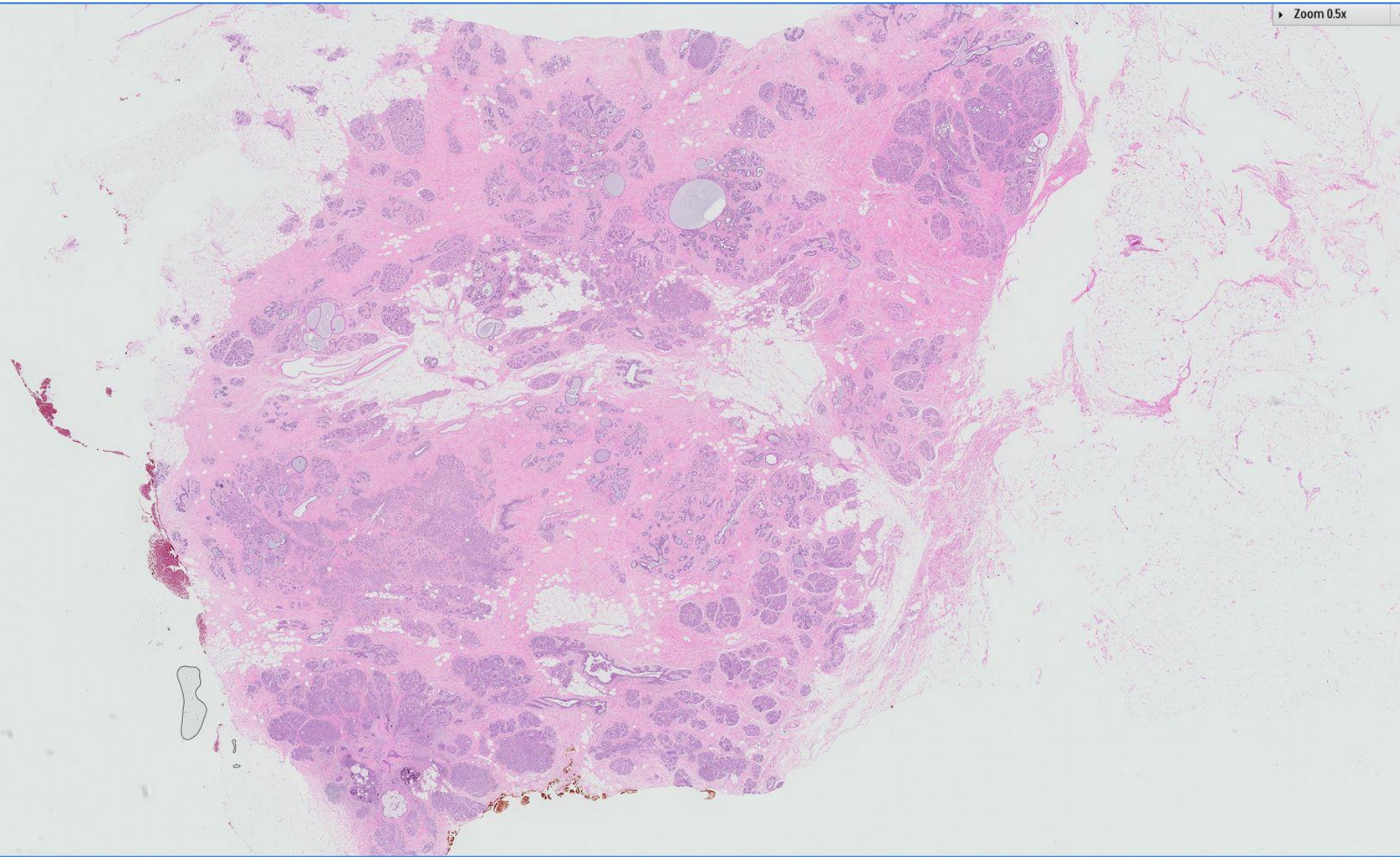


# *Case 28*

52 year old woman underwent left mastectomy with sentinel lymph node biopsy.

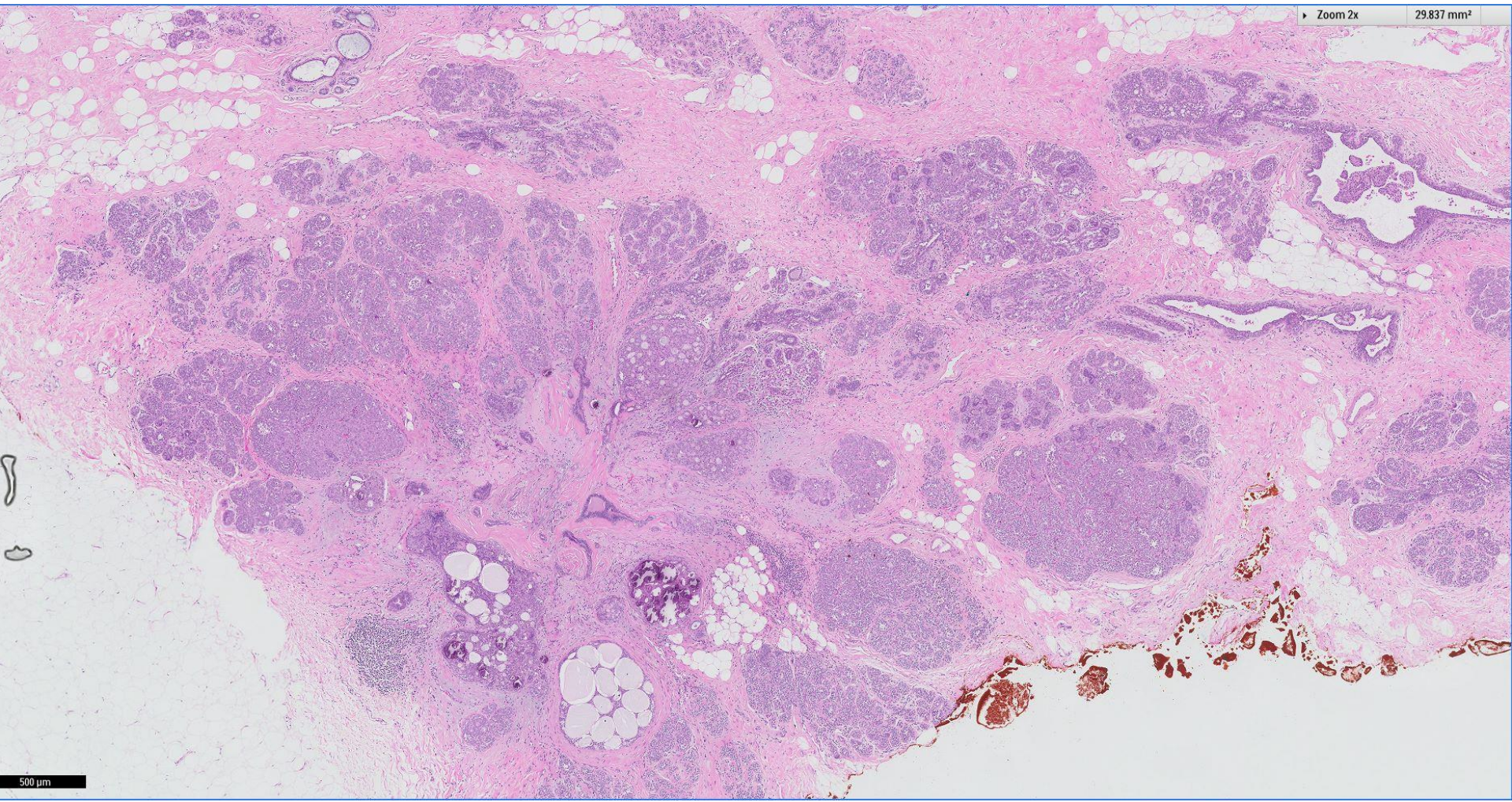
Prior core biopsy disclosed invasive carcinoma.  
The left breast showed multifocal invasive carcinoma.



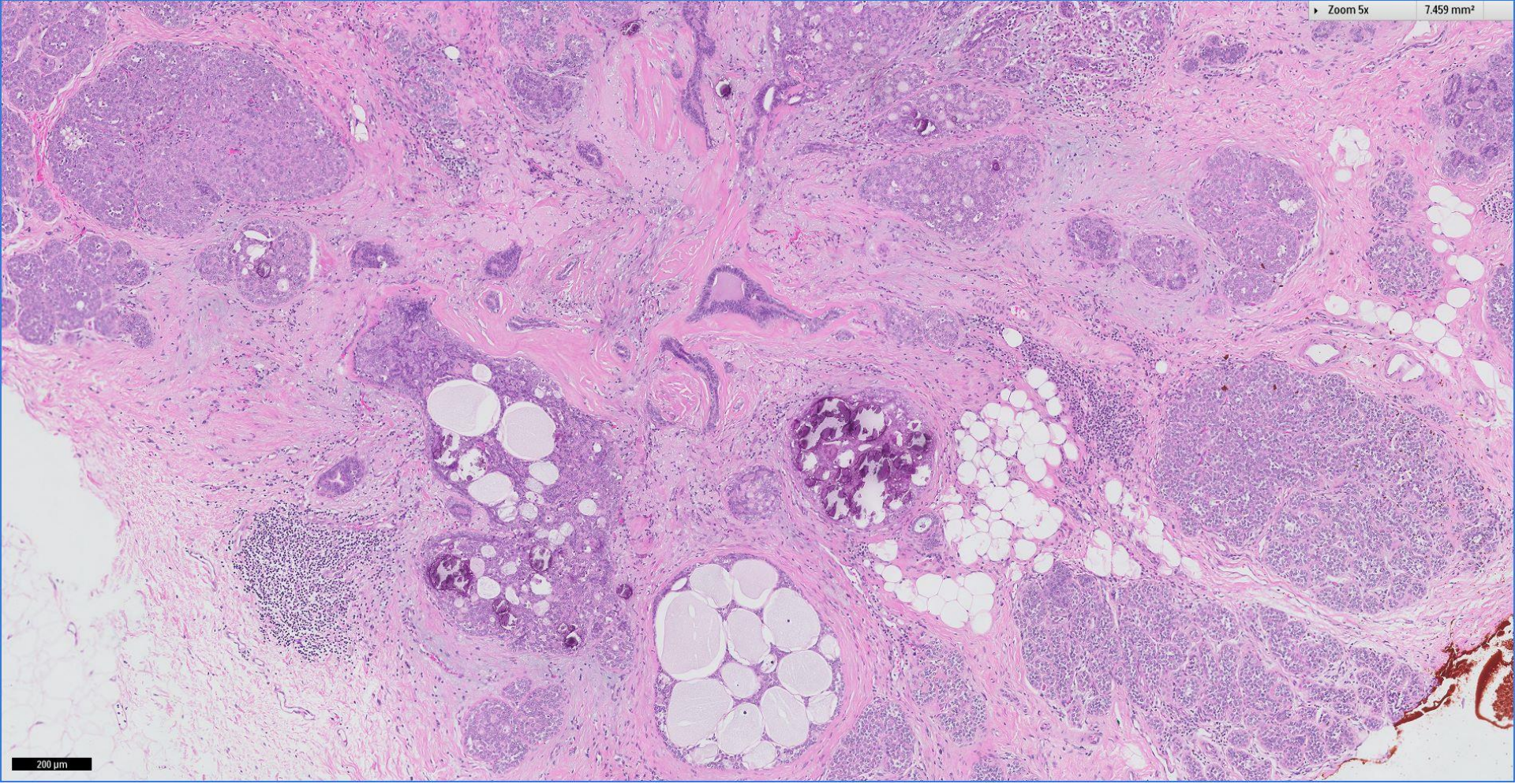


Zoom 2x

29.837 mm<sup>2</sup>

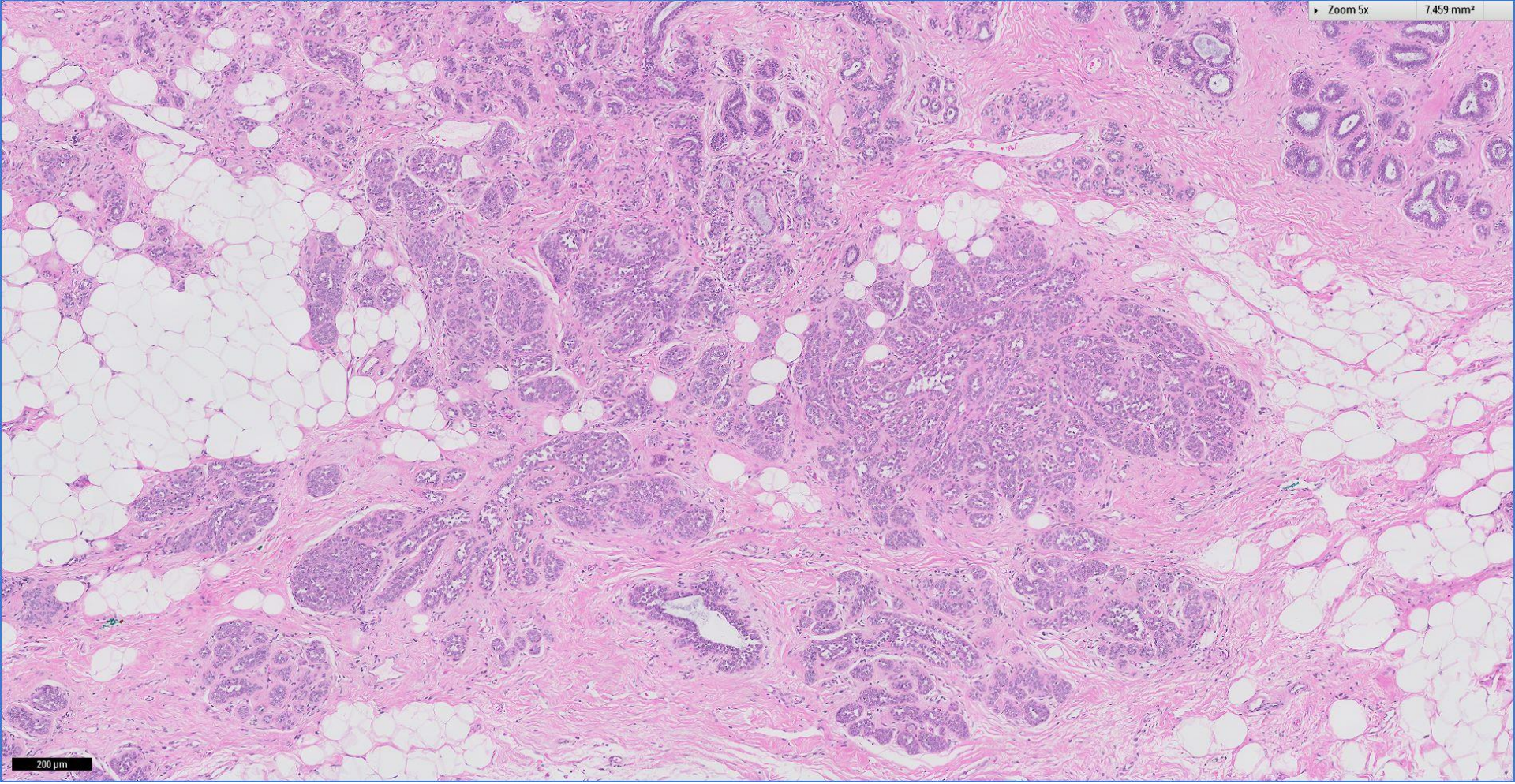


500 μm

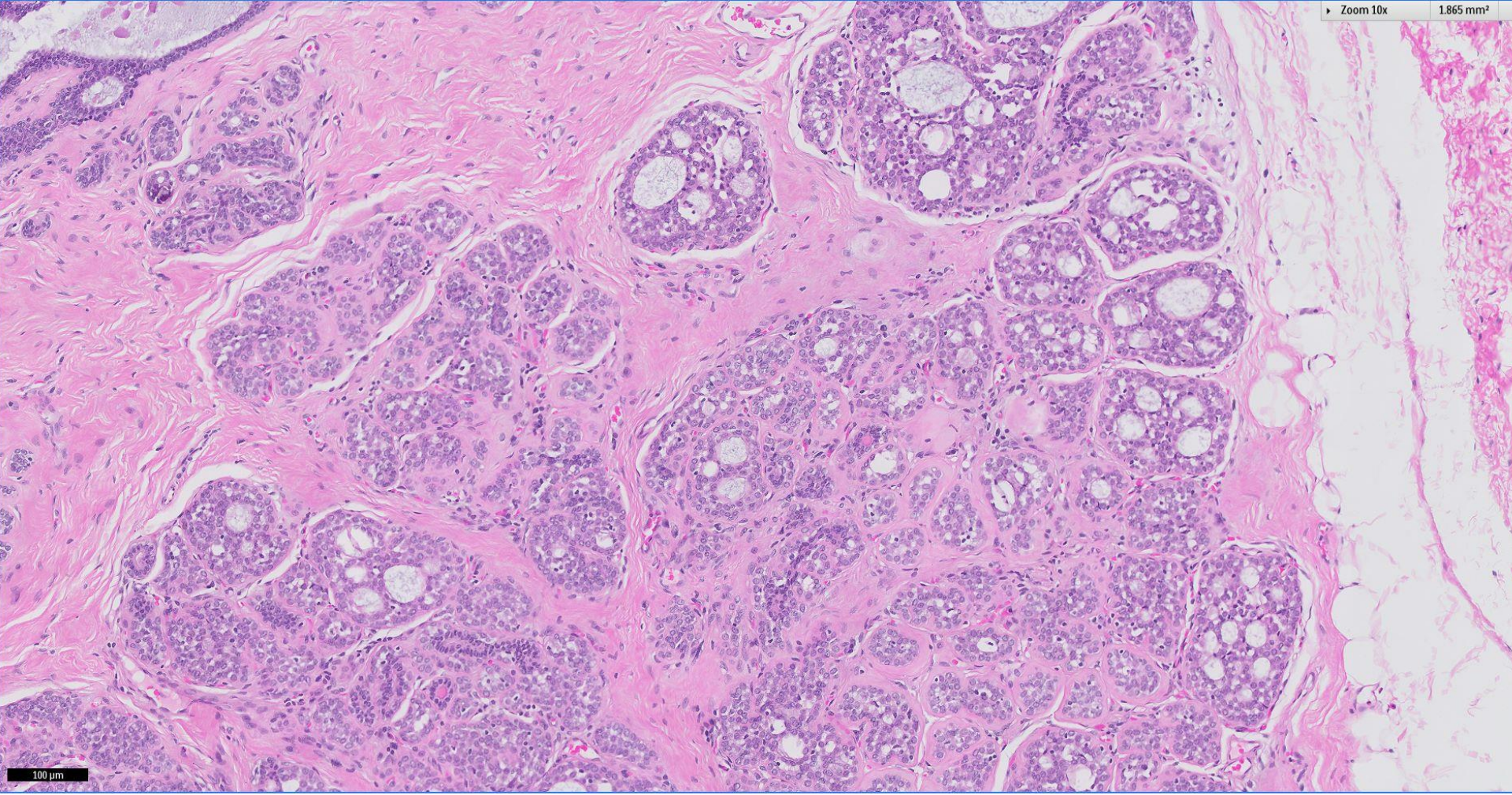


Zoom 5x

7.459 mm<sup>2</sup>



200  $\mu$ m

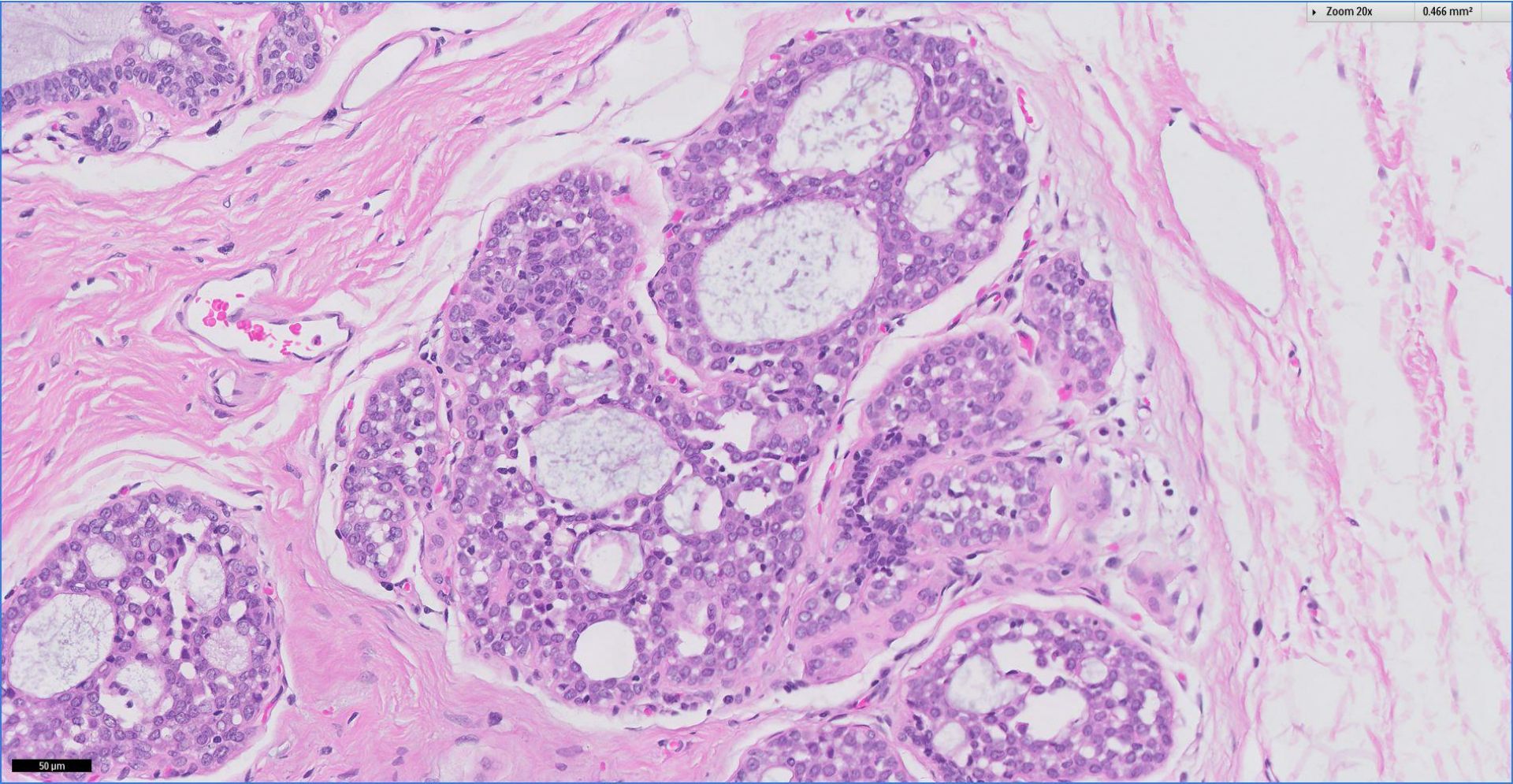


100  $\mu$ m



Zoom 20x

0.466 mm<sup>2</sup>

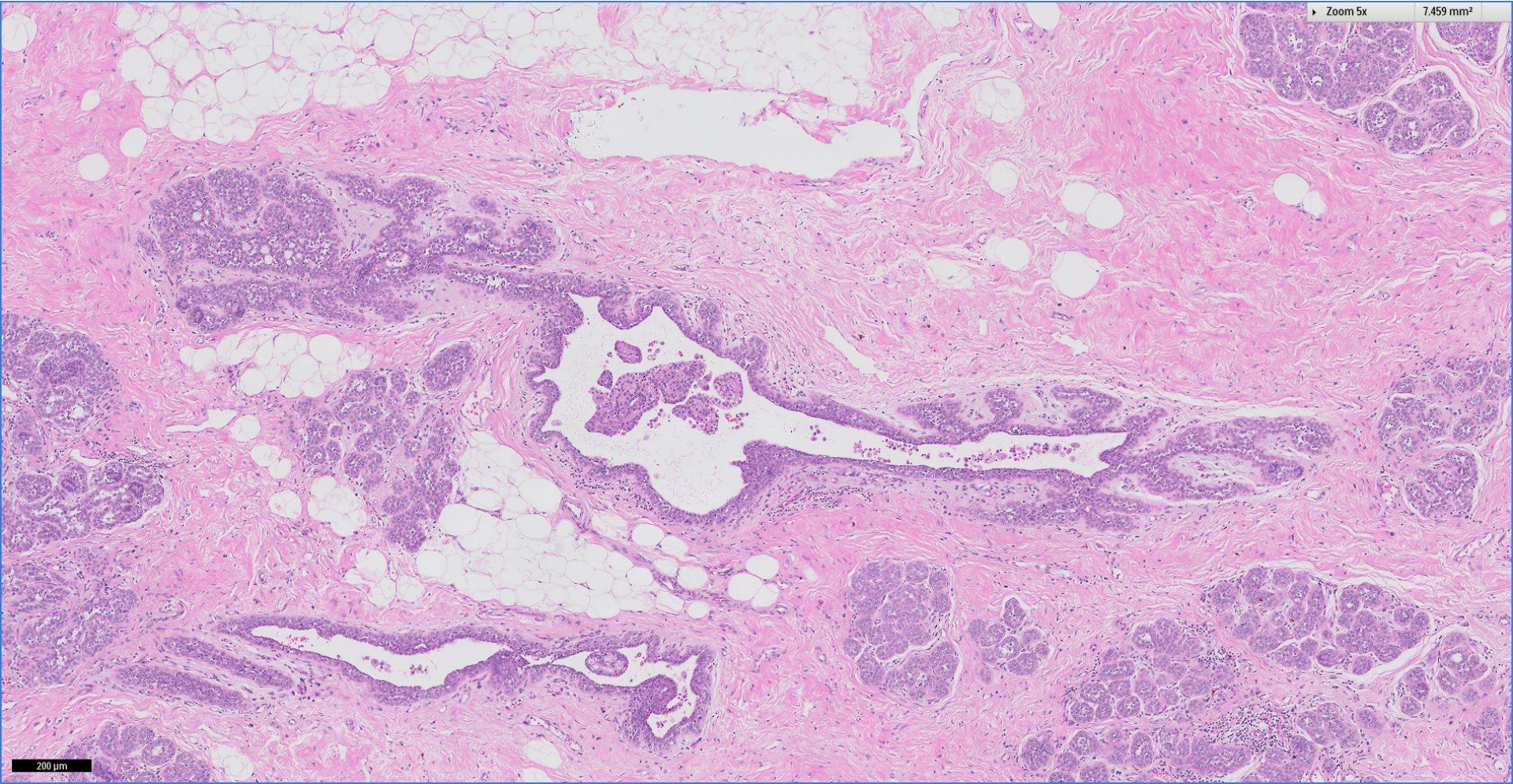


50 μm



Zoom 5x

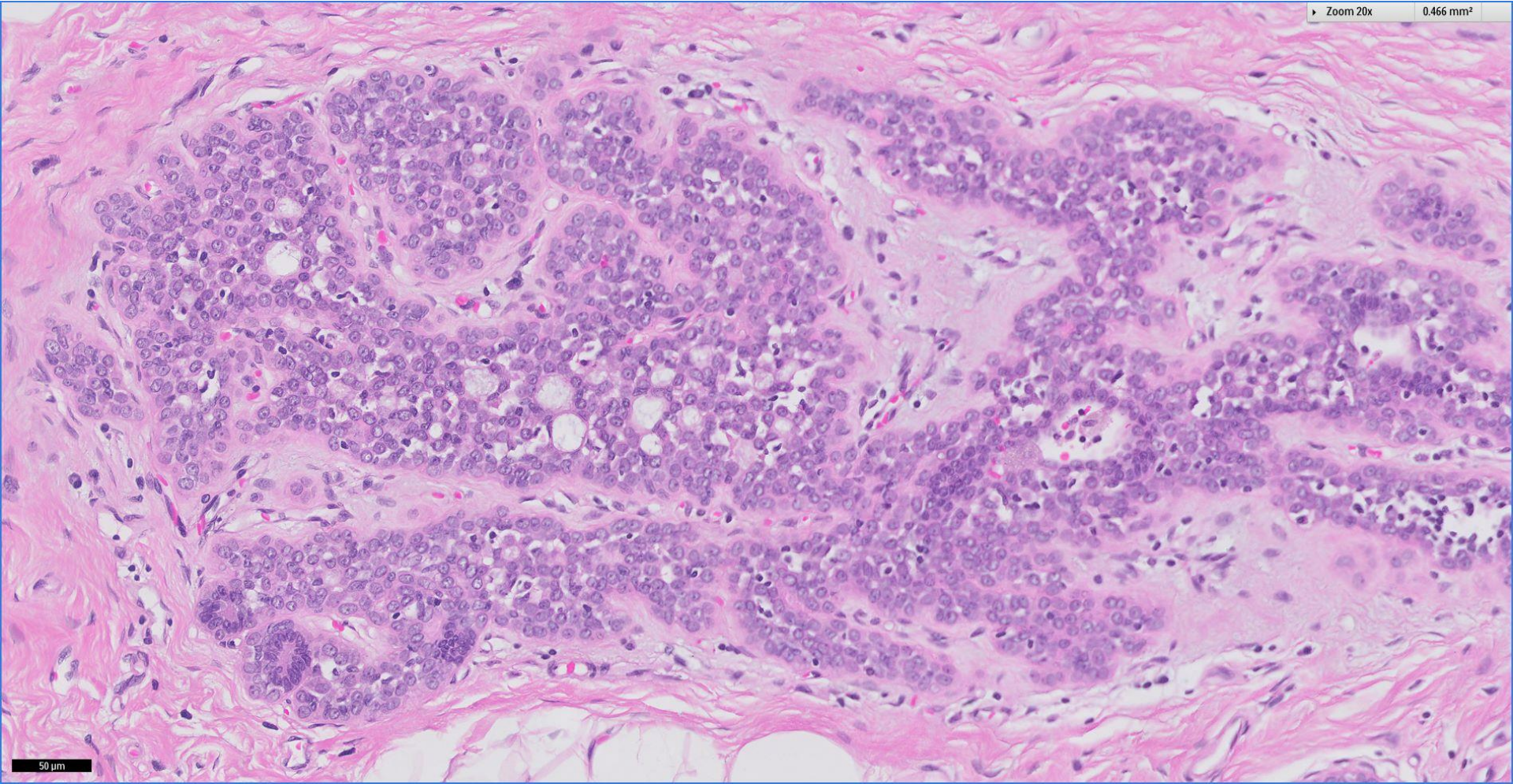
7.459 mm<sup>2</sup>



200 µm

Zoom 20x

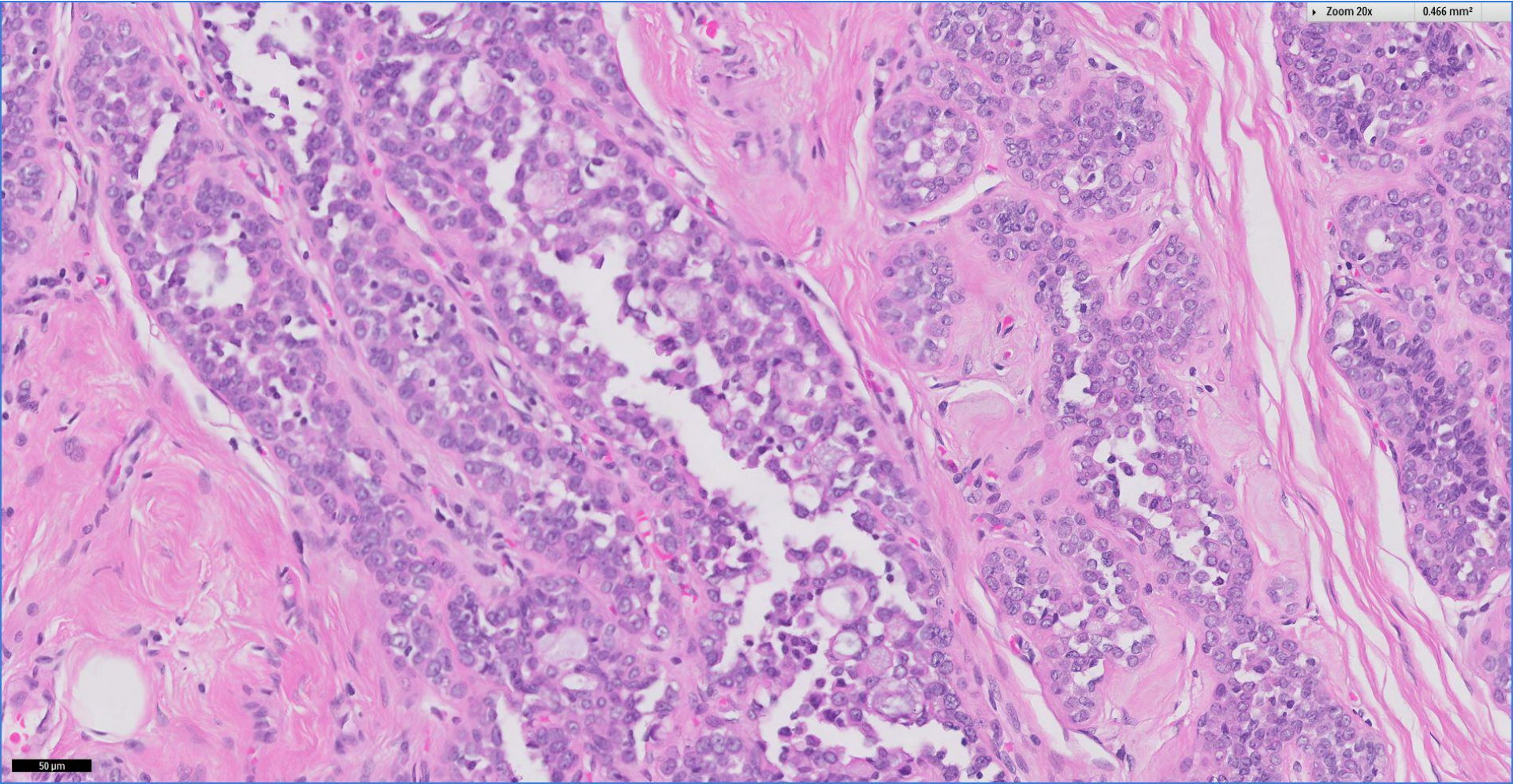
0.466 mm<sup>2</sup>



50 μm

Zoom 20x

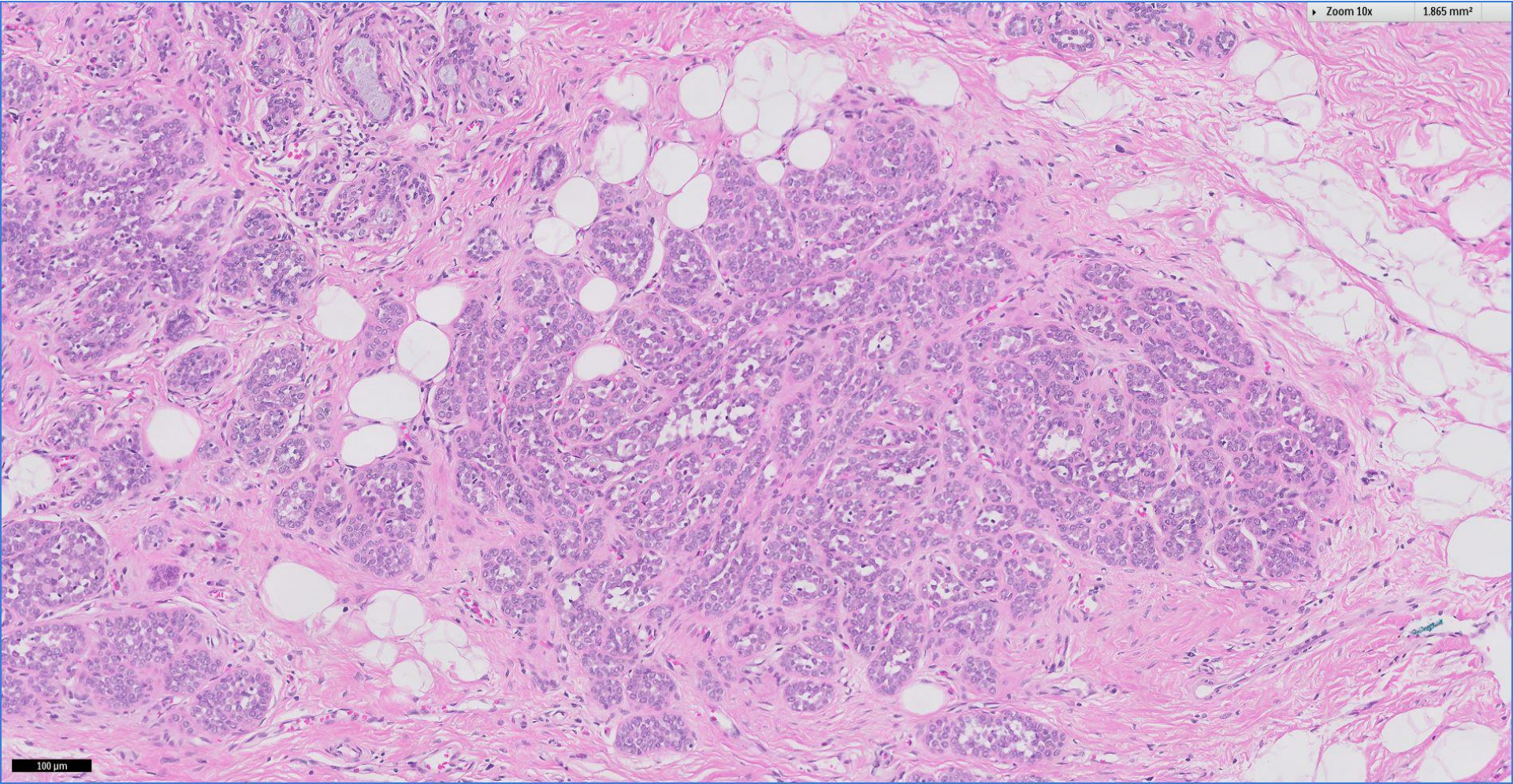
0.466 mm<sup>2</sup>



50 µm

Zoom 10x

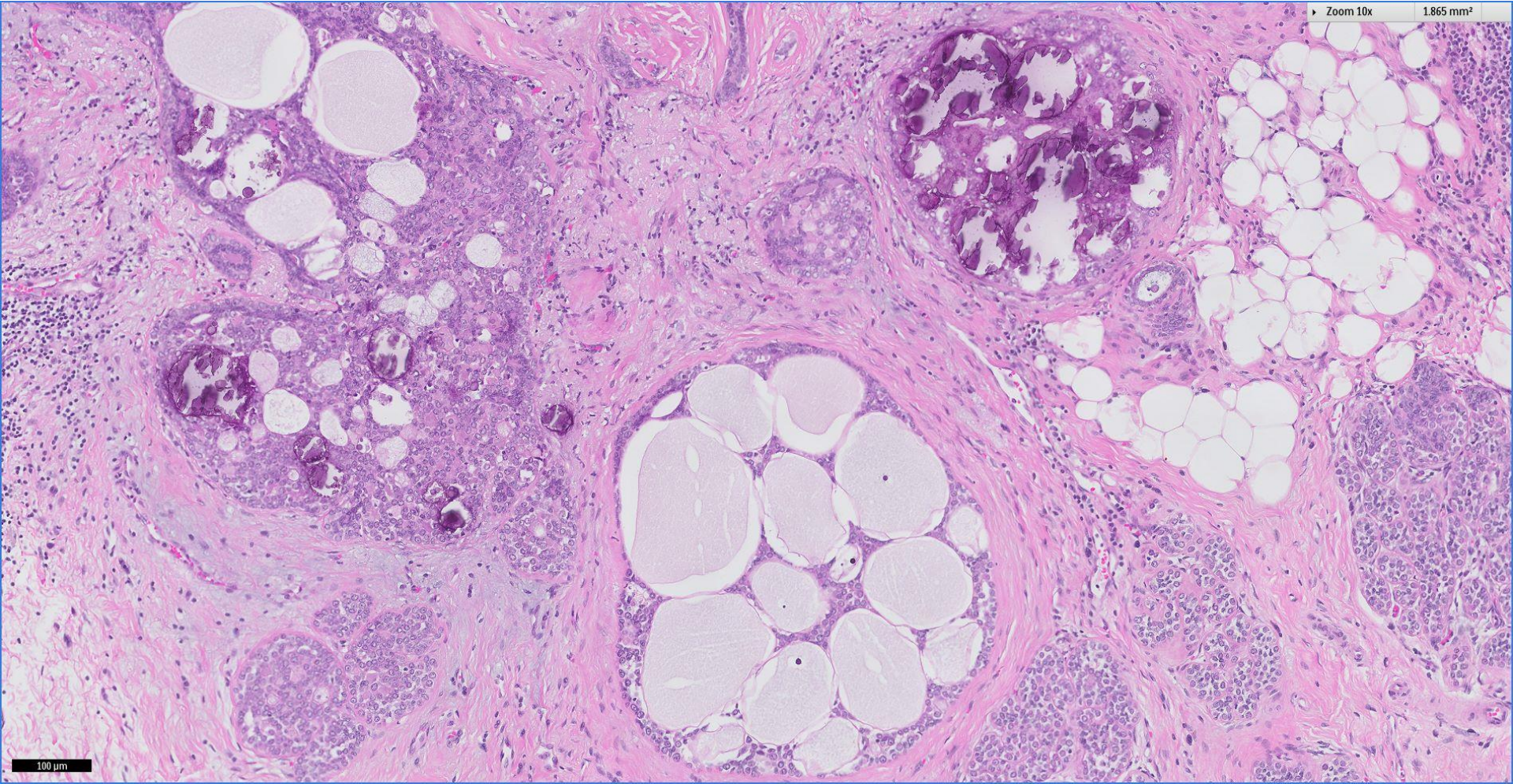
1.865 mm<sup>2</sup>



100  $\mu$ m

Zoom 10x

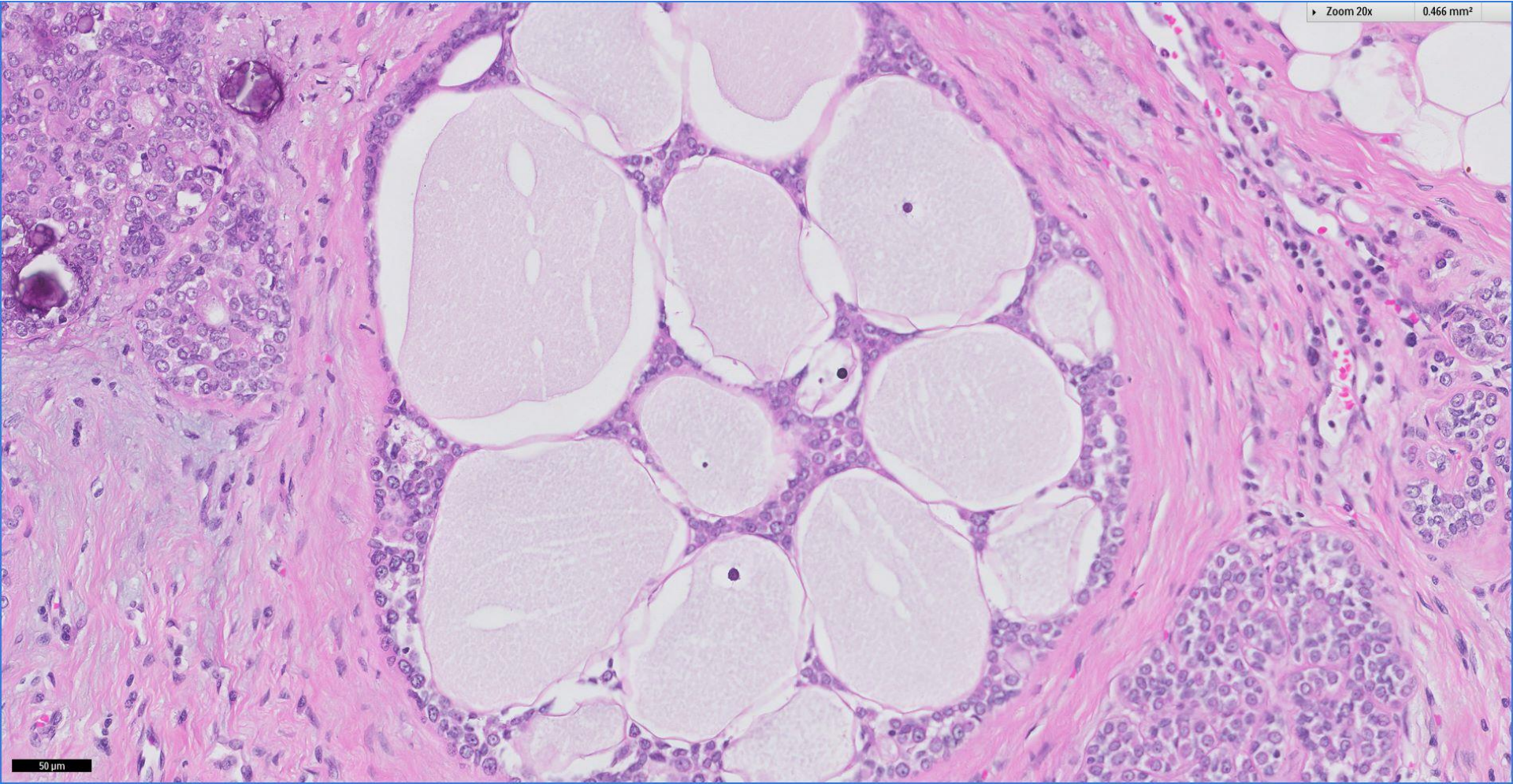
1.865 mm<sup>2</sup>



100  $\mu$ m

Zoom 20x

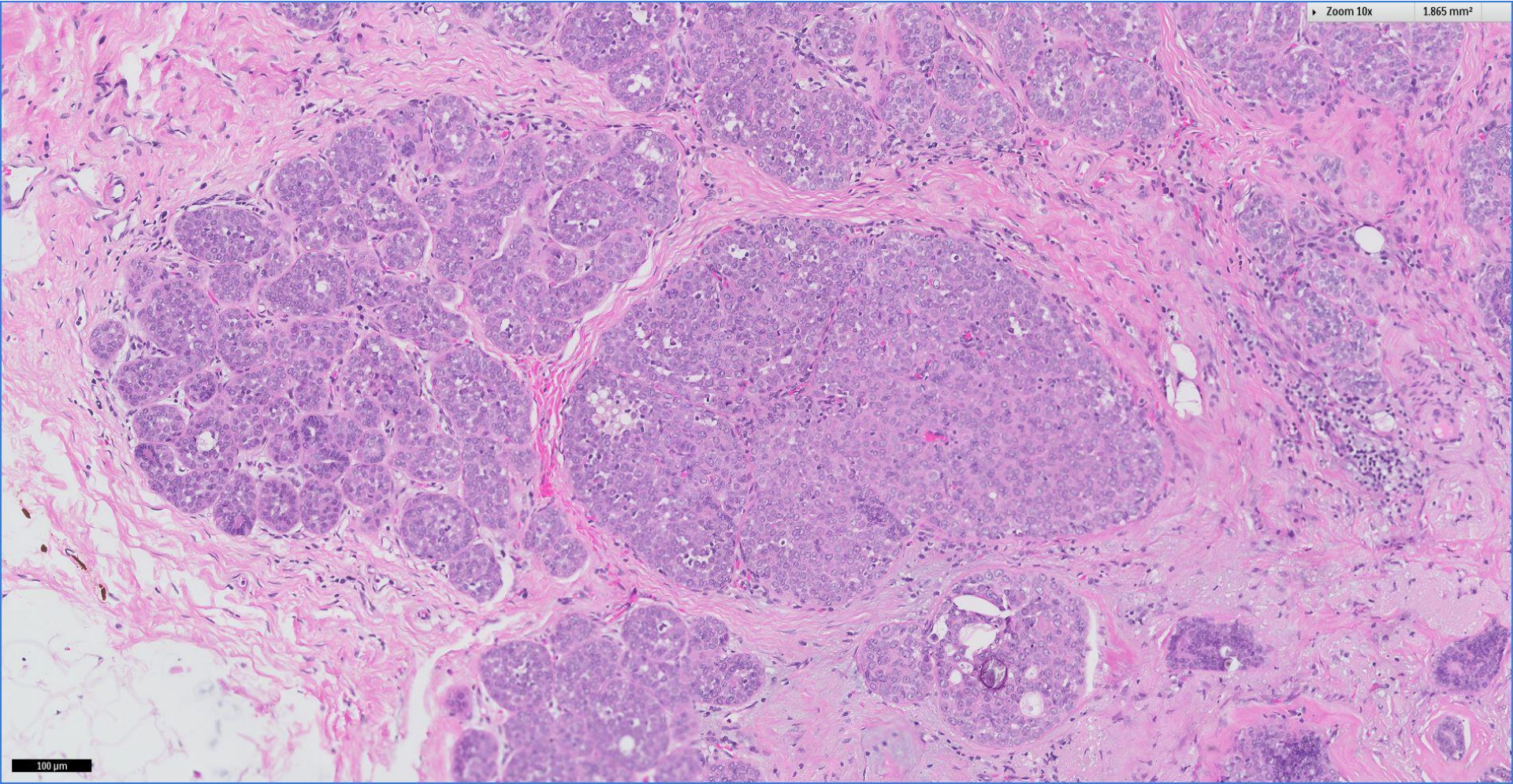
0.466 mm<sup>2</sup>



50  $\mu$ m

Zoom 10x

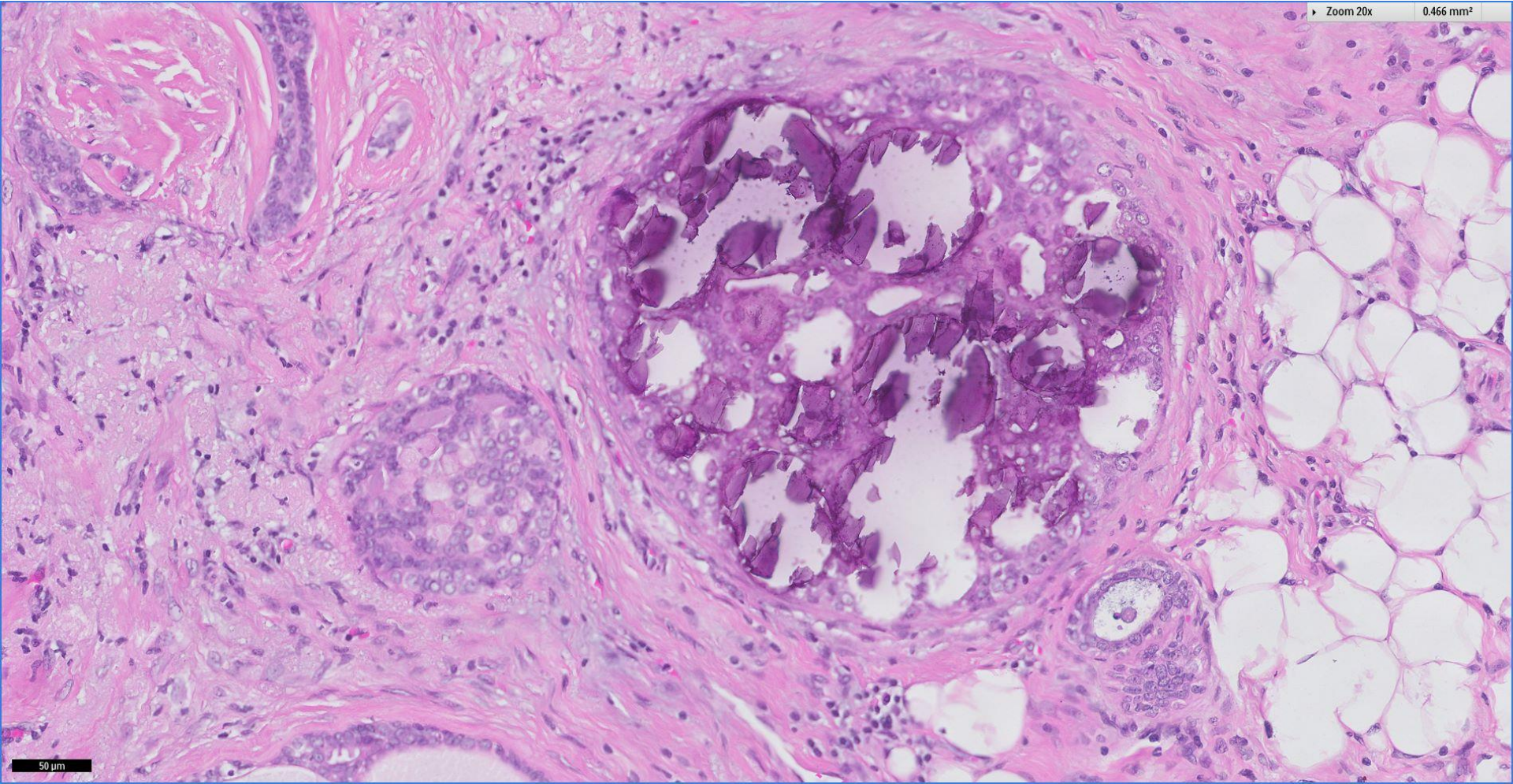
1.865 mm<sup>2</sup>



100  $\mu$ m

Zoom 20x

0.466 mm<sup>2</sup>



50 μm



Left breast tissue:

*Fibrocystic changes with calcifications*

*Radial scar*

*Collagenous spherulosis*

*Lobular neoplasia*

*(elsewhere there is multifocal invasive lobular carcinoma, not shown)*



# Radial scar

- Derived from ‘strahlige Narben’, introduced by Hamperl in 1975.
- Refers to the stellate appearance of these lesions.
- Synonymous with ***radial sclerosing lesion***.
- Mimics cancer radiologically.
- Histologically characterised by a central sclerotic zone surrounded by a corona of ducts and lobules with variable proliferative changes.



# Radial sclerosing lesion/Radial scar

- Reports of associated carcinoma in up to 32% of cases.
- Frequency of cancer occurrence is related to the size of RSL ( $\geq 7\text{mm}$ ) and age of patient ( $>50\text{years}$ ).
- Histological differential diagnosis of tubular carcinoma.
- If found on core biopsy, requires surgical excision.
- If incidental and microscopic on core biopsy, does not need surgical excision.
- Approach to removing RSL without atypia via vacuum assisted technique as an alternative to surgical excision.



# Collagenous spherulosis

- Incidentally discovered benign myoepithelial lesion, often seen in intraductal papillomas as well as usual ductal hyperplasia (UDH), adenosis and other breast conditions.
- It may sometimes be associated with microcalcifications that can be detected radiologically.
- Collagenous spherulosis features intraluminal eosinophilic, hyaline, acellular spherules rimmed by myoepithelial cells, histologically mimicking cribriform ductal carcinoma in situ (DCIS) or adenoid cystic carcinoma.

*WHO 2012*



# Collagenous spherulosis & lobular neoplasia

- Confluence of collagenous spherulosis with lobular neoplasia may accentuate the resemblance to cribriform ductal carcinoma in situ.

*Am J Surg Pathol. 1995 Dec;19(12):1366-70.*

# Immunohistochemical comparison of collagenous spherulosis, cribriform DCIS, invasive cribriform carcinoma, adenoid cystic carcinoma.

	<b>p63</b>	<b>S100</b>	<b>SMA</b>	<b>CD117</b>	<b>ER</b>	<b>CK14</b>
<b>Collagenous spherulosis*</b>	+	+	+	-	+(patchy)	+
<b>Cribriform DCIS</b>	+(MEC)	+(MEC)	+(MEC)	-	+(diffuse)	+(MEC)
<b>Invasive cribriform carcinoma</b>	-	-	-	-	+(diffuse)	-
<b>Adenoid cystic carcinoma</b>	+(diffuse)	+/-	+/-	+	-	+(diffuse)

MEC = myoepithelial cells

\* Immunostaining for p63, S100, SMA is seen around the pseudolumens of collagenous spherulosis, decorating myoepithelial cells

**Table 9.01** Classification of myoepithelial and epithelial–myoepithelial lesions

	<b>Myoepithelial lesions</b>	<b>Epithelial–myoepithelial lesions</b>
Benign	Myoepithelial hyperplasia Collagenous spherulosis	Pleomorphic adenoma Adenomyoepithelioma
Malignant	Myoepithelial carcinoma <sup>a</sup>	Adenomyoepithelioma with carcinoma - Carcinoma derived from luminal epithelium - Carcinoma derived from myoepithelium - Epithelial–myoepithelial carcinoma (carcinoma derived from both luminal epithelium and myoepithelium) Adenoid cystic carcinoma
<sup>a</sup> Myoepithelial carcinoma (malignant myoepithelioma) is classified under metaplastic carcinoma.		

WHO 2012



 Breast  
Pathology  
Course 2014

