Breast Pathology Course 2017

Case 36

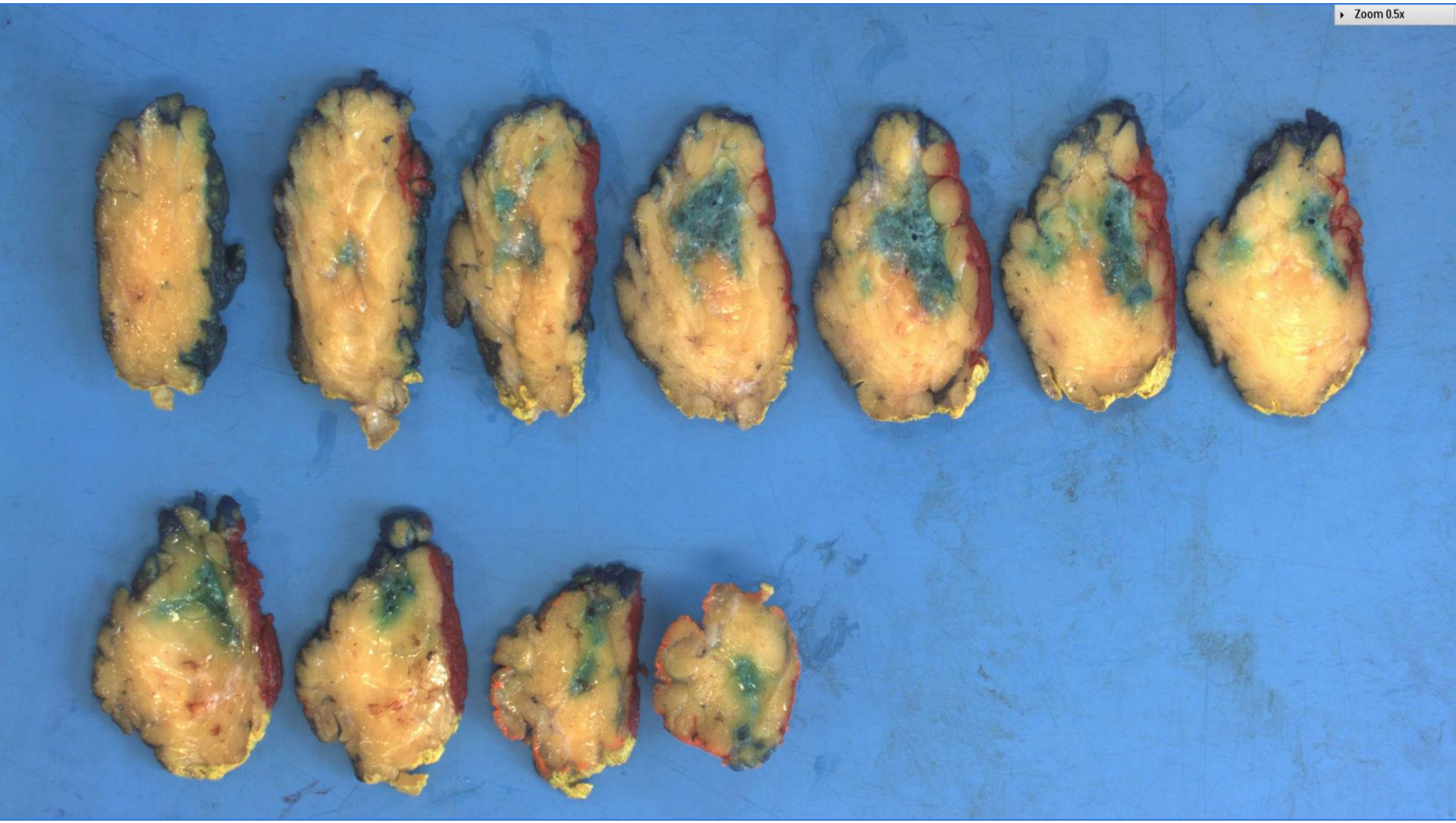
35 year old Chinese female.

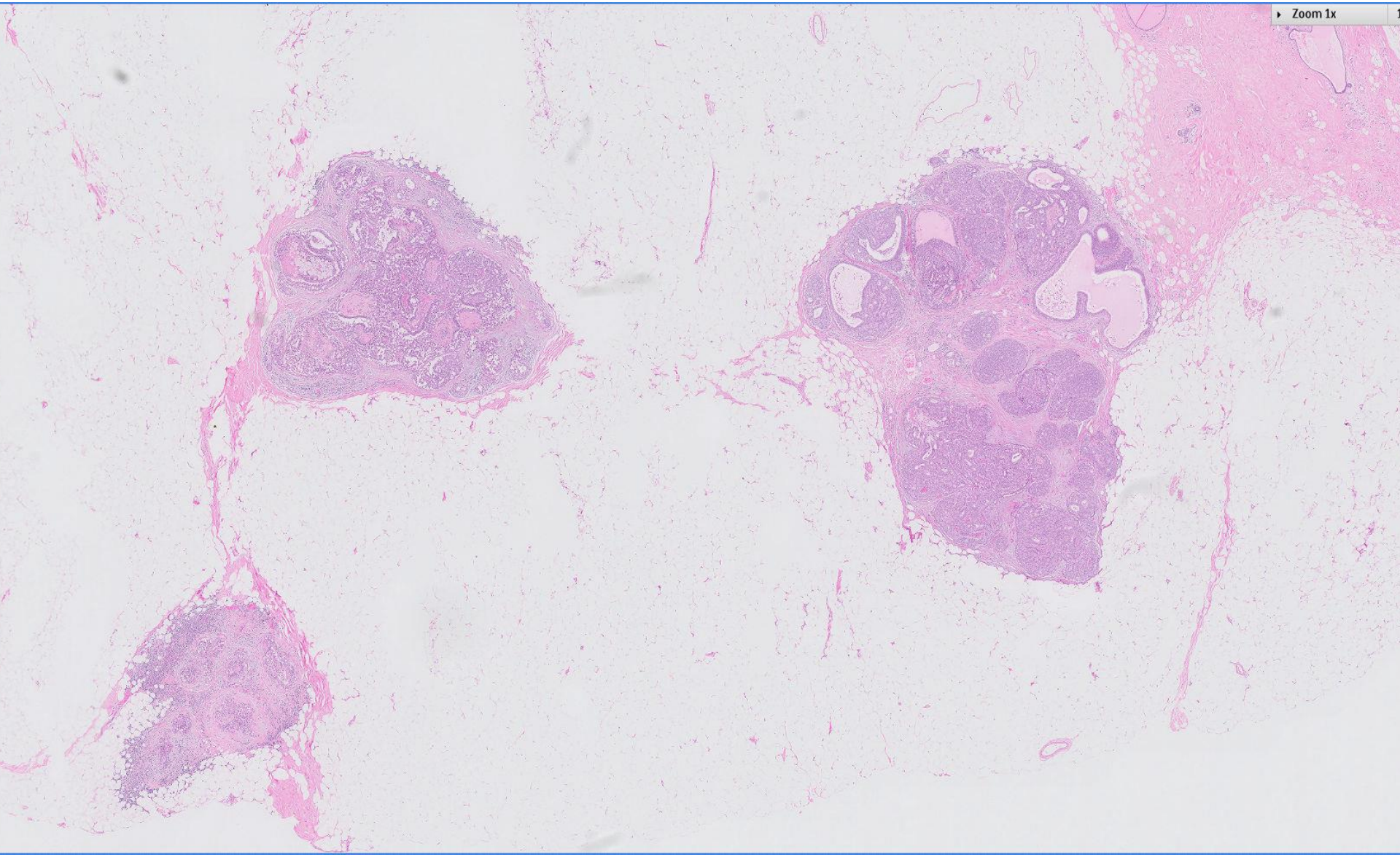
Right breast wide excision.

Singapore General Hospital
SingHealth
Division of Pathology

SingHealth DukeNUS
ACADEMIC MEDICAL CENTRE
PATHOLOGY

IAP
International Academy of Pathology
Singapore Division


Zoom 0.5x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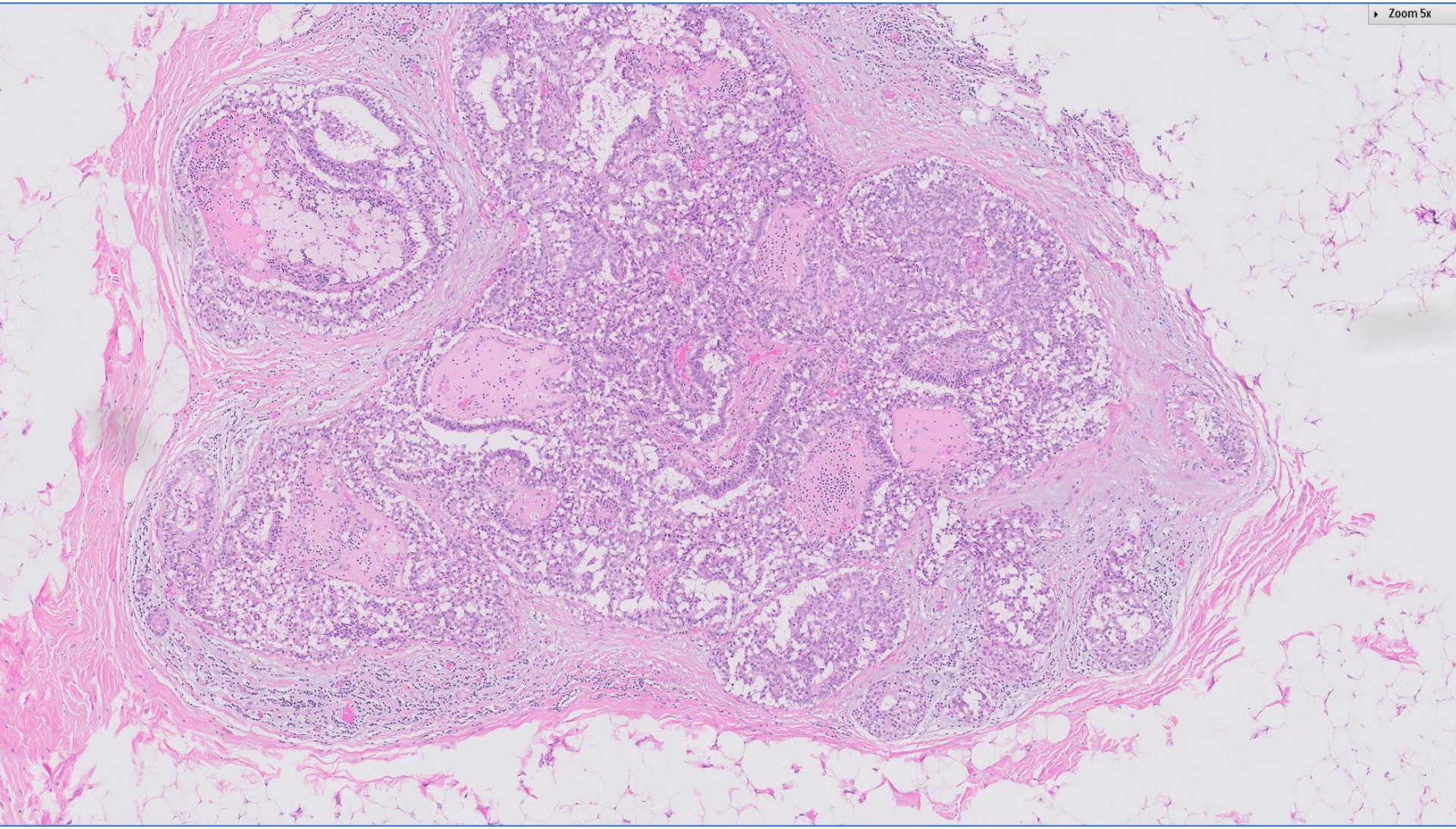
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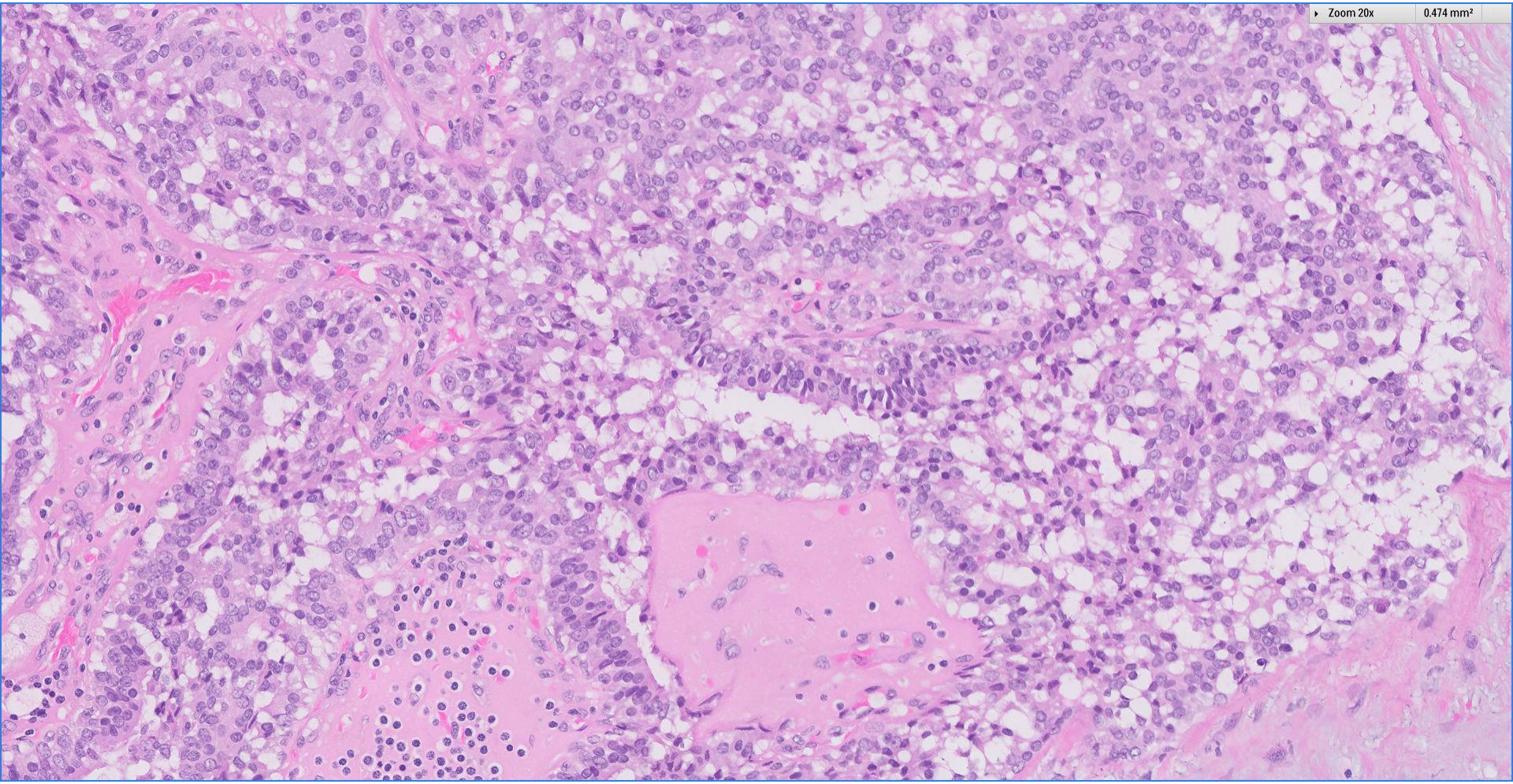
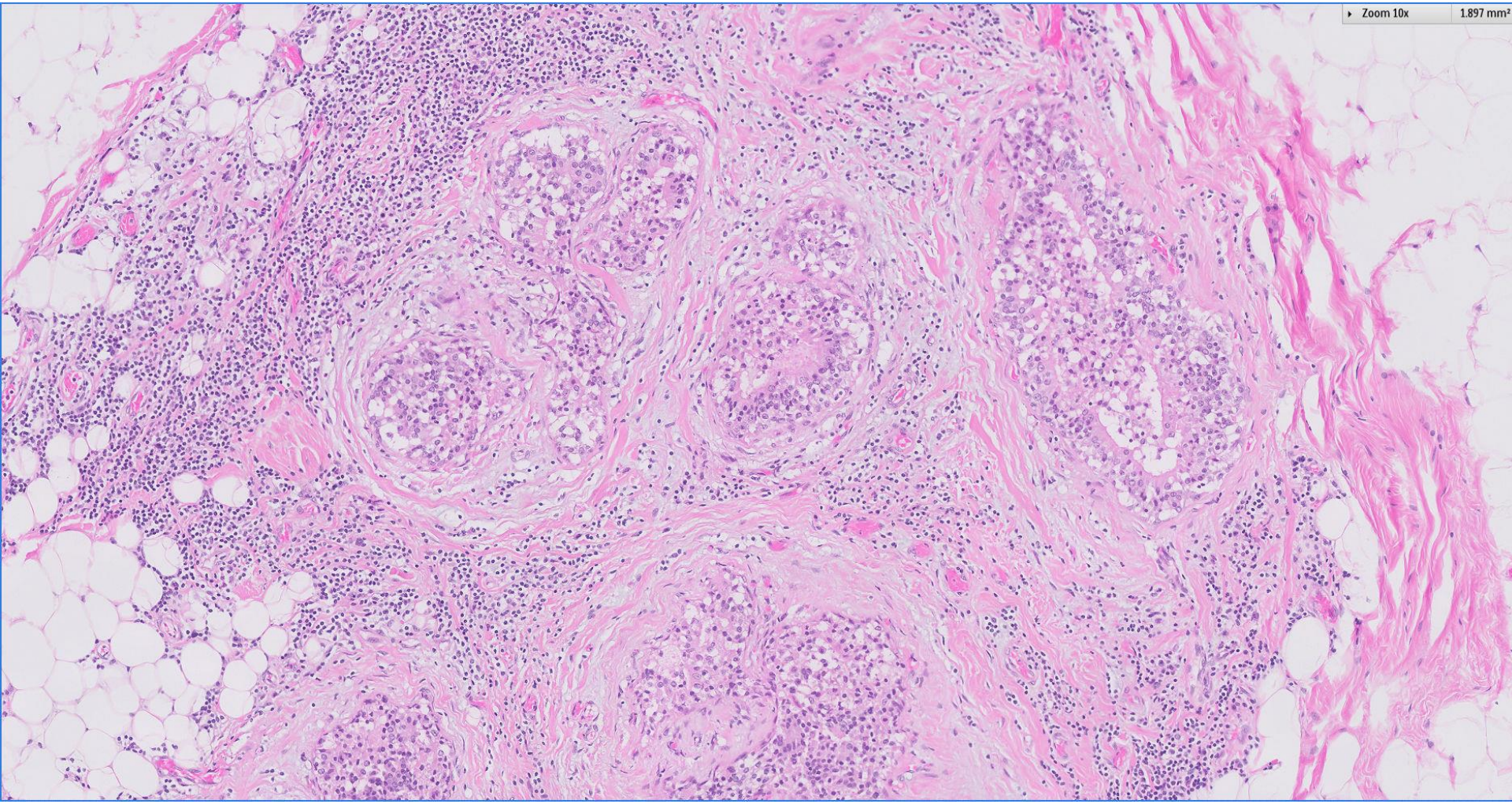
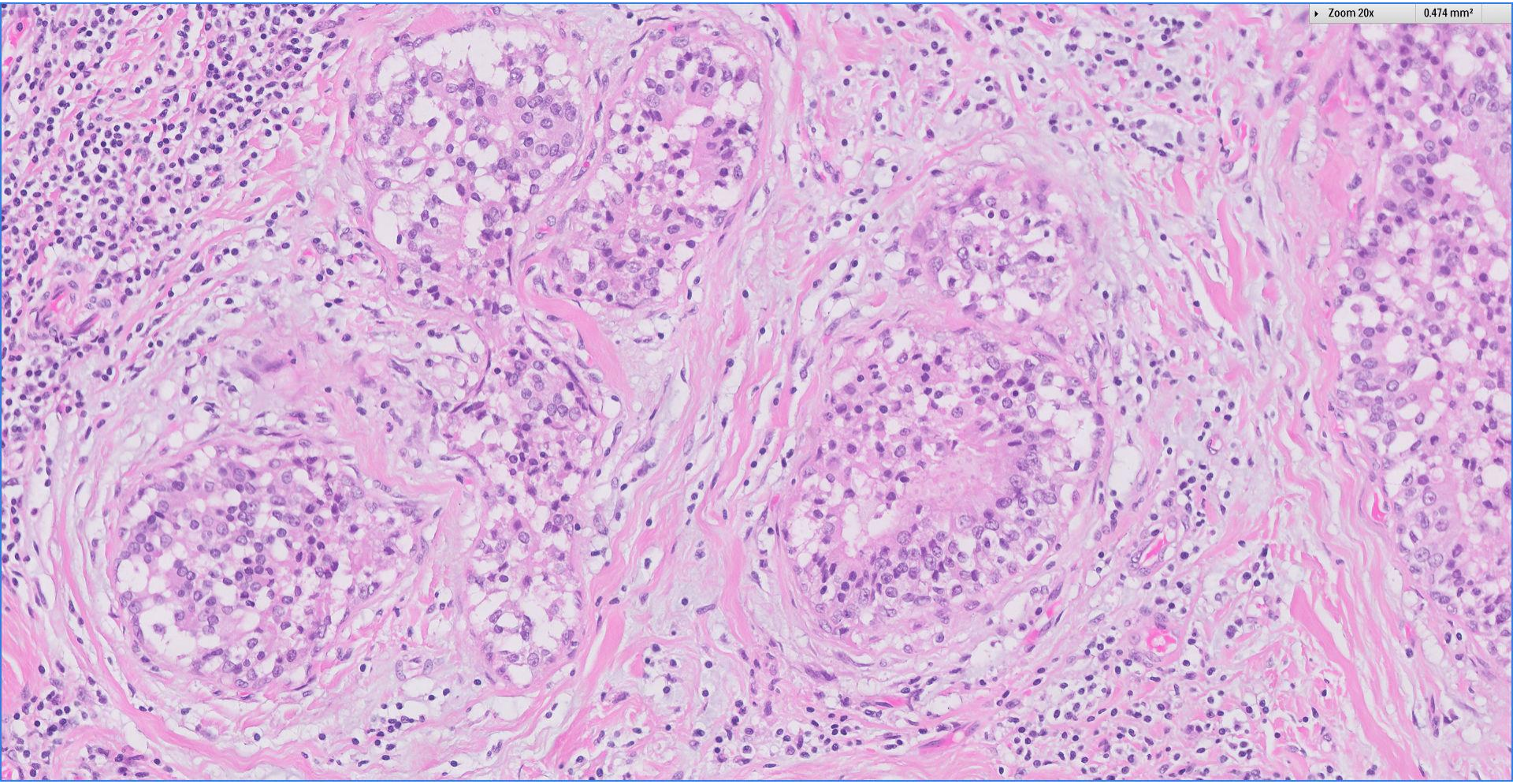

Zoom 20x
0.474 mm²


Zoom 10x
1.897 mm²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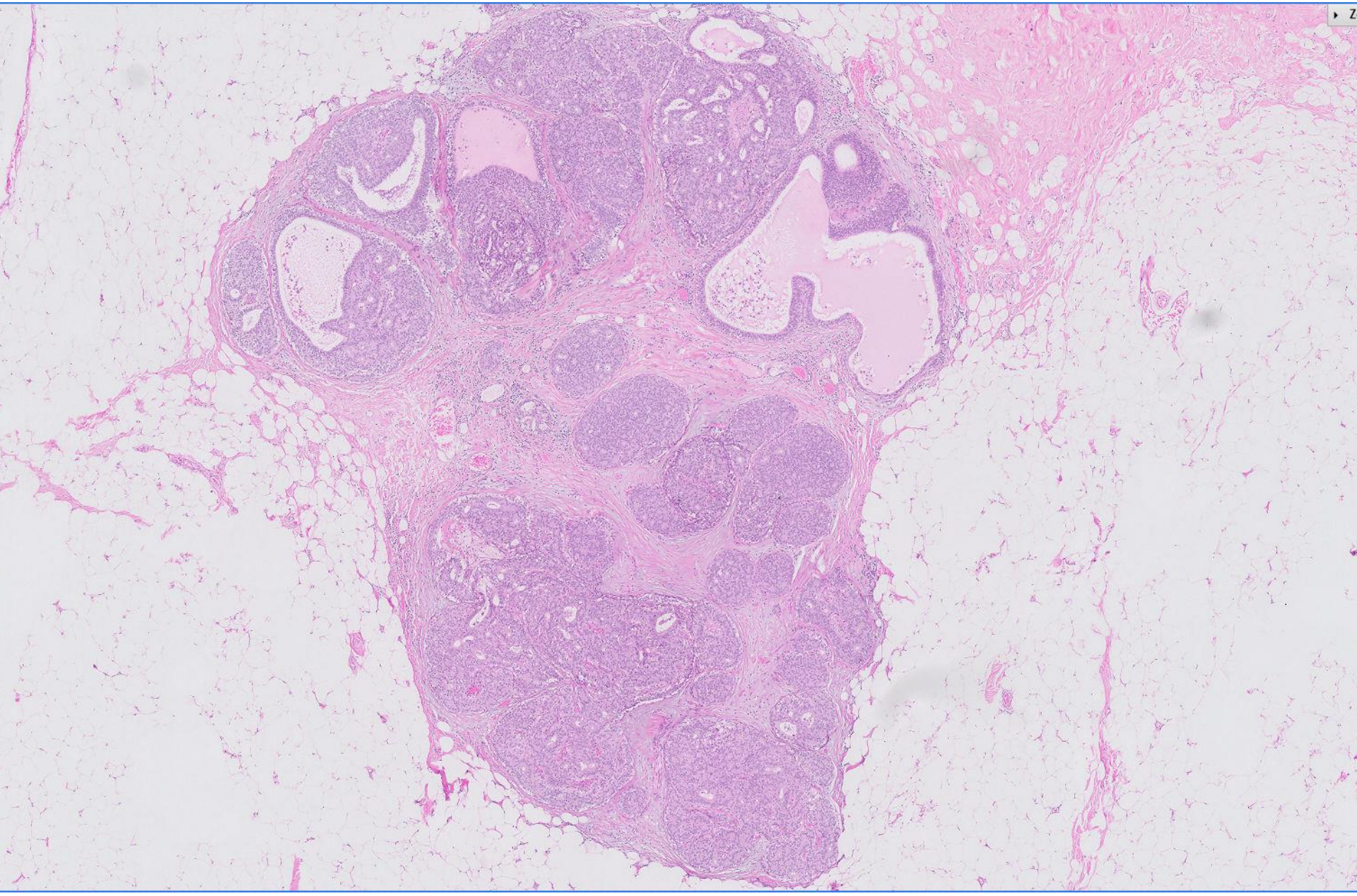
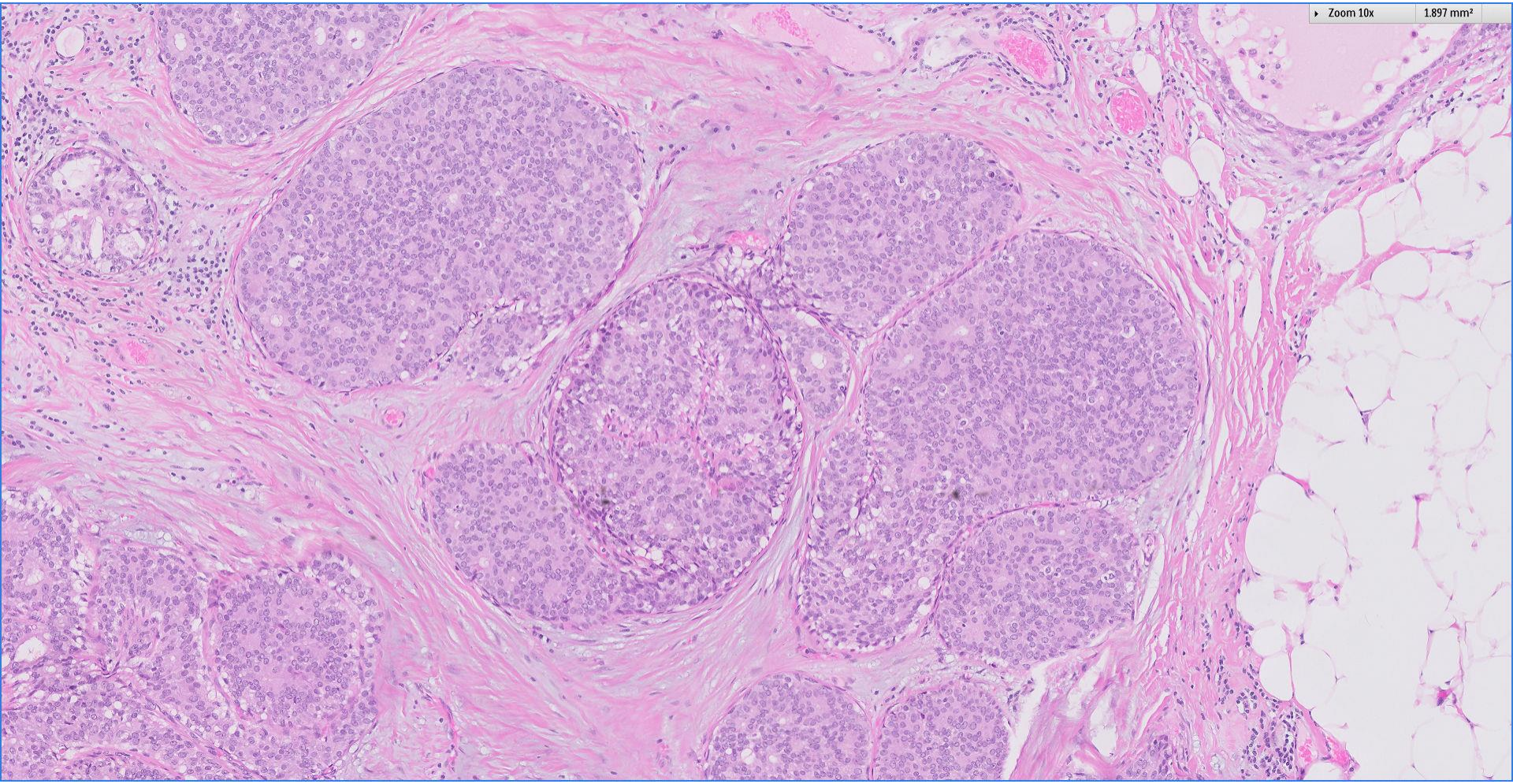
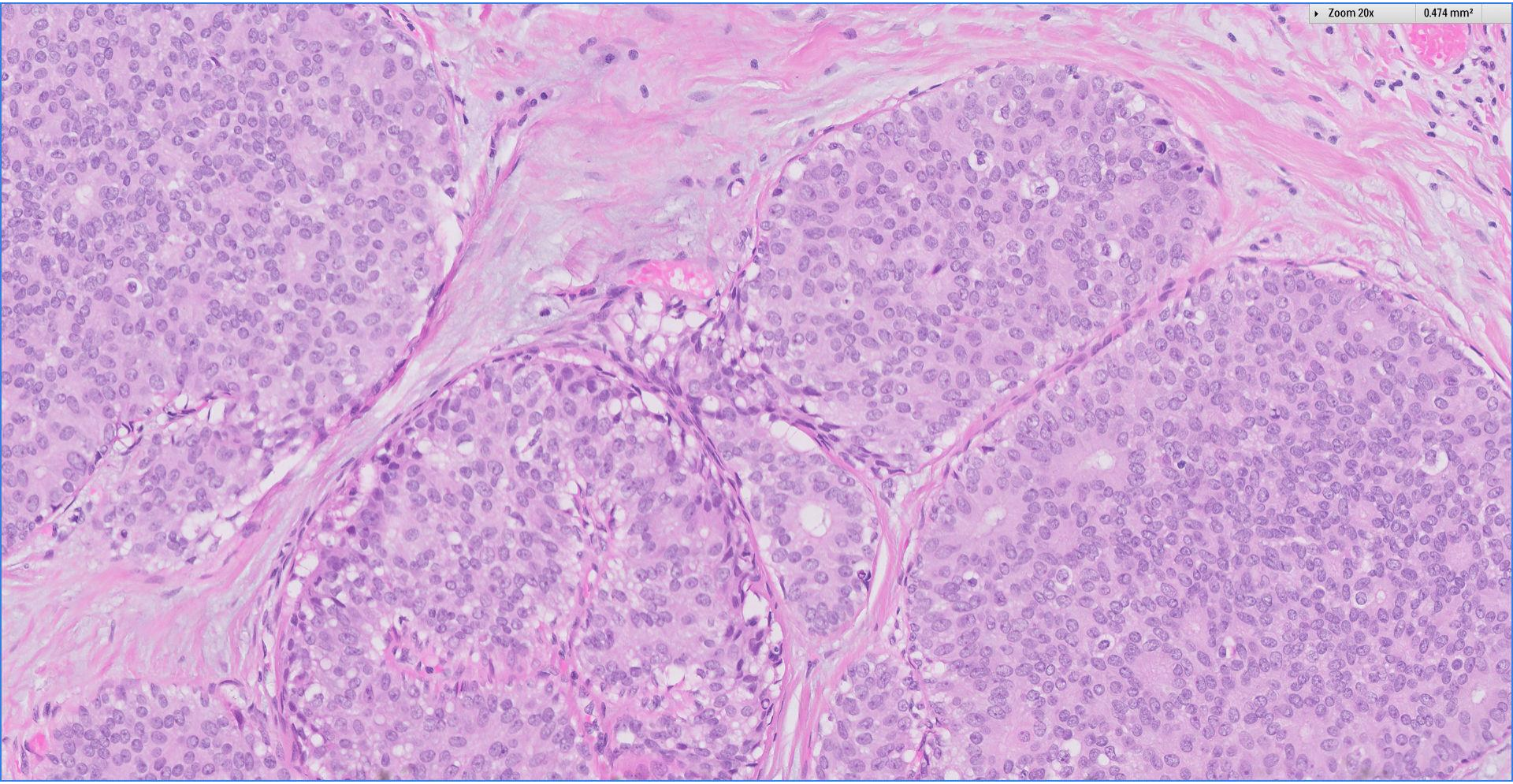
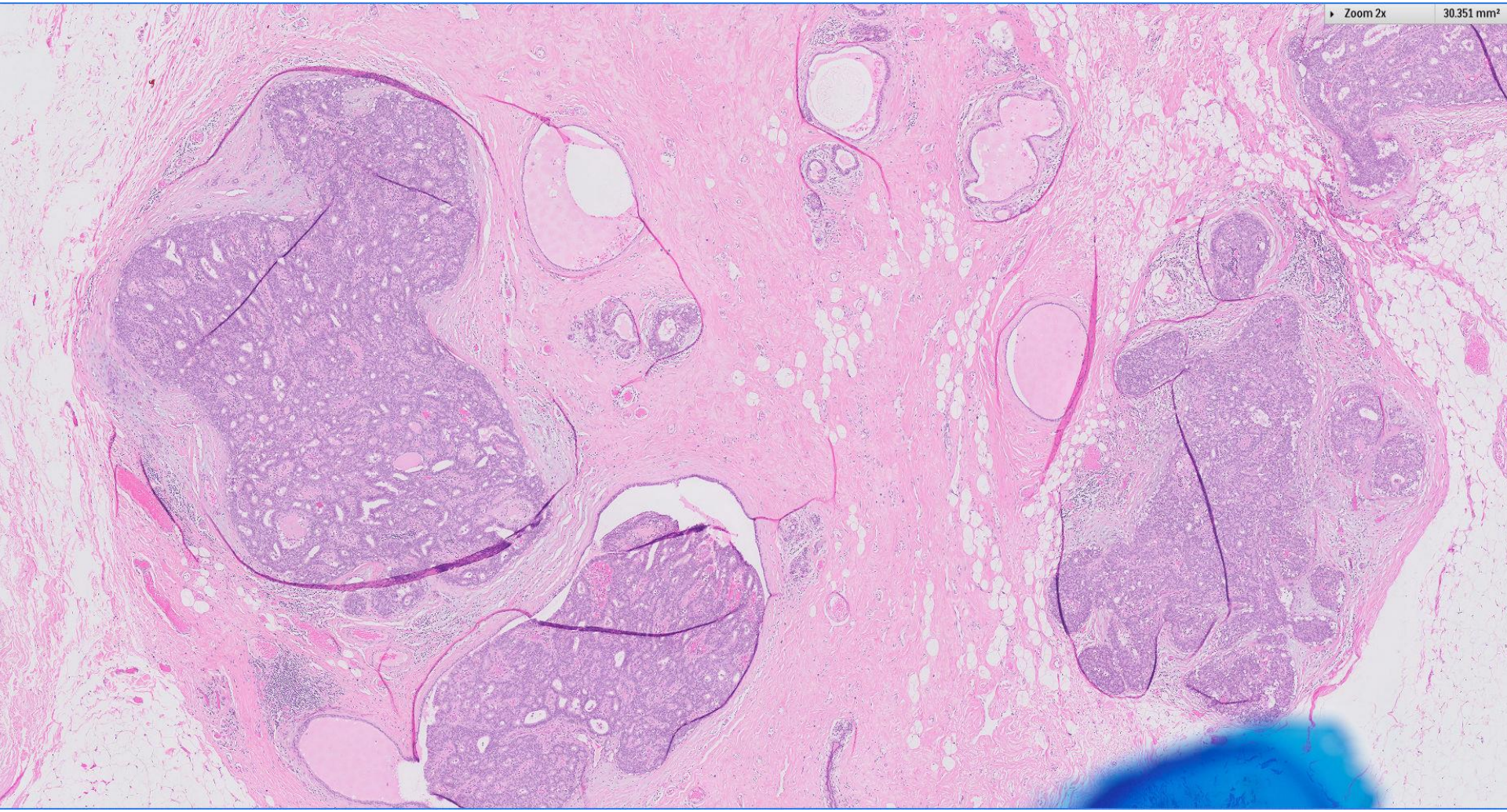



Zoom 10x
1.897 mm²


Zoom 20x
0.474 mm²


Zoom 2x
30.351 mm²

Diagnosis

Right breast wide excision ~

Ductal carcinoma in situ, predominantly papillary with a cribriform component, low nuclear grade, without necrosis or calcifications.

Estimated size 1.8cm.

ER positive, PR positive.

Papillary DCIS

- Non-invasive malignant lesion with papillary architecture arising within the ducts.
- In contrast to an intraductal papilloma with DCIS, papillary DCIS is regarded as a de novo in situ malignant papillary process without a morphologically recognisable benign papilloma in its background.
- Uncommon in its pure form and is often seen in conjunction with other morphological patterns of DCIS.

Aberrant p63 immunostaining

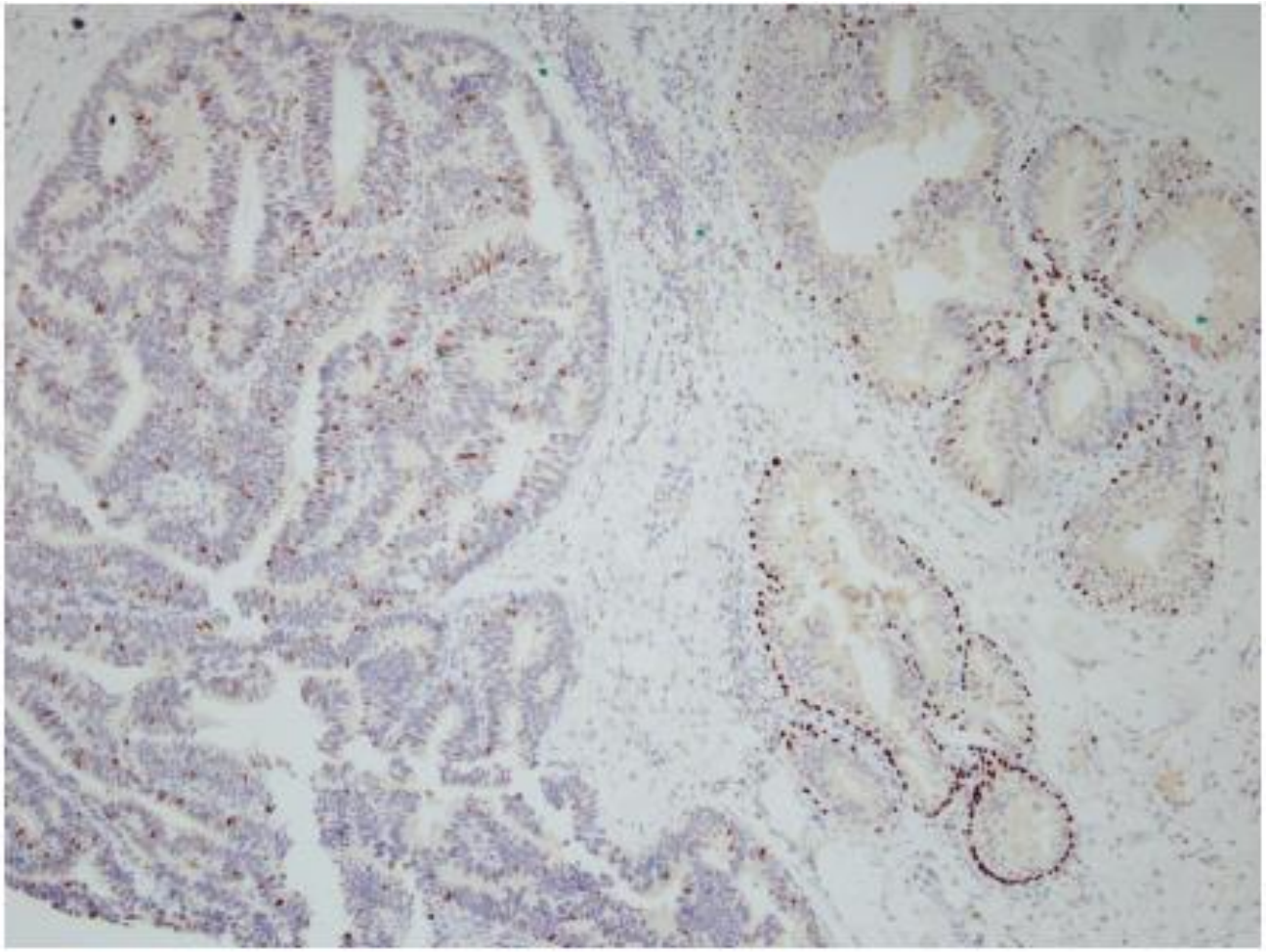
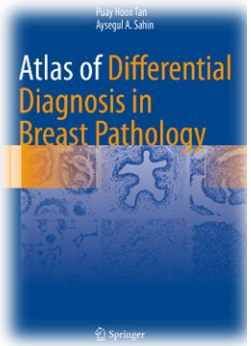


Fig. 4.39 Papillary DCIS. Aberrant nuclear staining for p63 can be observed in several neoplastic epithelial nuclei. However, there are no myoepithelial cells between the neoplastic epithelial cells and the fibrovascular stroma of the papillary fronds. Adjacent ducts show myoepithelial nuclei highlighted as a peripheral rim with p63 immunohistochemistry

Table 4.1 Histological comparison of papillary lesions

Feature	Intraductal papilloma	Intraductal papilloma with ADH/DCIS	Papillary DCIS	Encapsulated papillary carcinoma	Solid papillary carcinoma
Low magnification architecture	May be solitary or multiple	May be solitary or multiple	Papillary lesion extends along duct, usually associated with surrounding DCIS of other morphological patterns	Solitary expansile mass	Multinodular, lobulated mass
Papillae	Broad papillae with well-developed fibrovascular cores	Broad papillae with well-developed fibrovascular cores	Narrow papillae with slender fibrovascular cores	Narrow papillae with slender fibrovascular cores	Solid cellular nodules with fine vessels Papillae are inconspicuous
Myoepithelial cells	Present within papillae and at periphery	Present within papillae and at periphery Diminished in areas of ADH/DCIS	Absent or diminished within papillae Present at periphery	Absent or diminished within papillae Absent at periphery	Present or absent at periphery
Epithelial population	Heterogeneous population of luminal and myoepithelial cells, apocrine cells	Heterogeneous population of luminal and myoepithelial cells, apocrine cells Monotonous population in ADH/DCIS (low nuclear grade)	Monotonous single-cell population Usually low-to-intermediate nuclear grade, rarely high grade	Monotonous single-cell population Usually low-to-intermediate nuclear grade	Monotonous single-cell population Usually low-to-intermediate nuclear grade Spindle cells may be present Neuroendocrine differentiation Mucin production
Surrounding breast tissue	Usual ductal hyperplasia Fibrocystic changes	ADH/DCIS may be present	DCIS usually present	DCIS may be present	DCIS may be present
IHC, p63	Positive within papillae and at periphery	Positive within papillae and at periphery Diminished in ADH/DCIS	Absent or diminished within papillae Present at periphery	Absent or diminished within papillae Absent at periphery	Present or absent at periphery
IHC, high-molecular-weight keratins	Positive within papillae and at periphery Heterogeneous staining in UDH	Positive within papillae and at periphery Diminished staining in ADH/DCIS	Absent or diminished within papillae Present at periphery	Absent or diminished within papillae Absent at periphery	Present or absent at periphery
IHC, ER	Heterogeneous positivity in UDH and luminal epithelium	Heterogeneous positivity in UDH and luminal epithelium Diffuse positivity in ADH/DCIS	Diffuse positivity	Diffuse positivity	Diffuse positivity

ADH atypical ductal hyperplasia, *DCIS* ductal carcinoma in situ, *ER* oestrogen receptor, *IHC* immunohistochemistry, *UDH* usual ductal hyperplasia



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