

Pregnancy after Abdominal RT for Wilms' Tumor: Long-Term Follow-up Results

By Gretchen Henkel

This interview with Dr. Daniel Green, Chairman of the National Wilms Tumor Study Committee, first appeared in *Oncology Times*, Vol XXIII (No. 9) September, 2001 and is reprinted with permission of the author

Wilms' tumor affects one or both kidneys and generally occurs in children age three to four. With an overall cure rate of more than 80 percent, Wilms' tumor has afforded investigators a chance to follow their cured patients for long lengths of time to evaluate the late effects of treatment.

It is now known that women who were treated as children for Wilms' tumor with hemi-abdominal radiation are at increased risk for having lower birthweight babies and delivering them prior to 36 weeks' gestation. Those have been the major findings of the National Wilms' Tumor Study Group's (NWTSG's) Long-Term Follow-Up Study reported at the American Society of Clinical Oncology's 1999 and 2001 Annual Meetings.

In a recent interview, NWTSG Chair Daniel M. Green, MD, a pediatric oncologist at Roswell Park Cancer Institute and Professor of Pediatrics at the School of Medicine and Biomedical Sciences at State University of New York at Buffalo, noted that the manuscript regarding follow-up study results of pregnancy outcomes is currently undergoing the journal review process.

Tracing Results

The main difference between the manuscript submitted for publication and the initial abstract in 1999, explained Dr. Green, was that the group first reported on results from 301 pregnancies. The ASCO 2001 abstract reported on data the group had gathered regarding 594 pregnancies.

Another difference, noted Dr. Green, who was the first author, is that the final paper did not include women who had undergone full-abdominal radiation. A few of those women had been included in the original study results, even though most who receive full-abdomen radiation are sterilized after treatment.

Those patients were excluded from the final analysis, on the advice of the team's radiation oncologists, Dr. Green said. The radiation oncologists pointed out to study authors that doses for full and hemi-abdominal radiation are different, and might confound efforts to make effective comparisons between pregnancy occurring in former Wilms' tumor patients.

What Was Analyzed

Women's pregnancy outcomes comprise just one group of the factors tracked long-term by NWTSG. Other late effects such as risk for congestive heart failure after doxorubicin are also being followed and reported. (*Green et al: Congestive heart failure after treatment for Wilms' Tumor Study Group, J Clin Oncol 2001;19:1926-1934*).

When patients are enrolled in the late-effects study, all their data are processed and analyzed through the study group's Data Service Center located at the University of Washington in Seattle*. Many of the NWTSG member institutions, however, take responsibility for patient contacts, said Dr. Green.

The Long-Term Follow-Up Study of the NWTSG entered women into their study from 1969 to 1994. Investigators analyzed a number of pregnancy outcomes and complications. In the 2001 abstract, they reported there were 80 miscarriages (prior to 20 weeks) in a total of 594 pregnancies. Forty-three women had elective abortions, and there were six stillbirths (after 20 weeks' gestation). Women in the study delivered a total of 465 liveborn infants.

Further analysis of the liveborn births revealed that 17.5 percent of the infants were delivered prematurely (prior to 36 weeks' gestation). Low birthweight (less than 2,500 grams) was also common, occurring in 19.5 percent of 304 infants.

Several other complications were analyzed, including pregnancy-related hypertension, early or threatened labor, malposition of the fetus (such as breech presentation), obstructed labor and umbilical cord complications. In both the 1999 and 2001 analyses, malposition of the fetus occurred approximately 10 percent of the time, and early or threatened labor was also more frequent.

The take-home message, he said, is that fetal malposition, low birthweight and prematurity are much more frequent among the irradiated women. In light of the long-term findings, the NWTSG Web site for patients advises women who have been treated with radiation for Wilms' tumor to see their obstetricians early in their pregnancies. Patients can be referred to the Web site—www.nwtsg.org—where they can find helpful information. Links to member institutions and other sites are also available.

Reporting Intervals Vary

During the interview, Dr. Green also commented on the process for reporting results from such a long-term project. Journal reports from the long-term study group occur at different intervals than do those from the NWTSG's therapeutic studies, he explained. "Long term results are dependent on our having enough data to report. We publish articles as studies are completed. The therapeutic studies usually require four or five years of patient accrual, and we try to publish the results as soon as we have completed the accrual and have a minimum of two years of follow-up on essentially all the patients in the study." ❖



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*Dr. Norman Breslow is the biostatistician in charge. He maintains an office at the University of Washington and at the Data and Statistical Center at the Fred Hutchinson Cancer Research Center. Both are in Seattle.