GI Pathology-
Are We Speaking the
Same Language?

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What is a malignant polyp?
Intramucosal Carcinoma Arising within an adenomatous polyp of the colon
Terminology

- Adenomatous polyp with severe atypia
- Adenomatous polyp with severe dysplasia
- Adenomatous polyp with high grade dysplasia
- Intramucosal carcinoma
- Adenocarcinoma in situ
- Superficial adenocarcinoma
WHO Classification

- Low-grade dysplasia
- High-grade dysplasia
- Intramucosal carcinoma
- Invasive adenocarcinoma
Low-Grade Dysplasia

- Mild and mild-moderate dysplasia
- ALL adenomatous polyps by definition have a low grade of dysplasia
  - Slight decrease in intracellular mucin
  - Mild nuclear enlargement with hyperchromasia
  - Increased mitotic rate
High-Grade Dysplasia

- Encompasses and replaces previous term in situ carcinoma
- Irregular branching, budding, and cribriform configurations
- Enlarged hyperchromatic nuclei or vesicular with prominent nucleoli
- Stratified nuclei extending to luminal border of cell
Intramucosal Adenocarcinoma

- Individual carcinoma cells infiltrate beyond the basement membrane into the lamina propria and/or muscularis mucosa only
Invasive Adenocarcinoma

- Carcinoma invades submucosa and beyond
- Desmoplastic stroma
- Designate grade
Reporting of Malignant Polyps

- Status of margins
- Grade
- Lymphovascular invasion
Positive Margin

Tumor cells in the actual free edge of the submucosal transection point that shows diathermy artifact
Margins Close

- Cancer within diathermy
- One hpf from diathermy
- <1mm from transected margin
Questions
Goblet cell metaplasia

Reactive carditis with intestinal metaplasia

Cardiofundic type mucosa with goblet cells
Does the Pathologist definition of Barrett’s concur with the Gastroenterologist?
What is Barrett’s?

A change in the ESOPHAGEAL epithelium (lining) of ANY LENGTH that can be recognized at upper endoscopy and is confirmed to have intestinal metaplasia by biopsy.

Histopathological Findings  
Endoscopic Appearance
Intestinal metaplasia of gastric cardia is NOT Barrett’s
Endoscopic Difficulties

- EGJ biopsy with intestinal metaplasia
  - Barrett’s or
  - Intestinal metaplasia of the most proximal portion of the stomach
- Hiatal hernia makes identification of muscular EGJ difficult
  - Frequently present in Barrett’s
  - No anatomic landmarks that clearly define region of LES
Hiatal Hernia and Anatomy
Gastric cardia is present from birth as a normal structure but cardiac-type mucosa can arise in the distal esophagus as a metaplastic phenomenon.
Carditis-GERD?

- 95-97% of carditis pts. with infection had non-cardiac gastric infection
- Carditis related to both H. pylori infection and GERD
- Small group of patients who have no H. pylori infection or GERD (~20%)
Cardiac Intestinal Metaplasia-Dysplasia Risk?

1/34 pts

Low Grade Dysplasia

1/28 pts

0/85 pts
# Adenocarcinoma

<table>
<thead>
<tr>
<th>Cancer</th>
<th>LOH</th>
<th>Overexpression</th>
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</thead>
<tbody>
<tr>
<td>Barrett’s</td>
<td>p53 common (17p13.1)</td>
<td>Her2-neu 11-70%</td>
</tr>
<tr>
<td>Gastric Non-cardia</td>
<td>p53 less common</td>
<td>Her2-neu 9-38%</td>
</tr>
<tr>
<td>Gastric Cardia</td>
<td>p53 common</td>
<td>MDM2 gene amplification Microsatellite instability</td>
</tr>
</tbody>
</table>
Specialized columnar epithelium with acid mucin-containing goblet cells
BE Histopathology

- *Fundic type
  - *Cardiac type (Junctional)

- Specialized columnar
  - Goblet cells
    - Acid mucins, sialo and sulfated (AB/PAS + at pH 2.5)
    - Normal gastric foveolar cells contain neutral mucin (AB/PAS-) - Not considered diagnostic for BE

*Not diagnostic
# CK7/CK20

<table>
<thead>
<tr>
<th>DIAGNOSIS</th>
<th>CK7</th>
<th>CK20</th>
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<tbody>
<tr>
<td>Barrett’s</td>
<td>Superficial and deep</td>
<td>Superficial</td>
</tr>
<tr>
<td>Gastric IM</td>
<td>Negative</td>
<td>Superficial</td>
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*Use of Hollande’s fixative may give a weak and patchy CK7 staining pattern*
Are We Speaking the Same Language?
A change in the ESOPHAGEAL epithelium (lining) of ANY LENGTH...

Recognized at upper endoscopy and confirmed to have intestinal metaplasia by biopsy
Biopsy from distal esophagus showing either fundic or cardiac type is NOT diagnostic of BE...
both types are commonly found in the absence of intestinal metaplasia
If the endoscopic impression is clearly BE, then the absence of intestinal metaplasia may be a sampling error...
I feel a very unusual sensation - if it is not indigestion, I think it must be gratitude.

Benjamin Disraeli (1804 - 1881)