TruDx LABORATORY
MOLECULAR DIAGNOSTICS

Name: XXXXXXXXXXX
DOB: XXXXXXXXXXXX
Gender: XXXXX
Facility: XXXXXXXXXXXXXXXX
Provider:
Allergies/Notes:

Panel: UTI w/ ABR

Sample ID:
Collection Date:
Reported Date:

DETECTED PATHOGENS

Anaerococcus spp.	Detected - Low	<10^4 copies/µL	Gram-positive anaerobic organism; likely part of genitourinary flora. May be present in vaginal discharge and implicated in ovarian abscess. UTIs caused by anaerobic organisms have rarely been described. If treatment desired, amoxicillin-clavulanic acid may be considered.
Citrobacter spp.	Detected - High	>10^5 copies/µL	Gram-negative organism(s), may be responsible for UTI.
Escherichia coli	Detected - High	>10^5 copies/µL	
Klebsiella pneumoniae	Detected - High	>10^5 copies/µL	

DETECTED RESISTANCE GENES

CTX-M1	Detected - High	Extended Spectrum Beta-lactamase (ESBL): Confers resistance to penicillins, penicillin-BLI combinations, most cephalosporins, aztreonam. Expressed only by select gram-negative organisms.
dfrA(1,5,12,17)	Detected - High	Confers resistance to TMP/SMX. Expressed only by gram-negative organisms (Enterobacteriaceae).
ereA/mphA	Detected - High	Confers resistance to macrolides. Expressed by gram-positive organisms [mef(A)] and select gram-negative organisms [ere(A,B), mph(A)].
erm(A,B,C)	Detected - Medium	Confers resistance to macrolides, linacosamides (clindamycin), and streptogramins. Expressed primarily by gram-positive organisms.
MecA	Detected - Low	Confers resistance to penicillins, penicillin-BLI combinations, cephalosporins, carbapenems. Expressed only by staphylococcus spp.
Sul(1,2,3)	Detected - High	Confers resistance to TMP/SMX. Expressed only by gram-negative organisms.

PHARMD TREATMENT CONSIDERATIONS

Regimens based on organisms most likely to be pathogenic. Microbial load considered when available.

Medication	Dose/Duration	Renal Adjustment	Considerations
Fosfomycin (Monurol)	**Cystitis:** 3 g PO x 1 dose (x 3 doses every 48-72 hrs for complicated cystitis) **Pyelonephritis:** Avoid use	None	**Coverage for: Citrobacter spp.*, Escherichia coli, Klebsiella pneumoniae** • $31-51 for treatment course † • May repeat dosing every 48-72 hrs up to a total of 1-3 doses
OR			
Nitrofurantoin (Macrobid)	**Cystitis:** 100 mg PO BID x 5 d (7 d for complicated cystitis) **Pyelonephritis:** Avoid use	Avoid use in pts with CrCl < 30 mL/min	**Coverage for: Citrobacter spp.*, Escherichia coli*, Klebsiella pneumoniae*** • $16-21 for 7 day course †
OR			

Ciprofloxacin (Cipro)	**Cystitis:** 500 mg PO BID x 3 d (5-7 d for complicated cystitis) **Pyelonephritis:** 500 mg PO BID x 7-10 d	CrCl 30-50 mL/min: 250-500 mg PO every 12 hrs Crcl 5-29 mL/min: 250-500 mg PO every 18-24 hrs	**Coverage for: Citrobacter spp.*, Escherichia coli*, Klebsiella pneumoniae*** • $13-18 for 5 day course † • FQ class-wide warnings include: CNS toxicity, peripheral neuropathy, myasthenia gravis, aortic dissection, tendinopathy, QT interval

Medication	Dose/Duration	Renal Adjustment	Considerations
			prolongation, C.difficile colitis
OR			
Gentamicin (Garamycin)	**Cystitis:** 5 mg/kg IM x 1 dose (Adjusted BW) **Pyelonephritis:** Avoid use	ESRD on HD: Administer 50% of normal dose (after HD)	**Coverage for: Citrobacter spp.*, Escherichia coli*, Klebsiella pneumoniae*** • Single dose aminoglycoside therapy may be considered for lower UTIs, when oral options are lacking due to MDR or patient specific factors
OR			
Ertapenem (Invanz)	**Cystitis:** 1 g IV/IM daily x 3 d (7 d for complicated cystitis) **Pyelonephritis:** 1 g IV/IM daily x 10-14 d	CrCl < 30 mL/min: 500 mg IV/IM daily	**Coverage for: Citrobacter spp., Escherichia coli, Klebsiella pneumoniae** • $120-354 for 7 day course † • Safe to use in most PCN allergies (~1% cross-reactivity)

* Displays variable activity vs pathogen
† Based on available online coupons

Resistance Genes

SHV, TEM, CTX-M (ESBLs) confer resistance to penicillins, penicillin-BLI combinations, most cephalosporins, and aztreonam. Fosfomycin displays positive activity (+) vs ESBL-producing E. Coli and Klebsiella spp. Nitrofurantoin, TMP/SMX, and fluoroquinolones display variable activity (±) and may be considered for mild disease (e.g. uncomplicated cystitis). Treatment with carbapenems (e.g. ertapenem) may be warranted for moderate-severe disease (cUTI, pyelonephritis).

Additional Considerations

Complicating factors include: Male patients, pregnant women, obstruction, immunosuppression, renal failure, renal transplantation, urinary retention from neurologic disease, uncontrolled diabetes, and individuals with risk factors that predispose to persistent or relapsing infection (e.g., calculi, indwelling catheters or other drainage devices). For males in which acute prostatitis is suspected, fluoroquinolones and TMP/SMX are preferred due to reliable penetration of prostatic tissue.

Reviewed by: Max Dudenkov, PharmD (PS57804) Date: 7/10/2025

Have a question about a report? Scan the QR code to chat with a pharmacist or call 904-618-3554.

The following regimen(s) are based on generally accepted and peer-reviewed antimicrobial activity of specific agents against detected pathogens, resistance genes, and presumed diagnosis based on specimen source and resulting pathogens. Antimicrobial activity and efficacy of agents for treatment of detected pathogens is not guaranteed. Medication selection, dosages, durations, and considerations are in congruence with clinical practice guidelines (IDSA, CDC, AAP, etc), when guidance is available. Additional patient factors including but not limited to HPI, comorbidities, concomitant medications, etc. should be carefully evaluated in conjunction with listed treatment considerations. Clinical correlation and appropriate medical judgment is warranted prior to prescribing a course of treatment.

Disclaimer: Treatment considerations and therapeutic guidance is generated by ChoicePharmD, LLC and is not affiliated with the testing laborator

Powered by:

CHOICEPHARMD