

## Case 33

45 year old Chinese female.

Left breast lump excision.

Prior trucut biopsy showed a benign fibroepithelial lesion in keeping with a fibroadenoma.



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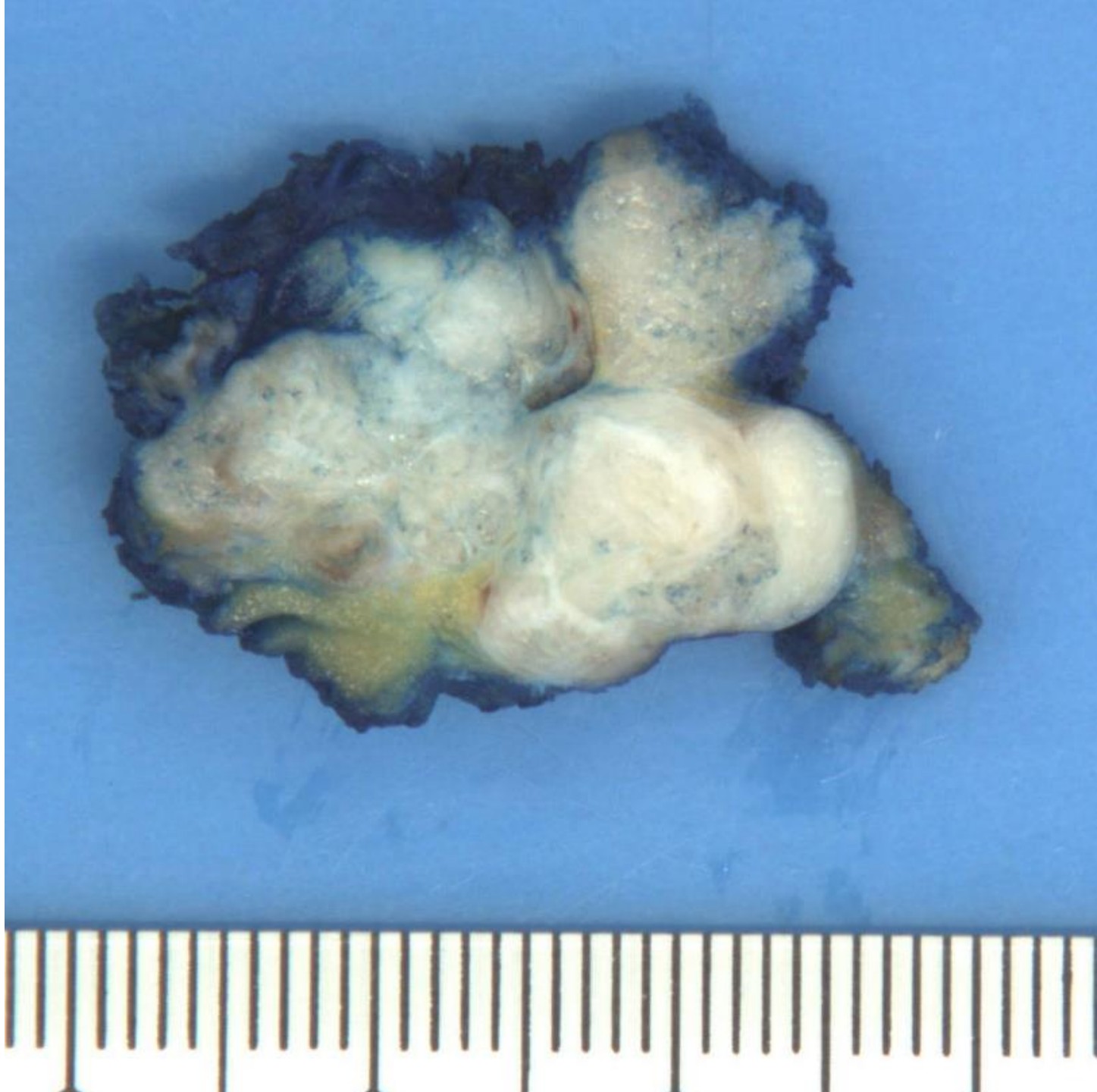
Division of Pathology

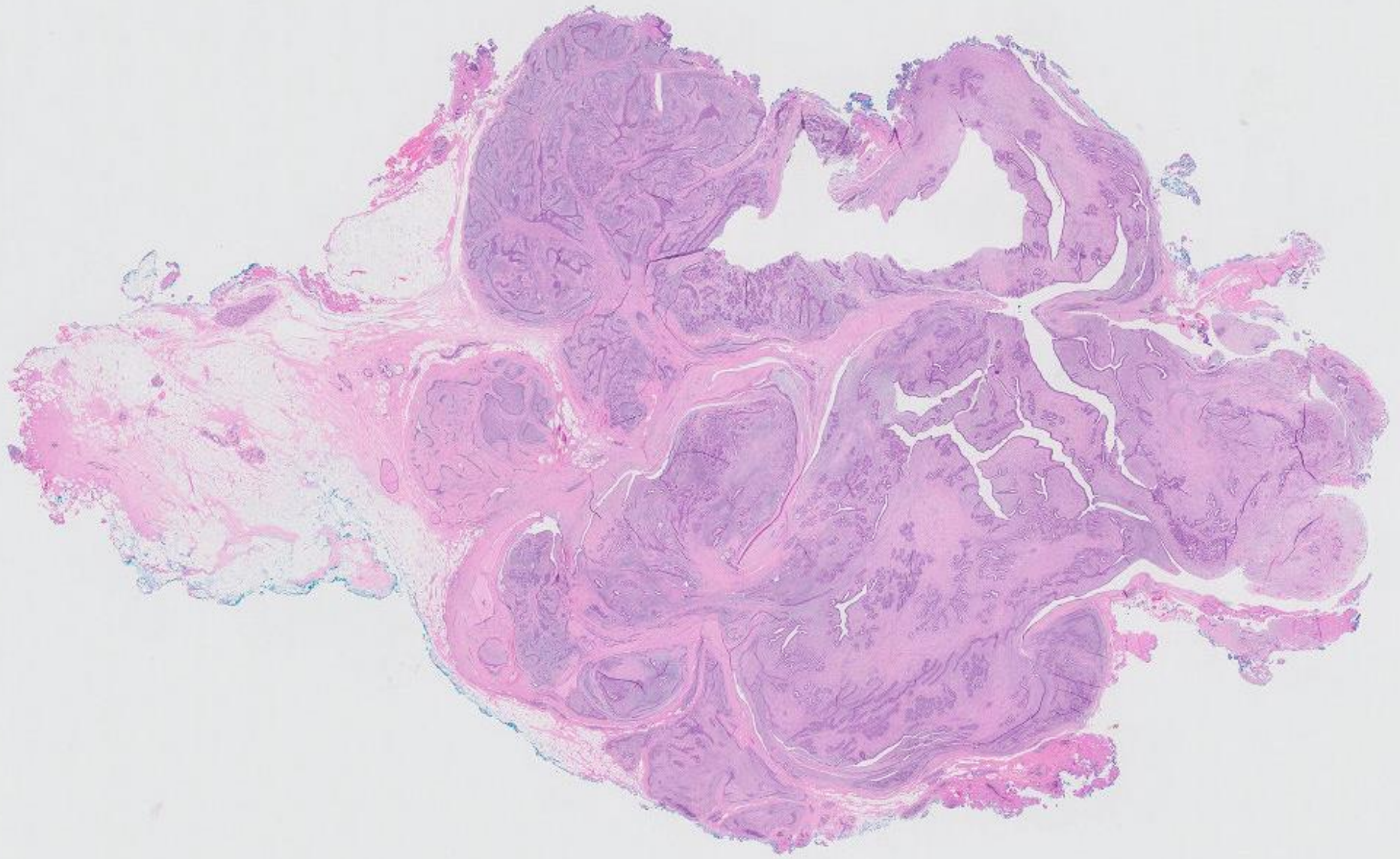


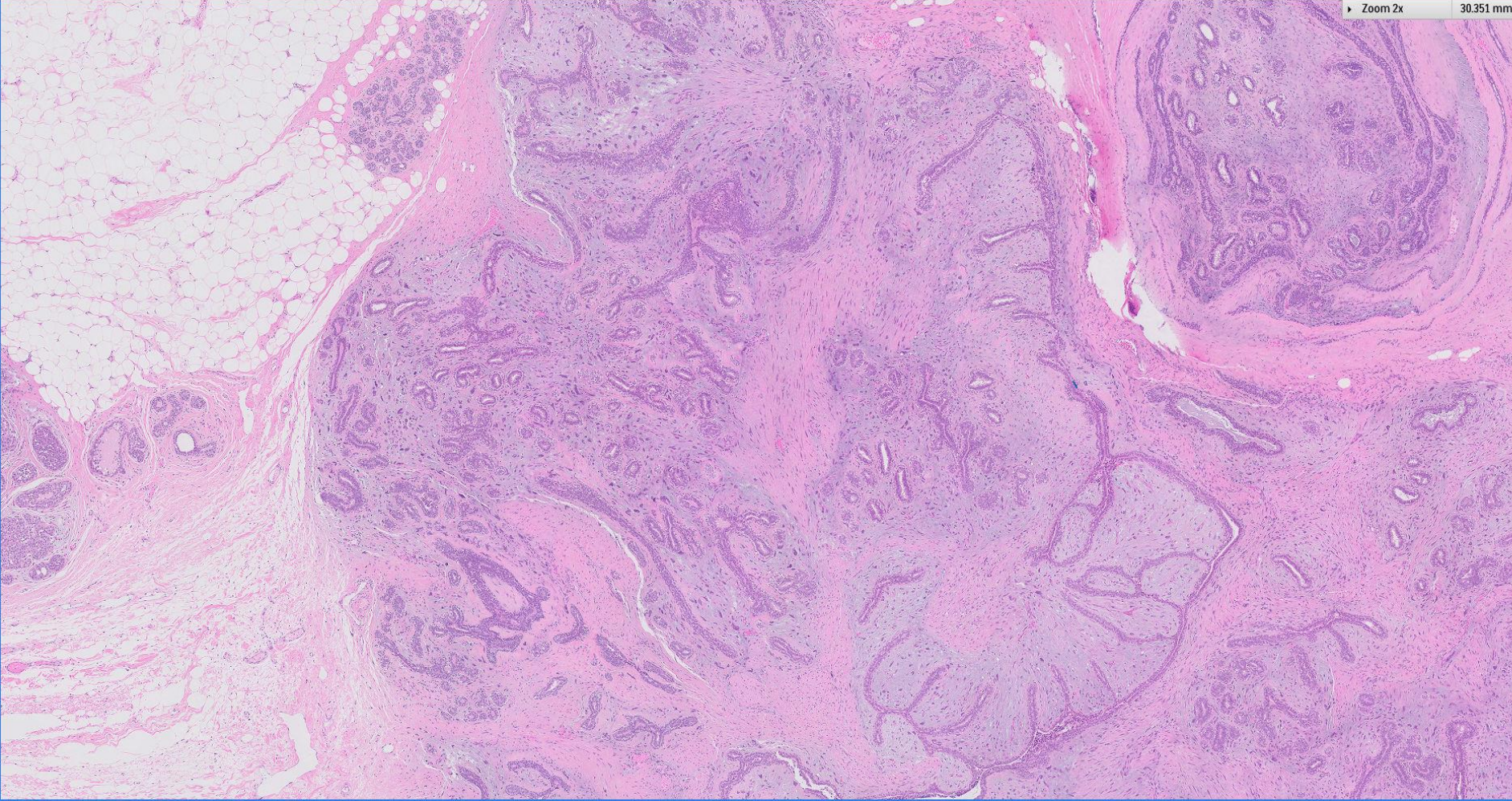
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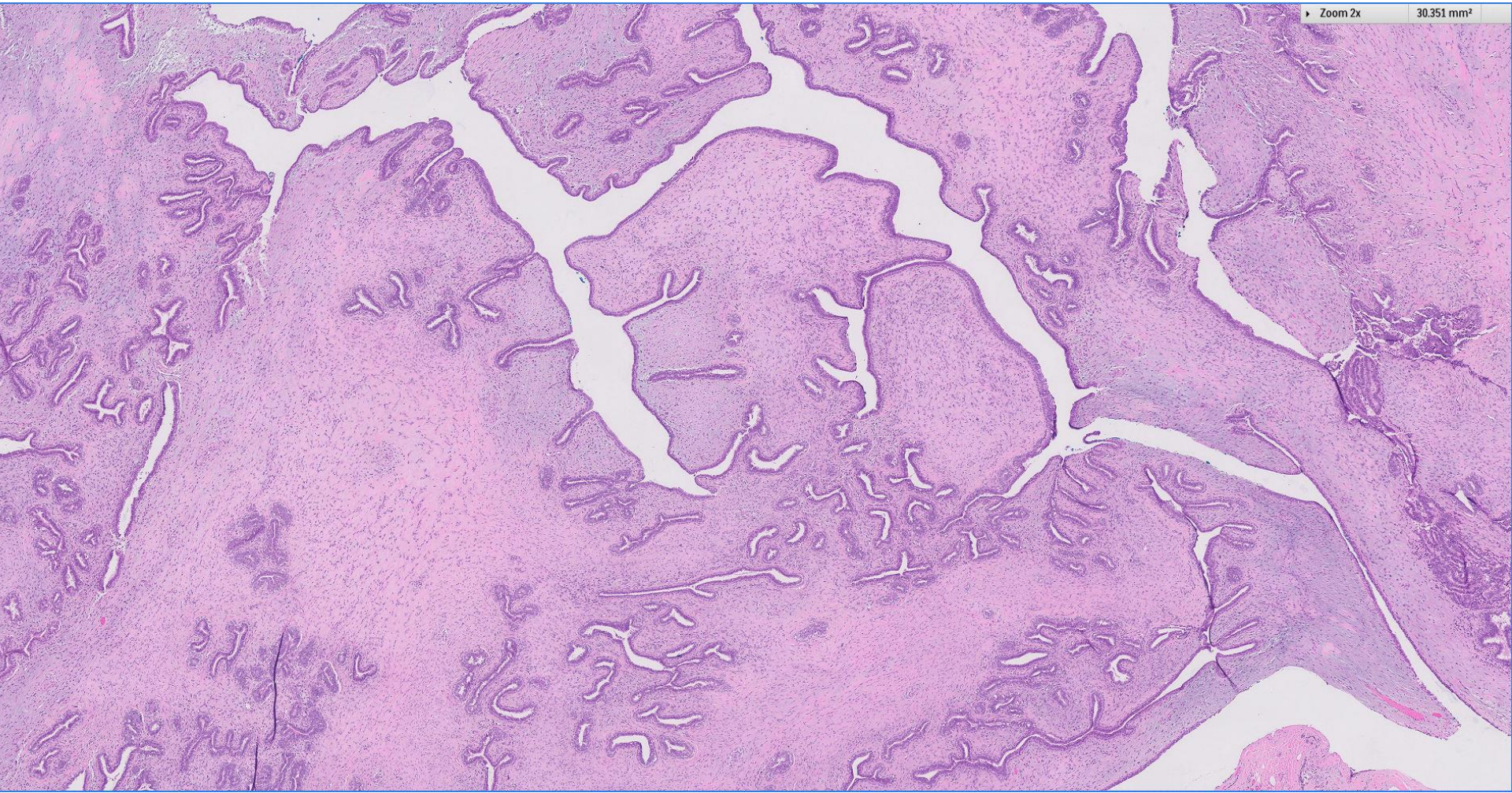
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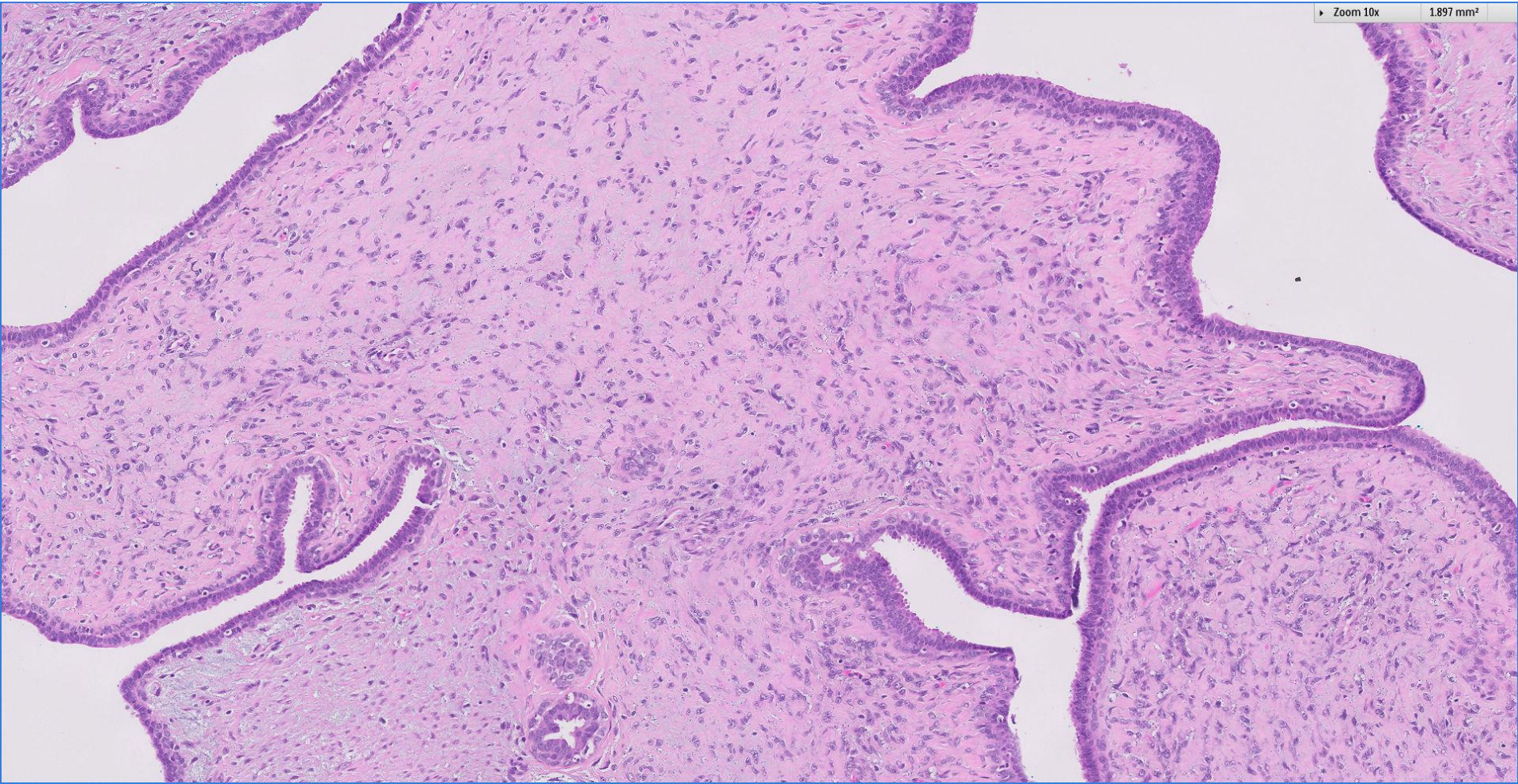




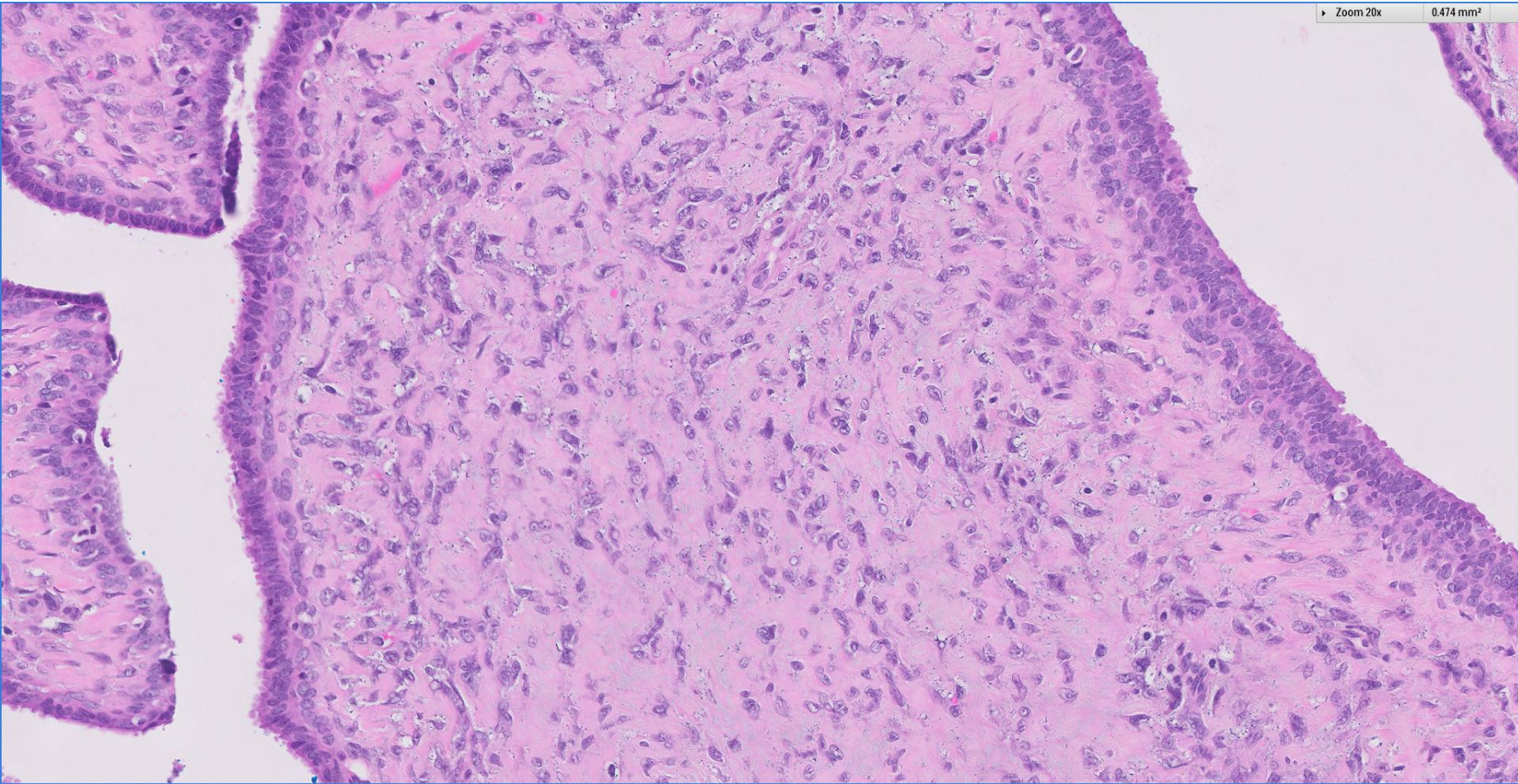


Zoom 10x

1.897 mm<sup>2</sup>

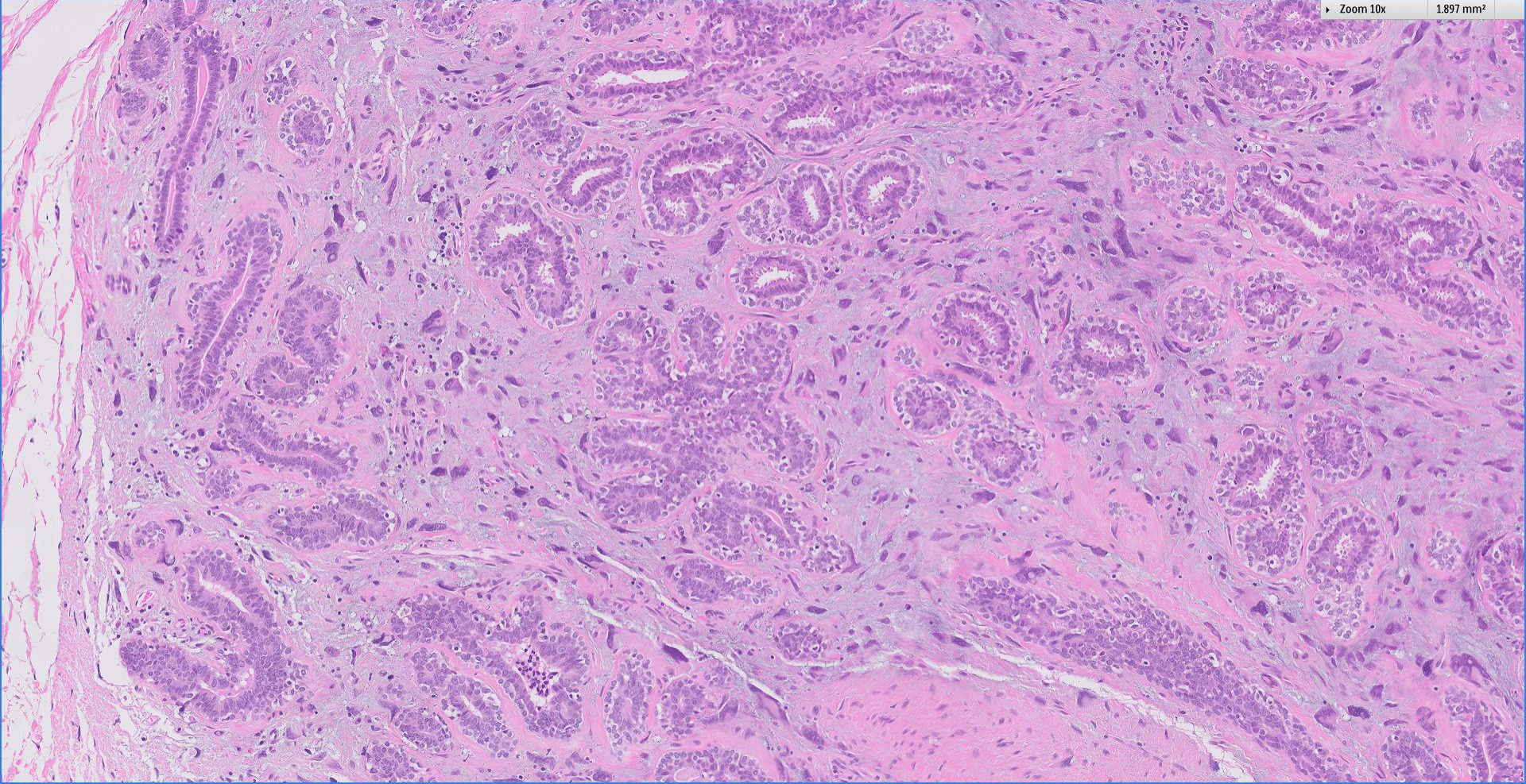


Zoom 20x 0.474 mm<sup>2</sup>



Zoom 10x

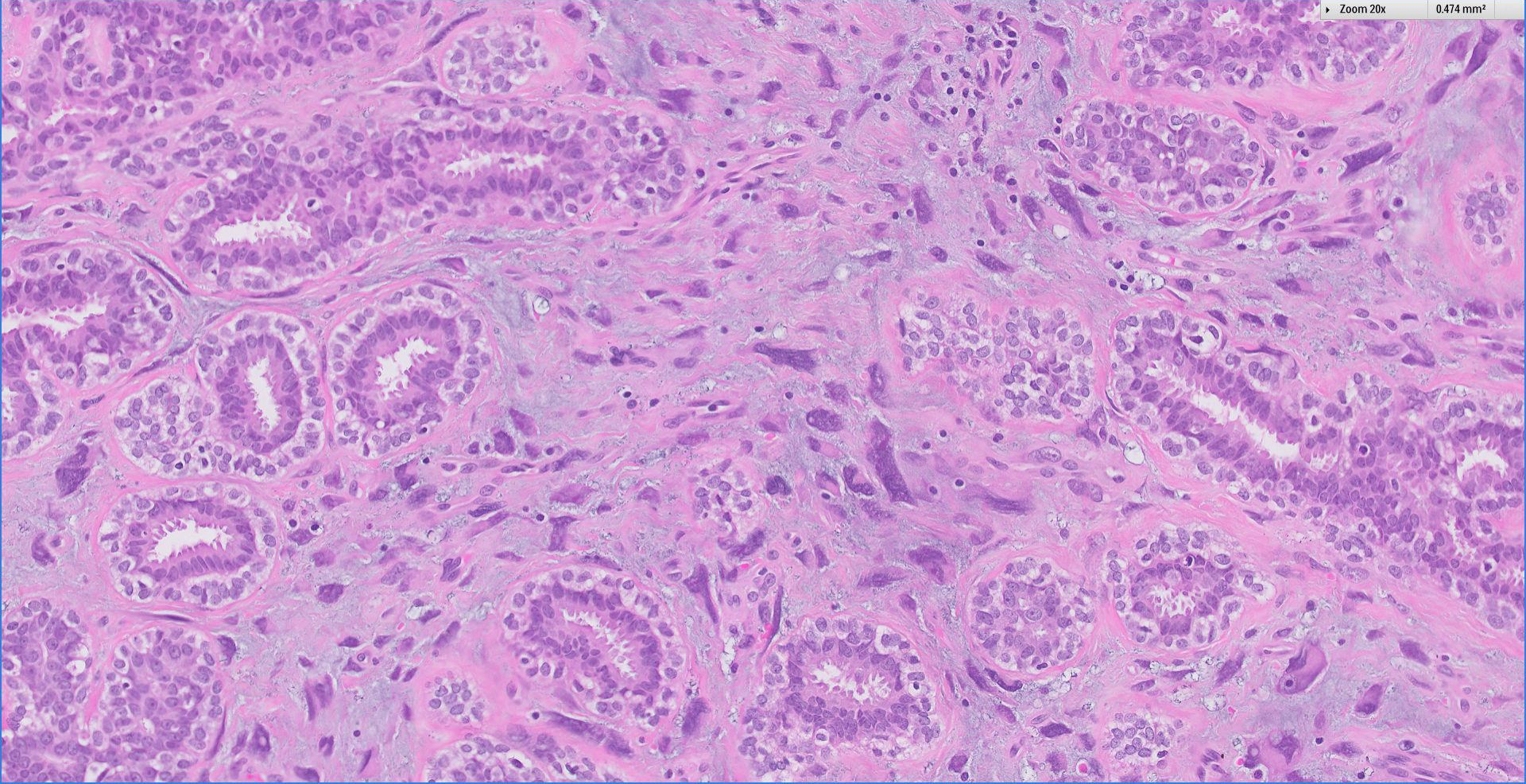
1.897 mm<sup>2</sup>

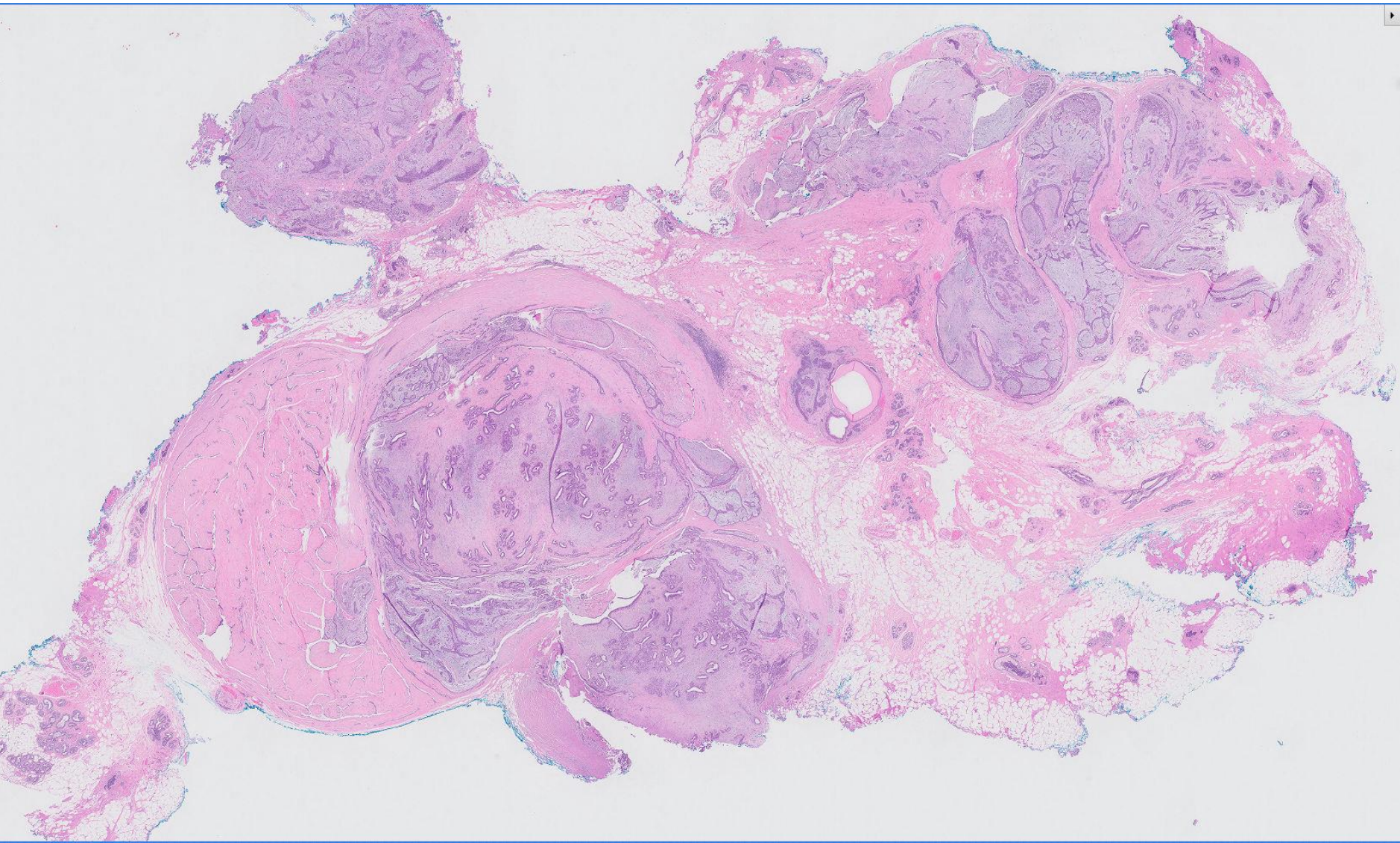




Zoom 20x

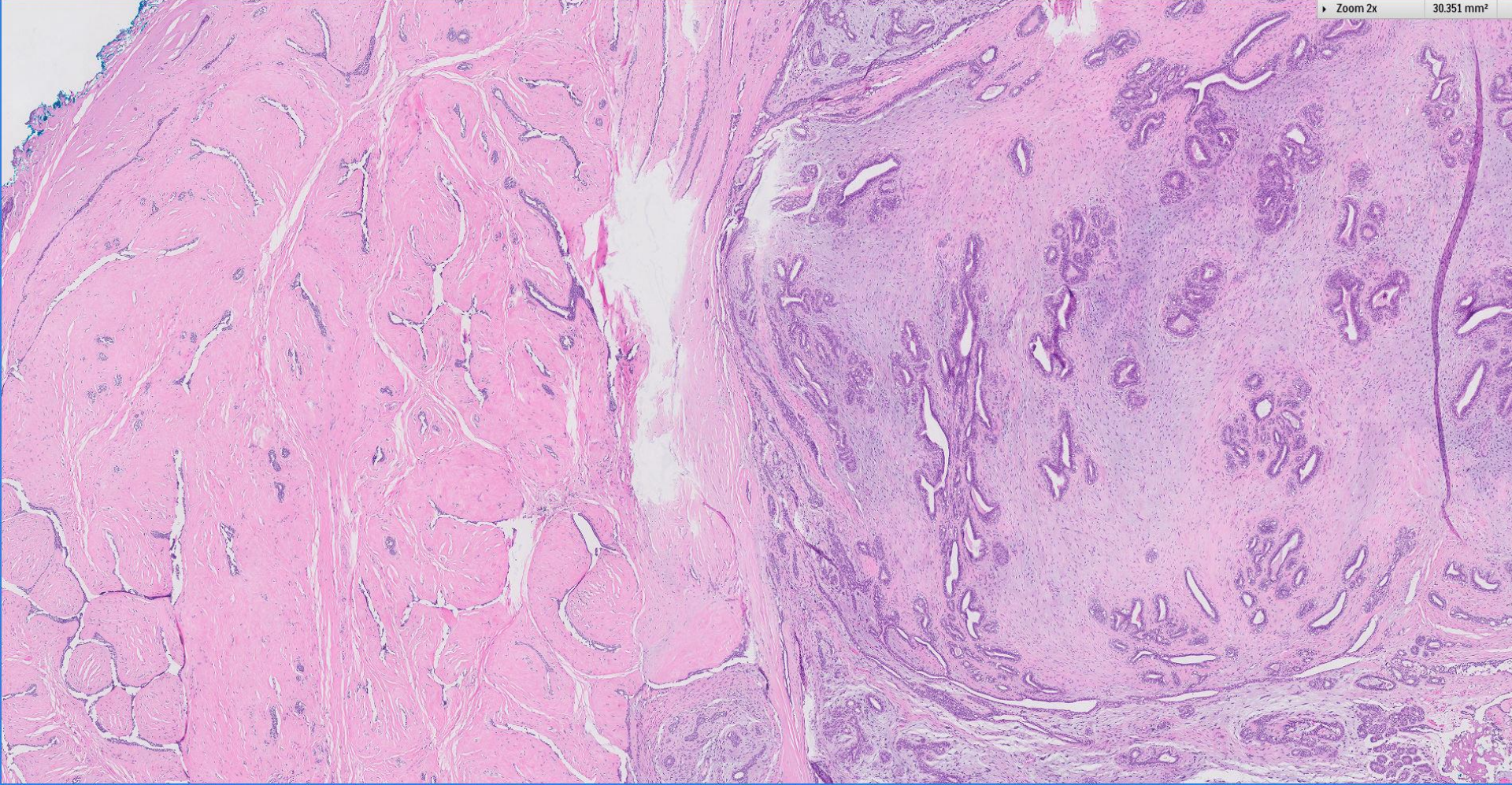
0.474 mm<sup>2</sup>





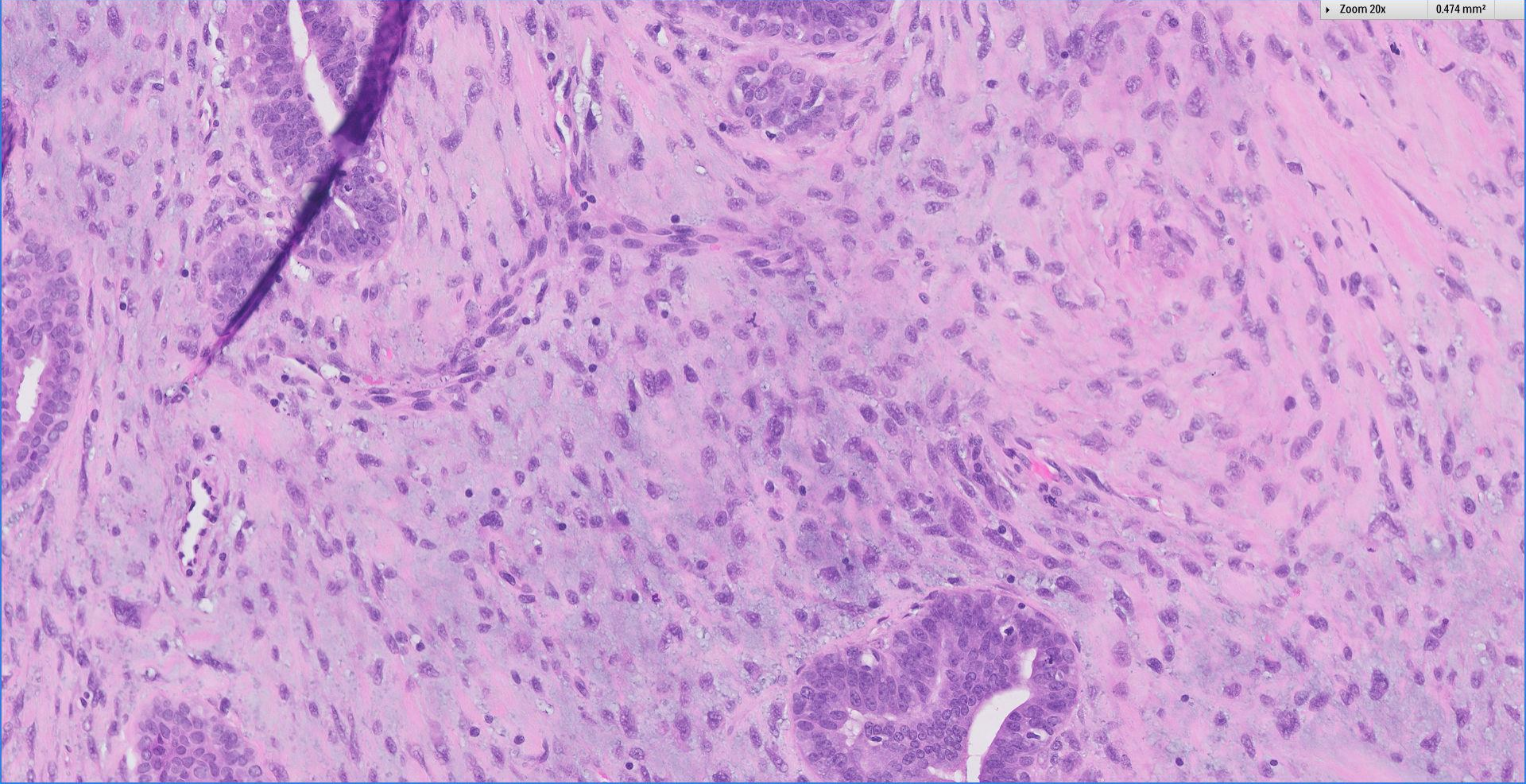
Zoom 2x

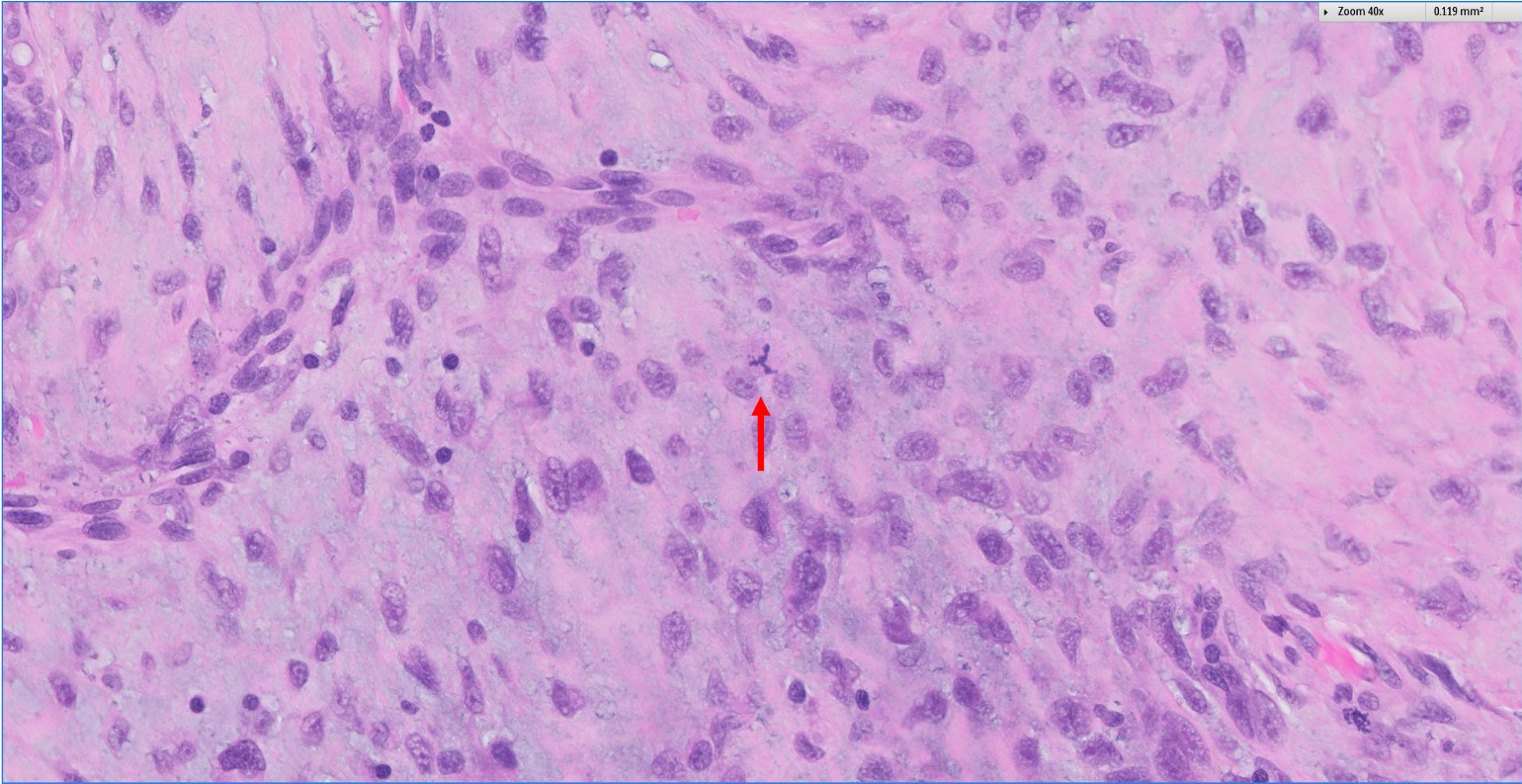
30.351 mm<sup>2</sup>

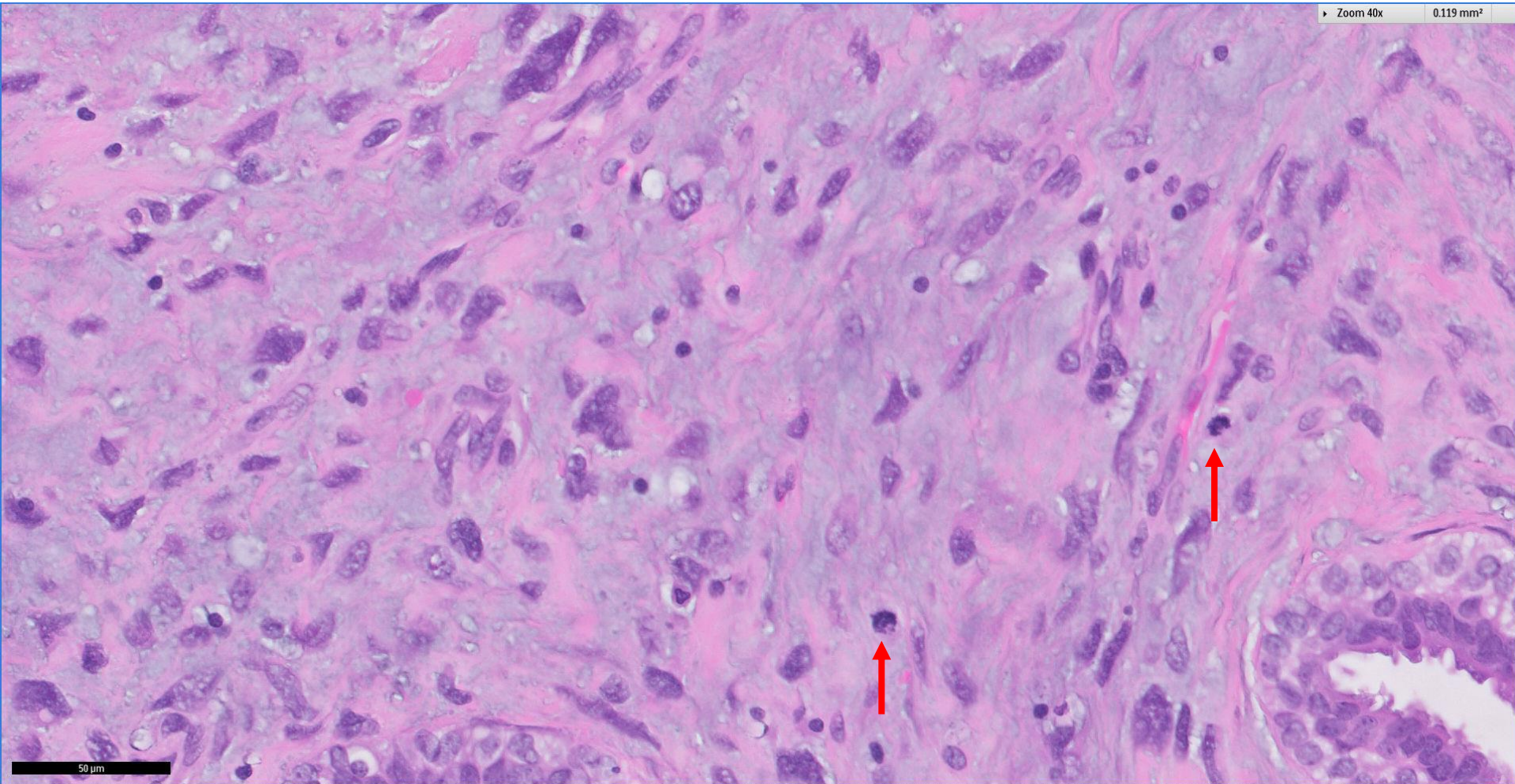


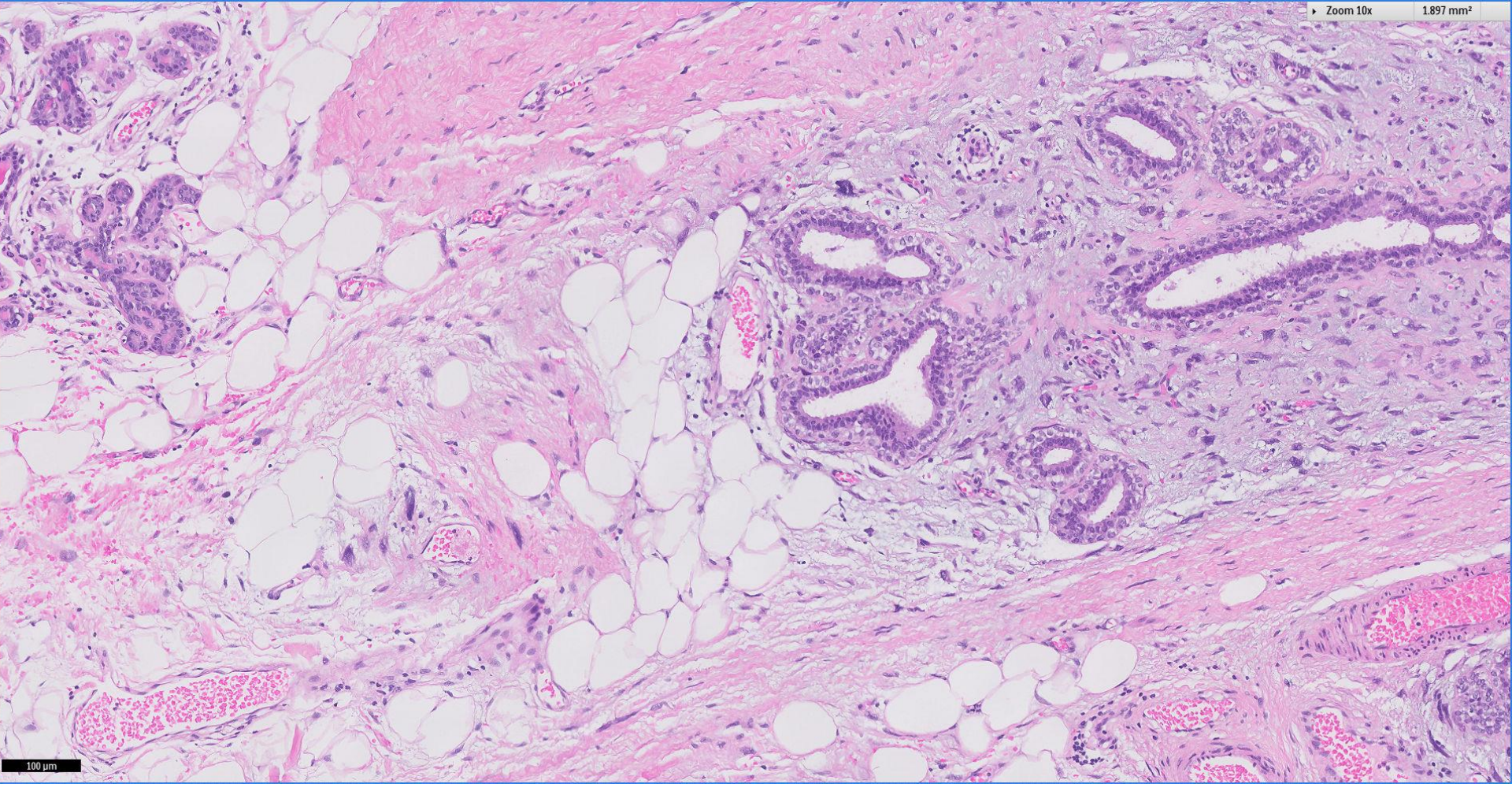
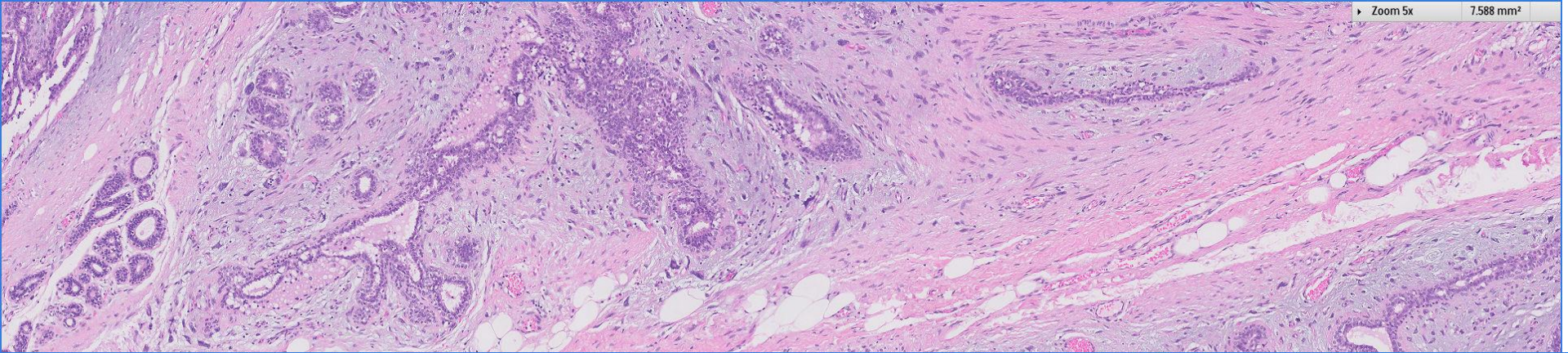
Zoom 20x

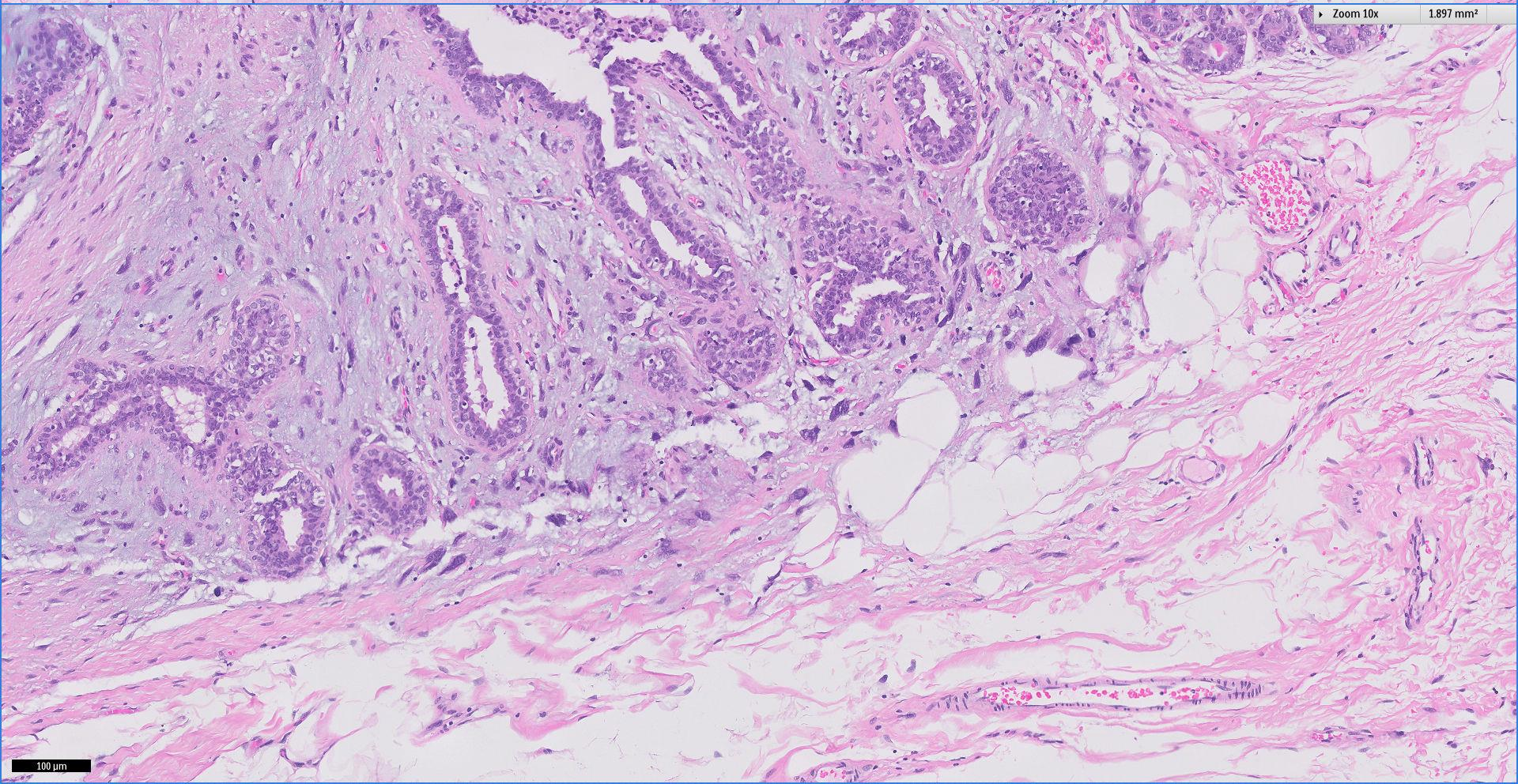
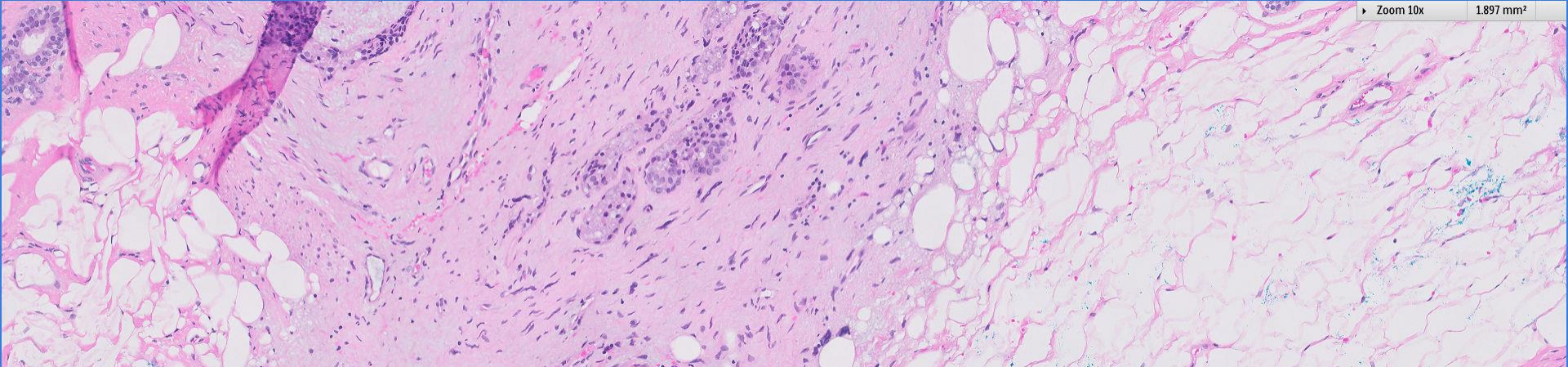
0.474 mm<sup>2</sup>



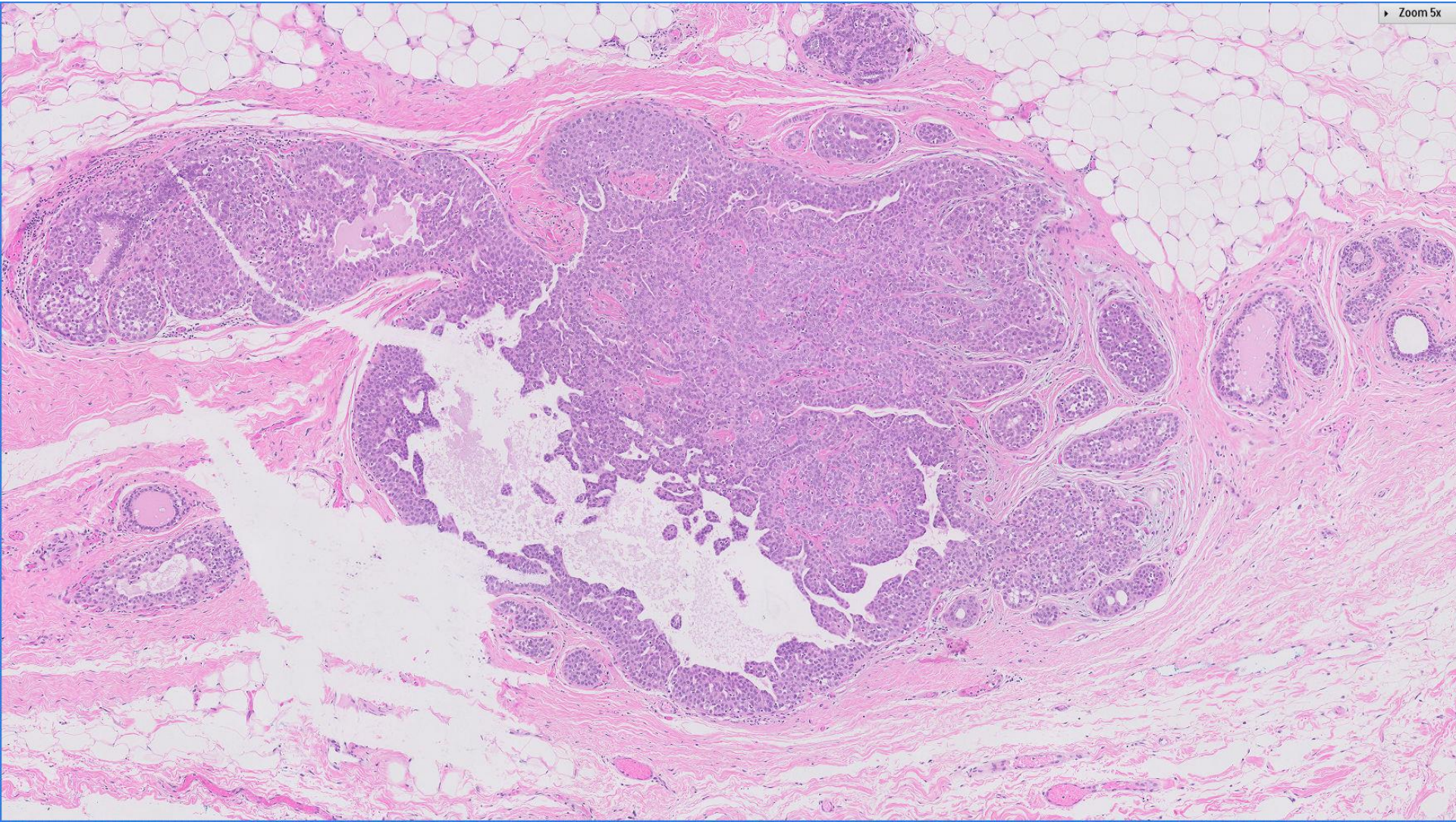






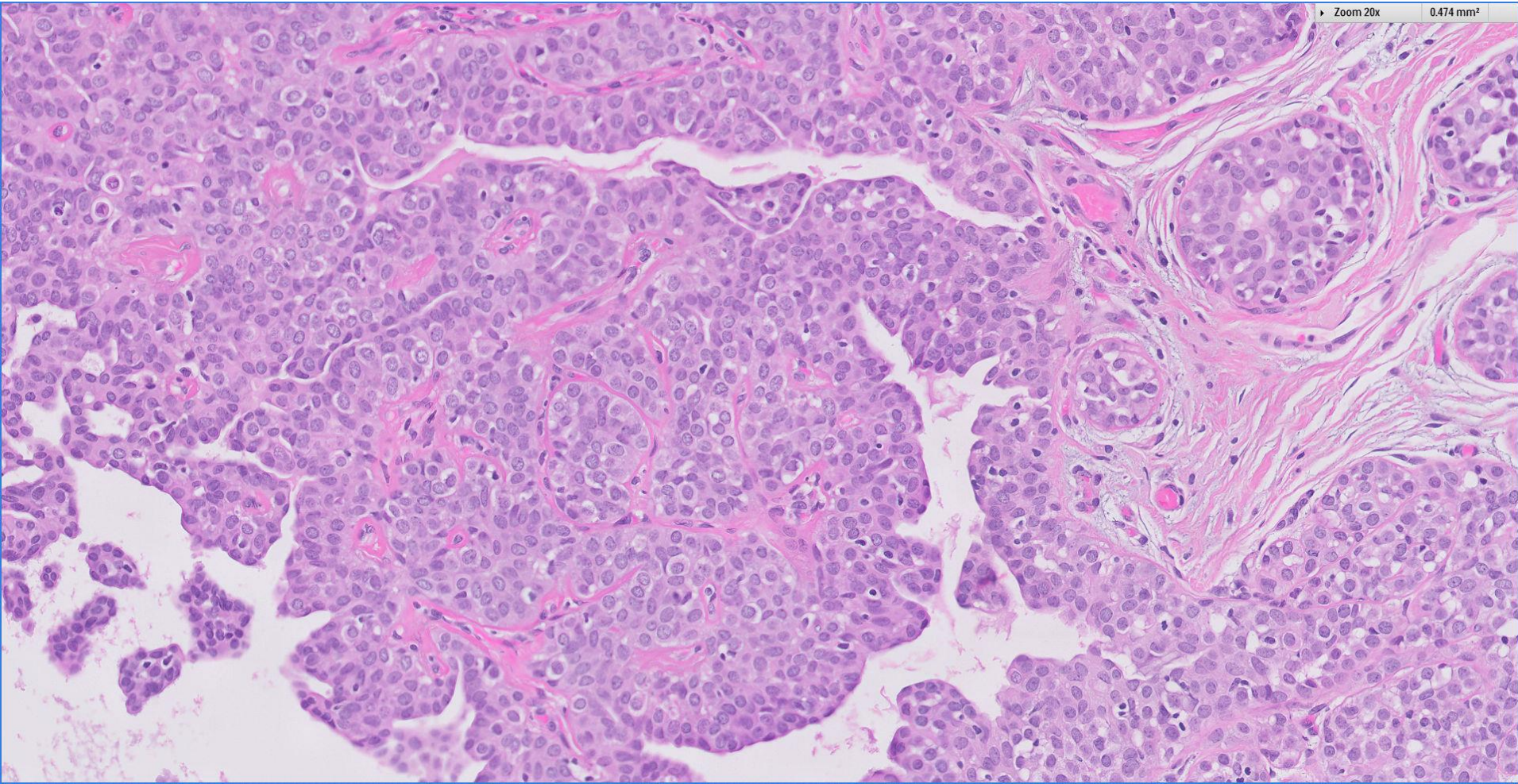






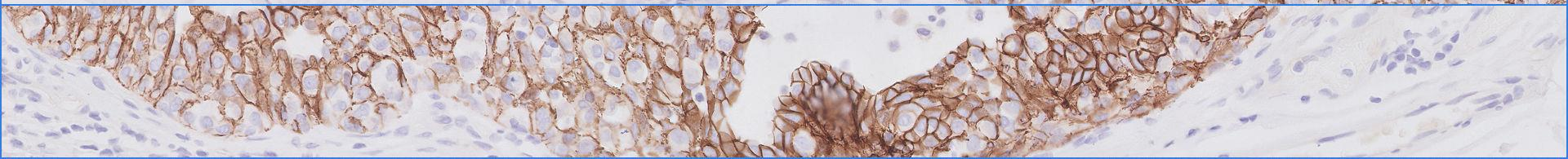
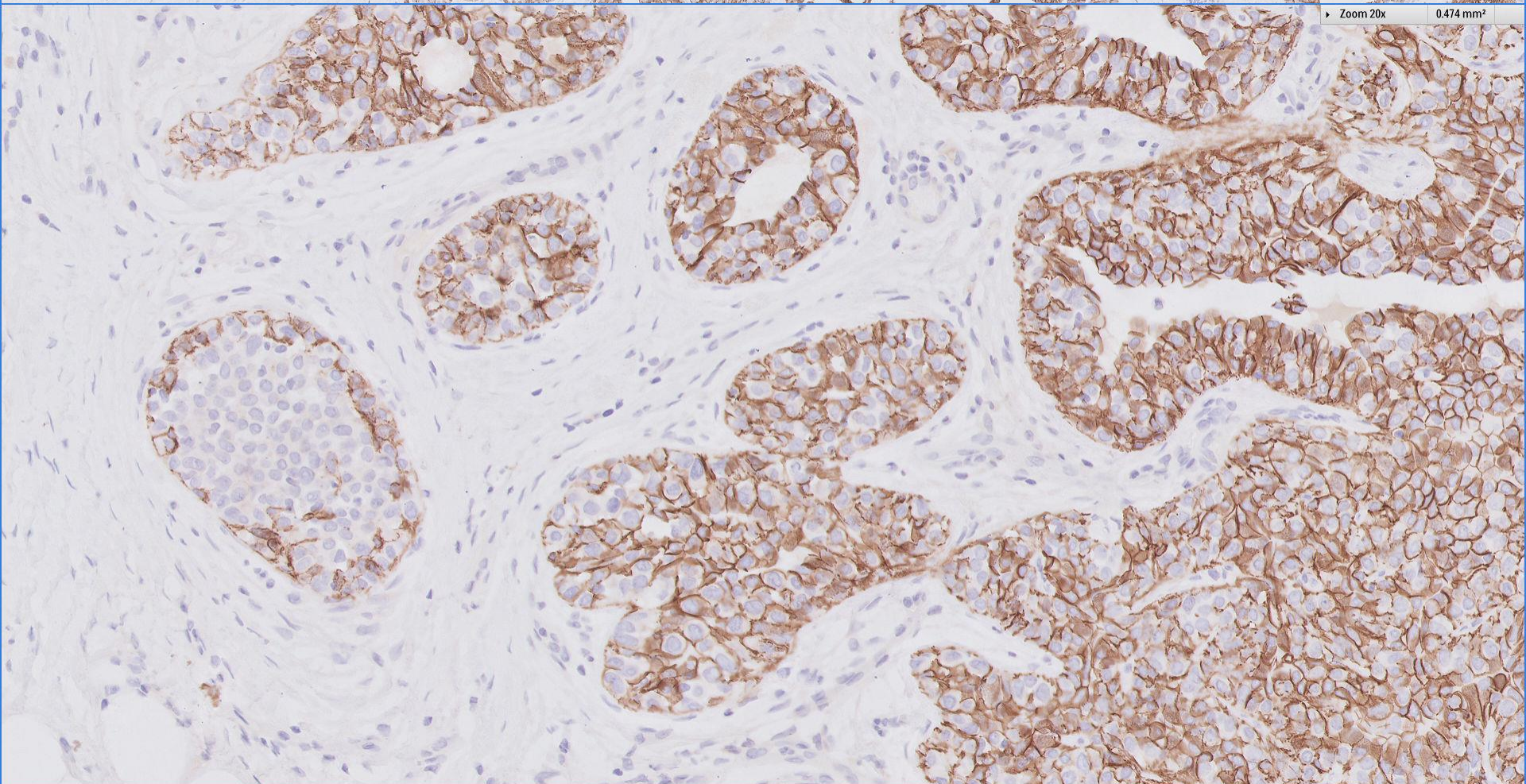
Zoom 20x

0.474 mm<sup>2</sup>

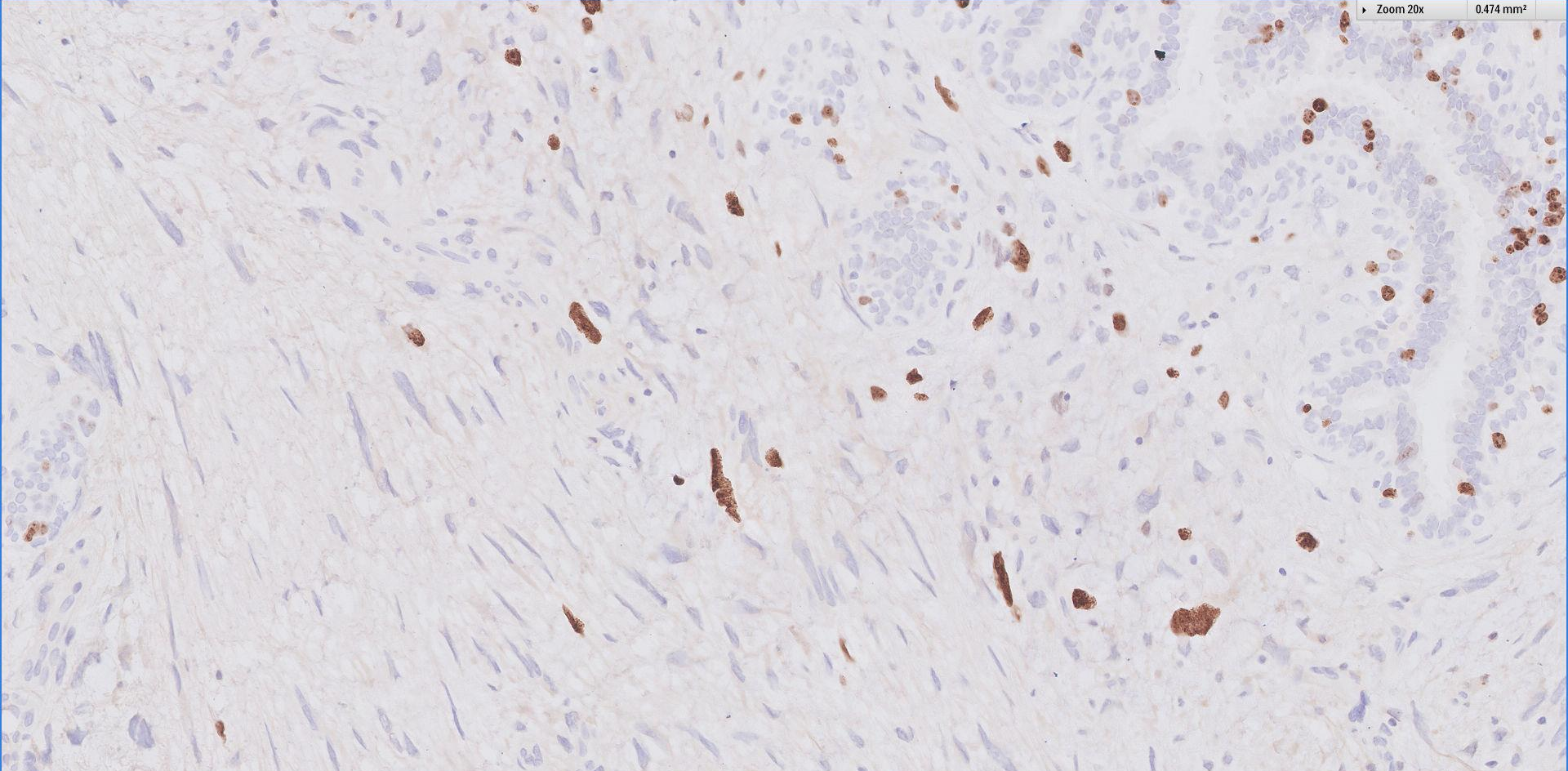
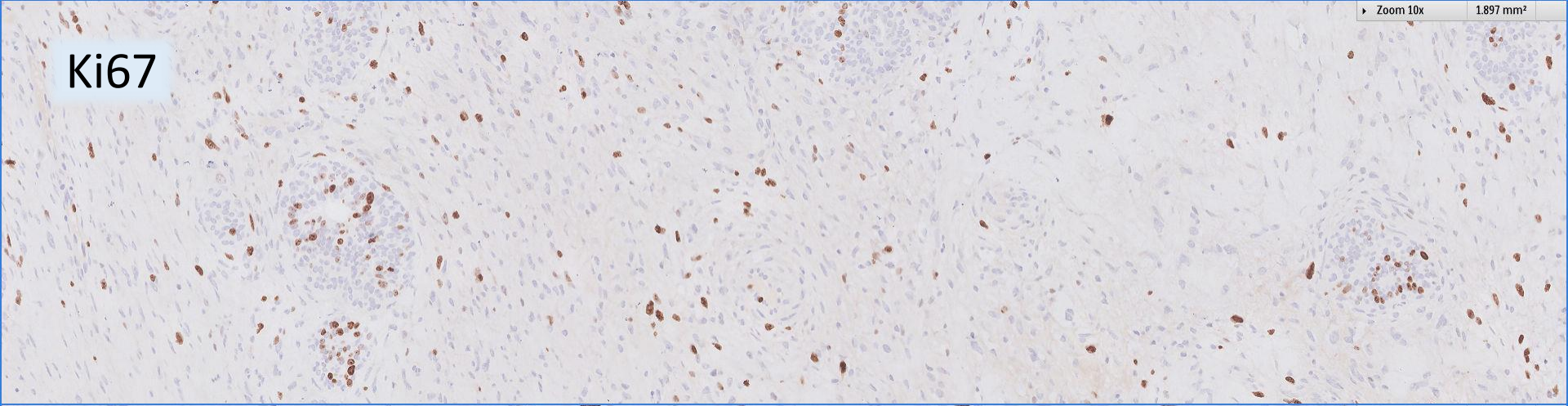


# E-cadherin

Zoom 5x 7.588 mm<sup>2</sup>



Ki67



# Diagnosis

**Left breast lump, excision biopsy ~**

Phyllodes tumour, borderline.

Atypical lobular hyperplasia in adjacent  
intraductal papilloma.



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# Borderline phyllodes tumour

- Borderline grade based on ~
  - Mild to moderate stromal atypia (apart from the multinucleated stromal cells)
  - Up to 5 mitoses per 10 high power fields
  - Atypical mitoses
  - Focal permeative tumour border
- No stromal overgrowth or malignant heterologous elements



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# Previous core biopsy



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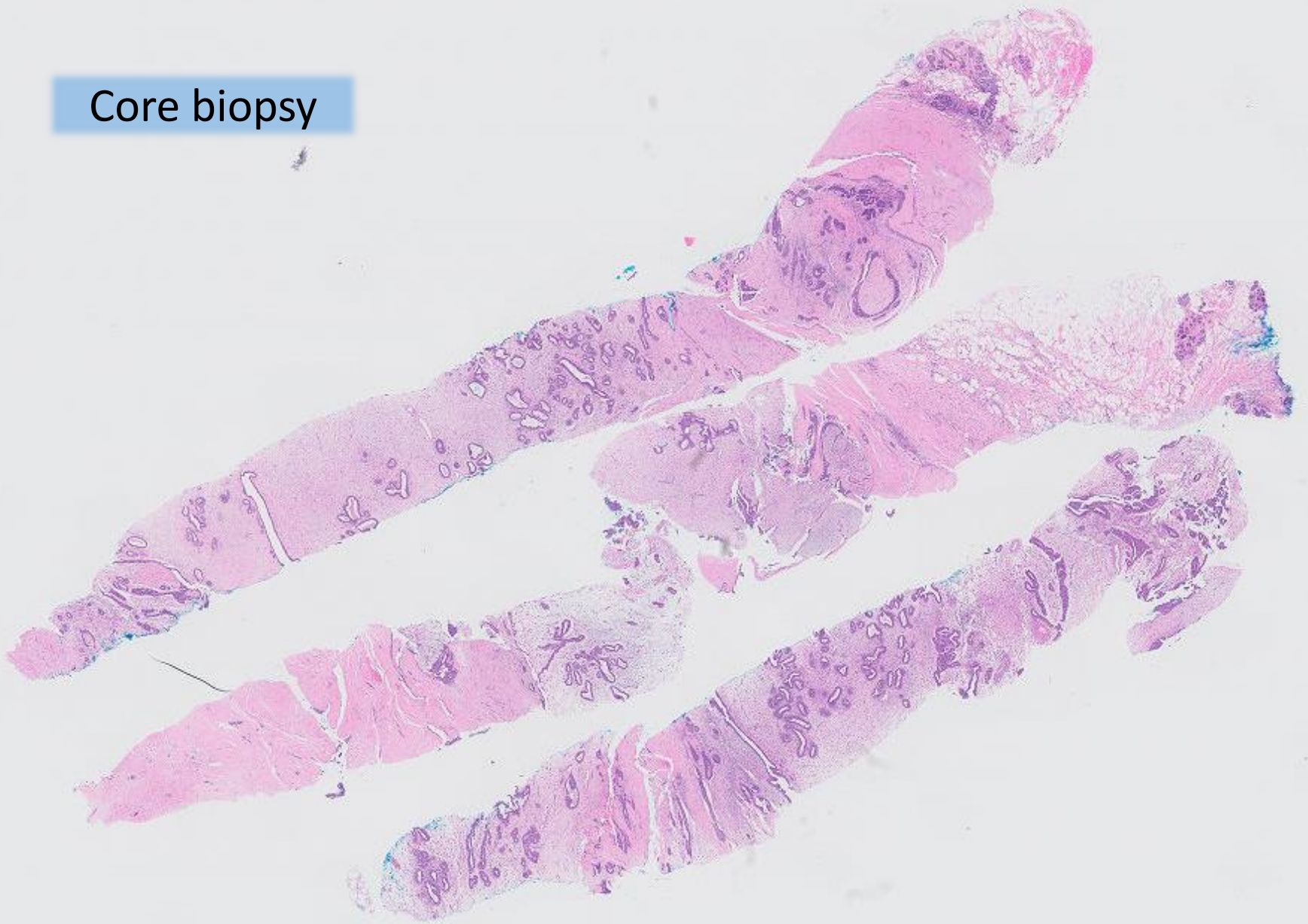
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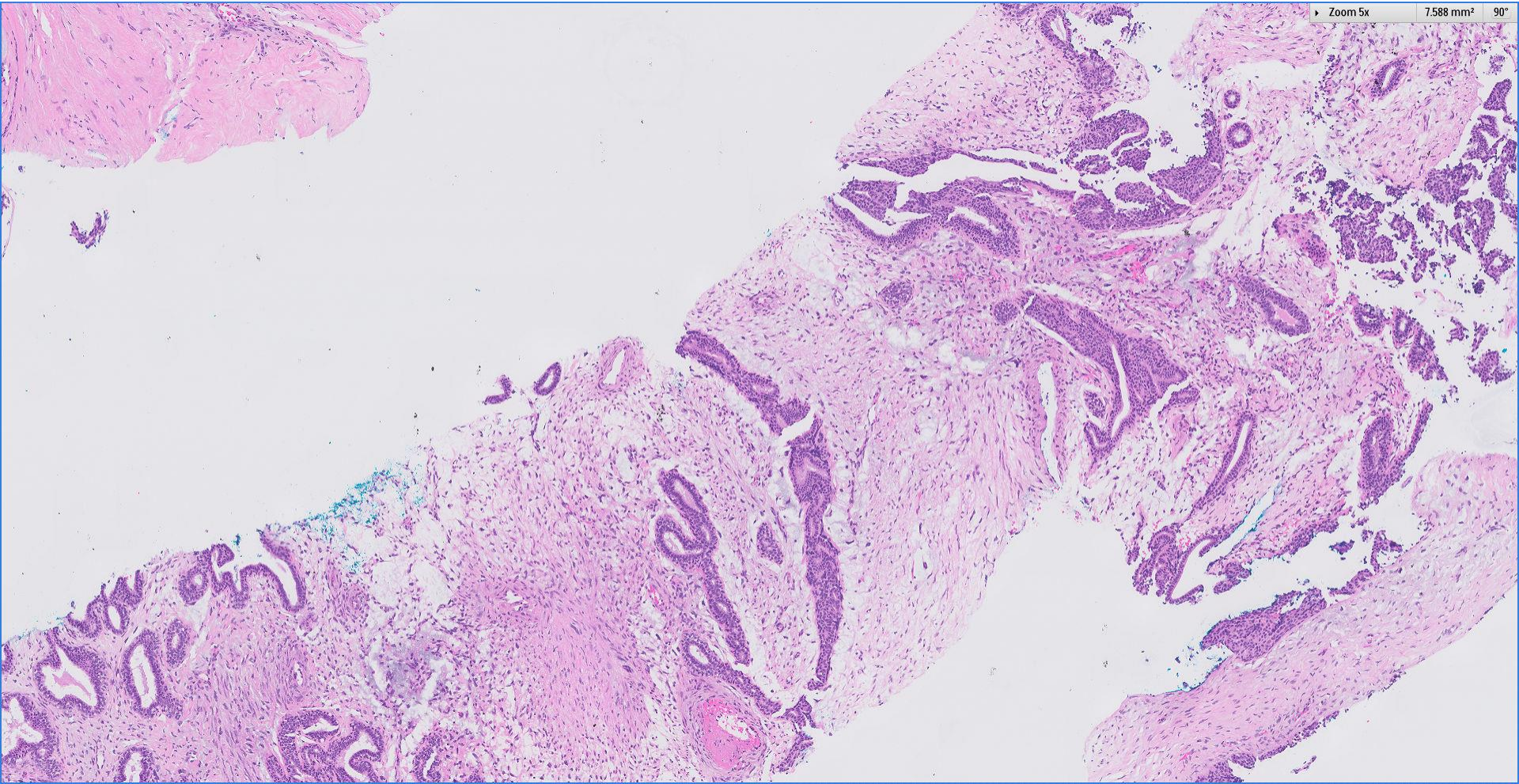


Core biopsy

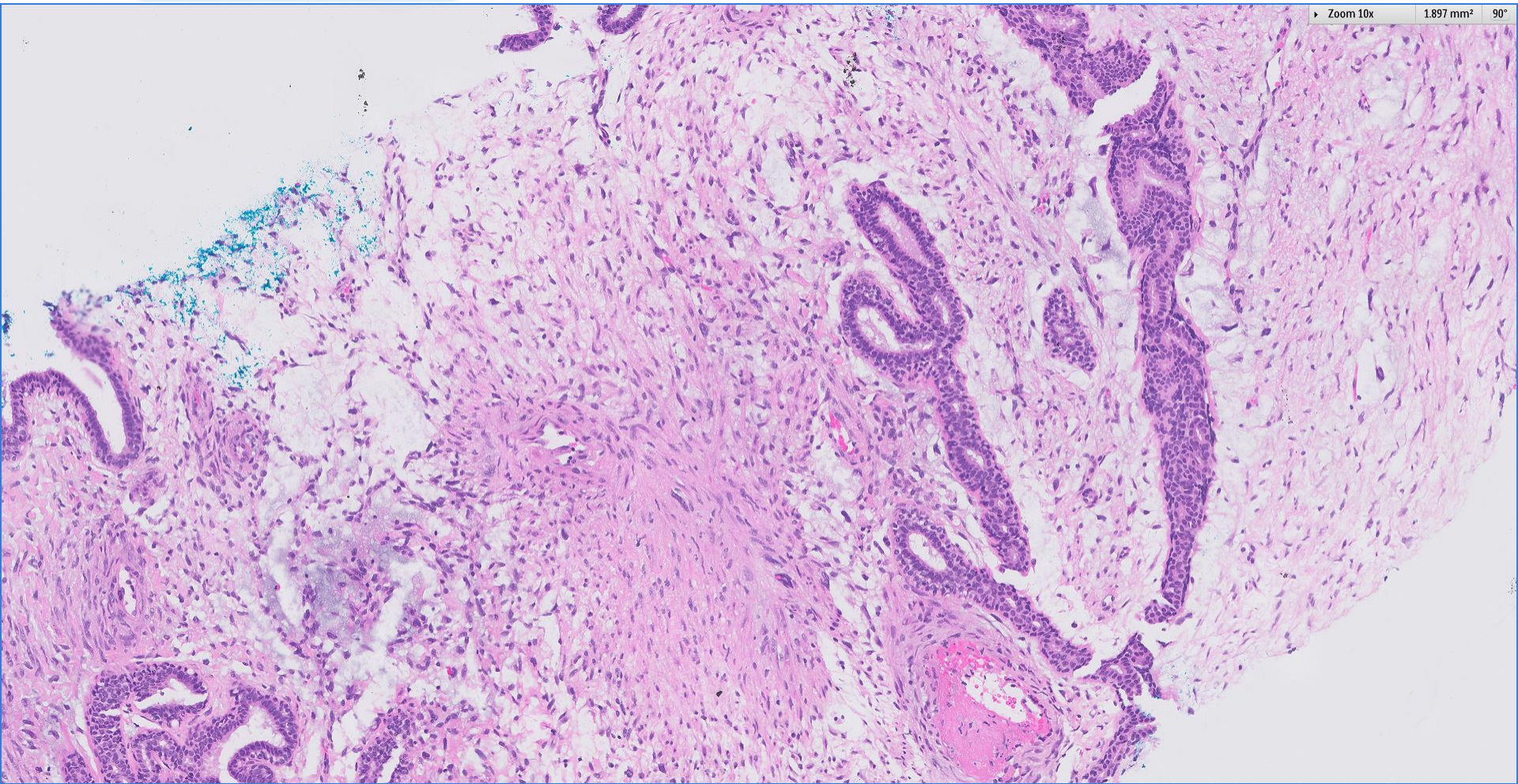




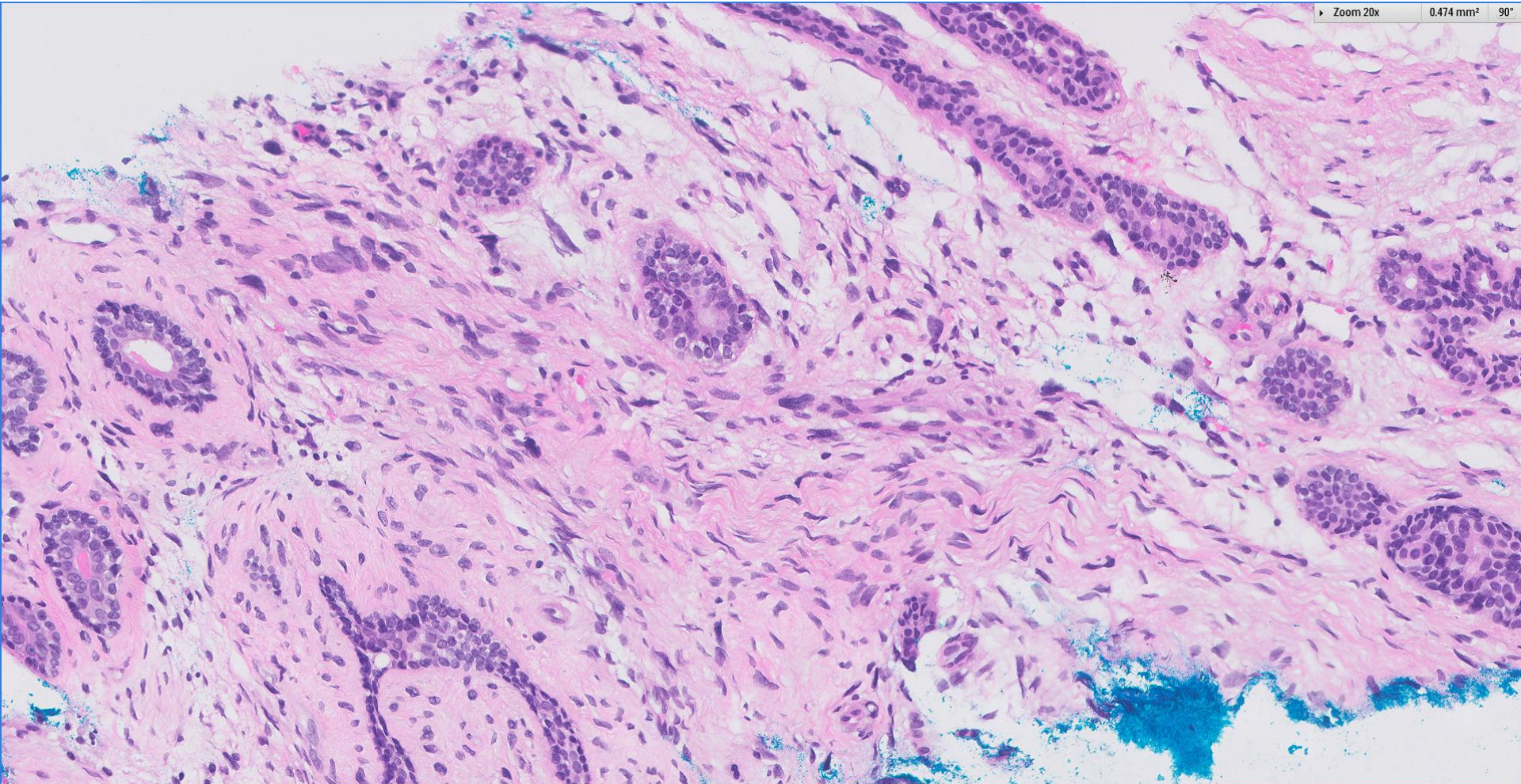
# Core biopsy



# Core biopsy



# Core biopsy



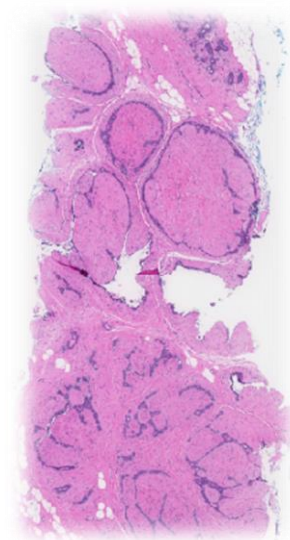
# Core biopsy diagnosis of fibroadenoma

- Core biopsies represent the standard of care in preoperative diagnosis of breast lesions discovered clinically & radiologically.
- No further treatment is needed for a diagnosis of fibroadenoma, vs excision biopsy for a conclusion of phyllodes tumour on core biopsy.
- How reliable is a core biopsy diagnosis of unambiguous fibroadenoma?
- Do we need to be concerned about underdiagnosing a phyllodes tumour?



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# Phyllodes Tumour Subsequent to a Diagnosis of Fibroadenoma on Breast Core Needle Biopsy: Frequency and Characteristics

- Timothy W Jacobs<sup>1</sup>, Yunn-Yi Chen<sup>2</sup>, Donald G Guinee<sup>1</sup>, Peter R Eby<sup>1</sup>, Aye Aye Thike<sup>3</sup>, Poonam Vohra<sup>2</sup>, Puay Hoon Tan<sup>3</sup>
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- 2. UCSF, San Francisco, CA
- 3. Singapore General Hospital, Singapore

*Courtesy of Dr Timothy Jacobs, platform presentation at USCAP 2014, San Diego California*



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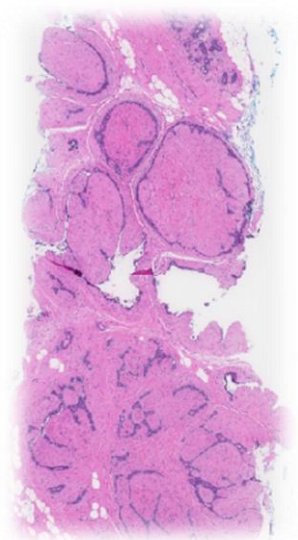


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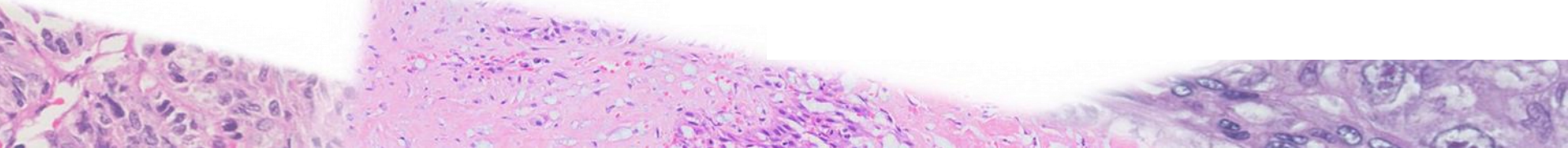


# Conclusions

- The incidence of PT subsequent to a diagnosis of FA on CNB is extremely low (0.38%, 16 out of 4163 cases).
- Most PT were categorized as benign (14 benign, 2 borderline).
- PT heterogeneity (e.g. FA-like areas) likely contributed to CNB-excision discrepancies.
- No pathologic features on CNB appeared to be prospectively predictive of PT at excision.
- Suspicious imaging features at time of CNB or on follow-up should prompt consideration for surgical excision.
- Diagnosing FA on CNB is reliable and safe, provided there is adequate imaging correlation and follow-up.



*Courtesy of Dr Timothy Jacobs, platform presentation at USCAP 2014, San Diego California*



# Core biopsy diagnosis of *cellular fibroepithelial lesions* – prediction of phyllodes tumour

Author	Reference	Key findings predicting phyllodes tumor
Jacobs et al	<i>Am J Clin Pathol</i> 2005; 124: 342-354	Marked stromal cellularity, mitoses in moderate stromal cellularity, Ki67 & topoisomerase II $\alpha$ indices
Lee et al	<i>Histopathology</i> 2007; 51: 336-344	Stromal cellularity $\geq$ 50% stroma, stromal overgrowth, fragmentation, adipose within stroma
Resetkova et al	<i>Breast J</i> 2010; 16:573-80.	No predictive value of clinical, radiologic or pathologic data Suggested follow-up alone for a patient subset
Jara-Lazaro et al	<i>Histopathology</i> 2010; 57: 220-232	Marked stromal cellularity/atypia, stromal overgrowth, mitoses $\geq$ 2 per 10 hpf, ill-defined lesional borders, Ki67 & topoisomerase II $\alpha$ indices $\geq$ 5%, reduced CD34 staining
Yasir et al	<i>Am J Clin Pathol</i> 2014; 142: 362-369	Mitoses, stromal overgrowth, fragmentation, adipose infiltration, heterogeneity, subepithelial condensation, nuclear pleomorphism

 Breast  
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