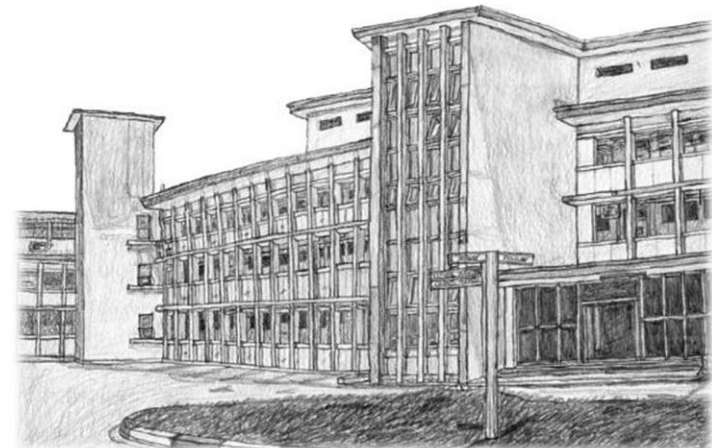
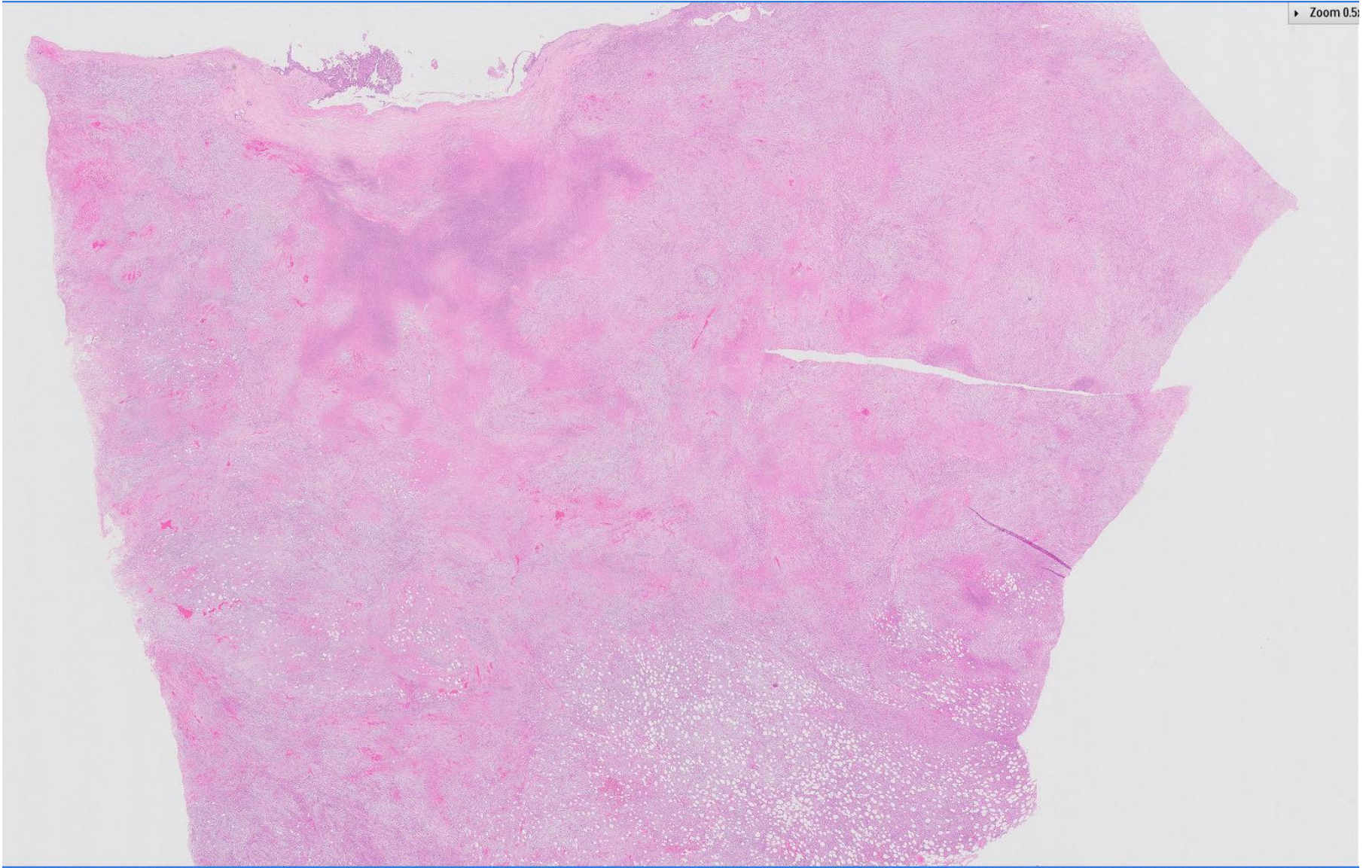


Case 25

67 year old female.
Left breast tumour. Mastectomy performed.

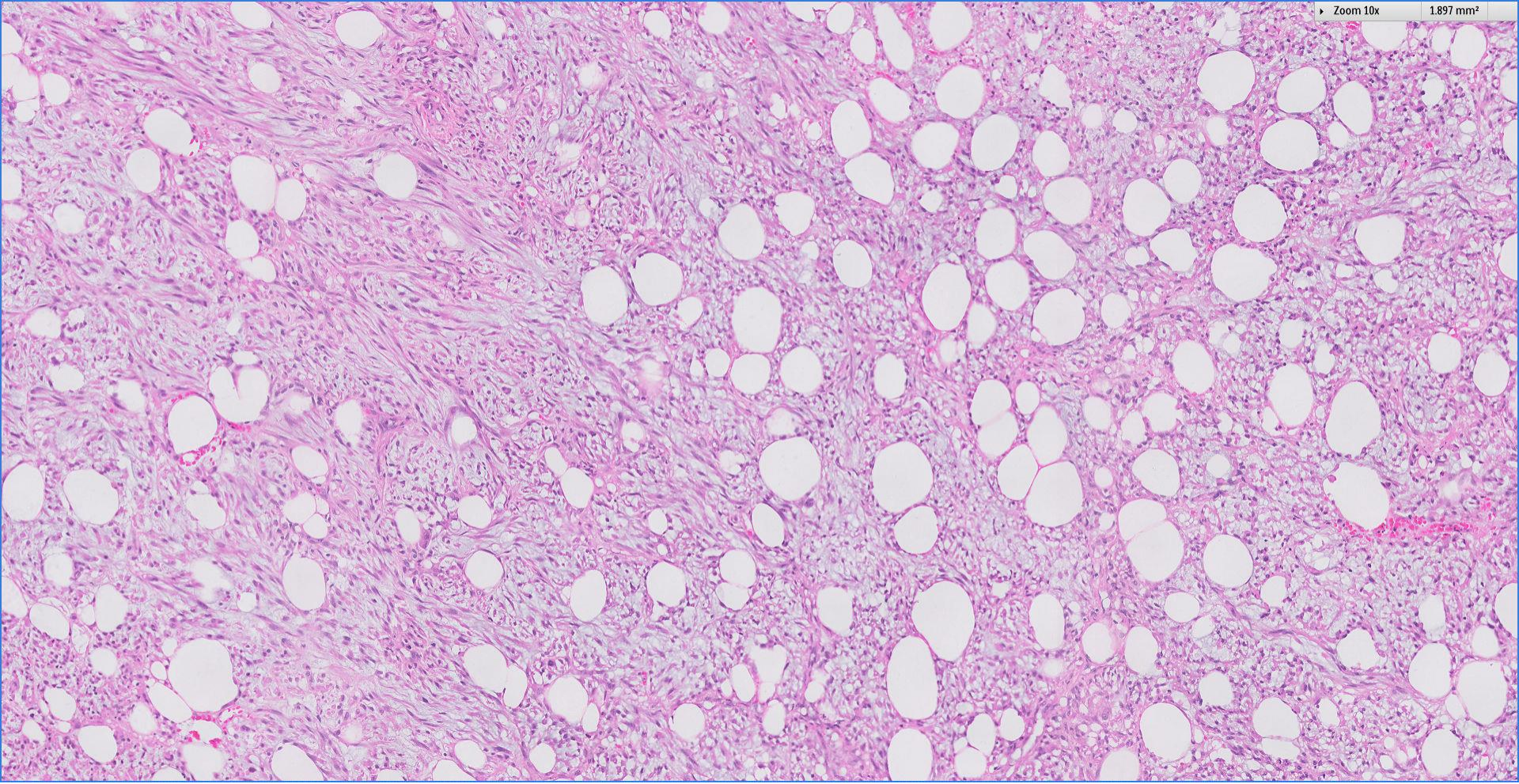
Case contributed by Dr Chih-Jung Chen, Taiwan





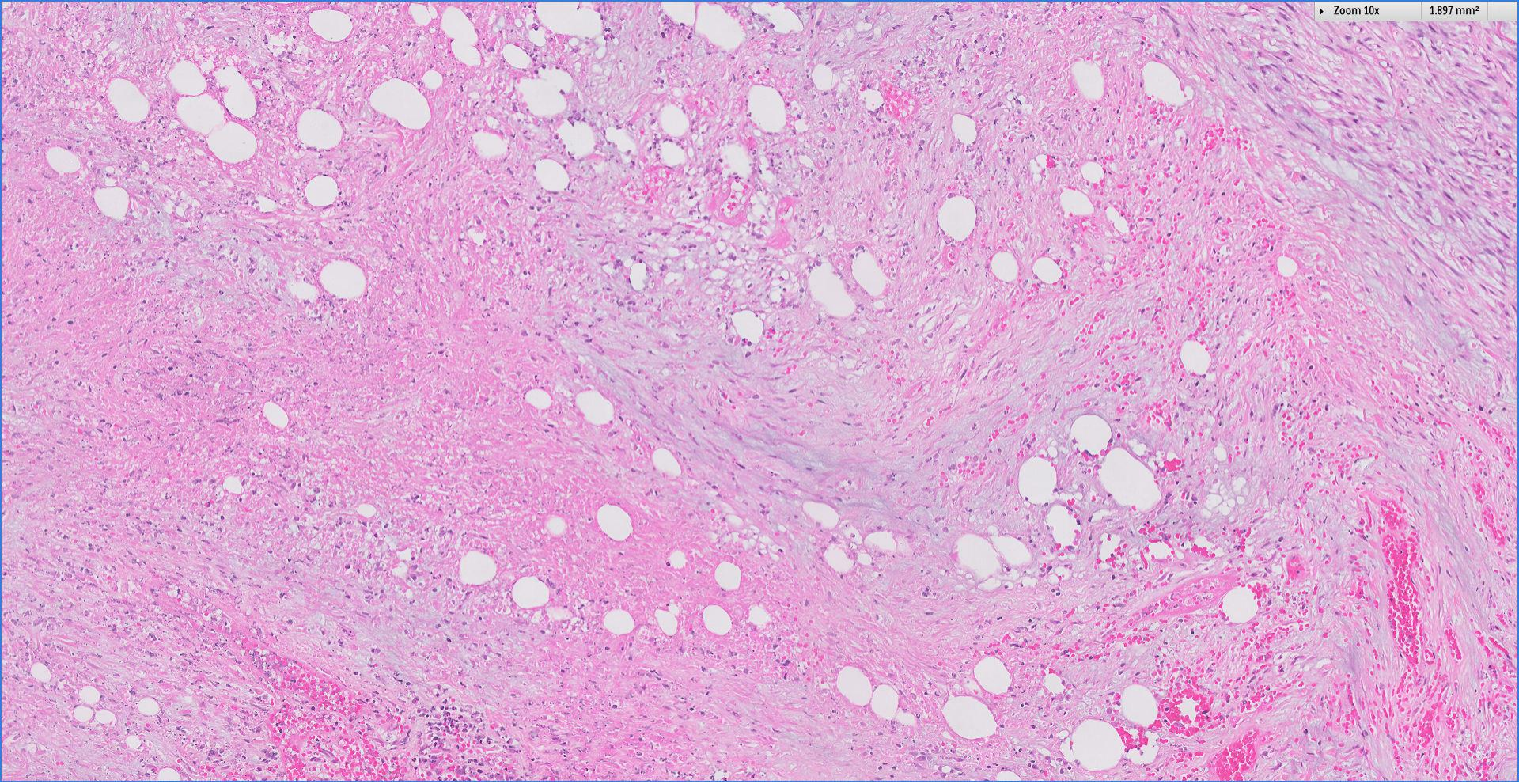
Zoom 10x

1.897 mm²



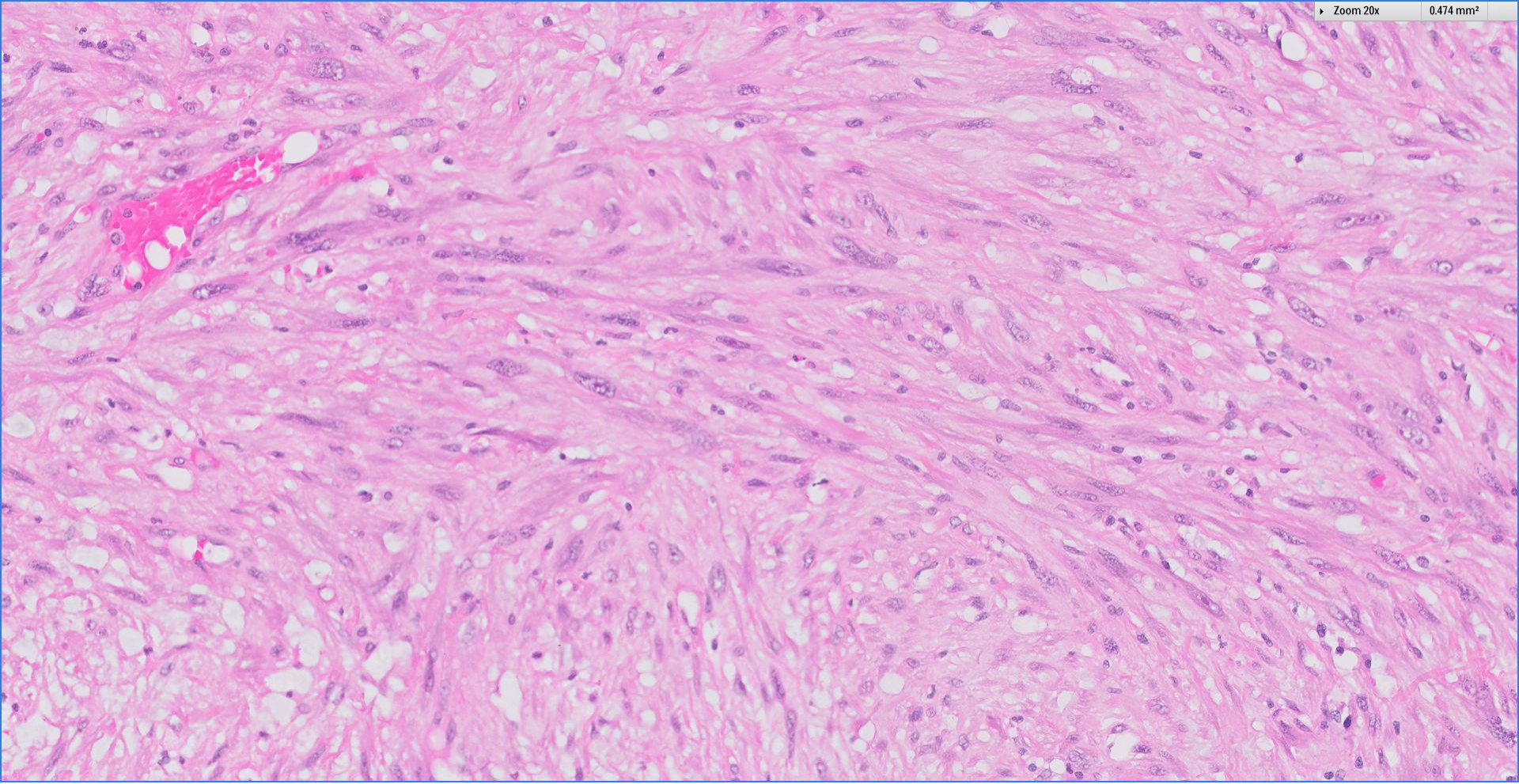
Zoom 10x

1.897 mm²



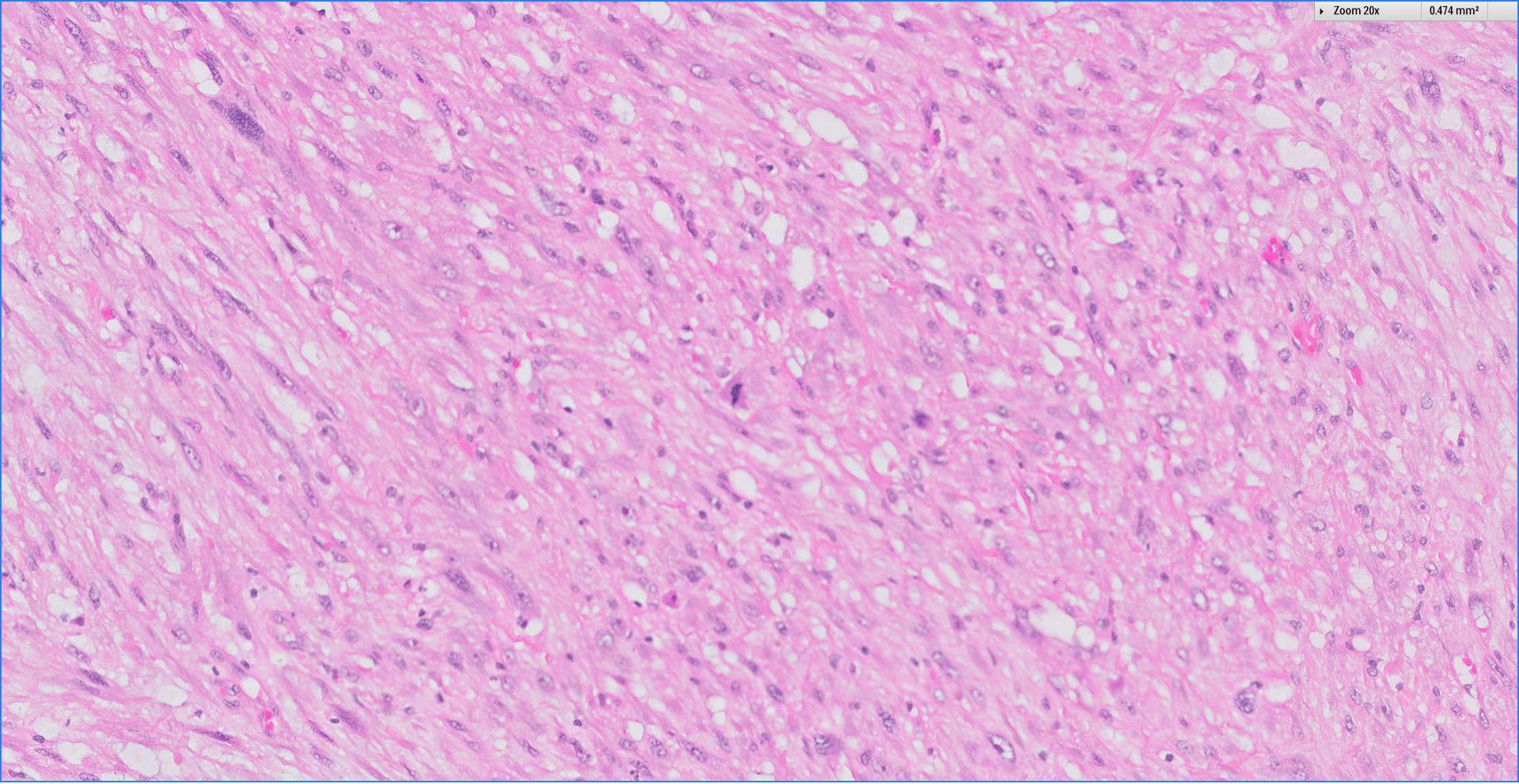
Zoom 20x

0.474 mm²

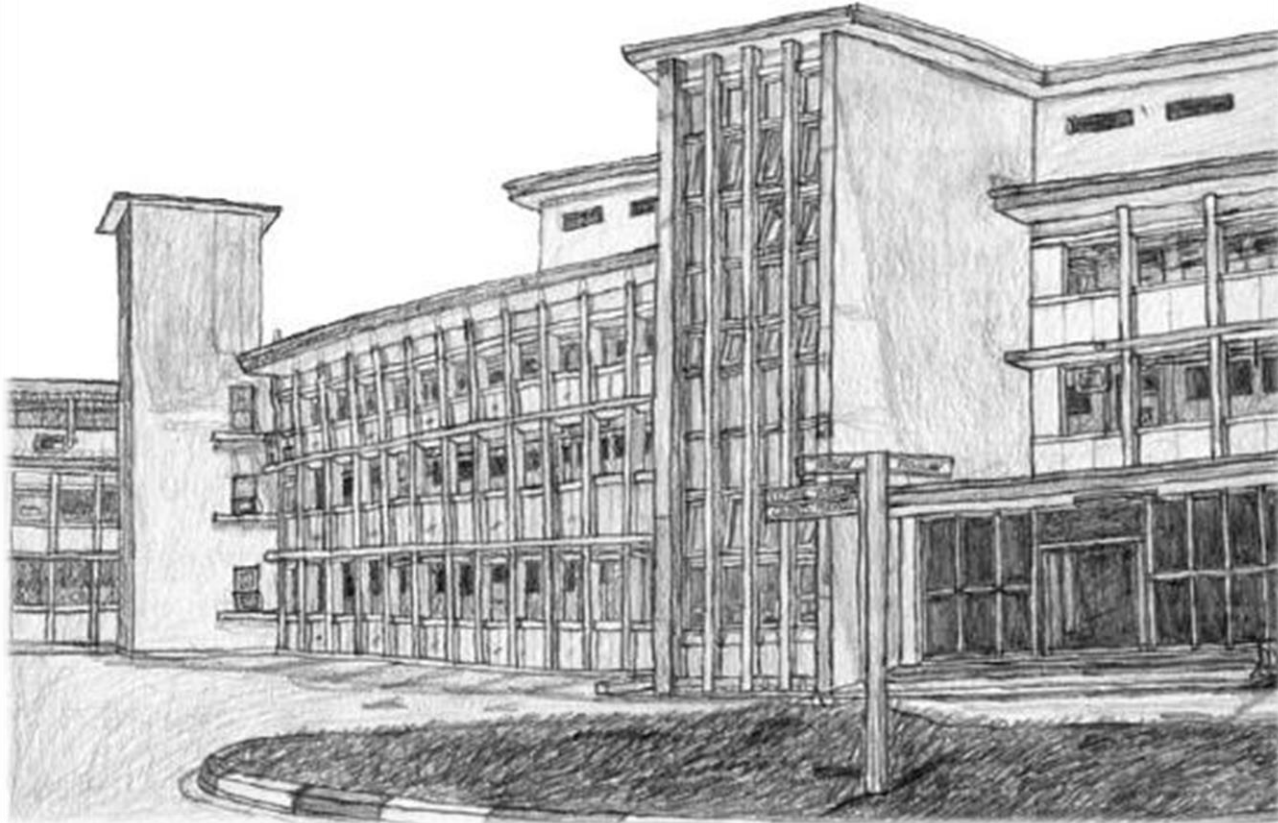


Zoom 20x

0.474 mm²



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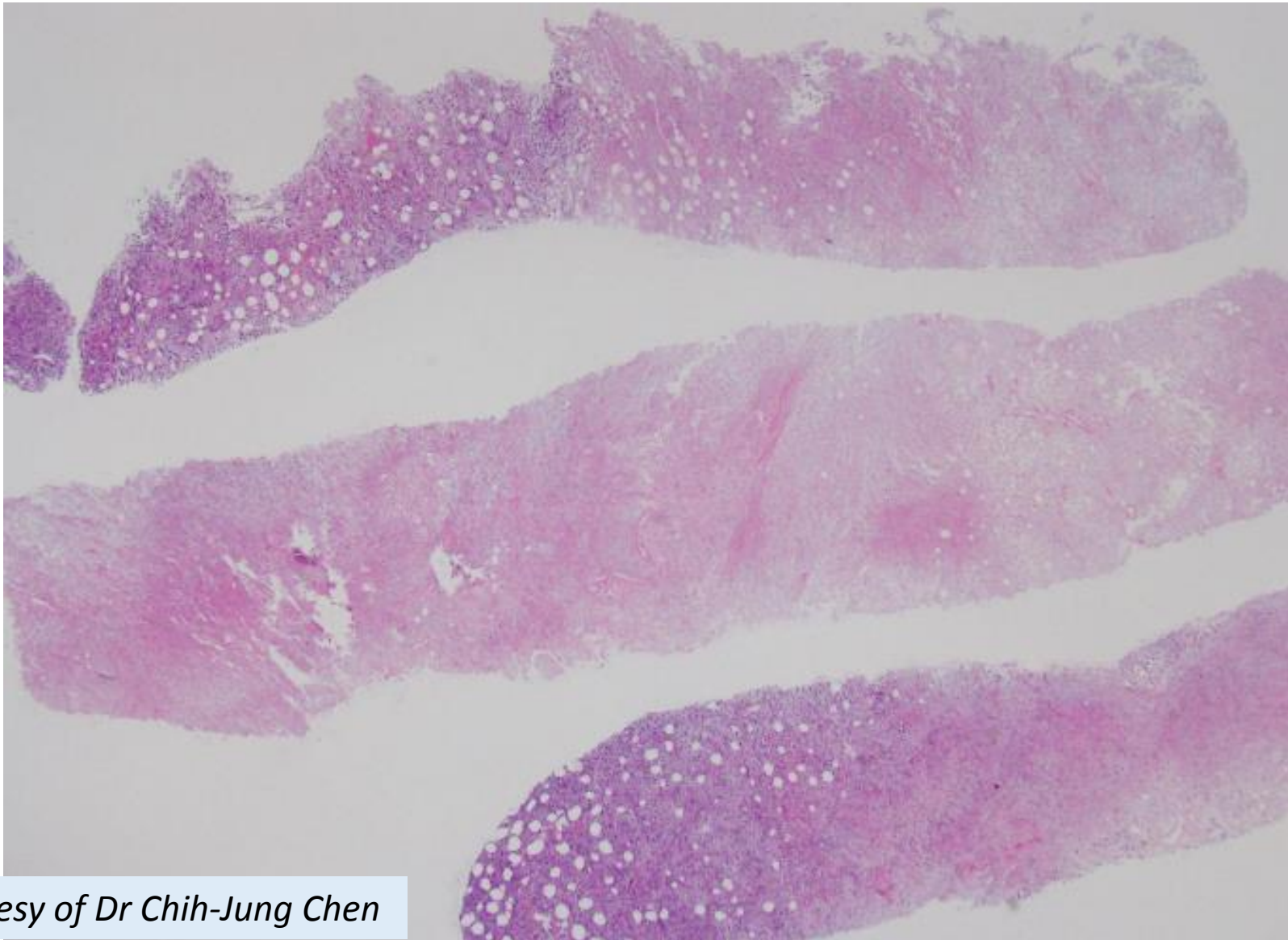
A left breast tumor measuring 5.8x5.6x4.8 cm in size

An infiltrative tumor with marked necrosis

Simple mastectomy was done and sentinel LN (-)

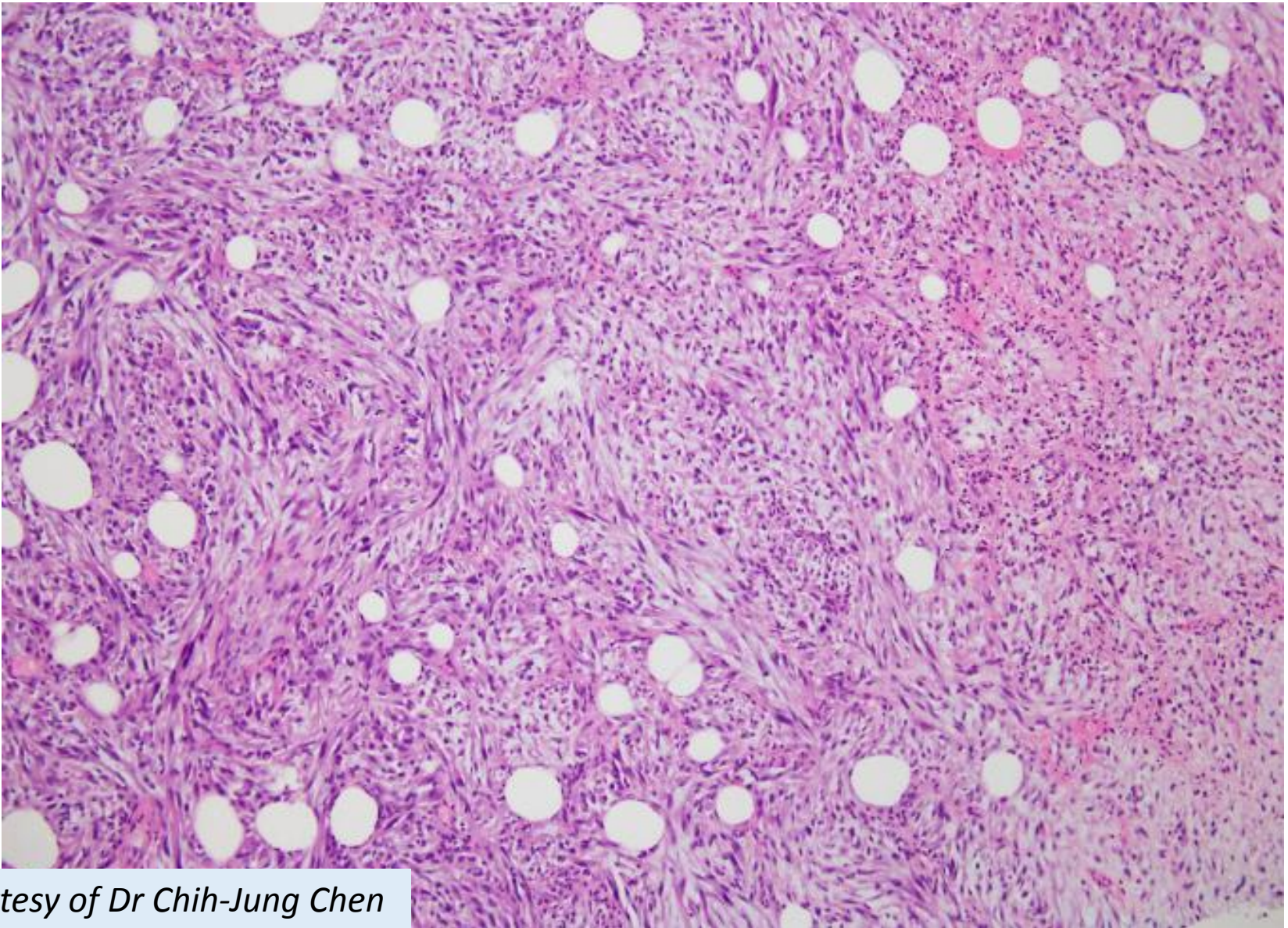
Needle biopsy: malignant spindle cell tumor with CK(+) and p63(-)

Previous core biopsy



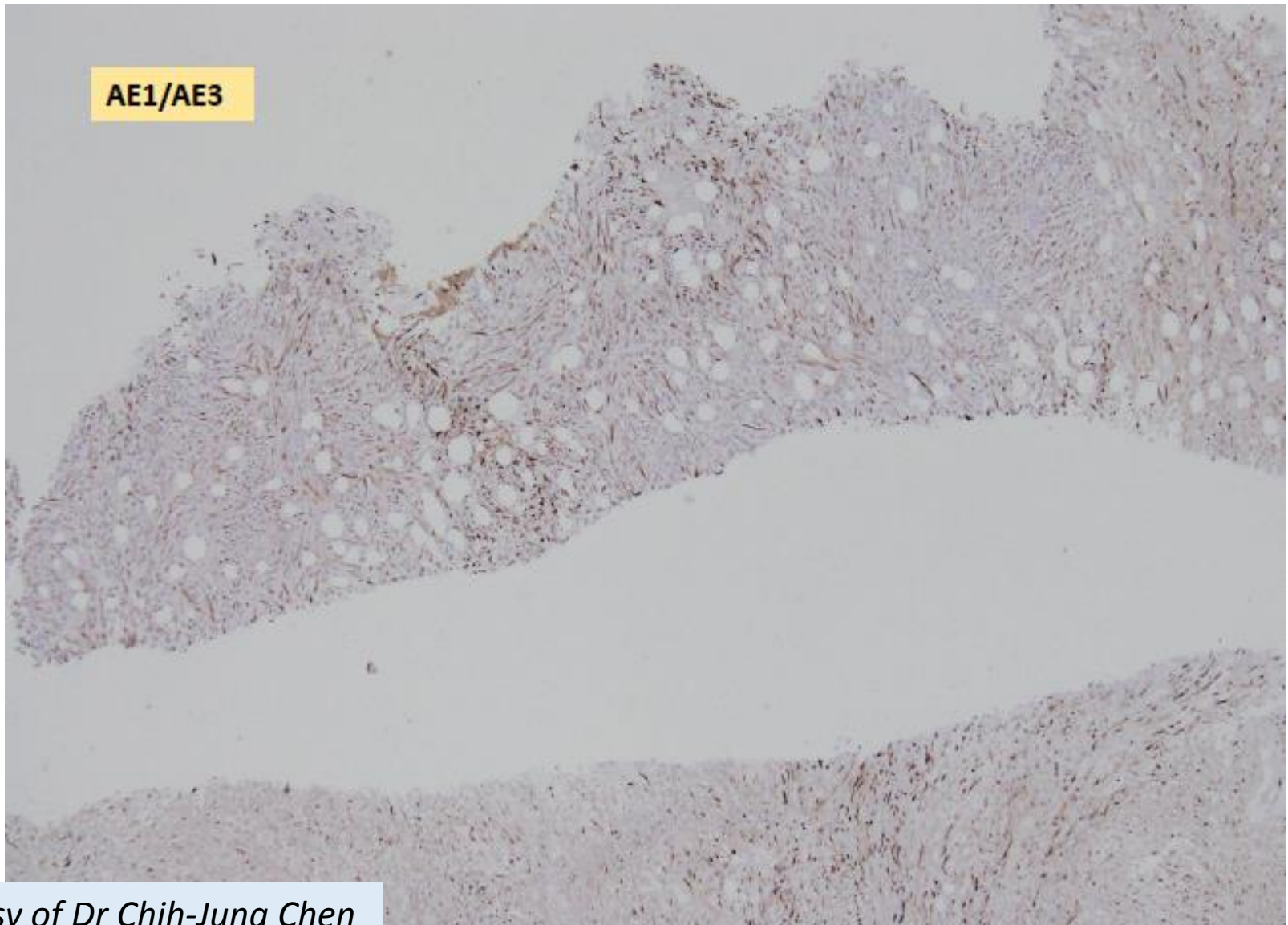
Courtesy of Dr Chih-Jung Chen

Previous core biopsy



Courtesy of Dr Chih-Jung Chen

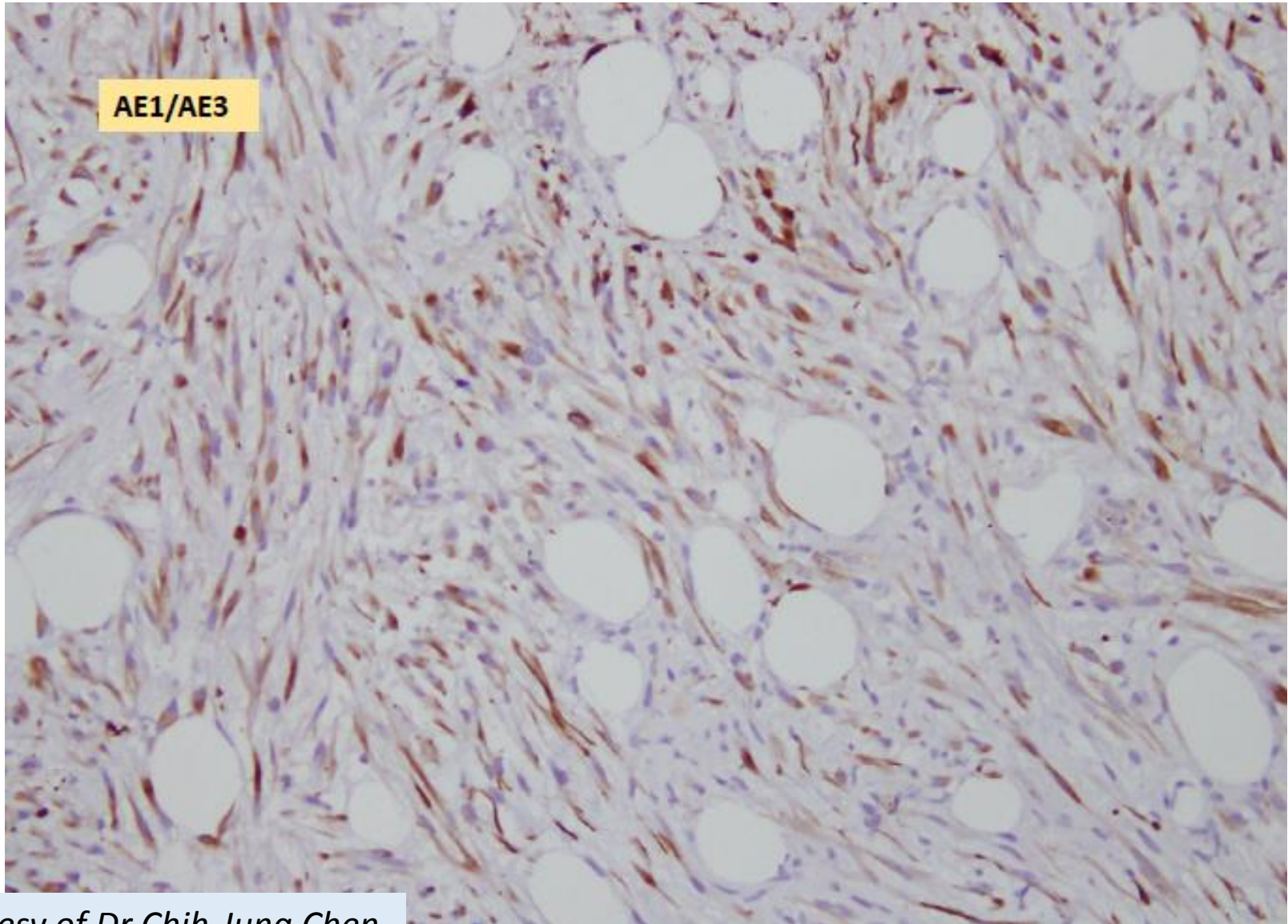
Previous core biopsy



AE1/AE3

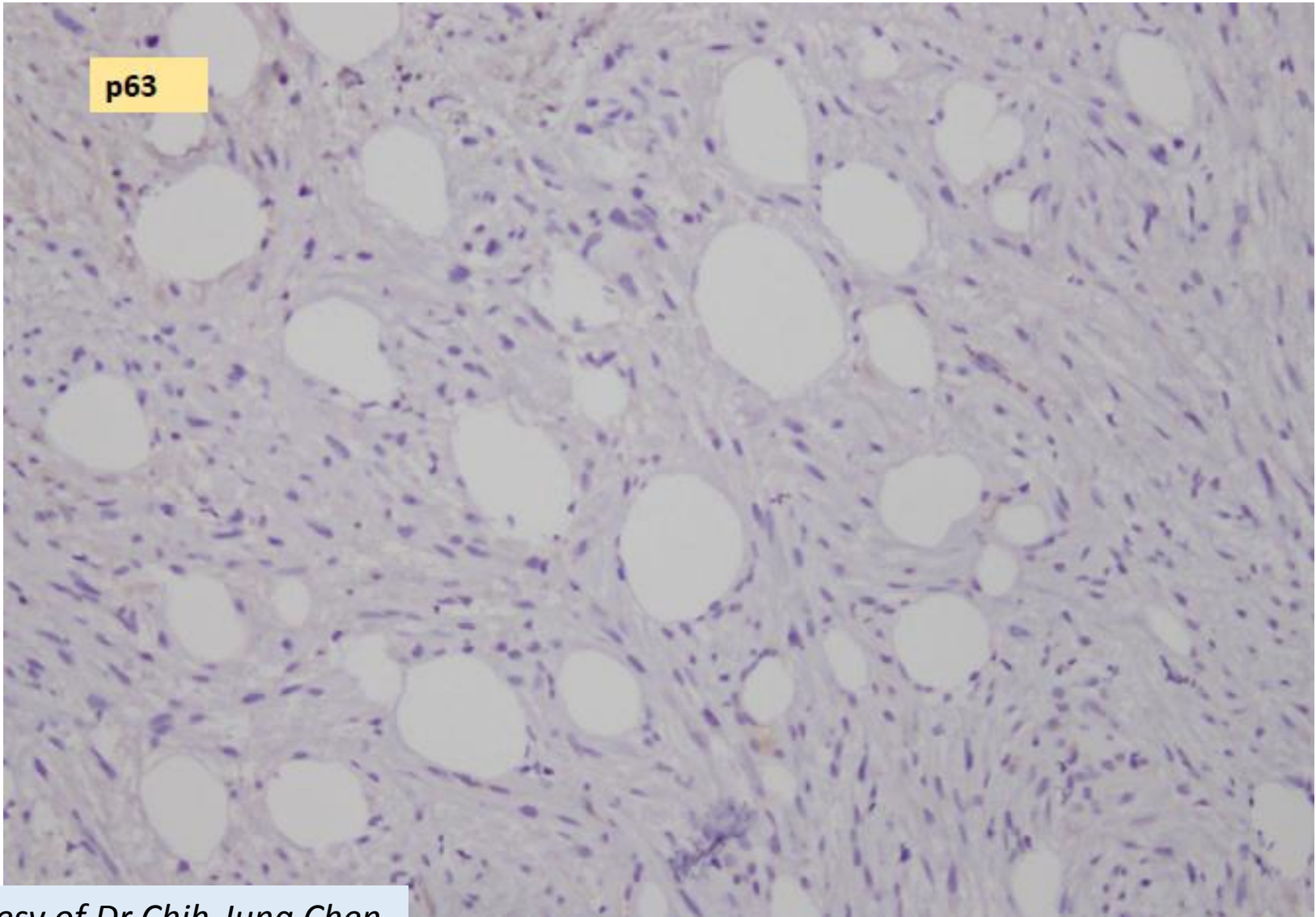
Courtesy of Dr Chih-Jung Chen

Previous core biopsy



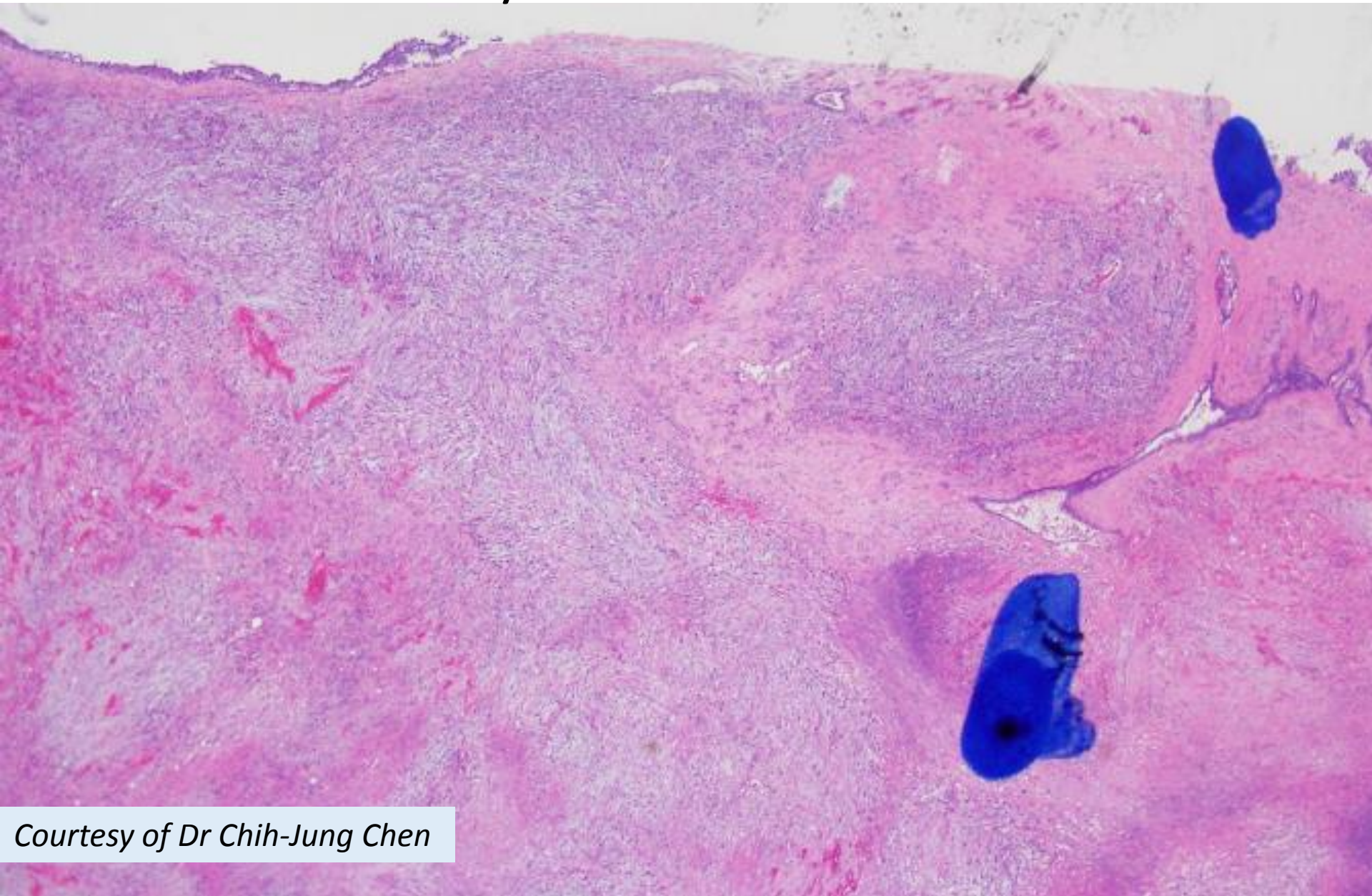
Courtesy of Dr Chih-Jung Chen

Previous core biopsy



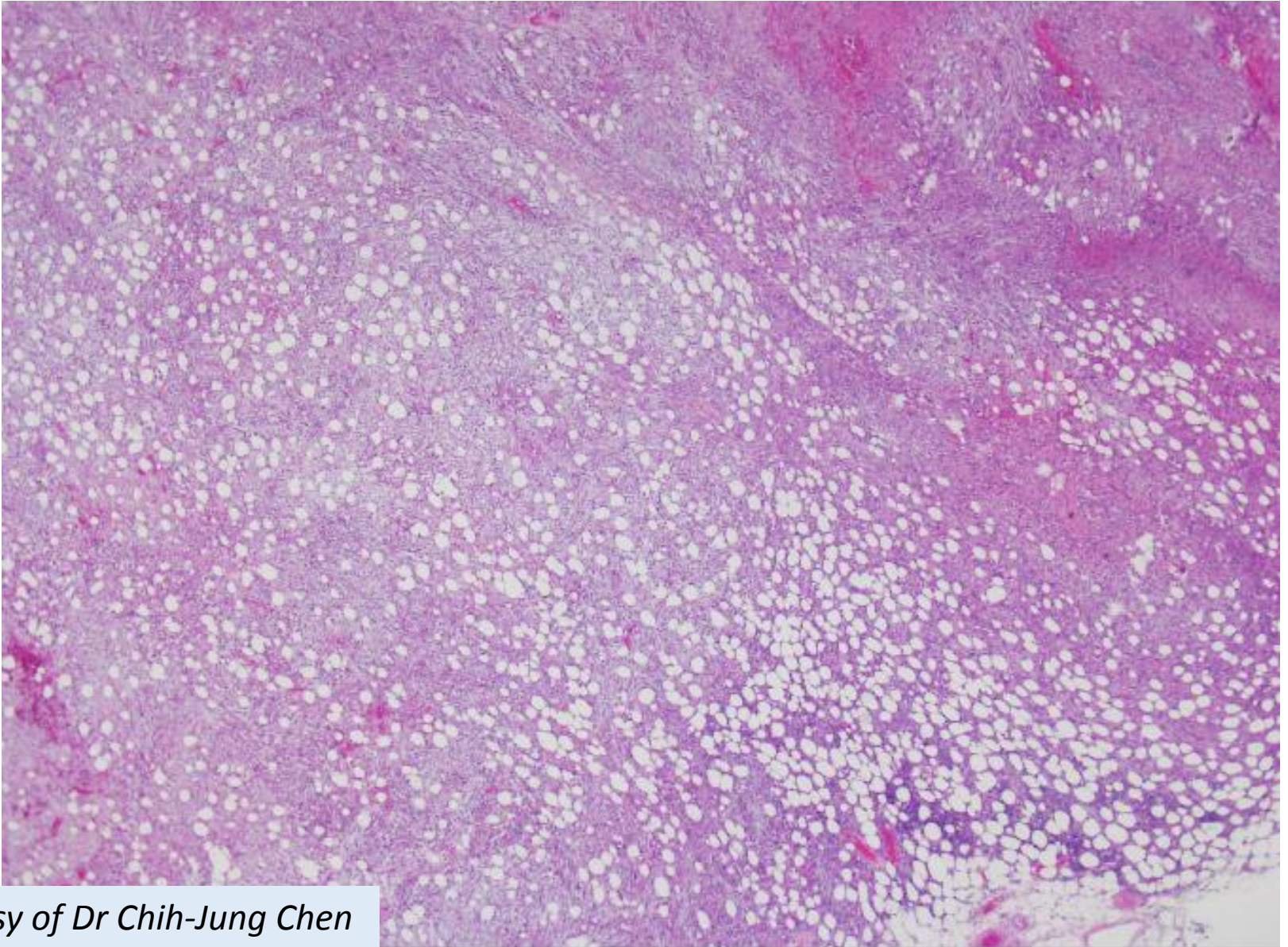
Courtesy of Dr Chih-Jung Chen

Mastectomy



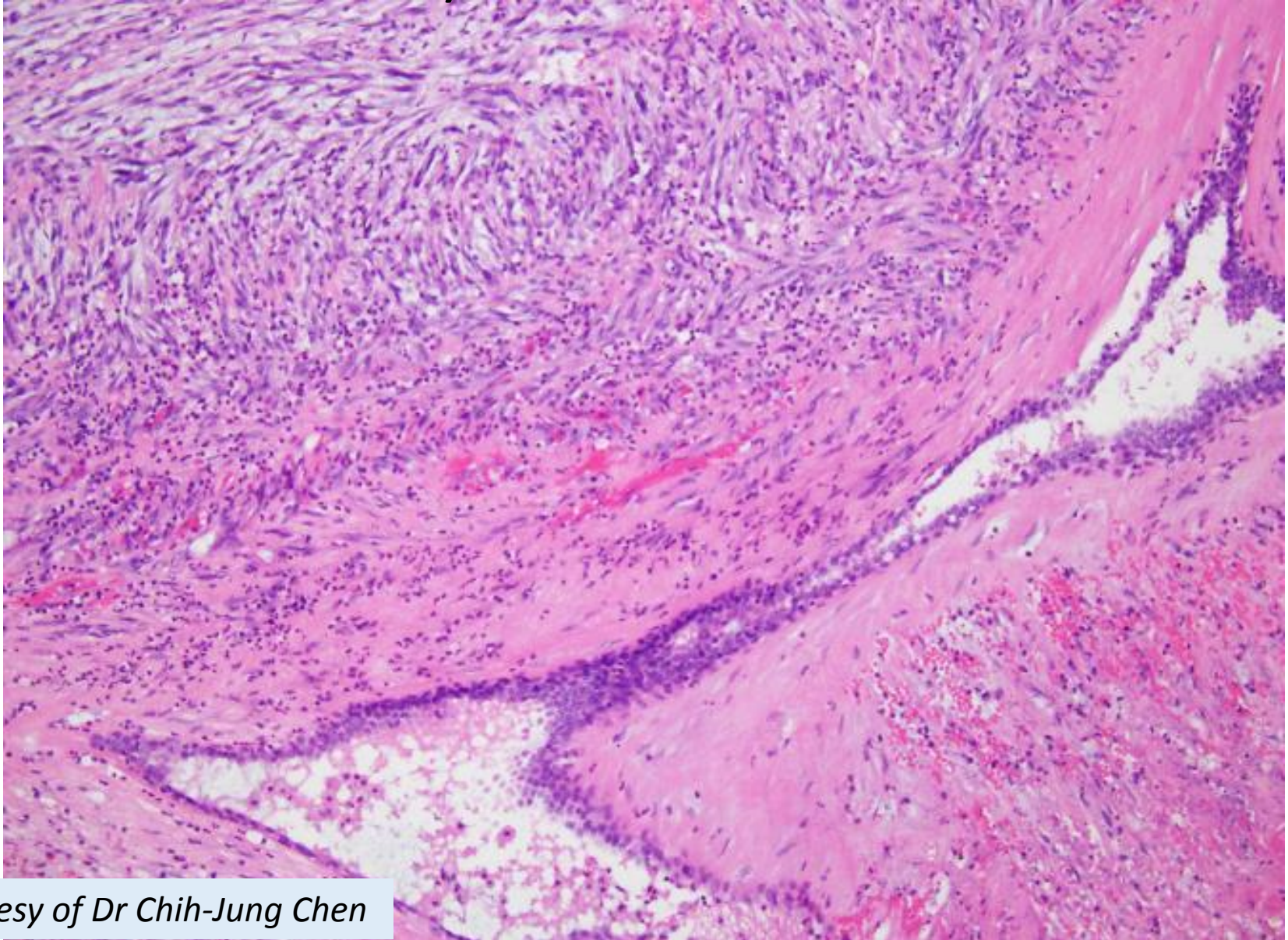
Courtesy of Dr Chih-Jung Chen

Mastectomy



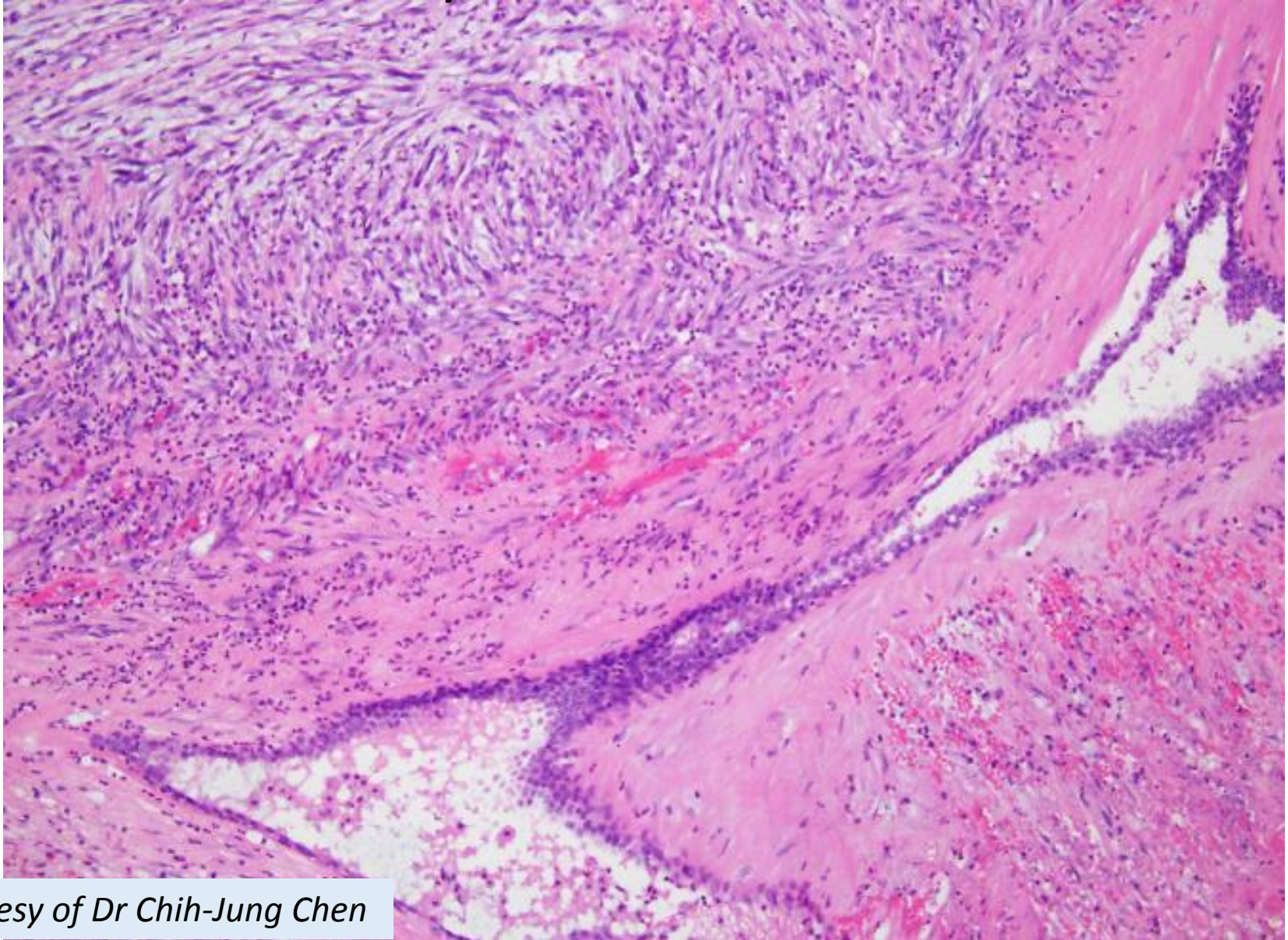
Courtesy of Dr Chih-Jung Chen

Mastectomy



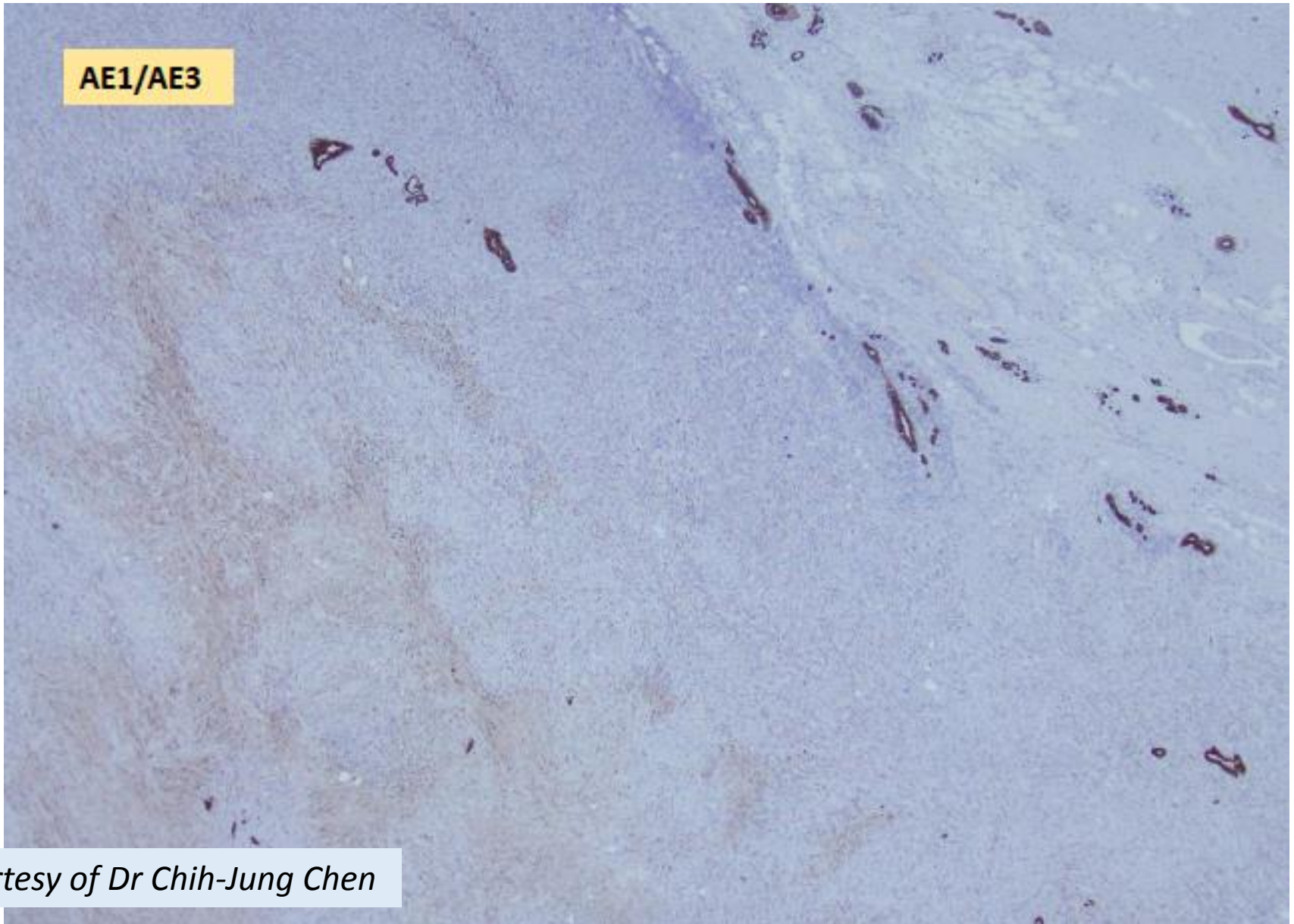
Courtesy of Dr Chih-Jung Chen

Mastectomy



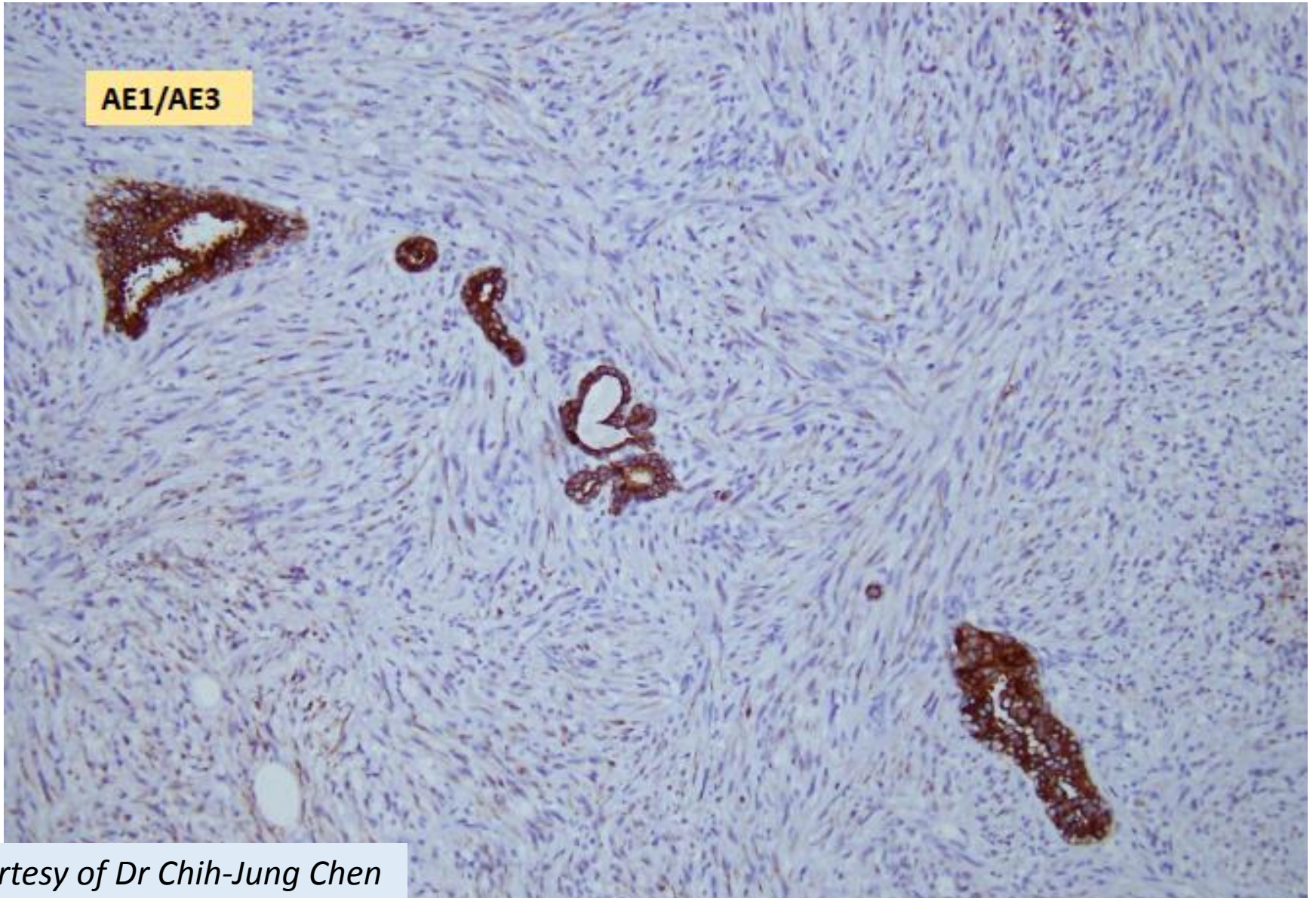
Courtesy of Dr Chih-Jung Chen

Mastectomy

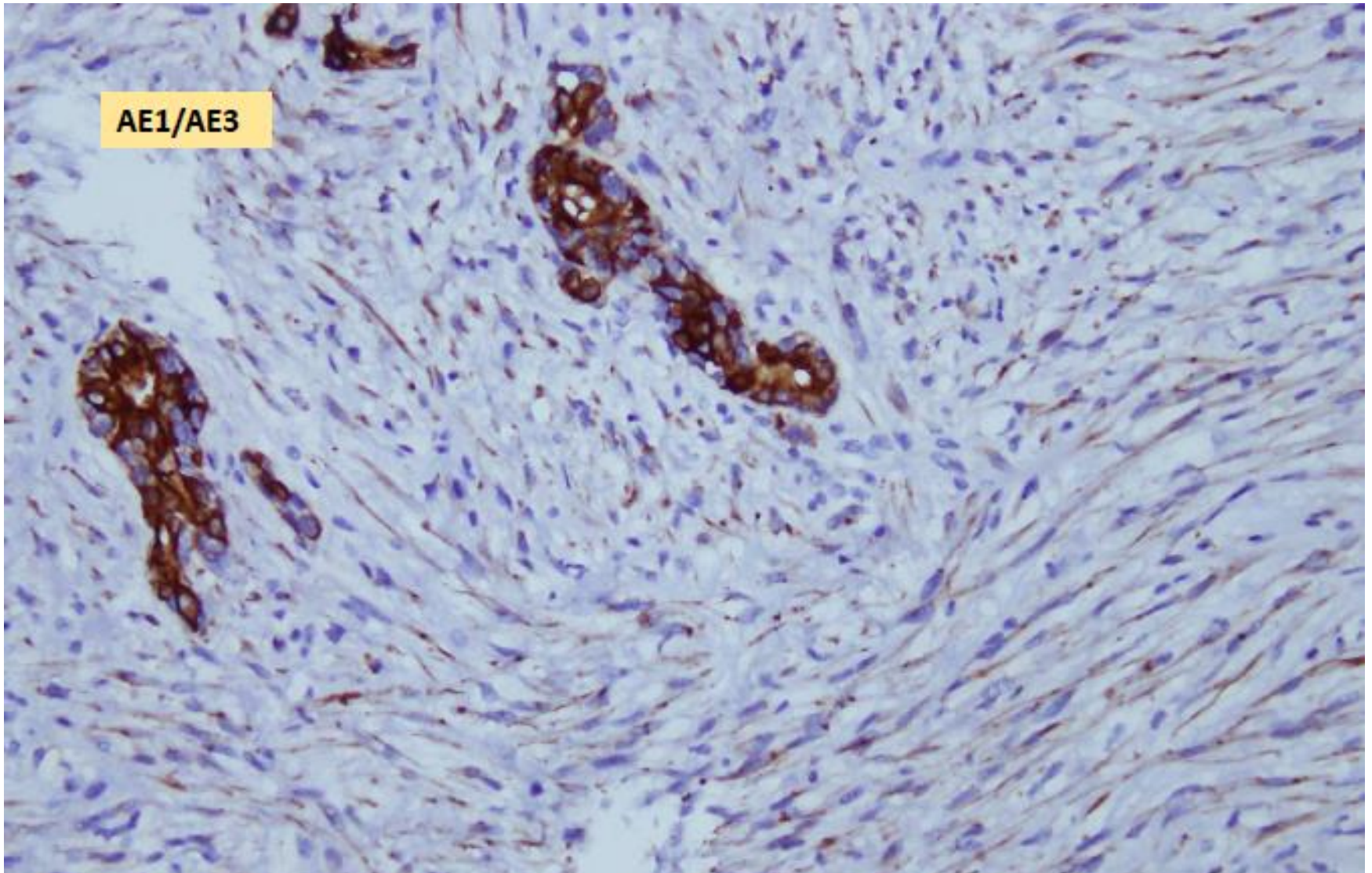


Courtesy of Dr Chih-Jung Chen

Mastectomy



Mastectomy



Courtesy of Dr Chih-Jung Chen

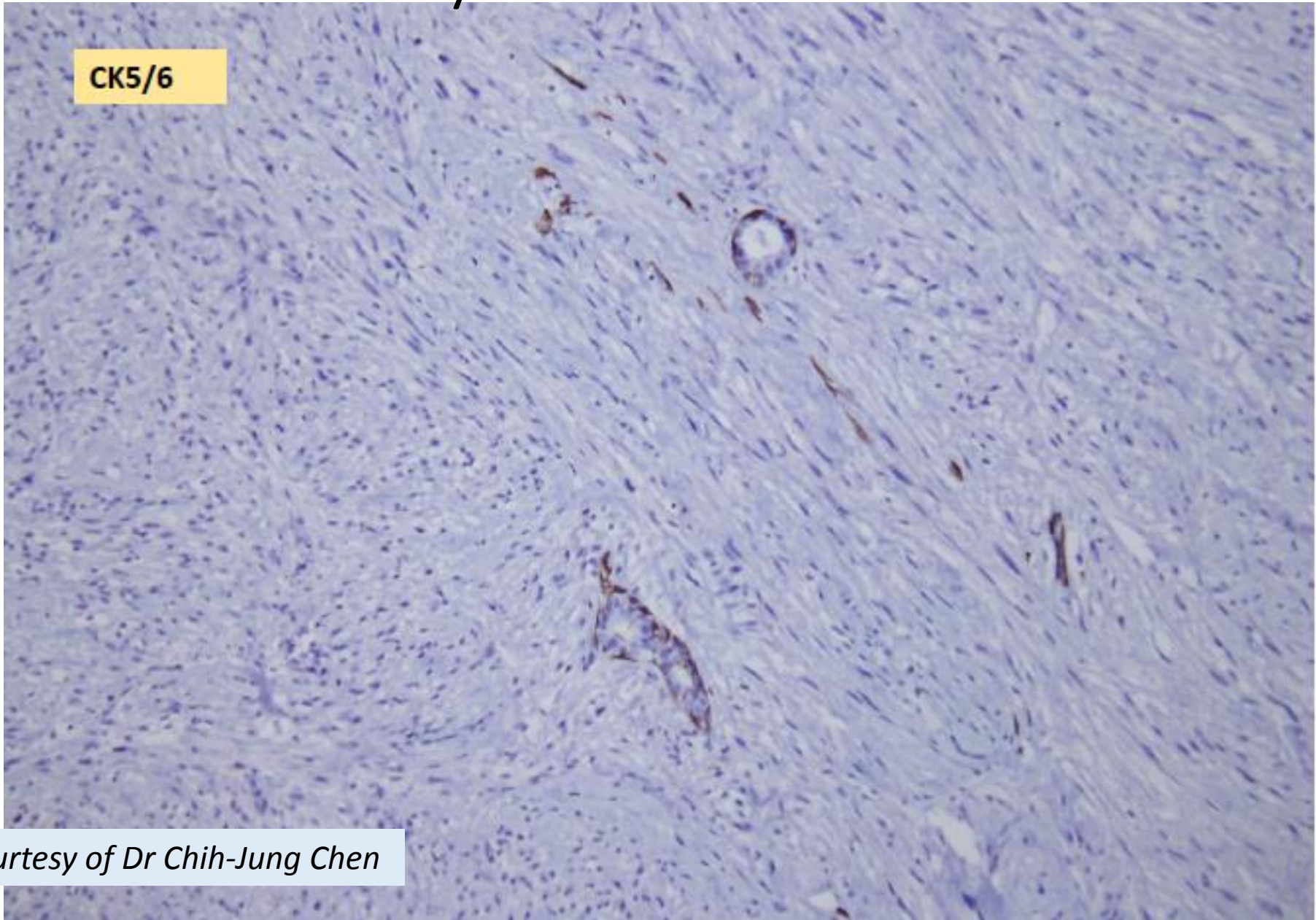
Mastectomy

CK34betaE12



Courtesy of Dr Chih-Jung Chen

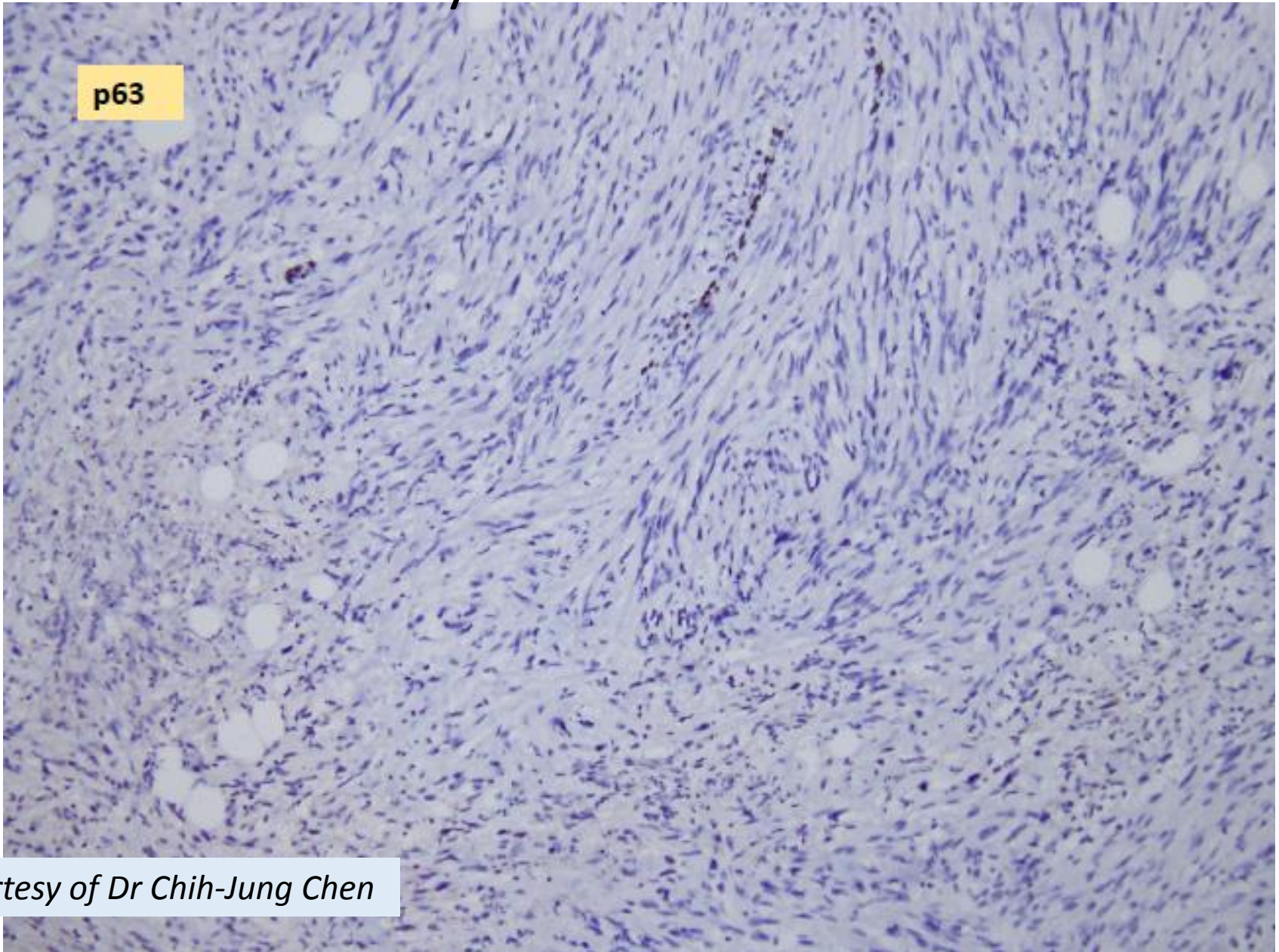
Mastectomy



CK5/6

Courtesy of Dr Chih-Jung Chen

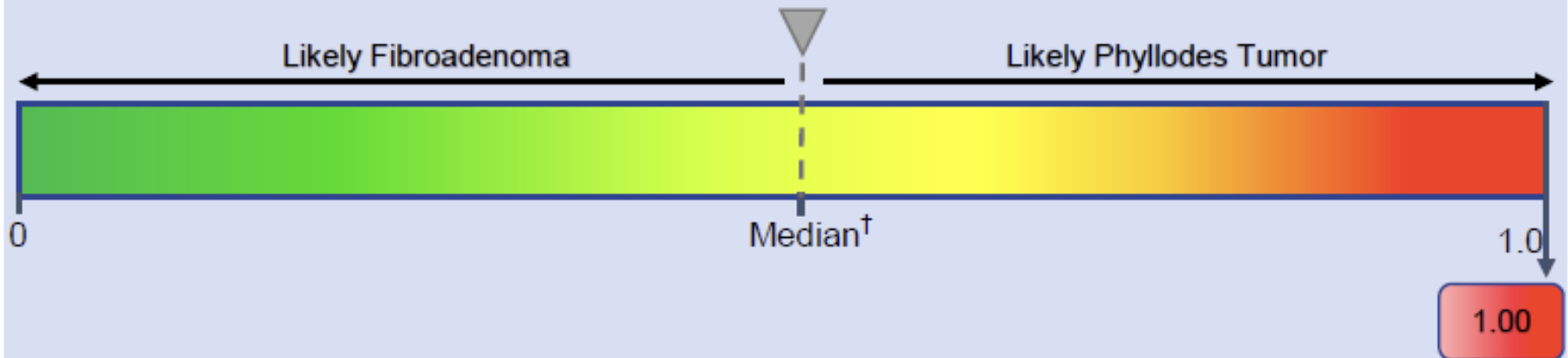
Mastectomy



Courtesy of Dr Chih-Jung Chen

RESULTS SUMMARY

FIBROPHYLLLO™ score = 1.00



The FibroPhyllo™ Score Assay uses quantitative real time-PCR to determine the expression of a panel of 5 genes in breast fibroepithelial tissues. FibroPhyllo™ score is calculated from the gene expression results and scaled to between 0.0 to 1.0.

† Median value of 0.5 has been derived from the distribution of FibroPhyllo™ scores for 230 core biopsies in a clinical validation study¹. Breast fibroepithelial tissue subtyping has been reported based on this median value, such that samples with scores equal to or greater than 0.5 are predicted to be phyllodes tumor and samples with scores lower than 0.5 are predicted to be fibroadenomas. Scores are calculated on a continuous scale and are scaled to a value between 0.0 and 1.0. Pre-operative distinction between the two tissue subtypes have been reported to have significant impact on subsequent treatment management.¹

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217 Henderson Road #03-08, Henderson Industrial Park, Singapore 159555

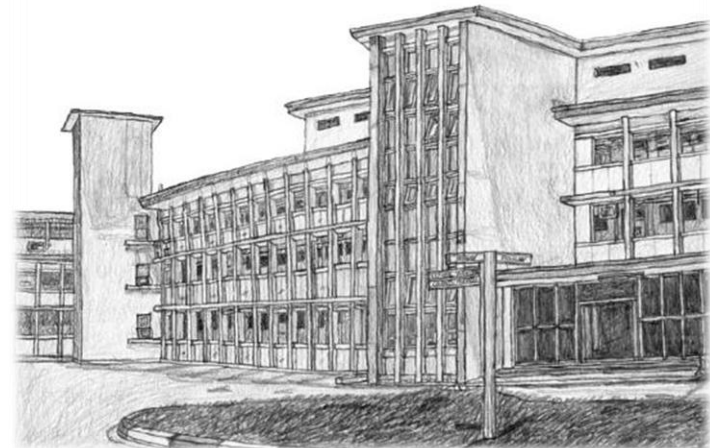
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Page 1 of 3

Courtesy of Dr Min-Han Tan, Lucence Diagnostics

Diagnosis

Malignant spindle cell tumour, favour
malignant phyllodes tumour



Phyllodes tumours & keratin expression

- In 1989, Auger et al described keratin expression in a malignant phyllodes tumour, where malignant stromal cells were positive for keratin on immunohistochemistry.
- On electron microscopy, stromal cells of one malignant phyllodes tumour displayed myoepithelial differentiation.

Arch Pathol Lab Med. 1989 Nov;113(11):1231-5.



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Stromal keratin expression in phyllodes tumours of the breast: a comparison with other spindle cell breast lesions

Yifoong Chia,¹ Aye Aye Thike,¹ Poh Yian Cheok,¹ Luke Yong-Zheng Chong,¹ Gary Man-Kit Tse,² Puay Hoon Tan¹

Table 6 Pattern of distribution of keratin immunohistochemical expression in phyllodes tumours

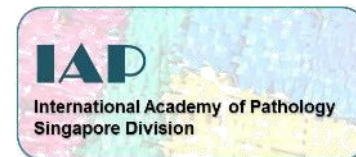
Cytokeratin	Periphery	Within the fronds	Subepithelial	Total
MNF 116	4 (30.8%)	4 (30.8%)	5 (38.5%)	13
34 β E12	9 (37.5%)	8 (33.3%)	7 (29.2%)	24
CK7	10 (32.3%)	11 (35.5%)	10 (32.3%)	31
CK14	—	1 (50%)	1 (50%)	2
AE 1/3	3 (33.3%)	4 (44.4%)	2 (22.3%)	9
Cam 5.2	1 (50%)	—	1 (50%)	2

Conclusion The use of keratins as an adjunctive immunohistochemical diagnostic tool in the differential work-up of spindle cell tumours of the breast has to be interpreted with caution especially on limited core biopsy material.

J Clin Pathol 2012;**65**:339–347. |



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Using adjunctive molecular tests ~ cautionary note

- Need to know what information is given by molecular test results.
- Fibrophyllo Tissue test assists in distinguishing fibroadenoma from phyllodes tumour.
- While the test in this case shows a result skewed towards a phyllodes tumour, it has not been validated in terms of distinction between metaplastic carcinoma and malignant phyllodes tumour.



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CORRESPONDENCE

A genetic mutation panel for differentiating malignant phyllodes tumour from metaplastic breast carcinoma

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Aye Aye Thike¹
Cedric Chuan Young Ng³
Nur Diyana Md Nasir¹
Kiley Loh³
Bin Tean Teh³
Puay Hoon Tan¹

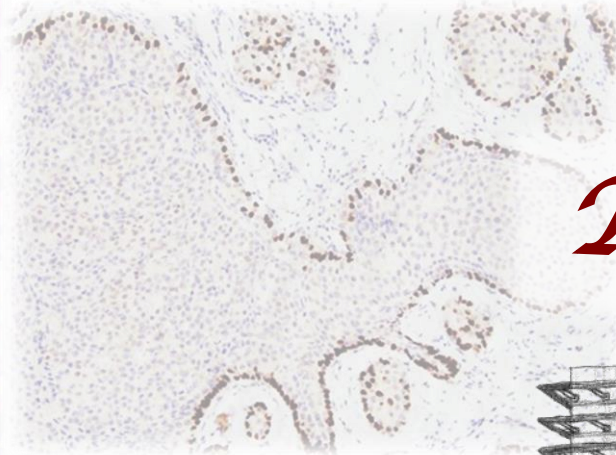
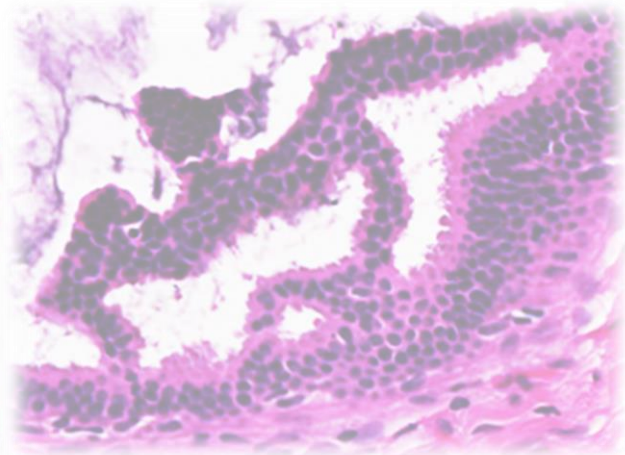
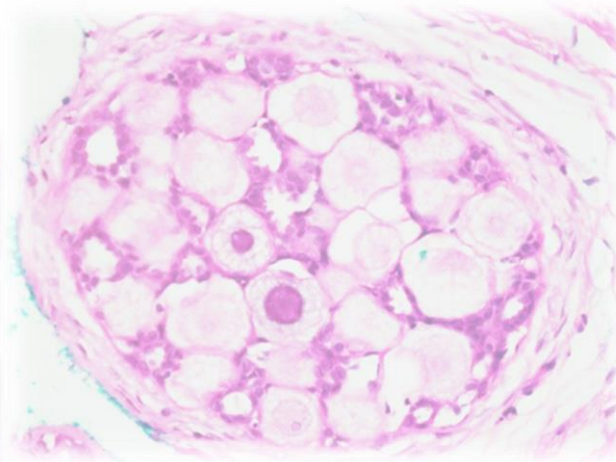
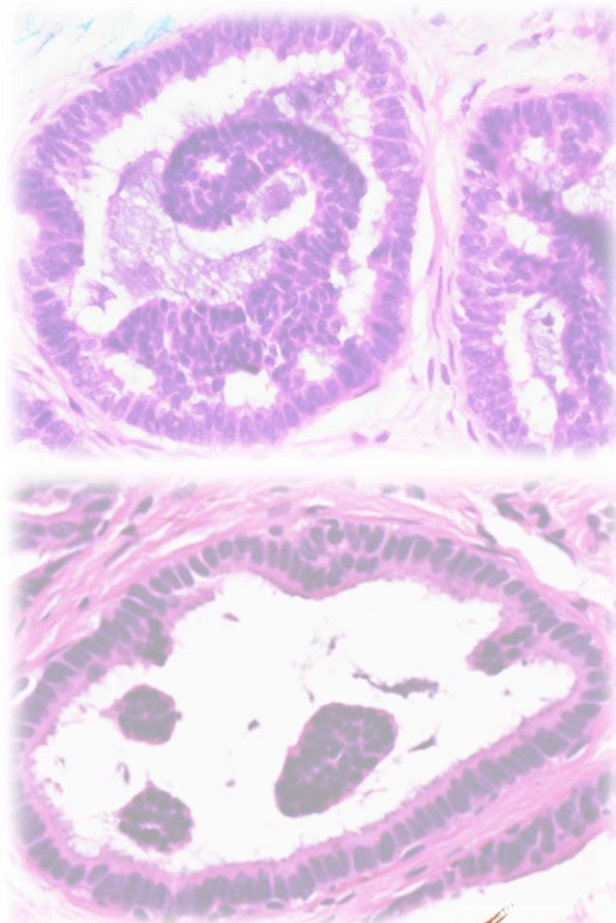
¹Division of Pathology, Singapore General Hospital,
²Singapore Immunology Network (SIGN), Agency of Science,
Technology and Research (A*STAR), and ³National Cancer
Center Singapore, Singapore



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09.05.2014

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