

# LATE BREAKING news

from the **National Wilms Tumor Study**



## **Pregnancy After Treatment for Wilms Tumor**

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**F**or many women, becoming pregnant and having a child can be one of life's greatest joys. For female survivors of childhood malignancies, approaching this life milestone can sometimes create a certain degree of uncertainty and anxiety. Questions regarding fertility and the ability to successfully carry a baby to term are of paramount concern. Will the treatment that I received make it difficult for me to become pregnant? If I do get pregnant, am I at risk for certain complications and what can I do to make sure that I have a healthy pregnancy? These are some of the questions that resonate with many female survivors now entering their childbearing years. Proportionally speaking, only a small number of Wilms Tumor survivors will experience difficulty becoming pregnant or maintaining a pregnancy. The most important factor is to understand those treatment exposures that may place you at the highest risk for complications. And, while some Wilms tumor survivors may have

a greater risk of complications, these risks should not discourage you from trying to become pregnant when you are ready. Identifying your risk factors and taking proactive steps to care for yourself before, during and after pregnancy is the key.

### **TREATMENT FACTORS and YOUR RISK**

To better understand your potential risks during pregnancy, each survivor must know the therapy they received and the risks associated with that treatment. The treatment for Wilms tumor typically involves surgery, chemotherapy and in some cases radiation. Depending on the extent of disease at the time of diagnosis, a combination of these different modalities is used to offer the best chance for long-term survival. Survivors who were treated with a nephrectomy (removal of the kidney) in combination with limited chemotherapy (usually

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drugs like actinomycin D and vincristine) are not likely to have difficulty conceiving or carrying a child. Survivors treated with additional types of chemotherapy or radiation may be at increased risk for having problems with fertility or pregnancy.

## RADIATION

Radiation can cause damage to the healthy cells of the ovaries, sometimes impairing a woman's ability to become pregnant. Radiation can also affect the elasticity and blood flow of the uterus. This can make it more difficult for the uterus to expand and stretch during pregnancy. Studies have shown that Wilms tumor survivors who received radiation to the flank (the side of the body between the upper abdomen and the back with doses between 10-20 Gy) can still achieve a successful pregnancy. Those who received radiation to the whole abdomen, including the pelvis, are at higher risk for infertility. Pregnancy for these women is likely to be more difficult to achieve but is not necessarily impossible.<sup>1</sup> Reports from the National Wilms Tumor Study indicate that women who have received radiation to the flank or upper parts of their abdomen may not have problems becoming pregnant but are at risk for premature labor, low birth weight, premature birth (<36 weeks), and malposition of the fetus.<sup>2</sup> Thankfully, current therapies for Wilms tumor have been modified in an attempt to minimize long-term effects on the female reproductive organs. Flank or upper abdominal radiation is only used for more advanced disease and total doses of radiation to this region have been reduced to minimize toxicity while maintaining cure. Hopefully, future generations of Wilms tumor survivors will benefit from these therapeutic adjustments as they move into their reproductive years.

## EXPOSURE to ANTHRACYCLINES on TREATMENT

In more advanced cases of Wilms tumor, drugs known as anthracyclines (drugs like Adriamycin and Doxorubicin) are sometimes utilized. Not everyone treated for Wilms tumor receives this class of drug as part of their therapy. Anthracyclines can cause weakening of the heart muscle later in life. This is especially true for those who received larger doses of the drug, at younger ages (less than 5 years) or in combination with radiation in the area of the chest or to the left side of the abdomen (this radiation may have reached the lower chambers of the heart). Effects on the heart, if any, may not be seen for many years after treatment. While many Wilms tumor survivors do not develop problems with their heart, the added stress of pregnancy on the body requires those who received this class of drug to be vigilant about a heart healthy pregnancy. Close monitoring of the heart's function, especially during the later stages of pregnancy and during labor and delivery, is strongly recommended. Suggested monitoring includes an echocardiogram (an ultrasound of the heart)

before and periodically during pregnancy, especially during the third trimester, and cardiac monitoring during labor and delivery.<sup>3</sup> Your doctor can decide what the best monitoring schedule is for you. Involvement of a doctor who specializes in the function of the heart (cardiologist) may also be advised.

## WHAT YOU CAN DO

Successful pregnancy is possible for most survivors of Wilms Tumor. For many survivors, there is no reason to expect that your treatment will prevent you from having a baby when you are ready. For survivors who may have received radiation and/or anthracyclines as part of their treatment, there are certain key points to remember if you are pregnant or are considering having a baby.

1. Know your treatment history including the total dose of any anthracyclines received as well as total dose and location of radiation. Your treating oncologist can provide this information to you.
2. Share information on your treatment exposures with your obstetrician as soon as you know you are pregnant.
3. Be proactive. Seek specialized care and careful monitoring throughout your pregnancy, even if you feel fine and are not having any problems. This may include care by an obstetrician with skills in high-risk pregnancy as well as regular visits to a cardiologist both during and after your pregnancy.

1. Kalapurakal, JA, Peterson, S, Peabody, EM, Thomas, PRM, Green, DM, D'Angio, GJ, Breslow, NE (2004). *Pregnancy outcomes after abdominal irradiation that included or excluded the pelvis in childhood Wilms tumor survivors: a report from the National Wilms Tumor Study.* *Int. J. Radiation Oncology Biol. Phys.* 58(5):1364-1368.

2. Green, DM, Peabody, EM, Nan, B, Peterson, S, Kalapurakal, JA, Breslow, NE (2002). *Pregnancy outcome after treatment for Wilms tumor: a report from the National Wilms Tumor Study Group.* *J Clin Oncol* 20:2506-2513.

3. *Children's Oncology Group Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers, Version 1.2-March 2004.*

## ABOUT THIS ISSUE

Several articles in this volume address issues concerning pregnancy and participants' children. We would like to thank all of you who have shared information with us about your or your partner's pregnancies and the birth of your children. We also thank those of you who have let us know you are unable to have children. For many of you this was painful to remember and report, and we cannot possibly thank you enough for having the courage to do so. All reports of pregnancy and fertility are valuable to answer questions about the effects of treatment for Wilms tumor on men's and women's fertility and their children. We are happy to share with you this series of articles that reflect everyone's contributions.