Dear Colleague:

Nineteen years ago, I encountered my first patient with cancer – a young woman with Hodgkin's disease. She came to me devastated after her oncologist advised her to terminate her pregnancy. Like most physicians in our field, I had little or no experience dealing with cancer in pregnancy.

Responding to my patient's confusion and distress, I embarked on my own research to determine whether ending her pregnancy would increase her chances of survival and how treatment might affect her developing baby. Eventually I was able to report to her that termination would not necessarily improve her prognosis and that other patients had received chemotherapy for Hodgkin's disease and other cancers such as acute leukemia and breast cancer without harming their developing baby.

My difficulty with advising this patient and researching her options exposed a serious void of information about how to treat pregnant women with cancer. This heart-wrenching and frustrating experience formed the foundation for *The Cancer and Pregnancy Registry*, a database of information about treatment and survival of women with cancer *during or before* pregnancy.

Through the Registry, I have followed more than 400 women from around the world with cancer during pregnancy, using their experiences to correlate treatment protocols with maternal and fetal outcomes in larger numbers than the case reports available. I plan to continue following each patient and their children to determine the neurodevelopmental impact upon their children and the survival rate of these women. A separate registry also follows the pregnancies of breast cancer and chronic leukemia survivors who are pregnant after completing cancer treatment.

The Registry is a tool available for you and your patients to help make difficult choices based on data and facts, not fear. Each time you refer a patient to the Registry, you not only help that person but you provide critical data to help women worldwide make educated decisions.

Sincerely,

Elyce H. Cardonick, MD Specialist of Maternal-Fetal Medicine Professor of Obstetrics and Gynecology Cooper University Hospital

Did you know?

- 1. As women are delaying pregnancy, breast cancer during pregnancy is becoming more common.
- 2. One in 1,000 pregnant women is diagnosed with some type of cancer. The type most commonly reported to the Registry is breast cancer.
- 3. Pregnant women with invasive cervical cancer can delay treatment for up to 14 weeks to allow fetal maturity and still have a good outcome.
- 4. If you match five-year survival rates for women with identical stages of Hodgkin's disease, melanoma or breast cancer, you will not see a difference in five-year survival rates of pregnant and non-pregnant women.
- 5. After the first trimester, certain chemotherapy agents don't uniformly lead to fetal harm.
- 6. Women who choose to continue their pregnancy and undergo cancer treatment are sometimes judged negatively by others.
- 7. At times, the underlying, non-treated cancer can be more detrimental to the developing baby than chemotherapy.
- 8. A preterm delivery isn't always necessary for patients with cancer.
- A minimum of 3 weeks between the final chemotherapy session during pregnancy and delivery is recommended; therefore, chemotherapy is not usually given after 34 weeks
- 10. Even women who finish chemotherapy prior to delivery may have difficulty producing enough milk to breastfeed.
- 11. Women who need chemotherapy after delivery shouldn't breastfeed.



The Cancer and Pregnancy Registry: A Critical Tool

As cancer complicates approximately 1 in 1,000 pregnancies, most obstetricians or oncologists will only be confronted by one or two cases of cancer in pregnancy during their entire career.

Complicating treatment decisions is the reality that pregnancy choices and outcomes may depend on the type of cancer, the standard treatment for the non-pregnant woman with the same cancer, the cancer stage, and the gestational age of the fetus when the cancer is diagnosed.

"One of my primary goals is to avoid the under-treatment of pregnant women with cancer. It is very reassuring for a fellow physician to realize that he or she is not the first person to give a pregnant woman chemotherapy."

-Elyce H. Cardonick, MD



Through the Registry, we are building a database of information about cancer in pregnancy by analyzing:

- The mean age of the mother
- The gestational age at diagnosis
- · The gestational age at delivery
- The mean birth weight of the newborn
- Dosages of chemotherapy and gestational age at exposure
- · Complications for the baby by chemotherapy type
- Whether there was a delay in the cancer diagnosis due to pregnancy so we can improve our timely diagnosis for reproductive age women
- Survival of the pregnant woman with cancer
- Yearly medical follow up, as well as periodic standard intelligence tests, are obtained on each child
- How the treatment of cancer differs between pregnant and nonpregnant women

The result is the ability to provide physicians and patients with hard data about cancer during pregnancy and the safest treatment options for each kind of cancer.

Through the Registry, we:

- Help women to make educated choices based on data, not myths or gut reaction
- Support the treating physicians if desired
- Reassure patients that they aren't the first to go through this trauma
- Connect patients to the national Pregnant with Cancer Support Network (For more information on the support network, see below.)

How it works

Connecting to the Registry starts with a phone call from you, the referring physician, with permission from your patient. At that time, you can decide whether you want to connect us to your patient or act as a liaison. Or the patient can call. Regardless, all information that you give us is completely confidential. Medical records are requested with the patient's written consent. Patients do not have to be local to participate.



We track each patient in the Registry through annual contact with her oncologist and track each child through contact with the family's pediatrician and pediatric dentist. We also follow those patients who end their pregnancy to see if their choice impacted their survival.

We have a separate registry for breast and chronic leukemia cancer survivors, in which we track whether prior chemotherapy or radiation impacts later pregnancies or how pregnancy affects recurrence and survival.

Pregnant women diagnosed with cancer can find emotional support by being matched with another woman who was diagnosed with the same cancer and has already undergone treatment and delivered her baby. Please refer your newly diagnosed patient to www.pregnantwithcancer.org or 1.800.743.4471 for information about the Hope for Two support network.

Elyce H. Cardonick, MD



Dr. Elyce H. Cardonick is founder of the Cancer and Pregnancy Registry, an international database for pregnant women diagnosed with cancer. A specialist in maternal-fetal medicine, she is an Associate Professor of Obstetrics and Gynecology at Cooper University Hospital.

Dr. Cardonick treats patients at Cooper University Hospital in Camden, NJ, and Atlantic City Medical Center in Pomona, NJ. She previously practiced at Pennsylvania Hospital and Thomas Jefferson University Hospital, which are both in Philadelphia. She has also lectured nationwide on cancer and pregnancy. She is a member of INCIP, the International Network of Cancer, Infertility and Pregnancy.

A summa cum laude graduate of the University of Delaware, Dr. Cardonick received her medical degree from the Medical College of Pennsylvania in Philadelphia. Upon graduating, Dr. Cardonick undertook post-graduate work at Albert Einstein College of Medicine/Montefiore Medical Center in the Bronx, NY, and earned a fellowship in maternal-fetal medicine at Thomas Jefferson University.



Dr. Cardonick is board certified in Obstetrics and Gynecology and Maternal-Fetal Medicine, and is a member of The American College of Obstetricians and Gynecologists; the Society of Maternal-Fetal Medicine; and the Organization of Teratology Information Services.

She has been named a *Top Doc* and a *Top Doc for Women* by *Philadelphia Magazine* and a *Forty (People to Watch) under 40* by *The Philadelphia Business Journal*. She has also been honored with the Leo M. Davidoff Society Certificate of Distinction for Teaching of Resident and Medical Students.

Dr. Cardonick has been published in several journals including *Obstetrics and Gynecology; The Lancet Oncology; The Journal of Reproductive Medicine;* and *The American Journal of Obstetrics and Gynecology.* She has also spoken at numerous medical conventions and seminars about her specialty.

To learn more about The Cancer and Pregnancy Registry, contact:

Dr. Elyce Cardonick 856.342.2491 or 856.757.7876

Toll Free: 1.877.635.4499

www.cancerandpregnancy.com

