



## **Wilms Tumor: Differences in Treatment**

Kelly Trout, RN, BSN

There are two basic approaches to the treatment of Wilms tumor: The North American approach, and the European approach.

In North America, the National Wilms Tumor Study Group and its successor, The Children's Oncology Group, (COG) have studied Wilms tumor and its treatment since 1969. In general, the approach they've developed is:

- 1) Surgery immediately (unless bilateral tumors are present). Complete removal of the kidney is usual.
- 2) Examination of the tumor for staging
- 3) Post-operative treatment (i.e., chemotherapy, with radiation if needed) based on the stage of the tumor

In Europe and many other parts of the world, the International Society of Pediatric Oncology (SIOP) is the organization which studies Wilms tumor and has developed protocols for treatment. The general approach of this group is:

- 1) Staging of the tumor based on ultrasound/MRI
- 2) A period of chemotherapy (and radiation, if indicated)
- 3) Surgery
- 4) Post-operative treatment (i.e., chemotherapy, with radiation if indicated)

One benefit of the North American (COG) approach is that immediate surgery allows the tumor to be staged and the type of cells to be identified, with post-op treatment specific to the stage of the tumor.

The European (SIOP) approach has a couple of benefits, and one drawback. First, a benefit of preoperative chemotherapy is that it usually reduces the size of the tumor, which can decrease the amount of treatment needed after surgery. In addition, the patient's response to preoperative chemotherapy can help determine the most appropriate treatment for them after the tumor is removed.

One difficulty with the SIOP approach is the small risk of misdiagnosis. Most patients no longer receive biopsy prior to treatment, and since the appearance of a mass on ultrasound and/or MRI can be misleading, approximately 5% of patients will ultimately be found not to have Wilms tumor.

Both of these approaches have similar outcomes – in other words, overall survival rates are excellent with either. So, ***“In the absence of a clear choice between up-front nephrectomy (removal of the kidney) and preoperative chemotherapy, it is reasonable to base the timing of resection (surgery) on factors such as tumor size, the patient’s clinical condition, and the experience of the surgeon.”***

*Metzger, ML, Dome, JS, Current Therapy for Wilms Tumor. The Oncologist 2005;10: 815-826.*