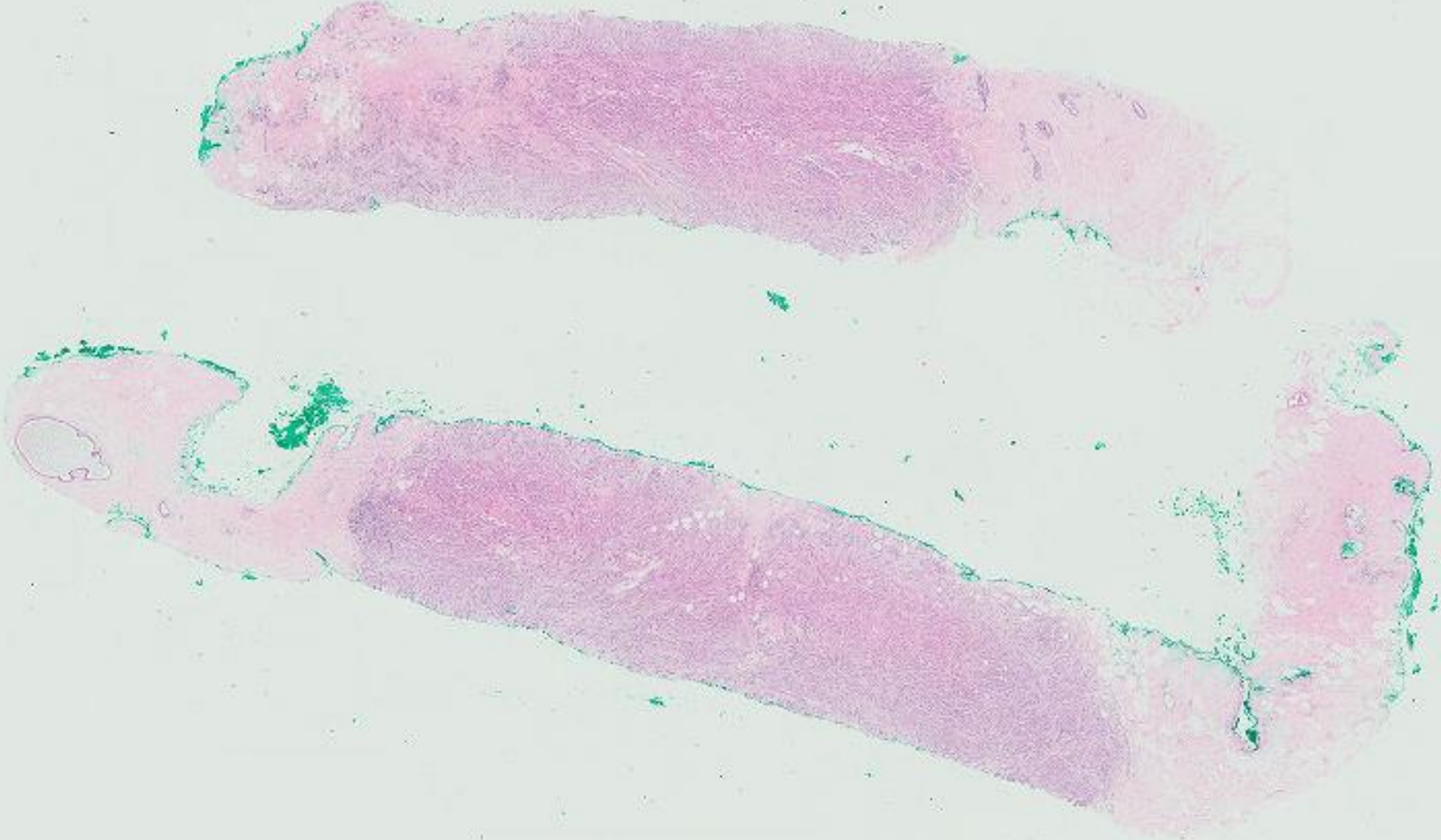


Case 1

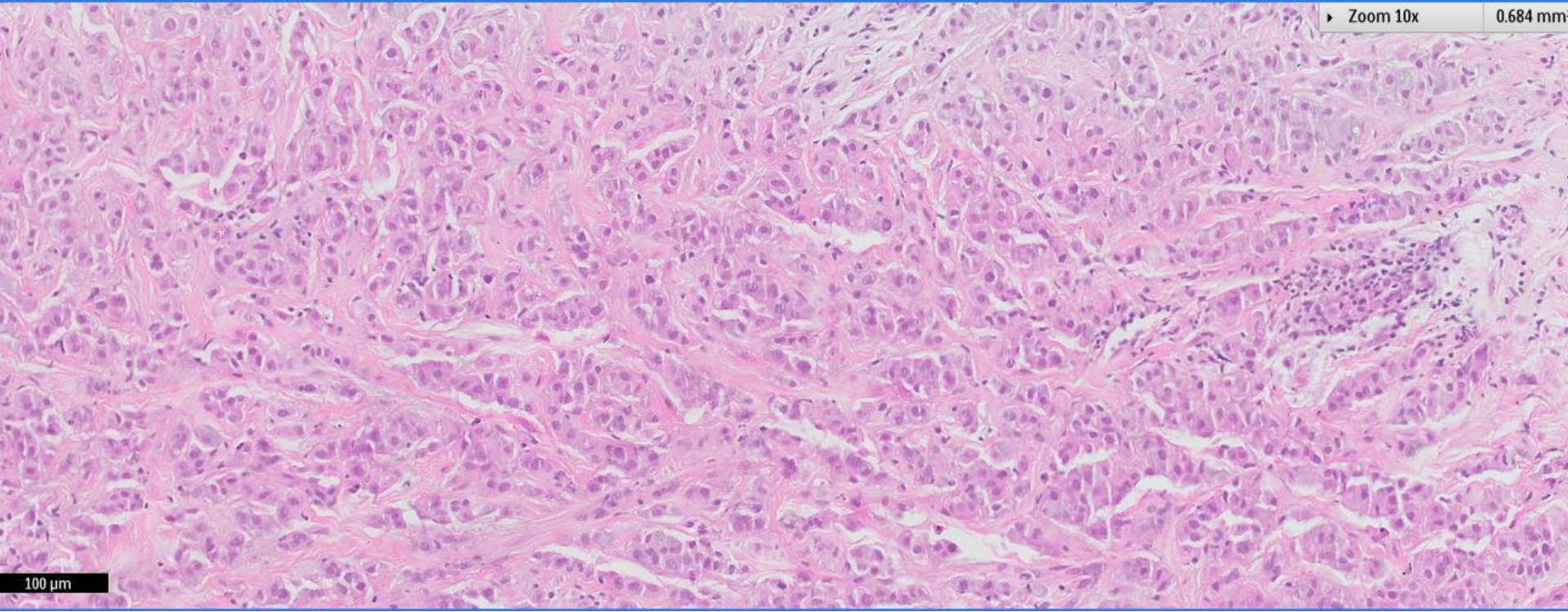
42 year old Malay woman underwent ultrasound guided core biopsies of 2 lesions in the left breast – one in the upper outer quadrant (A) and another in the subareolar region (B).



Upper outer quadrant (A)



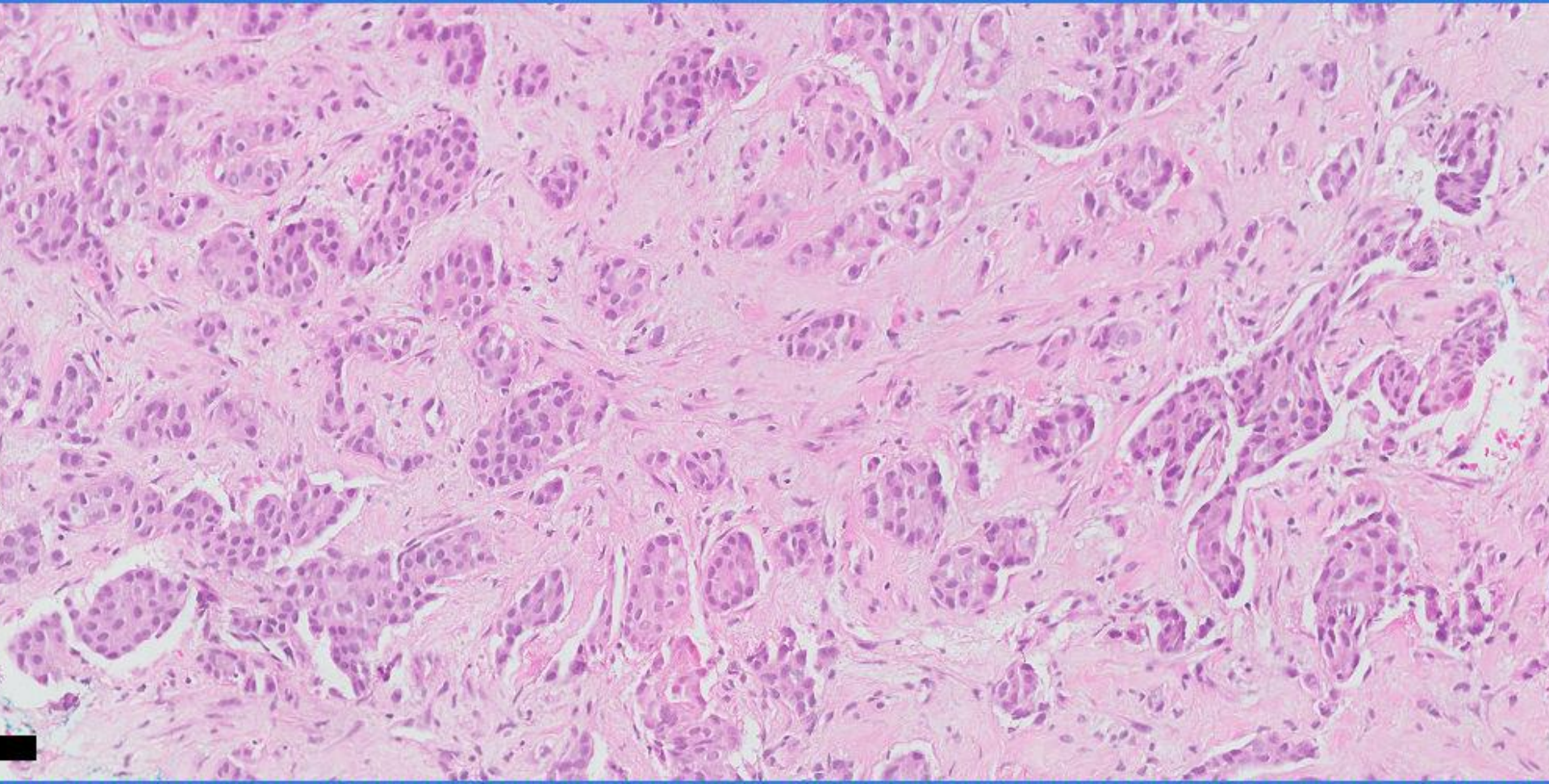
Upper outer quadrant (A)



Subareolar (B)



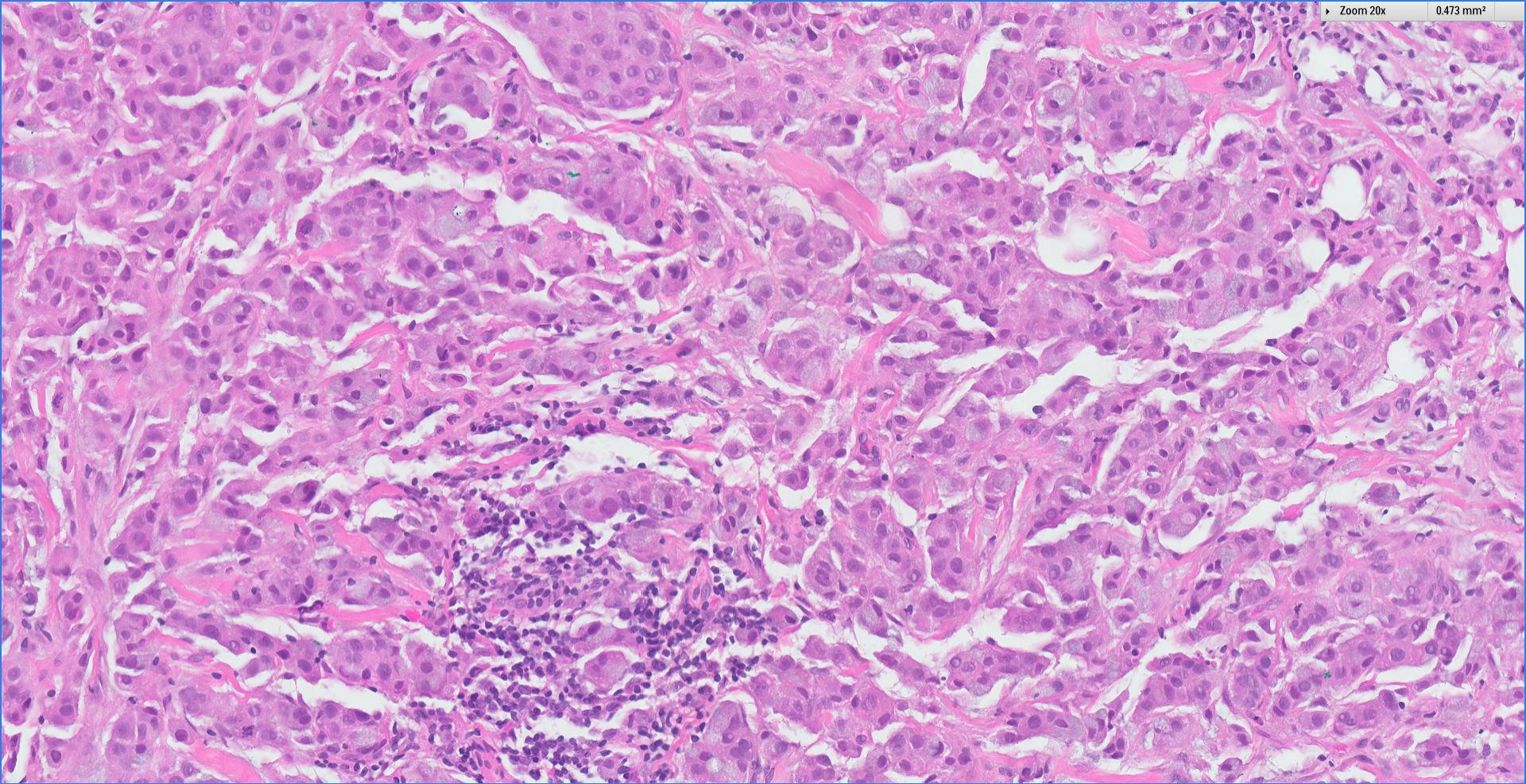
Subareolar (B)



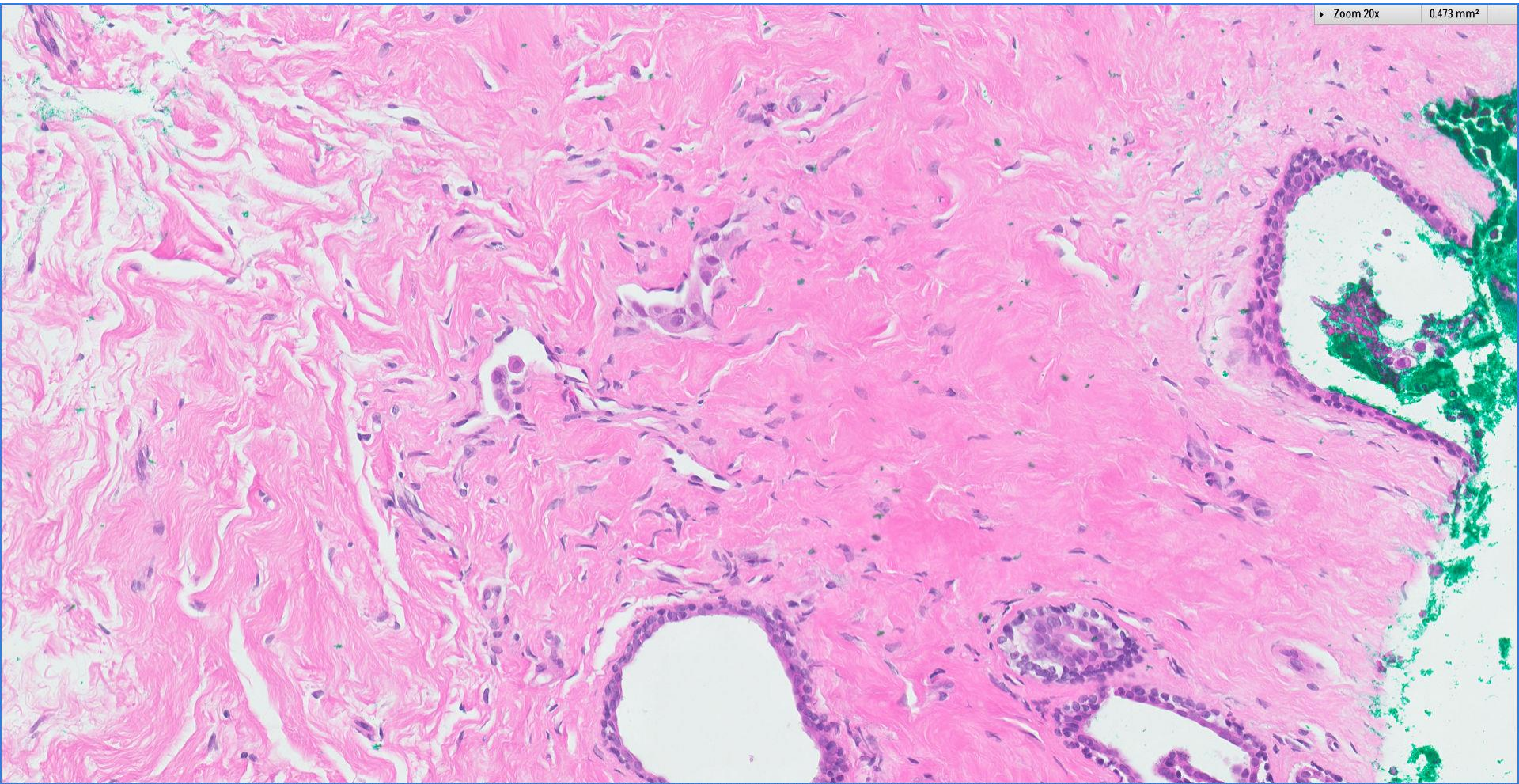


Singapore River

Upper outer quadrant (A)

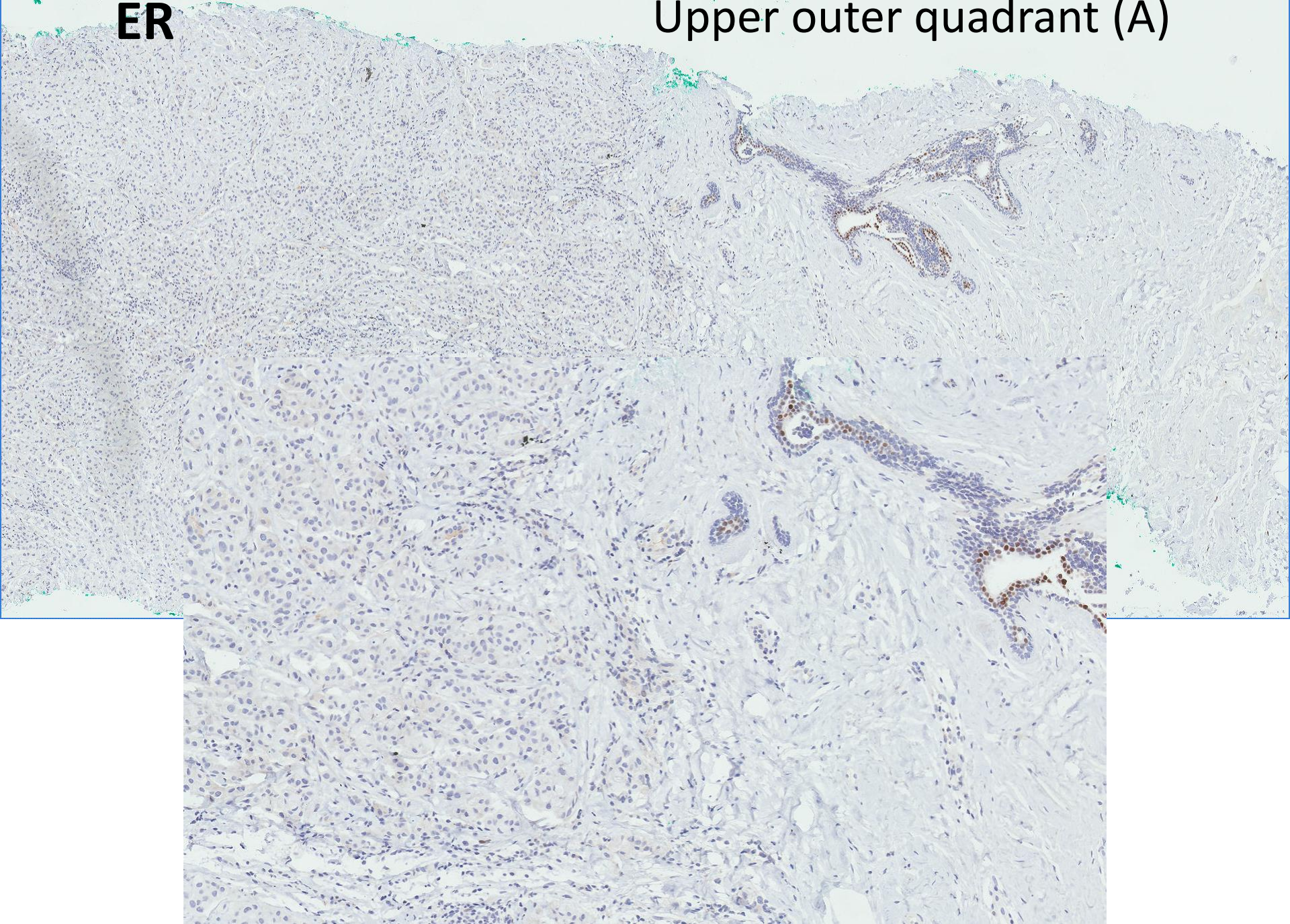


Upper outer quadrant (A)



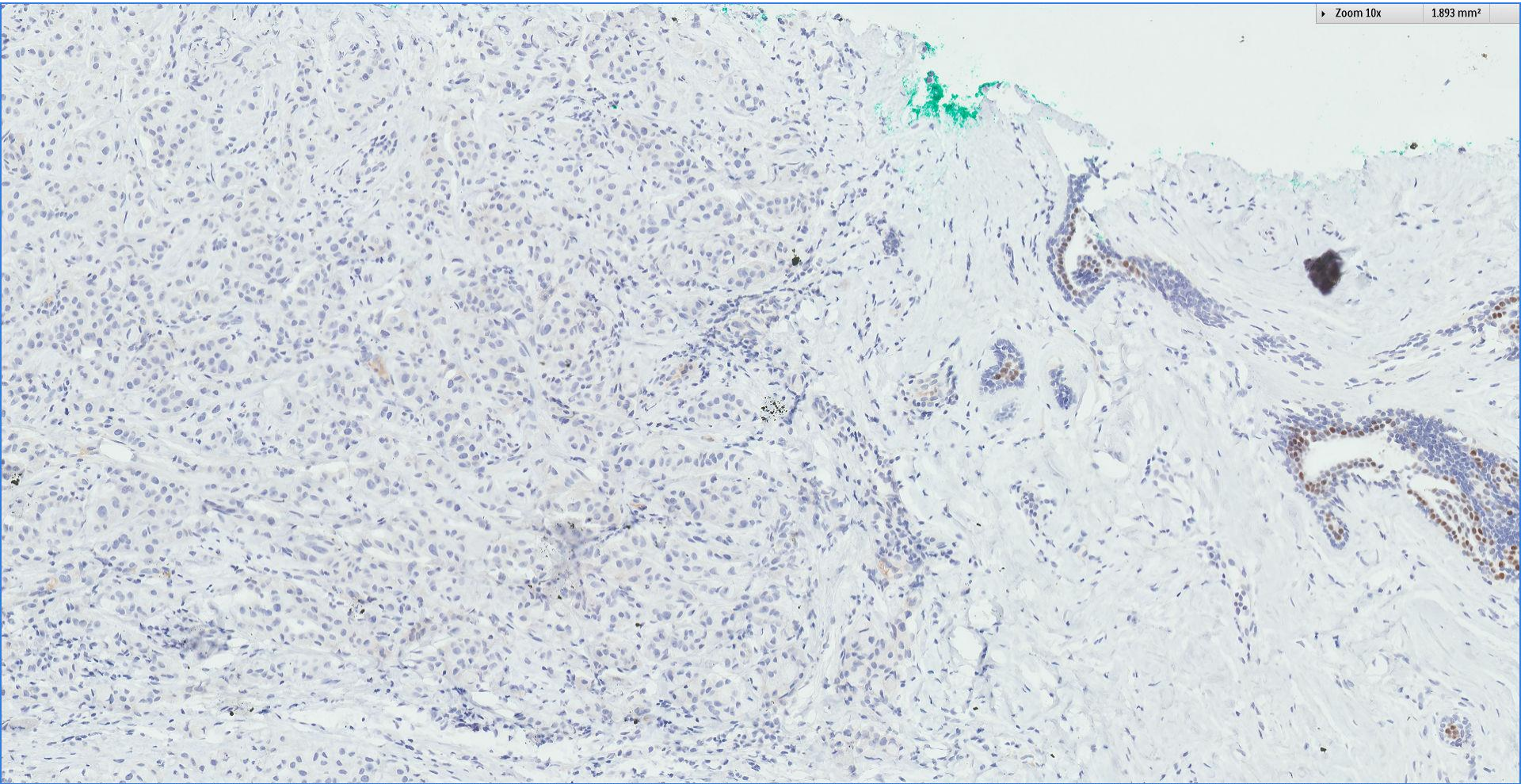
ER

Upper outer quadrant (A)



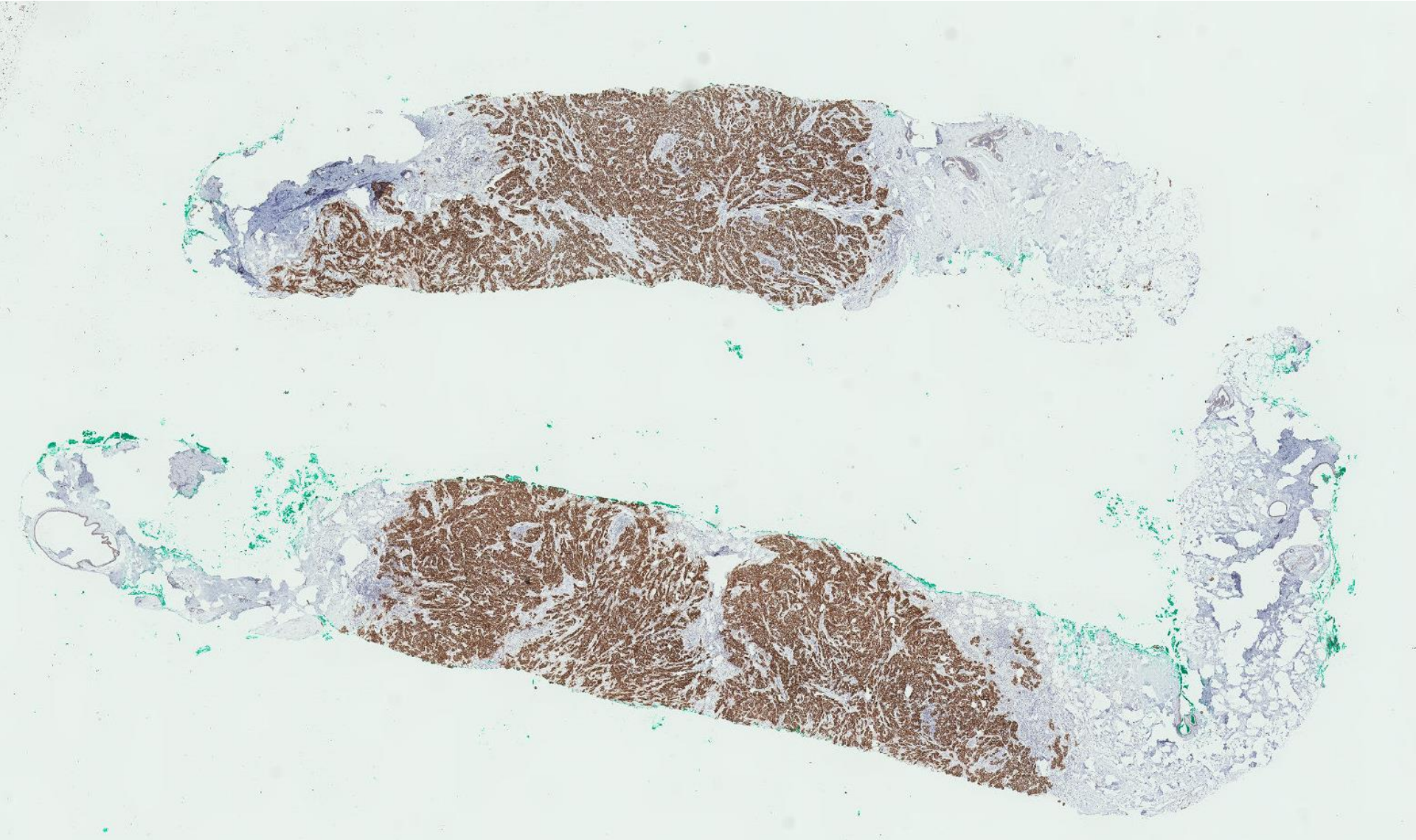
PR

Upper outer quadrant (A)



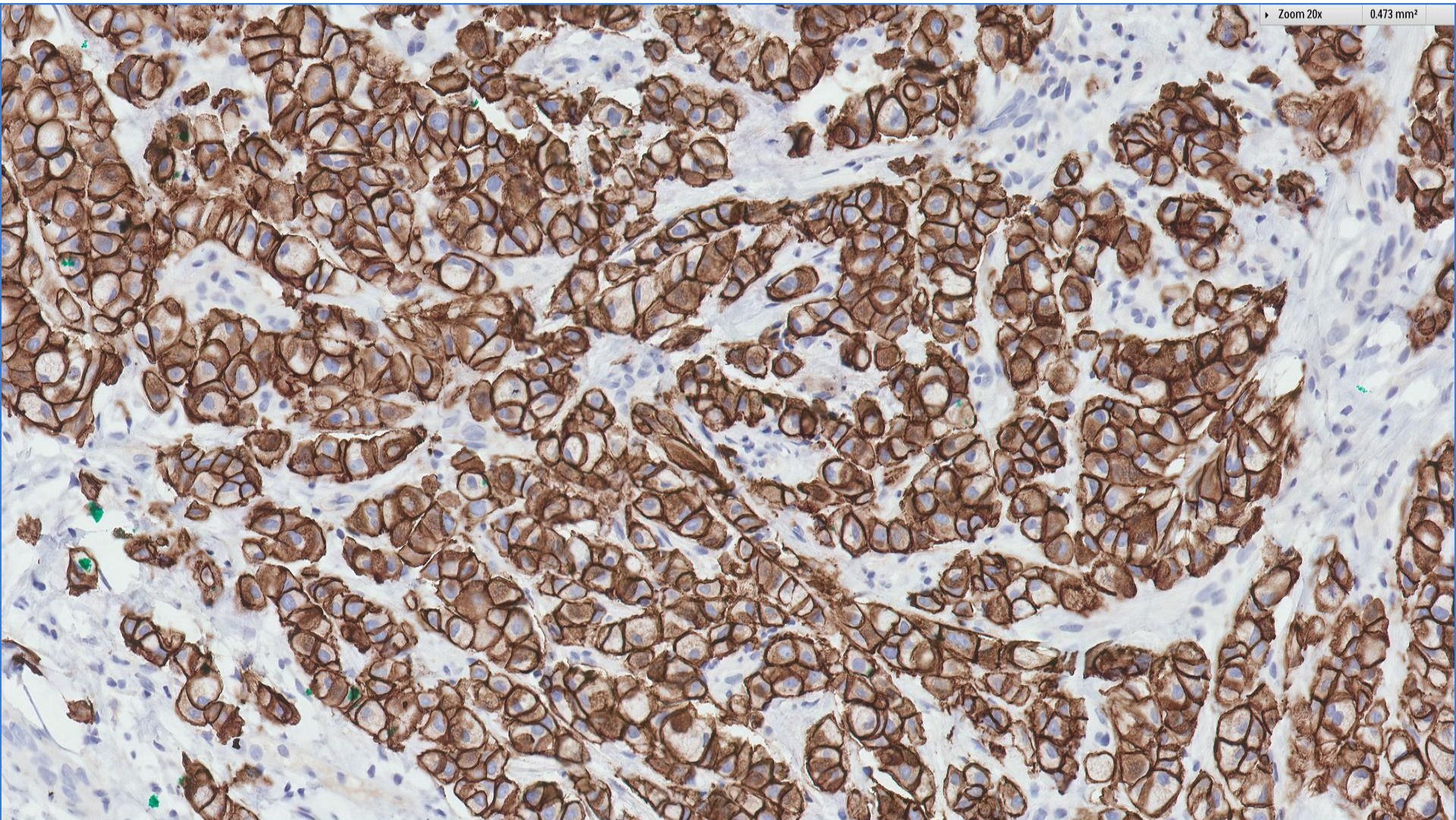
HER2

Upper outer quadrant (A)

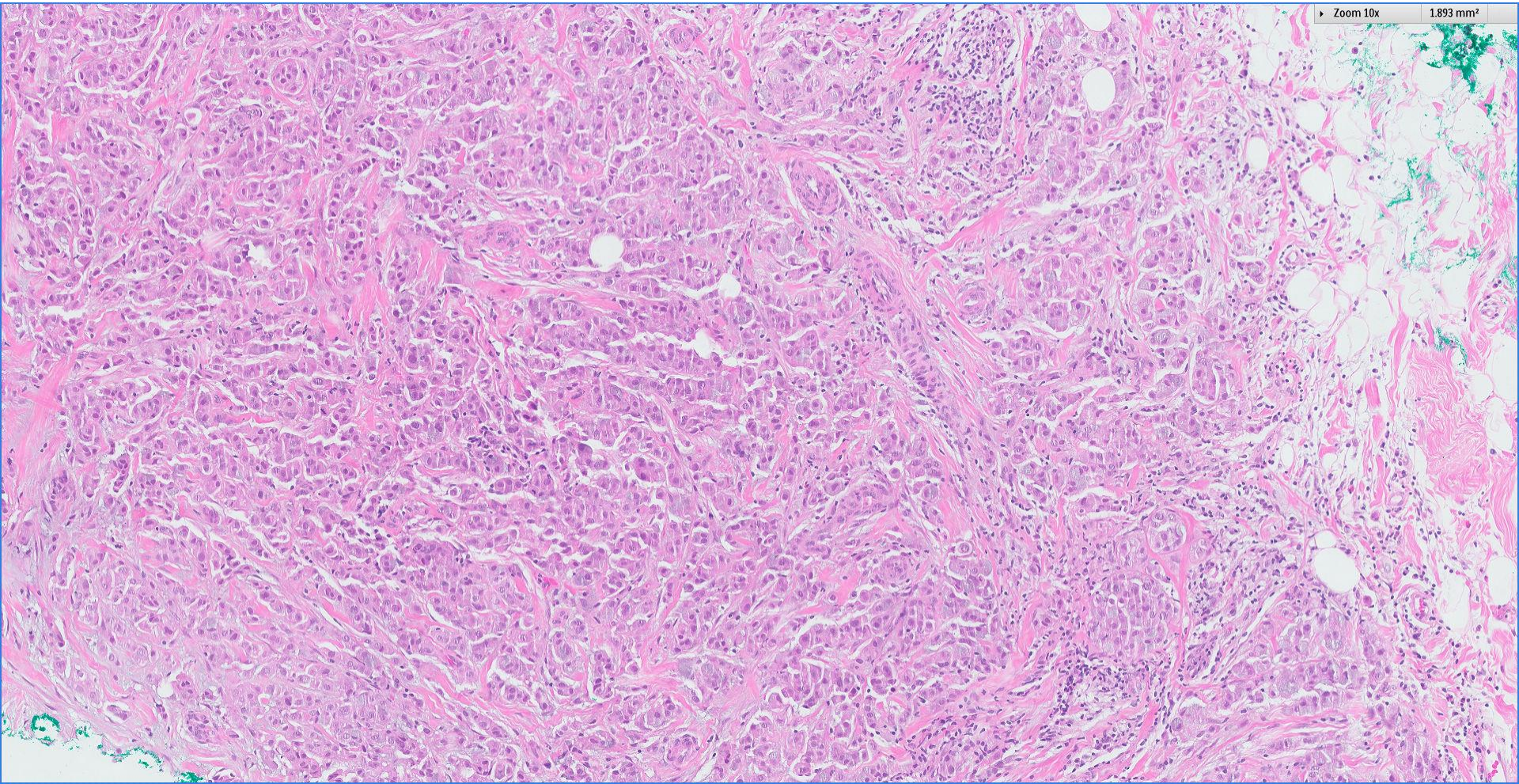


HER2

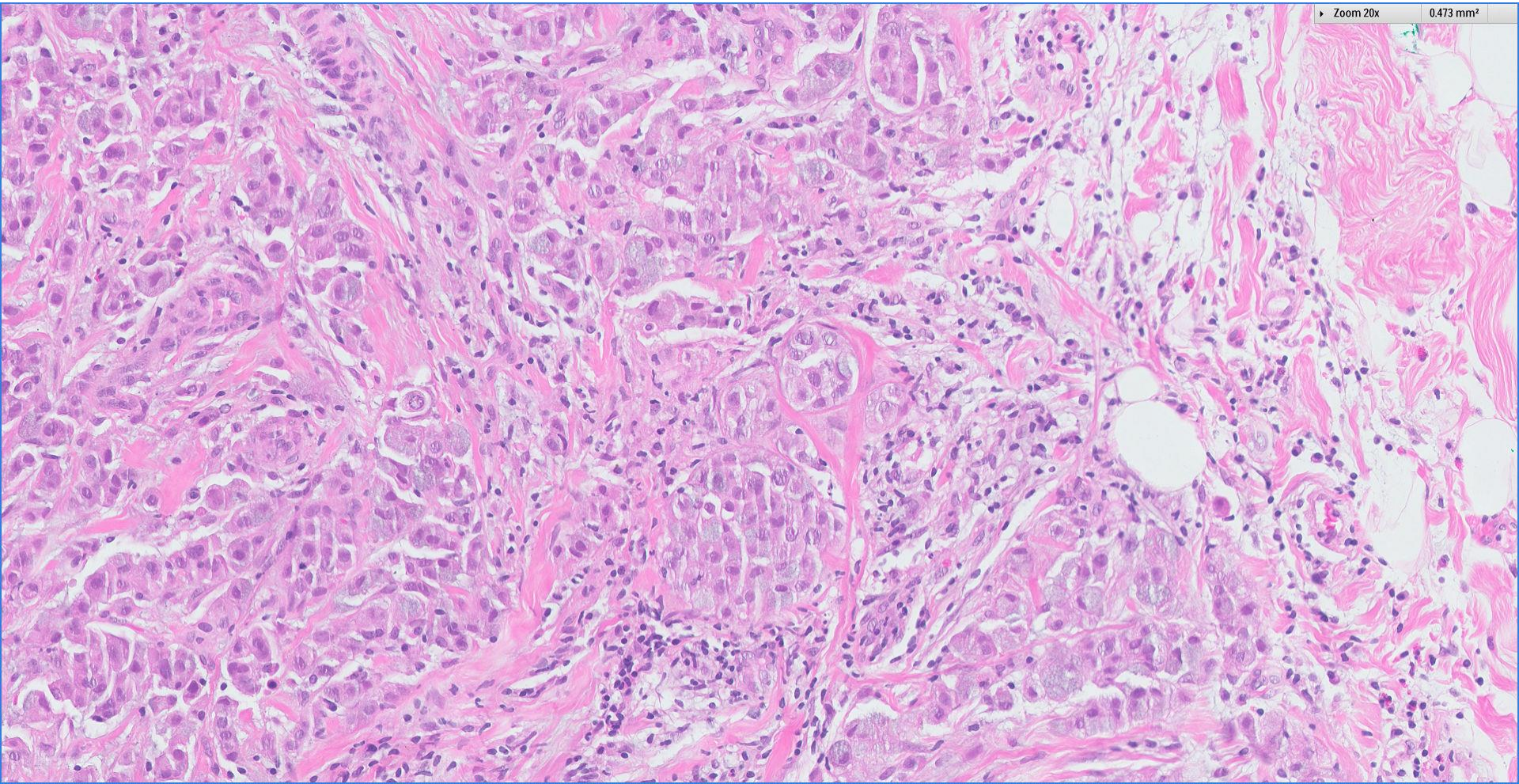
Upper outer quadrant (A)



Subareolar (B)

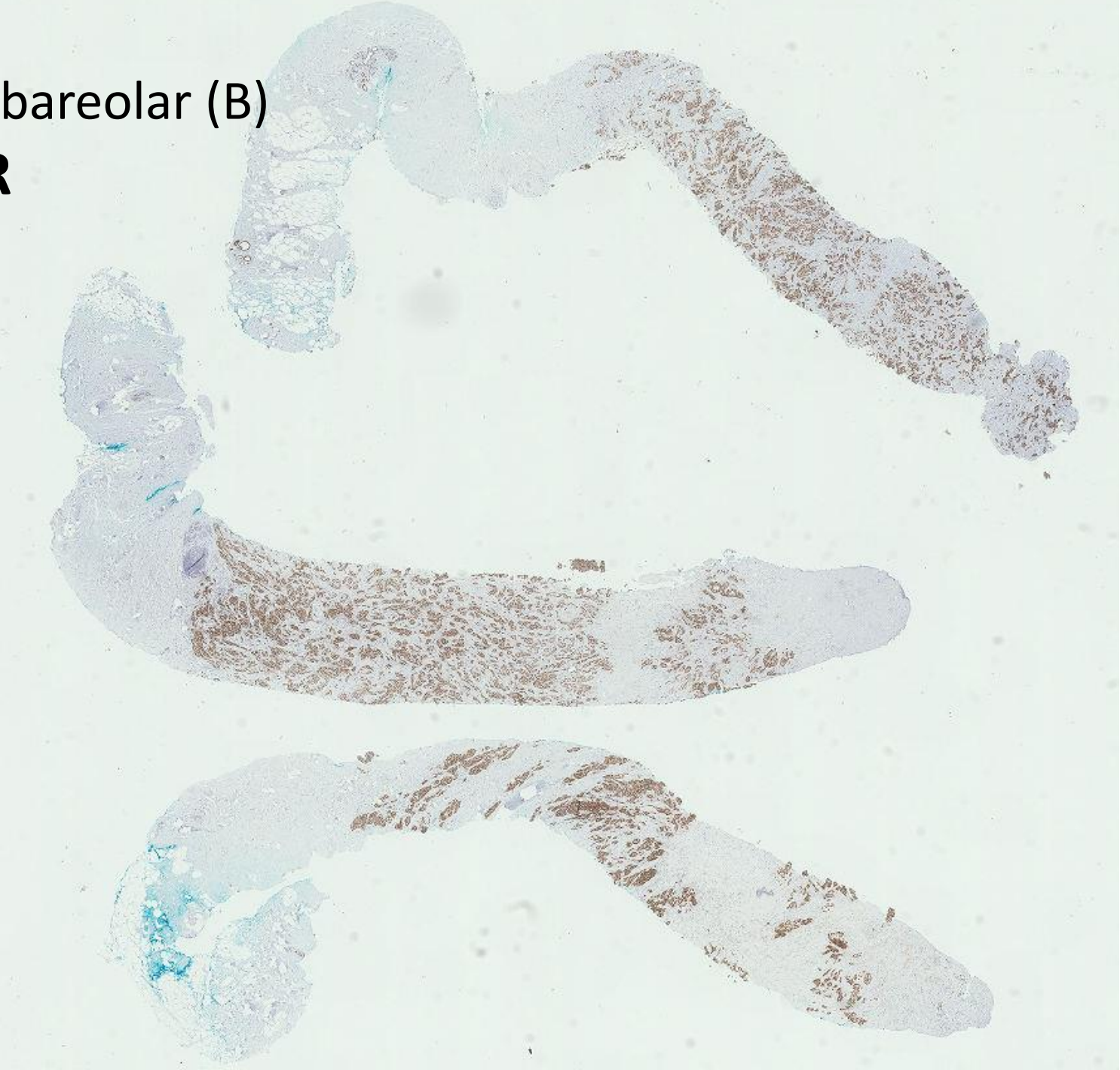


Subareolar (B)

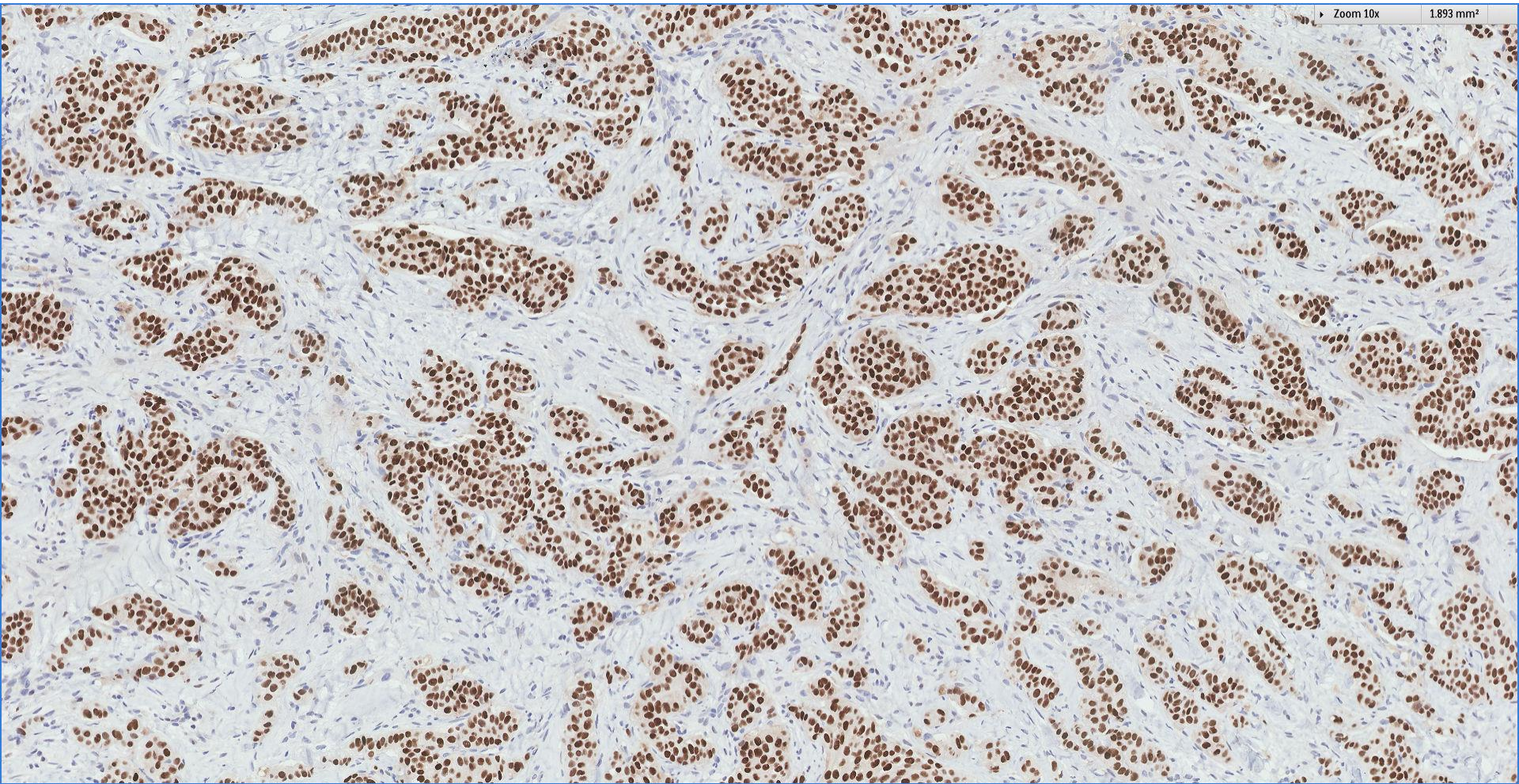


Subareolar (B)

ER



Subareolar (B), ER

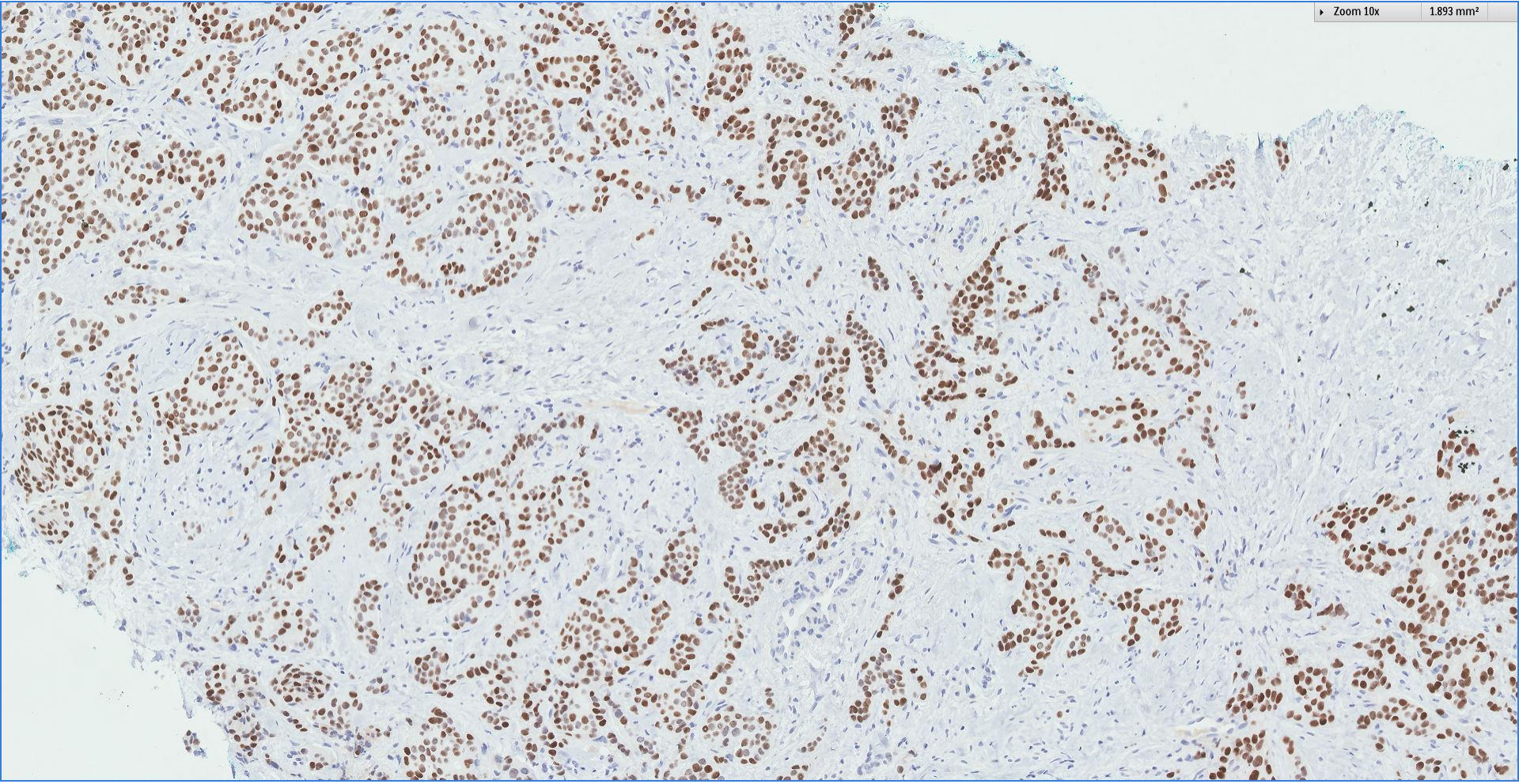


Subareolar (B)

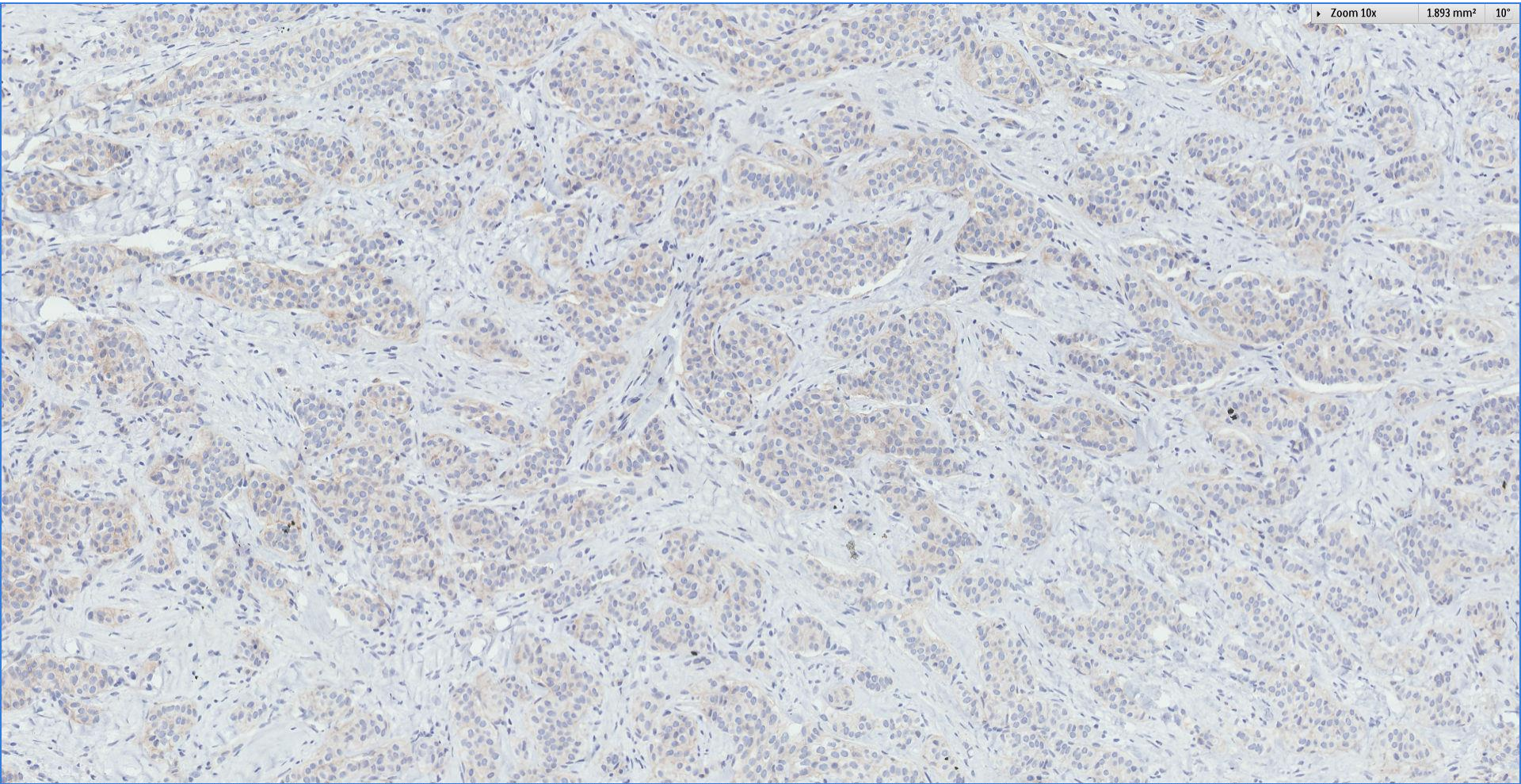
PR



Subareolar (B), PR



Subareolar (B), **HER2**



Diagnosis

Ultrasound guided trucut biopsies, left breast;

(A) UOQ:

Invasive carcinoma with ductal features

Lymphovascular invasion

ER negative, PR negative, HER2 positive (3+)

(B) Subareolar:

Invasive carcinoma with ductal features

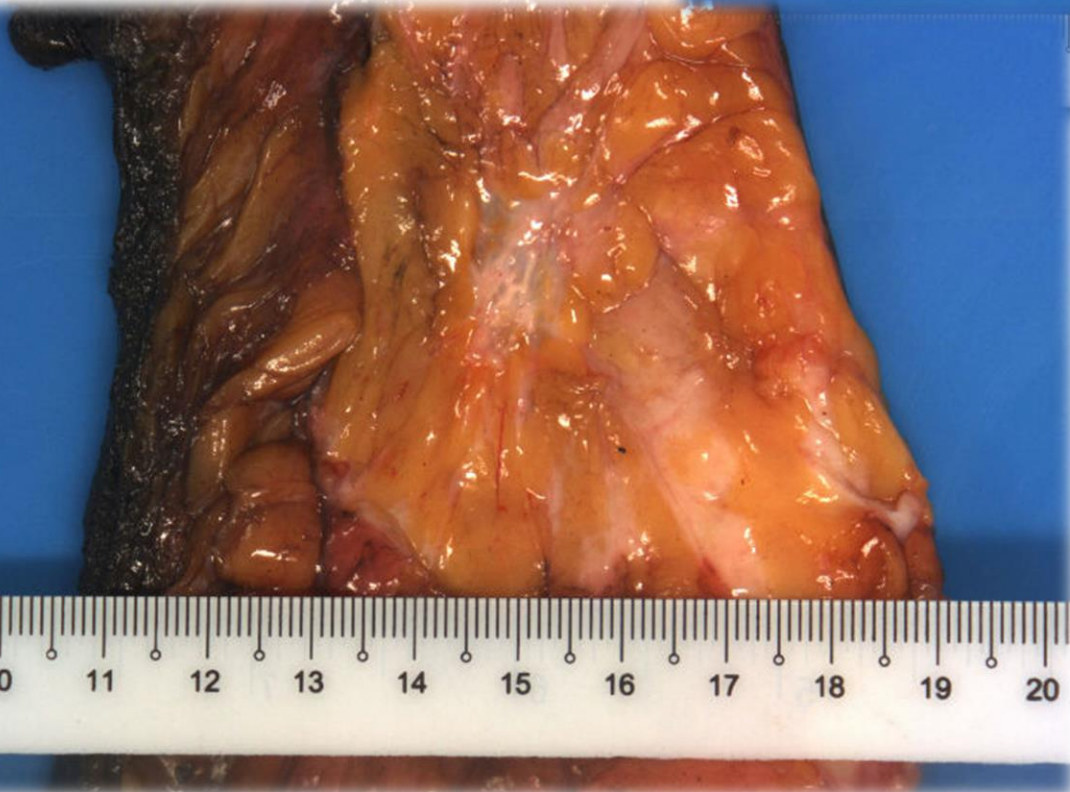
ER positive, PR positive, HER2 negative

Patient underwent neoadjuvant chemotherapy with subsequent left breast mastectomy and axillary clearance.

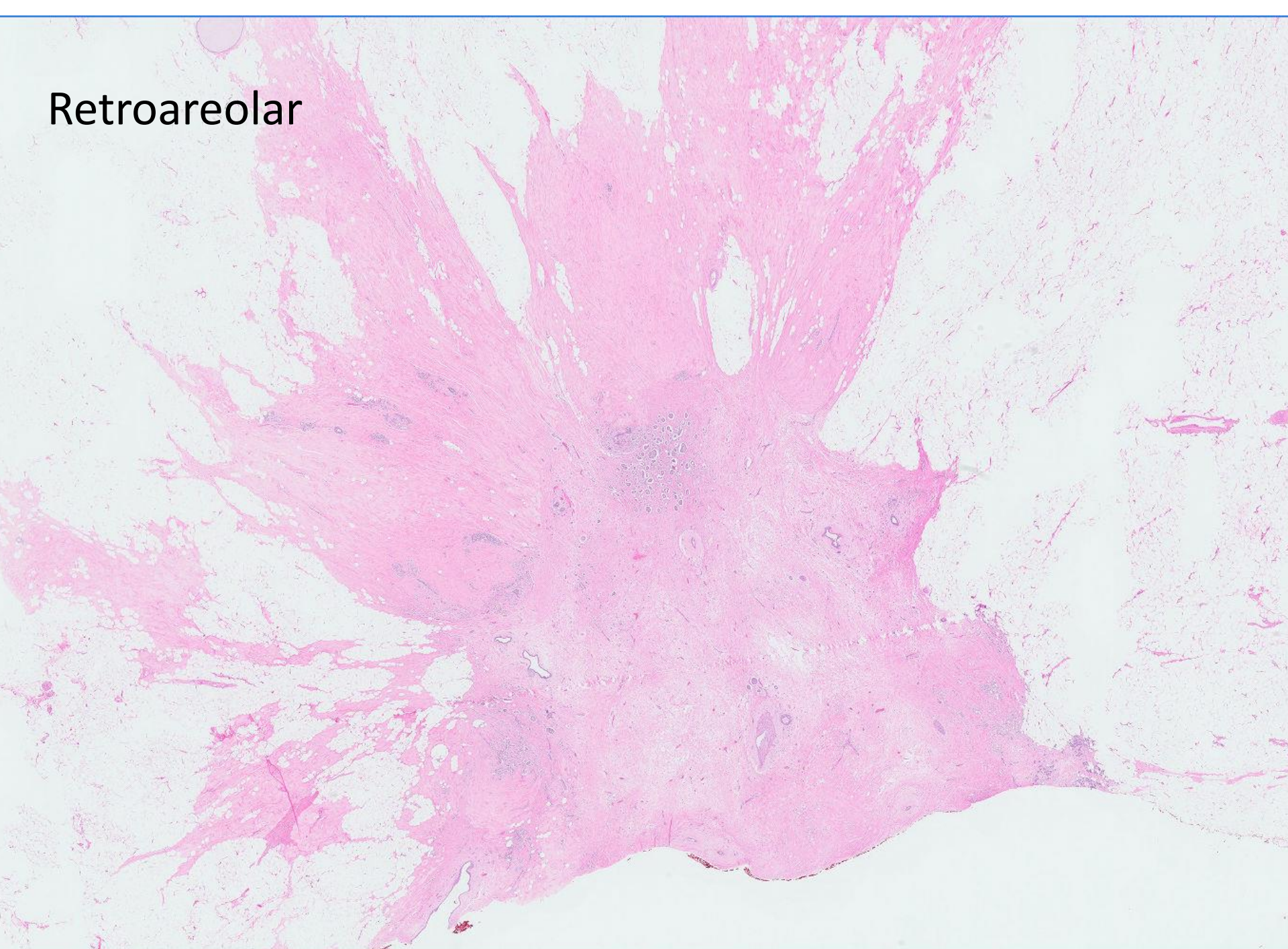
*Left breast
mastectomy*



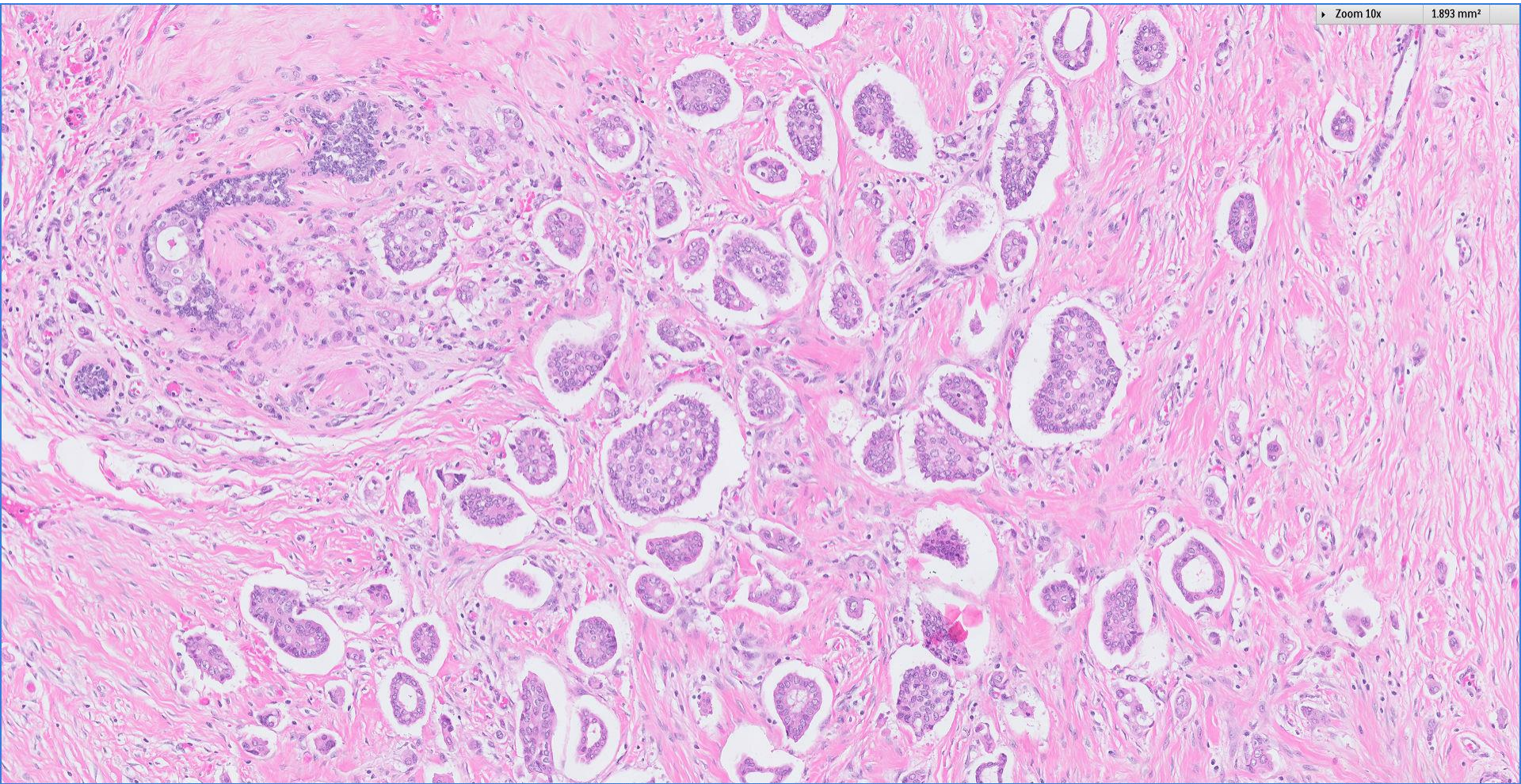
Retroareolar
(subareolar)



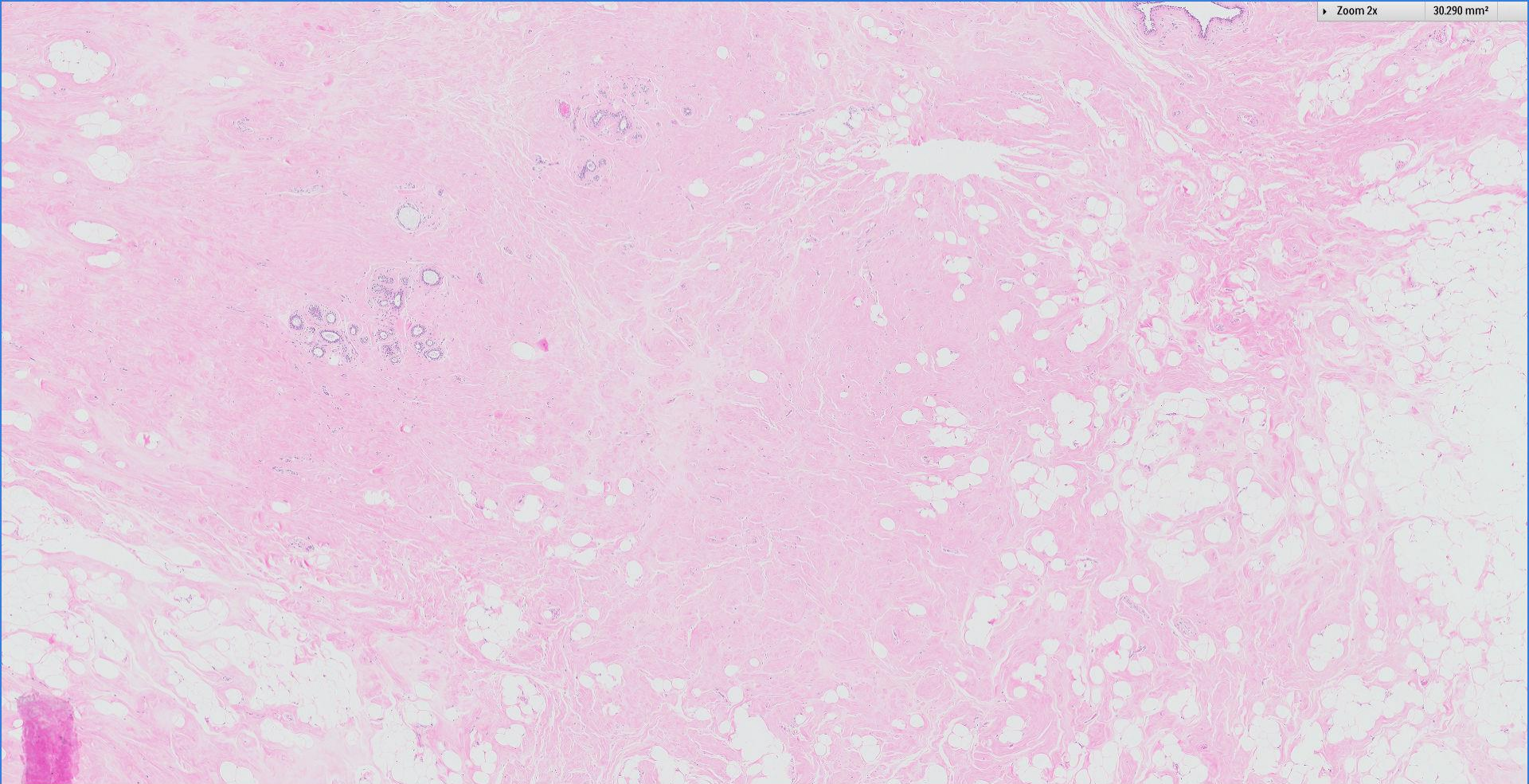
Retroareolar



Retroareolar



UOQ



Diagnosis

Left breast, mastectomy and axillary clearance (post-neoadjuvant chemotherapy):

Invasive ductal carcinoma, 1.5cm in the retroareolar region.

No residual tumour in the UOQ.

13 negative lymph nodes.

Key points

- Two tumours in the left breast with similar histological appearance but divergent receptor status.
- Complete pathologic remission of UOQ tumour, partial remission of retroareolar (subareolar) tumour, post-neoadjuvant chemotherapy.

Multifocal invasive breast cancer

- Seen in 13-63% of breast cancers.
- Defined as multiple synchronous unilateral lesions of invasive breast cancer.
- ER/PR/HER2 usually assessed in the main tumour focus.
- When evaluated in multifocal tumours:
 - Minor differences in ER which did not affect overall classification into positive/negative.
 - PR showed more variability, but since ER was positive, the PR status was not critical.

{Acta Oncol 2007;46:204-7}



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Multifocal invasive breast cancer

- Multifocal/multicentric invasive ductal carcinomas usually have a single phenotype with regard to hormone receptors and HER2.
- Analysis of the index tumour may be sufficient in routine practice.
- If tumours are of high grade and different in histological features, separate assessment of biomarkers on the different invasive cancers may be warranted.

{Hum Pathol 2012;43:48-55}



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Multifocal invasive breast cancer

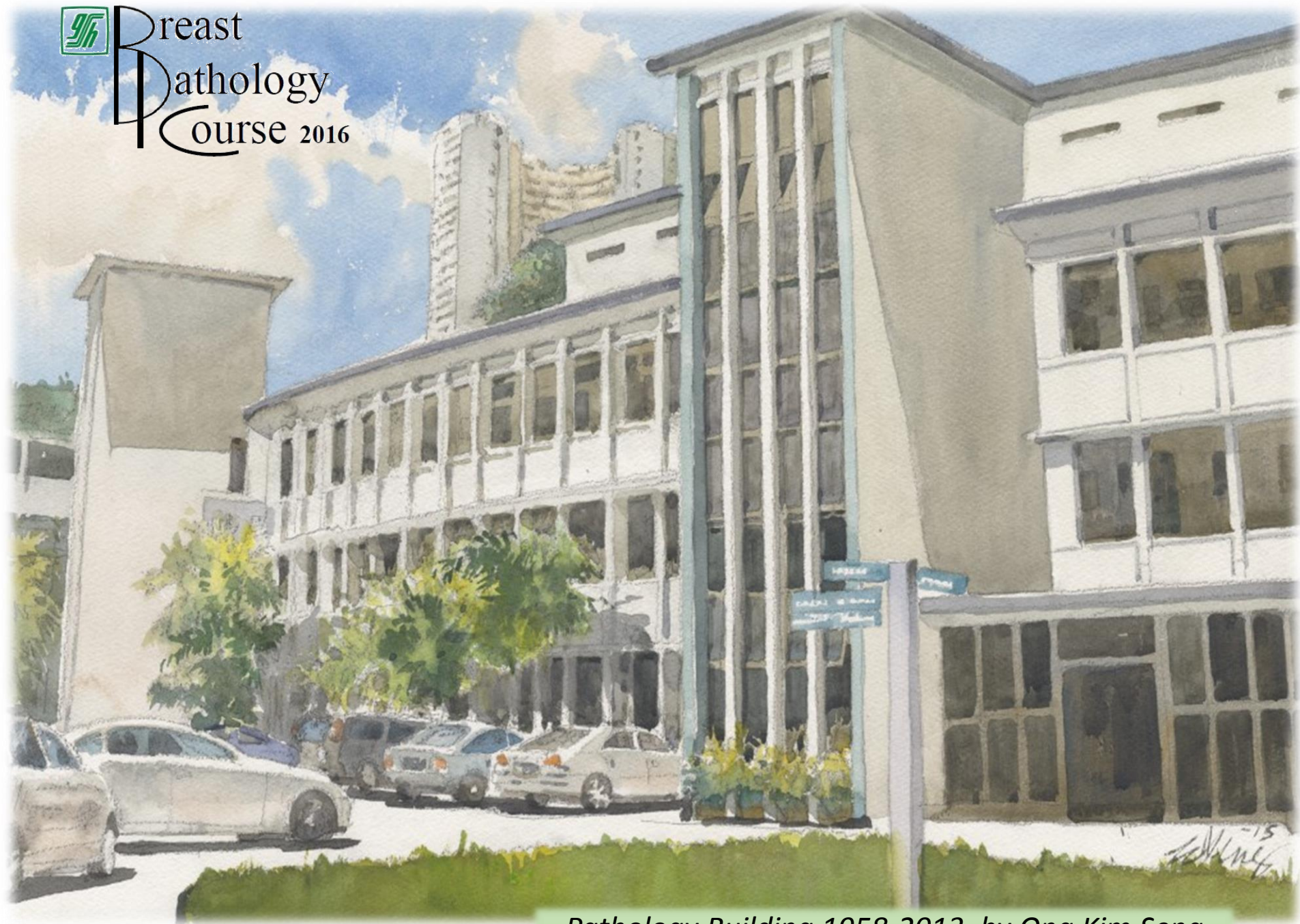
- Mismatched ER status in 4.4% of cases.
- Mismatched PR status in 15.9% of cases.
- Other mismatches ~
 - Tumour grade (18.6%)
 - Ki67 status (15%)
 - HER2/cerbB2 (9.7%)
- Assessment of multiple tumours led to 12.4% of women receiving different adjuvant treatment, than if based on the biological status of the primary tumour alone.

{Ann Oncol 2012;23:2042-6}

Multifocal synchronous breast cancer: *recommendations*

- Assess receptors in the separate synchronous tumours ~
 - If they appear morphologically distinct with different grades.
 - If it is unclear which is the index tumour.
 - If they are geographically separate in the breast.

 Breast
Pathology
Course 2016



Pathology Building 1958-2013, by Ong Kim Seng