

# Breast Ca Post Pregnancy Predicts Worse Survival

*Next question: Does the total time a woman is pregnant correlate with an increased risk?*

BY SARA FREEMAN

BARCELONA — Women younger than 45 years are 48% more likely to die if they are diagnosed with breast cancer in the first 12 months after completing a pregnancy than are other young women who are diagnosed with breast cancer and are not pregnant.

In a study of 2,752 breast cancer patients who were seen at the University of Western Australia in Crawley, Dr. Angela Ives and associates also found that there was a small (3%), but non-significant rise in the risk of death in women who were diagnosed with breast cancer when still pregnant.

“A possible explanation of this is that the total time a woman is pregnant, with or without lactation, correlates with increased growth of a breast cancer, and this can lead to worse survival,” Dr. Ives, a research fellow at the university, said at the European Breast Cancer Conference.

Gestational breast cancer was defined in this study as breast cancer that was di-

agnosed during pregnancy or in the 12-month postpartum period. “Completing pregnancy” included live births, terminations, and miscarriages.

In addition to pregnancy status, the researchers examined the effects of a variety of factors that could affect survival in the women studied. These included age at diagnosis, histologic tumor grade, disease stage, lymph node status, and length of survival and death status (as of Dec. 31, 2007, when the data were censored).

As expected, young age, positive lymph nodes, higher disease stage, and histologic tumor grade at diagnosis were

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associated with poor prognosis.

“When we looked at pregnancy status, those who were pregnant when they were diagnosed [n = 55] had similar survival outcomes to all those young

## VITALS

**Major Finding:** Risk of death rose 48% when women were diagnosed with breast cancer within the 12 months after a pregnancy.

**Data Source:** 2,752 breast cancer patients at one center in Australia.

**Disclosures:** Dr. Ives and Dr. Saunders reported no conflicts of interest. Financial support for the research was provided by Susan G. Komen for the Cure and the Australian National Breast Cancer Foundation.

women who had no associated pregnancy [n = 2,570],” Dr. Ives reported. “Those that were diagnosed in the first 12 months post partum [n = 127], after they completed a pregnancy, however, were 48% more likely to die than the women who were pregnant at their diagnosis.”

Dr. Ives noted that a Norwegian registry study had recently reported similar results, although in that study the postpartum period was defined as up to 6 months after completion of pregnancy (J. Clin. Oncol. 2009;27:45-51).

“Based on this research, there are two things that we would like to see happen in research, so that we can better inform women and their treating clinicians,” Dr. Ives said.

“The first is to look at how the time that a woman is pregnant or breastfeed-

ing impacts on their survival,” she added. This would involve looking at the effects of pregnancy on survival from the time of conception to the time of breast cancer diagnosis.

“We’d also like to look at how pregnancy affects breast cancer cells,” Dr. Ives said. In the long term, pregnancy and breastfeeding are known to be protective against being diagnosed with breast cancer, she

noted, but in the short term, it seems that is not the case and that it actually might increase the chances of being diagnosed with breast cancer.

Dr. Christobel Saunders, coauthor of the study and professor of surgical oncology at the university, commented that the study’s findings do not change how women should currently be advised. She explained that the subjects were already diagnosed with breast cancer, and that the study did not look at possible causal or treatment effects.

“There’s an intriguing biological question now which needs to be further explored about what it is about the length of pregnancy and/or breastfeeding, or perhaps the way that the body accommodates the tumor and allows a more aggressive tumor to develop,” Dr. Saunders said. ■

## Breast Cancer Chemotherapy Does Not Harm Fetus

BY SARA FREEMAN

BARCELONA — Women who are diagnosed with breast cancer while pregnant can be treated with standard chemotherapy regimens after the 12th gestational week without endangering the health of the fetus, according to data from a registry established by the German Breast Group.

Fetal outcomes were not significantly different when 121 newborns of women who were treated with chemotherapy were compared with 36 newborns of women who did not receive chemotherapy in pregnancy. The findings were presented in a poster at the European Breast Cancer Conference.

“Breast cancer is among the most common cancers diagnosed during pregnancy,” said the lead author Dr. Sibylle Loibl of Johann Wolfgang Goethe University in Frankfurt-am-Main, Germany. Approximately 3% of all breast cancer cases are diagnosed during pregnancy.

“In 2003, we developed the first international guidelines on how to treat breast cancer during pregnancy (Cancer 2006;106:237-46), and we found such limited data that we felt we had to collect more information about this,” she explained.

In all, 235 women with gestational breast cancer were registered in the German database between April 2003 and October 2008.

The investigators’ primary aim was to evaluate fetal outcomes 4 weeks after delivery; they also plan to evaluate outcomes in the children and their mothers at 5 years after therapy.

The median age of the women was 33 years (range, 24-46 years). The diagnosis of breast cancer was made during the first trimester in 23.8% of women. Corresponding figures for the second and third trimesters were 39.5% and 36.8%, respectively.

All told, 121 women received cytotoxic chemother-

## VITALS

**Major Finding:** Newborns of breast cancer patients who received chemotherapy during pregnancy did not have significantly different outcomes than did newborns of breast cancer patients who did not have chemotherapy.

**Data Source:** A German Breast Cancer Group registry of 235 women who were diagnosed while pregnant.

**Disclosures:** No disclosures were given.

apy during pregnancy. This mostly consisted of anthracyclines in 58.6%, FEC (5-fluorouracil, epirubicin, and cyclophosphamide) in 16.5%, or CMF (cyclophosphamide, methotrexate, and 5-fluorouracil) in 14%. A median of four cycles of chemotherapy was received during pregnancy.

The majority (57.1%) of women had T2 tumors, with T3 tumors found in 25.8%, T1 in 11.5% of cases, and T4 in 4.4% of women who were diagnosed with breast cancer during pregnancy. About half had node-positive disease, and 7.9% had metastatic (M1) disease. Almost two-thirds (63.5%) of breast tumors were negative for the estrogen receptor, with 34.8% identified as being HER2 positive. Most tumors (93.4%) were described as ductal invasive/other.

About half (49.3%) of all newborns in the study were delivered by cesarean section. The median time to delivery was 36 weeks, and Dr. Loibl reported that the median overall birth weight was unaffected by whether or not the mother had received chemotherapy during pregnancy. The median overall birth weight was 2,760

g for 121 newborns who were exposed, and 2,785 g for the 36 newborns who were not exposed to cytotoxic chemotherapy while in utero. No significant differences in postpartum hemoglobin levels were found, with median hemoglobin levels of 16.1 g/dL and 17.2 g/dL, respectively.

Fetal complications occurring within the first 4 weeks after birth in both sets of newborns included signs of infection, anemia, neutropenia, and the need for continuous positive airway pressure (CPAP). Some newborns who were not exposed to intrauterine chemotherapy experienced congenital malformation and icterus, whereas those who were exposed to intrauterine chemotherapy experienced rectal atresia, hyperbilirubinemia, hypoglycemia, and permanent foramen ovale.

“I think pregnant women should and can be treated with standard treatments as recommended by the international guidelines,” Dr. Loibl said. Events that occurred in fetal outcome “were similar in both groups, but we need more information on cytotoxic agents that are more commonly used,

such as the taxanes.”

These findings suggest that “there is no harm done to the child when women who are pregnant take chemotherapy,” said Ellen Verschuur-van der Voort, vice president of the Dutch Breast Cancer Association and president of the Europa Donna Forum, the Netherlands.

Ms. Verschuur-van der Voort added that the research gave “a very good and positive conclusion,” offering reassurance to women who are diagnosed with breast cancer while pregnant. ■

**Of all cancers diagnosed during pregnancy, breast cancer is among the most common. And of all breast cancer cases, approximately 3% are diagnosed in pregnancy.**