Histopathological features of HPV infection in the gynecological specimens

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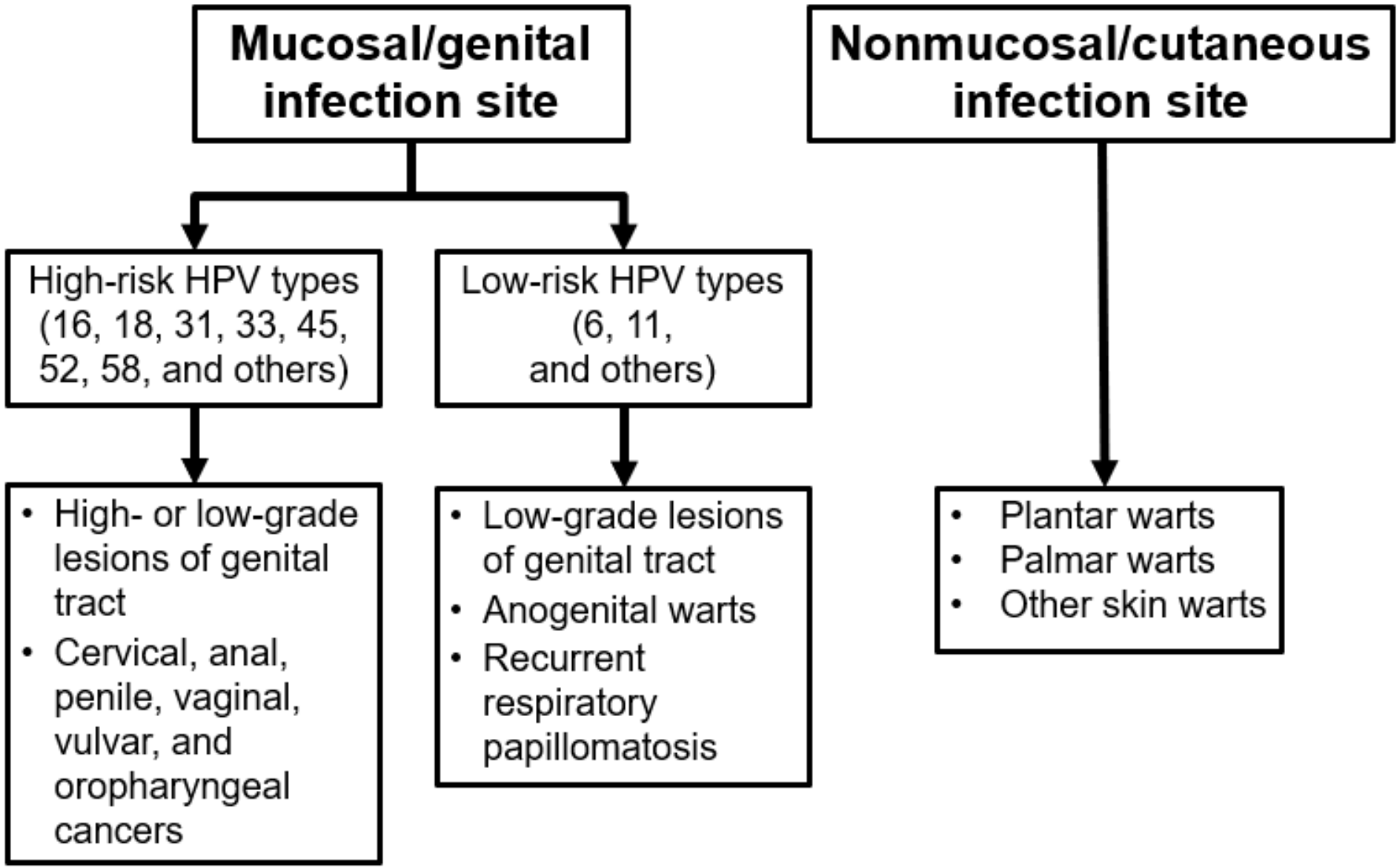
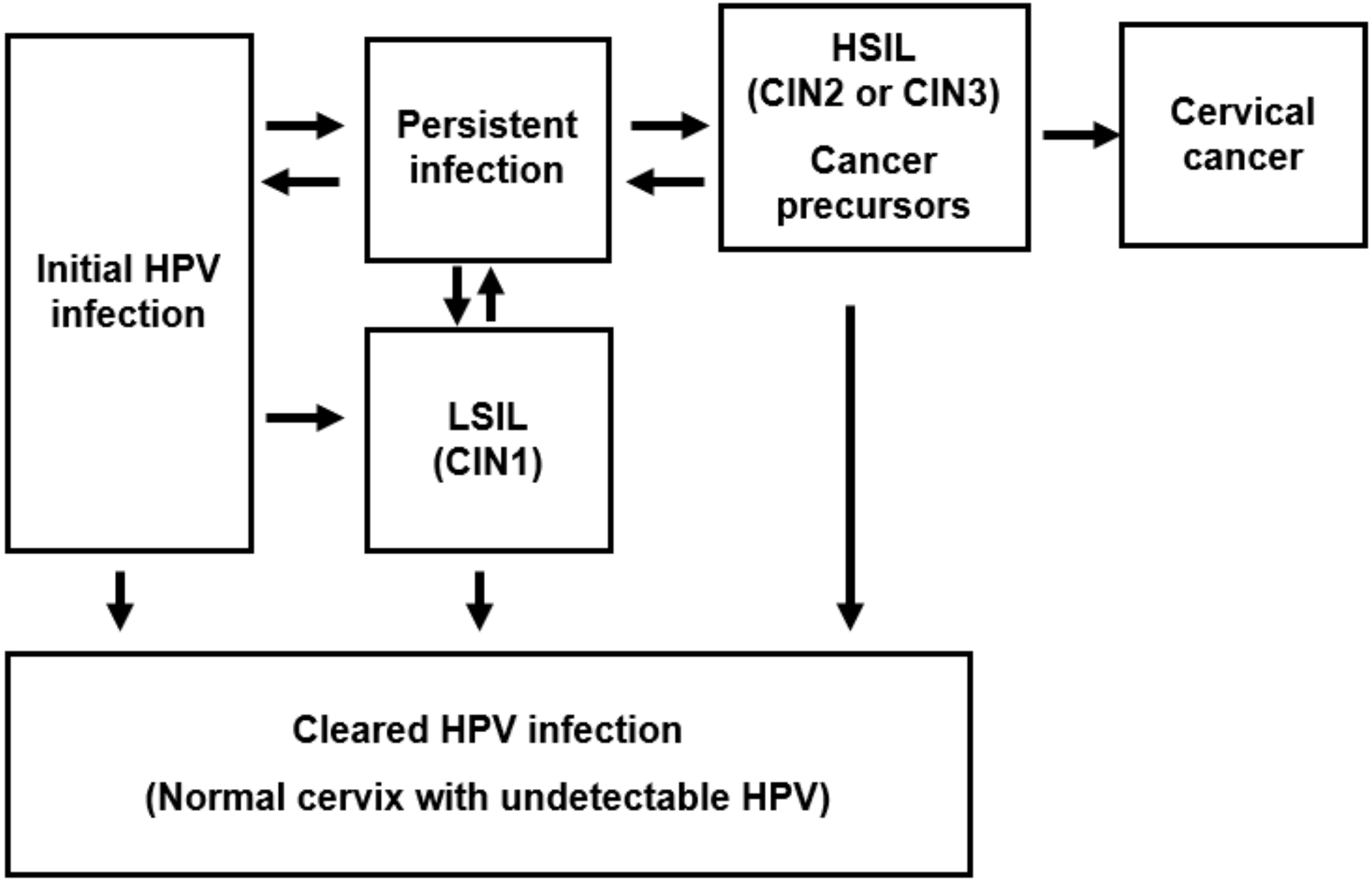
Pathologist

Autumn 2023


Mucosal/genital infection site
Nonmucosal/cutaneous infection site
High-risk HPV types (16, 18, 31, 33, 45, 52, 58, and others)
Low-risk HPV types (6, 11, and others)
• High- or low-grade lesions of genital tract
• Cervical, anal, penile, vaginal, vulvar, and oropharyngeal cancers
• Low-grade lesions of genital tract
• Anogenital warts
• Recurrent respiratory papillomatosis
• Plantar warts
• Palmar warts
• Other skin warts

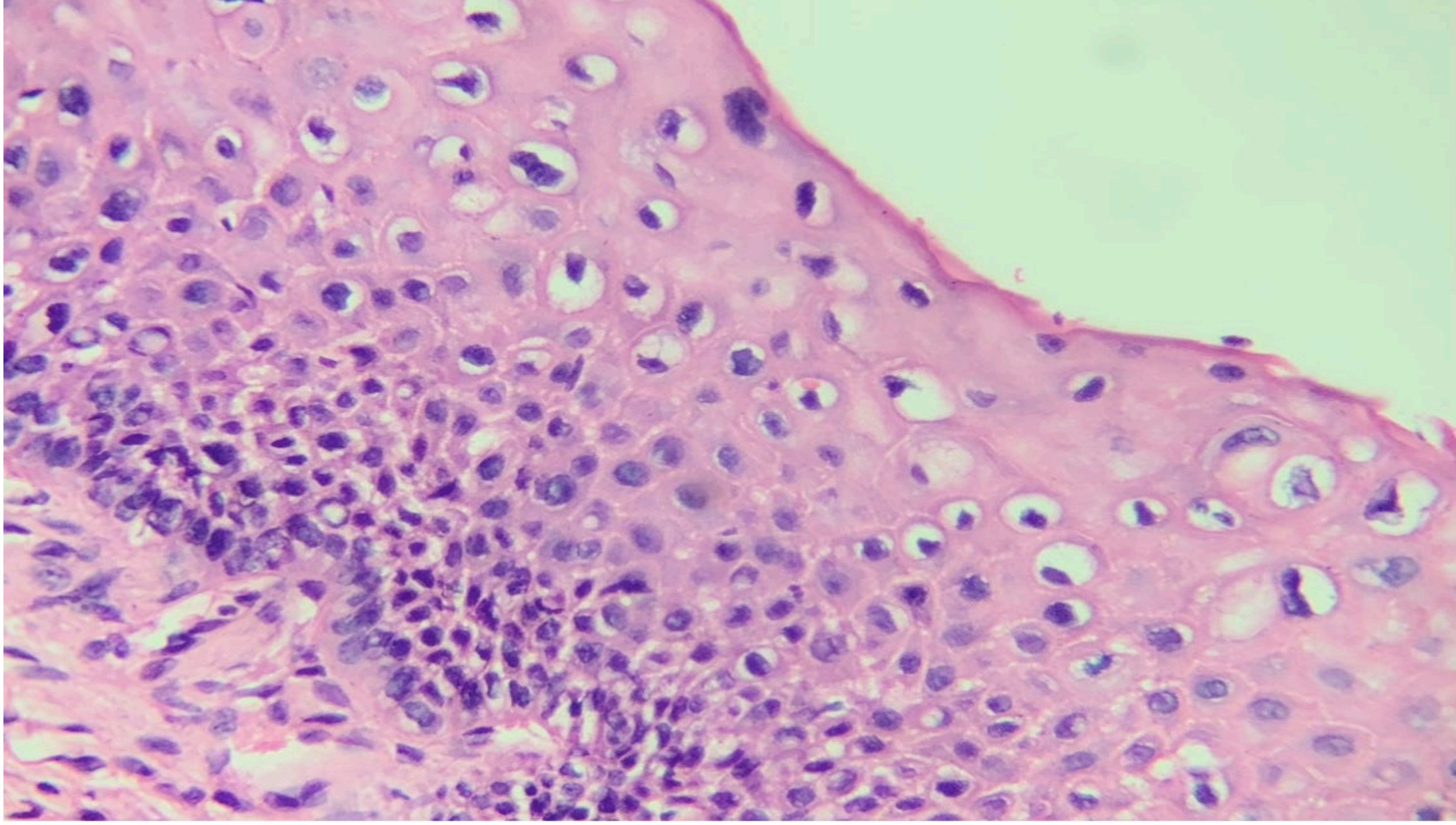

Initial HPV infection
Persistent infection
HSIL (CIN2 or CIN3)
Cancer precursors
Cervical cancer
LSIL (CIN1)
Cleared HPV infection
(Normal cervix with undetectable HPV)

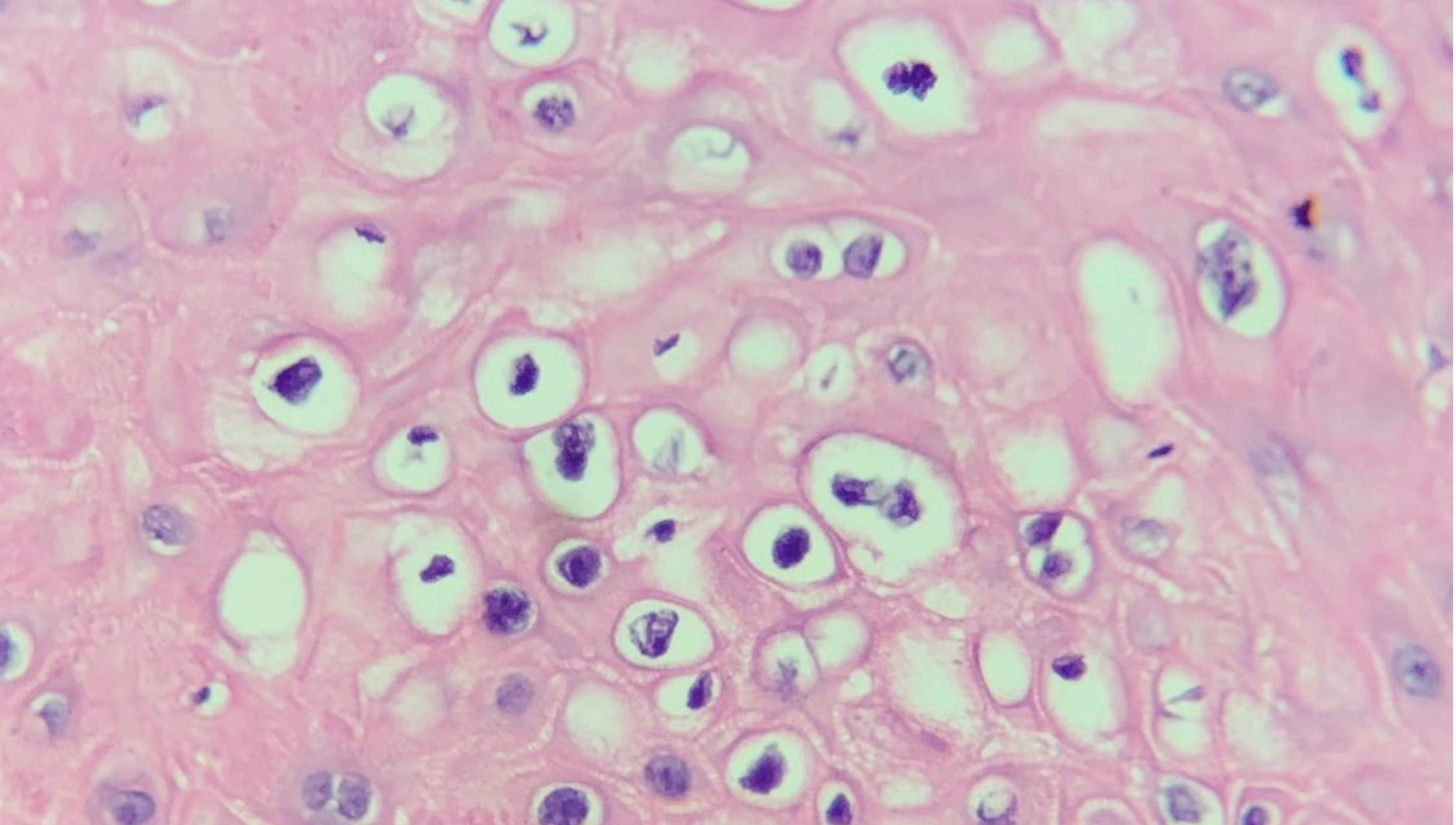
Microscopic (histologic) description

- Diagnosis of squamous intraepithelial lesions is based on:
    - Nuclear atypia: variation in nuclear size and shape (raisinoid), hyperchromasia and coarse chromatin granules
    - N:C ratio

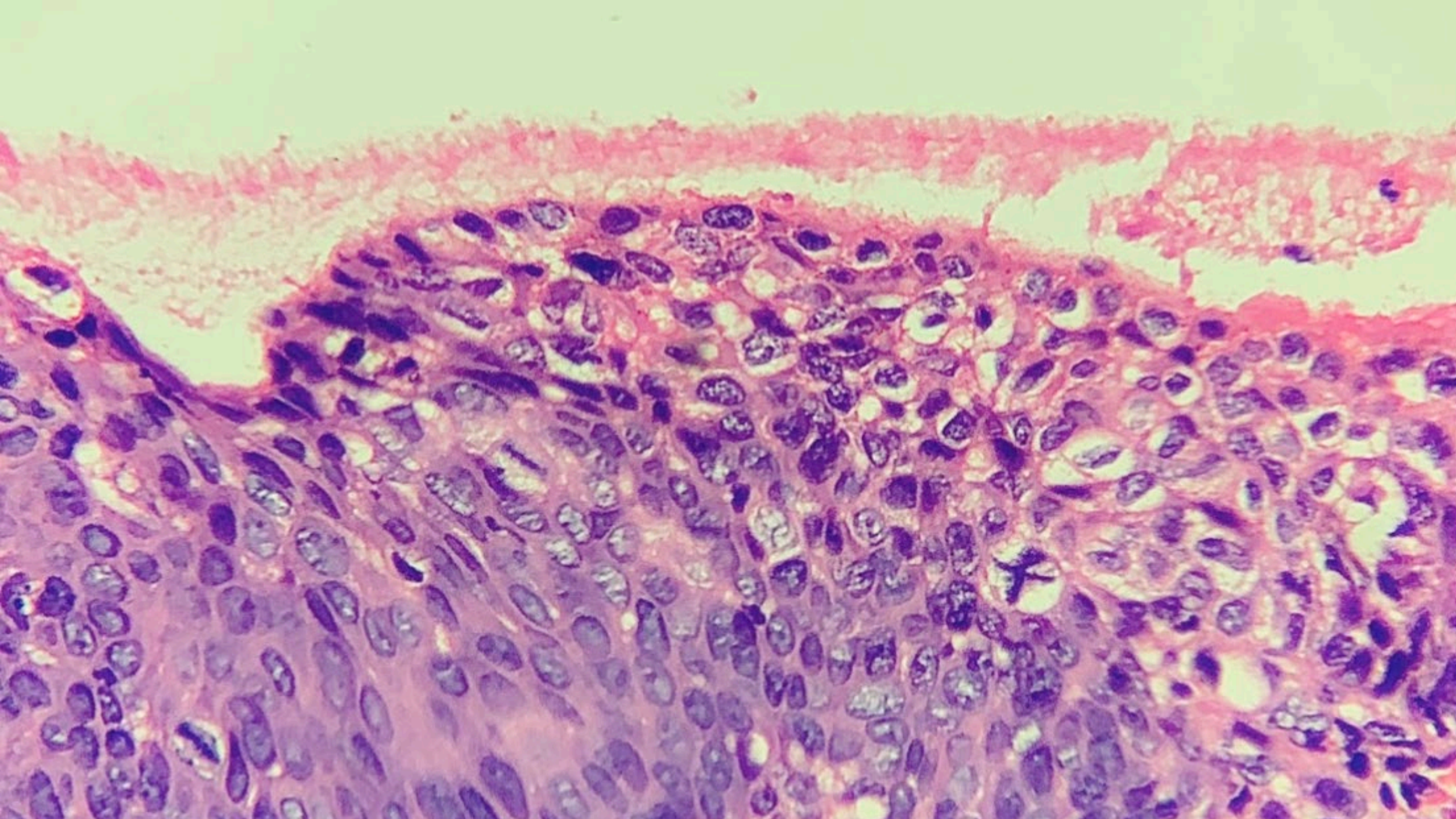
- Low grade dysplasia / koilocytosis / koilocytic changes:
    - Histologically, the changes involve only the lower third of the epithelium or there are koilocytic changes in the upper epithelium (maturation seen)
    - Koilocytes are superficial or intermediate squamous cells with large and irregular, well defined perinuclear halos with a cookie cutter border and cytoplasmic thickening

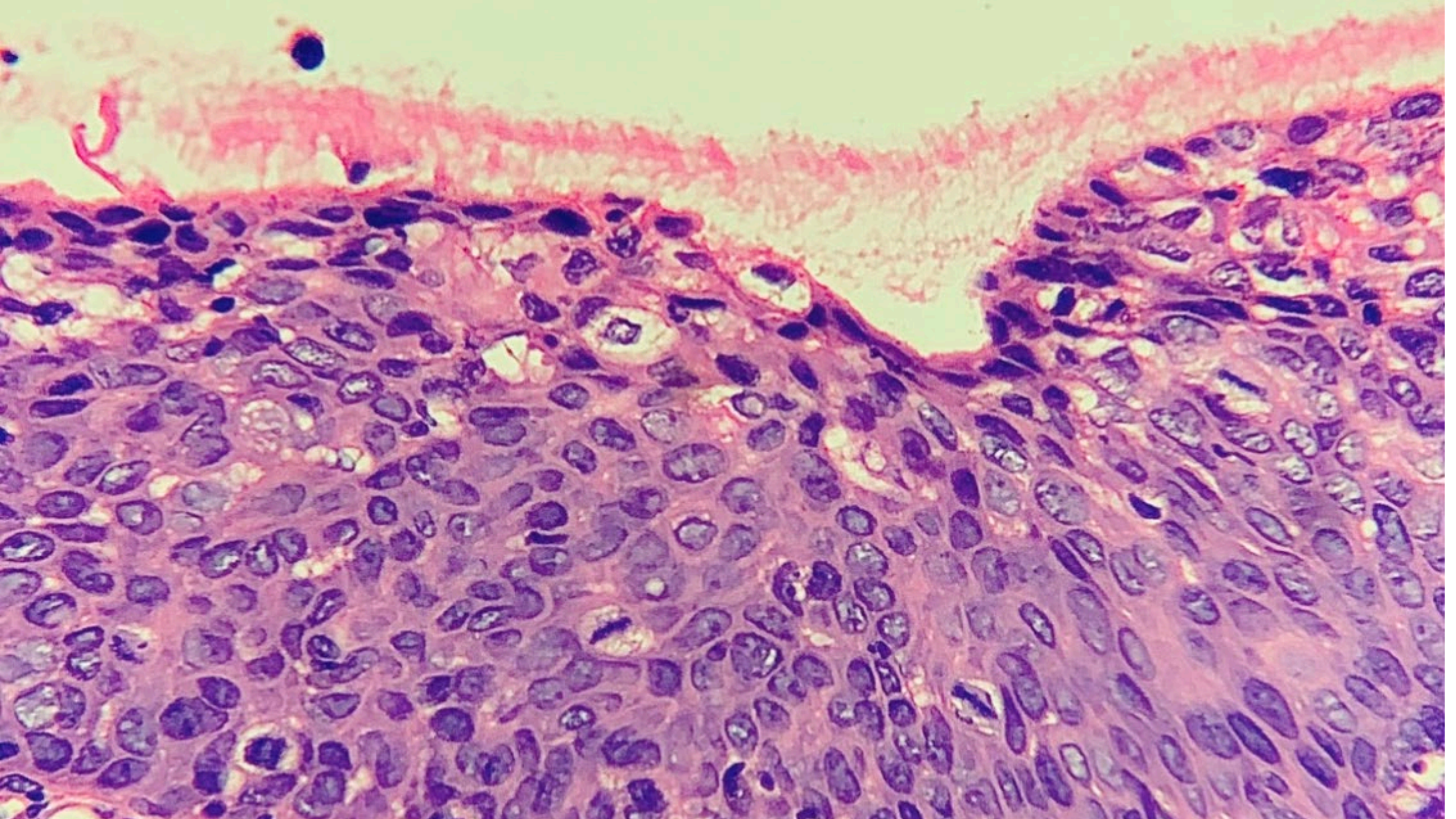
- Bi or multinucleation is often identified
- Nuclei are enlarged (2 - 3 times normal size)
- Nuclear changes are required for diagnosis of koilocytosis

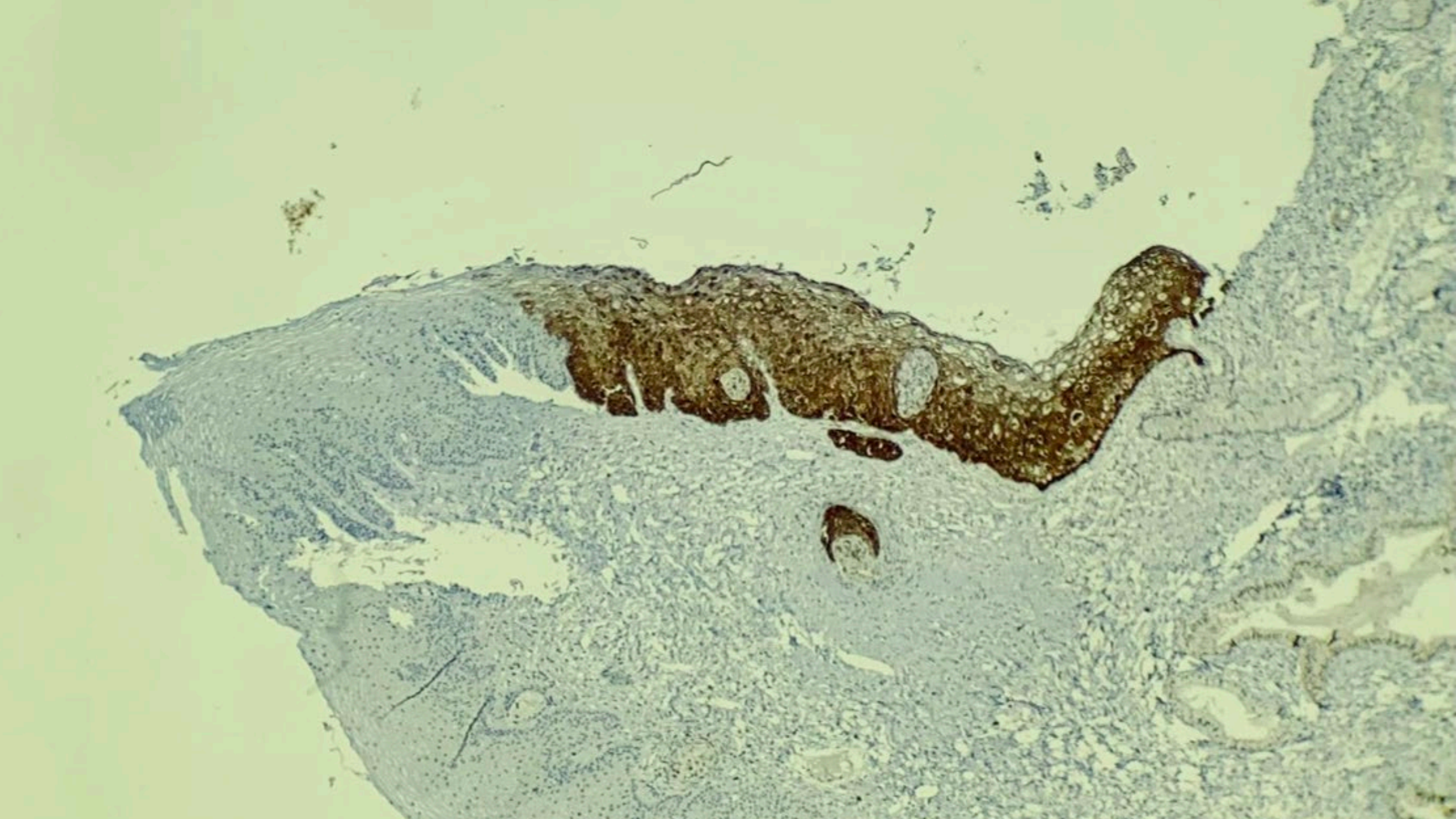


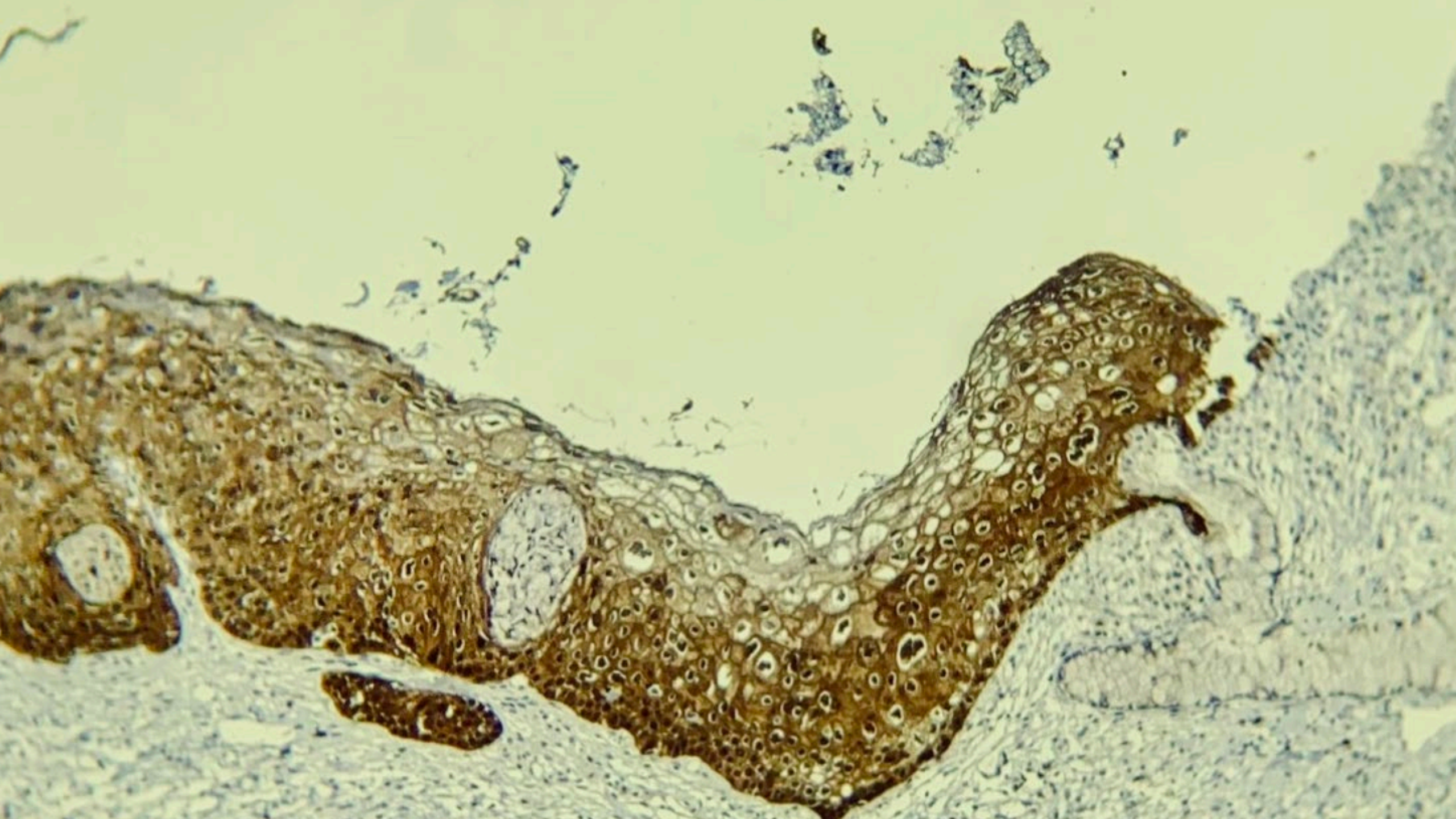


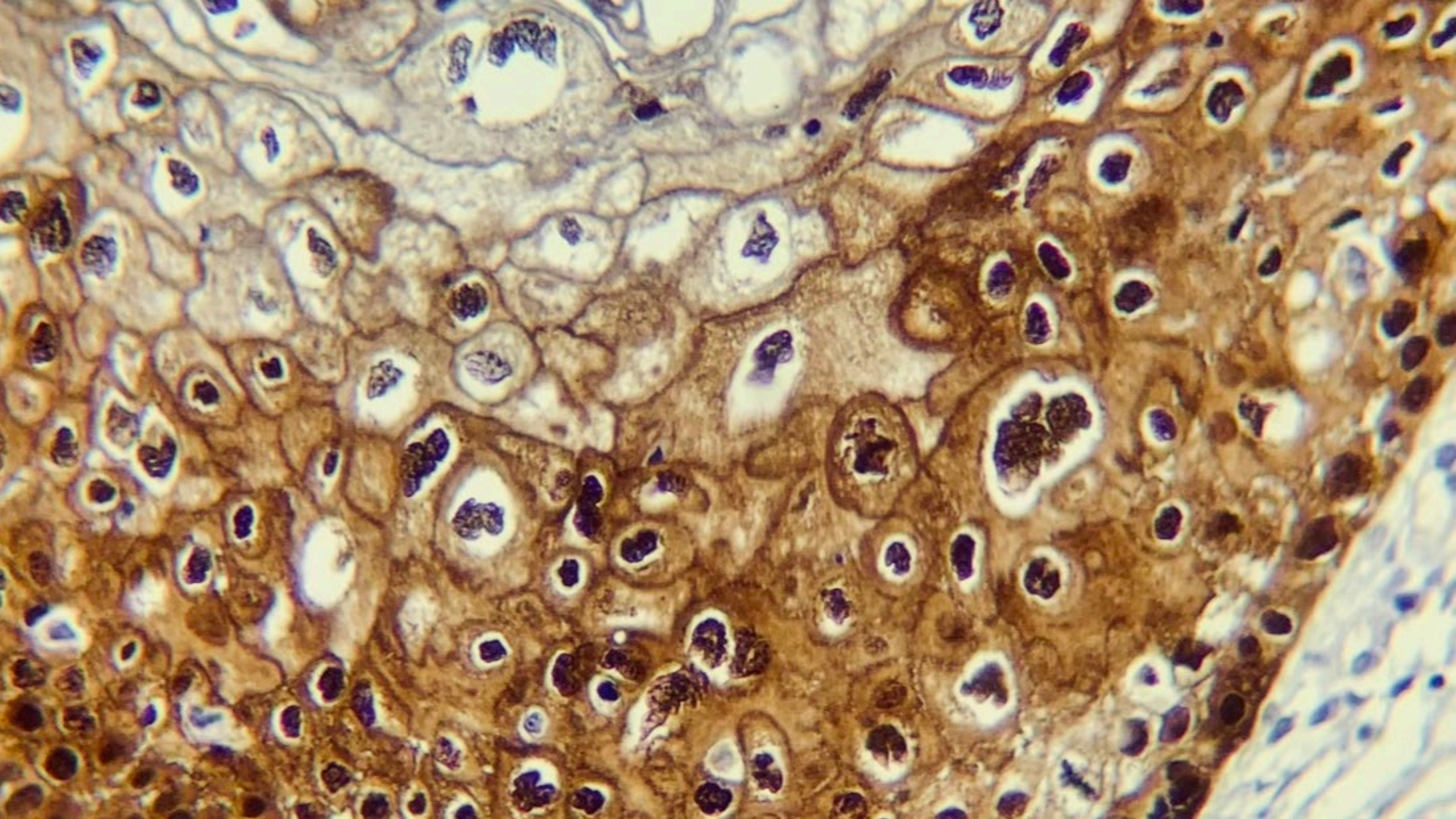
- High grade dysplasia (CIN 2 and CIN 3):
    - Striking nuclear atypia involving all layers of the epithelium
    - Lack of or minimal maturation
    - Nuclear changes include enlargement, membrane irregularities, variable shapes and abnormal chromatin
    - N:C ratio is high

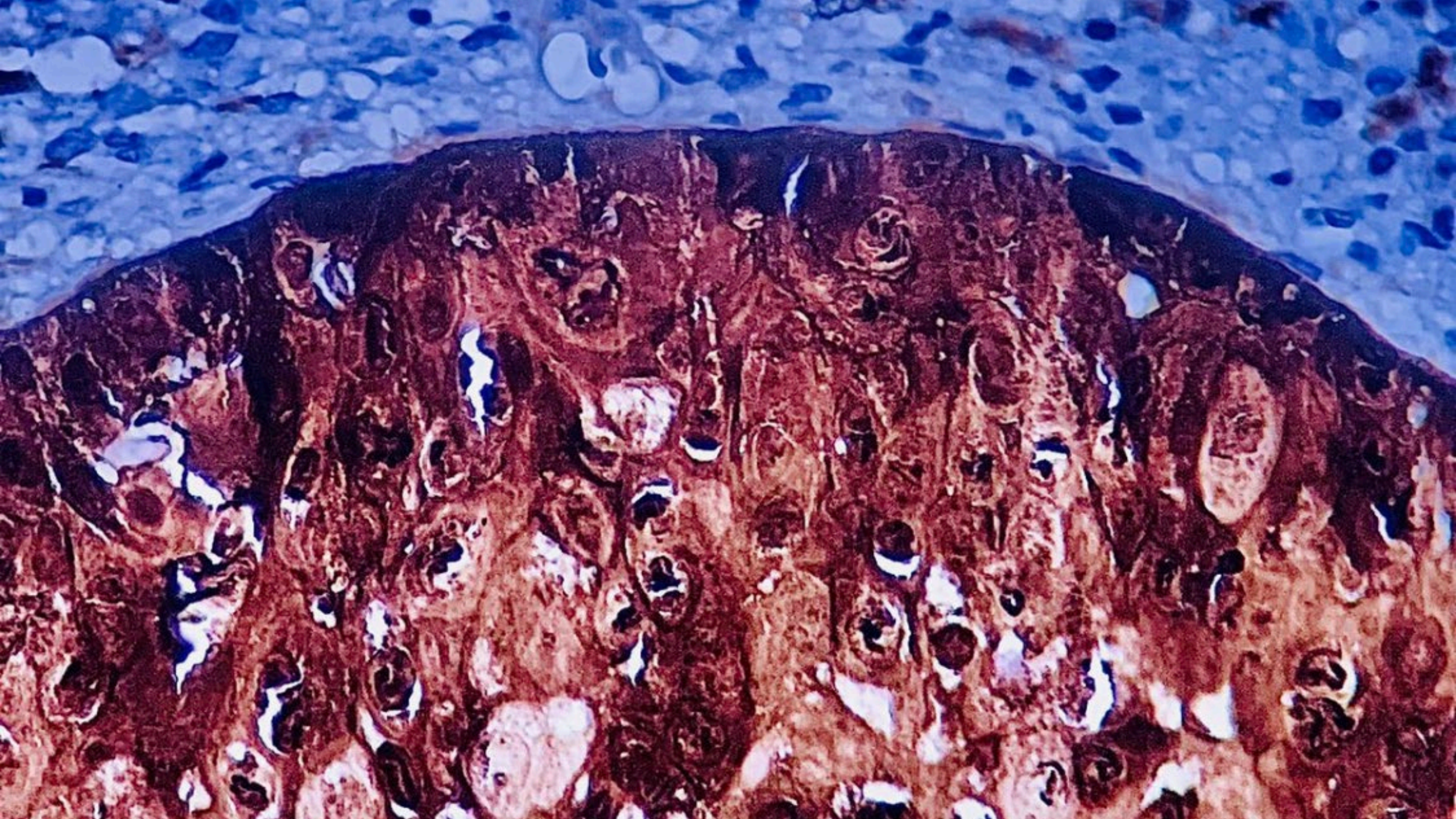


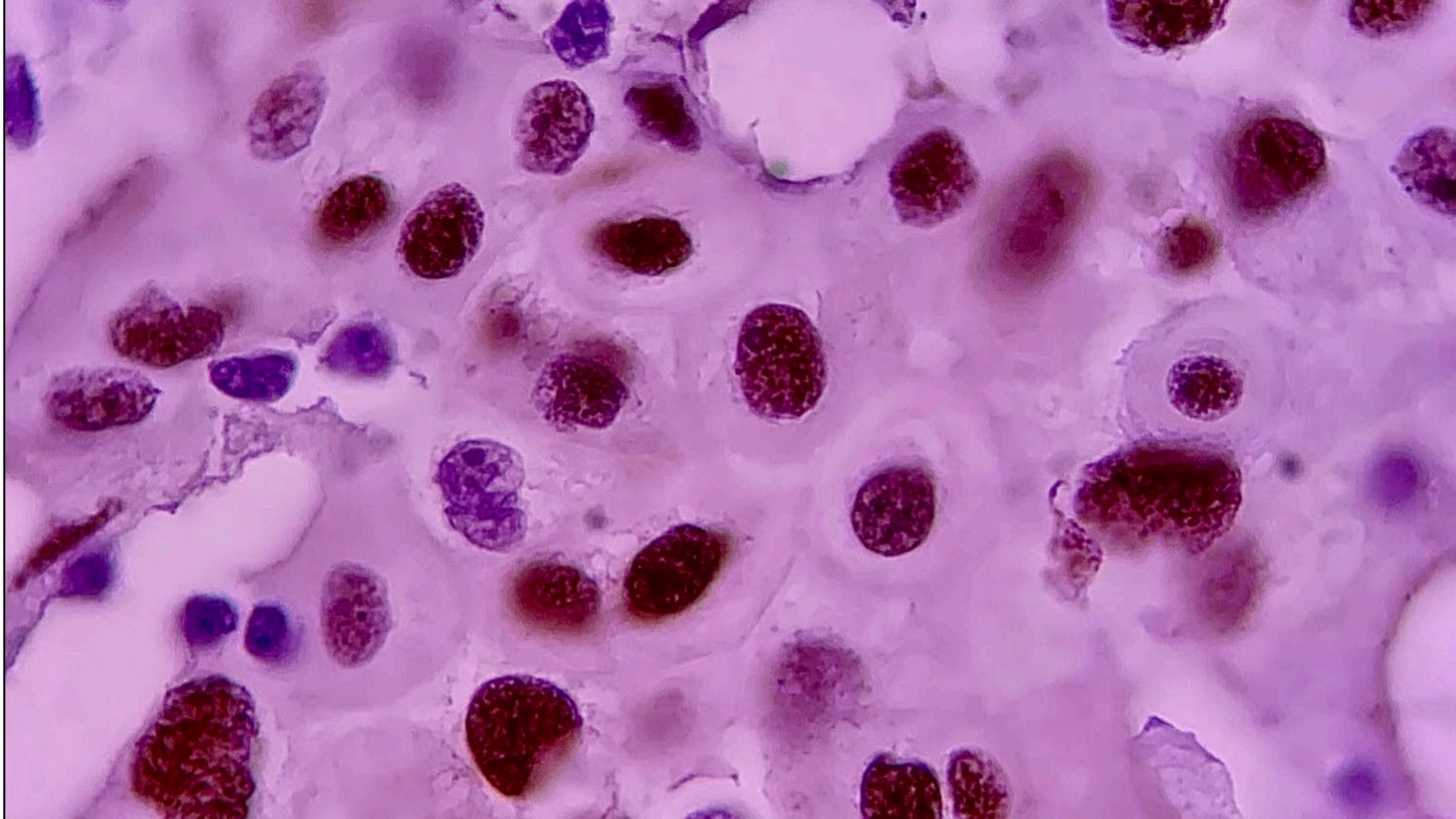












Thanks