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Margin status impact on recurrence of phyllodes tumors in high-risk groups: a retrospective observational study

Aliyeh Ranjbar¹, Vahid Zangouri^{1,2*} and Mansoureh Shokripour^{3*}

Abstract

Background Phyllodes tumor (PT) is an fibroepithelial tumor with potential for local recurrence. The optimal margin for surgical resection of PT is still debated, particularly in cases of positive margins. This study aimed to identify the risk factors for phyllodes tumor recurrence and the effect of a free margin on tumor recurrence by considering these risk factors.

Materials and methods This is a retrospective observational study of patients diagnosed with PT who had undergone surgical management. The data were collected from medical records from 2001 to 2020 in the breast clinic of Shahid Motahari Clinic of Shiraz. Patients were followed up for at least 3 years after the operation to be checked for local recurrence or distant metastasis at regular intervals.

Results This retrospective study included 319 patients with PT who underwent surgical management. Of these patients, 83.9% ($n = 267$), 7.6% ($n = 24$), and 8.5% ($n = 27$) were classified as benign, borderline, and malignant, respectively. 8.8% of all patients and 7.6% of non-malignant cases experienced local recurrence, and risk factors for recurrence included oral contraceptive use, smoking, size > 4 cm, stromal overgrowth, and stromal cell atypia. A negative surgical margin decreased the prevalence of recurrence in tumors > 4 cm and with stromal overgrowth significantly.

Conclusion The study found that a negative margin in all patients did not reduce the recurrence rate in benign and borderline phyllodes tumors, suggesting close follow up as a reasonable alternative. However, a negative margin may be effective in reducing recurrence in certain high-risk groups.

Keywords Phyllodes tumour, Local recurrence, Surgical margins, Risk factor

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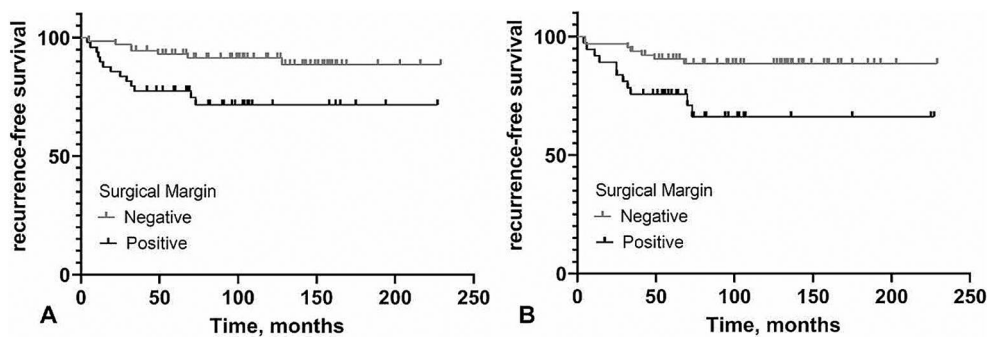


Fig. 3 Kaplan-Meier survival plot of recurrence-free survival, stratified by the negative and positive surgical margin in mass size > 4 cm (A), and present of stromal overgrowth (B)

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Author contributions

V.Z., A.R., and M.Sh.: conceptualized the data. M.Sh., and A.R.: curated the data. A.R.: wrote the original draft. V.Z.: edited the draft. All authors reviewed the manuscript.

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Data availability

Data is available from the corresponding author upon reasonable request via email.

Declarations

Ethics approval and consent to participate

This study was conducted in accordance with the principles established by the Declaration of Helsinki and obtained the approval of the Ethics Committee of Shiraz University of Medical Sciences (approval ID: IR.SUMS.MED.REC.1400.029). Informed consent was obtained and signed by all study participants prior to recruitment.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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