

Frequency of clinically significant findings in the surgical pathology specimen following laparoscopic sleeve gastrectomy and concordance with preoperative endoscopy: Insights from a large single-center experience

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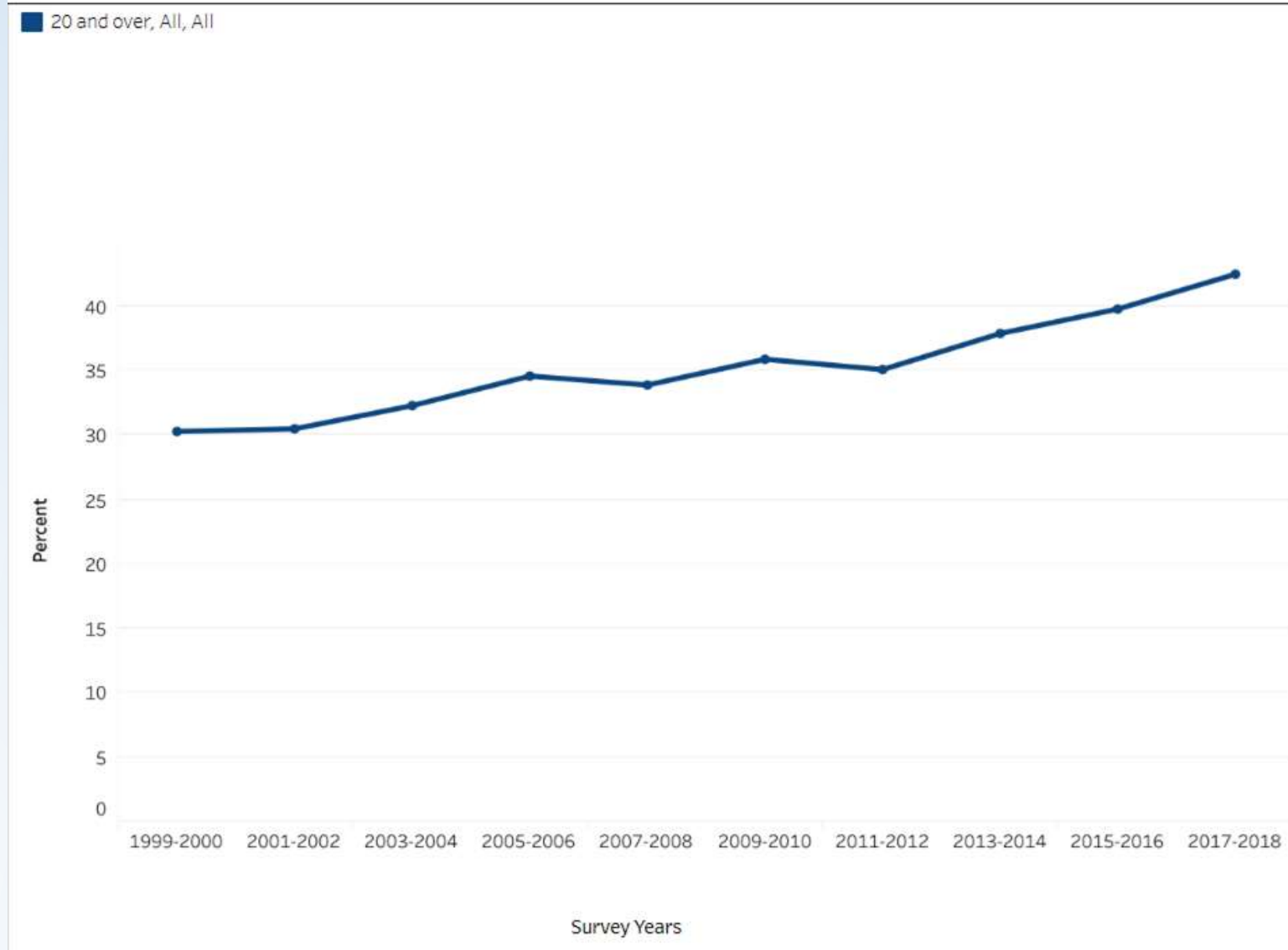
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# Conflict of Interest Disclosure

- I have no potential conflicts of interest to disclose

## Prevalence of Obesity in the U.S. Population, 1999-2000 to 2017-2018



# Objective

- Determine the frequency of clinically significant surgical pathology findings following SG (sleeve gastrectomy)
- Evaluate for correlation with pre-operative endoscopy

# Methods

- Retrospective analysis
- Patients  $\geq 18$  years who underwent minimally invasive sleeve gastrectomy (SG), 2014-2022 at a single MBSAQIP accredited Level 1 comprehensive bariatric surgery center
- All patients were planned for routine pre-op upper endoscopy with gastric antrum biopsies with additional biopsies at the discretion of the endoscopist
- All patients who underwent SG had routine histopathological evaluation of gastric remnant by pathologist

# Collected Data

- Baseline characteristics: age, gender, BMI at the time of surgery, race, smoking status, associated medical comorbidities, preoperative endoscopy, and readmission rates
- Pre-op endoscopic pathology and post-op surgical pathology for each patient was reviewed

Demographics (n=426)	
Age (years)	43 [36,53]
Gender	
Male	68
Female	358 (84.0%)
BMI (kg/m <sup>2</sup> )	42 [39,46]
Race	
White/Caucasian	196
African American	125
Asian	6
Hawaii/Pacific Islander	2
Native American	2
Other	81
Unknown	14
Smoking Status	
Active/recently stopped	7
History of smoking	81 (19.0%)
Never smoker	338
Medical Comorbidity	420 (98.6%)
Preoperative endoscopy performed	397 (93.2%)
Readmission (total)	79 (18.5%)
Multiple readmissions	25 (5.9%)

# Results

N=373	Postoperative pathology	Noted on preoperative endoscopy pathology
Other gastritis (lymphocytic or follicular gastritis)	3 (0.8%)	1 (33.3%; gastric body)
H pylori positive	34 (9.1%)	16/34 (47.1%)
Fundic gland or hyperlastic polyps	14 (3.8%)	
Leiomyoma (submucosal)	1 (0.3%)	
Intestinal metaplasia	6 (1.6%)	1 (20.0%; gastric body biopsy)
Autoimmune metaplastic atrophic gastritis (AMAG)	9 (2.4%)	4 (44.4%; gastric body biopsy)
Gastrointestinal stromal tumor	6 (1.6%)	
Adenocarcinoma	1 (0.3%)	
H pylori positive (entire cohort)	38/426 (8.9%)	
Autoimmune metaplastic atrophic gastritis (entire cohort)	10/426 (2.3%)	



# Discussion

- 11.3% (including H. pylori) or 5.4% (excluding H. pylori) of our cohort had significant/potentially significant post-operative pathology
- Preoperative gastric biopsies (to include gastric body) identified AMAG in nearly ½ of patients
- Intestinal metaplasia and AMAG were only diagnosed pre-operatively if gastric **body** biopsy was taken
  - Antral intestinal metaplasia is usually related to environmental/H pylori gastritis and body/fundic intestinal metaplasia is usually related to autoimmune gastritis
- AMAG: 3-5-fold increase in risk for gastric cancer

# Key Points

- Wide sampling of the stomach in patients undergoing preoperative endoscopy is important to identify potentially significant
- Autoimmune metaplastic atrophic gastritis (AMAG) which is associated with a 3-5 fold increase risk of gastric cancer
  - Recommend routine postoperative endoscopic surveillance
- Recommend detailed examination of SG specimen, especially in patients who did not have pre-op endoscopy
- Preoperative diagnosis of AMAG is especially important in patients considering gastric bypass given the difficulty in postoperative endoscopic surveillance of the gastric remnant
  - Consider resection of gastric remnant if gastric bypass is planned

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Grazie Mille