

Menopausal hormone therapy, breast cancer risk and death among women with a *BRCA* pathogenic variant

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Abstract

Women with a pathogenic variant in the *BRCA1* or *BRCA2* gene (carriers) are at a high risk of developing ovarian (fallopian tube) cancer and recommended to undergo bilateral salpingo-oophorectomy at an early age resulting in surgical menopause. Menopausal hormone therapy (MHT) is the most effective way to mitigate the adverse outcomes of early menopause; however, the safety of MHT on breast cancer risk in this population has not been established. Furthermore, MHT is contraindicated for women with a personal history of breast cancer which is of importance for *BRCA* carriers given their tendency to develop early onset disease and the prognostic role of oophorectomy following a diagnosis. In this session, I will present data from two recent prospective analyses evaluating the association between: Study 1) MHT and *BRCA* breast cancer risk and Study 2) MHT use following breast cancer and the risk of death among *BRCA* carriers. Study 1) Our findings suggest no increase in the risk of breast cancer with the use of MHT, irrespective of gene mutation or formulation. Unless contraindicated, HRT use following preventive surgery in *BRCA* carriers should be considered safe and may be used to mitigate any adverse effects of surgical menopause. Study 2) Although preliminary and based on small strata, our findings are suggestive of no increased risk of death with MHT use after *BRCA*-breast cancer and may offer an opportunity to improve quality of life in this unique population. Replication in larger datasets are needed. These findings provide an evidence-based approach for the management of women at high-risk of breast cancer who are facing the acute and chronic effects of early surgical menopause. The safe use of MHT by *BRCA* carriers will continue to be an important research topic as formulations continue to evolve. Our goal should be to maximize survival while optimizing health following risk-reducing salpingo-oophorectomy.