Cost-effectiveness of reduction mammoplasty
Taylor AJ, Tate D, Brandberg Y, Blomqvist L

Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study evaluated the cost-effectiveness of reduction mammoplasty for women with macromastia (large breasts). The authors concluded that strong evidence supported the cost-effectiveness of reduction mammoplasty. Inadequate reporting throughout the study makes it impossible to judge the validity of the results, and it is not clear if the authors' conclusions are appropriate.

Type of economic evaluation
Cost-utility analysis

Study objective
This study evaluated the cost-effectiveness of reduction mammoplasty for women with macromastia (large breasts).

Interventions
The intervention was reduction mammoplasty, which was compared with no surgery.

Location/setting
UK/in-patient and out-patient care.

Methods
Analytical approach:
This economic evaluation was based on a Swedish study (see Other Publications of Related Interest) of patients with macromastia, who were undergoing reduction mammoplasty. It had a three-year time frame for the benefits. The authors stated that the perspective was that of the UK NHS or a third-party payer.

Effectiveness data:
The primary measure of effectiveness was the score on the Short Form (SF-36) Health Survey, which was completed by the patients in the Swedish study, before surgery, and at six, 12, and 36 months after surgery.

Monetary benefit and utility valuations:
The utility scores were mapped from the SF-36 to the SF-6D, using the published Brazier algorithm.

Measure of benefit:
The summary measure of benefit was quality-adjusted life-years (QALYs). Benefits were discounted at 5% annually.

Cost data:
The cost data included the direct cost of reduction mammoplasty, from the 2003 UK NHS Reference Costs. The costs were in UK £ and they were not discounted, as they were incurred in the first three months following the procedure.

Analysis of uncertainty:
No analysis of uncertainty was conducted, but the cost-effectiveness was presented as a range of values, representing different estimates for the cost of reduction mammoplasty.

Results
Reduction mammoplasty cost between £1,563 and £1,892.
The incremental cost per QALY gained for mammoplasty, compared with no surgery, was between £4,733 and £5,729.

**Authors' conclusions**
The authors concluded that strong evidence supported the cost-effectiveness of reduction mammoplasty.

**CRD commentary**

**Interventions:**
The method used for mammoplasty was not reported. The comparator was not clear, but seems to have been no intervention.

**Effectiveness/benefits:**
The authors gave the reference for the study that provided the effectiveness data, but they did not report the actual data nor the results of the conversions to the SF-6D. The utilities were only reported as part of the cost-effectiveness ratios. The method used to calculate the QALY benefit from reduction mammoplasty was not reported; it seems that it was calculated as a gain from before surgery, rather than compared with a control group, who did not receive surgery.

**Costs:**
The source for the costs was appropriate, but the cost data were limited. It was not clear if any costs were assigned for patients who did not receive surgery, and it is likely that there would be costs for untreated macromastia, which would improve the cost-effectiveness of the surgery.

**Analysis and results:**
It was not clear how the incremental cost-effectiveness ratios were generated. Insufficient information was given to reproduce the analysis. No analysis of uncertainty was undertaken, and it is likely that there was significant uncertainty in the utilities, as there were only 39 patients who responded to each of the SF-36 surveys, in the Swedish study.

**Concluding remarks:**
Inadequate reporting throughout the study makes it impossible to judge the validity of the results, and it is not clear if the authors' conclusions are appropriate.

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**Other publications of related interest**

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adult; Aged; Breast /pathology /surgery; Cost-Benefit Analysis; Female; Humans; Hypertrophy; Mammaplasty /economics; Middle Aged; Quality-Adjusted Life Years