

#### Case 24

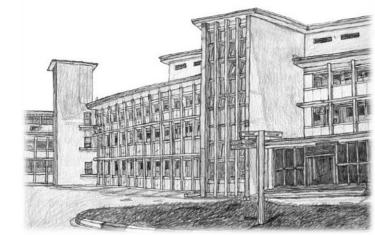
51 year old female. Left breast tumour, 9.7cm. Mastectomy performed.

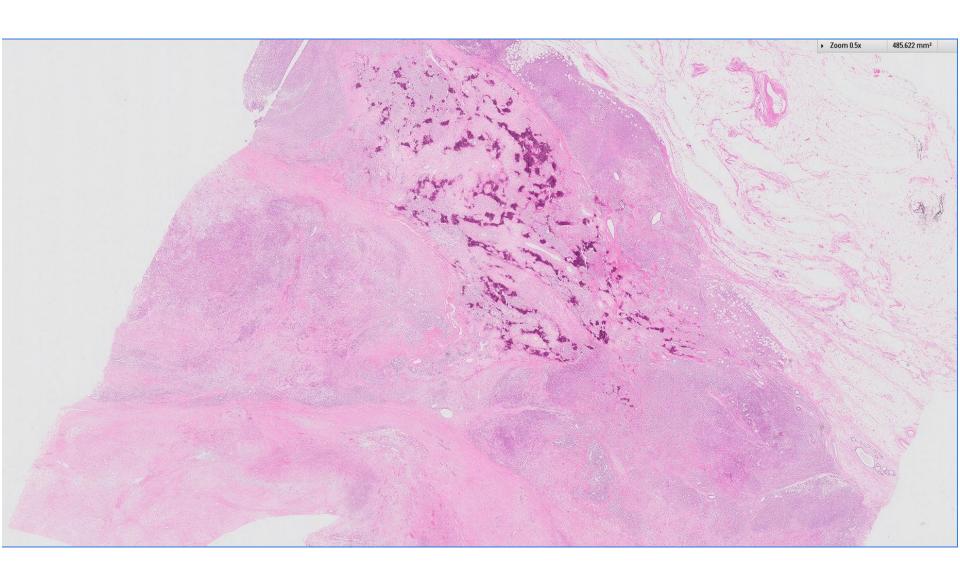
Case contributed by Dr Chih-Jung Chen, Taiwan

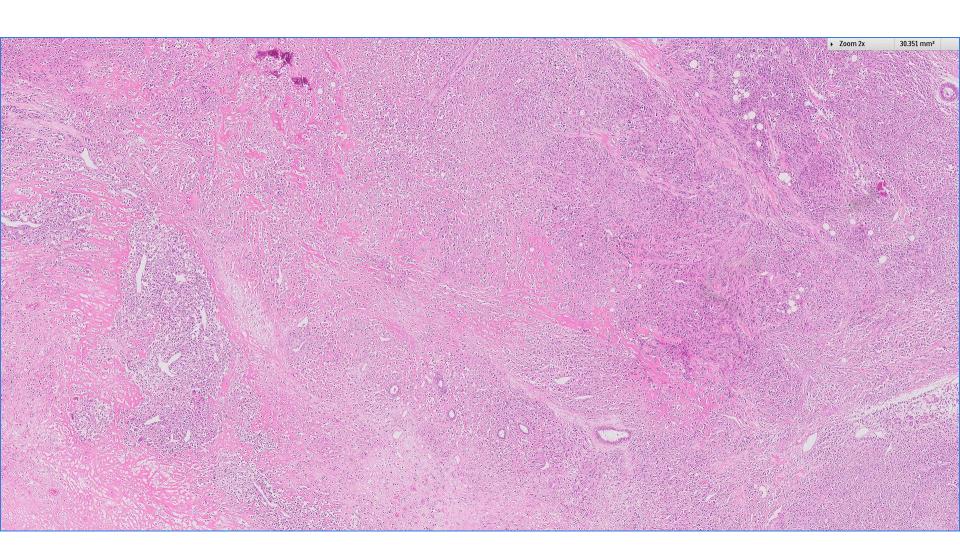


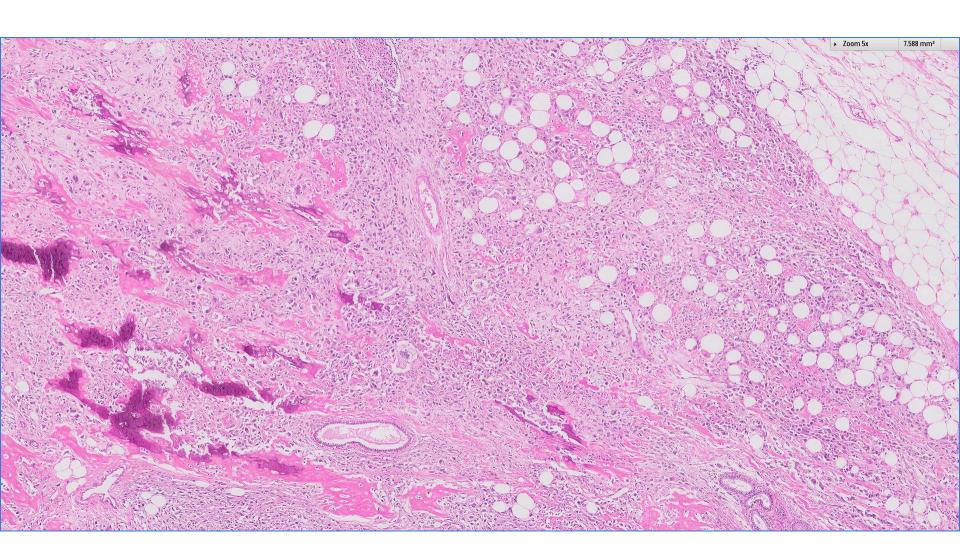


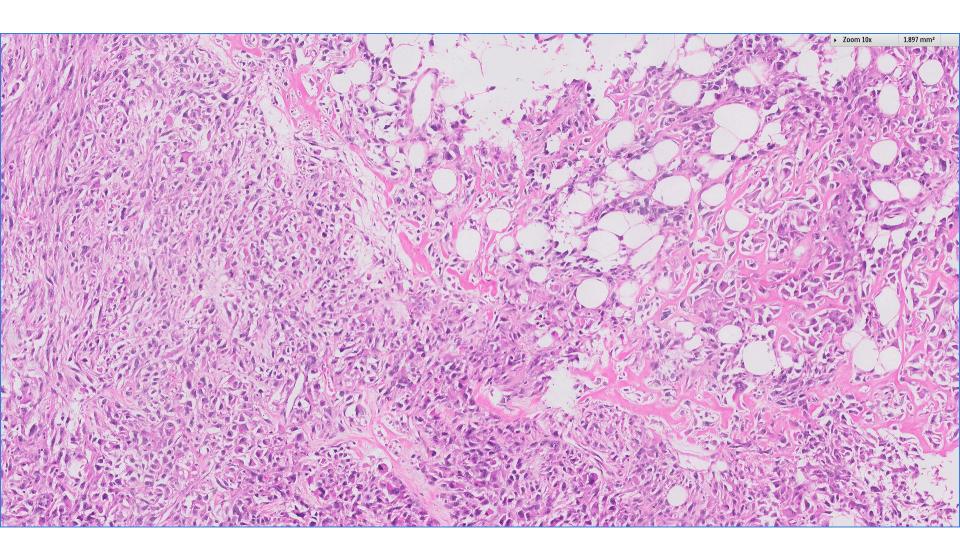


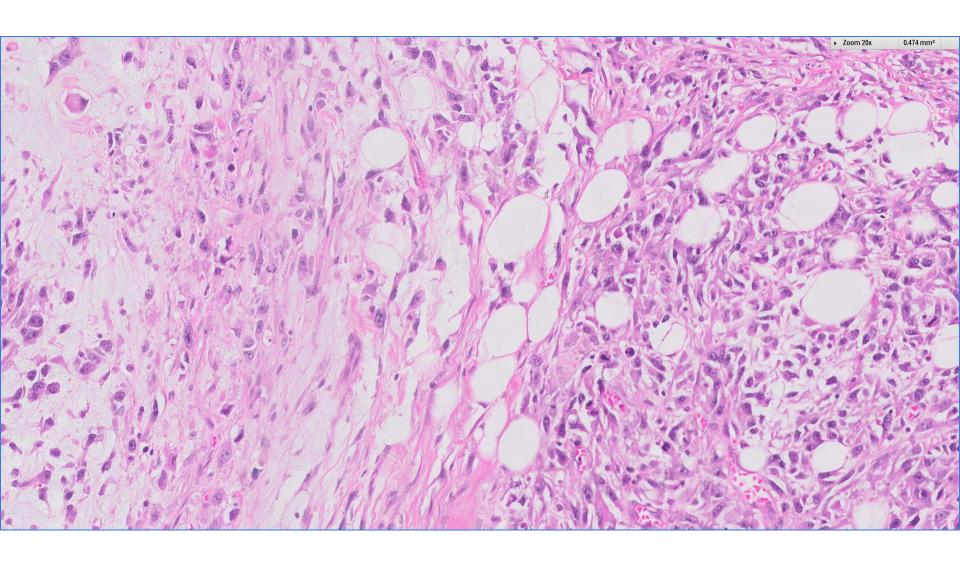




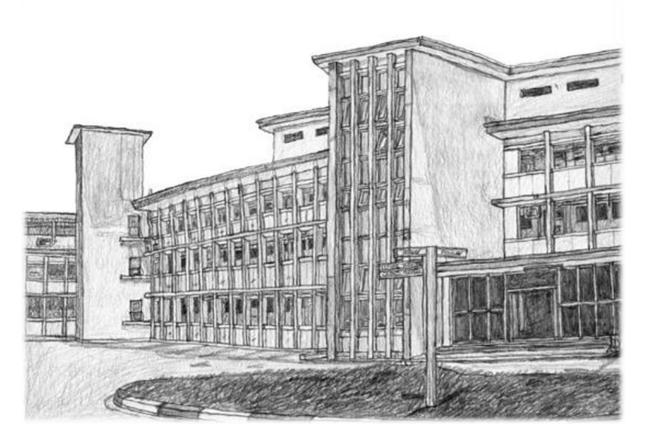












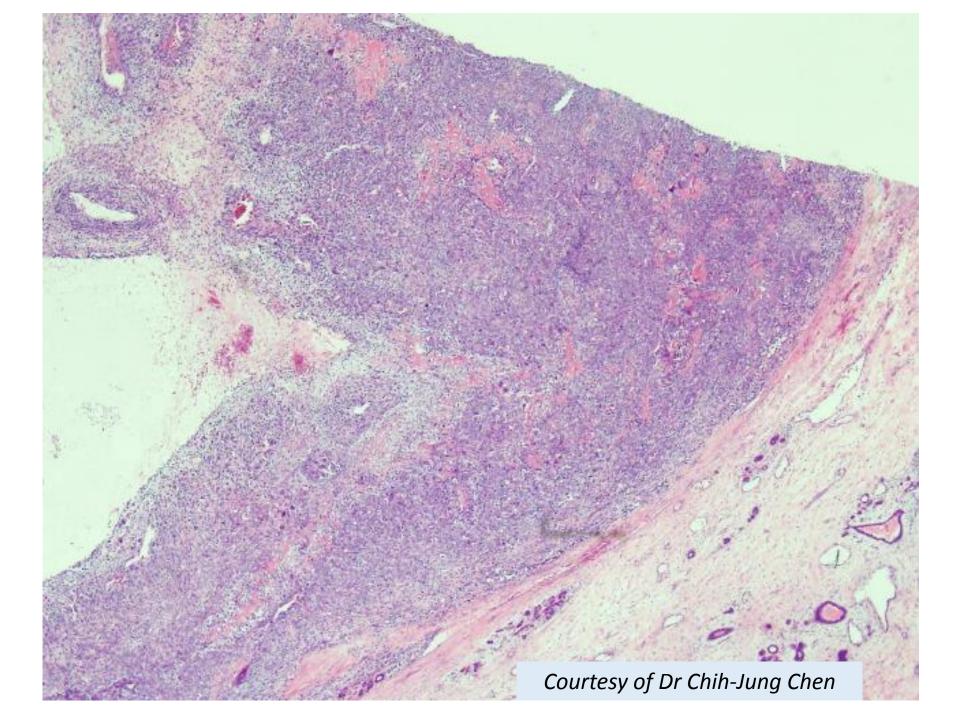


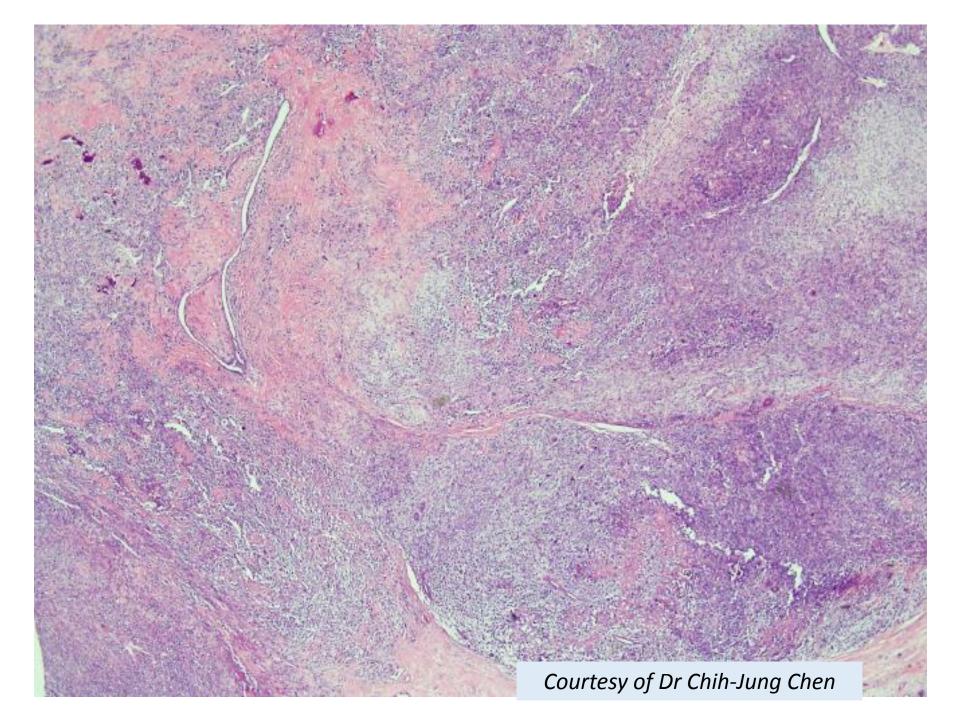


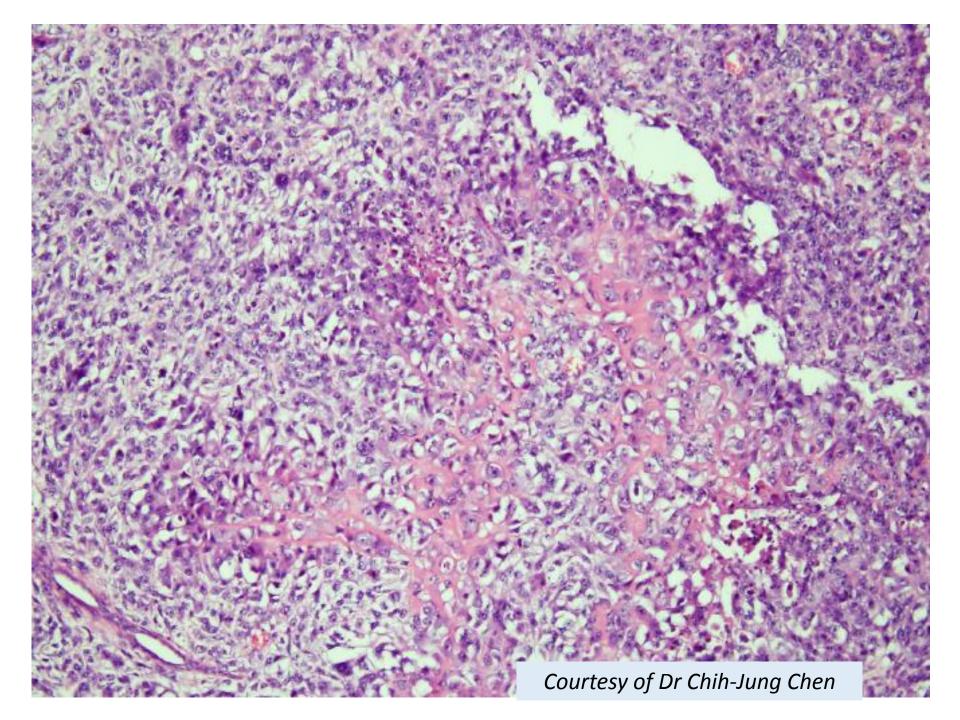


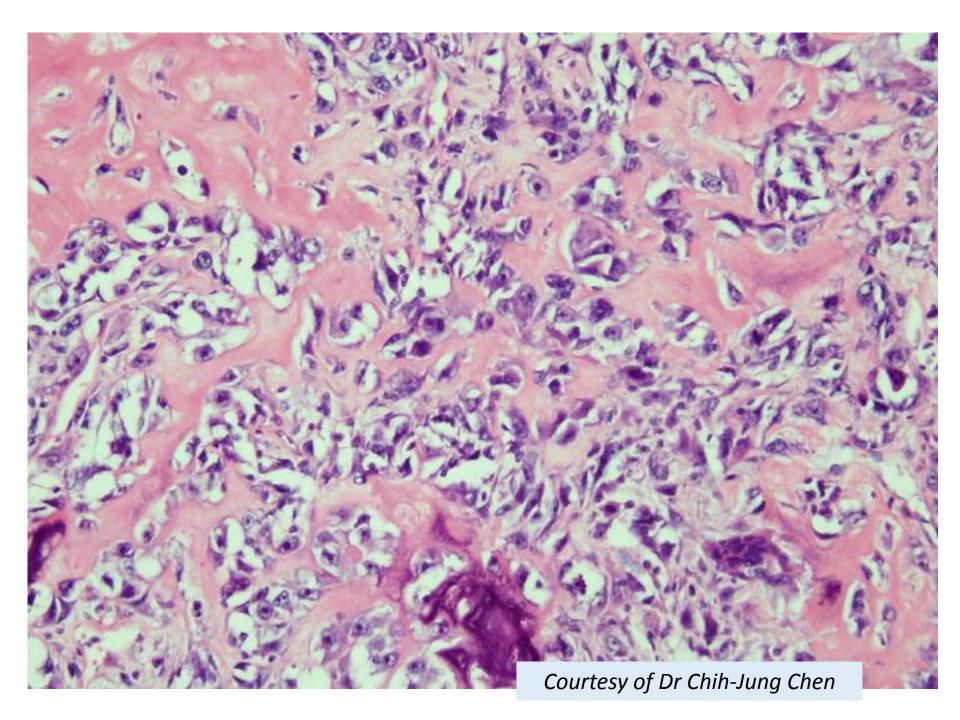
51 y/o lady, a left breast tumor, 9.7 cm in maximal diameter radical mastectomy was done

Bone scan and CT: no metastatic lesions

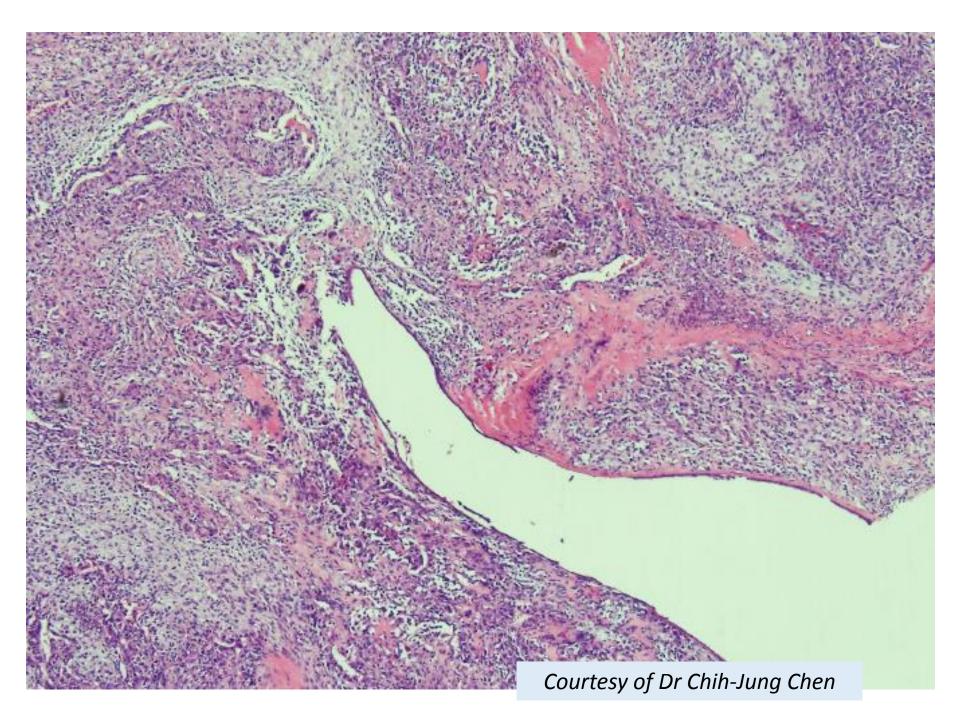


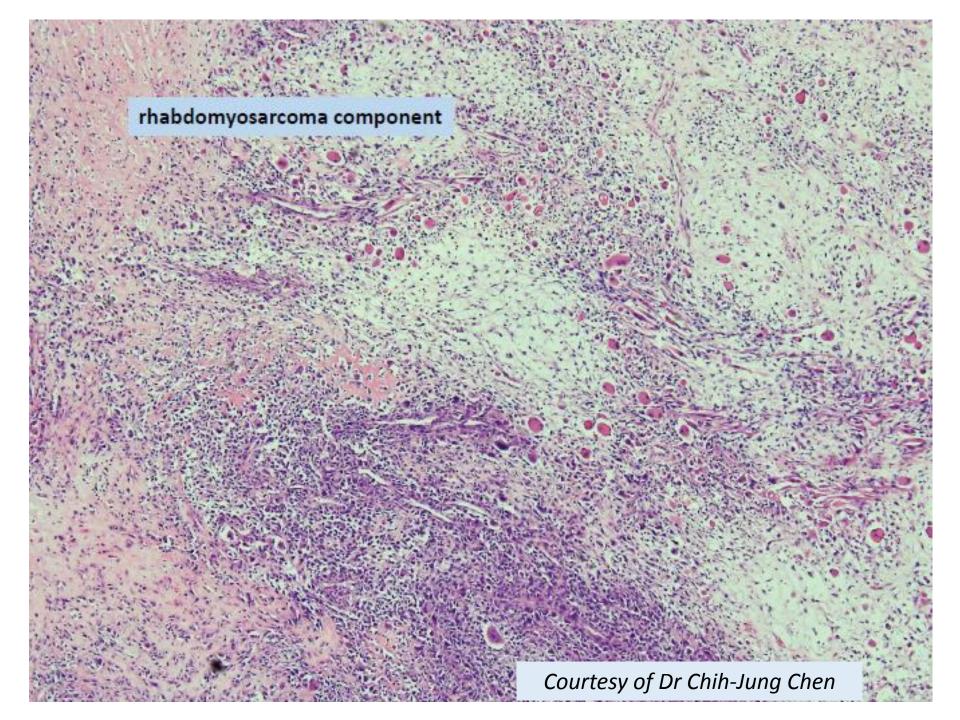


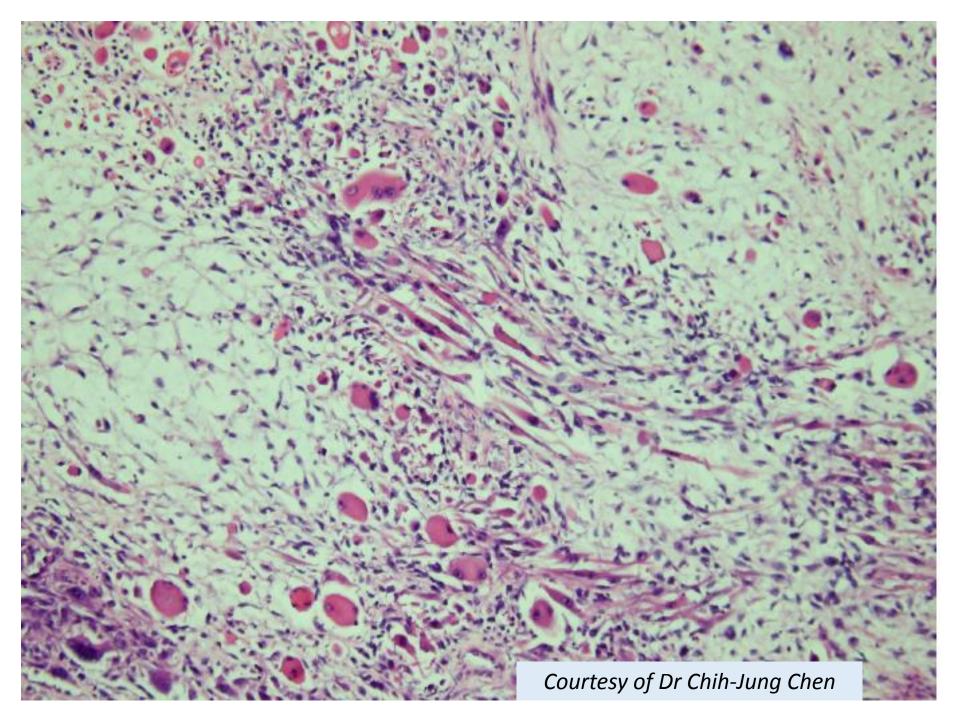


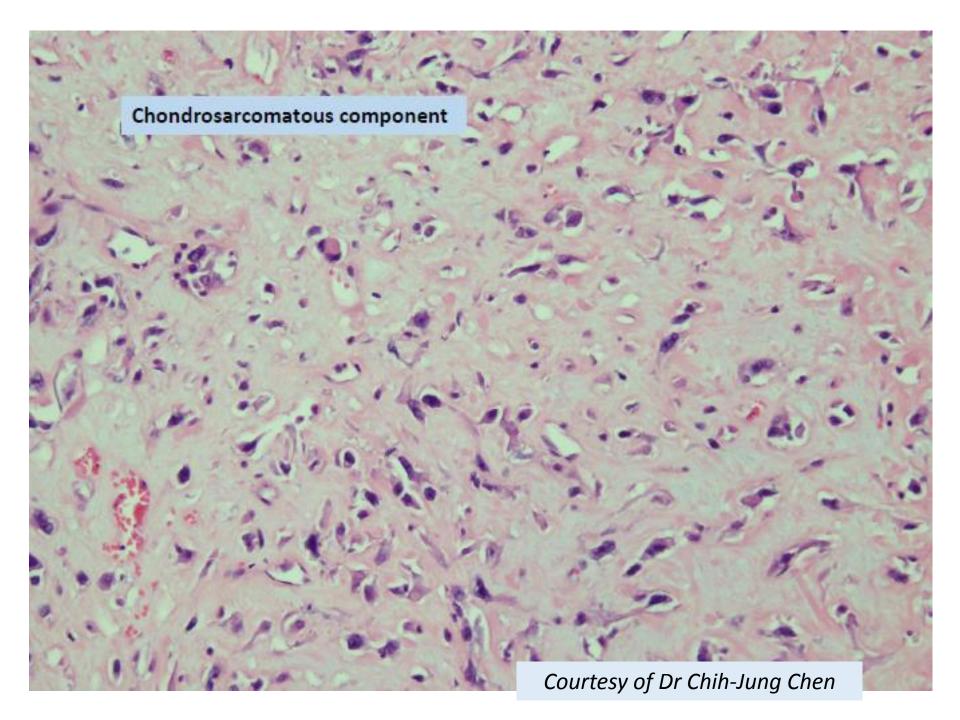


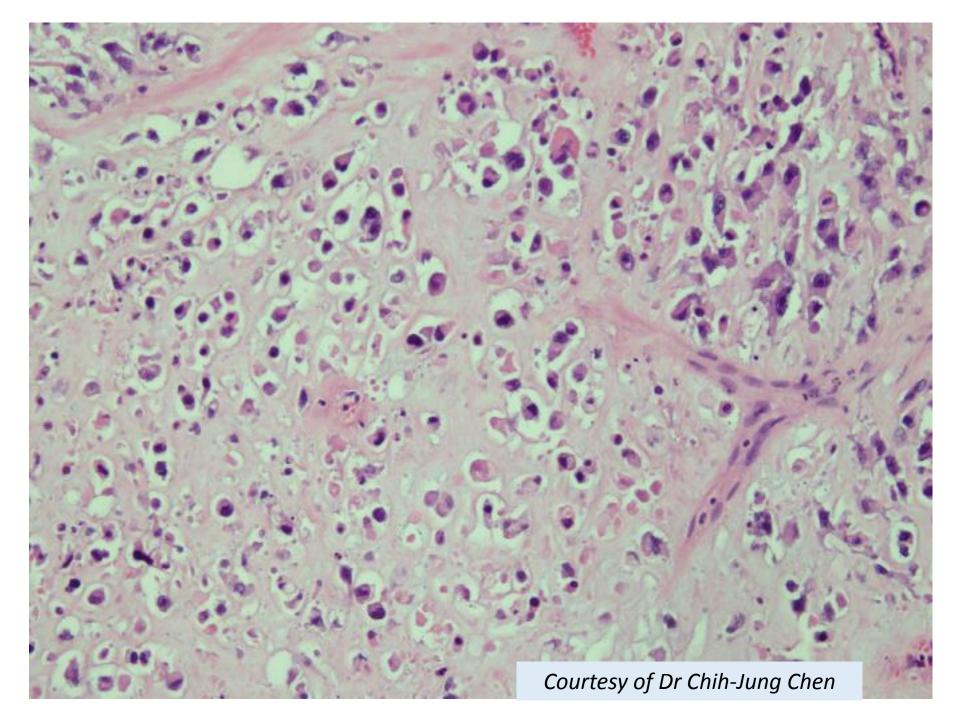


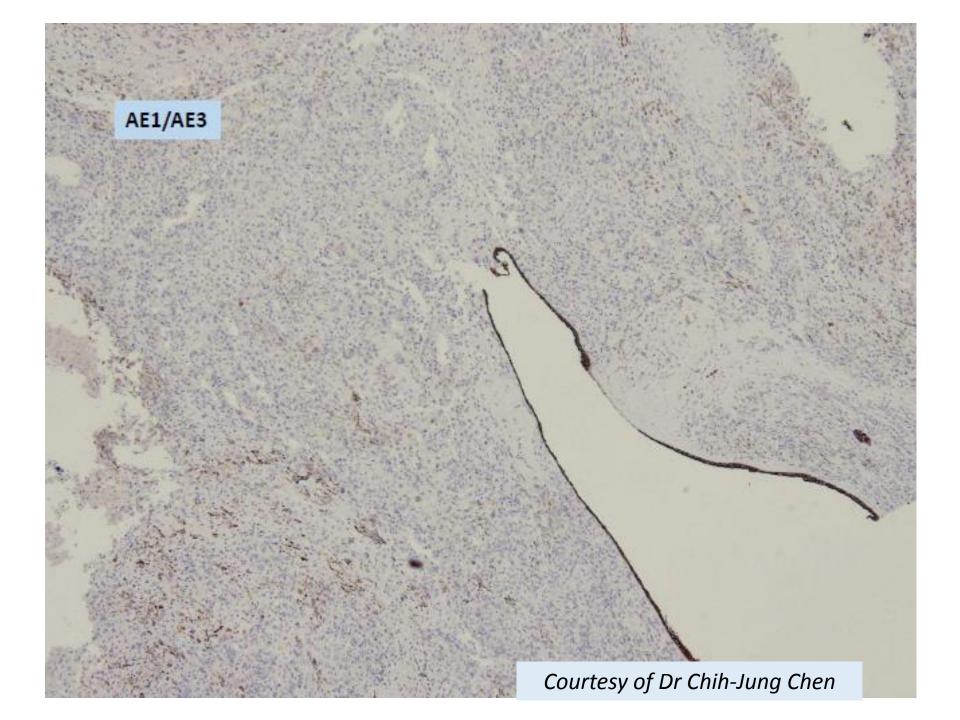


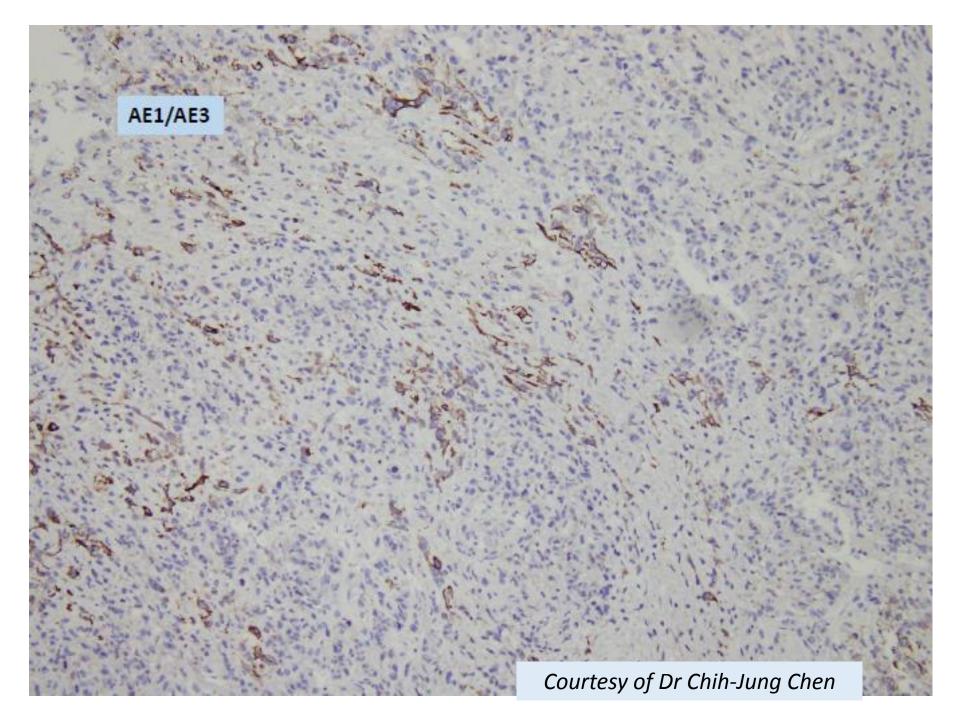


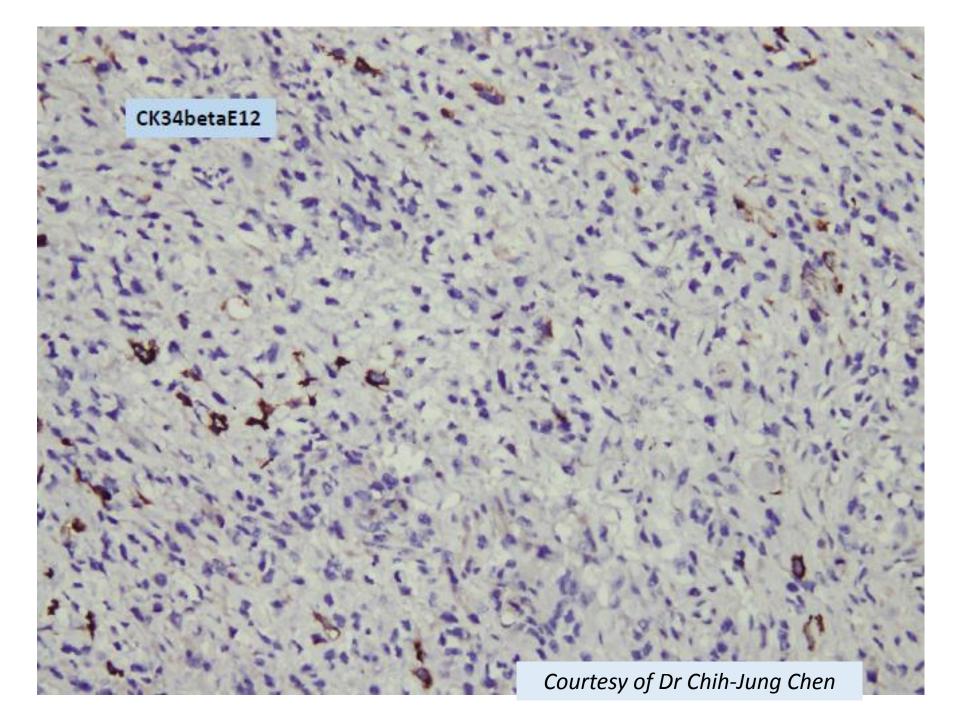


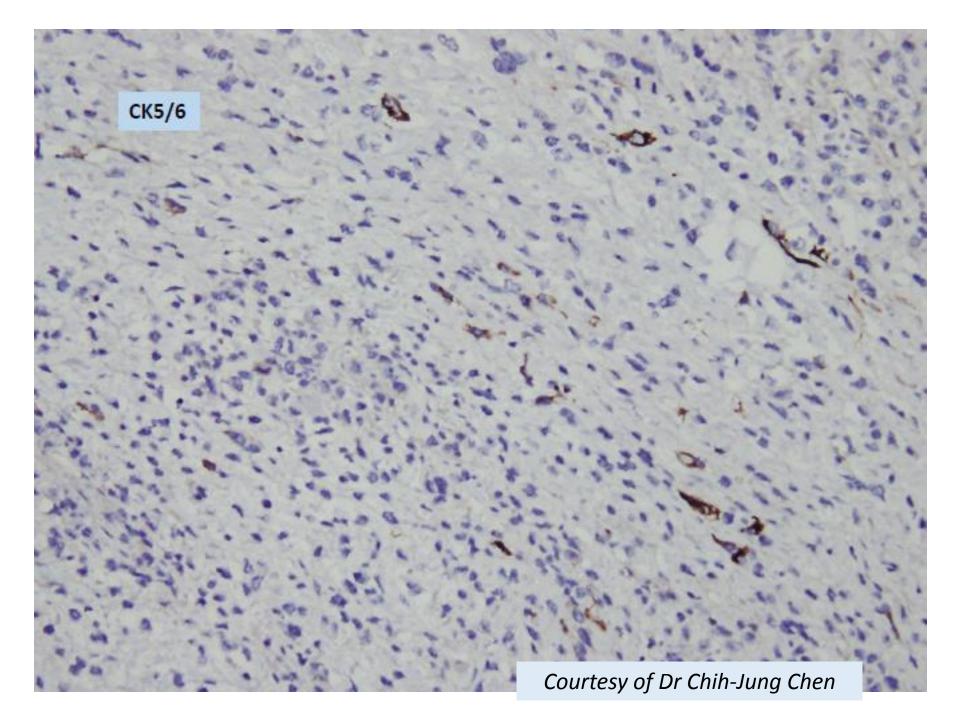


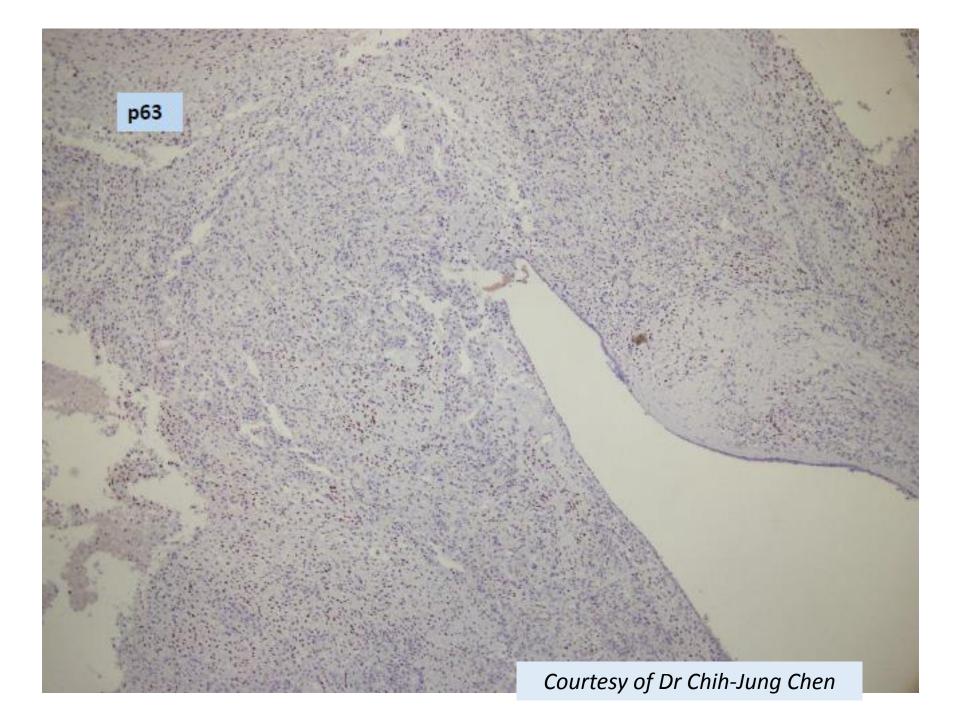


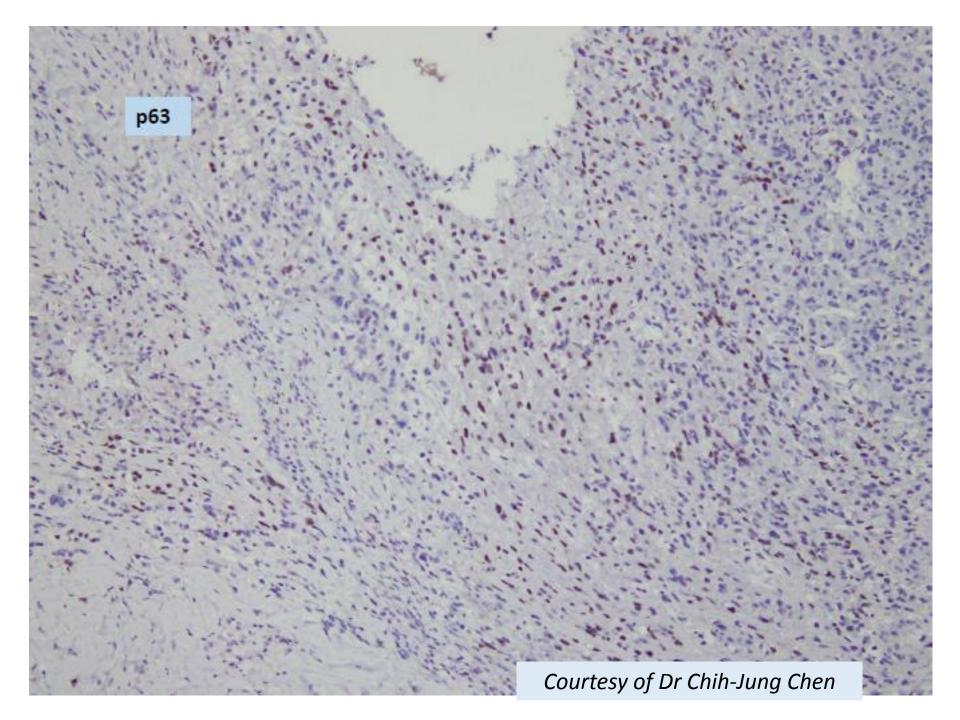


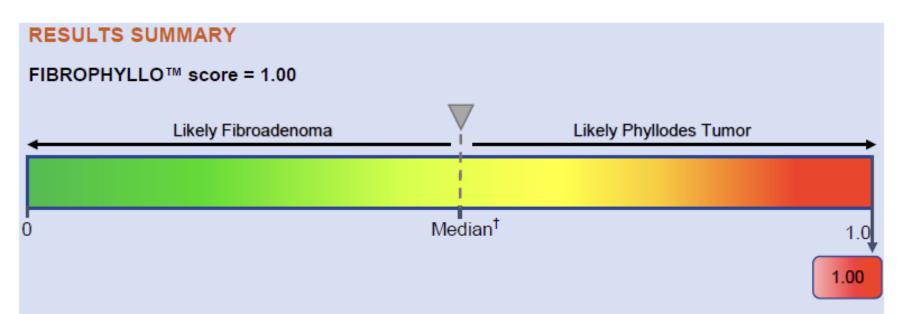












The FibroPhyllo™ Score Assay uses quantitative real time-PCR to determine the expression of a panel of 5 genes in breast fibroepithelial tissues. FibroPhyllo™ score is calculated from the gene expression results and scaled to between 0.0 to 1.0.

<sup>†</sup> Median value of 0.5 has been derived from the distribution of FibroPhyllo™ scores for 230 core biopsies in a clinical validation study<sup>1</sup>. 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.<sup>1</sup>

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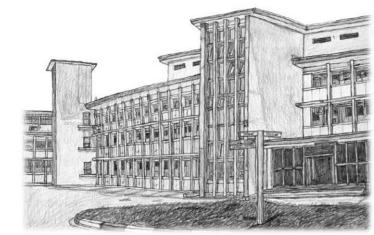
### Diagnosis

Malignant phyllodes tumour with malignant heterologous elements (osteosarcoma, rhabdomyosarcoma, chondrosarcoma)









## Malignant phyllodes tumours with heterologous differentiation

• Nine (29%) of 31 malignant phyllodes tumours showed heterologous differentiation.

Am J Clin Pathol 2005;123:529-540

 Sixteen of 83 (19.3%) malignant phyllodes tumours contained heterologous elements

Size and heterologous elements predict metastases in malignant phyllodes tumours of the breast.

Koh et al. Virchows Arch. 2018 Apr;472(4):615-621











Tumori. 2004 Mar-Apr;90(2):239-43.

#### Low expression of p63 and p73 in osteosarcoma.

Park HR<sup>1</sup>, Kim YW, Park JH, Maeng YH, Nojima T, Hashimoto H, Park YK.

Tumour Biol. 2012 Oct;33(5):1639-44. doi: 10.1007/s13277-012-0419-y. Epub 2012 May 25.

Nuclear p63 expression in osteoblastic tumors.

Kallen ME<sup>1</sup>, Sanders ME, Gonzalez AL, Black JO, Keedv VL, Hande KR, Homlar KC, Halpern JL, Holt GE, Schwartz HS, Coffin CM, Cates JM.

While p63 may be aberrantly expressed in stromal cells of malignant phyllodes tumours, presence of a heterologous osteosarcoma component may contribute to the p63 positivity on immunohistochemistry.

# 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.











