

Case 2

55 year old Chinese female.

Left breast mastectomy and sentinel node biopsy.

Section from a 3cm lobulated tan-coloured tumour at the 10 o'clock position of the left breast.



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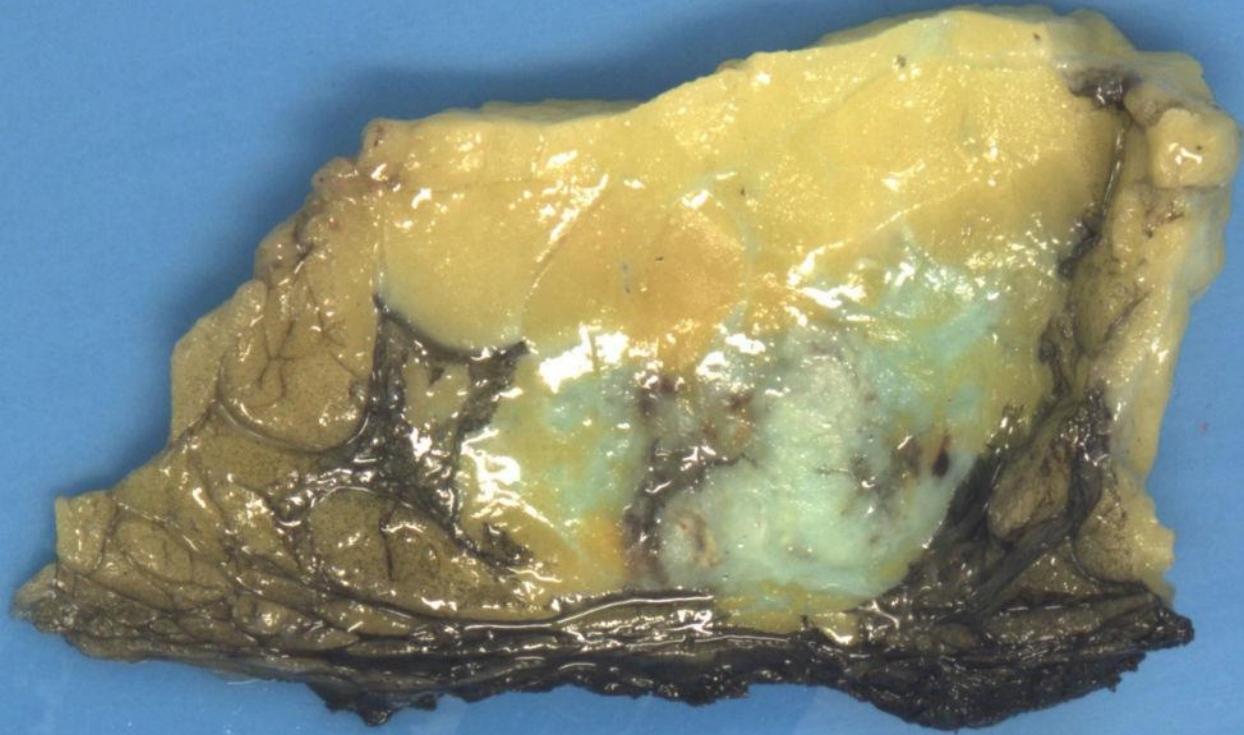
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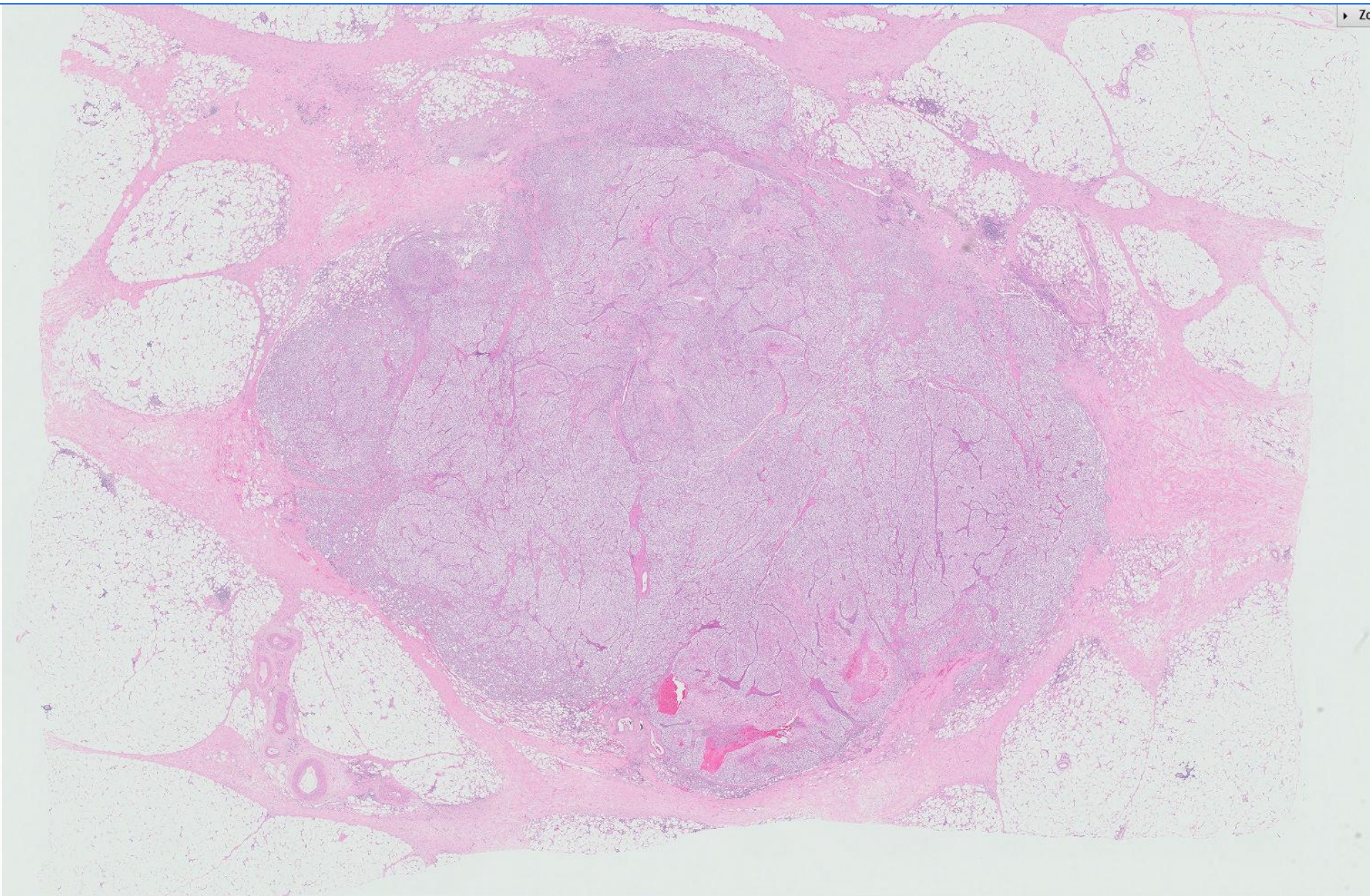


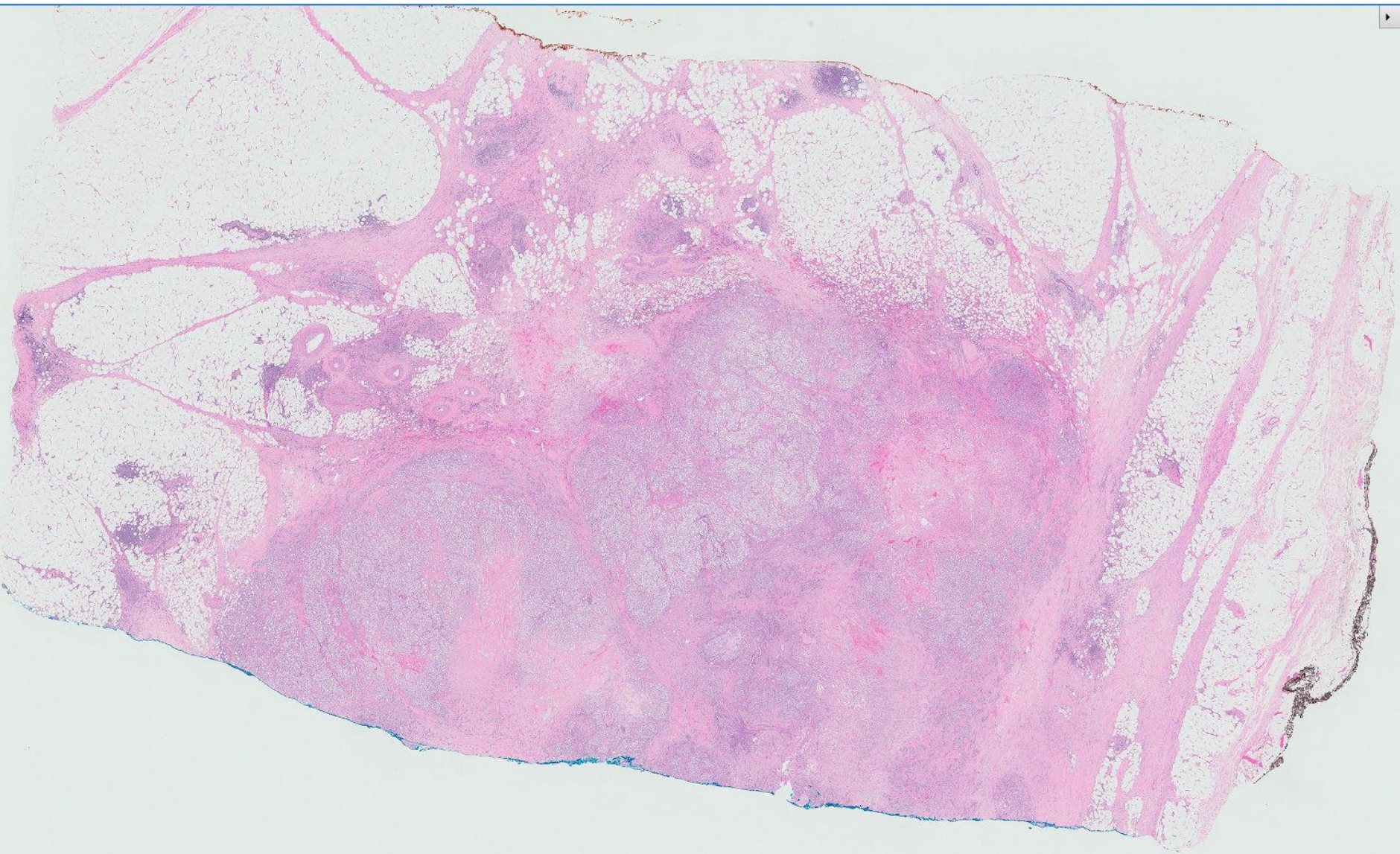
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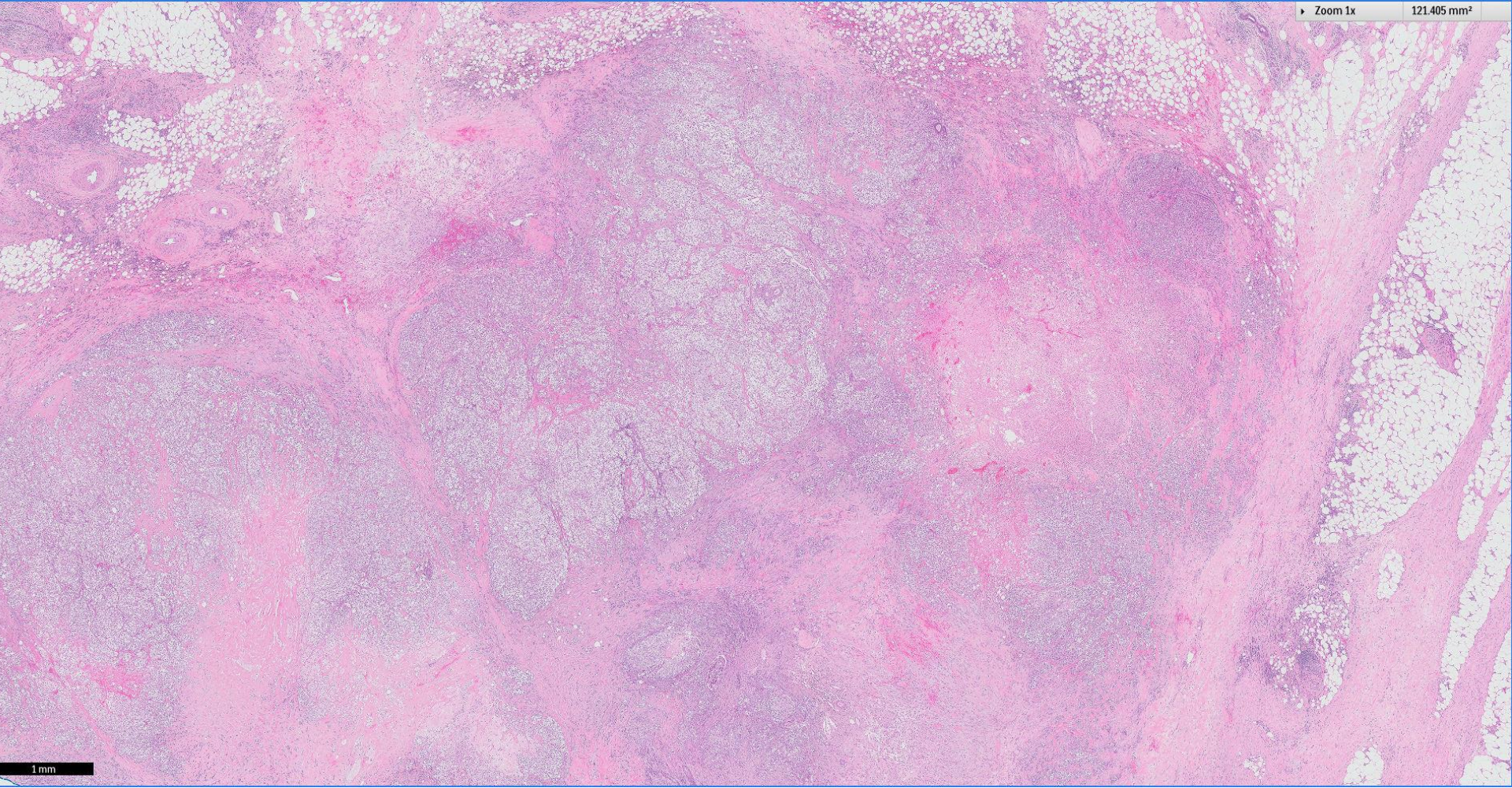




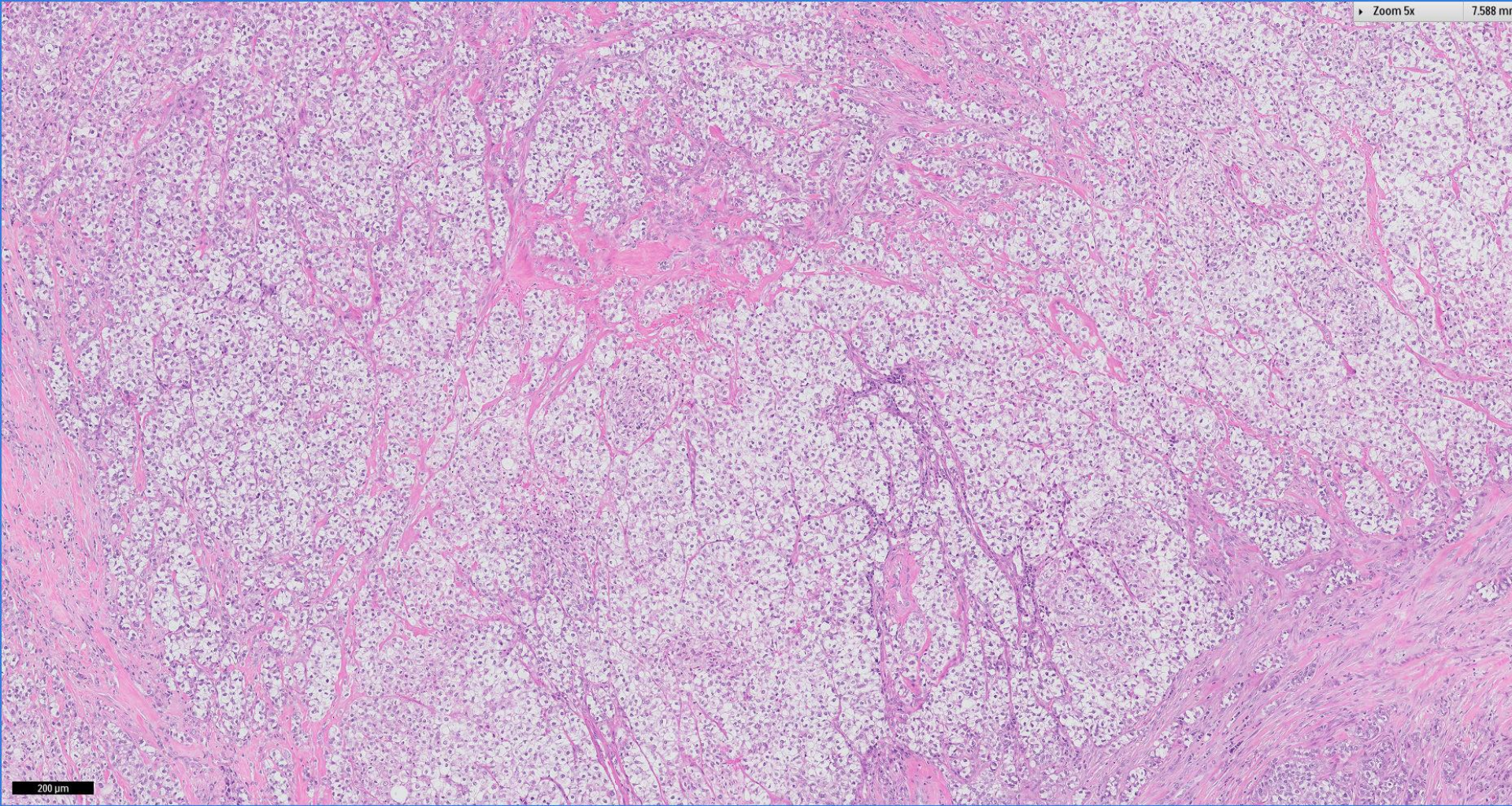


Zoom 1x

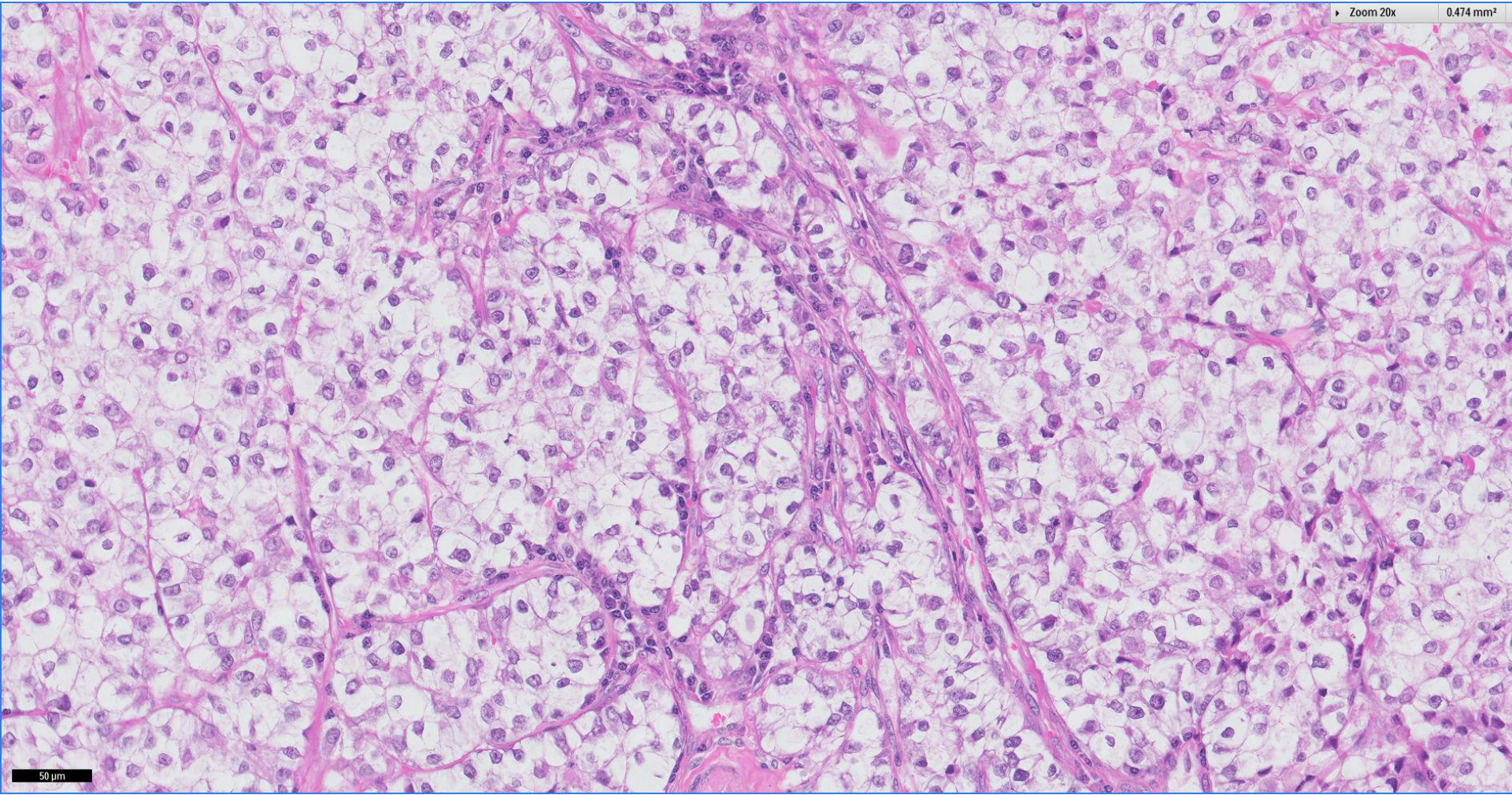
121.405 mm²



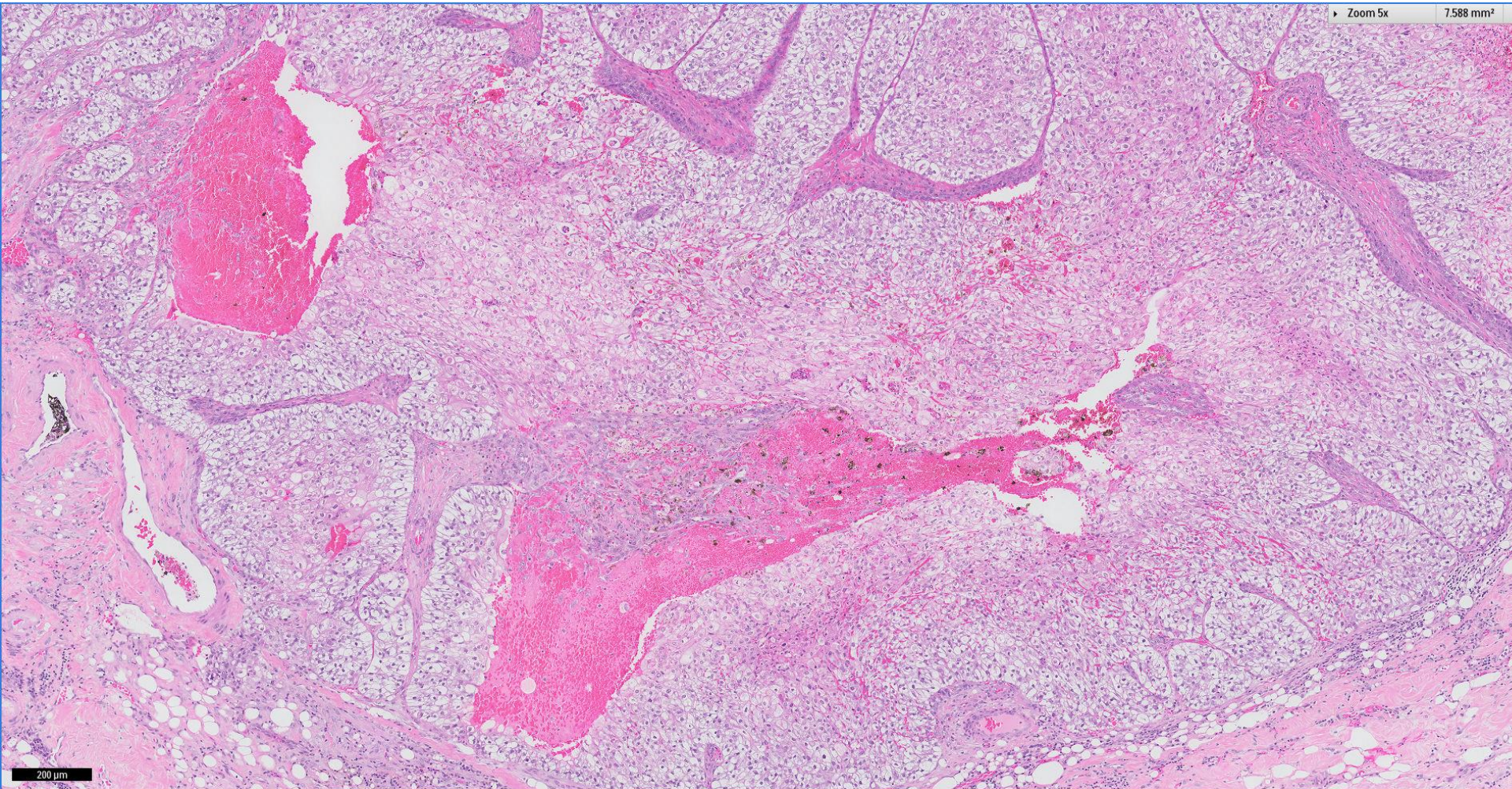
1 mm



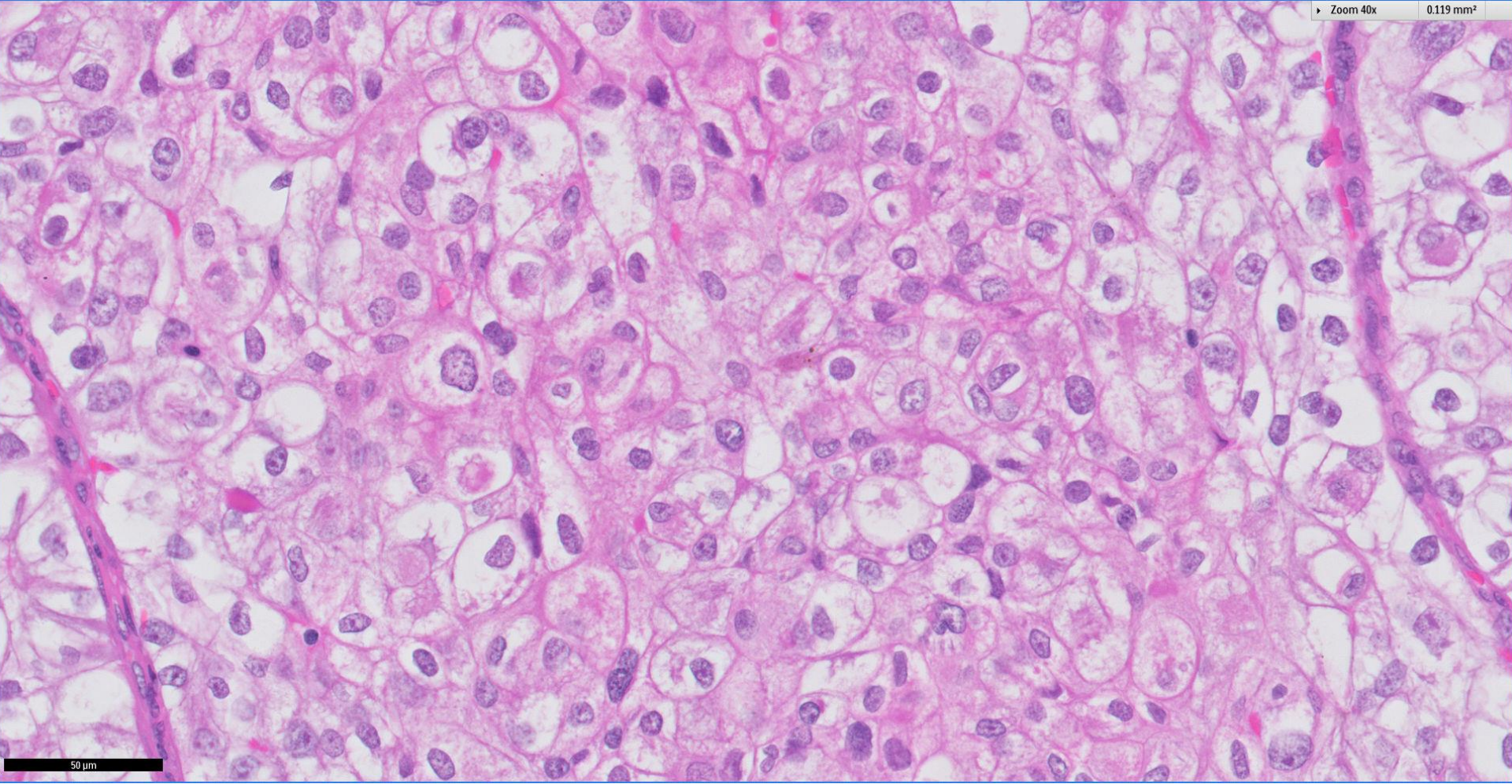
200 μm



50 μm



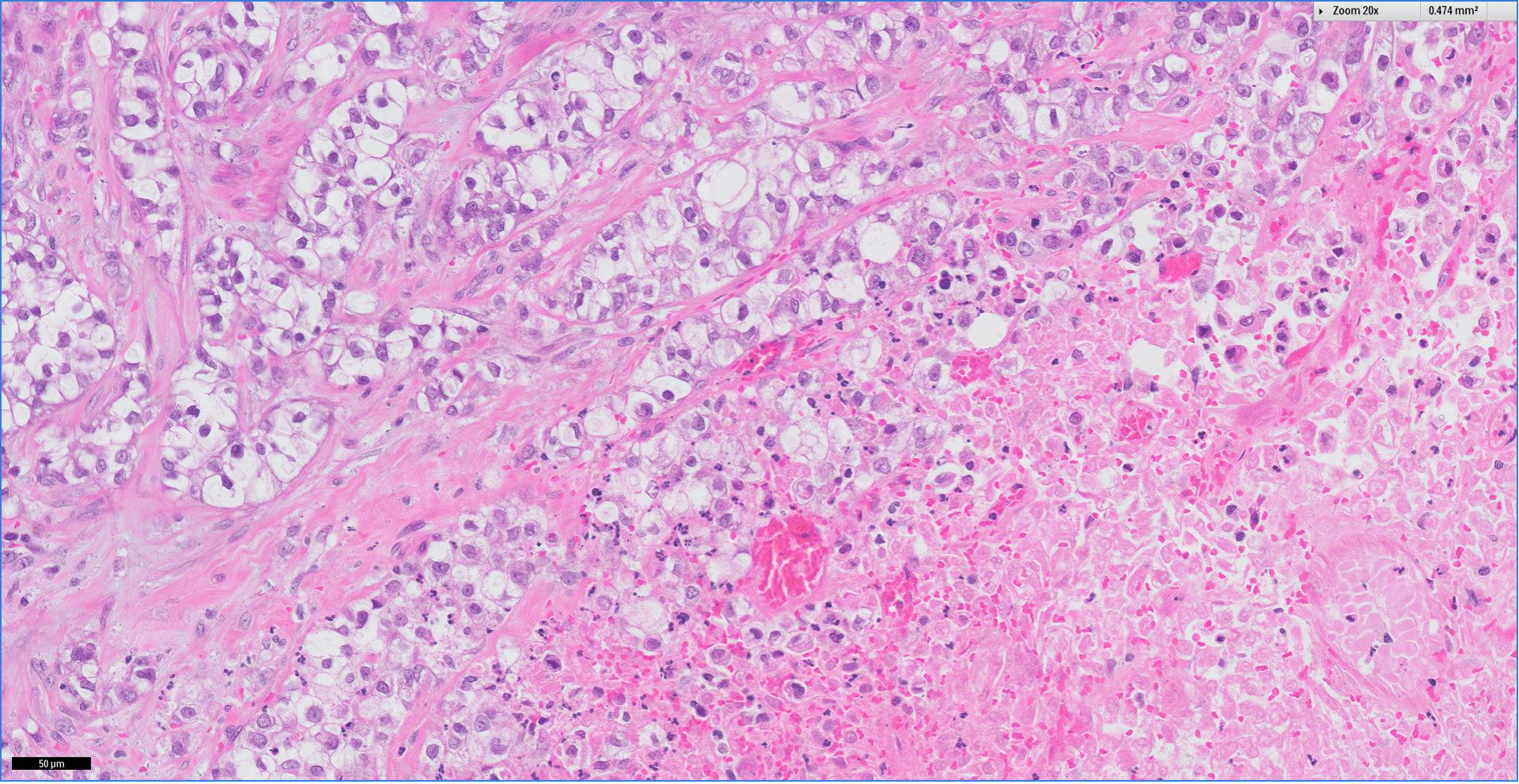
Zoom 40x 0.119 mm²



50 μm

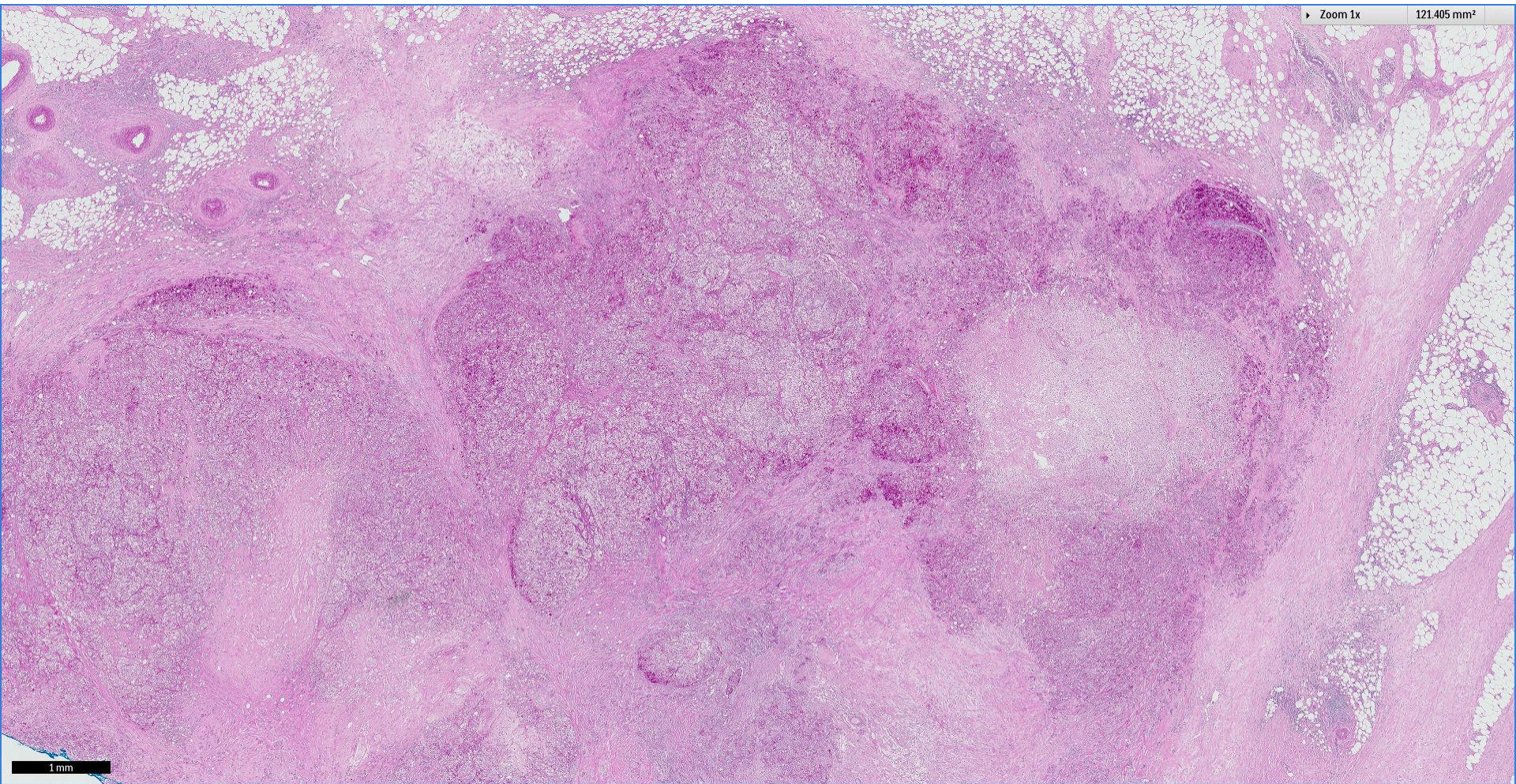
Zoom 20x

0.474 mm²

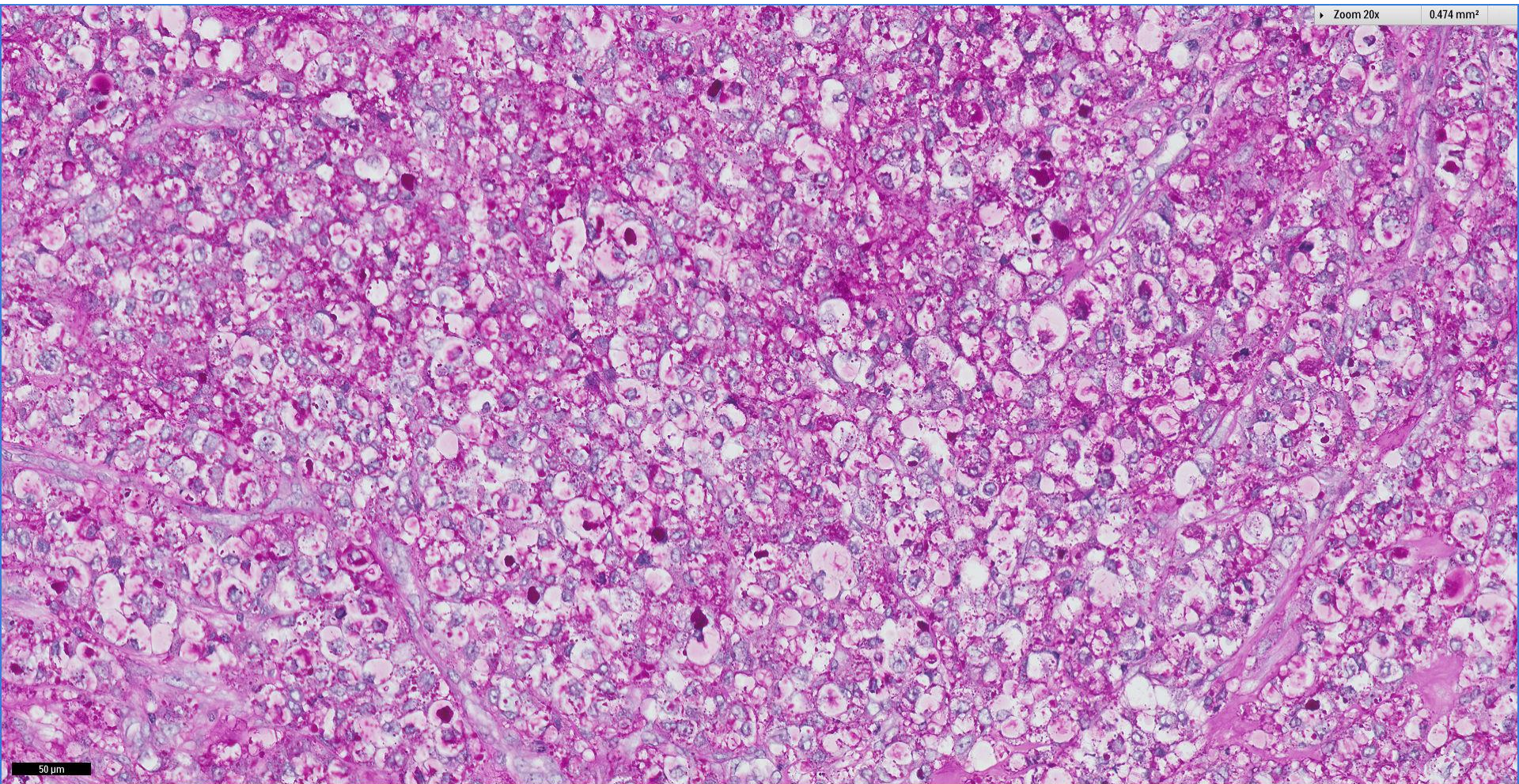


50 μm

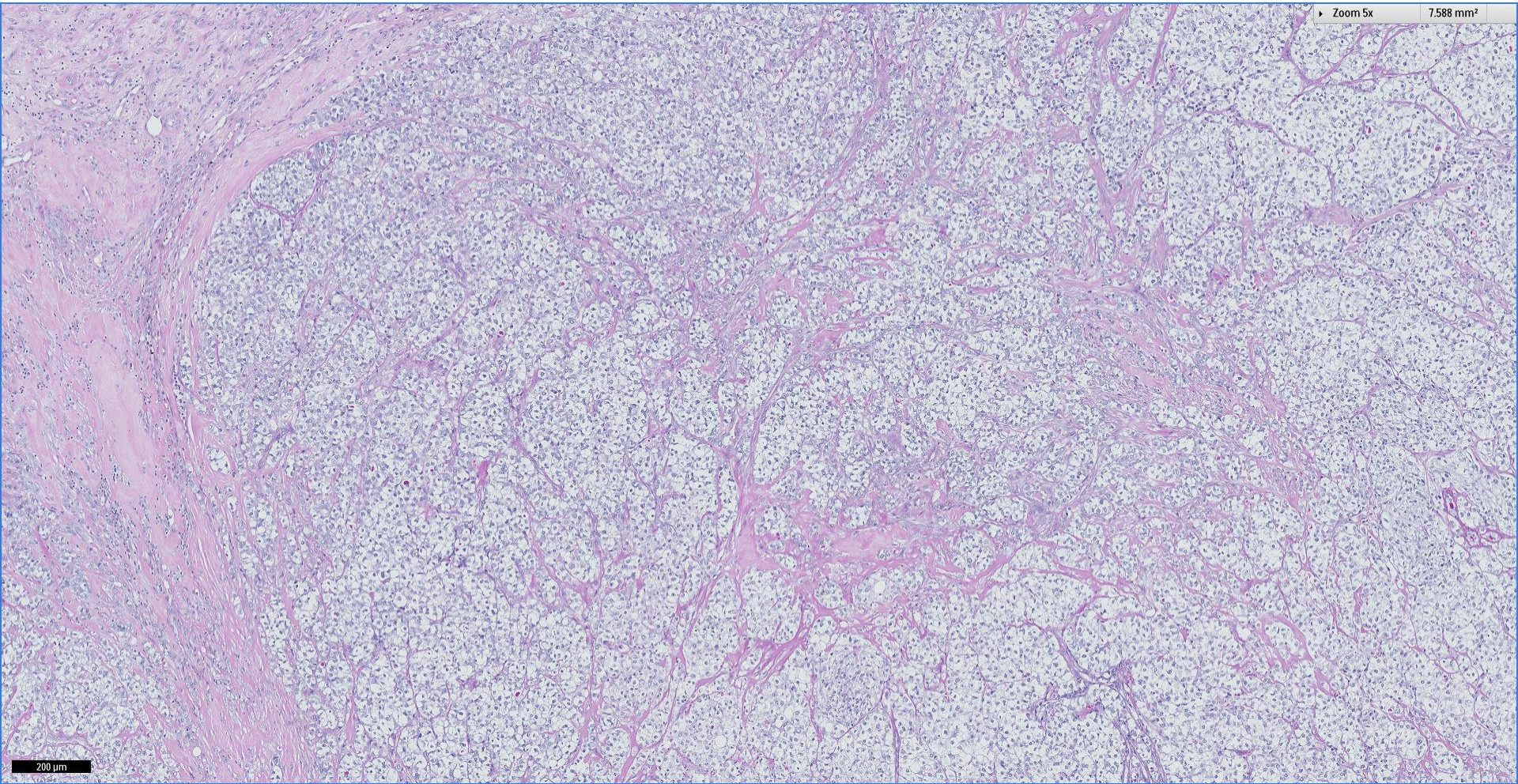
PAS



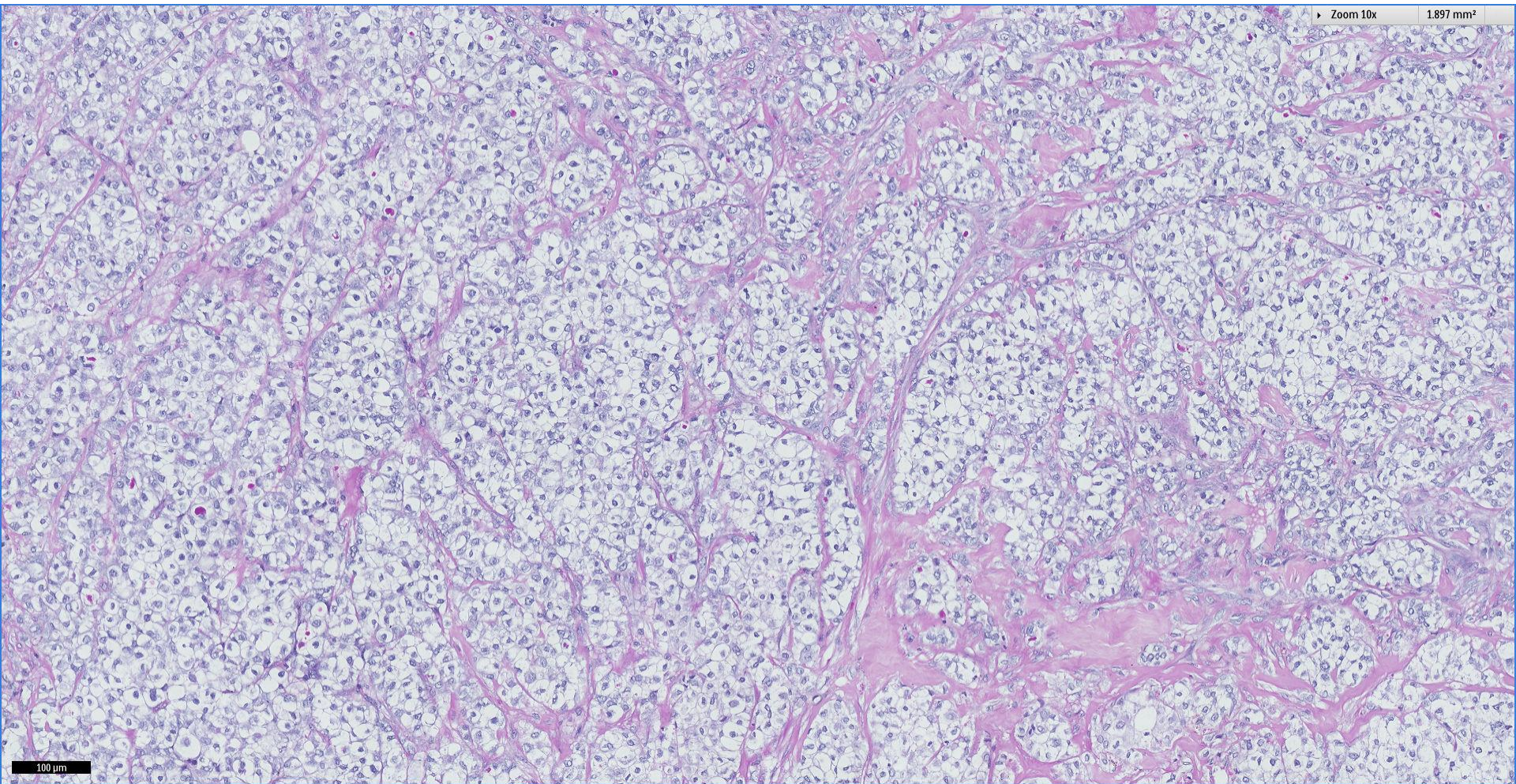
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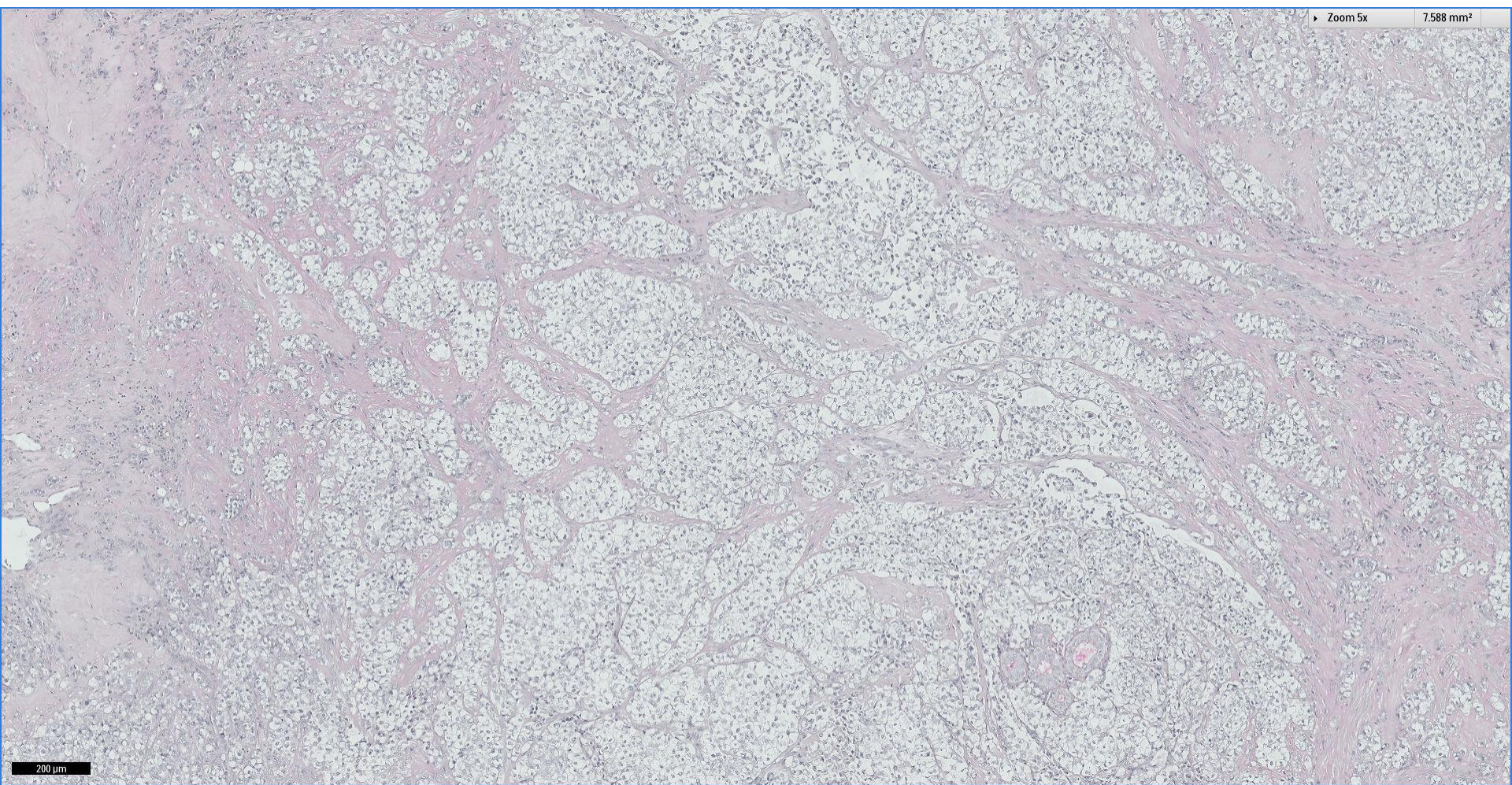
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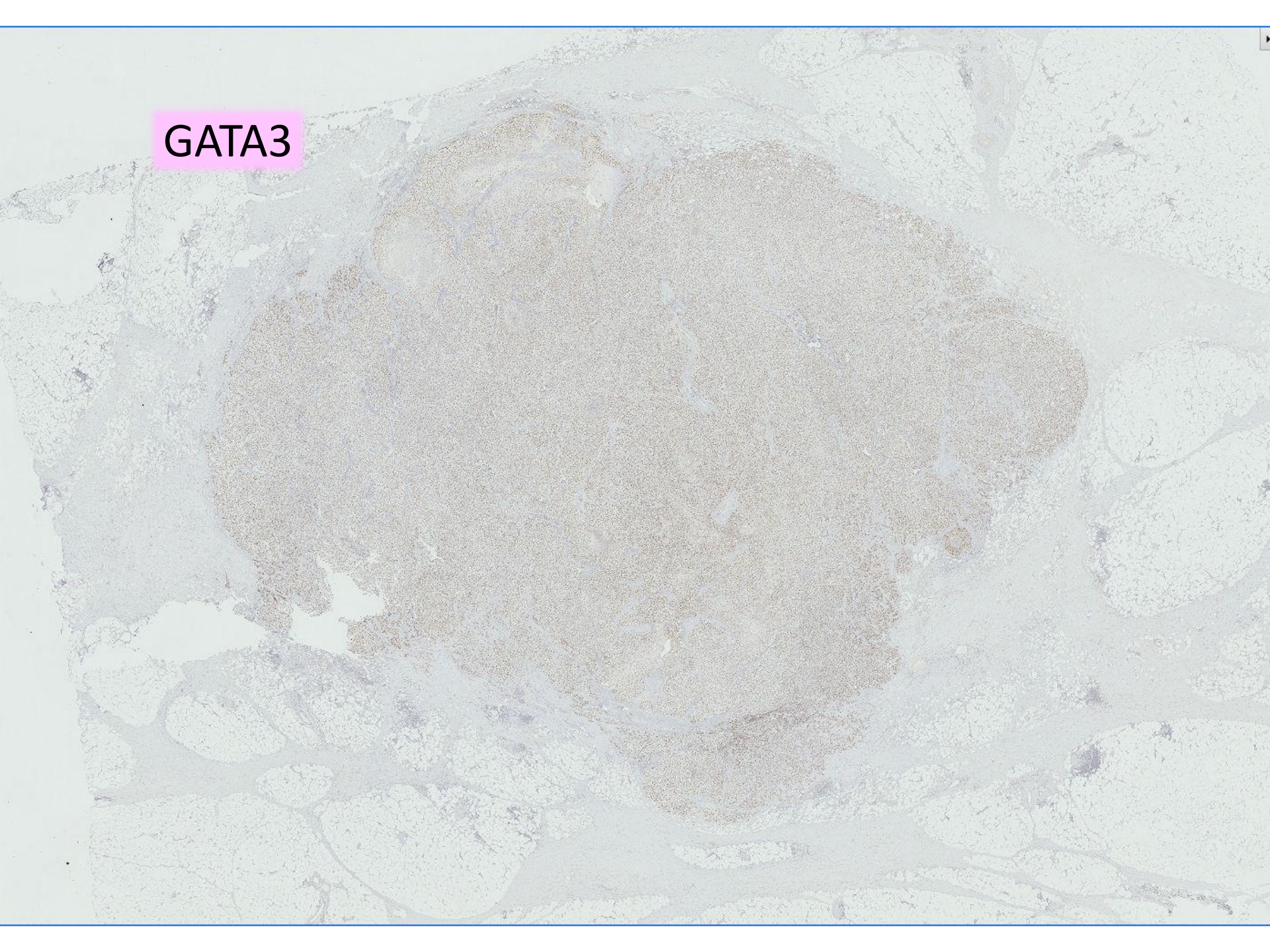
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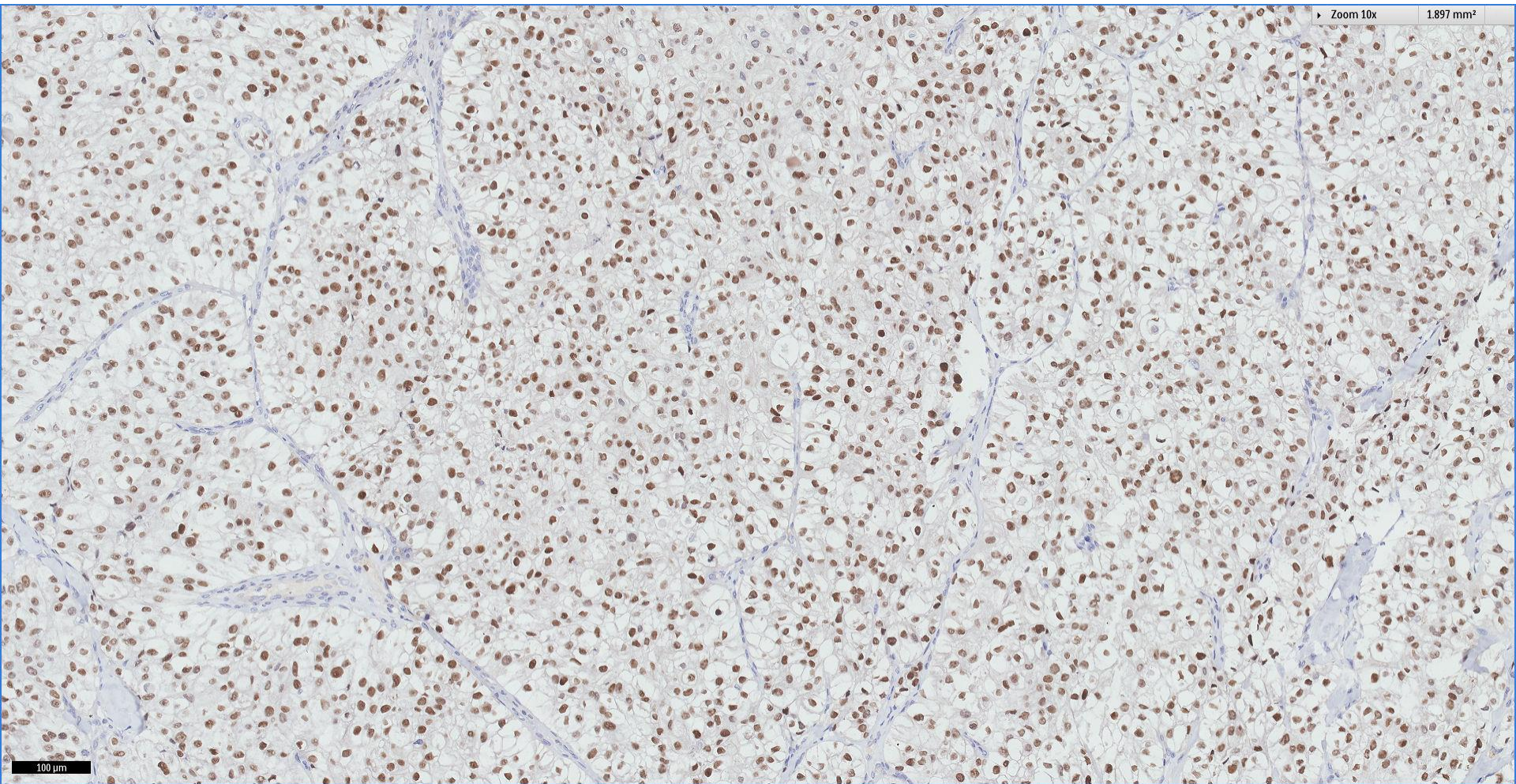
mucicarmine



GATA3



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- ER negative, PR negative, cerbB2 negative.



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Diagnosis:

Glycogen rich clear cell carcinoma



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Glycogen rich clear cell carcinoma of the breast

- Exceptionally rare variant of breast cancer.
- A carcinoma in which > 90% of the neoplastic cells have abundant clear cytoplasm containing glycogen.
- Synonyms ~
 - Clear cell carcinoma
 - Glycogen rich carcinoma
- Incidence ~ 1% and 3% of breast carcinomas.
- Age range 41–78 years (median, 57 years).
- Clinical features similar to invasive carcinoma of no special type.



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Glycogen rich clear cell carcinoma of the breast

- Strict definition required.
- Carcinomas that have a clear cell appearance are uncommon in the breast; can be an artefact of the extraction of intracytoplasmic substances during tissue processing.
- Intracytoplasmic glycogen has been observed without a significant clear-cell appearance in 60% of breast carcinomas.
- Structural features of intraductal and invasive carcinoma NST, rarely those of lobular, medullary or tubular types.
- In situ component, either in the pure form or in association with most invasive cases, has a compact solid, comedo or papillary growth pattern.



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Glycogen rich clear cell carcinoma of the breast

- ER is positive in 50% of cases, while PR is negative.
- Cases that are positive for HER2 and negative for ER and PR have been seen.
- Staining for smooth-muscle actin, GCDFP-15 or CD10 is consistently negative.
- Differential diagnoses ~
 - Lipid-rich carcinoma
 - Histiocytoid apocrine carcinoma
 - Adenomyoepithelioma
 - Clear cell hidradenoma
 - Metastatic renal cell carcinoma
 - PEComa (peri-epithelioid cell tumour)



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Glycogen rich clear cell carcinoma of the breast

- Reports suggest that glycogen-rich clear cell carcinoma is more aggressive than invasive carcinoma NST.
- Some authors believe that the prognosis is no different from conventional mammary carcinomas matched by tumour size, grade, and lymph-node status.



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