Genitourinary Grossing Guidelines

**Specimen Type:** NEPHROURETERECTOMY

**Procedure:**
1. Review radiology and prior path reports for tumor location.
2. Inspect and palpate ureter and renal pelvis for tumor, palpate for hilar lymph nodes, and perinephric fat for adrenal.
3. Ink surface of kidney (Gerota’s fascia or perinephric fat) and ureter.
   a. Can differentially ink the ureter with three colors- proximal, mid, distal
   b. Usually a bladder cuff is present (a small portion of bladder surrounding the ureteral orifice), ink peripheral margins of bladder cuff in a different color.
4. Measure the overall size of kidney with perinephric fat, length and diameter of ureter, diameter and thickness of bladder cuff.
5. Remove renal vein and artery margins and place in a cassette. Bladder cuff margin --- amputate 5-7 mm in length including a small portion of distal ureter, radially section (like a cervical cone), and submit sections in 2-3 cassettes. If no bladder cuff, submit the distal ureter margin en face.
6. Place a probe into ureter, and extend it into renal pelvis. Open ureter along its length. Inspect ureteral mucosa for tumor and erythematous flat lesions.
7. At renal hilum, push one probe through renal pelvicalyceal system and push through parenchyma of superior pole of kidney.
8. Place second probe in renal pelvicalyceal system and push through parenchyma of inferior pole of kidney.
10. Measure kidney, and adrenal (if present).
11. Examine renal pelvis and ureter for tumor(s). Look for ureteral wall and periureteric fat invasion by ureteral tumor; look for pelvic wall, peripelvic fat, and renal parenchymal invasion by renal pelvic tumor.
12. Describe adrenal if present.
13. Photograph the specimen. Fix overnight.
15. After taking sections of tumor, bread loaf the uninvolved kidney in 1 cm interval, look for additional lesions, describe uninvolved kidney: external surface, cortex, medulla, pelvis.
16. Look for hilar lymph nodes.

**Gross Template:**
Labeled with the patient’s name (***), medical record number (***), designated “***”, and received [fresh/in formalin] is a [right,left] ***g, *** x *** x *** cm total nephrectomy. The kidney alone measures *** x *** x *** cm . The ureter measures *** cm in length x *** cm in diameter. The bladder cuff measures *** cm in diameter x *** cm in thickness. The renal artery measures *** cm in length x *** cm in diameter. The renal vein measures *** cm in length x *** cm in diameter. [Describe adrenal gland if present- measure].
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Sectioning reveals a [describe mass-size, shape, focality, circumscription, color, consistency, necrosis, hemorrhage] located in the [renal pelvis/proximal, mid, distal portion of the ureter]. The mass extends [into the muscularis propria of the renal pelvis/ureter, into renal sinus fat/periureteric fat, into renal parenchyma, is confined to the renal pelvis/ureter with no gross invasion, other]. The mass measures *** cm from the ureteral margin.

The pelvicalyceal system/ureter [is/is not] dilated. The mucosa of the remaining renal pelvis and ureter is [smooth, roughened, granular, thickened, other.] Calculi [are/are not] present [describe obstruction and dilation of calyces if present]. The renal parenchyma is [grossly uninvolved, unremarkable, or additional pathology]. The corticomedullary junction is [distinct/poorly defined].

No additional lesions or masses are identified. [Describe if frozen sections taken]. Representative sections are submitted [describe cassette summary]. Gross photographs are taken.

Ink key:
Blue- proximal third
Black- mid portion
Green- distal third

Cassette Submission: 8-10 cassettes
- Bladder cuff margin, radially sectioned and on edge
- Or ureteral margin, shave
  - Perpendicular/radial section to ureteral margin if tumor is close enough to do so
- One cassette of vascular margins
- Tumor:
  - Ureter tumor to include greatest depth of invasion with periureteric fat and soft tissue margin
  - Pelvic tumor with hilar fat
  - Pelvic tumor with renal parenchyma
  - Tumor with adjacent mucosa
  - Flat mucosal lesions
- Unremarkable ureteral wall and pelvis
  - if ureter is differentially inked, you may put sections from proximal, mid, and distal uninvolved ureter in one cassette
- One cassette of non-neoplastic renal parenchyma (at least 2 cm away from tumor), try to include cortex, medulla, and calyceal mucosa
- One section of adrenal gland (if present)
- Submit all hilar lymph nodes (if present)
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