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Breast Cancer Patients Choose to Maintain Pregnancy Options as Choices Expand

New Study Highlights Need for Widespread Patient Counseling

Abstract: Fertility in Young Women of Child-Bearing Age after Breast Cancer: Are We Giving Them a Better Chance?

Dallas, April 14, 2016--Despite recent advances in assisted reproductive technology for women with breast cancer, documented fertility counseling at diagnosis remains low, while 89% of those made aware of their options sought specialized consultation for reproductive preservation. Almost 50% of these women chose one of the options discussed. These were the findings of a new study presented this week at the American Society of Breast Surgeons Annual Meeting.

"This study shows that whether or not they eventually attempt to become pregnant, most women want to maintain the option," says primary study author Devina McCray, M.D., breast surgical oncology fellow, of Cleveland Clinic. She notes that cancer treatments such as chemotherapy may damage or destroy egg cells, leaving a woman unable to bear children after cancer therapy.

Today a range of new and increasingly effective avenues are available to help women start a family following breast cancer treatment. However, typically these involve decisions made in advance of therapy, with limited options once treatment is underway.

"This study suggests that women concerned with future child-bearing should actively seek out assisted reproduction counseling before treatment and healthcare professionals involved with these patients should provide information and education."

The retrospective study reviewed all women age 40 and younger treated for breast cancer with chemotherapy and/or anti-hormonal therapy at Cleveland Clinic from 2006 to 2014. It involved 303 qualifying patients with an average age of 35.7 years and a median follow up of 3.7 years. At diagnosis, 32% were single, 68% married and 27% had no children. Eighty patients (26%) had a documented

fertility discussion. Of these, only nine (11%) did not pursue in-vitro fertilization (IVF) consultation or gonadotropin-releasing hormone (GnRH) agonists for ovarian protection during chemotherapy.

According to Dr. McCray, IVF is a common technique used to retain the option to bear children for women undergoing treatment of breast cancer. Healthy eggs are harvested prior to treatment, fertilized externally and when pregnancy is desired, implanted into the uterus. In addition, increasingly, gonadotropin-releasing hormone (GnRH) agonists are used to provide ovarian protection during chemotherapy. Targeting highly active cells, chemotherapy typically affects both cancer and ovarian cells, which often decreases future ovarian function.

Of the 303 women studied, 22 (7%) became pregnant within the median 3.7 year follow up period. Fifty-five (69%) of patients received counseling about IVF procedures, and 17 (31%) pursued this option. Of these, four (24%) eventually became pregnant as did five patients treated with GnRH. Ten patients not pursuing IVF consultation or GnRH became pregnant spontaneously. Overall successful pregnancy was associated with younger age at the time of diagnosis and estrogen-receptor negative and progesterone-receptor negative tumors.

Dr. McCray reports that the most frequent form of cancer among women of reproductive age is breast cancer, according to the National Cancer Institute. Statistics from the American Cancer Society reveal that approximately 12,500 women under age 40 are diagnosed with breast cancer in the U.S. annually. However, few studies have examined the frequency of fertility preservation counseling in breast cancer patients in particular.

“With advancing techniques to maintain child-bearing after breast cancer, a growing number of patients can look forward to raising a family in the future,” says Dr. McCray. “Timely counseling is extremely important so women are able to take full advantage of their options.”

Abstract, Official Proceedings

Presenter: Devina McCray
Institution: Cleveland Clinic

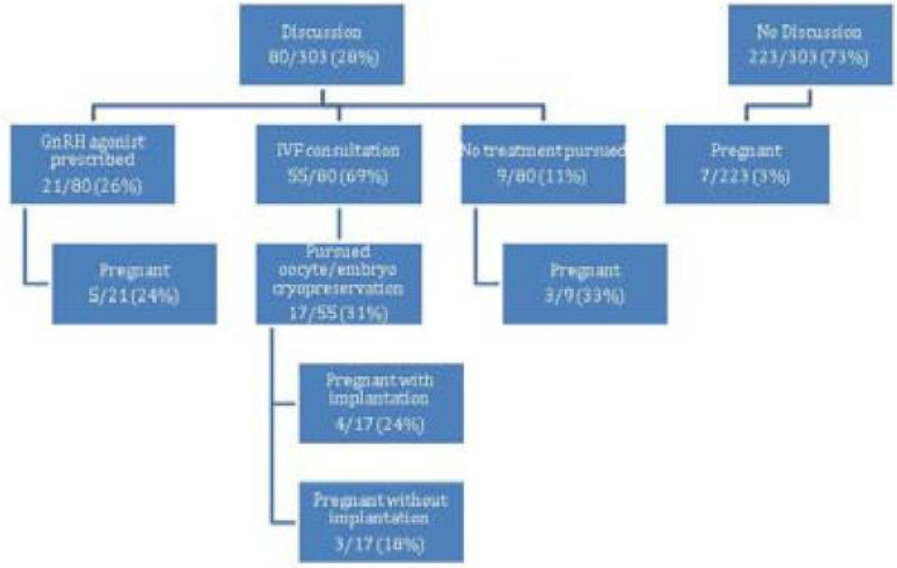
Title: Fertility in Young Women of Child-Bearing Age after Breast Cancer: Are We Giving Them a Better Chance?

Objective: Breast cancer is the most frequent cancer occurring in women of reproductive age. Because chemotherapy and/or anti-hormonal therapy is usually recommended, it becomes important to consider fertility preservation before undergoing cytotoxic therapies that impair ovarian function and interrupt childbearing plans. There is significant advancement in assisted reproductive technologies and increasing use of gonadotropin-releasing hormone (GnRH) agonists for ovarian protection during chemotherapy. We evaluated whether patients had a fertility discussion (FD) with their physician, what options were chosen, and if pregnancy was achieved.

Methods: A retrospective chart review was performed of all women 40 and younger diagnosed with breast cancer, treated with chemotherapy and/or anti-hormonal therapy and followed at our facility from 2006 to 2014. Patient demographics, treatment regimens, FD, in-vitro fertilization (IVF) consultation, GnRH used and successful pregnancy were evaluated.

Results: We identified 303 patients meeting inclusion criteria. Average age at diagnosis was 35.1 years (range 20-40 years) with median follow up of 3.7 years (range 4 months – 9.5 years). At diagnosis, 32% of women were single and 68% were married. Eighty-two (27%) women had no children at time of diagnosis. Eighty (26%) of all women had a documented FD. Of those undergoing chemotherapy, 77/262 (29%) had a FD. Twenty-one (26%) of those women were prescribed GnRH agonist for ovarian protection while on chemotherapy, 55 (69%) underwent IVF consultation, and 5 (6%) had both GnRH agonist and IVF consultation. Nine (11%) patients who had FD chose no fertility options.

Of 303 patients, pregnancy after treatment was seen in 22 (7%) women. Of women who had GnRH agonist prescribed, 5/21 (24%) became pregnant. Of the 55 patients who had an IVF consultation, 17 (31%) pursued oocyte retrieval and 4/17 (24%) became pregnant with embryo transfer. Three of 17 (18%) women became pregnant without embryo transfer and of those, 2 women had GnRH agonist prescribed. Three of 9 (33%) patients having a FD but not pursuing further options became pregnant spontaneously. Seven (3%) patients not having a FD became pregnant spontaneously. Evaluation of patient demographics and tumor characteristics identified that successful pregnancy was associated with being younger at time of diagnosis ($P < 0.001$), and having a tumor that was ER negative ($P = 0.009$), and PR negative ($P = 0.04$).



Conclusion: Despite advances in fertility options for young women, documented FD and referral in this age group remains low. Although not every woman in this group desired pregnancy, 71/80 (89%) of those having a documented FD sought some form of fertility preservation. It is important to improve fertility option awareness in both physicians and women of childbearing age, as patients who had a FD and consultation had a higher chance of pregnancy compared to those who did not.