

**Adaptáció**  
**Calcifikáció**  
**Kőképződés**

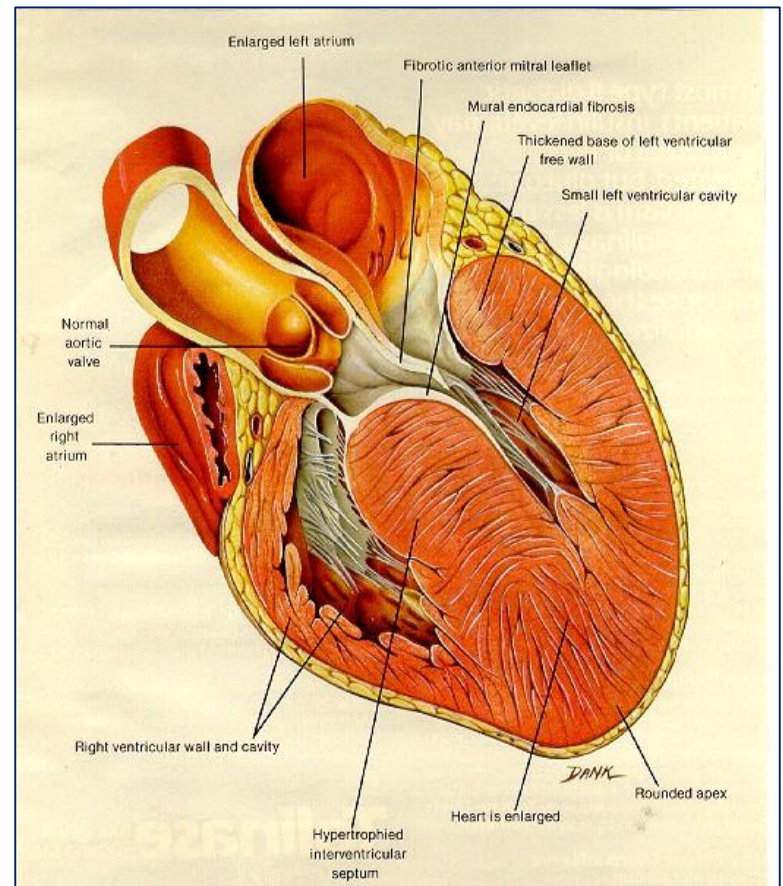
# Hypertrophia (szív)

Szerv-szövet megnagyobbodása, fokozott funkció, a sejtek száma megtartott, de méretük fokozott

Fokozott nyomásra vagy térfogatnövekedésre adott adaptív válaszreakció

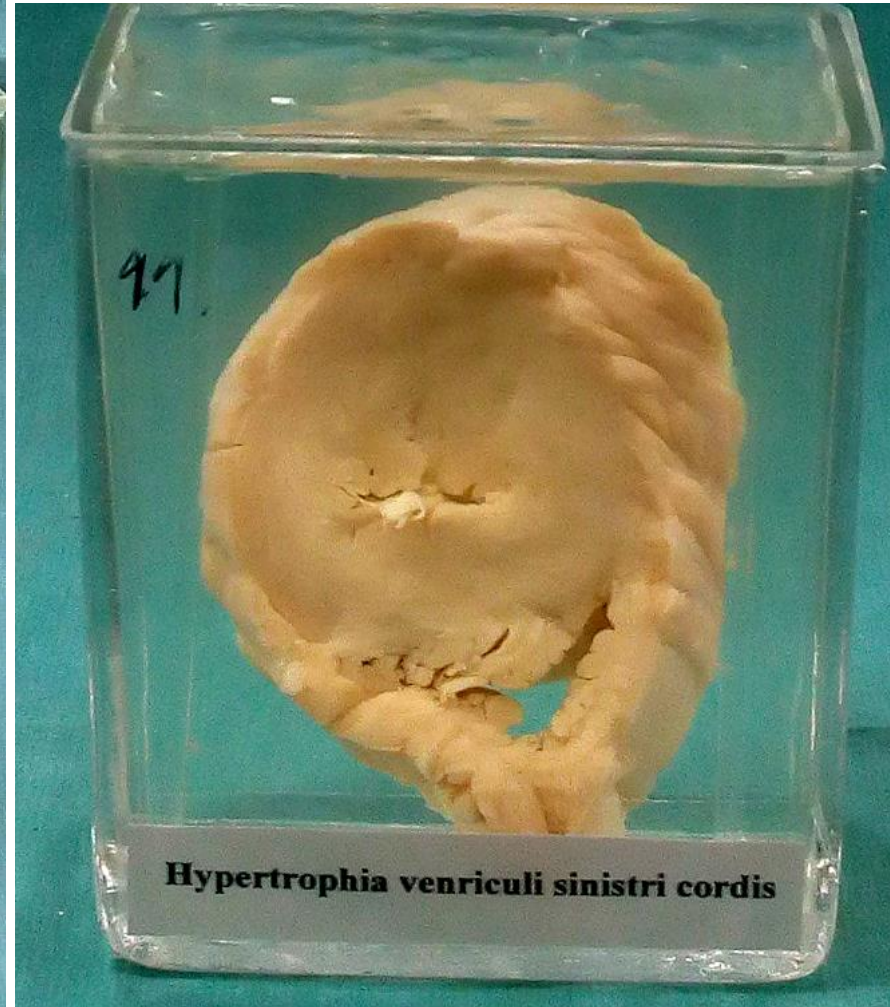
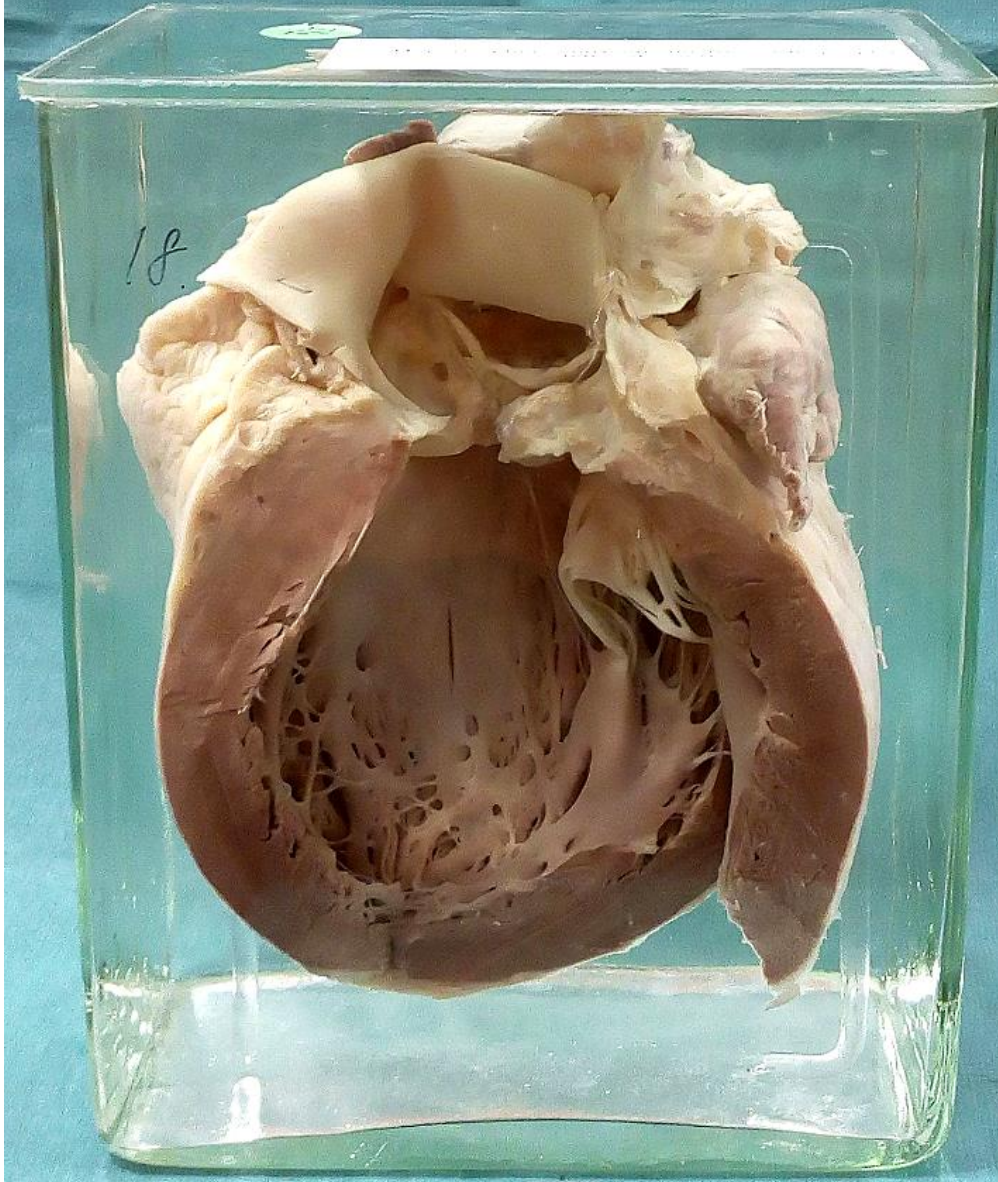
## Okok:

- tartós hypertonia (bármilyen okból)
  - szisztémás vagy pulmonalis -
- mechanikus akadály (billentyű stenosis)
- genetikai háttér
  - sarcomer proteineket érintő mutációk
  - (hypertrophiás cardiomyopathia)





Hypertrophia ventriculi sinistri cordis (2)



hypertrophia ventriculi dextri cordis

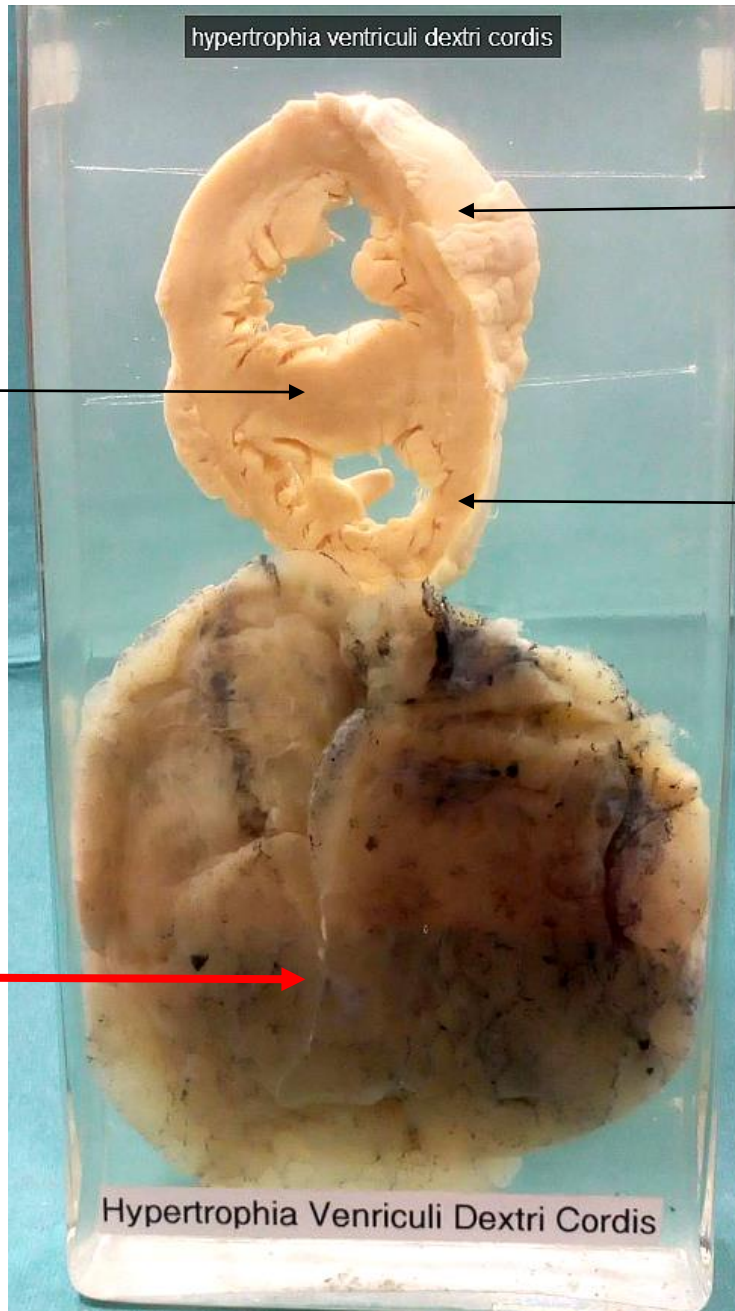
bal kamra

**Septum**

jobb kamra

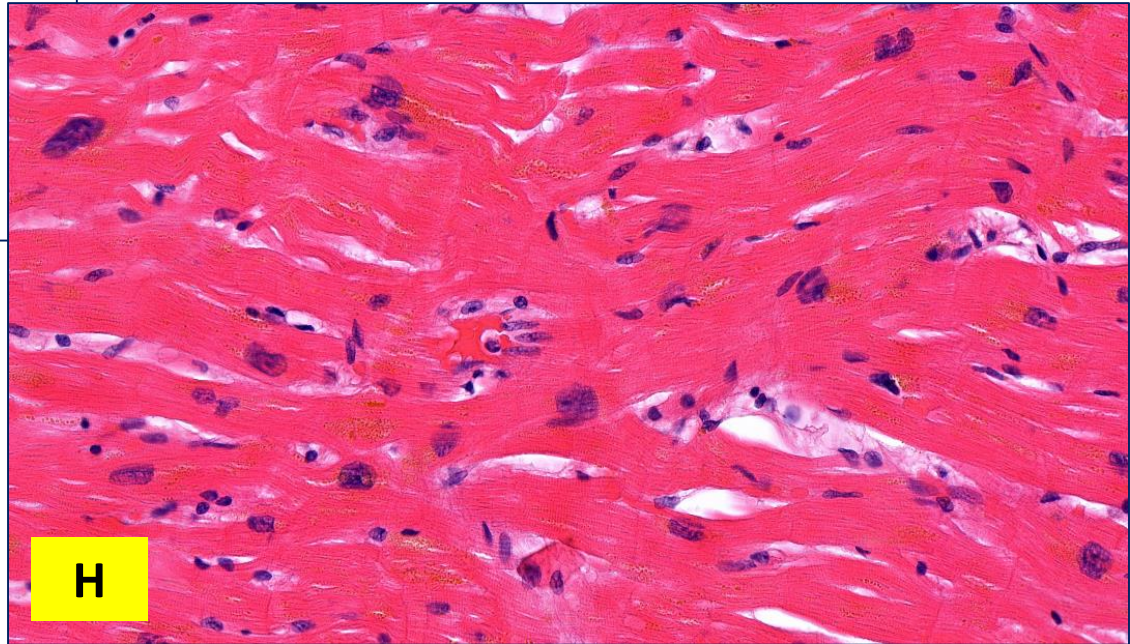
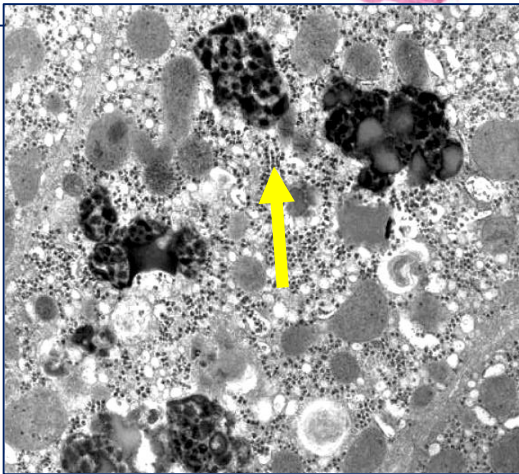
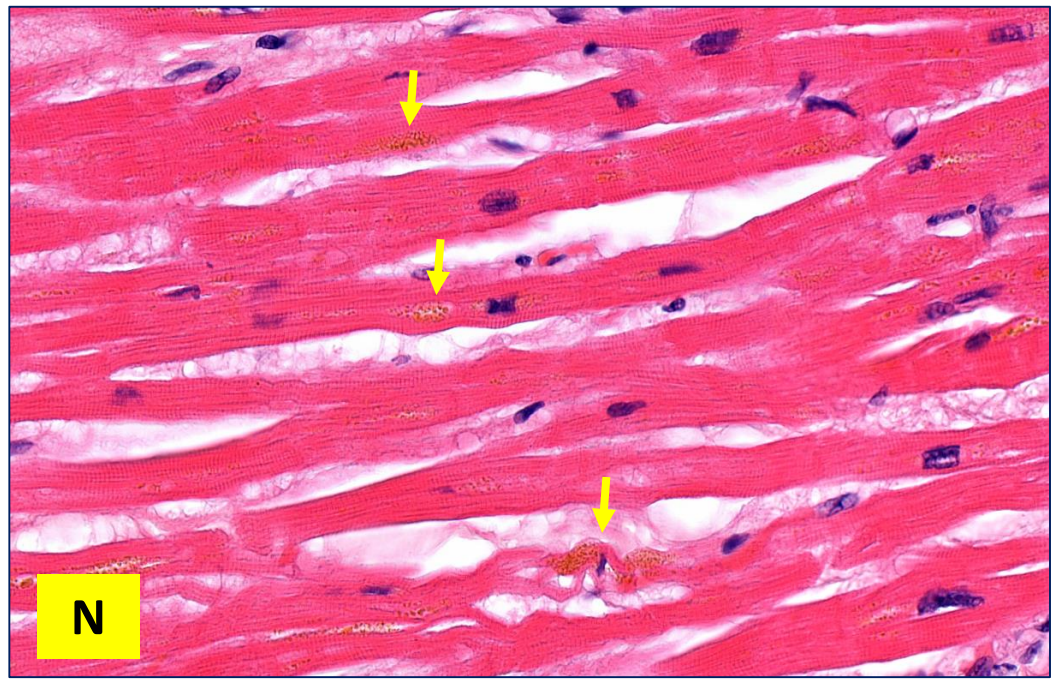
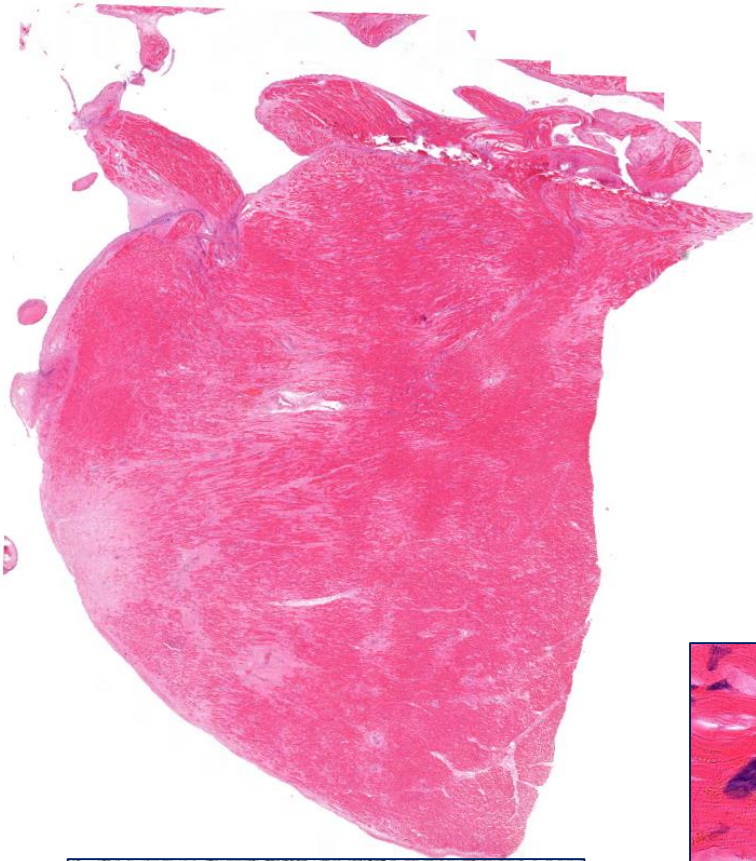
tüdő

Hypertrophia Ventriculi Dextri Cordis

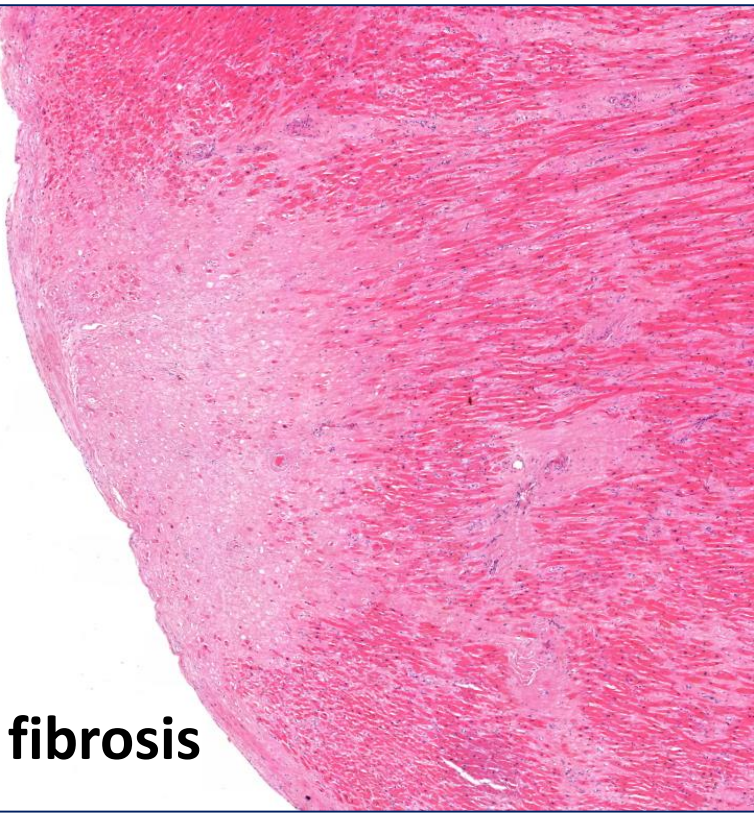
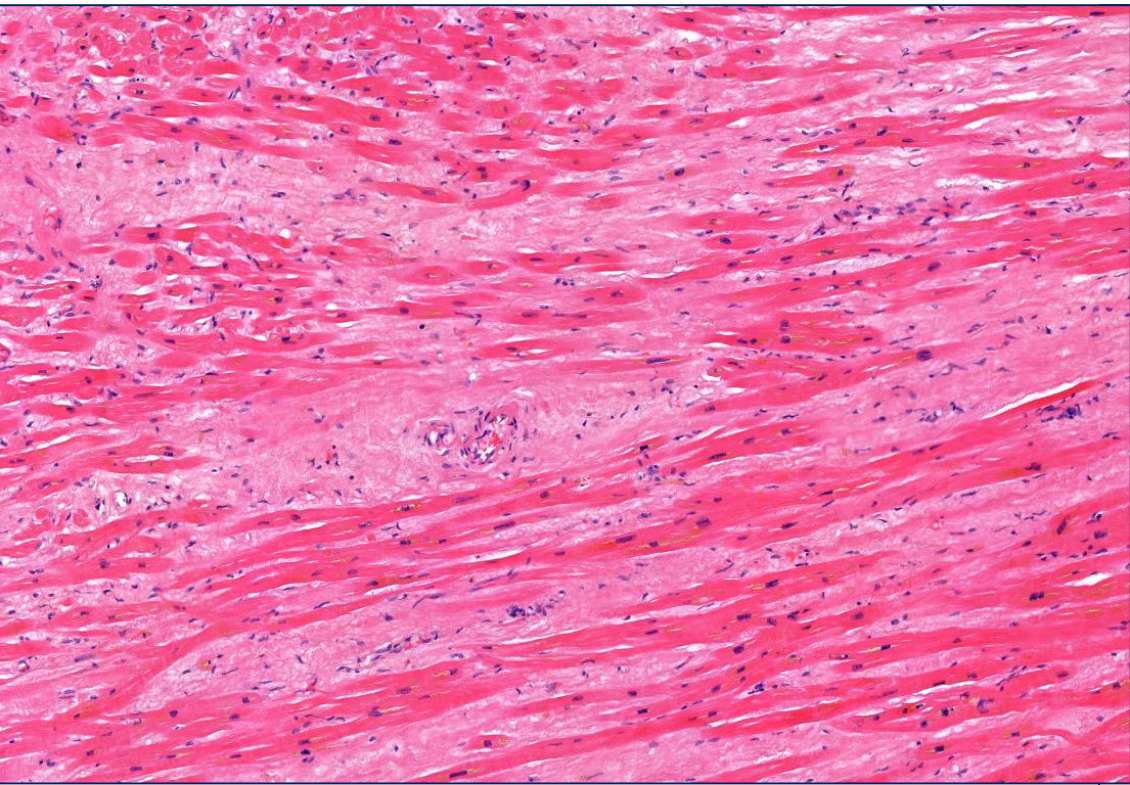




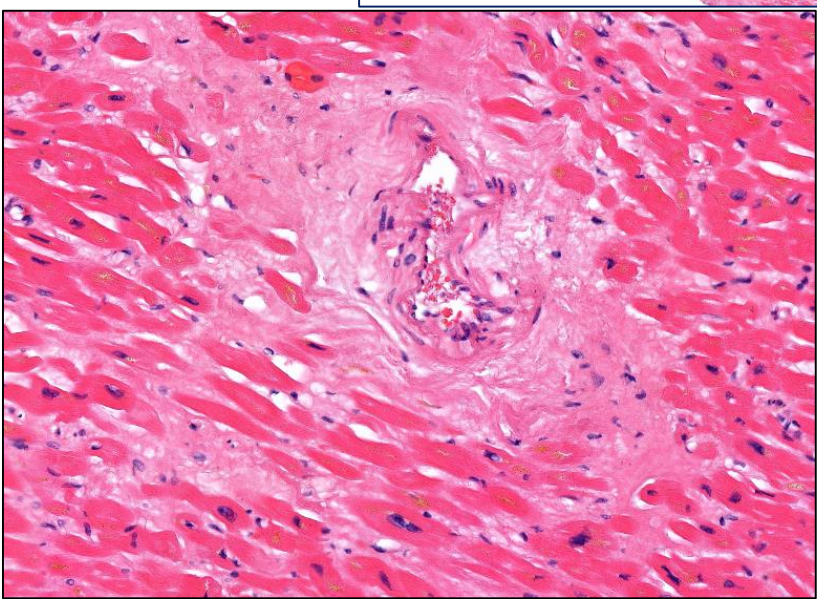
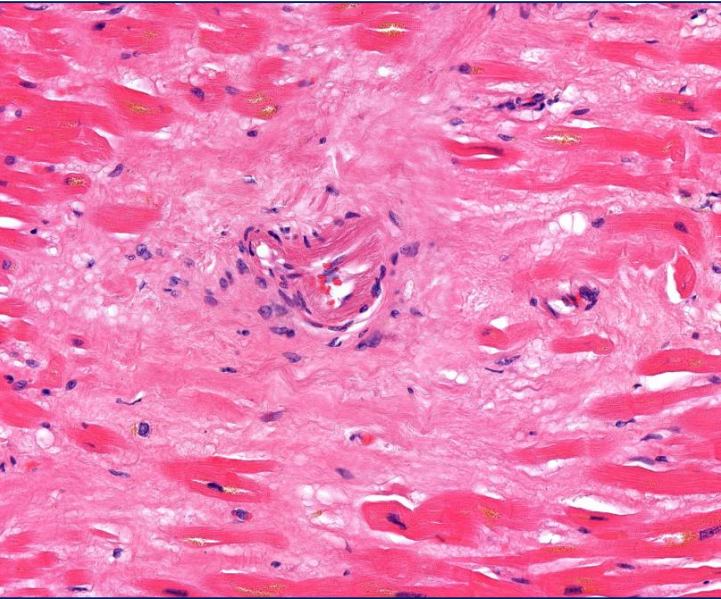
01. Hypertrophia myocardii, CIHD







**fibrosis**



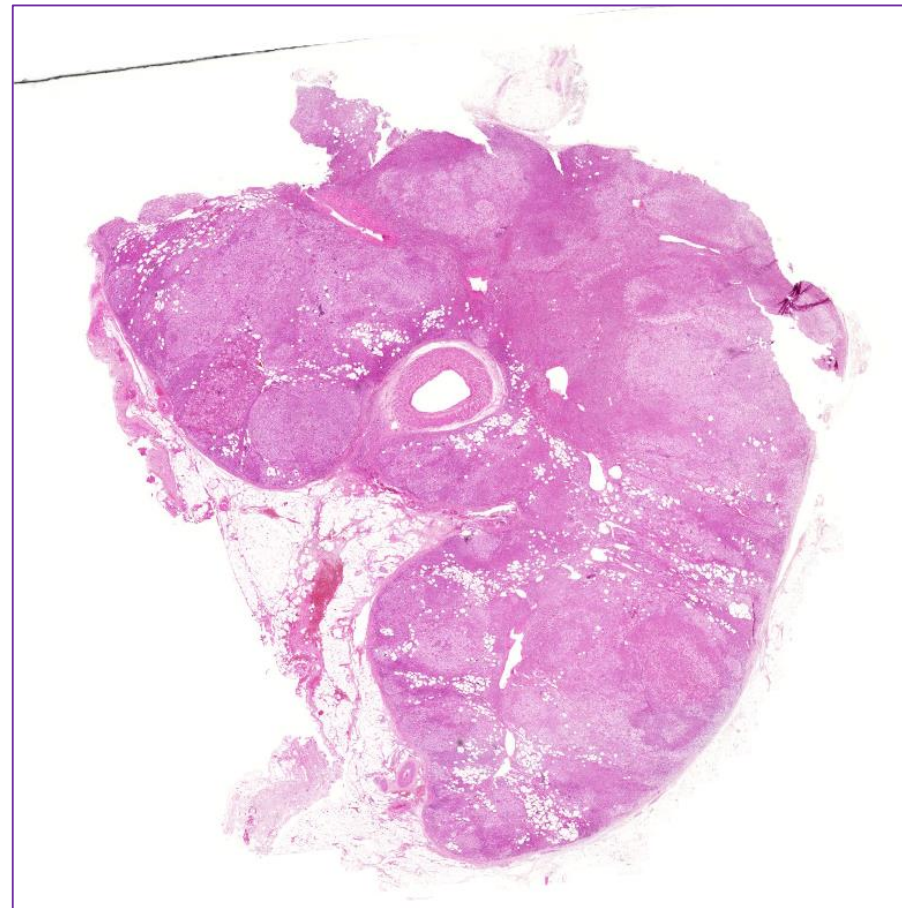
**Hyalinos  
arteriolo-  
sclerosis**



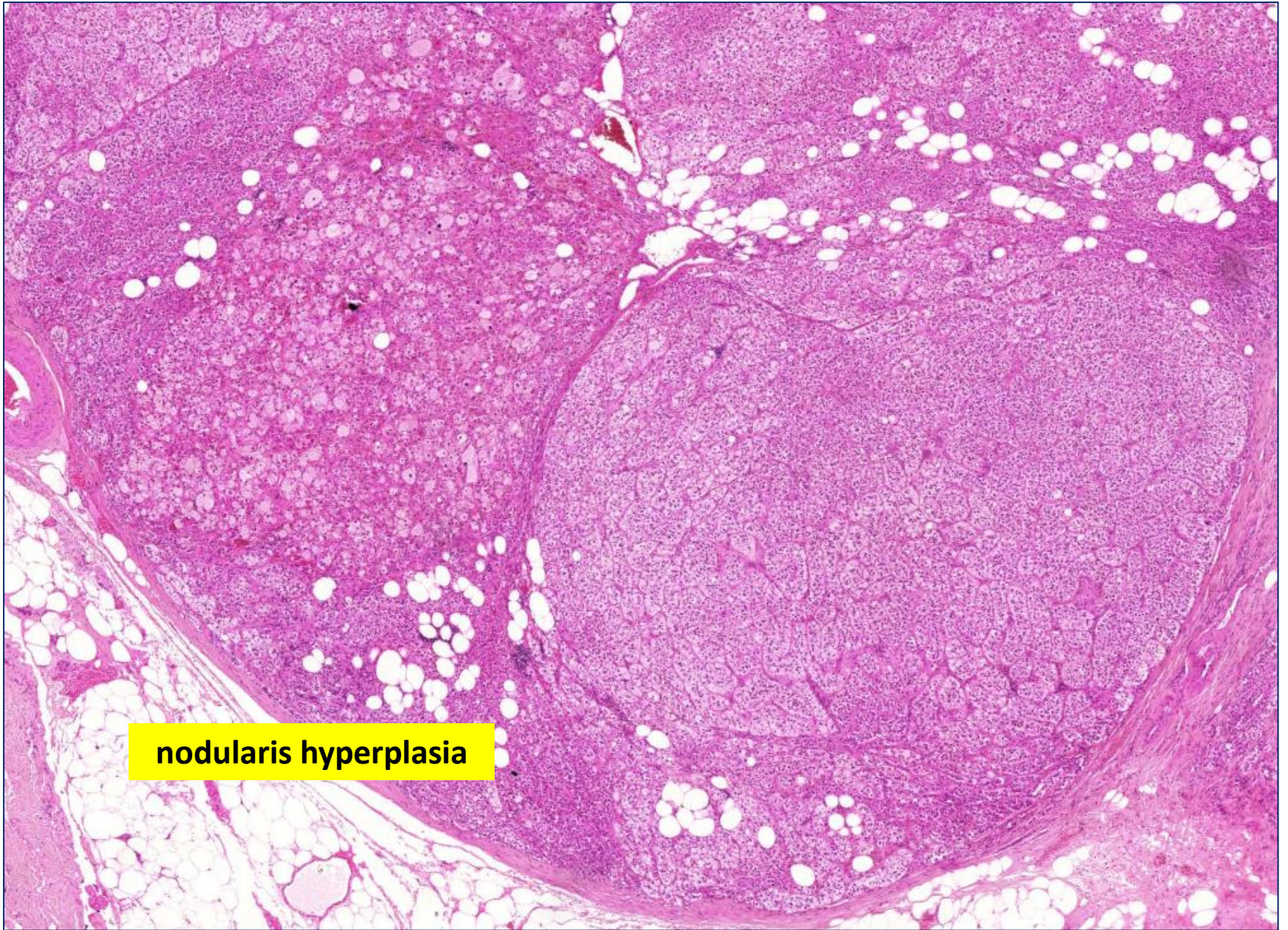
# Hyperplasia

Szerv/szövet megnagyobbodása, fokozott funkció, felszaporodott sejtszám

Típuspéldák: hormon-responsív szervek



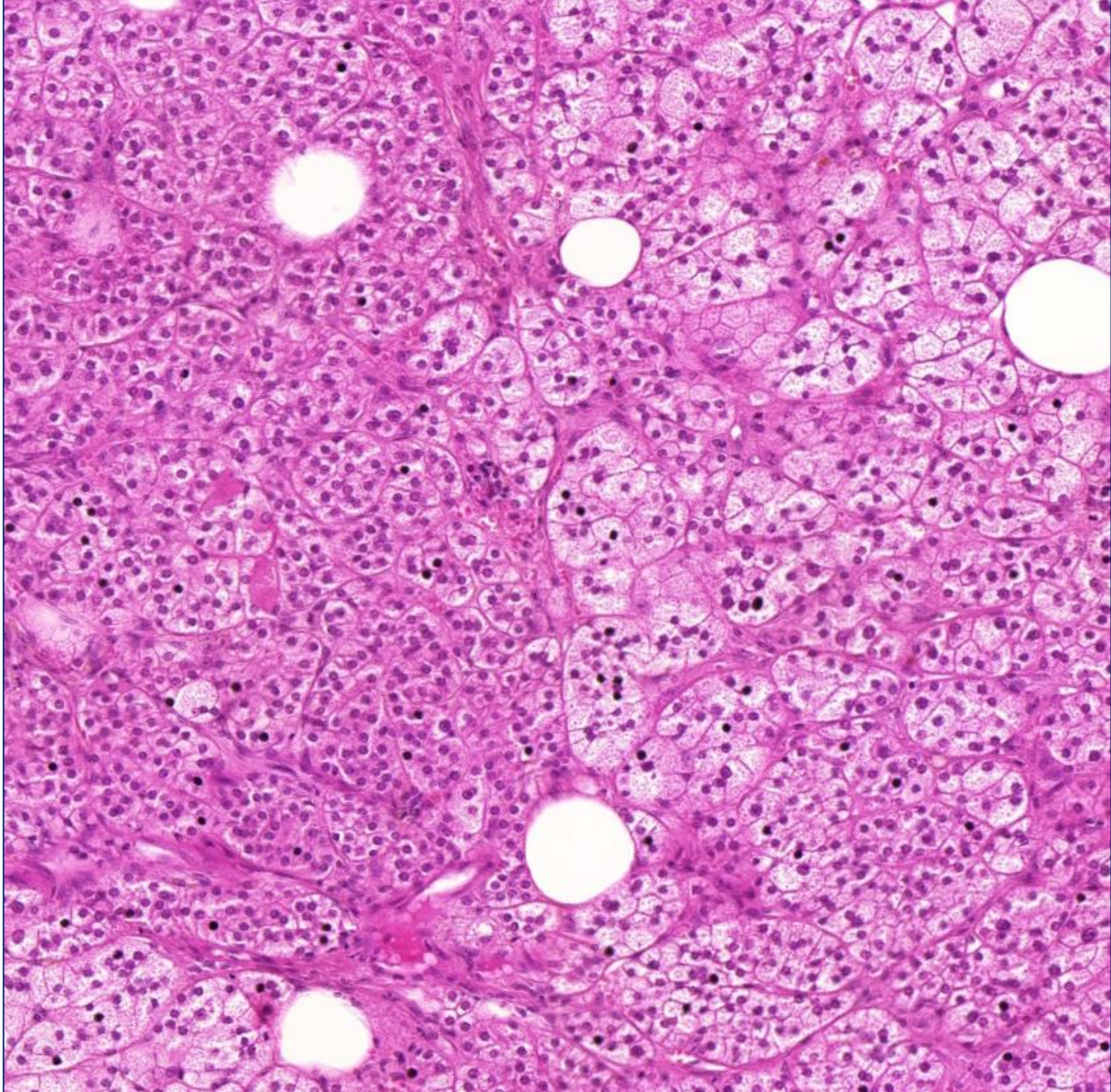




**nodularis hyperplasia**



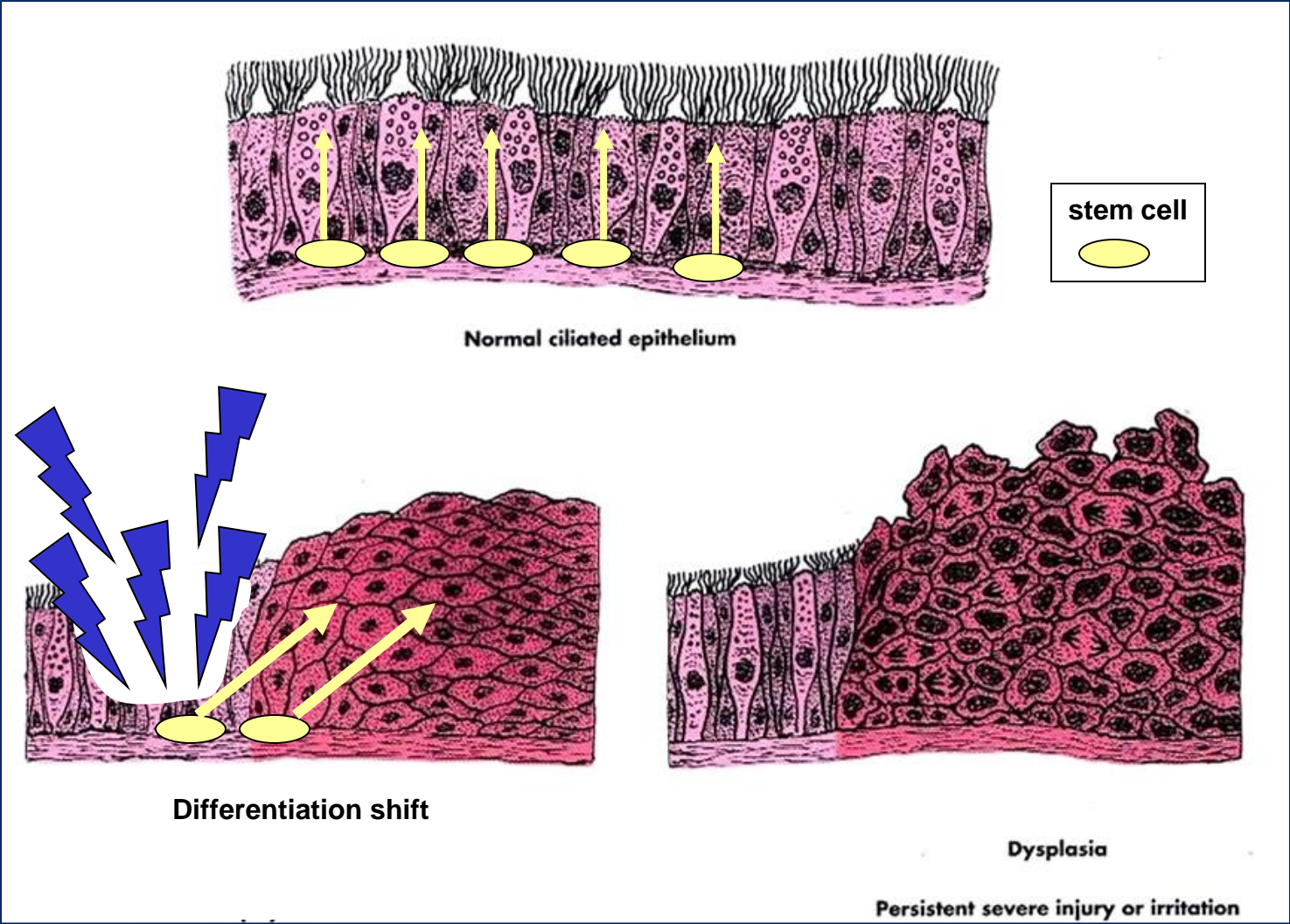
Zona glomerulosa



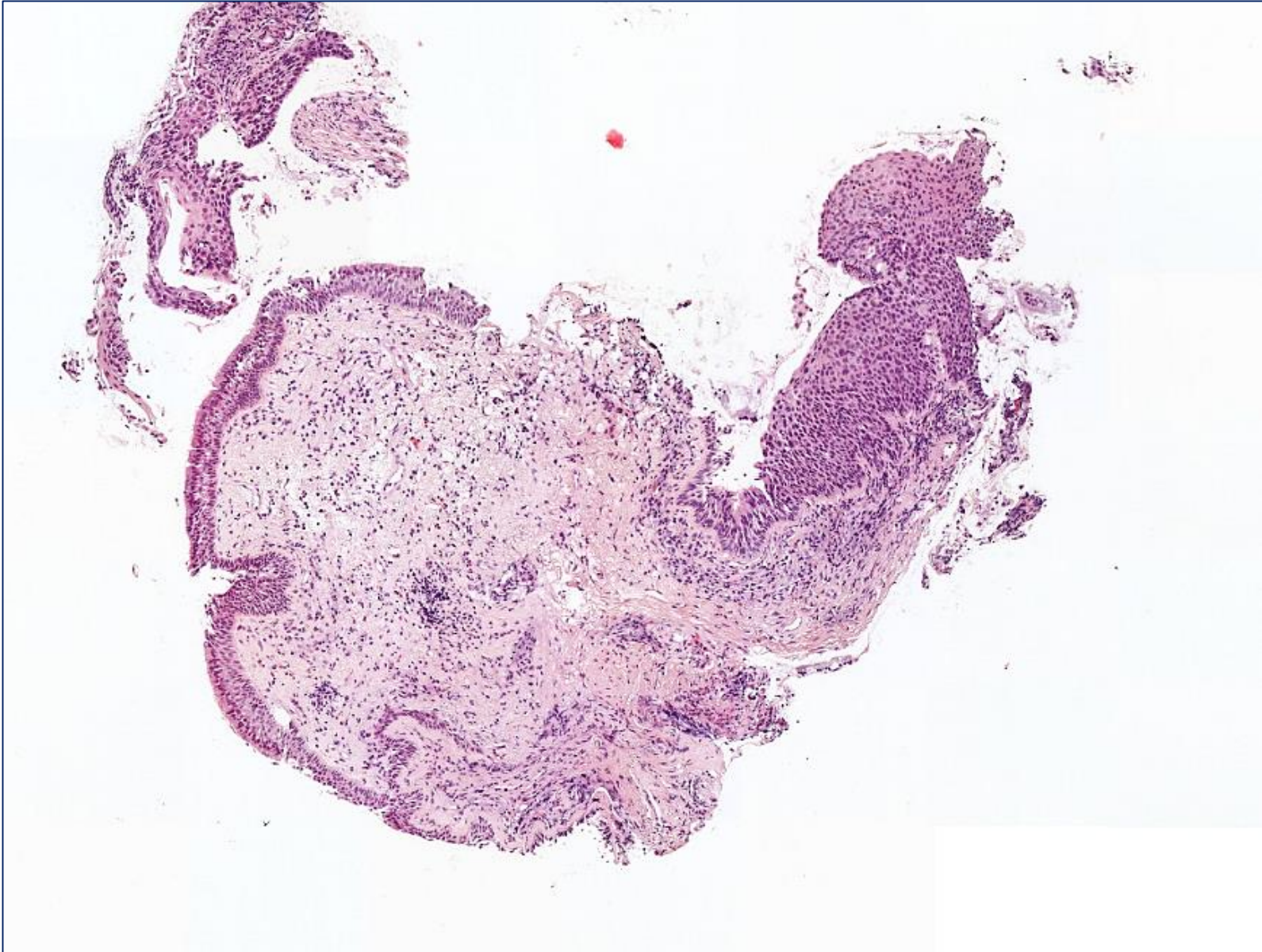
Zona fascicularis



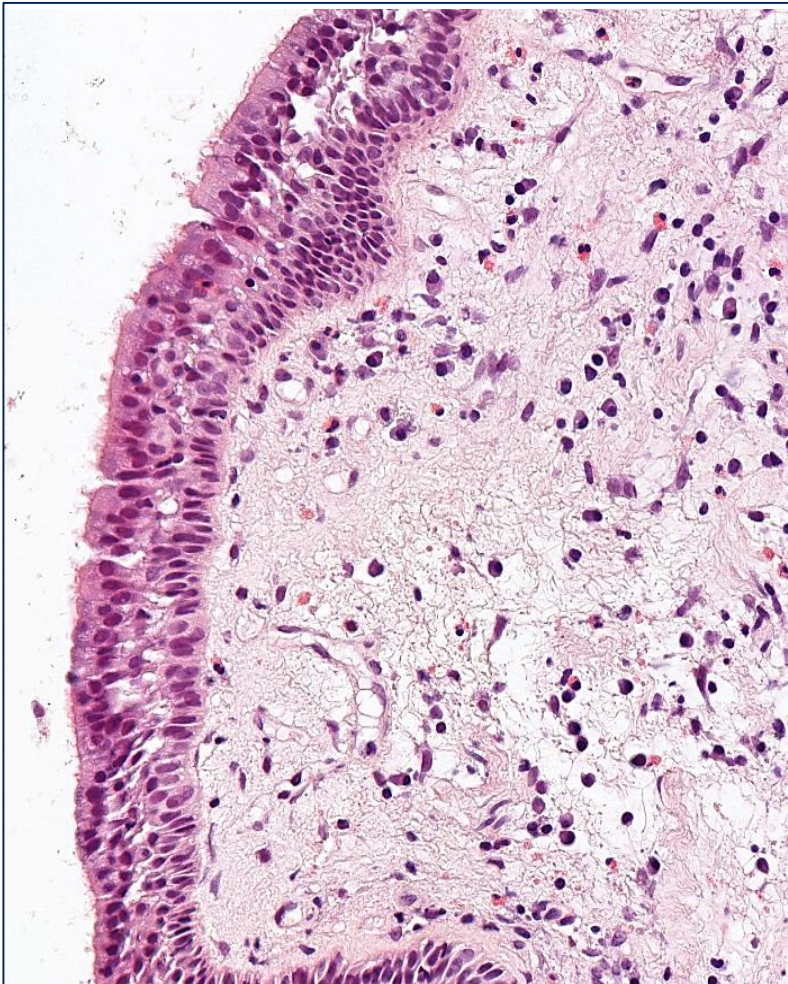
# Metaplasia



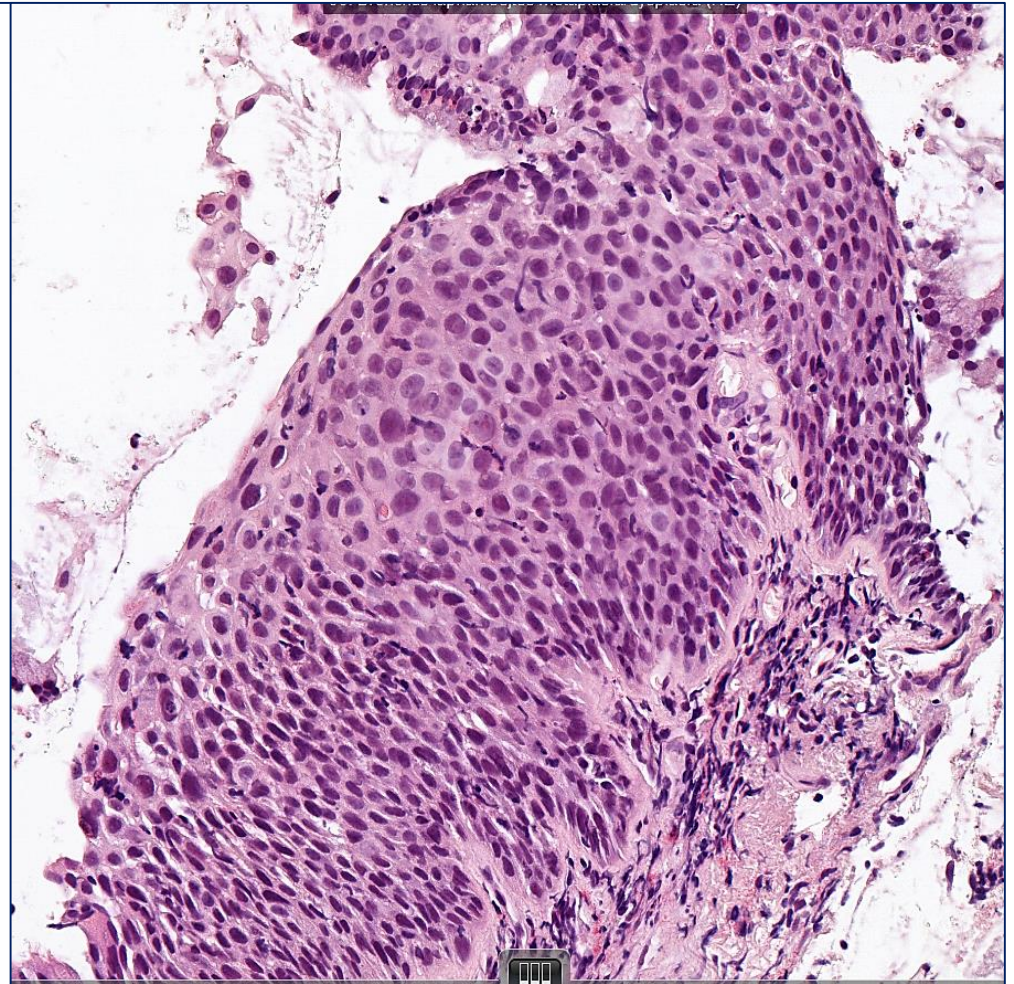








Bronchialis csillószőrös hengerhám



Laphám metaplasia + dysplasia



# Cholelithiasis



cholesterin-

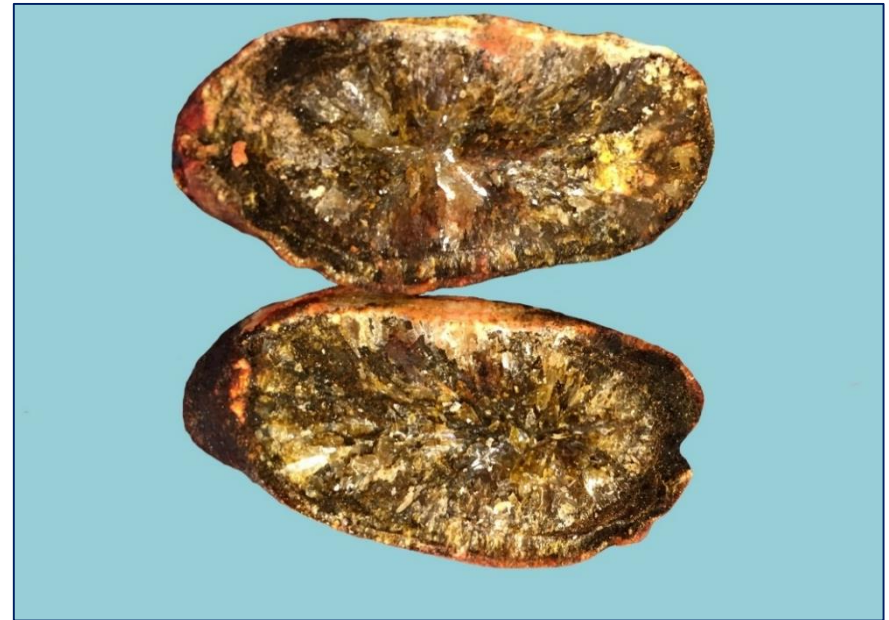
1. Tiszta kövek



pigment-



2. Kevert



3. Kombinált-



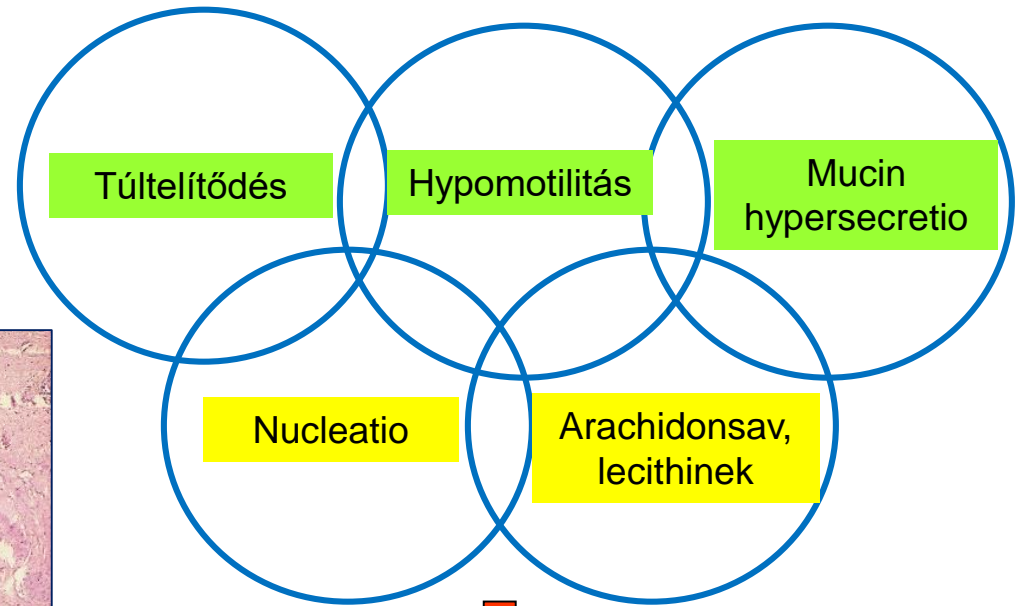
# Okok:

- Túrtelítődés



- Dysmotilitás

- Infectio

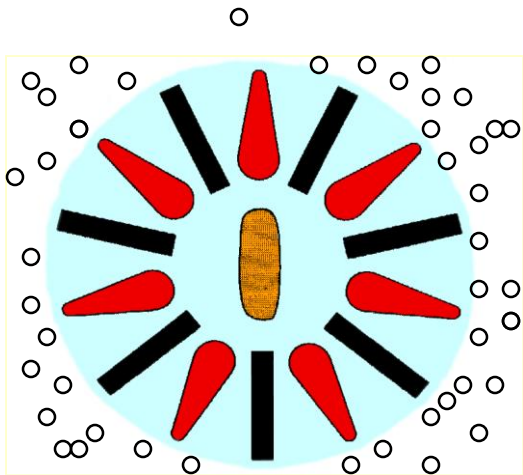


Cholesterin kő



# MICELLAKÉPZŐDÉS

A cholesterint epesavas sók tartják oldatban, foszfolipidek segítségével.



Epekőképződés:

Cholesterin-koncentráció ↑

Epesavas sók koncentrációja ↓

 epesavas sók (1 : 7)

 foszfolipidek

 cholesterin







Calciumcarbonat-kő



Facettált felszínű kövek



Cholesterinkő



Pigmentkő  
(Calcium-bilirubinat)



Vegyes epekő

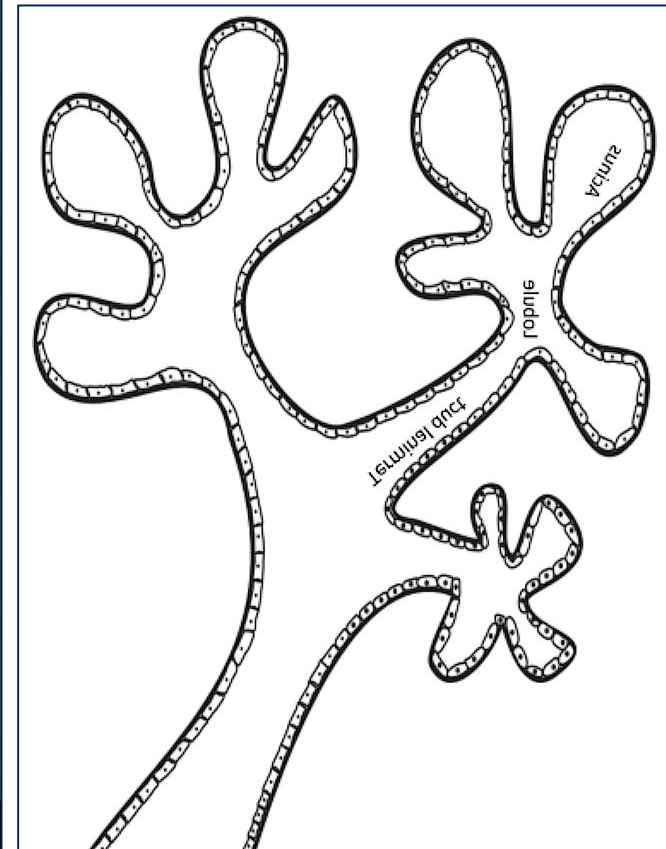
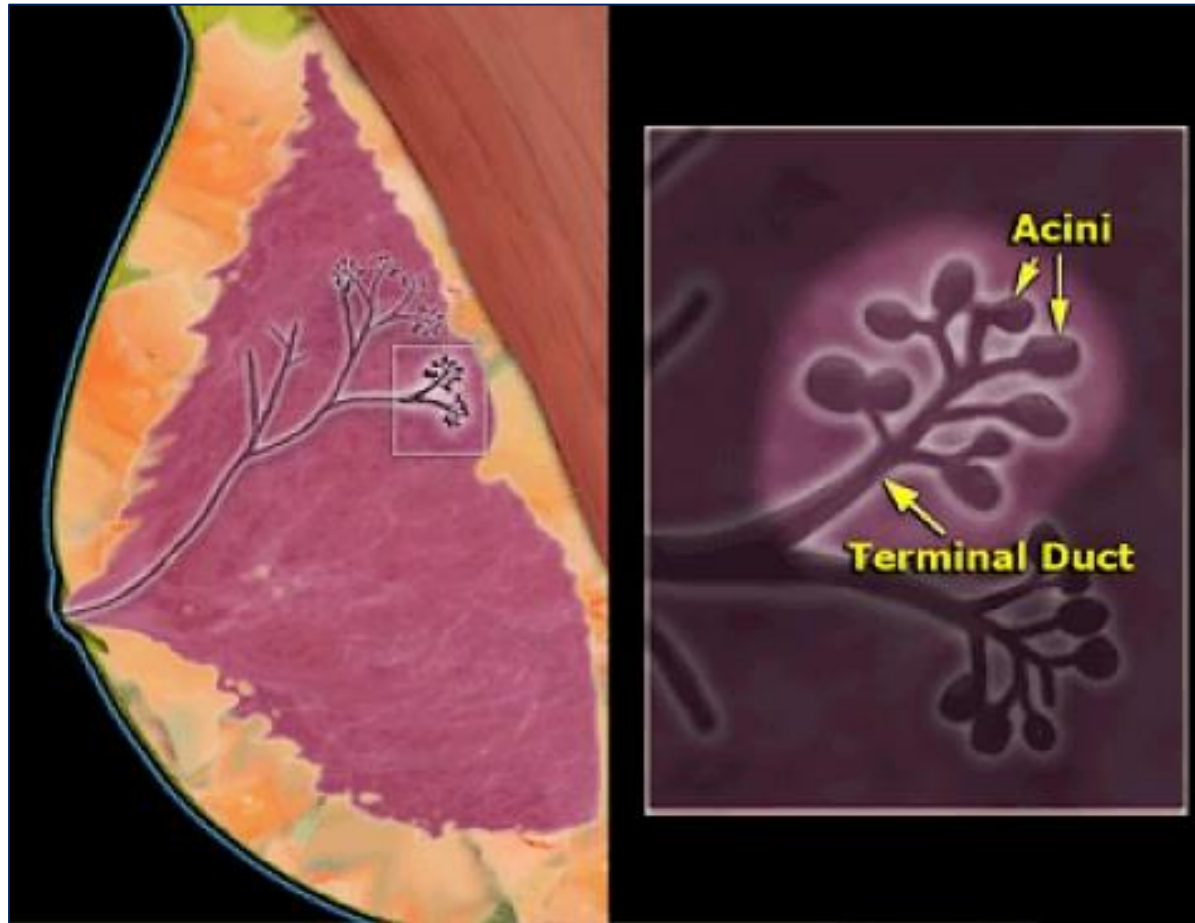


Kombinált kő

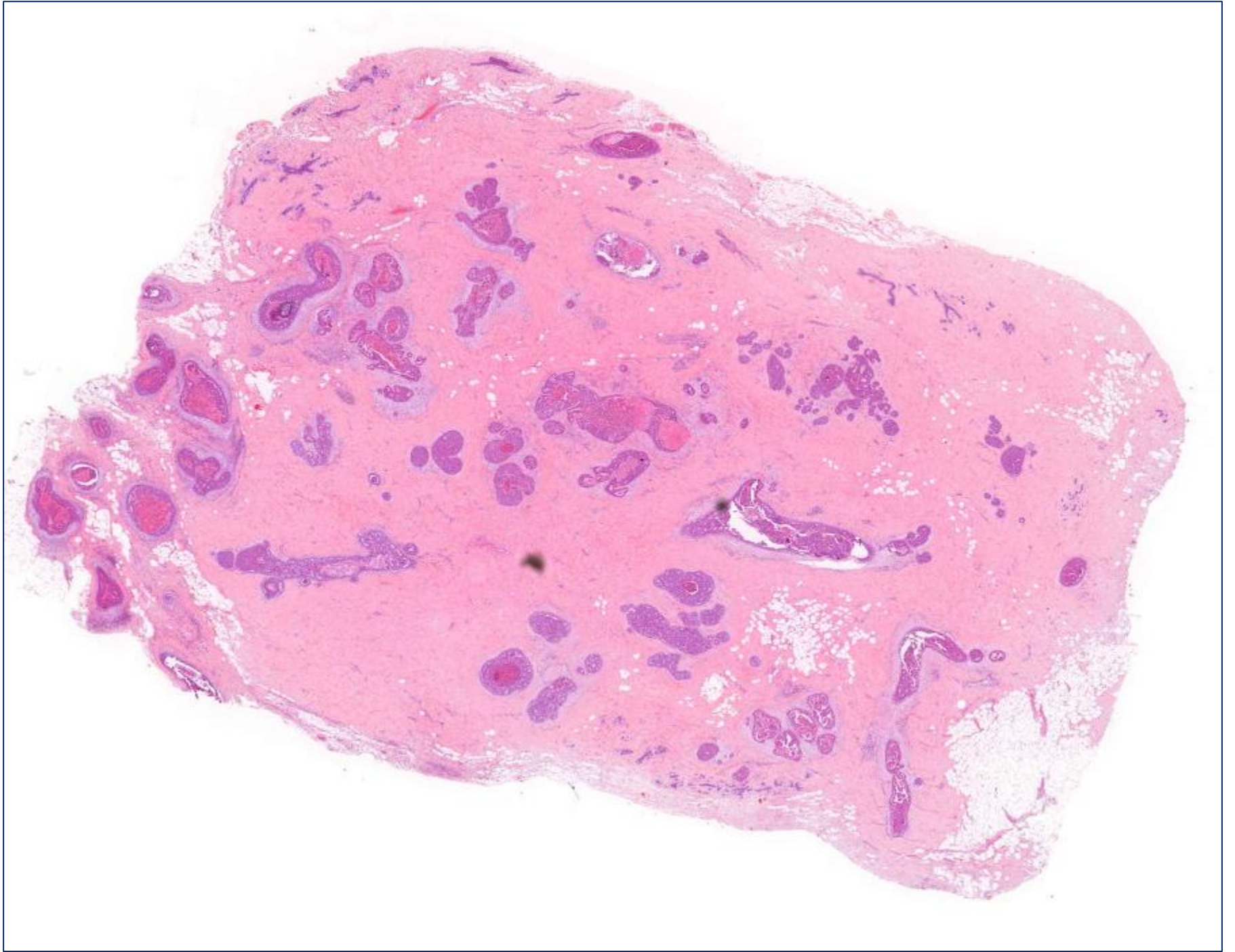




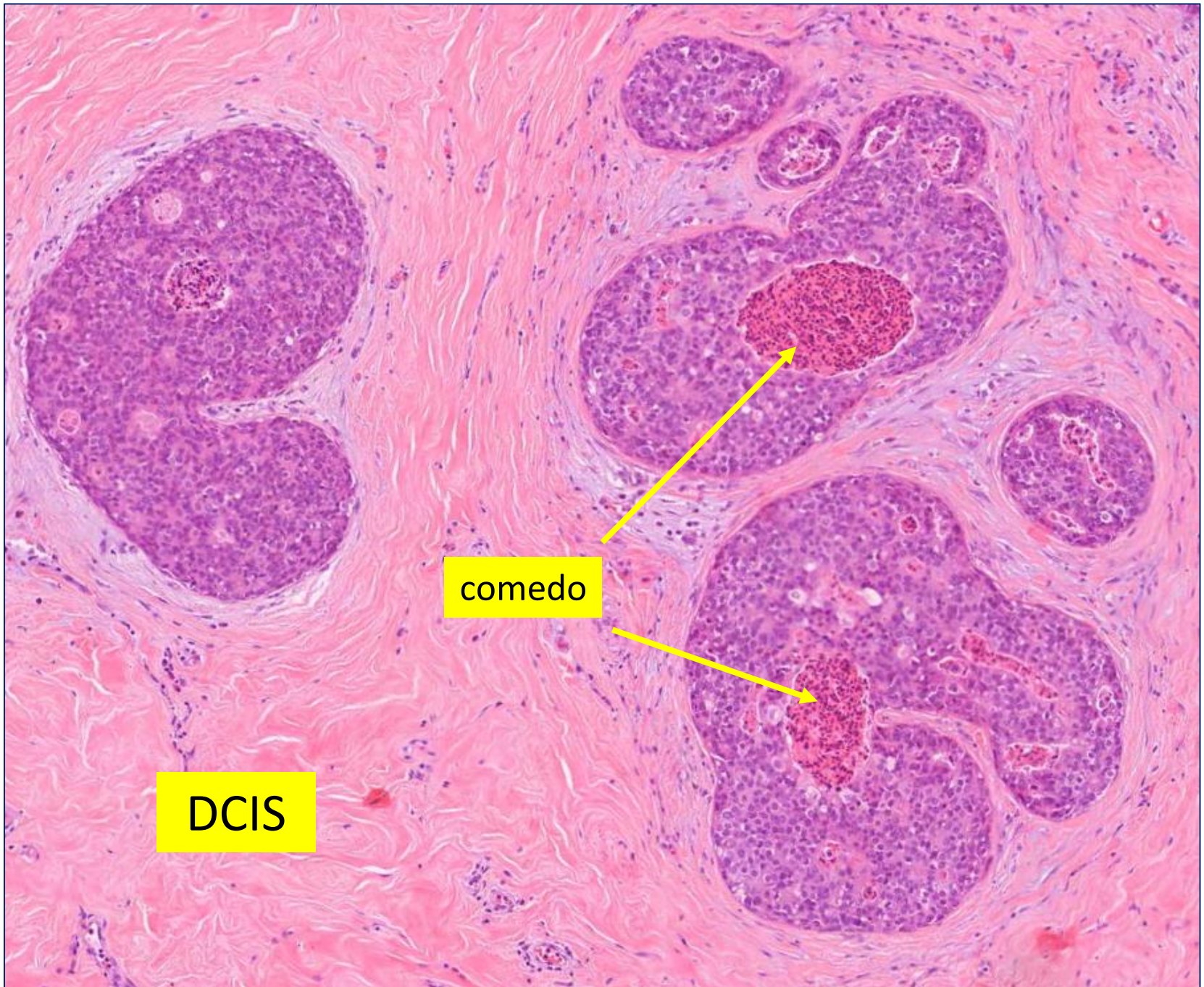
# Emlő / Terminalis ductularis-lobularis unit (TDLU)







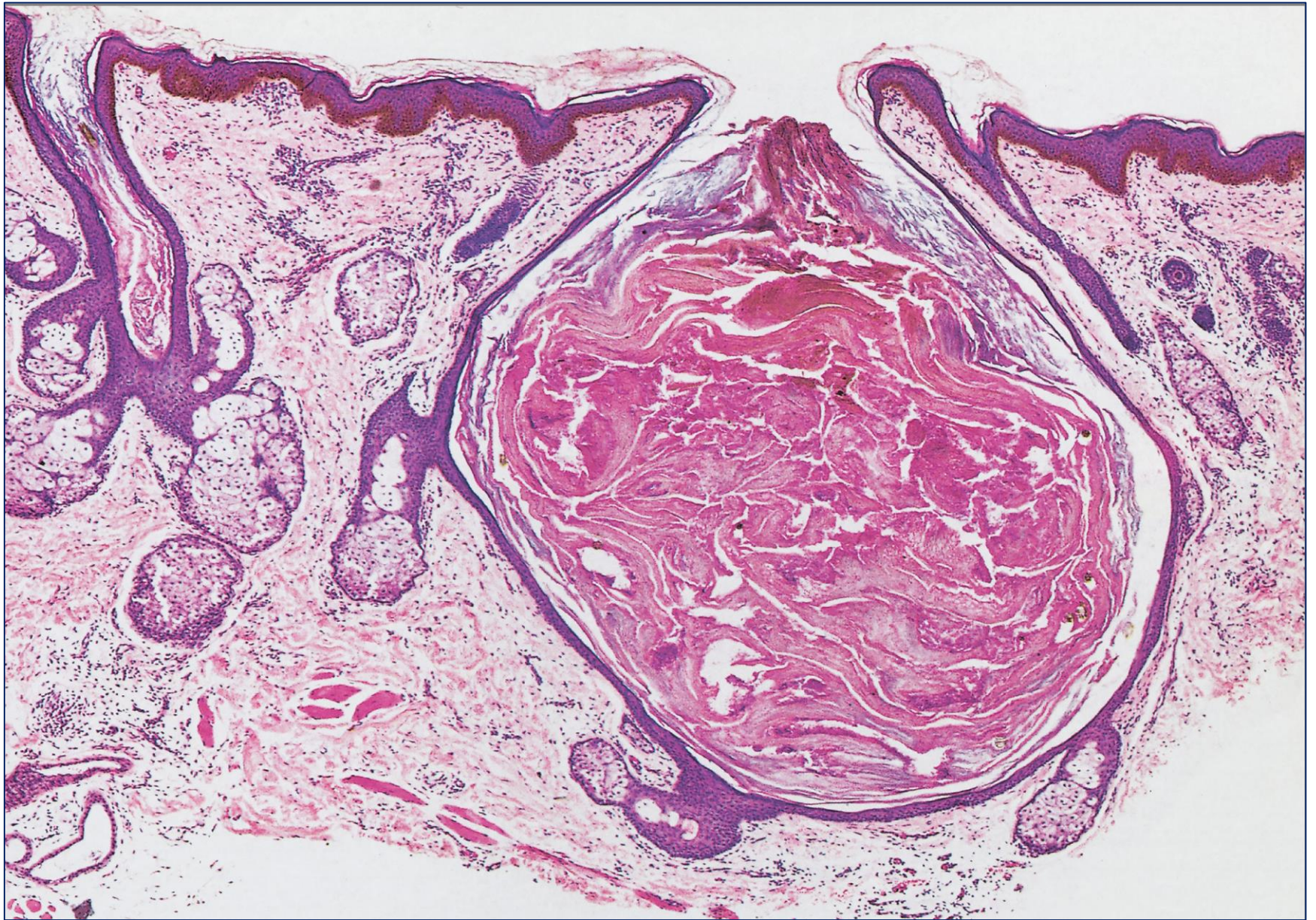




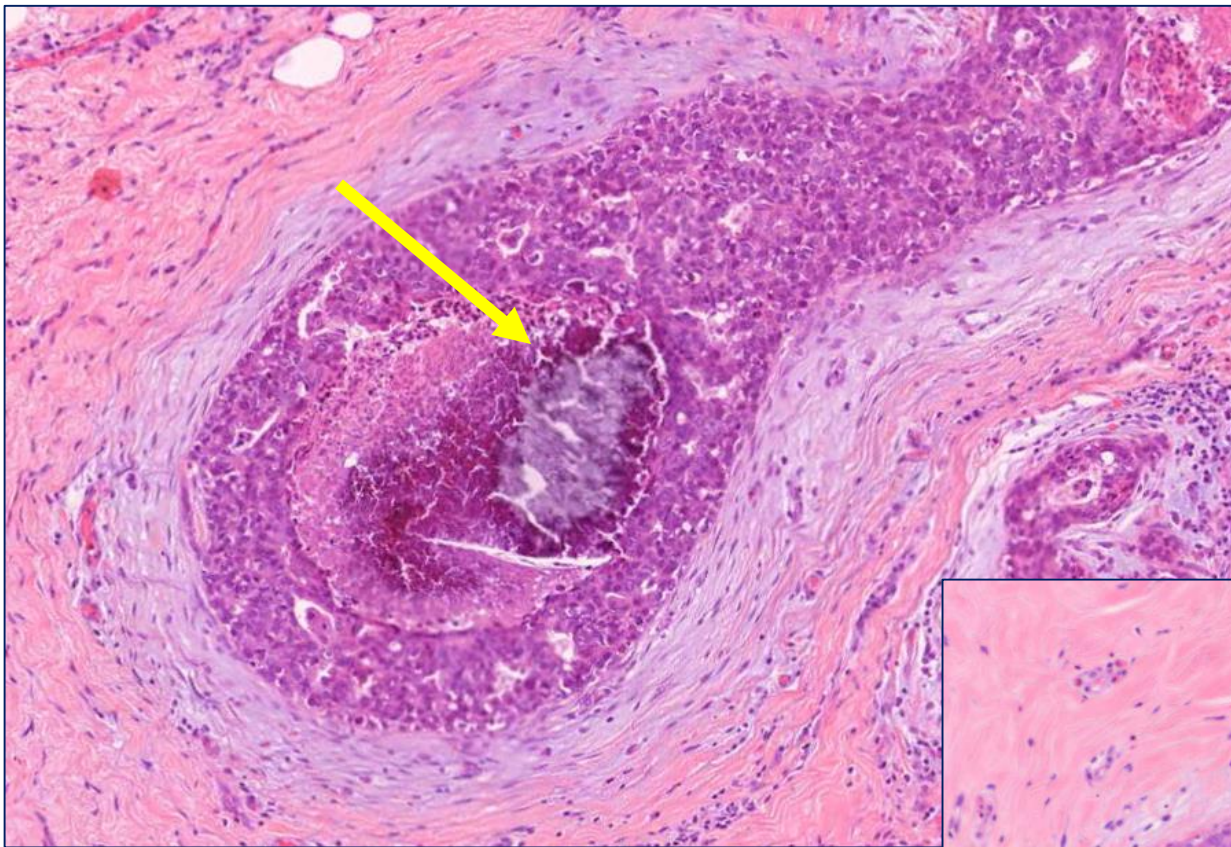
DCIS

comedo

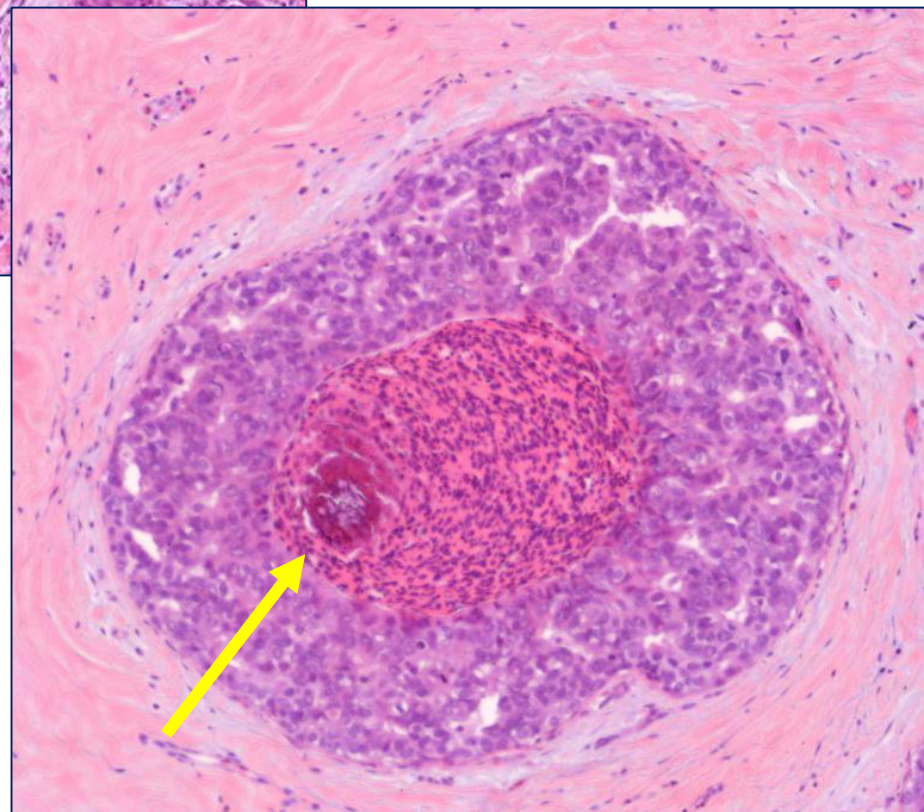




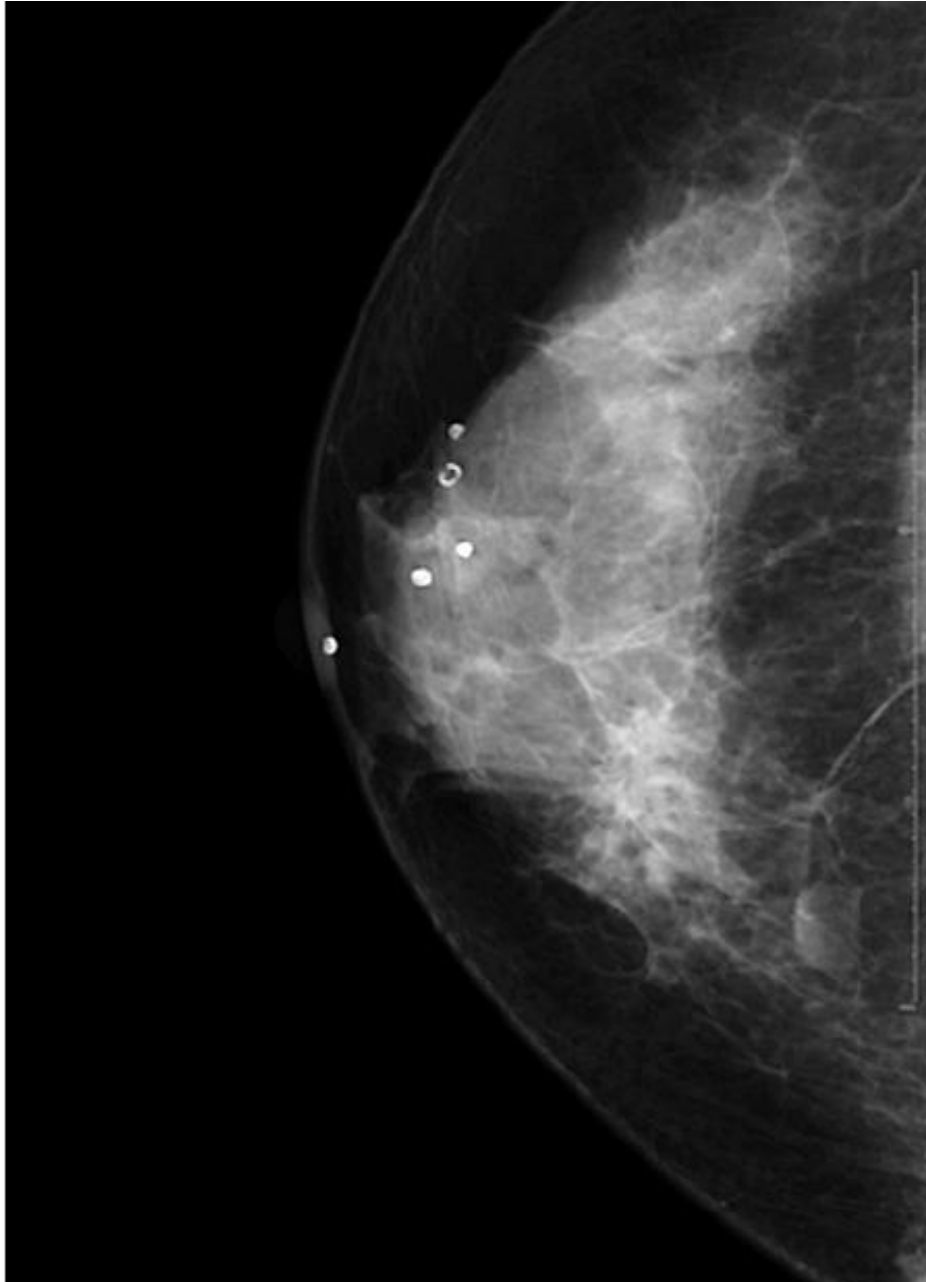
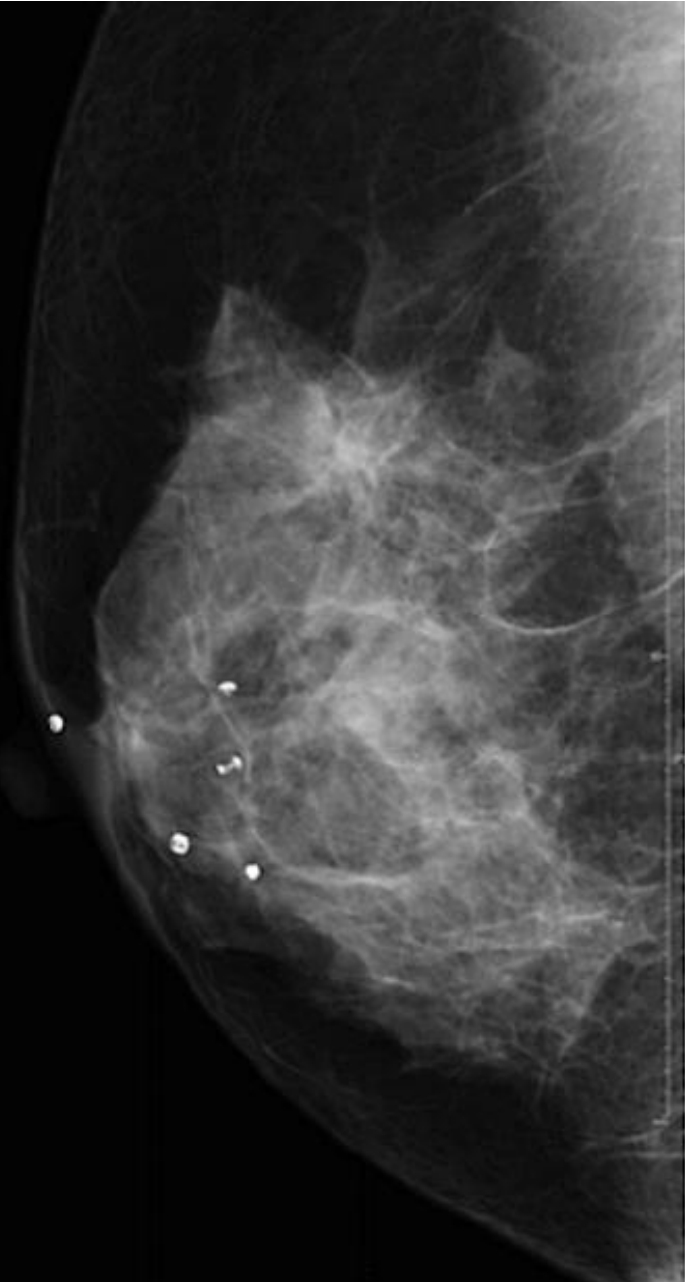




dystrophiás  
calcificatio







mammographia - microcalcificatio