

# Case 2

57 year old lady underwent a core biopsy of a mass in the left breast (A), with subsequent mastectomy (B).

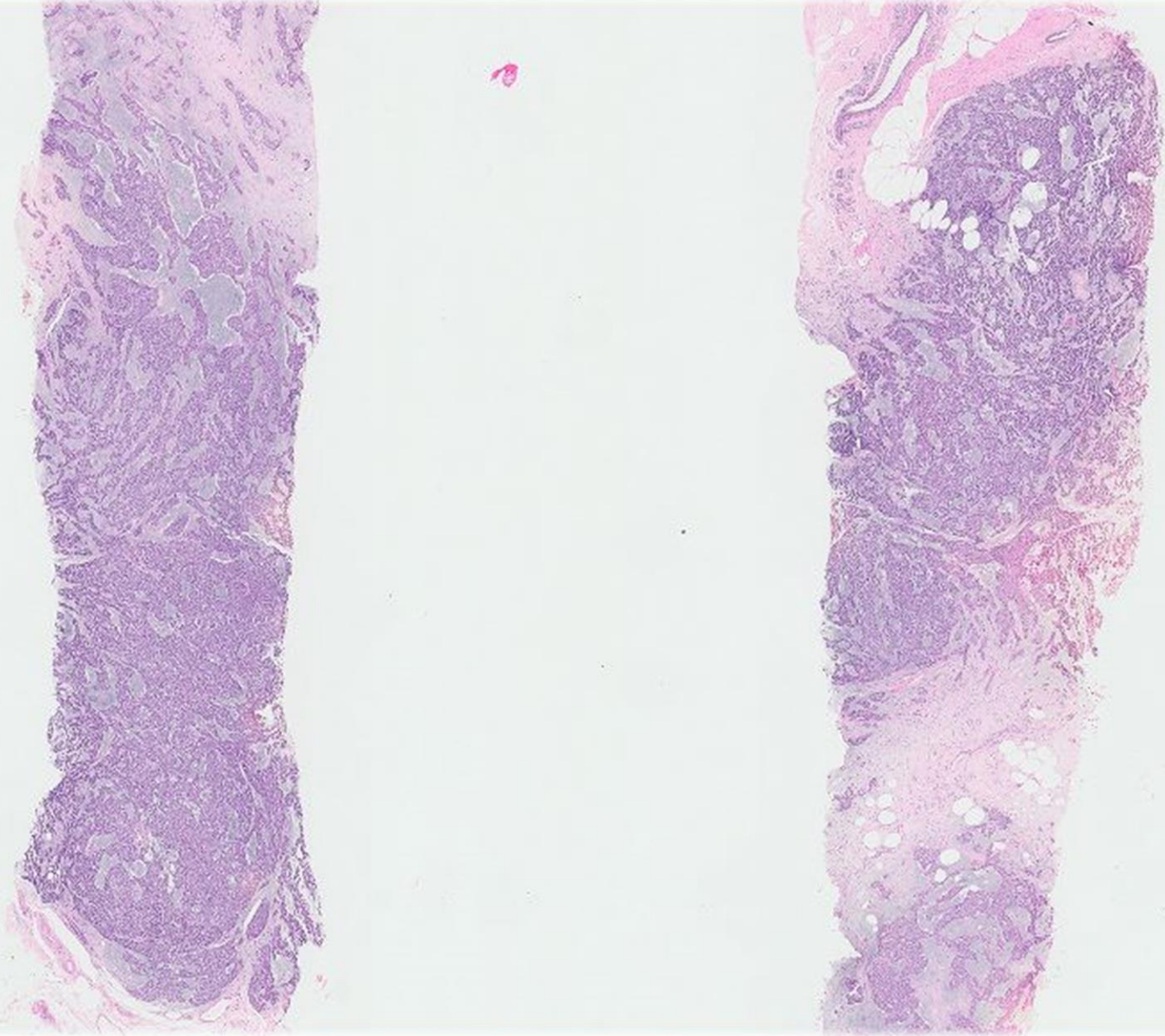
Sections of the core biopsy and subsequent mastectomy are provided.



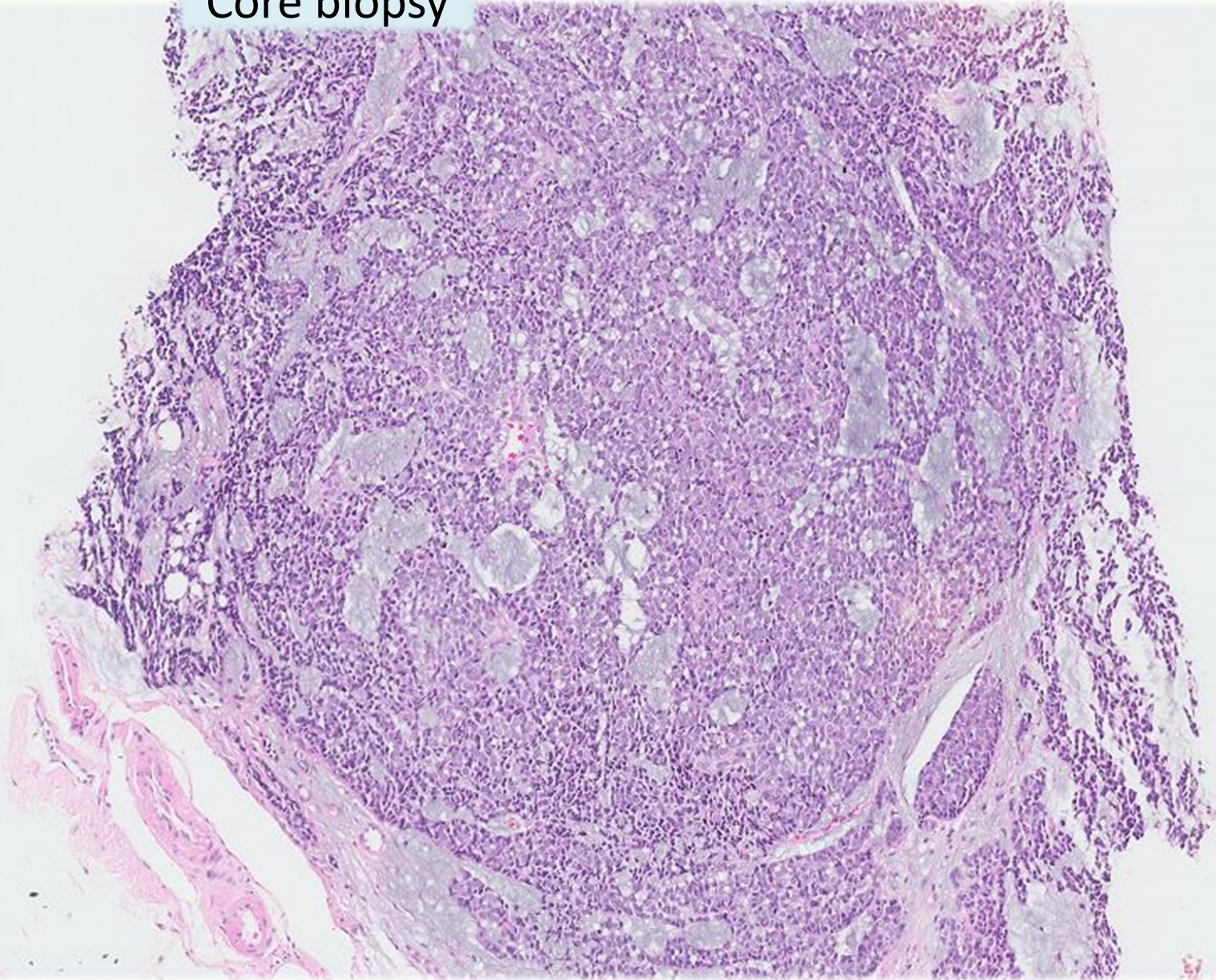
# Core biopsy



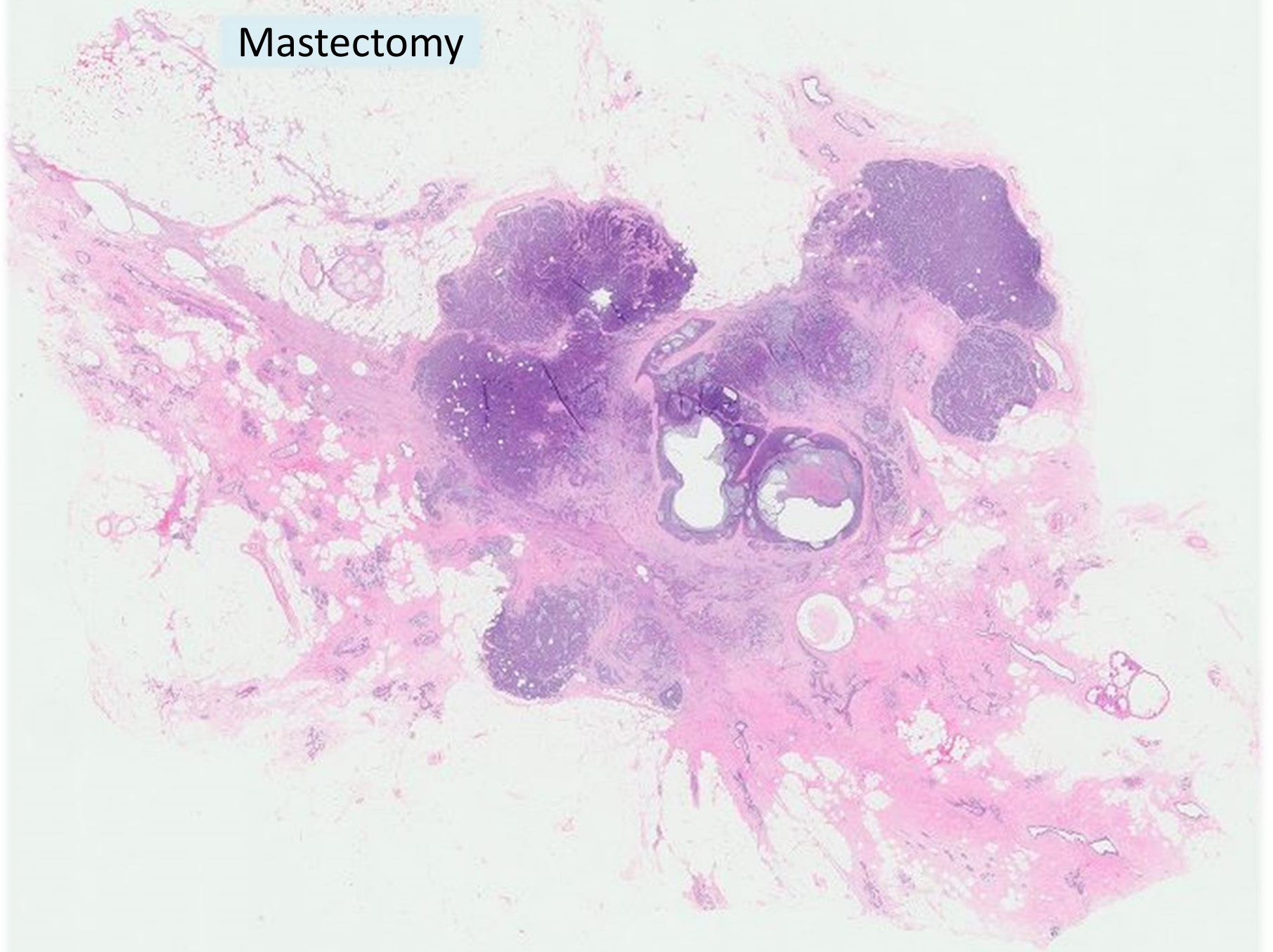
# Core biopsy



# Core biopsy

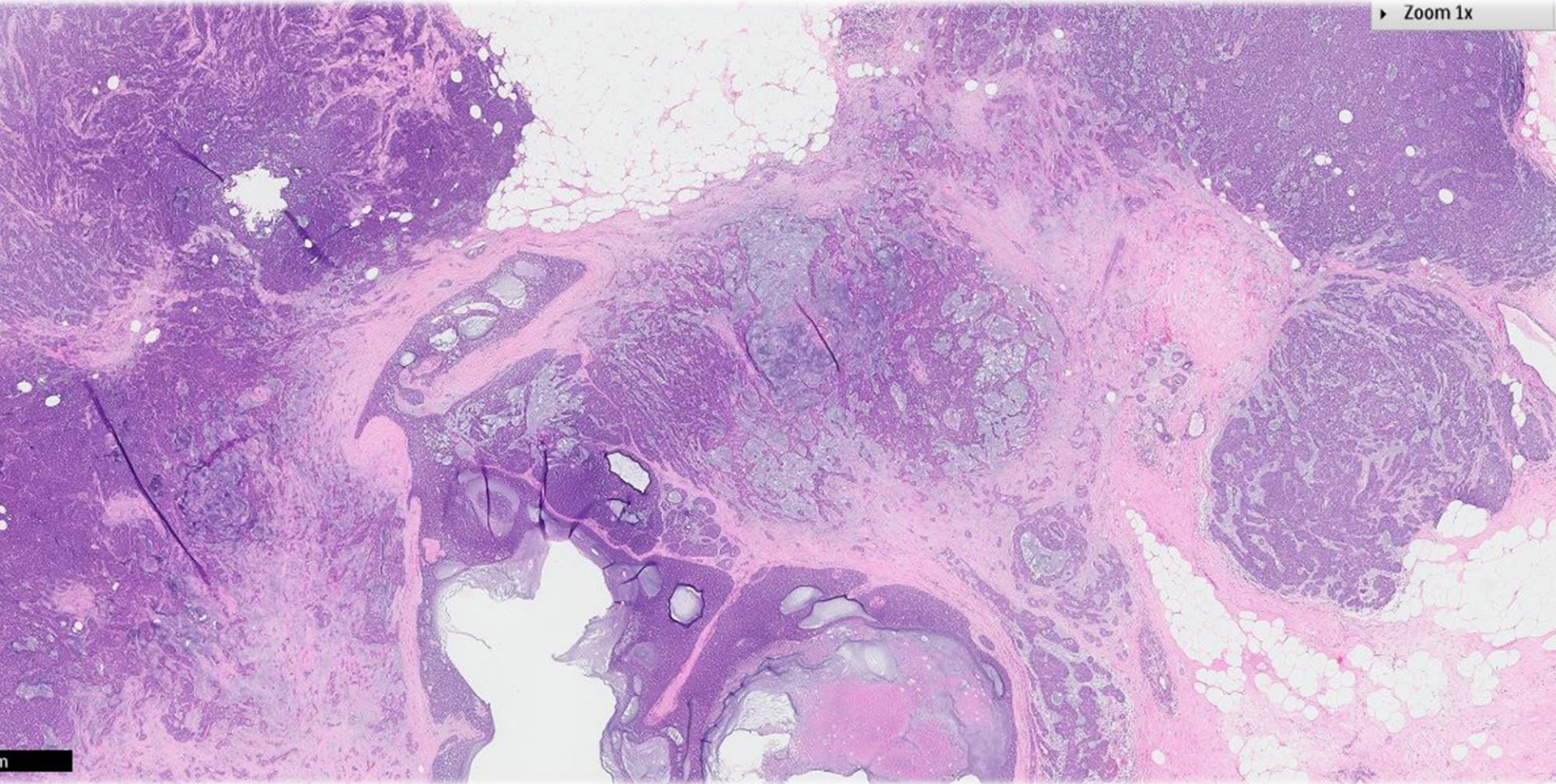


# Mastectomy



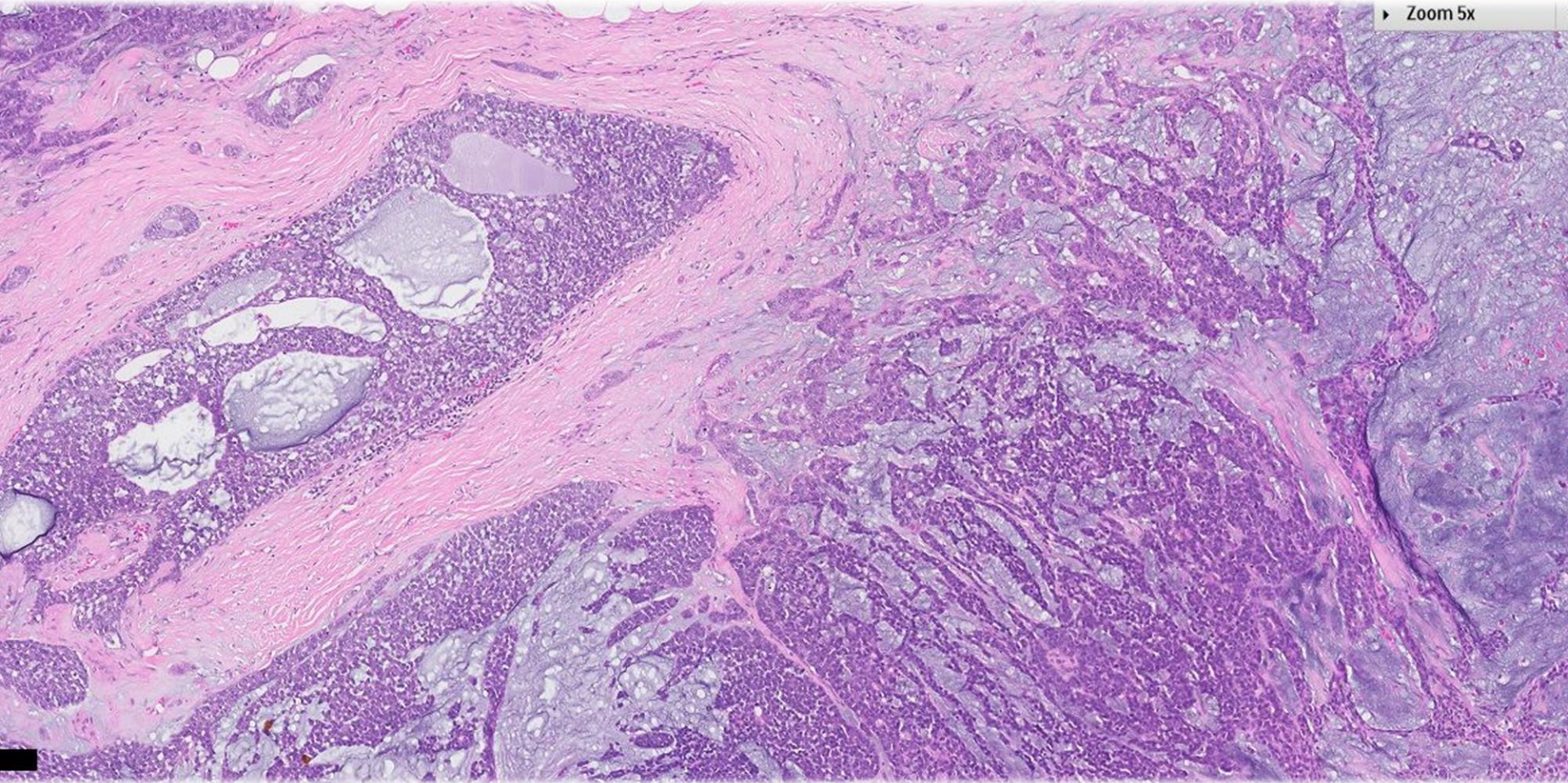
# Mastectomy

▶ Zoom 1x



# Mastectomy

▶ Zoom 5x



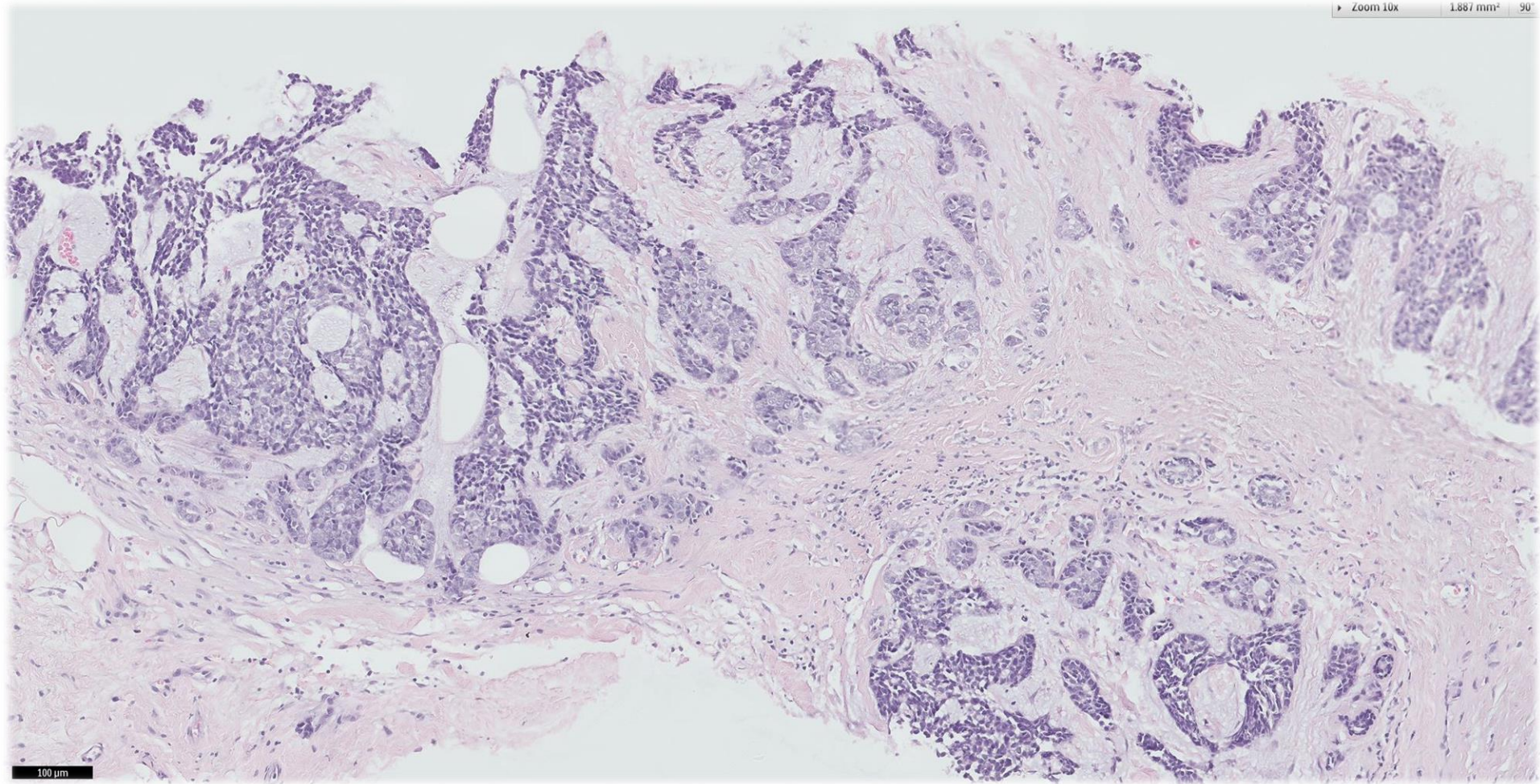
*Marina Bay Sands & Gardens by the Bay*





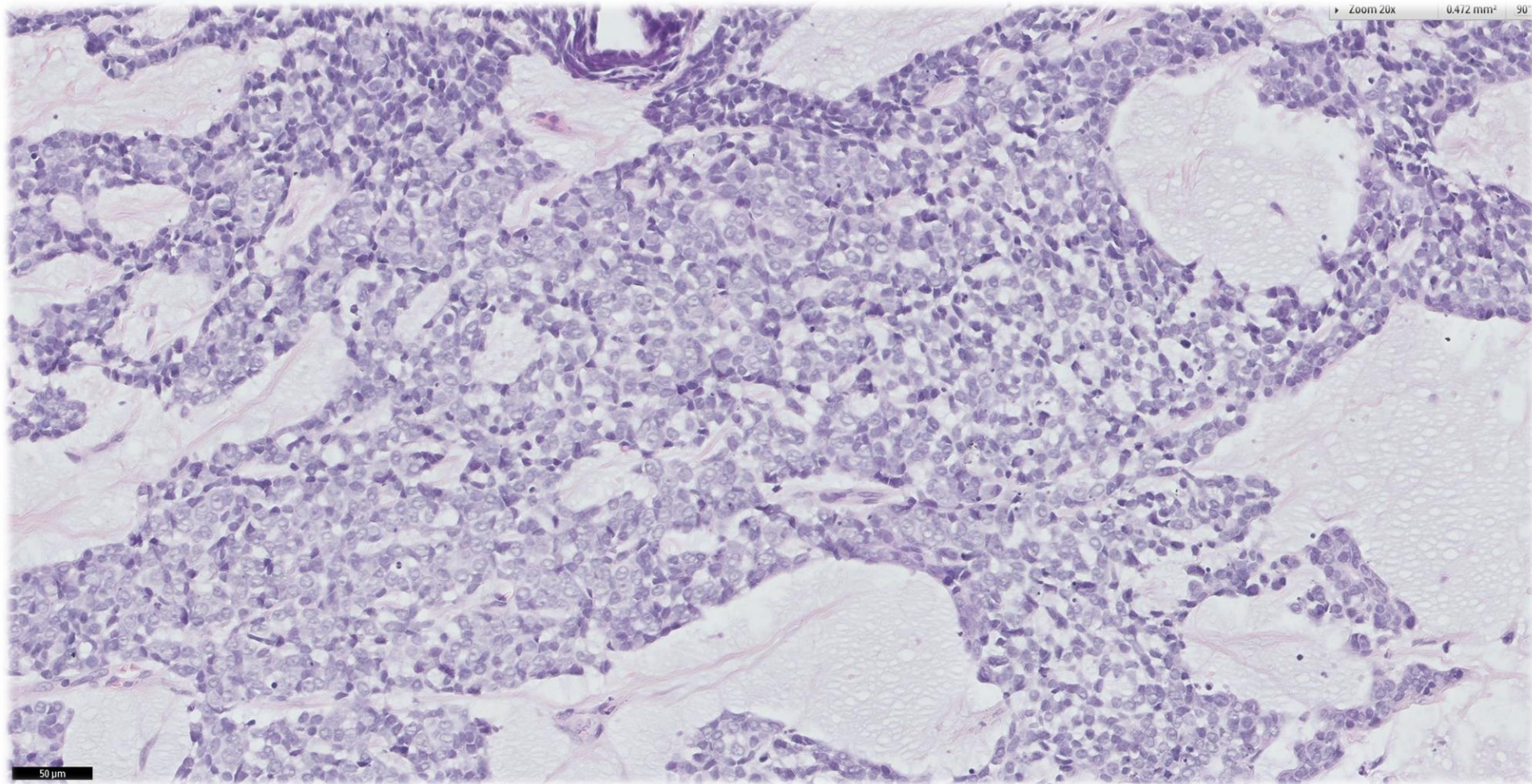
# Core biopsy

Zoom 10x 1.887 mm<sup>2</sup> 90



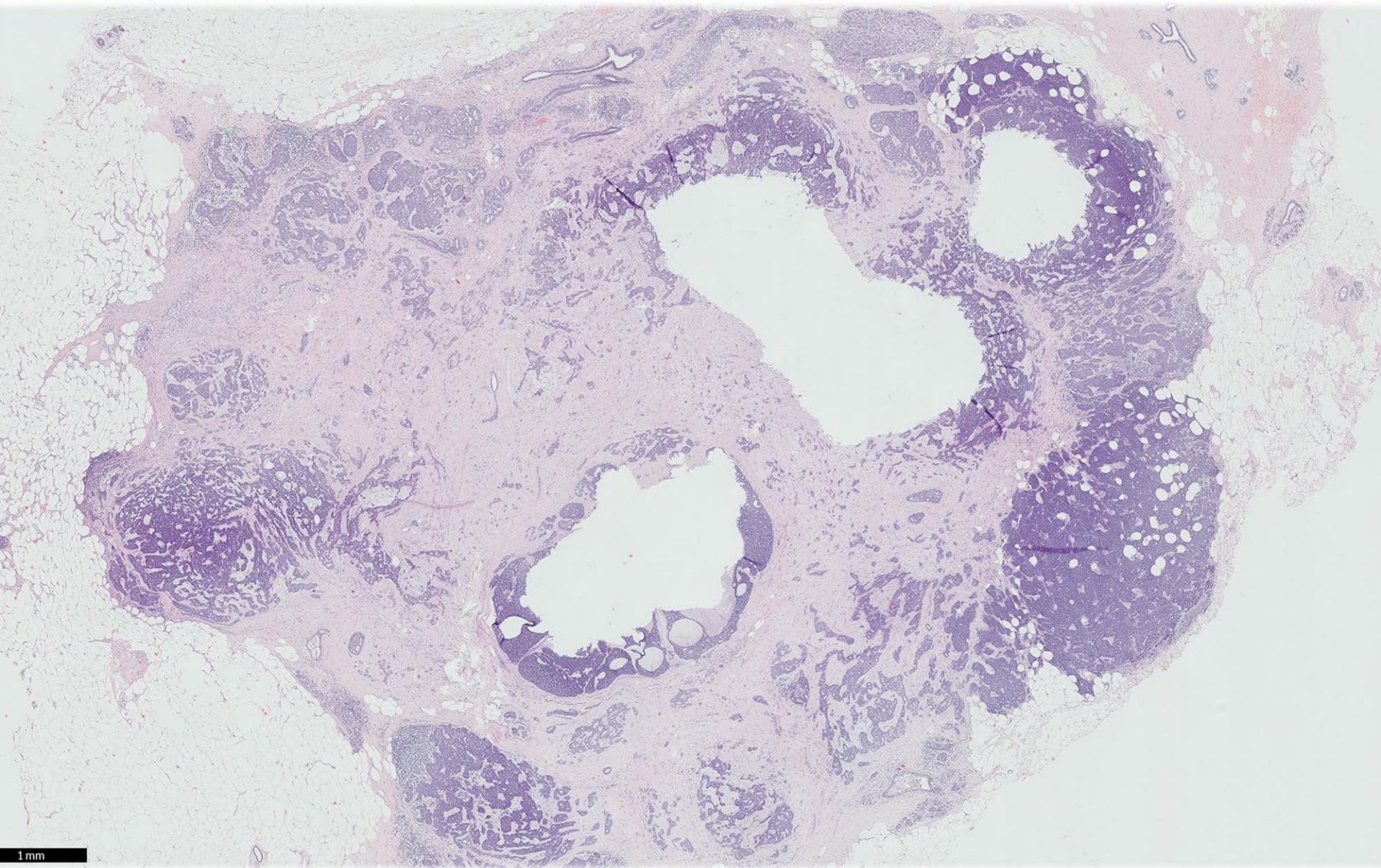
100 μm

# Core biopsy



Mastectomy disclosed 2 separate tumour nodules, one in the lateral quadrant (1.5cm) and the other deep to the nipple (1cm).

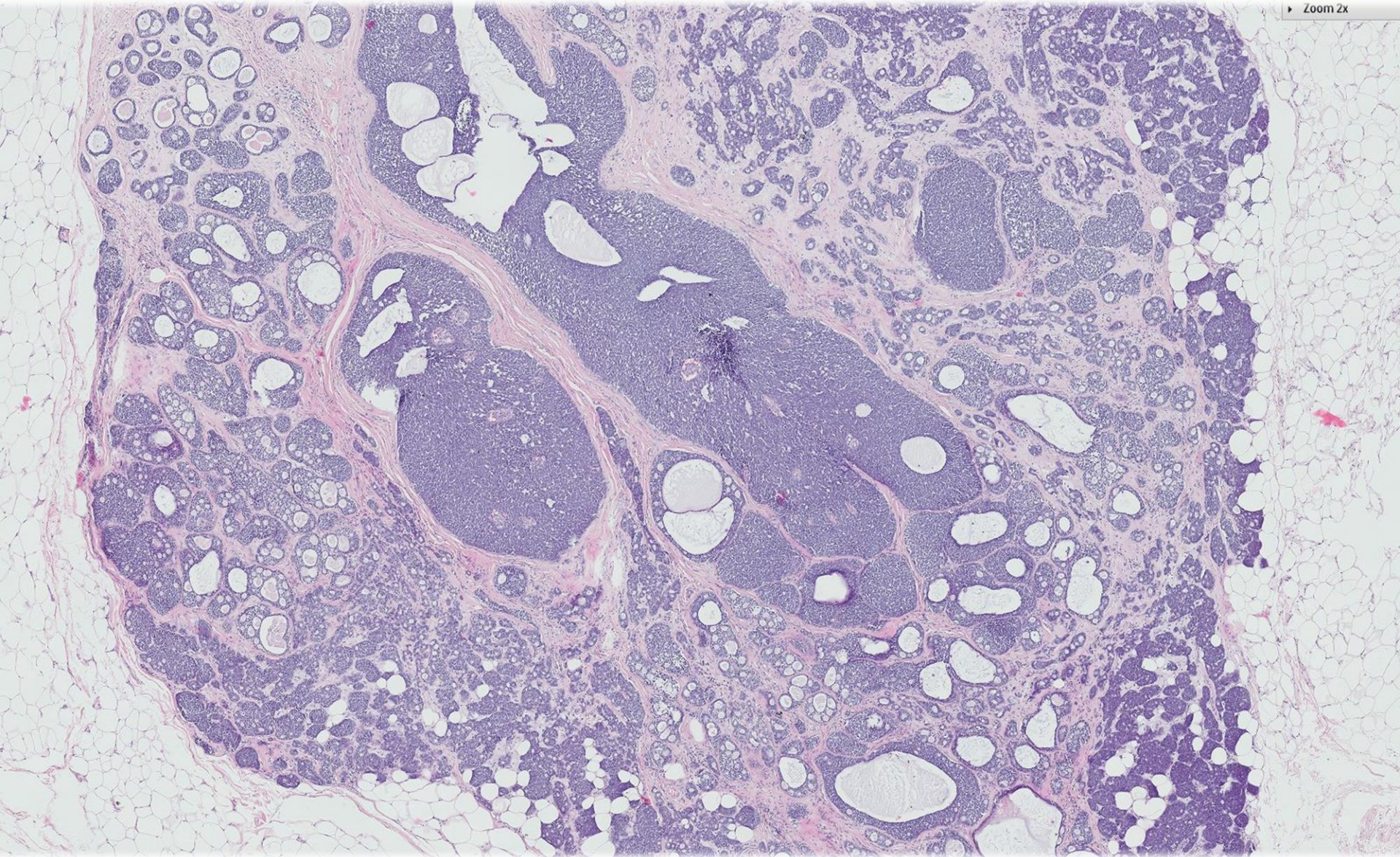
# Lateral quadrant



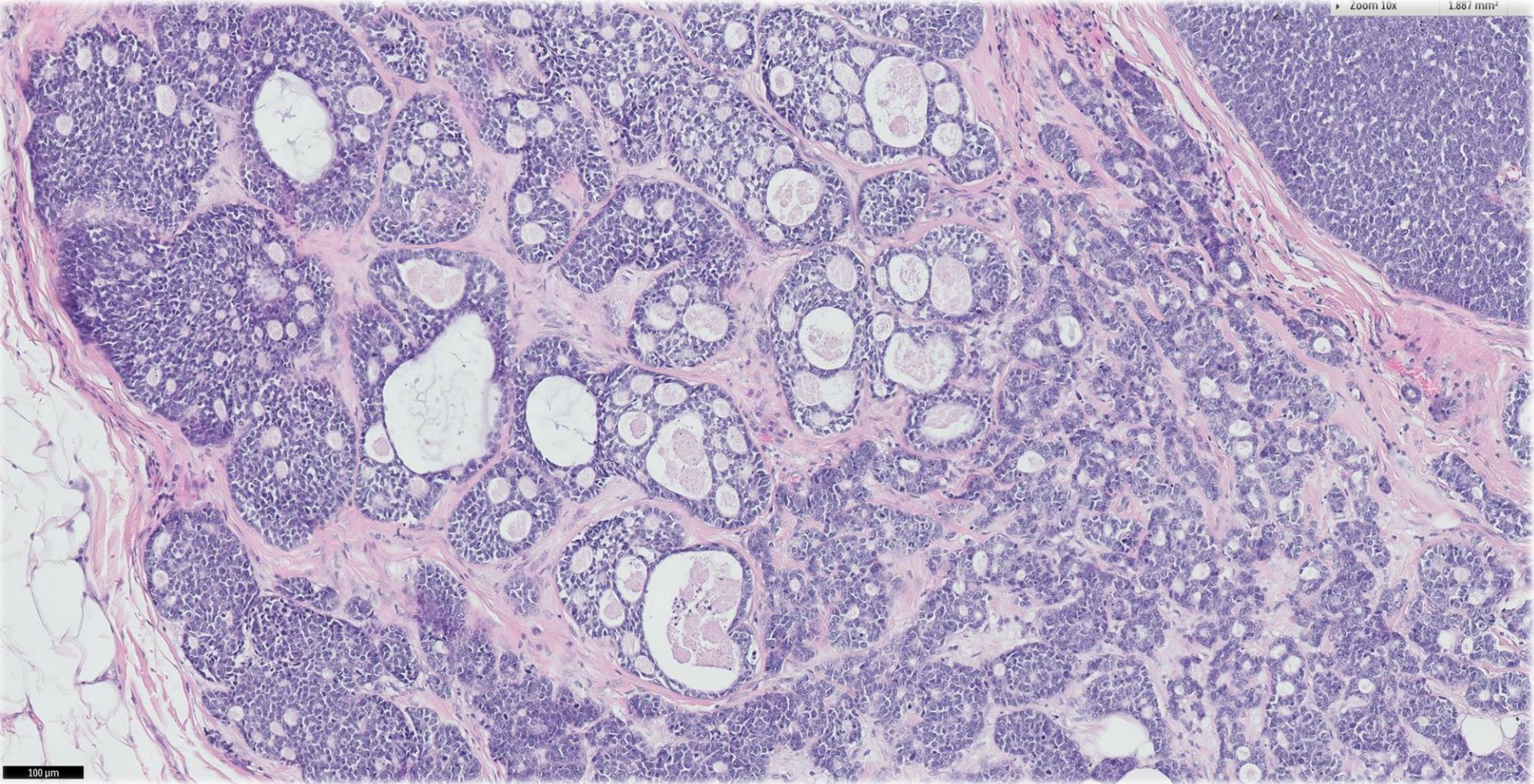
1 mm

# Lateral quadrant

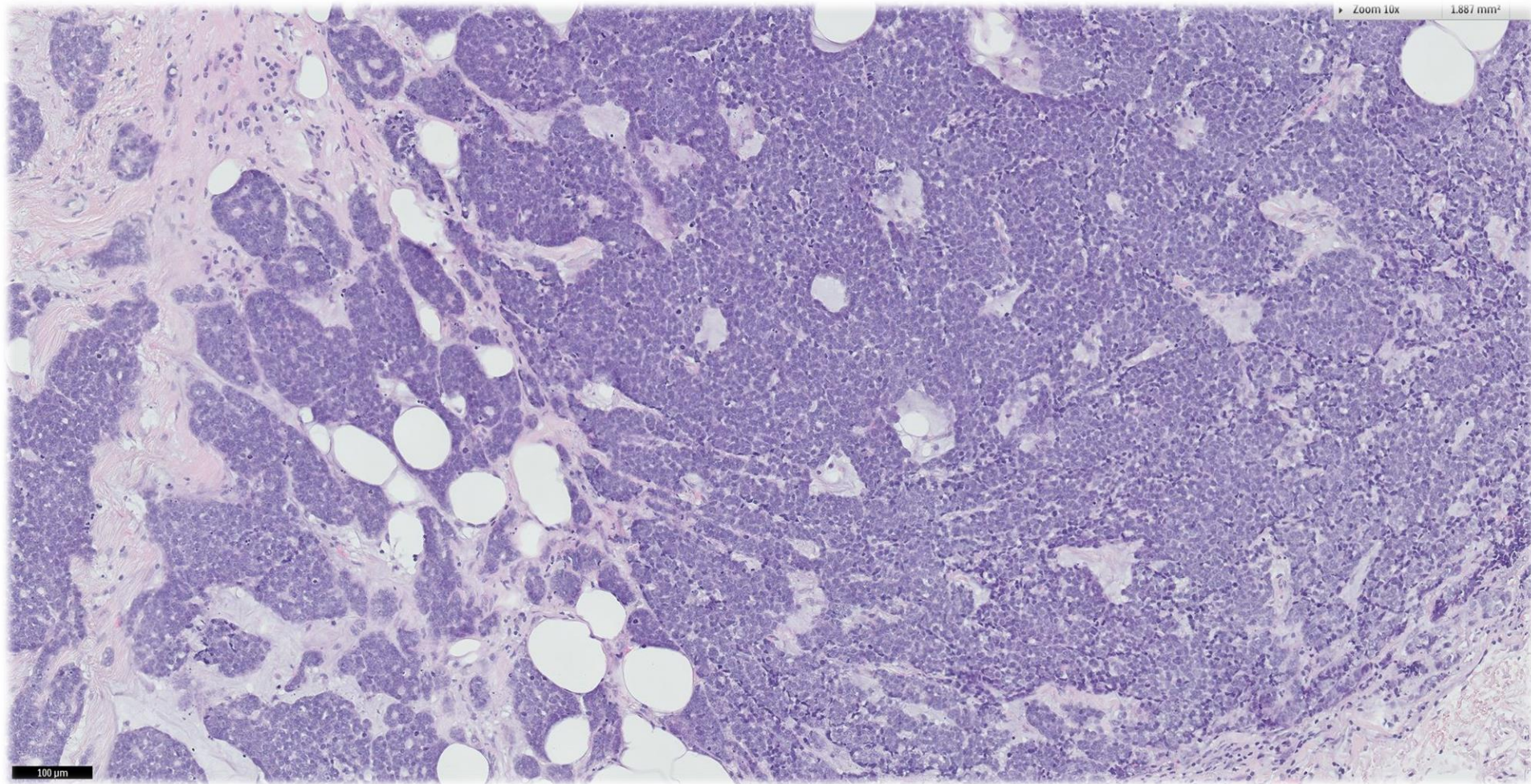
► Zoom 2x



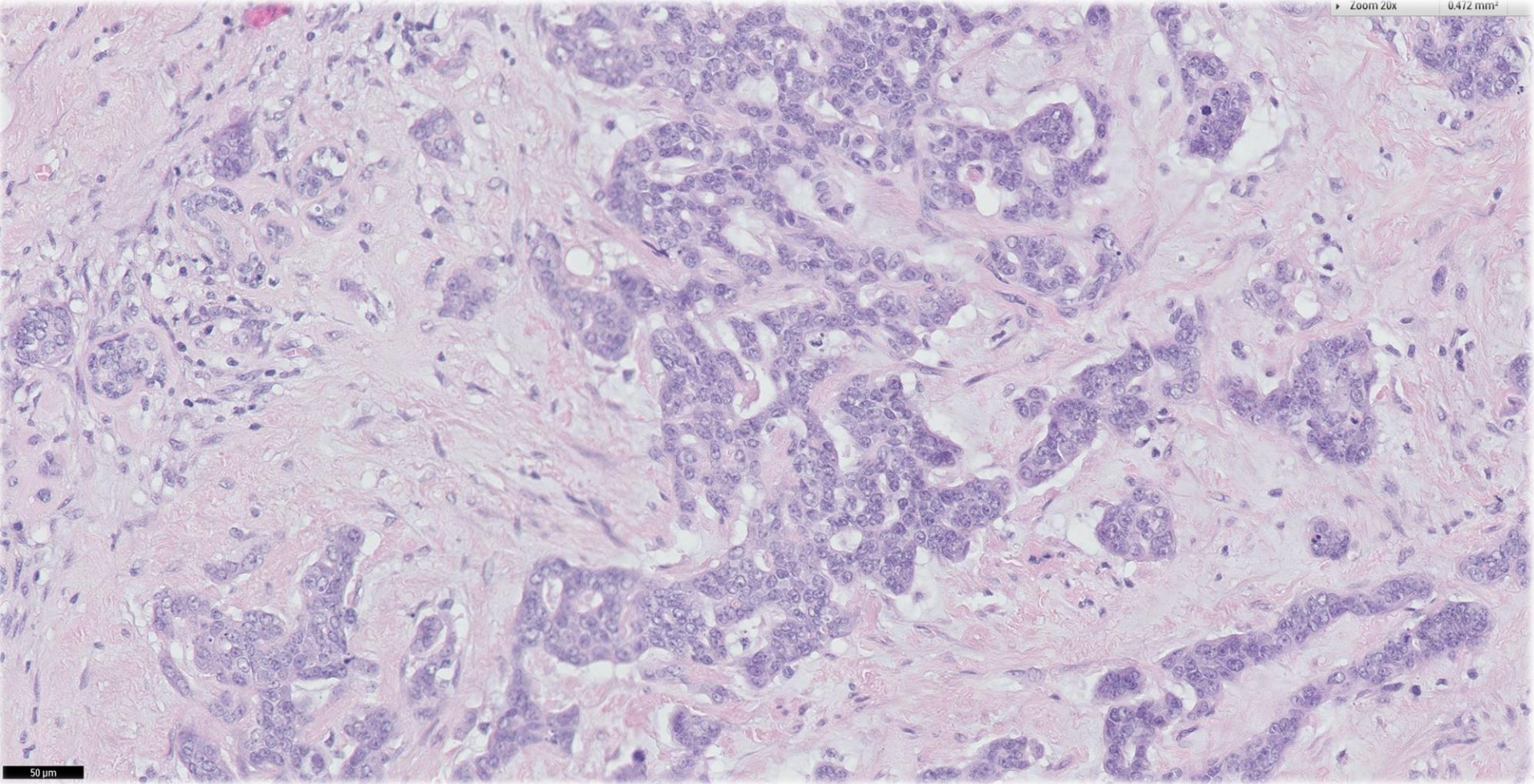
# Lateral quadrant



# Lateral quadrant

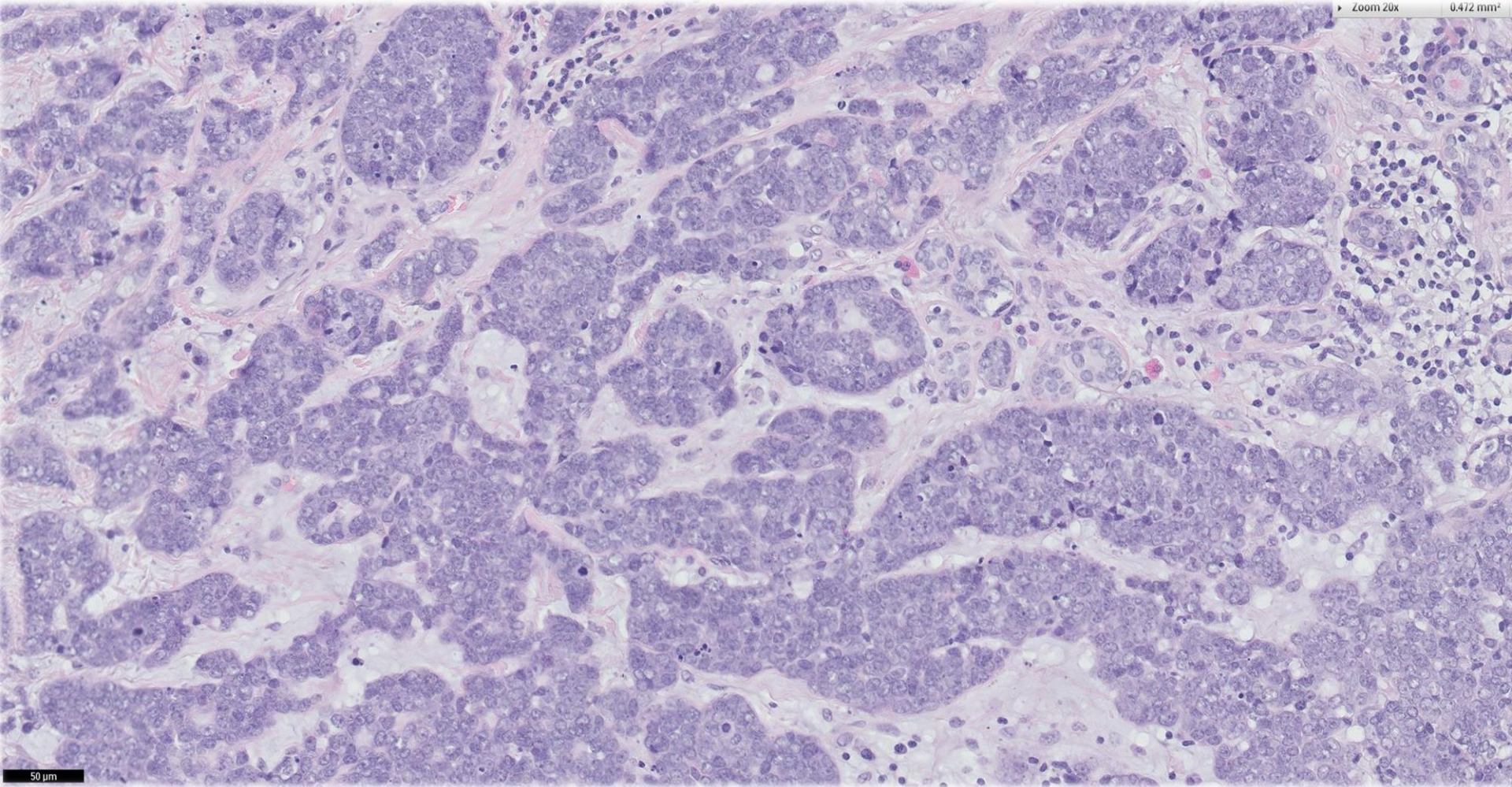


# Lateral quadrant

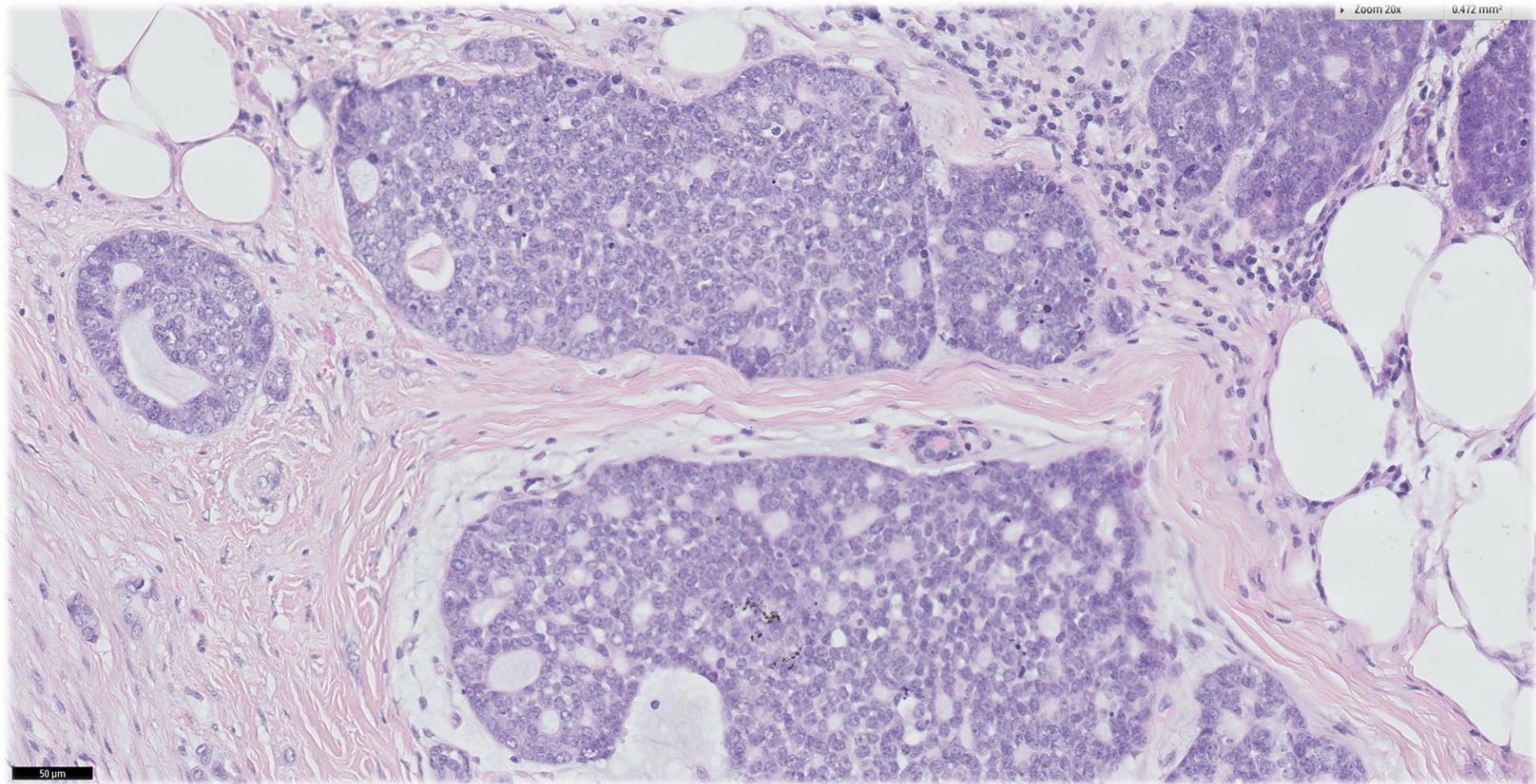




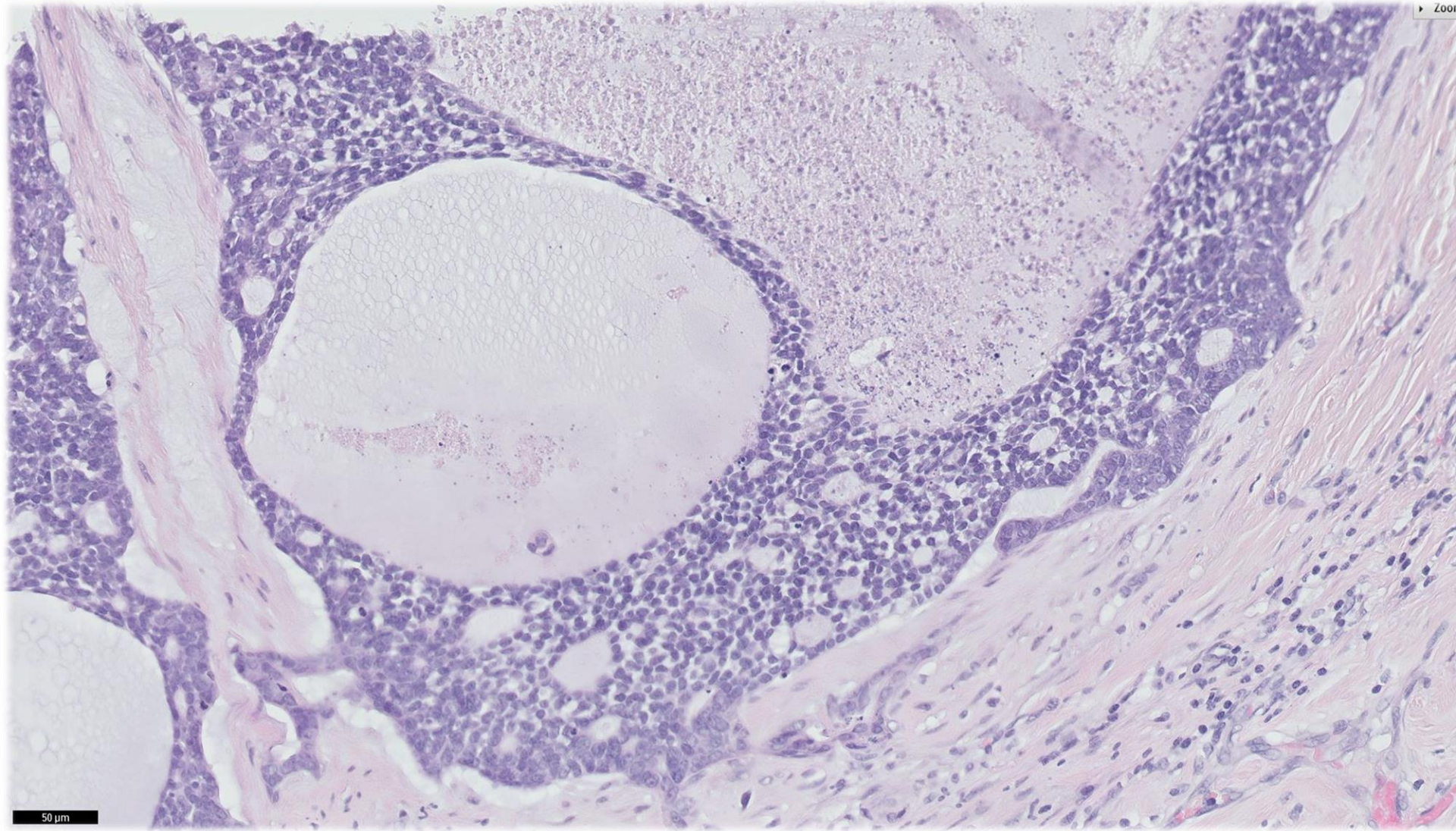
# Lateral quadrant



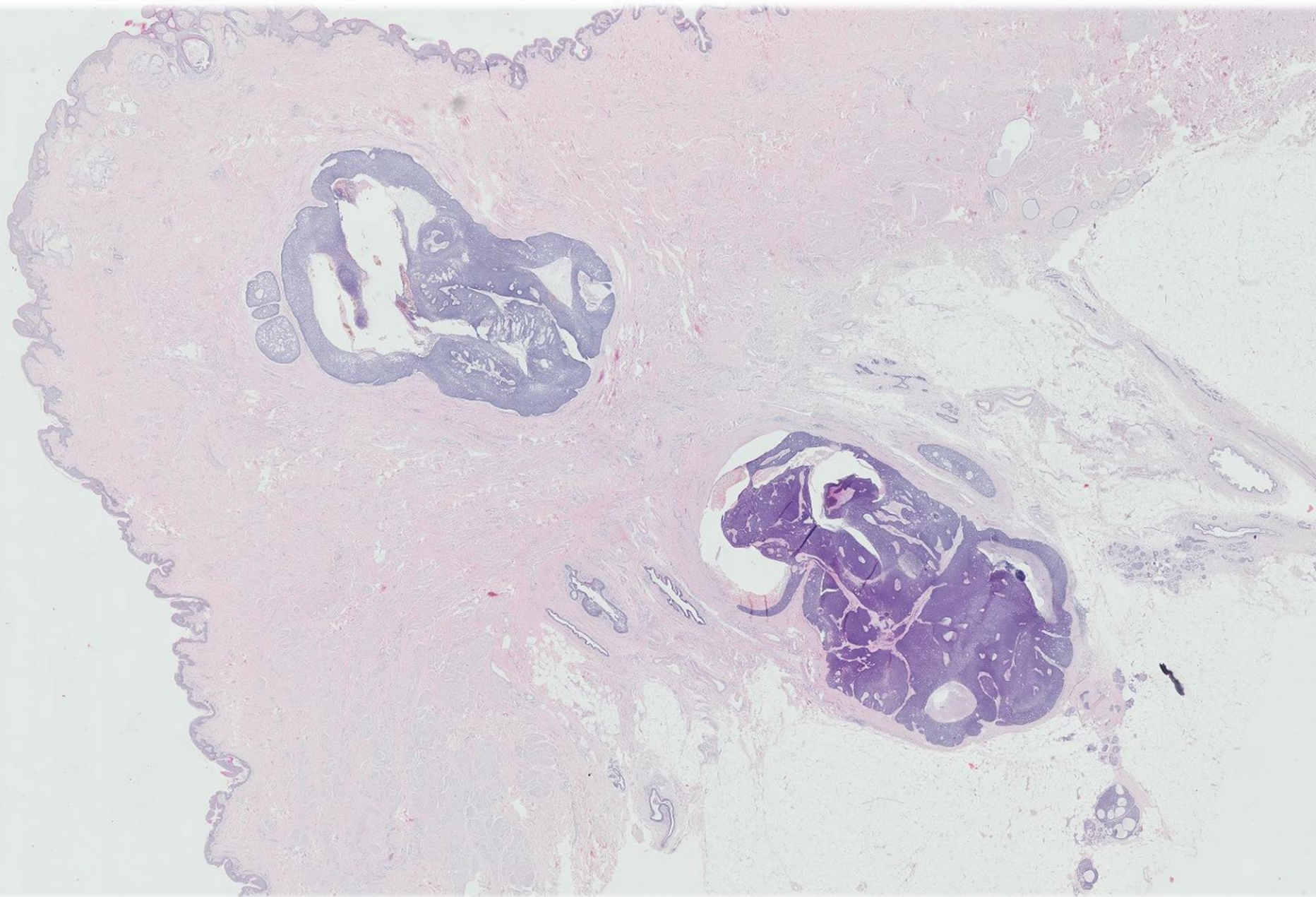
# Lateral quadrant



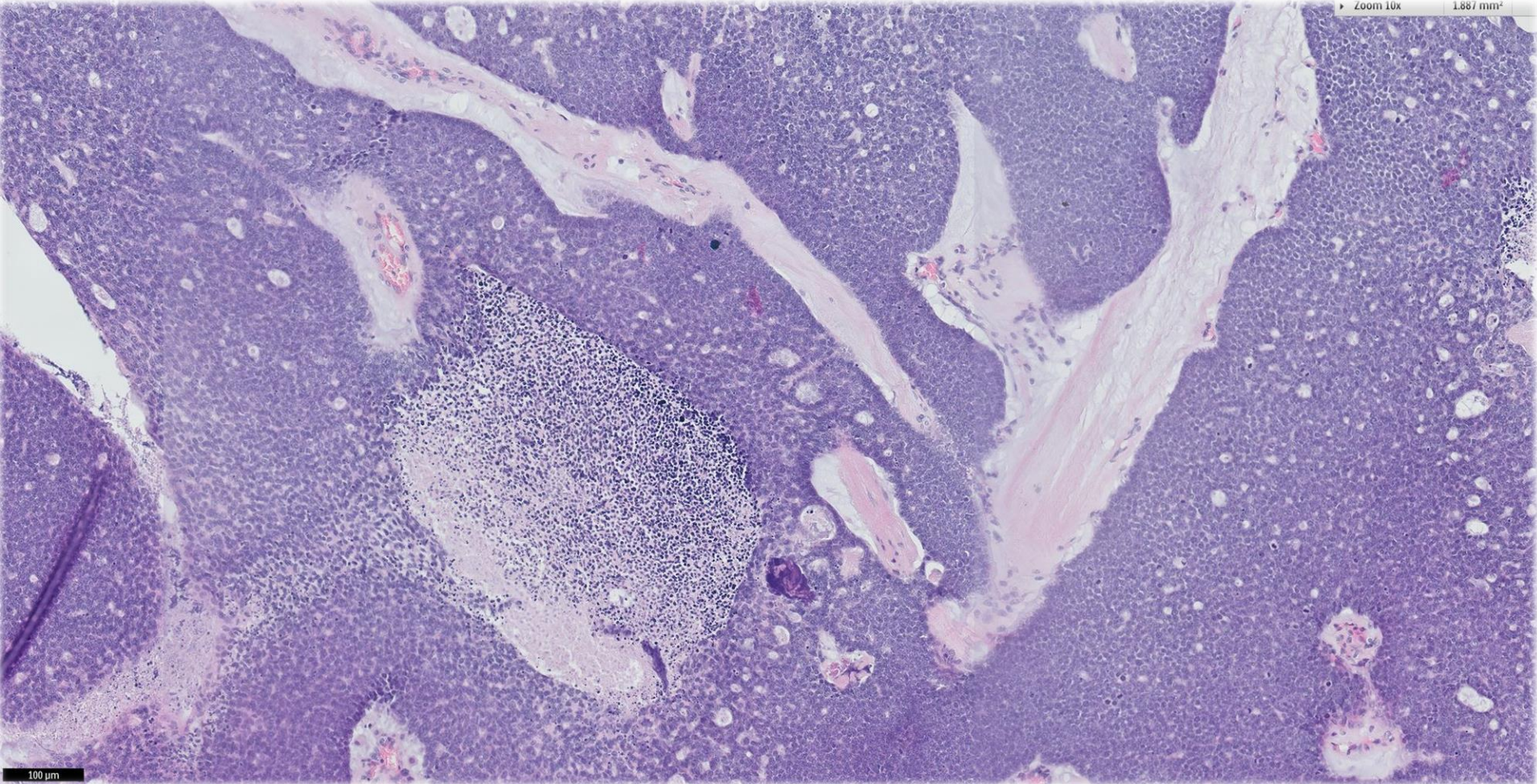
# Lateral quadrant



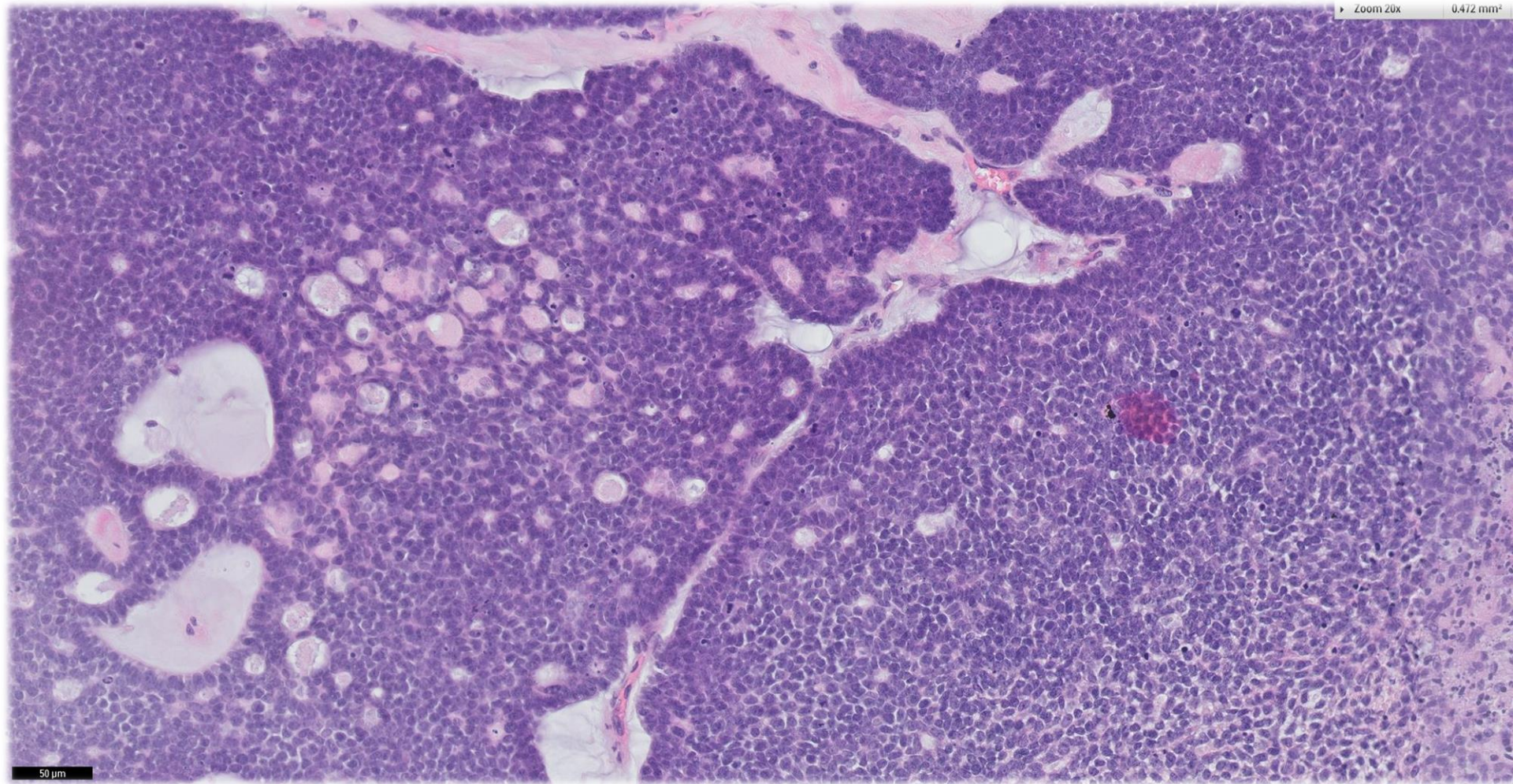
# Nipple



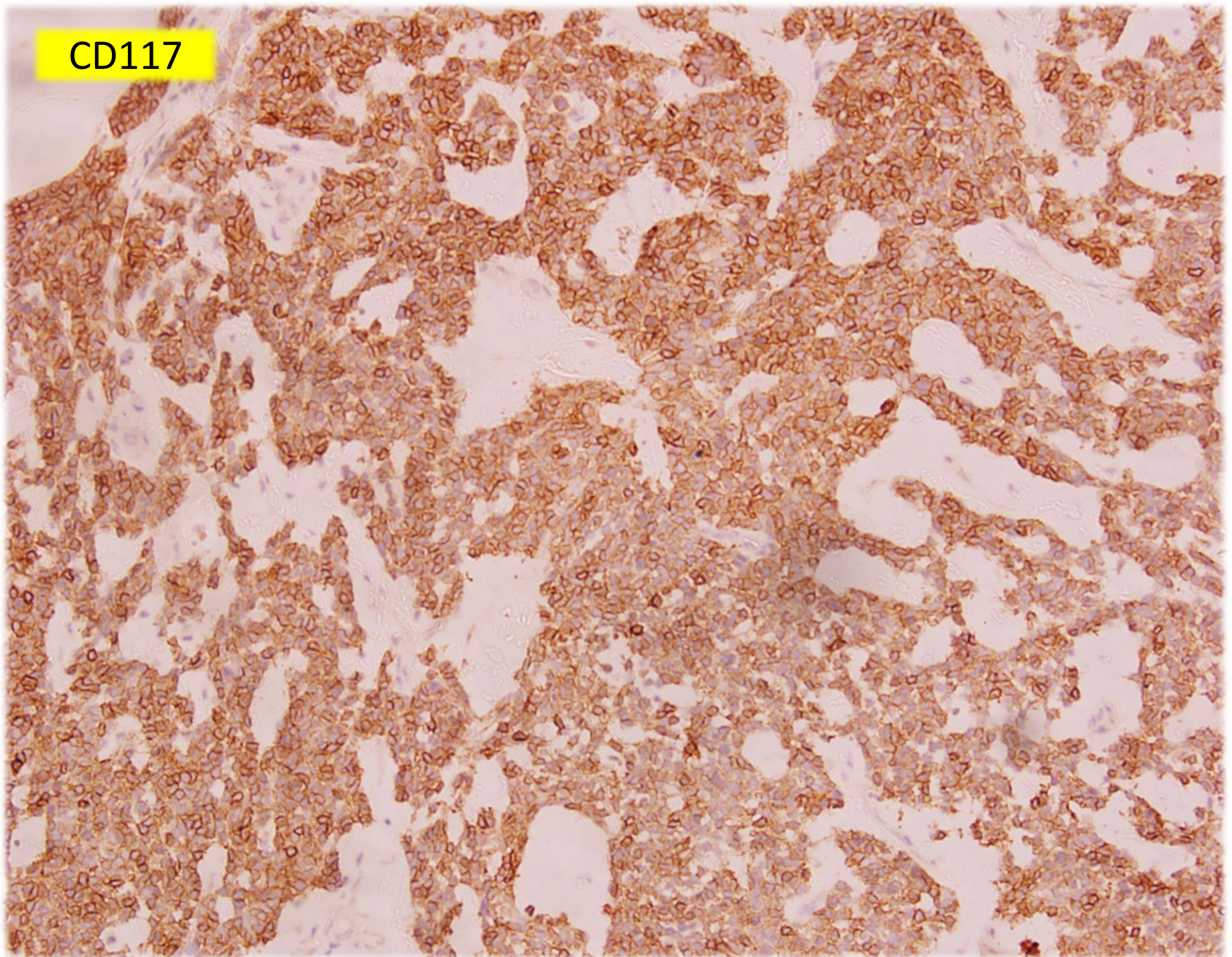
# Nipple



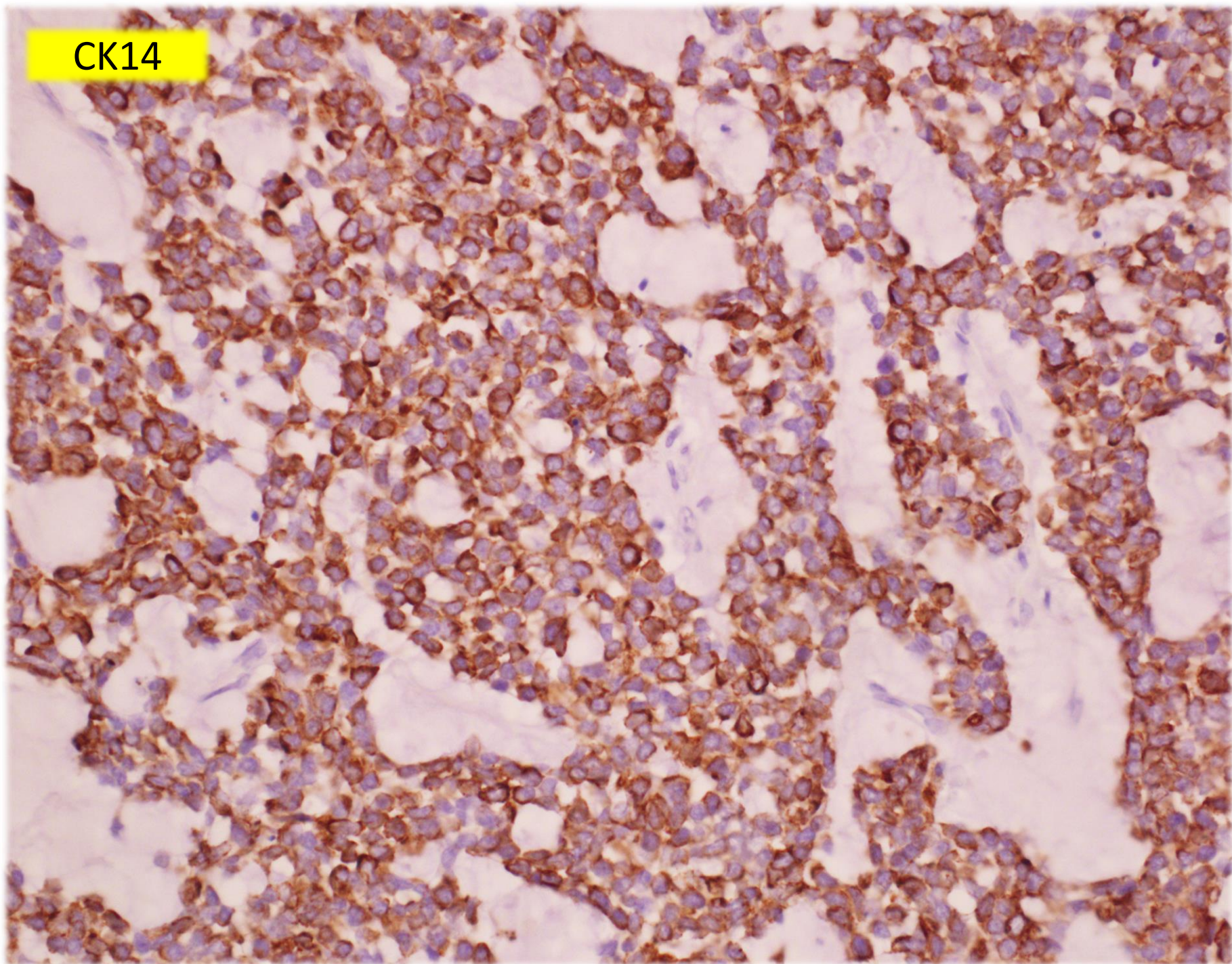
# Nipple



CD117

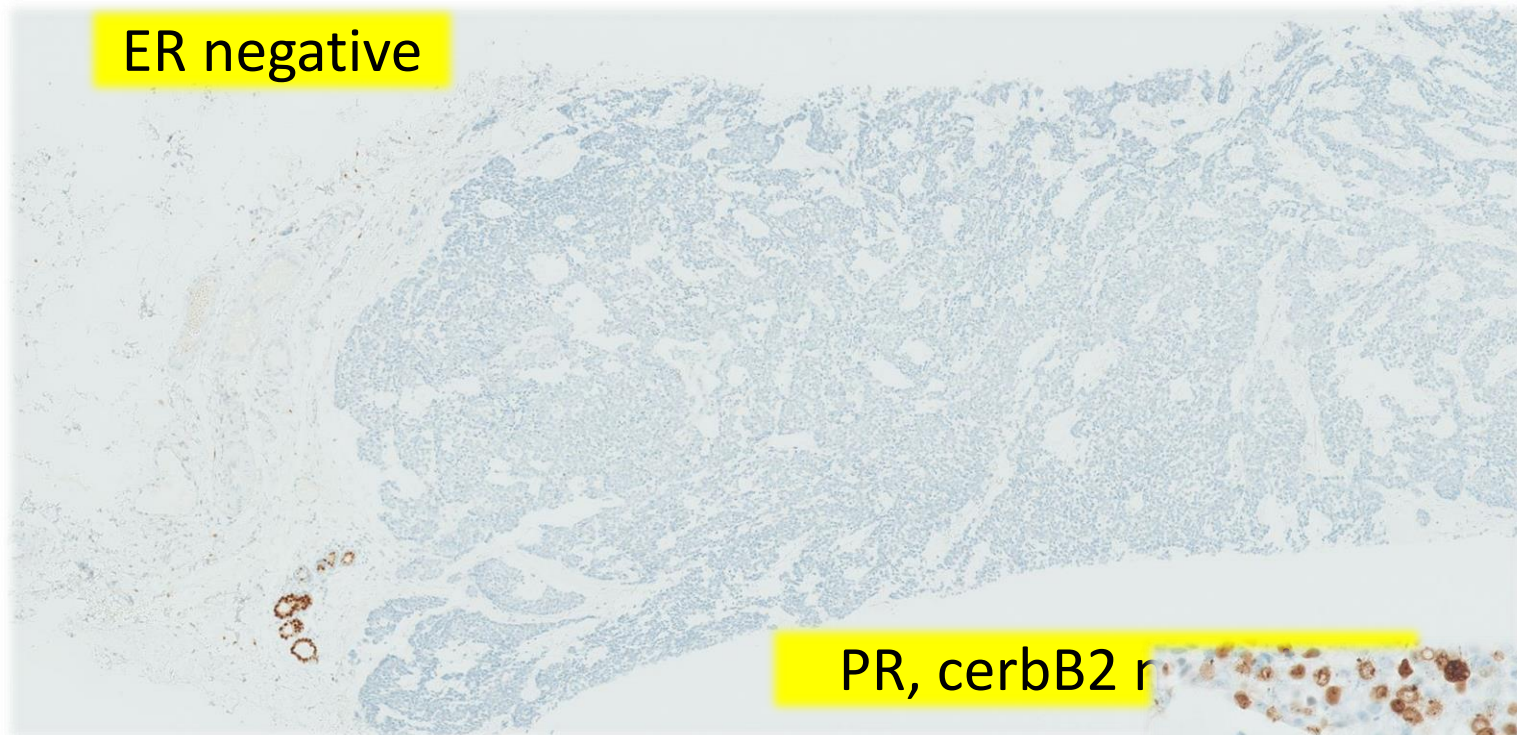


CK14



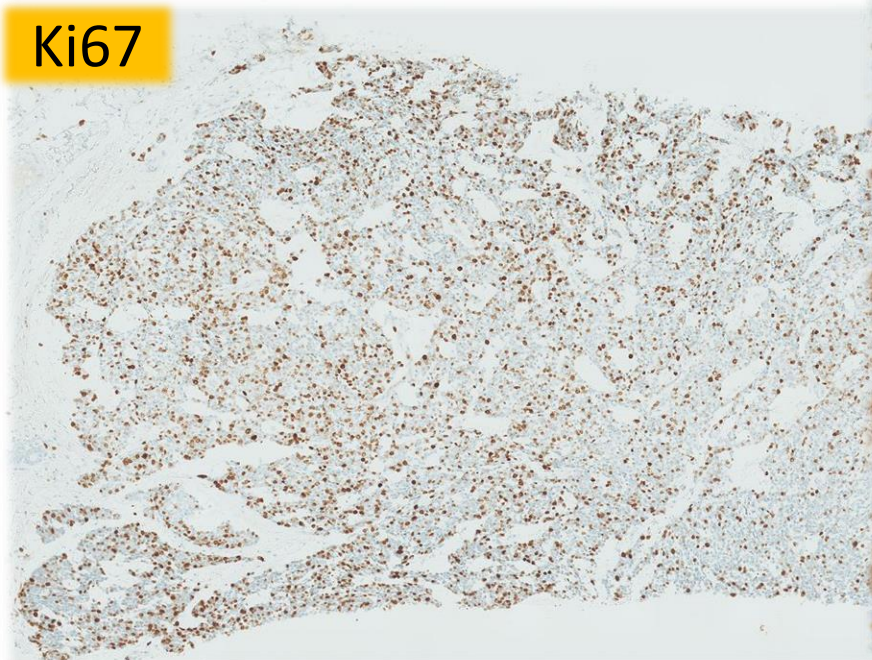


ER negative

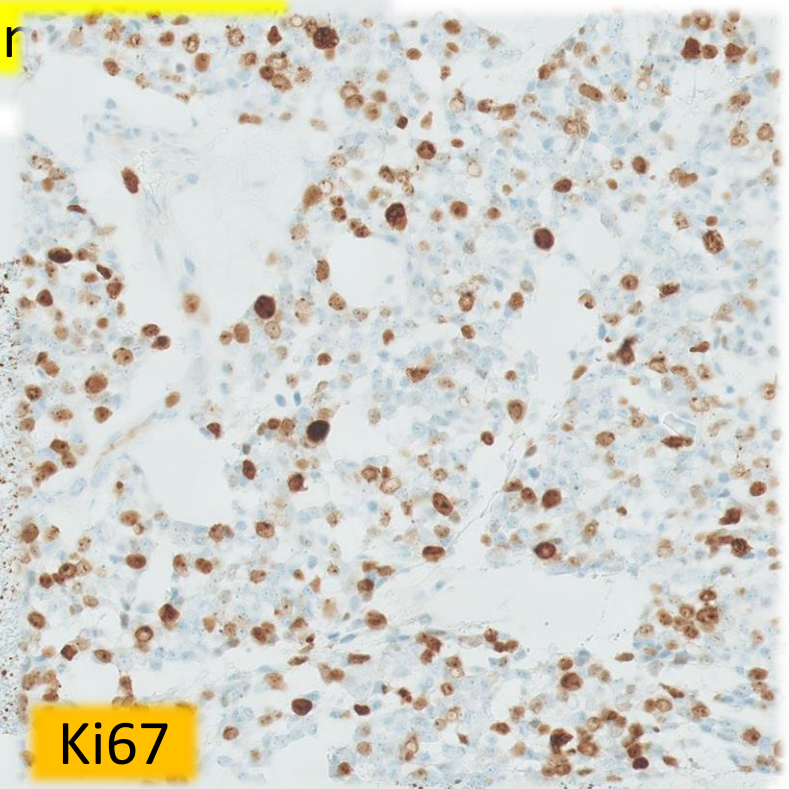


PR, cerbB2 r

Ki67



Ki67



# Diagnosis

- Adenoid cystic carcinoma, grade 2.  
(Two separate lesions in the breast – in the lateral quadrant, 1.5cm, and deep to the nipple, 1cm.)



# Adenoid cystic carcinoma

- Less than 0.1% of breast carcinomas.
- Mean age of diagnosis is 64 years.
- 50% occur in the subareolar region.
- Histologically similar to adenoid cystic carcinomas of the salivary gland, lung and skin.
- Epithelial-myoepithelial tumour.
- Triple negative.
- Displays the recurrent chromosomal translocation  $t(6;9)(q22-23;p23-24)$ , which generates fusion transcripts involving the genes *MYB* and *NFIB* in > 90% of cases.

# Adenoid cystic carcinoma

- Most tumours are nodular and grossly circumscribed.
- Microscopic extension into surrounding breast tissue with multinodularity is seen in about half of cases.
- Although prognosis is excellent, the solid variant with basaloid features may behave more aggressively with recurrent disease.

# Adenoid cystic carcinoma

- Immunohistochemistry
  - Positive reactivity for basal keratins
  - CD117 positive
  - Ki67 correlates with grade of the tumour
  - Type IV collagen, laminin, heparan sulphate in the basement membrane material

# Adenoid cystic carcinoma

- Mutational burden and repertoire of breast adenoid cystic carcinomas are more similar to those of salivary gland adenoid cystic carcinomas than to those of other types of triple negative breast cancers, emphasizing the importance of histological subtyping of TNBCs.

*Martellato et al. J Pathol. 2015 Jun 12.*

