Evaluation of Relapse and Reinfecion Using Whole-Genome Sequencing of Clostridium difficile Infections from Elderly Patients with C. difficile Infection (CDI) in the EXTEND Randomised, Comparative Study of Extended-Pulsed Fidaxomycin and Vancomycin for the Treatment of CDI

Introduction

Objective

Methods

Study design and patients

- **Extend** was an open-label, parallel, active-controlled, parallel group, Phase 3 study of 857 adults
- **Elderly** were defined as aged ≥75 years
- **Randomisation was 1:1 (fidaxomicin:vancomycin)**

Outcomes

- **Clinical outcome** by treatment arm, mFAS
- **Efficacy evaluations** conducted on a modified full analysis set (mFAS), comprising all patients with CDI at baseline who received at least one dose of study medication

Methods

- Whole-genome sequencing
- **SNV analysis** was performed on **paired samples** from baseline and at postrelapse and reinfection

Statistical methods

- **Comparisons were made using 1-sided tests**
- **The rate of relapse, as determined by **Vanc** in the entire study population and **Vanc** in the modified analysis set (mFAS)
- **The rate of relapse, as determined by **Vanc** in the entire study population**

Results

- **Patients** who relapsed were identified in the extended treatment group
- **Patients** who met the criteria for relapse were included in the safety population

References

- **IRIS-Ext** showed that:
- **The comparative efficacy of EPFX versus standard vancomycin therapy in patients aged >60 years was examined**
- **The prevention of CDI recurrence has been identified as a major unmet need in the elderly population**
- **The safety profiles of the two treatments were broadly similar**
- **The rate of SCC was consistently higher with EPFX than standard vancomycin at all time points, including Day 90**
- **The rate of SCC was significantly higher with EPFX than with standard vancomycin regimen**
- **The rate of SCC was significantly higher with EPFX than with standard vancomycin regimen**
- **The rate of SCC was significantly lower with fidaxomicin (appro**