EmergencyKT: Complicated UTI

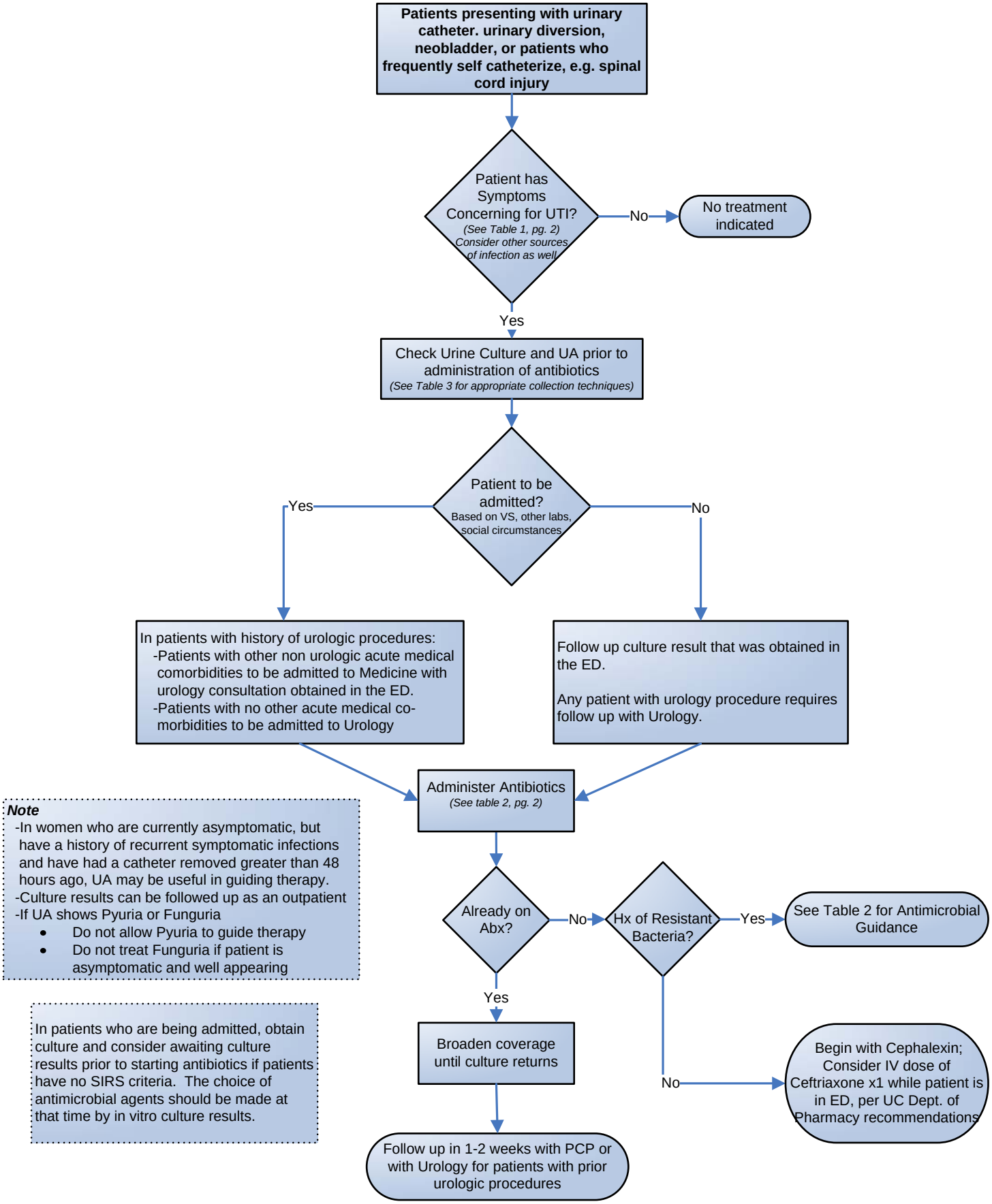


Table 1

In patients with Diversion or Neobladder:
Pain alone is not symptomatic UTI; consider other causes of pain. Consider symptomatic with any positive SIRS criteria with concern for urinary infection. Change in character of urine may be a sign of infection when combined with other symptoms.

In Patients with spinal cord injury:
Pain alone is not a symptom. Consider patient to be symptomatic if: Fever, increased spasticity, urinary incontinence, autonomic hyperreflexia, increased sweating, cloudy or odorous urine, altered mental status. Discomfort or pain may or may not be present.

In patients with ureter stent:
If presenting with flank pain or dysuria consider pyelonephritis, as well as other stent complications such as obstruction, vesicoureteral reflux leading to flank pain, or stent migration. 80% of patients with ureter stents have vesicoureteral reflux which leads to flank pain.

Assess Vital Signs, check for SIRS criteria to aid in determining if patient is infected. If these are normal, treat only with a positive urine culture or if UA indicates bacteria in absence of squamous cells. Pyuria alone is not an indication to treat.

In patients with indwelling catheter AND has at least 2 of the following signs or symptoms:
- Fever (>38.0° C) or chills or hx of fever at home
- New flank or suprapubic pain or tenderness
- Change in character of urine*
- Worsening of mental or functional status

*Change in character may be clinical (eg new onset bloody urine, foul smell or increase in amount of sediment) or as reported by the laboratory (NEW pyuria or NEW microscopic hematuria). For laboratory changes, this requires comparison to a previous urinalysis result.

Table 2 – Treatment and Recommendations

Antimicrobials
- Always check patient's prior cultures before administration of antibiotics.
- If no prior history of drug resistance, risk factors for resistance, or patient is not severe sepsis or septic shock: Treat with Rocephin 1 gram q day or Keflex 500 mg q 6 hours 7-14 days.

CAUTI: Rocephin, Keflex if well appearing, or tailor to patient's previous cultures.
If severe sepsis/ septic shock or risk factors for resistance: Amp/Gent, Pip/tazo, Imipenem/Cilastatin, or Cefepime are all reasonable choices.

Stones: Cefepime or Pip/tazo + Aminoglycoside for double coverage. If history of MRSA in urine add Vancomycin. Treat at least 14 days.

Stents: Cefepime or Pip/tazo +/- Vancomycin for MRSA in past if patient presenting with severe sepsis or septic shock. If concern for fungal infection (hyphae in urine or prior fungal infections in urine), consider adding Fluconazole.

Diversion procedures: Treat similarly to CAUTI, but consider MRSA as a pathogen, especially if patients have risk factors for drug resistance.

Risk factors for Drug Resistance:
- Recent antibiotic therapy
- Hospitalization for at least 2 days in past 90 days
- Nursing home/extended care facility
- Home infusion therapy
- Chronic dialysis within 30 days
- Home wound care
- Family member with MDR pathogen
- Immunosuppressive disease AND/OR therapy

Table 3

Proper culture collection techniques:

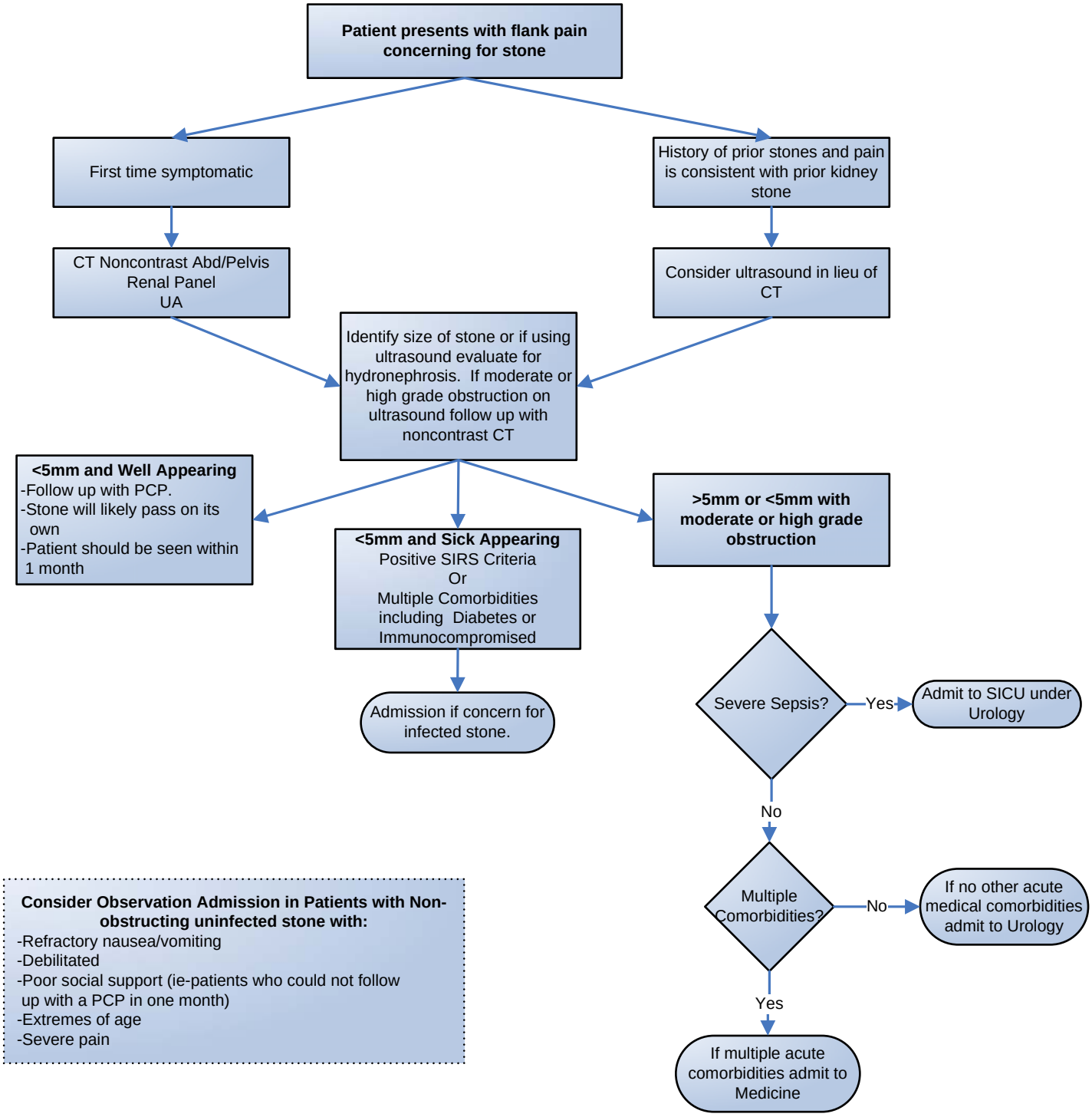
In patients with an indwelling Foley: Clamp and aspirate from access port prior to treatment. Culture should never be obtained from urine in the bag.

In patients with an incontinent diversion or continent diversion (not neobladder): Catherize the stoma.

In patients with a neobladder: A midstream clean catch is necessary in voided specimen. Obtain a bladder scan afterwards to evaluate for residual urine.

These guidelines are compliant with the IDSA guidelines and have been approved by the UCMC Antimicrobial Stewardship Committee. The IDSA guidelines should always be prefaced by local microbiology.

EmergencyKT: Flank Pain Concerning for Stone



References

1. CAUTI is Rarely Symptomatic: A Prospective Study of 1497 Catheterized Patients. Paul Tambyah, MBBS; Dennis G. Maki, MD. Arch Intern Med vol160 Mar 13 2000

2. Infectious Diseases Society of America's Guidelines for the Diagnosis and Treatment of Asymptomatic Bacteriuria in Adults. Nicolle, et al.