Beneath the surface: Unravelling diagnostic Dilemma in Breast Fibroepithelial Lesions

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Introduction

Phyllodes tumours (PT) and fibroadenomas (FA) are fibro epithelial breast lesions with intersecting feature making diagnosis tough. PTs are rare but may recur or become malignant, requiring wide excision, while FAs are common and usually need minimal treatment. Imaging and histology help but often overlap so surgical excision remains necessary for confirmation and appropriate management.
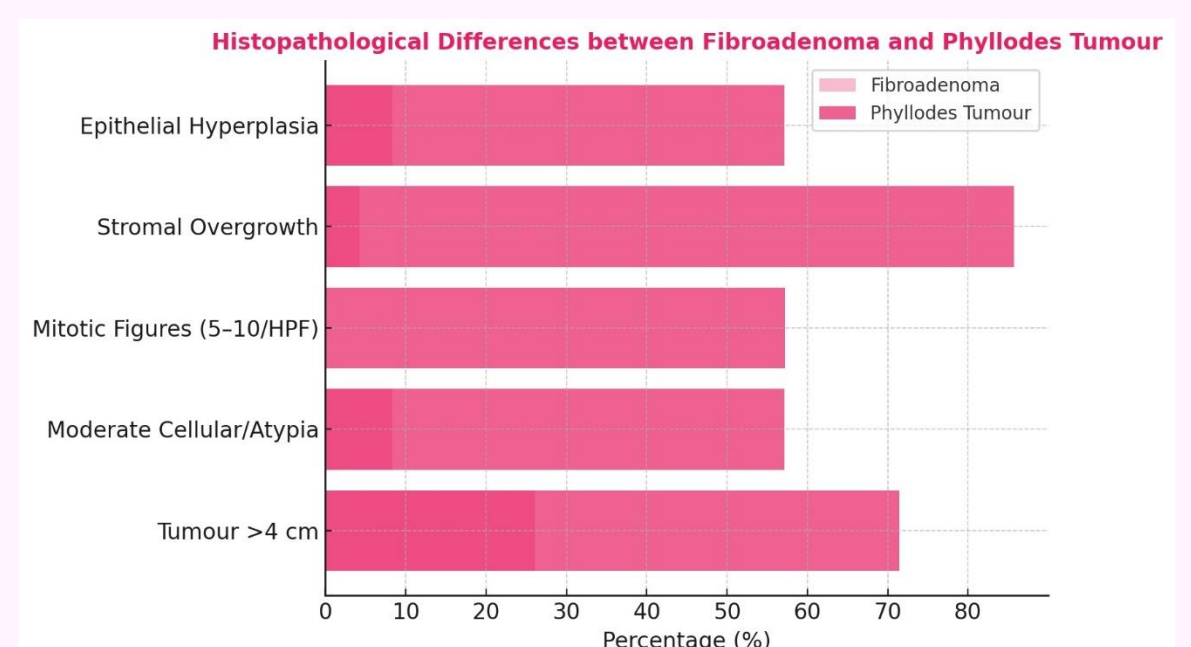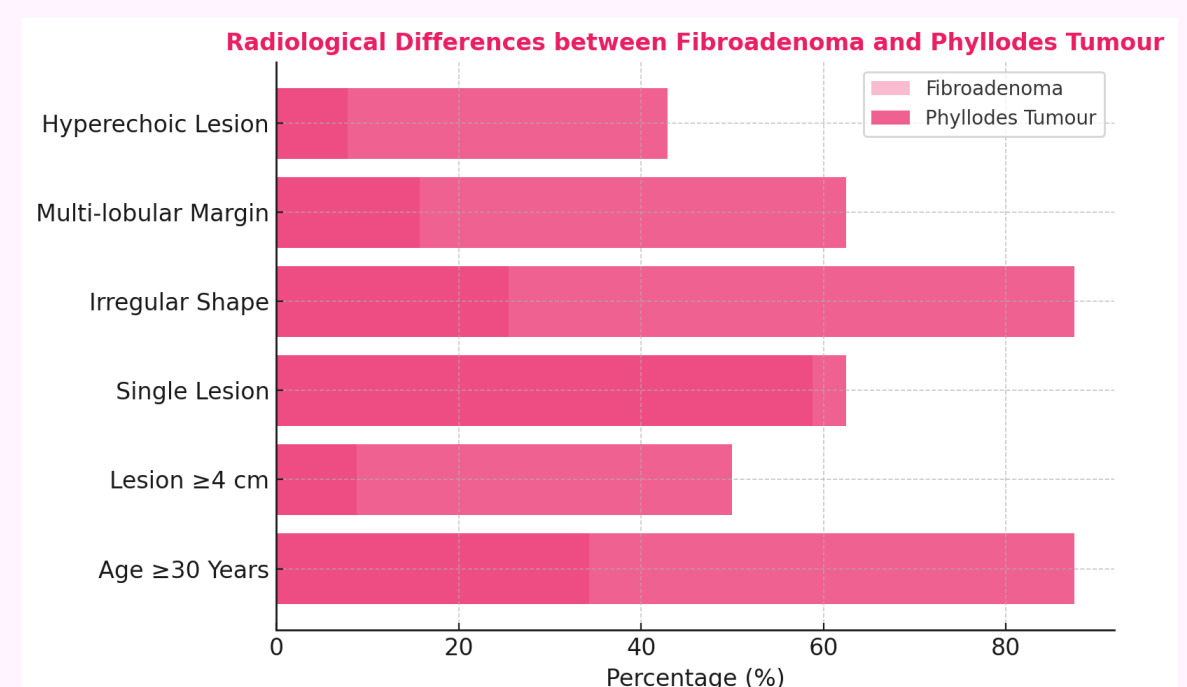
Objectives

- To determine the prevalence of Phyllodes tumors Among fibroepithelial breast Lesions
- To identify clinical, histopathological and radiological differences between Phyllodes Tumors and fibroadenomas.
- To enhance accuracy of diagnosis between PTs and FAs in order to guide appropriate surgical planning and reduce risk of recurrence or under-treatment.

Methodology

A Retrospective cross-sectional study was conducted in the Breast Care Unit, Rehman Medical Institute, Peshawar over a period 18 months (1st January 2024 – 30th June 2025). 110 female patients of age 18–80 years were examined. Clinical presentation, radiological imaging, and histopathological records were analyzed. Radiological and histopathological parameters were compared between FA and PT groups using Fisher's exact test and Univariate logistic regression

Results

- **Final Diagnosis:** 102 (92.7%) were **Fibroadenomas (FA)** and 8 (7.3%) were **Phyllodes Tumours (PT)**.
- **Age Distribution:** Mean age 28 years (range 16–58); **FA common <30 years (65.7%)**, **PT common >30 years (87.5%)**.
- **Clinical Presentation:** Most presented with **breast lump (93%)**, followed by **Mastalgia (14%)**.

- **Predictors of PT (Univariate Analysis):**
- Irregular shape (OR = 15.5)
- Irregular/infiltrative margin (OR = 6.4)
- Stromal overgrowth (OR = 138)
- High stromal cellularity/atypia (OR = 14.7).

- **Core Biopsy Limitations:** 34 Cases were indeterminate on Core Needle Biopsy → 7 (20.6%) upgraded to PT on excision.

Radiological Differences between Fibroadenoma and Phyllodes Tumour

Histopathological Differences between Fibroadenoma and Phyllodes Tumour

Conclusion

Phyllodes tumors depict distinguishing radiological and histopathological features. Strong predictors, specifically lesion shape, margin, stromal cellularity, and overgrowth, can help in accurate distinction enhancing diagnostic accuracy, aiding in timely management, crucial for appropriate clinical management.