

Abstract – DBKS

More than triple risk of reoperation in DCIS compared to invasive breast cancer after wire-guided breast conserving surgery

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Background:

The reoperation rate due to positive margins after wire-guided breast conserving surgery (BCS) vary largely in the literature from 14-70%. These results are based on very inhomogeneous data material including both benign and malignant lesions.

The purpose of this study was to estimate the reoperation rate due to positive margins in patients with nonpalpable breast cancer or ductal carcinoma in situ (DCIS) treated with wire-guided BCS. Additionally, we examined whether the risk of a reoperation was associated with isolated DCIS or histological type, to try to identify a group that could benefit from a more accurate localization method or even mastectomy.

Material and Methods:

In this nationwide retrospective study, data on women operated for breast cancer or DCIS with wire-guided BCS was retrieved from The National Patient Registry. Patients who received an additional operation within 2 months of the primary operation were identified. Data was validated using the Danish Breast Cancer Group database and the Danish Pathology Register. The study period was from 1st of January 2010 to 31st December 2013. We used SAS statistical software version 5.1 for data analysis.

Results:

4118 patients had a wire-guided BCS. The total reoperation rate was 17.6% (725 patients), including 593 patients with reresections (14.4%) and 132 patients with mastectomies (3.2%). Significantly more patients with isolated DCIS (37.3%) had a reoperation compared to patients with invasive cancer (13.4%) ($p < 0.0001$) with an OR of 3.8 (CI:3.2-4.6). The same difference was found when not considering patients ending up with a mastectomy.

Of the 593 patients who had a reresection, 454 had invasive cancer; 360 (79.3%) with ductal carcinoma, 58 (12.7%) with lobular carcinoma and 36 (8.0%) with other types. The overall difference between histological types was non-significant ($p=0.059$), but there was a trend towards higher reresection rate in patients with lobular carcinoma (17.4%) with an OR of 1.4 compared to ductal carcinomas (13.1%).

Out of the 593 patients with reresections, 16.4% (97 patients) still had positive margin after reresection. Again, patients with isolated DCIS had a significantly higher risk of repeated positive margins compared to patients with invasive cancer ($p=0.0003$), with an OR of 2.2 (CI: 1.4-3.4). In total, only 202 patients (4.9%) ended up having a mastectomy, either as the first or second reoperation. This was evenly distributed between DCIS and invasive cancer and between histological types.

Conclusion:

The reoperation rate after wire-guided BCS was lower than anticipated based on the current

literature. The risk of reoperation due to positive margin was nearly four times higher in patients with isolated DCIS compared to invasive cancer. Those patients may benefit from a more accurate localization method.

Keywords: ductal carcinoma in situ; wire guided localization; margin status.