

**Case Report**
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## A Rare Case of Malignant Phyllodes Tumor in a Young Female

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**ABSTRACT**

Phyllodes tumours are rare breast tumours that represent less than 1% of all breast tumours. They can be classified into three categories based on their histological features: benign, borderline, and malignant. Malignant phyllodes tumours are the most aggressive and can metastasize to distant organs. Here we report a case of a 26-year-old female with a malignant phyllodes tumour of the breast. The patient underwent wide local excision followed by adjuvant radiotherapy. We discuss the diagnostic and therapeutic challenges of managing this rare malignancy.

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**Introduction**

Phyllodes tumours of the breast are rare fibroepithelial neoplasms that can be benign, borderline, or malignant. They are most commonly found in women in their fifth decade of life, but can occur at any age. Malignant phyllodes tumours are the most aggressive and can metastasize to distant organs. The diagnosis of phyllodes tumours can be challenging due to their rarity and similarity to other breast tumours such as fibroadenomas and breast carcinomas.

**Case Presentation**

A 26-year-old female presented with a painless lump in her right breast. The lump had been present for six months and had recently increased in size. Physical examination revealed a 5cm firm, mobile, and non-tender lump in the upper outer quadrant of the right breast. Mammography and ultrasound showed a well-circumscribed mass with areas of cystic change. A core needle biopsy was performed, which revealed a phyllodes tumour of borderline malignancy. The patient underwent wide local excision of the tumour with negative margins. The final histopathological examination showed a malignant phyllodes tumour with areas of stromal overgrowth and heterologous differentiation. The tumour was 8cm in size and had invaded the surrounding breast tissue. The patient was referred for adjuvant radiotherapy to reduce the risk of local recurrence and distant metastasis.



Pod 7 Wound



Intra Operative Specimen

**Discussion**

Phyllodes tumors are rare fibroepithelial neoplasms of the breast that can be challenging to diagnose and manage. Overall, Phyllodes Tumor is a rare but potentially malignant neoplasm of the breast" [1]. They can present as a painless lump in the breast, and imaging studies may show a well-circumscribed mass with areas of cystic change. Core needle biopsy is essential for diagnosis, but histological examination of the surgical specimen is required to determine the tumor's grade and prognosis. The management of phyllodes tumors depends on their histological grade and surgical margins. Wide local excision with negative margins is the preferred treatment for benign and borderline phyllodes tumors, while malignant phyllodes tumors require wide local excision with negative margins and adjuvant radiotherapy. Chemotherapy and hormone therapy have not been shown to be effective in the treatment of phyllodes tumors. Recent studies have shown that genomic profiling may help to identify potential therapeutic targets for Phyllodes Tumor [6].

In particular, alterations in the PI3K/Akt/mTOR signaling pathway have been observed in a significant proportion of cases [6]. These findings suggest that targeted therapies that inhibit this pathway may be effective in the treatment of Phyllodes Tumor. Another important consideration in the management of Phyllodes Tumor is the risk of local recurrence. Previous studies have shown that the risk of local recurrence is higher in cases of Phyllodes Tumor

with positive surgical margins, larger tumor size, higher histologic grade, and stromal overgrowth [3, 4, 7].

In this case, the patient had a negative surgical margin and a small tumor size, which may have contributed to the favorable outcome. It is also worth noting that there is some controversy regarding the optimal surgical management of Phyllodes Tumor. While some studies have suggested that breast-conserving surgery may be appropriate for select cases of Phyllodes Tumor [3], others have advocated for more extensive surgical resection, such as mastectomy [5, 9].

Further studies are needed to determine the optimal surgical approach for Phyllodes Tumor, taking into account factors such as tumor size, histologic grade, and stromal overgrowth. Overall, Phyllodes Tumor is a rare but potentially malignant neoplasm of the breast. Timely diagnosis and appropriate surgical management are crucial for achieving favorable outcomes and minimizing the risk of local recurrence. Ongoing research into the molecular and genetic characteristics of Phyllodes Tumor may lead to the development of targeted therapies that improve patient outcomes.

### Conclusion

Phyllodes tumors of the breast are rare neoplasms that can be difficult to diagnose and manage. Malignant phyllodes tumors are the most aggressive and require aggressive surgical management with wide local excision and adjuvant radiotherapy to reduce the risk of local recurrence and distant metastasis. A multidisciplinary approach involving radiologists, pathologists, surgeons, and oncologists is required for the optimal management of phyllodes tumors.

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