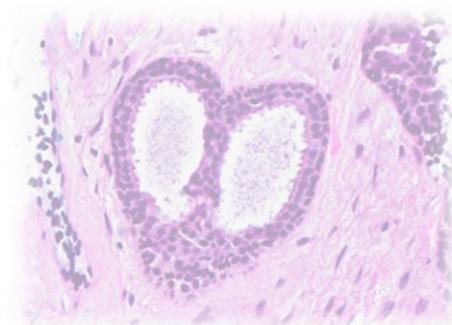
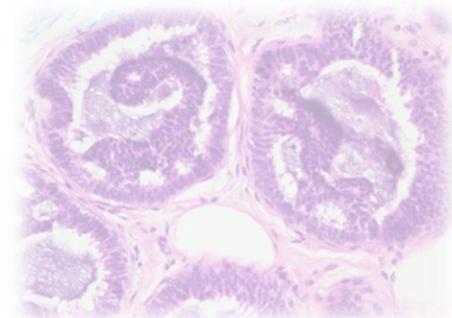
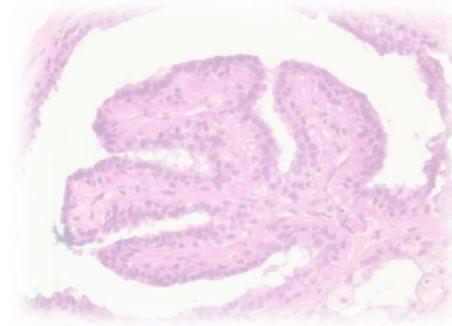
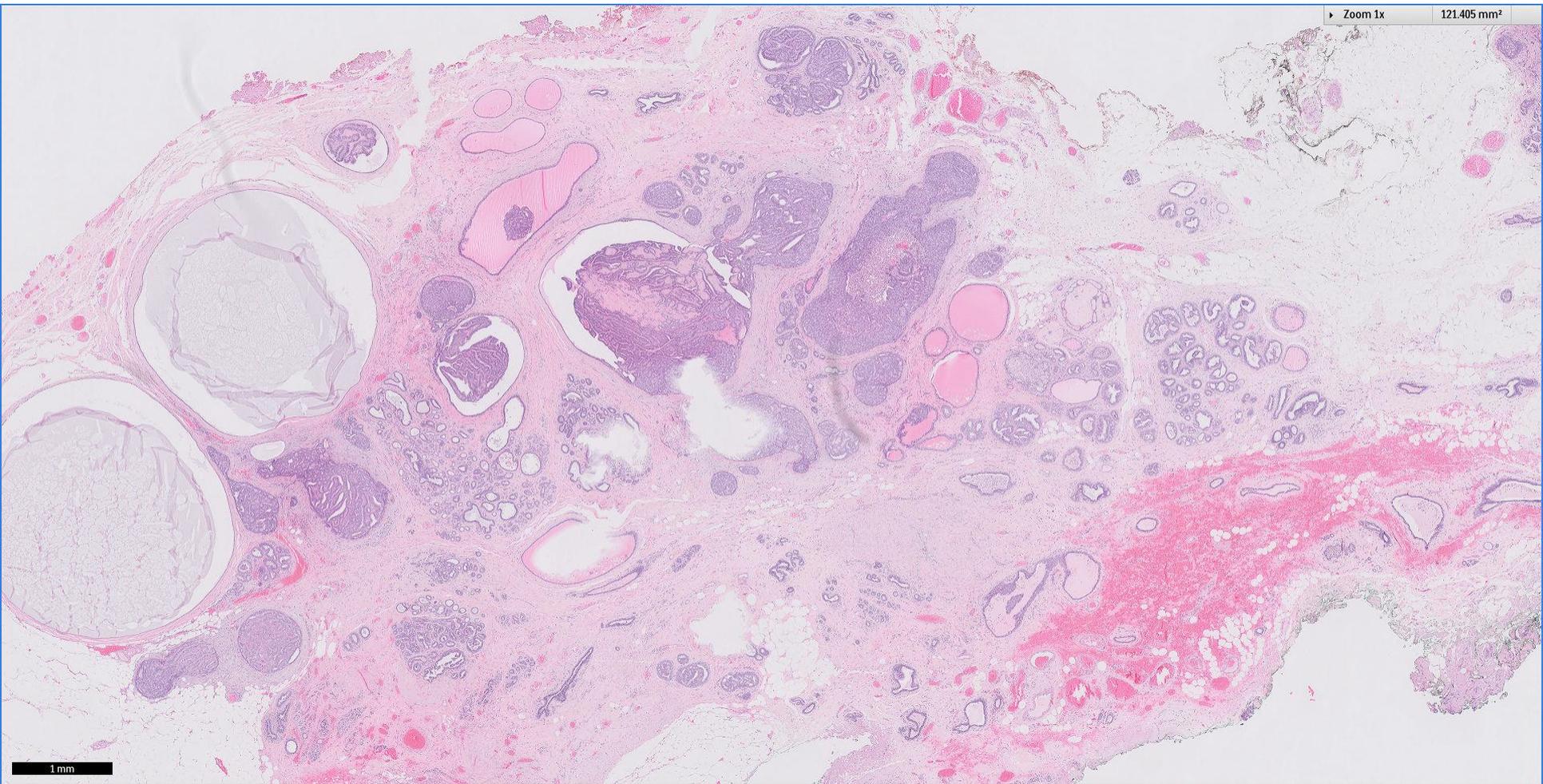
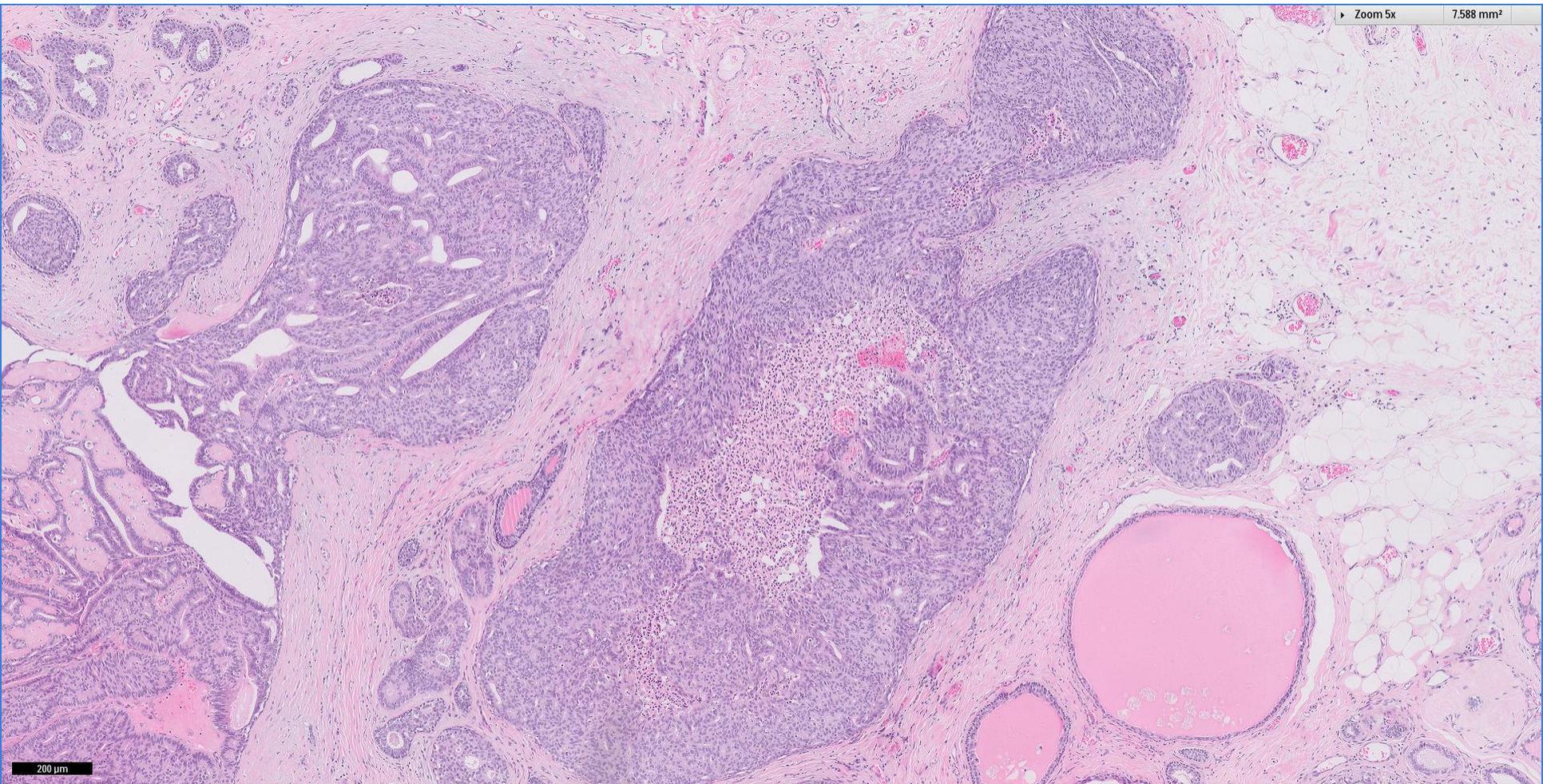


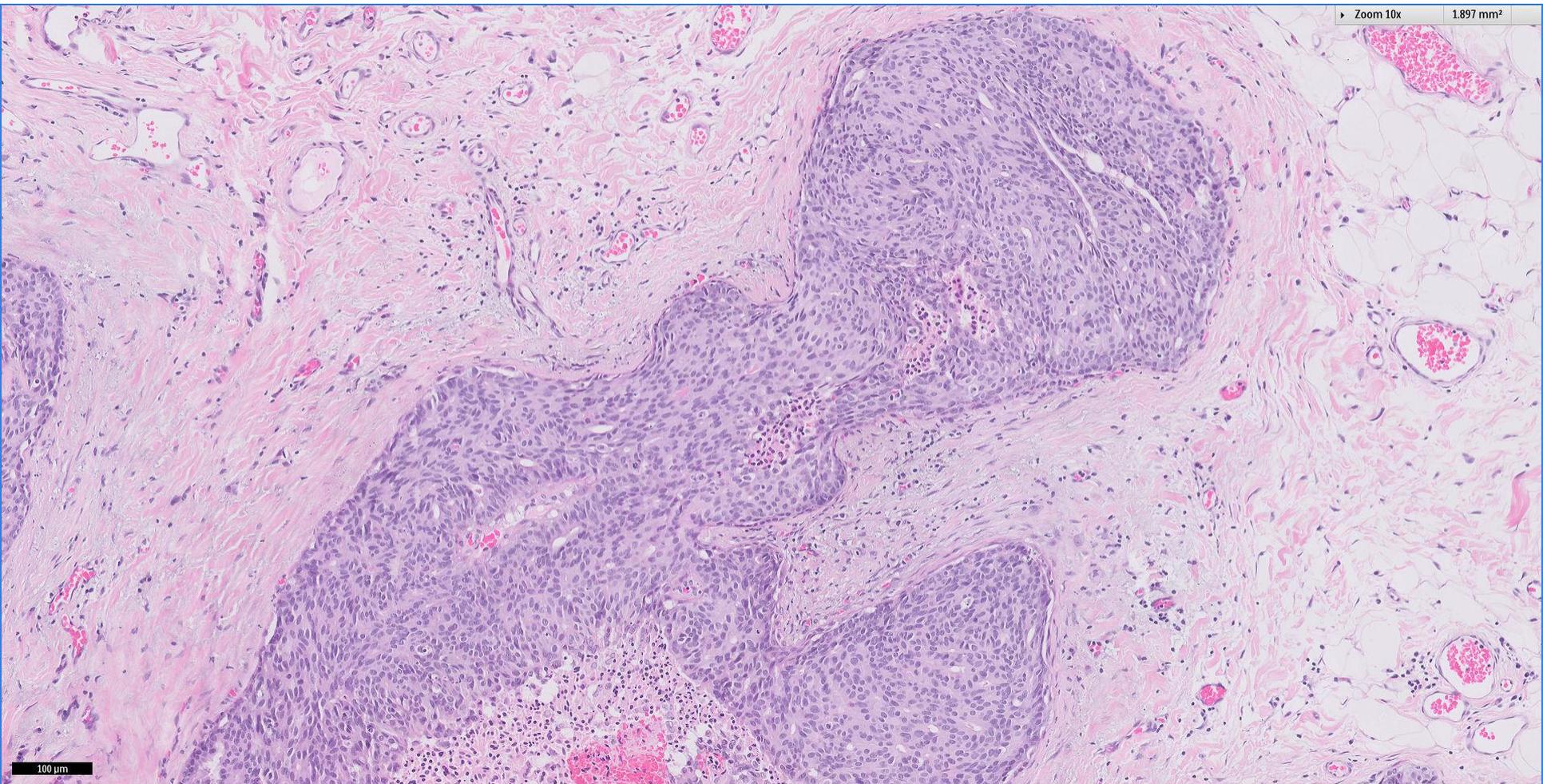
## Case 16

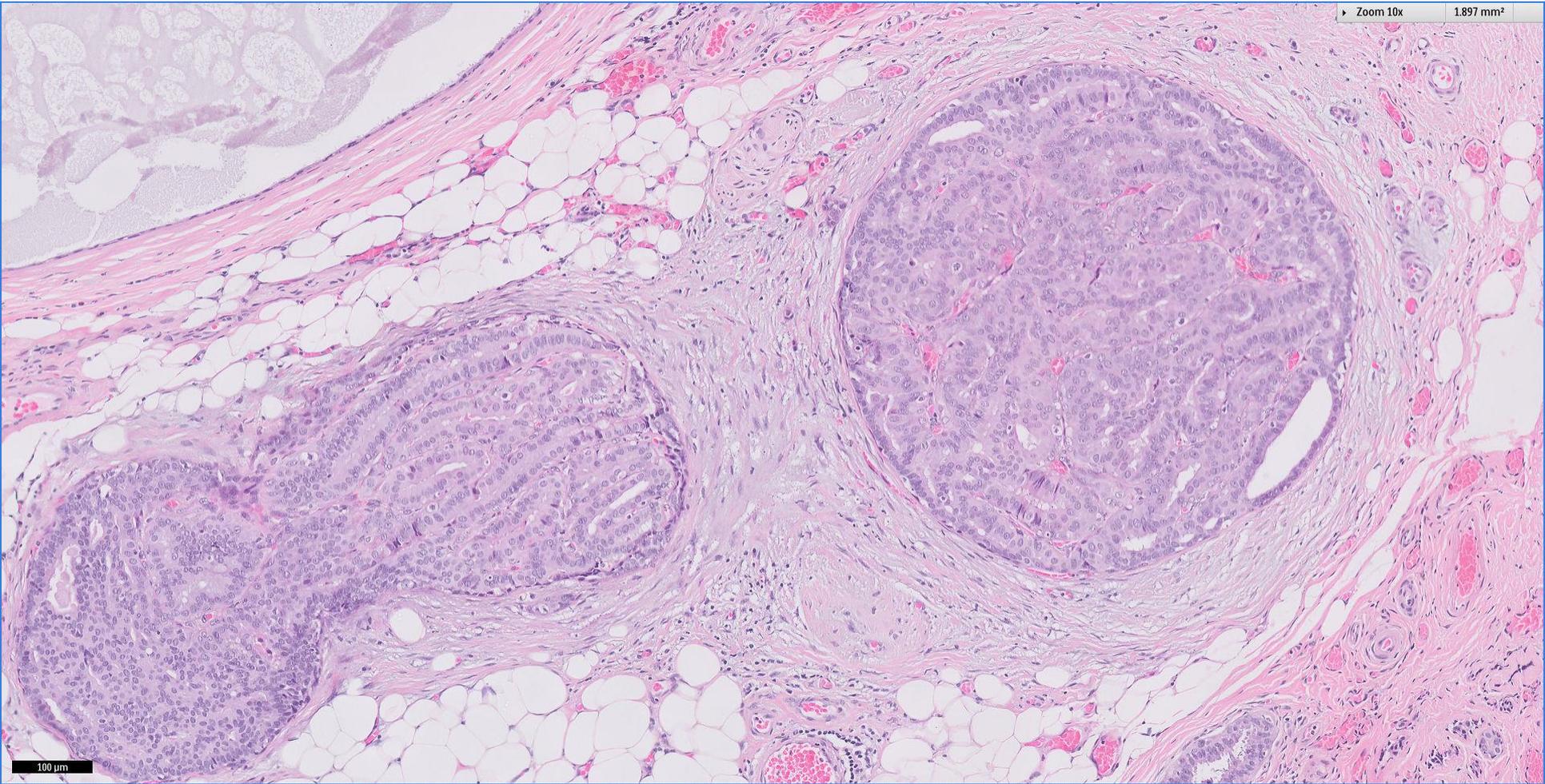
78 year old Chinese female.  
Left breast lump, excision biopsy.





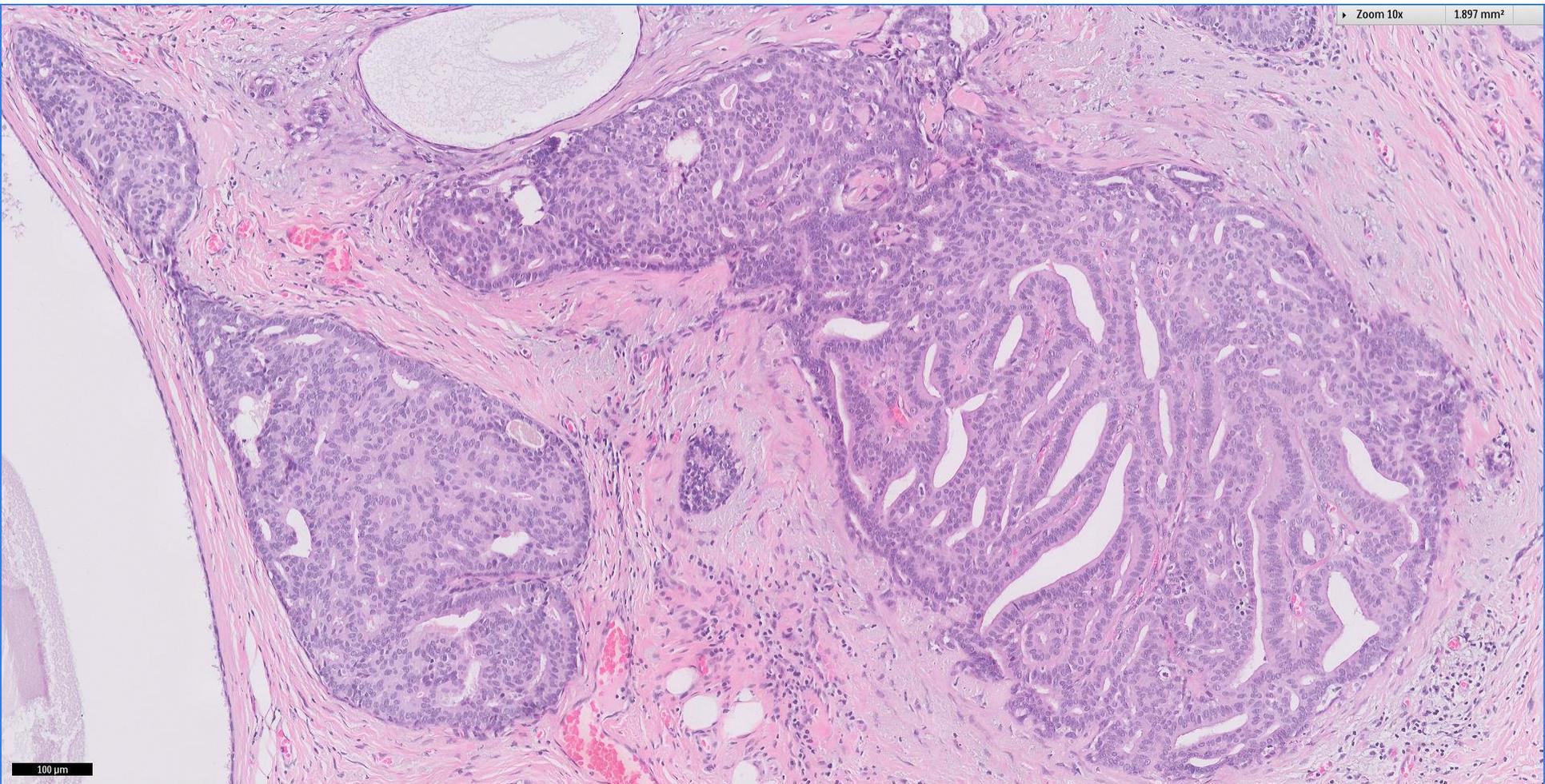


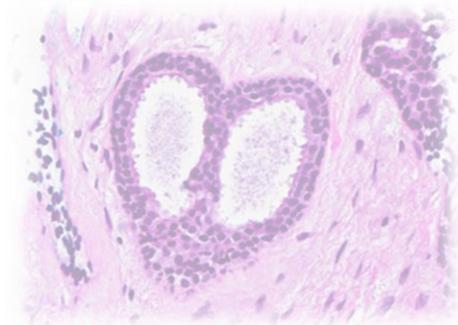
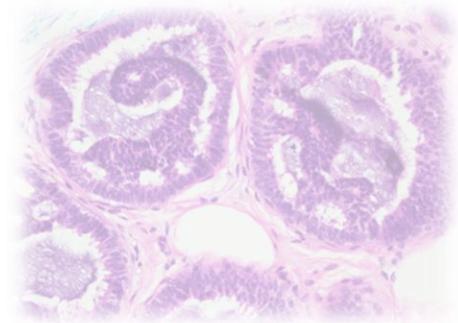
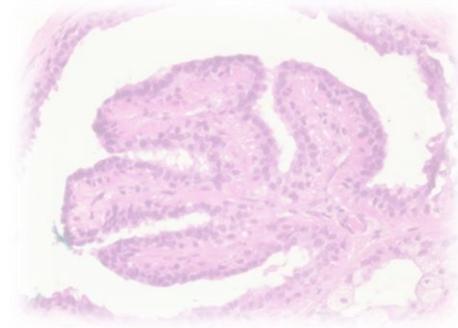




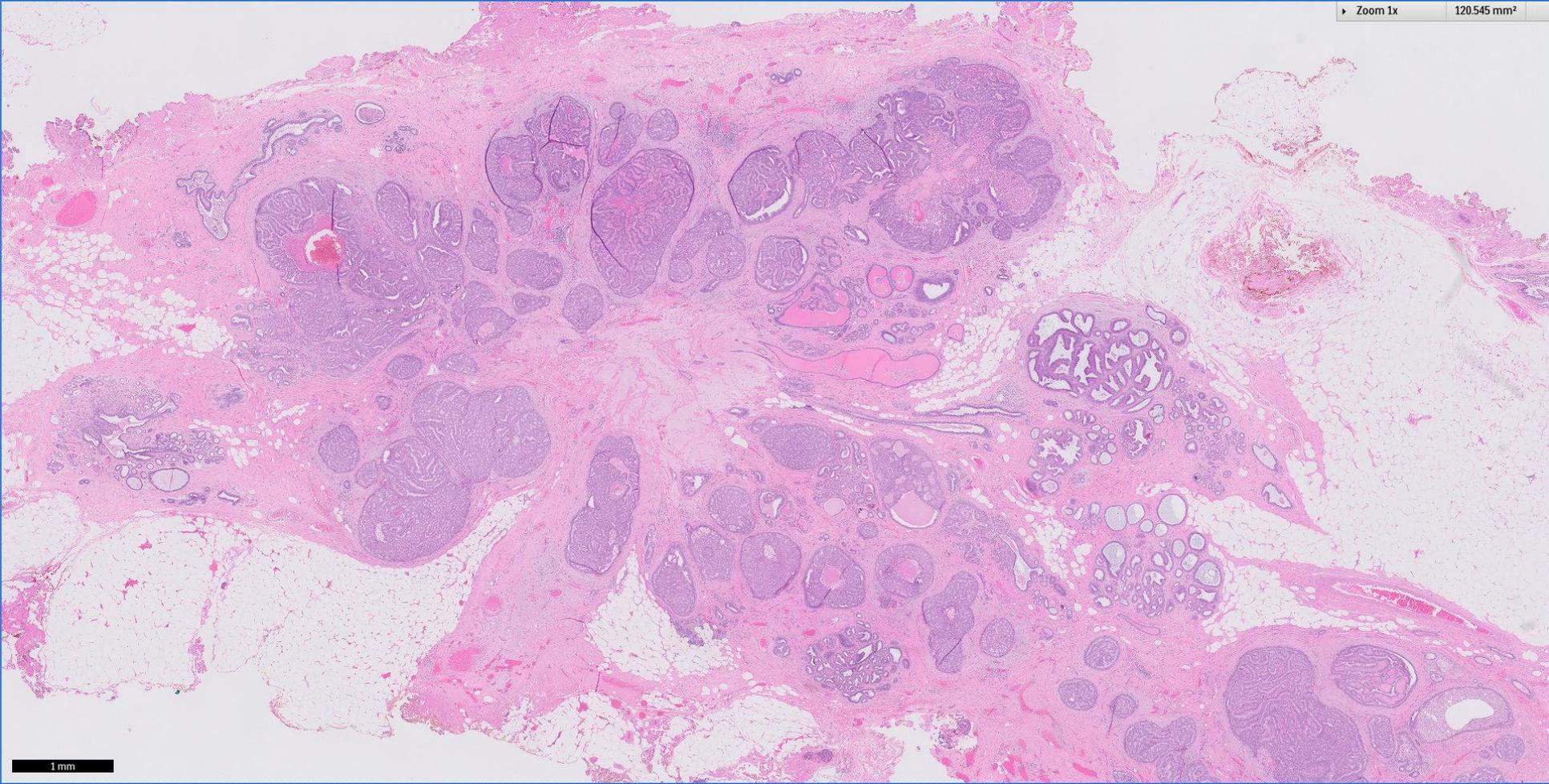
Division of Pathology  
Singapore General Hospital







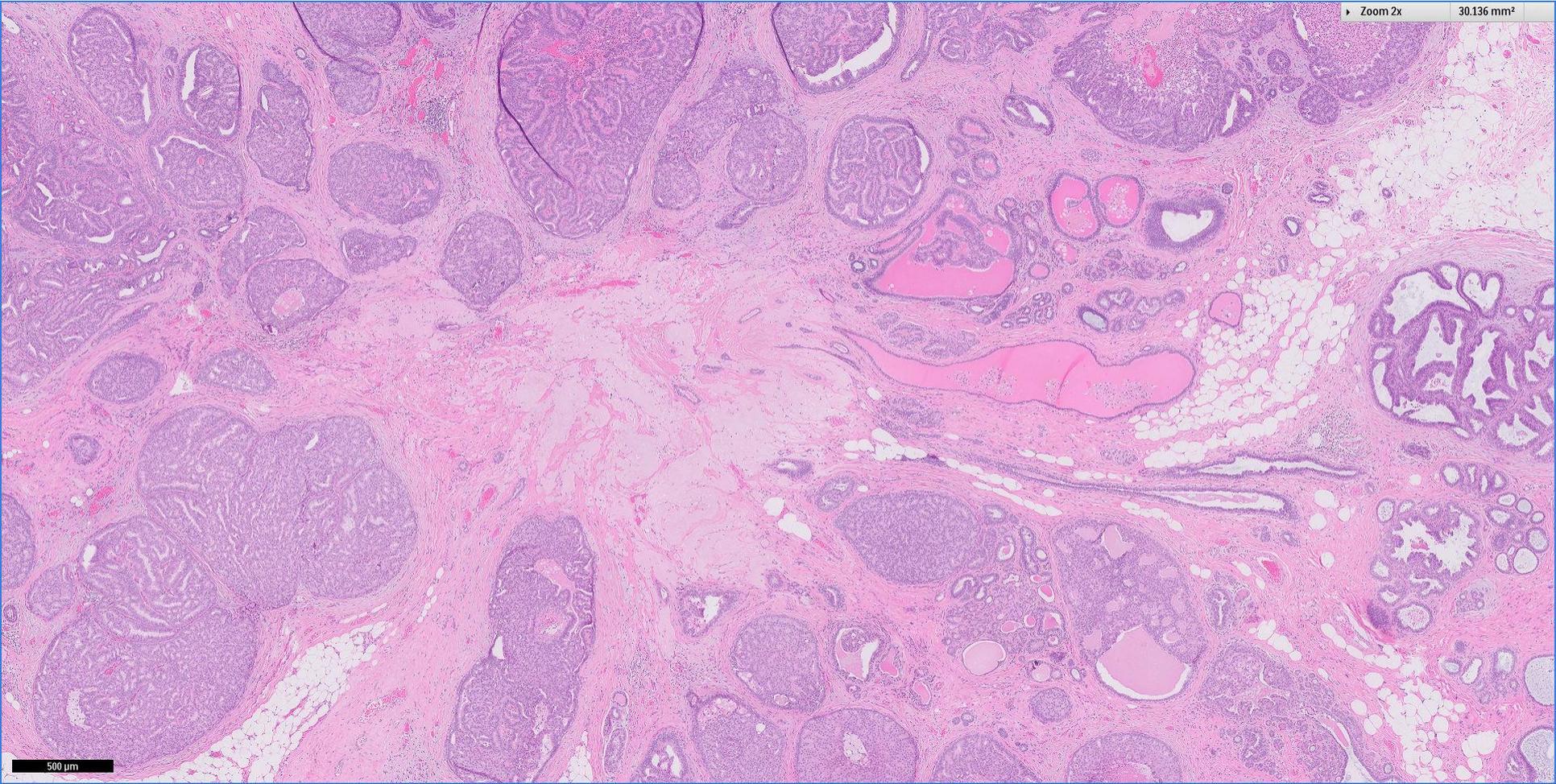
# *Additional pictures*



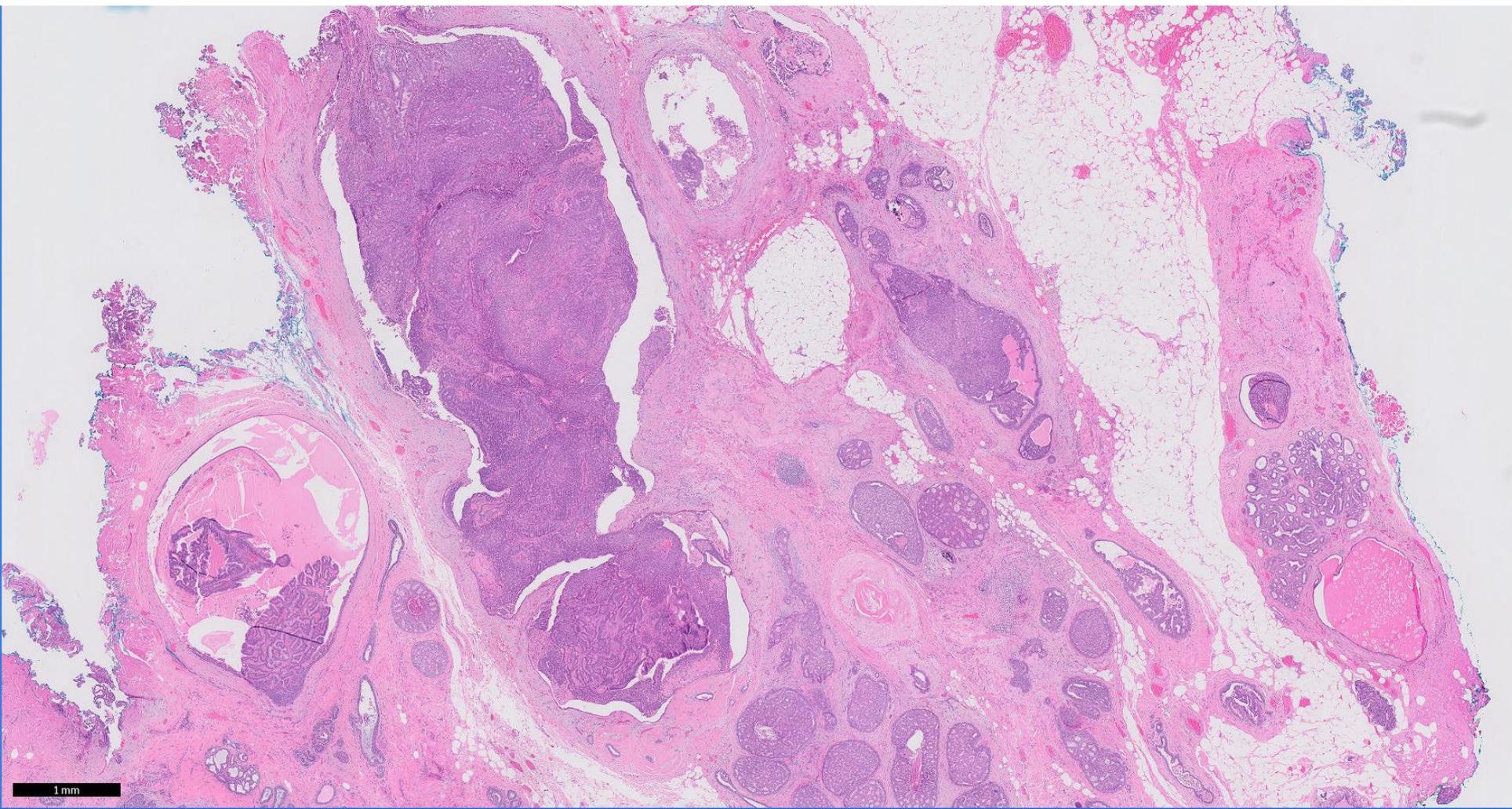
1 mm

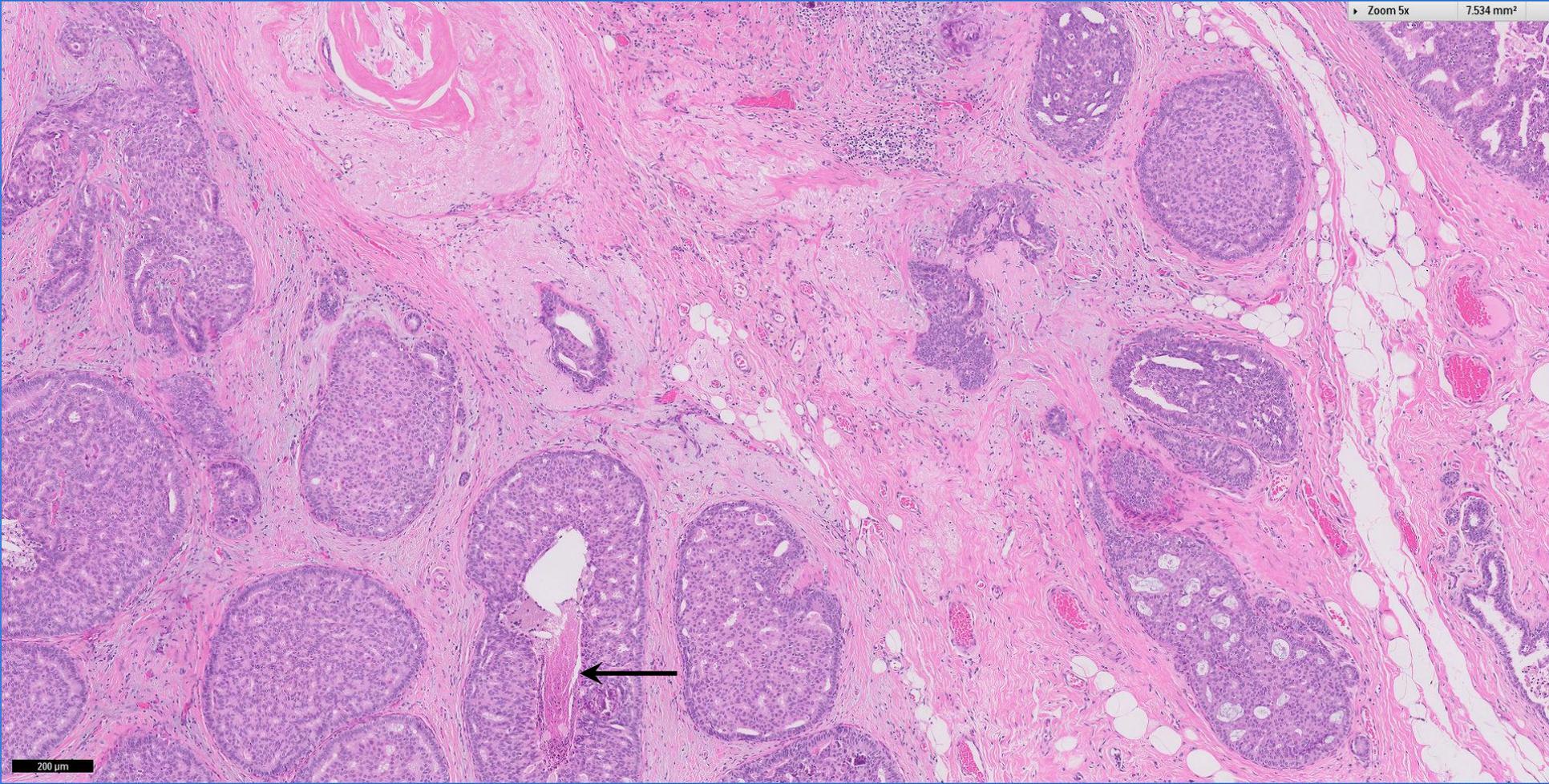
Zoom 2x

30.136 mm²



500 µm

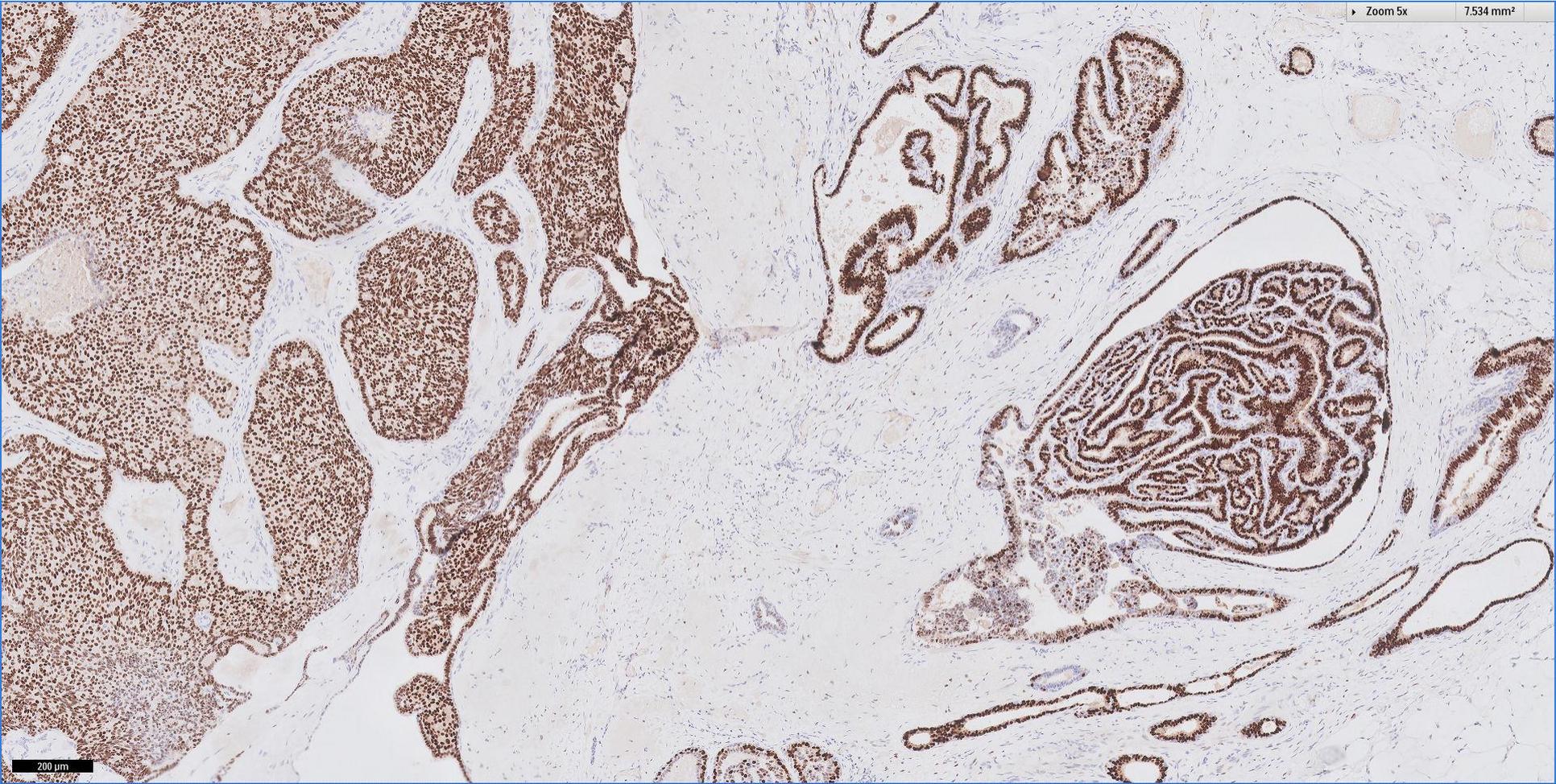




ER

Zoom 5x

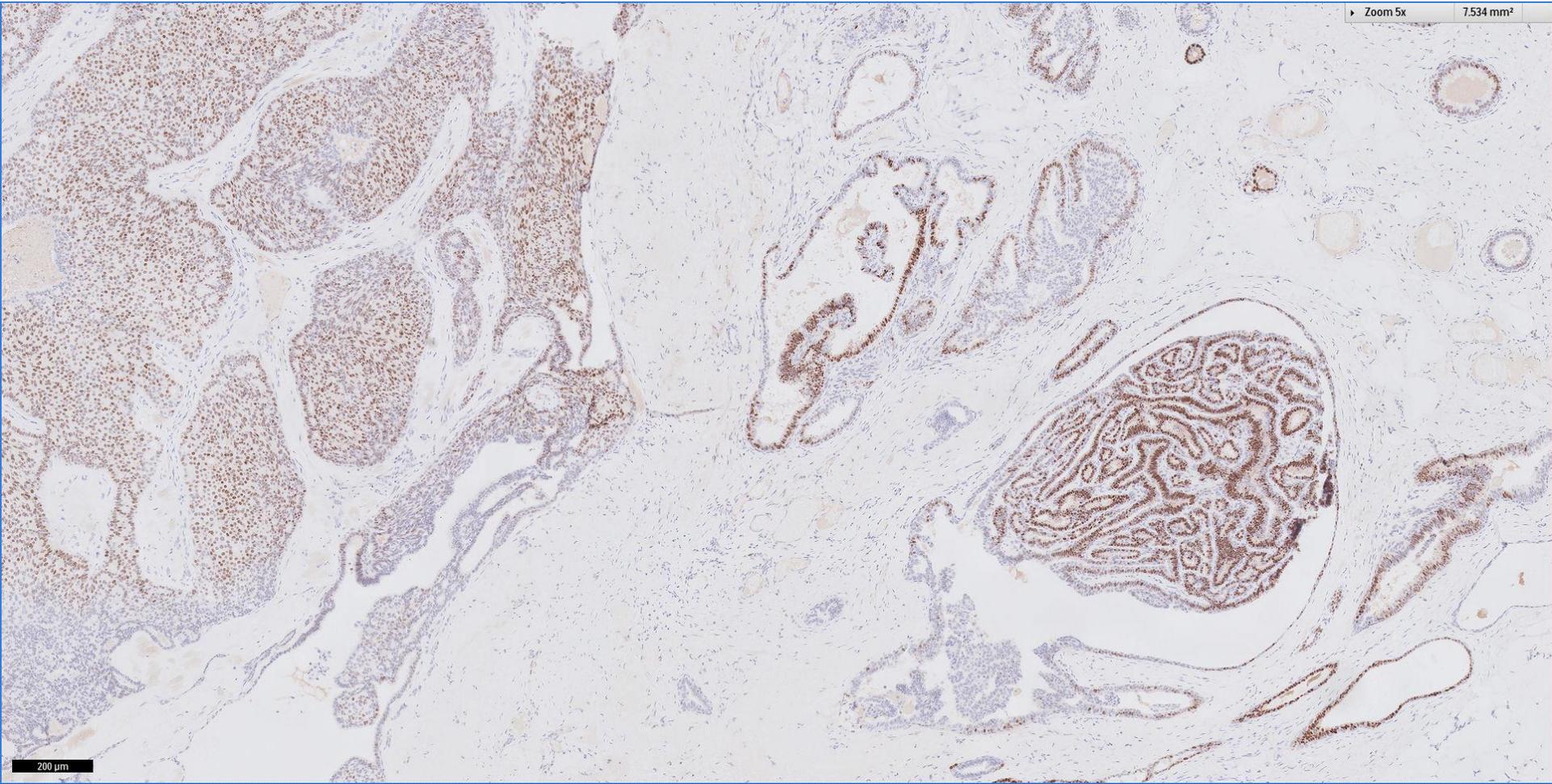
7.534 mm<sup>2</sup>



200  $\mu$ m

PR

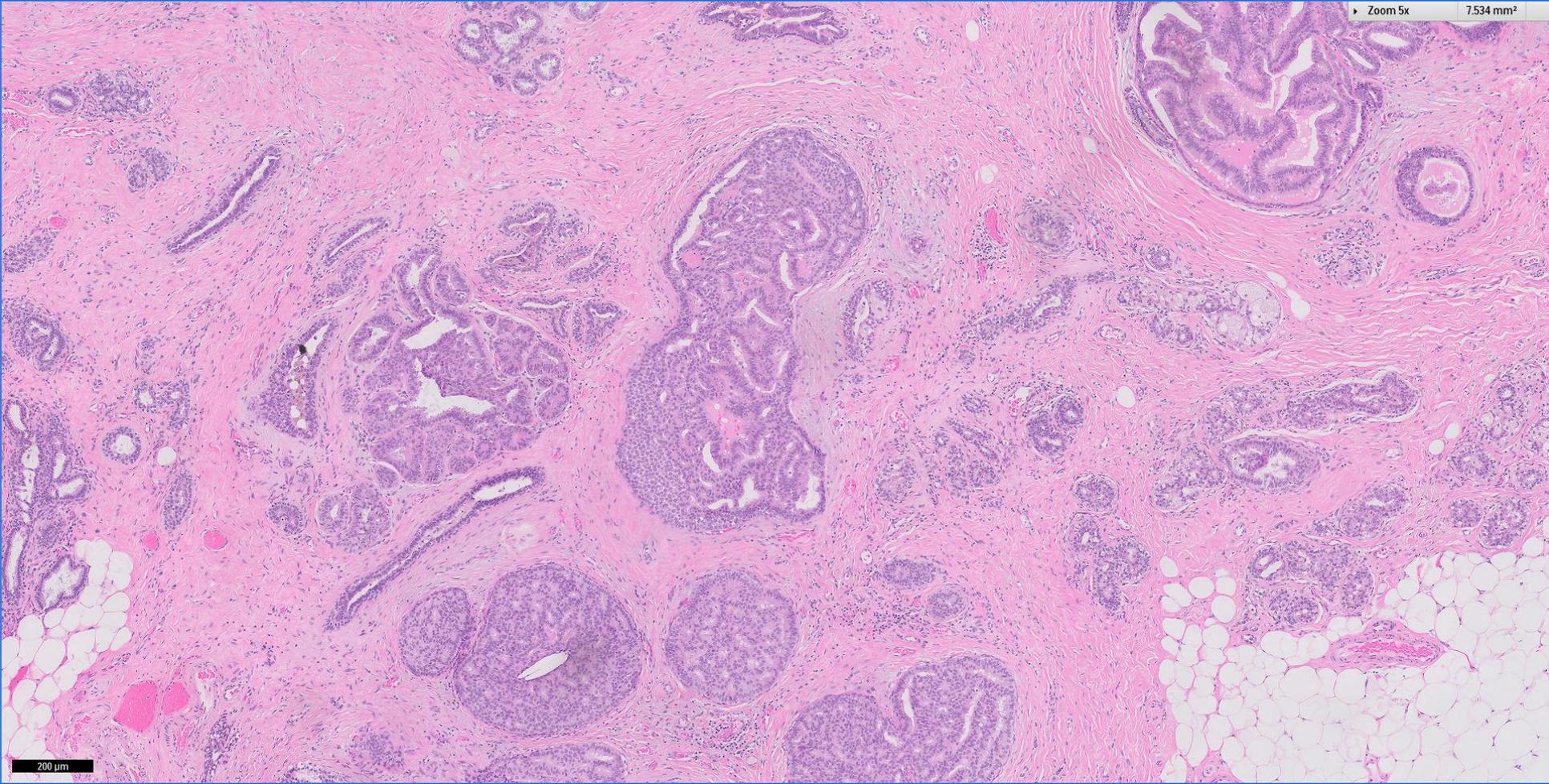
Zoom 5x 7.534 mm<sup>2</sup>



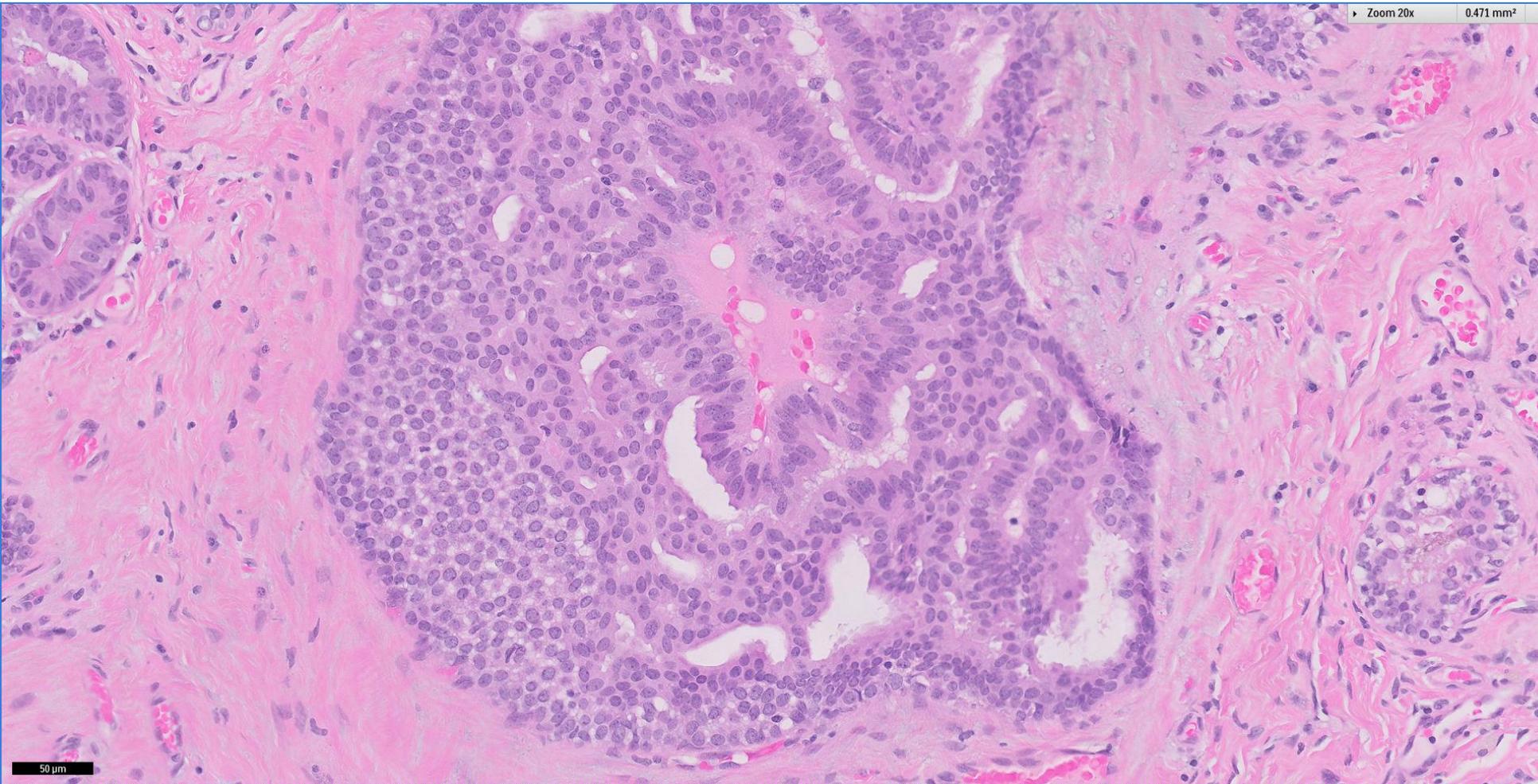
200 μm

Zoom 5x

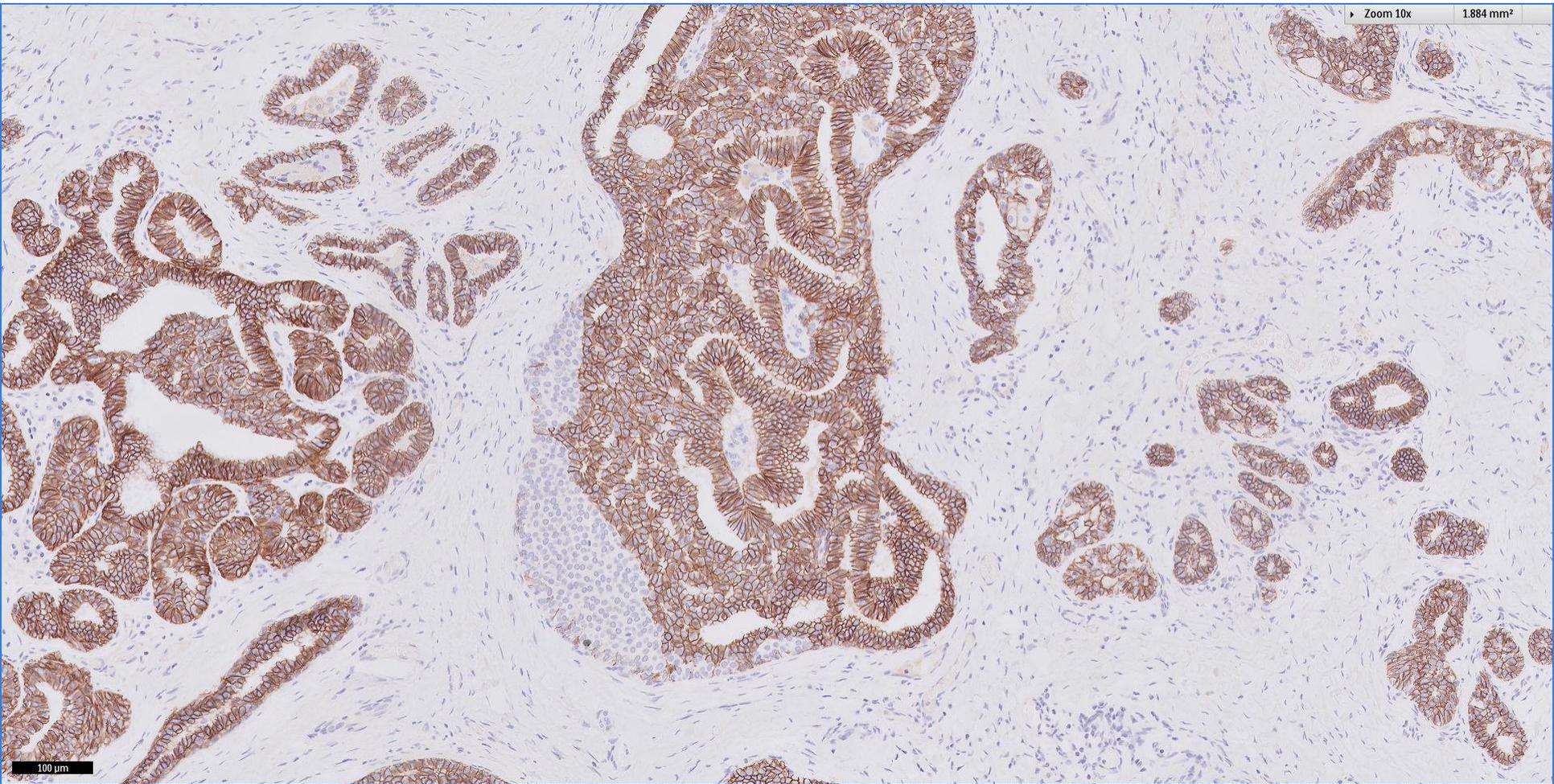
7.534 mm<sup>2</sup>



200  $\mu$ m

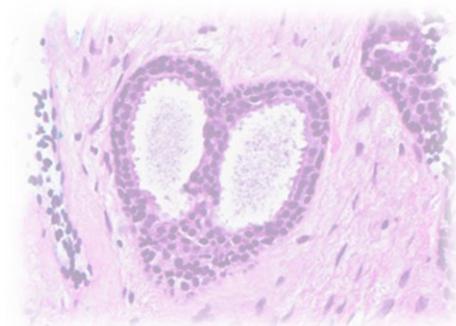
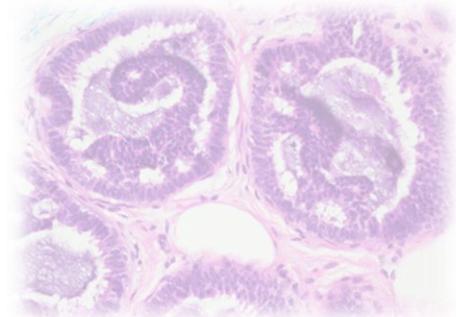
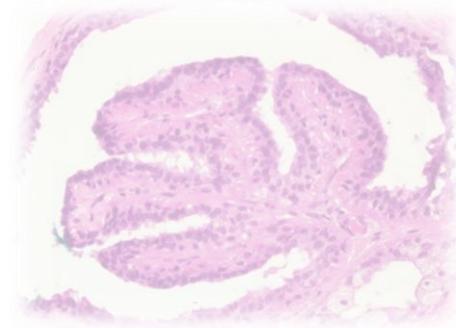


# E-cadherin



# Diagnosis, case 16

- Left breast lump, excision biopsy:  
Ductal carcinoma in situ, low to intermediate nuclear grade, papillary and cribriform architecture, with focal necrosis and scattered calcifications, 39mm, ER+, PR+.  
Atypical lobular hyperplasia.  
Radial scar involved by DCIS.



# Papillary DCIS

- Formerly termed intracystic papillary carcinoma.
- Consists of DCIS lining fibrovascular cores, devoid of myoepithelium but contained within a duct with preserved surrounding myoepithelium.
- In addition to the conventional solid, cribriform, and micropapillary patterns, papillary DCIS may appear deceptively bland with a stratified spindled, compact columnar, or dimorphic pattern.
- The dimorphic pattern features a second population of epithelial cells with clear cytoplasm, which may mimic myoepithelium; this can be resolved with myoepithelial immunostaining which will be negative.
- Papillary DCIS may rarely occur in isolation.
- More commonly, it is one of several architectural patterns in a case of DCIS.
- Like all types of DCIS, papillary DCIS is graded on the basis of the nuclear atypia of the neoplastic epithelium.

**Table 2.03** Histopathological characteristics of breast papillary neoplasms

Neoplasm	Presentation	Papillary architecture	Epithelial cells	Myoepithelial cells
<b>Intraductal papilloma</b>	Single lesion (central papilloma) or multiple lesions (peripheral papillomas)	Generally broad, blunt fronds	Heterogeneous non-neoplastic cell population: luminal cells, usual ductal hyperplasia, apocrine metaplasia and hyperplasia	Present throughout and at periphery
<b>Papilloma with ADH or DCIS</b>	Single lesion (central papilloma) or multiple lesions (peripheral papillomas)	Generally broad, blunt fronds	Focal areas of cells with architectural and cytological features of ADH or DCIS (usually low-grade); background of heterogeneous non-neoplastic cell population	Mostly present throughout and at periphery; may be attenuated in areas of ADH/DCIS
<b>Papillary DCIS</b>	Multiple lesions	Slender fronds, sometimes branching	Entire lesion occupied by a cell population with architectural and cytological features of DCIS of low, intermediate, or rarely high nuclear grade; can grow as a single layer along thin fibrovascular stalks	Absent or scant in papillae; present in attenuated form at the periphery of ducts
<b>Encapsulated papillary carcinoma</b>	Single lesion	Numerous slender fronds, sometimes branching; peripheral, typically well-developed, fibrous capsule	Entire lesion occupied by a cell population with architectural and cytological features of DCIS of low or intermediate grade; can grow as a single layer along thin fibrovascular stalks; cribriform, micropapillary, and solid patterns may be present, with fusion of adjacent papillae	Usually absent throughout and at periphery
<b>Solid papillary carcinoma</b>	Single or multiple lesions	Solid with inconspicuous delicate fibrovascular septa	Entire lesion occupied by a cell population with cytological features of low or intermediate nuclear grade, growing predominantly in a solid manner; spindle cell component; neuroendocrine and mucinous differentiation is frequent	Present or absent within the solid papillary proliferation or at the outer contours of the nodules
<b>Invasive papillary carcinoma</b>	Single lesion	Infiltrating carcinoma with papillary morphology, including fibrovascular cores	Low-, intermediate-, or rarely high-grade nuclear atypia	Absent throughout

ADH, atypical ductal hyperplasia; DCIS, ductal carcinoma in situ.

Note: In rare cases, there are overlapping features between solid papillary carcinoma and encapsulated papillary carcinoma or between encapsulated papillary carcinoma and papillary DCIS, and it may not be possible to distinguish papillary carcinoma subtypes in every case.

**Table 2.04** Immunohistochemical characteristics of breast papillary neoplasms

Neoplasm	Myoepithelial markers (e.g. p63, CK14, SMM, calponin)		High-molecular-weight cytokeratins (CK5/6, CK14)	ER and PR	Other
	Papillary fronds	Periphery of the lesion			
<b>Intraductal papilloma</b>	Positive	Positive	<i>Positive:</i> myoepithelial cells, UDH (heterogeneous positivity) <i>Negative:</i> apocrine metaplasia	<i>Positive (heterogeneous):</i> luminal cells, UDH <i>Negative:</i> apocrine metaplasia	
<b>Papilloma with ADH or DCIS</b>	Positive in the papilloma; may be scant in the ADH/DCIS component	Positive	<i>Positive:</i> myoepithelial cells, UDH (heterogeneous positivity) <i>Negative:</i> apocrine metaplasia, ADH/DCIS	<i>Positive (strong and diffuse):</i> ADH/DCIS <i>Positive (heterogeneous):</i> luminal cells, UDH <i>Negative:</i> apocrine metaplasia	
<b>Papillary DCIS<sup>a</sup></b>	Negative; attenuated layer in rare cases	Positive	<i>Positive:</i> myoepithelial cells <i>Negative:</i> neoplastic cell population	Positive (strong and diffuse)	
<b>Encapsulated papillary carcinoma</b>	Negative	Usually negative	Negative in the neoplastic cell population	Positive (strong and diffuse)	
<b>Solid papillary carcinoma</b>	Negative or positive	Negative or positive	Negative in the neoplastic cell population	Positive (strong and diffuse)	Frequent chromogranin and synaptophysin expression
<b>Invasive papillary carcinoma</b>	Negative	Negative	Negative	Positive	

ADH, atypical ductal hyperplasia; DCIS, ductal carcinoma in situ; UDH, usual ductal hyperplasia.

<sup>a</sup>High-grade lesions may show a different pattern of staining.

*Thank You*