

= Haematology 435 =

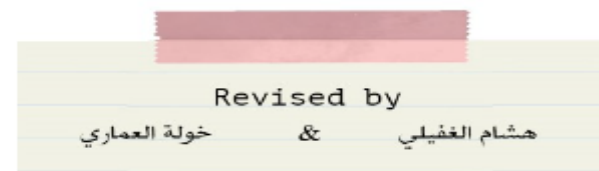
For revision

> **Color Codes:**

- **Pink:** Girls' notes. **Blue:** Boys' notes. **Red:** Important Notes. Gray: Extra notes.
- **Purple:** Lecture notes & Pathoma notes.

> **References:**

- Girls&Boys Doctors Slides and Notes.
- Lecture notes pathology (chapter 12)
- Pathoma (chapter 5)
- Team 434 & 433.



> **Correction File:** ([HERE](#))

> **Check your Understanding!** ([HERE](#))

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- **Lymphoproliferative disorders:** Several clinical conditions in which lymphocytes are produced in excessive quantities (**Lymphocytosis**)
- **LYMPHOMA:** Malignant lymphoid mass involving the lymphoid tissues
- **LYMPHOID LEUKEMIA:** Malignant proliferation of fluid lymphoid cells in Bone marrow and peripheral blood ما نقول ليمفويد لوكيميا الا اذا وصلوا اليون الperipheral blood. وال
- **Lymphocytosis:** increase in the number of lymphocytes in the blood. (It is common in children) could be due different causes ex:EBV and CLL.
- **Infectious mononucleosis:** infectious disease caused by **Epstein-Barr virus (kissing .V)** so affect usually **young adults** characterized by : **swollen lymph nodes (painful) (Unlike the malignancy which is painless)**, high grade fever, and **atypical lymphocyte**. ليمفوسايت مو بشكلها الطبيعي تكون كأنها بلاست عشان كذا كثير دكاترة يخرطون فيها.
- **Mantle lymphoma:** t(11;14) Cyklin D and has +CD5 , CD19 & CD20
- **DLBCL (Diffuse large B-cell lymphoma):** t(3;14) BCL-6 and has +CD10 , CD19 & CD20
- **BCL is an anti-apoptotic (prevent apoptosis)**

Malignant Lymphoproliferative disorders

TYPES	Mature				
	Lymphoid Leukemia	Lymphoma			
		Non Hodgkin lymphoma B- cell neoplasm			Hodgkin
		CLL	Burkitt's	Follicular	
(markers) +CD	CD19 CD20 CD23 CD5	CD19 CD20 CD10	CD19 CD20 CD10	CD20 CD138 CD56	CD15 CD30
Mutation	Mature naïve B-cell IgM & IgD (MD)	t(8;14) C-myc (Overexpression of c-myc oncogene promotes cell growth) GCBs "germline center blast"	t(14;18) BCL-2 Centrocyte cells	Plasma cells	
Features	-Moderate lymphadenopathy and splenomegaly. - required for diagnosis: 1-Lymphocytosis (>5,000): <i>إذا أقل من ٥٠٠٠ ما تسميه CLL أبدأ!</i> 2-"soccer ball"=condensed chromatin. 3-"smudge cells" (dead cells) Why? Fragile.	 <i>(غدة كغدة البعير)</i> Morphology: 1-BMA: vacuolated cytoplasm. 2-Biopsy: "starry sky" (Macrophages engulfing the apoptotic cells)	-Follicular pattern - Presented as: 1-Lymphadenopathy (100%). 2-splenomegaly (80%). 3-BM involvement (60%). 4-blood involvement (40%).	Malignant B neoplasm characterized by a triad of abnormalities: 1- Accumulation of plasma cells in the bone marrow. 2- Lytic Bone lesions. 3- Production of a monoclonal immunoglobulin (Ig) or Ig fragments.	- presence of few large binucleated cells (Reed-Sternberg) surrounded by reactive cells (lymphocytes, plasma cells, eosinophils) - Involving cervical lymph nodes in young adults (most often)
Notes	- The most common adult leukemia - M>W - Complications: 1-Hypo-gammaglobulinemia: <u>Infection is the most common cause of death.</u> 2-Autoimmune hemolytic anemia. 3-Transformation to large cell lymphoma (Richter's syndrome) "is the transformation of CLL into aggressive lymphoma, most commonly diffuse large B-cell lymphoma DLBCL"	- Fastest growing tumor and highly aggressive with extremely short doubling time (24 hrs). - Respond to chemotherapy: Cure rate = 90% at early Phase. WHY? <i>Because it is hunger cells so it will eat chemotherapy and die immediately.</i> <i>"في البداية هي مرة خطيرة و very aggressive ال cure rate عالي جدا"</i> - Types : 1- Endemic: "affects the jaw" chronic malaria and EBV In equatorial Africa. 2- Sporadic: "affects GIT". 3-Immuno-deficiency associated: HIV infection or the use of immunosuppressive drugs.	- Most common type of "indolent" lymphoma Incurable also (opposite to Burkitt's) <i>تشغل بهدوء بس انها ما تستجيب للعلاج عكس ال burkitts.</i> - Transformation to aggressive lymphoma (DLBCL) can occur.		