

Title Hormone Therapy for those at High Risk for Estrogen Sensitive Breast Cancer

Background: With the advent of increasingly personalized cancer diagnosis and treatment genetic testing is becoming more common BRCA1 and BRCA2 mutation carriers are significantly more likely develop breast or ovarian cancer in their lifetime. Under current guidelines recommendations for BRCA1 mutation carriers it is recommended risk reducing BSO between age 35-40 or when they are done with childbearing. About 50-75% in the US will follow this guideline as known carriers. Current recommendations for people with high-risk genetic disorders such as Lynch or BRCA carriers are to remove high risk organs such as ovaries while pre-menopausal. While this is an effective technique in preventing cancer, many patients find the side effect of surgical menopause unacceptably high including hot flashes, weight gain, emotional distress, increased risk of poor cardiovascular outcomes. It is important for these women to understand there are many options to managing these side effects and reducing overall risk associated with these surgeries.

Objective: Develop and utilize an algorithm about effective treatment options, hormonal and nonhormonal, for those with breast cancer risk mutations who are considering early surgical menopause

Methods: Review literature on use of hormone therapy after early surgical menopause for breast cancer gene mutations such as BRCA genes. Develop an algorithm and test it in high risk clinic and survey benefits on improving education about early menopause and options for therapy and decreasing fear of the surgery.

Results: Prior studies have demonstrated that post-menopausal women who do not have contraindications and were experiencing low quality of life secondary to vasomotor symptoms had significant improvement both in vasomotor symptoms and decreased risk of stroke and heart attack. However, estrogen with progestogen for women with a uterus carries an increased risk of breast cancer. That they need dedicated counseling about their risks both with and without either bilateral salpingectomy or bilateral oophorectomy and more knowledge targeting their risks of early surgical menopause and risks and benefits of hormone therapy. The developed algorithm will help providers and their patients navigate the available nonhormone and hormone options are available, their effectiveness, and the risks. We will discuss current and possible future options for management of low estrogen states in these young individuals including hormonal and non-hormonal options such as SSRIs, SSNRs, Gabapentin, Oxybutynin, and the new neurokinin receptor NK3 inhibitors.

Conclusion: There is an unmet need to develop an easy to use algorithm to help providers and those at high risk navigate these difficult and fear producing decisions. There are many hormonal and non-hormonal options. These can improve post operative quality of life, improve cardiovascular health and decrease mental anguish secondary to surgery particularly in patients less than 60 years of age and even more so for those with early surgical menopause.

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