Radiology Service Guidelines for Emergent Treatment of Urinary Tract Obstruction

**Purpose:** To optimize the risk/benefit profile when selecting a means of initial urinary tract decompression.

**Policy:** Owing to the higher risk of hemorrhagic complications with percutaneous nephrostomy (PCN) versus alternative methods (AM) for urinary tract decompression, the Radiology Service strongly discourages PCN as a first line therapy when the following circumstances apply:

1. There is reasonable likelihood that AM will be technically successful.
2. There is reasonable likelihood that AM will be therapeutically effective.

**Exclusions:** Situations where PCN may be the first line therapy:

1. When AM deemed technically unfeasible
   - Examples:
     a. Past cystectomy
     b. Extensive ureteral invasion by tumor.
     c. Associated ureteral perforation or transection.

2. When AM deemed unlikely to be therapeutically effective.
   - Examples:
     a. Extensive bladder involvement by tumor.
     b. Acute pyonephrosis associated with highly debris laden urine (as seen on imaging studies)

**Additional Consideration:**

1. Fluid and electrolyte abnormalities associated with uremia may not be in and of themselves an indication for emergent urinary tract decompression. These may be indications for emergency medical therapy possibly including dialysis. Conversation between radiologist and nephrologists will optimally direct treatment in complex cases.

2. In patients with a solitary kidney the risk/benefit profile is skewed against PCN and in favor of AM. Every reasonable effort to decompress by AM should be made prior to PCN.

3. In patients with severe irreversible renal parenchymal disease scrupulous risk/benefit analysis need be performed prior to committing such patients to PCN.