

MYCOPLASMA GENITALIUM IN NORTH QUEENSLAND

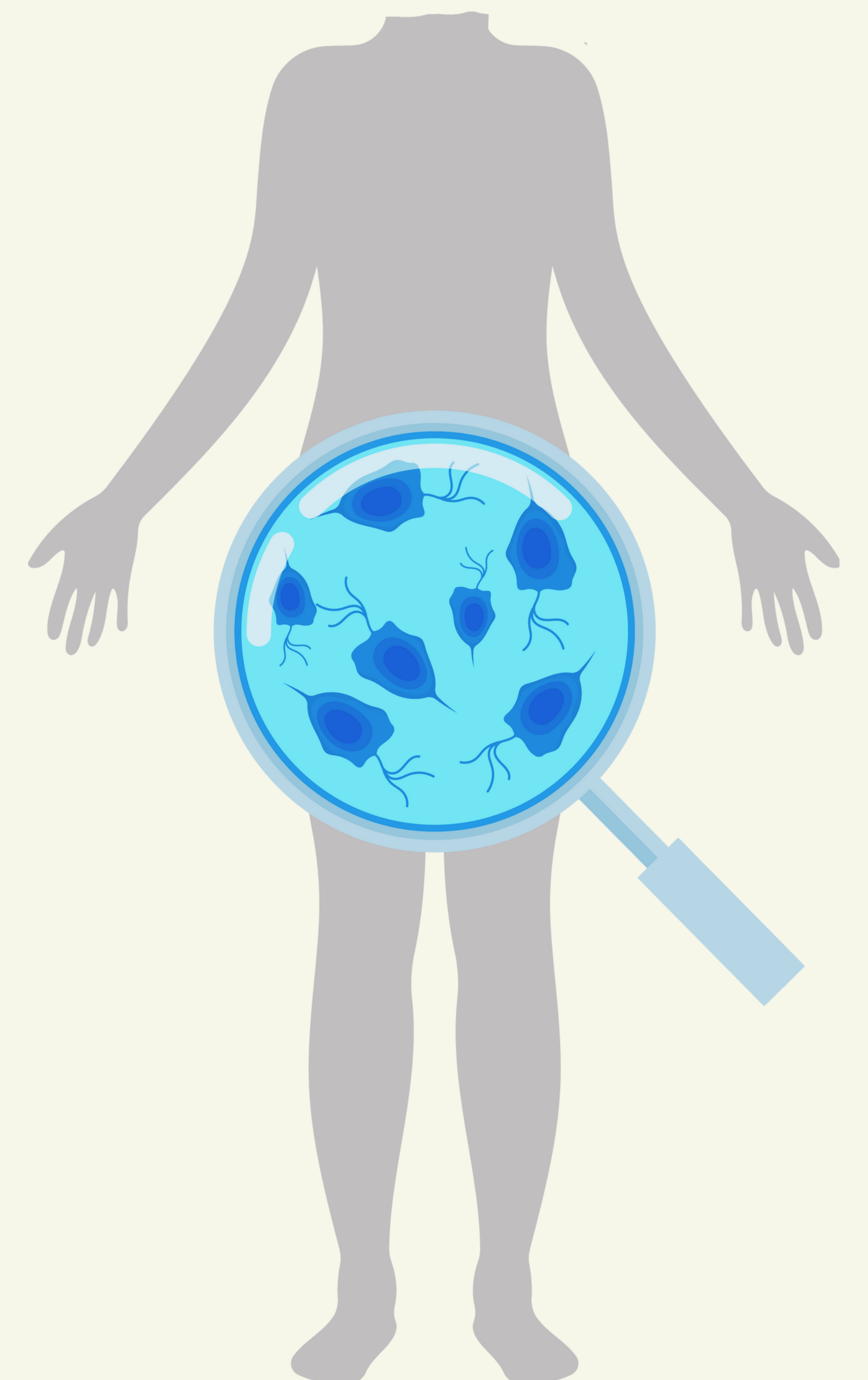
Mycoplasma genitalium (MG) is a sexually transmitted bacterium that has gained attention in Australia and globally due to its role in causing genital infections. It is a relatively newly recognized pathogen and is associated with urethritis, cervicitis, and pelvic inflammatory disease. In recent years, concerns have emerged regarding its increasing antibiotic resistance, making it a challenging infection to treat effectively, and highlighting the importance of ongoing research and surveillance in Australia to manage and control its spread.

Authors

Brooke Gooch (MBBS6 JCU)
Abhirami Thavakulasingham (MBBS6 JCU)

Affiliations

James Cook University, QLD



AUDIT SETUP

- Any patient with a positive MG test with a RIVeR number between 15/02/21 to 5/01/23
- 83 patients at Cairns Sexual Health clinic (Cairns Hinterland Hospital and Health Service - CHHHS)
 - One patient was excluded due to pregnancy status

OBJECTIVES, TO IDENTIFY:

- Demographics of patients testing positive for MG
- Most common clinical manifestations
- Prevalence of MG resistance to evaluate efficacy of first line treatment
- Delays in result turnover and treatment

RESULTS

GENDER: 52% of patients were female

AGE: 91.5% of patients were aged between 17-35 yo

GENDER OF SEXUAL PARTNERS: 90% disclosed having intercourse with the opposite sex only

ABORIGINAL/TORRES STRAIT ISLANDER IDENTIFICATION: majority (77%) identified as neither Aboriginal nor Torres Strait Islander

MEDICARE STATUS: ~80% were medicare eligible

PRESENTING SYMPTOMS: 20% were asymptomatic, 49% reported vaginal or urethral discharge +/- dysuria, 17% reported dysuria only, remaining 14% reported 'other' (e.g. PID, testicular pain, rectal symptoms, post coital bleeding)

KNOWN CONTACT OF MG: Almost three-quarters (74%) were not a known contact

TREATMENT RESISTANCE: 66% were macrolide resistant, 2.4% were quinolone resistant (12% were not tested for macrolide resistance, 94% were not tested for quinolone resistance)

TEST OF CURE: of the TOCs completed, 82% were successful (46% of patients did not have a TOC). ?Lost to follow-up?

DATA COLLECTED

- Patient demographics
- Presenting symptoms
- Specimen type
- Dates of testing, MG positive result and macrolide/fluoroquinolone resistance results
- Presumptive and MG specific treatments given
- TOC status
- Follow-up

ANALYSIS

1. Cairns Sexual Health clinic, macrolide resistance rate was 75.3% of those tested, higher than the rates found in the larger Australian population (> 50%) and North Queensland (almost 60%) in other studies

2. 66% of positive patients were macrolide RESISTANT!

2.1 Interestingly, of the macrolide SUSCEPTIBLE patients, 42% were non-medicare eligible

3. 60% of non-known MG-contact were presumptively treated

3.1 Asymptomatic patients who were NOT a known MG contact were not given presumptive treatment, commendable clinical practice for the clinic!

3.2. 23% were given doxycycline as presumptive treatment

KEY POINTS AND LIMITATIONS

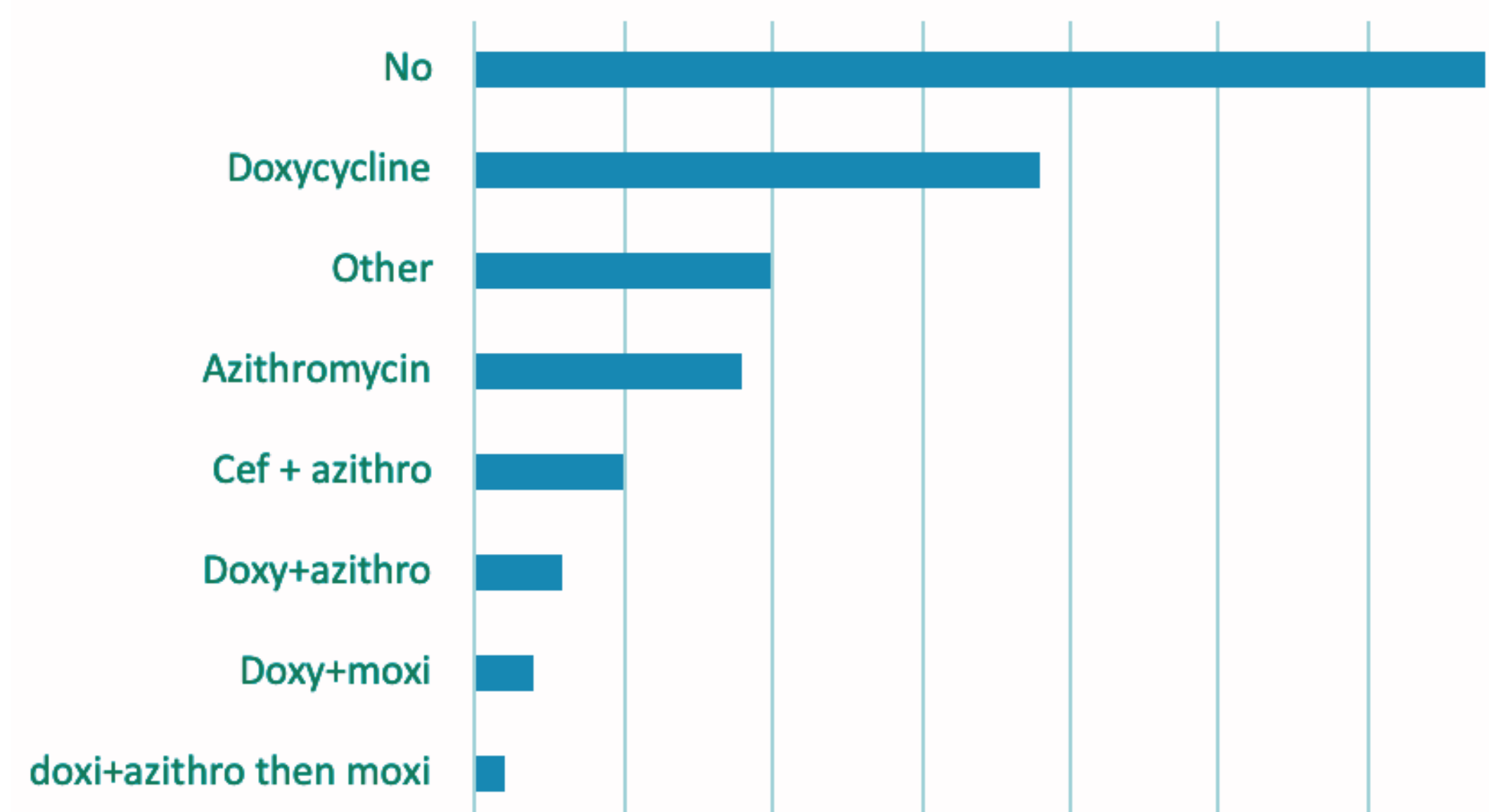
Much higher rate of resistance to macrolide therapy in North Queensland than Australia and the rest of Queensland.

Almost half of the patients susceptible to macrolide therapy were not local North Qld residence, possibly overseas travellers visiting FNQ.

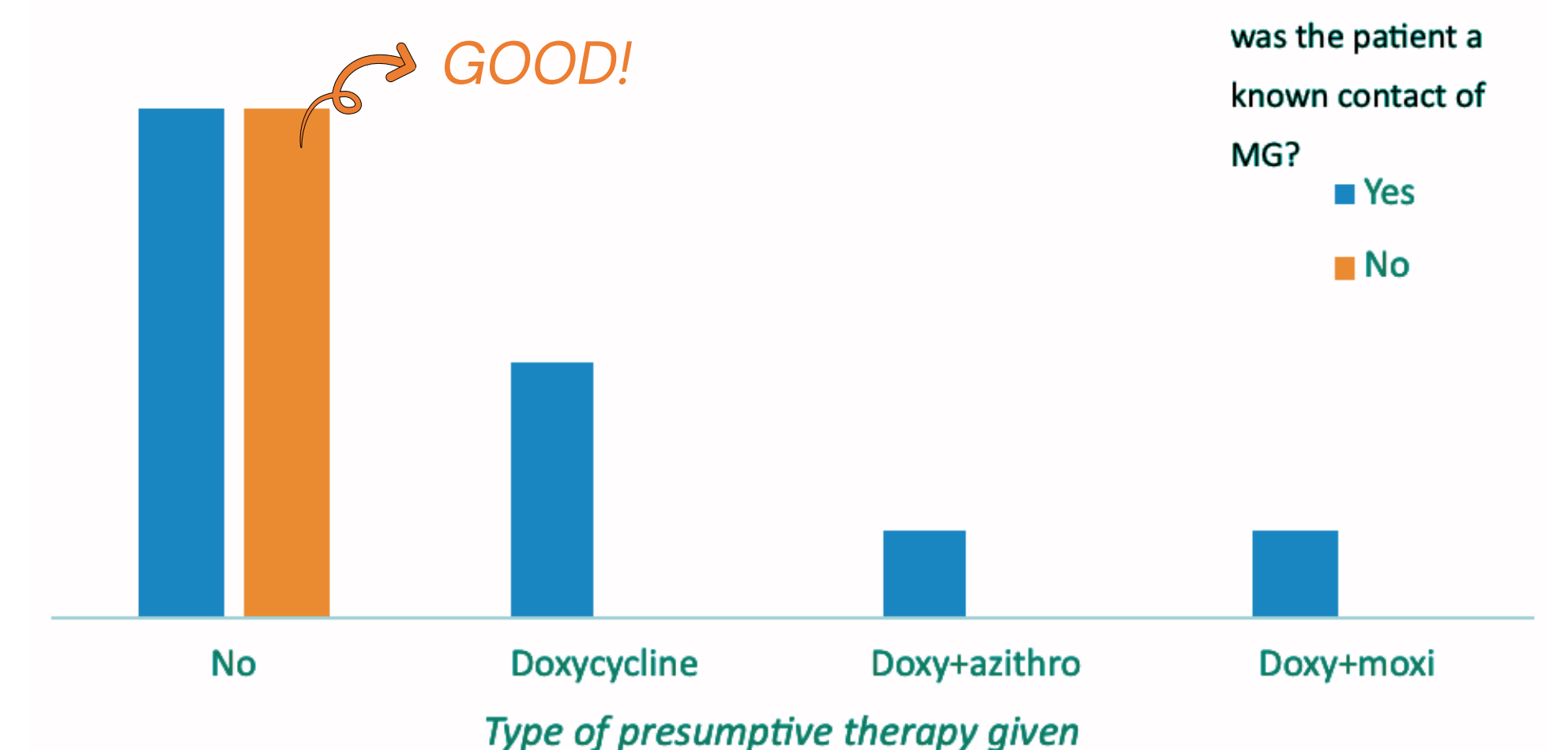
Limitations:

- Only looked at a 2 year period
- Many patients were lost to follow up
- Several factors not considered e.g., adherence to treatment

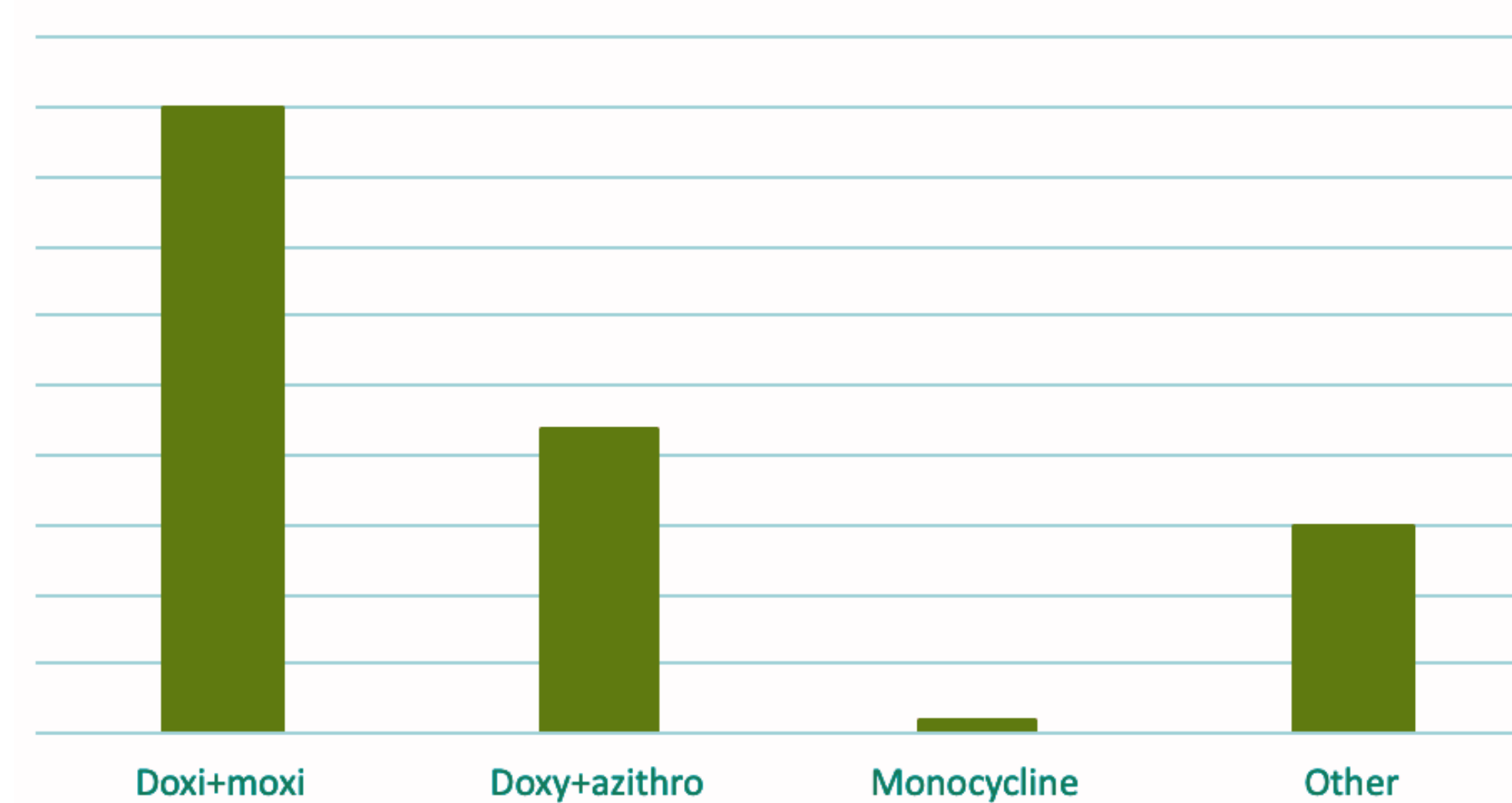
Presumptive Treatments



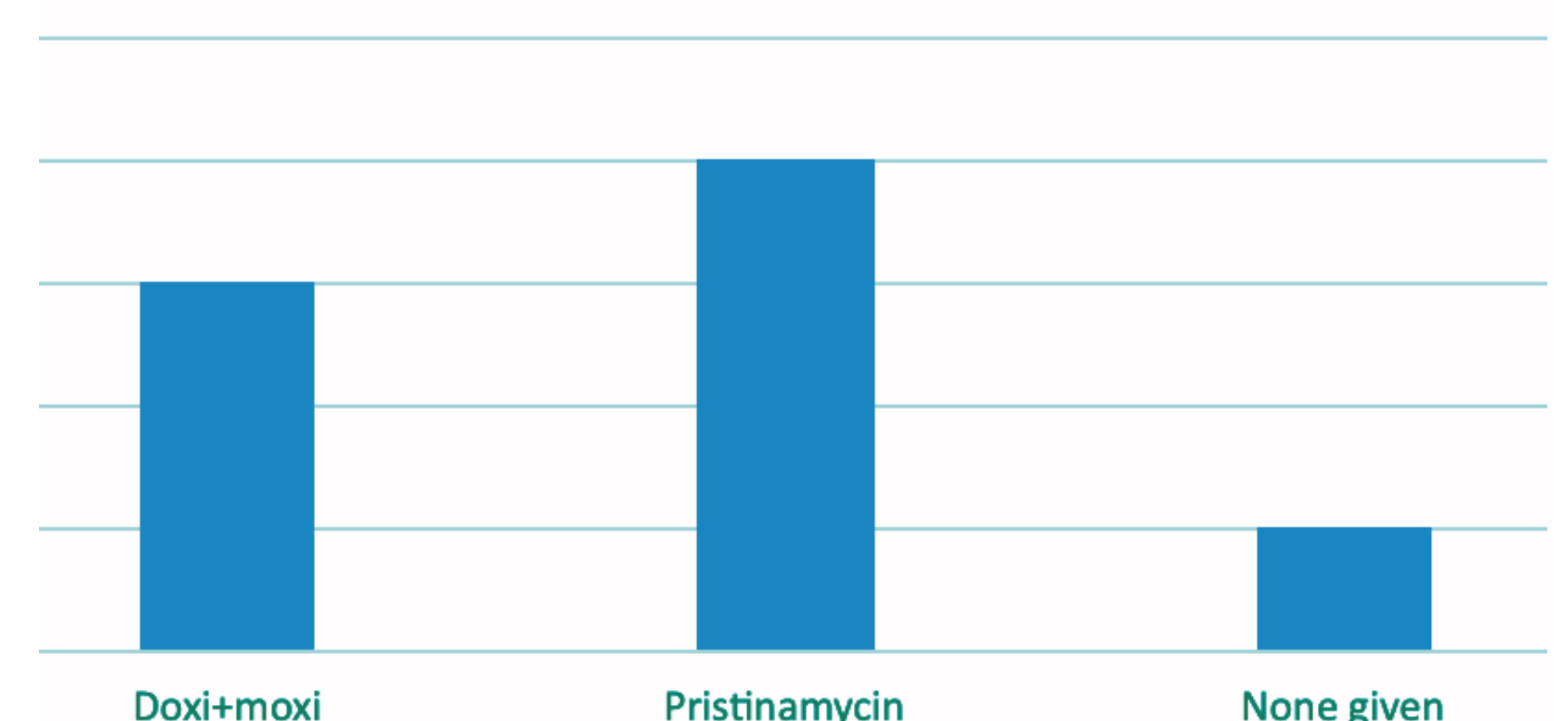
Presumptive Treatment in Asymptomatic Patients



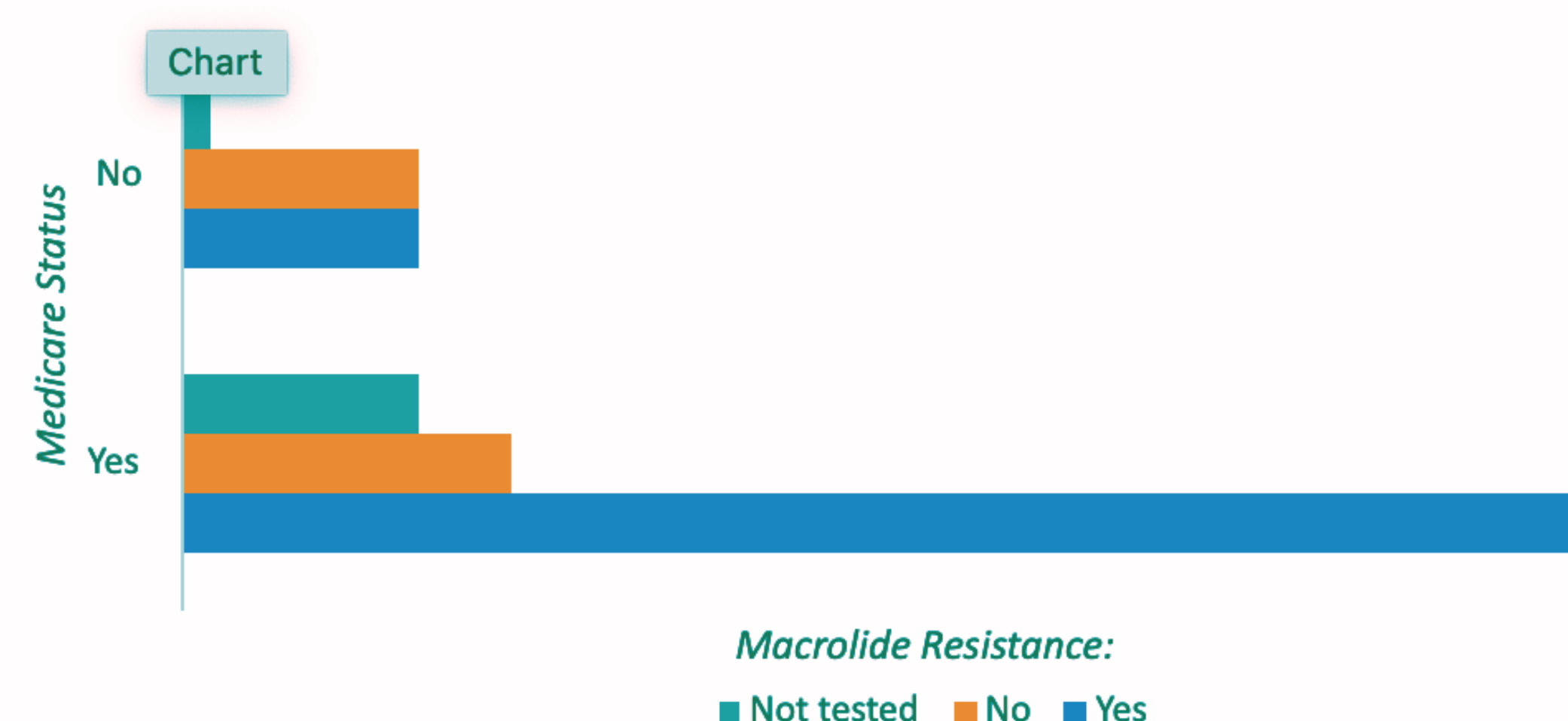
Type of 1st MG-specific Treatment Given



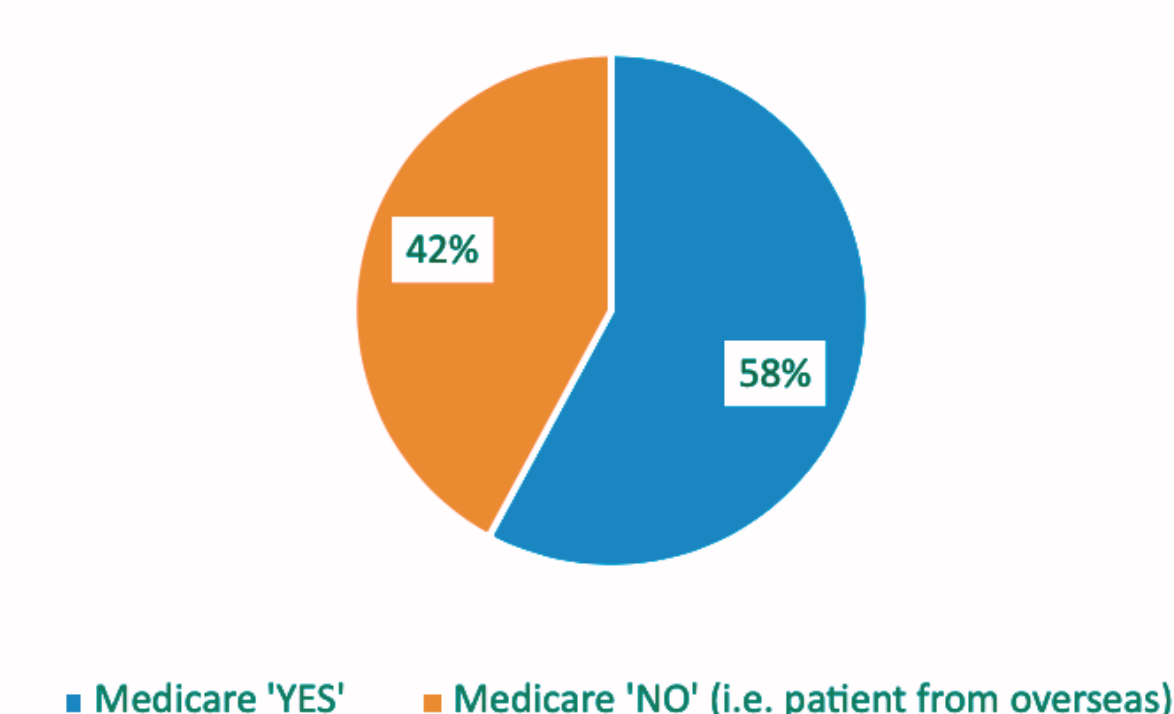
Second Line Treatment Given to Patients with Positive TOC



Medicare Status vs. Macrolide Resistance



Medicare Status of Macrolide SUSCEPTIBLE MG positive patients



Is MG from other regions (e.g. overseas) more susceptible to macrolide therapy?

References:

- ASHM. Mycoplasma genitalium. Australian STI Management Guidelines. Updated December 2021. 31/1/2023. <https://sti.guidelines.org.au/sexually-transmissible-infections/mycoplasma-genitalium/>
- Manhart LE, Gaydos CA, Taylor SN et al. Characteristics of Mycoplasma genitalium Urogenital Infections in a Diverse Patient Sample from the United States: Results from the Aptima Mycoplasma genitalium Evaluation Study (AMES). *J Clin Microbiol.* 2020;58(7):e00165-20. 31/1/2023. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7315021/>
- Conway R, Cook S, Soni S. Antibiotic treatment of Mycoplasma genitalium infection. *The Pharmaceutical Journal.* 2019; <https://pharmaceutical-journal.com/article/ld/antibiotic-treatment-of-mycoplasma-genitalium-infection>
- Sweeney EL, Trembizki E, Bletchley C, et al. Levels of Mycoplasma genitalium Antimicrobial Resistance Differ by Both Region and Gender in the State of Queensland, Australia: Implications for Treatment Guidelines. *J Clin Microbiol.* 2019 Mar; 57(3): e01555-18. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6425175/>