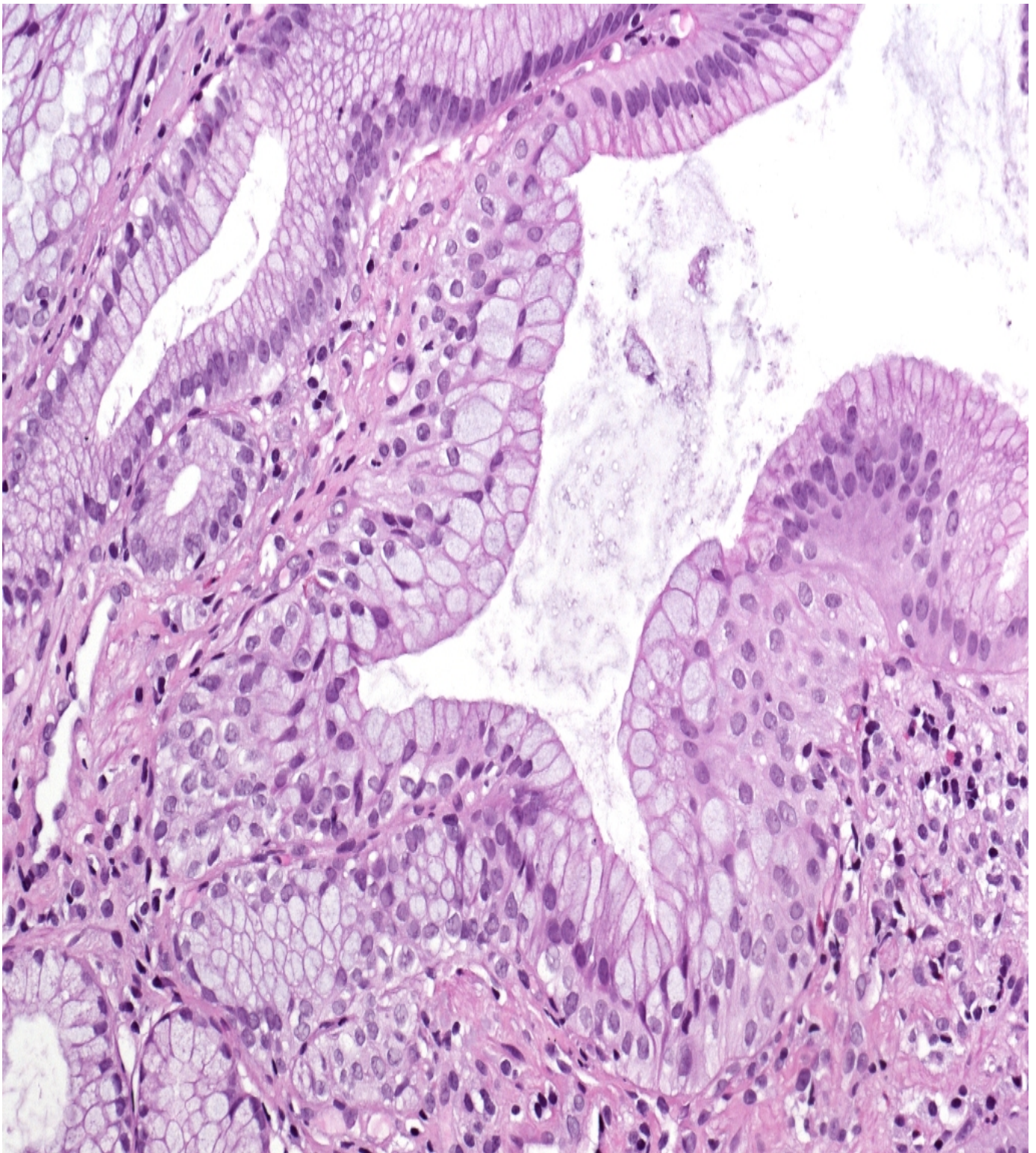


# September 2014

Biopsy material from the distal oesophagus of a 68-year-old male.

What is your diagnosis?





## Diagnosis

Multilayered epithelium.

## Comment

In 1993, Shields et al. were the first to report the presence of a distinctive cell type at the gastroesophageal junction with features intermediate between those of squamous and columnar epithelium. In a second paper, the same group identified "multilayered epithelium" as a distinct type of epithelium with morphological and immunocytochemical characteristics of both squamous and columnar epithelium. Today, multilayered

epithelium can be defined as distinct hybrid epithelium with features of both squamous and columnar epithelium, characterized by flattened squamoid cells in the basal layers and columnar mucus cells in the superficial layers, respectively.

In several smaller studies, the presence of multilayered epithelium was related to GERD-induced inflammation and goblet cell metaplasia. In the prospective multicenter central European histoGERD trial we were able to identify multilayered epithelium in about every tenth individual undergoing gastroscopy for various unselected reasons. Its presence was associated with increasing age, high BMI, presence of hiatal hernia and endoscopic diagnosis of esophagitis or Barrett's oesophagus. Upon histology, multilayered epithelium was associated with features of the squamous epithelium indicating GERD, presence of cardiac mucosa and intestinal metaplasia. In summary, the association with clinical and histological features indicating GERD advocates the lesion as histological marker for reflux esophagitis. The association with cardiac mucosa and Barrett's esophagus suggests multilayered epithelium to be an intermediate step in the development of columnar metaplasia and, ultimately, Barrett's oesophagus.

### For further reading

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- › Glickman JN, Spechler SJ, Souza RF, et al. Multilayered epithelium in mucosal biopsy specimens from the gastroesophageal junction region is a histologic marker of gastroesophageal reflux disease. *Am J Surg Pathol.* 2009;33:818-825.
- › Shields HM, Rosenberg SJ, Zwas FR, et al. Prospective evaluation of multilayered epithelium in Barrett's esophagus. *Am J Gastroenterol.* 2001;96:3268-3273.
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- › Langner C, Wolf EM, Plieschnegger W, et al. Multilayered epithelium at the gastroesophageal junction is a marker of gastroesophageal reflux disease: data from a prospective Central European multicenter study (histoGERD trial). *Virchows Arch.* 2014;464:409-417.

### Presented by

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