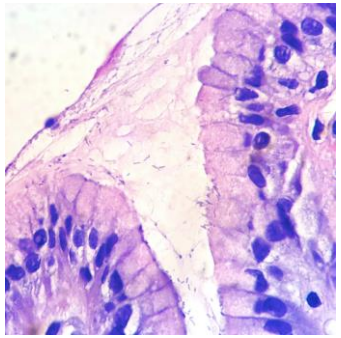
AGA Clinical Guideline: Gastric Intestinal Metaplasia

By Amneet Hans

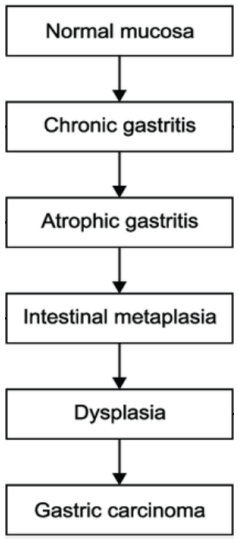
@EmoryGastroHep

Background

- Gastric cancer: 3rd leading cause of cancer death worldwide
- The majority are non-cardia gastric cancers
  - Arise from antrum, incisura, body, and/or fundus
- Chronic infection with H. pylori is the primary risk factor for (intestinal-type) non-cardia gastric cancer
  - At least 80% of the global gastric cancer burden attributable to this pathogen
- GIM may represent the histologic step just before development of dysplasia.
- In low-incidence countries, such as the US, population-wide screening has not been endorsed.

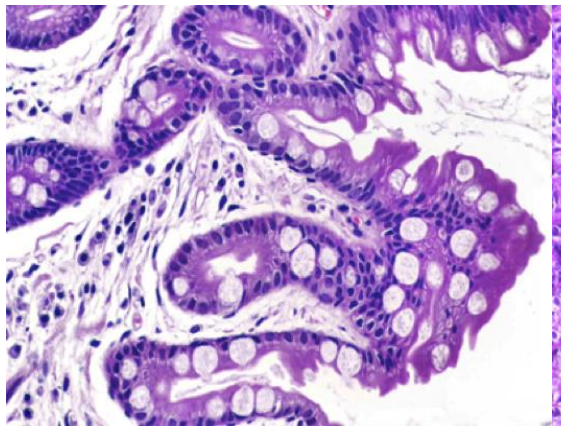


Helicobacter pylori seen on gastric biopsy (the tiny dark rods in the space above/between the gastric mucosa)

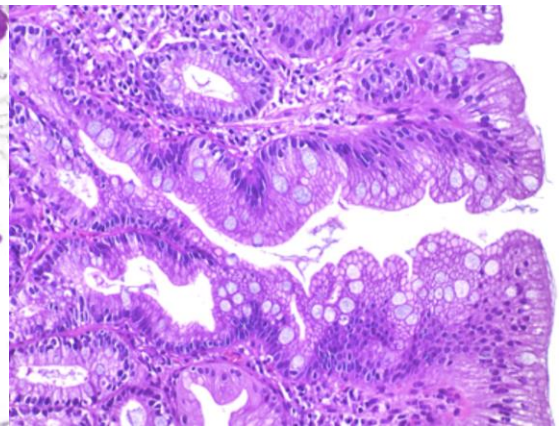


Prevalence

- Prevalence of GIM in the US: ~4.8%.
- Rate of progression to gastric cancer among individuals with GIM was estimated to be 0.16% per year, or 1.6% at 10 years.
- The 3-, 5-, and 10-year pooled cumulative rates of incident gastric cancer among patients with GIM were estimated to be 0.4%, 1.1%, and 1.6%, respectively.
- Minority populations have overall higher risk for gastric cancer in the United States, but unclear if there is increased risk once GIM is established.



Complete GIM



Incomplete GIM

Classification

Histologic subtype: Complete vs Incomplete GIM

- **Complete**: presence of small intestinal-type mucosa with goblet cells, a brush border, and eosinophilic enterocytes
- **Incomplete**: presence of colonic-type epithelium with multiple, irregular mucin droplets, and absence of a brush border

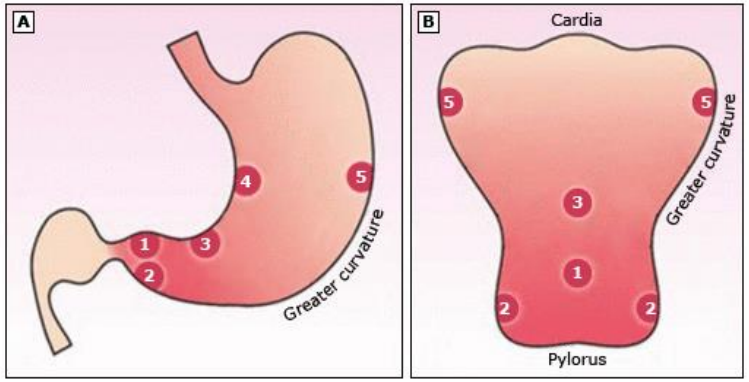
Topographic extent: Extensive vs Limited GIM

- **Extensive**: involves the body & either the antrum and/or incisura. GIM of the body alone is considered a surrogate for extensive GIM, as antral metaplasia is usually also present, but may have been missed on biopsy given patchy distribution.
- **Limited**: involves the antrum or incisura

Citation: Gupta, et al. AGA Clinical Practice Guidelines on Management of Gastric Intestinal Metaplasia. Gastroenterology 2020;158:693–702; UpToDate – Gastric Intestinal Metaplasia; https://radiopaedia.org/cases/helicobacter-pylori-histology-1

Recommendation #1

- In patients with GIM, the AGA recommends testing for H pylori followed by eradication over no testing and eradication
  - Strong recommendation, moderate quality of evidence



Sydney Protocol Biopsy

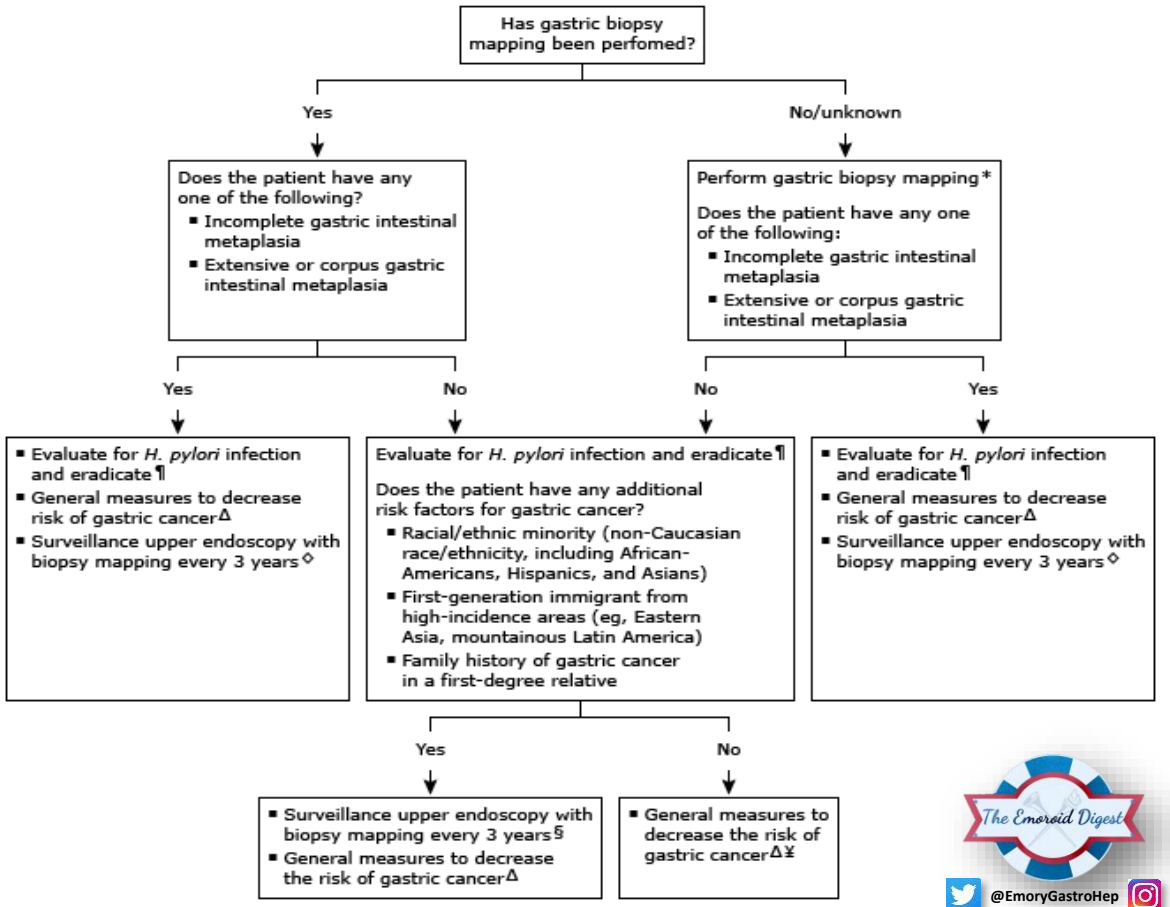
1. Distal antrum, lesser curvature, within 3 to 5 cm of pylorus
2. Distal antrum, greater curvature, within 3 to 5 cm of pylorus
3. Lesser curvature of the incisura angularis
4. Proximal corpus, lesser curvature
5. Proximal corpus, greater curvature

Recommendation #2

- In patients with GIM, the AGA suggests against routine use of endoscopic surveillance.
  - Conditional recommendation, very low quality of evidence
- **Patients with GIM specifically at higher risk of gastric cancer include those with:**
  - *Incomplete vs complete GIM – 3 fold increase*
  - *Extensive vs limited GIM – 2 fold increase*
  - *Family hx of gastric cancer*
  - *Racial/ethnic minorities*
  - *Immigrants from high incidence regions*
- Repeat upper endoscopy every 3–5 years with careful mucosal visualization and gastric biopsies of the antrum, body, and any concerning lesions could be considered in patients with incidental GIM
  - Only if shared decision-making favors surveillance.
  - Discuss with patients!

Recommendation #3

- In patients with GIM, the AGA suggests against routine short-interval repeat endoscopy for the purpose of risk stratification.
  - Conditional recommendation, very low quality of evidence
- Those with GIM and high-risk stigmata, concerns about completeness of baseline EGD, or who are at increased risk for gastric cancer (racial/ethnic minorities, immigrants from regions with high gastric cancer incidence, or with 1st degree relative with gastric cancer), consider repeat EGD in 1 year for risk stratification.
  - Based on shared decision-making



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