

1st Generation

Ex: Cephalotin

- Potent activity against Gram-positive
- Mediocre activity against Gram-negative

3rd Generation

Ex: Ceftazidime

- Improved activity against Gram-negative
- Better cell penetration
- Higher binding towards bacterial target

5th Generation

Ex: Ceftobiprole

- Approved for treatment of critical infections, such as hospital-acquired pneumonia

1964

1983

1985

1994

2013

2nd Generation

Ex: Cefuroxime

- Expanded spectrum of activity
- Better cell penetration
- Increased resistance to Beta-lactamases
- Slightly less potent against Gram-positive
- Considerably more active against Gram-negative

4th Generation

Ex: Cefepime

- Improved resistance to Beta-lactamases
- Wider spectrum of activity
- Higher activity against both Gram-positive and against Gram-negative