

Wilms Tumor

# Pediatric Renal Cancer Awareness

Disease, Symptoms, Treatment, Support





### **Wilms Cancer Foundation (WCF)**

The Wilms Cancer Foundation (WCF), is a charitable organization, that supports and represents the needs of children, families and healthcare organizations affected by pediatric renal (kidney) cancer (particularly nephroblastoma commonly known as 'Wilms'). Its mission is to establish an international program of awareness, education, advocacy, early detection treatment and support to tackle the spread of the disease.

This WCF guide is for educational purposes only. It is based on international pediatric oncology standards in Canada, the United States and Europe. Seek advice from a qualified medical professional should you have any concerns or questions.

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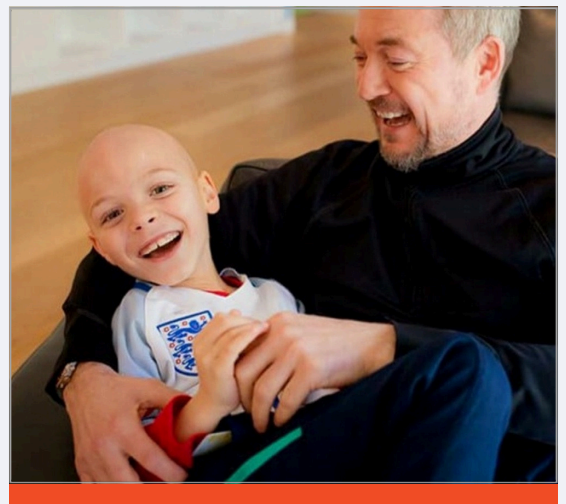
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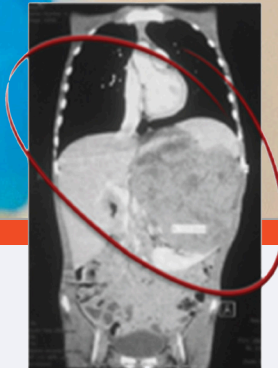
## Pediatric Renal Cancer Awareness

Briefing Series 5.7a

(Disease, Symptoms, Treatment, Support)

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Wilms tumor (stage 4)  
Abdominal and Lungs

# Pediatric Renal Cancer

## Childhood **Kidney** Cancer

### **Wilms Tumor** (Medical Term: Nephroblastoma)

#### **Disease**

Nephroblastoma (commonly known as Wilms tumor) is the most common type of pediatric renal (kidney) cancer and the 4th most common childhood cancer overall. In fact, 9/10 childhood kidney cancers are Wilms. At any given moment over 190,000 children are affected by the disease worldwide. Wilms tumor is a malignant cancer that forms in the kidneys of children, originating from early kidney cells that did not develop normally before birth. These immature cells multiply uncontrollably and form a solid tumor, usually within one kidney, although both kidneys can sometimes be affected.

Most children affected with Wilms tumor have no clear underlying cause for their disease. It is sometimes associated with abnormalities of the urinary tracts or other birth defects and several small studies have suggested that certain environmental factors may be associated with a higher risk of Wilms tumor, but the results are conflicting.

As the tumor grows, it can distort the normal structure of the kidney and may spread through the bloodstream or lymphatic system, most commonly to the lungs or nearby abdominal tissues. Despite its aggressive growth, Wilms tumor is generally very responsive to treatment, and advances in pediatric cancer care have made long-term survival possible for most children

“Kidney Cancer is the 4th most common childhood cancer overall”

### Symptoms

Wilms' tumor most often affects children ages 3-4 but can also affect children in their teens and sometimes adults. The tumor initially grows on the kidney but eventually grows and becomes much bigger than the kidney itself. Both usually require removal and later stage Wilms can spread to other parts of the body including the lungs, liver and bones. Ultimately it can be terminal.

Wilms tumor symptoms can vary, and in many children the tumor is discovered before symptoms become severe. The most common sign is a painless swelling or lump in the abdomen, which parents often notice while bathing or dressing their child. Other symptoms may include abdominal pain, fever, fatigue, loss of appetite, or weight loss. Some children develop high blood pressure because the tumor affects kidney function, and others may have blood in the urine or changes in urination. Less commonly, if the cancer has spread to the lungs, symptoms such as persistent cough or shortness of breath may occur. Because these symptoms can resemble more common childhood illnesses, prompt medical evaluation of any persistent or unusual signs is important for early diagnosis.

“The disease has a good survival rate if detected early”



### Treatment

The disease has a good survival rate if detected early but sadly, many children go undiagnosed for years and those who are diagnosed late face dismal outcomes. They often require extensive, life-threatening treatment including chemotherapy & radiation and surgery and may still face a terminal prognosis.

Wilms tumor treatment is carefully tailored to each child and usually involves a combination of therapies delivered by a pediatric oncology team. The foundation of treatment is surgery, most often a nephrectomy to remove the affected kidney and tumor, or kidney-sparing surgery in selected cases, especially when both kidneys are involved. Chemotherapy is given to destroy cancer cells that may remain after surgery or, in some protocols, before surgery to shrink the tumor and make removal safer. The specific drugs and length of treatment depend on the stage of the cancer and the tumor's histology. Radiation therapy is used in certain higher-risk situations, such as more advanced stages or unfavourable histology, to reduce the risk of recurrence. With modern treatment protocols, the majority of children with Wilms tumor are cured, and long-term care focuses on monitoring for relapse and managing potential late effects while supporting healthy growth and development.

## Challenges ahead

In addition to the pain, heartache and uncertainty that many children suffer, families confronted by diagnosis also face significant financial and emotional difficulties as 100% of their time is taken up in caring for a son or a daughter for protracted periods of time. This inability to generate income leads to spiralling financial problems in addition to the stress of dealing with a child's illness. Even the most essential living expenses can become a desperate challenge.

“Even the most essential living expenses become a desperate challenge”

The healthcare sector itself is also faced with the significant cost of tackling the disease. Treatment costs for those deemed to be late stage places a heavy burden on paediatric budgets (in terms of invested work hours and funds). Though in contrast early detection is relatively quick and inexpensive simply consisting of a combination of blood-work and an ultra-sound for those deemed to be at risk.



### Support

Wilms tumor treatment should ideally be managed at a pediatric oncology center or specialized renal tumor program.

The core medical team usually includes:

- Pediatric oncologist (chemotherapy & overall cancer management);
- Pediatric surgeon or urologic oncologist (tumor removal);
- Radiation oncologist (if radiation is required);
- Nephrologist (kidney function monitoring);
- Oncology nurse specialists;
- Long-term survivorship specialists.

Appropriate treatment matters because Wilms tumor survival rates exceed 85–90% in developed programs and outcomes are significantly better when treated in specialized centers. Families should immediately contact their medical team if the patient experiences:

- Fever during chemotherapy;
- Sudden swelling or pain;
- Breathing problems;
- Severe fatigue;
- Emotional distress or depression.



“Appropriate treatment matters because Wilms tumor survival rates exceed \*85-90% in developed programs”





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