**Patient-Level Costs of Staged Unilateral versus Bilateral Immediate Symmetrization Mammaplasty**

Y Grant¹, P Thiruchelvam², R Al-Multi², K Hogben², DJ Hadjiminas², DR Leff¹,²

¹Department of BioSurgery and Surgical Technology and ²Breast Unit, Imperial College Healthcare NHS Trust

**BACKGROUND**

- Therapeutic mammoplasty extends the boundaries of breast conserving surgery, preserving natural breast cosmesis and circumventing the need for mastectomy.

- However, following unilateral therapeutic mammoplasty, a contralateral procedure (mastopexy / mammoplasty) is often needed to improve symmetry.

- There is no consensus regarding when this contralateral balancing procedure should be performed.

- The objective of this study was to investigate the impact of staged unilateral versus immediate bilateral symmetrisation mammoplasty for breast conserving surgery (BCS) on patient level costs.

**METHODS**

- The study was conducted at a large academic Medical Center.

- Data was collected from women who had received either unilateral alone (n=76), unilateral staged mammoplasty by single attending (n=26) or bilateral immediate mammoplasty by dual attending (n=27) between April 2015 and March 2019.

- Financial data were retrieved using the Patient-Level Information and Costing Systems (PLICS), a software package using a unit of observation based on the hospital admission.

- The exchange rate from GBP to USD used was 1.29. Statistical analysis was conducted using STATA (v14.2)

**RESULTS**

- The additional median cost of unilateral staged mammoplasty versus bilateral immediate mammoplasty is $5,383 (range: $3,853 to $6,447, p<0.01) per patient.

- The median cost of unilateral staged mammoplasty (index & subsequent symmetrisation) is $11,476 (range: $4,696 to $17,922).

- The median cost of index procedure was $4,906 (range $2,021 to $10,192) and median cost of subsequent symmetrisation was $5,292 (range $1,489 to $10,556).

- The median cost of bilateral immediate mammoplasty was $6,093 (range $2,165 to $17,184).

- There was no statistically significant difference in clinicopathological determinants of age, Charlson Comorbidity Index or tumour size between the comparator groups.

- Only 1 patient experienced a complication and return to theatre for evacuation of haematoma in the unilateral staged symmetrisation cohort.

- Extrapolation of a subsequent contralateral symmetrisation at the median cost for unilateral mammoplasty alone patients (n=76) would represent an additional $408,878 in cost at our institution.

**CONCLUSION**

- The authors present the first cost comparison between immediate bilateral mammoplasty and delayed unilateral staged symmetrisation, with a granular approach to cost at the patient level.

- The results demonstrate that the facilitation of single-stage immediate symmetrisation mammoplasty is of significant financial benefit to the NHS, which may be extrapolated to the US setting.

- Synchronous dual consultant operating may also improve cosmesis, reduce visits to hospital for delayed symmetrisation, with potential to enhance patient satisfaction.

- This study has demonstrated the magnitude of added patient-level costs of delayed symmetrisation after BCS and established a framework for further health economic analyses.

**REFERENCES**
