



Pattern of *S. maltophilia* infections and therapies within community teaching hospital, Riyadh Saudi Arabia

INTRODUCTION

Stenotrophomonas maltophilia (*S. maltophilia*) infections are associated with a significantly high risk of morbidity and mortality due to the high level of intrinsic resistance to multiple classes of antibiotics developed by this organism.

OBJECTIVES

- To describe the clinical characteristics of patients infected by *S. maltophilia* at tertiary hospital.
- To assess the efficacy of the antibiotics used to cure *S. maltophilia* infections.

METHODS

A retrospective cohort study was carried out between January 2015 and December 2018 at King Khalid University Hospital to include all patients infected with *S. maltophilia* according to the microbiology laboratory database, aged > 16 years and received at least 3 doses of any antibiotic. Patients with age ≤ 16 years and/or received < 3 doses of antibiotics were excluded. Baseline characteristics, used antibiotics and clinic response of the included patients were extracted. Data was descriptively analyzed using a statistical package for social science version 26 (SPSS).

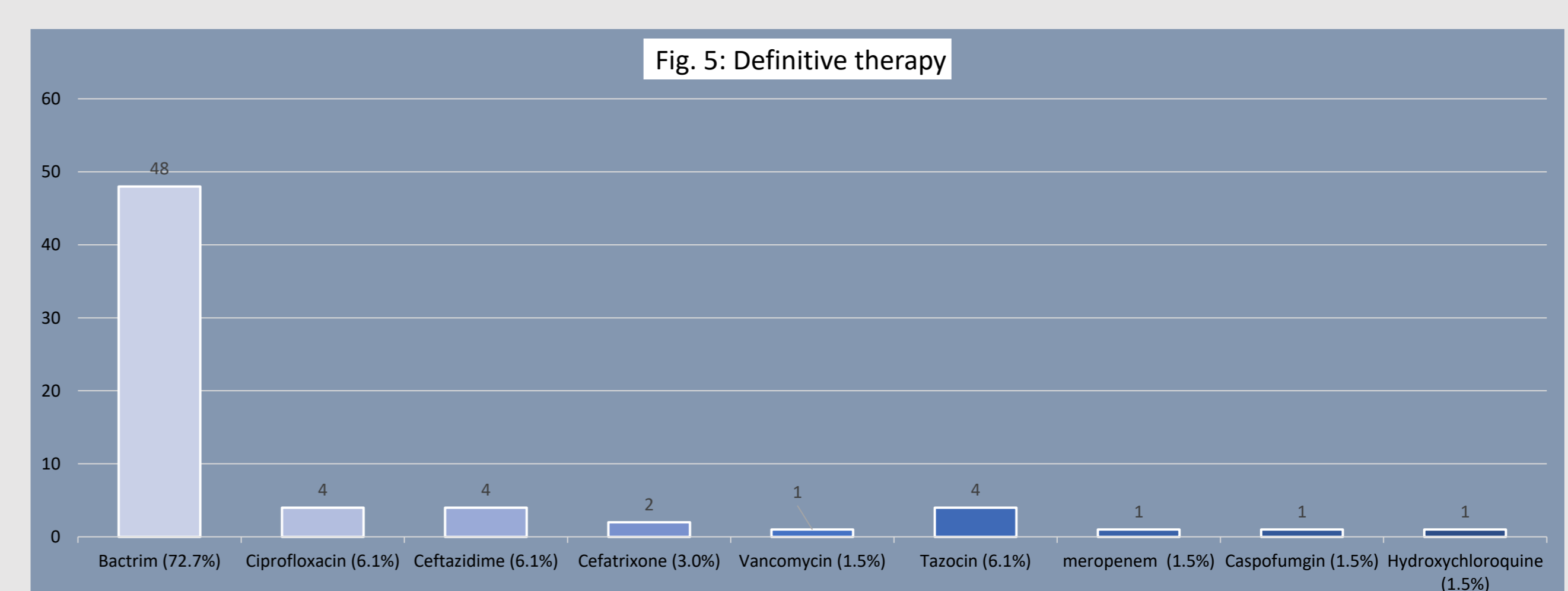
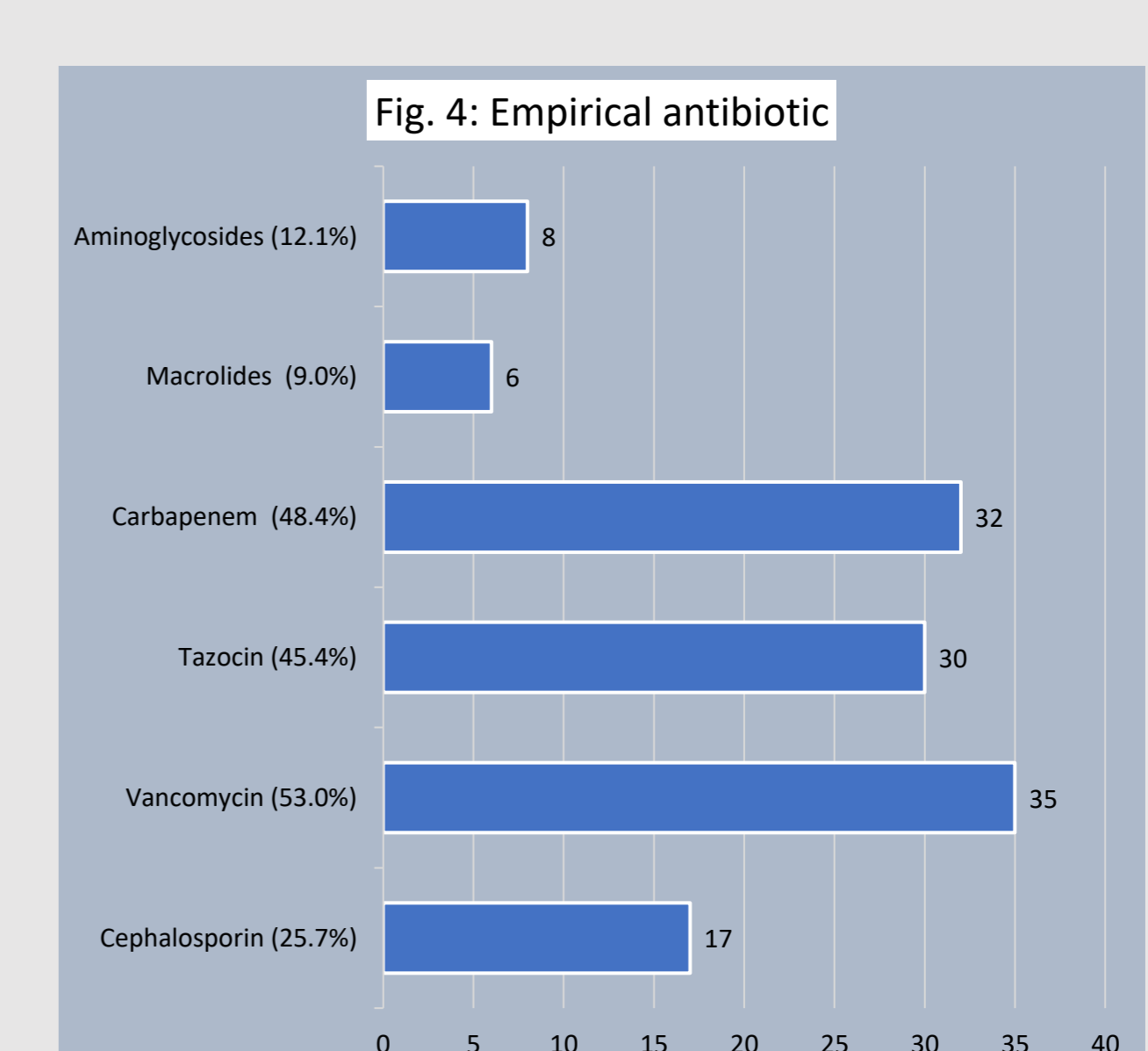
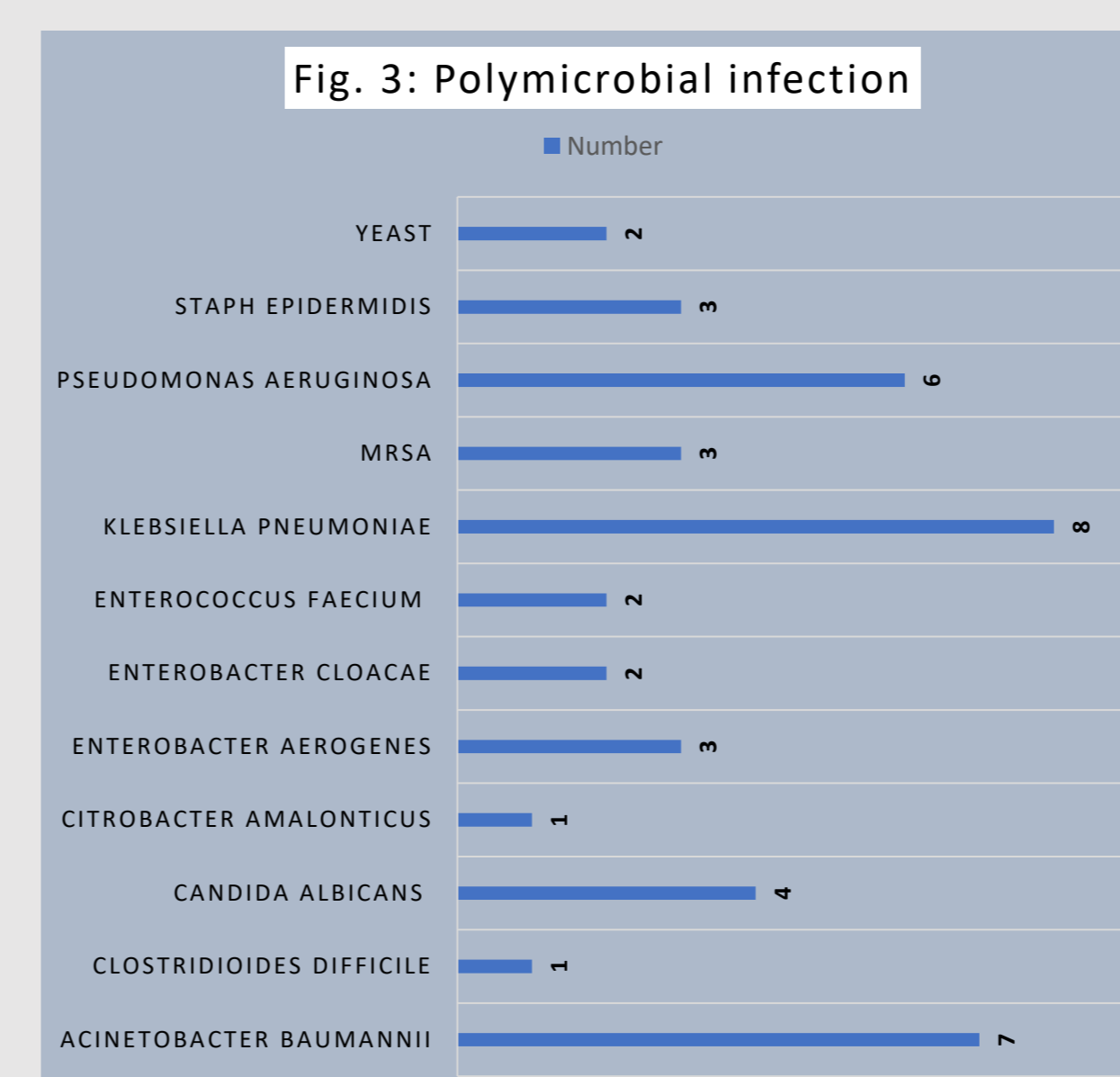
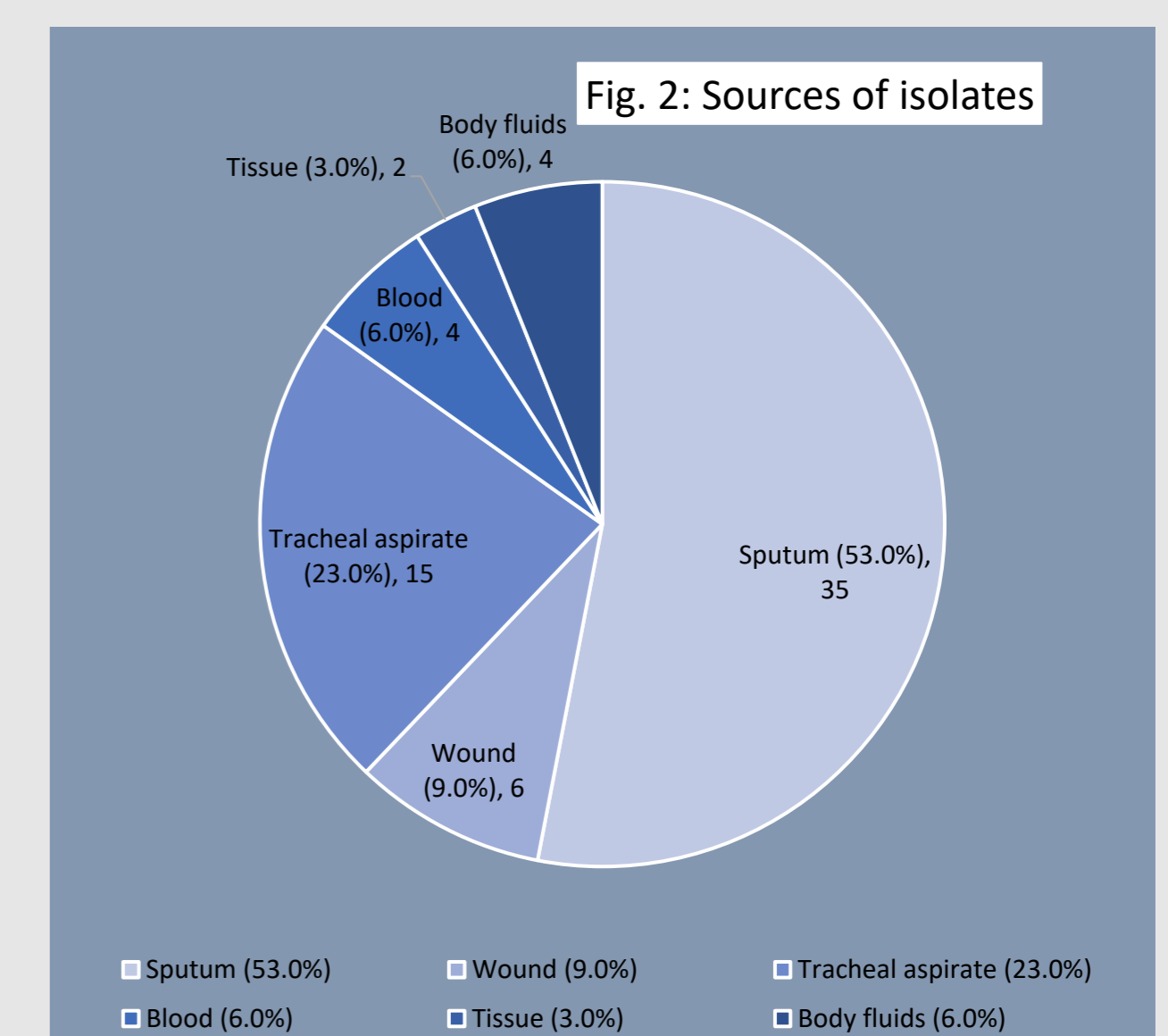
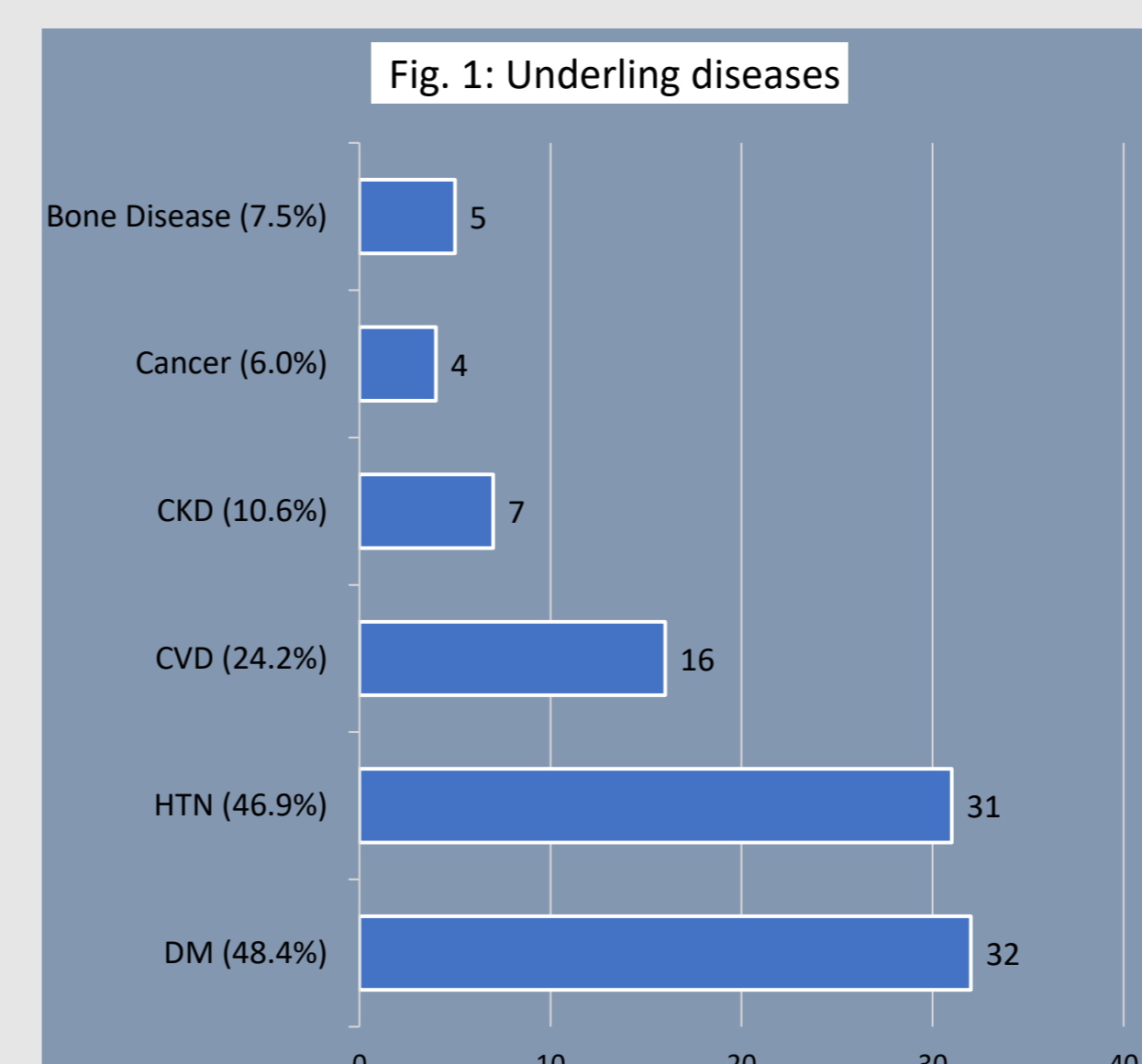
RESULTS

A total of 66 patients were identified to have *S. maltophilia* infections and included in the study. The mean age of patients was 60.3 years, of which 52 % were males. Approximately, 64 % of the patients needed ventilation. The majority of patients (84.3%) had comorbidities including diabetes, hypertension, chronic kidney disease, cardiovascular disease, cancer, and bone diseases (Fig. 1).

Different body specimens were used to identify *S. maltophilia*, among which sputum was the most common (Fig. 2). Around 50 % of the patients had polymicrobial infections (Fig. 3), thus several monotherapies and combination therapies were prescribed. The most commonly used antibiotics included meropenem, imipenem, tazocin and vancomycin (Fig. 4).

For a patient to have a positive clinical outcome, three factors must be fulfilled; Absence of infection in a seven-day period, Absence of fever in a seven days period, and a normal white blood cells count in a seven days period. Only 39 % of the patients (n=26) were clinically cured within 7 days. The most effective antibiotic among cured patients was bactrim 19 (73%) followed by ciprofloxacin 3 (11.5%), tazocin 2 (7.7%), and ceftazidime 1 (3.8%).

RESULTS



CONCLUSIONS

The current findings revealed that *S. maltophilia* infection exists in community teaching hospital, and the most effective drug that warrants positive clinical outcomes is Bactrim.

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