

# WBCs SGDs

Dr saima irum

Assistant professor of pathology

Number 1

- 22 years old male came in OPD with complaints of fatigue, loss of appetite, weight loss.
- On physical examination there was splenomegaly and palpable submandibular and suboccipital lymph nodes
- Rest of physical examination was normal

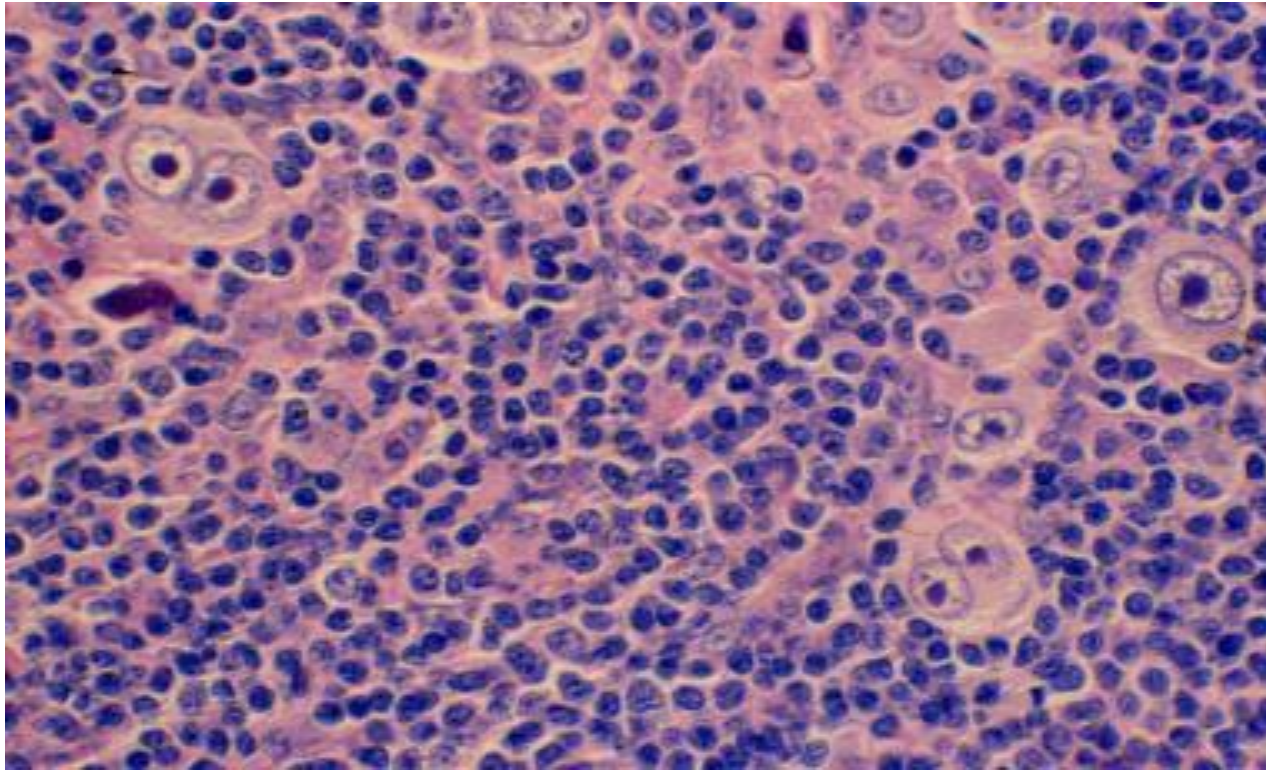
- Physician advised routine baseline tests
- Point out abnormal findings in test report

**Table 1. Laboratory findings of the patient on admission.**

<b>Laboratory test</b>	<b>Patient's value</b>	<b>Reference value</b>
<b>CBC</b>		
WBC	2300/mm <sup>3</sup>	4000-10000/mm <sup>3</sup>
Hemoglobin	10.3 g/dL	12-16 g/dL
MCV	87.5 fL	80-99 fL
Plt	67000/mm <sup>3</sup>	150000-400000/mm <sup>3</sup>
<b>ESR</b>	3 mm/hr	<20 mm/hr
<b>CRP</b>	22.4mg/L	<10 mg/L
<b>LDH</b>	787 IU/L	105-333IU/L
<b>Serum Creatinine</b>	0.8 mg/dL	0.7-1.3 mg/dL
<b>Blood Urea Nitrogen</b>	19 mg/dl	8-25 mg/dL
<b>AST</b>	14 IU/L	10-34 IU/L
<b>ALT</b>	19 IU/L	10-40 IU/L
<b>AlkP</b>	186 IU/L	44-147 IU/L
<b>RF</b>	7.6 IU/mL	<20 IU/mL
<b>ANA</b>	1IU/ml	<10IU/ml
<b>HIV Ab</b>	negative	-
<b>HBs Ag</b>	negative	-
<b>HCV Ab</b>	negative	-

- As there is pancytopenia in CBC report. so he advised bone marrow biopsy and lymph node biopsy to find its cause and referred patient to hemato oncologist

Bone marrow biopsy result is



- What is diagnosis?
- Classify Hodgkin lymphoma?
- What is difference between HL and NHL?



Number 2

2 years old boy with protrubent abdomen,loss of appetite and petechial rash

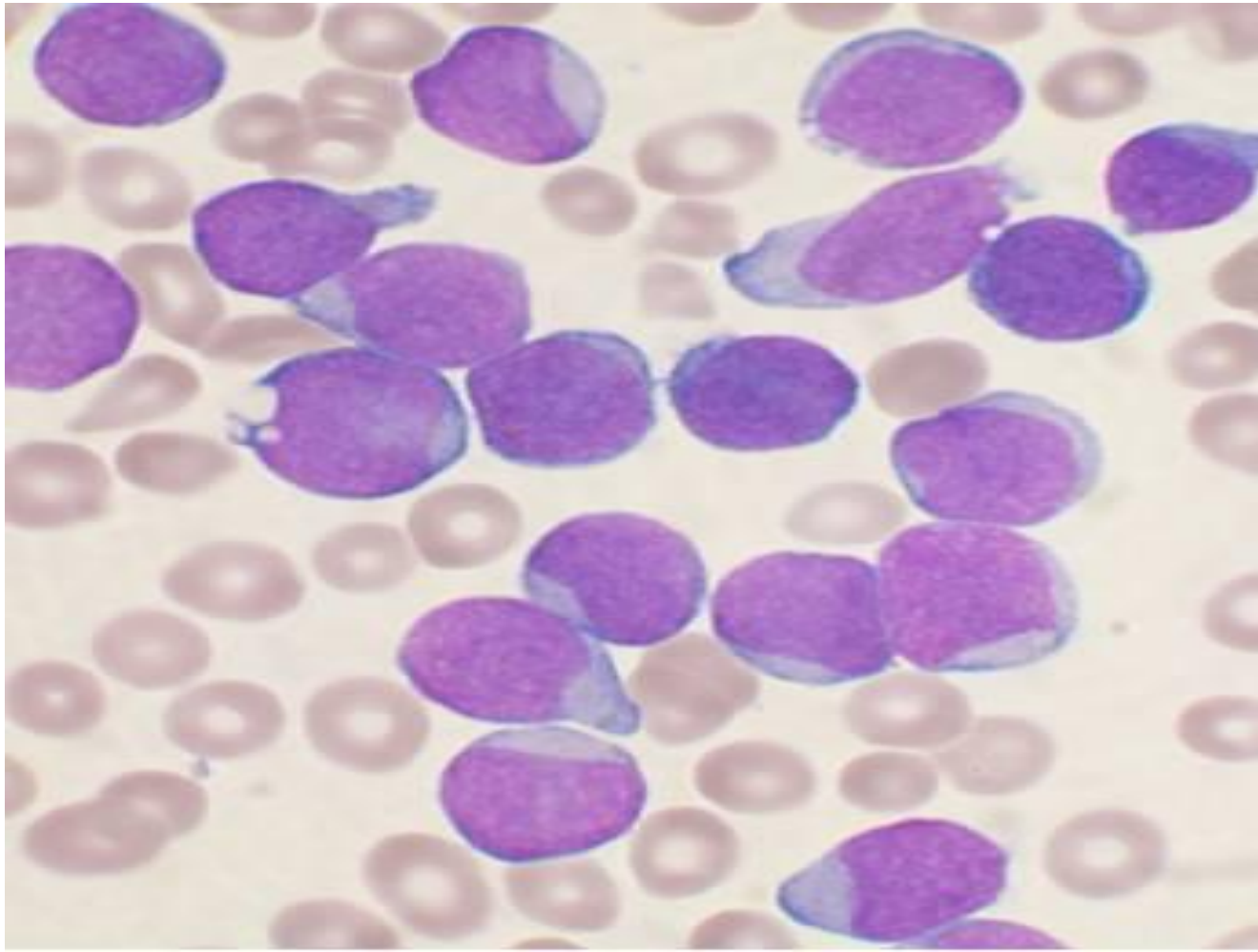
LABORATORY

WBC	$19.11 \times 10^9/L$
Neu%	5.4
Lym%	69.6
Mon%	24.7
Eos%	0.1
Bas%	0.2
RBC	$1.45 \times 10^{12}$
HGB	4.1g/dl
HCT	12.7%
MCV	87.6 Fl
MCH	28.3 Pg
MCHC	32.3 g/Dl
PLT	$5 \times 10^9/L$

Abbreviation: Neu(Neutrophil); Lym(Lymphocyte), Mon(Monocyte), Eos(Eosinophil), Bas(Basophil)

- There is lymphocytosis and low platelet count
- Advise peripheral smear

Describe morphology of blast on peripheral smear(lymphoblast)



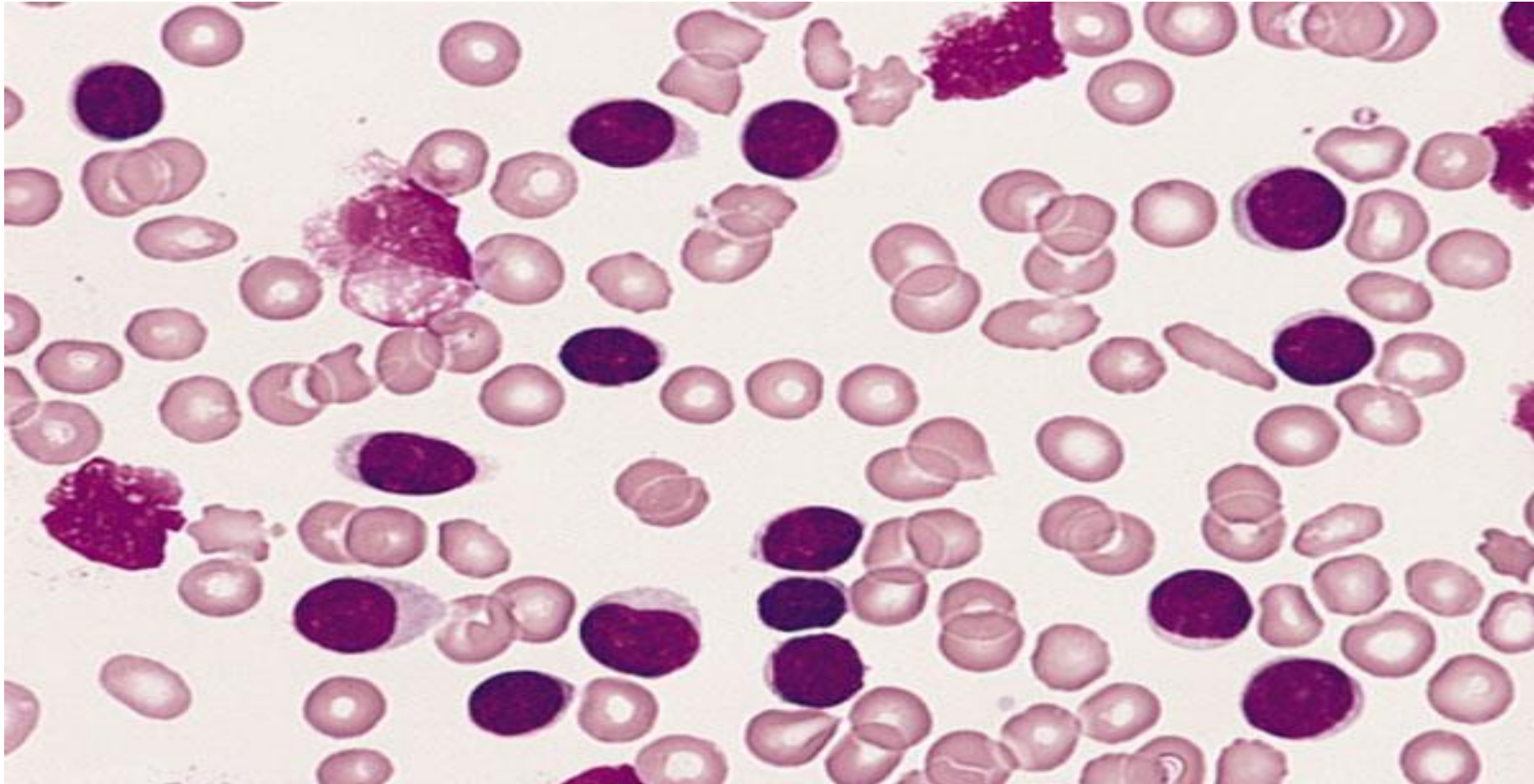
- What further tests will be advised?
- What are types of ALL?

Number 3

65 years old male with diffuse lymphadenopathy and hepatosplenomegaly and B symptoms

- On CBC
- WBC .....21
- Hb 10
- Platelets...160
- Peripheral smear was advised

Describe peripheral smear(mature lymphocytes)





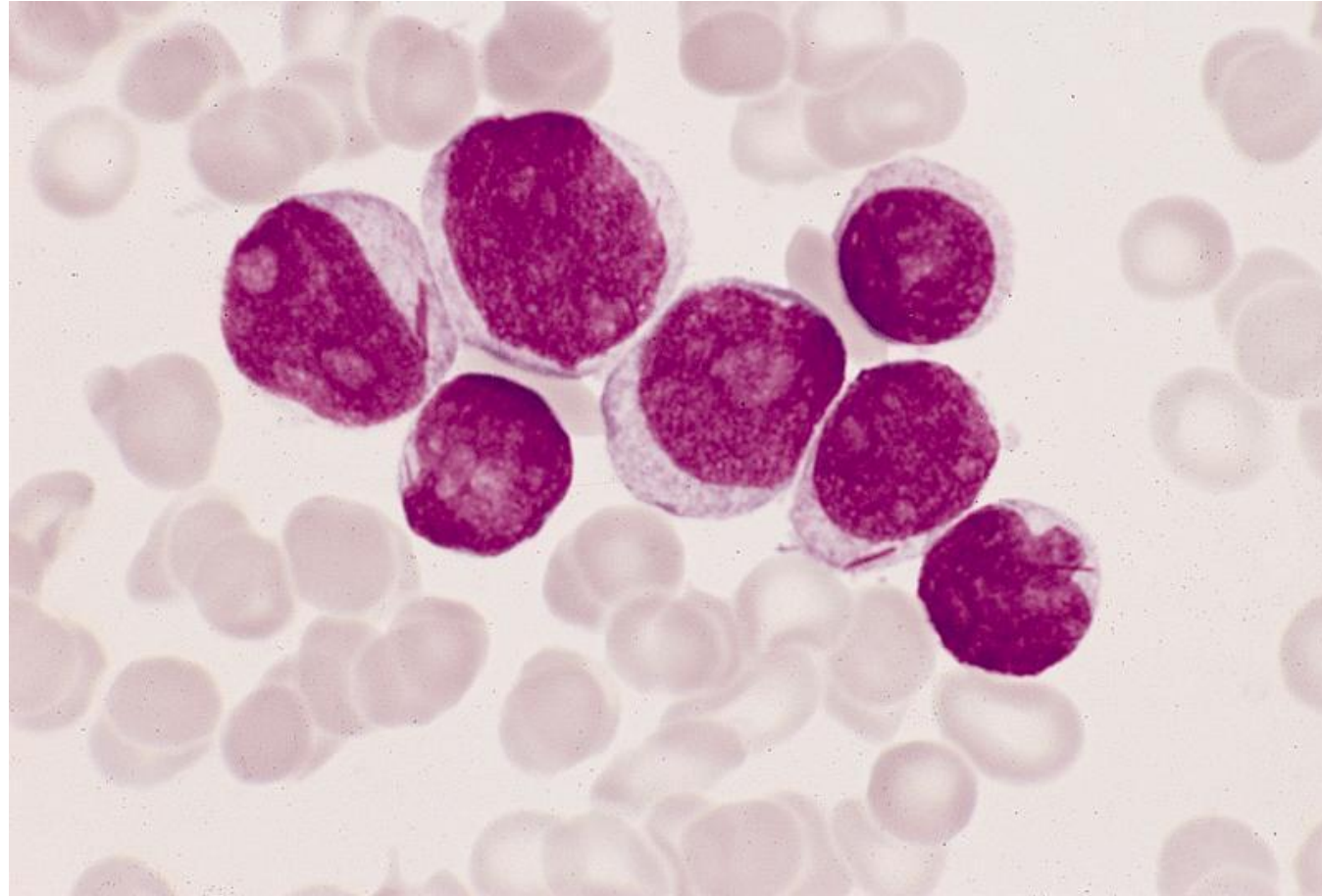
- What is difference between lymphoblast and lymphocyte?
- What are lineage markers for B and T lymphocytes?

Number 4

35 years female with severe pallor, fever and bleeding from nose and moth

- Hb ...6.5
- WBC ....150
- Platelets ...39

Describe peripheral smear(myeloblast)



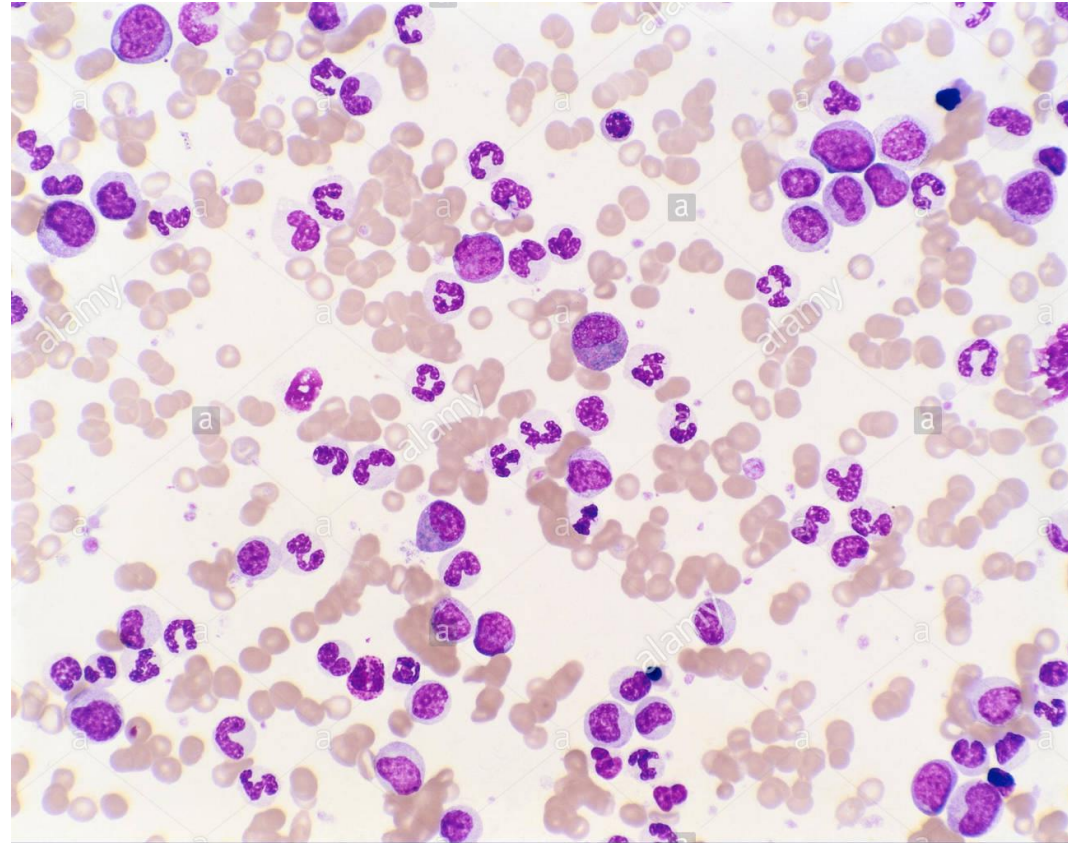
- Which cytochemical stain are positive in AML?
- What are lineage markers of myelocytes?

Number 5

45 years old male with splenomegaly, mild fever

Hemoglobin	13 g/dL
Platelets	350,000/mm <sup>3</sup>
Leukocytes	54,000/mm <sup>3</sup>
Neutrophils	65%
Band form	10%
Myelocyte	3%
Metamyelocyte	1%
Lymphocytes	15%

# Describe smesr



 alamy stock photo

HRF76B  
www.alamy.com

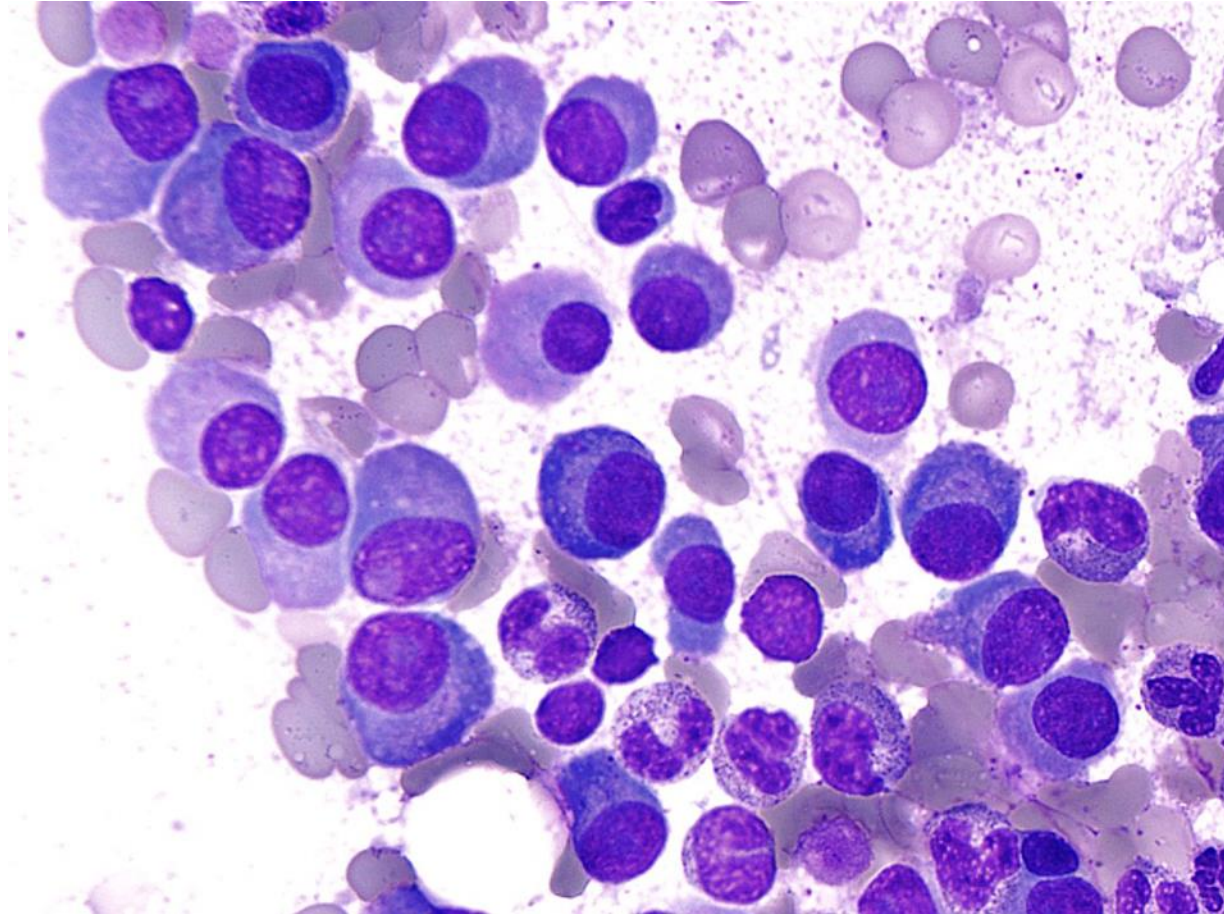


- What is cytogenetics and molecular genetics of this disorder?
- What is leukemoid reaction? what are its causes?

Number 6

52 years old male with back pain, fatigue, frequent infections and confusion

Bone marrow biopsy shows

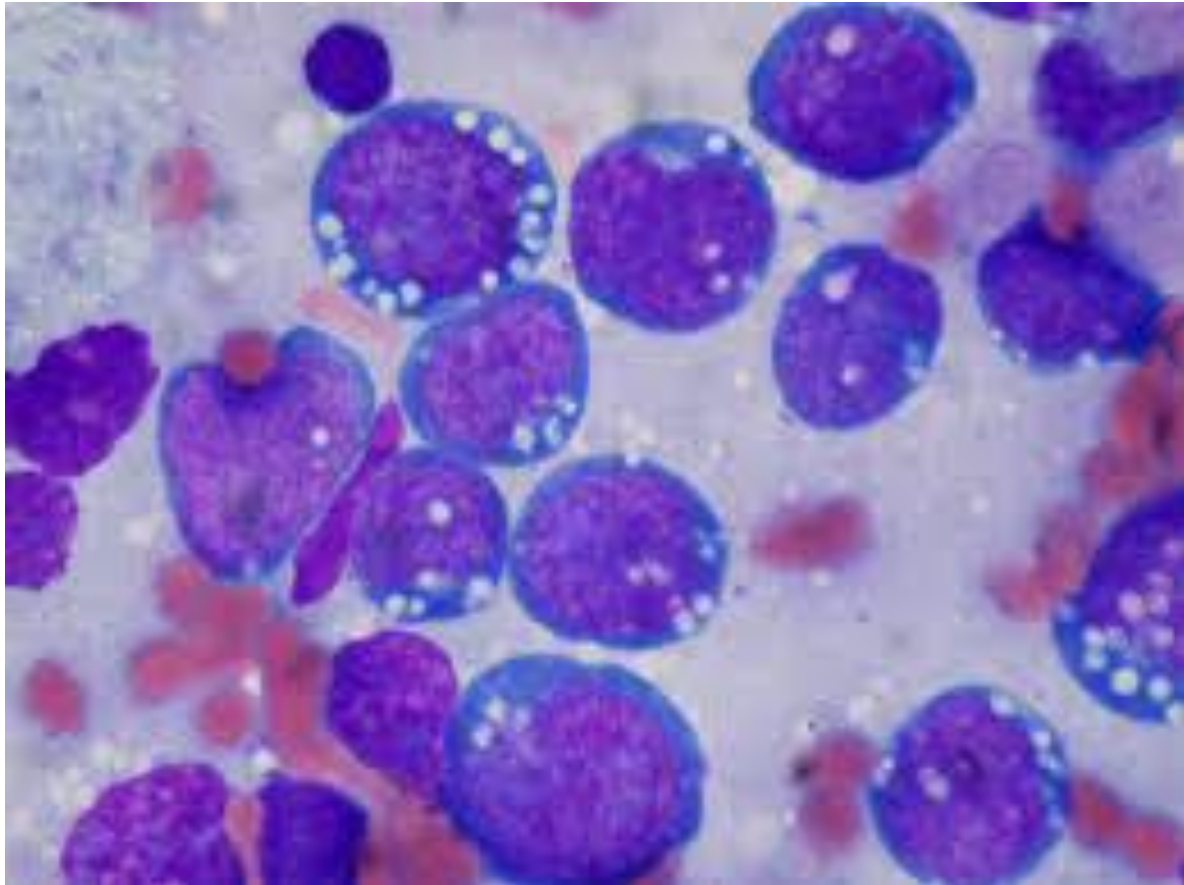


- What is morphology of plasma cell?
- Complications of disease?

Number 7

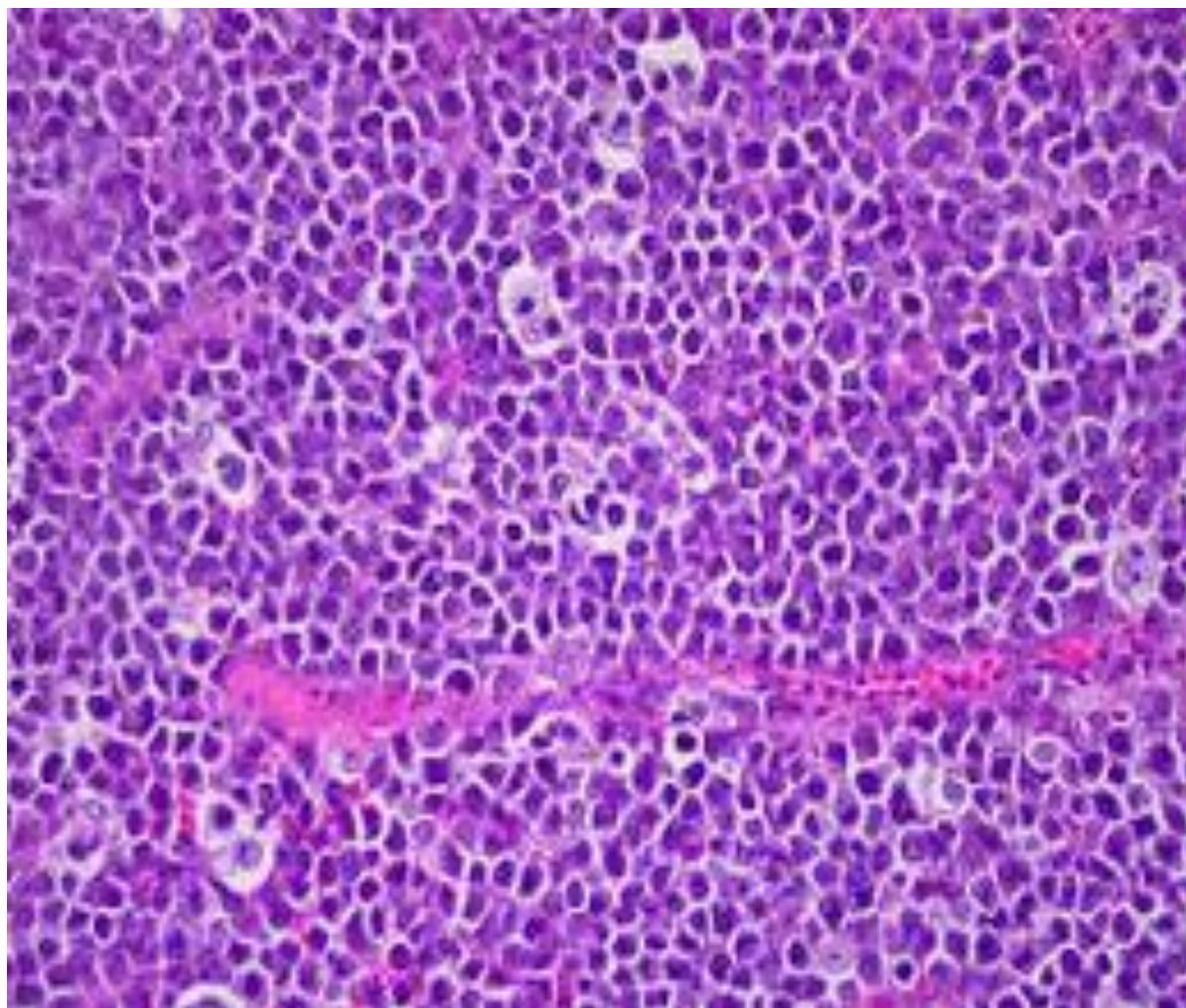
- 4 years old boy presented in emergency with bleeding gums, severe pallor, face swelling and distended abdomen. baseline CBC showed pancytopenia
- Bone marrow was advised and result was pending while patient died

Describe morphology(L3 type blasts)





# Starry sky pattern



- What is diagnosis?
- What is mutation in this?
- List 4 other types of NHL