Appendix S1

SUPPLEMENTARY METHODS

Study design and population

This is a retrospective cohort study of 3,957 visits of men who have sex with men (MSM) who attended the walk-in STI Department of Oslo University Hospital, Olafia Clinic during the time-periods 2004 to 2005 and 2010 to 2011, and had a positive anorectal swab for Ct. An anonymous data file was extracted from the electronic medical record including all patients attending for a new visit with a positive rectal test during these time-periods, regardless of previous anal or non-anal CT

Data collection and treatment

The Olafia clinic is a walk-in STI clinic located in the city centre of Oslo, Norway. In 2002 the clinic introduced electronic medical records. Walk-in patients were first assessed by a triage nurse. Asymptomatic MSM were routinely offered serological tests for HIV and syphilis, a throat swab for *Neisseria gonorrhoeae* (Ng) was then taken by the attending nurse followed by first void urine (FVU) and a self-taken anal swab, which were both sent for nucleic acid amplification test (NAAT) to our partner laboratory, Fürst Laboratories, Søren Bulls vei 25, Oslo for Ct, Ng and *Mycoplasma genitalium* (Mg).

To detect Ct for the samples taken between 2004 and 2005, DNA was isolated from 200 µl of the collected samples using MagNA Pure LC DNA isolation Kit I (Roche, Indianapolis, IN, USA), which was later diluted into 100 µl dilution buffer. In total 25 µl of the DNA preparation was used for detection of Ct using Cobas Taqman 48 (Roche).

To detect Ng, swabs from urethra, anus and throat were cultured.

In the latter period, DNA from 200 µl of the samples was isolated using Magna Pure LC Total Nucleic Acid isolation high-performance kit (Roche) on the Magna Pure LC platform. This was followed by usage of 50 µl of DNA for detection of Ct using the COBAS TaqMan Ct test, v2.0 (Roche). Ct positive anorectal swabs were later tested for *lymphogranuloma venereum* biovar of Ct, as described (5). To detect Ng and Mg, NAAT was performed as described (5).

Patients who presented with any genitourinary symptoms were offered serological tests for HIV and syphilis and throat swab for Ng by the triage nurse before being consulted by a doctor who performed necessary examinations for clinical diagnosis. In these symptomatic patients, anorectal swab for NAAT for Ct, Ng and Mg was taken by the doctor followed by FVU. NAAT for Ct was analysed from the throat swab in some cases, but not routinely.

When non-gonococcal urethritis was diagnosed with the aid of symptoms and microscopy in 2004 to 2005, the patient was administered a free of charge treatment with azithromycin 1 g as directly observed therapy (DOT).

In the years 2010 to 2011, patients with the same diagnosis were given a course of doxycycline in the hand, to be taken orally 100 mg twice daily for 7 days. If the same patient was diagnosed with *M. genitalium*, an additional 5 days' treatment with azithromycin or moxifloxacin was administered. If Ng was diagnosed by urethral microscopy, by NAAT or culture, they were given additional ceftriaxone 500 mg intramuscularly (i.m.) with test of cure (TOC) after 2 weeks.

Asymptomatic patients diagnosed with anorectal Ct were informed by letter in the earlier years and via SMS in the later years. They were then given an appointment with a nurse for treatment with azithromycin in 2004 to 2005 or doxycycline in 2010 to 2011. The patients were treated per protocol. All patients were provided with relevant information regarding possible side-effects and partner tracing. Patients were advised not to have sex for one week after treatment initiation. In a few cases, due to the doctor's decision not to follow the standard treatment, the patient was then treated with doxycycline in 2004 to 2005 and azithromycin in 2010 to 2011.

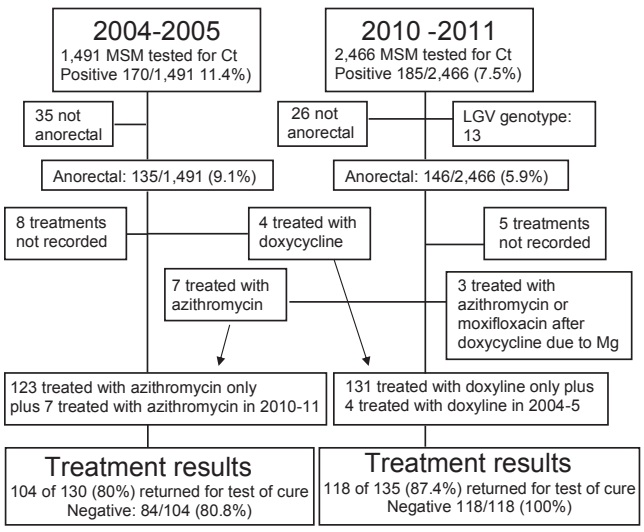
Patients were given an appointment with a nurse for TOC 5 weeks after treatment initiation. During 2004 to 2005, doxycycline was given as second-line treatment if the TOC was positive after azithromycin. A second follow-up appointment was then given after a further 5 weeks to evaluate clearance of infection after second-line treatment.

In a few circumstances, patients attended their general practitioner's office for TOC and later informed the clinic of the result.

As this was a retrospective quality control study, local research ethics committee (REC) approval was not required.

STable I. Age distribution of positive anal tests (*lymphogranuloma venereum* excluded)

Age, years	Years		Distribution *n* (%)
	2004 to 2005	2010 to 2011	
15–19	2	5	7 (2.5)
20–29	63	59	122 (43.4)
30–39	46	45	91 (32.4)
40–49	15	22	37 (13.2)
50–59	8	11	19 (6.8)
60–69	1	3	4 (1.4)
70–79	0	1	1 (0.4)
Total	135	146	281



SFig. 1. Study flow chart. LGV: *lymphogranuloma venereum*; Ct: *Chlamydia trachomatis*; Mg: *Mycoplasma genitalium*.