Methods Within the Idiopathic Urethritis Men’s Project cohort study, we recruited men with NGU. NGU was diagnosed by the presence of urethritis signs and/or symptoms and urethral Gram stain with >5 PMNs/hpf. Men were treated with 1 gm azithromycin and returned for a 1-month test-of-cure visit. At the test-of-cure visit, men were asked about post-treatment symptom outcomes and partner treatment. A first-catch urine specimen was obtained at both visits for five-pathogen testing for *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT), MG, *Trichomonas vaginalis* (TV), and *Ureaplasma urealyticum* (UU). NG-positive cases were excluded and five-pathogen-negative cases were classified as idiopathic urethritis (II). Post-treatment symptom outcomes were: (1) resolved, (2) resolved then recurred, or (3) persisted unchanged.

Results One hundred twenty-four men are included in this study. The median age was 28, 52% were African American, and 86% self-identified as heterosexual. All men reported urethral symptoms and 98% had a discharge on exam at baseline. Symptoms resolved completely in 91 (73%) men. Symptoms resolved then recurred or persisted unchanged in 12 (10%) and 21 (17%) men, respectively. Excluding men with untreated partners (N = 9, 28%), a different pathogen was identified in 5 (50%) and 4 (25%) men with recurrent and persistent symptoms, respectively. In men with the same pathogen identified (N = 15), 53% were IU, 33% were MG, 7% were CT, and 7% were IU.

Conclusion Persistent NGU occurs in approximately 25% of azithromycin-treated men and is related to a new infection in up to 50% of cases. In men with persistent symptoms and the same infection identified at the test-of-cure visit, MG and IU comprised 86% of cases, which suggests that MG and IU-associated organisms may be resistant to azithromycin.

Disclosure No significant relationships.

Background Recommended cutoffs for PMNs per high-power field (hpf) to define NGU vary. CDC treatment guidelines specify >2 PMNs/hpf. Other guidelines recommend >5 PMNs/hpf.

Methods From 08/2014-08/2018, we enrolled symptomatic and asymptomatic male STD clinic patients >16 years with exclusively female partners in the past year. Men with gonorrhea or antibiotic use in the past month were excluded. We collected a urethral swab for GSS and urine for *Chlamydia trachomatis* (CT) and *Mycoplasma genitalium* (MG) testing (Aptima, Hologic). We calculated Youden’s Index (I = sensitivity + specificity -1), which maximizes sensitivity and specificity, and calculated the proportions of CT/MG cases missed and cases treated in the absence of CT/MG (test-negative) for three PMN/hpf cutoffs. CT/MG co-infections (N = 3) were excluded.

Results Among 369 participants, median age was 32 (range 17–71), 53% were white, and 25% were black. Among all men with 0–1, 2–4, 5–9, and >10 PMNs/hpf, CT prevalence was 1%, 5%, 11%, and 26%, respectively; MG prevalence was 5%, 3%, 15%, and 17%. J was maximized at ≥5 PMNs/hpf for CT, MG, and CT/MG. Thirteen percent, 17%, and 33% of CT/MG cases were missed at ≥2, ≥5, and ≥10 PMNs/hpf cutoffs, respectively; 45%, 33%, and 21% of test-negative cases were treated. Among symptomatic men (N = 166) with 0–1, 2–4, 5–9, and ≥10 PMNs/hpf, CT prevalence was 0%, 20%, 12%, and 31%, respectively; MG prevalence was 9%, 0%, 18%, and 19%. J was maximized at ≥5 PMNs/hpf for MG, and ≥10 PMNs/hpf for CT and CT/MG. Five percent, 8%, and 25% of CT/MG cases were missed at the ≥2, ≥5, and ≥10 PMNs/hpf cutoffs, respectively; 72%, 64%, and 43% of test-negative cases were treated.

Conclusion The increase in missed CT/MG cases between the ≥2 PMNs/hpf cutoff and ≥5 PMNs/hpf cutoff was minimal; the ≥5 PMNs/hpf cutoff treats fewer cases without CT/MG. The ≥5 PMNs/hpf cutoff appears optimal in this population.

Disclosure No significant relationships.