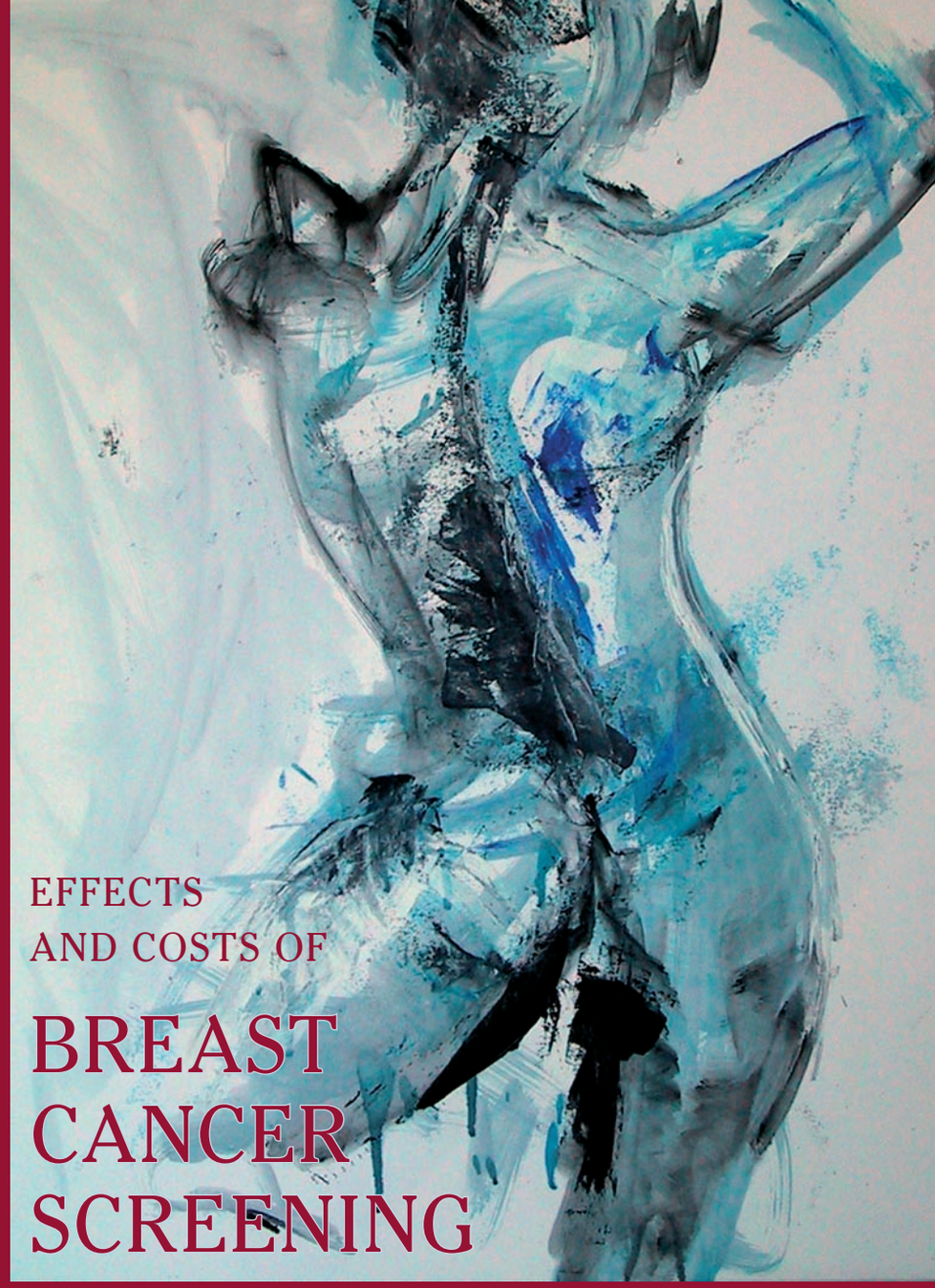
Women with a BRCA1 or BRCA2 mutation, who have a considerable increased risk of developing breast cancer, now face the choice of intensive screening, prophylactic surgery or chemoprevention. The efficacy of the various medical options and the durability of its effects are of major concern to female BRCA1/2 mutation carriers, and will influence their choices. Although prophylactic mastectomy reduces the rate of breast cancer risk by 90% or more, the intervention is irreversible, with potential harms that may be unacceptable for certain women.

This thesis shows that intensive screening is an appropriate alternative to reduce the risk of breast cancer death for both BRCA1/2 mutation carriers and for women with a clear family history of breast cancer where a mutation has not (yet) been found. Intensive screening is expected to lead to significant breast cancer mortality reductions with no adverse effect on short-term generic health-related quality of life and general distress. Including magnetic resonance imaging in BRCA1/2 mutation carriers (50-85% cumulative lifetime risk for developing breast cancer) surveillance is cost-effective. For moderate-risk women (15-30% cumulative lifetime risk for developing breast cancer), intensive screening with only mammography, alternatively in combination with clinical breast examination, is most cost-effective.

EFFECTS AND COSTS OF BREAST CANCER SCREENING IN WOMEN WITH A FAMILIAL OR GENETIC PREDISPOSITION RIAN RIJNSBURGER



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