Lefamulin (Pleuromutilin-Class Antibiotic) Is an Empiric, Monotherapeutic Treatment Option for Community-Acquired Bacterial Pneumonia Caused by Strepotococcus pneumoniae, Including Drug-Resistant Strains

Thomas M. File Jr, MD1; Jared L. Crandon, PharmD2; Andrea Deschambeaut, PharmD2; Bishoy Luka, PharmD2; Christian Sandrock, MD2; Gregory J Moran, MD2; Susanne Pauker, PhD1; Summa Health, Akron, OH, USA; 1Nabriva Therapeutics US, Inc, Fort Washington, PA, USA; 2UC Davis School of Medicine, Sacramento, CA, USA; 3Olive View-UCLA Medical Center, Los Angeles, CA, USA; 4Nabriva Therapeutics GmbH, Vienna, Austria

INTRODUCTION & PURPOSE

Community-acquired bacterial pneumonia (CABP) is associated with substantial morbidity, mortality, and economic burden.1,2 A recent meta-analysis of 16 clinical trials revealed that 20% of patients treated with fluoroquinolones alone failed to meet the clinical response endpoint.3,4 In addition, growing rates of bacterial resistance and safety issues associated with fluoroquinolones have created a need for new empiric and efficacious options.5,6 Community-acquired pneumonia (CAP) is associated with substantial morbidity, mortality, and economic burden and is among the leading causes of infection-related death in the US.1,2

METHODS (continued)

• Lefamulin, a first-in-class pleuromutilin for intravenous (IV) and oral use in humans, inhibits protein synthesis by binding centrally to the peptidyl transferase center of the 50S ribosomal subunit.8
• Increasing rates of bacterial resistance and safety issues associated with fluoroquinolones have created a need for new empiric and efficacious options.5,6

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• Multi-drug resistance was defined as resistant to ≥2 of the following: oral penicillin, moxifloxacin, clindamycin, trimethoprim/sulfamethoxazole, tetracycline, chloramphenicol, and sulbactam.

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METHODS (continued)

• In the two global phase 3 studies, LEAP 1 and LEAP 2, lefamulin, the first-in-class systemic pleuromutilin antibiotic, was administered in a switch option (IV-to-oral transition of care); lefamulin was administered as a single IV dose followed by oral once daily dosing

RESULTS

Overall pooled LEAP trial program

The LEAP studies evaluated the efficacy and safety of lefamulin as monotherapy in a switch-on-switch-off trial design with the aim of reducing antibacterial burden in patients with CABP who receive lefamulin during the index hospitalization with the goal of minimizing the risk of resistance and overuse of antimicrobials.

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Study Design and Efficacy in LEAP 1 & LEAP 2

• The LEAP 1 study evaluated the efficacy and safety of lefamulin as monotherapy, with an IV-to-oral switch option, compared with moxifloxacin
• The LEAP 2 study evaluated the efficacy and safety of lefamulin monotherapy compared with oral moxifloxacin

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