Amikacin

Sources:

- Amikacin is supplied by Sandoz Canada, 250mg/ml, 10x2ml vials (DIN: 02242971) (1)

Indications and Clinical uses in Canada:

- An aminoglycoside for the treatment of serious infections caused by gram-negative organisms (eg. *Citrobacter, Pseudomonas aeruginosa, Proteus, Klebsiella, E. Coli. Enterbacter, Serratia sp.*) that are resistant to other agents (2)
- Usual dosage of 5-7.5mg/kg/dose, with dosing interval adjusted based on creatinine clearance. (2)

Treatment alternatives:

- Treatment options should be tailored to results from a culture and sensitivity. **Always consult an infectious disease specialist for patient specific recommendations** (3)
- Amikacin has similar activity to gentamicin and tobramycin, but resistance is less likely to develop to amikacin, specifically with *Mycobacterium avium* complex and other gram-negative bacteria. (3)
  - Consider reserving amikacin supplies for patients with drug-resistant MAC and other drug-resistant non-pulmonary Mycobacterium species
  - Streptomycin is usually second line but can be used as a first line treatment of Mycobacterium tuberculosis if other agents are unavailable
  - Consider use of other parenteral aminoglycosides, such as gentamicin or tobramycin for susceptible infections
  - See [http://www.ashp.org/DocLibrary/Policy/DrugShortages/amikacin-expanded-posting050411currentTable_1_2.aspx](http://www.ashp.org/DocLibrary/Policy/DrugShortages/amikacin-expanded-posting050411currentTable_1_2.aspx) for comparison of aminoglycosides
- In some cases, a fluroquinolone may be an appropriate alternative for amikacin (4,5,6)
- Piperacillin/tazobactam or ticarcillin/clavulanic acid are reported to be as effective as an amikacin antibiotic combination for patients with febrile neutropenia.
References:

4. Personal communication with Dr. Yvonne Shevchuk, Pharm D, Infectious Disease specialist. December 2013.