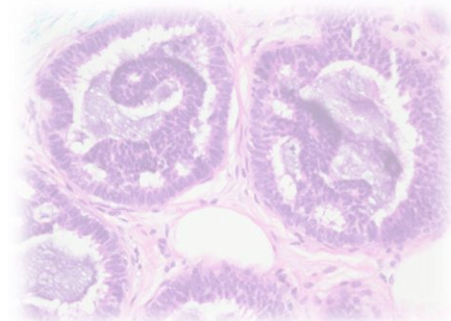
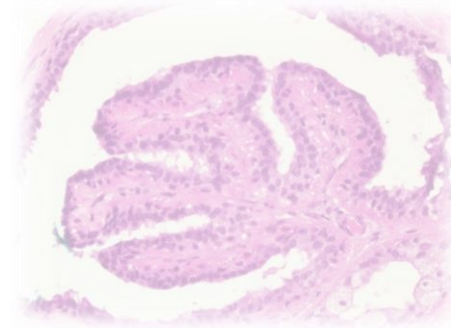


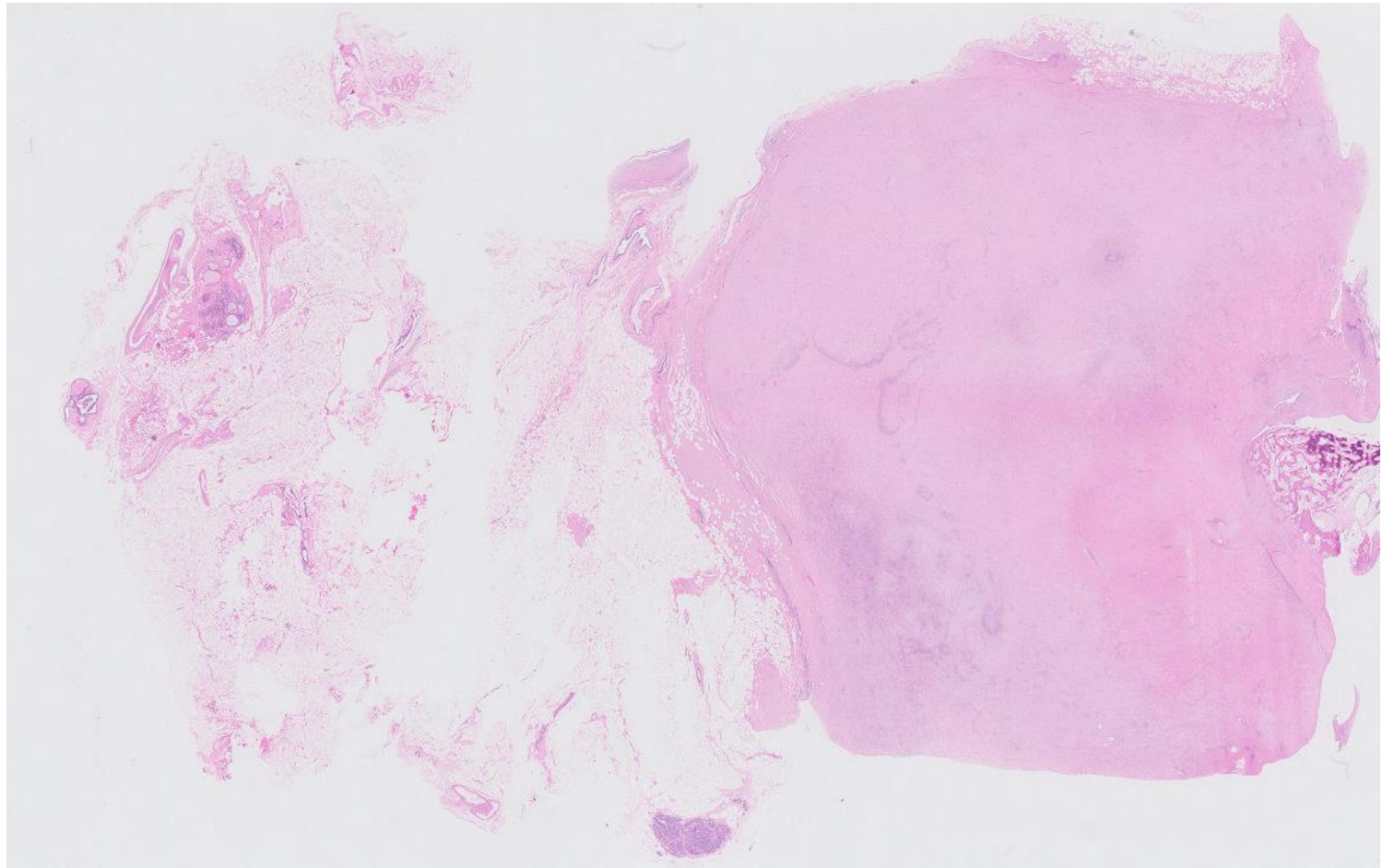
Case 31

84 year old Chinese female.

Left breast, simple mastectomy for a
12cm mass.

Previous core biopsy showed a
spindle cell proliferation.



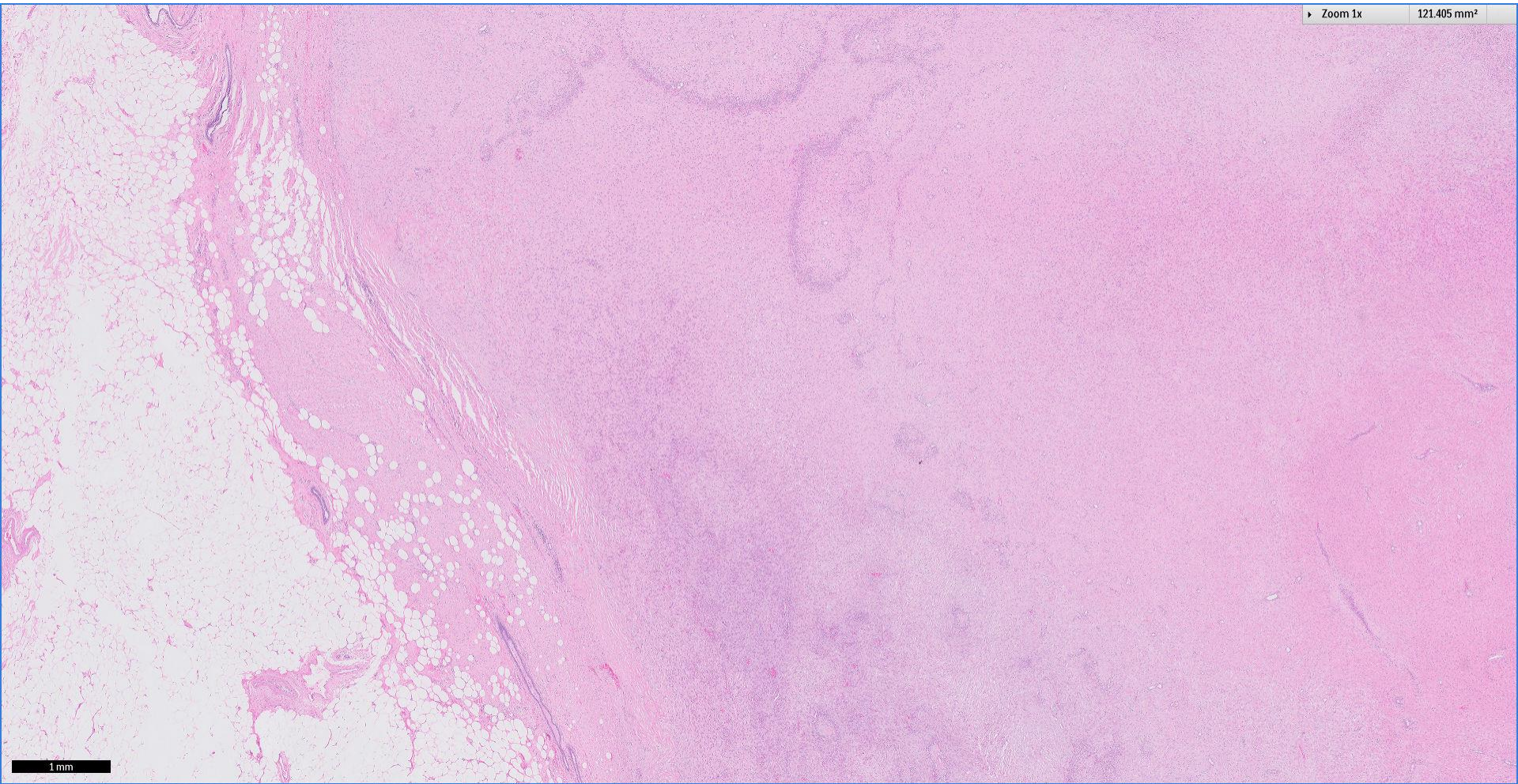


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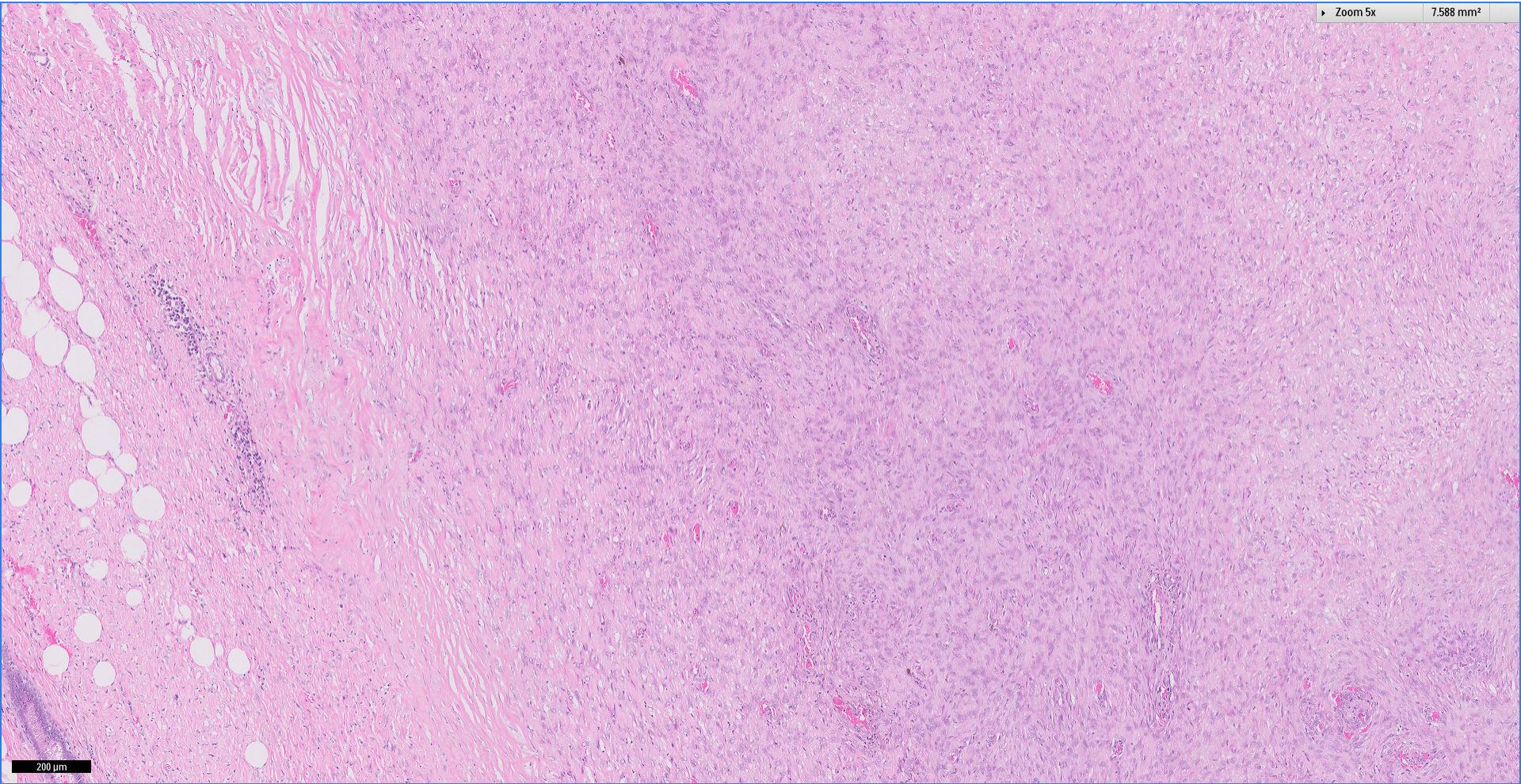
Zoom 1x

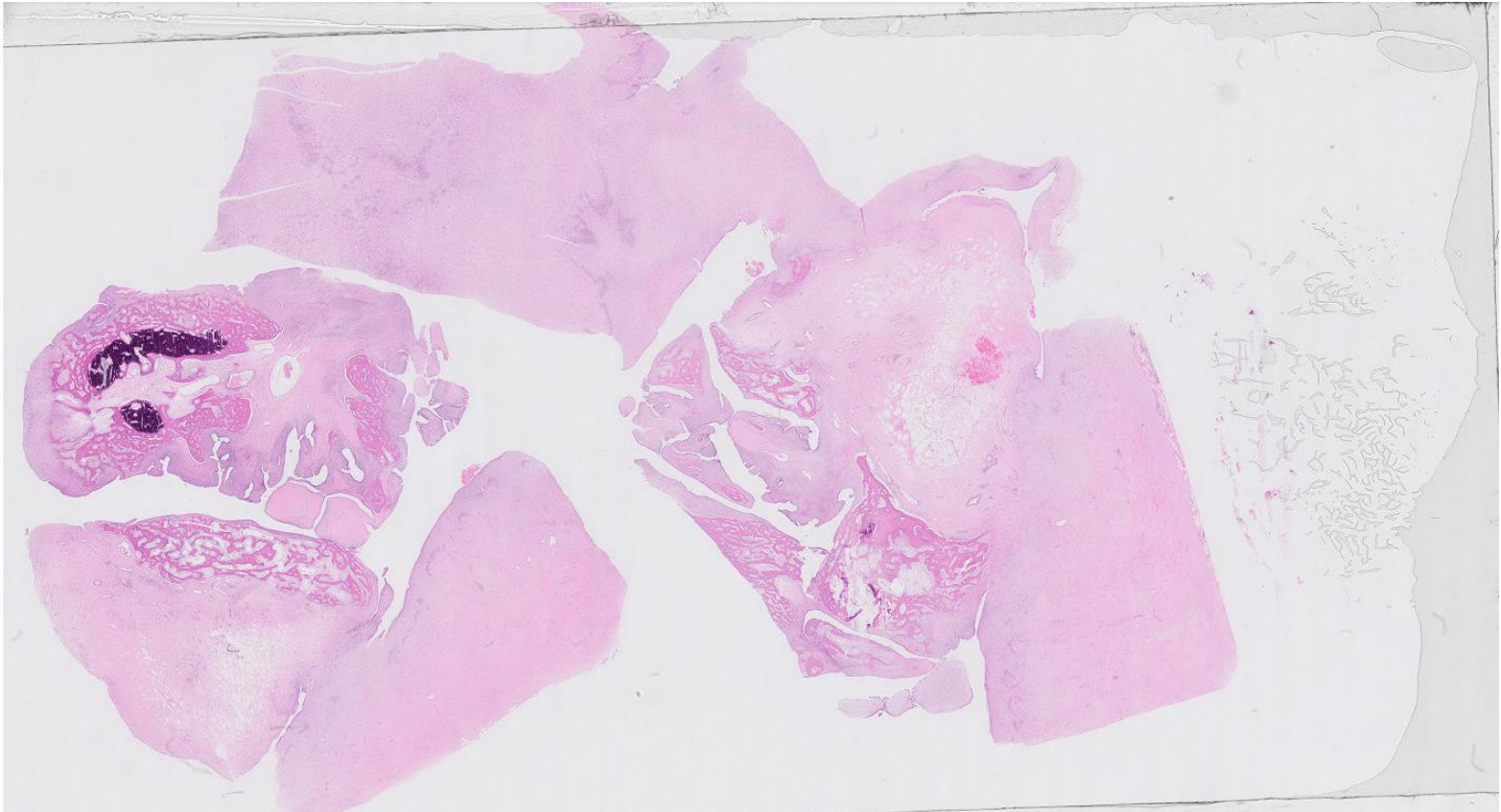
121.405 mm²



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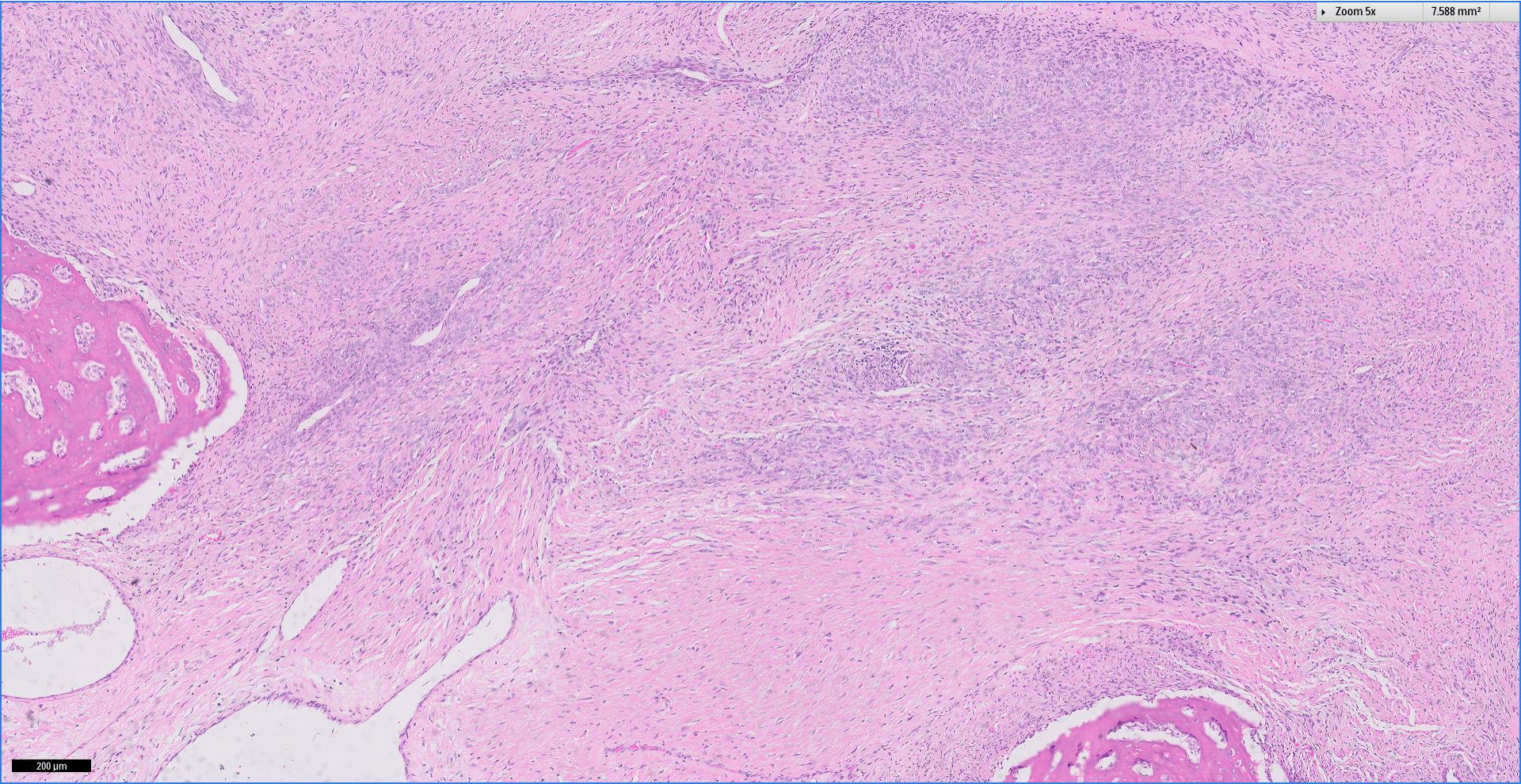


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Zoom 5x

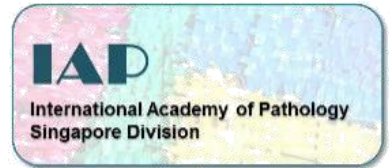
7.588 mm²

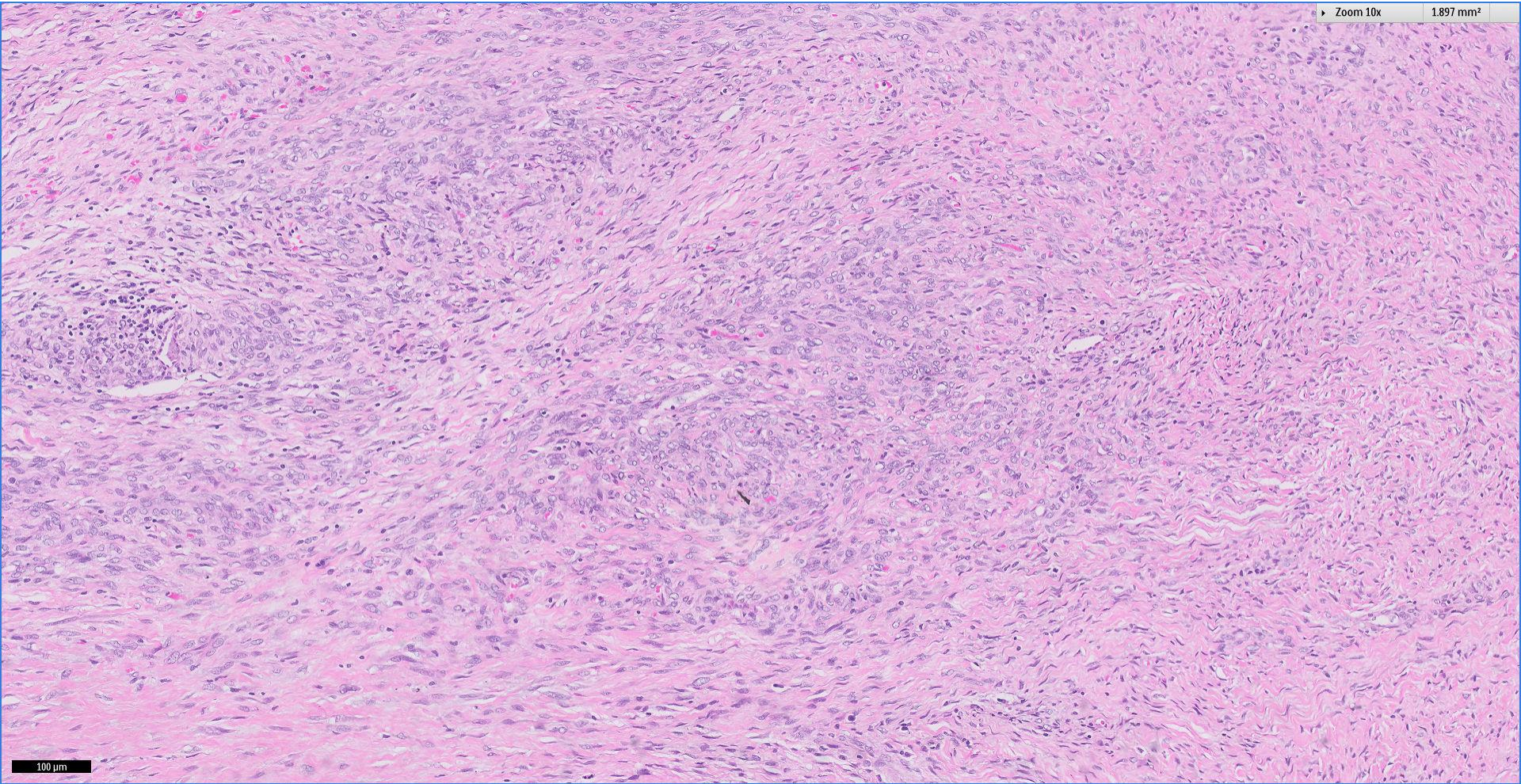


200 μ m



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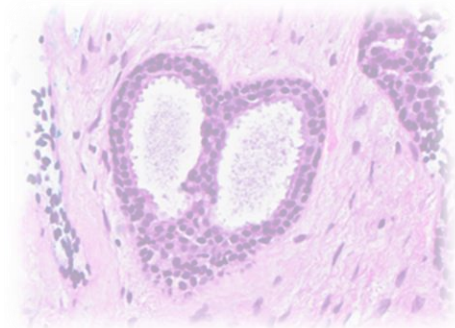
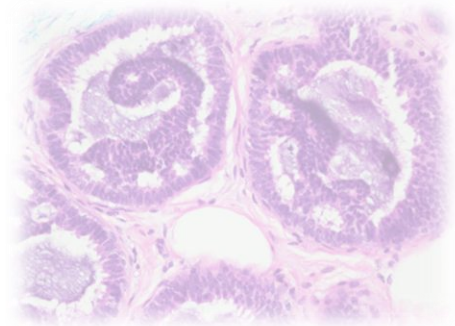
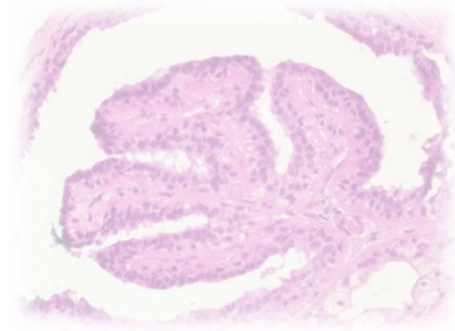


100 μ m



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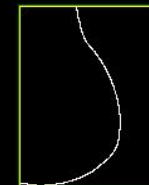


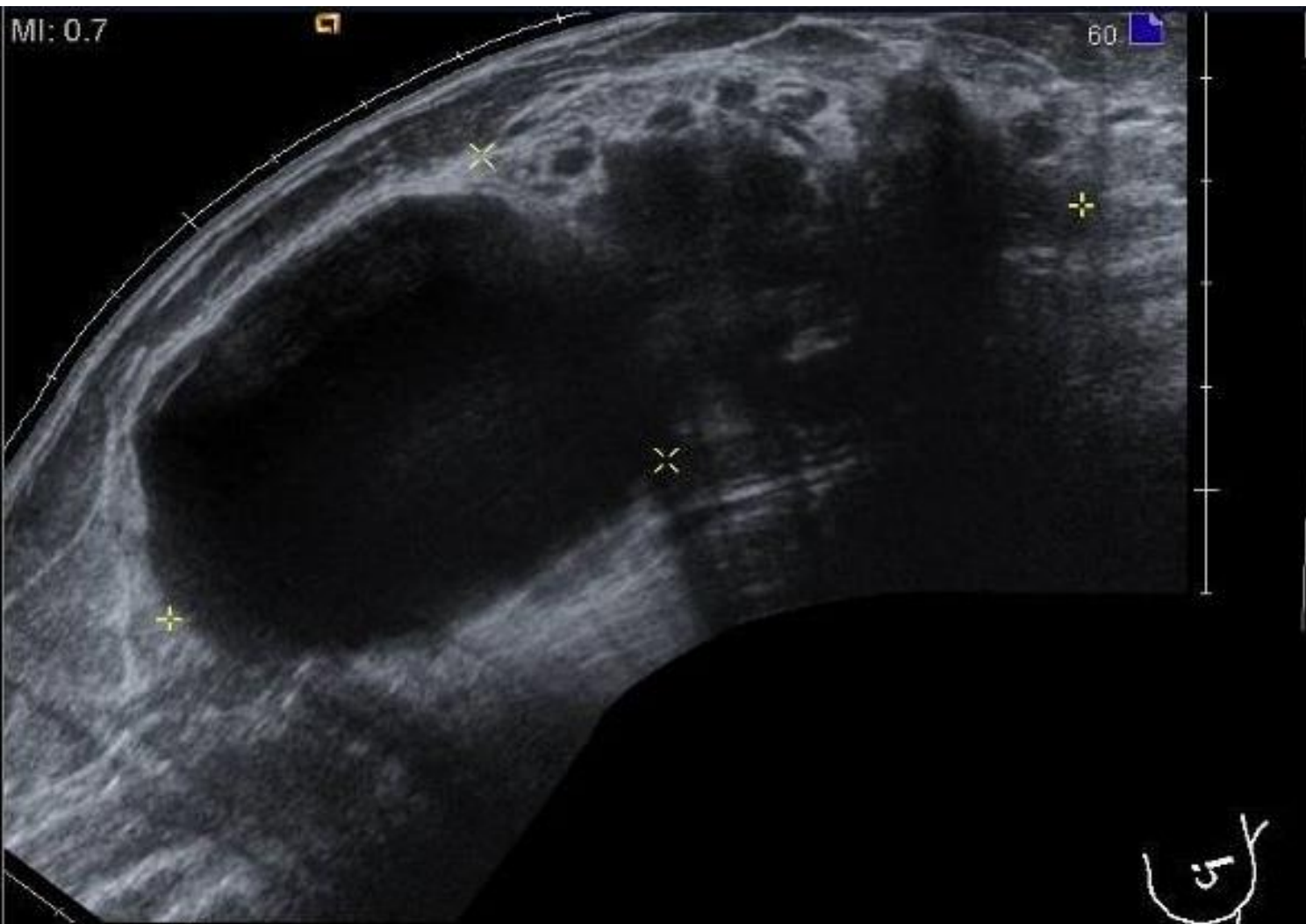


Additional pictures



**Mammogram ~
Dense mass with
internal thick bone-like
coarse calcifications and few
round calcifications**





MI: 0.7

60

SIEMENS
VFX13-5 / Breast
2D
GEN / 10.00 MHz
46 dB / DR 65
SC 2
Map J / RS 3

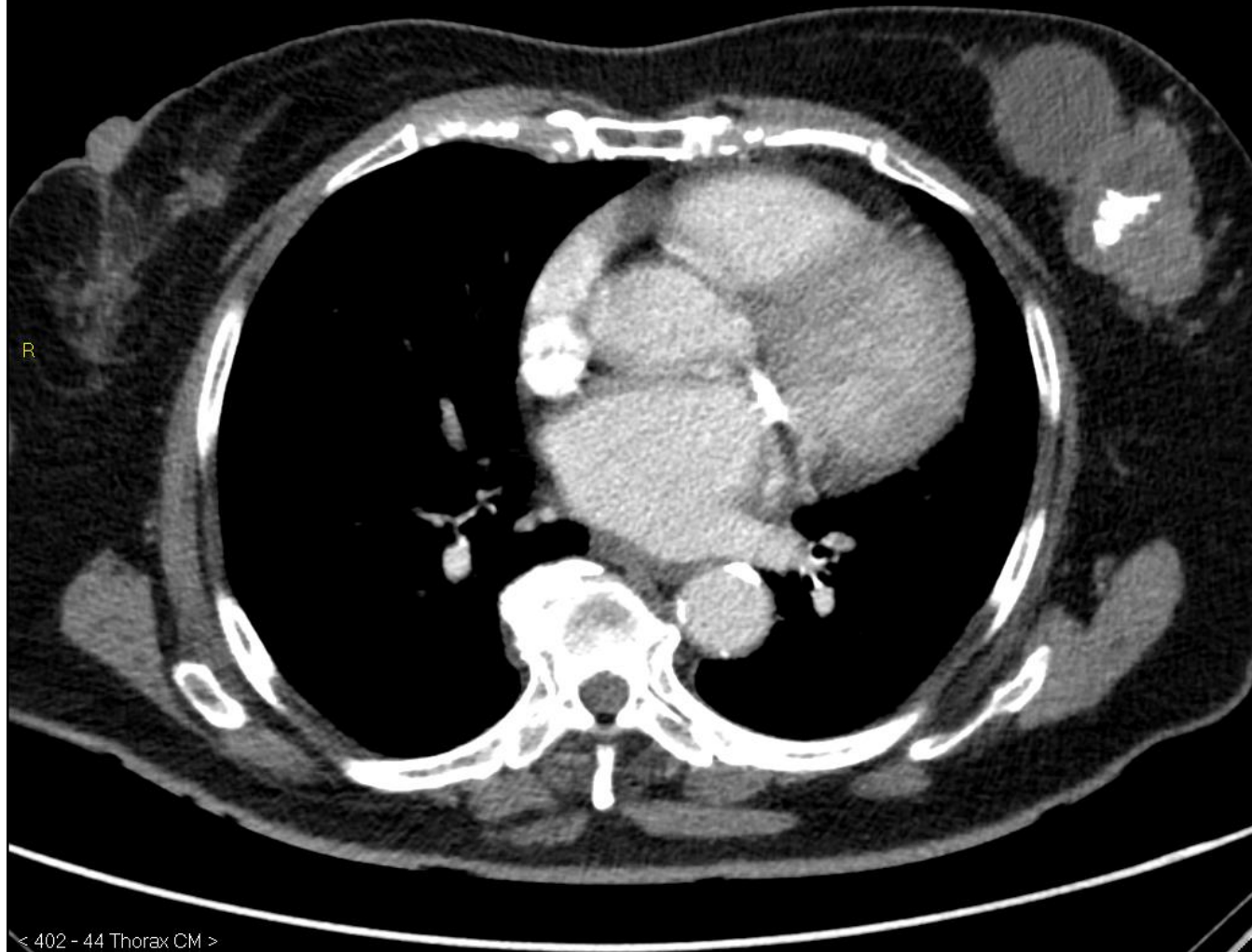
+ D=94.2 mm
x D=34.2 mm

FTI

5

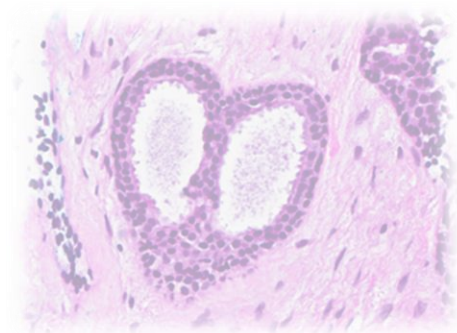
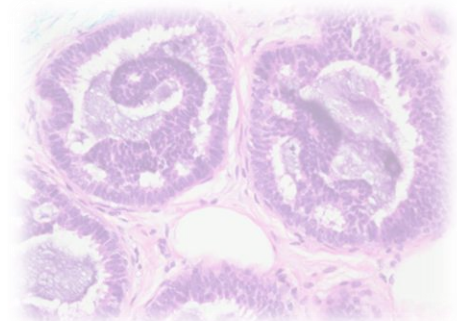
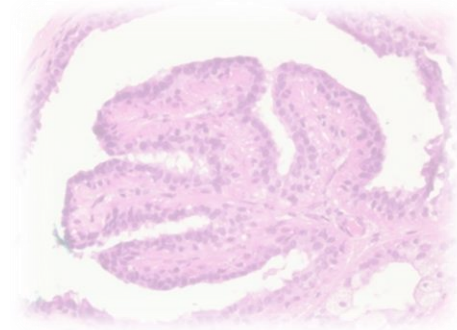
– **Ultrasound ~
Solid cystic mass**

**Contrast enhanced CT ~
Dense mass with
internal thick bone-like coarse
calcifications and few round calcifications**



Diagnosis, case 31

- Left breast, simple mastectomy:
Malignant phyllodes tumour, 120mm.
Three benign sentinel lymph nodes.



Spindle cell lesion on core biopsy

- Keep a broad range of differential diagnoses
- Clinicoradiological findings are important
- Adjunctive studies are helpful, but beware of pitfalls and limitations on small samples
- Final diagnosis usually rendered on excision

Keratins in differential diagnosis of phyllodes, sarcoma and metaplastic carcinoma

A word of caution.....

Table 8 Immunohistochemical expression of keratins in phyllodes tumours, spindle cell sarcoma NOS, spindle cell components of metaplastic carcinoma and low-grade spindle cell lesions of the breast

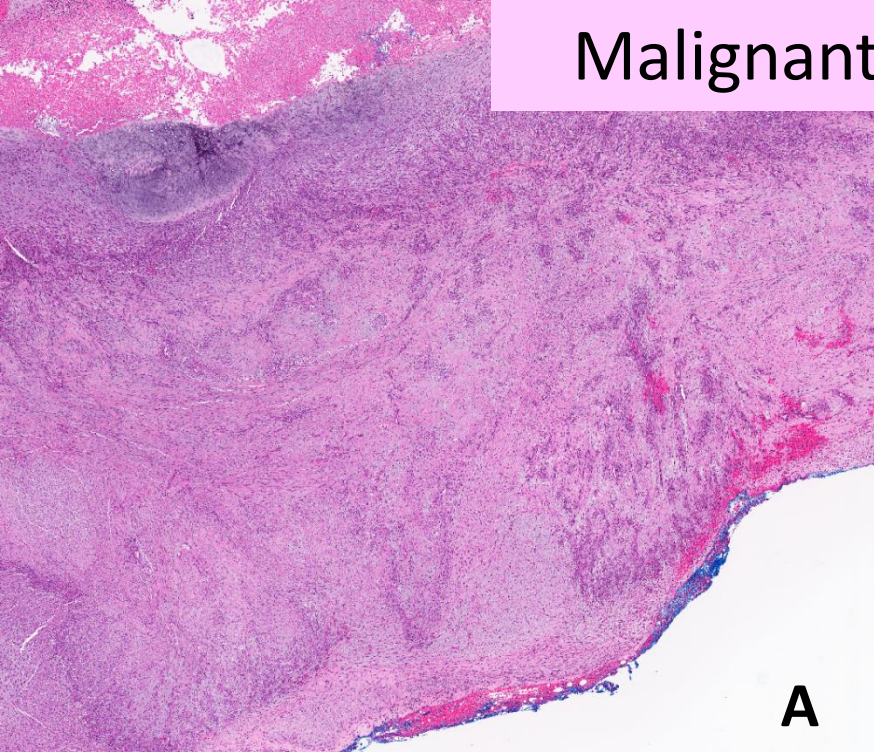
Diagnosis	Total no of cases	AE1/3 positive	CK14 positive	Cam5.2 positive	CK7 positive	34βE12 positive	MNF 116 positive
Phyllodes tumour	109	9/109 (8.3%)	2/109 (1.8%)	2/109 (1.8%)	31/109 (28.3%)	24/109 (21.8%)	13/109 (11.8%)
Benign	70	4/70 (5.7%)	0/70 (0%)	0/70 (0%)	20/70 (28.6%)	11/70 (15.7%)	6/70 (8.6%)
Borderline	30	3/30 (10.0%)	2/30 (6.7%)	1/30 (3.3%)	9/30 (30.0%)	9/30 (30.0%)	4/30 (13.3%)
Malignant	9	2/9 (22.2%)	0/9 (0%)	1/9 (11.1%)	2/9 (22.2%)	4/9 (44.4%)	3/9 (33.3%)
Spindle cell sarcoma	8	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Spindle cell component of metaplastic carcinoma	8	5/8 (62.5%)	8/8 (100%)	6/8 (75.0%)	3/8 (37.5%)	2/8 (25.0%)	7/8 (87.5%)
Low-grade spindle cell lesions	13	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

NOS, not otherwise specified.

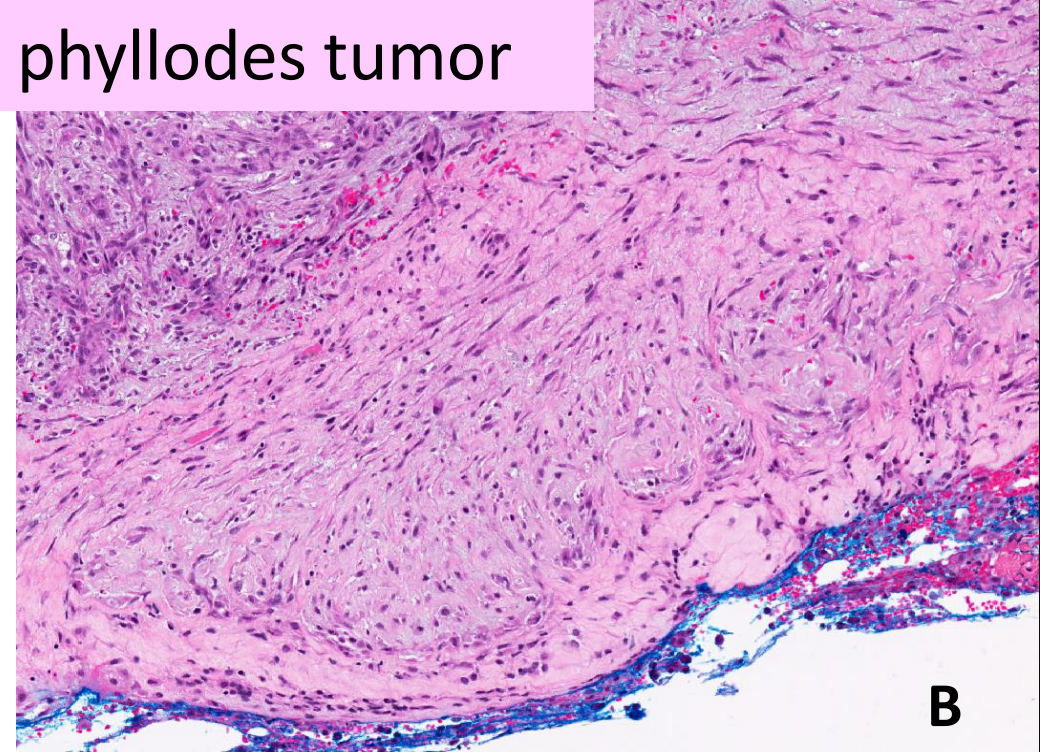
Chia Y et al. J Clin Pathol. 2012 Apr;65(4):339-47.

Note: Staining in phyllodes tumours is focal (less than 5% of stromal cells) and patchy.

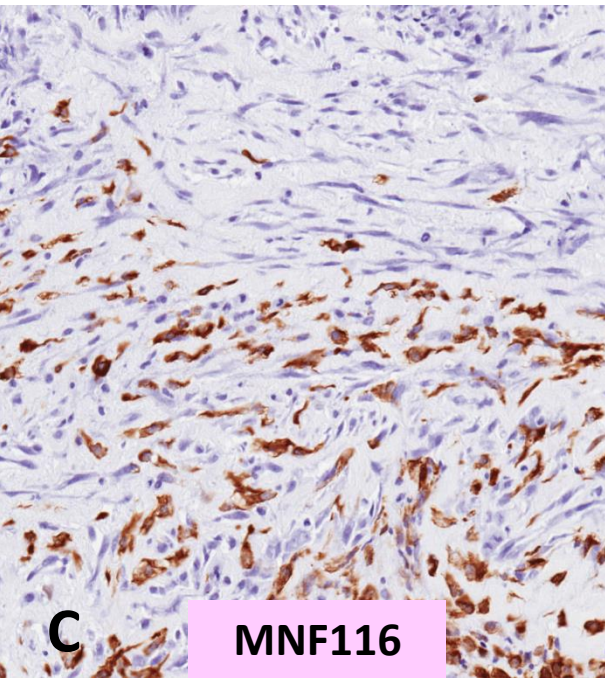
Malignant phyllodes tumor



A

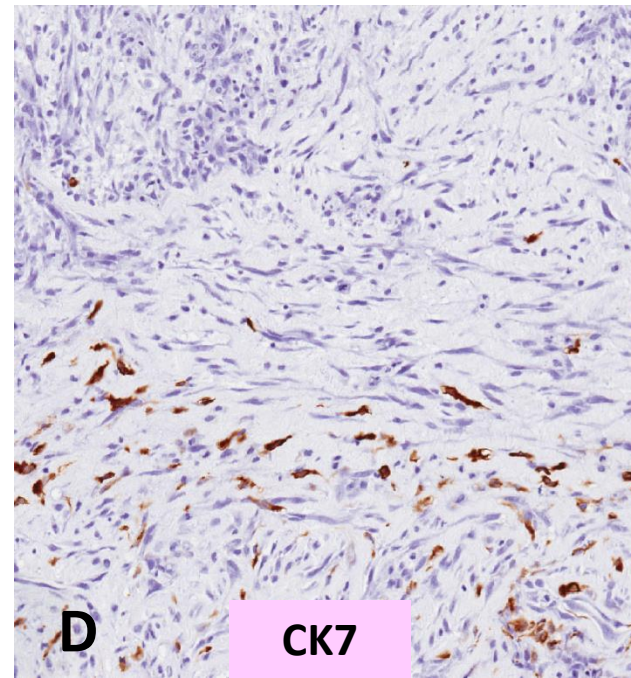


B



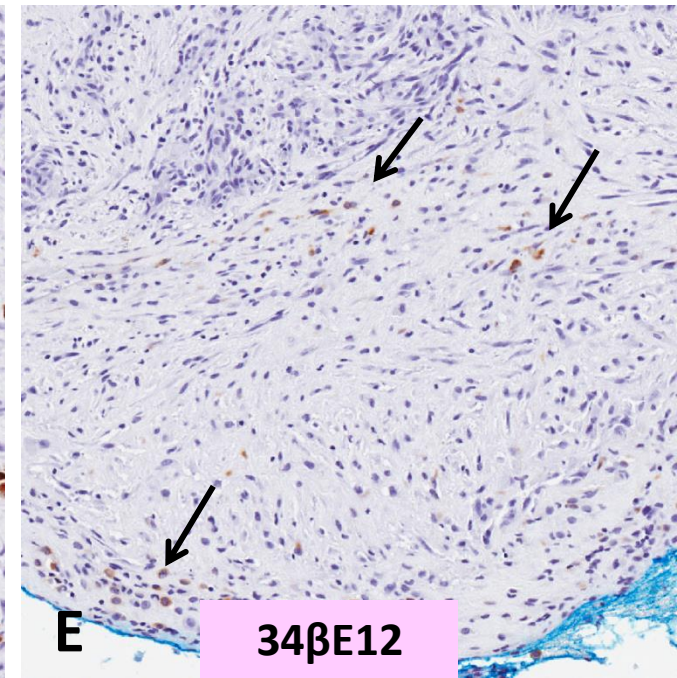
C

MNF116



D

CK7



E

34βE12

Spindle cell breast lesions: additional questions

- Best immunohistochemical marker?
 - Panel approach
 - Keratins – broad spectrum, basal
 - p63
 - Markers for specific diagnoses
 - Exercise caution when staining is focal, or on limited material
 - Be aware of cross reactivities and pitfalls

6: Mesenchymal tumours of the breast

6.1: Mesenchymal tumours of the breast: Introduction

6.2: Vascular tumours

- 6.2.1: Haemangioma
- 6.2.2: Angiomatosis
- 6.2.3: Atypical vascular lesions
- 6.2.4: Postradiation angiosarcoma of the breast
- 6.2.5: Primary angiosarcoma of the breast

6.3: Fibroblastic and myofibroblastic tumours

- 6.3.1: Nodular fasciitis
- 6.3.2: Myofibroblastoma
- 6.3.3: Desmoid fibromatosis
- 6.3.4: Inflammatory myofibroblastic tumour

6.4: Peripheral nerve sheath tumours

- 6.4.1: Schwannoma
- 6.4.2: Neurofibroma
- 6.4.3: Granular cell tumour

6.5: Smooth muscle tumours

- 6.5.1: Leiomyoma
- 6.5.2: Leiomyosarcoma

6.6: Adipocytic tumours

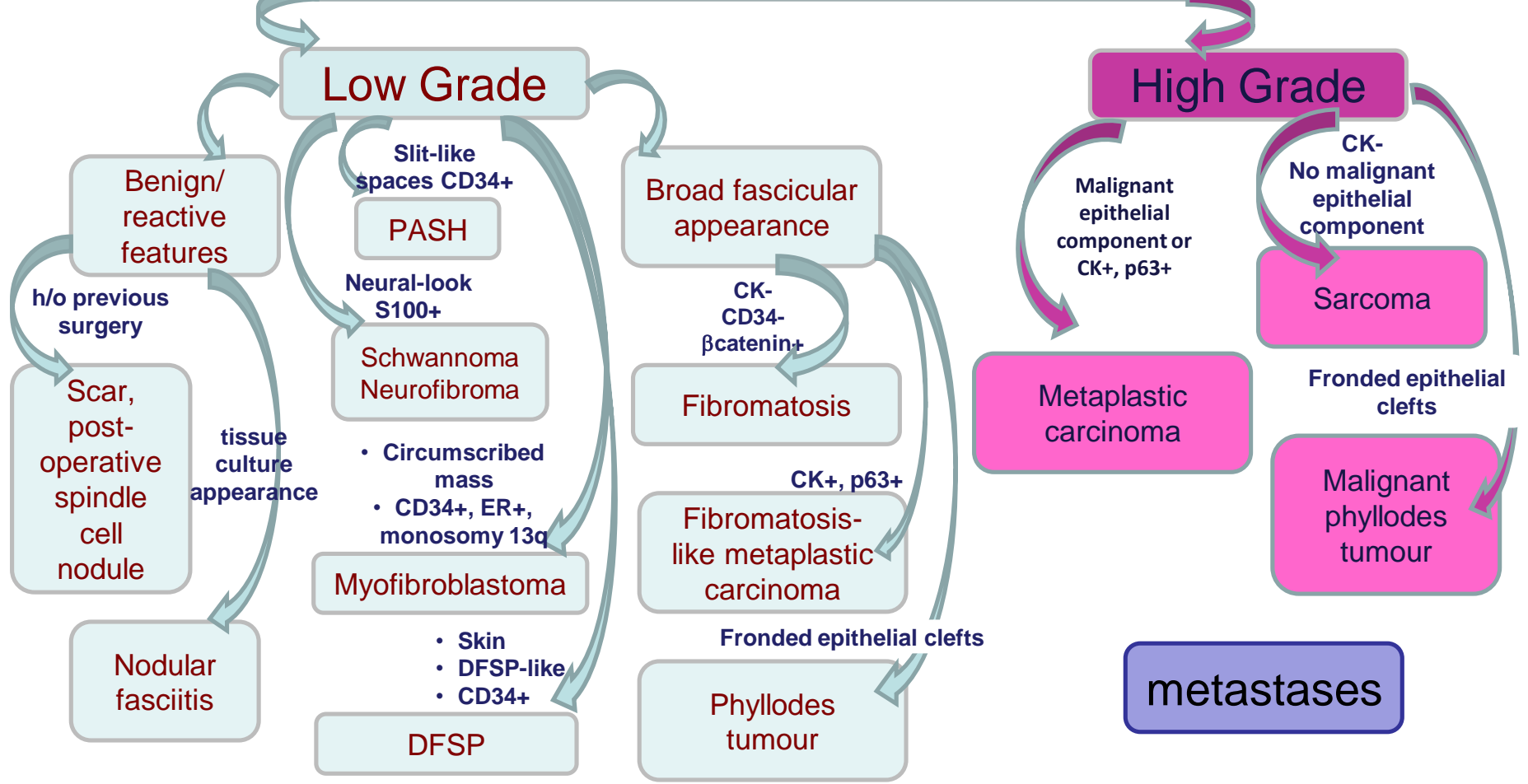
- 6.6.1: Lipoma
- 6.6.2: Angiolipoma
- 6.6.3: Liposarcoma

6.7: Other mesenchymal tumours and tumour-like conditions

- 6.7.1: Pseudoangiomatous stromal hyperplasia

WHO 2019

Spindle Cell Breast Lesion



Puay Hoon Tan
Aysegul A. Sahin

Atlas of Differential Diagnosis in Breast Pathology



 Springer

Spindle Cell Lesions

11

A spindle cell is a fusiform cell that is tapered at both ends. Although both luminal epithelial and myoepithelial cells may assume spindle shapes, spindle cell lesions of the breast usually refer to conditions that are composed of mesenchymal or mesenchymal-like cells that harbour elongated and stretched cytoplasm. A variety of different lesions may comprise mesenchymal spindle cells, including nodular fasciitis, fibrous scarring, pseudoangiomatous stromal hyperplasia, myofibroblastoma, fibromatosis, stromal overgrowth in phyllodes tumour, and sarcoma. Mesenchymal-like malignant epithelial cells are encountered in fibromatosis-like and spindle cell metaplastic carcinomas.

Imaging Features

Nodular fasciitis is a mimic of breast malignancy on imaging, usually presenting as ill-defined, spiculated nodular masses, although well-circumscribed, benign-appearing masses have also been described. It is commonly seen superficially in the subcutaneous fascia but can also be found deep to the muscle or intramuscularly. It is usually hypoechoic on sonography because of its fibrous content [1, 2].

Pathologic Features

https://books.google.com.sg/books/about/Atlas_of_Differential_Diagnosis_in_Breast_Pathology.html?id=G9G_DgAAQBAJ&redir_esc=y

Thank You