



Temporary ovarian suppression helps preserve fertility for young breast cancer survivors.

We tend to think of cancer as being a disease of the elderly, and most cancers do become more common as we age. However, breast cancer is a disease that often strikes women who are still in their childbearing years. The good news for these women is that the medical profession is doing better than ever before in treating breast cancer, and so the majority of the time breast cancer patients will go on to live a normal life span. Unfortunately, though some of the very treatments that are necessary to cure the cancer — specifically, chemotherapy and hormonal therapy — will also interfere with a woman's ability to get pregnant.

Chemotherapy is recommended after surgery for many women with breast cancer. Among the many adverse effects of chemotherapy is damage to the ovaries, which can result in premature menopause. The probability of this varies with the chemotherapy regimen and the patient's age. The older the patient, the higher the risk of premature menopause, with the risk being over 50% in women older than 40. While hormonal therapy, such as tamoxifen, is not thought to cause premature menopause (though it may cause menstrual periods to stop while it is being taken), it cannot be safely taken during pregnancy. Therefore, since current recommendations are that hormonal therapy



Breast cancer survivor Jessica DeNoble is pictured with her husband and daughter.

continue for at least five years, getting optimal treatment may delay attempts to get pregnant for prohibitively long periods.

So, what options does the newly diagnosed breast cancer patient have to preserve the option of having biological children in the future? Some women select the option of having either embryos or (if they do not have a male partner) eggs frozen. However, these procedures are expensive, often not paid for by insurance, require the use of hormones, and delay the initiation of treatment for the cancer.

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There is another option available, which is the use of gonadotropin-releasing hormone (GnRH) analogs during chemotherapy. These drugs act on the pituitary gland to shut off the signals it sends to the ovaries, which are what causes the production of hormones that in turn cause ovulation and menstruation. It has been theorized for many years that “shutting off” the ovaries during chemotherapy, i.e. preventing the production of eggs, might protect the ovaries from damage, but studies have yielded conflicting results. Recently, however, the data from these studies have been combined in an attempt to come to a definitive answer.

This analysis revealed that use of a GnRH analog did decrease the incidence of permanent stop of menstrual cycles and increased the rate of post-chemotherapy pregnancy in women treated with GnRH analogs during chemotherapy. While use of a GnRH analog did not prevent menopause

in all patients, it did prevent it in a meaningful number of patients without the need for a costly invasive procedure. Since it shuts off production of estrogen and progesterone by the ovaries, its main side effects are menopausal symptoms, such as hot flashes and vaginal dryness. Use of GnRH analogs is usually covered by insurance.

It should be noted that there is a theoretical concern that hormonal manipulation during chemotherapy may make the chemotherapy less effective against hormone sensitive breast cancers. Use of GnRH analogs is therefore not appropriate for all breast cancer patients, but women concerned about preserving their ability to conceive after chemotherapy should discuss this with their physicians.