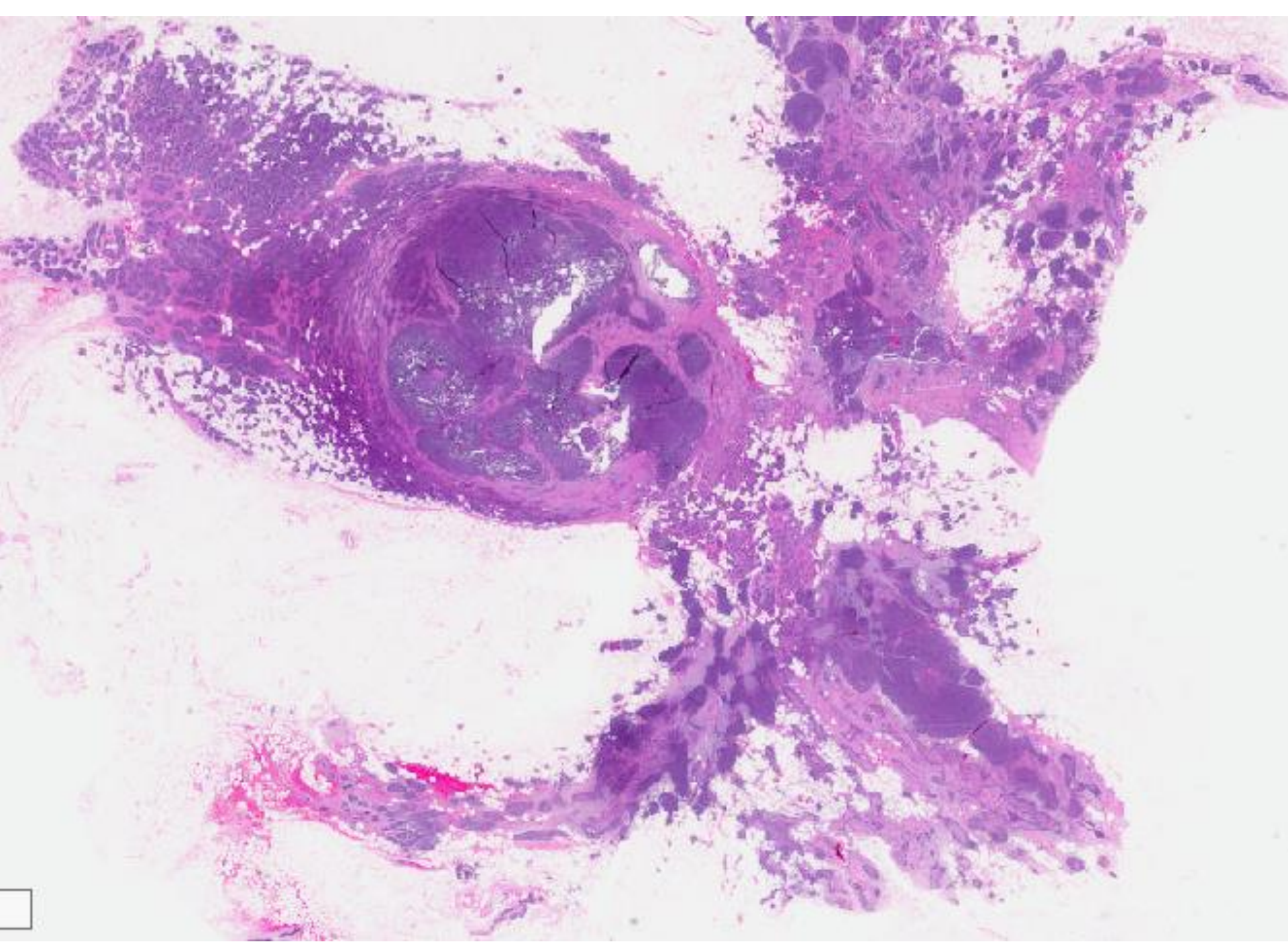
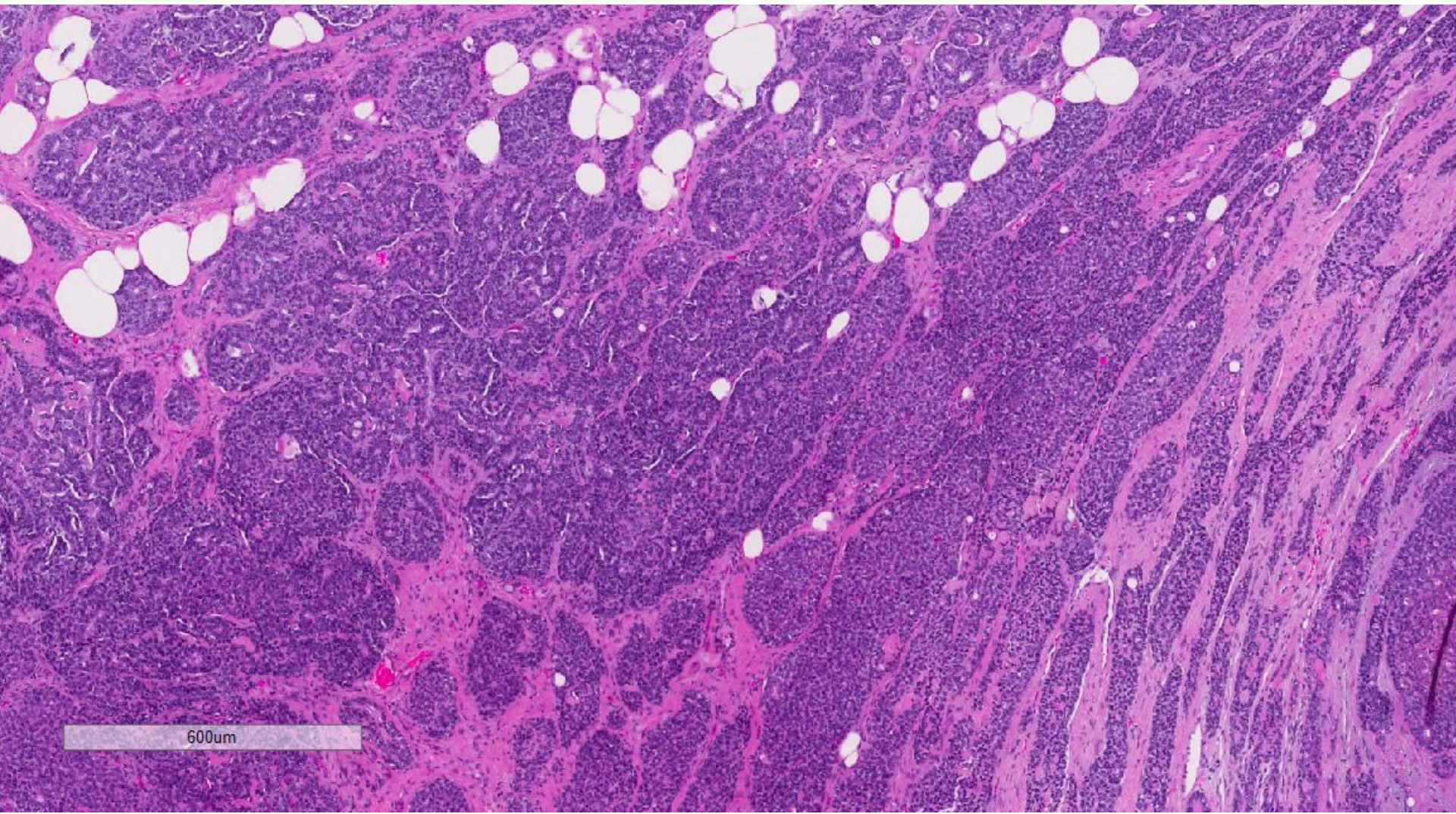


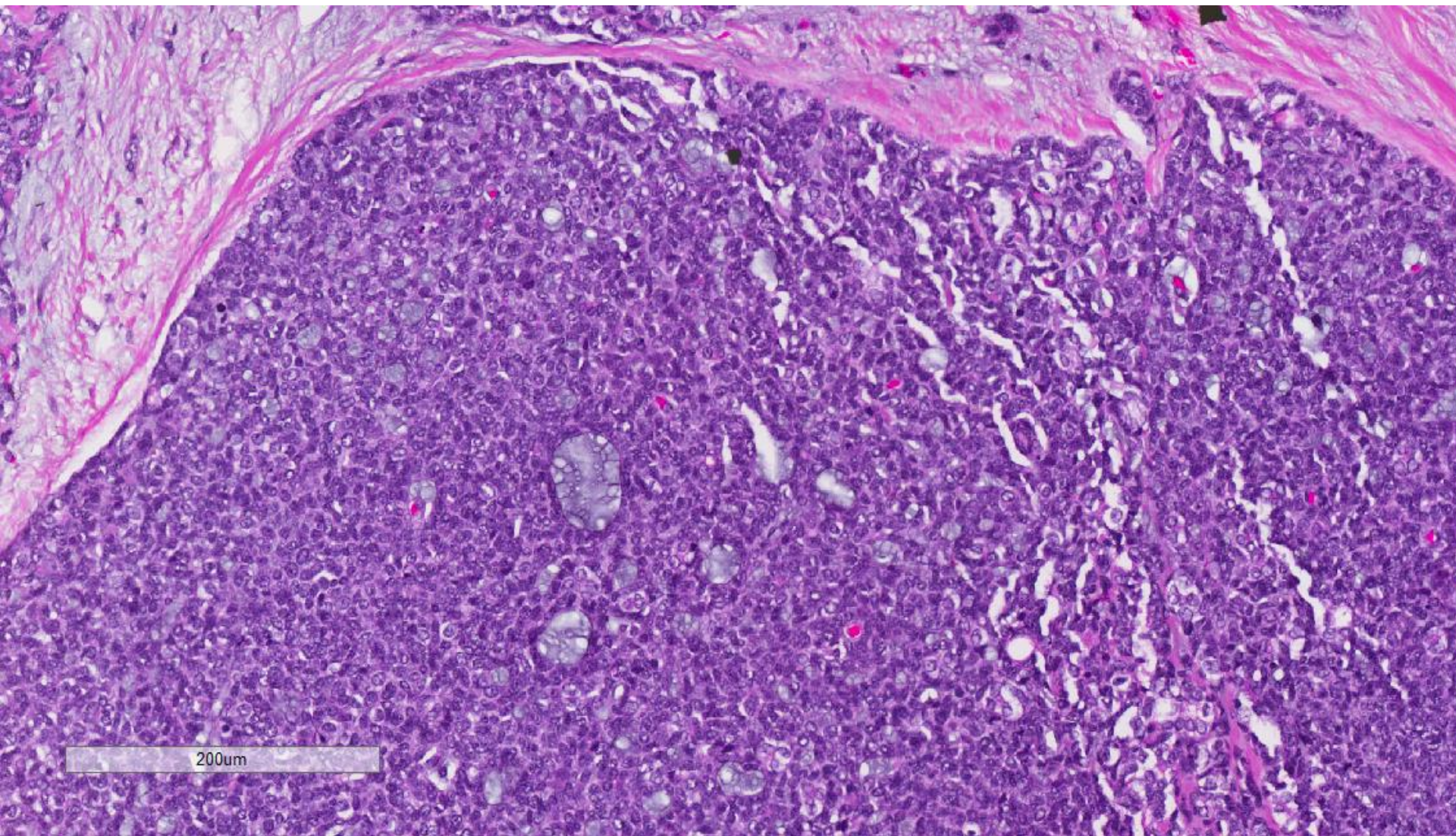
Case 15

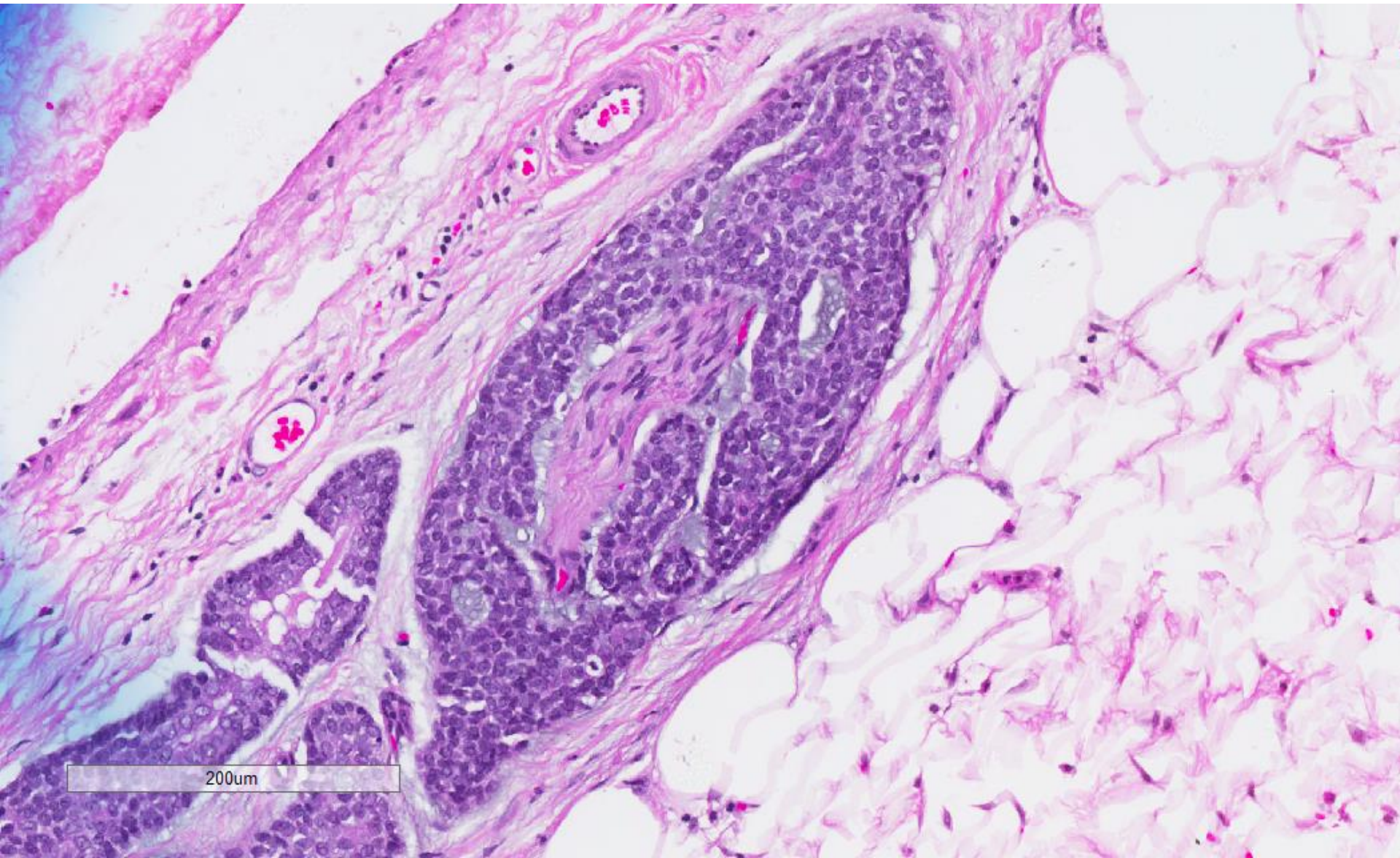
58 year old lady underwent mastectomy
for a 5 cm left breast mass.



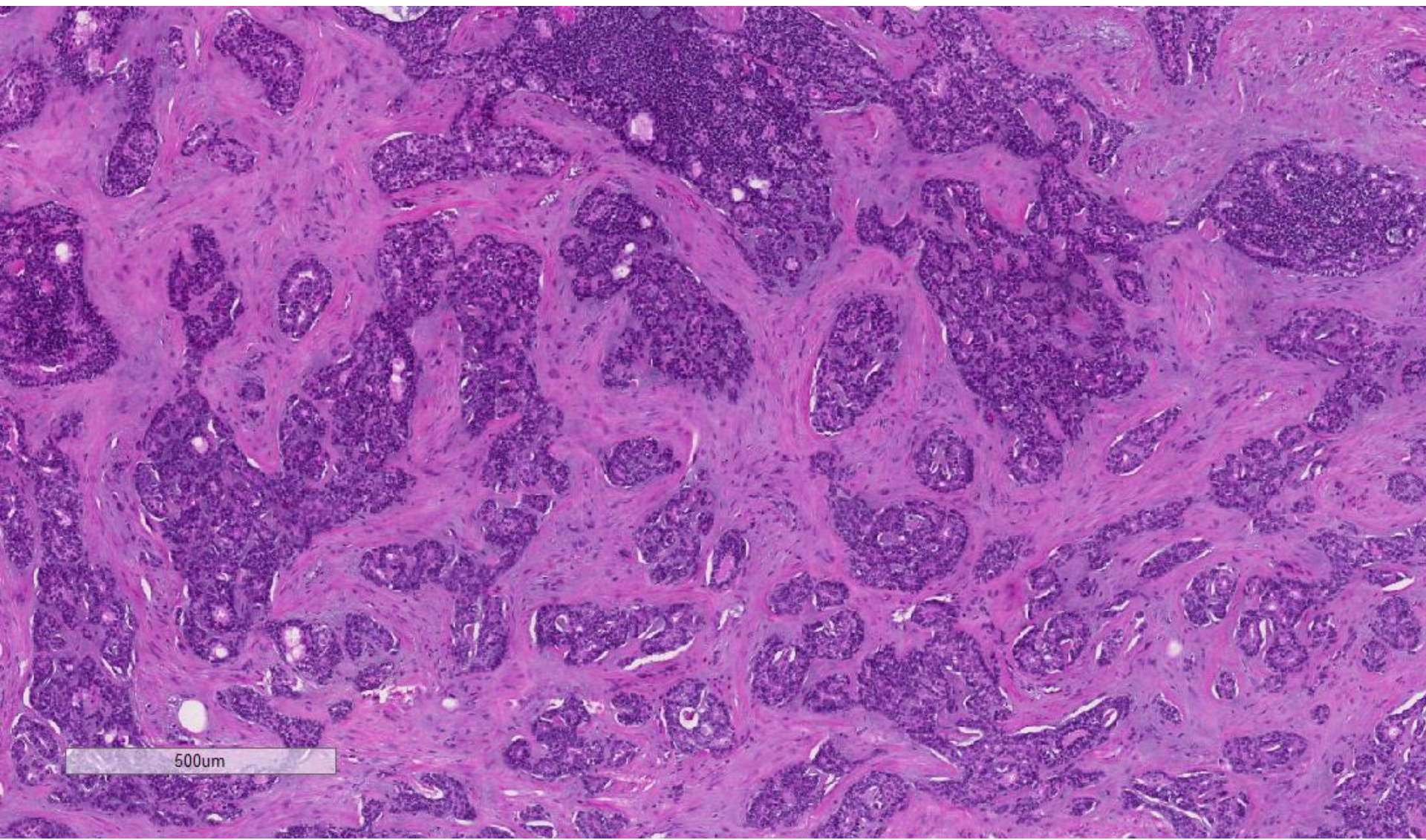


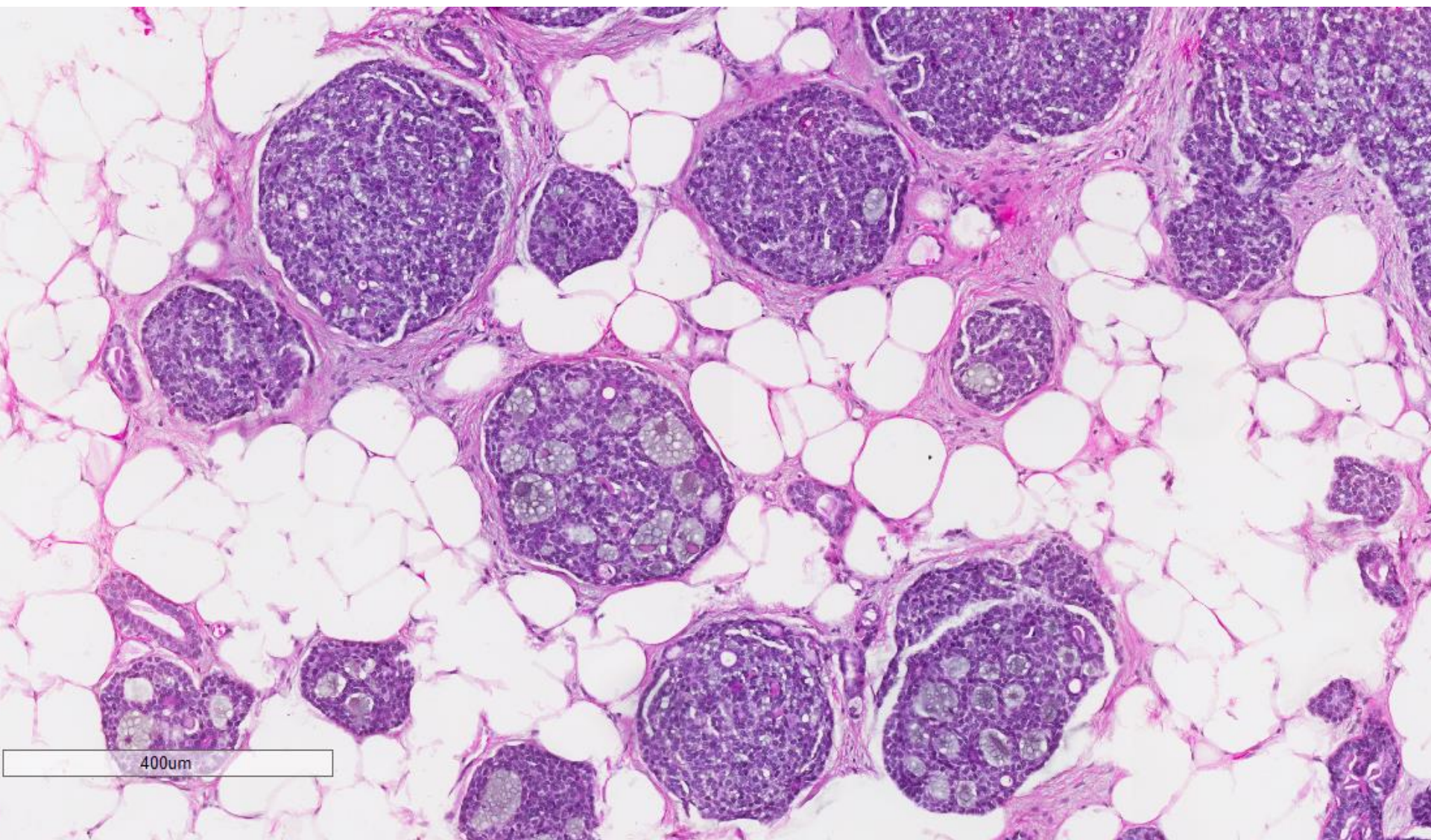
600um



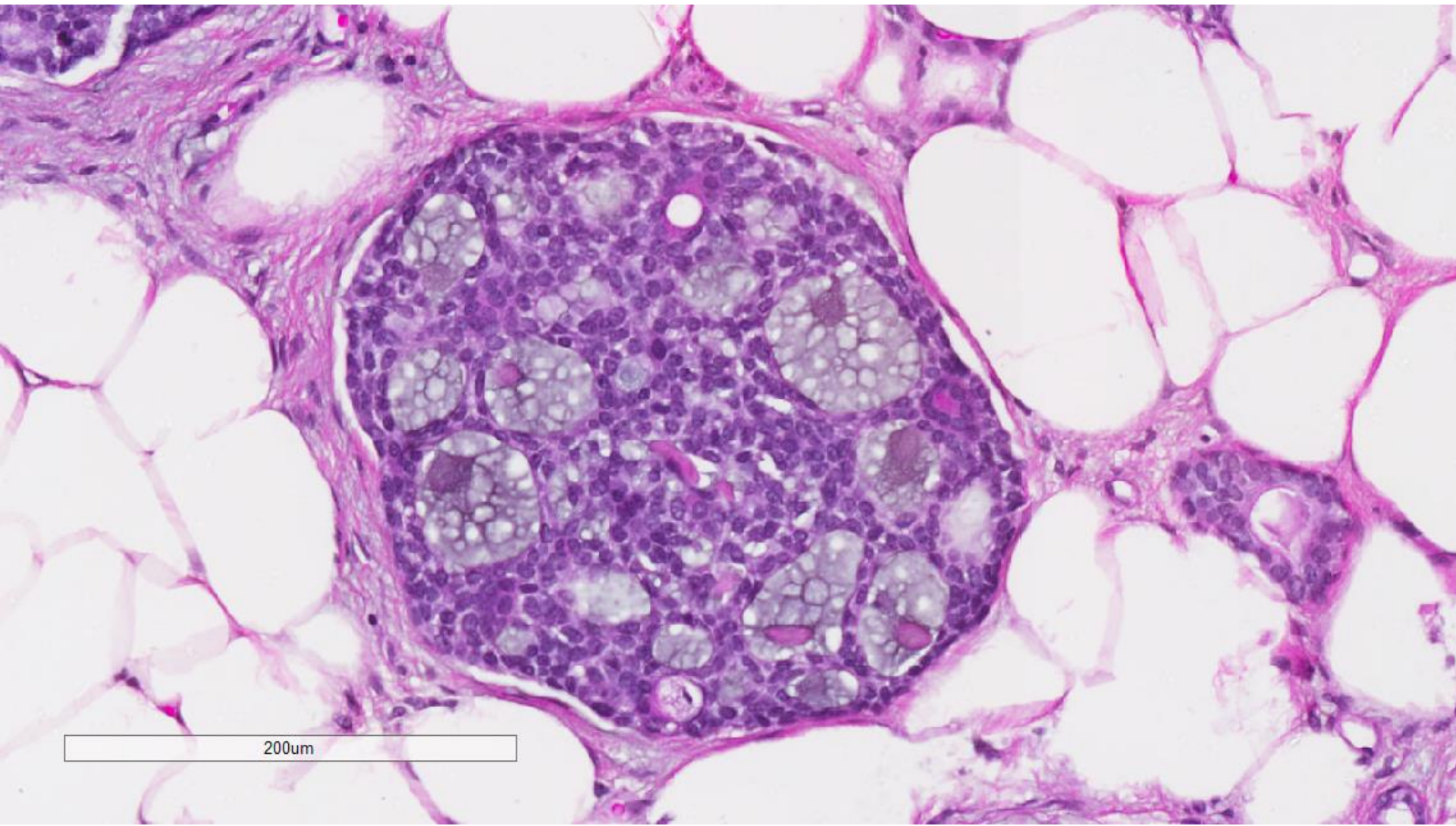


200um

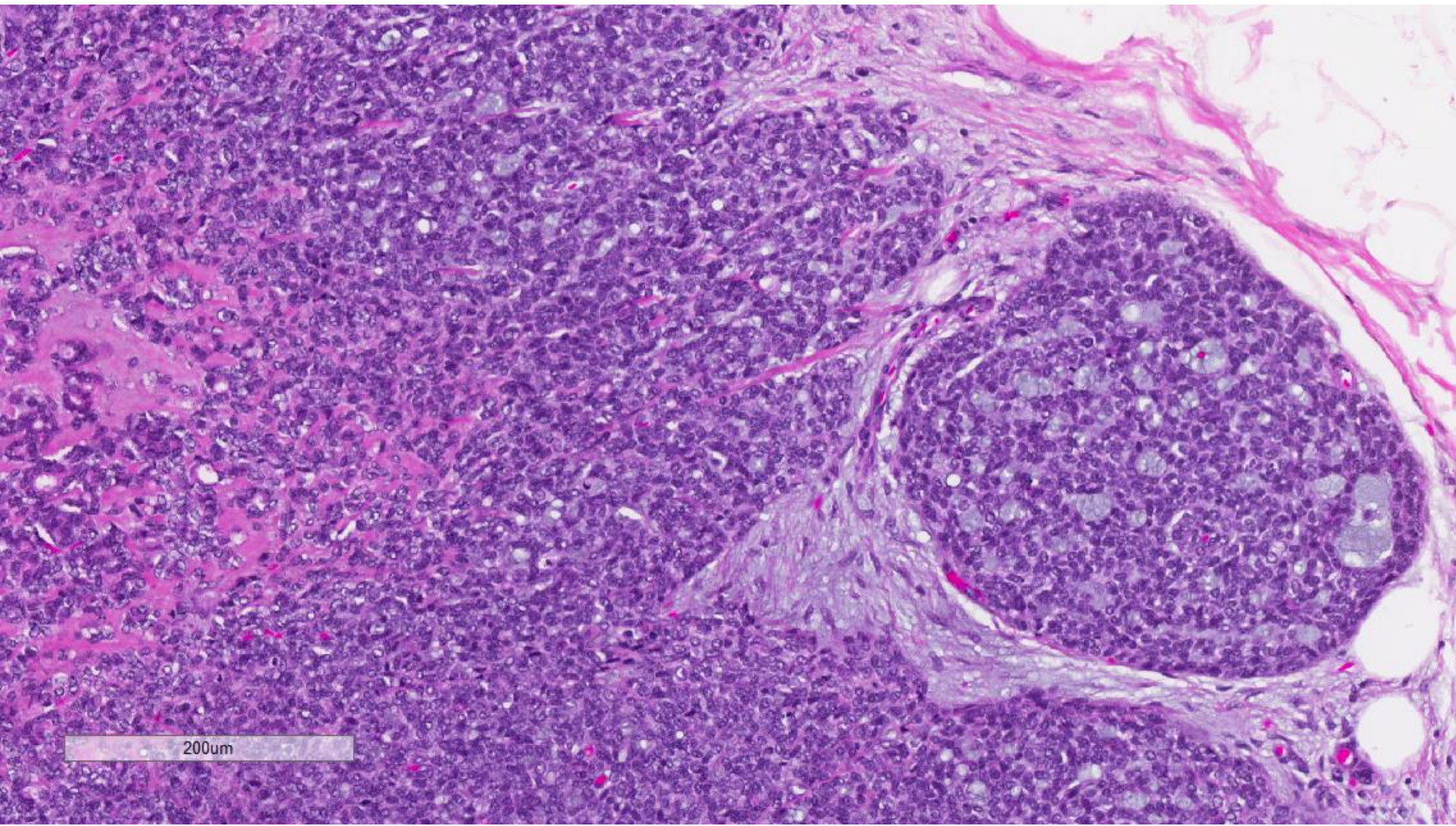




400um

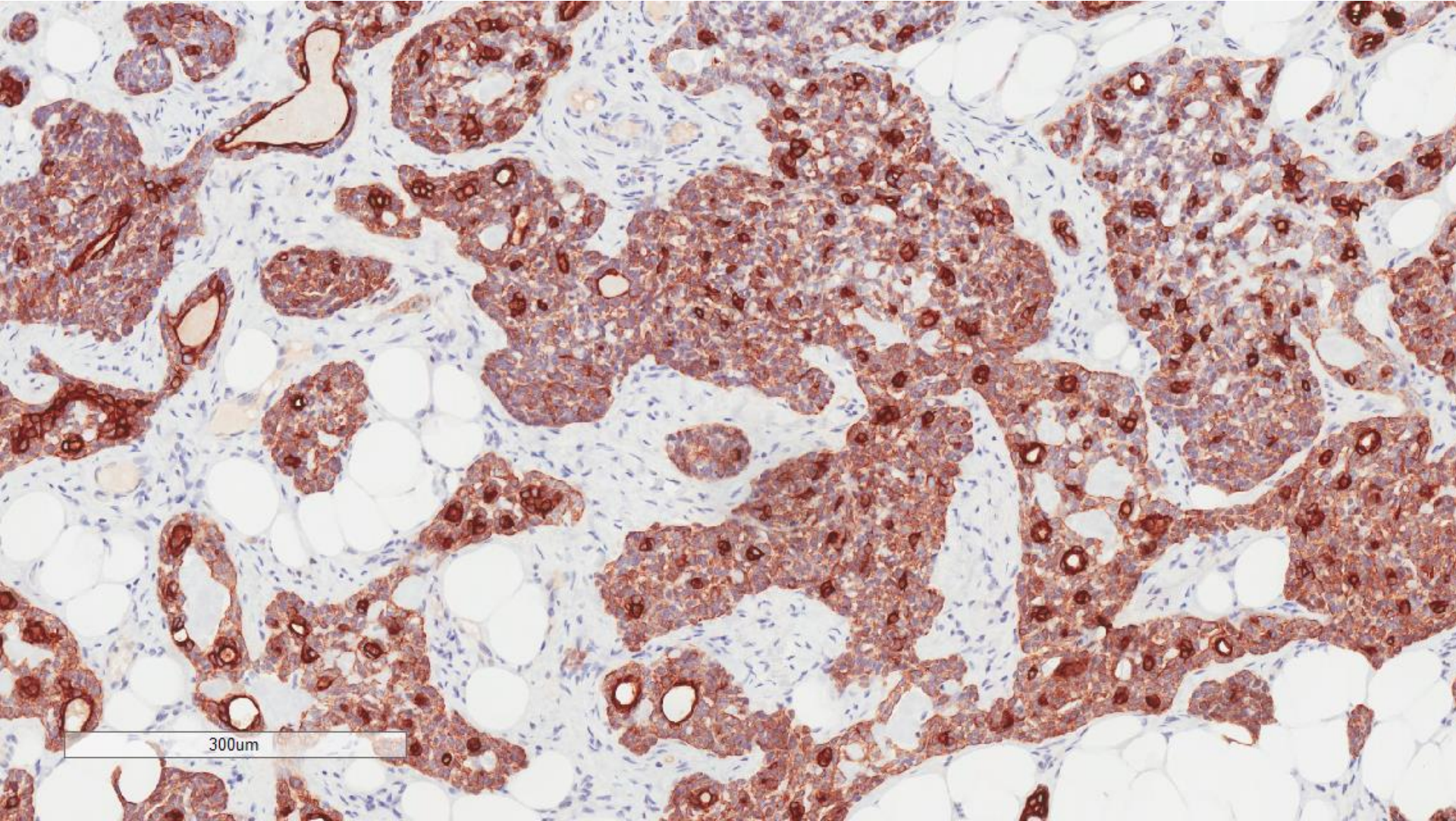


200um

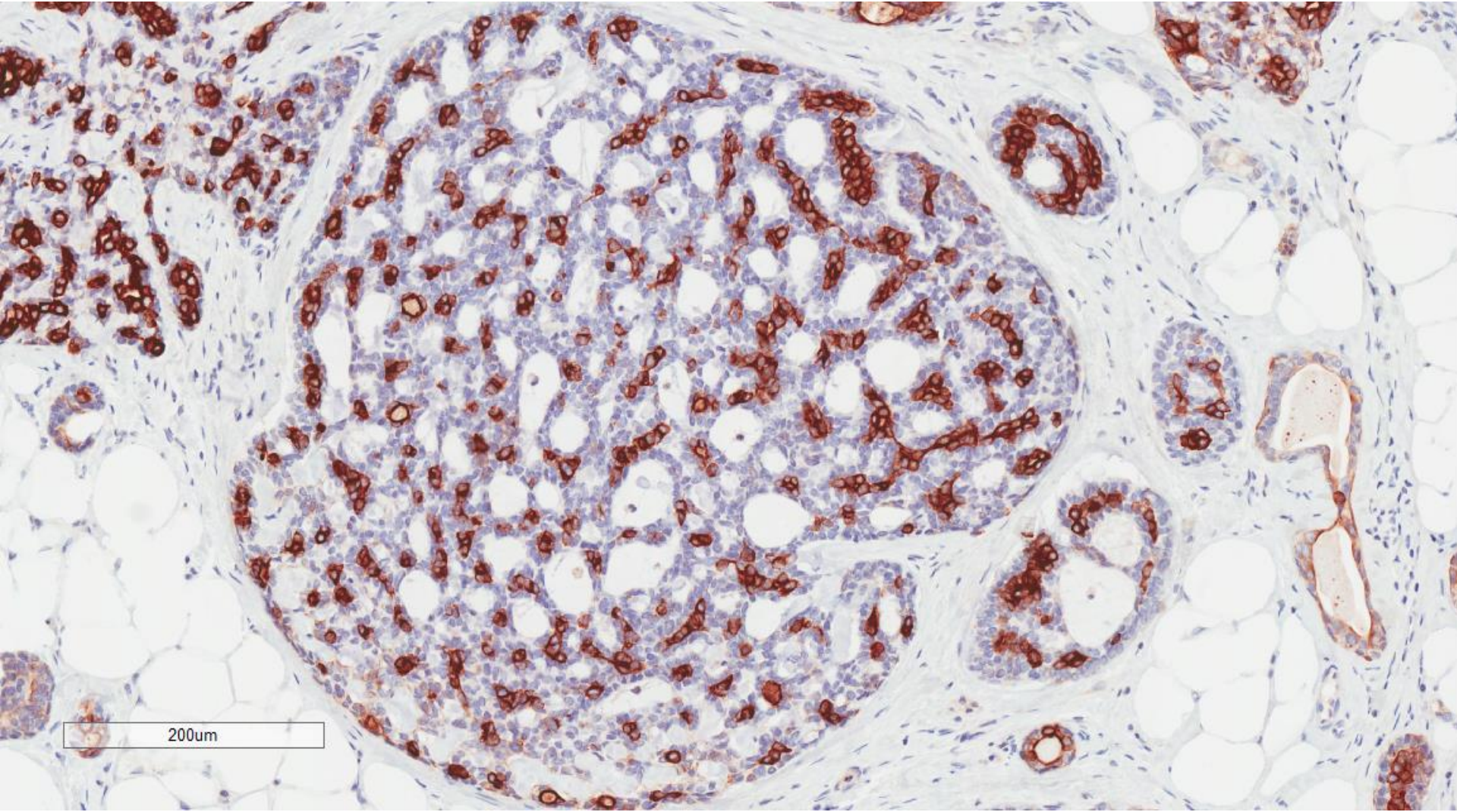


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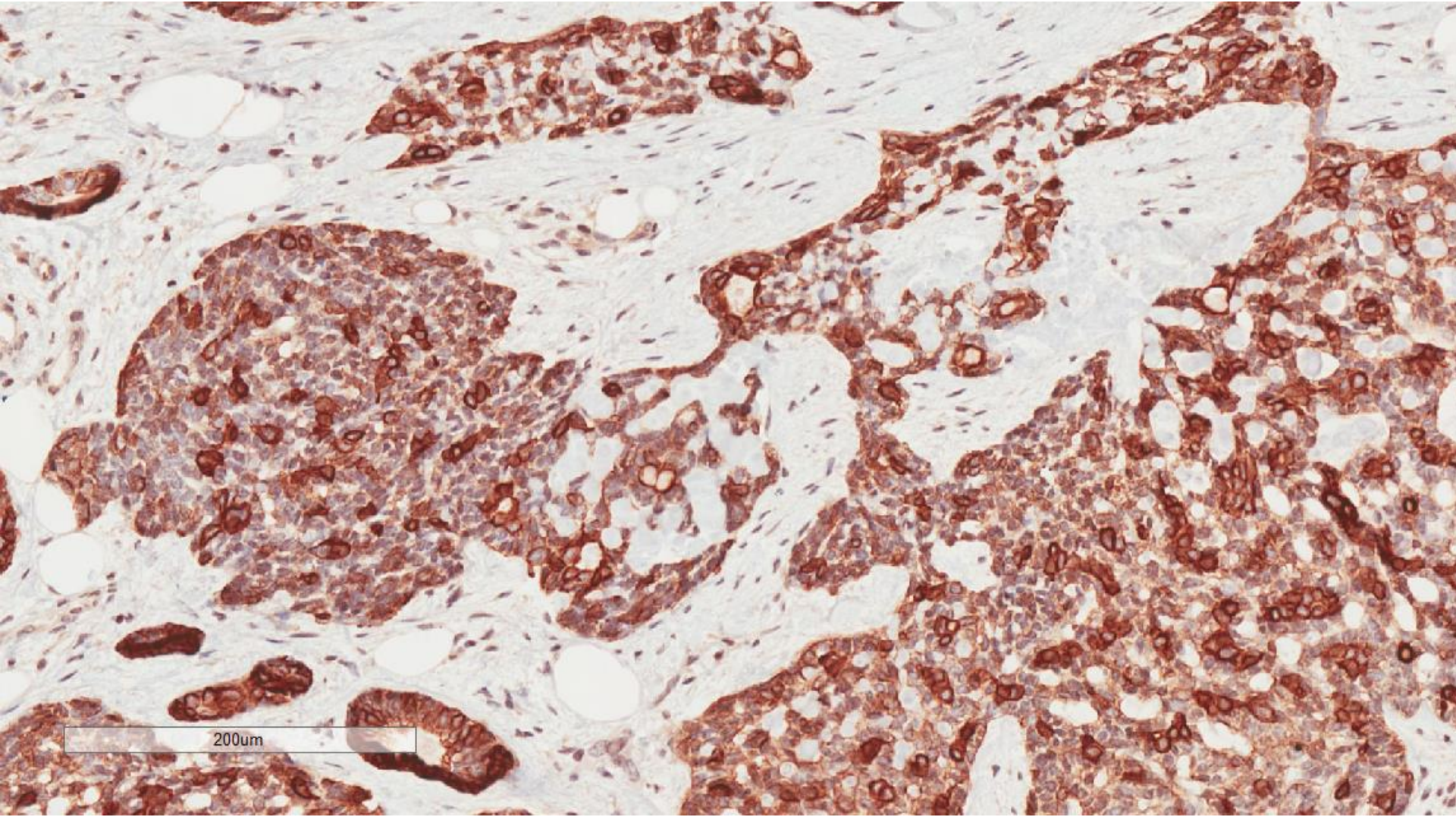
CK5/6



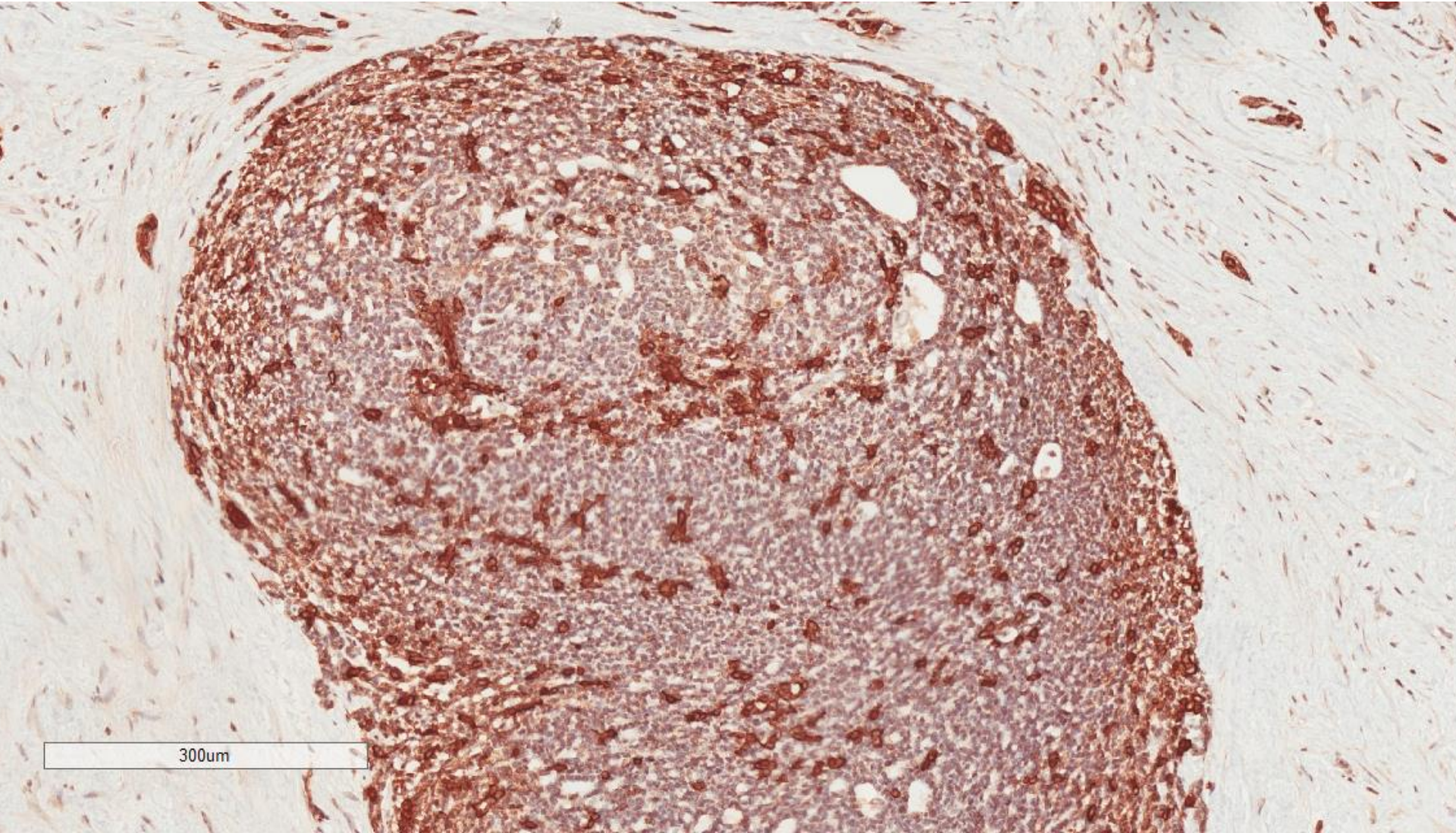
CK5/6



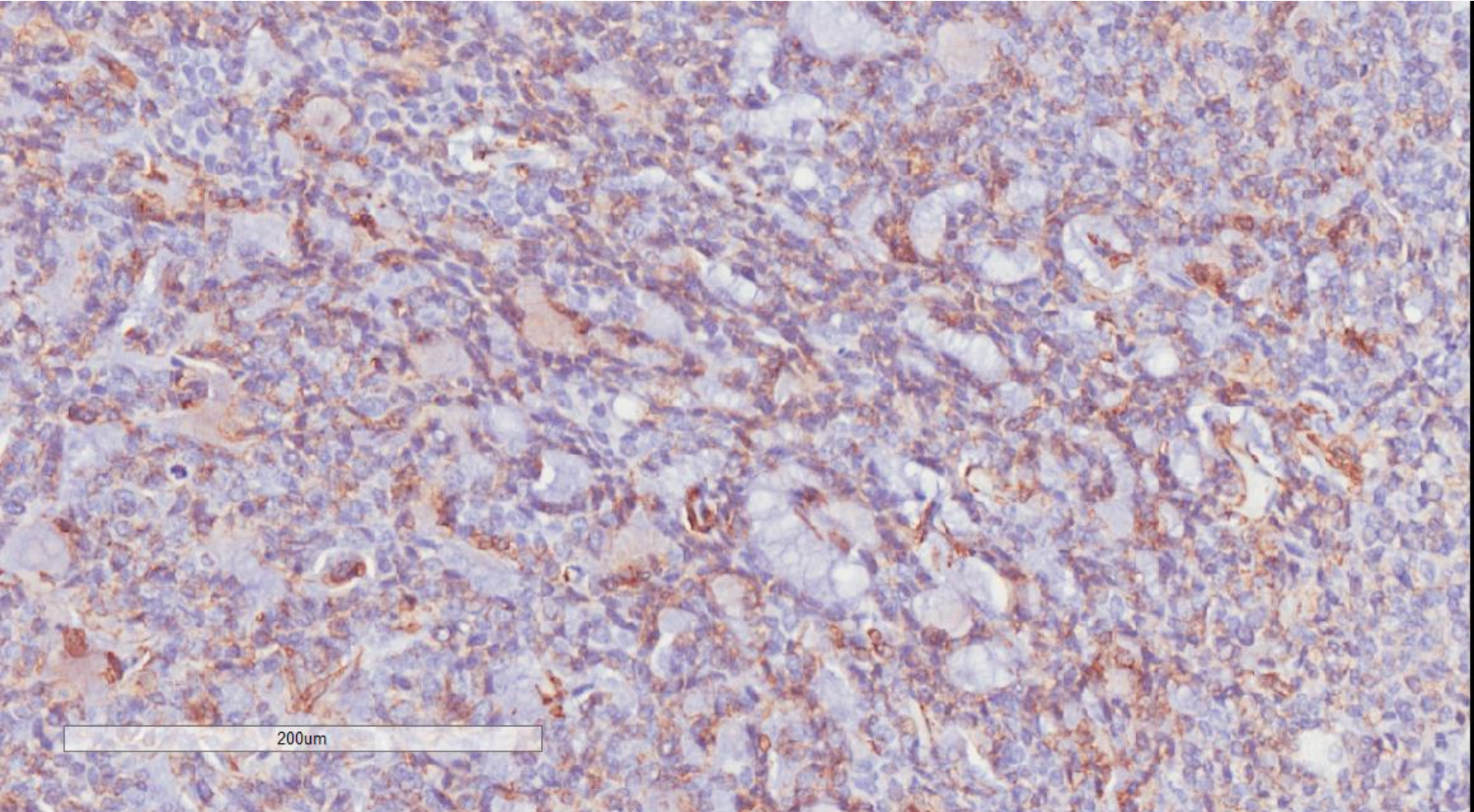
CK14



CK14



SMA



Adenoid cystic carcinoma, 50 mm

Adenoid cystic carcinoma

- A carcinoma of low malignant potential, histologically similar to its counterpart in the salivary gland.
- Comprising < 0.1% of breast carcinomas.
- About 50% of cases are found in the subareolar region.

Adenoid cystic carcinoma

- Histologically, neoplastic cells are polarized around two types of structures:
 - True glandular spaces and pseudolumina.
- True glandular spaces are surrounded by luminal cells, are small, difficult to see and contain neutral periodic acid-Schiff (PAS)-positive mucin.
- Pseudolumina, which result from intraluminal invaginations of the stroma (stromal space) are surrounded by basal–myoepithelial cells.
- Laminin and collagen IV-positive material outlines these stromal spaces.
- Pseudolumina are sometimes filled by small spherules or cylinders of hyaline material, shown ultrastructurally and immunohistochemically to be basal lamina.

Adenoid cystic carcinoma

- Ultrastructurally, basaloid cells have myoepithelial features and are immunohistochemically positive for smooth muscle actin, p63, and calponin as well as for high-molecular-weight keratins (keratins 14, 5/6), with negativity for CD10.
- Luminal cells are positive for keratins 7 and 8/18, CD117.
- Usually negative for ER, PR and cerbB2.

Adenoid cystic carcinoma

- Differential diagnosis:
 - Collagenous spherulosis.
 - Cribriform DCIS.
 - Invasive cribriform carcinoma.
- DDX of solid variant ACC with basaloid features:
 - Small cell carcinoma.
 - Solid papillary carcinoma.
 - Metaplastic carcinoma.

Adenoid cystic carcinoma

- Display 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.
- ACC is a low-grade malignant tumour that is generally cured by complete excision.
- Suggestion that cases classified as grade 3 (solid growth pattern) may have a higher rate of metastasis and recurrence.

Adenoid cystic carcinoma

- Rarely spreads via the lymphatic system and rarely involves regional lymph nodes.
- Most cases are associated with excellent survival.
- Solid variant of ACC with basaloid features may have a greater propensity for axillary metastasis than conventional ACC.
- 5-year and 10-year survival rates for patients with breast ACC are > 95% and 90%, respectively.