Lymphomas
Diagnosis and workup

- 2 of the most important initial questions
  - What do you have?
  - Where do you have it?

- Other important question
  - What are you going to do about it?
Lymphomas
Diagnosis

- Biopsy of suspicious lymph nodes or masses (extranodal)
- Routine histology
- Immunophenotyping
  - CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD56, etc
Large Cells

Small Cells

Architecture

Follicular

Diffuse
Types of Biopsies

- Fine needle aspirate (FNA)
- Core Needle Biopsy
- Surgical: Incisional or excisional
Immunophenotyping

- Tells what kind of cell it is
- B cell vs T cell (CD whatever)
- Patterns of markers lead to diagnosis

CD3  CD8  CD30

CD20  CD10  CD5

Immunohistochemistry

“Stain”
- Enzyme-color
- Fluorescence
- Pattern can lead to the diagnosis
DIFFUSE LARGE B CELL LYMPHOMA:
- IMMUNOHISTOCHEMICAL STUDIES SHOW THAT THE B CELLS ARE POSITIVE FOR CD20 AND HIGH PROLIFERATIVE RATE

Large

CD20

Ki-67

FOLLICULAR LYMPHOMA: IMMUNOHISTOCHEMICAL STUDIES DEMONSTRATES NEOPLASTIC CELLS TO BE POSITIVE FOR CD20, CD10, BCL2. THE PROLIFERATIVE INDEX WITH Ki-67 IS 10%.
MANTLE CELL LYMPHOMA

IMMUNOHISTOCHEMICAL STUDIES SHOW POSITIVE IMMUNOLABELING FOR CD20, CYCLIN-D1, CD5. WHILE NEGATIVE FOR CD3, CD10.

CLASSICAL HODGKIN'S LYMPHOMA, NODULAR SCLEROSIS TYPE.
- IMMUNOHISTOCHEMICAL STAINS FOR CD15 AND CD30 LABEL SCATTERED REED-STERNBERG CELLS, CD20 IS NEGATIVE
**Lymphomas**
Diagnosis and workup

- 2 of the most important initial questions
  - What do you have?
  - Where do you have it?

- Staging
  - CT scan
  - PET scan
  - Bone Marrow Biopsy

**CT Scan**

Oral contrast
IV contrast
CT Scan

CT Scan: Axillary (under the arms)
Lymph Nodes

Size (enlarged lymph nodes) and masses
CT Scan, Before and After

Enlarged lymph nodes under right arms

Complete remission after chemotherapy.

PET (CT) Scan

Oral contrast
IV contrast-Sometimes
PET (CT) Scan

Metabolic Activity
PET Shows areas with increased uptake of FDG: suggestive but not diagnostic of some cancers including lymphoma

PET (CT) Scan, Fusion Images

Size (enlarged lymph nodes) and masses and increased metabolic activity
PET (CT) Scan, Fusion Images

Nodule in the lung seen on CT scan. PET fusion images show that it is metabolically active and therefore more likely to be cancer-this requires a biopsy

PET (CT) Scan, Fusion Images
Before and After

T-cell lymphoma with PET avid lymph nodes under arms and in chest

Complete remission after chemotherapy. PET activity in bones from Neulasta.
Lymphomas
Diagnosis and workup

- What do you have?
  - Biopsy
  - Histology
  - Immunohistochemistry

- Where do you have it?
  - Staging
  - Scans, CT and PET
  - Bone marrow