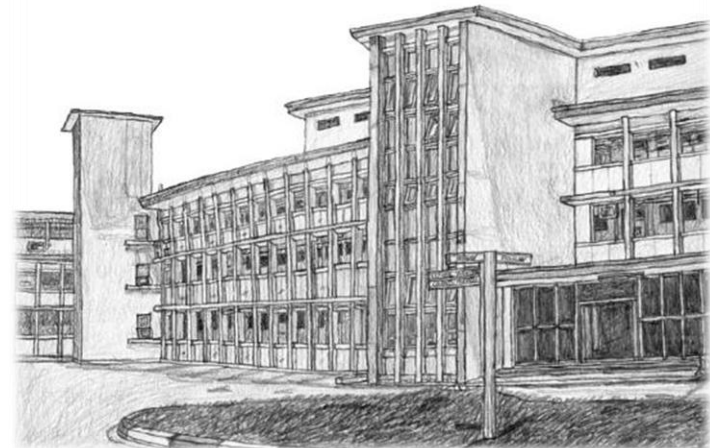
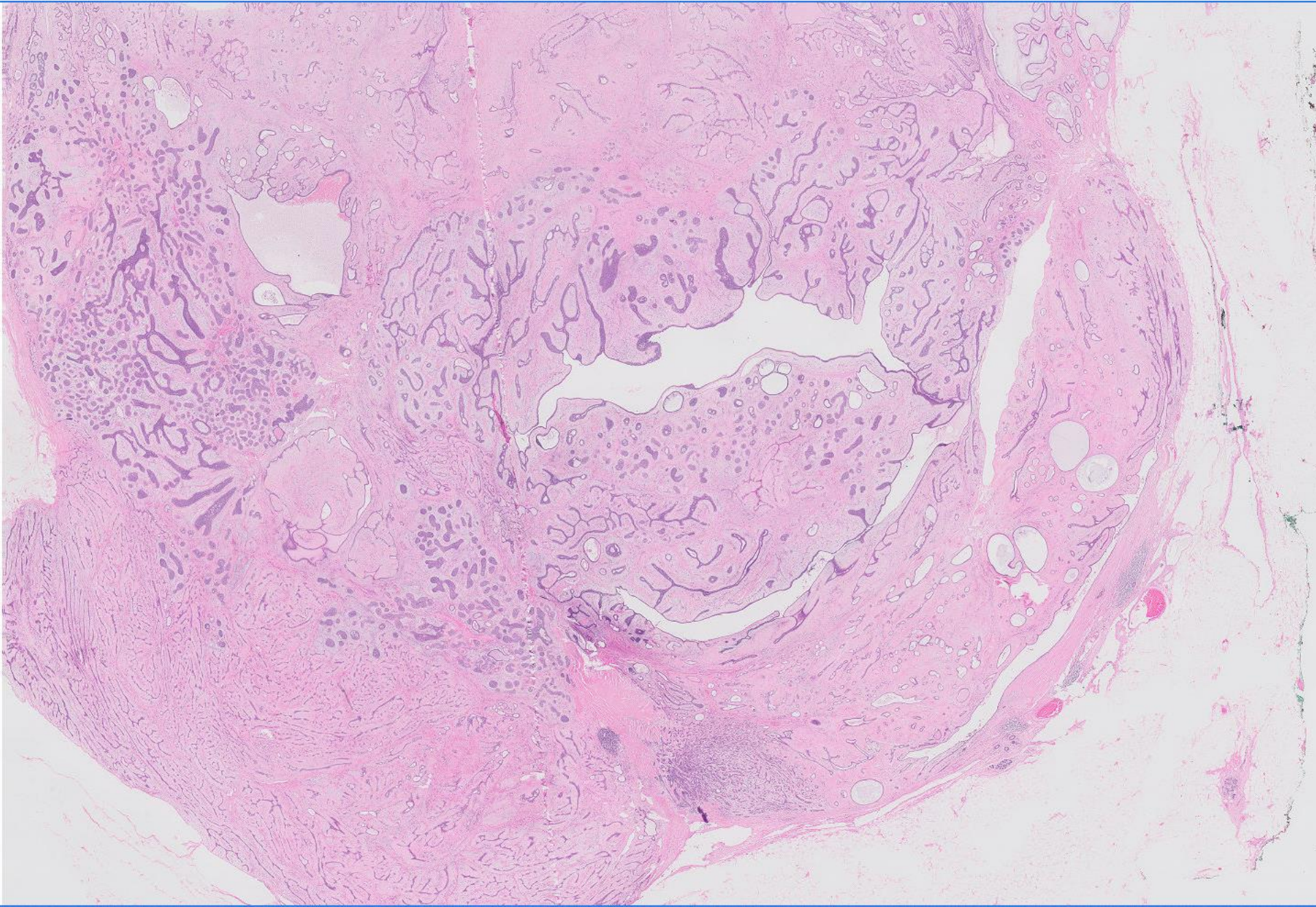


Case 3

39 year old female.

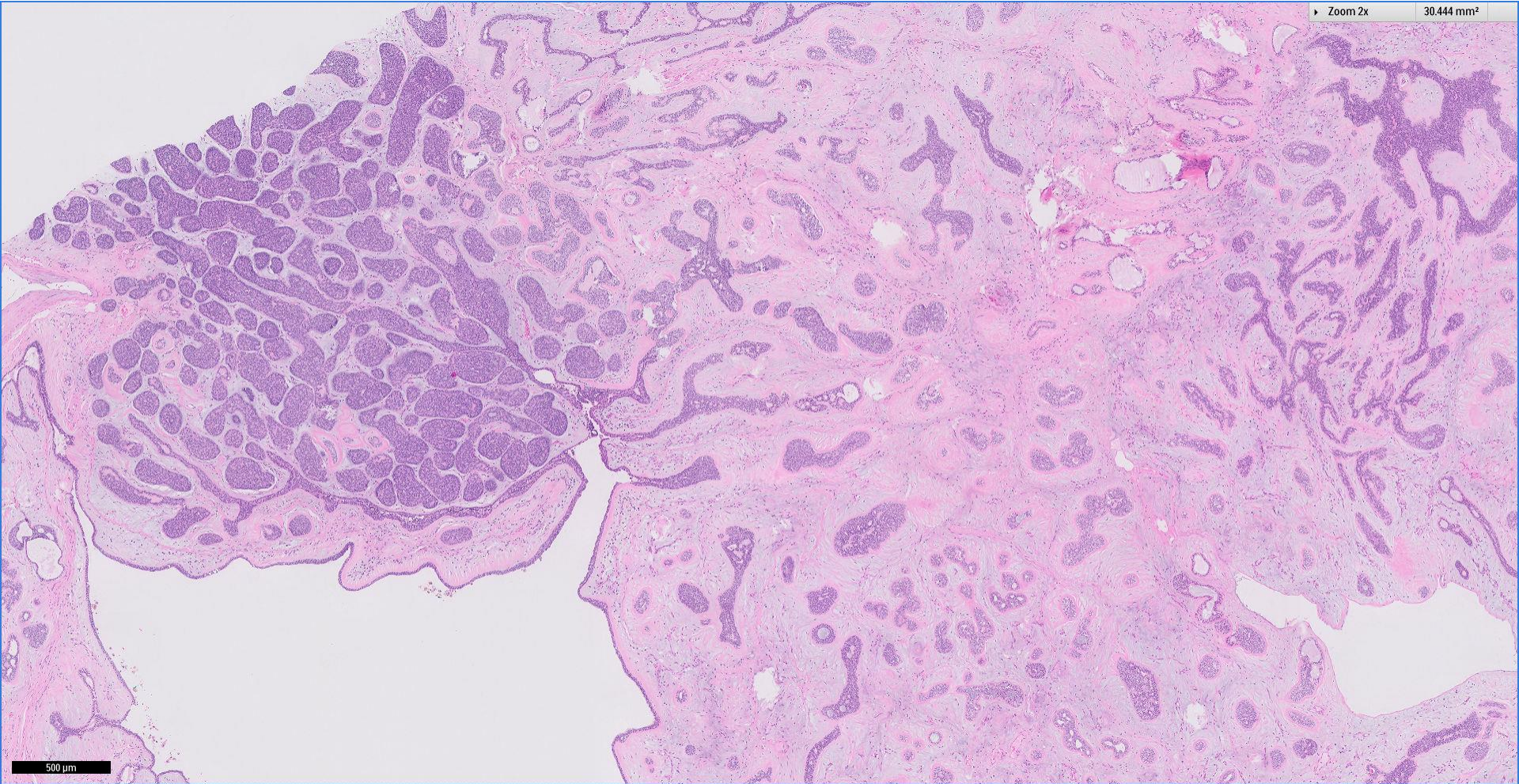
Right breast mass at the 11-12 o'clock position.
Radiologically 52 x 22 x 49mm, query phyllodes tumour.
Surgical excision performed after core biopsy reported a
fibroepithelial lesion.





Zoom 2x

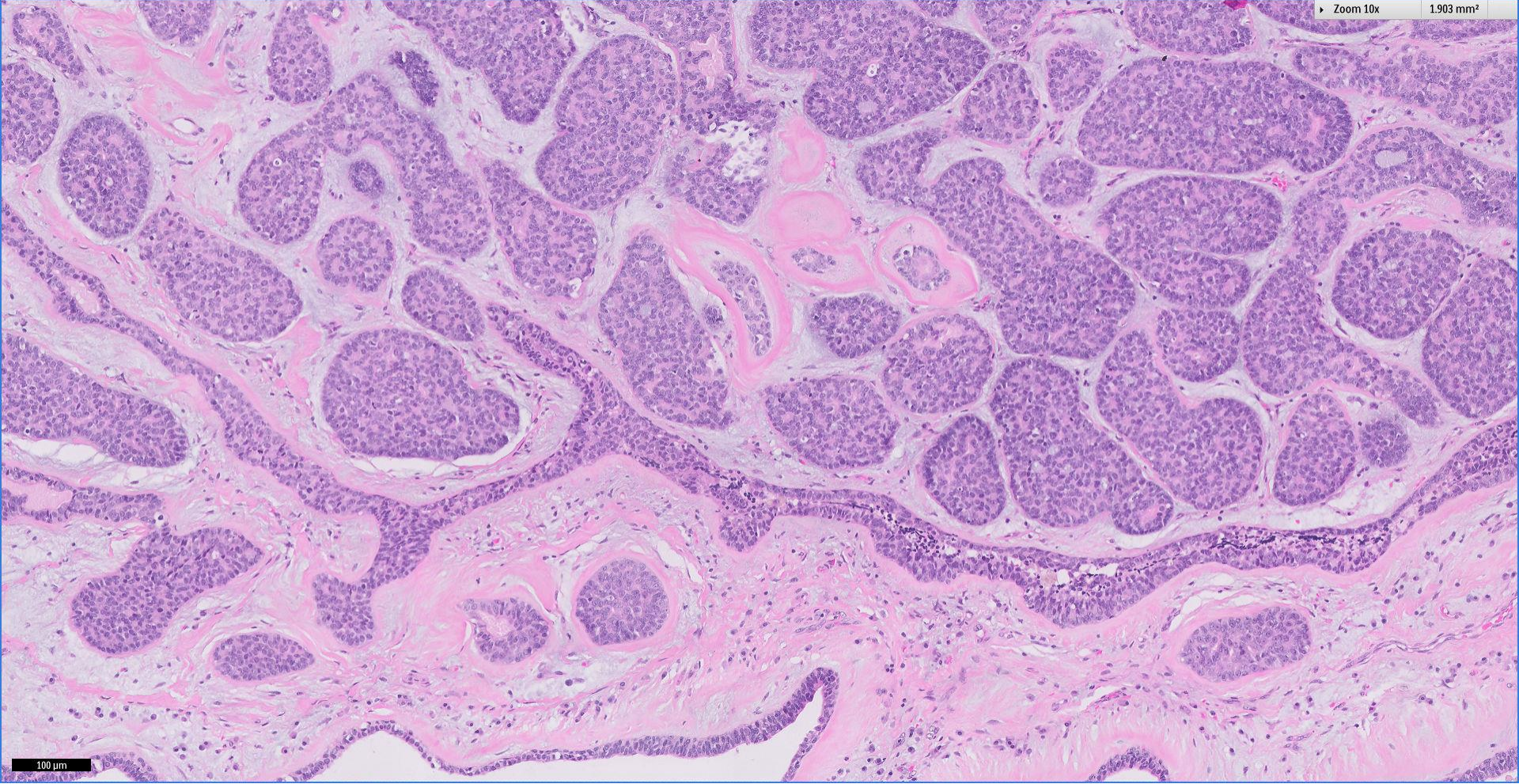
30.444 mm²



500 μ m

Zoom 10x

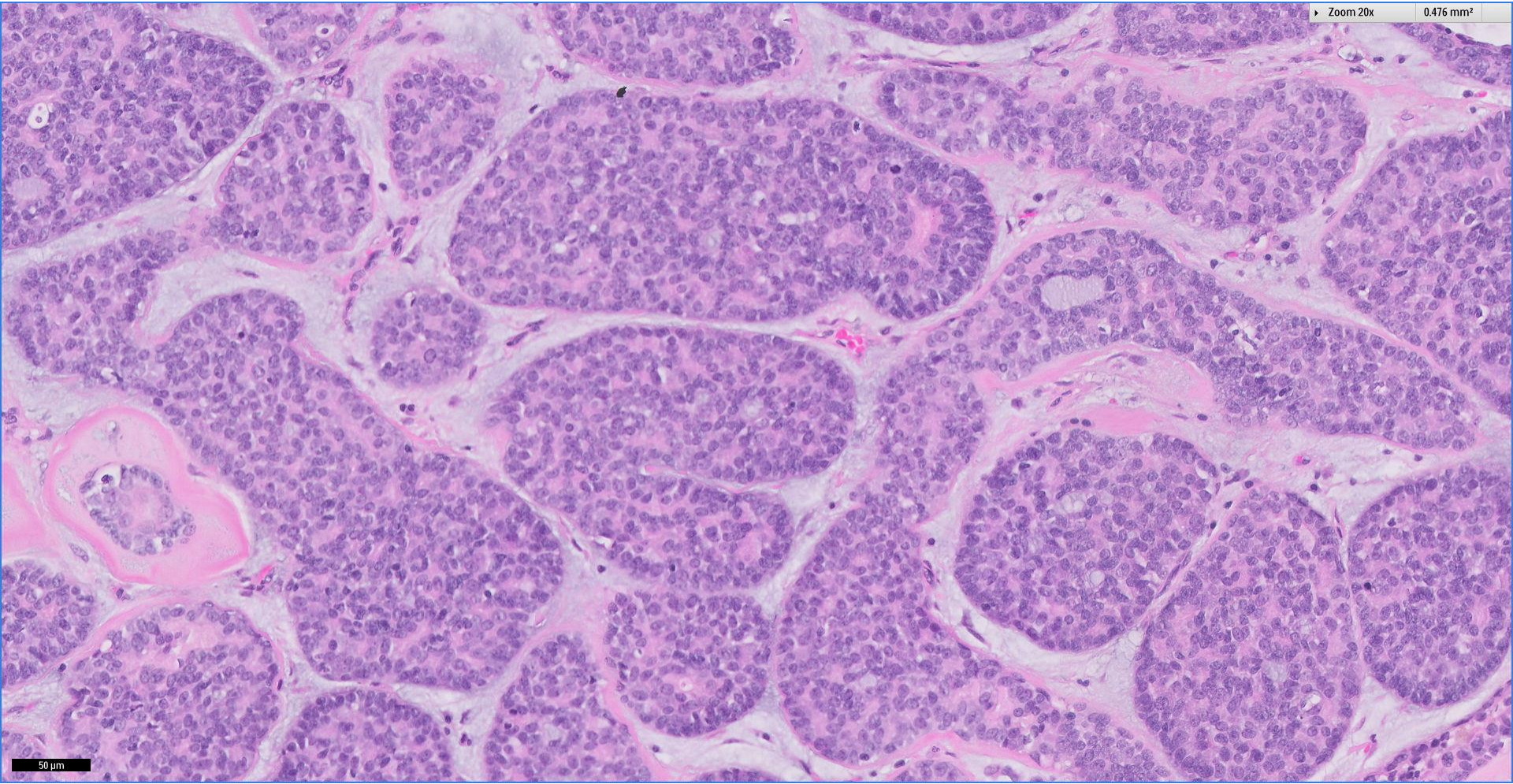
1.903 mm²



100 μ m

Zoom 20x

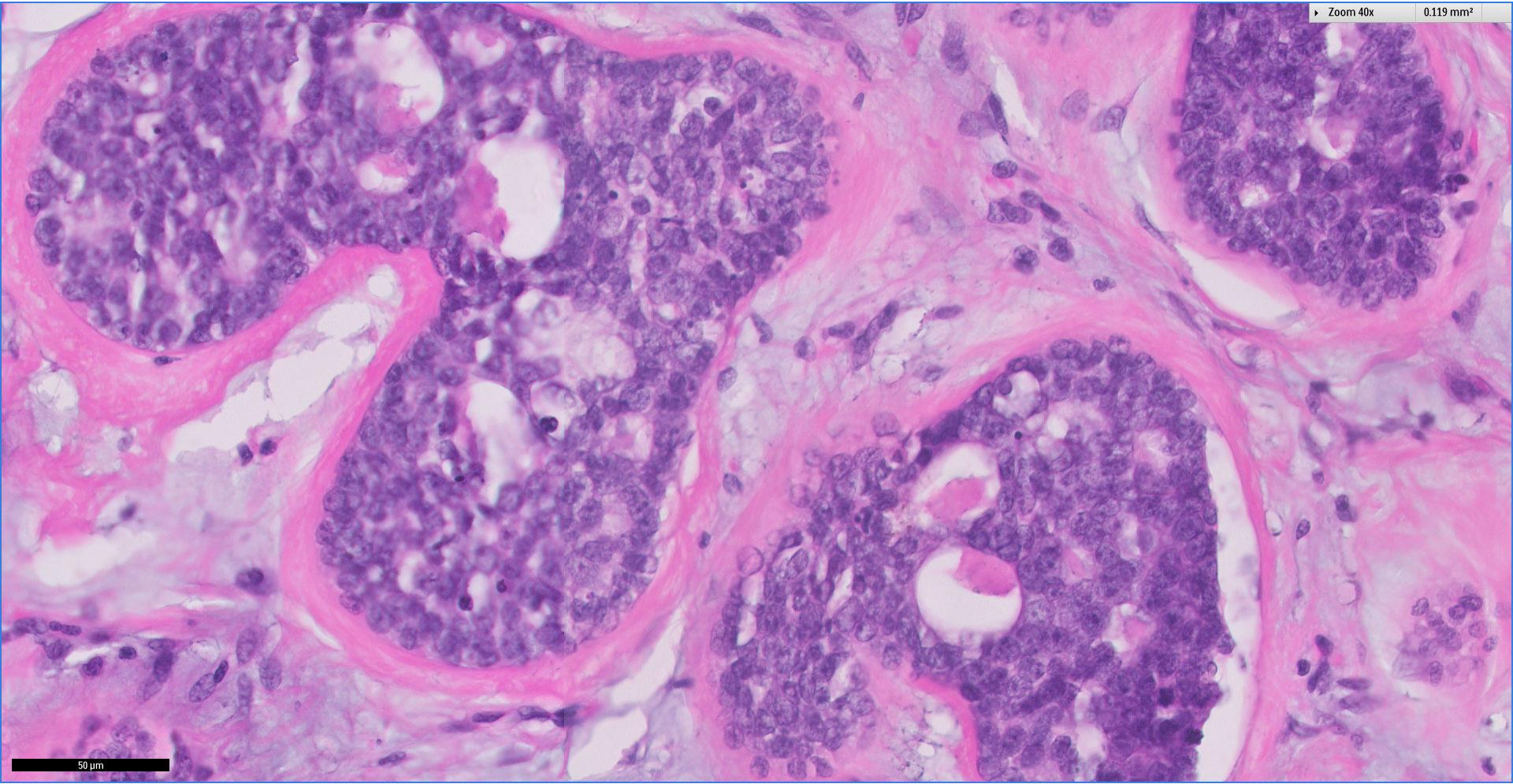
0.476 mm²



50 μm

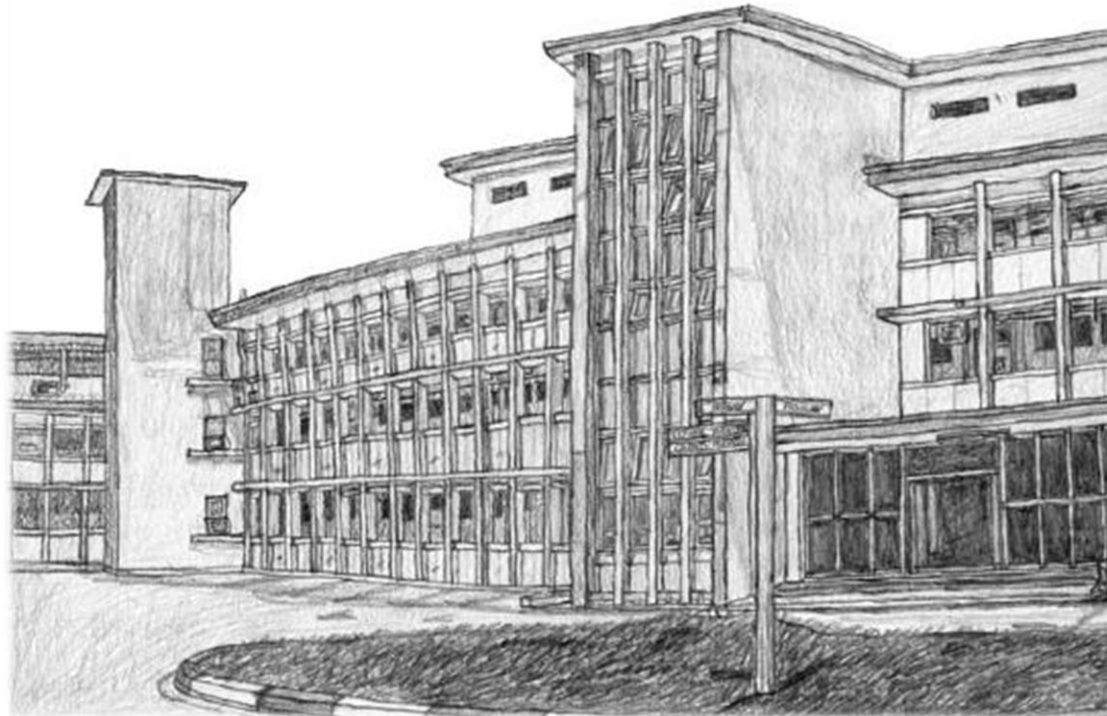
Zoom 40x

0.119 mm²



50 µm

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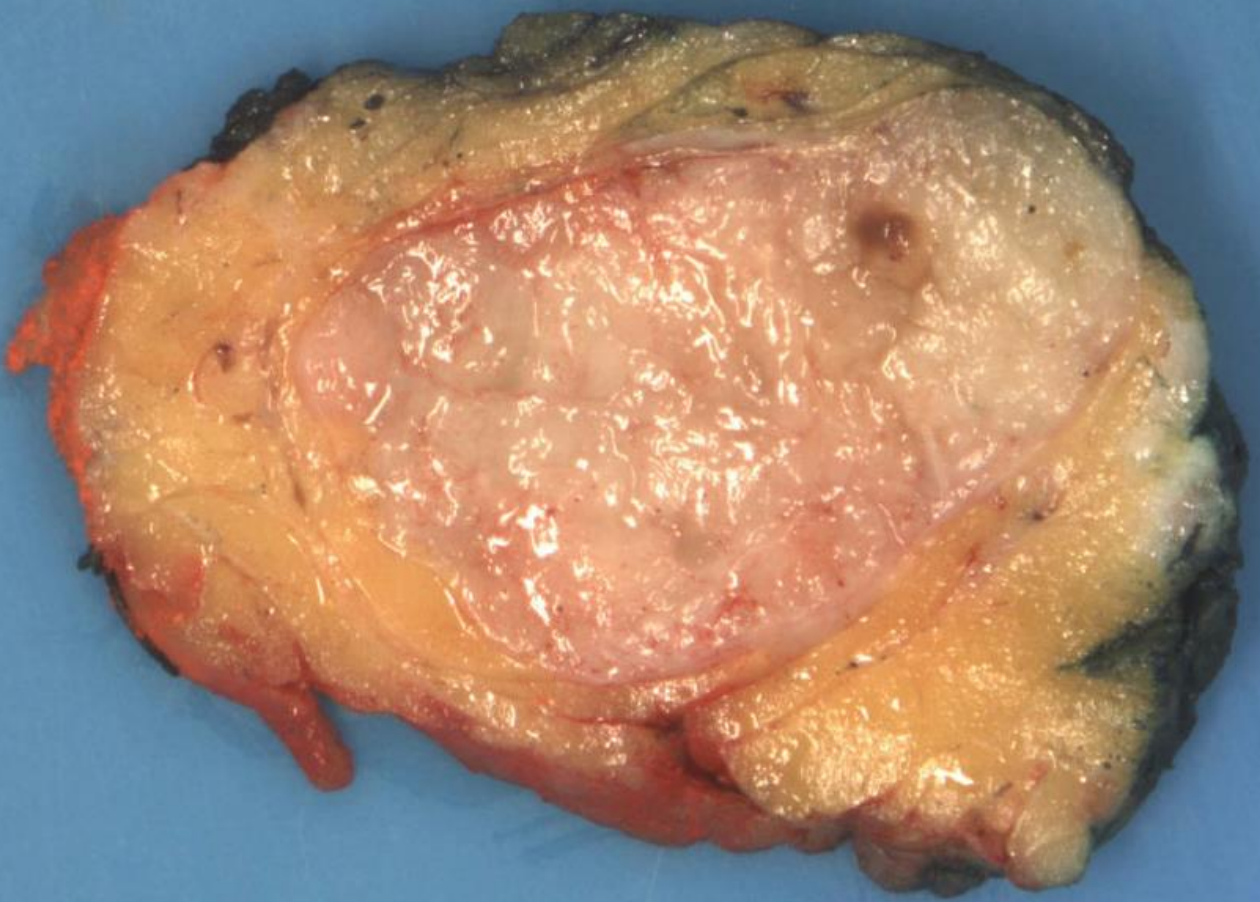
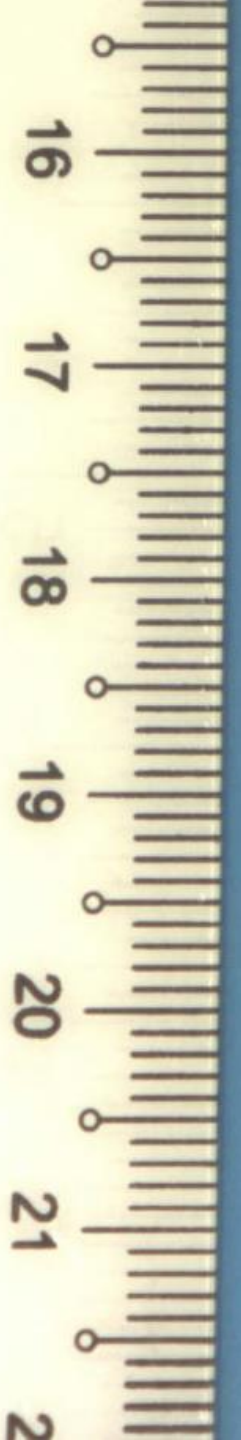
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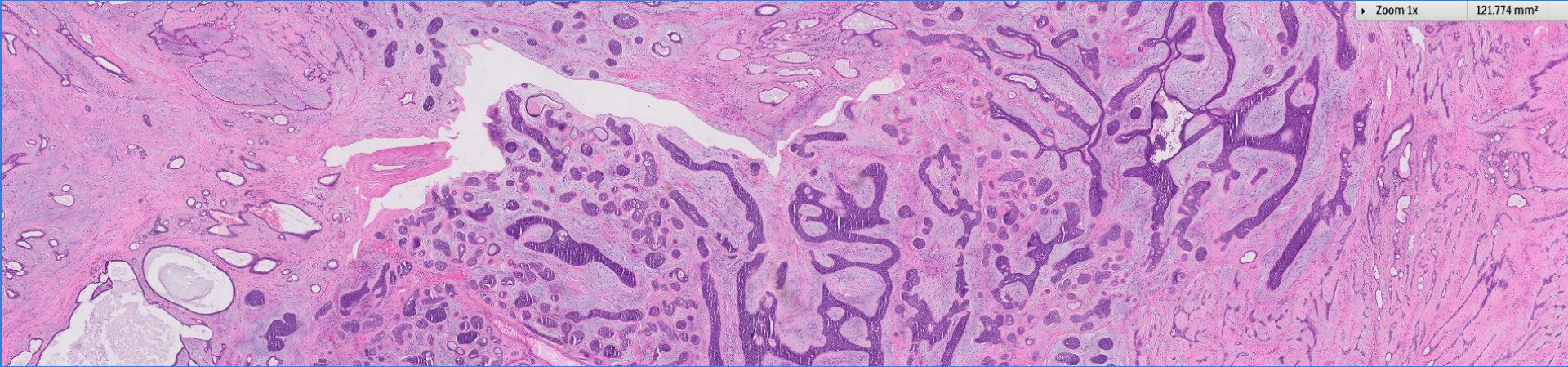
SingHealth
Division of Pathology

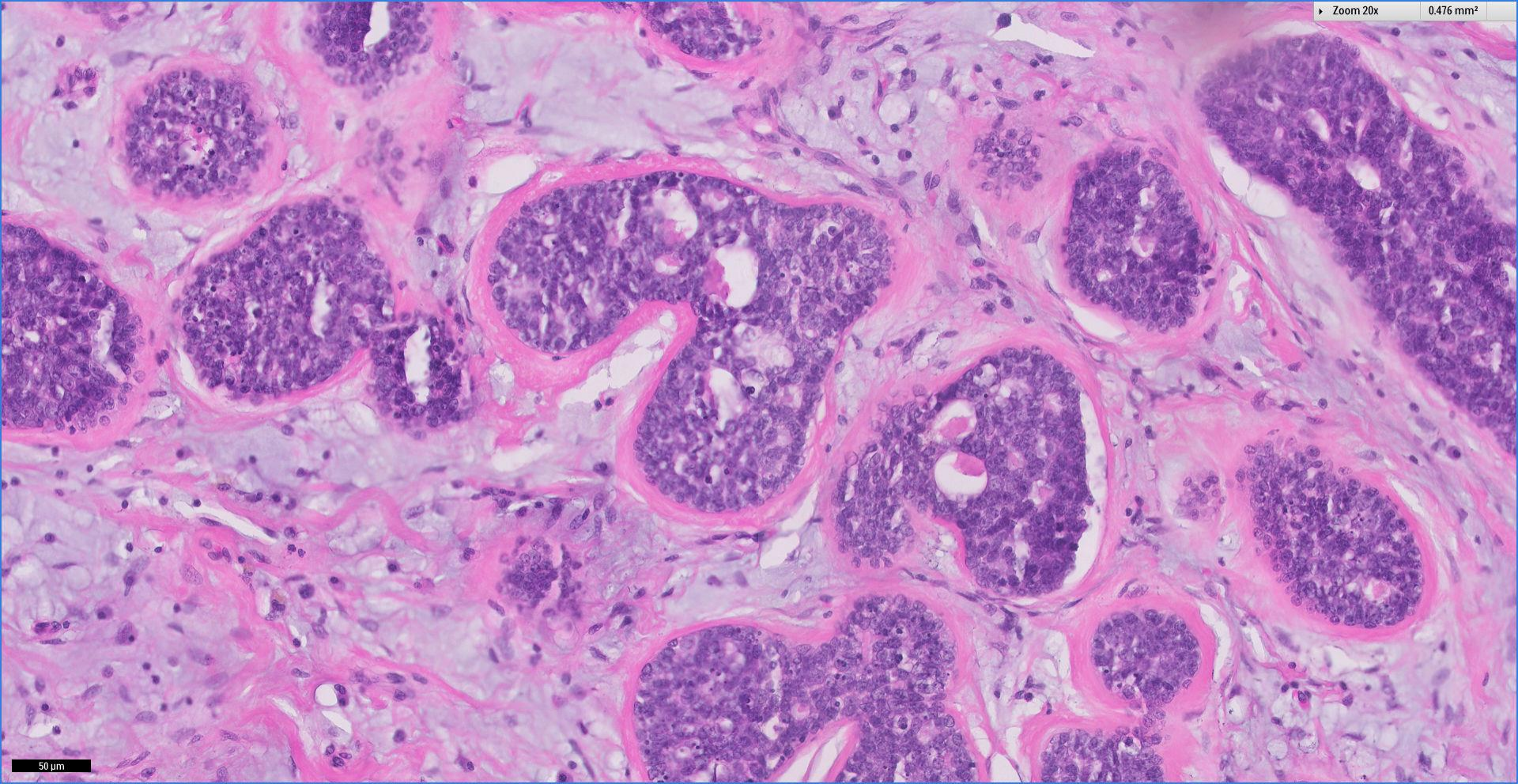
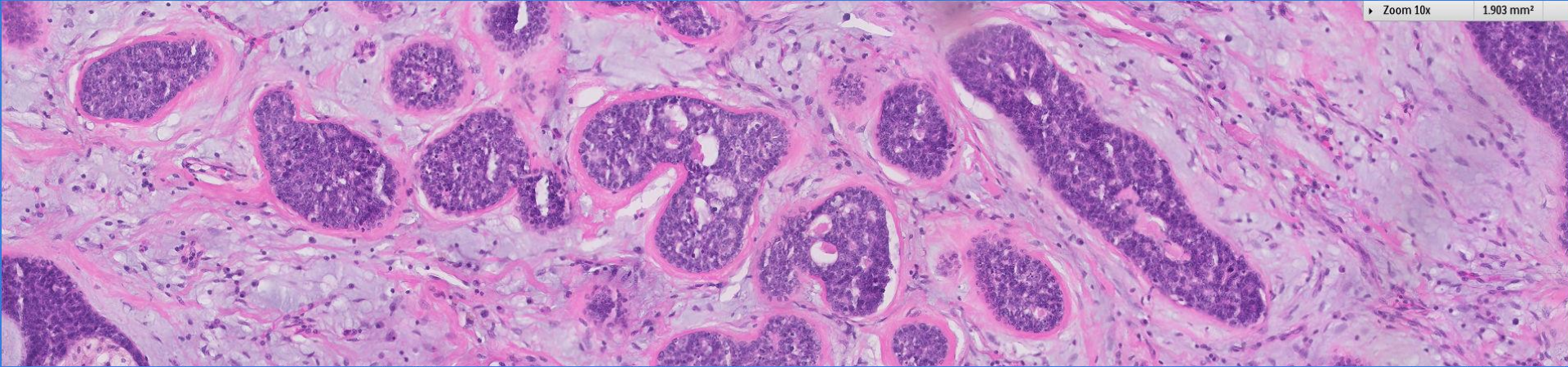

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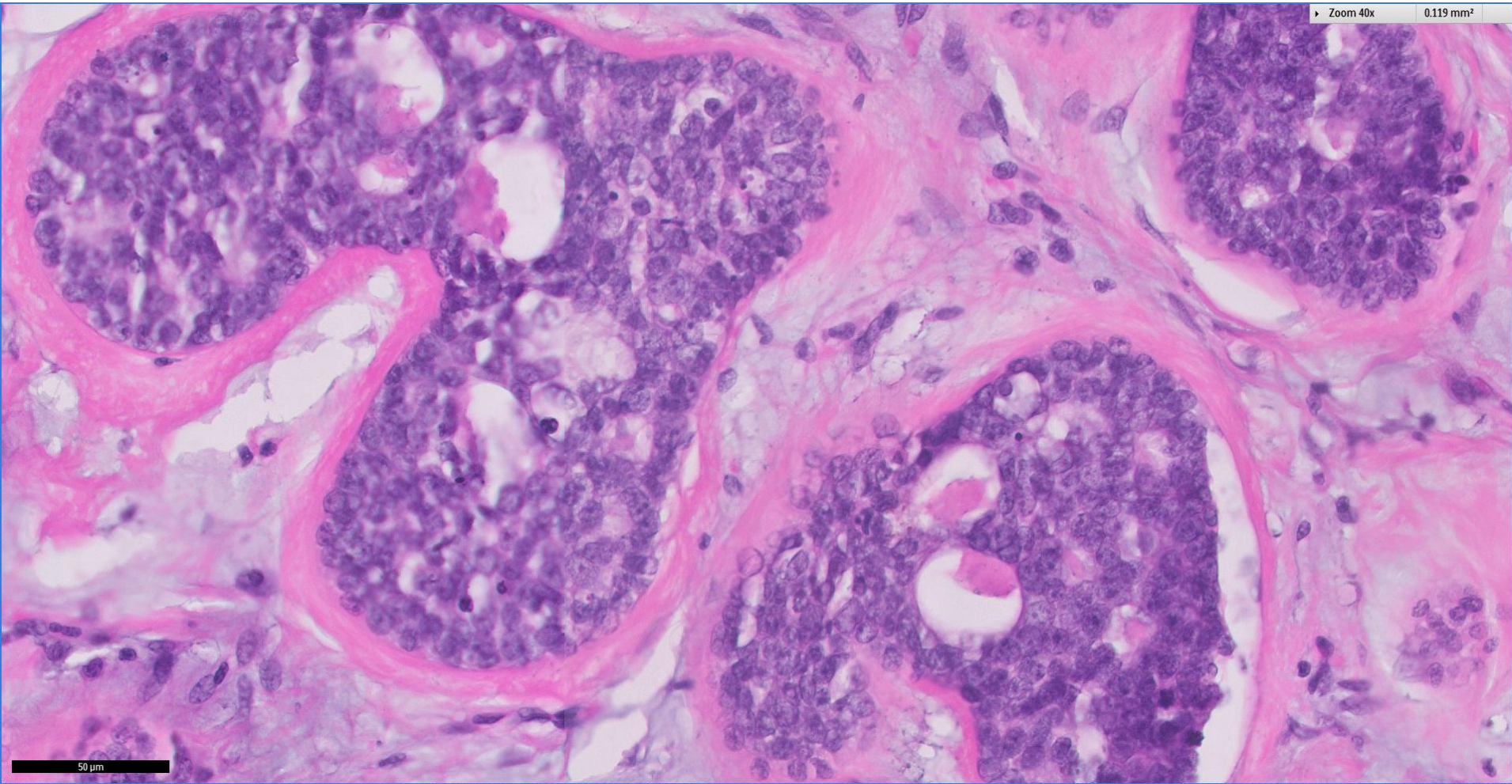




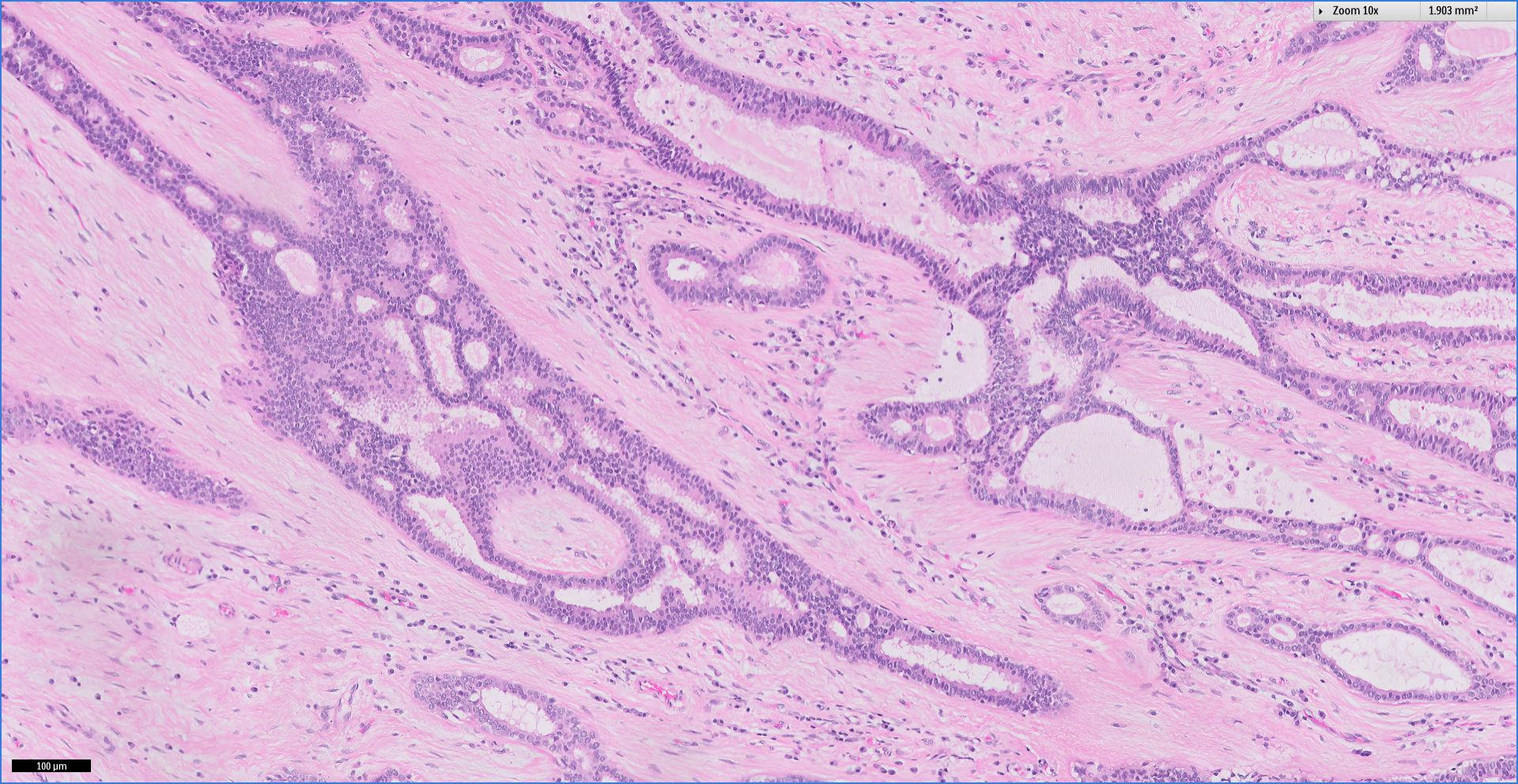
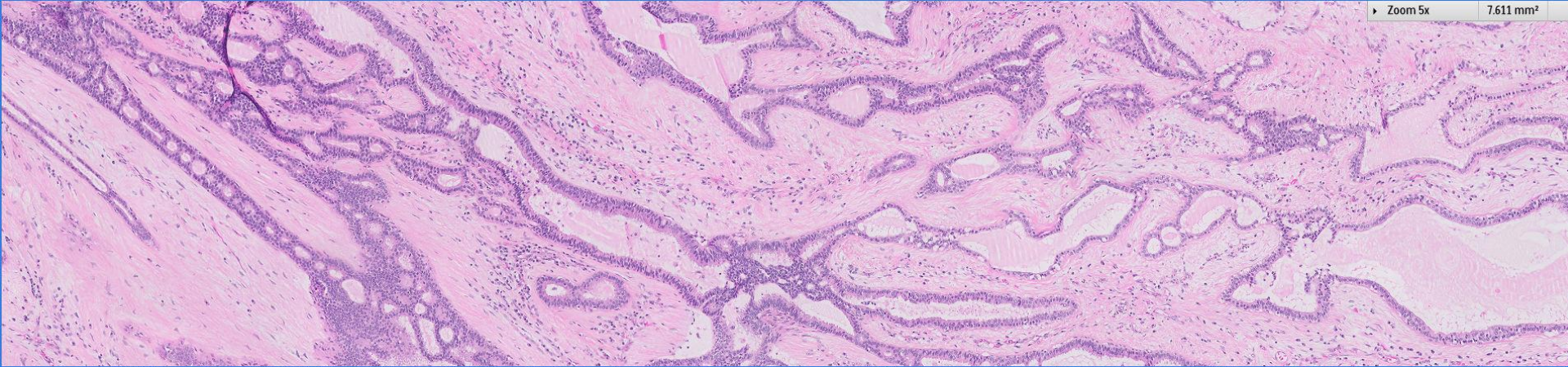


Zoom 40x

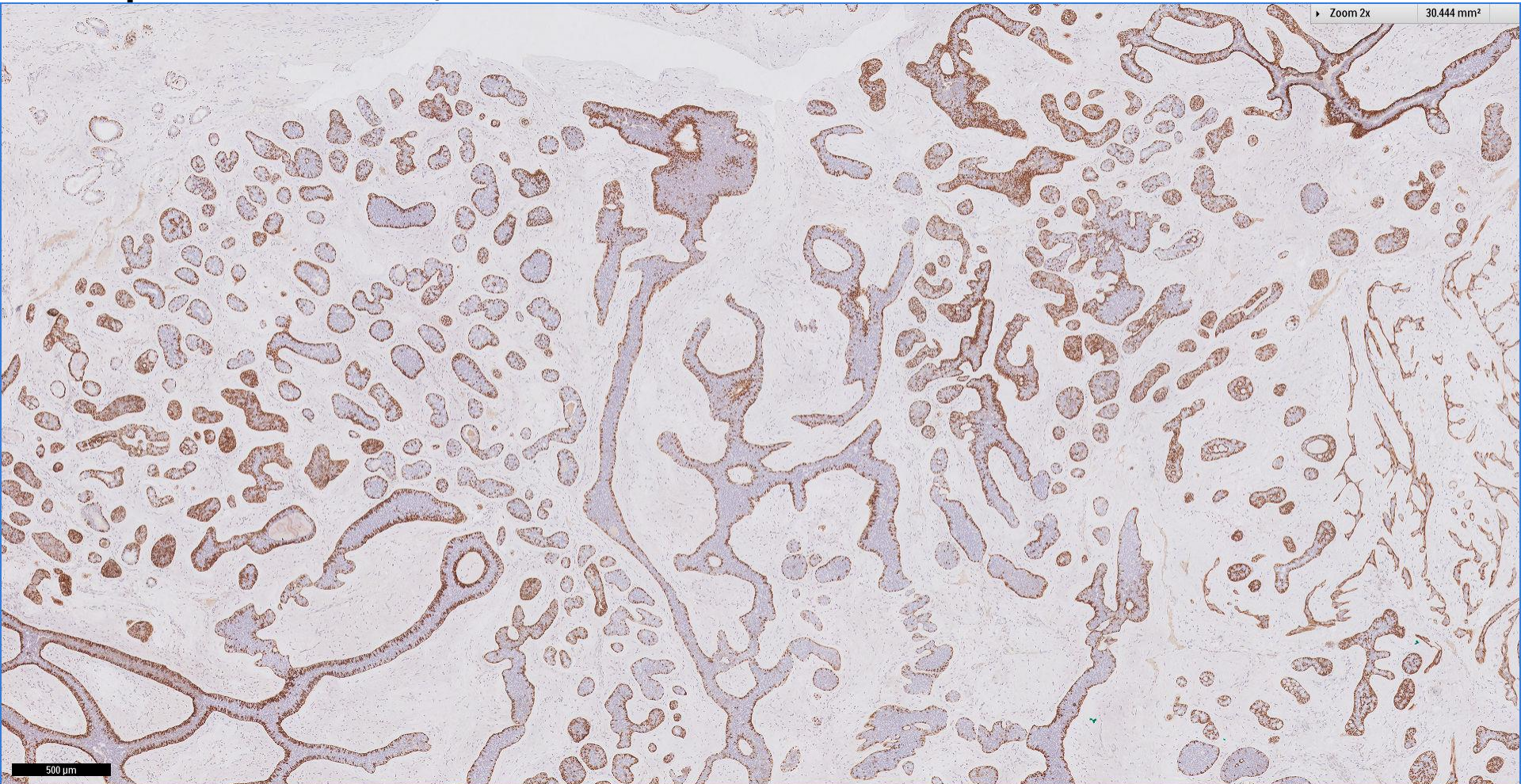
0.119 mm²



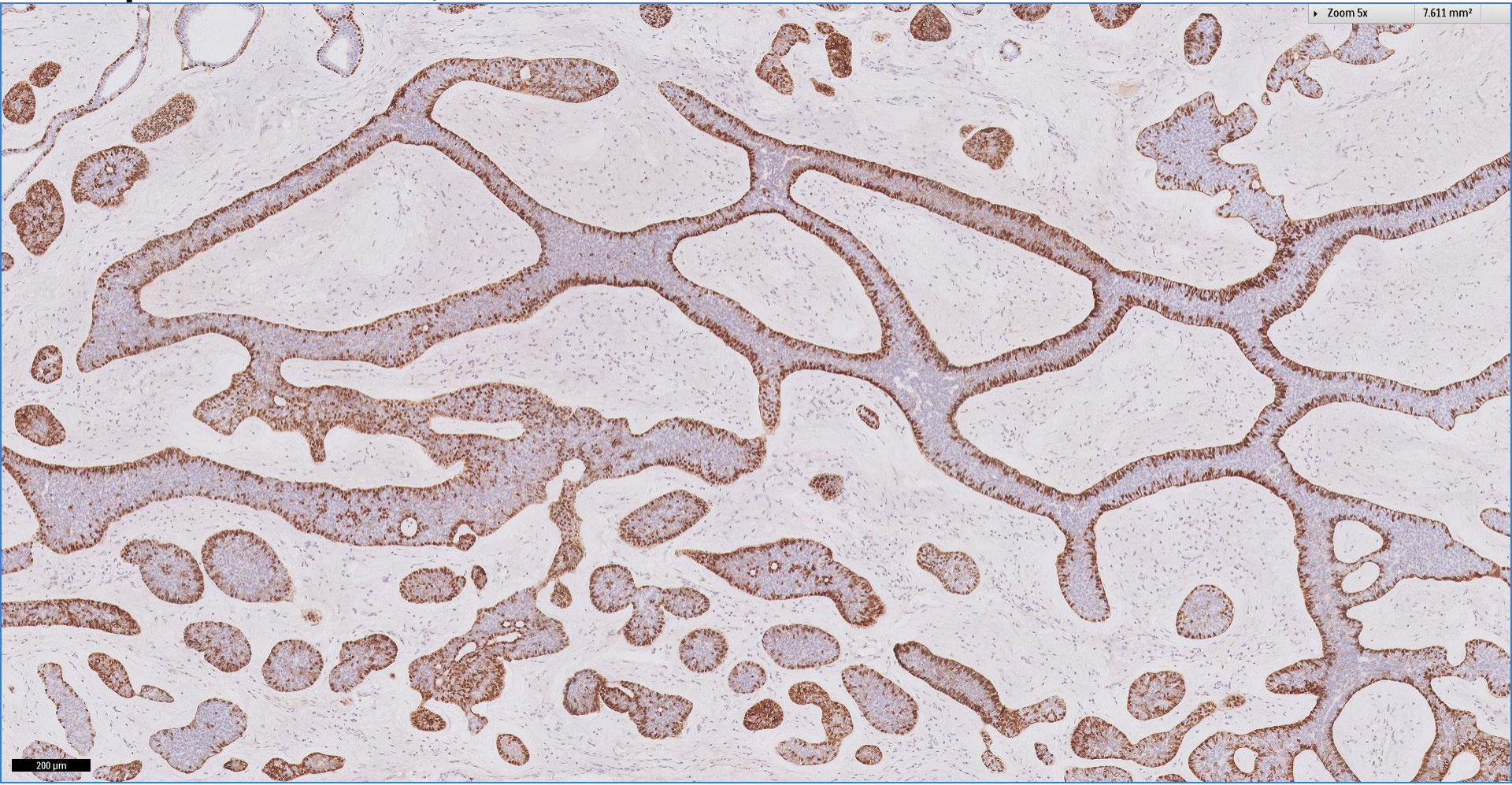
50 µm



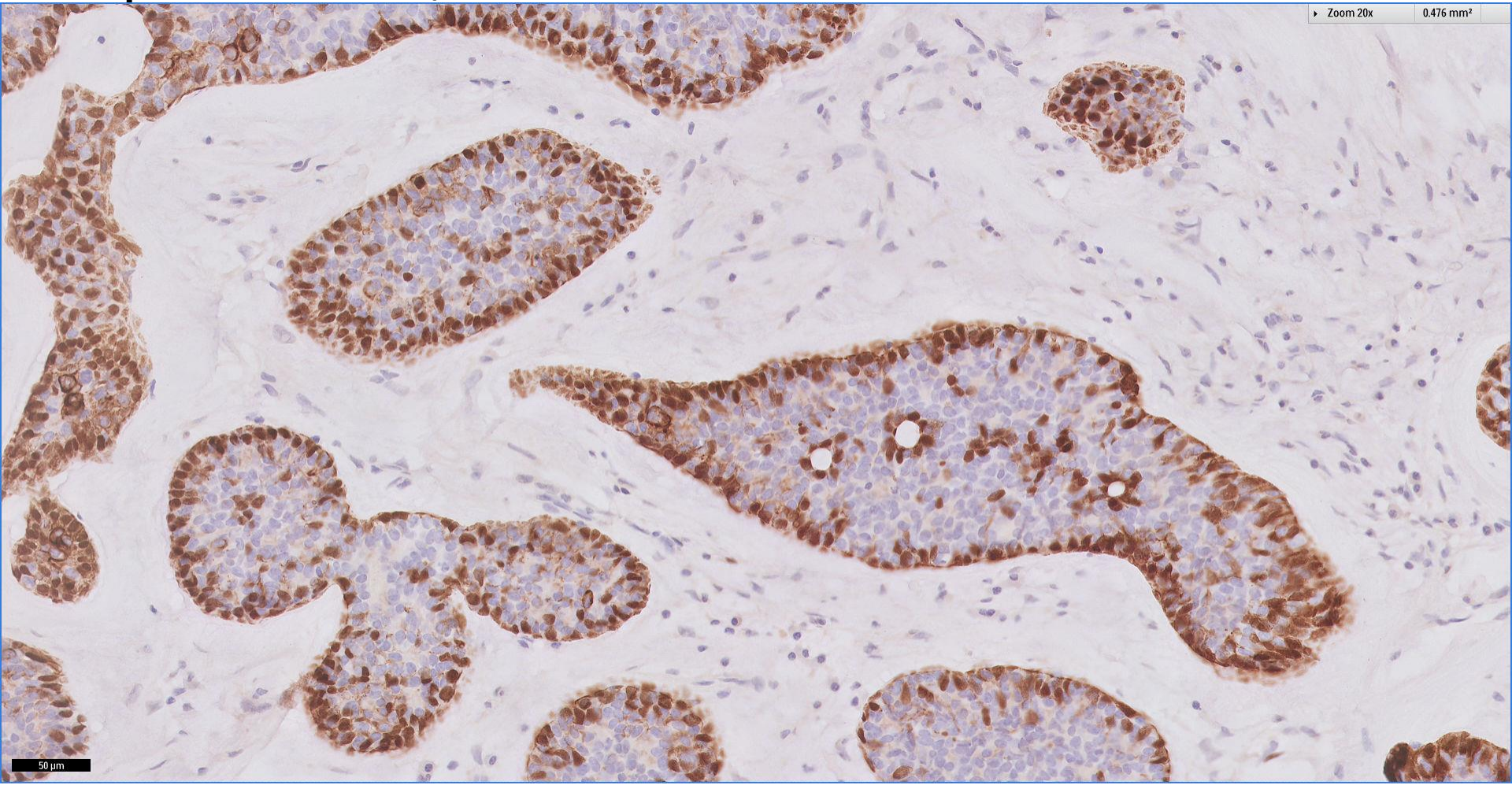
p63-CK5/6



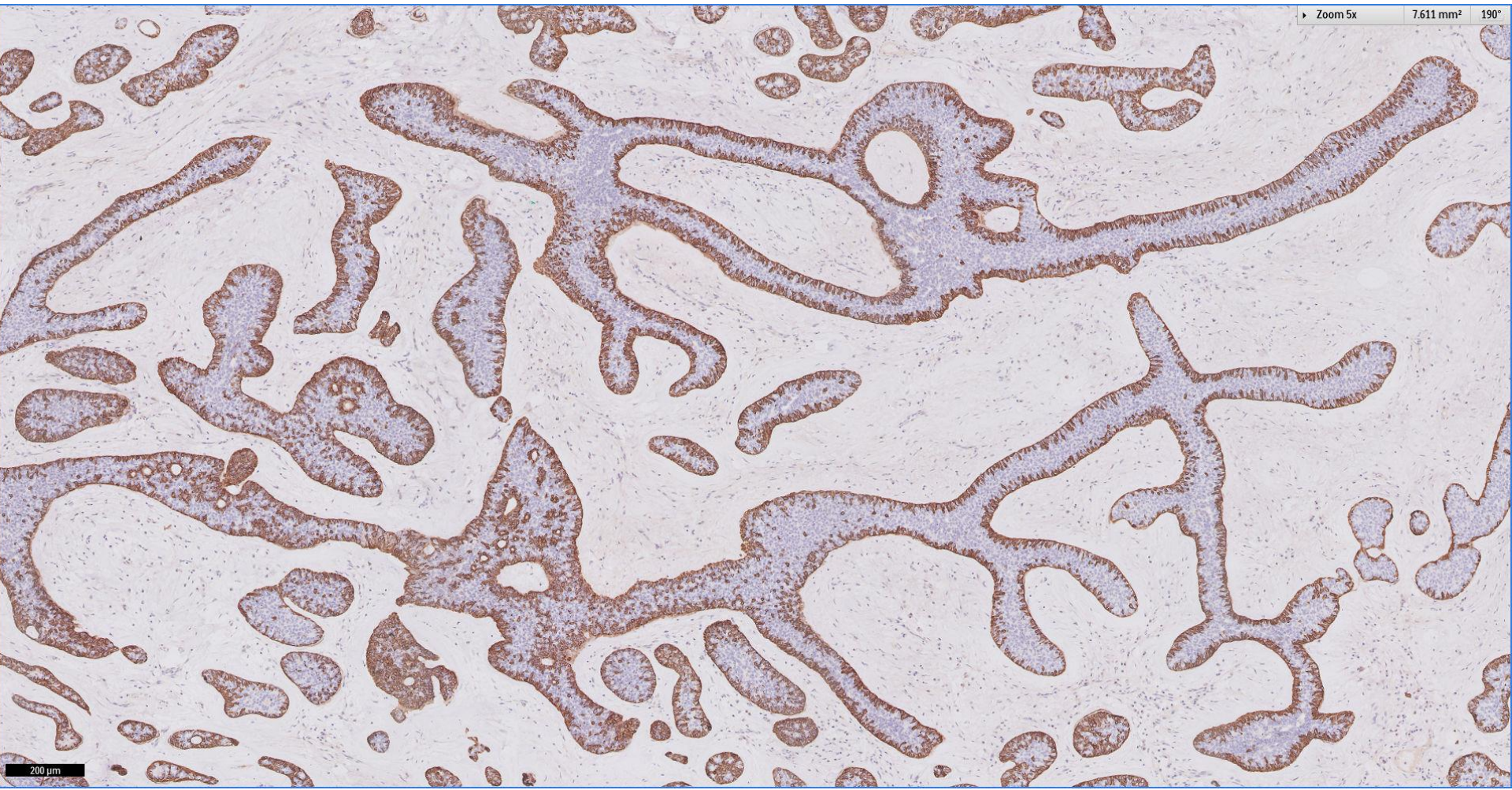
p63-CK5/6



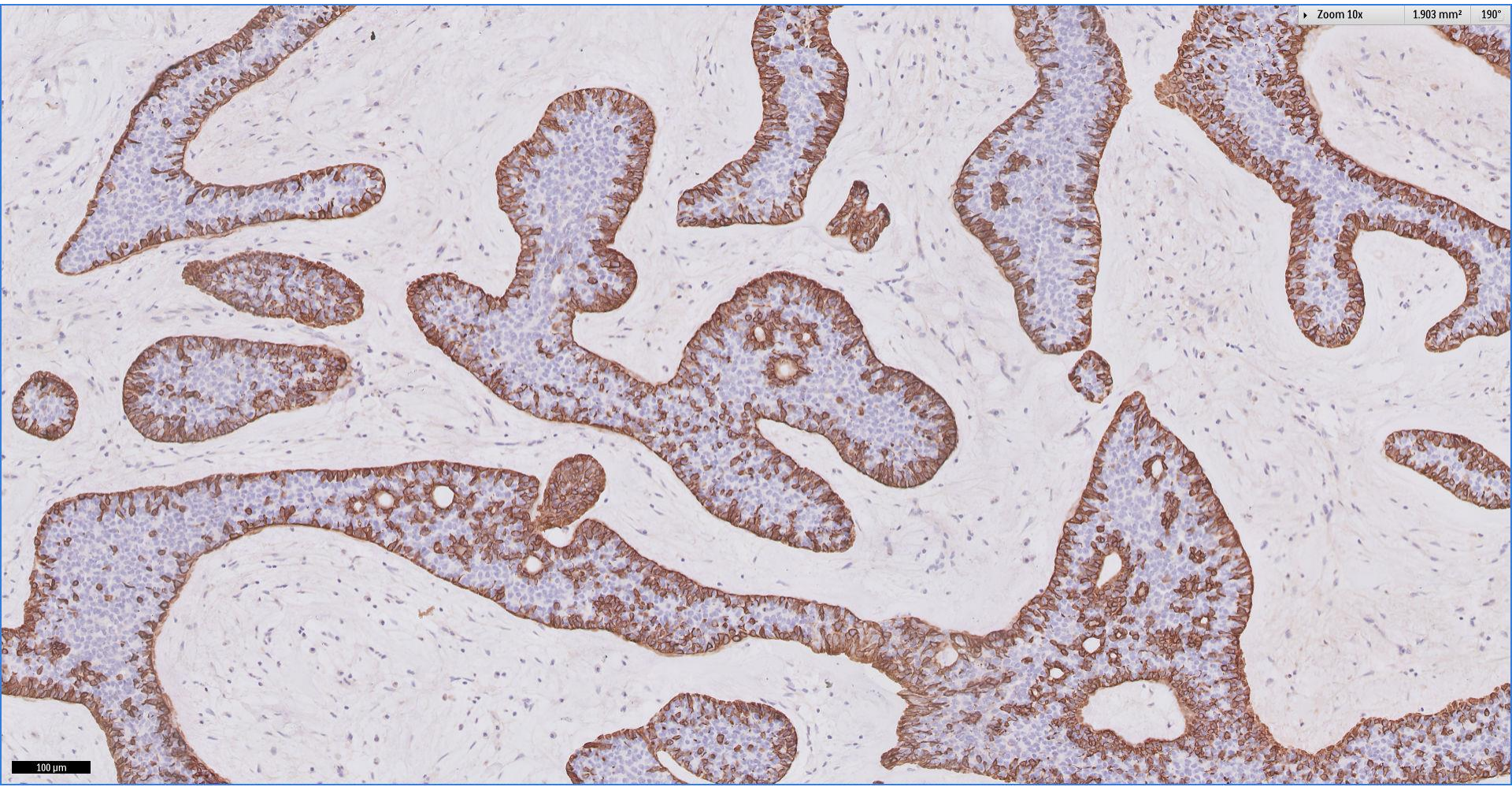
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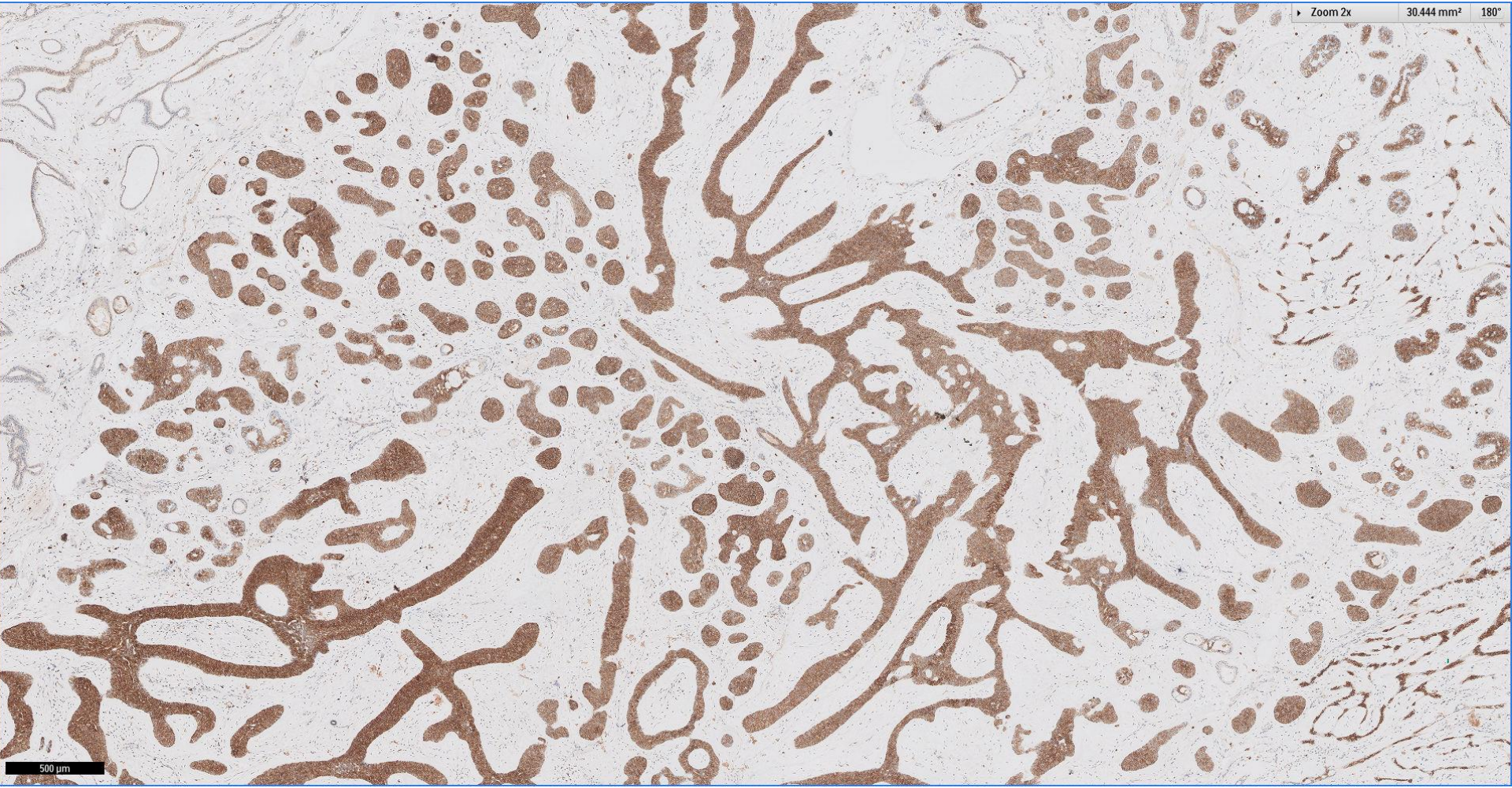
CK14



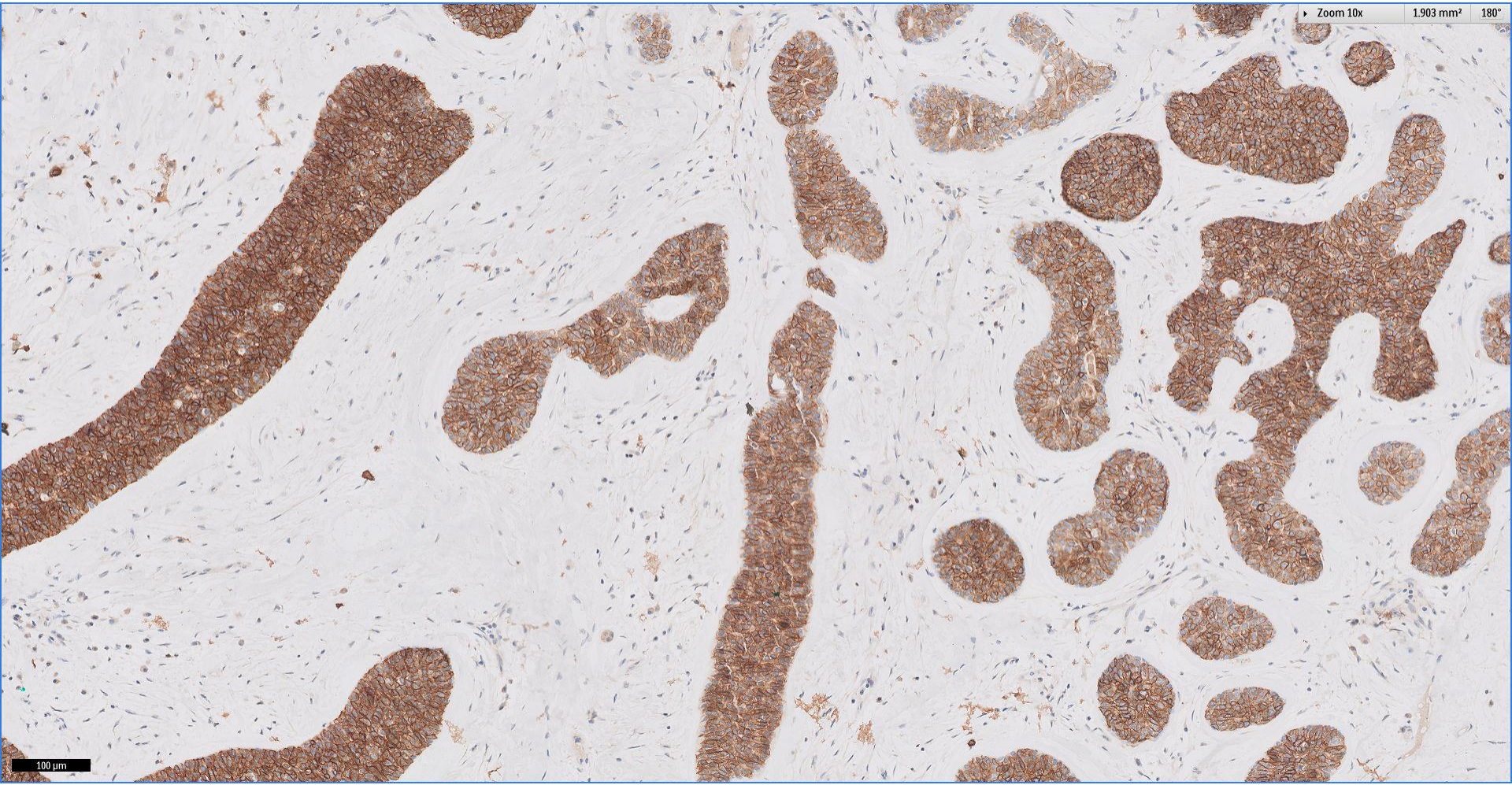
CK14

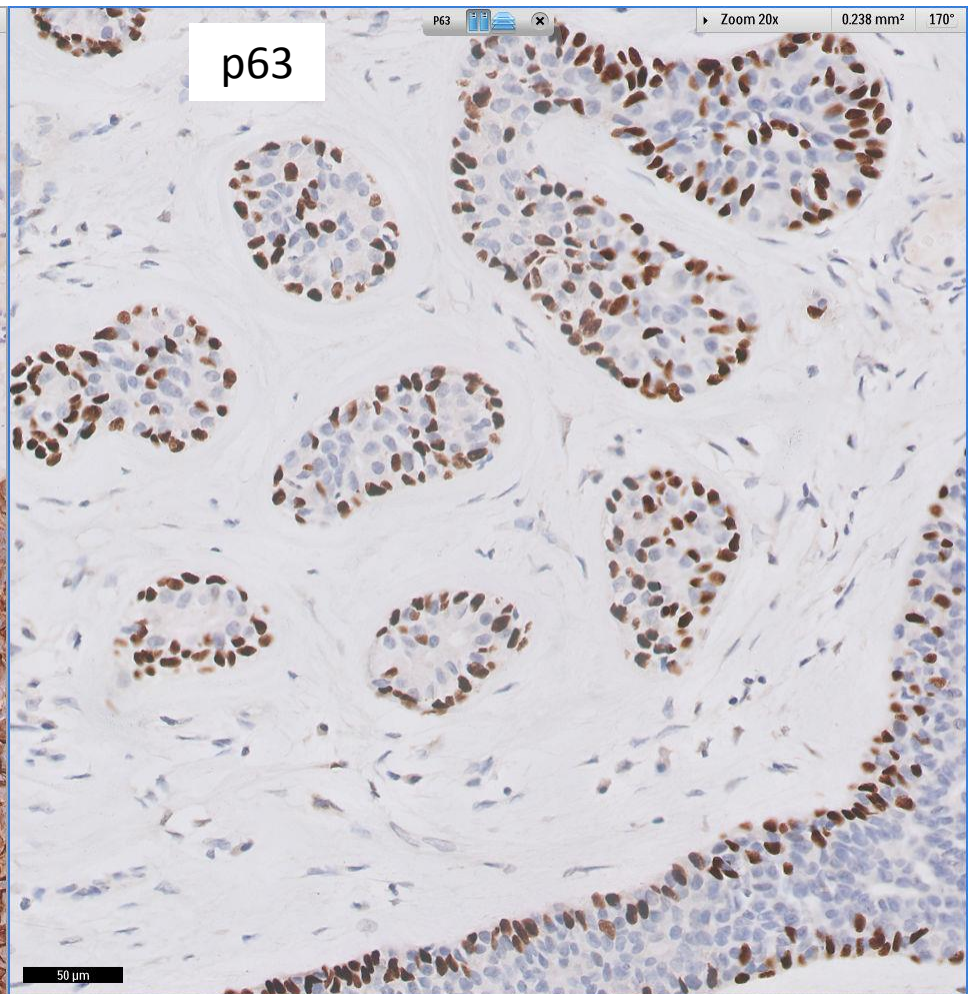
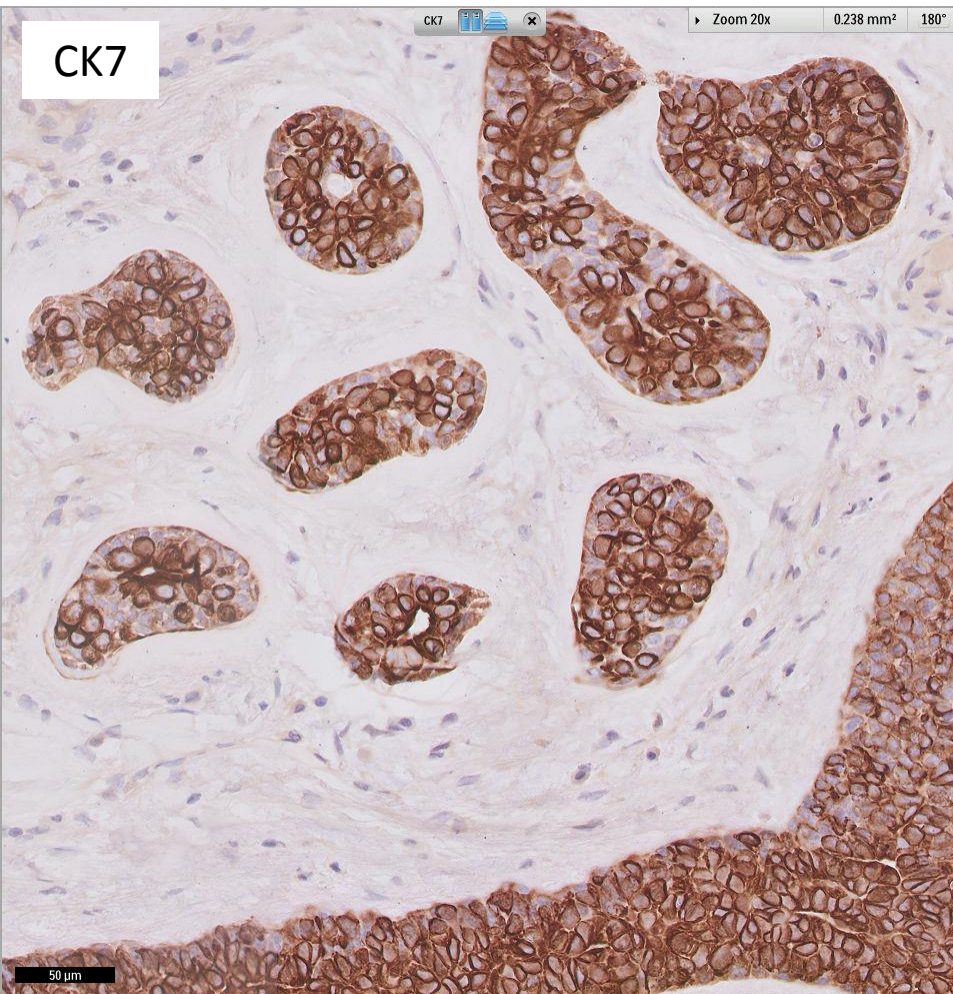


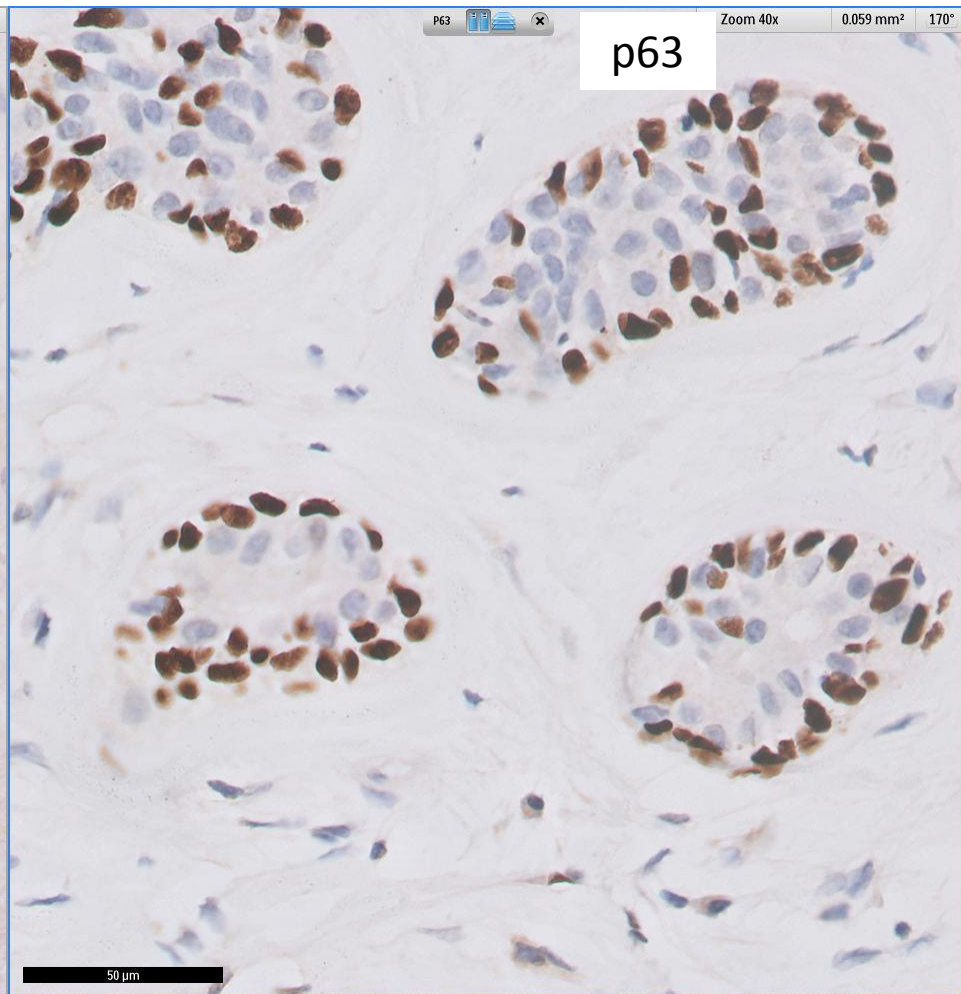
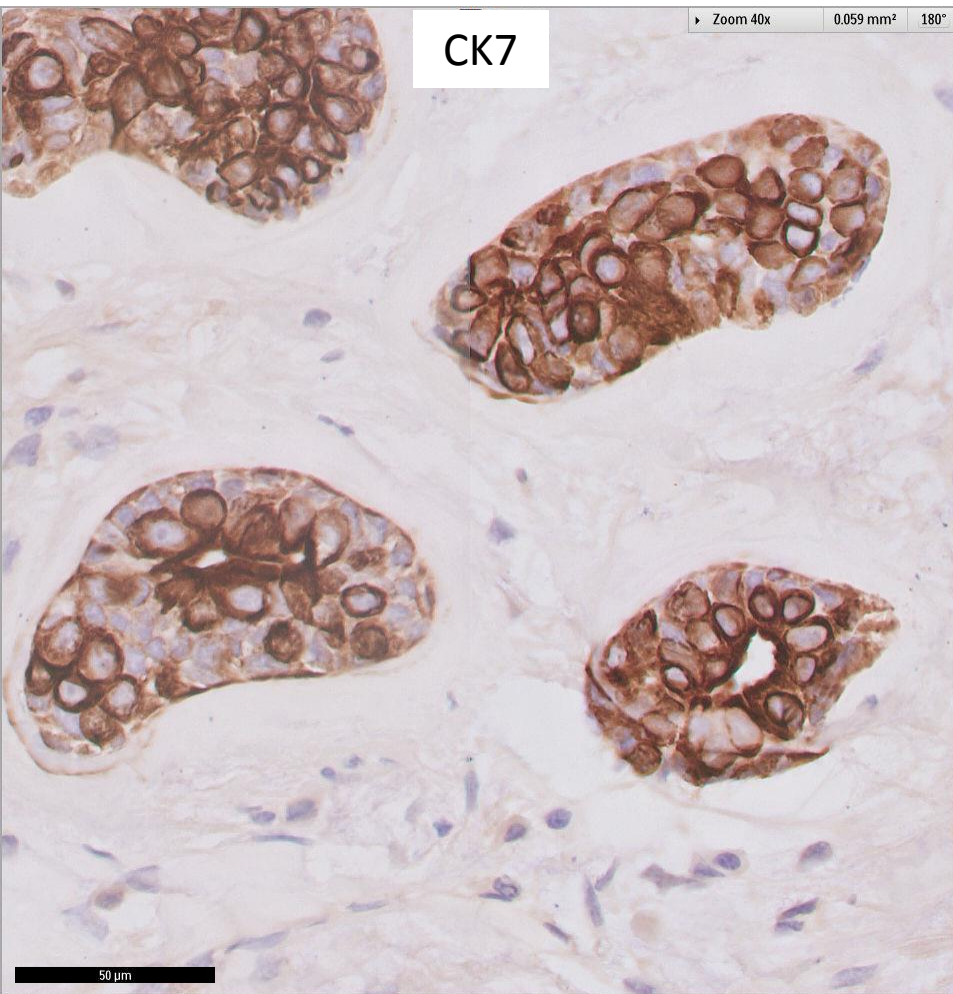
CD117



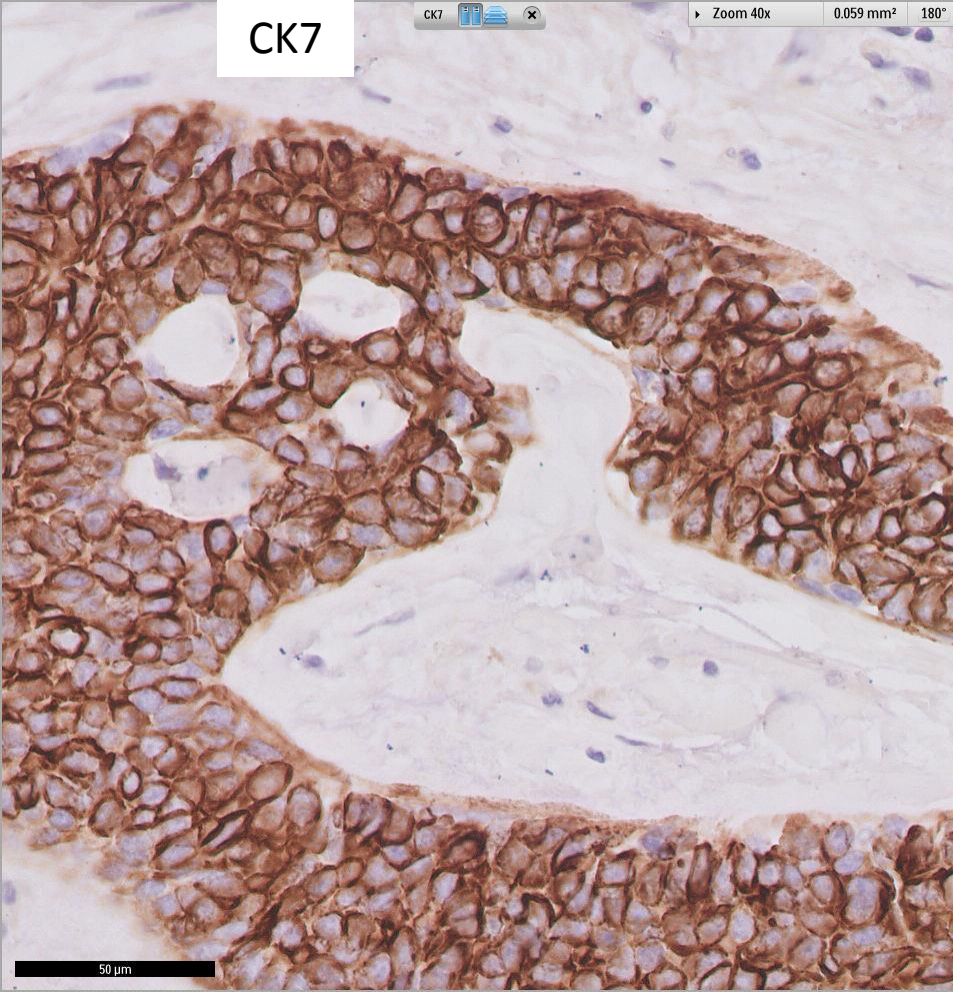
CD117



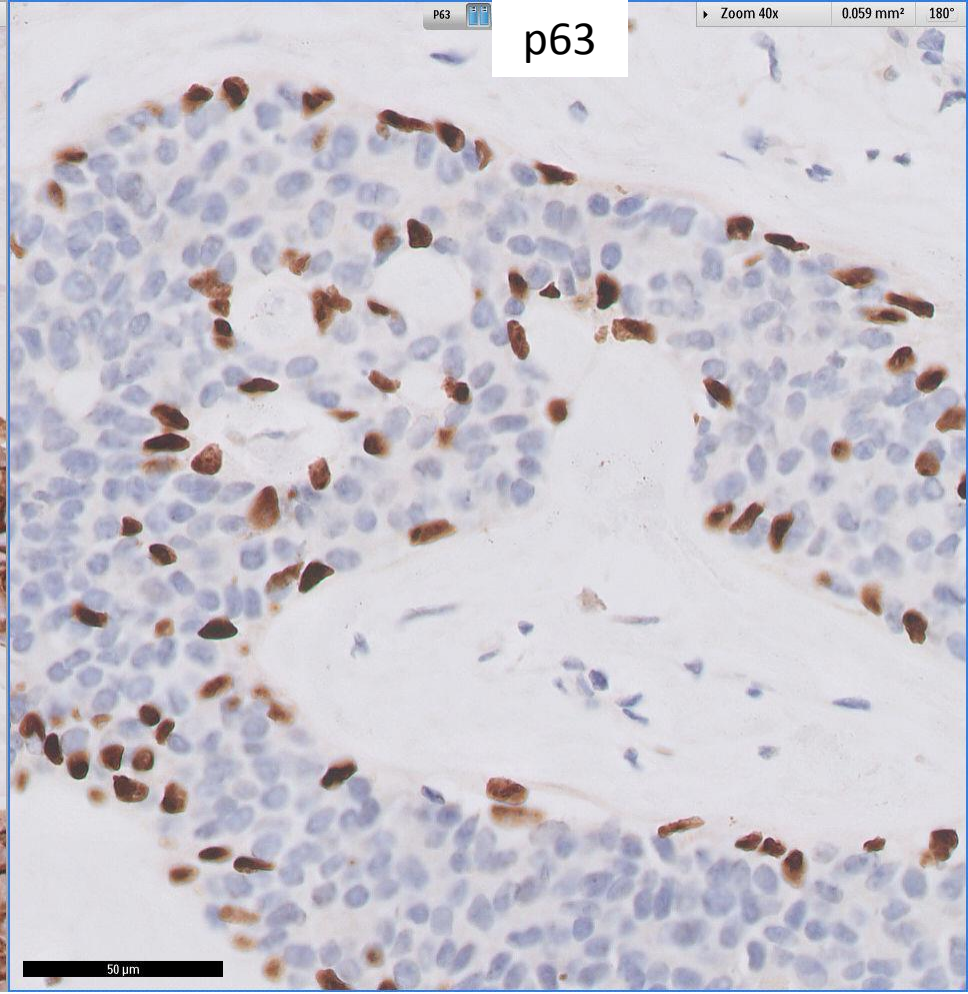




CK7

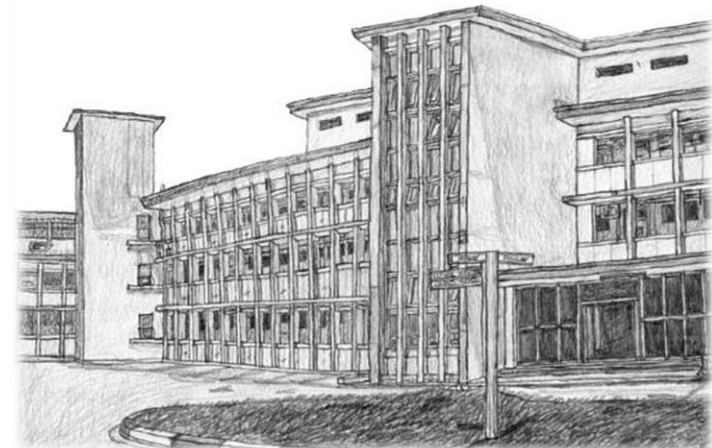


p63



Diagnosis

Giant complex fibroadenoma with an adenoid cystic carcinoma in situ-like proliferation, with atypical ductal hyperplasia.





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Adenoid cystic carcinoma arising in a fibroadenoma

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Abstract

Adenoid cystic carcinoma (ACC) of the breast is a rare neoplasm, accounting for only 0.1 % of all breast carcinomas. An intriguing factor of ACC in the breast is its good prognosis compared to ACC in other locations, mainly in the minor salivary glands. The incidence of axillary lymph node involvement is also very low compared to that of other breast tumors, and distant metastases are uncommon. We report the case of a 65-year-old woman with a 2-year history of a well-circumscribed breast nodule sonographically thought to be a lymph node which was later excised because of rapid growth. Histologic examination showed an adenoid cystic carcinoma with squamous differentiation originating in a fibroadenoma. A review of the literature reveals no previous report of such a case.

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Index words:

Adenoid cystic carcinoma; Fibroadenoma

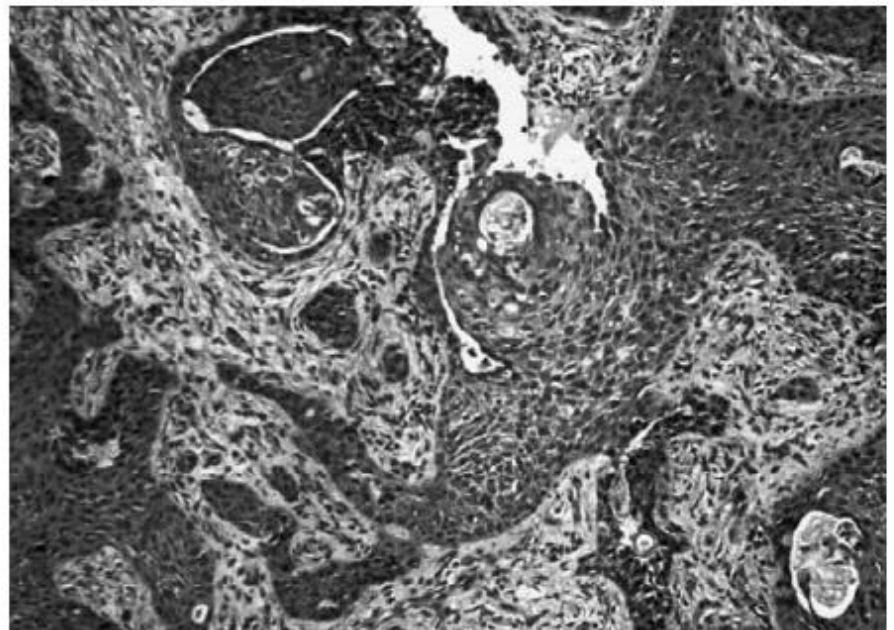
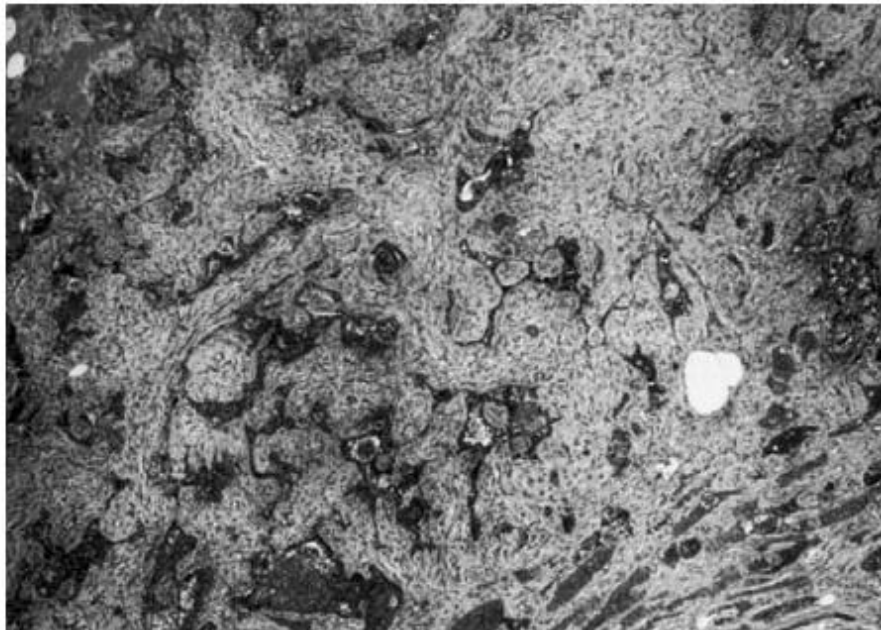
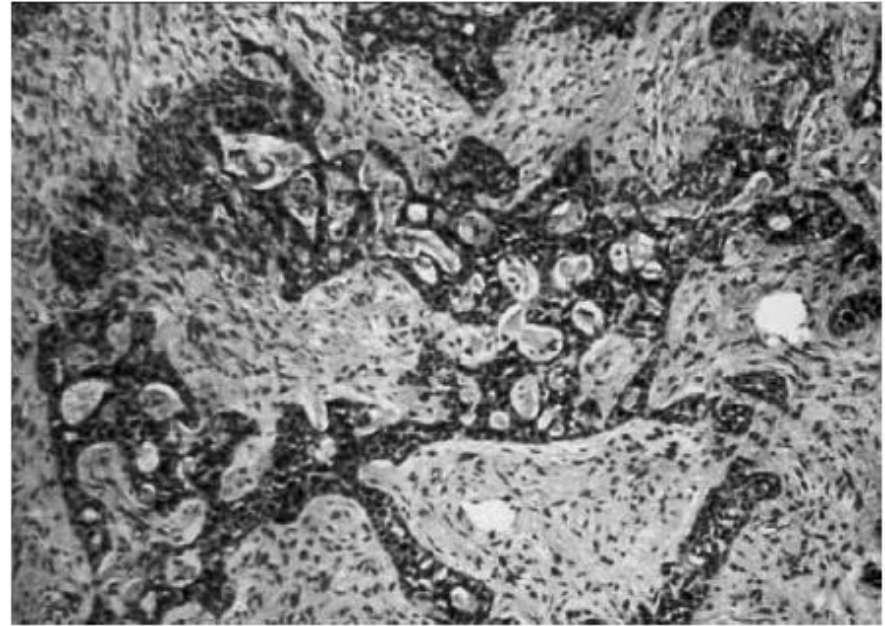
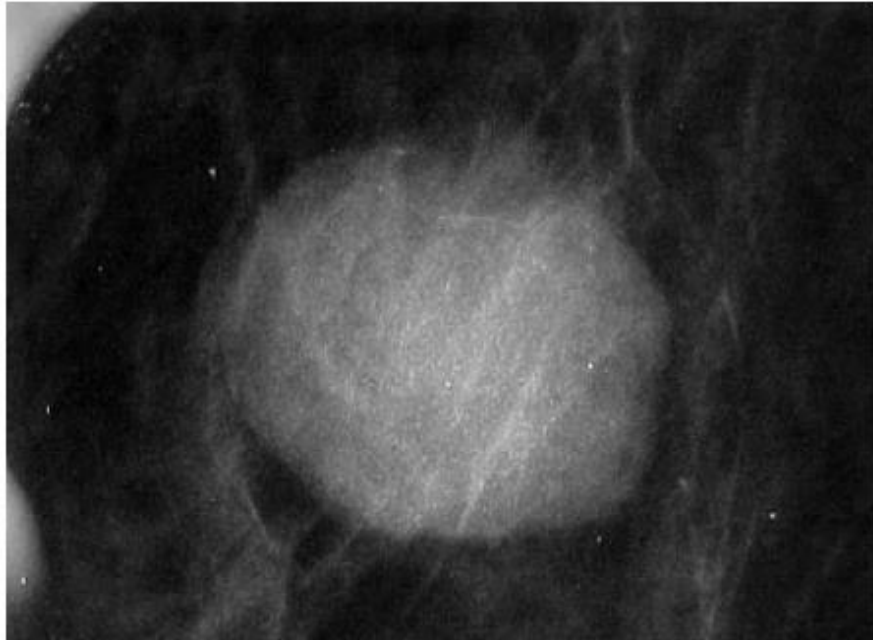


Fig. 2. Fibroadenoma, intracanalicular type.

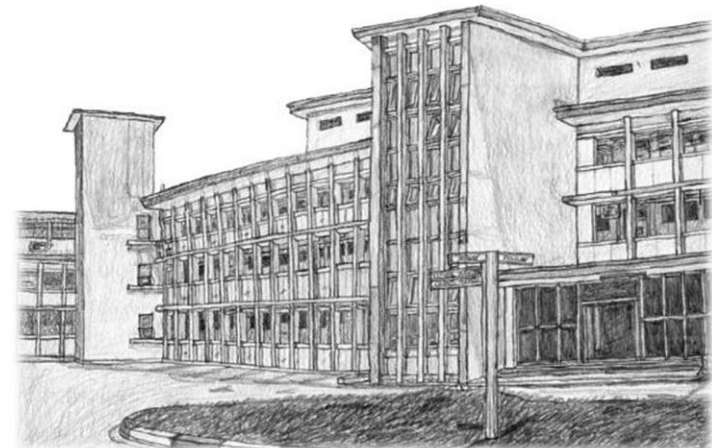
Fig. 4. Adenoid cystic carcinoma, squamous differentiation.

Fibroadenoma with carcinoma

- Prevalence of carcinoma within fibroadenoma in a screened population has been reported as 0.02%.

Can J Surg 1985;28:372- 4.

- Most frequent tumours encountered are lobular and ductal in situ carcinomas, with a minority of infiltrating tumours.



Low-grade ductal carcinoma in situ and invasive mammary carcinoma with columnar cell morphology arising in a complex fibroadenoma in continuity with columnar cell change and flat epithelial atypia.

Petersson F, Tan PH, Putti TC.

Author information: (1)Department of Pathology, National University Health System, Singapore. fredrikpetersson@live.se

We describe the clinicopathologic features of a small low-grade invasive mammary carcinoma with cytomorphological columnar cell features arising in a complex fibroadenoma that in addition to sclerosing adenosis, apocrine metaplasia, and usual ductal hyperplasia also displayed columnar cell change with flat epithelial atypia and low-grade ductal carcinoma in situ merging with the invasive carcinoma. There were strong cytomorphological similarities between the invasive carcinoma and the low-grade ductal carcinoma in situ, which also showed significant overlap in the immunohistochemical findings.

Adenoid cystic carcinoma

- Uncommon breast malignancy that accounts for less than 0.1% of all breast carcinomas.
- It is histologically similar to adenoid cystic carcinoma of the salivary gland, lung, and skin.
- **Invasive** epithelial–myoepithelial tumour, histologically characterised by large, coalescent, cribriform islands harbouring spaces (pseudolumens) containing watery, basophilic mucopolysaccharides and thicker, eosinophilic basement membrane material, both secreted by myoepithelial cells.
- True lumens surrounded by luminal epithelial cells are also present.
- Loose myxoid stroma surrounds the cribriform islands.
- Tubules, anastomosing trabeculae, and solid nests may also be seen.
- Squamous and sebaceous metaplasia, and adenomyoepitheliomatous areas, may be observed.
- Some tumours are composed of solid, basaloid nests.

Adenoid cystic carcinoma

- Immunohistochemical features ~
 - Negative for hormone receptors and c-erbB-2 (triple-negative).
 - Positive staining for p63, high-molecular-weight keratins (CK5/6, CK14, CK17), smooth muscle actin (SMA), and SMMHC in the myoepithelial component.
 - CK7 is useful in identifying the luminal epithelial cells, especially in lesions that are predominantly solid or basaloid.
 - CD117, Cam5.2, and EMA also decorate the luminal cells.
- Translocation $t(6;9)(q22-23;p23-24)$, which generates fusion transcripts involving the genes *MYB* and *NFIB*, is seen in more than 90% of cases.



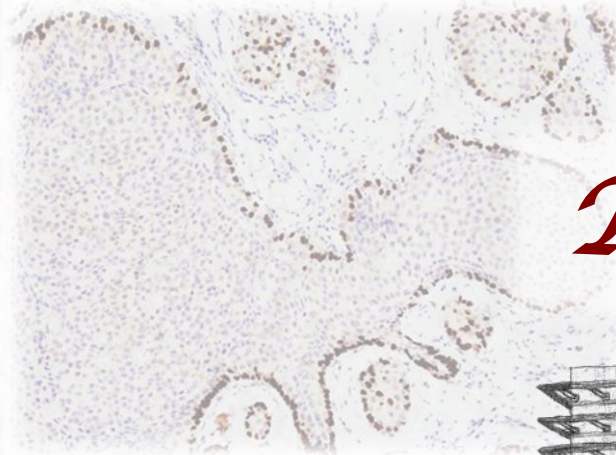
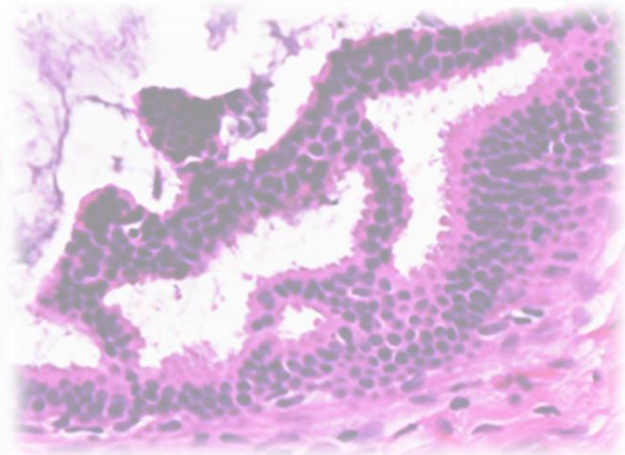
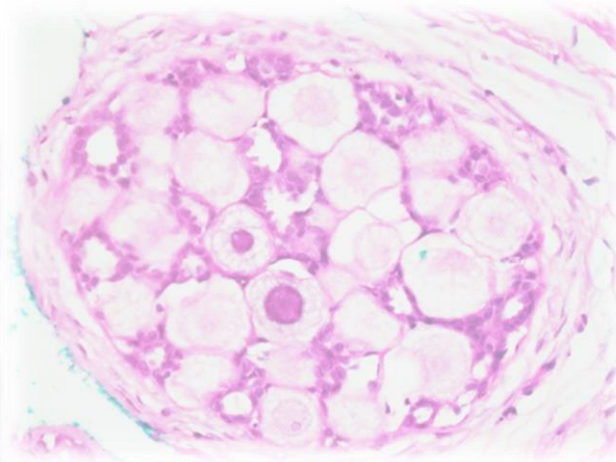
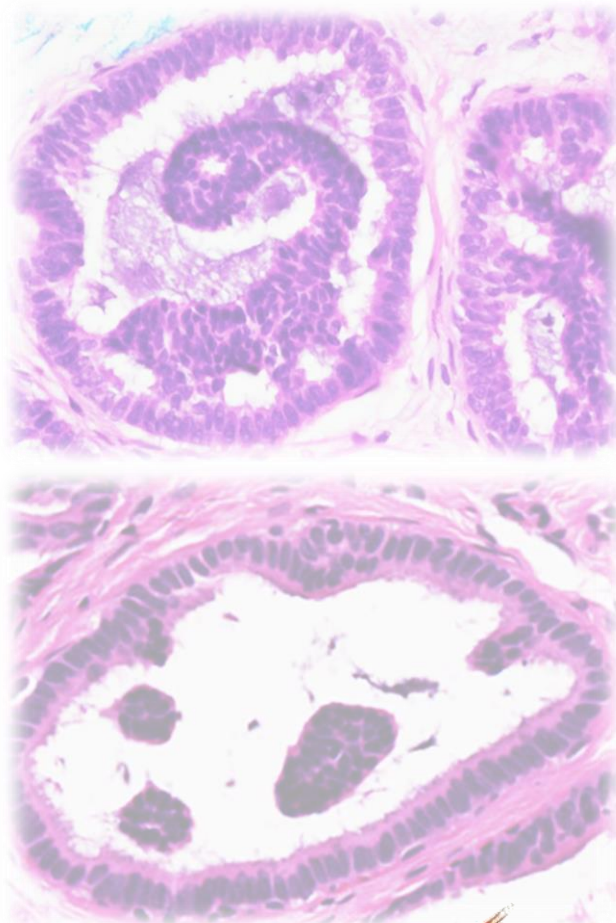
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Adenoid cystic carcinoma

- Conventionally regarded as invasive.
- An in situ component is difficult to determine due to inability to rely on myoepithelial markers and basement membrane stains.
- In this case 3, the adenoid cystic proliferation is confined to the epithelial compartment of the fibroadenoma, supporting a non-invasive process.

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Thank you!

