		renal angiography Magnetic resonance urogram used to detect specific urologic abnormalities, such as ectopic ureter	Assist with IV access if indicated Magnetic devices or implants may be unsafe for MRI, including cochlear implants and permanent pacemakers
CT	Narrow-beam x-rays and computer analysis provide precise reconstruction of area	Visualizes vertical or horizontal cross section of kidney Especially valuable to distinguish tumors, cysts, and stones Noncontrast helical CT is gold standard for radiologic diagnosis of renal stone disease Renal CT angiogram used to evaluate blood flow in hypertensive patients and is now used more commonly than renal arteriography	Noncontrast scan is noninvasive Contrast-enhanced CT scan preparation may require child be NPO for a few hours With speed of newer scans, the need for sedation is decreased but if required will also require NPO Assist with IV access if needed *Used selectively due to higher radiation exposure*
Cystoscopy	Direct visualization of bladder and lower urinary tract through small scope inserted via urethra	Investigation of bladder and lower tract lesions; visualizes ureteral openings, bladder wall, trigone, and urethra	NPO orders per protocol, typically no solid food after midnight, liquids until 4 to 6 hours before procedure Carry out preoperative preparations; cystoscopy is done under anesthesia in children
Renal biopsy	Removal of kidney tissue by open or percutaneous technique for study by light, electron, or immunofluorescent microscopy	Yields histologic and microscopic information about glomeruli and tubules; helps distinguish among types of nephritic syndromes Distinguishes other renal disorders	Nothing orally 4 to 6 hours before test Premedicate as ordered Prepare setup for procedure Assist with procedure Take vital signs Apply pressure to area with pressure dressing and, if feasible, a sandbag Bed rest for 24 hours Observe for abdominal pain, tenderness Monitor input and output Surgical incision may be required in infants
Urodynamics	Set of tests designed to measure bladder filling, storage, and evacuation functions: **Uroflowmetry:** Test to determine efficiency of	Determine characteristic of voiding dysfunction Used to identify type (cause) of incontinence or urinary retention Especially valuable for	Prepare child for urinary catheterization The bladder will be filled with contrast, sterile water, or saline solution, and filling pressures will be recorded; the child may