

## WILMS' TUMOR

Wilms' tumor is a malignant tumor of the kidney. It is named after Max Wilms who first described this tumor in 1899. The tumor may occur at any age, but it is most common in children 1 to 5 years of age.

### SIGNS AND SYMPTOMS

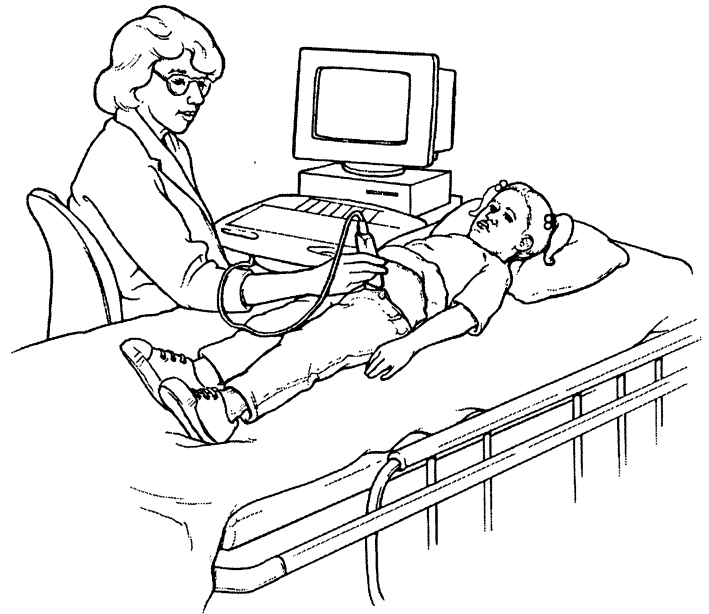
Generally, there are few early signs to suggest the tumor is present. Most children appear healthy. The most common sign is a swelling or mass in the abdomen. Parents usually first find a mass while bathing or dressing their child. Other signs and symptoms may include abdominal pain, blood in the urine, high blood pressure, and unexplained fevers.

### DIAGNOSIS

Certain birth defects are more common in children who have Wilms' tumor. One is the absence of the colored part of the eye (the iris). Another is one arm or leg that is larger than the other (hemihypertrophy). Other things may not be normal in the kidneys or urinary tract. These signs are often noticed before the Wilms' tumor occurs.

Tests used to evaluate patients with Wilms' tumor include X-rays, CT scans, and ultrasound scans of the abdomen (belly).

If a Wilms' tumor is strongly suspected, surgery will be done. The surgery is done for two reasons: 1) to remove as much of the tumor as possible; and 2) to remove a piece of the tumor for examination under a microscope. A pathologist will look at the sample and decide if a definite diagnosis of Wilms' tumor can be made.

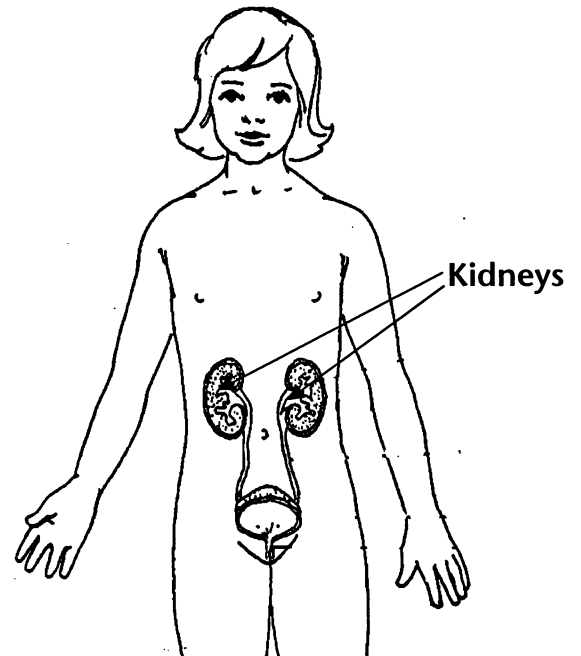


**Picture 1** Having an ultrasound scan.

## STAGING CATEGORIES

Staging categories describe how far the tumor has spread. Staging is important because it helps decide the best type of treatment for the child. There are five stages of Wilms' tumor:

- Stage I** Tumor is limited to the kidney which has been completely removed during surgery. The child can function normally with one kidney.
- Stage II** Tumor extends beyond the kidney but is completely removed during surgery.
- Stage III** Tumor is left in the abdomen, but there is no evidence of spread beyond the abdomen.
- Stage IV** Tumor has spread outside the abdomen, usually to the lungs or liver.
- Stage V** Tumor involves both kidneys.



**Picture 2** The urinary system inside the body.

## TREATMENT

- Treatment of Wilms' tumor includes surgery, radiation therapy, and chemotherapy. The particular treatment chosen by the doctor depends on the stage.
- Surgery is done to remove as much of the tumor as can be taken out while still preserving kidney function.
- Radiation therapy is usually done in Stages III and IV.
- The type of chemotherapy and length of treatment will depend on the stage of the tumor. The hematologist will explain the chemotherapy your child will need.

## FOLLOW-UP CARE

- You will have follow-up appointments with a hematologist who will monitor your child's response to treatments.
- X-rays, a CT scan of the lungs, and abdominal ultrasound of the remaining kidney and the liver will be done from time to time to check to see if the tumor is returning.

If you have any questions or concerns, be sure to talk with your doctor or nurse.