ESOPHAGEAL CANCER

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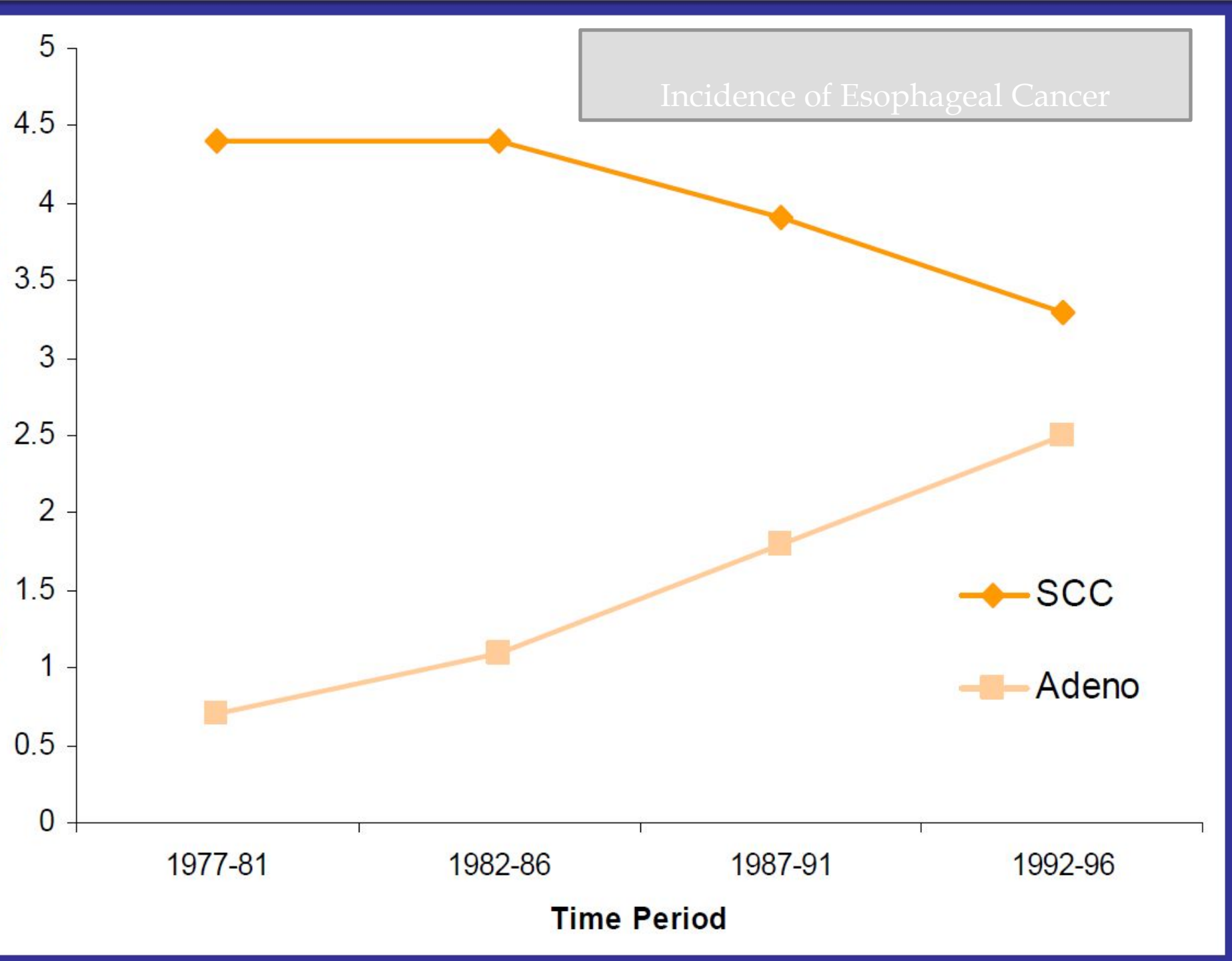
Esophageal Cancer

- Epidemiology and Risk Factors
- Diagnosis — signs, symptoms, and tests
- Work-up
- Treatment Overview
- Future Directions

Epidemiology

- Over 15,000 patients per year in the United States and 7th leading cause of cancer death in men.
- 8th most common cancer worldwide.
- Most cases are squamous cell, related to tobacco and alcohol exposure.
- In Western countries, adenocarcinoma increasing thought due to Barrett's esophagus.
- Approximately 50% present with advanced disease, which is incurable.


Incidence of Esophageal Cancer
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1977-81
1982-86
1987-91
1992-96
Time Period
SCC
Adeno

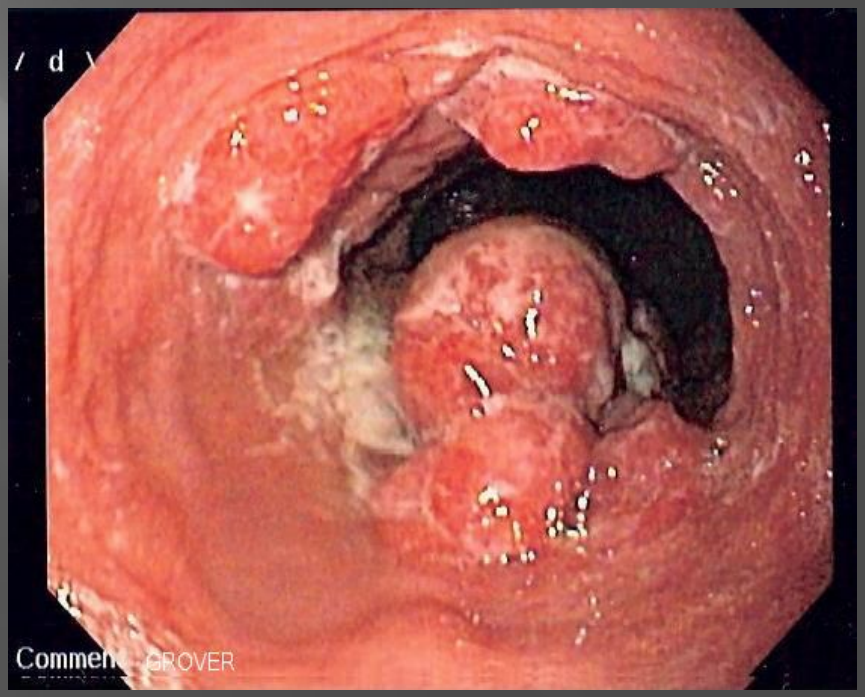
Adenocarcinoma: Barrett's Esophagus

- Likely related to chronic GERD, obesity.
- Pathway of malignant progression.
- 40 to 125 times relative risk of adenocarcinoma.
- Incidence of cancer is approximately 0.5% per year in patients with BE.
- No known effective screening tool.
- Usually Lower esophagus/GE junction.

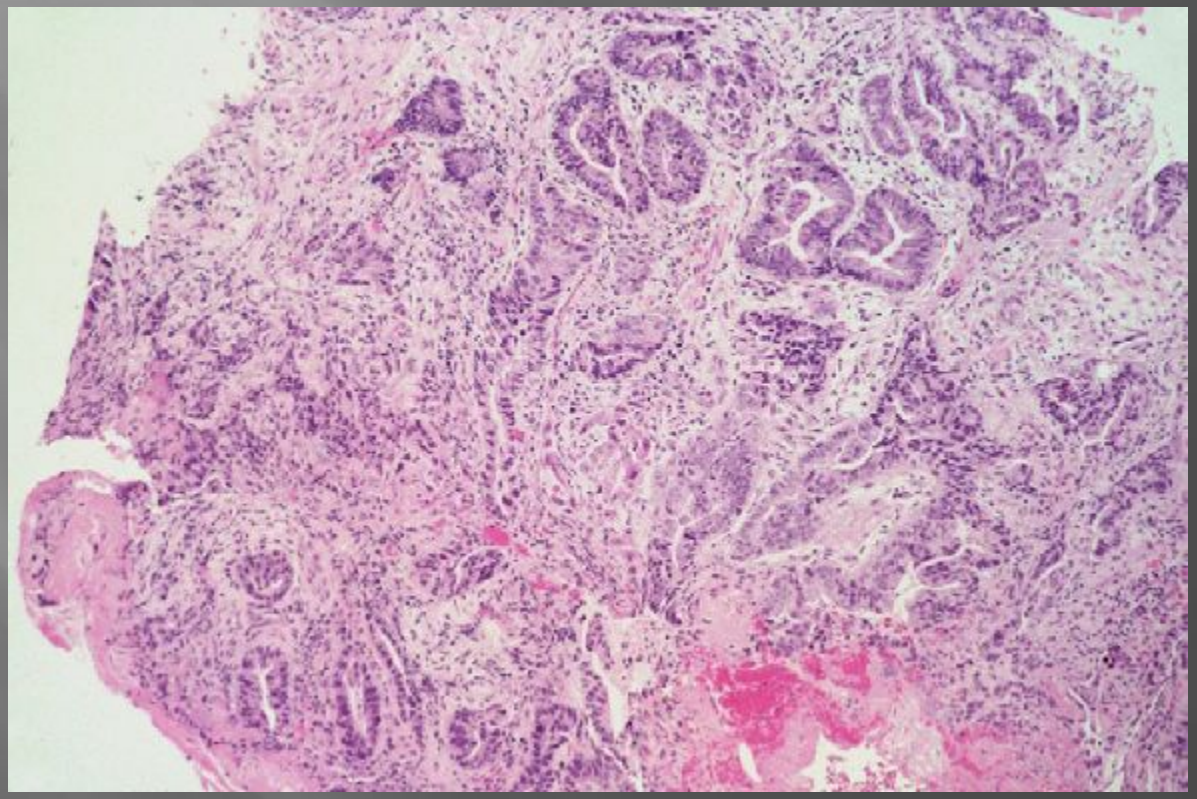
Barrett's Esophagus and Esophageal Cancer

ENDOSCOPIC IMAGE OF BARRETT'S ESOPHAGUS WITH PERMISSION TO PLACE IN PUBLIC DOMAIN TAKEN FROM PATIENT

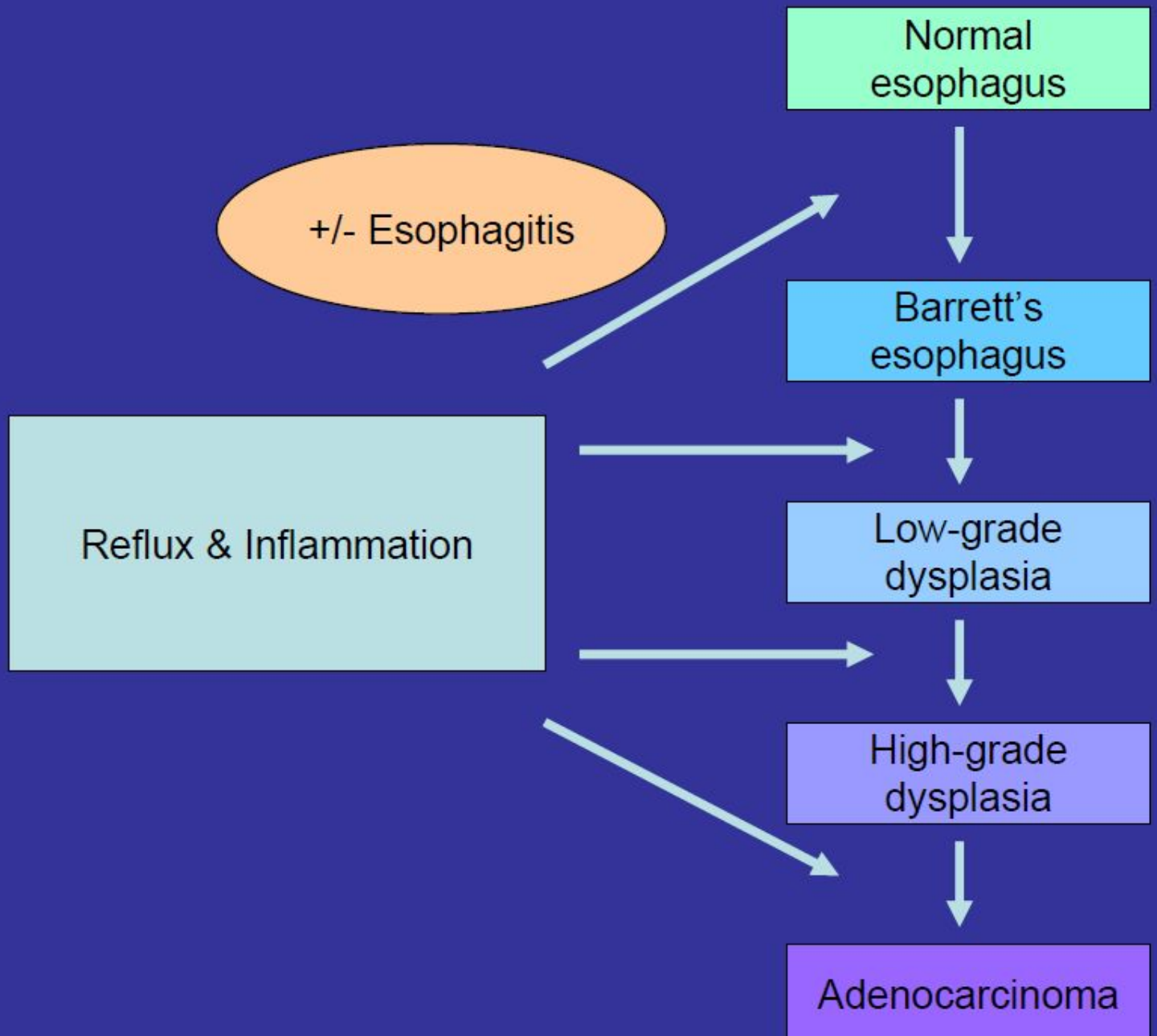
ENDOSCOPIC IMAGE OF PATIENT WITH ESOPHAGEAL ADENOCARCINOMA SEEN AT GASTRO-ESOPHAGEAL JUNCTION.



Adenocarcinoma



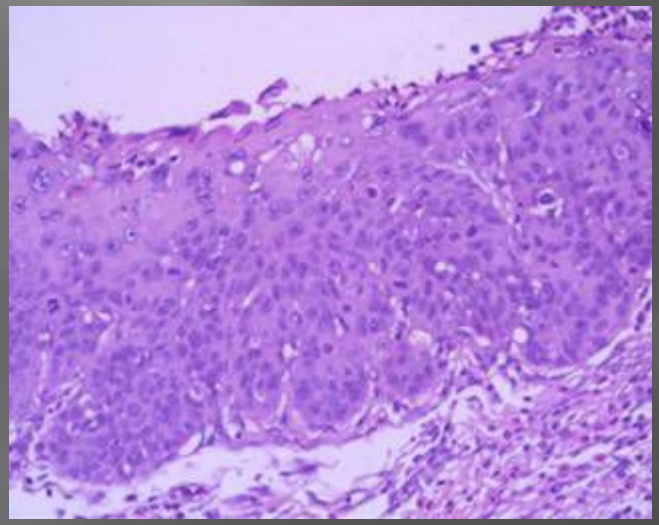
Malignant Progression



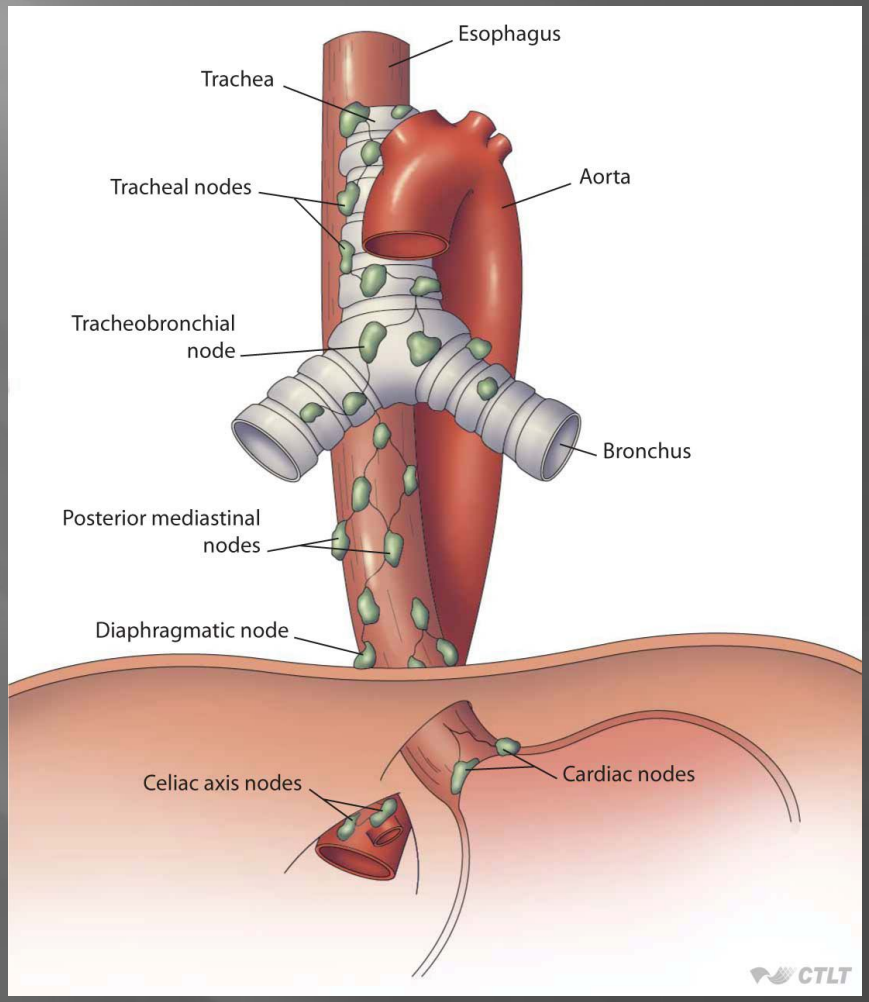
Squamous Cell Carcinoma

- Usually upper and middle esophagus.
- Tends to be a local problem—less metastases.
- Most common worldwide histology.
- Carcinogens present in tobacco and alcohol.

Squamous Cell Carcinoma



Anatomy


Esophagus
Trachea
Tracheal nodes
Aorta
Tracheobronchial node
Bronchus
Posterior mediastinal nodes
Diaphragmatic node
Celiac axis nodes
Cardiac nodes
CTLT

Clinical Presentation

- Signs: weight loss, palpable lymph nodes, usually non-specific.
- Symptoms: dysphagia, loss of appetite, pain with swallowing, fatigue, cough, retrosternal and abdominal pain.
- Lab Data: no tumor markers.

Endoscopy

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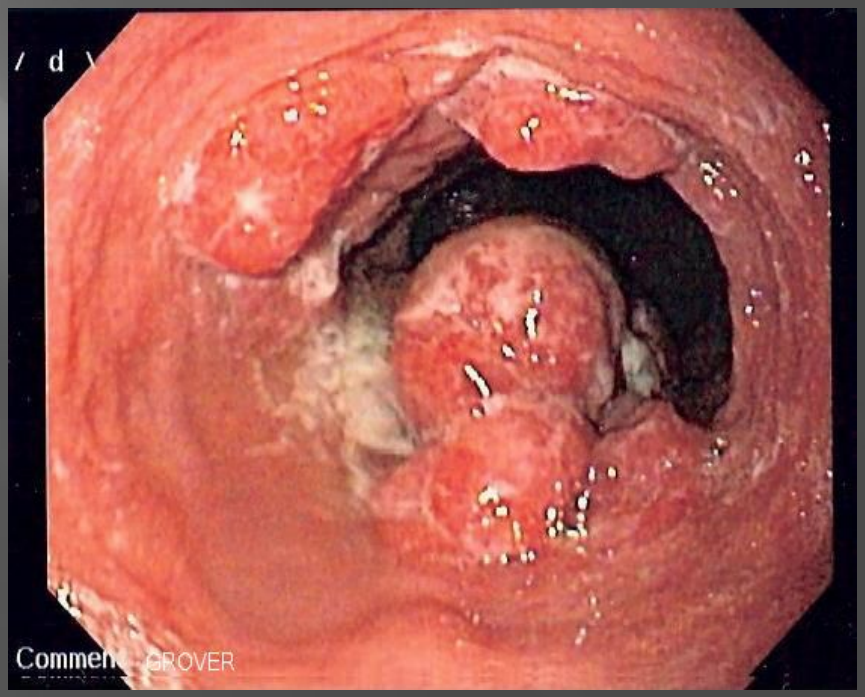

Tomographic Imaging (CT)

Positron Emission Tomography

Staging

Two basic groups

Locally Advanced (primary tumor and regional lymph nodes):

- potentially curable

Metastatic (distant spread)

-Incurable

-survival increased with chemotherapy

Locally Advanced Stage

- "Best" treatment approach is controversial and continually evolving.
- Concepts to consider:
- Local control (primary tumor)
- Distant disease ("micrometastases")

- Modes of treatment include surgery, radiation and chemotherapy in various sequences and combinations

Chemotherapy & Radiation Without Surgery

- 5y survival:
- **radiation therapy only - 0%**
- **Combination treatment – 26%**

- **Survival and Pathologic Response**

Pattern of Recurrence

- Almost always at a distant site.
- Approaches to this problem.
  - Adjuvant chemotherapy
  - Newer chemotherapy
  - Induction chemotherapy
  - Intensified chemotherapy
- Result: nothing is much better…

Treatment of Metastatic Disease

- Palliative
- No standard chemotherapy approach
- Combination of two drugs based on 5-FU, platins, taxanes.

  -Cisplatin/CPT-11, FOLFOX
- Median survival ~ 9 months
- Clinical trial

Palliation

- For swallowing trouble: stent most common
- For pain: narcotics, radiation
- For Cachexia: appetite stimulants, feeding tubes

Molecular Markers/Targets