

- Title** Risk-reduction mastectomy versus other preventive options in *BRCA1* and *BRCA2* mutation carriers
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- Reference** Cantero-Muñoz P, Triñanes Pego Y. Mastectomía reductora de riesgo de cáncer de mama en mujeres portadoras de mutación en *BRCA1/BRCA2* frente a otras opciones preventivas. Santiago de Compostela: Unidade de Asesoramento Científico-técnico, avalia-t; 2016. Available from: <https://avalia-t.sergas.gal/DXerais/726/avalia-t201605MastectomiaProfilactica.pdf>

Aim:

To assess the efficacy/effectiveness and safety of risk-reducing mastectomy in *BRCA1* and/or *BRCA2* mutations carriers as against other preventive and early diagnosis strategies. In addition to effectiveness the economic, organisational, ethical, social and legal domains were also addressed.

Conclusions and results:

No clinical or randomised trials were retrieved. Ten cohort studies were included which assessed the effectiveness of risk-reducing mastectomy, whether bilateral prophylactic mastectomy (BPM) or contralateral prophylactic mastectomy (CPM), against of intensive surveillance measures. 2 systematic reviews evaluated the impact on quality of life, psychosocial variables and satisfaction, and 2 economic studies. In all, 1160 women had undergone risk-reducing mastectomy (53% BPM and 47% CPM) and 3144 women had chosen to undergo surveillance. BPM and CPM were associated with significant breast cancer risk reductions (89% and 93% respectively). Overall, the percentage of complications was just under 40%, and of these, 14% were severe and required readmission or surgical reintervention. Evidence suggests that psychological distress, anxiety and concern about cancer decreases after risk-reduction surgery. In economic terms, as compared to annual screening (mammography and magnetic resonance), risk-reduction surgery would appear to be the most cost-effective strategy.

Currently, available scientific evidence show that, risk-reducing mastectomy in *BRCA* mutation carriers effectively reduces incidence of breast cancer as compared to surveillance strategies and, seemingly, provides a benefit in terms of mortality, particularly in the case of contralateral surgery, yet none of this makes for improvement in survival. Moreover, this type of surgical intervention confers additional morbidity, which in most instances tends to be

localised in the preventively excised breast. Despite the advantages that this strategy seems to afford, the final decision depends on the patient. It is therefore essential to provide genetic counselling, to ensure that, patient is clearly informed of the benefit/risk balance of each alternative, along with the psychosocial and sexual implications, and impact on quality of life.

Methods:

A systematic search of the scientific literature was made, without time limitation and covering the main biomedical databases such as: Clinical Practice Guidelines (GIN,...), HTA and Systematic Reviews databases (CRD, Cochrane, ...), general databases (PubMed, Embase) and ongoing research projects. Two independent reviewers selected the papers on the basis of pre-defined inclusion/exclusion criteria. Data were extracted, summarised in evidence tables and subjected to internal peer review, taking into account the risk of bias of the studies included. A descriptive analysis was performed, since the heterogeneity of the studies ruled out the possibility of quantitative synthesis and meta-analysis. Study quality was assessed using GRADE methodology.

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