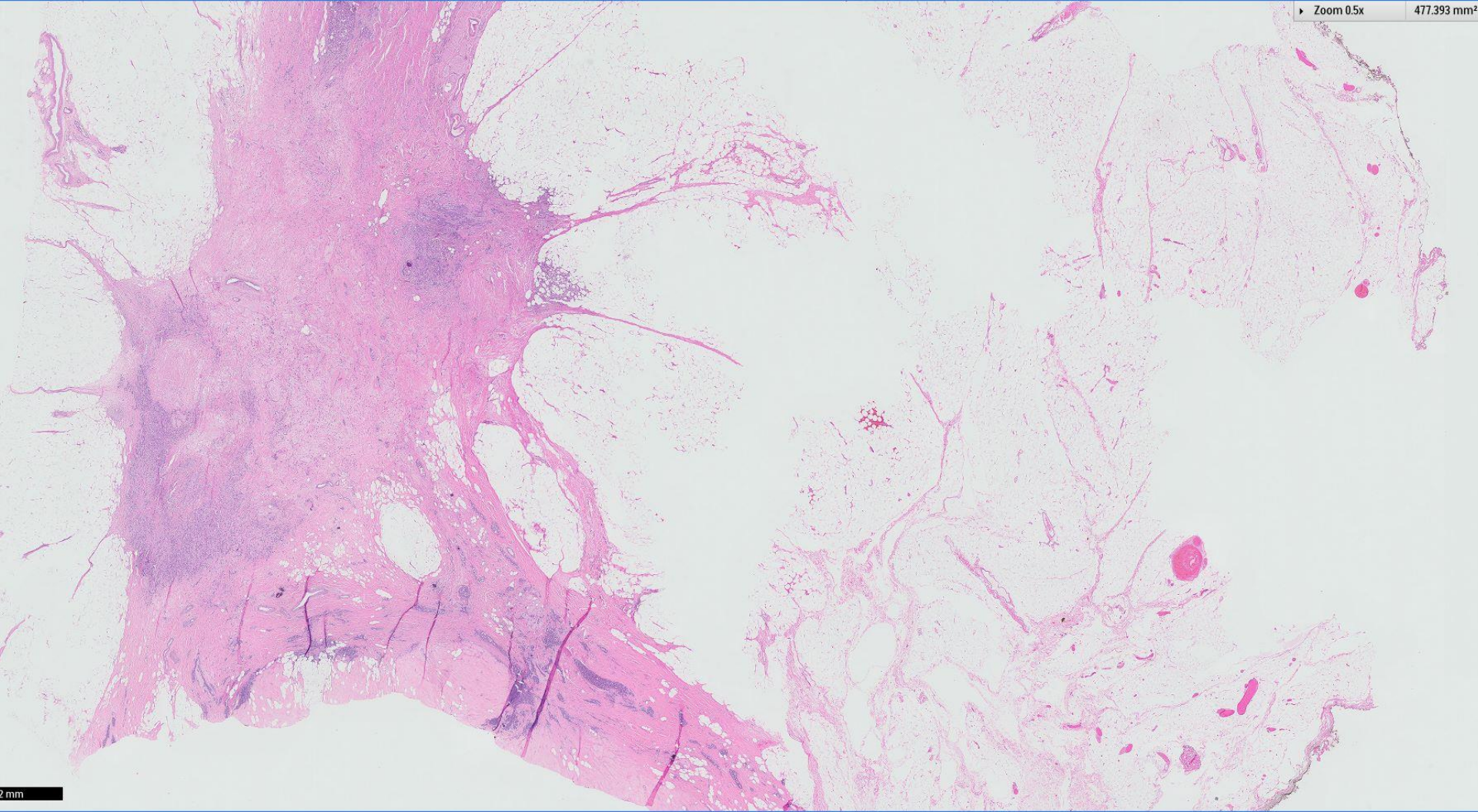


Case 34

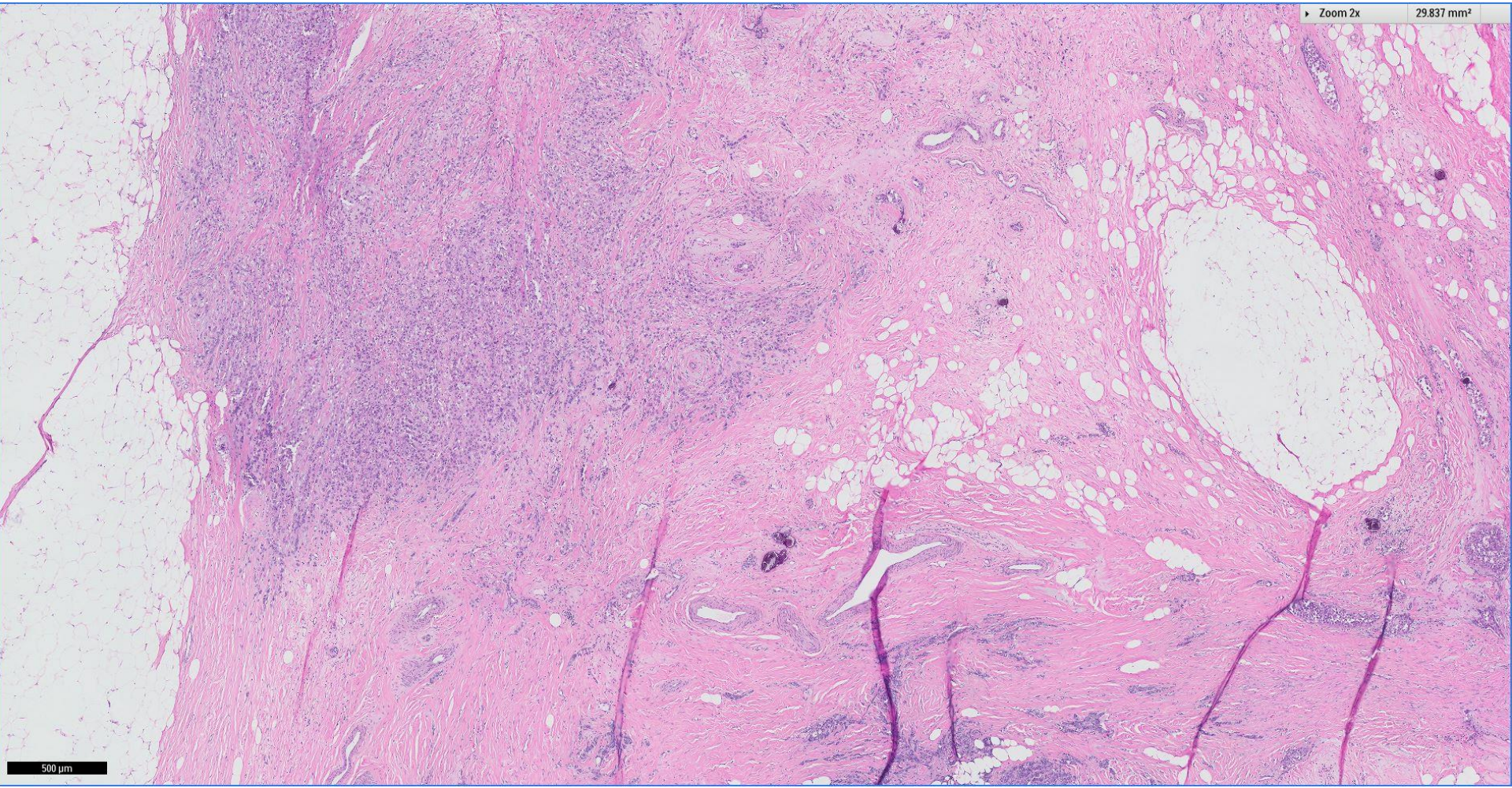
57 year old woman underwent mastectomy, post-neoadjuvant chemotherapy for core biopsy diagnosed invasive carcinoma. Section is from the mastectomy.



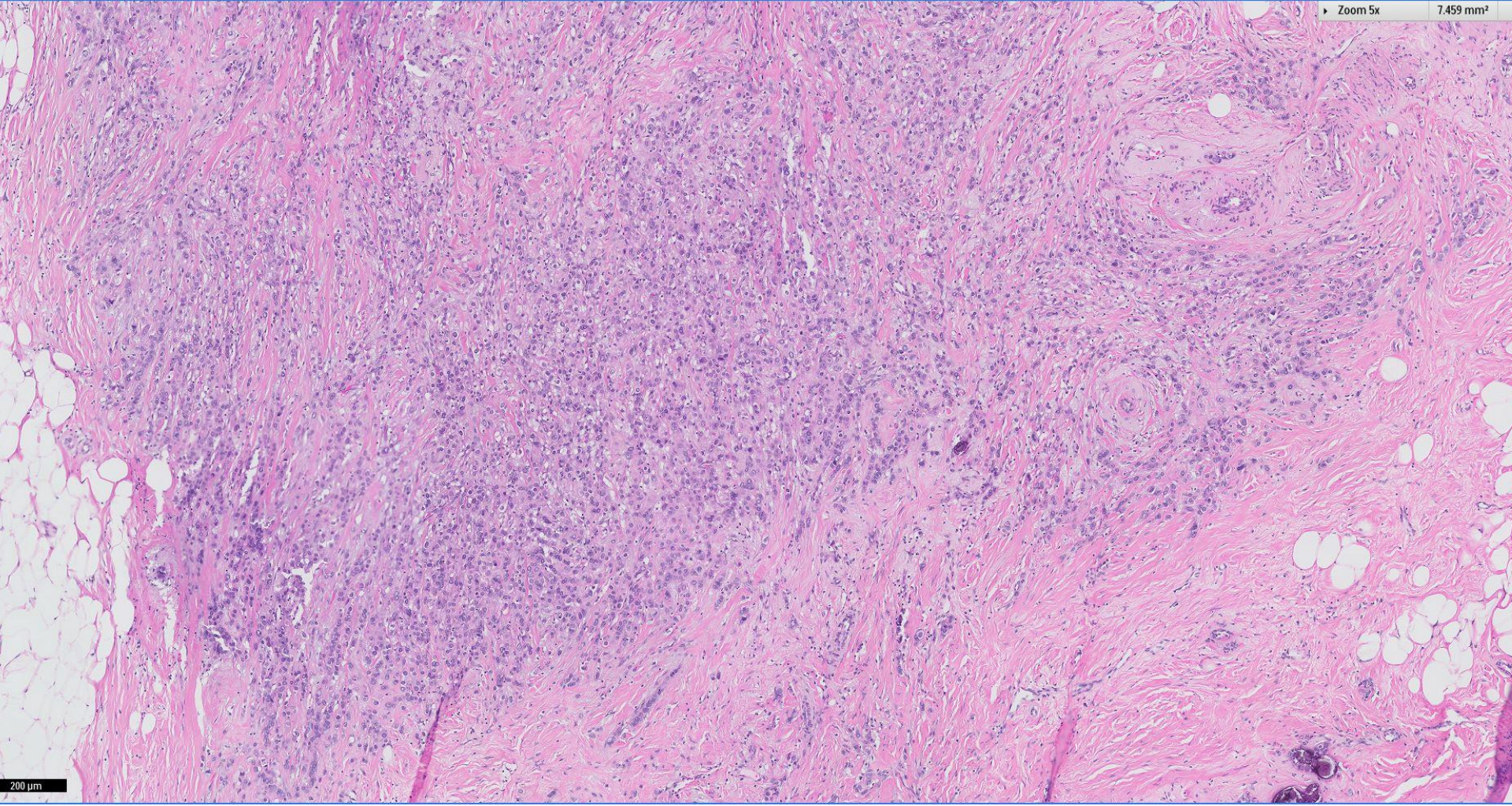


Zoom 2x

29.837 mm²

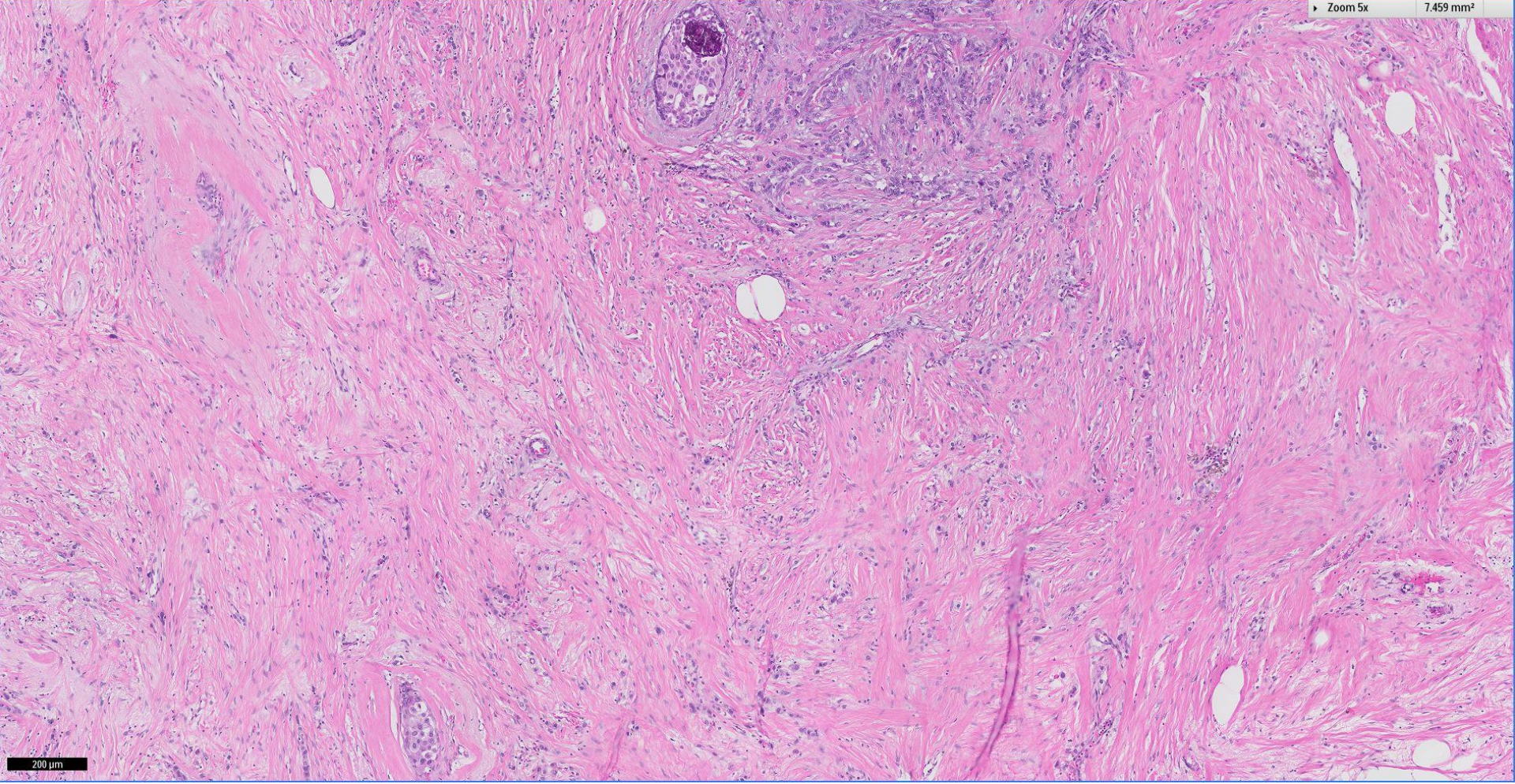


500 μ m

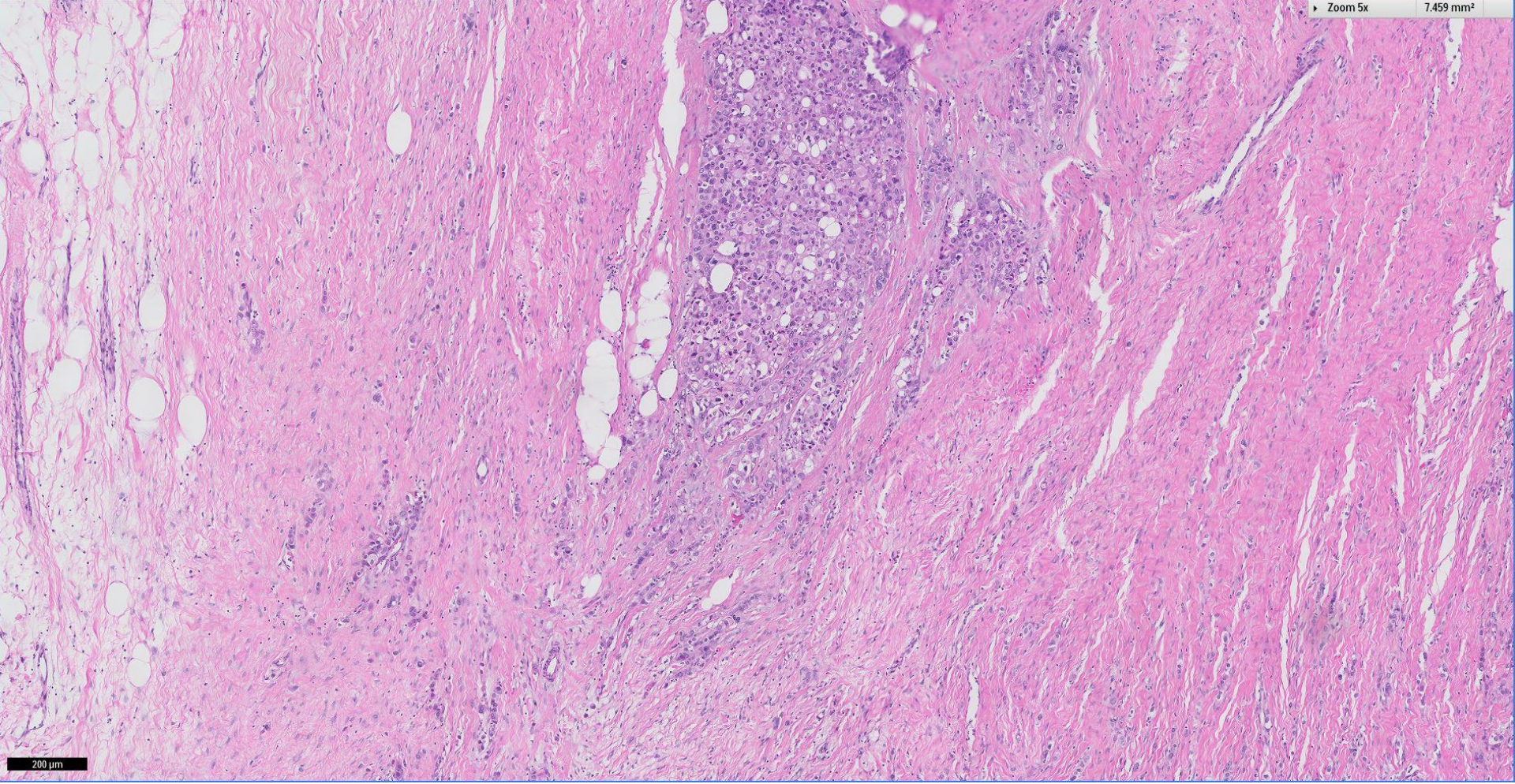


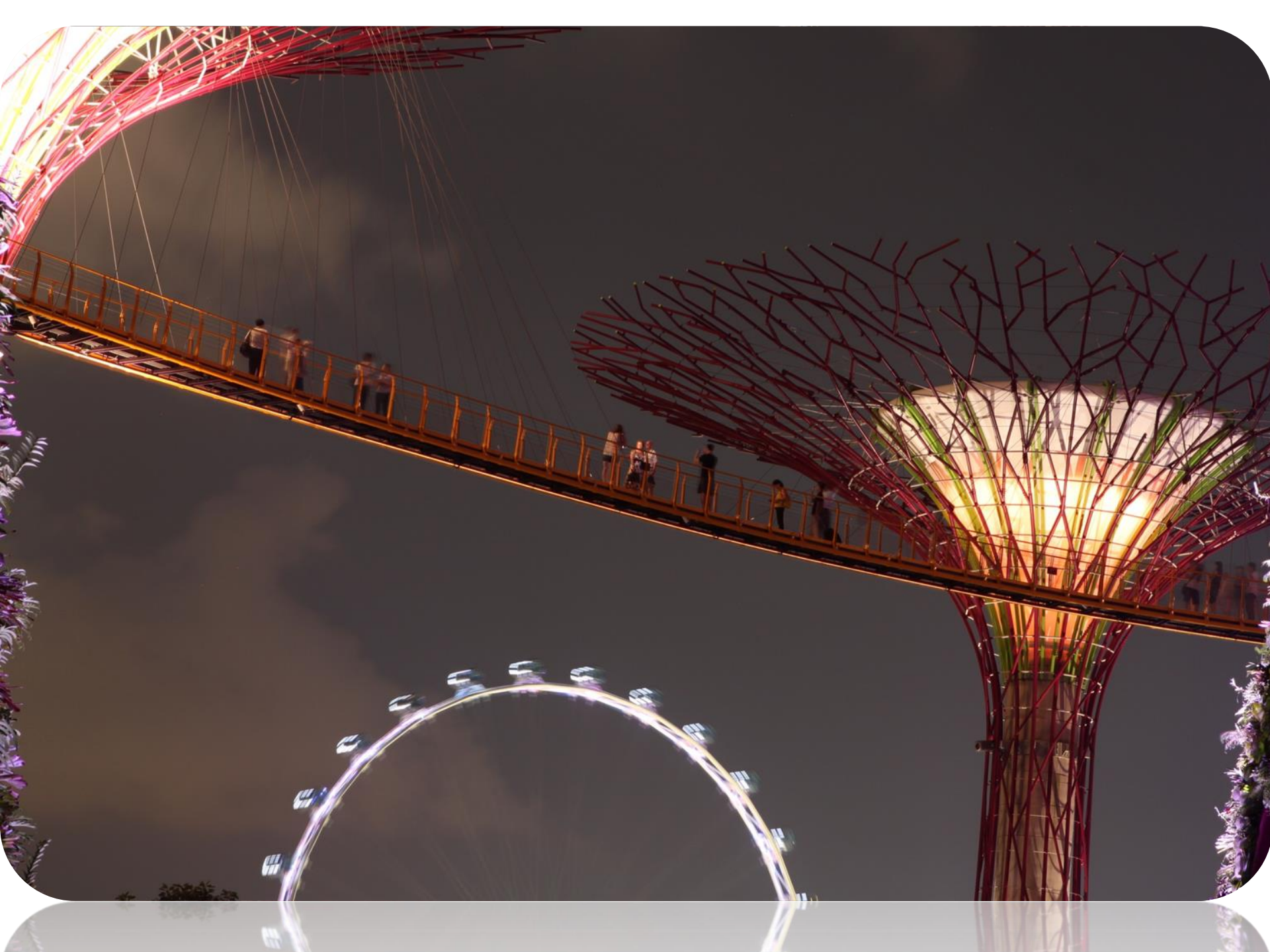
Zoom 5x

7.459 mm²



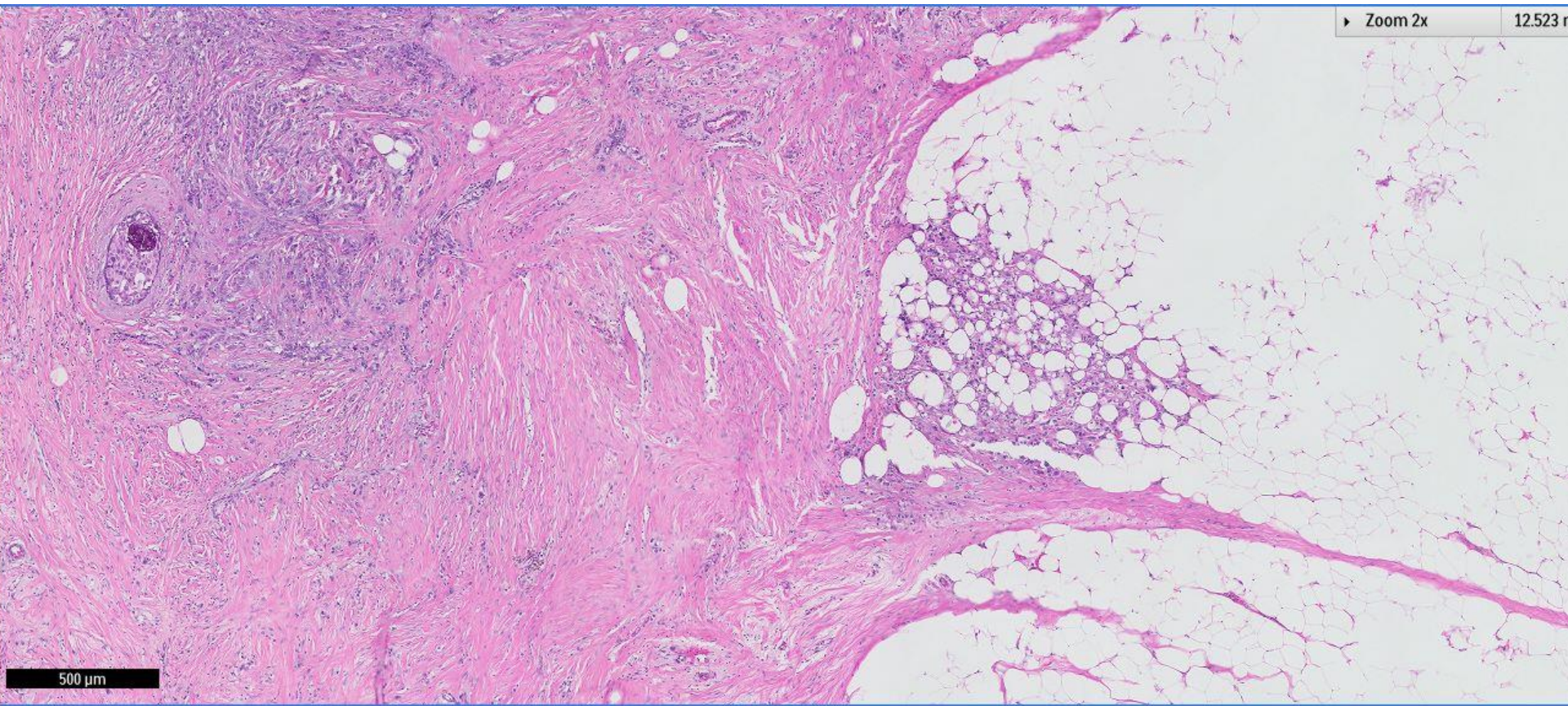
200 μm



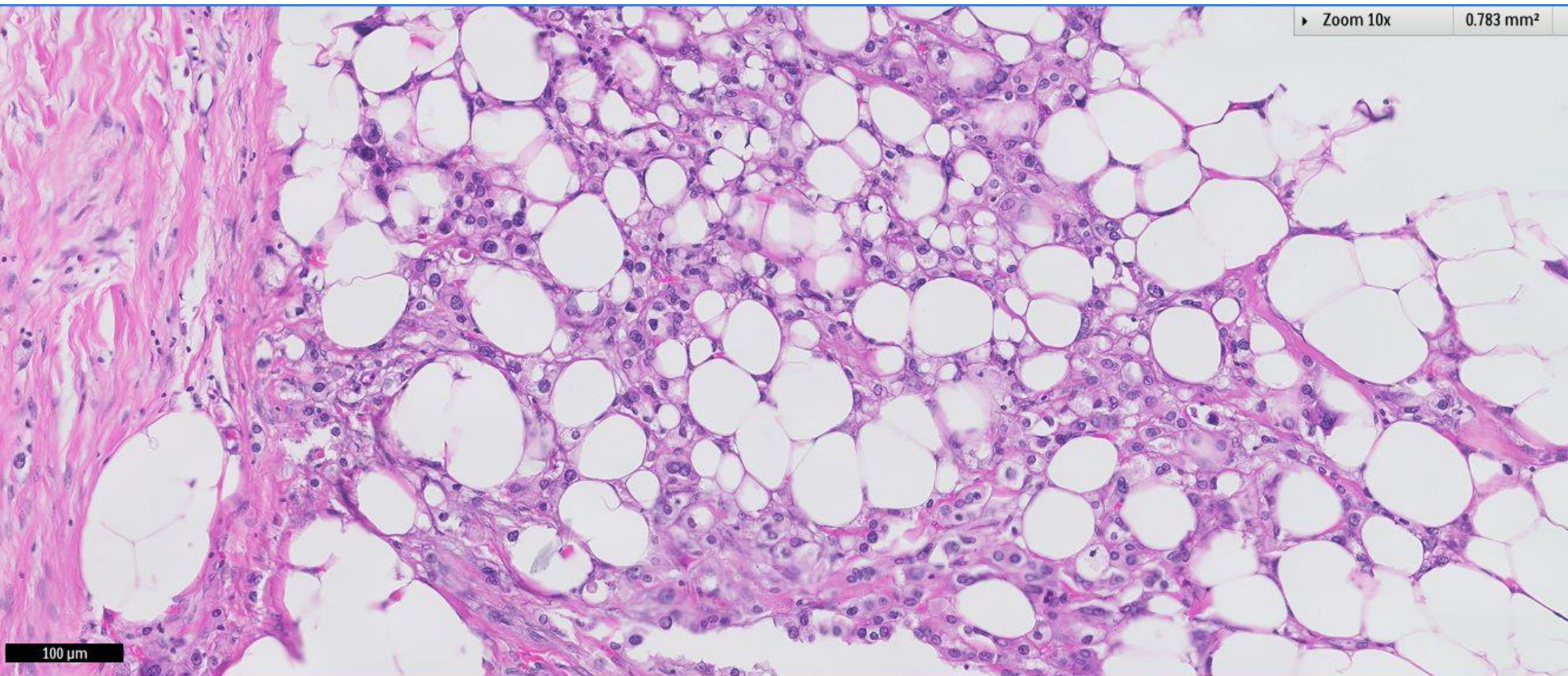


▶ Zoom 2x

12.523 r



500 μ m

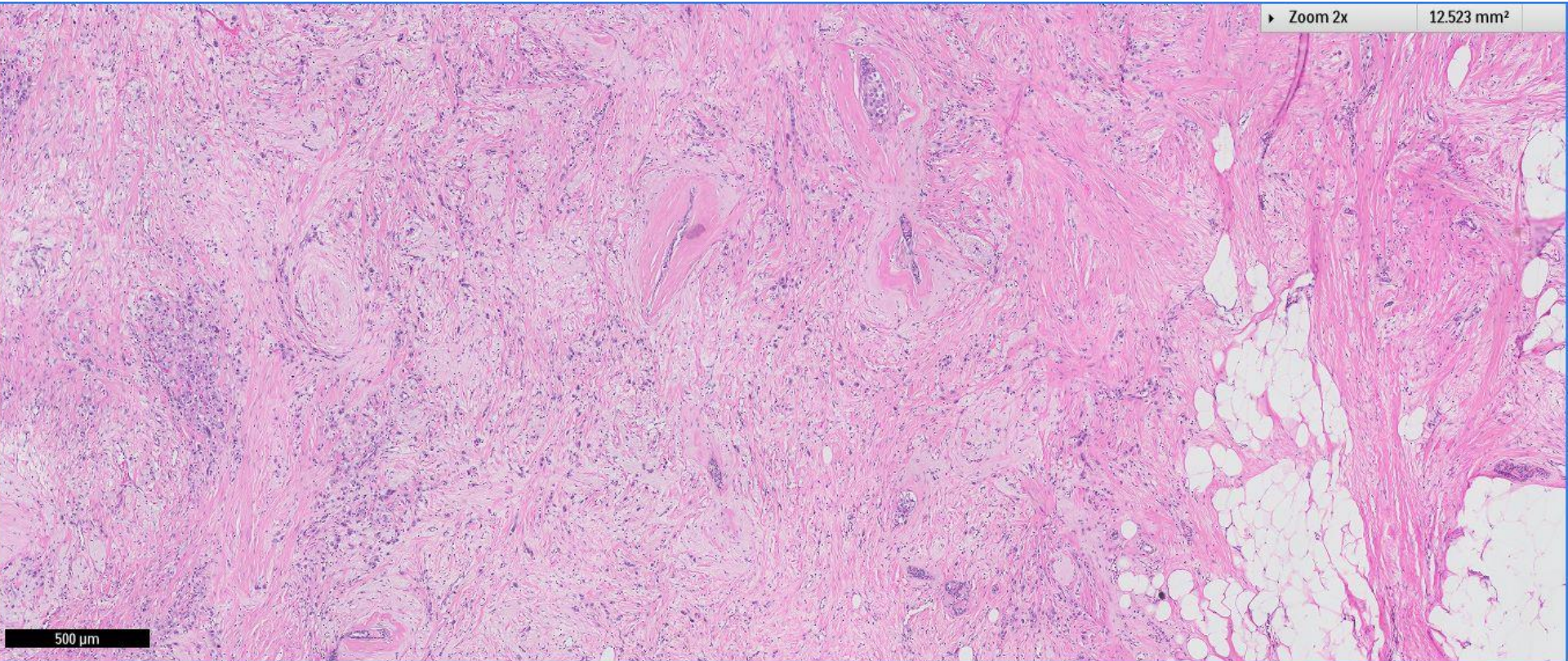


Zoom 10x

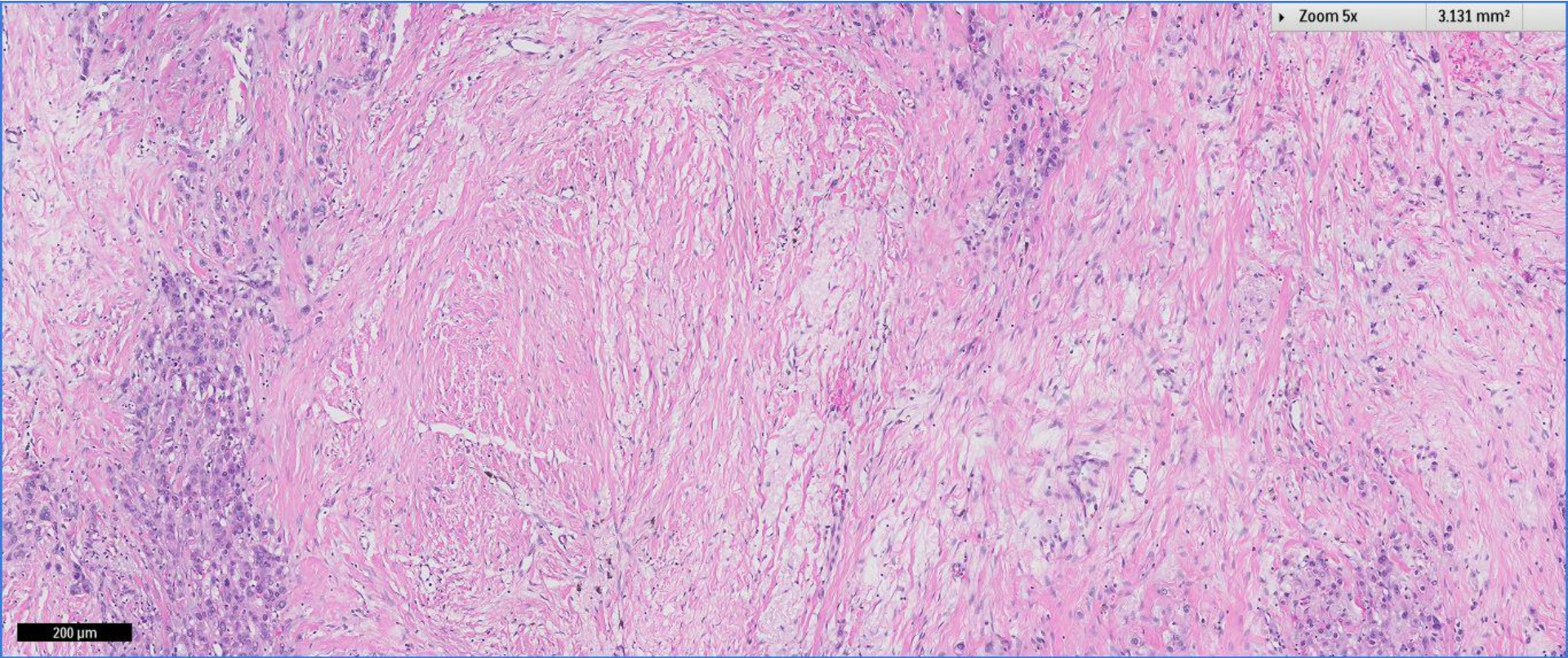
0.783 mm²

100 μm

▶ Zoom 2x 12.523 mm²



500 μ m

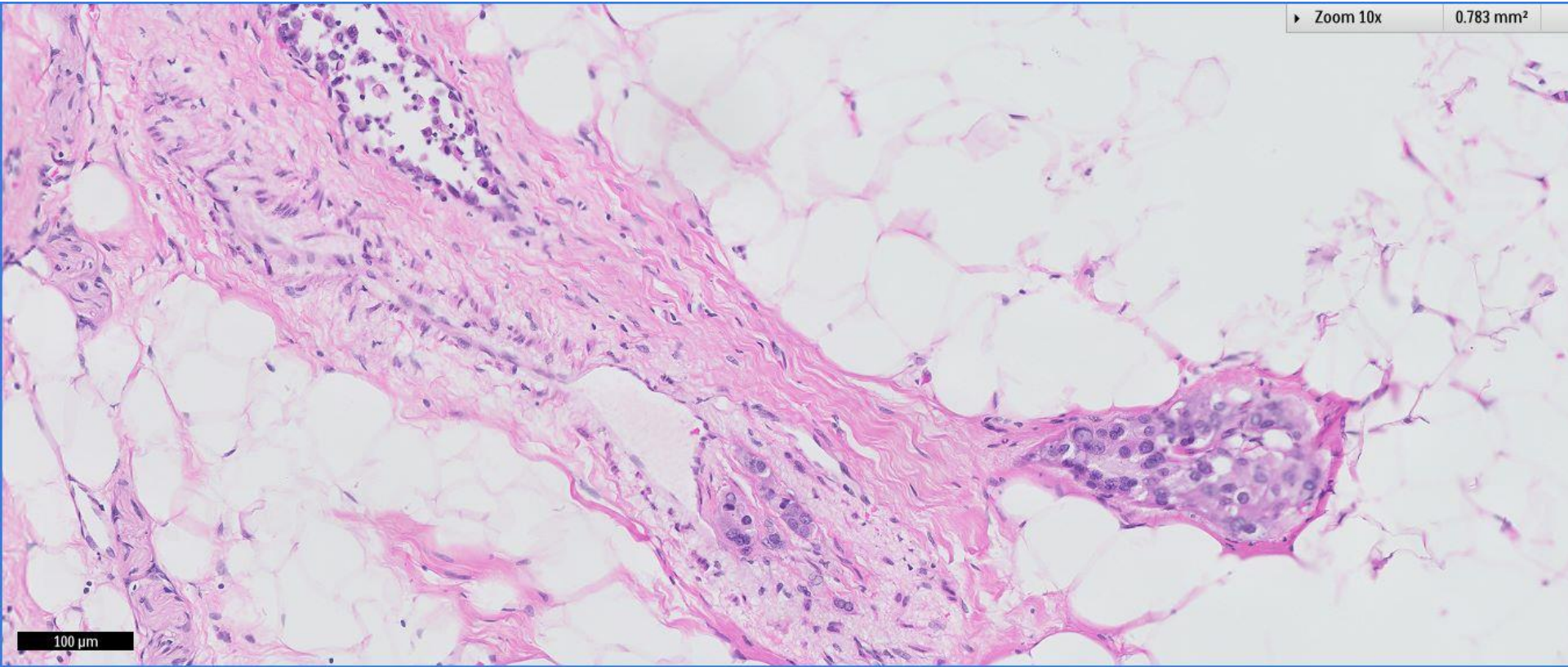


► Zoom 5x

3.131 mm²

200 μm

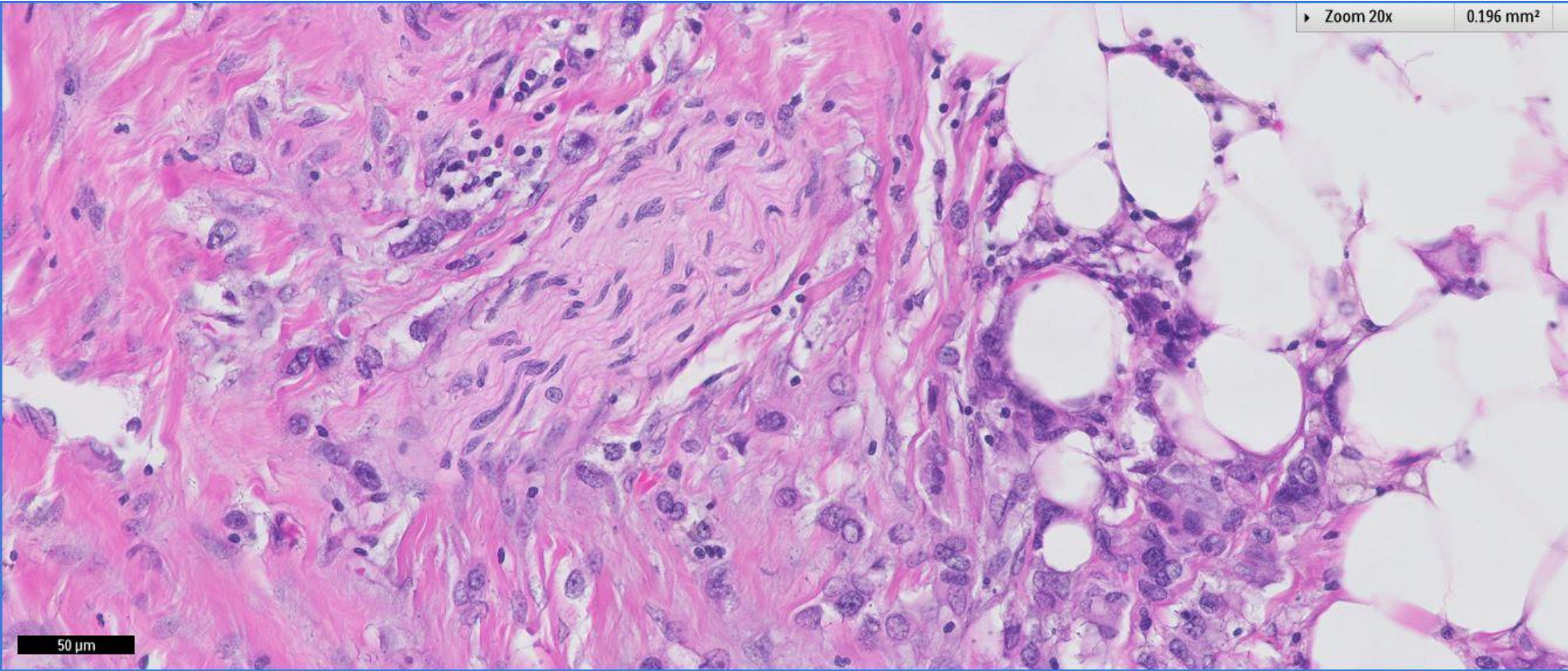
► Zoom 10x 0.783 mm²



100 μ m

Zoom 20x

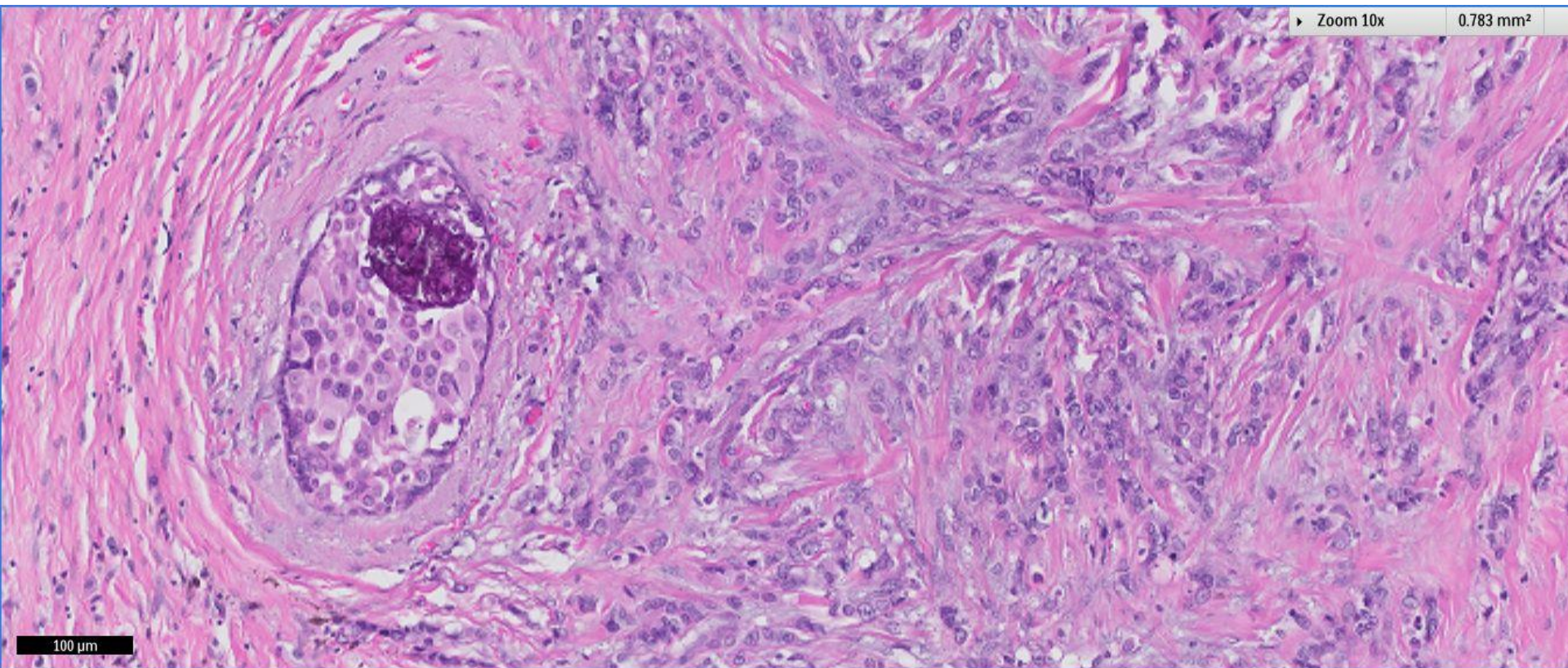
0.196 mm²



50 μ m

▶ Zoom 10x

0.783 mm²



100 μm

Right breast, mastectomy:
Invasive ductal carcinoma, post-
neoadjuvant chemotherapy



Neoadjuvant chemotherapy

- Refers to chemotherapy administered before surgery.
- Used to be administered only for locally advanced breast cancer in the past.
- More recently also used in earlier stages of breast cancer.



Neoadjuvant chemotherapy: Prediction of response

- High response rates in:
 - HER2 positive breast carcinoma.
 - Triple negative breast carcinoma.
 - High grade tumours.
 - Tumours with necrosis.
- Low response rates in:
 - Invasive lobular carcinoma.



Neoadjuvant chemotherapy: Histopathological assessment

- Treatment effect:
 - Decrease in tumour cellularity.
 - Presence of chronic inflammation, histiocyte collections, stromal fibrosis and elastosis.
- Identification of the tumour bed:
 - Via radiologic marker placed at the time of the core biopsy.
 - Reparative changes from prior core biopsy.



Neoadjuvant chemotherapy: Histopathological assessment

- Invasive carcinoma cells post neoadjuvant chemotherapy:
 - May be morphologically unchanged.
 - Cytological changes include cell enlargement with increased cytoplasmic volume.
 - Cells shrink from the stroma.
 - Nuclei are large, hyperchromatic, pleomorphic, multinucleated and contain abnormal mitoses.
 - Cells can mimic histiocytes.
 - Retain immunohistochemical reactivity for cytokeratins.
 - In some cases, tumour cells show smaller nuclei post-neoadjuvant chemotherapy.



Neoadjuvant chemotherapy: Histopathological assessment

- Residual carcinoma:
 - May be DCIS, lymphatic tumour emboli, or both.
- Presence of carcinoma in lymphovascular spaces is associated with lymph node metastases.
- Non-neoplastic breast parenchyma also shows subtle changes.



Neoadjuvant chemotherapy: Prognosis

- Prognosis is related to the completeness of pathologic response.
- 5 year prognosis is favourable in patients with least evidence of tumour in the breast or lymph nodes.



 Breast
Pathology
Course 2014

