

Valuing health states associated with breast cancer screening and overdiagnosis

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## **Abstract Body**

### **Background**

Overdiagnosis is a risk of population based mammographic screening that must be balanced against the benefits of reducing breast cancer related mortality. Utilities are cardinal measures of quality of life (on a 0 to 1 scale) used to quantify such benefits and harms for use in the economic evaluation of breast cancer screening programs. Existing utilities for breast screening health states are unlikely to fully capture the risk of overdiagnosis in their valuation.

### **Aim**

To assess women's preferences for managing low risk breast cancers identified by BreastScreen and explore the extent to which the utilities may differ if the woman is adequately informed about the potential risk of overdiagnosis.

### **Method**

A pilot study is being undertaken to derive utilities from women in the Melbourne metropolitan area using standard gambles. Utilities will be derived for four different hypothetical treatments for low risk breast cancers identified by routine mammographic screening: breast conserving surgery alone, breast conserving surgery with radiotherapy, mastectomy and active monitoring. The health states described have been developed from a literature review, iterative piloting with patients and consultation with clinical experts. The probabilities for the risk of cancer progression or potential overtreatment will be varied to determine women's preferences for the hypothetical treatment of cancers potentially subject to overdiagnosis.

### **Results**

We will report average utilities and risk thresholds according to treatment of low risk breast cancers (breast conserving surgery with or without radiation mastectomy, or active monitoring).

### **Conclusion**

The results from the study will provide an assessment of how women prefer to manage low risk breast cancers identified by BreastScreen Australia. This will provide a valuable insight into whether women find active monitoring a plausible alternative for reducing the burden of overdiagnosis in mammographic screening.