



- **Hodgkin’s lymphoma: is divided to:**

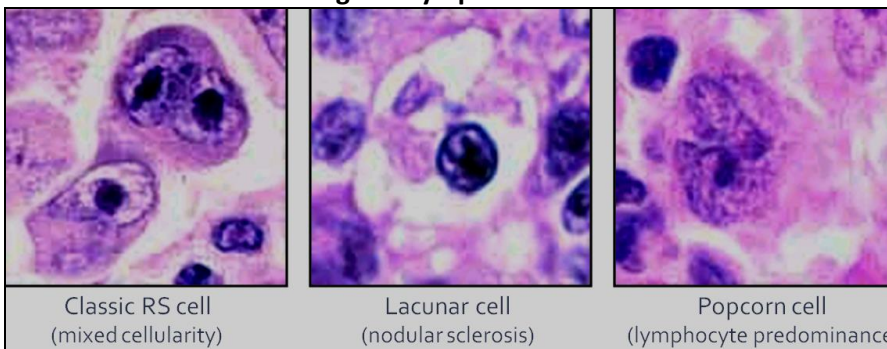
- **Classical Hodgkin: which further includes:**
  - ✓ Nodular sclerosis.
  - ✓ Mixed-cellularity.
  - ✓ Lymphocyte-rich.
  - ✓ Lymphocyte-depleted.
- **Lymphocyte predominant Hodgkin.**

- **Sings and symptoms of Hodgkin’s lymphoma:**

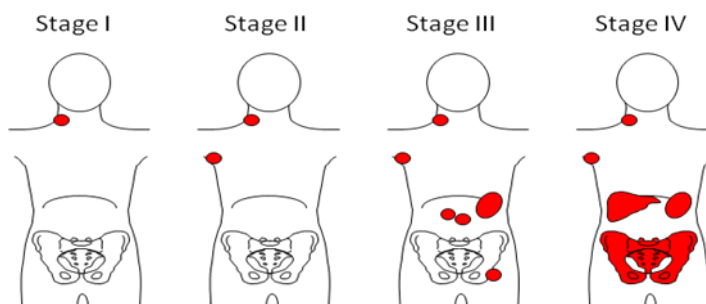
- Lymph node enlargement (usually cervical or mediastinal).
- Systemic “B” symptoms are common (fever, night sweats and weight loss).
- Pain on drinking alcohol.
- **Pel-Ebstein fever:**
  - ✓ Relapsing (مُنْتَكِس), high-grade fever (38-40C) with a periodicity of 7-10 days. Note that the fever spikes abrupt (increases all of a sudden) in onset and resolution.
- There will be T-cell mediated immunodeficiency making the patient prone to infection (ex. Herpes zoster, mycobacterium or fungus).

- **Diagnosis of Hodgkin’s lymphoma:**

- Fine needle aspiration is not sufficient to make the diagnosis so excisional biopsy of a lymph node is done (استئصال الغدة اللمفاوية).
- **RS-cell and its variant is seen in Hodgkin’s lymphoma:**



- **Staging of Hodgkin’s lymphoma (Ann Arbor staging):**



- **Treatment and prognosis:**

Stage	Treatment	Overall 5 year survival
I & II	ABVD* x 2-4 and radiation	80-90%
III & IV	ABVD x 6-8	70-80%

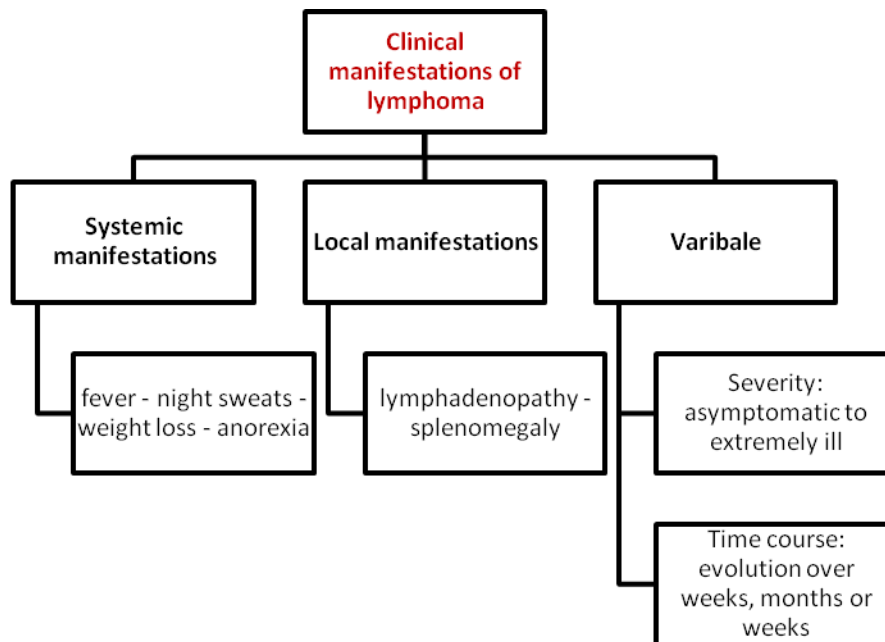
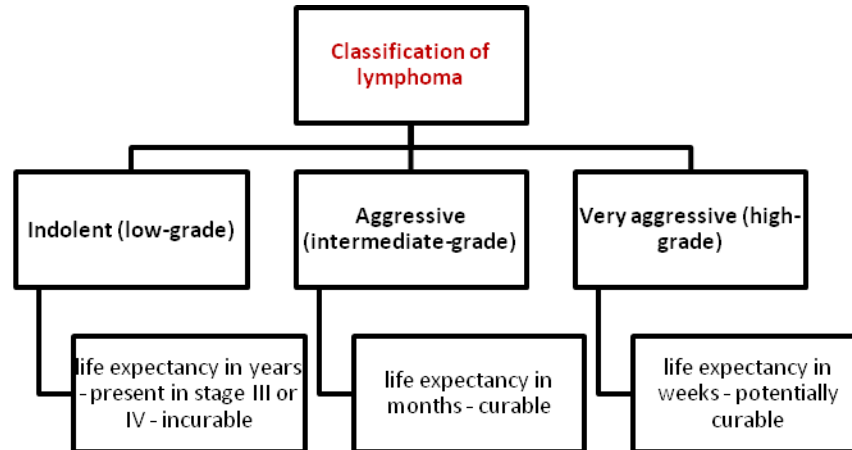
- **Late complications of Hodgkin’s lymphoma:**

- There will be a high incidence of second malignancies (ex. Leukemia in the first 10 years).
- **Treatment related complications:**
  - ✓ Cardiomyopathy.
  - ✓ Constrictive pericarditis after radiotherapy to the mediastinum.
  - ✓ Hypothyroidism after irradiation of the neck.
  - ✓ Infertility after the use of alkylating agents.



**Non-Hodgkin's lymphoma:**

- **Burden and epidemiology:**
  - ✓ Incidence rates have risen especially in developed countries.
  - ✓ Males > females
  - ✓ It is the 5<sup>th</sup>-6<sup>th</sup> most common cause of cancer death in US.
  - ✓ The types of non-Hodgkin's lymphoma reflect the developmental stages of lymphocytes.
  - ✓ 85% are of B-cell origin, the rest are T or null cells.
- **Etiology:**
  - ✓ Immune-suppression: increasing age, AIDS and organ transplant.
  - ✓ Viral causes: EBV, HIV and hepatitis C virus (HCV).
  - ✓ Chronic inflammation and antigenic stimulation: H.pylori and Chlamydia.



- **Diagnosis of non-Hodgkin's lymphoma:**
  - ✓ Excisional biopsy of the lymph node.
  - ✓ Immunohistochemistry.
  - ✓ Flow cytometry:
    - \* CD19, CD20 for B-cell lymphomas.
    - \* CD3, CD4, CD8 for T-cell lymphomas.
  - ✓ Chromosome changes:
    - \* t(14;18) in follicular lymphoma (resulting in BCL-2 oncogen).
    - \* t(8;14), t(8;22), t(2;8) in Burkitt's lymphoma (resulting in C-MYC oncogen).
- **Staging: same as Hodgkin's lymphoma.**

**Note: some types of lymphoma were mentioned in clinical slides. Information about them were written in pathology note. There is no need to mention them**