

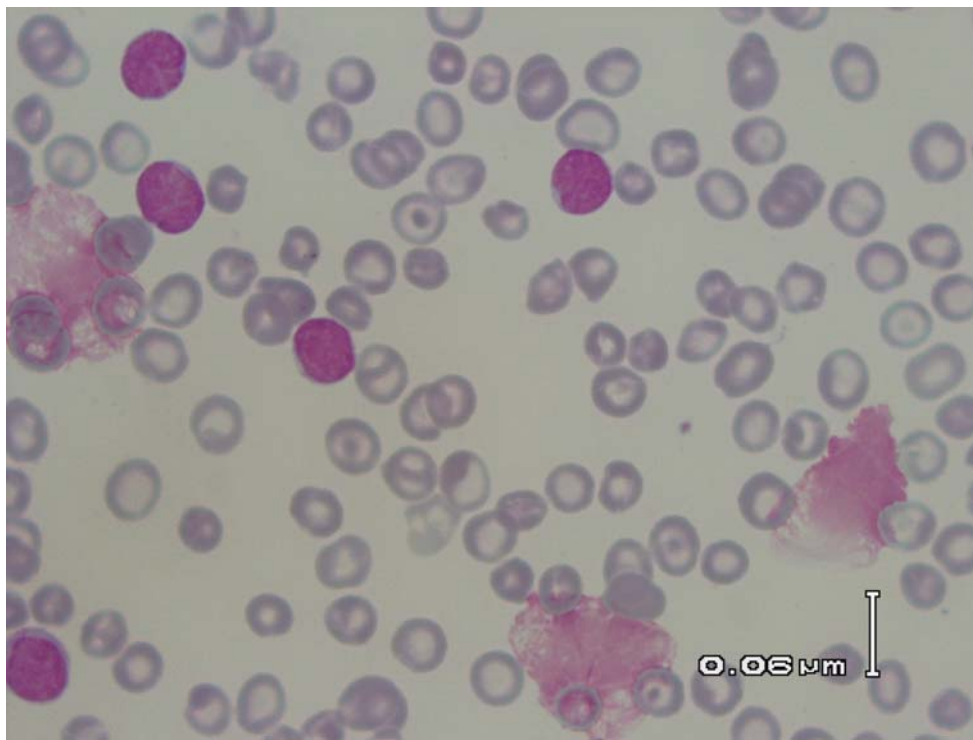
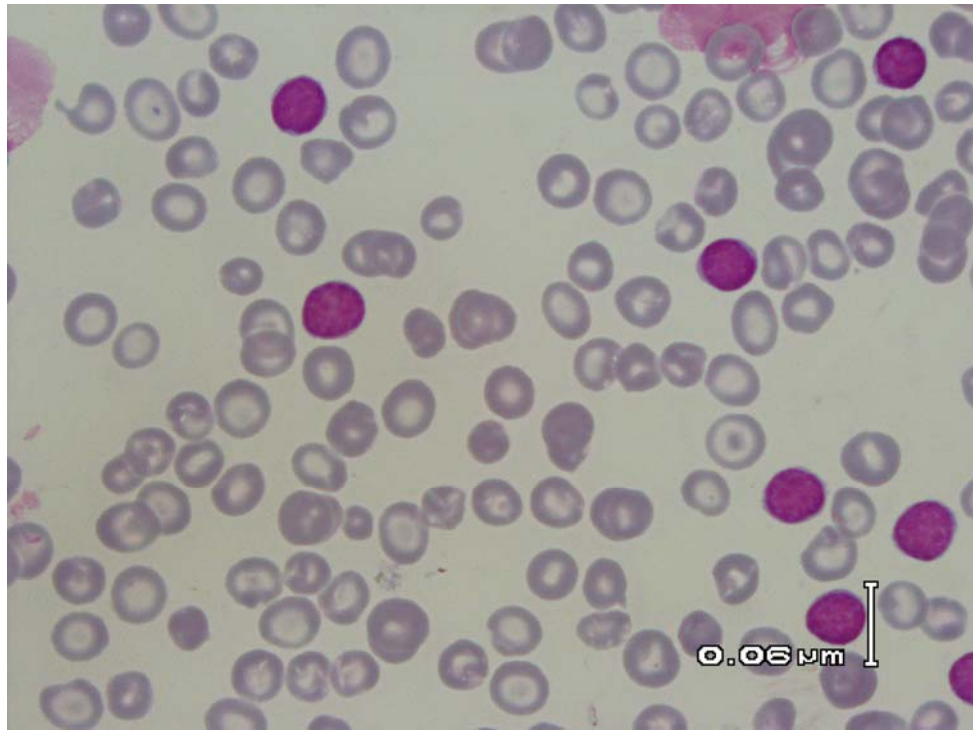


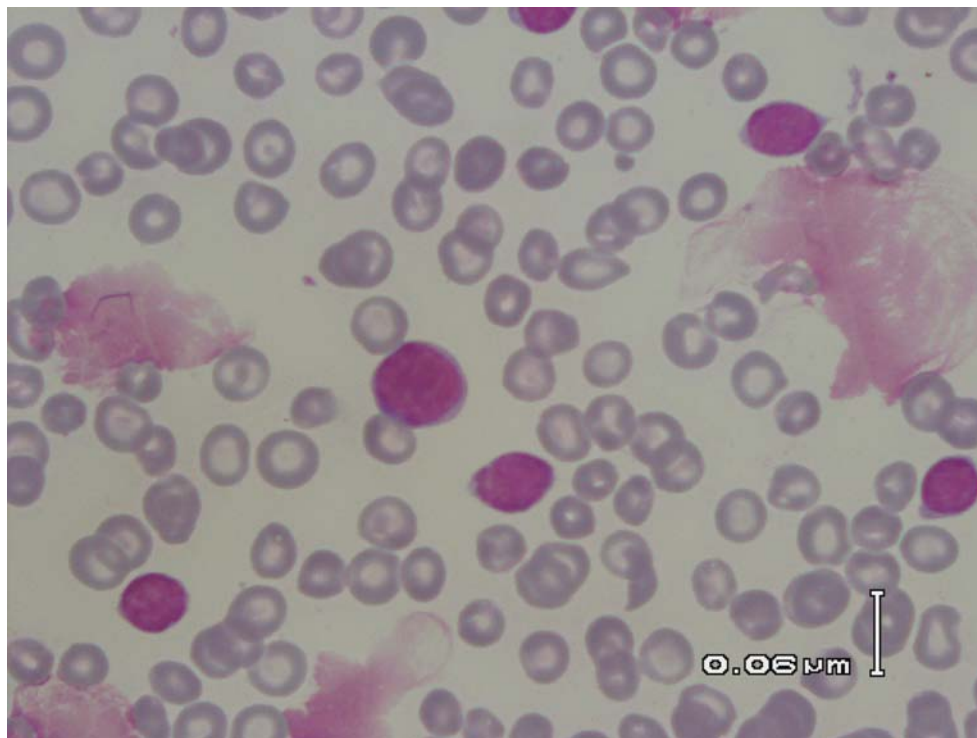
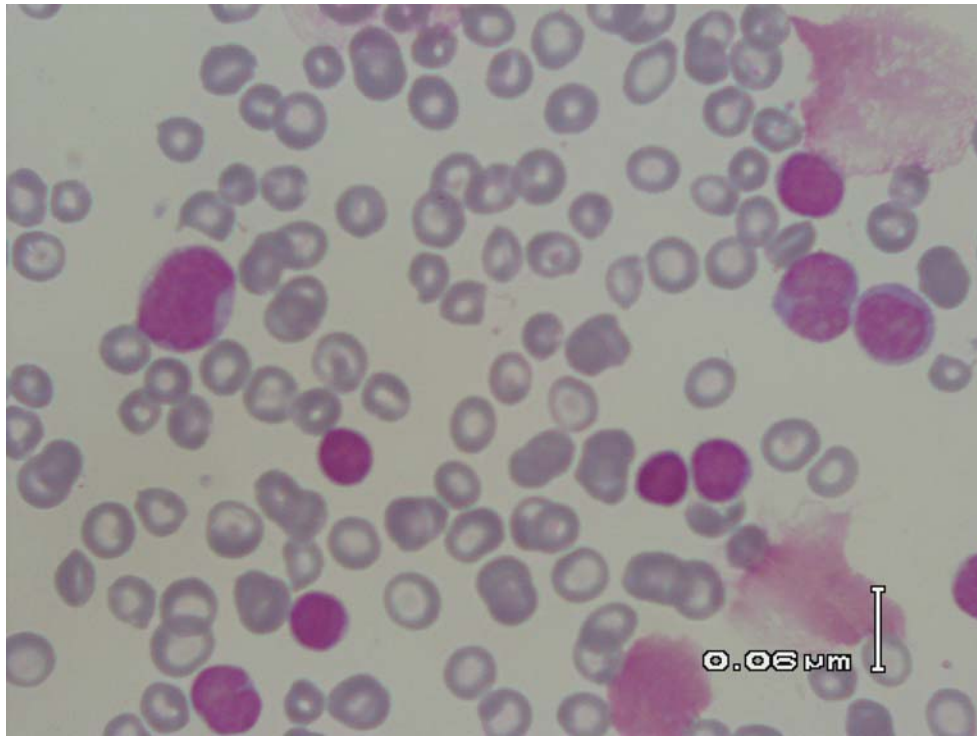
Clinical Presentation

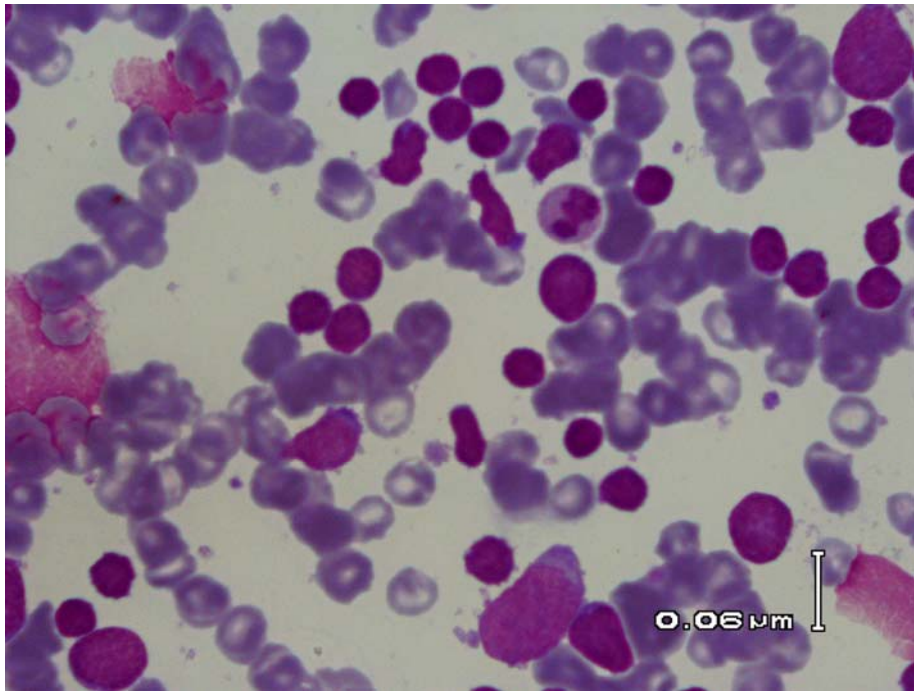
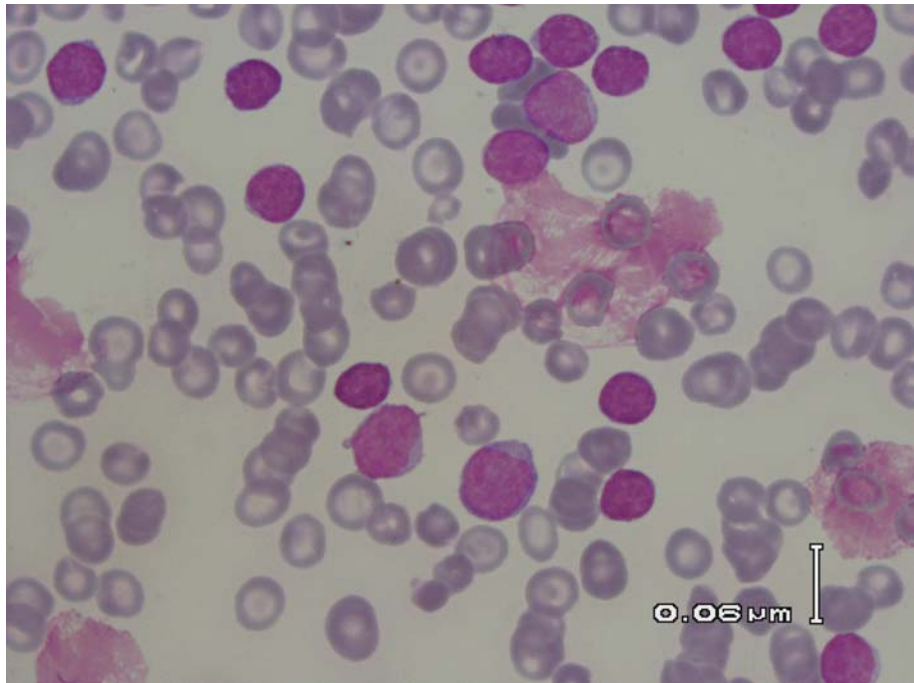
- 63 year old male
- Bilateral parotid swelling
- Did not receive any therapy
- No H/O blood transfusions
- Pallor ++
- Lymph nodes : not palpable
- Liver palpable 9 cm
- Spleen not palpable

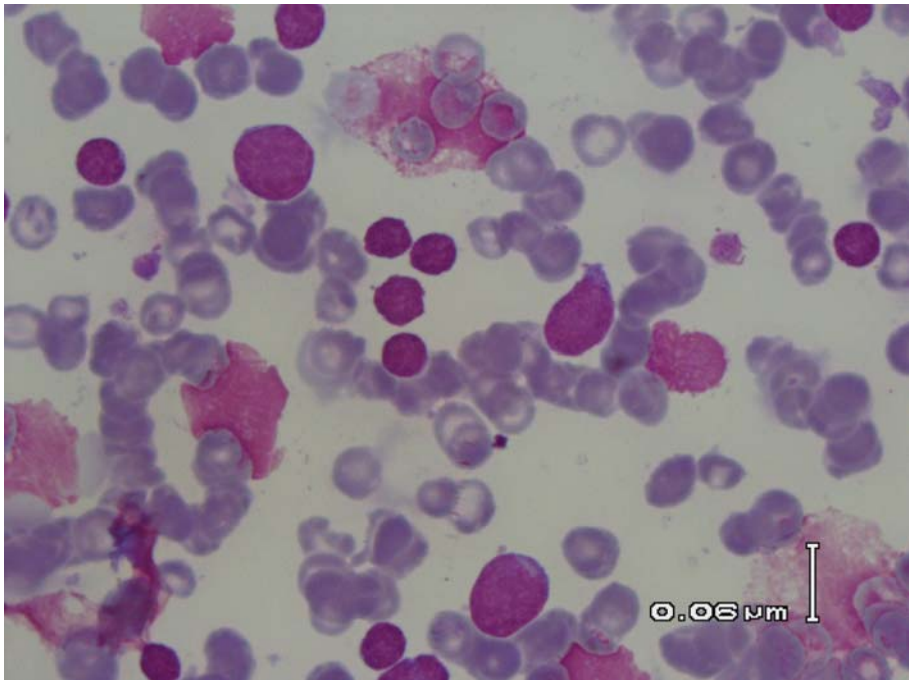
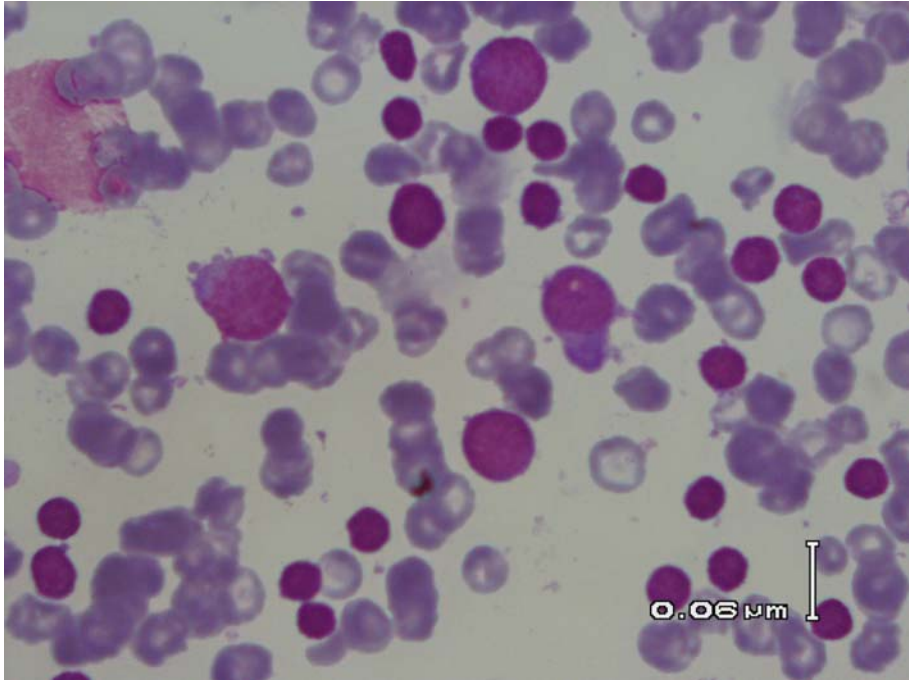
Blood Counts

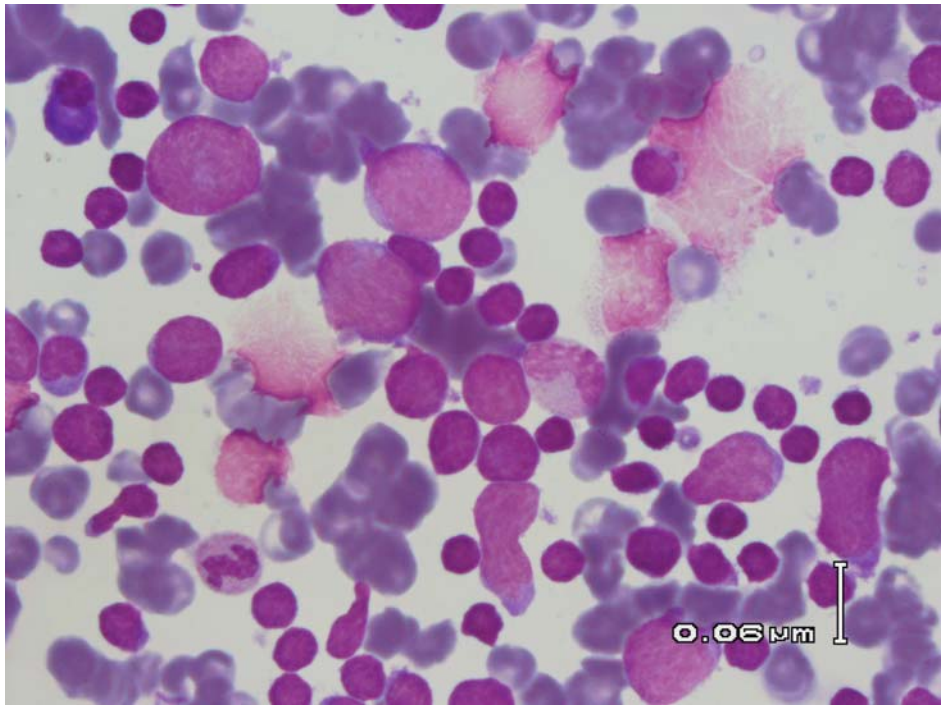
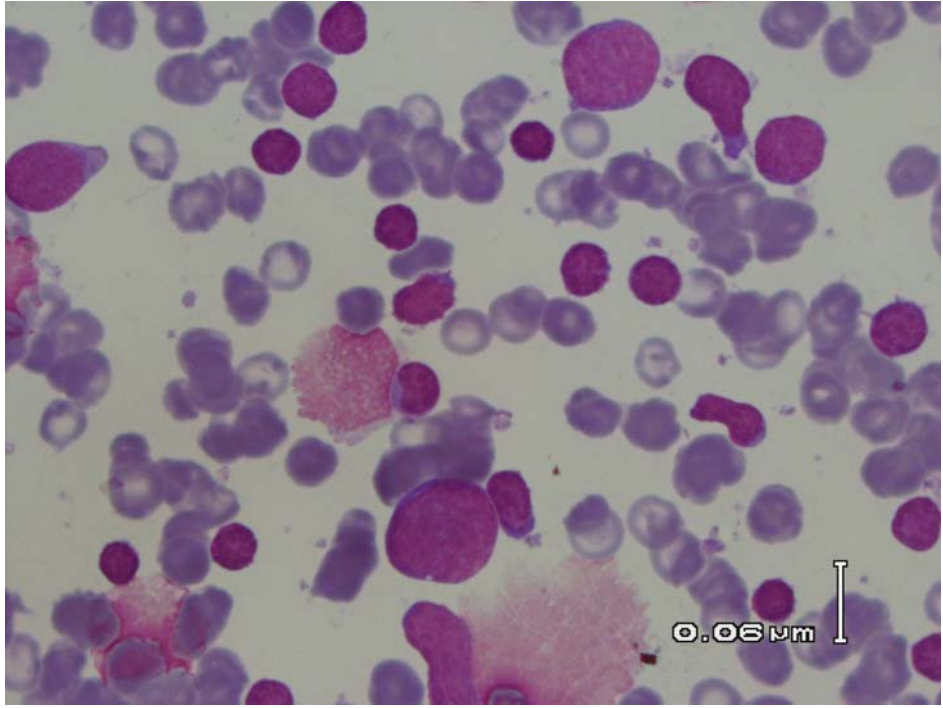
Parameter		
RCC	$\times 10^{12}/L$	2.76
Hb	g/dl	7.4
MCV	fl	81.2
MCH	pg	26.8
MCHC	g/dl	33.0
Retics	%	1
N RBCs	/100wbc	0
TLC	$\times 10^9/L$	$142 \times 10^9/L$.
DLC		Neutrophils:1%, Lymphocytes:99%
Platelets	$\times 10^9/L$	65

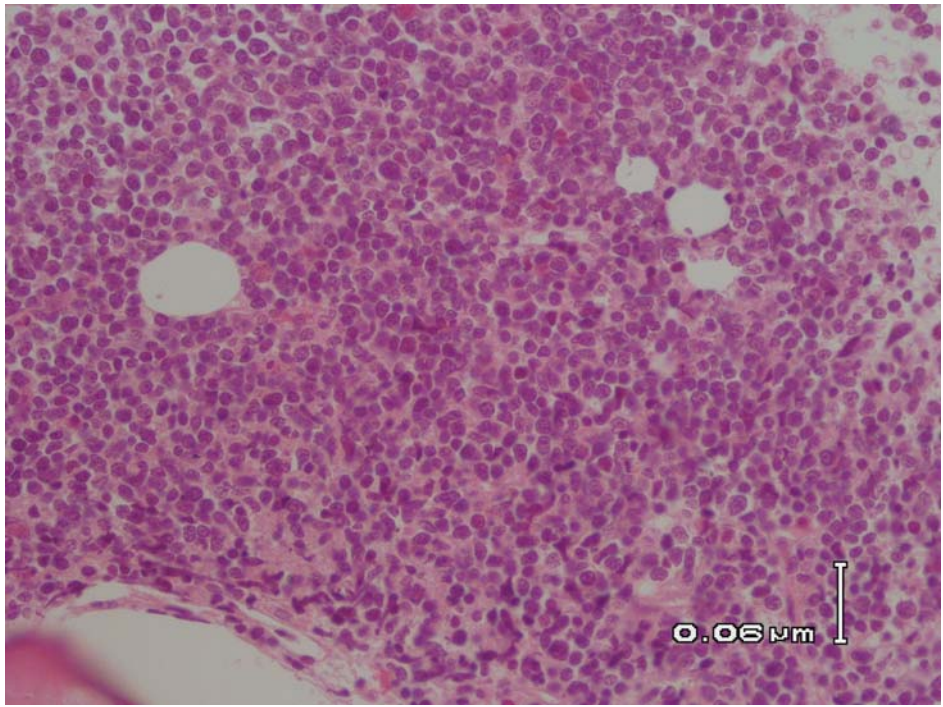
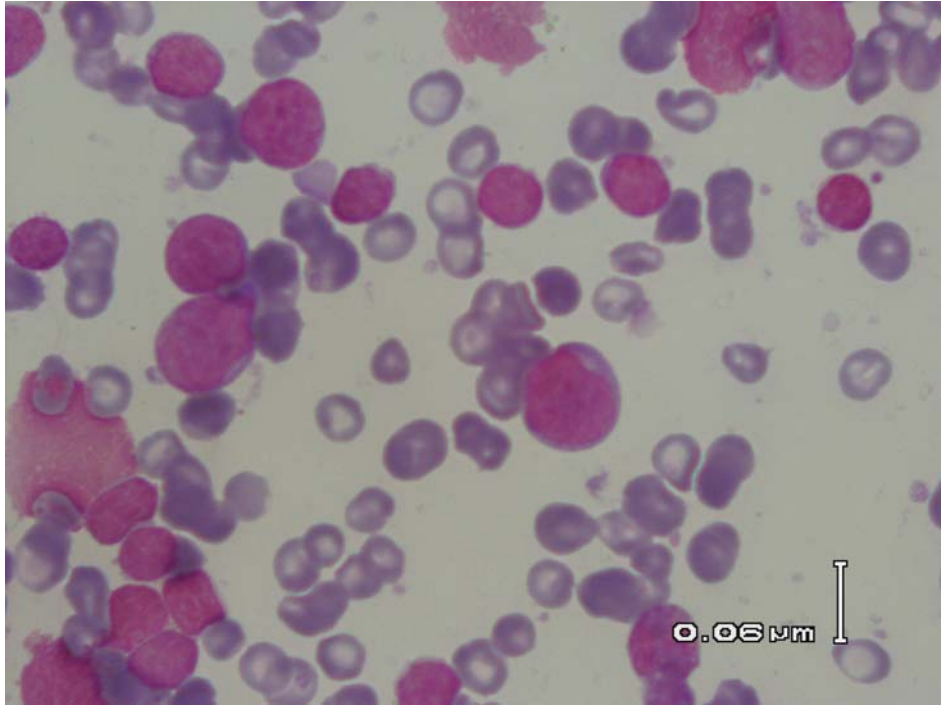


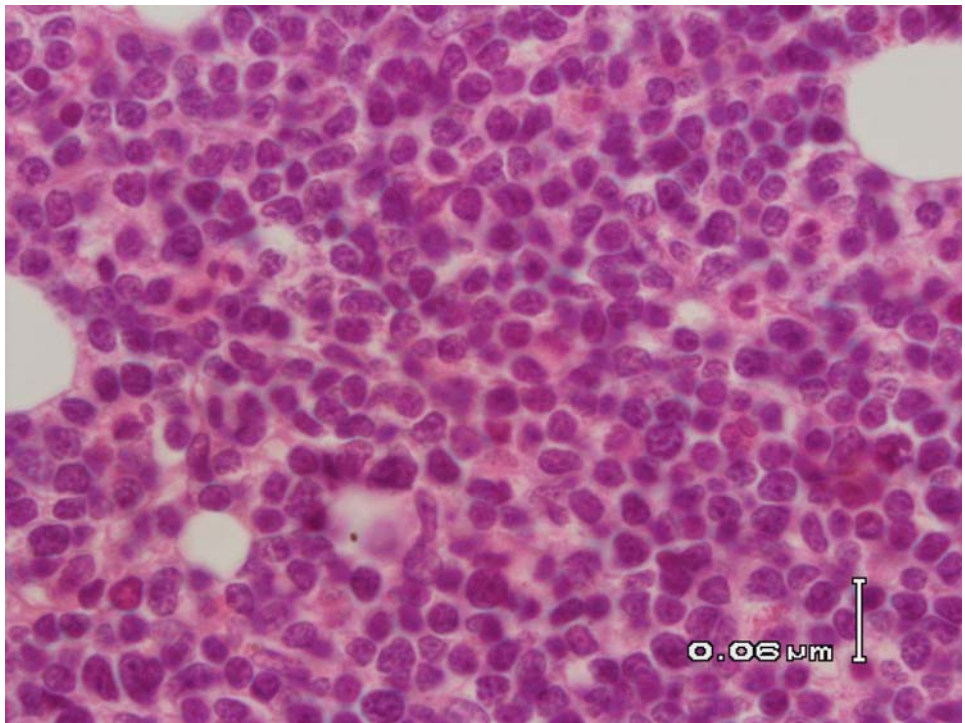
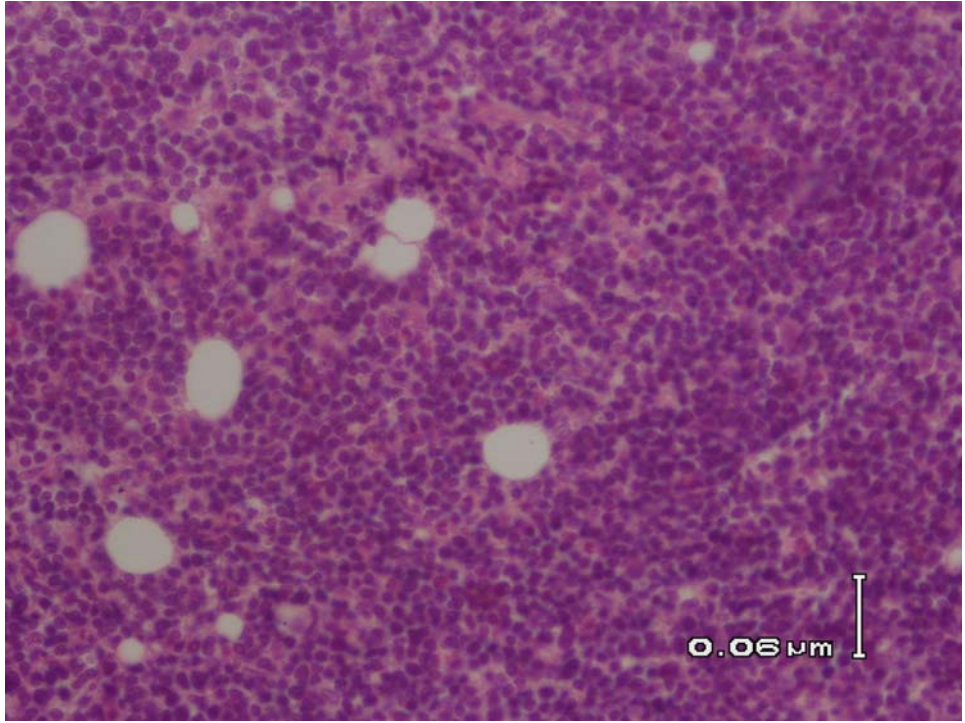












Immunophenotype

- CD 45: 99%
- CD 23+CD20: 82%
- CD 19+CD5:92%
- HLA DR: 91%

Opinion: Chronic lymphocytic Leukemia

(Chronic lymphocytic leukemia/Small Lymphocytic Lymphoma)

Definitions CLL

- Monomorphic small round to slightly irregular B lymphocytes
- Peripheral blood, bone marrow, spleen and lymphnodes
- Admixed with prolymphocytes, and paraimmunoblasts
- Forming proliferation centres in tissue infiltrates
- Usually co-express CD 5 and CD 23
- In absence of extramedullary involvement
 - $\geq 5 \times 10^9/l$ monoclonal lymphocytes with CLL morphology in PB
- Lymphocytosis for at least 3 months
- Lower lymphocyte counts with cytopenias or disease related symptoms
- SLL: non leukemic cases
 - Tissue morphology and immunophenotype of CLL
 - Lymphadenopathy

- No Cytopenias due to BM infiltration by CLL/SLL
- And $< 5 \times 10^9/L$ PB B cells

Salient Features

- Adults and old age, male to female ratio 1.5-2
- Most asymptomatic
- Fatigue, autoimmune hemolytic anemia, infections
- Splenomegaly, hepatomegaly, lymphadenopathy, extranodal infiltrates
- Monoclonal Lymphocytosis
 - 3.5% normal adults over 40 years age
 - Non CLL phenotype in other B-cell neoplasms
- Immunophenotype
 - CD20, CD22, CD19, CD23, CD5, CD79a, CD43, and CD11c
 - Dim surface IgM/IgD
 - CD negative, FMC 7 and CD79b usually negative
 - In tissue sections Cytoplasmic Ig may be detectable & Cyclin D1 -ve

Morphology Peripheral Blood

- Small lymphocytes with clumped chromatin and scanty cytoplasm
- Smudged or basket cells
- Polymphocytes:
 - Larger cells with prominent cytoplasm $< 2\%$
 - Increasing polymphocytes show more aggressive disease course
 - Polymphocytes $> 55\%$ favors B-PLL diagnosis

- Atypical CLL:
 - Less condensed nuclear chromatin
 - Nuclear irregularities in PB lymphocytes
 - More frequent in trisomy 12 and in other chromosomal abnormalities

Morphology Bone marrow

- > 30% lymphocytes
 - Interstitial involvement
 - Nodular
 - Diffuse
 - Proliferation centres less common than lymph node
- Value of BM trephine
 - Prognostic value
 - Clarify the nature of cytopenia
 - D/D from NHL
 - To assess response to treatment

Morphology Spleen

- White pulp involvement is prominent
- Red pulp is also involved
- Proliferation centres may be seen
- In some cases small lymphoid cells may show moderate nuclear irregularity differentiate mantle cell lymphoma

- Some cases may show plasmacytoid differentiation