

Resistance of *Mycoplasma genitalium*: Austrian Experiences

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INTRODUCTION

Resistances against *Mycoplasma genitalium* (*M. genitalium*) are an increasing problem for patients with *M. genitalium* infections. Testing for resistance proof of *M. genitalium* for both, azithromycin and moxifloxacin, is commercially available.

The Allplex MG&AziR Assay and Allplex MG&MoxiR Assay (Seegene, Republic of Korea) are multiplex real time PCR assays that simultaneously detect and identify *M. genitalium* and 6 mutations in 23s rRNA gene related to **azithromycin resistance** and 6 mutations in parC gene related to **moxifloxacin resistance**.

Aim of the evaluation was to perform the **resistance proof** with both Allplex Assays for **samples tested positive** for *M. genitalium* with the Alinity m STI Assay (Abbott, USA).

METHODS AND MATERIALS

In 2024 and 2025, 45 patients attending the Outpatients Centre with a **positive result for *M. genitalium*** in the Alinity m STI assay were included in the study. Resistance was evaluated via PCR by the **Allplex MG&AziR Assay** and **Allplex MG&MoxiR Assay** for azithromycin and moxifloxacin.

RESULTS

Altogether, for all samples positive in the Alinity m STI Assay as well as in both Allplex Assays, resistance was detected for **azithromycin in 85.30%**, for **moxifloxacin in 51.35%** (Figure 1) and for **both antibiotics in 48.49%**, respectively.

A high **agreement of 100%** for the detection of *M. genitalium* between the Alinity m assay and both Allplex Assays was observed for samples with cycle turn-values (CT-values) of the Alinity m assay below **25.00**.

For CT-values between **25.00 and 35.00** of positive Alinity m results, **82.8% and 89.7%** respectively, revealed also a positive result for the Allplex MG&AziR Assay and Allplex MG&MoxiR Assay.

For CT-values of the Alinity m Assay **above 35.00**, low numbers of concordant positive results (**33.3% and 44.4%**, respectively) were observed for the Allplex Assays (Figure 2).

CONCLUSIONS

A **high resistance** for azithromycin (85.30%) and moxifloxacin (51.35%) or both antibiotics (48.49%) was observed in Austria which confirms the importance of resistance proof, which conveniently was performed by the Allplex Assays.

For Alinity m positive samples with a **high CT level**, the Allplex Assays might fail to detect an infection with *M. genitalium*, **also missing to detect resistances** against standard antibiotics.

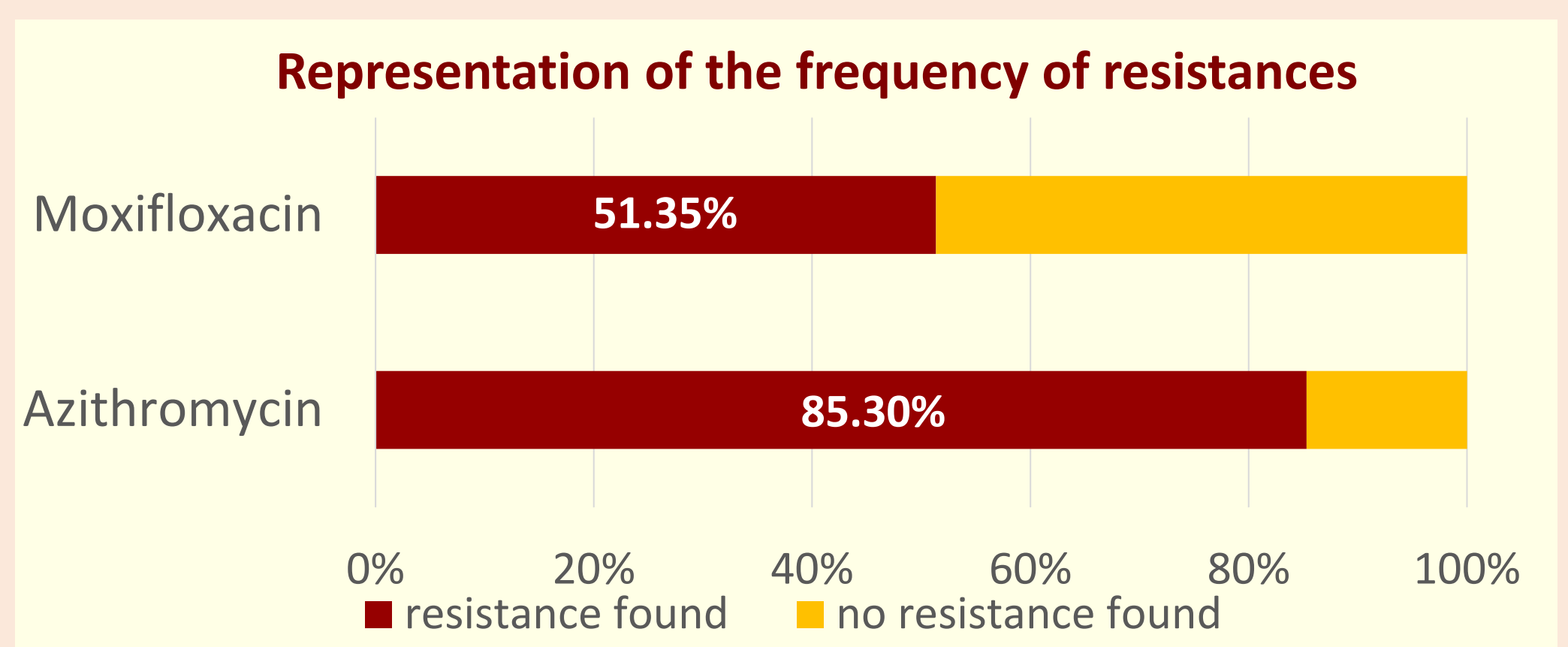


Figure 1: Representation of the frequency of resistance of *M. genitalium* against azithromycin and moxifloxacin

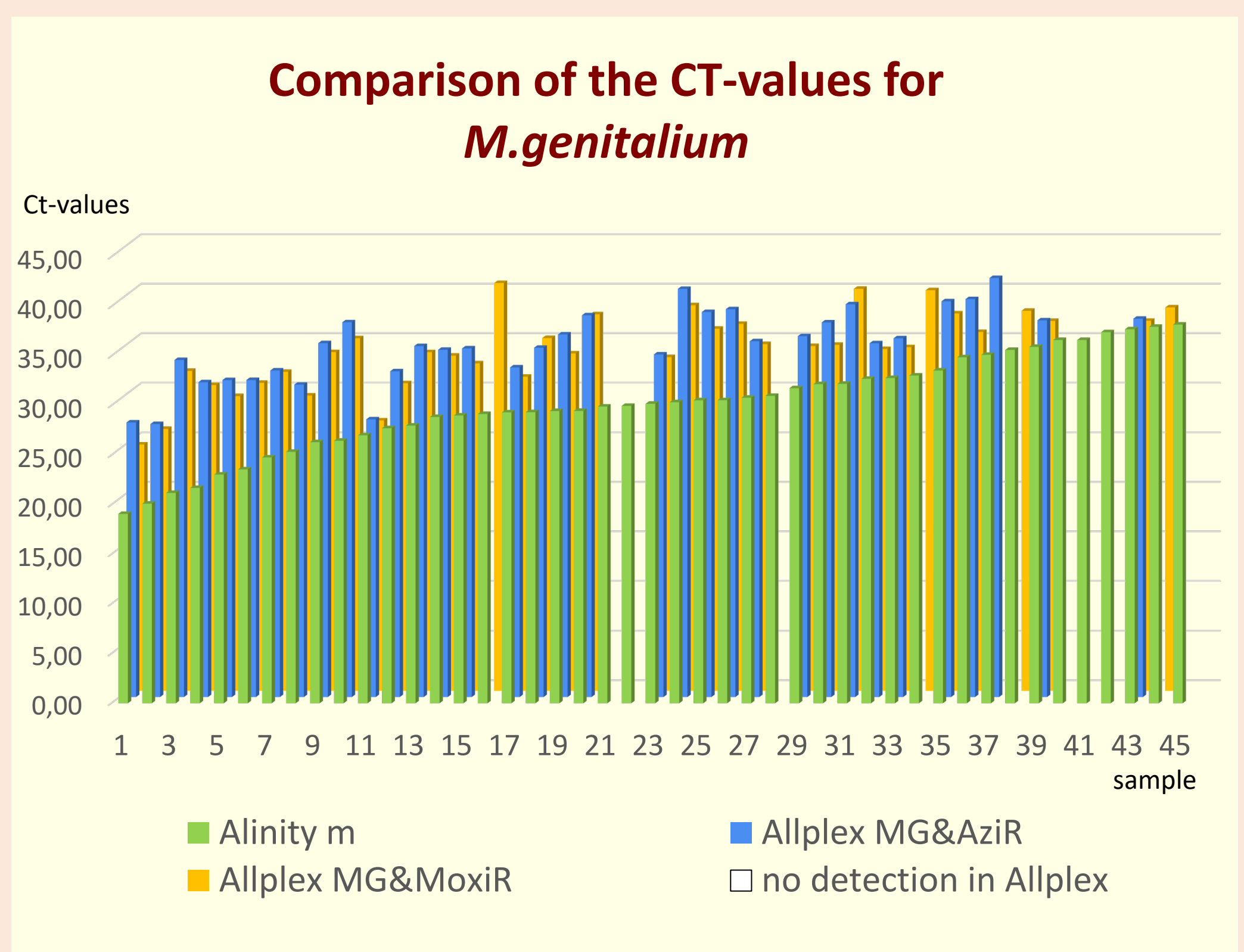


Figure 2: Comparison of the CT-values of Alinity m with Seegene Allplex MG&AziR and Allplex MG&MoxiR for *M. genitalium*.