

ANALYSIS OF BREAST SYMMETRY IN PATIENTS WHO UNDERWENT
BREAST CONSERVING SURGERY WITH LOCAL PERFORATOR FLAPS
USING THE BCCT.CORE (BREAST CANCER CONSERVATION
TREATMENT. COSMETIC RESULTS) SOFTWARE

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BACKGROUND

In recent times, the preference for breast conservation surgery has significantly increased, driven by advancements in both oncological treatments and reconstructive techniques. Alongside this, there has been a notable rise in the adoption of chest wall perforator flaps (CWPF) for partial breast reconstruction. The aesthetic outcome, particularly breast symmetry, is of paramount importance in these procedures. This study is designed to explore the effectiveness of perforator flaps in breast reconstruction, specifically focusing on their impact on postoperative breast symmetry as assessed by BCCT.core software.

METHODOLOGY

A retrospective cohort study involving breast cancer patients who underwent breast conservation surgery (BCS) with chest wall perforator flaps at the Westmead Breast Cancer Institute between October 2016 and June 2023. Postoperative photographs were analysed using BCCT.core software.

RESULTS

A total of 236 patients underwent the Chest Wall Perforator Flap (CWPF) procedure. An analysis of breast symmetry was conducted using BCCT.core software, which included 104 patients who had follow-up photos taken at an average of 4.02 weeks post-surgery. Most procedures were done using the modified LICAP flap (91.9%), Figure 1.

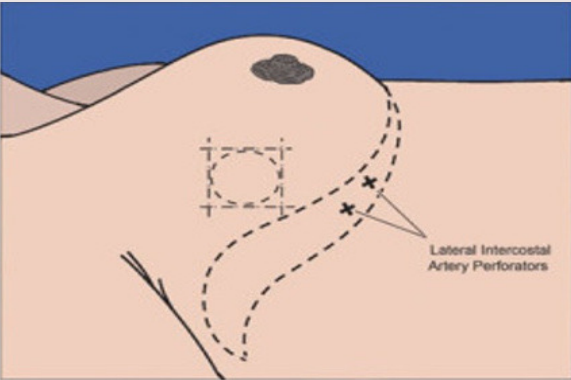


Figure 1. Modified LICAP flap
Image taken from Meybodi et al (2019)

Symmetry	N=104(%)
Excellent	28 (27%)
Good	63 (60.5%)
Fair	13 (12.5%)
Poor	0

Table 1. Post-surgery symmetry scores

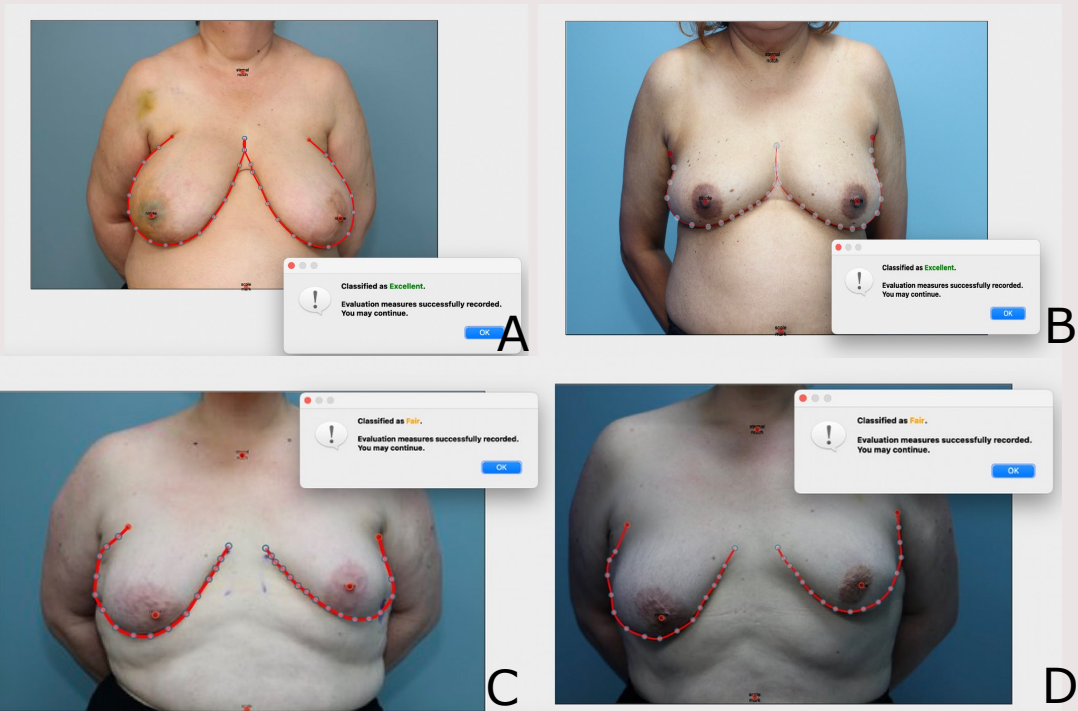


Figure 2. Different patients with excellent symmetry at Day7(A) and Day10(B) post-surgery; Patient with fair symmetry pre- (C) and post-surgery (D)

CONCLUSION

The study demonstrates that chest wall perforator flaps (CWPF) effectively achieve satisfactory breast symmetry after breast conservation surgery, with most patients rated as good to excellent. Utilising BCCT.core software for symmetry assessments provided robust data supporting the aesthetic success of these procedures. Furthermore, the majority of patients maintained their symmetry post-adjuvant radiotherapy, highlighting CWPF's resilience and potential to improve postoperative outcomes and patient satisfaction.

Post-adjuvant Radiotherapy Outcomes

Approximately 75% of the cases analysed showed consistent symmetry pre- and post-radiotherapy with photos taken at an average of 58.3 weeks post-surgery, 19% had worse outcome while 6.4%, improved.

Symmetry	N = 31 (%)
Excellent	9 (29%)
Good	10 (32.3%)
Fair	10 (32.3%)
Poor	2 (6.4%)

Table 2. Post-adjuvant RT symmetry

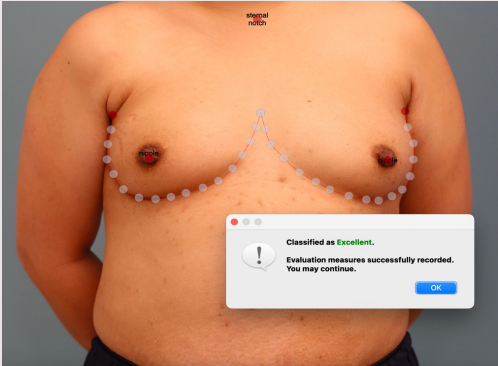


Figure 3. Two yrs post-surgery and RT with excellent symmetry

Re-excision and Post-surgery Symmetry

Post-op symmetry	N=104 (%)	No re-excision (%)	With re-excision (%)	p-value
Excellent	28 (27)	20 (71.4)	8 (28.6)	0.026
Good	63 (60.5)	54 (85.7)	9 (14.3)	
Fair	13 (12.5)	7 (53.8)	6 (46.2)	
Poor	0	0	0	

Table 3. Post-surgery symmetry and re-excision

POINTS TO CONSIDER

- Effect of Radiotherapy
- Post-surgery Complications and Symmetry
 - No association seen
- Re-excision and Post-surgery Symmetry
 - Statistically significant (p=0.026)
 - Patients with fair symmetry had significantly higher re-excision rate (46.2%)

REFERENCES

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