

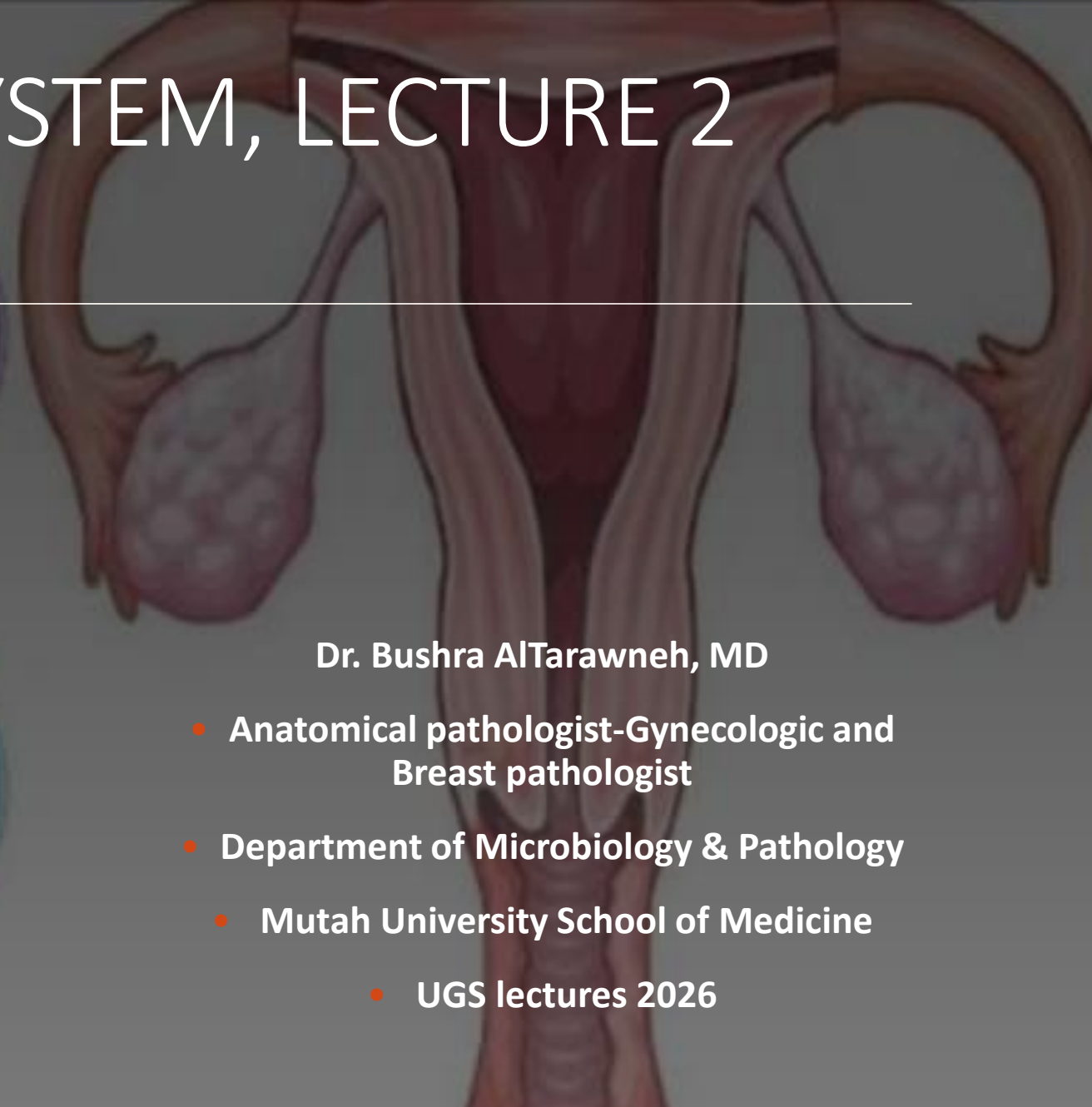
FEMALE GENITAL SYSTEM, LECTURE 2

Cervix

Internal
genital
organs

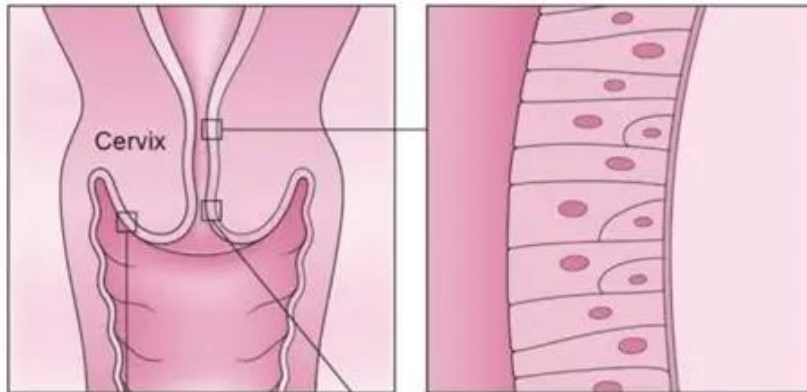
Uterus

Fallopian
tubes



Dr. Bushra AlTarawneh, MD

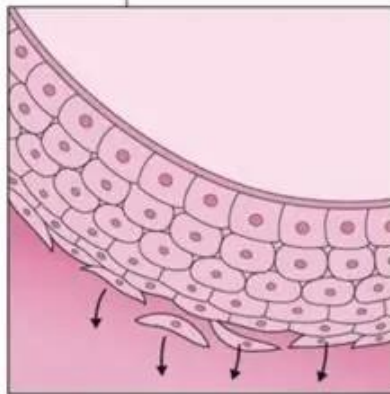
- Anatomical pathologist-Gynecologic and Breast pathologist
- Department of Microbiology & Pathology
- Mutah University School of Medicine
 - UGS lectures 2026



Endocervix -
Soft, **columnar glandular cells**

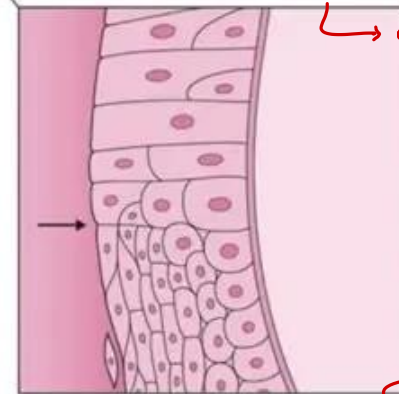
adino carcinoma

more Susbtoble for injury + ulceration



Ectocervix -
Hard, **squamous cells**

Squamous cell carcinoma

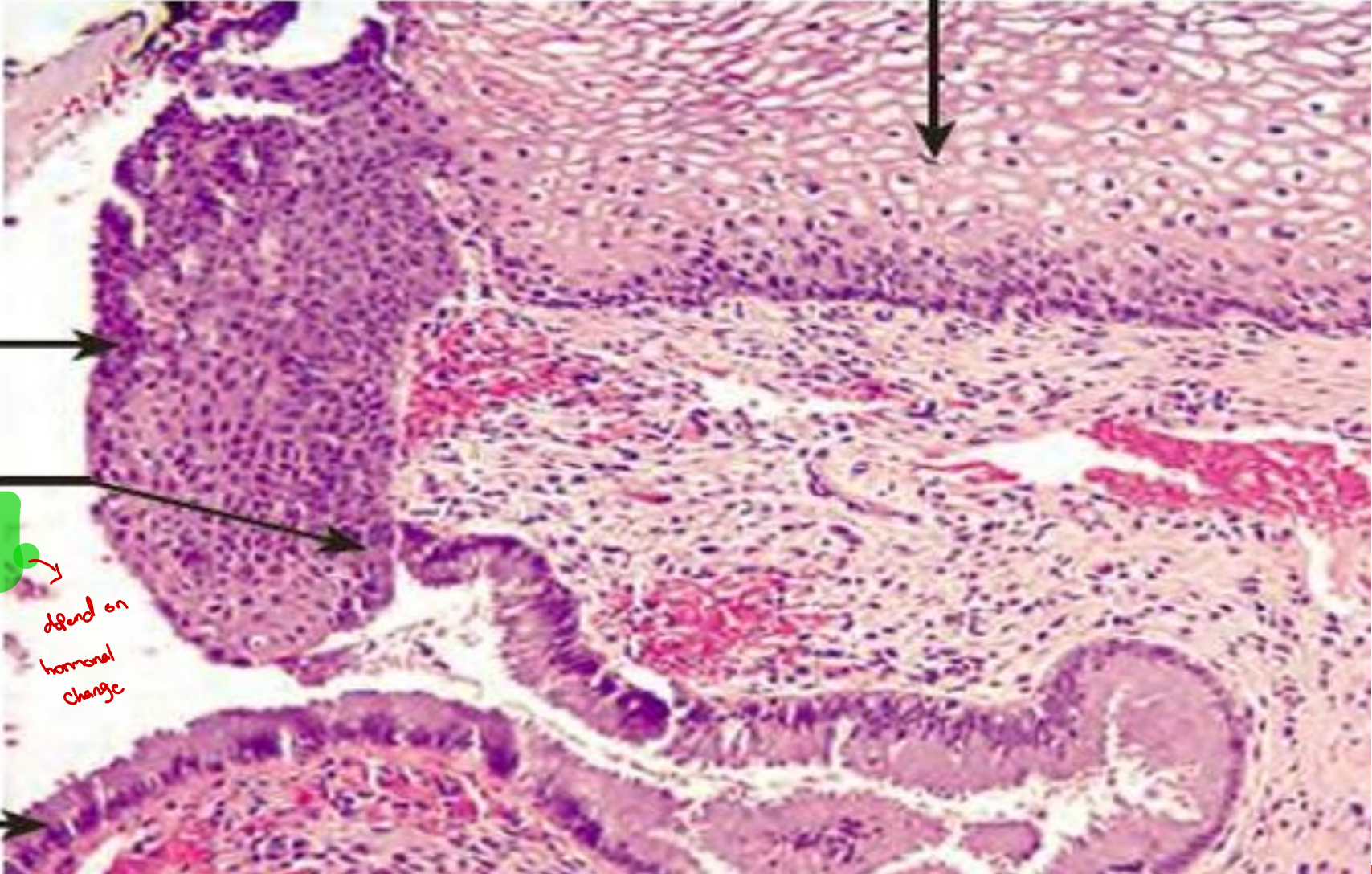


Endocervical canal -
Transition zone where glandular cells transform into **squamous cells**

Weak Point

المنطقة
بغير دبقها
Cancer

Mature squamous cells



Immature squamous cells

important area

Squamocolumnar junction

depend on hormonal change

Columnar glandular cells

Ecto

Endo

CERVICAL CARCINOMA

to detect
early lesion

- Was the most common cancers in women worldwide.
Was → Papanicolaou (Pap) smear → the most successful cancer-screening test ever developed.

عمر 20 → Survival less than 6 months

قلته مني الحالات

- Most common form is SCC 75%, adenoCa. & adenosquamous (mixed) Ca. 20%, & neuroendocrine Ca 5%.

follow by →

- All are ass with HPV infection.

- Peak at 45 years, 10-15 years after detection of their precursors: cervical intraepithelial neoplasia (CIN)

انها من قبل العمر 35

Progress for cancer

HPV → in situ → carcinoma

Cervical intraepithelial neoplasia (CIN)

Dysplasia in epithelial cells, graded depending on the extent of epithelial involvement:

-CIN I: Mild dysplasia (involves a third or less of thickness)

-CIN II: moderate dysplasia (involves 2/3 of thickness).

↳ a typical cell at lower surface

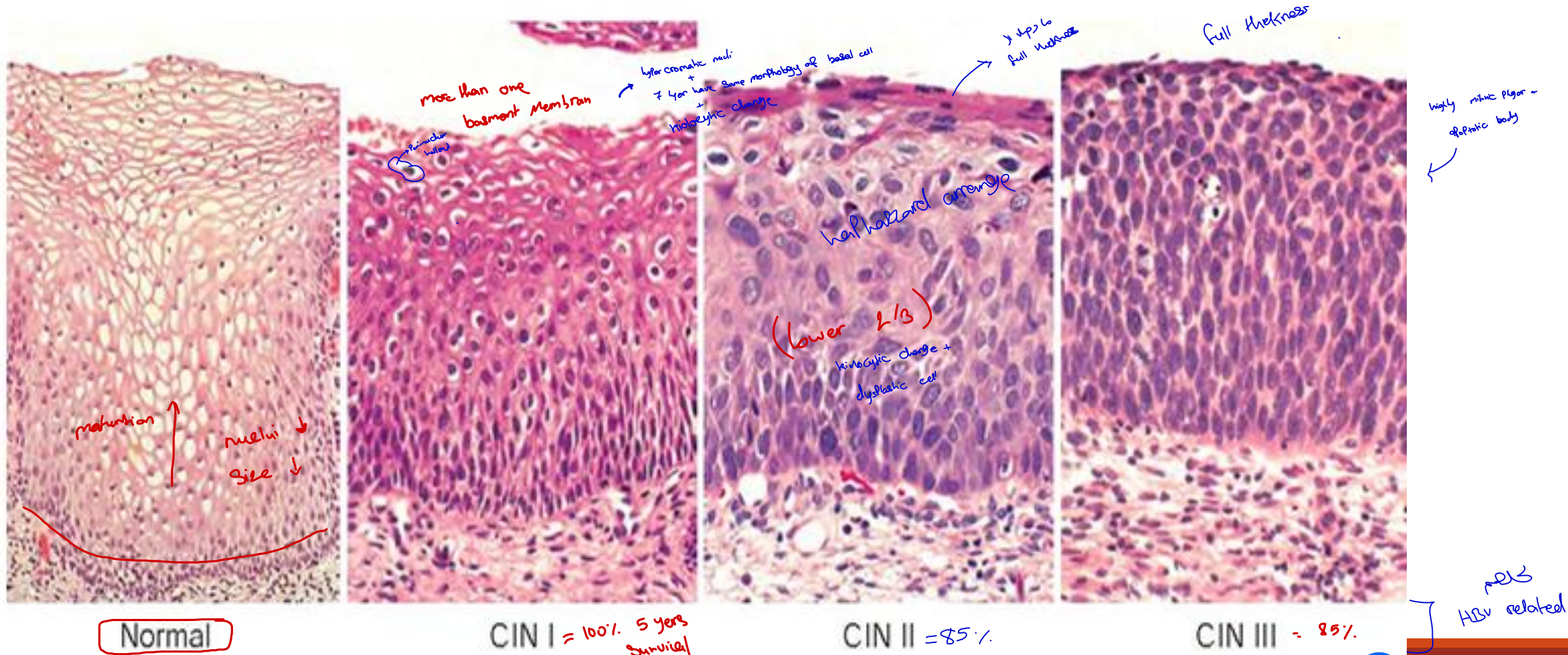
*-CIN III: severe dysplasia (involves full thickness) → carcinoma in situ *

1/3
2/3
full

CIN → Dysplasia: nuclear enlargement, hyperchromasia (darker), coarse chromatin, & variation in nuclear size & shape

Biopsy

CIN → mitotic figer above basement Membran



CIN and Pap smear!

- 1- Non invasive
- 2- low cost
- 3- No need to anesthesia
- 4- fast
- 5- un painful

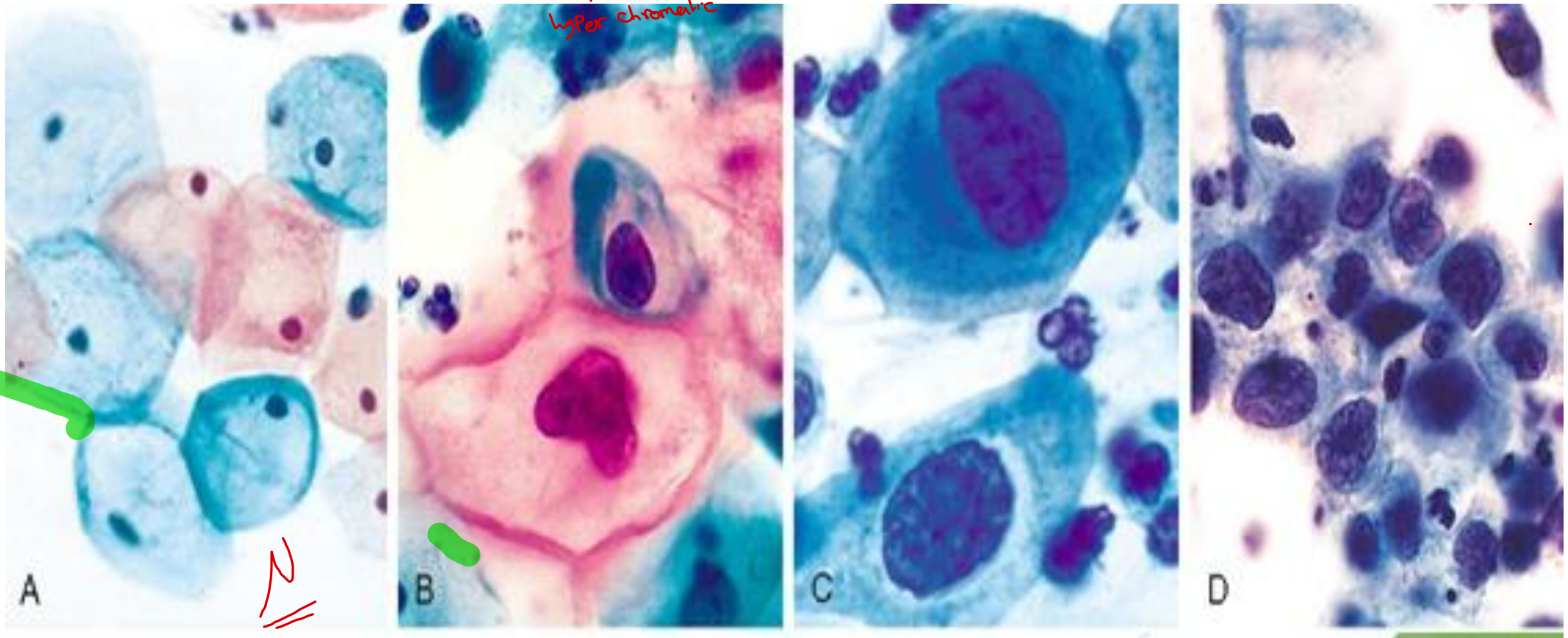
HPV positive
Ingen of virus
healthy Cervix → one area
transformation zone

- Cervical precancerous lesions are associated with abnormalities in cytologic preparations → Can be detected long before abnormality is visible on gross inspection.
- Cells are scraped from the transformation zone & examined microscopically
- Pap screening has dramatically lowered the incidence of invasive cervical tumors & it is no longer ranks among the top 10 causes of cancer deaths in U.S. women.

CIN → Dysplasia: nuclear enlargement, hyperchromasia (darker), coarse chromatin, & variation in nuclear size & shape

ما سبق التالى

Pre nuclear
hallow
+
hyper chromatic



CIN → SIL (squamous intraepithelial lesion)

The decision with regard to patient management is **two-tiered** (observation versus surgical treatment) → Three-tier classification system → recently simplified to a two-tiered system → **Low grade squamous intraepithelial lesion (LSIL)** & **high grade squamous intraepithelial lesion (HSIL)**

Dysplasia/Carcinoma in Situ	Cervical Intraepithelial Neoplasia (CIN)	Squamous Intraepithelial Lesion (SIL), Current Classification
Mild dysplasia	CIN I	Low-grade SIL (LSIL)
Moderate dysplasia	CIN II	High-grade SIL (HSIL)
Severe dysplasia	CIN III	High-grade SIL (HSIL)
Carcinoma in situ	CIN III	High-grade SIL (HSIL)

CIN, Cervical intraepithelial neoplasia; SIL, squamous intraepithelial lesion.

CIN– Pathogenesis & epidemiology

- Peak incidence at 30s (SCC at 45 years of age).
- HPV can be detected in nearly all CIN and invasive carcinoma. (mostly subtype 16 & 18). *
- These subtypes show a propensity to integrate into host genome, & express large amounts of E6 & E7 proteins → inhibit tumor suppressor genes p53 & RB, respectively.
E6 *E7*
- HPV vaccine is recently introduced → very effective in preventing HPV infections → expected to lower frequency of genital warts & cervical Ca.

بظرفی نسی
6.11.16.18

CIN– Clinical

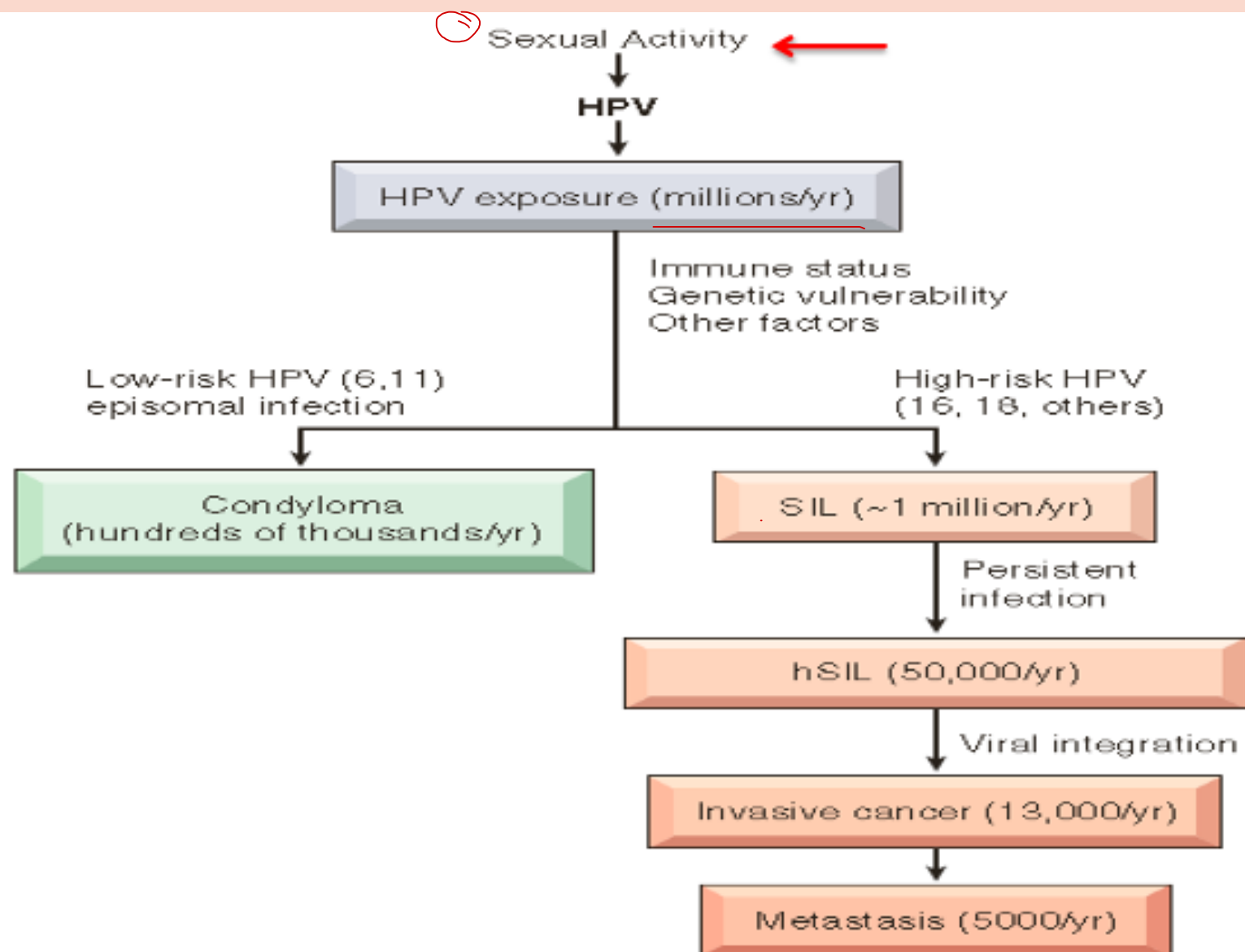
-SIL is asymptomatic and comes to clinical attention through an abnormal Pap smear result.

-Women with biopsy-documented LSIL are managed with careful observation.

-HSILs & persistent LSIL are treated with surgical excision (laser or cone biopsy) & follow up.

Invasive Carcinoma of the Cervix: Clinical

- Progression of SIL to invasive carcinoma is **variable & unpredictable**. (**smoking** is a risk factor).
- **LSIL** → **10%** → **HSIL** → **10%** in ~ **10 years** → **carcinomas**.
Handwritten notes: "عمرز ما چار" (Age matters), "هیلد زبیر زبیر" (High grade), "aggressive" (aggressive)
- Most often is seen in women who have never had a Pap smear or who have not been screened for many years.
- Tx: **Hysterectomy** + **radiotherapy** and **chemotherapy** in **advanced cases** (high stage).
- 5-year survival: **SIL: 100%**; **stage 1: 90%**; **stage 2 82%**; **stage 3: 35%**; & **stage 4: 10%**.



Endocervical Polyp

benign



- Endocervical polyps are benign polypoid masses seen protruding from the endocervical mucosa (sometimes through the exocervix).
- They can be as large as a few centimeters, are soft and yielding to palpation, and have a smooth, glistening surface with underlying cystically dilated spaces filled with mucinous secretions.
- The surface epithelium and lining of the underlying cysts are composed of the same mucus-secreting columnar cells that line the endocervical canal. The stroma is edematous and may contain scattered mononuclear cells.
- Superimposed chronic inflammation may lead to squamous metaplasia of the overlying epithelium and ulcerations.