

Urinary Tract Infections

	Definition	Clinical Presentation	Populations
ASBU	Positive urine culture in a patient with no signs or symptoms of a urinary tract infection (e.g., dysuria, frequency, urgency, fever, flank pain)		
Uncomplicated UTI	Infection confined to the bladder in afebrile women or men	Localized bladder signs/symptoms: <ul style="list-style-type: none"> <input type="radio"/> Dysuria <input type="radio"/> Urgency <input type="radio"/> Frequency <input type="radio"/> Suprapubic pain 	Female or Male Patients with underlying urologic abnormalities Immunocompromised patients Patients with diabetes
Complicated UTI/Cystitis	Infection extending beyond the bladder (for both men and women) <ul style="list-style-type: none"> <input type="radio"/> Pyelonephritis <input type="radio"/> Catheter-associated UTI <input type="radio"/> Febrile or bacteremic UTI <input type="radio"/> Prostatitis* 	Symptoms that suggest an infection extending beyond the bladder: <ul style="list-style-type: none"> <input type="radio"/> Fever <input type="radio"/> Systemic signs (chills, rigors, hemodynamic instability) <input type="radio"/> Flank pain <input type="radio"/> Costovertebral tenderness 	Indwelling Urinary Catheter Neurogenic bladder Urinary obstruction Urinary retention

ASBU = Asymptomatic Bacteruria

UTI = Urinary Tract Infection

Empiric Antibiotics

UNCOMPLICATED UTI

PO:

- Nitrofurantoin
- Cephalexin
- Trimethoprim-sulfamethoxazole

IV:

- Cefazolin
- Ciprofloxacin
- Gentamicin

Duration:

- 1–7 days
 - Gentamicin can be used as a single dose
 - Trimethoprim-sulfamethoxazole or ciprofloxacin x 3 days
 - Nitrofurantoin x 5 days

COMPLICATED UTI

Sepsis +/- Shock:

- 3rd or 4th generation cephalosporins (i.e. ceftriaxone, ceftazidime, cefepime)
- Carbapenems (i.e. ertapenem, meropenem)

Without Sepsis (IV):

- 3rd or 4th generation Cephalosporins

Without Sepsis (PO):

- Fluoroquinolones
- Trimethoprim-sulfamethoxazole

Duration:

- 5–7 days of a fluoroquinolone

- Piperacillin-tazobactam
- Fluoroquinolones (i.e. ciprofloxacin, levofloxacin)

- Piperacillin-tazobactam
- Fluoroquinolones

- Alternatives: Amoxicillin-clavulanate or oral cephalosporins

- 7 days of a non-fluoroquinolone antibiotic

Avoid antibiotics to which the patient has had a resistant pathogen isolated from the urine previously. The time frame for paired cultures (urine samples collected from the same patient at different occasions) varied, but the median was 3–6 months.

IV to PO Conversion when:

- Clinically improving
- Able to take oral medication
- An effective oral option is available