

A microscopic view of a blood smear. The background is filled with numerous cells. Many are purple-stained, indicating leukocytes (white blood cells) with prominent nuclei. Interspersed among them are many brown-stained, biconcave disc-shaped cells, which are erythrocytes (red blood cells). The overall appearance is that of a dense population of white blood cells, characteristic of leukemia.

# Leukemia

Jeff Liu, Period 5

# What Is Leukemia?

- Cancer of the white blood cells
- Acute or Chronic
- Affects ability to produce normal blood cells
- Bone marrow makes abnormally large number of immature white blood cells called blasts

# History

- Means “white blood” in Greek
- Discovered by Dr. Alfred Velpeau in France, 1827
- Named by pathologist Rudolf Virchow in Germany, 1845

# Main Types

- Acute Lymphocytic Leukemia (ALL)
- Acute Mylogenous Leukemia (AML)
- Chronic Lymphocytic Leukemia (CLL)
- Chronic Mylogenous Leukemia (CML)

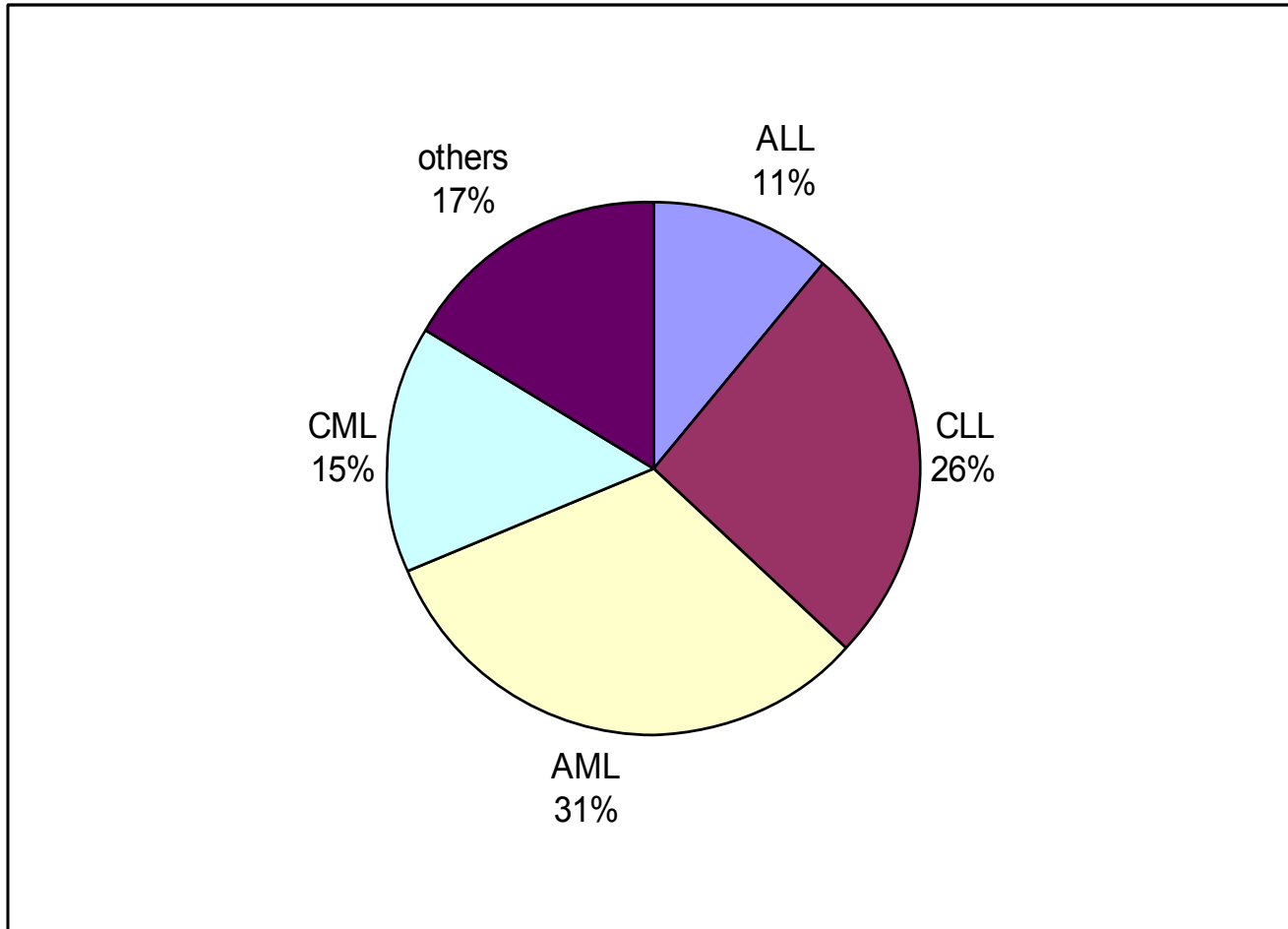
# Demographics of Leukemia Patients (2001 Data)

CLL=Chronic Lymphocytic

ALL=Acute Lymphocytic

CML=Chronic Mylogenous

AML=Acute Mylogenous



Total Reported Cases = 31,500

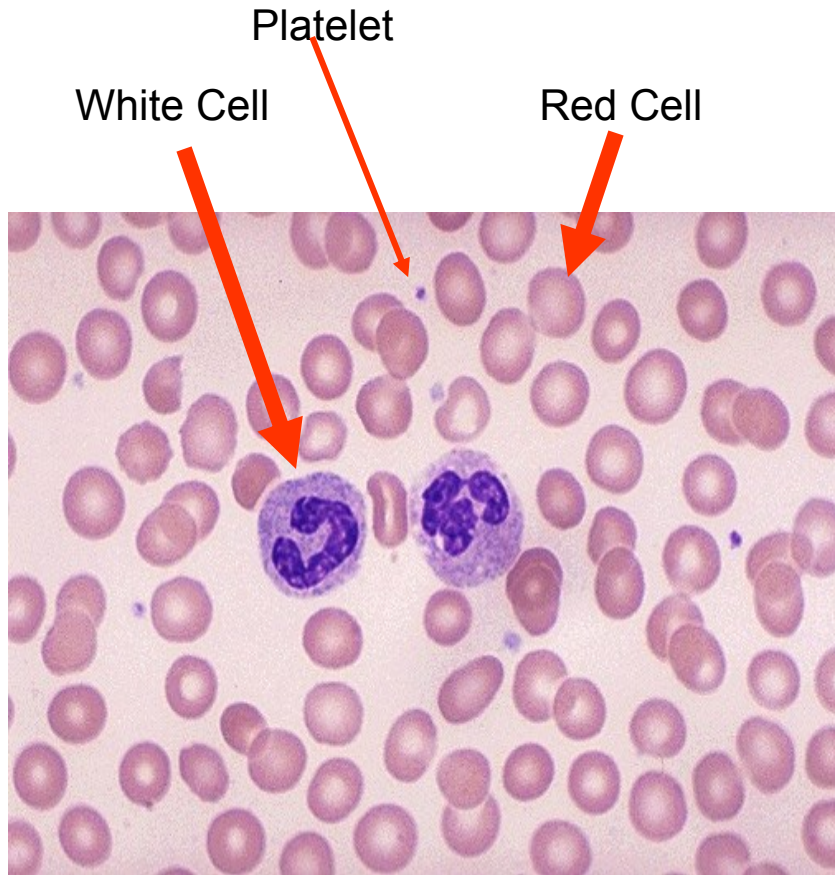
# Symptoms

- When there are excessive white blood cells  
--> Infections
- When there are few red blood cells:  
Paleness --> Anemia
- When there are few platelets --> Excessive  
bleeding

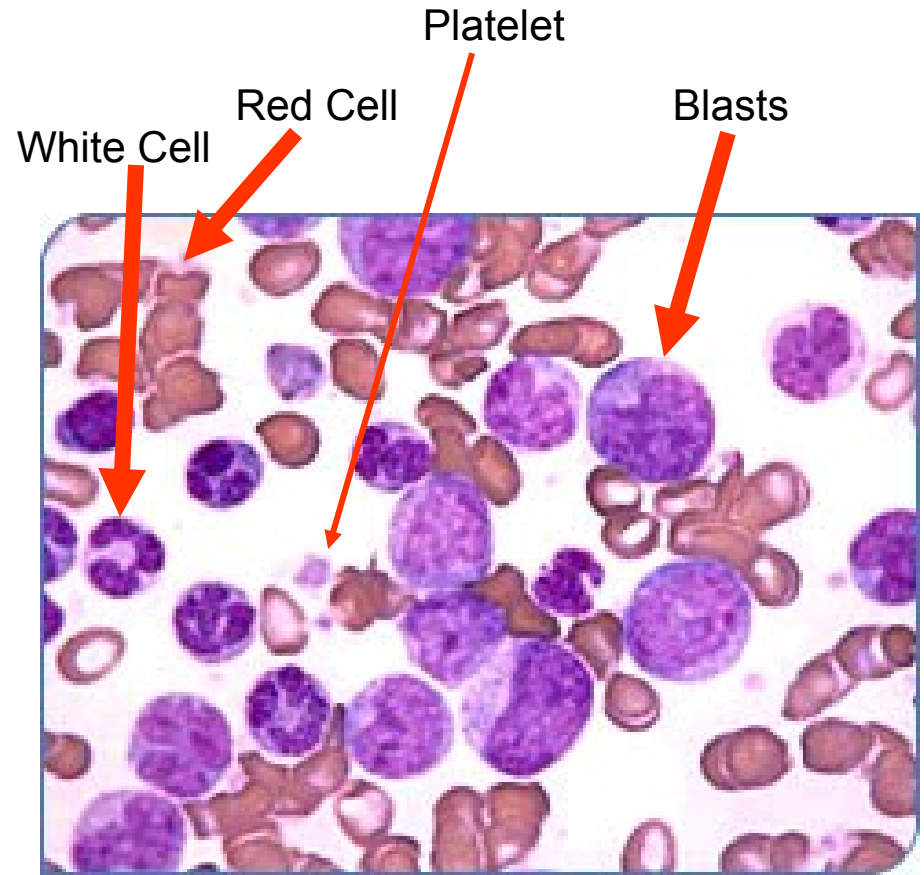
# Tests For Diagnosis

- Finger prick
- Blood sample
- Blood dye
- Bone marrow sample
- Spinal Tap/Lumbar Puncture

# Pictures Of Blood



Normal human blood



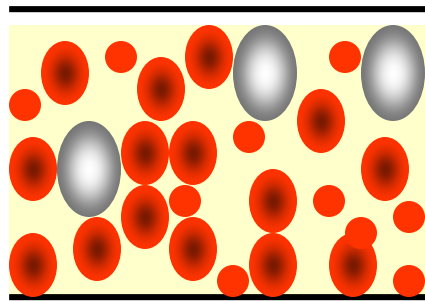
Blood with leukemia



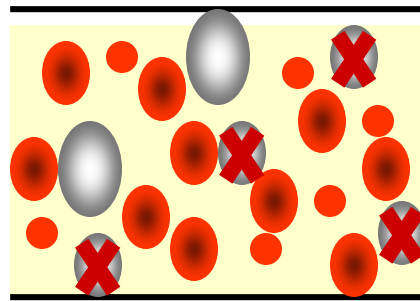
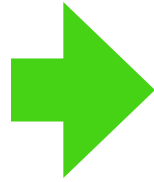
# Effects On the Body

- Attacks the immune system
- Infections
- Anemia
- Weakness
- No more regular white blood cells, red blood cells, and platelets
- Blasts clog blood stream and bone marrow

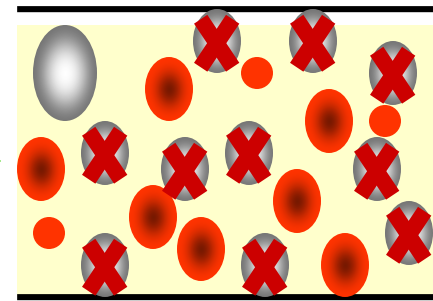
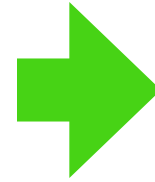
# Development of Leukemia in the Bloodstream



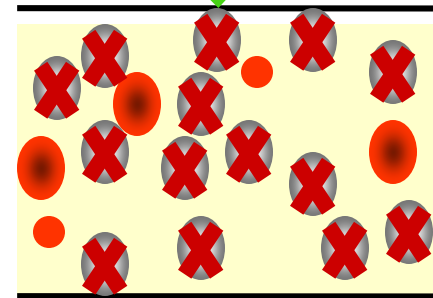
Stage 1- Normal



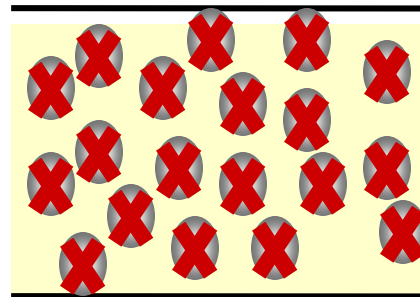
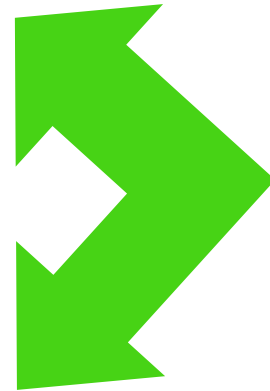
Stage 2- Symptoms



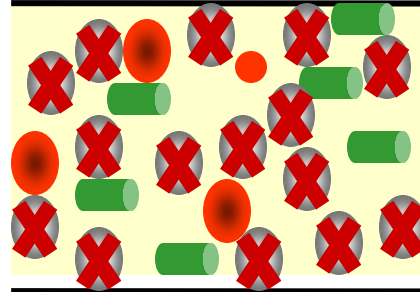
Stage 3- Diagnosis



Stage 4- Worsening

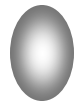






Stage 5a- Anemia



Stage 5b- Infection

## Legend

-  White Cell
-  Red Cell
-  Platelet
-  Blast
-  Germ

# Causes

- High level radiation/toxin exposure
- Viruses
- Genes
- Chemicals
- Mostly unknown
- Can't be caught

# Treatment

- Chemotherapy
- Immunotherapy
- Radiation
- Bone marrow transplant

# Research

- New drugs
- Cord blood and planceta

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End