Spontaneous Bacterial Peritonitis (SBP)

EMPIRIC CHOICE
- Ceftriaxone 1g* IV daily

DURATION
- 5 days

ALTERNATIVES FOR ALLERGIES
- Ertapenem 1g IV daily (cross-reactivity ~ 1% with penicillin allergy, see β-Lactam allergy summary)
- Moxifloxacin 400mg PO/IV daily

COMMON ORGANISMS
- Vast majority of cases are monomicrobial (polymicrobial infections warrant evaluation for other causes)
- Enterobactereciae (*E. coli, K. pneumoniae* in particular)
- *Streptococcus pneumoniae*
- Other *Streptococcus* or *Enterococcus* spp., *S. aureus* (less frequent)

CURRENT RESISTANCE ISSUES
- High likelihood of fluoroquinolone resistance if patient has been receiving fluoroquinolone prophylaxis

ADDITIONAL DIAGNOSTIC AND THERAPEUTIC COMMENTS
- Cultures:
  - All patients with cirrhosis and ascites should have a diagnostic paracentesis upon admission to hospital, change in clinical status or with GI bleeding, may be sent in blood culture bottles for higher yield.
  - Blood cultures (2 sets) should be obtained prior to starting antibiotics
- Antibiotics:
  - Start empiric antibiotics if ascitic fluid neutrophil count ≥ 250 cells/mm^3
  - If paracentesis is contraindicated or cannot be performed, other clinical considerations for starting empiric antibiotics include fever ≥ 38°C, abdominal pain, altered level of consciousness
- Antibiotic regimen should be tailored based on culture results
- Consider Infectious Diseases consultation if polymicrobial infection, unusual organism isolated (e.g. *Pseudomonas*), or non-resolving infection
- Follow-up paracentesis is recommended if fever persists after 5 days or if infection is polymicrobial

ADDITIONAL PROPHYLAXIS CONSIDERATIONS
- For patients with prior SBP secondary prophylaxis has been shown to decrease future episodes
- Options include norfloxacin 400mg PO daily, TMP-SMX 1 DS tab PO daily, or ciprofloxacin 750mg PO weekly (intermittent dosing may select for resistant flora more rapidly)

References:

1. Such J, Runyon BA. Spontaneous bacterial peritonitis. *Clin Infect Dis.* 1998;27:669.
2. Sort P, Navasa M, Arroyo V, et al. Effect of Intravenous Albumin on Renal Impairment and Mortality in Patients with Cirrhosis and Spontaneous Bacterial Peritonitis. *NEJM.* 1999;341:403-9.
3. Chavez-Tapia NC, Barrientos-Gutierrez T, et al. Meta-analysis: antibiotic prophylaxis for cirrhotic patients with upper gastrointestinal bleeding - an updated Cochrane review. *Aliment Pharmacol Ther*. 2011.

***Although initial trials of therapy with ceftriaxone used 2g per dose, current literature does not support the need for routine administration of higher doses**