

Breast Cancer, BRAC Genetic Mutations and the Role of Hormone Therapy

What are the Risks?

Hormone Therapy in Breast Cancer Survivors

When a post-menopausal woman on ERT or HRT is diagnosed with breast cancer she is routinely advised to stop her hormones, usually with no consideration or discussion of the impact from quitting. When a breast cancer survivor enters menopause, or if she is already post-menopausal, she will usually not be offered the option of hormone replacement. The reason is a long-standing concern among the medical profession that administering estrogen in any form might stimulate a recurrence of her disease. However, a double-blinded clinical trial has never been conducted to determine if, in fact, there is any increased risk of recurrence of disease in women who elect to initiate or restart ERT or HRT.

In spite of the absence of a prospective double-blind study as to the risk of estrogen use in women with a personal history of breast cancer, there are clinical studies and observations, which provide support for the consideration of estrogen replacement in appropriately selected patients:

- When breast cancer is detected during a pregnancy, termination of the pregnancy is no longer recommended. Exposure to high levels of female hormones while pregnant has no adverse impact on either the course of the disease or the incidence of a future recurrence.
- Previously treated breast cancer patients who become pregnant do well.
- Pre-menopausal patients who are diagnosed with breast cancer do not have their ovaries (the source of estrogen) removed. There is an exception, if recurrent disease occurs and the tumor is estrogen BRAC1
- There is no evidence of an increased risk of breast cancer in women who have used oral contraceptive pills or estrogen alone (without progesterone) after menopause.
- Current studies have established that women who are using estrogen replacement have a 23% **reduction** in the incidence of breast cancer, a 63% **reduction** in deaths from breast cancer and a 60% **reduction** in all-cause mortality.

Hormone Therapy in *Previvors* (BRAC1 or BRAC2 Women with NO Personal History of Breast or Ovarian Cancer

- BRAC1 carriers risk of cancer by age of 70:
 - Breast - 60-65%
 - Ovarian – 39-59%
- BRAC2 carriers risk of cancer by age of 70:
 - Breast – 45-55%
 - Ovarian – 11-17%
- Removal of ovaries and fallopian tubes (BSO) before menopause reduces ovarian, fallopian tube and peritoneal cancer by up to 80% and breast cancer by 45%
- Previvors should complete childbearing AND have a BSO by age of 35-40 years
- Women who undergo a BSO and do NOT take replacement hormone therapy have an increased risk of cognitive impairment or dementia, more severe menopausal symptoms, osteoporosis and cardiovascular disease.

- Risk of breast cancer in Preivors who undergo a BSO have a reduced risk of up to 60% and the use of hormone therapy does not increase breast cancer risk in BRAC1 or BRAC2 mutation carriers with intact breasts.
- Recommendation for young Preivors with or without intact breasts: Carriers should not defer or avoid risk-reducing BSO because of concerns that subsequent use of systemic hormone therapy will increase their breast cancer risk.

Each woman is unique and deserves a thorough risk assessment that includes her quality of life (QOL). In the final analysis, it is the patients' right to choose whether she will initiate or continue her hormone replacement program. I view my professional responsibility to assess, educate, and counsel my patients and then respect and support their decisions. Any decision can always be changed, and in the future further investigational data and newer alternatives will be available.

Medical Article References (Arranged by Year Published)

- Stoll BA: Hormone Replacement Therapy in Women Treated for Breast Cancer. Eur. J. Cancer Clin. Oncol 1989;25:1909.
- Wile AG, DiSaia PJ: Hormones and Breast Cancer. Am J Surg AM J Surg 1989; 157:438.
- Bergkvist L, Adami H, Persson I, et al. Prognosis after Breast Cancer Diagnosis in Women Exposed to Estrogen and Estrogen-Progesterone Replacement Therapy. Am J Epidemiol. 1989;130:221-228.
- Creasman WT: Estrogen Replacement Therapy: Is Previously Treated Cancer a Contraindication? Obstet Gynecol 1991; 77:308
- Vassilopoulou-Sellin R, Zolinski C. Estrogen Replacement Therapy in Women with Breast Cancer: A Survey of Patient Attitudes. Am J Med Sci. 1992;304(3):145-149.
- Vassilopoulou-Sellin R. Estrogen Replacement Therapy for Breast Cancer Survivors, Rationale for a Prospective, Randomized Trial. Female Patient 1993; 18:41-48.
- Speroff L. Postmenopausal therapy and the risk of breast cancer. Maturitas. 1999;32:123-129.
- Speroff L. Hormone Replacement and Breast Cancer. Supp to The Female Patient, Dec.2001.
- Pritchard, K et al. Clinical Practice Guidelines for the Care and Treatment of Breast Cancer: 14. The Role of Hormone Replacement Therapy in Women with a Previous Diagnosis of Breast Cancer. Canadian Medical Association Journal. April, 2002; 166 (8).
- Grady, Deborah, et al. Noncardiovascular Disease Outcomes During 6.8 Years of Hormone Therapy – Heart and Estrogen/Progestin Replacement Study Follow-Up (HERS II). JAMA, July 3, 2002; 288:1
- Rossouw, Jacques E., et al. Risks and Benefits of Estrogen Plus Progestin in Healthy Postmenopausal Women. – Principal Results from the Woman's Health Initiative Randomized Controlled Trial. JAMA July 17, 2002; 288:3.
- Lea, Robert et al. Use of Hormonal Replacement Therapy After Treatment of Breast Cancer. JOGC, Jan. 2004; 142:49-54
- von Schoultz E, Rutqvist LE. Menopausal Hormone Therapy after Breast Cancer: The Stockholm Randomized Trial. Journal of the National Cancer Institute 2005; 97(7):533–535.
- Batur P, Blixen CE, Moore HC, Thacker HL, Xu M. Menopausal Hormone Therapy (HT) in Patients with Breast Cancer. Maturitas 2006; 53(2):123–132.

- Menopause. 2016; 23(9):1026-1027. The North American Menopause Society

Published by Gordon C. Gunn, M.D.

Rev. 2.27.2017