

# Pneumonia due to Co-Infection: Detection and Clinical Significance

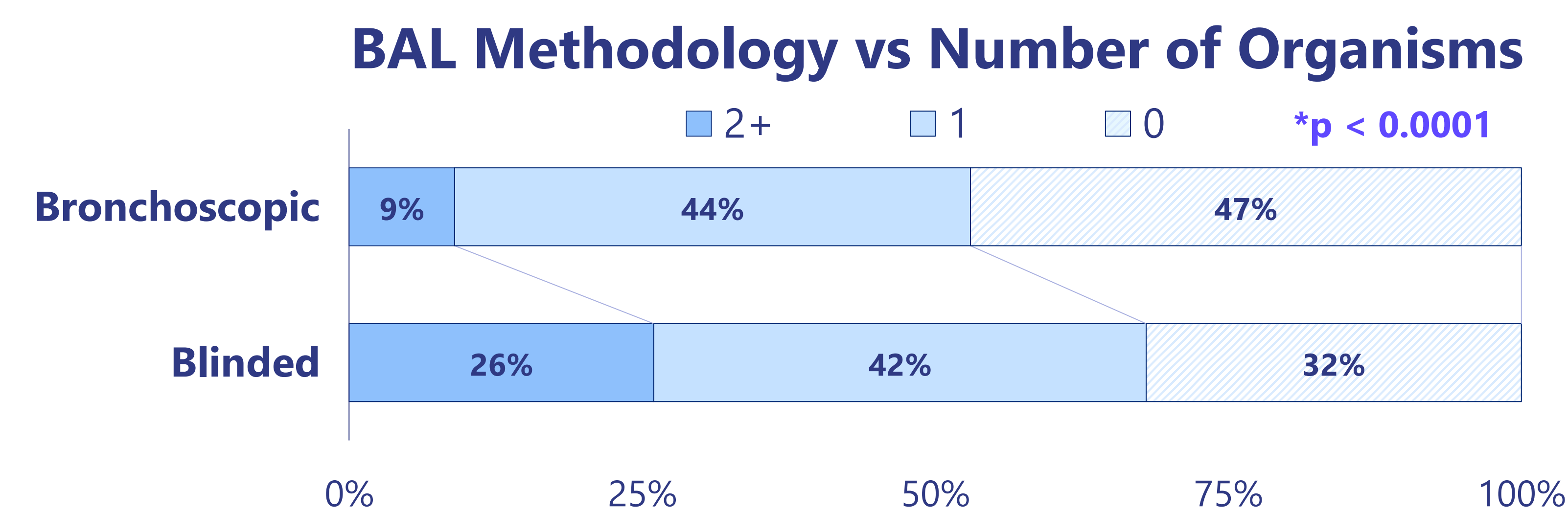


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- Co-infection in mechanically ventilated adult patients with pneumonia appears to be a significant risk factor for mortality
- Isolation of viral organisms specifically may play an independent role in mortality
- Within this population, bronchoscopic BALs may have a valuable diagnostic and prognostic methodology

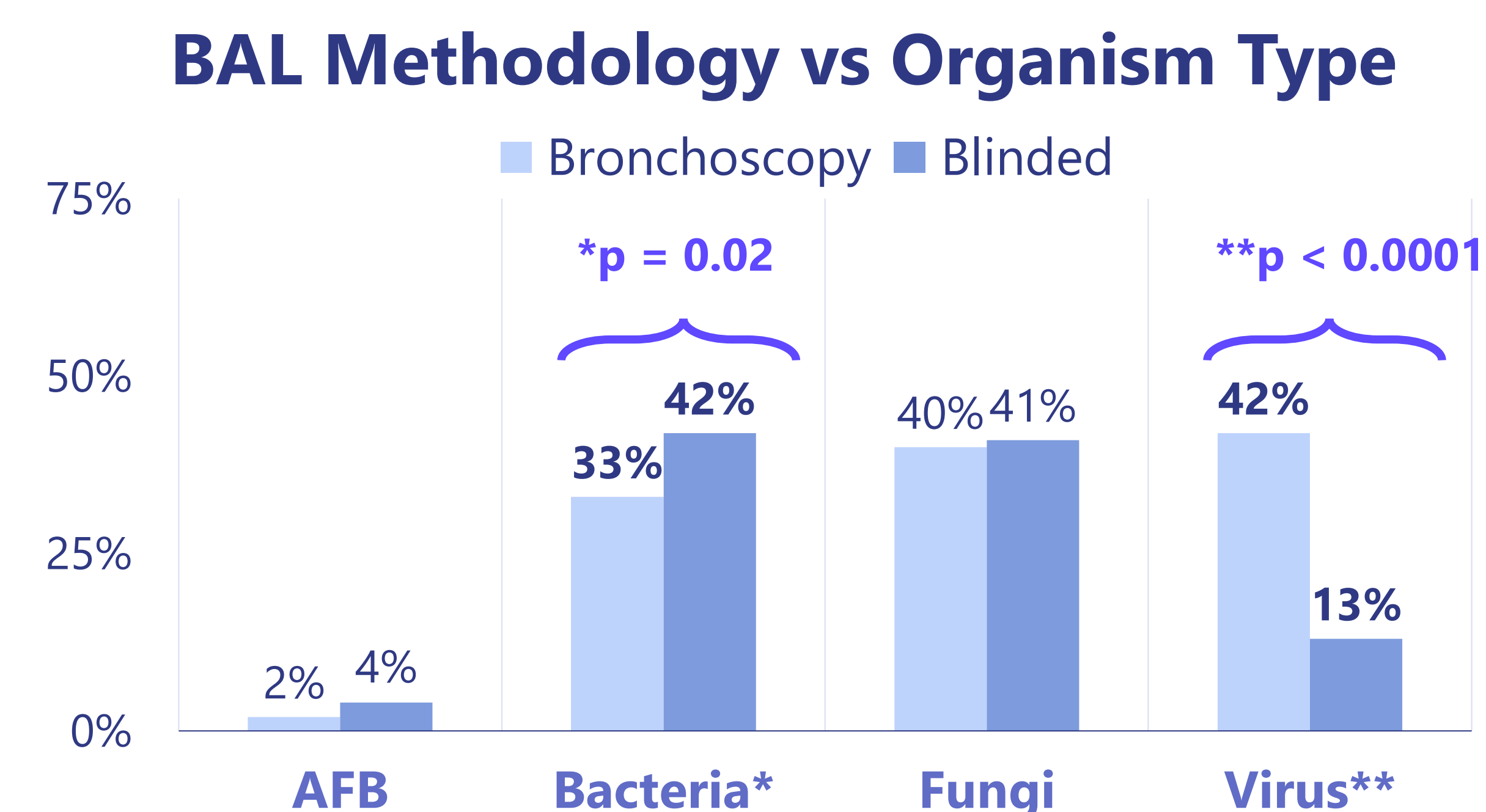
## Background

- Pneumonia is a significant cause of morbidity & mortality
- Increasing interest in the clinical significance of co-infection
- Limited studies analyzing the impact of methodology & isolated organisms



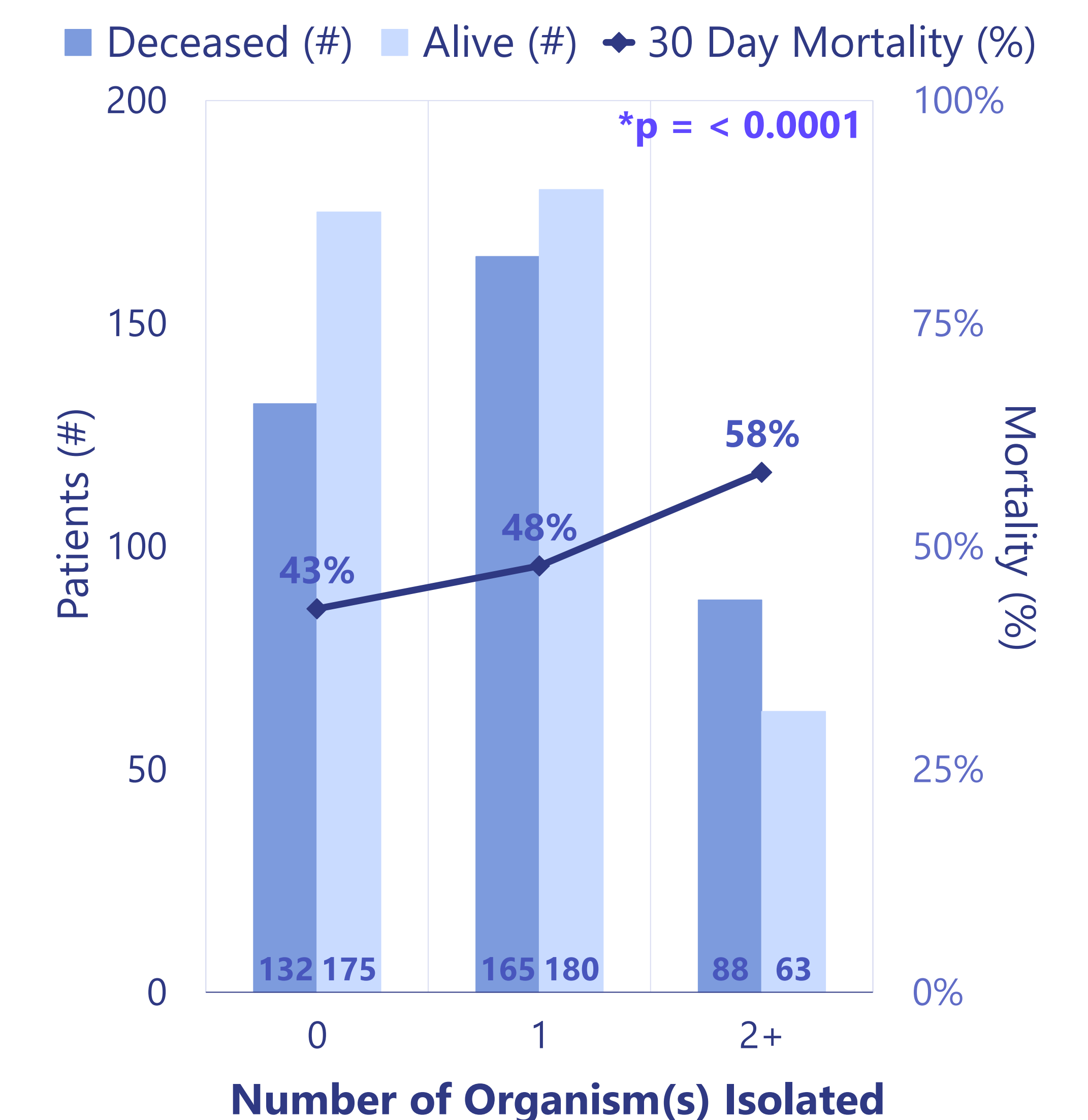
## Methods

- Single-center, retrospective analysis
- Mechanically ventilated adults in ICUs (2012 – 2017)
- Comparison of BAL microbiological analyses vs
  - Methodology (bronchoscopic vs blinded)
  - Organism type(s) isolated
  - Clinical outcomes



- ↑ Isolation of viruses with bronchoscopic BALs
  - 41.9% vs 13.1%, p < 0.0001
- ↑ Isolation of bacteria with blinded BALs
  - 41.8% vs 33.0%, p = 0.01

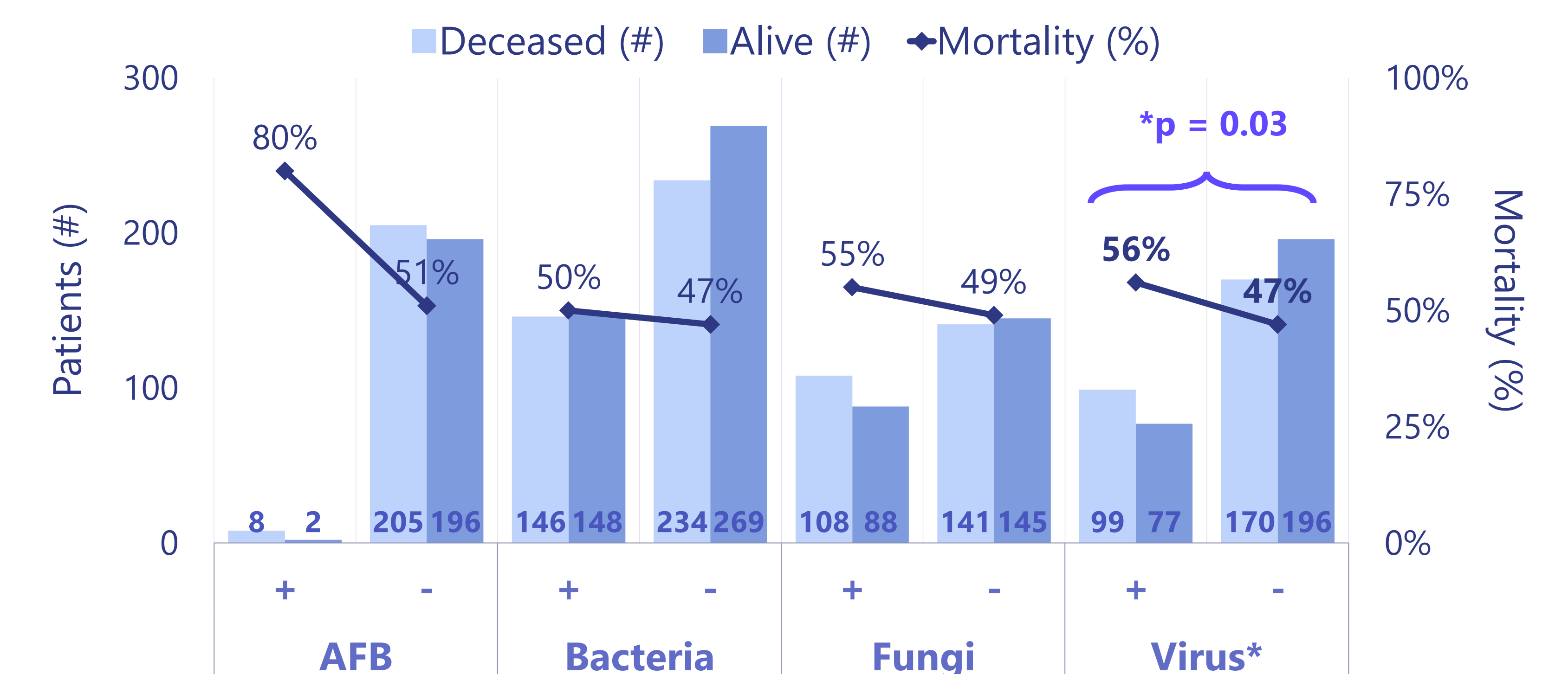
## 30 Day Mortality vs Number of Organisms Isolated



## Results

- 803 BALs total met inclusion criteria
  - 461 Bronchoscopic + 339 Blinded BALs
  - 307 Without + 496 With Organisms

## 30 Day Mortality vs Organism Type



- ∅ Mortality association detected with respect to isolation of AFB, bacteria, or fungi
  - p = 0.11, 0.39, and 0.21, respectively

See full abstract



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