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Poster

Multicenter study to evaluate the efficacy and standardize radiofrequency ablation therapy for small breast carcinomas

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Background: Given the increasing number of early-stage breast cancers detected by screening mammography, we aim to establish RFA as a minimally invasive, cost-efficient, and cosmetically acceptable local treatment. In our Phase 1 study, localized tumors with a maximum diameter of 2 cm, preoperatively diagnosed by imaging and histopathology, were treated with RFA. A 90% complete ablation rate was confirmed histopathologically.

Subjects and Methods: From Nov. 2009 to Nov. 2012, 58 patients with early-stage breast cancer received non-surgical RFA therapy. Patients had localized solitary N0 tumors with a maximum diameter of 1 cm. They underwent RFA and SNB under general anesthesia and adjuvant therapy and breast radiation [A1]. Follow-up evaluation for residual tumor at 3, 6, and 12 months after RFA included clinical examination, diagnostic imagings and vacuum-assisted biopsy. Surgical resection was recommended for patients with suspected residual disease or incomplete ablation. The primary endpoint was the frequency of adverse events. Secondary endpoints included the complete ablation rate and ipsilateral breast relapse-free rate.

Results: The follow-up period ranged from 15 to 109 months (median, 85 months). The 57 patients completed the non-surgical RFA procedure and underwent diagnostic imaging and needle biopsy after 3 months. Seven patients with suspected incomplete ablation underwent surgical resection; incomplete ablation was confirmed in 5 (8.6%, 2 with invasive and 3 with non-invasive ductal carcinoma). During subsequent follow-up, 1 patient each was diagnosed with contralateral breast cancer and ipsilateral breast tumor relapse. No distant recurrence was documented. Cosmetic results were excellent in 94% of patients.

Conclusions: RFA is a promising alternative to surgery for treating localized, early-stage breast cancer.

No conflict of interest.

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Non-intervention vs. surgical interventions in (Low-Risk) Ductal Carcinoma In Situ: A DCIS multi-state model for decision analytics

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Background: An active surveillance strategy has been proposed for patients with low- and intermediate-grade ductal carcinoma in situ (DCIS). Prospective trials to measure clinical outcomes are on-going, and results will not be available for >10 years. In lieu of prospective data, there is value in creating a disease model for low-risk DCIS to understand the potential impact of an active surveillance strategy.

Methods: Multi-state models were developed using patient-level data from the SEER 18 Registries database, for 4 treatment strategies (no local treatment, breast conserving surgery [BCS], BCS + radiotherapy [RT], mastectomy), and for women with low-risk features. Eligible cases included women with grade 1, 2, and 3 histologically-confirmed DCIS as first primary, diagnosed between 1992–2016, aged ≥40 years at diagnosis, and known laterality, local treatment status, survival time, and cause of death. The multi-state model considers 5 mutually exclusive states: DCIS diagnosis, ipsilateral invasive breast cancer (iIBC) ≤5 years post-DCIS diagnosis, iIBC >5 years post-DCIS diagnosis, death preceded by iIBC, and death not preceded by iIBC. Transitions between each state were modelled with Cox proportional hazards models. The effects of treatment strategy, age, diagnosis year,

grade, ER status, and race on each transition was assessed. Missing covariate values were imputed.

Results: Data on n = 86,803 DCIS patients, including n = 2,008 with no local treatment, were used for model development. Increased risk of iIBC ≤5 years after DCIS diagnosis was demonstrated for women aged 40–49 (Hazard ratio (HR) 1.45, 95% Confidence Interval (CI) 1.25–1.69 compared to women aged 50–69), grade 3 lesions (HR 1.35, 95% CI 1.16–1.56) compared to grade 2 lesions, lesion size >1 cm (HR 1.29, 95% CI 1.18–1.42), and Black race (HR 1.56, 95% CI 1.31–1.86 compared to White race). ER+ status was associated with lower iIBC risk (HR 0.57, 95% CI 0.48–0.66). Results from the multi-state models on the subset of 13,903 patients with low-risk features (age 50–69, White, grade 1 or 2, lesion size ≤1 cm, ER+) showed that the probability of surviving iIBC-free at 10 years was 89.8% for women with no local treatment, 89.0% for BCS only, 91.5% for BCS+RT, and 92.0% for mastectomy.

Conclusions: Baseline DCIS characteristics are predictive of iIBC events diagnosed within 5 years, and are therefore useful in selecting patients for treatment. Women with low-risk features represent 16% of the studied population, and demonstrate minimal differences by treatment strategy in the probability of surviving iIBC-free at 10 years. This suggests there is opportunity to de-escalate treatment for women aged 50–69 at diagnosis, with ER+, grade 1+2, ≤1 cm DCIS lesions. This work was supported by Cancer Research UK and by KWF Kankerbestrijding (ref. C38317/A24043).

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Psycho-social assessment of post-surgery outcomes after breast reconstruction surgery

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Breast Cancer (BC) surgery leads to mutilation of breast shape with negative effects on body image and self-esteem. Reconstructive and oncoplastic breast surgery can satisfy patients and improve their quality of life (QoL). It is important to assess the patient experience post-surgery using patient-reported outcome measures (PROMs) based on patient's perception of surgical care, psychosocial well-being and physical functioning.

Our objective was to identify predictors of patient satisfaction in a selective sample of women (age 26–75 years) who underwent breast reconstruction surgery. 120 patients underwent unilateral breast reconstruction using implant. While 38 patients underwent reconstruction with opposite breast reduction symmetrization, 27 patients underwent therapeutic mastoplasty. All patients were asked to complete the standardized BREAST-Q questionnaire 1 year after surgery. The response rate for BREAST-Q questionnaire completion was 98% with 147 out of 150 study participants completed the questionnaire.

PROMs could be distributed into 4 distinct groups based on the reconstruction outcomes namely (a) very much satisfied (93%) (b) definitely and mostly satisfied (94%) (c) satisfied with the outcome (88%) (d) definitely agree on having reconstruction rather than the alternative of having no breast (91%). Significant improvement was observed in post-surgery satisfaction about breast appearance, psychosocial, sexual and physical well-being. Reconstruction surgery had an overall positive impact on quality of life. In patients that did not undergo breast reconstruction, psychological issues related to sexuality were observed.

We propose that BC Management protocols should also include additional counseling support to explore benefits of breast oncoplasty surgery.

No conflict of interest.

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Combined iodinated radiographic contrast and Tc99 radioisotope (i-ROLL) as technical improvement for the preoperative localization of non-palpable breast lesions: A comparative study with ROLL

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Background: Radioguided occult lesion localization (ROLL) is considered of reference for presurgical assessment of non-palpable breast lesions. A technical variation adding iodine contrast to the radioisotope tracer was previously described. The aim of our study was to compare our experience with ROLL and the iodine variant (i-ROLL) in a cohort of patients.