

# VANCOMYCIN PHARMACOKINETIC MONITORING IN CRITICALLY ILL NEONATAL PATIENTS

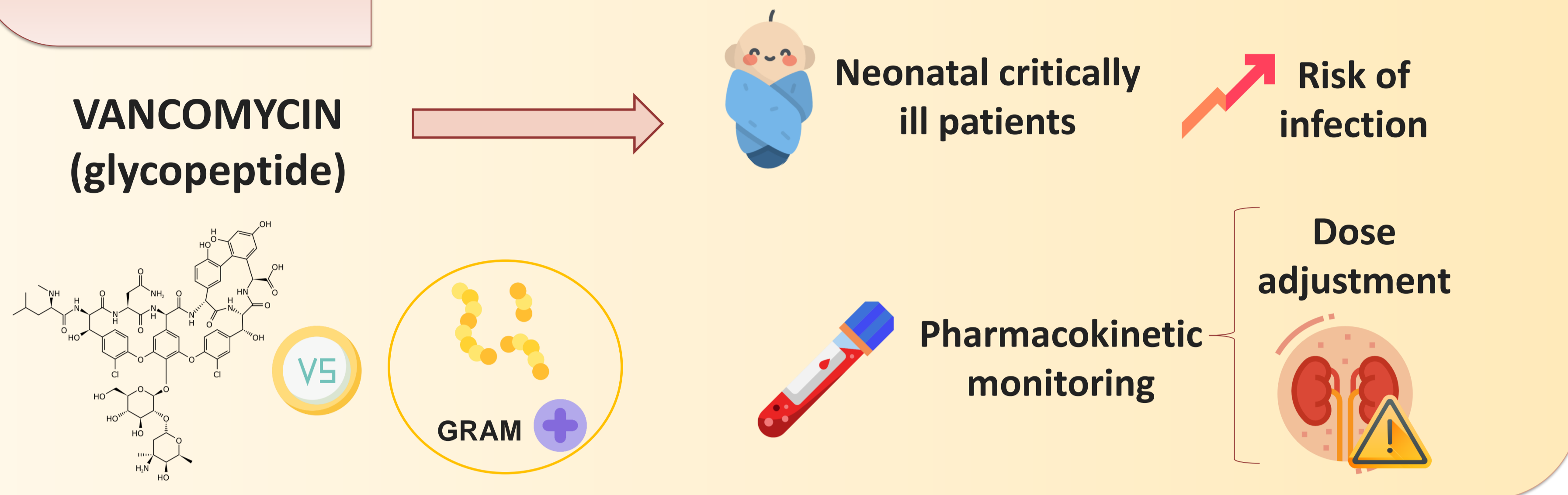
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## BACKGROUND



## AIM AND OBJECTIVES

Assessing possible under-exposure to vancomycin in critically ill neonatal patients after dosing, as recommended by standard guidelines.

## MATERIAL AND METHODS

Retrospective observational

March 2021  
June 2023



Tertiary hospital

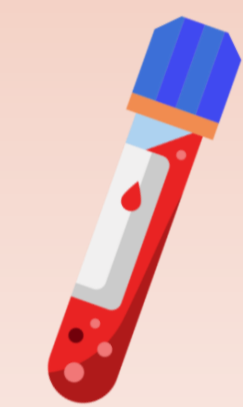


Neonatal critically ill patients with <1 month of life



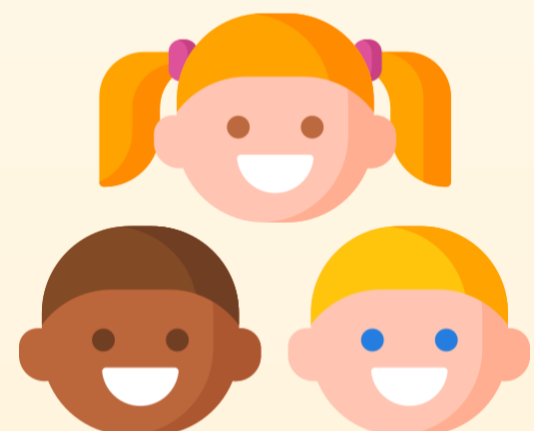
Data collected from medical records

- Demographics
- Diagnosis
- Microbiological culture results
- Renal function
- Vancomycin dosing regimen
- Plasma concentration (PC)
- Antimicrobial treatment duration
- Occurrence of nephrotoxicity

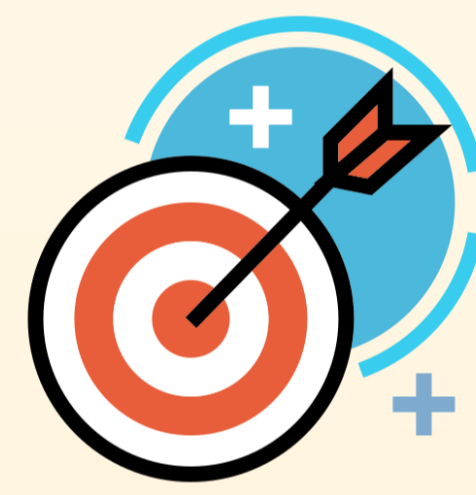


Therapeutic PC VANCOMYCIN (before dose 4)  
10-20 mg/dL

## RESULTS



34 patients



79 pharmacokinetic determinations



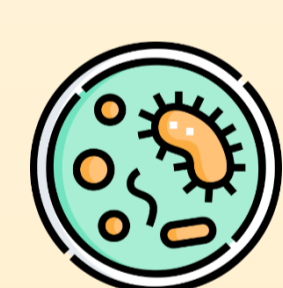
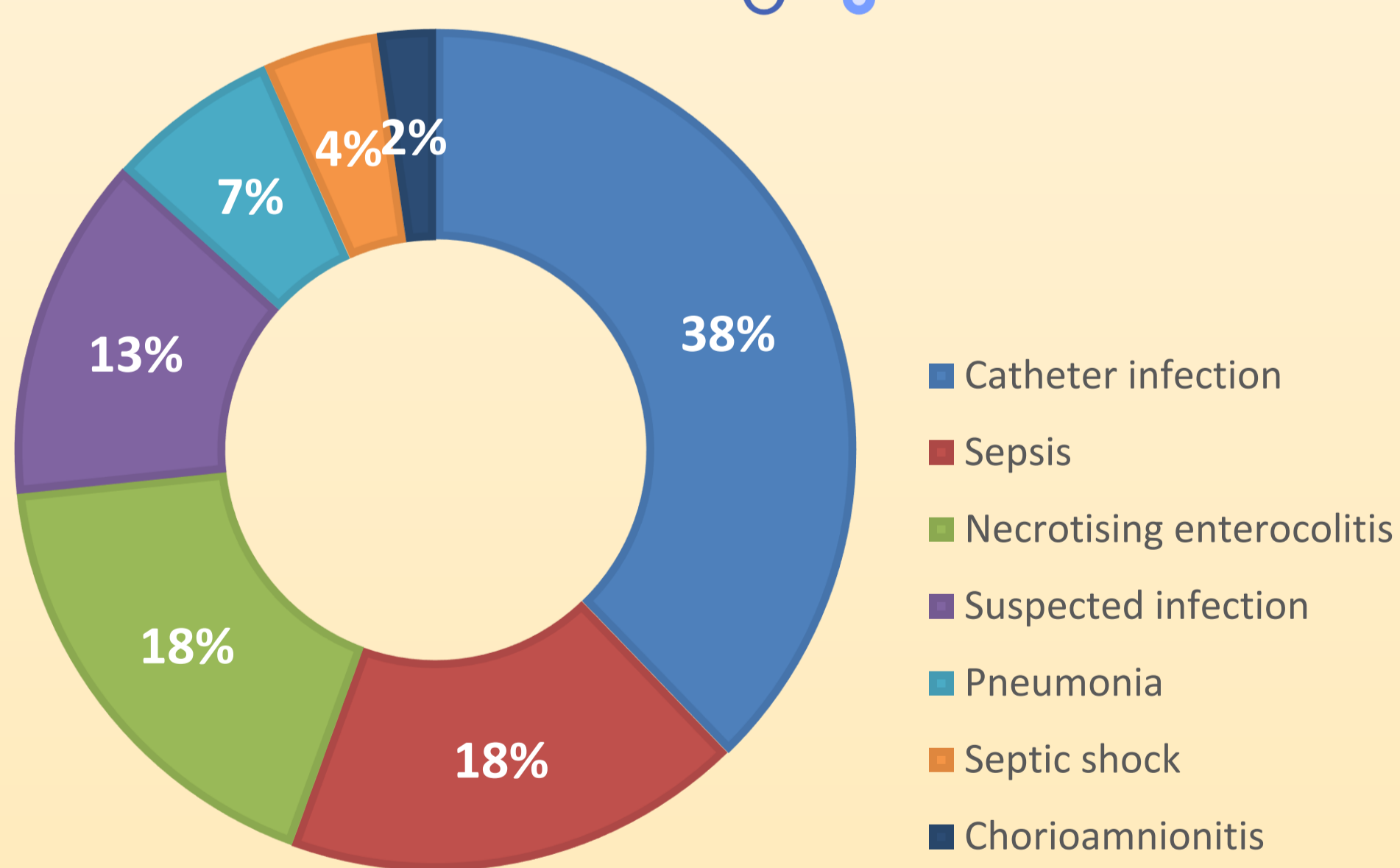
45 treatments



Median duration of 6 days

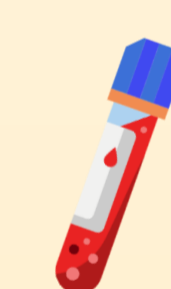
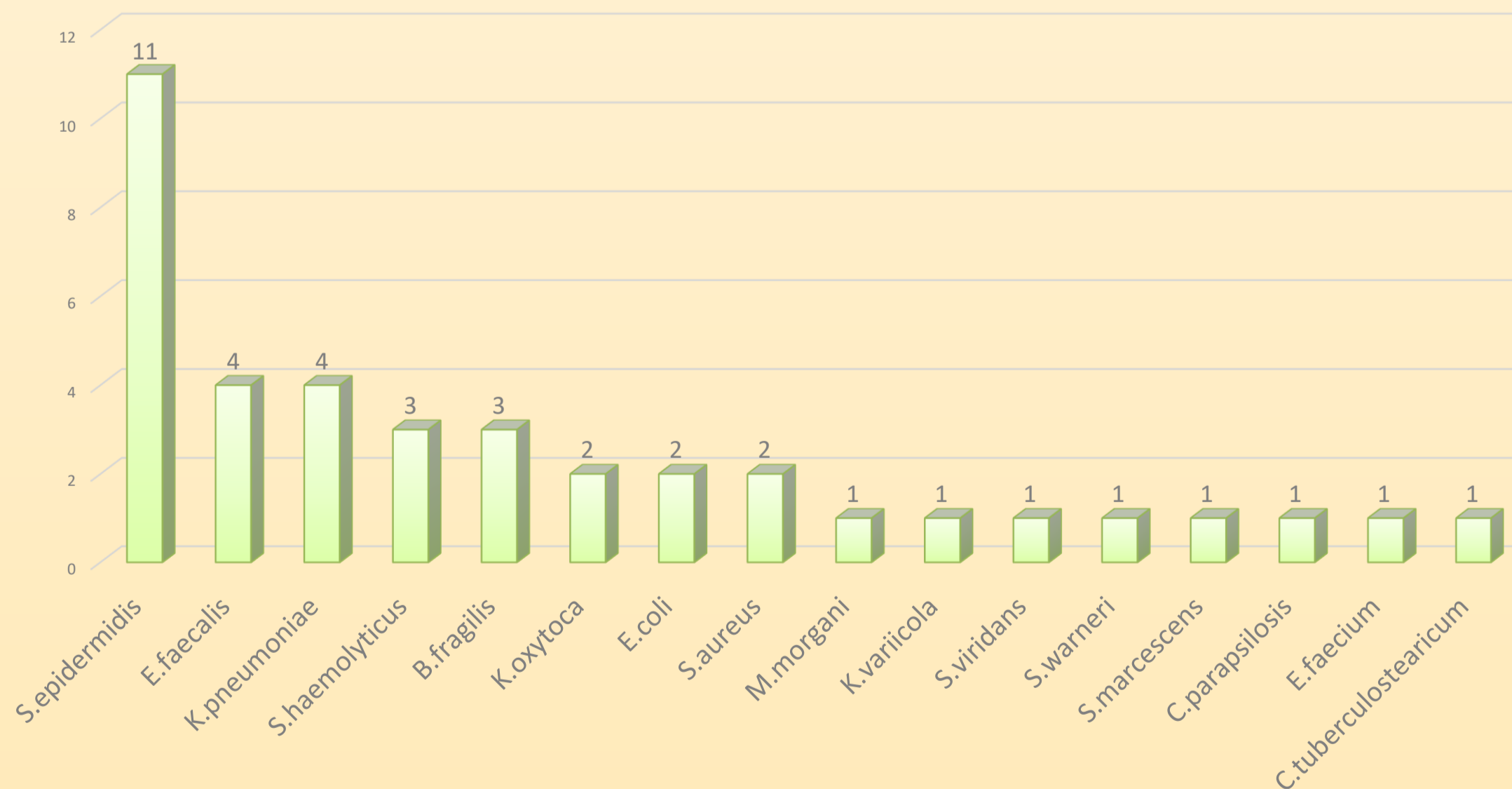
31 (68,9%) empirical

### DIAGNOSES

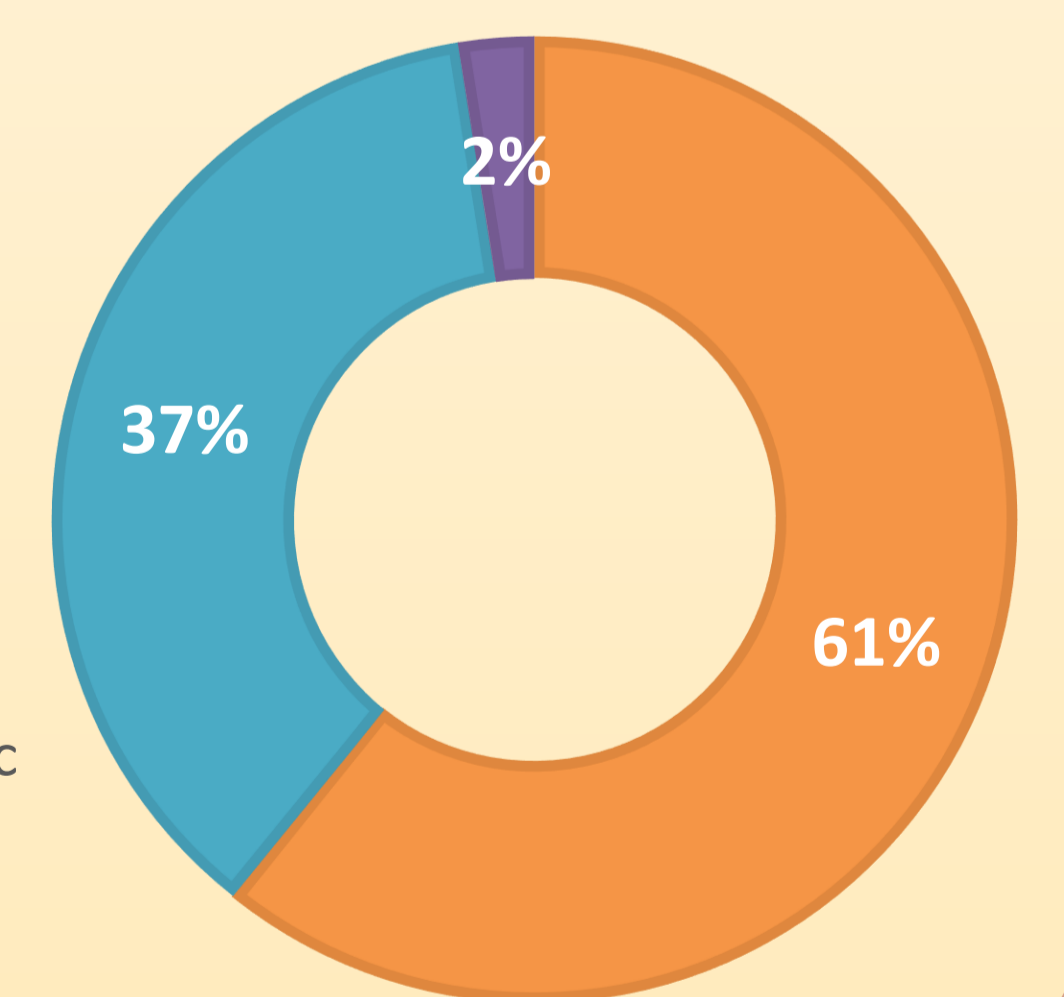


28 positive microbiological cultures (62,2%)

Pathogens isolated in microbiological cultures

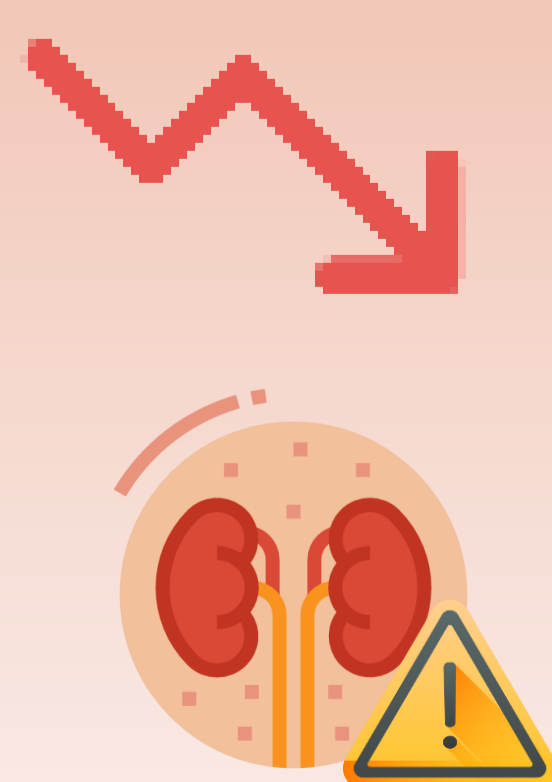


VANCOMYCIN PLASMA CONCENTRATION



## CONCLUSIONS

Standard guidelines



48 under-treated (62,2%)

9 nephrotoxicity (13,3%)

It is necessary to review the recommended dosing regimens in this group of patients to achieve therapeutic PC of vancomycin from the start of treatment guided by pharmacokinetic monitoring.

