EASIL UTI Best Practice Antibiotic Choice and Duration

Choice of Antibiotic (use only when sufficient urinary symptoms)		
UTI and Cystitis (Lower UTI), uncomplicated or complicated (stones, catheter in place)		
	Antibiotic Agent	**Comments**
1st line	Nitrofurantoin 100 BID	• Avoid only if CrCL < 30 ml/min; clincalc.com/kinetics/crcl.aspx • Avoid if suspect pyelonephritis or prostatitis • Make Day 3 switch if Proteus
	Cephalexin 500 mg PO BID (QID if severe)	• Acceptable unless severe B-lactam allergy • Low dose if CrCL low: 10-50 ml/min max does TID, <10 max dose QD • Make Day 3 switch if enterococcus, Pseudomonas
2nd line	Doxycycline 100 mg PO BID	• Moderate coverage, safe • Make Day 3 switch if Proteus, Pseudomonas, or Enterococcus
	Bactrim 1 SS BID or Bactrim 1 DS BID	• SS if CrCL low (10-30 ml/min); DS if CrCL nl; avoid if CrCL <10 ml/min • Moderate coverage; (>50% E. coli is resistant at Northeast Atlanta Health and Rehabilitation) • Interactions on warfarin, follow potassium level, follow INR level • Day 3 switch if non-susceptible
3rd line	Fosfomycin 3g sachet single dose	• Good coverage, especially if suspect Enterococcus, Pseudomonas • Alert microbiology lab to test for susceptibility; may have poor insurance coverage

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Pyelonephritis (Upper UTI) or Severe Illness (sufficient urinary symptoms AND high fever, nausea/vomiting, hypotension)		
	Antibiotic Agent	**Comments**
1st line	Ceftriaxone IV/IM 1 g IV/IM dose and consider transfer or 1 g QD	• Safe if mild PCN allergy (i.e., rash), cross rxn low • Patient needing other intravenous antibiotics (severe b-lactam allergy) such as aminoglycosides consider transfer and careful dosing.
2nd line	Bactrim (after ceftriaxone)	See above
	Ciprofloxacin 250 or 500 PO BID (400 IV BID) or Levofloxacin 750 PO QD and consider transfer	• Low dose if CrCl <30 ml/min • If unable to transfer and unable to tolerate Bactrim • Or severe symptoms; review culture to confirm susceptible • QTc prolonging potential in combination with anti-psychotics and anti-emetics here. • Interactions on Warfarin, follow INR level

Duration of Treatment			
Agents	**Uncomplicated UTI**	**Complicated UTI (i.e. male, renal stones, obstruction, catheter related)**	**Pyelonephritis or severe symptoms**
Bactrim, Ciprofloxacin/ Levofloxacin	3 days	Remove/replace catheter 7 days if rapid improvement 14 days ONLY if delayed response	Quinolones 7 days Other agents 10-14 days
Nitrofurantoin, Cephelexin, Doxycycline	5 days		
Fosfomycin trometamol 3g	1 dose	NA	NA