

Category I

Eight-year Post-accreditation Outcomes Following Implementation of an Oncoplastic-dedicated Surgical Team and Digital Same-day Oncology-surgery Workflow: Sustained Breast-conserving Therapy Rate of 96% Ten Years Post-initiation

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Objective: After international accreditation in 2016, a structured oncoplastic service was introduced at our multidisciplinary breast centre, incorporating a dedicated surgical team, integrated oncology anaesthetic clinic, and direct digital communication pathways between oncology, radiology, and surgery. This initiative aimed to optimise breast-conserving therapy (BCT) utilisation, reduce theatre delays, and enhance margin clearance through coordinated imaging, localisation, and intraoperative assessment.

Materials and Methods: A retrospective analysis was performed of all malignant breast surgeries (2016–2024). Service development milestones included:

- **2016–2018:** Establishment of oncoplastic unit and protocol alignment.
- **2019–2020:** Integration of real-time radiology support and pre-surgical localisation workflow.
- **2021–2024:** Implementation of a secure digital oncology-surgery same-day referral system, intraoperative radiology communication, and in-theatre pathology review.

Procedures were categorised as BCT (wide local excision/oncoplastic BCT) or mastectomy. Yearly and aggregate BCT rates were calculated.

Results: Over the eight years post-accreditation, the proportion of patients treated with BCT rose from 54.5% (2016) to 96.1% (2024). Key transitional improvements included:

- **Pre-digitisation period (2016–2020):** Mean BCT 64.1%, reflecting gradual integration of oncoplastic principles.
- **Digital workflow period (2021–2024):** Mean BCT 90.8% (1,423/1,567 cases; 95% confidence interval 89.3–92.1).

Margin clearance rates exceeded 90% in all recent years. The adoption of MRI-guided magnetic marker placement, same-day oncology-to-surgery referral, and intraoperative radiology-pathology collaboration were associated with a sustained rise in BCT utilisation and reduction in re-excision rates.

Conclusion: Ten years after program inception, the integration of a dedicated oncoplastic surgical team, real-time digital oncology-surgery pathways, and multimodal intraoperative support has resulted in a sustained BCT rate of 96%, exceeding international benchmarks. This model demonstrates how combining accreditation standards, workflow digitisation, and subspecialist coordination can deliver durable service-wide improvements in breast-conserving outcomes.

Keywords: Oncoplastic; workflow; South Africa