

placed on the history and physical examination for the presence of congenital anomalies; a family history of cancer; and signs of malignancy, such as weight loss, enlarged liver and spleen, indications of anemia, and lymphadenopathy. Specific tests include radiographic studies, such as abdominal ultrasound, CT, and MRI of the abdomen; CT of the chest to look for metastases in the lung; and Doppler ultrasound of the inferior vena cava. Laboratory studies should include a complete blood count (polycythemia is sometimes present if the tumor secretes excess erythropoietin), biochemical studies, and urinalysis. Studies to demonstrate the relationship of the tumor to the ipsilateral kidney and the presence of a normally functioning kidney on the contralateral side are essential.

## **Staging and Prognosis**

Wilms tumor arises from a malignant, undifferentiated metanephrogenic blastoma (a cluster of primordial cells capable of initiating the regeneration of an abnormal structure). Its occurrence slightly favors the left kidney, which is advantageous because surgically this kidney is easier to manipulate and remove. Although the tumor may become large, it remains encapsulated for an extended period.

The histology of the tumor cells is identified and classified according to two groups: favorable histology (FH) and unfavorable histology (UH). Only about 10% of Wilms tumors demonstrate UH, which is associated with a poorer prognosis and demands a more aggressive treatment protocol, regardless of the clinical stage ([Davenport, Blanco, and Sandler, 2012](#)).

Survival rates for Wilms tumor are one of the highest among all childhood cancers. Children with localized tumor have a 90% chance of cure with multimodal therapy ([Davenport, Blanco, and Sandler, 2012](#)). For those children who relapse, a better expectancy of disease-free survival is associated with FH of the tumor; time to recurrence and site of recurrence are no longer considered prognostic indicators ([Davidoff, 2012](#)).

## **Therapeutic Management**

Combined treatment with surgery and chemotherapy, with or