

Case 13

59 year old Chinese woman underwent left simple mastectomy and axillary clearance for a left breast mass.

A right radical nephrectomy was performed at the same time for a 4cm renal tumour.

The section provided is of the left breast mass.

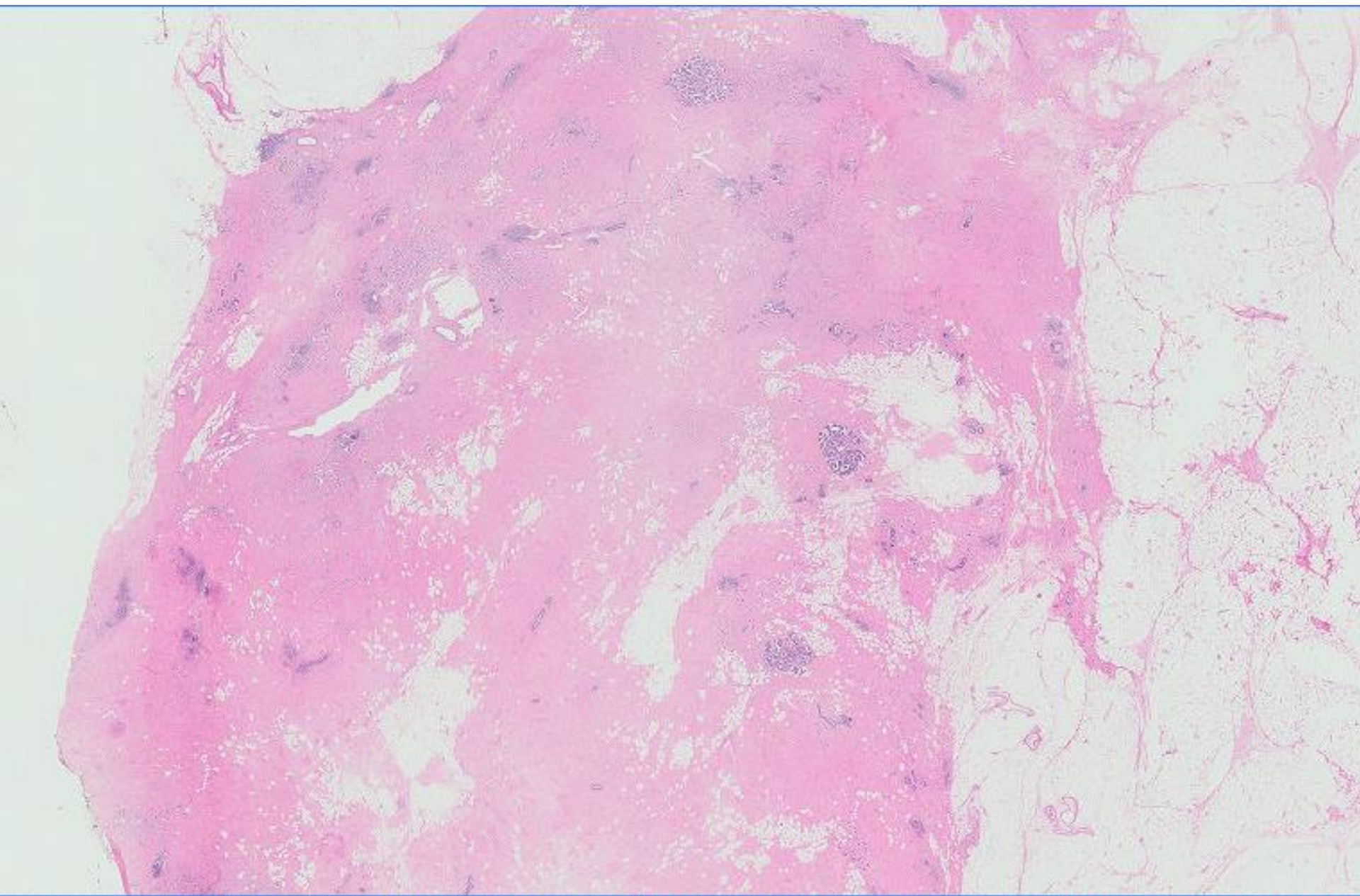


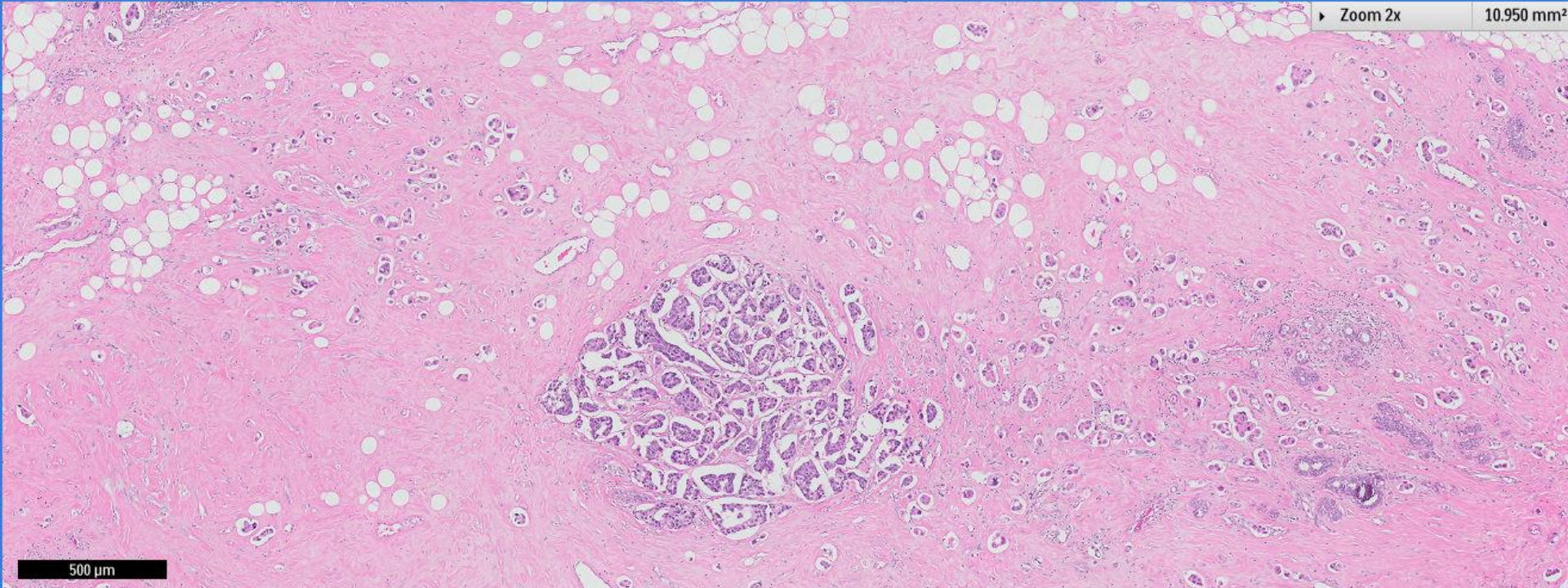
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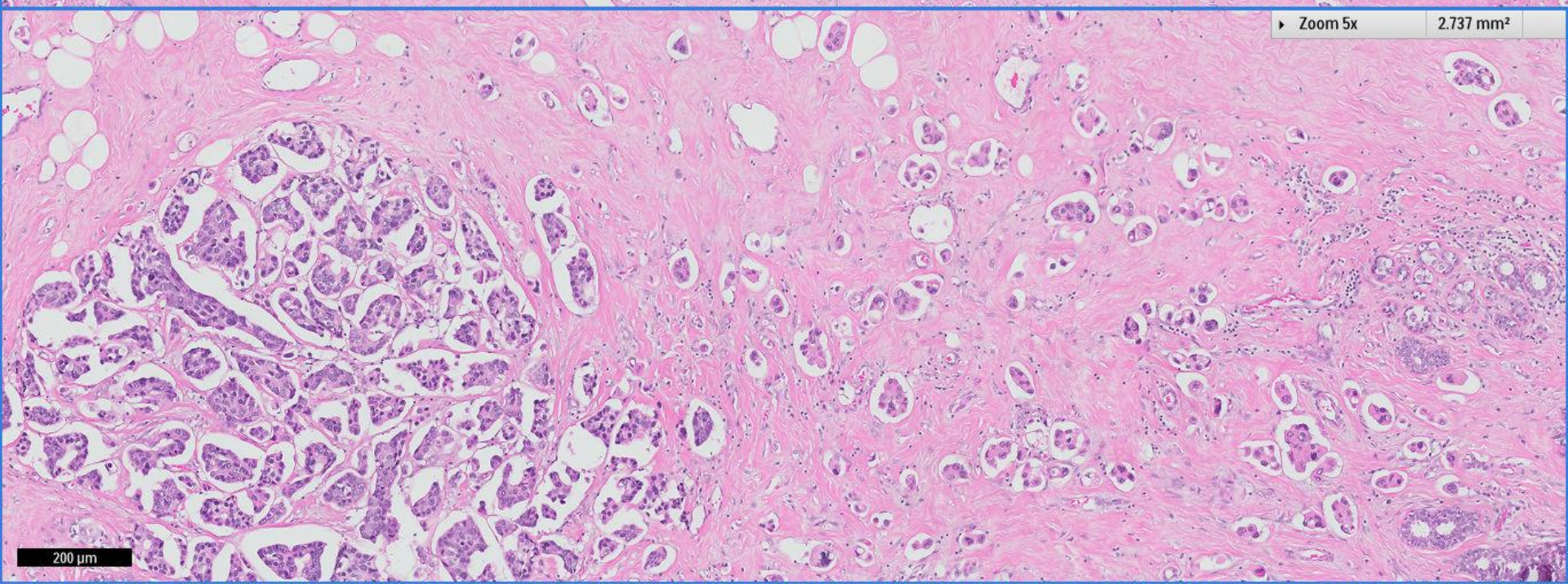

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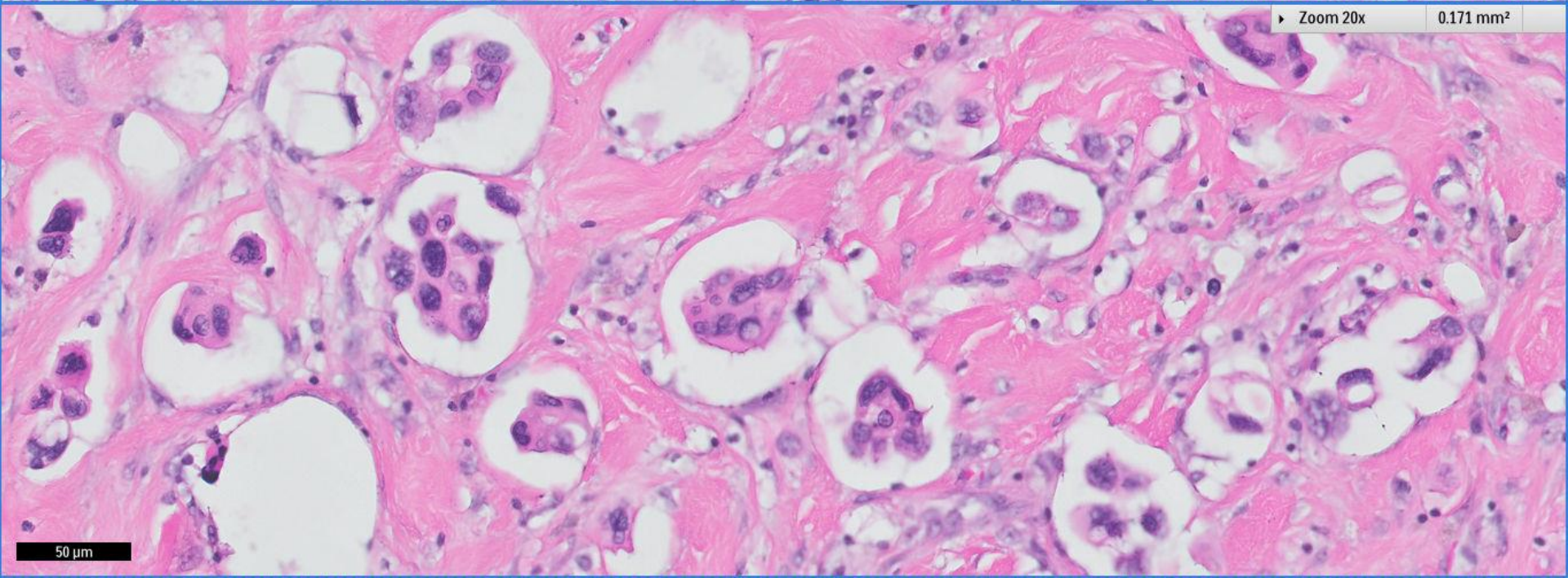
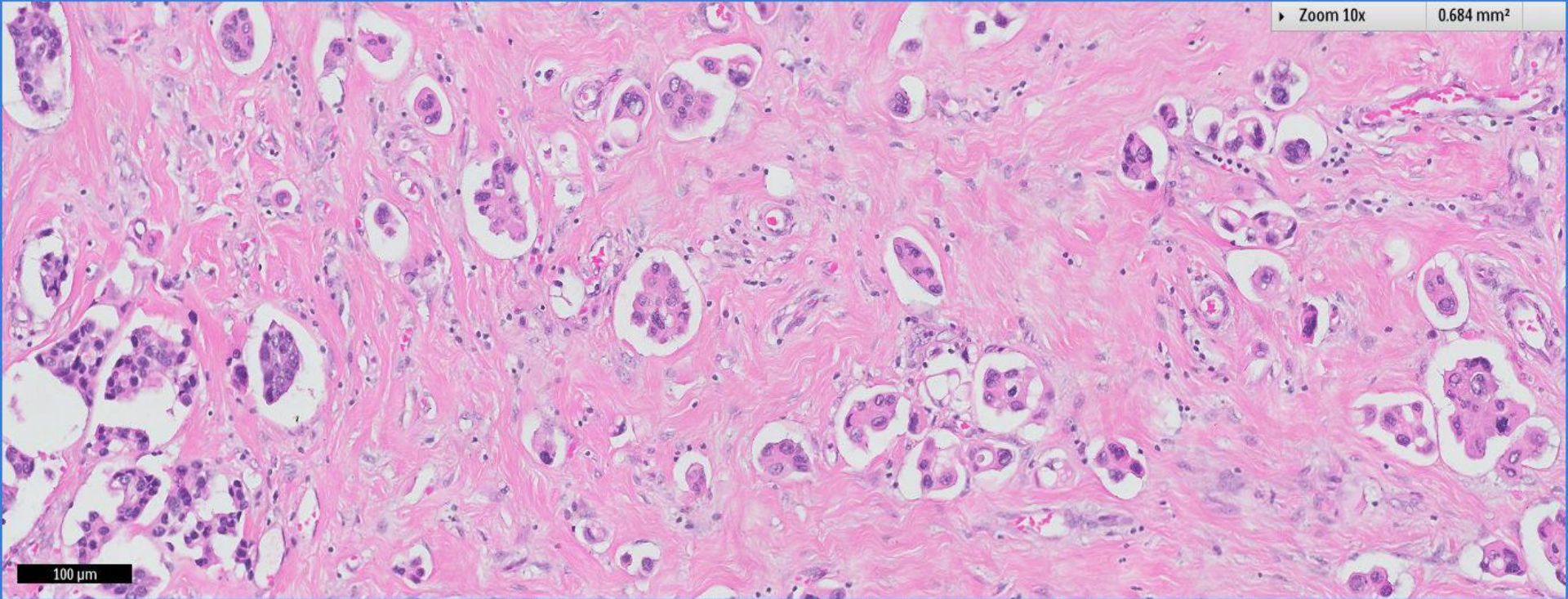


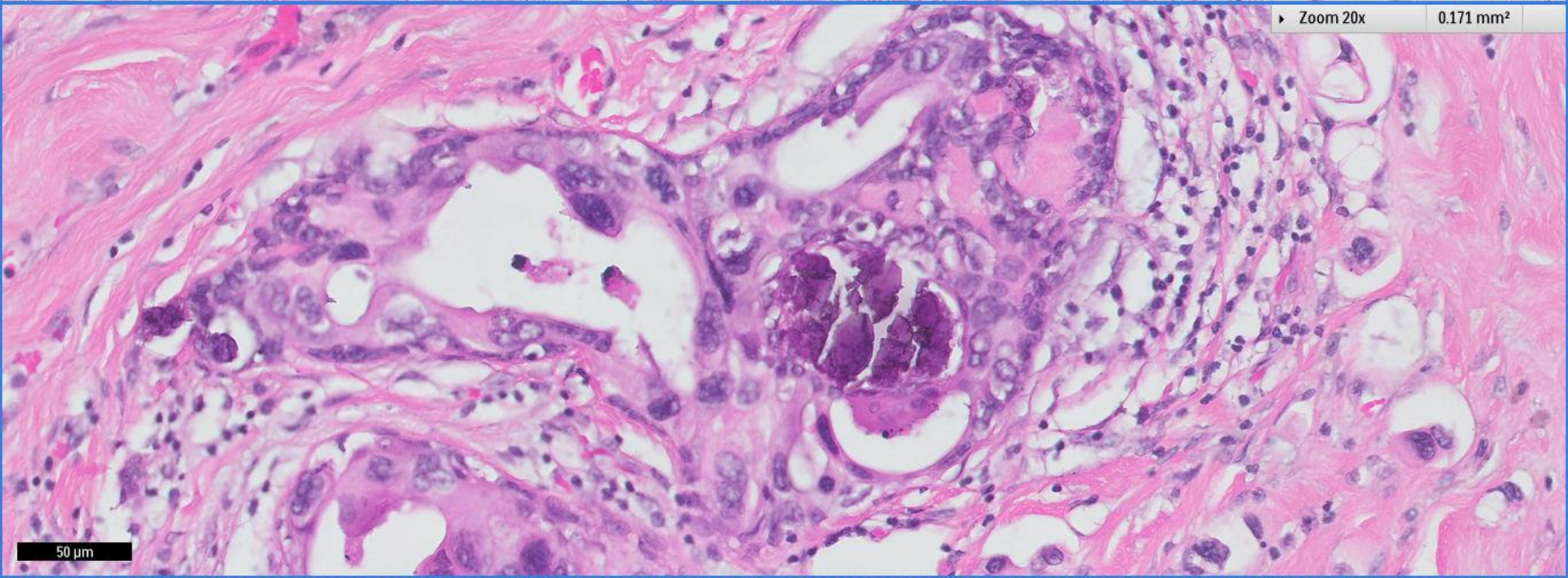
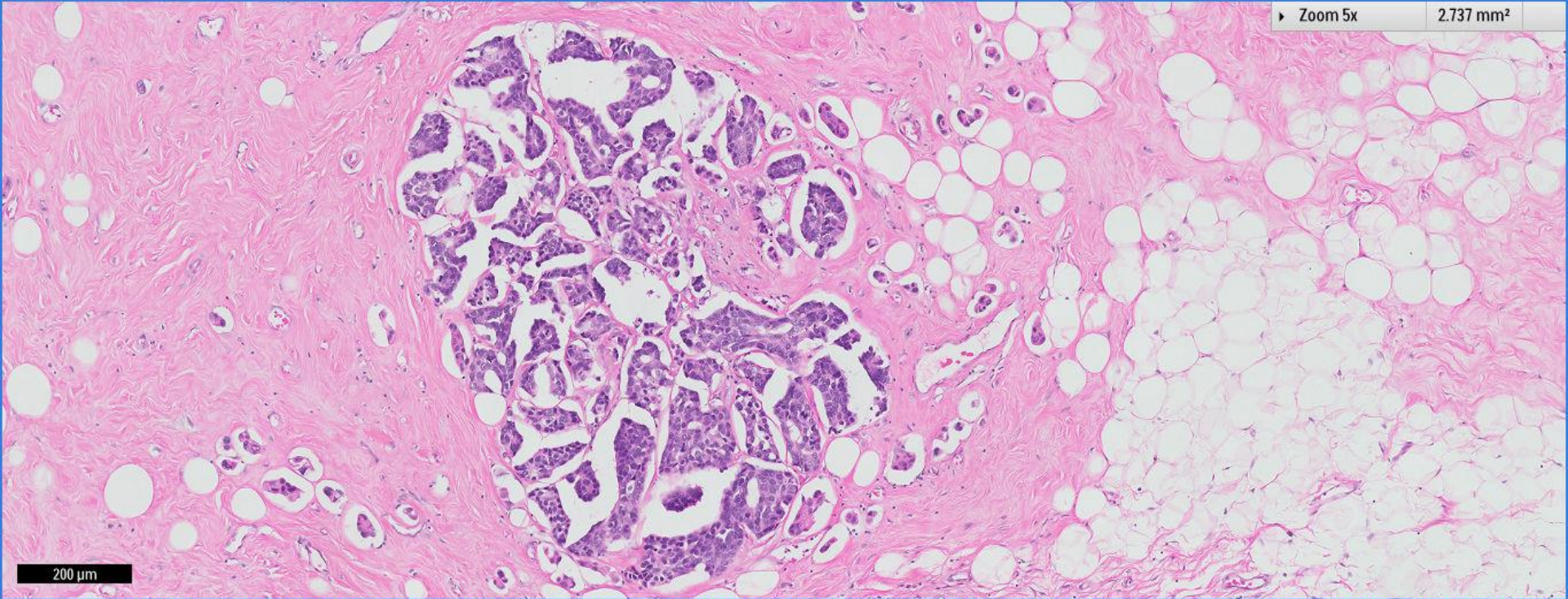


500 μ m



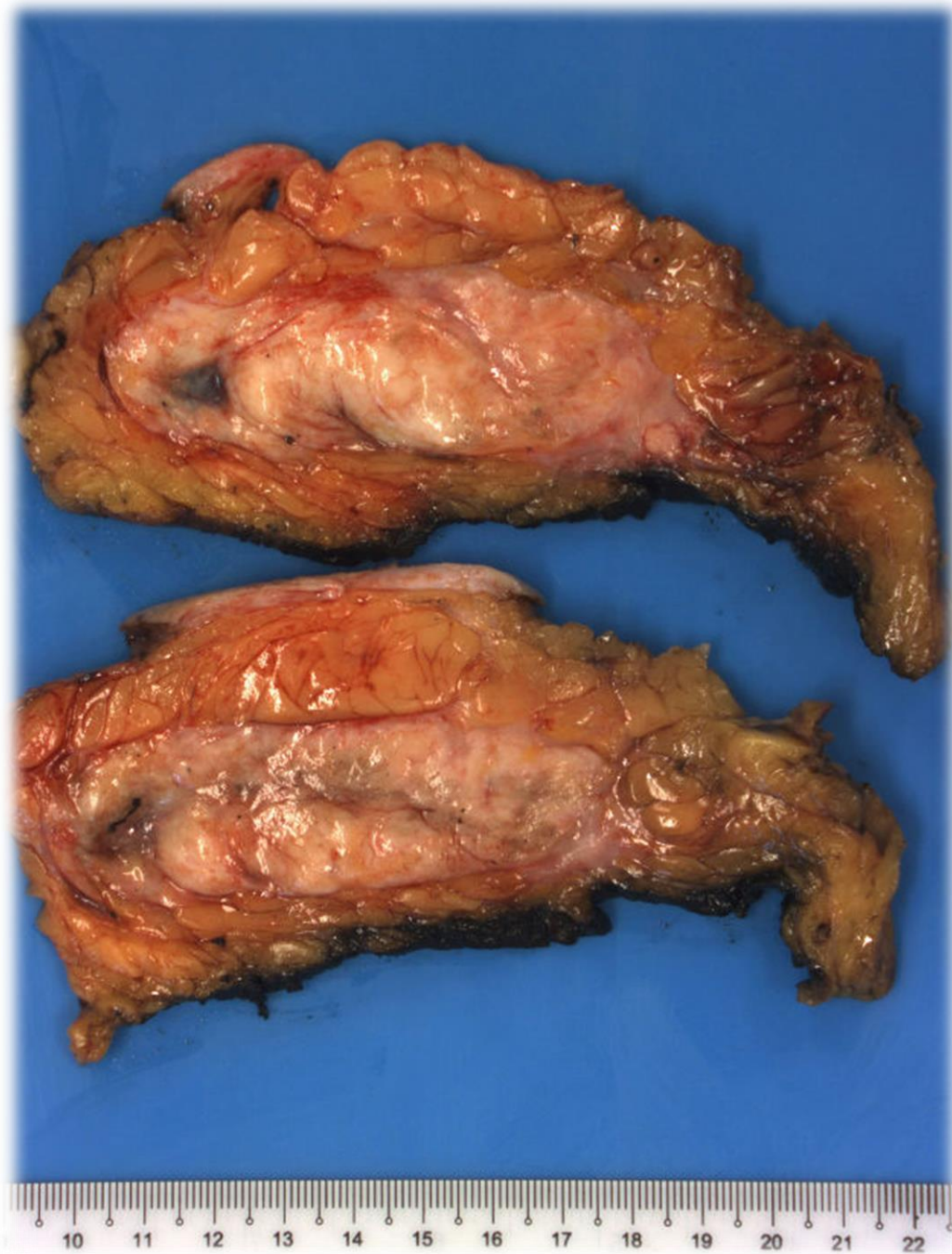
200 μ m



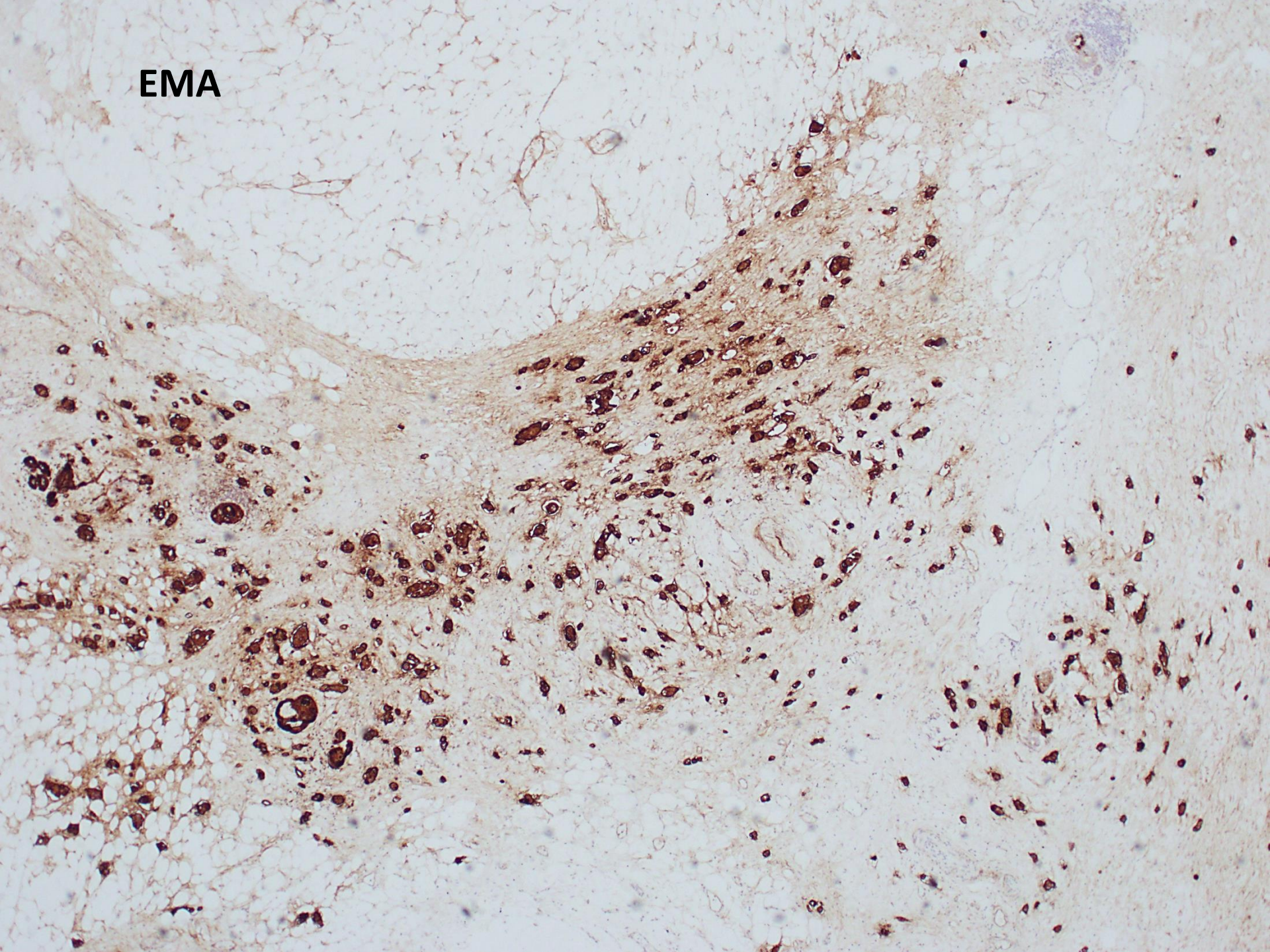


*In the Cool House,
Singapore Botanic
Gardens*

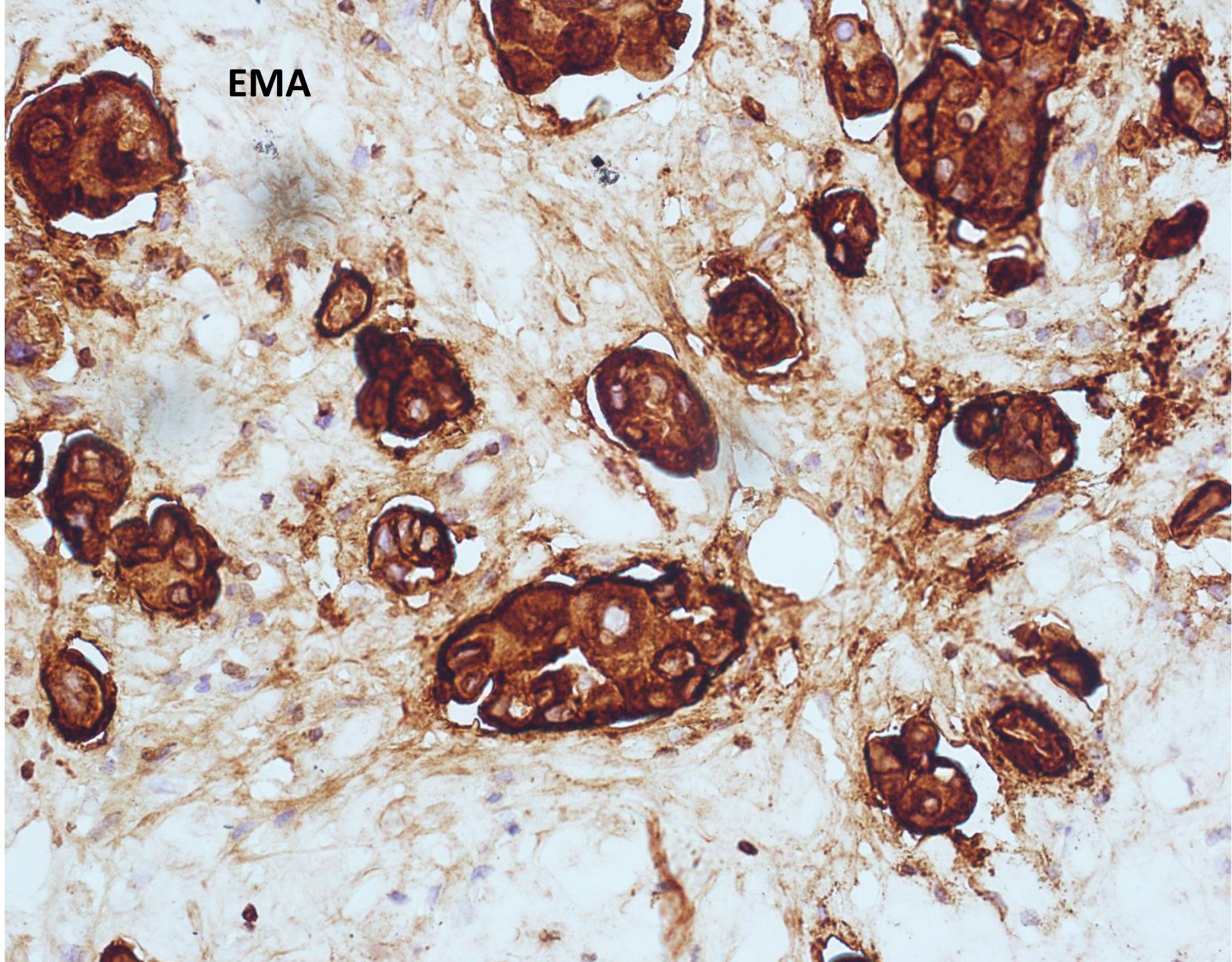




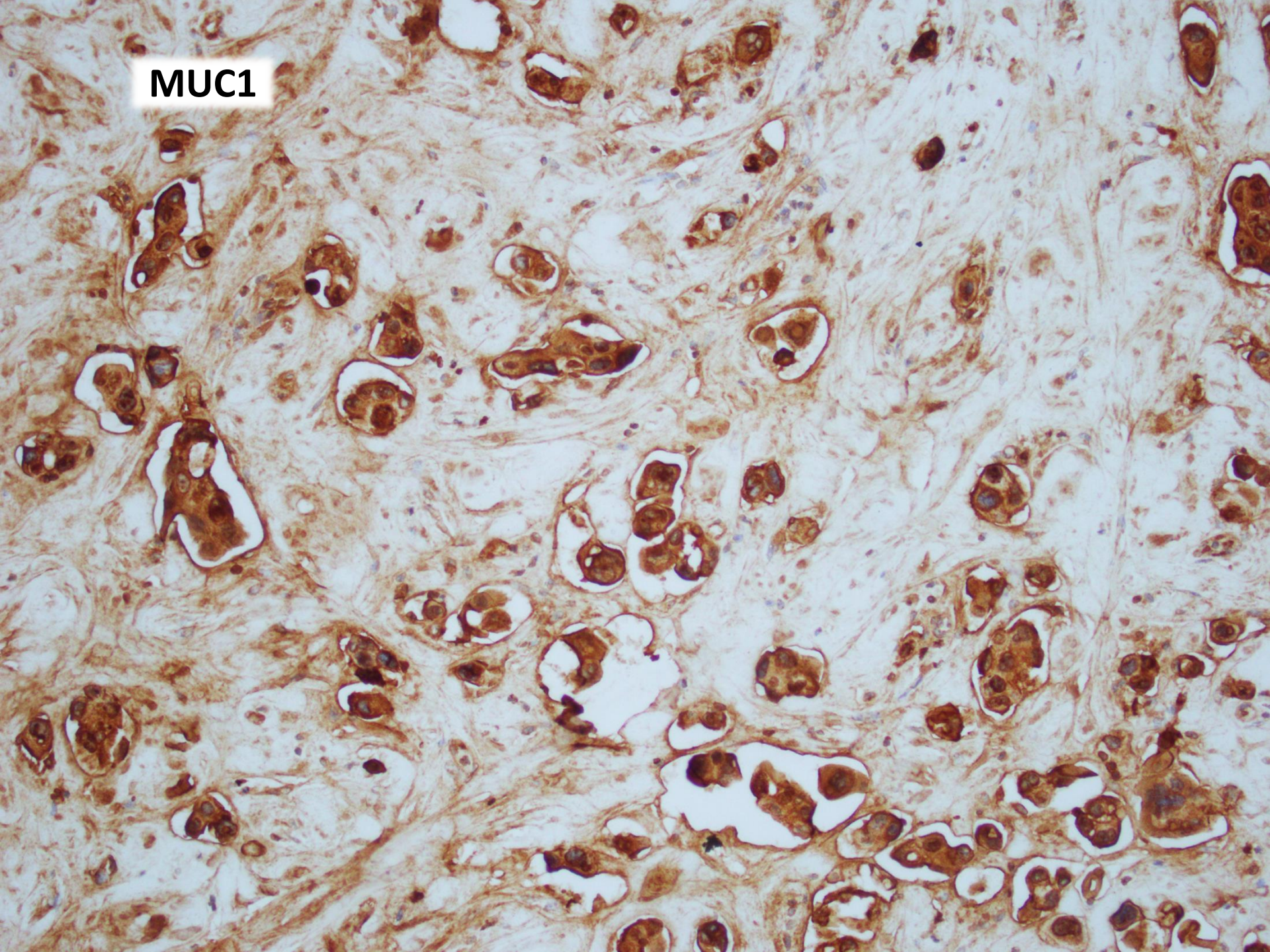
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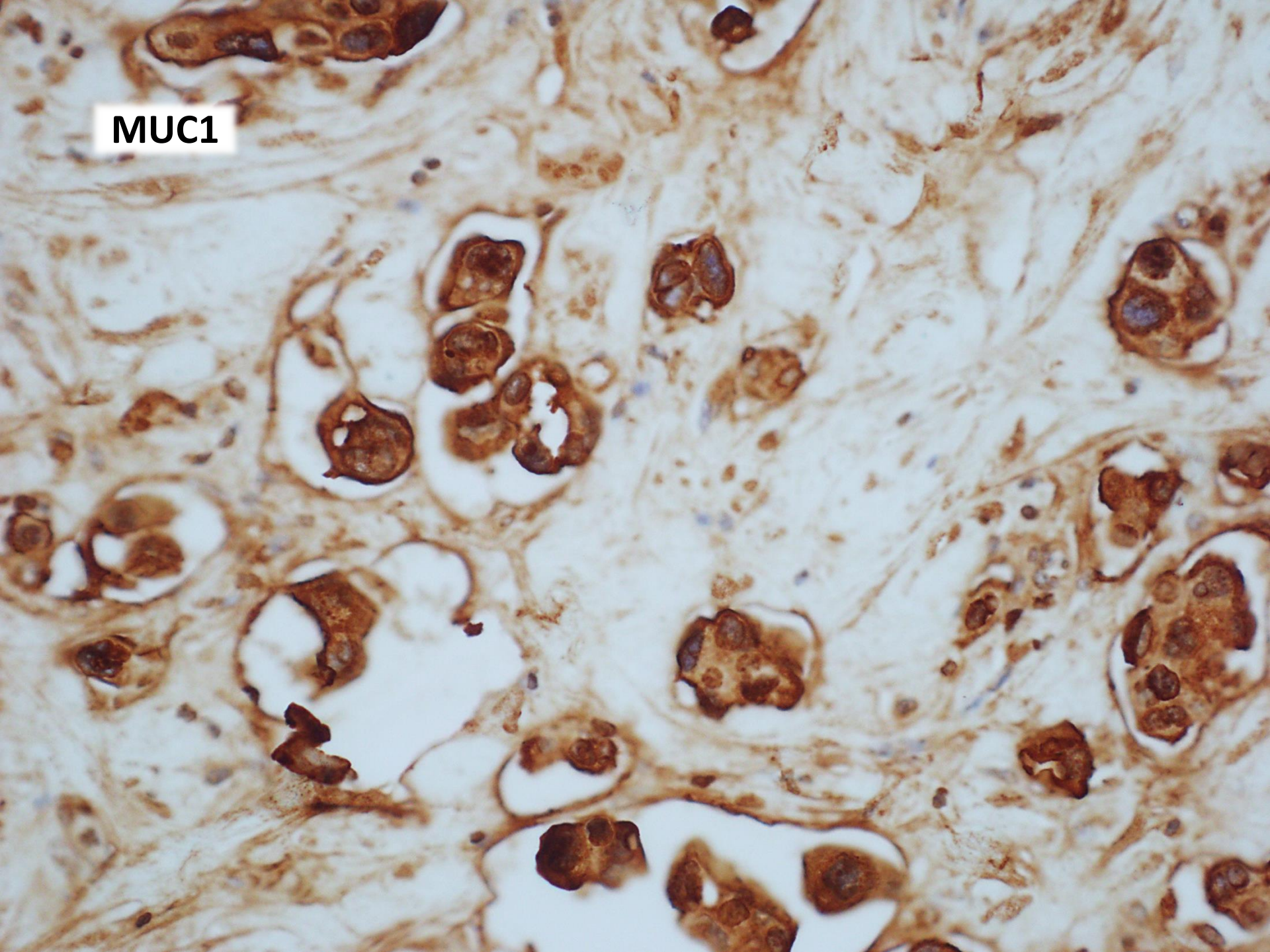
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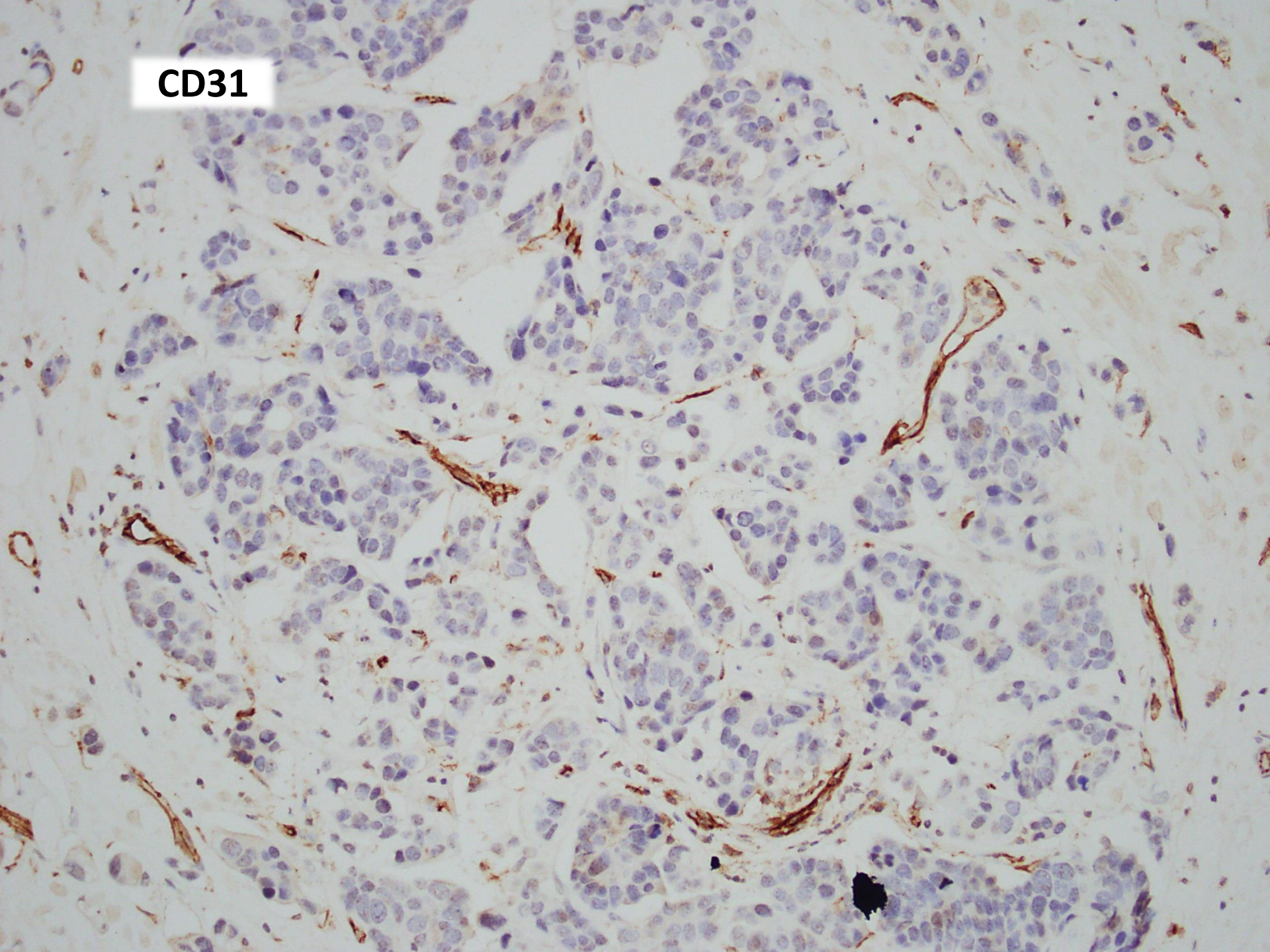
MUC1



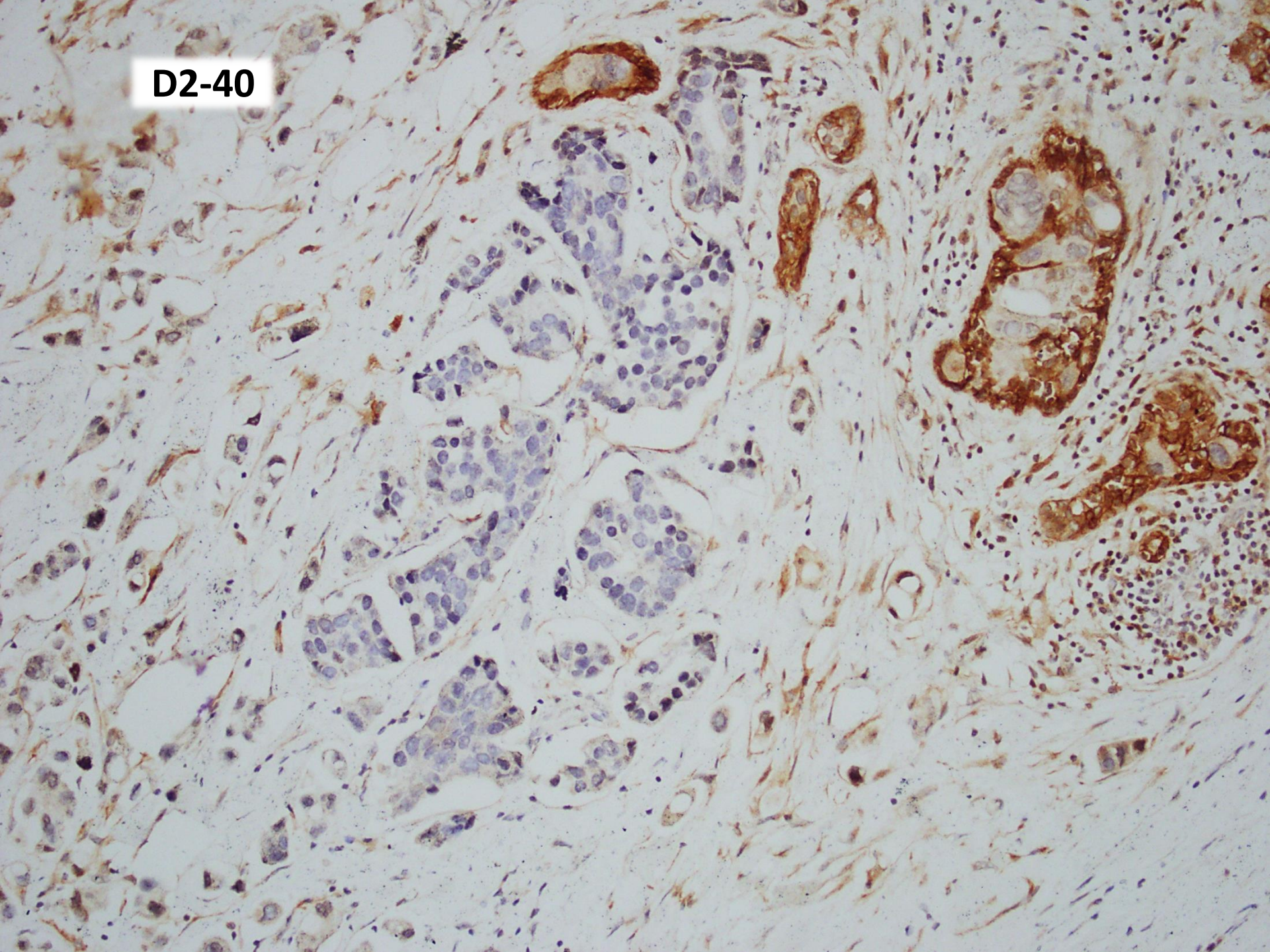
MUC1



CD31



D2-40



Diagnosis

Left simple mastectomy and axillary clearance ~

***Invasive carcinoma with micropapillary features,
grade 3, 61mm, ypT3.***

***Tumour bed shows partial response to post-
neoadjuvant chemotherapy.***

8 positive lymph nodes.



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Invasive micropapillary carcinoma

- 1.2-2.3% of all invasive breast carcinomas in the pure form.
- More often seen accompanying infiltrative ductal carcinoma, 7%.
- Age range: 28-92 years; mean 52-58 years.
- High incidence of lymphovascular invasion and axillary nodal metastases.
- Minor component also important.

Invasive micropapillary carcinoma

- Grossly:
 - Average tumour size 2-4cm (range 0.1-10cm).
 - 23% reported to be 1cm or less.
 - Non-specific appearance of gray-white, stellate and firm cut surface.



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Invasive micropapillary carcinoma

- Microscopically:
 - Solid/tubular epithelial nests within clear spaces.
 - Spaces due to artefactual shrinkage, not seen on frozen sections.
 - Lack of true fibrovascular cores.
 - Commonly constitutes < 20% tumour when seen accompanying infiltrative ductal carcinoma.
 - Histologic grade 3 (58-82%).
 - Lymphovascular invasion (63-76%).
 - Multifocality (31%).
 - Lymph node positivity (69-95%).
 - Small tumours (T1a and T1b) are also associated with a high incidence of axillary nodal metastases (64% and 75% respectively).

Invasive micropapillary carcinoma

- Immunohistochemistry:
 - EMA shows characteristic “inside-out” pattern.
 - ER positivity in 61-90%, PR positivity 61-70%.
 - cerbB2 positivity up to 54%.
- Molecular studies:
 - Comparative genomic hybridization (CGH) showed average of 7.4 chromosomal alterations per case (lower than tumours of no special type).
 - 8p loss with 88% showing 8q gains.

Invasive micropapillary carcinoma

- Prognosis:
 - Local recurrence rate of 22% (vs 12% for ductal NOS).
 - Distant metastatic rate similar to ductal NOS (25% vs 23%).
 - Mortality within 9 years of 28% vs 18% (ductal NOS).
 - 46% mortality with a follow-up of 143 months.
 - 42-52% of cases present with 4 or more positive lymph nodes.
 - Overall survival similar to other subtypes when matched stage for stage.



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Post-neoadjuvant chemotherapy ~ histological evaluation

Is grading required?

Grading prior to treatment should be reported for all breast carcinomas.

Grading is not a mandatory parameter in the post-therapy evaluation, as systemic therapy may alter the nuclear morphology as well as the mitotic rate, precluding accurate grading.



Breast Pathology Course 2016



Pathology Building 1958-2013, by Ong Kim Seng