

Gastrointestinal pathology esophagus and stomach lecture 2

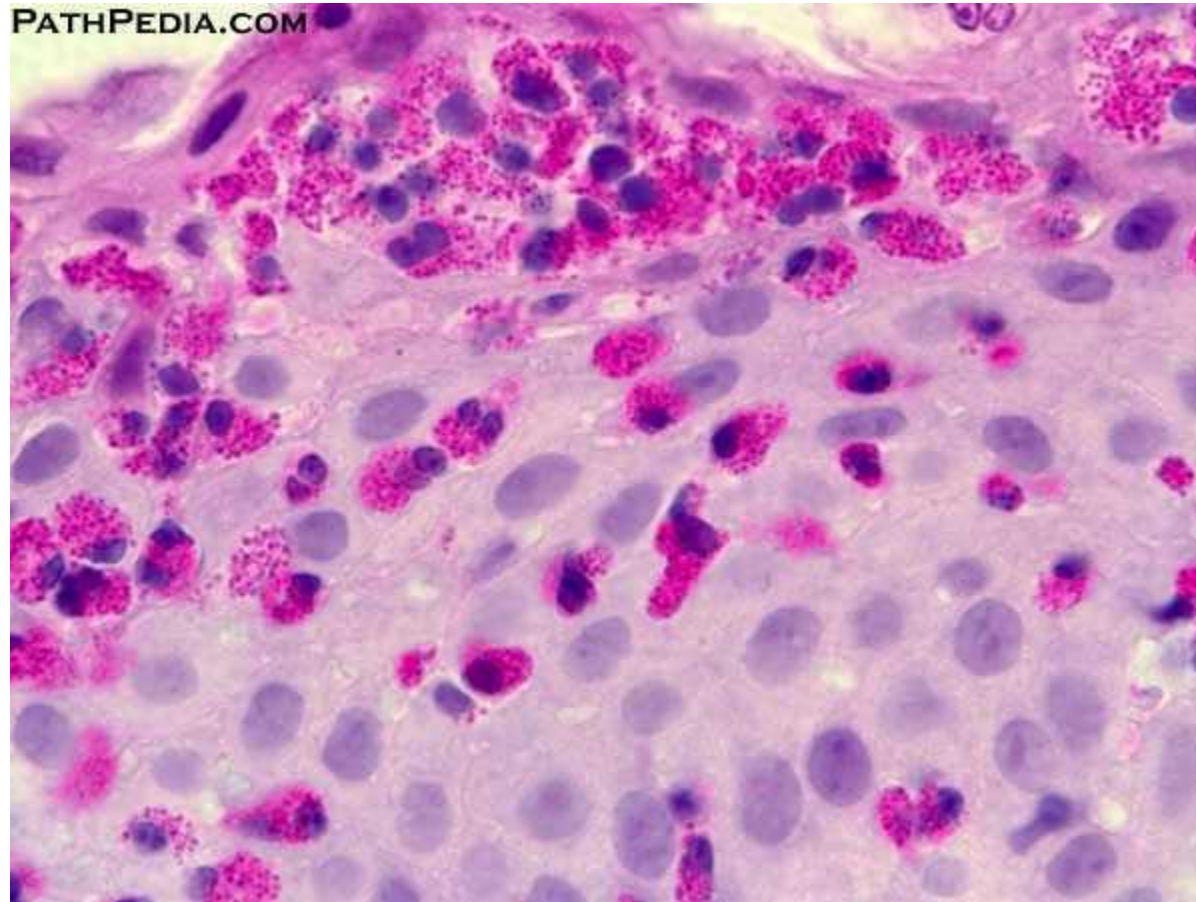
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FRCPath

Eosinophilic esophagitis

- Incidence of eosinophilic gastritis is increasing.
- Symptoms: food impaction and dysphagia .
- Histology: infiltration by numerous eosinophils.
- The majority of patients are atopic and have other allergic diseases like atopic dermatitis, allergic rhinitis, asthma
- Treatment: 1. dietary restriction of food allergens like milk and soy products. 2. steroids
- Note: these patients do not respond to proton pump inhibitors which are used in reflux esophagitis.

Eosinophilic esophagitis



Barret esophagus

- It is a complication of gastroesophageal reflux (GERD)
- = intestinal metaplasia of the esophageal squamous mucosa
- 10% of people with symptomatic GERD have Barrett esophagus
- Males are affected more than females
- Increased risk of esophageal malignancy (adenocarcinoma)
- Dysplasia can occur in Barrett (around 1% of cases).

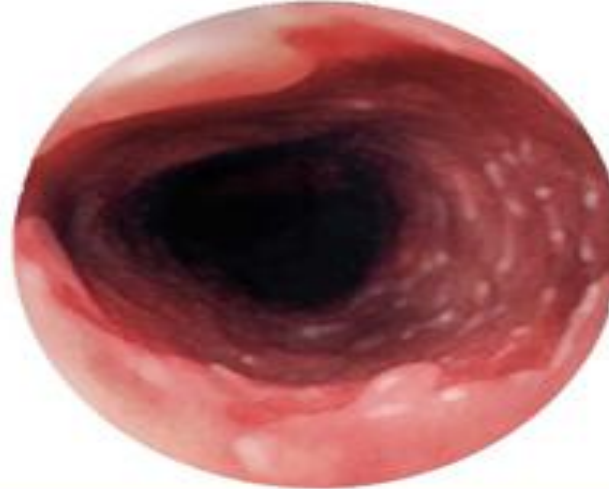
morphology

- Endoscopy: tongues or patches of red mucosa extending upwards from the gastroesophageal junction
- Note: normal esophageal mucosa appears pale in color.
- Histology: gastric or intestinal metaplasia (so the normal squamous epithelium is replaced by gastric or intestinal type mucosa)

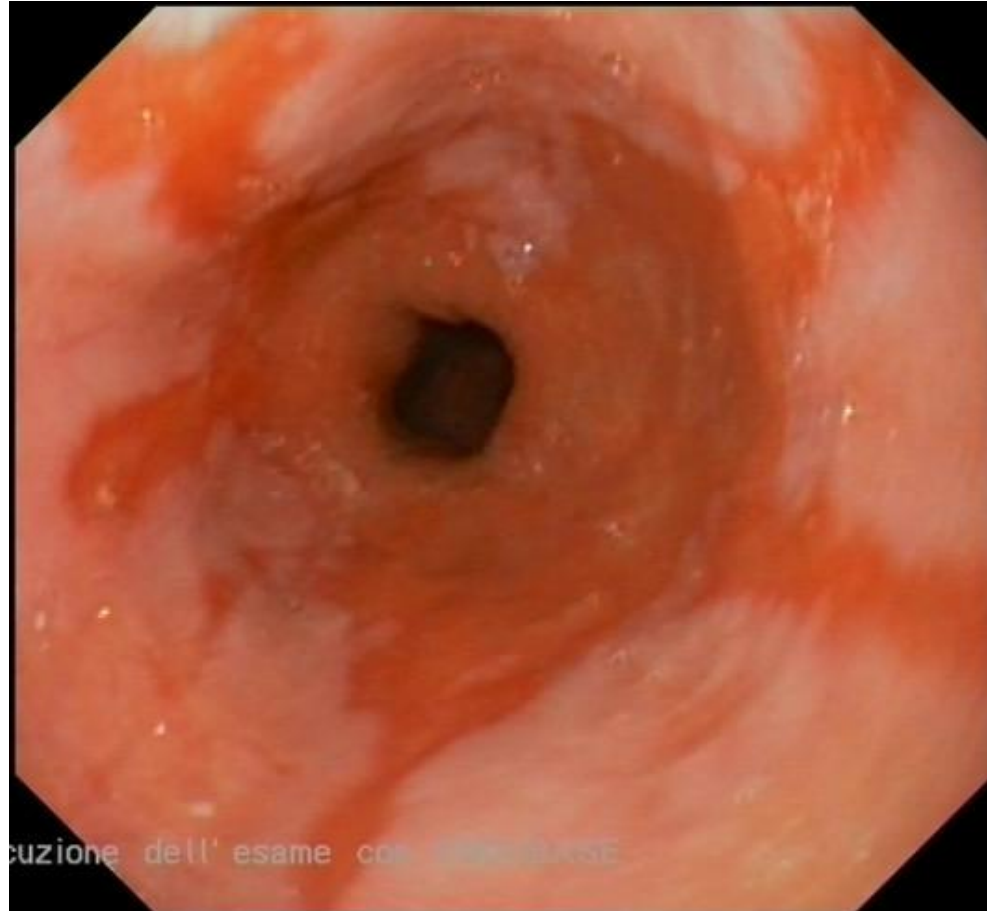
**Normal lower
esophagus**

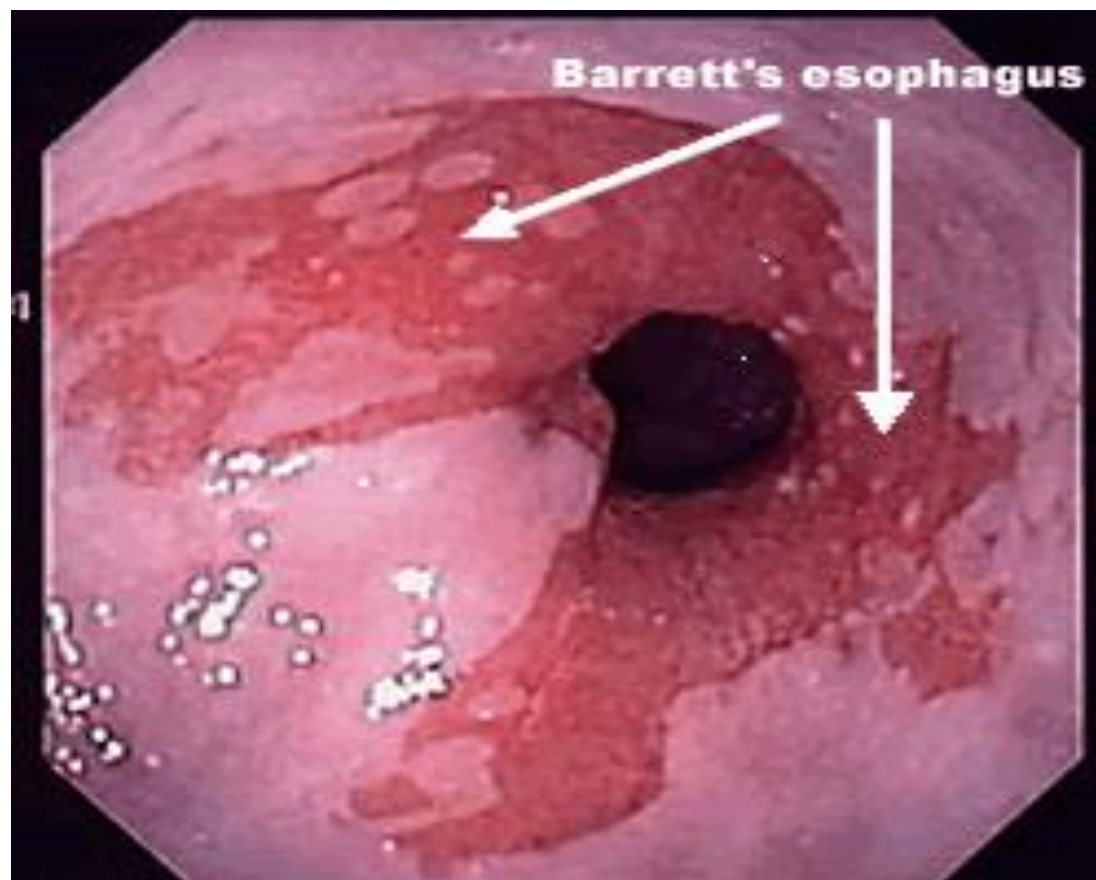


**Barrett's
esophagus**

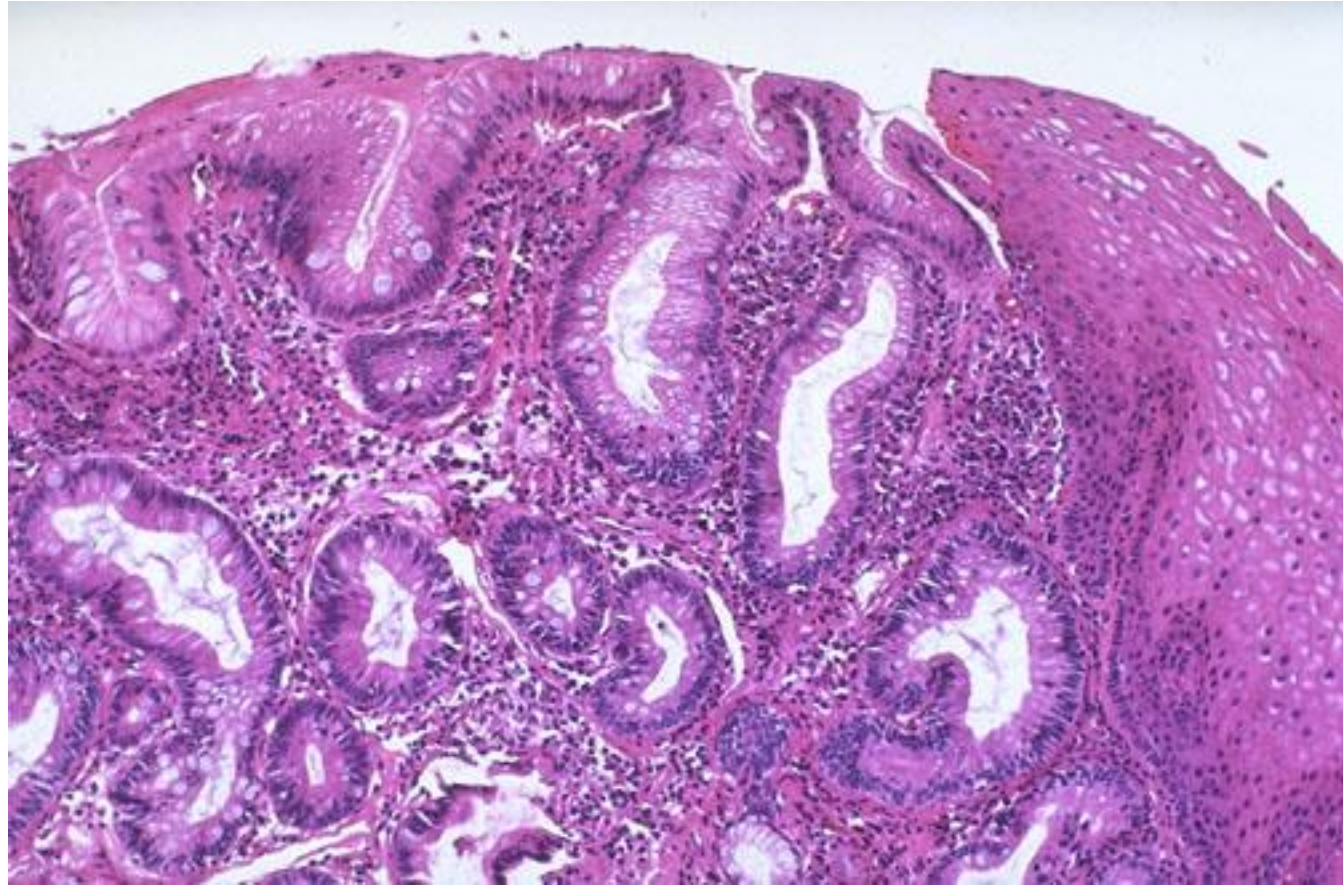


Barrett mucosa/ the red tongues

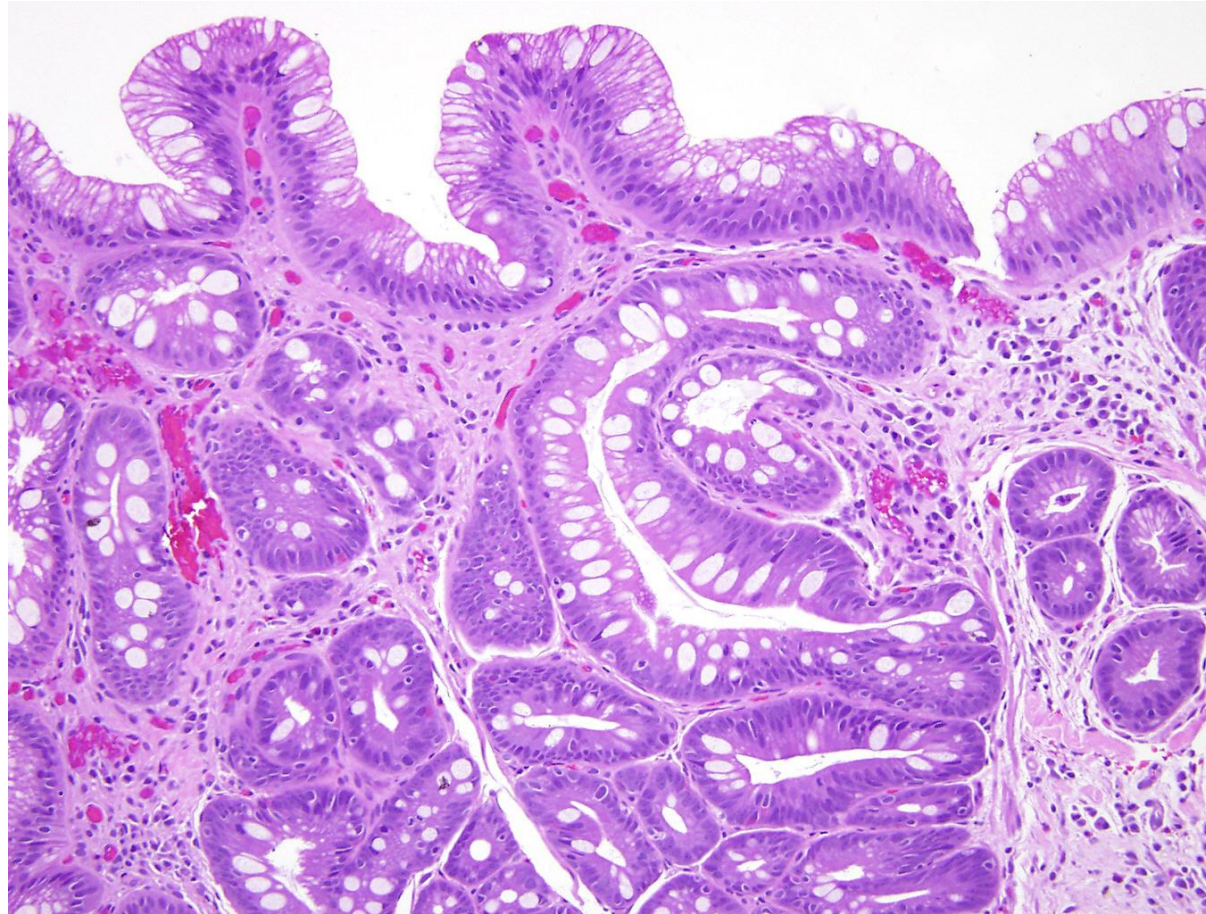




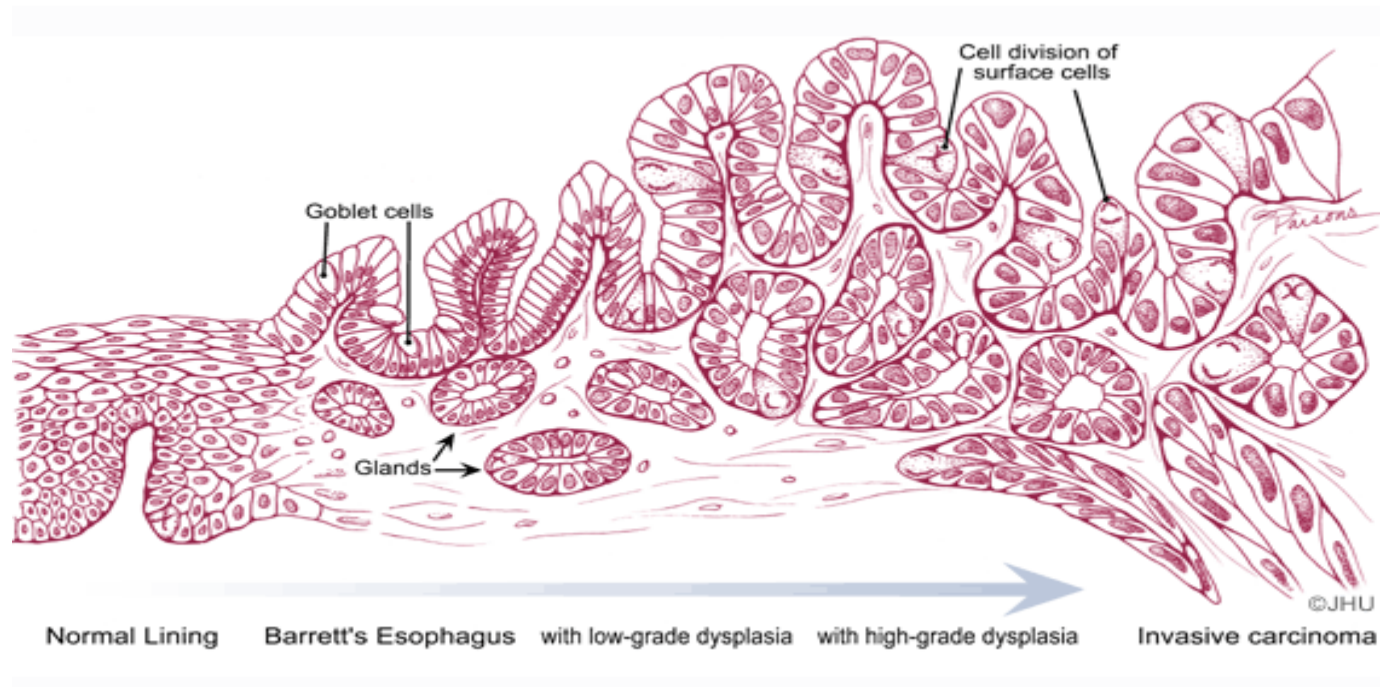
Barrett/ note the squamous epithelium on the right and the intestinal metaplasia on the left

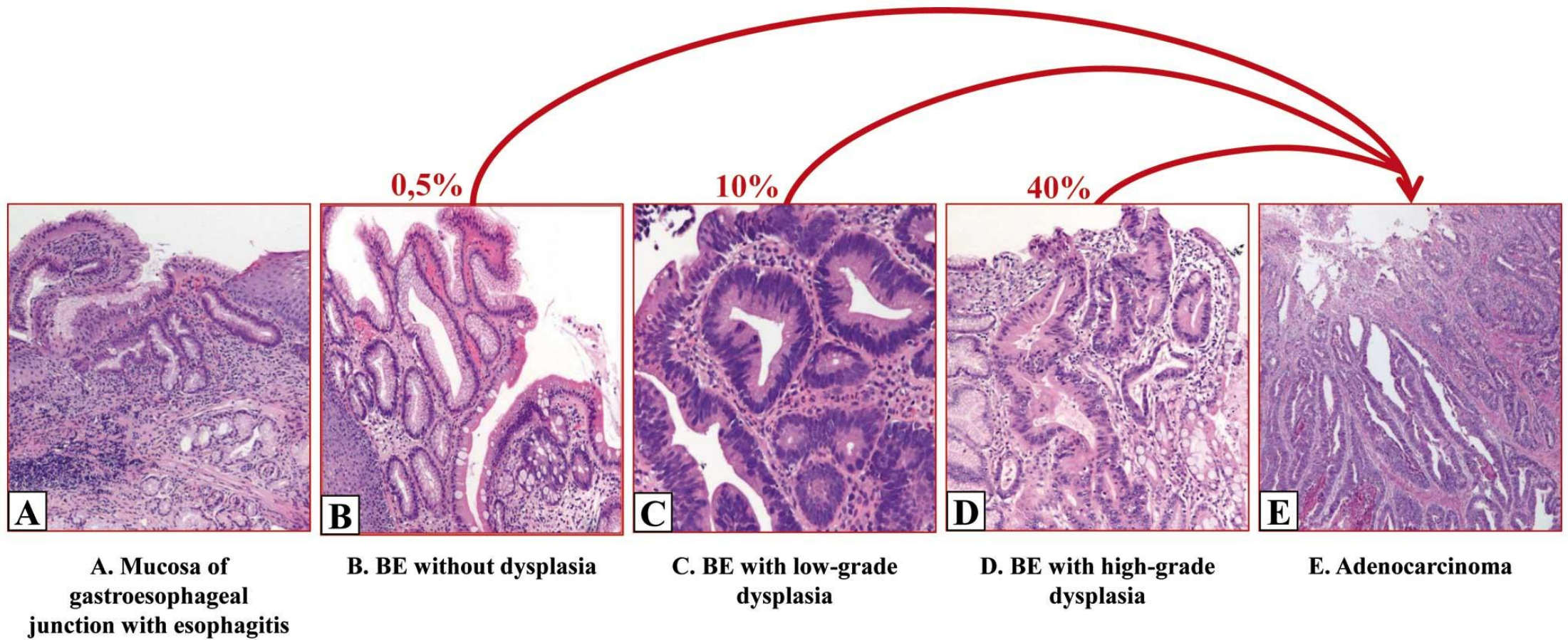


Barrett I note the goblet cells (mucus secreting cells with white vacuoles)



Complications of Barrett: dysplasia and carcinoma





Esophageal tumors

- The majority of esophageal malignancies are : adenocarcinomas and squamous cell carcinomas
- Squamous cell carcinoma (SCC) was the most common type, but with increased GERD and Barrett esophagus, adenocarcinoma has increased and it is now commoner than SCC at least in the West

Jordan cancer registry 2013 statistics

	number	% of overall cancers
males	13	0.5%
females	11	0.4%
overall	24	0.4%

adenocarcinoma

Risk factors:

- GERD and Barrett mucosa
 - Smoking
 - Obesity
 - Previous radiotherapy
-
- Risk is reduced with diets rich in fruit and veg

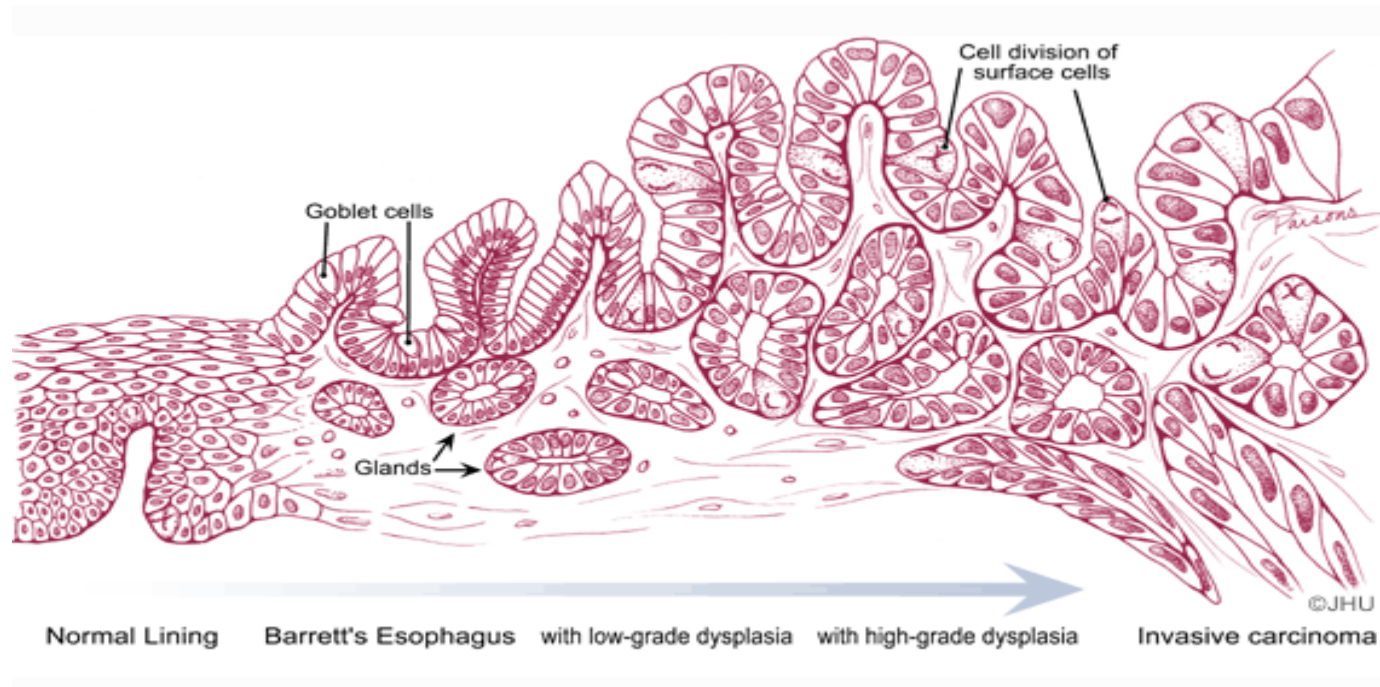
Adenocarcinoma/epidemiology

- Male to female ratio 7: 1
- Highest rates in USA, UK, Canada, Australia
- Lowest incidence in Korea, japan and Thailand
- Before 1970 adenocarcinoma represented less than 5% of esophageal tumors, but ow it accounts for at least 50% of esophageal tumors!!
Cause: GERD... due to dietary changes
- SO DON'T EAT UNHEALTHY FOOD.!!

pathogenesis

- Barrett epithelium acquires several genetic mutations over a long period of time to transform to adenocarcinoma
- A common mutation is the TP53 mutation
- Inflammation also acts as an enabler of malignant transformation

Complications of Barrett: dysplasia and carcinoma



morphology

- Adenocarcinoma affects the distal third of the esophagus (which is the site of Barrett)
- Gross appearance: exophytic masses or ulcers
- Microscopy: tumor forming glands and producing mucin

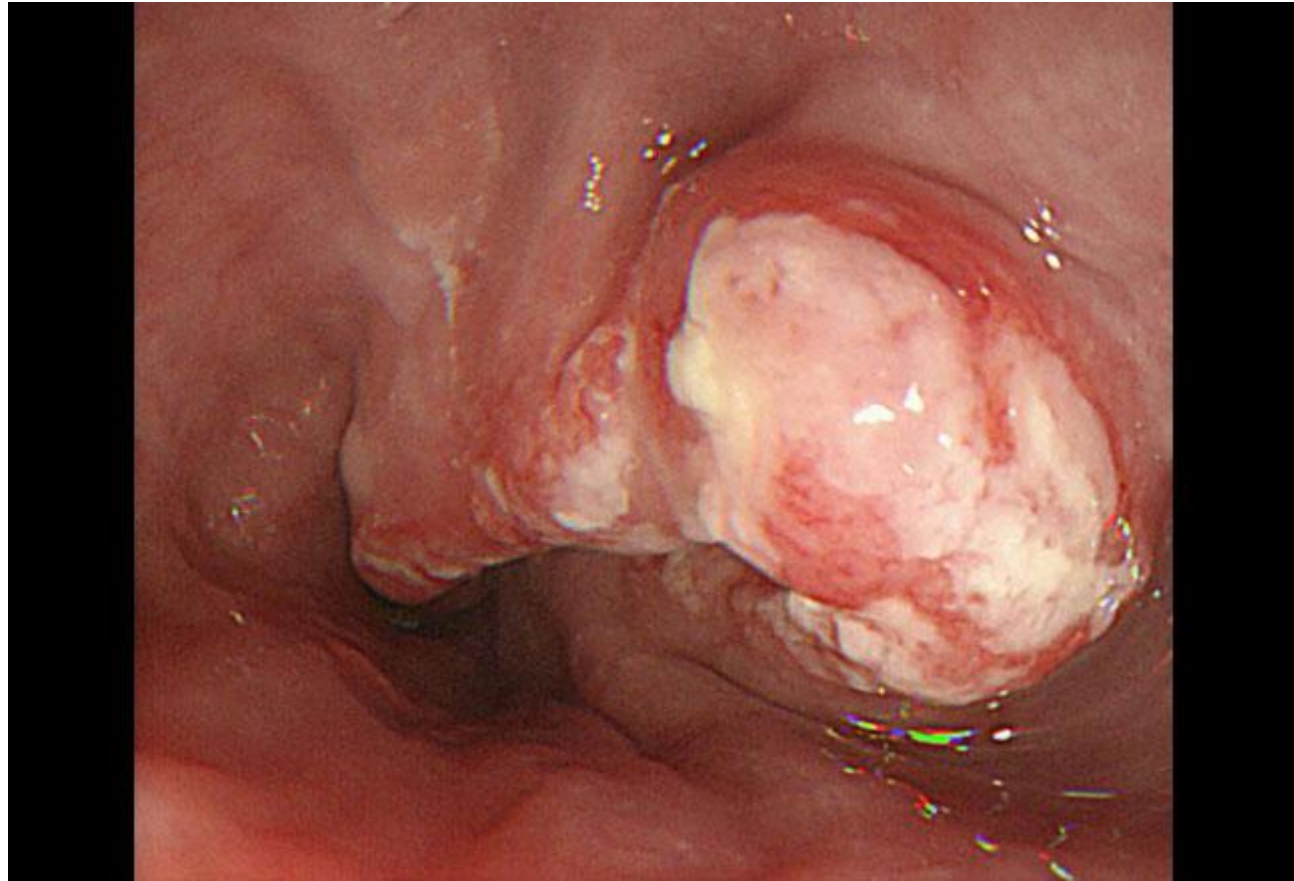
Clinical features

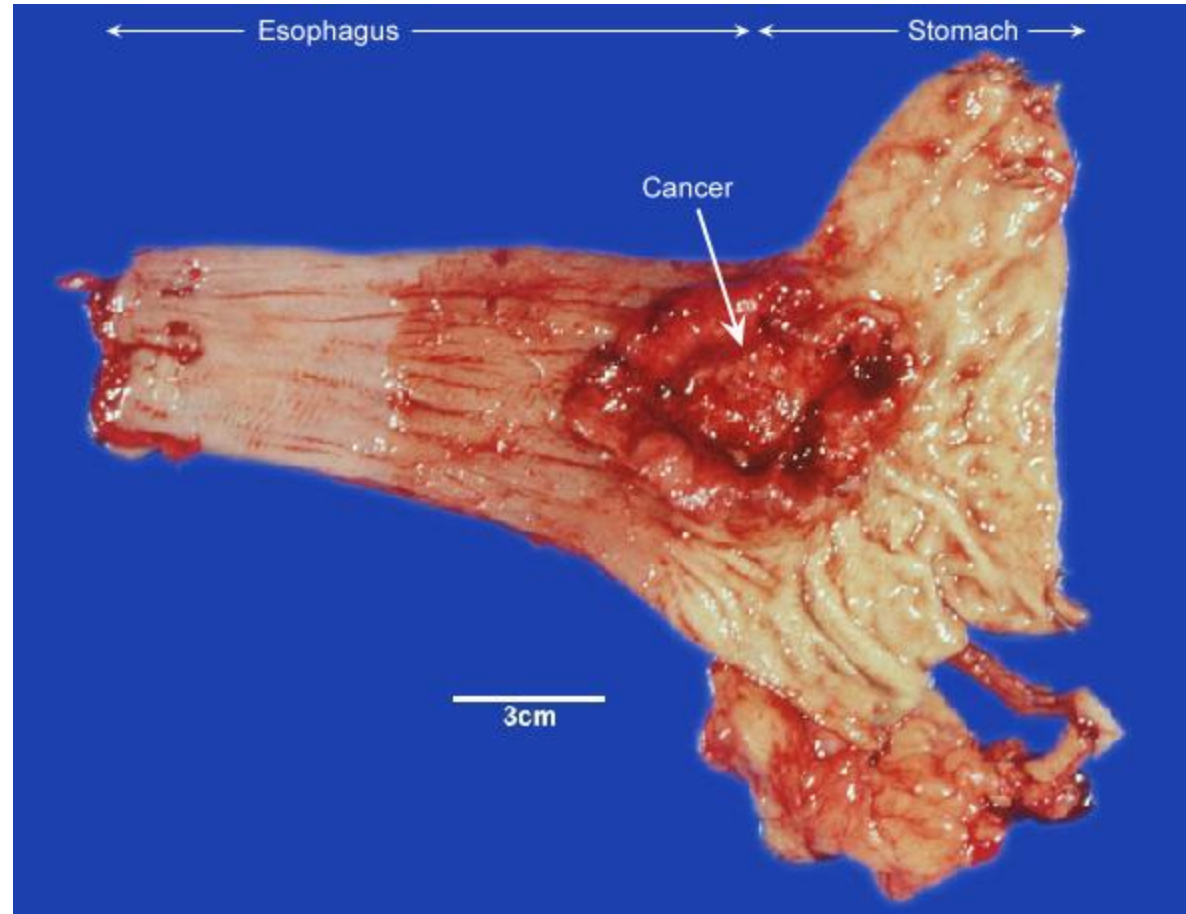
- Pain or difficulty in swallowing
- Weight loss
- Chest pain
- vomiting

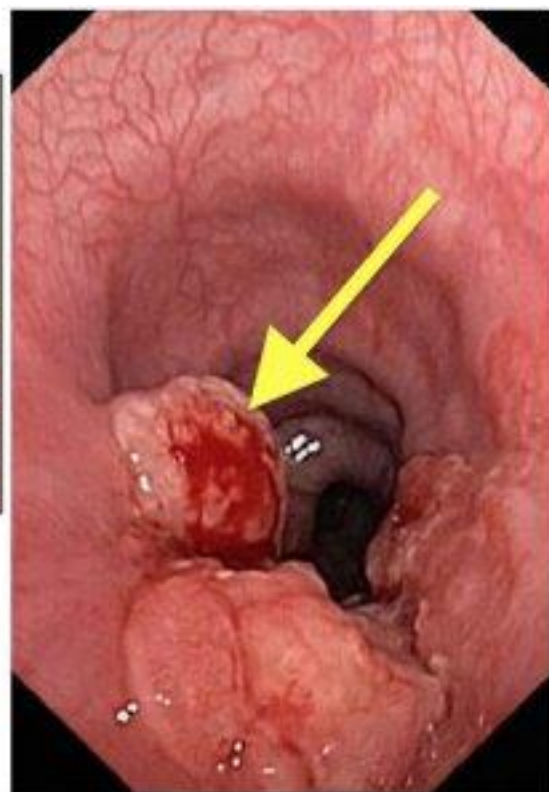
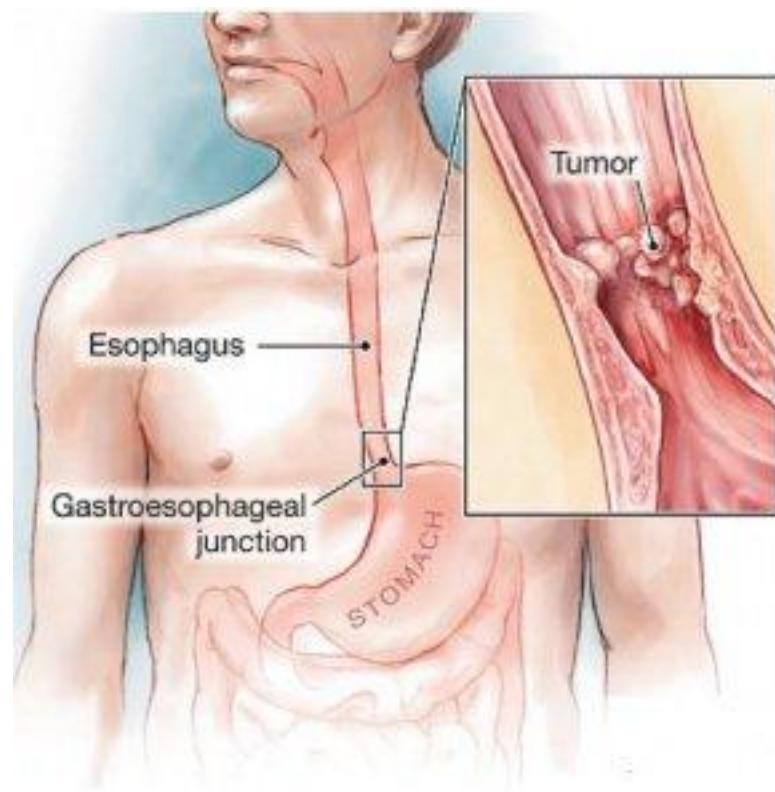
prognosis

- Depends on stage (extent of invasion and spread)
- 5 year survival 80% if the tumor is limited to the mucosa or submucosa
- 5 year survival is 25% if the disease is advanced.

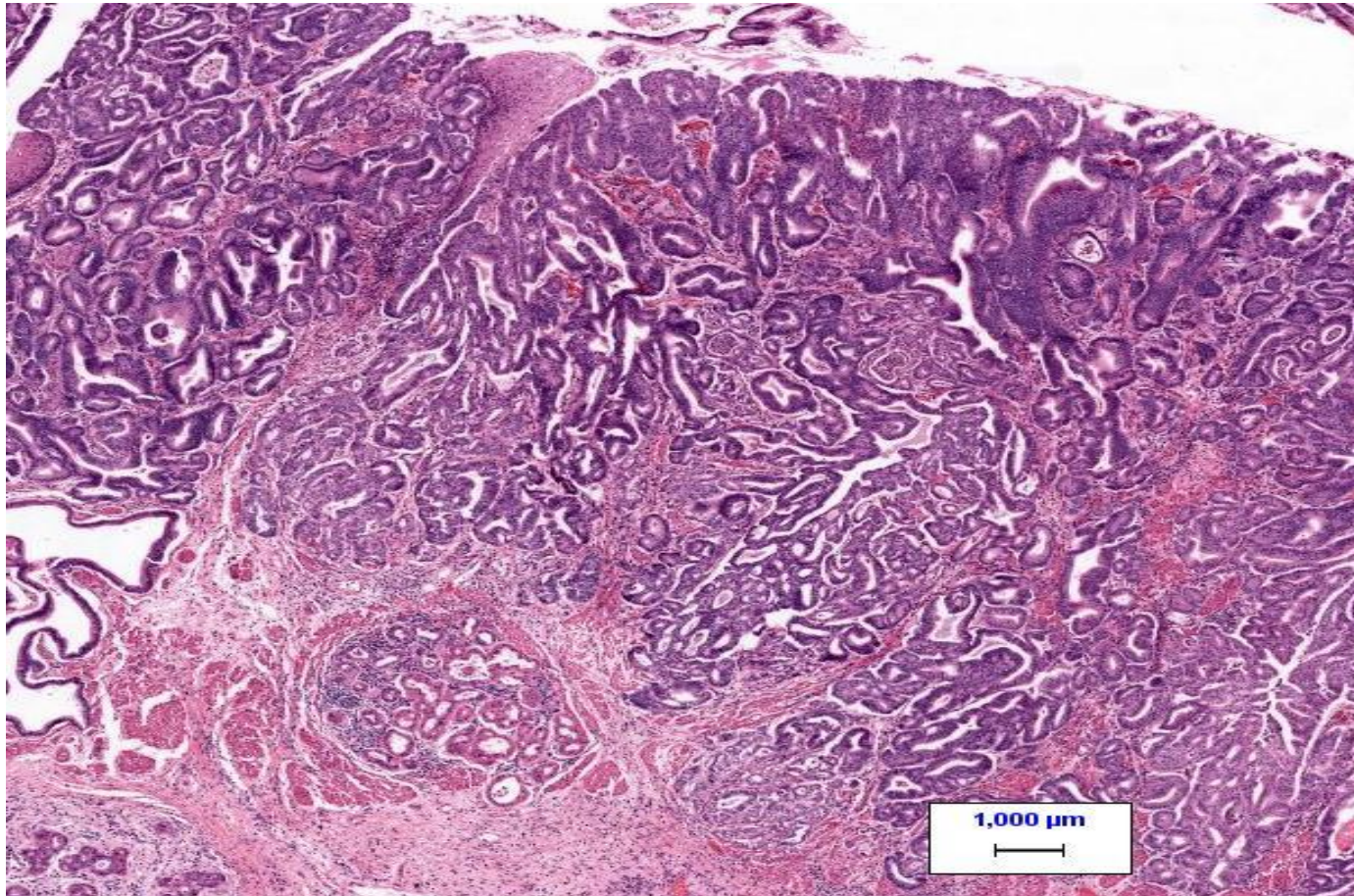
morphology







adenocarcinoma



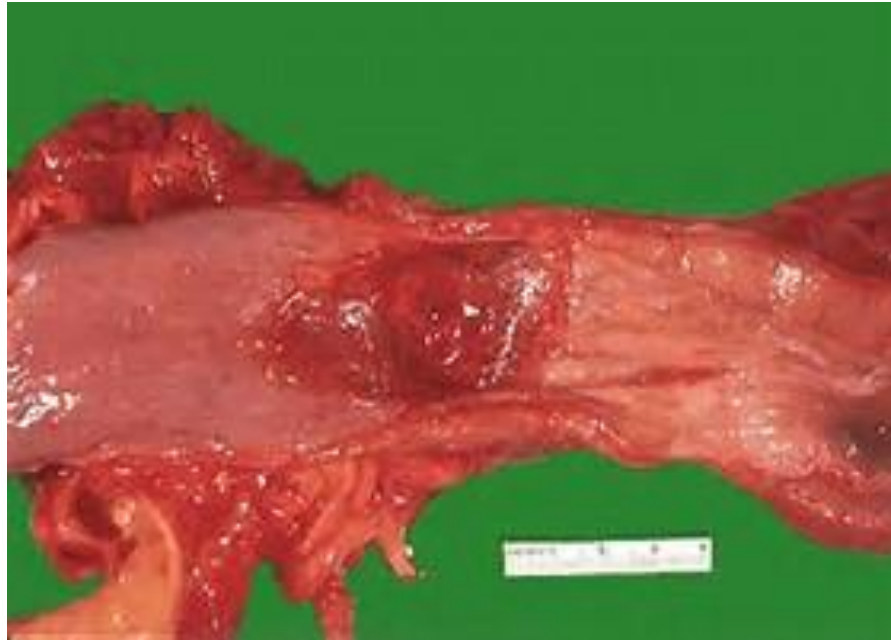
Squamous cell carcinoma

- Affects adults older than 45
- Male: female ratio is 4:1
- Risk factors: alcohol, smoking, poverty, caustic injury, achalasia, frequent consumption of very hot drinks, previous radiotherapy.
- Higher incidence in : Iran, china, Hong Kong

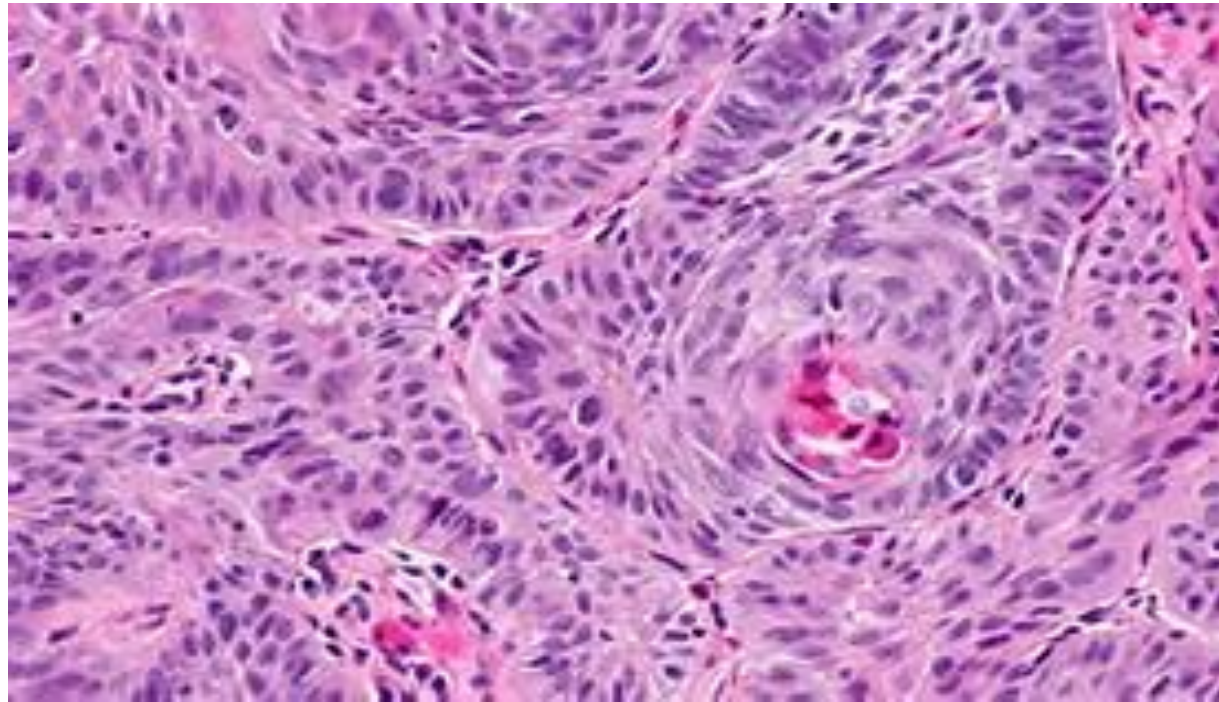
morphology

- Usually in the middle third of the esophagus
- Starts as squamous dysplasia
- SCC appears usually as a polypoid mass
- They spread to adjacent structures and to lymph nodes early in their development because of the rich lymphatic supply

Note the tumor location in the mid-esophagus



SCC



Clinical picture

- Dysphagia (difficulty in swallowing)
- Odynophagia (pain on swallowing)
- Weight loss

prognosis

- 5 year survival= 75% if tumor is superficial and didn't spread
- Much worse prognosis if advanced
- Overall 5 year survival is 9%, because the majority of cases are discovered at a late stage.

