

# Clinical Updates

# Leukemia vs Lymphoma

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## **Objective:**

At the conclusion of this presentation, participants should be able to:

- 1) Have a basic understanding of the differences between Leukemia and Lymphoma.

## **For CME Credit:**

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# LEUKEMIA VS LYMPHOMA

Clinical Updates Podcast: Classification differences

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05/23/2024

# Basic Understanding

## LEUKEMIA

Blood and marrow

Not emergent - SLOW

### Chronic

### Acute

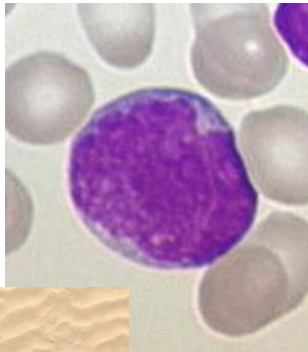
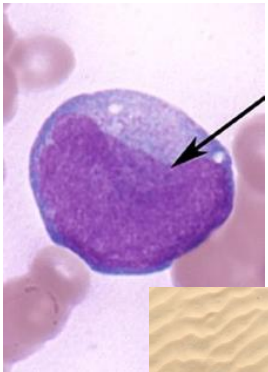
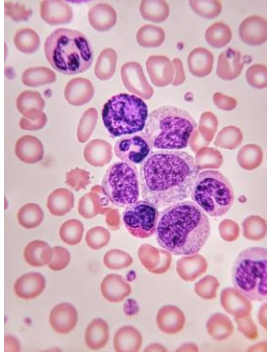
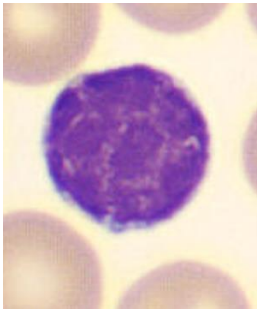
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Emergency - RAPID

Chronic lymphocytic leukemia

Chronic myeloid leukemia

Acute myeloid leukemia

Acute lymphocytic leukemia



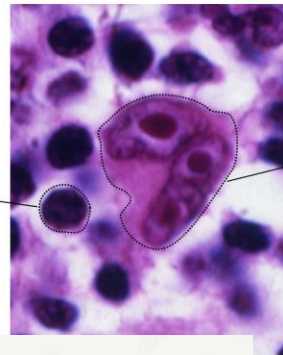
## LYMPHOMA

Lymph nodes

### Hodgkin

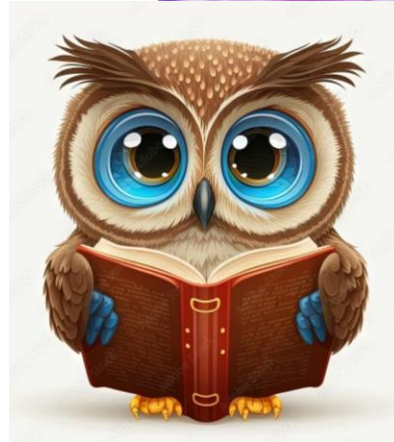
### Non-Hodgkin

"Owls eye"

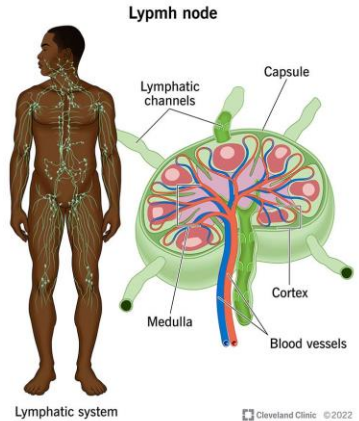


Normal lymphocyte

Reed-Sternberg Cell



- Large Cell
- Follicular
- Burkitt
- Mantle cell
- Marginal Zone
- LPL
- Other: T cell

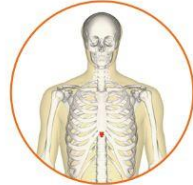


# LEUKEMIA

## Signs & Symptoms



Petechiae or small red spots on the skin



Bones become tender especially the sternum



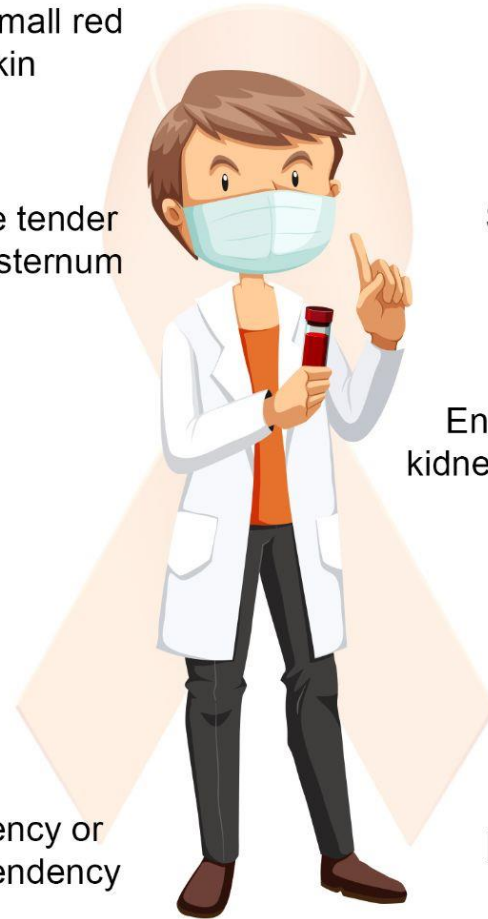
Anemia



Night sweats



Bleeding tendency or hemorrhagic tendency



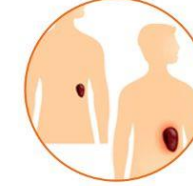
Fatigue and fever



Swollen lymph nodes



Enlarged spleen, kidney and the liver



Pain in joints and bones

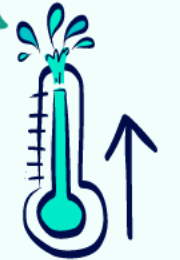


Loss of weight





Coughing



Pain or vomiting when drinking alcohol



# SIGNS & SYMPTOMS OF NON-HODGKIN LYMPHOMA

# Clues to the Diagnosis

## LEUKEMIA

**Blood and marrow**

Not emergent - SLOW

### Chronic

### Acute

\*\*\*  
Emergency - RAPID

Chronic lymphocytic leukemia

Chronic myeloid leukemia

Acute myeloid leukemia

Acute lymphocytic leukemia

**Peripheral lymphocyte count >4.0**  
  
Older patients >60

WBC count > 30K usually  
  
Middle aged patients 40-60  
  
High neutrophil count  
  
**Clue \*\*\* Basophilia, eosinophilia!**

WBC count either low (<2) or high (>20)  
Platelets <50  
Hemoglobin <9  
  
**PANCYTOPENIA!**  
  
Rapidly dropping counts

## LYMPHOMA

**Lymph nodes**

### Hodgkin

### Non-Hodgkin

Younger patients 20-40  
  
Progressing lymphadenopathy

Middle to older age 50+  
  
Progressing lymphadenopathy

# Diagnostic tests

**LEUKEMIA**

**Blood and marrow**

Not emergent - SLOW

**Chronic**

**Acute**

\*\*\*  
Emergency - RAPID

Chronic lymphocytic leukemia

Chronic myeloid leukemia

Acute myeloid leukemia

Acute lymphocytic leukemia

FLOW CYTOMETRY OF BLOOD

**BCR/ABL OF THE BLOOD**  
Flow is NOT helpful here!

FLOW CYTOMETRY  
URGENT BONE MARROW BIOPSY  
MAY NEED CHEMO EMERGENTLY

**LYMPHOMA**

**Lymph nodes**

**Hodgkin**

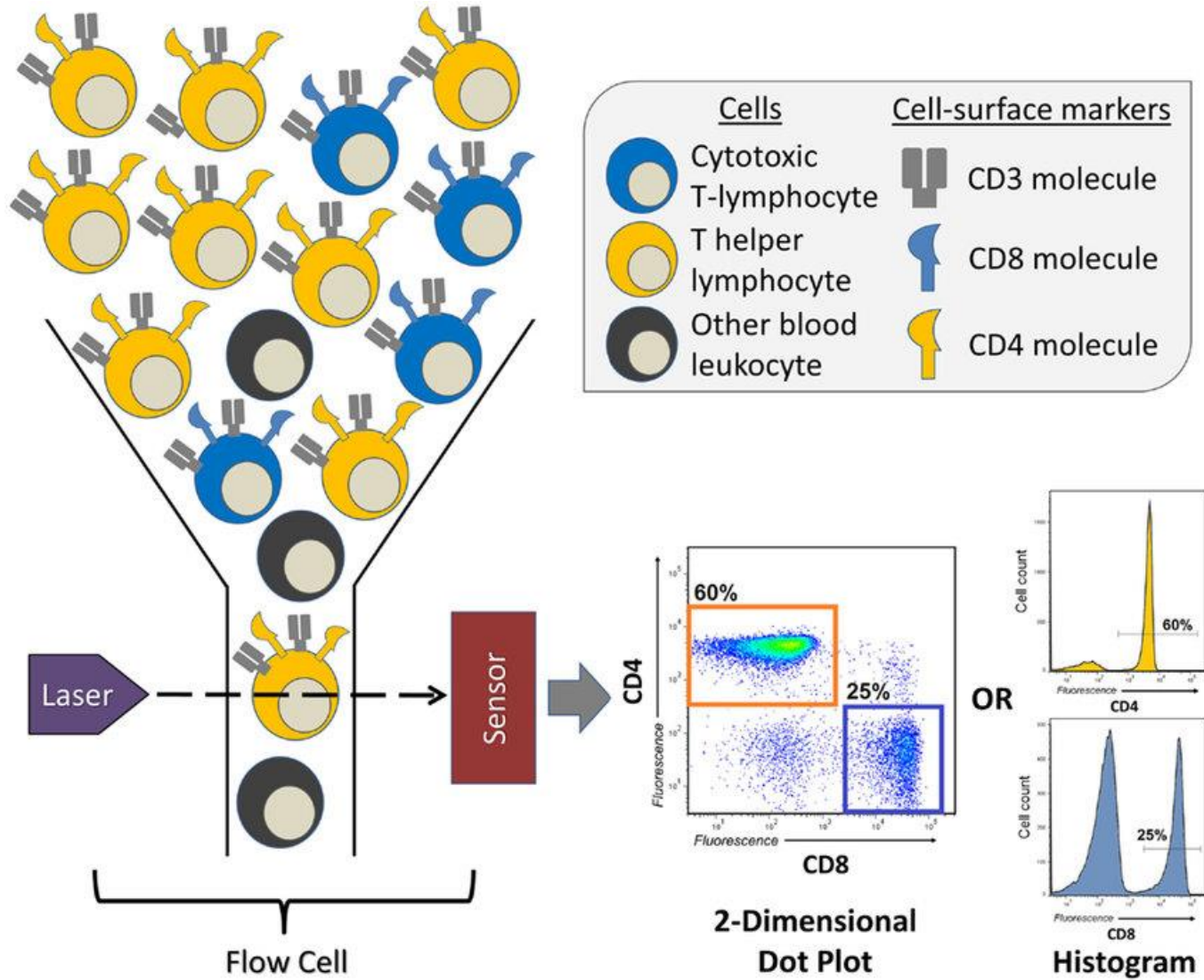
**Non-Hodgkin**

Lymph node biopsy  
Flow NOT helpful

Lymph node biopsy  
Send FRESH for flow cytometry

Flow cytometry Limitations:

- Neutrophils
- MDS
- Myeloproliferative tumors
- Monocytic neoplasms
- Hodgkin disease
- Metastatic carcinoma or melanoma





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- <https://survey.alchemer.com/s3/7645302/CME-Clinical-Updates-ENDURING-MATERIAL>
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