Breast Pathology Course 2016

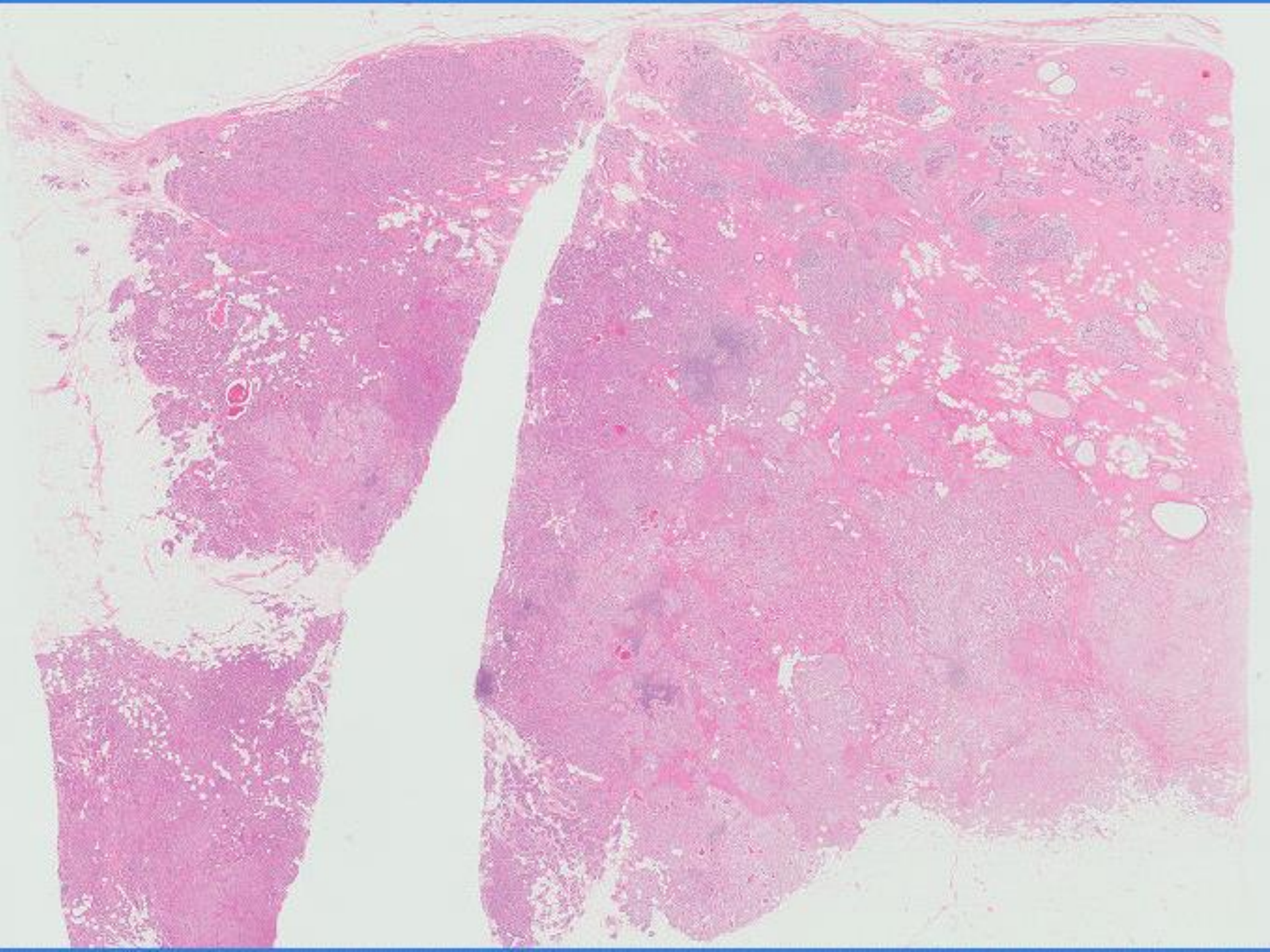
Case 22

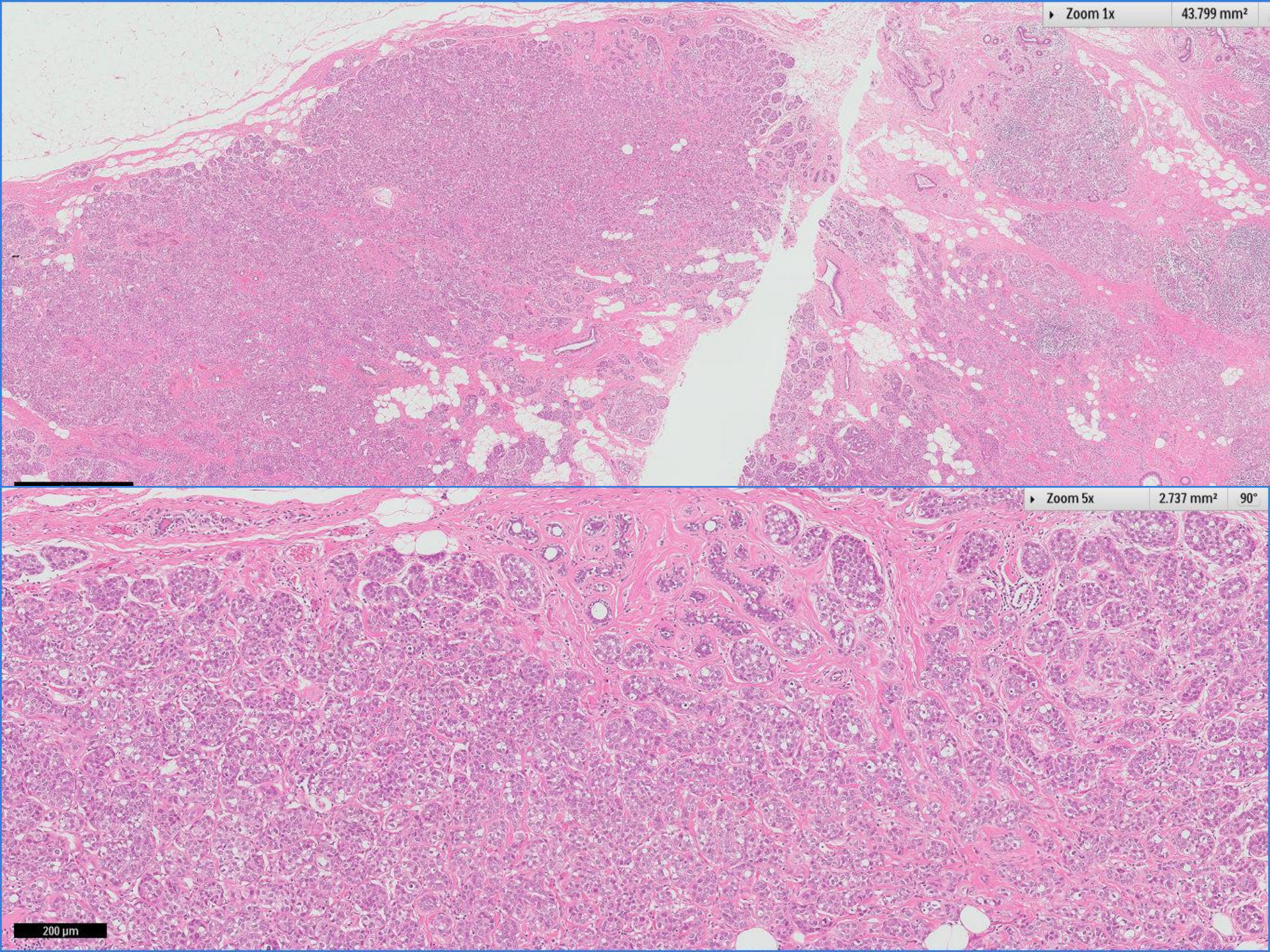
38 year old Japanese woman.
Excision biopsy of a left breast tumour (current slide).

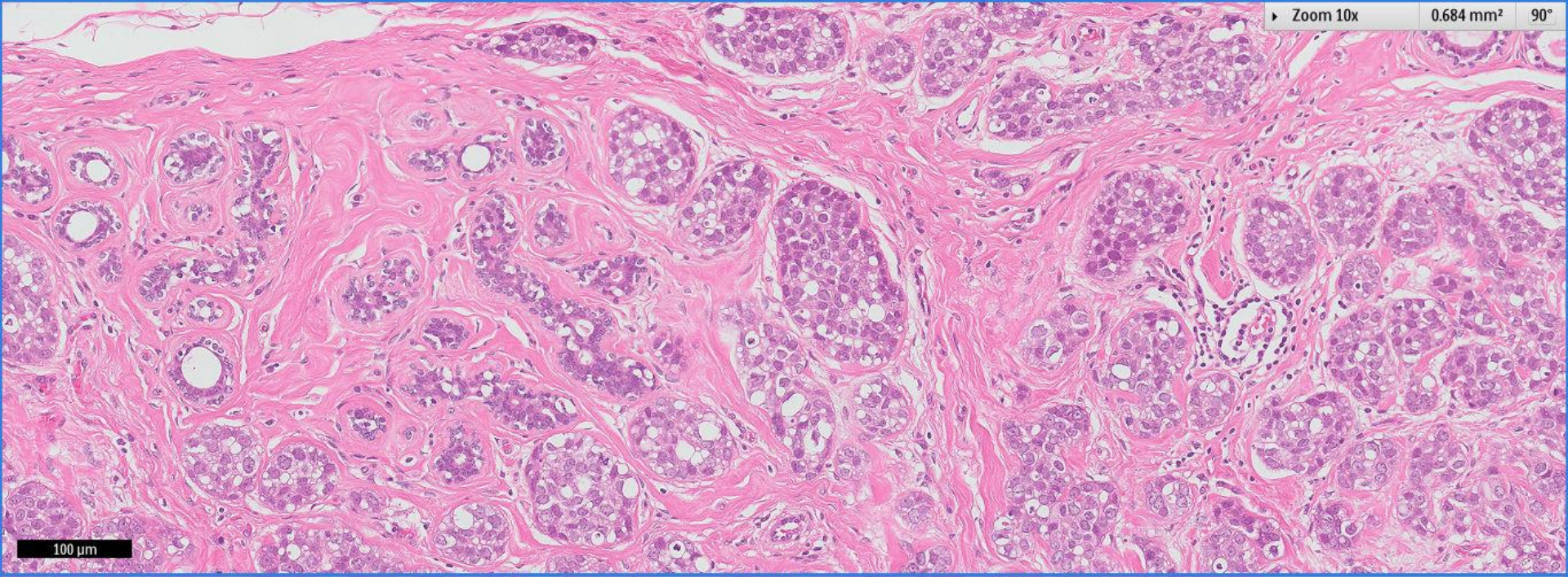
Past history of a triple negative right breast invasive carcinoma 4 years ago, which responded to neoadjuvant chemotherapy.

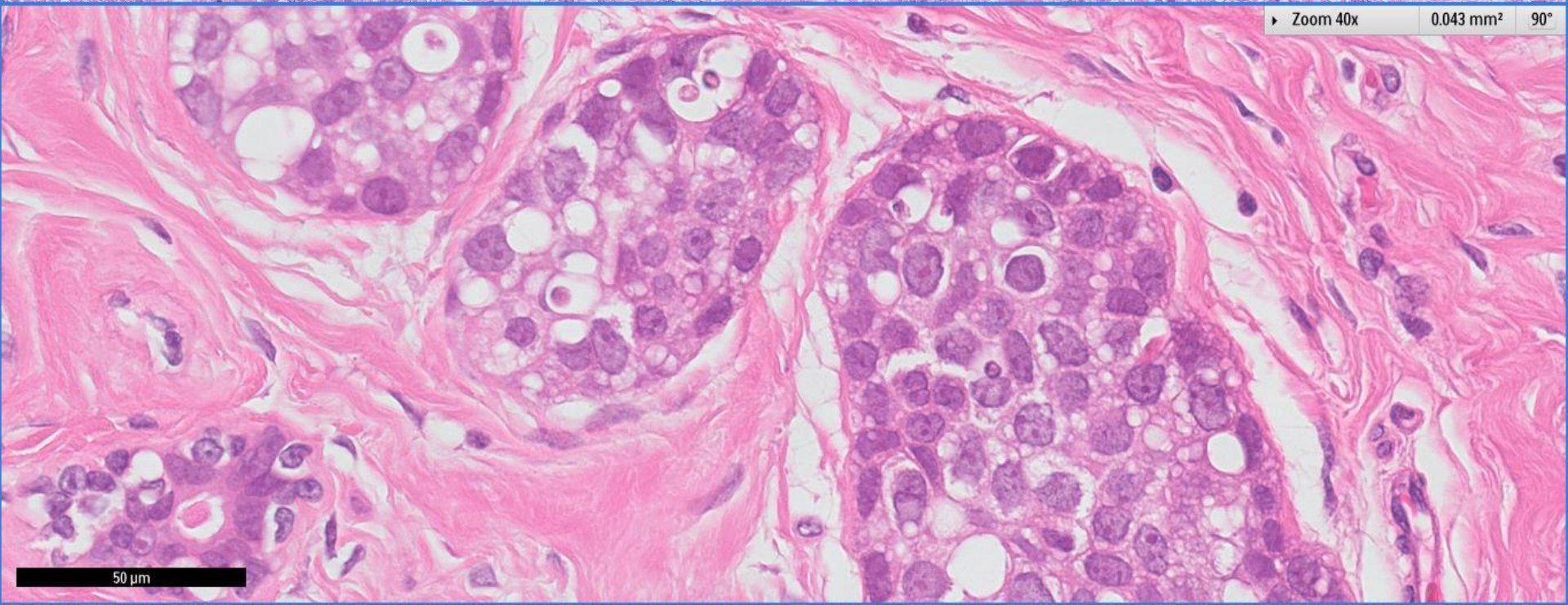
(Case contributed by Dr Oi Harada, Japan)

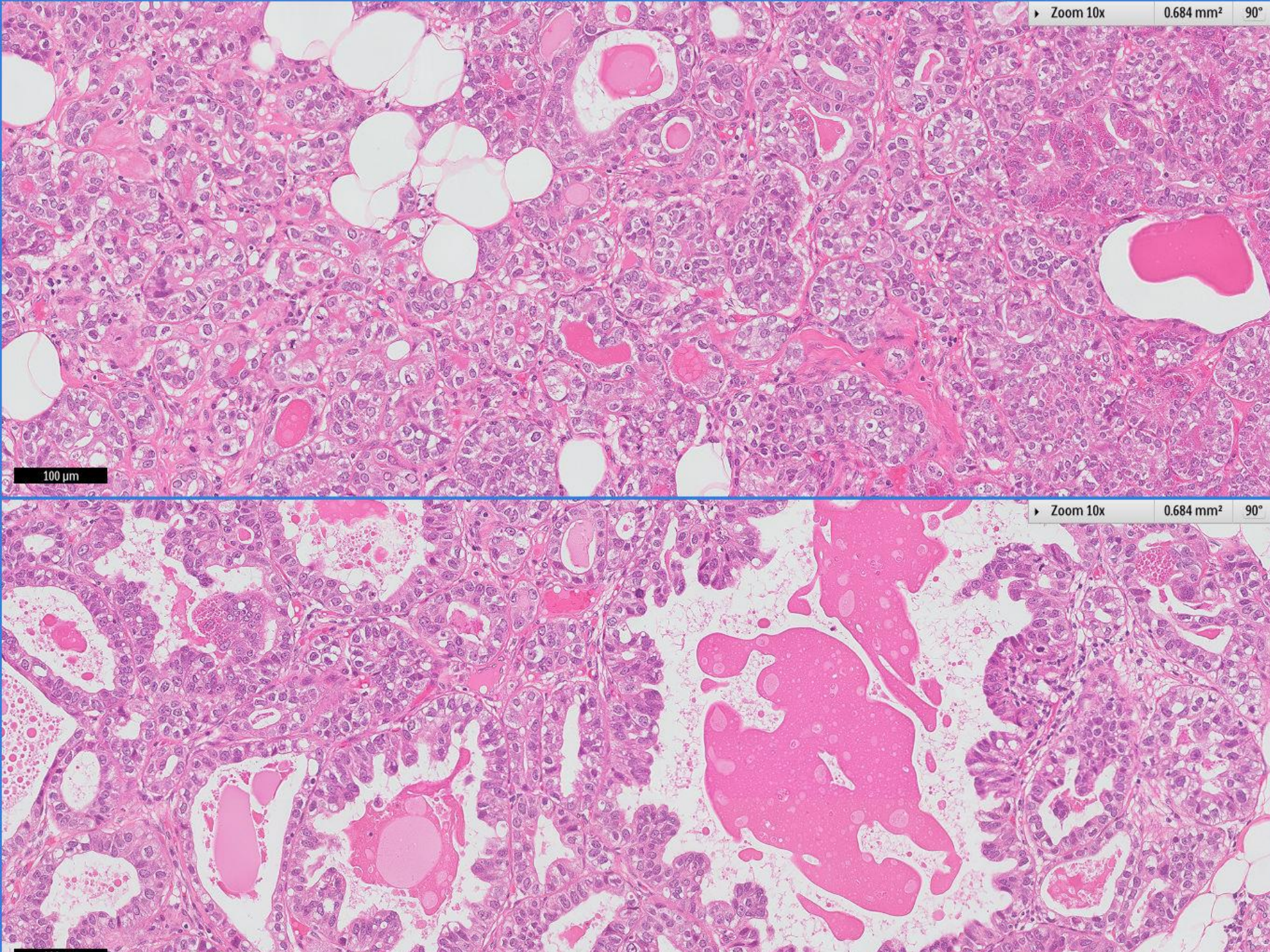
Singapore General Hospital
SingHealth
Division of Pathology
since 1821
195th Anniversary
SingHealth DukeNUS ACADEMIC MEDICAL CENTRE
PATHOLOGY
IAP International Academy of Pathology Singapore Division




Zoom 1x
43.799 mm²
Zoom 5x
2.737 mm²
90°
200 µm

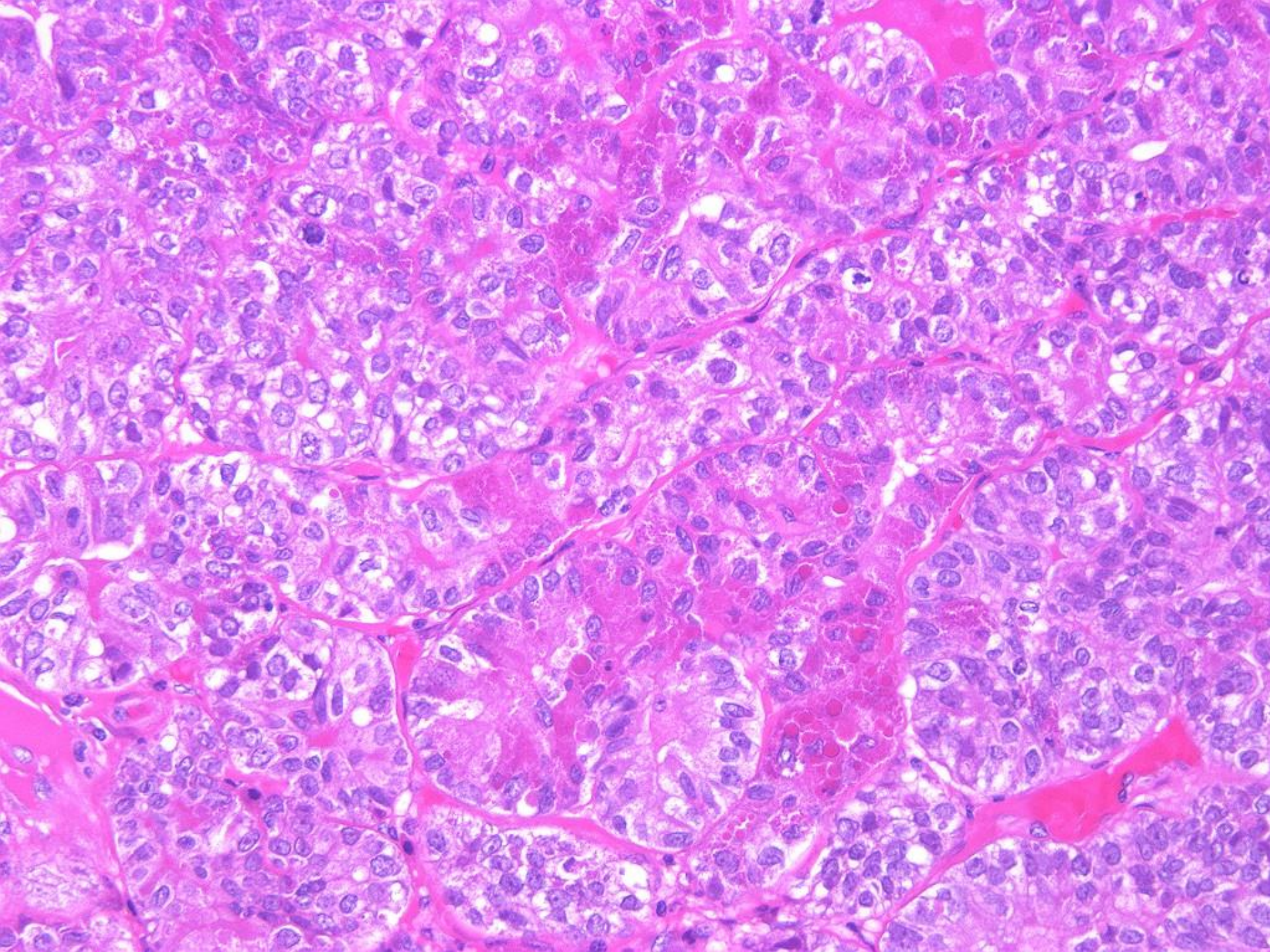

Zoom 10x
0.684 mm²
90°
100 µm

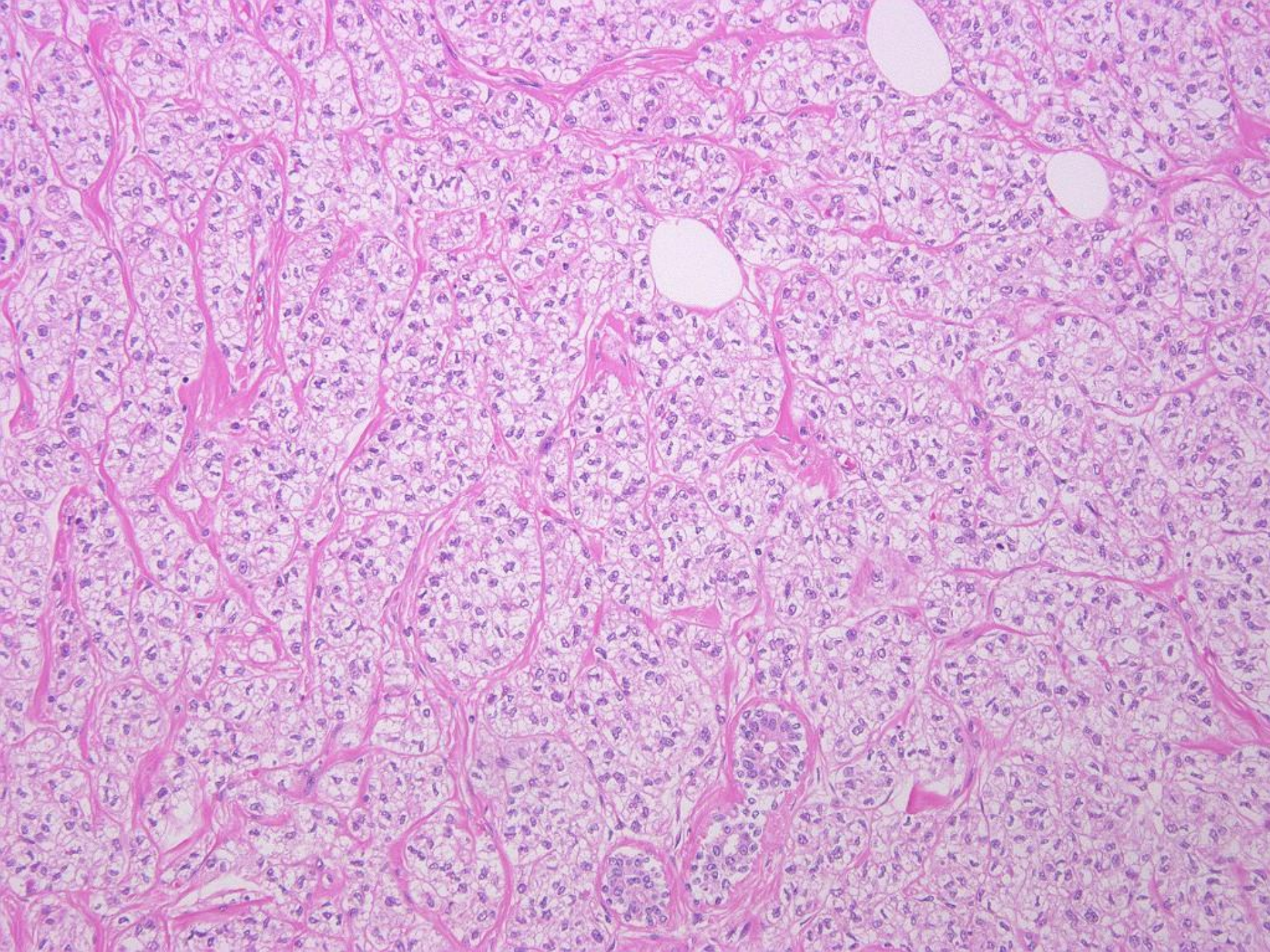

Zoom 40x
0.043 mm²
90°
50 µm

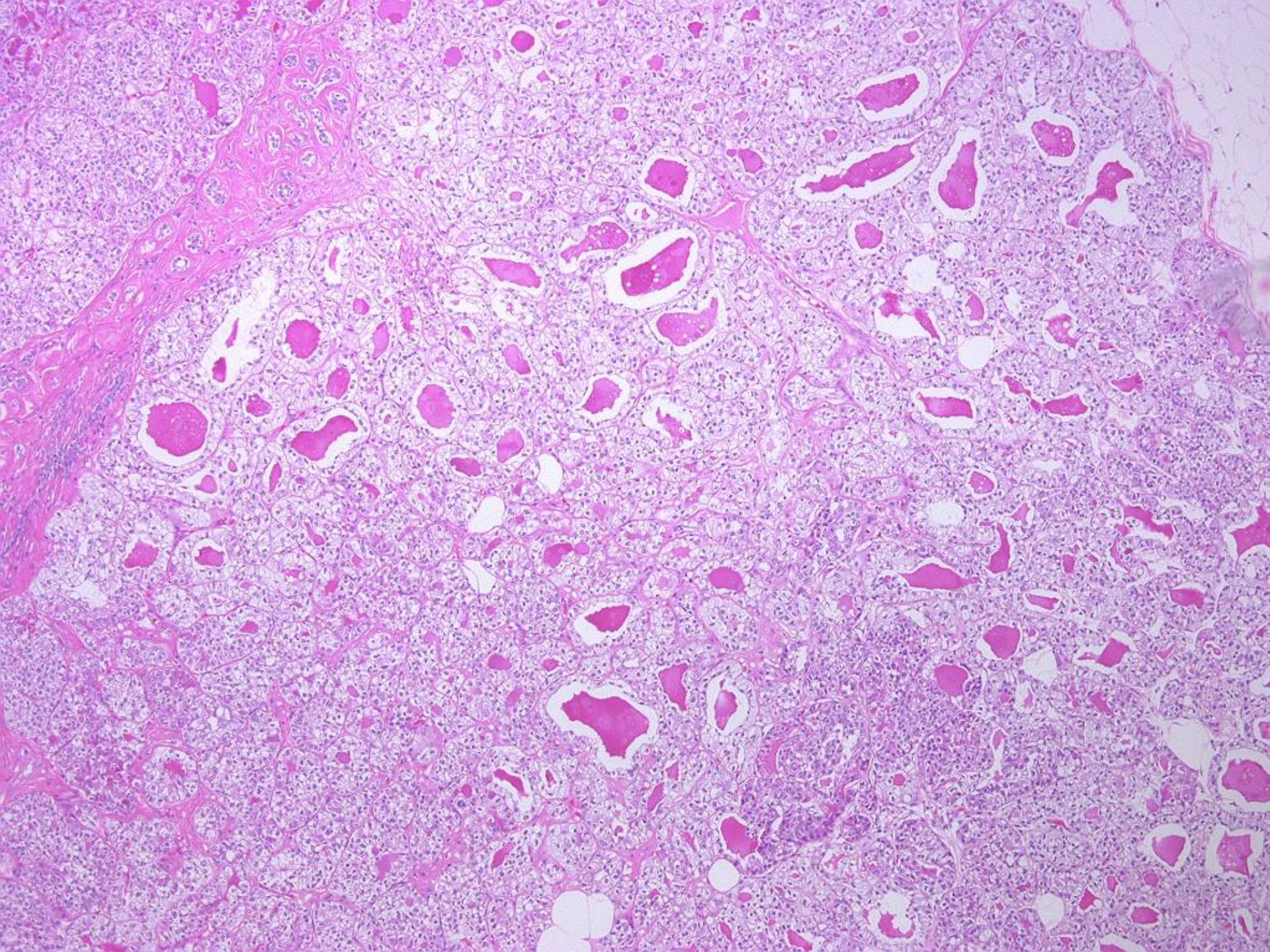

Zoom 10x
0.684 mm²
90°
100 µm
Zoom 10x
0.684 mm²
90°

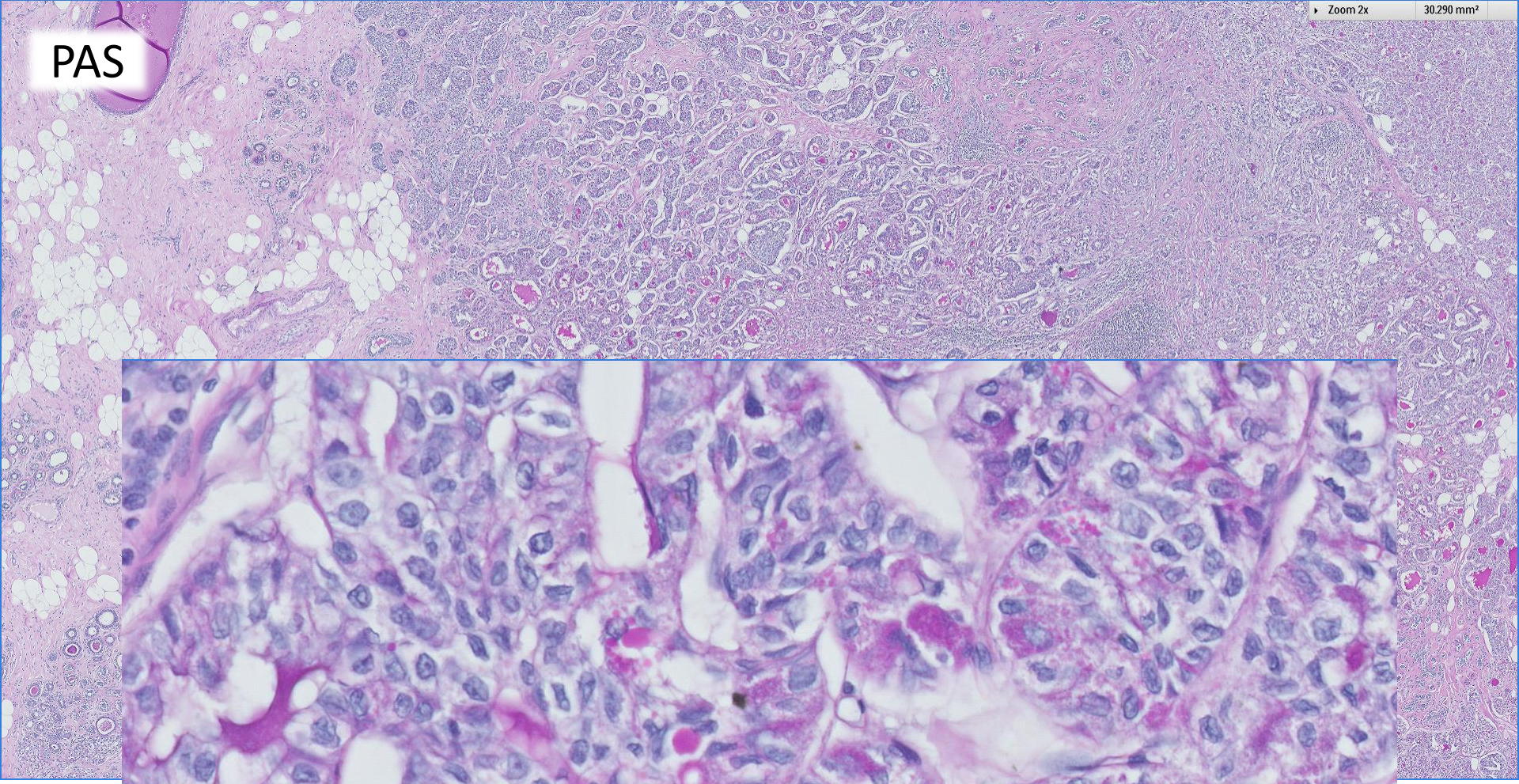
"DEPARTMENT OF PATHOLOGY
SINGAPORE GENERAL HOSPITAL"

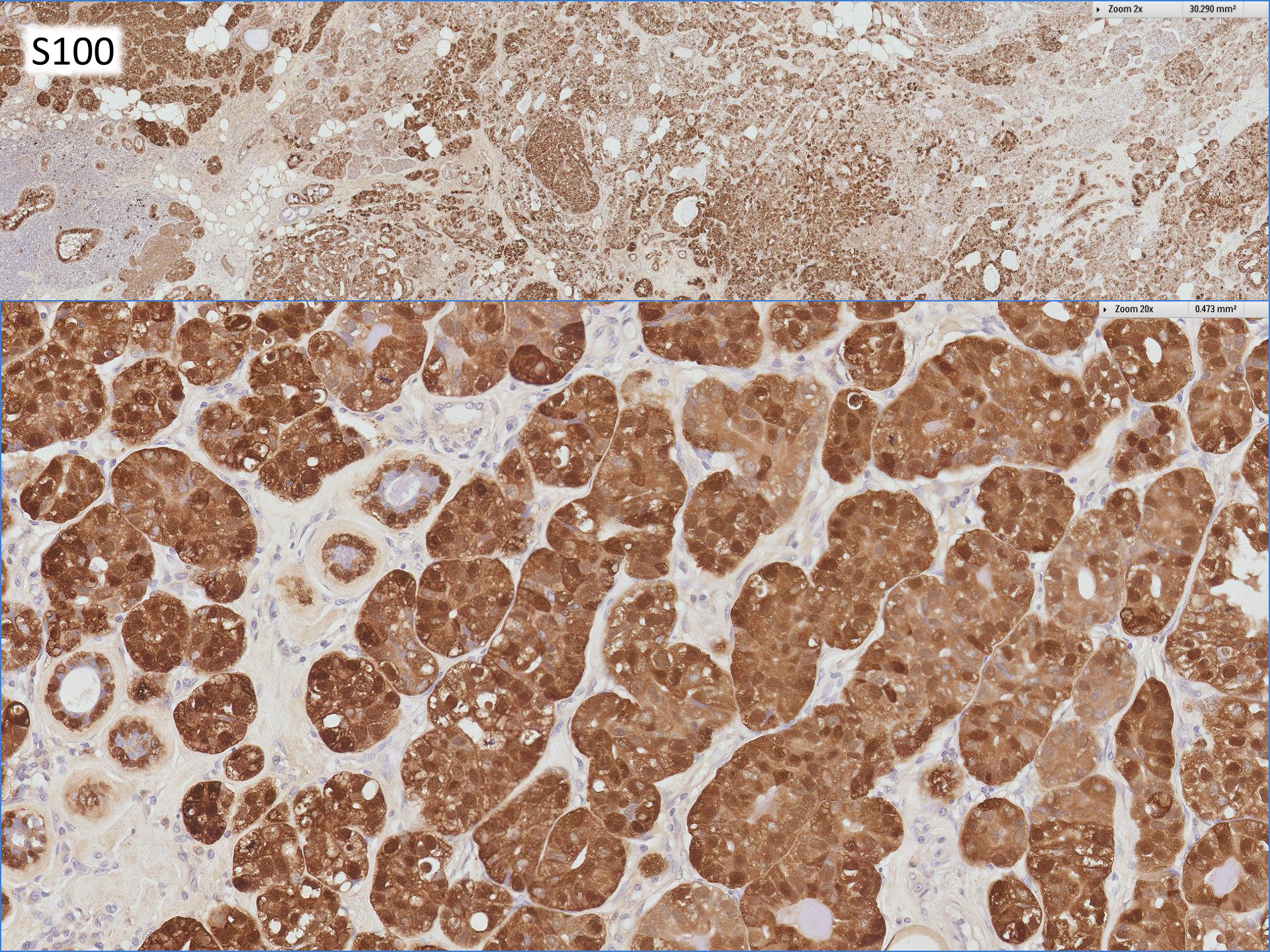
27.04.2014

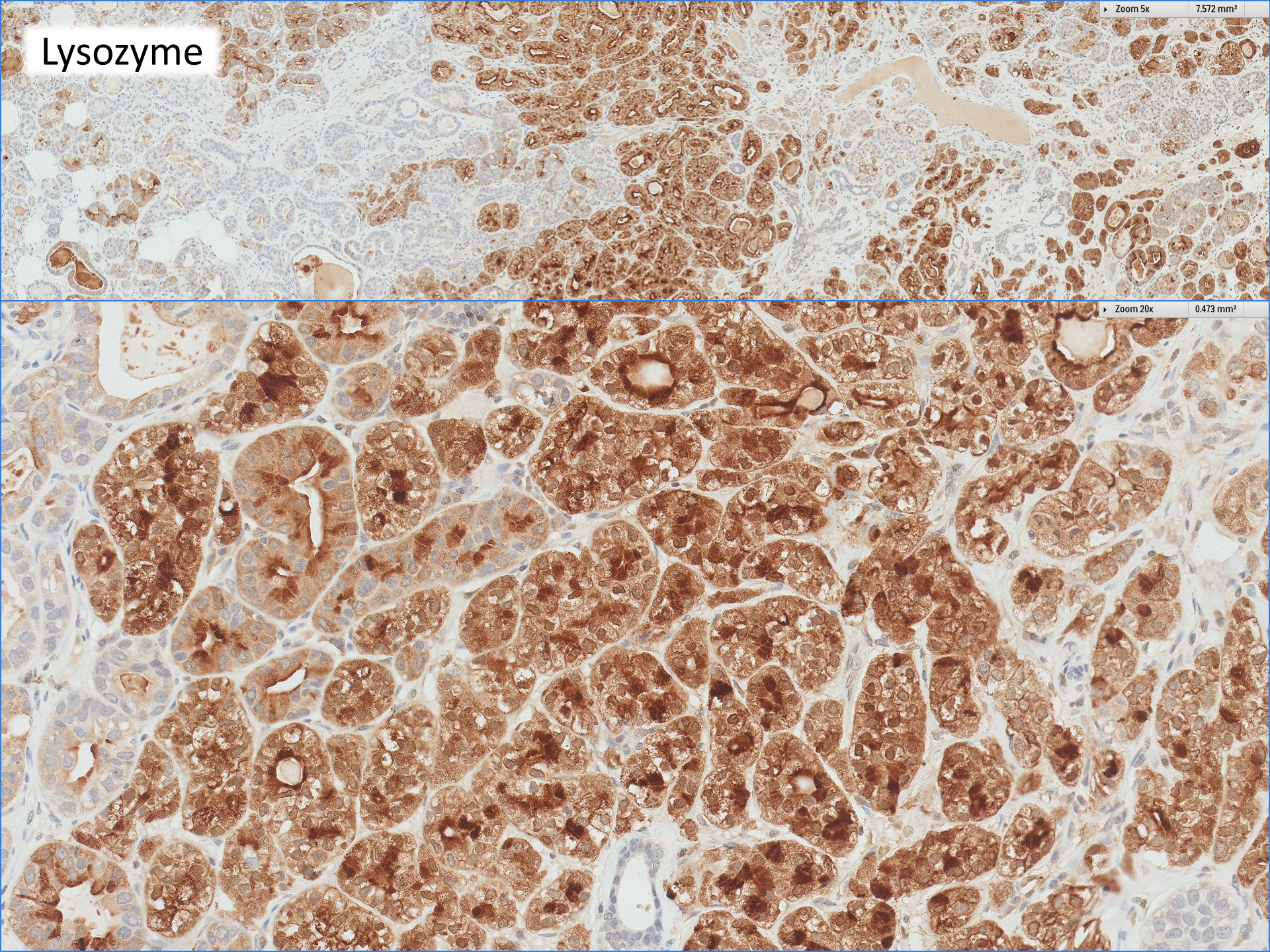


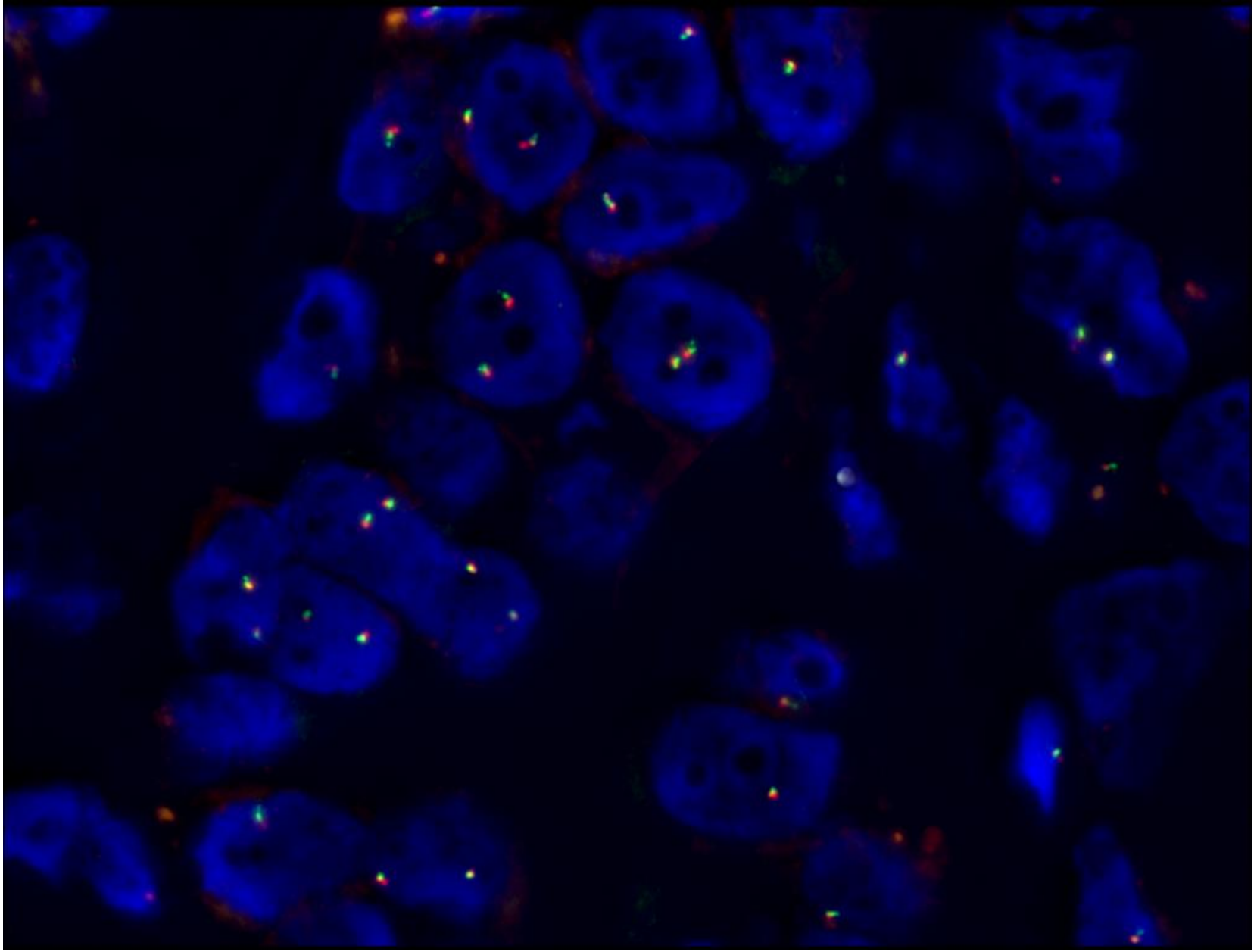





PAS
Zoom 2x
30.290 mm²


S100
Zoom 2x
30.290 mm²
Zoom 20x
0.473 mm²


Lysozyme
Zoom 5x
7.572 mm²
Zoom 20x
0.473 mm²



Interphase FISH using the ETV6 breakapart probe set showed no disruption of the ETV6 gene. The test is negative for ETV6 gene rearrangement.

Diagnosis

Excision biopsy, left breast tumour ~

Invasive carcinoma with acinic and clear cell features

Histopathology

ACCA varies from well-differentiated and easily recognizable to structurally solid (dedifferentiated) {1416}. Some show microcystic and microglandular areas, or solid nests with comedo-like necrosis and a rim of microglandular structures at the periphery {1198}. The cells have irregular round to ovoid nuclei, evident single nucleoli and abundant cytoplasm, which is usually granular, amphophilic to eosinophilic. Granules can be large and coarse, bright red in colour, reminiscent of those seen in Paneth cells and ultrastructurally similar to zymogen-like granules {314, 1198,1276}. Cells with clear "hypernephroid" cytoplasm are a feature and may predominate. Mitoses can number up to 15 per 10 high-power fields {314}. In almost all tumours, cells express a high level of alpha-1-antichymotrypsin, salivary-gland amylase, lysozyme, EMA and S100 protein {314}. The mucoapocrine marker GCDFP-15 can be focally positive. ACCAs are consistently negative for ER, PR, androgen receptors {1083} and HER2 {459}.

WHO 2012

Differential diagnosis

ACCA has to be differentiated from secretory carcinoma {580}, which lacks hypernephroid features and all the proteins of the salivary-gland counterpart of ACCA.

WHO 2012

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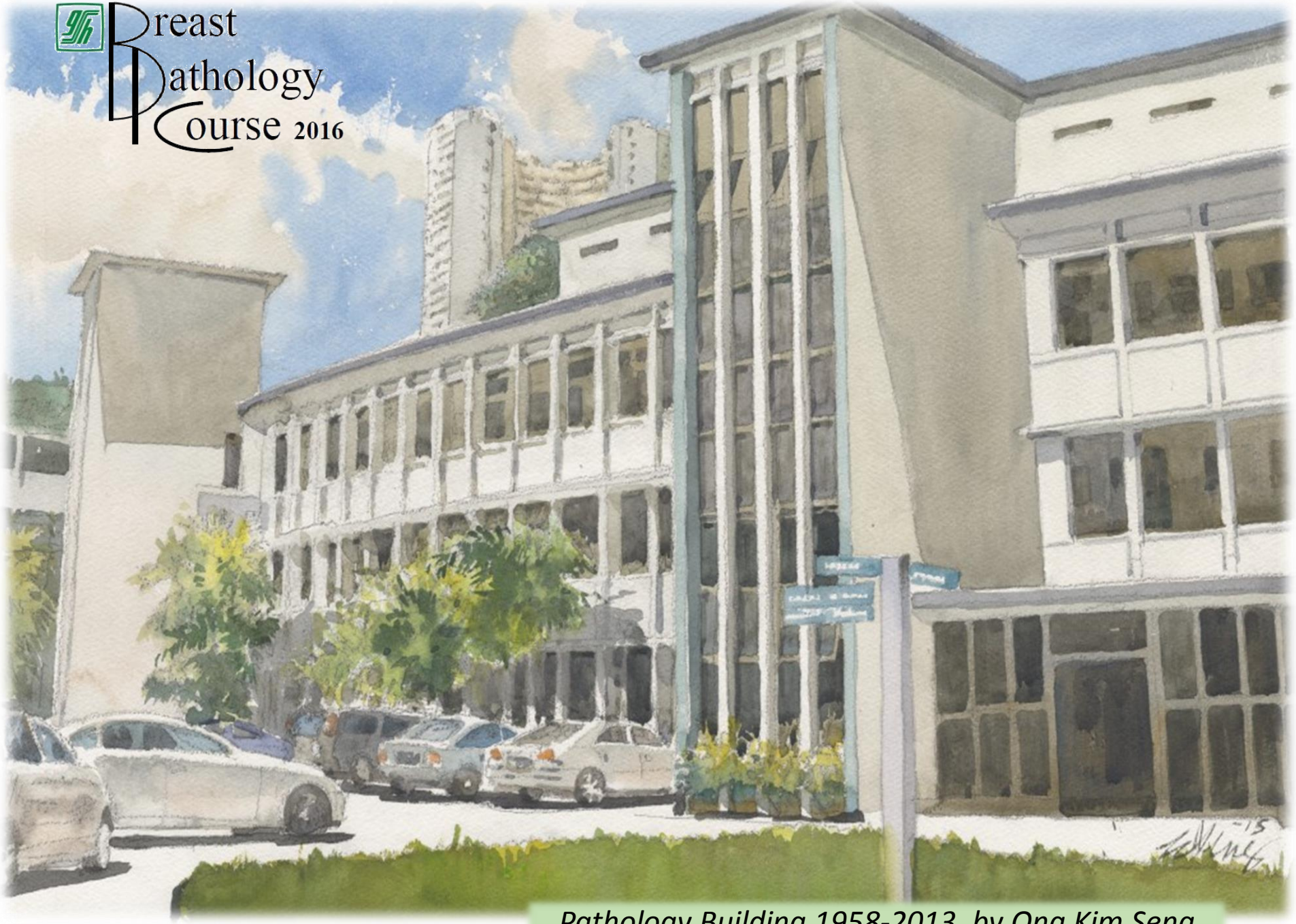

Pathology Building 1958-2013, by Ong Kim Seng