

## Impact of Lobular Carcinoma in situ on Local Recurrence in Breast Cancer Treated with Breast Conservation Therapy: A Systematic Review and Meta-Analysis

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**Abstract :** Purpose: Lobular carcinoma in situ (LCIS) is a known risk factor for breast cancer of unclear significance when detected in association with invasive carcinoma. This meta-analysis aims to determine the impact of LCIS on local recurrence risk for individuals with breast cancer treated with breast conservation therapy to help guide appropriate treatment strategies. Methods: We identified relevant studies from five electronic databases. Studies were deemed suitable for inclusion where they compared patients with invasive breast cancer and concurrent LCIS to those with breast cancer alone, all patients underwent breast conservation therapy (lumpectomy with adjuvant radiation therapy), and local recurrence was evaluated. Recurrence data were pooled by use of a random effects model. Results: From 1488 citations screened by our search, 8 studies were deemed suitable for inclusion. These studies comprised of 908 cases and 10638 controls. Median follow-up time was 90 months. There was a significantly increased overall risk of local breast cancer recurrence for individuals with LCIS in association with breast cancer following breast conservation therapy [pOR 1.87; 95% CI 1.14-3.04; p = 0.012]. The risk of local recurrence was non-significantly increased at 5 [pOR 1.09; 95% CI 0.48-2.48; p = 0.828] and 10 years [pOR 1.90; 95% CI 0.89-4.06; p = 0.096]. Conclusions: Individuals with LCIS in association with invasive breast cancer have an increased risk of local recurrence following breast conservation therapy. This supports consideration of aggressive local control of LCIS by way of completion mastectomy or re-excision for certain high-risk patients.

**Keywords :** breast cancer, breast conservation therapy, lobular carcinoma in situ, lobular neoplasia, local recurrence, meta-analysis

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