Newly Diagnosed Solid Tumors
Renal

Children's Mercy KANSAS CITY | Evidence Based Practice

Consult Hematology/Oncology

Email Solid Tumor Group for timing and setting of biopsy plan:
HONewSolidTumor@cmh.edu

Renal Tumor

QR code for mobile view

Lab Work-Up

- CBC with diff
- BMP
- LFTs
- PT/PTT/fibrinogen
- Urinalysis

Repeat labs as clinically indicated

Imaging

- CT chest/abdomen/pelvis with contrast
- If indeterminate cystic renal lesions,
  - CT chest/abdomen/pelvis with and without contrast **OR**
  - MR abdomen/pelvis without and with contrast and a CT chest with contrast
- If concern for urinary leak, mention in "Comments" section of the order
  - Ex: "Clinical concern for urinary leak. Please obtain delayed renal phase."

If vascular involvement unclear consider ultrasound with Doppler

If concern for arterial occlusion:
- CT angiography with arterial phase imaging may be indicated in addition to the noncontrast and venous phases

If concern for urinary leak, mention in "Comments" section of the order

Ex: "Clinical concern for urinary leak. Please obtain delayed renal phase."

Criteria for a renal tumor that should NOT be resected or biopsied at diagnosis:
- Unilateral tumor with:
  - Any single contralateral lesion if <1 year of age
  - Single contralateral lesion ≥ 1 cm (>1 year of age)
  - Multiple contralateral lesions
  - Known Wilms tumor predisposition syndrome
  - Hemihypertrophy
  - Aniridia
  - Genitourinary abnormalities associated with bilateral tumors (e.g. cryptorchidism, hypospadias)

Biopsy Method

Consult Surgery

Involvement?

Unilateral Wilms (Presumed)

Contraindications for tumor resection?

- **Yes** → Biopsy method to be determined by Urology/Surgery
- **No** → Radical nephrectomy 6 - 10 lymph nodes should be sampled versus complete aorto-caval lymph node dissection

Resectable?

- **Yes** → Proceed with Nephrectomy
- **No** → Surgical biopsy

Bilateral

Biopsy contraindicated, proceed with chemotherapy

Renal Cell Carcinoma (Presumed)

Consult surgery for next steps

If Renal Cell Carcinoma is confirmed definitive surgery requires retroperitoneal lymph node dissection

Pathology

Oncology team places "Pathology Tissue Request" order with pertinent information in "Details" section

Anatomic Pathology

Pathology will triage tissue/specimen sample & will order appropriate ancillary testing (Ex: Genetic testing)

Tissue Source: Surgical or IR?

- **Surgical** → 3 by 3 by 1.5 cm biopsy for clinical diagnosis purposes
- **IR** → Sufficient quantity to be determined by pathology and IR

Research Pathology

Minimum 1 gram frozen tissue

Molecular and genetic testing on bone marrow specimens must be ordered by Oncology

This clinical pathway is meant as a guide for physicians and healthcare providers. It does not establish a standard of care, and is not a substitute for medical judgment which should be applied based upon the individual circumstances and clinical condition of the patient. Printing of Clinical Pathways is not recommended as these documents are updated regularly . Copyright © The Children's Mercy Hospital 2026. All rights reserved.