

# **ESOPHAGEAL ADENOCARCINOMA**

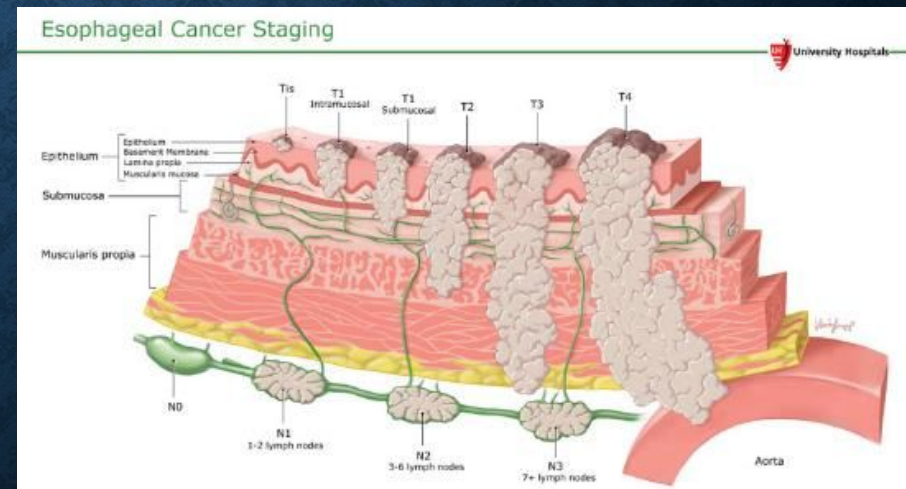
David Nehring

Radiology-Pathology Correlation

Presented on 6/14/18

# PATIENT C.F.

- C.F. is a 71 yo male with esophageal adenocarcinoma
- T2N0 staged by EGD/EUD and a PET/CT scan
  - Induction chemotherapy
- S/p esophagectomy on 1/22/18
- pT1bN0
  - Cluster of malignant cells is present deep in the submucosa and closely approaches but does not penetrate the muscularis propria
- Question of surgical site infection



<http://www.uhhospitals.org/health-and-wellness/health-library/a-c/-/media/uh/images/services/cancerstagingwknapp-1g.jpg>

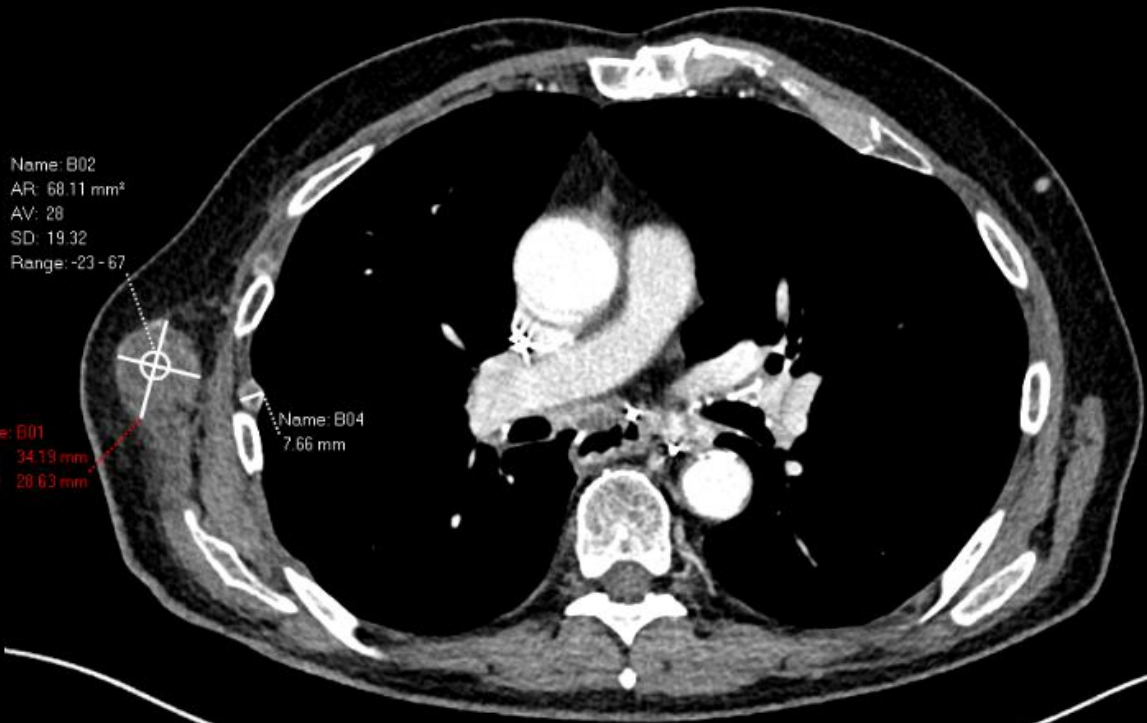
# CHEMOTHERAPY AND FOLLOW-UP

- T1bN0 with negative margins and 0/15 LN
- No role for chemotherapy, follow-up with surveillance imaging :
  - PET/CT or CT w contrast of C/A/P q6-12mo per NCCN<sup>1</sup>
- CXR showed bibasilar pneumonia; still concern for thoracotomy infection
  - CT C/A/P

Name: B02  
AR: 68.11 mm<sup>2</sup>  
AV: 28  
SD: 19.32  
Range: -23 - 67

Name: B01  
Dia1: 34.19 mm  
Dia2: 28.63 mm

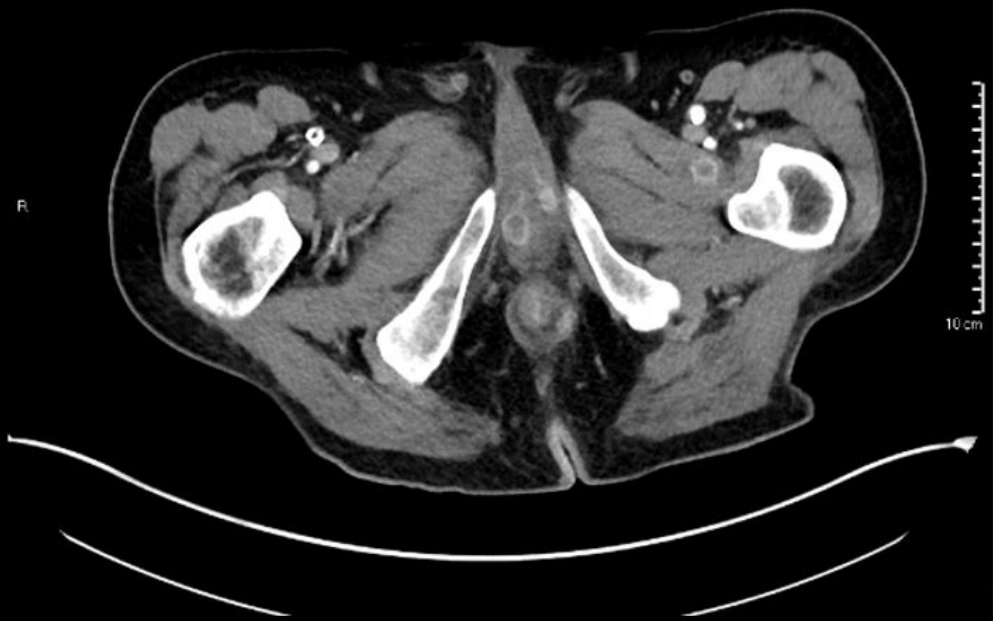
Name: B04  
7.66 mm



Patient Pos: FFS  
Study Desc: CT ABDOMEN PELVIS W CONTRAST  
Series Desc: ABDOMEN PELVIS  
None  
None 0.14  
4.1 - 79 y

[ 6/5/2018 9:25:55 AM ]

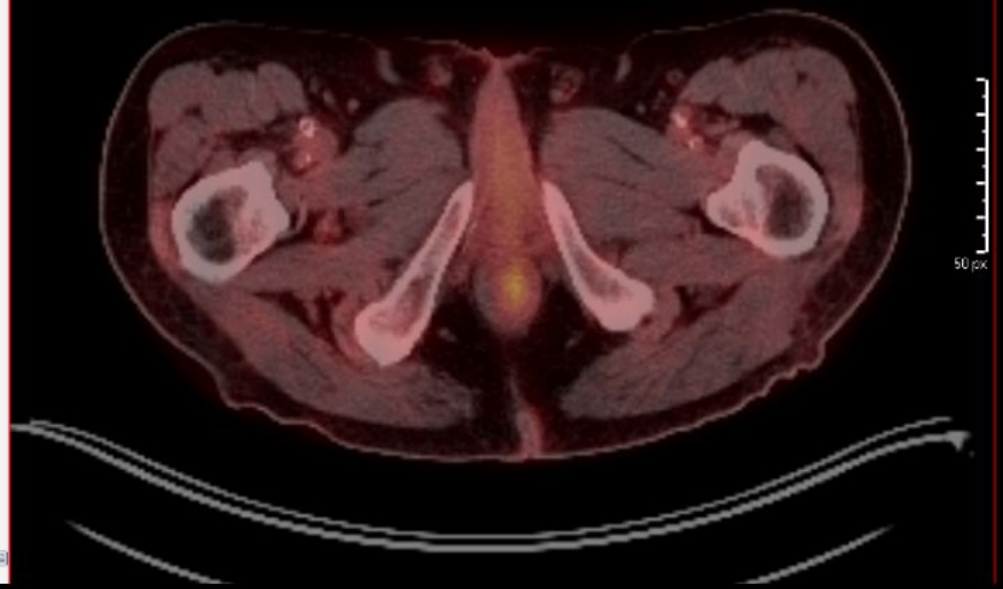
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SIEMENS SOMATOM Force  
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100kV, 153mAs  
SC 500.00 mm  
CKL  
1.02% Pixel  
SW 5.00 mm  
Viewer



Study Desc: PET ACCT ESOPHAGEAL CA INITIAL SKULL  
Series Desc: Range-CT WB 4.0 eFov-Tra-ALPHA Range  
4 803-17 y

12/7/2017 9:31:51 AM

12/7/2017  
SIEMENS  
9:10:16 AM  
tc  
323% Pixel



Patient Pos: FFS  
Study Desc: CT ABDOMEN PELVIS W CONTRAST  
Series Desc: ABDOMEN PELVIS  
Name:  
None 014  
4.1 - 75

[ 6/5/2018 ,9:25:54 AM ]

6/5/2018  
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SW 5.00 mm  
Viewer



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12/7/2017  
SIEMENS  
9:10:16 AM  
tc  
329% Pixel



Patient Pos: PFS  
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Series Desc: CT WB 4.0 eFoV  
12/7/2017

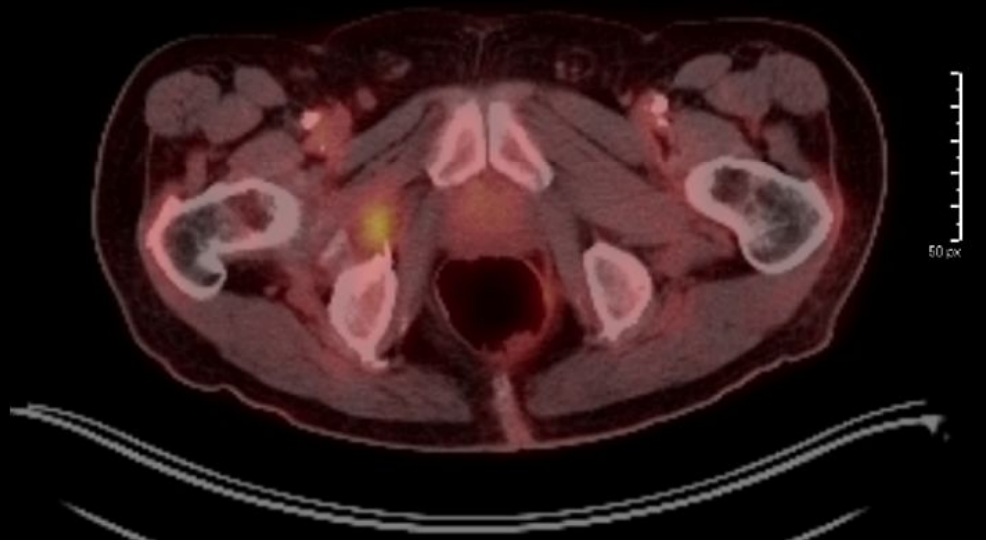
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12/7/2017  
SIEMENS Biograph40  
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120kV 149mA  
SC 670 10 mm  
12/7/2017  
SW 4.00mm  
12/7/2017

Study Desc: PET ACCT ESOPHAGEAL CA INITIAL SKULL  
Series Desc: Range-CT WB 4.0 eFoV-Tru-CALPHA Range  
12/7/2017

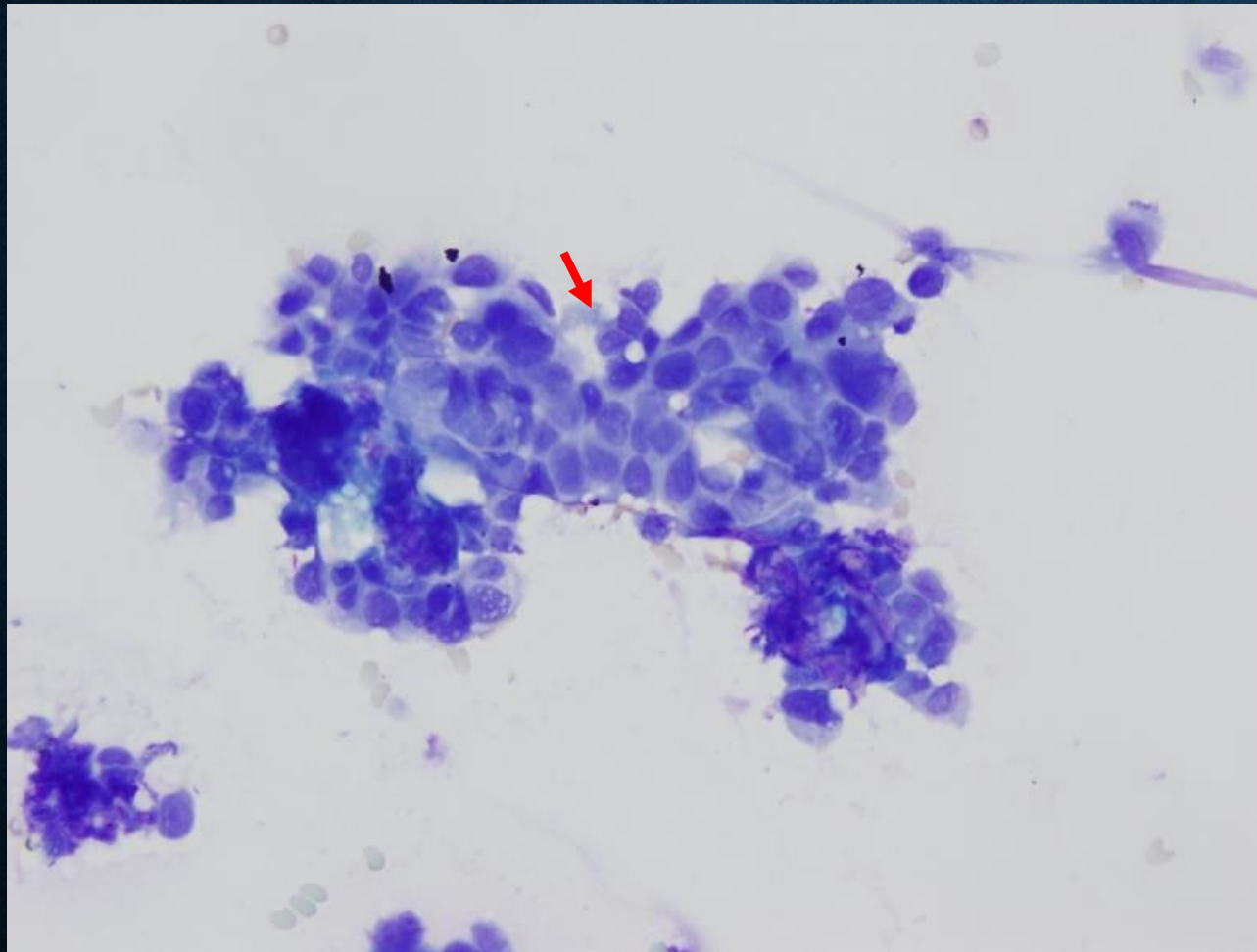
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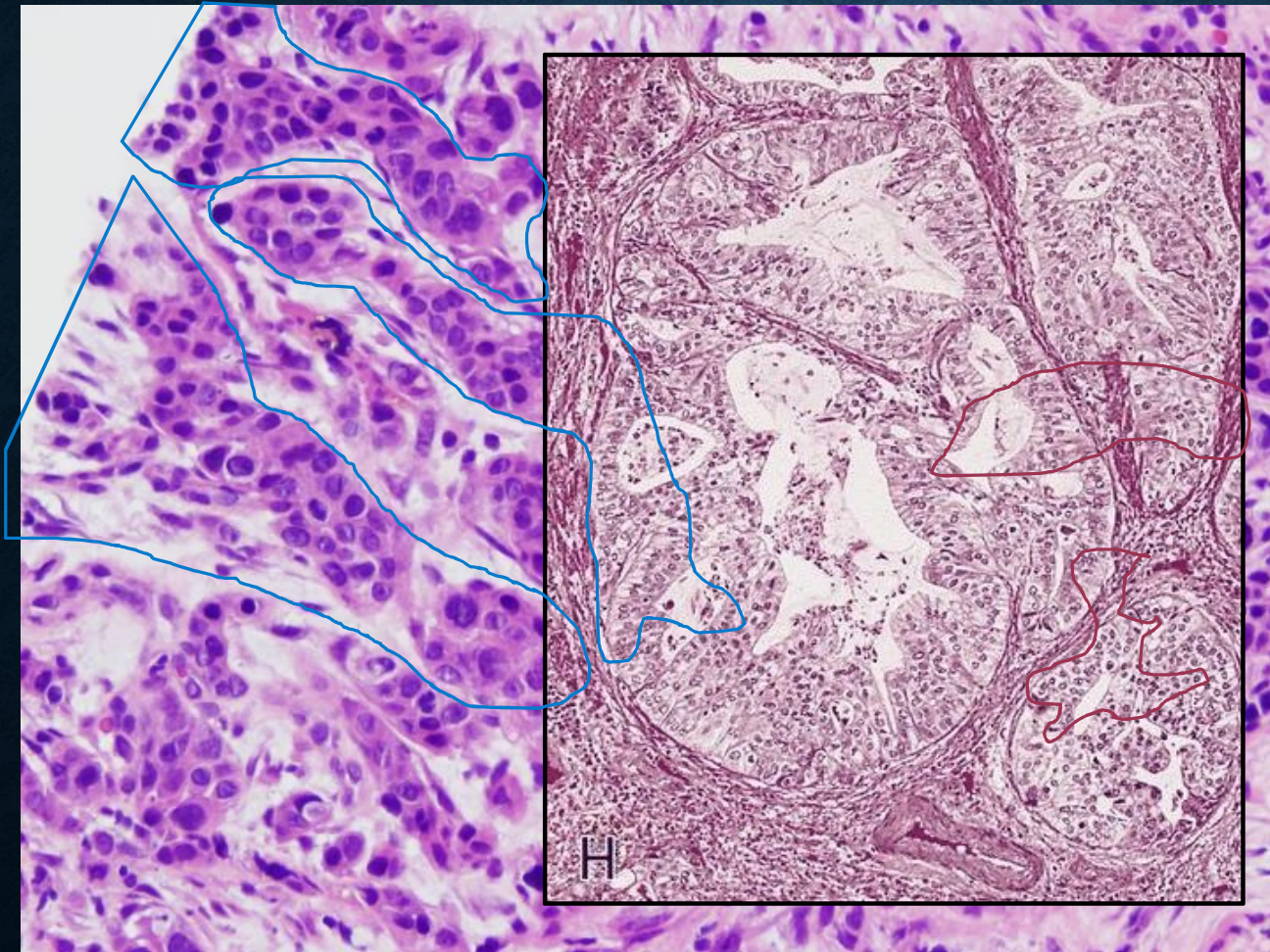


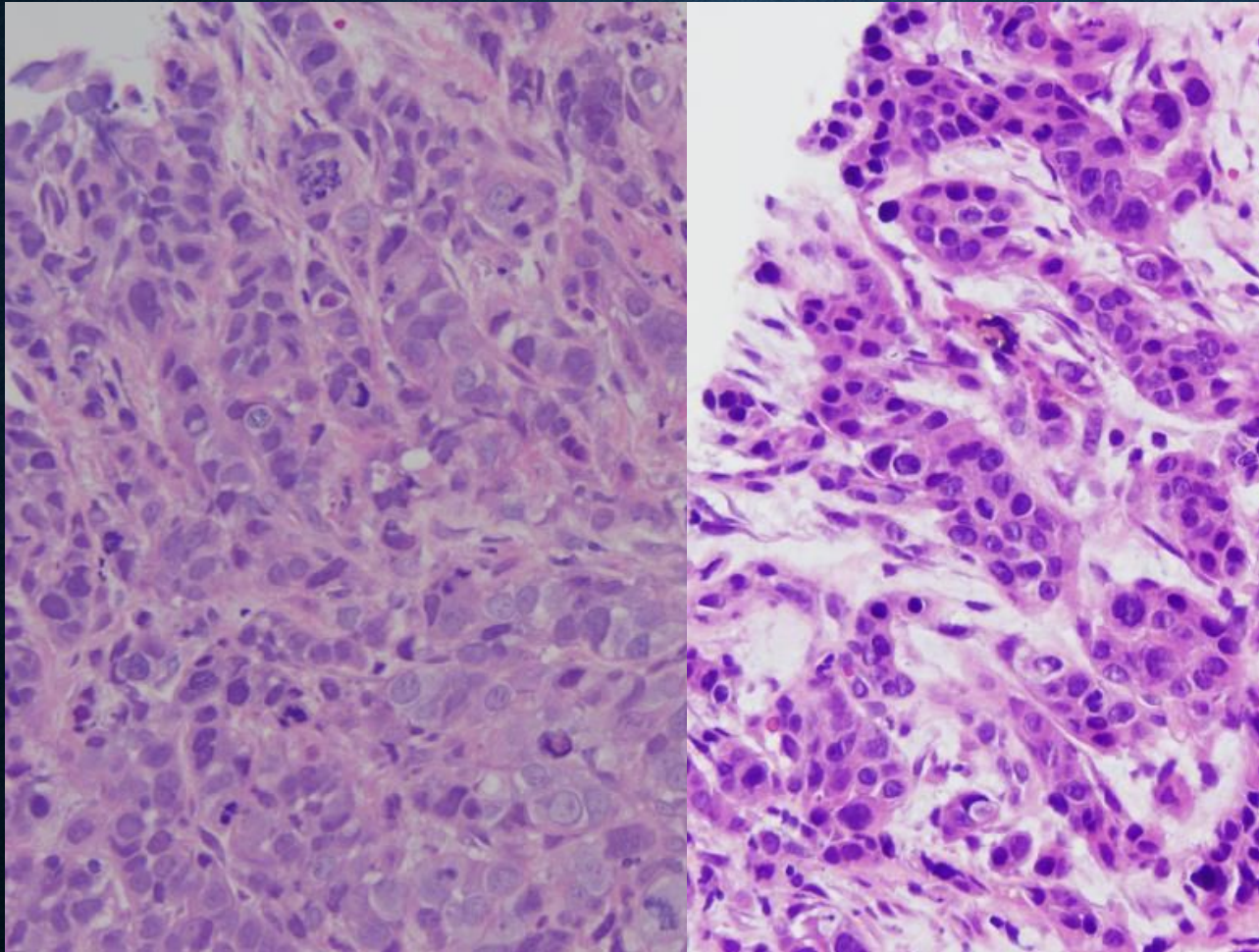
## Cytology

- Disordered epithelial cells (not supposed to be in the soft tissue)
- Assess for typical features of malignancy:
  - N:C ratio
  - Nucleoli size/shape
  - Chromatin granularity
  - Mitoses/atypical mitoses
  - Areas of necrosis on histology
- Hints at glandular formation
  - Vacuoles
- Core biopsy to further assess features and tissue for immunohistochemical staining

## Core Biopsy

- Cords of disordered epithelial cells
  - Areas of necrosis on histology
- No evidence of glandular cells
- Morphologically similar to prior making this poorly-differentiated metastatic adenocarcinoma
- Immunohistochemical staining for HER-2/neu Negative





## Surgical Pathology

- Sheets of disordered epithelial cells
- Other areas somewhat more well-defined; given location diagnosed as adeno

### ***FOCAL RESIDUAL ADENOCARCINOMA WITH MARKED TREATMENT EFFECT***

Histologic sections demonstrate a single, small focus of residual invasive adenocarcinoma in a background of fibrosis consistent with treatment response. This cluster of malignant cells is present deep in the submucosa and closely approaches but does not penetrate the muscularis propria.

Most of the lymph nodes examined in this case contain single scattered giant cells, however fibrosis suggestive of definitive treatment response is lacking.

# **METASTATIC ESOPHAGEAL ADENOCARCINOMA**

- Stage IV disease
- Palliative chemoradiation

## Trastuzumab for HER-2 positive gastric and GE junction adenocarcinomas [ToGA trial]

- Median overall survival was 13.8mo with addition of trastuzumab vs 11.1mo with standard platin-based chemo regimen

Bang YJ, et al.; ToGA Trial Investigators. Trastuzumab in combination with chemotherapy versus chemotherapy alone for treatment of HER2-positive advanced gastric or gastro-oesophageal junction cancer (ToGA): a phase 3, open-label, randomized controlled trial. *Lancet*. 2010 Aug 28;376(9742):687-97.

## RadioGraphics

- Approximately 85% of patients are men, and the peak incidence is in the 7th decade
- Evolution of cancer following dysplastic changes secondary to Barrett's Esophagus

Imaging key point: Adenocarcinoma of the esophagus may be indistinguishable from SCC at imaging on the basis of morphologic findings, but the vast majority of adenocarcinomas involve the lower third of the esophagus, and these tumors are much more likely to invade the stomach.

Pathology key point: Because esophageal adenocarcinomas arise from preexisting Barrett mucosa, these tumors are usually located in the lower third of the thoracic esophagus. Unlike SCCs, esophageal adenocarcinomas have a marked tendency to invade the gastric cardia and fundus by direct extension across the gastroesophageal junction