A Comparison of Margin Width in DCIS Patients Treated with Breast Conserving Surgery Plus Whole Breast Radiation Therapy

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Background

• In an effort to define adequate surgical margin width in patients diagnosed with Ductal Carcinoma in Situ (DCIS), a consensus guideline was recently published.

• The guideline found that there are less ipsilateral breast tumor recurrences (IBTR) in DCIS cases whose margins were at least 2mm at the time of breast conserving surgery (BCS) followed by whole breast radiation therapy (WBRT).

• The aim of this study was to validate these findings in our patient population.

Methods

• We queried a prospective database for patients with pure DCIS (no invasion or micro-invasion) treated with BCS followed by WBRT.

• 434 patients were stratified into two groups based on final margin width: 174 with margins < 2mm (narrow margin group) and 260 with margins ≥ 2mm (adequate margin group).

• Primary endpoint: ipsilateral breast tumor recurrence.

• Secondary endpoints: regional recurrences, distant recurrences, and mortality.

• Kaplan-Meyer analysis was used to determine local recurrence rates at ten years. Differences in outcome were analyzed using the log-rank test.

Results

• For patients with narrow margins, IBTR was significantly higher when compared to patients treated with adequate margins (31% vs. 11% p<0.0001).

• There was no significant difference between distant recurrence or survival and margin width.

The probability of an IBTR is shown in the graph above

• Median follow-up: 95 months

• Average age: 54 years

• Median time to an IBTR: 70 months

• Median tumor span: 20 mm for the narrow margin group and 16 mm for the adequate margin group

Conclusions

• Analysis of our data supports the Consensus Guideline: 2 mm is an appropriate minimal margin width for patients with DCIS treated with breast conserving therapy plus whole breast radiation therapy.

• Although there was a significant difference in local recurrence rates, no differences in distant recurrence, overall survival, or breast cancer specific survival were observed.