

STH INTERNATIONAL CONFERENCE ON ONCOLOGY AND CANCER RESEARCH



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Seeing the Unseen: IFI as a Game Changer in Breast-Conserving Surgery

Breast-conserving surgery (BCS) aims to remove malignant breast tissue while preserving as much healthy tissue as possible, with negative surgical margins being essential to reduce recurrence and the need for additional surgeries. This retrospective study evaluated whether intraoperative fluorescence imaging (IFI) improves margin assessment compared to standard intraoperative techniques. The study included 100 female patients aged 30 to 70 years with early-stage (I-II), single-tumor breast cancer. Patients with multiple tumors, metastasis, or contraindications to fluorescence agents were excluded. Participants were divided into two groups: Group A (n = 50) underwent standard BCS using palpation, visual inspection, and intraoperative radiography, while Group B (n = 50) received IFI in addition to standard techniques. IFI-assisted BCS achieved a significantly higher rate of negative margins (88% vs. 65%, $p < 0.001$) and a lower re-excision rate (8% vs. 22%, $p = 0.002$). No statistically significant difference in 12-month recurrence rates was observed between the groups ($p = 0.145$). These findings suggest that IFI enhances intraoperative margin visualization, thereby reducing the need for reoperation, and may serve as a valuable adjunct to standard techniques in BCS. Further research is needed to evaluate long-term oncologic outcomes and broader clinical applicability.

Keywords

Breast-conserving surgery, Intraoperative fluorescence imaging, Surgical margins, breast cancer, Re-excision rates, Image-guided surgery

Biography

Dr Navaneeth completed his post graduation in General surgery in India and worked as a Senior resident at Caritas hospital, Kottayam, India and currently working as a Clinical fellow LAS ST3 in Urology at Western Health and Social care trust, Northern Ireland. He is an enthusiastic surgeon keen on mentoring younger colleagues and students.