

## Gastroesophageal reflux disease: From heartburn to cancer

Marco G Patti, Irving Waxman

Marco G Patti, Department of Surgery, University of Chicago Pritzker School of Medicine, Chicago, IL 60637, United States

Irving Waxman, Center for Endoscopic Research and Therapeutics (CERT), University of Chicago Pritzker School of Medicine, Chicago, IL 60637, United States

Author contributions: Patti MG wrote the manuscript; Waxman I reviewed the manuscript.

Correspondence to: Marco G Patti, MD, Professor, Director, Department of Surgery, University of Chicago Pritzker School of Medicine, 5841 S. Maryland Ave, MC 5095, Room G-201, Chicago, IL 60637, United States. [mpatti@surgery.bs.uchicago.edu](mailto:mpatti@surgery.bs.uchicago.edu)

Telephone: +1-773-7024763 Fax: +1-773-7026120

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### Abstract

About 10%-15% of patients with gastroesophageal reflux disease develop Barrett's esophagus. This is considered a premalignant condition because it can progress from metaplasia to high-grade dysplasia, and eventually to adenocarcinoma. Recently, major advances have been made in the endoscopic treatment of Barrett's esophagus, therefore limiting the role of surgery in the treatment of this disease.

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**Key words:** Gastroesophageal reflux disease; Barrett's esophagus; Esophageal adenocarcinoma; Laparoscopic fundoplication; Radiofrequency ablation; Esophageal endoscopic mucosal resection; Minimally invasive esophagectomy

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Gastroesophageal reflux disease affects an estimated 20% of the population in the United States. About 10%-15% of patients with gastroesophageal reflux disease develop Barrett's esophagus, which eventually can progress to adenocarcinoma, which is currently the fastest growing cancer in the United States. It is recognized that adenocarcinoma is in most cases the end stage of a sequence of events whereby the squamous esophageal epithelium is initially replaced by columnar epithelium without dysplasia. Subsequently, the metaplastic epithelium can progress to low- and high-grade dysplasia and eventually cancer<sup>[1-3]</sup>.

This symposium addresses some key questions in the treatment of this disease process. The pathophysiology and diagnosis of the disease are reviewed, particularly in morbidly obese patients<sup>[4-10]</sup>. Based on the pathophysiology, the treatment of metaplasia is discussed. Special attention has been placed on new treatment modalities such as radiofrequency ablation and endoscopic mucosal resection, which have revolutionized the treatment of high-grade dysplasia and intramucosal carcinoma<sup>[11-16]</sup>. The remaining indications for esophagectomy in these cases are discussed<sup>[17]</sup>. Finally, we have reviewed what to do when invasive cancer is present, discussing the role of neoadjuvant therapy<sup>[18-20]</sup>, the type of esophageal resection (transhiatal versus trans-thoracic)<sup>[21,22]</sup>, and the current data available about minimally invasive esophagectomy<sup>[23,24]</sup>. The authors are both experts dedicated to the treatment of patients with esophageal disorders and have published extensively on these topics.

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