



# Fluoroquinolone-Resistant *Escherichia coli*

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## FLUOROQUINOLONE (FQ)-RESISTANT *ESCHERICHIA COLI*

Isolated

• FQ-resistant isolates are frequently multidrug resistant.  
• Suggested alternative antimicrobials should be used only with favorable susceptibility test results.  
• Therapeutic concentrations may not be achievable with intracellular or deep tissue infections or in the presence of biofilms.

INV Identify infection

Dx Urinary tract infection

Dx Systemic infection

INV Identify type

INV Identify type

Dx Cystitis

Dx Pyelonephritis  
Prostatitis

Dx Pneumonia  
Septicemia

**Tx Oral or parenteral**

- Pradofloxacin PO  
—Extralabel in dogs
- Amikacin IV, IM, SC  
—Unlikely to achieve therapeutic concentrations in sequestered or deep tissue infections  
—Because of nephrotoxicity, therapy limited to 5–7 days  
—High-protein diet can reduce risk for renal damage<sup>1</sup>
- Fosfomycin PO  
—Human drug
- Meropenem IV, SC  
—Human drug
- Cefoxitin or cefotetan IV, IM, SC  
—Human drug
- Ampicillin–sulbactam IV  
—Human drug

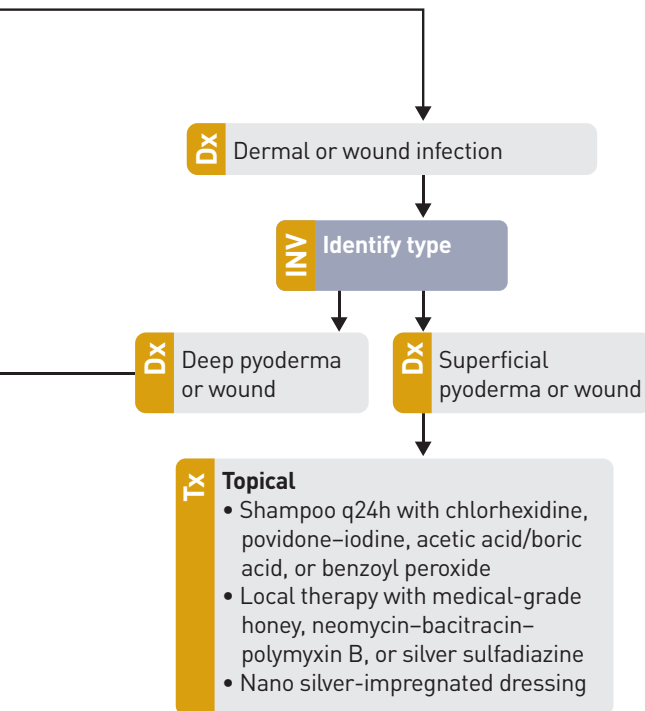
**Tx Oral**

- Nitrofurantoin  
—Human drug
- Pradofloxacin  
—Extralabel in dogs
- Trimethoprim–sulfamethoxazole
- Chloramphenicol
- Fosfomycin  
—Human drug

FQ = fluoroquinolone

## Author Insight

- Some FQ-resistant isolates are susceptible to third-generation FQ pradofloxacin.
- Most are susceptible to nitrofurantoin, amikacin, fosfomycin, and meropenem.



## REFERENCE

1. **Effects of dietary protein conditioning on gentamicin-induced nephrotoxicosis in healthy male dogs.** Grauer GF, Greco DS, Behrend EN, et al. *Am J Vet Res* 55(1):90-97, 1994.

## SUGGESTED READING

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