SOI som kan ha rettsmedisinsk betydning

Kurs I klinisk rettmedisinsk sakkyndighet for overgrepsmottak Oslo Kongresssenter 08.09.26

Michelle Hanlon, Overlege Olafiaklinikken OUS, mihanl@ous-hf.no

Oslo universitetssykehus

UiO

Olafiaklinikken (OUS)

- *Hud* (Rikshospital) *og veneriske sykdommer* (Schous Plass)
- Poliklinisk (drop in-soi)
- Timeavtaler: (henvist-genital dermatose, PrEP)

Populasjon:

- “voksne”(ikke barn)
- mennesker , intim kontakt med annen person,
- stor MSM populasjon (høyere forekomst soi)

Oslo universitetssykehus

Open access Original research

BMJ Open

Sexually transmitted infections among patients attending a sexual assault centre: a cohort study from Oslo, Norway

Katarina Skjælaaen,[1,2] Helle Nesvold,[2] Mette Brekke ,[1] Miriam Sare,[3] Elisabeth Toverud Landaas,[3,4] Ibrahimu Mdala,[1] Anne Olaug Olsen,[5,6] Odd Martin Vallersnes [1,7]

Oslo

Prospective observational cohort study among patients attending a SAC from May 2017 to July 2019.

- N=645
- Female: n=602 (93.3%)
- Male:n=43 (6.7%)

- CT 8.7% kvinner, 4.8% menn
- Mg 6.9% kvinner, 0% menn
- Ng 0.7% kvinner, 0% menn
- Ingen nye tilfeller hiv, syphilis, hbv, hcv

Table 3 Sexually transmitted infections at primary examination among patients attending a sexual assault centre in Oslo, Norway

	Female n/N (%)	Male n/N (%)	Total n/N (%)
Chlamydia trachomatis			
Patients total	50/578 (8.7)	2/42 (4.8)	52/620 (8.4)
Cervix/vagina/urethra/urine*	49/573 (8.6)	0/42*	49/615 (8.0)
Anus	12/243 (4.9)	2/30 (6.7)	14/273 (5.1)
Mycoplasma genitalium			
Patients total	34/494 (6.9)†	0/35	34/529 (6.4)†
Cervix/vagina/urethra/urine*	28/490 (5.7)‡	0/34	28/524 (5.3)‡
Anus	8/212 (3.8)§	0/25	8/237 (3.4)§
Neisseria gonorrhoeae			
Patients total	4/593 (0.7)	0/42	4/635 (0.6)
Cervix/vagina/urethra/urine*	2/573 (0.3)	0/41	2/614 (0.3%)
Anus	1/238 (0.4)	0/30	1/268 (0.4)
Oropharynx	4/522 (0.8)	0/36	4/558 (0.7)
Hepatitis B			
Known chronic contagious infection	1/584 (0.2)	1/42 (2.4)	2/626 (0.3)
Previous infection	10/584 (1.7)	1/42 (2.4)	11/626 (1.8)
Previously vaccinated	181/584 (31.0)	15/42 (35.7)	196/626 (31.3)
Positive vaccination status during follow-up¶	360/420 (85.7)	24/32 (75.0)	384/452 (85.0)
Hepatitis C			
Known previous infection	12/585 (2.1)	2/42 (4.8)	14/627 (2.2)
HIV			
Known infection	1/586 (0.2)	0/42	1/628 (0.2)
Syphilis			
Known previous infection	1/576 (0.2)	2/39 (5.1)*	3/615 (0.5)

Proportions stated as positive tests (n) per patient tested (N).
Fourteen patients were tested for lymphogranuloma venereum, all negative.
Seven patients were tested for *Trichomonas vaginalis*, all negative.

Skjælaaen K, et al. BMJ Open. 2022;12:e064934. doi:10

Oversikt

Klinikers perspektiv :

- Soi screening: Ct, Ng, hiv syfilis, hepatitt B/C
- uforventet/diskordante svar (Fallgruv diagnostikk)
- vindusperioden/ sikker test?

- HSV- serologi eller ikke?
- Skade Vs infeksjon
- Sår/vesikel/lesjon Quiz

Vanlige/ viktige SOI ?

Bakterier

•Klamydia (inkl LGV)

•Mycoplasma genitalium

•Gonoré

•Syfilis

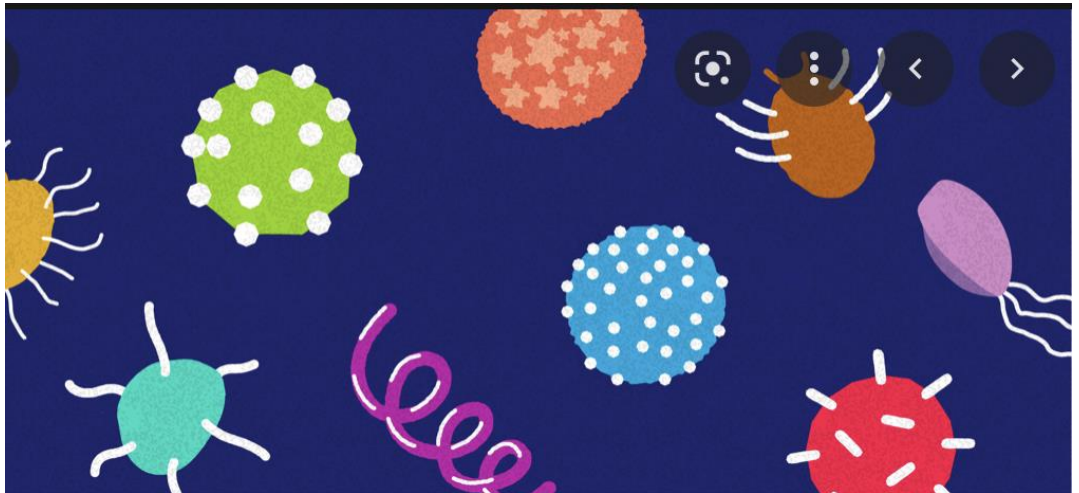
•Haemophilus ducreyi (chancroid/bløt sjanker)-Malawi, India ellers sporadisk Europa)

• *Klebsiella granulomatis (*granuloma inguinale/Donovanosis) India, Sørafrika, Sør amerike

mm..

Parasitt

- Skabb
- Lus
- Trikomonas vaginalis



Virus

- HPV
- Herpes simplex virus
- Molluscum contagiosum
- M-kopper

- Hiv
- Hep B (D)
- Hepatitt C
- Hepatitt A,E

Sopp?

- Trichophyton mentagrophytes

Received: 23 January 2025 | Accepted: 6 May 2025

DOI: 10.1111/ddg.15837

ORIGINAL ARTICLE

Trichophyton mentagrophytes type VII: cohort study on patient characteristics, clinical features, disease course, and treatment

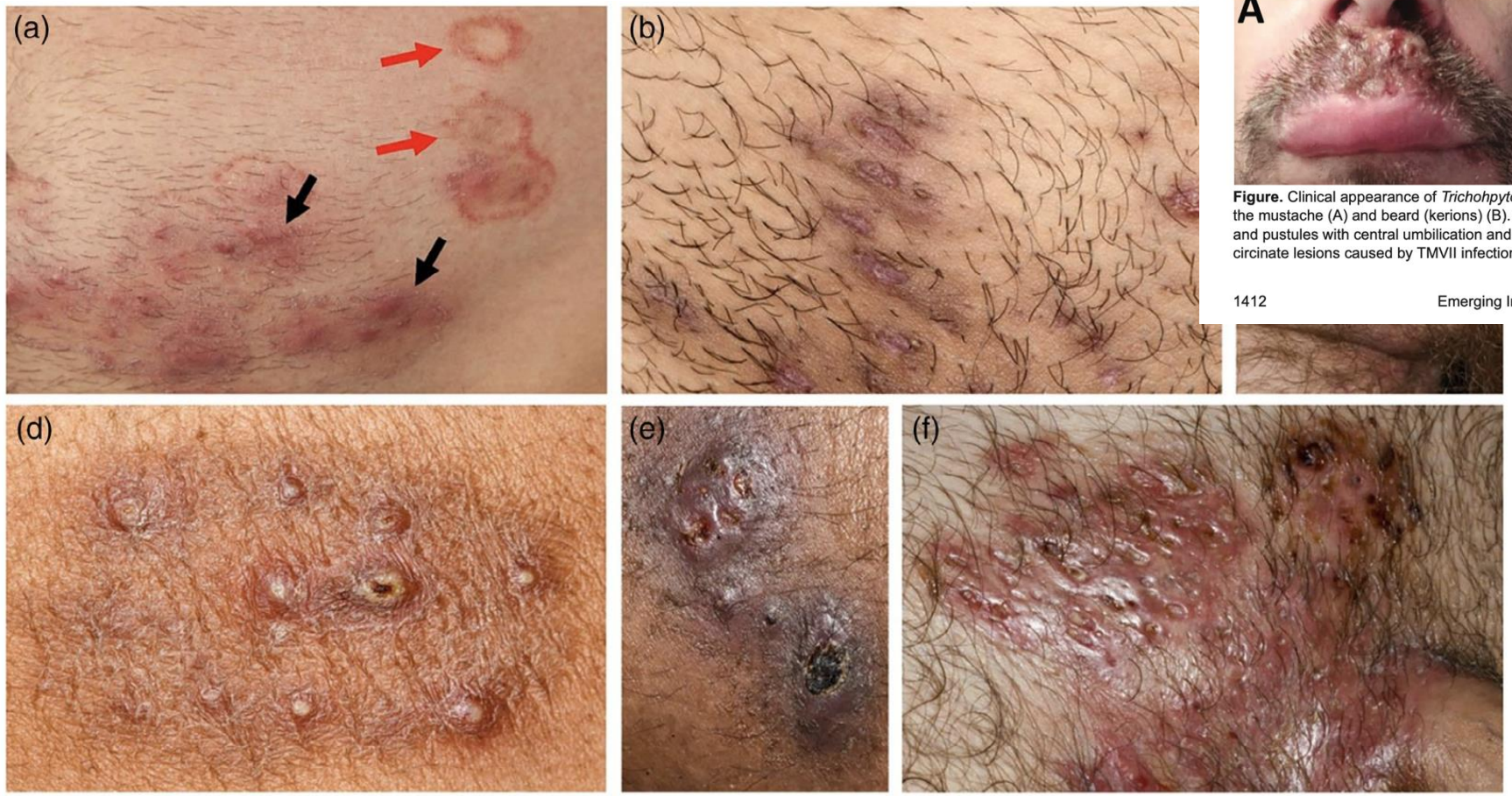


FIGURE 1 Clinical presentations of Trichophyton mentagrophytes type VII infections. (a) Typical tinea corporis lesions (superficial, well-demarcated erythematous plaques with marginal accentuation and scaling; red arrows) and atypical subcutaneous papules and pustules (black arrows) on the pubic area and lower abdomen. (b–d) Subcutaneous papules and pustules, partly follicular, in the pubic, perianal, and gluteal regions of three different patients. (e–h) Confluent subcutaneous pustules and papules forming nodules and plaques. (i) Localized alopecia on the forearm.

Sexually Transmitted *Trichophyton mentagrophytes* Genotype VII Infection among Men Who Have Sex with Men

Arnaud Jabet, Sarah Dellière, Sophie Seang, Aziza Chermak, Luminita Schneider, Thibault Chiarabini, Alexandre Teboul, Geoffroy Hickman, Alizée Bozonnat, Cécile Brin, Marion Favier, Yanis Tamzali, François Chasset, Stéphane Barete, Samia Hamane, Mazzouz Benderdouche, Alicia Moreno-Sabater, Eric Dannaoui, Christophe Hennequin, Arnaud Fekkar, Renaud Piarroux, Anne-Cécile Normand, Gentiane Monsel

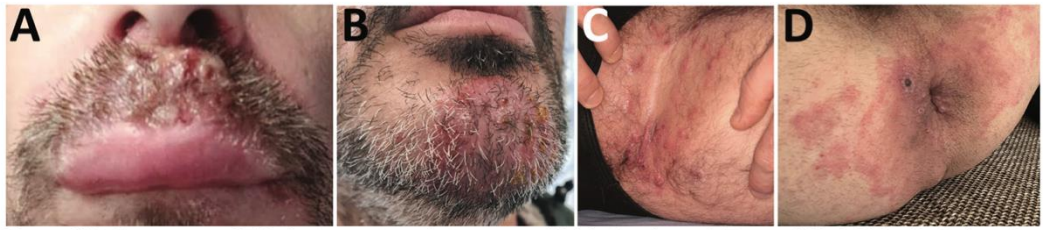


Figure. Clinical appearance of *Trichohpyton mentagrophytes* genotype VII infections in men in France, 2022. A, B) Swollen lesions of the mustache (A) and beard (kerions) (B). C) Papular and nodular inguinal lesions. D) Peri-anal mpox lesions with associated papules and pustules with central umbilication and a large lesion with a central necrotic crust, surrounded by extensive erythemato-squamous circinate lesions caused by TMVII infection.

Vanlige/ viktige SOI og smittemåte

Relevante soi?:
smittemåte
inkubasjonstid

Bakterier

- Klamydia (inkl L
kontakt) med infi
- Mycoplasma ge
direkt kontakt) m
- Gonoréinokulas
infisert sekret

- Syfilis direkt kon
- …

Parasitt

- Skabb:hudko
- Lus: direktkor
- Trikomonas

takt
dkontakt
esmitte
e

Smittetallene fortsetter å øke etter hepatitt A-utbrudd

20.000 kunder kan ha vært innom restauranten før utbruddet ble oppdaget. Flere kommuner tilbyr drop-in-vaksiner.

Carl Anders Brynildsen Sørheim
Journalist

Publisert 11. aug. kl. 14:02
Oppdatert 11. aug. kl. 14:26

Screenshot

Vanlige/ viktige SOI ?

Bakterier

- Klamydia (inkl LGV)
- Mycoplasma genitalium
- Gonoré
- Syfilis
- Haemophilus ducreyi (chancroid/b

Hvilke infeksjoner bør jeg screene for??

mm..

Parasitt

- Skabb
- Lus
- Trikomonas vaginalis

Virus

screening

- Latent/ tidlig symptomatisk fase
- komplikasjoner
- Enkelt påletelig akseptablet test
- Akseptablet behandling

Wilson & Jungner's principles of screening

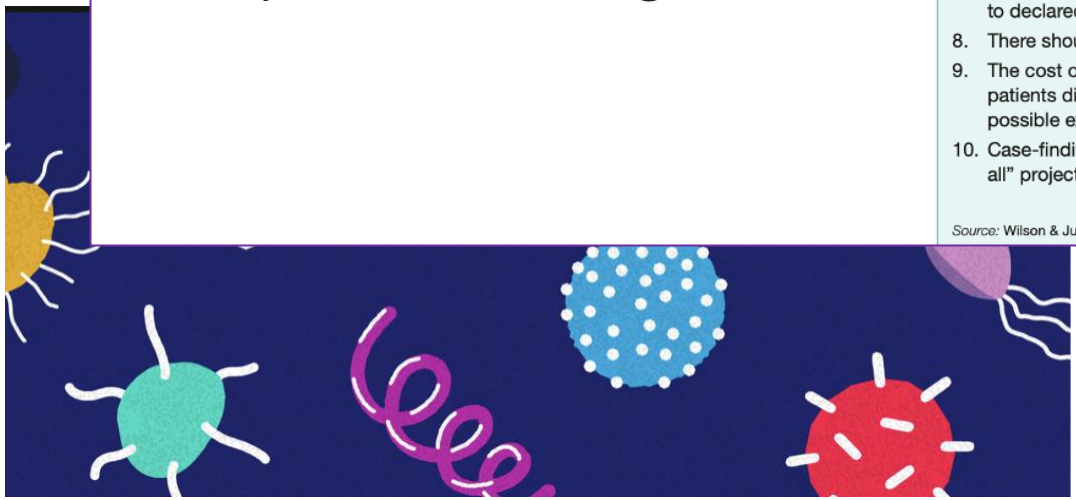
The era of modern screening began in 1968 with a landmark publication by Wilson & Jungner for WHO *(3)*, which stated:

Screening is the presumptive identification of unrecog-
nized disease or defect by the application of tests, exami-

Box 1. Wilson & Jungner's principles of screening

1. The condition should be an important health problem.
2. There should be an accepted treatment for patients with recognized disease.
3. Facilities for diagnosis and treatment should be available.
4. There should be a recognizable latent or early symptomatic phase.
5. There should be a suitable test or examination.
6. The test should be acceptable to the population.
7. The natural history of the condition, including development from latent to declared disease, should be adequately understood.
8. There should be an agreed policy on whom to treat as patients.
9. The cost of case-finding (including a diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole.
10. Case-finding should be a continuous process and not a "once and for all" project.

Source: Wilson & Jungner *(3)*.



SO kurs 2024-06. Medisinsk undersøkelse og behandling.pdf

-kjente komplikasjoner
-akseptablet test
-god behandling

Oslo

Medisinsk undersøkelse og behandling

Vivian Moe Dalaker
Dina Midttun
Katarina Skjælaaen

Prøvetakning ved Overgrepsmottaket

	Akutt	2 uker	5 uker	3 måneder	6 måneder (se kommentarer)
SOI PCR-prøver					
Klamydia	X	X			
Gonoré	X	X			
Blodprøver Serologi					
Hiv (Hiv-Ag/As)	X	X	X	X	
Hepatitt B (HbsAg og anti-HBs)	X			X	X * Tas dersom blodprøver ved 3 måneder viser ikke-immun status / HBsAb <10 IU
Hepatitt C** (anti-HCV)	X		X	X	X ** Ved høy smitterisiko
Syfilis	X		X	X	
Blodprøver **Klinisk kjemisk**					
ALAT Alle pasienter	X	X Gjentas hvis unormale prøver akutt	X	X	
Kreatinin og eGFR Kun ved hiv-PEP	X	X Gjentas hvis unormale prøver akutt			
Graviditet					
U-hCG (S-hCG)	X	X	X		

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Home > Newsroom > Bacterial STIs reach record highs in Europe, as congenital syphilis cases nearly double

< Newsroom

Bacterial STIs reach record highs in Europe, as congenital syphilis cases nearly double

Press release

21 May 2026

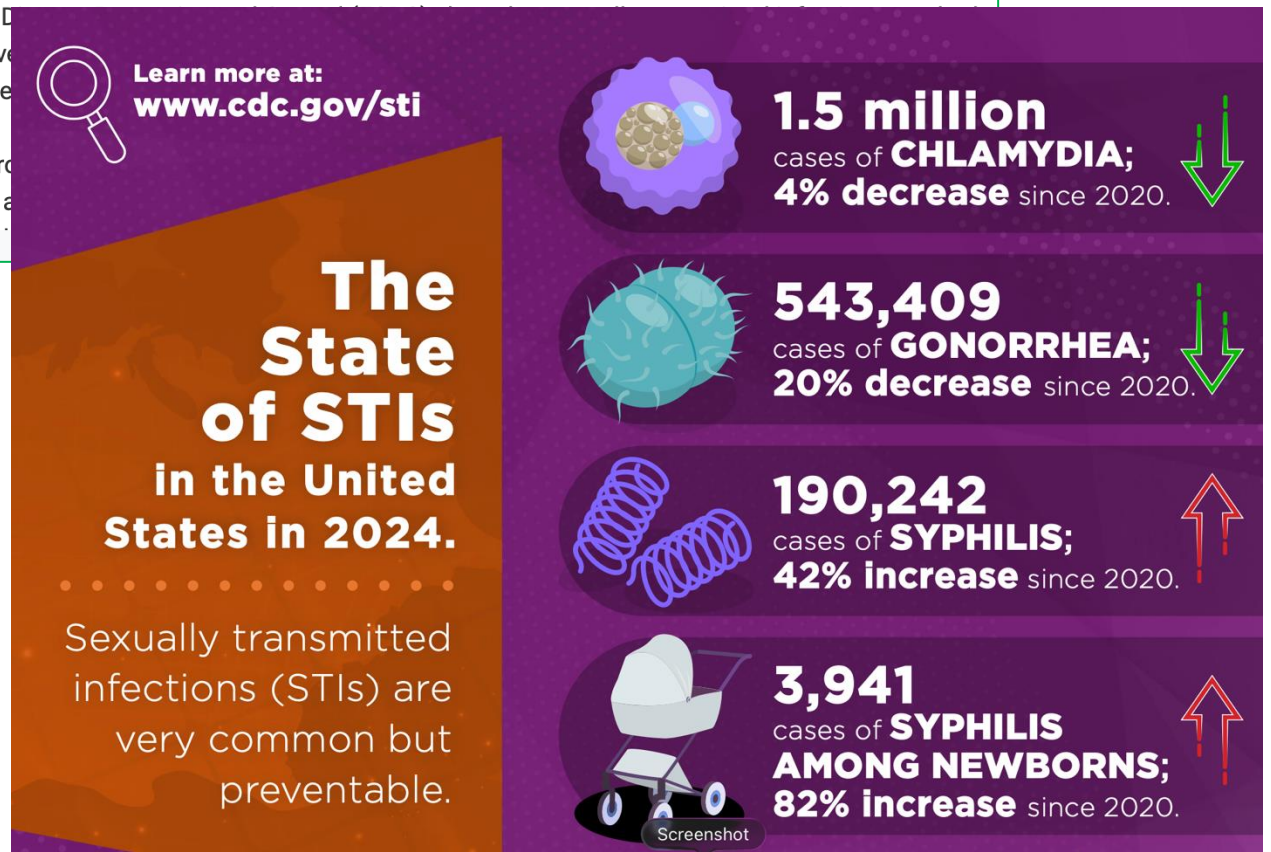
BBC

Gonorrhoea and syphilis hit record levels in Europe

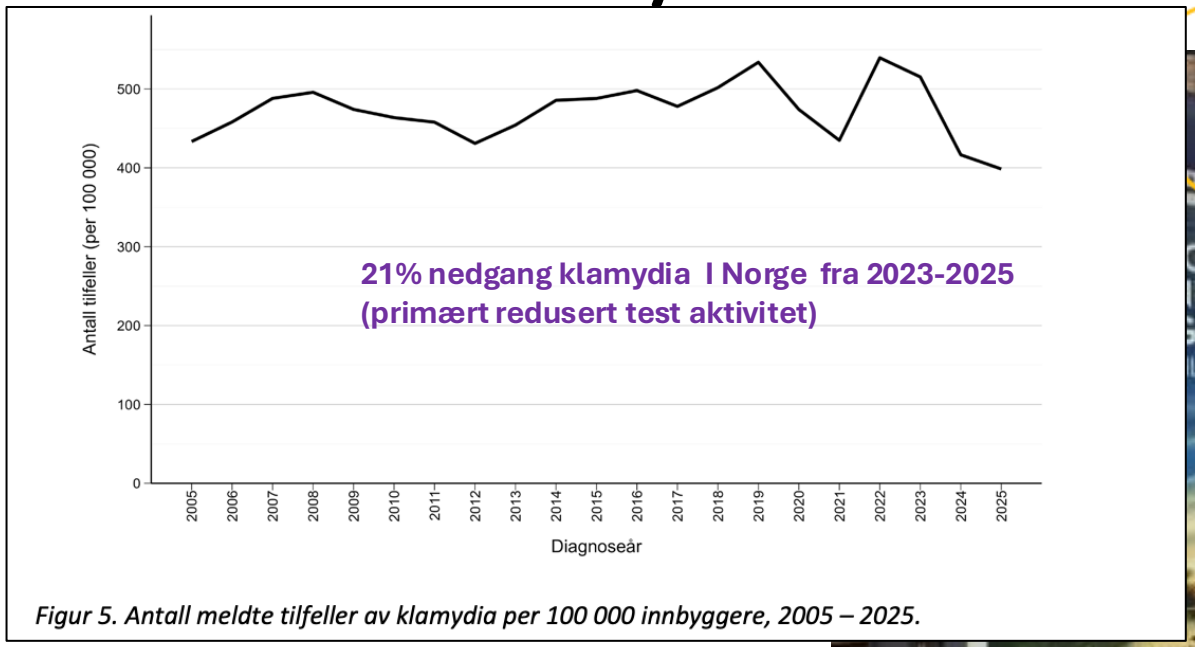
21 May 2026

Share Save Add as preferred on Google

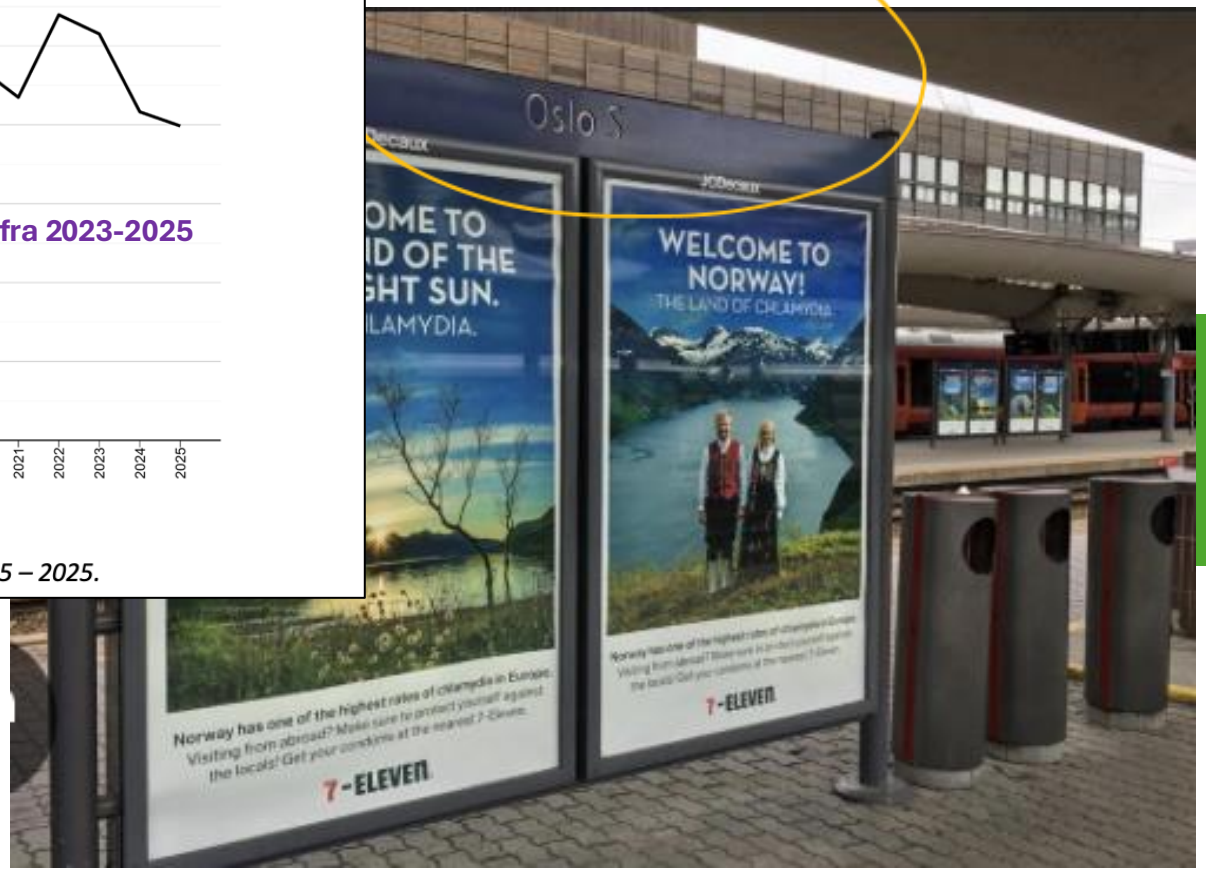
Dan Sales



”Norway- the land of Chlamydia”



Figur 5. Antall meldte tilfeller av klamydia per 100 000 innbyggere, 2005 – 2025.



Ct rate 2024
1. Denmark
2. Island
3. Norge

Published 21.05.26

https://www.fhi.no/contentassets/afee45c2b35a4a179f5a8672d60d8a34/arsrapport_overvakning-av-blod--og-seksuelt-overforbare-infeksjoner_2025_final.pdf

Nordiske land utgjør 35% av rapporterte tilfeller av Ct i Europa

60-80% infeksjoner asymptomatiske

2014
n=24,696

2024
n= 106,331

Published 21.05.26

303% økning gonoré i europa fra 2015-2024

- Twenty-eight European Union/European Economic Area (EU/EEA) countries reported 106 331 confirmed cases of gonorrhoea for 2024, with a crude notification rate of 26.9 cases per 100 000 population.

https://www.ecdc.europa.eu/sites/default/files/documents/AER%20gonorrhea%202024.pdf

Gonoré rate i Europa

RAPID COMMUNICATION

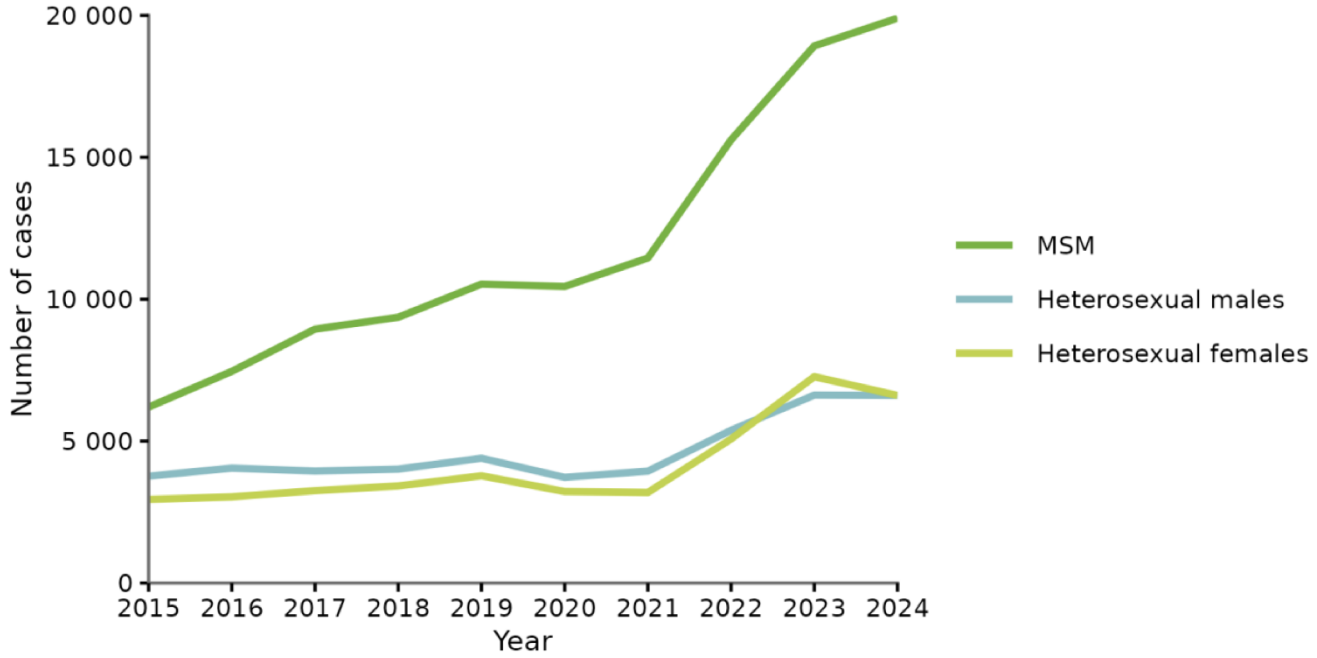
Sharp increase in gonorrhoea notifications among young people, EU/EEA, July 2022 to June 2023

Lina Nerlander[1], Lydia Champezou[1], Joana Gomes Dias[1], Gudrun Aspelund[2], Lina Berlot[3], Elisavet Constantinou[4], Asunción Díaz[5], Jevgenia Epštein[6], Erika Fogarassy[7], Victoria Hernando[5], Patrick Hoffmann[8], Derval Igoe[9], Irena Klavs[3], Pedro Pinto Leite[10], Kirsi Liitsola[11], Angeline McIntyre[9], Zsuzsanna Molnár[7], Anne Olaug Olsen[12], Yolanda Pires-Afonso[8], Renāte Putniņa[13], Kęstutis Rudaitis[14], Georgios Siakallis[15], Sacha de Stoppelaar[16], Barbara Suligoi[17], Tuula Hannila-Handelberg[11], Inga Velicko[18], Vítor Cabral Veríssimo[10,19], Maartje Visser[16], Maria Wessman[20], Otilia Mår

1. European Centre for Disease Prevention and Control, Stockholm, Sweden
2. Centre for Health Security and Communicable Disease Control, Directora
3. Communicable Diseases Centre, National Institute of Public Health, Ljub
4. Ministry of Health, Nicosia, Cyprus

Eurosurveillance

Figure 5. Number of confirmed gonorrhoea cases by gender, transmission category and year in EU/EEA countries reporting consistently, 2015–2024



MSM overrepresentert
Økning i alle grupper de siste

Reported confirmed cases Ng in europe (excluding UK):

- 2014 n=24,696
- 2019: n=40,639
- 2024: n=106,331

ecdc
EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

Antall meldte tilfeller gonoré etter kjønn og smittemåte, Norge 1994-2025

2009-2019: 10 ganger økning både i MSM og KSM gruppe

MSM overrepresentert

https://www.fhi.no/contentassets/afee45c2b35a4a179f5a8672d60d8a34/arsrapport_overvakning-av-blod--og-seksuelt-overforbare-infeksjoner_2025_final.pdf

Antall meldte tilfeller gonoré etter kjønn og smittemåte, Norge 1994-2025

2009-2019: 10 ganger økning både i MSM og KSM gruppe

MSM overrepresentert

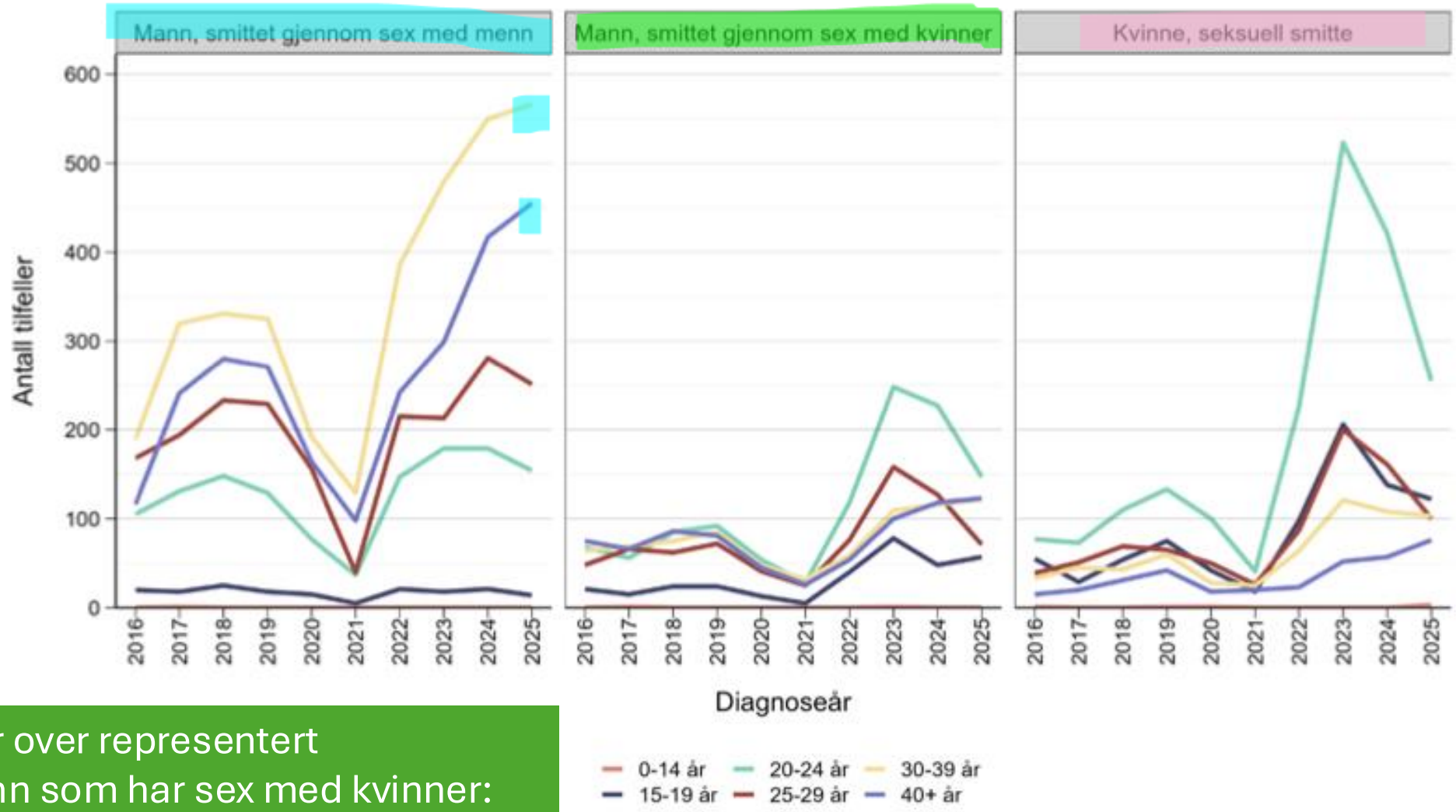
https://www.fhi.no/contentassets/afee45c2b35a4a179f5a8672d60d8a34/arsrapport_overvakning-av-blod--og-seksuelt-overforbare-infeksjoner_2025_final.pdf

Tabell 1. Antall meldte tilfeller av gonoré, etter kjønn og smittemåte, 2016 – 2025.

Smittemåte	Diagnoseår									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Mann, smittet gjennom sex med menn	598	905	1017	972	604	309	1011	1188	1448	1440
Mann, smittet gjennom sex med kvinner	276	273	332	354	201	116	347	694	636	520
Mann, uspesifisert seksuell smitte	2	3	3	2	0	0	1	1	120	153
Kvinne, seksuell smitte	220	218	307	376	239	130	498	1102	881	659
Mor-barn	0	0	0	0	1	0	0	0	0	1
Ukjent[1]	0	0	0	0	0	0	0	0	61	89
Totalt	1096	1399	1659	1704	1045	555	1857	2985	3150	2864

https://www.fhi.no/contentassets/afee45c2b35a4a179f5a8672d60d8a34/arsrapport_overvaking-av-blod--og-seksuelt-overforbare-infeksjoner_2025_final.pdf

"1m" opphevet sept 21, oppheving "alt" feb 22



MSM 30-39år over representert
Kvinner, menn som har sex med kvinner:
20-24år >>> andre aldersgrupper

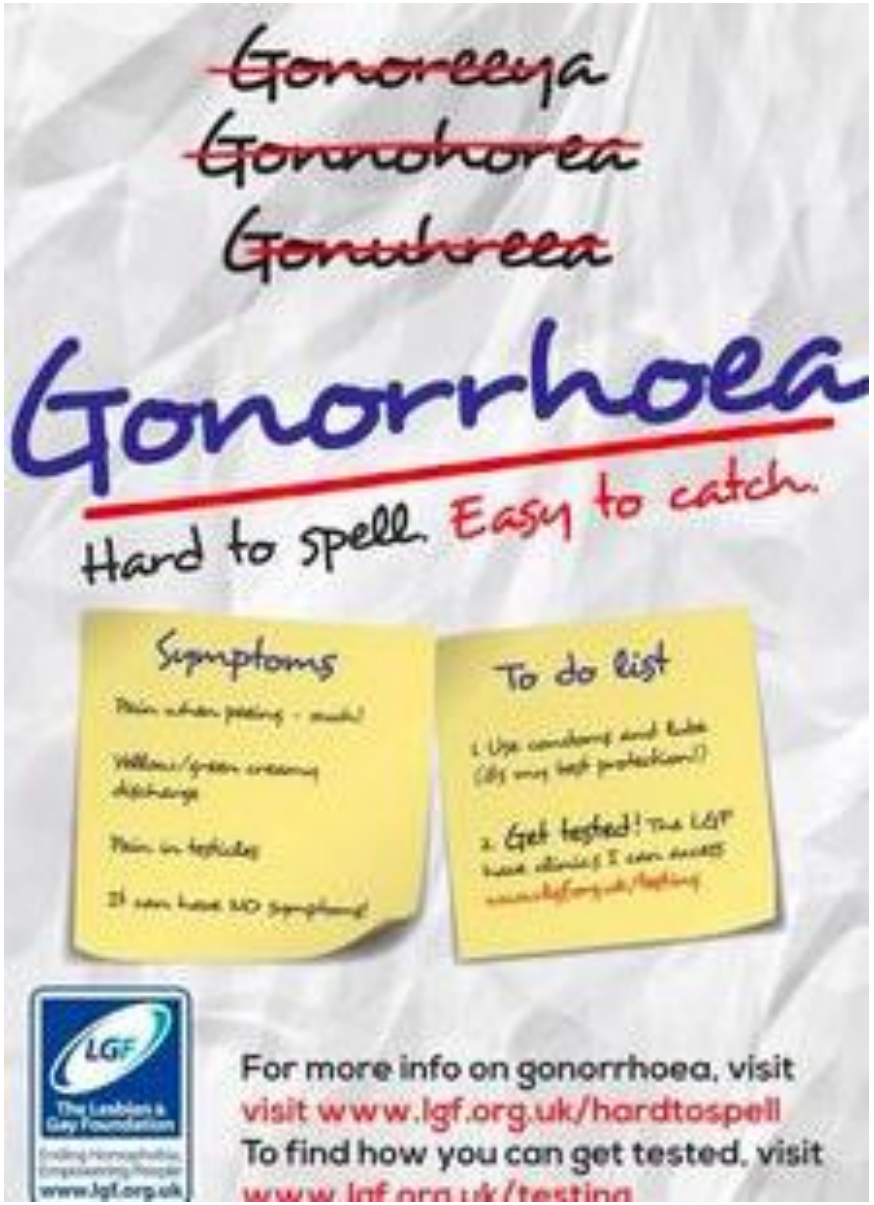
Figur 3. Antall meldte tilfeller av gonoré etter alder, kjønn og smittemåte, 2016 – 2025.

https://www.fhi.no/contentassets/afee45c2b35a4a179f5a8672d60d8a34/arsrapport_overvakning-av-blod--og-seksuelt-overforbare-infeksjoner_2025_final.pdf

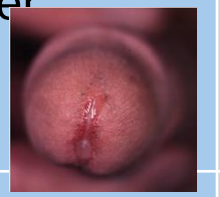
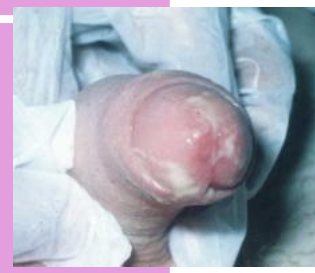
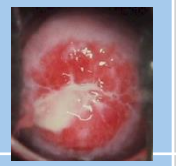
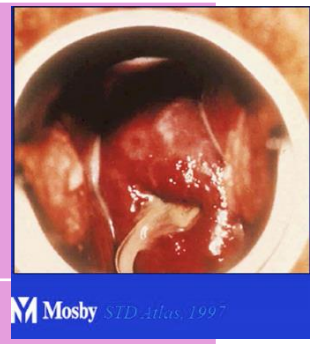
Smittsomhet av Gonoré

Fra 1 vaginal sex,

- ca 50-90% kvinne smittet fra 1 episode
- ca 20-30% for menn smittet fra 1 episode



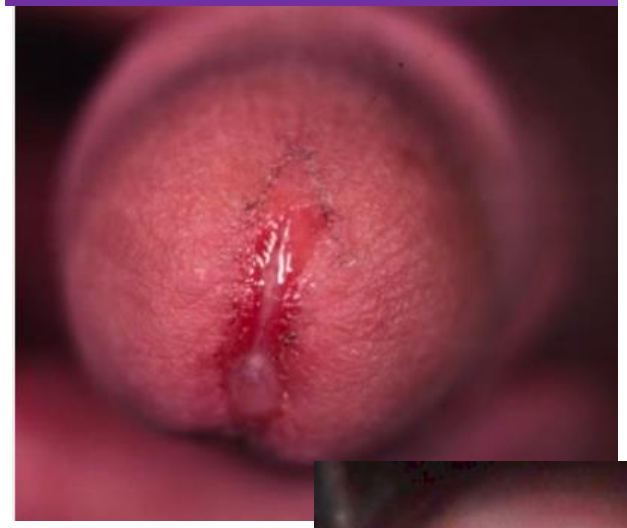
Symptomer avhengig av infeksjon og lokalisasjon

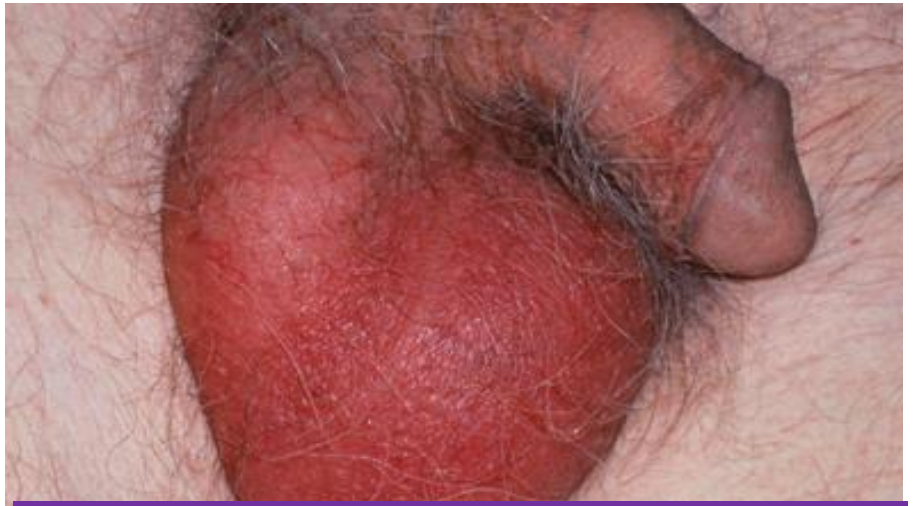
	Klamydia	M genitalium	Gonoré
Uretritt menn	Ca 50% (lett dysuri, lett uretra utflod 1-3 uker etter smitte[1] (ofte normal) 	Opptil 95% asymptomatisk (tilbakefallende uretritt)	90% purulent utflod 2-5 (8)dager etter sex [2(3)] **10% asymptomatisk** 
Cervicitt/ uretritt kvinner	70-95% asymptomatisk 	Ofte (40-75%) asymptomatisk	<50% " endret utflod" 
Proktitt	Typisk asymptomatisk (70% kvinner med urogenital Ct har anal infeksjon)	Nesten aldri symptomer	Typisk asymptomatisk
Faryngitt	Typisk asymptomatisk Opptil 50% spontant borte ("clearance") mellom testing og behandling1	Nesten aldri symptomer	Typisk asymptomatisk

https://www.bashh.org/_userfiles/pages/files/national_guideline_for_the_management_of_infection_chlamydia_trachomatis_2026.pdf
https://www.bashh.org/_userfiles/pages/files/fiferetal2025britishassociationofsexualhealthandhivuknationalguidelineforthemanagementofinfection_1.pdf
https://iusti.org/wp-content/uploads/2020/10/IUSTI-Gonorrhoea-2020.pdf

Ng,Ct kan forårsake blant annet

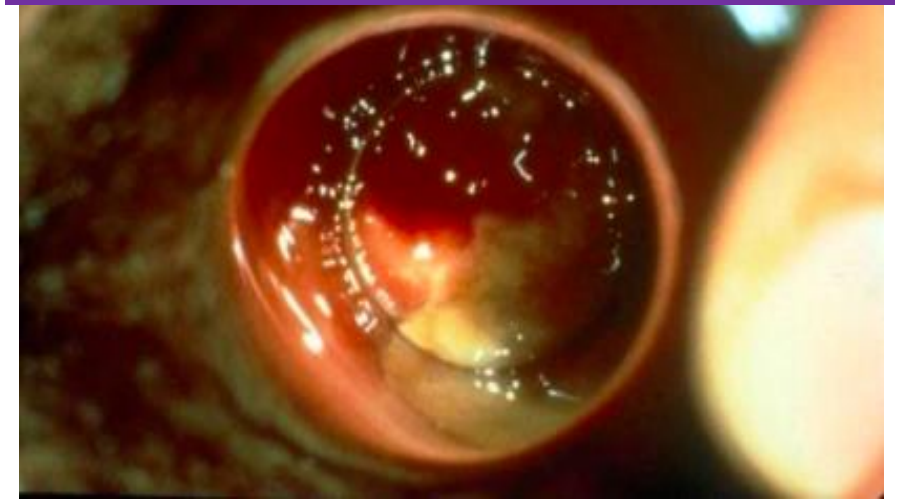
uretritt

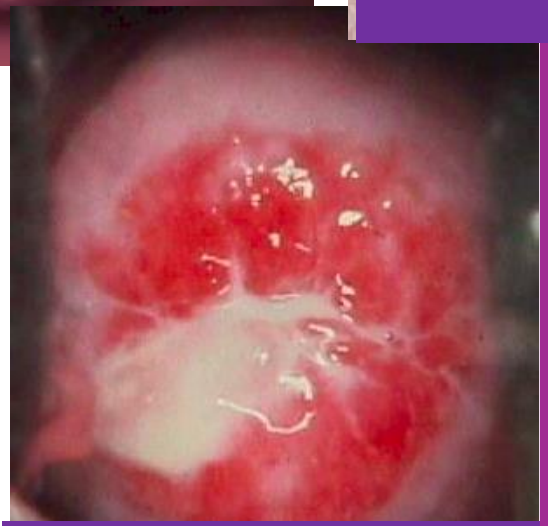




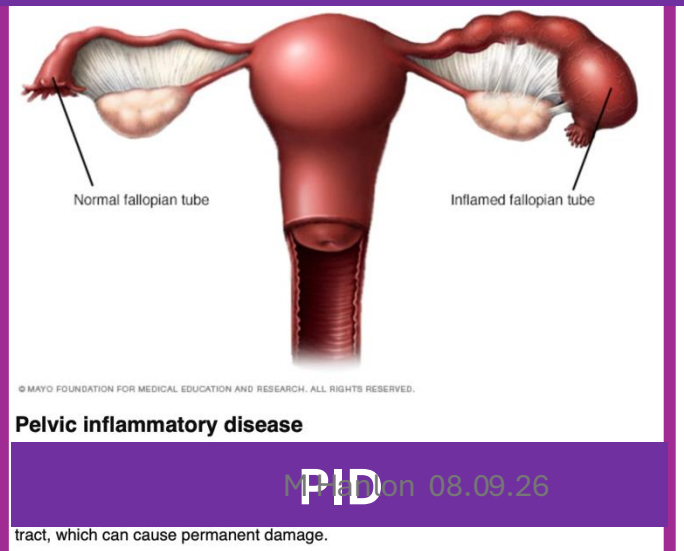
Epididymo-orkitt

proktitt

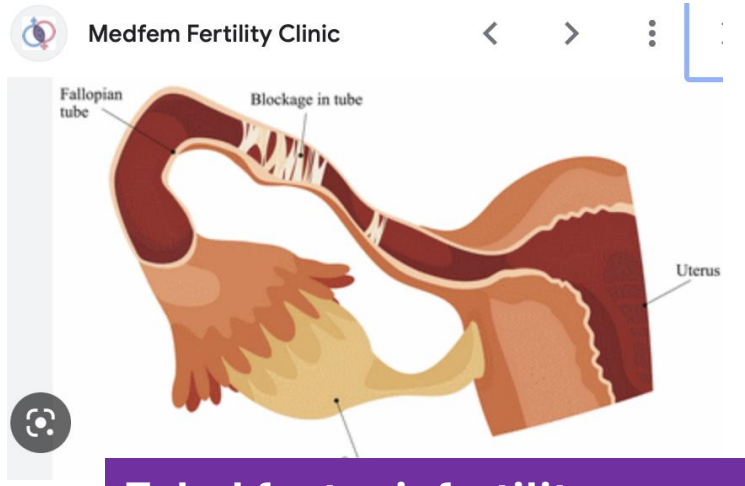




cervicitt



PID



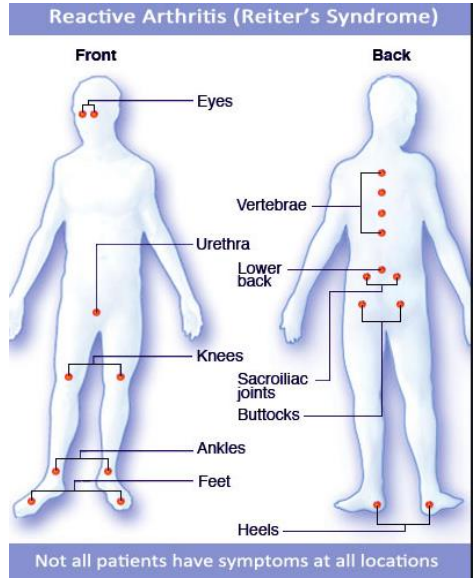
Tubal factor infertility

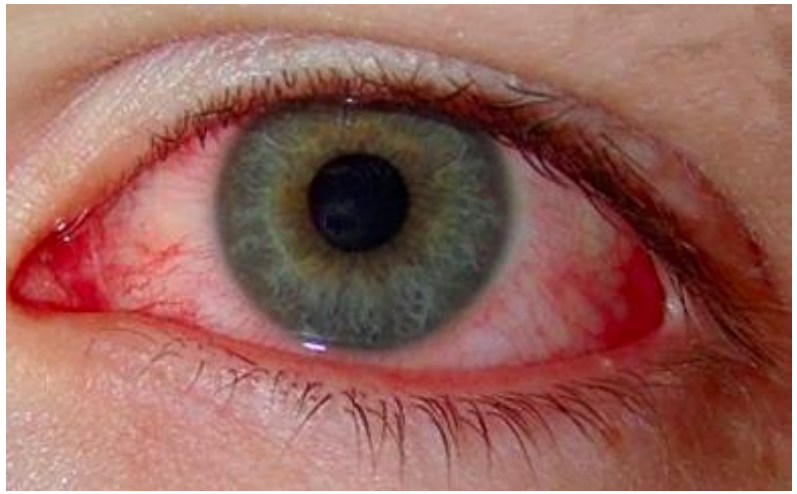
Andre Komplikasjoner felles til Ct, Ng

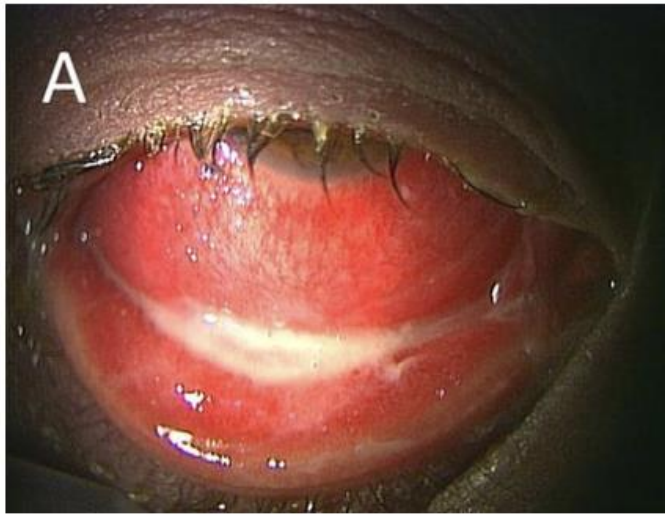
- reaktiv artritt <1%

(sexually acquired reactive arthritis: SARA)

- Konjunktivitt





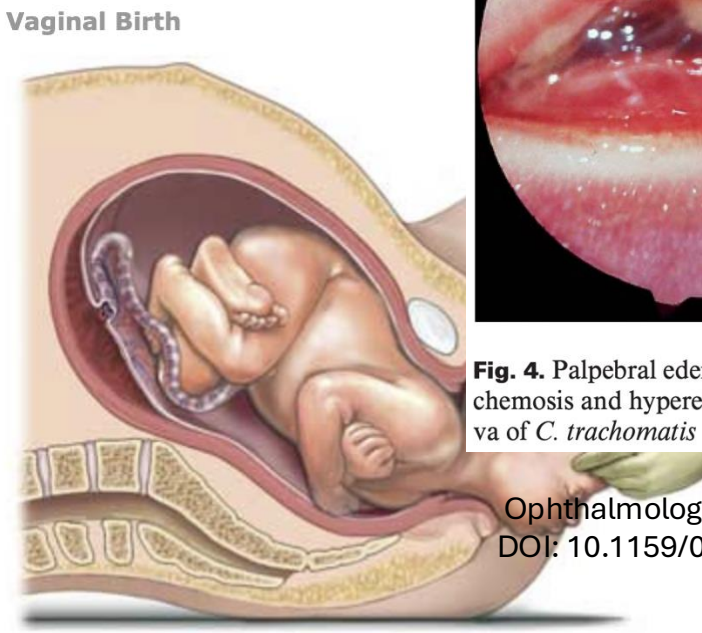


Andre Komplikasjoner felles til Ct og Ng

Mor til barn:

- For tidlig fødsel, chorioamnionitt, IUGR(?)

- Klamydia – smitte 50-70%[1]
  - -Neonatal konjunktivitt 30-50%
  - -Neonatal pneumoni 10-20%
- Gonoré
  - -Neonatal konjunktivitt ca 30% smitte risiko[2]
- Mycoplasma genitalium
  - -Teoretisk risiko øye /lunge infeksjon (smitterisiko(ca 10%?)



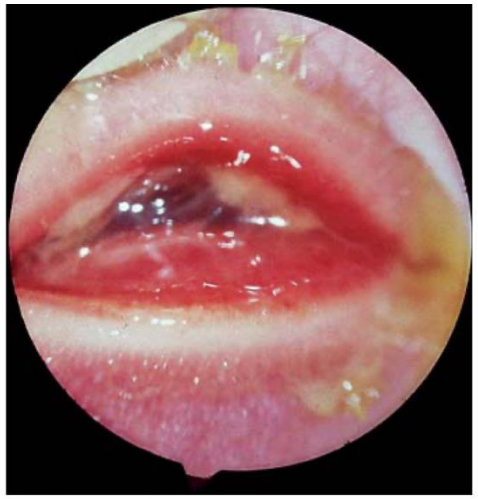
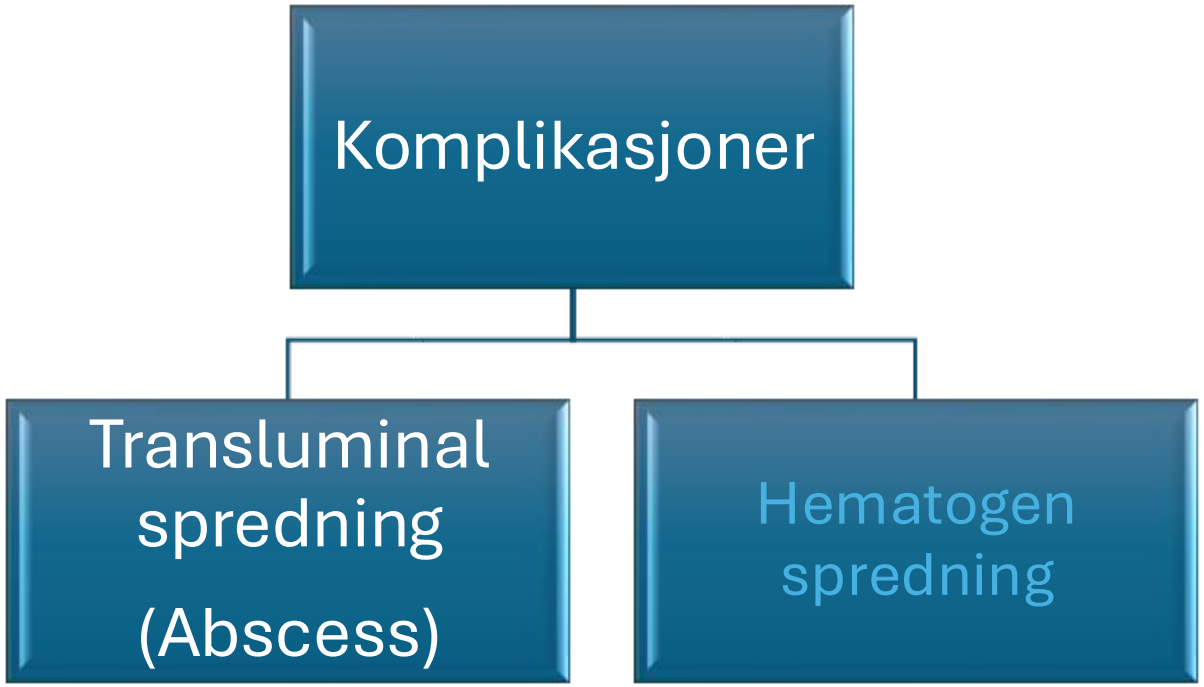


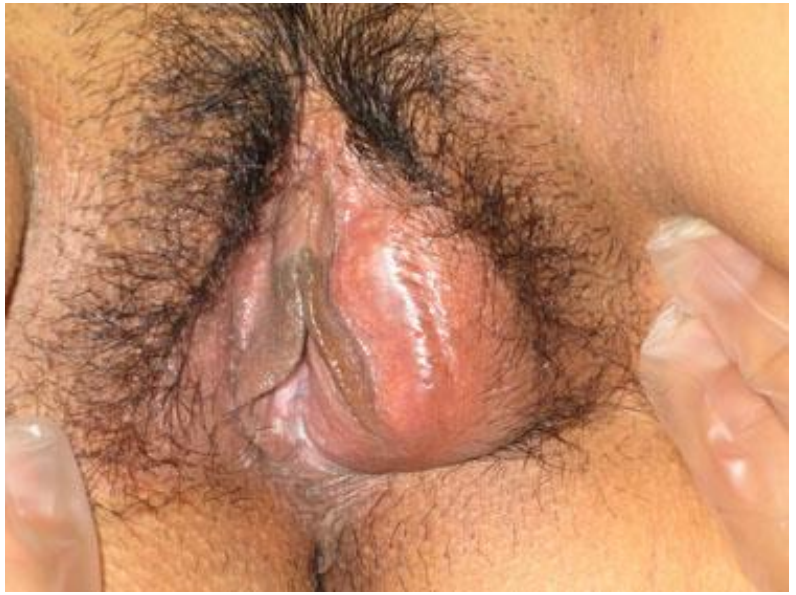
Fig. 4. Palpebral edema, discharge, diffuse chemosis and hyperemia on the conjunctiva of *C. trachomatis* inflammation.

Ophthalmologica 2005;219:232–236
DOI: 10.1159/000085733

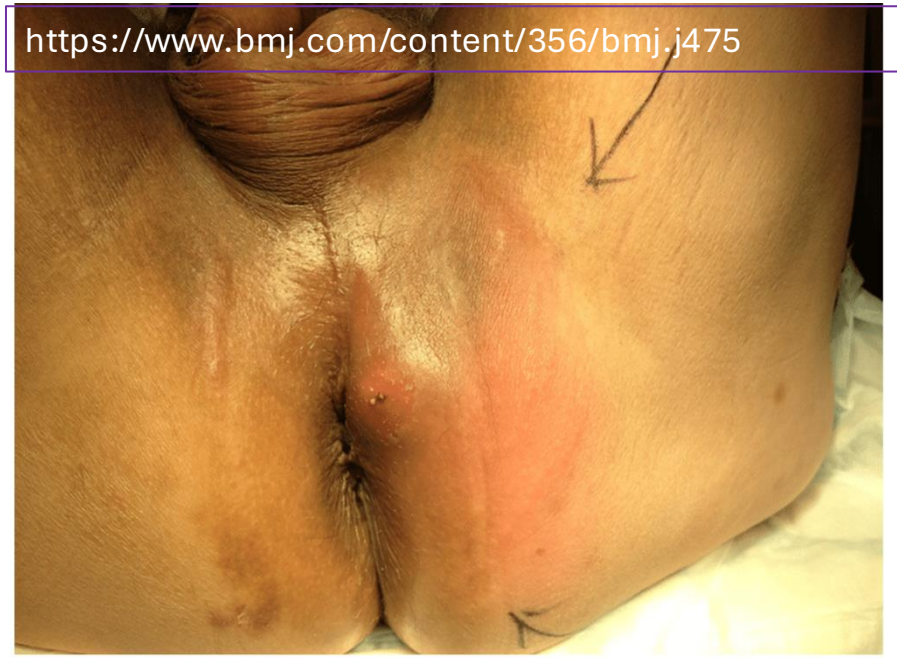
1. https://iusti.org/wp-content/uploads/2025/03/white-et-al-2025-2025-european-guideline-on-the-management-of-chlamydia-trachomatis-infections.pdf
2. https://www.fhi.no/sm/smittevernhandboka/sykdommer-a-a/gonore/?term=#smittemte
3. vhttps://iusti.org/wp-content/uploads/2022/03/Jensen-et-al_Published.pdf

Litt mer om gonoré (Ng)





https://www.bmj.com/content/356/bmj.j475



Typical clinical appearance of a superficial perianal abscess

Abscesser : f.eks Bartholinitt, perianal abscess

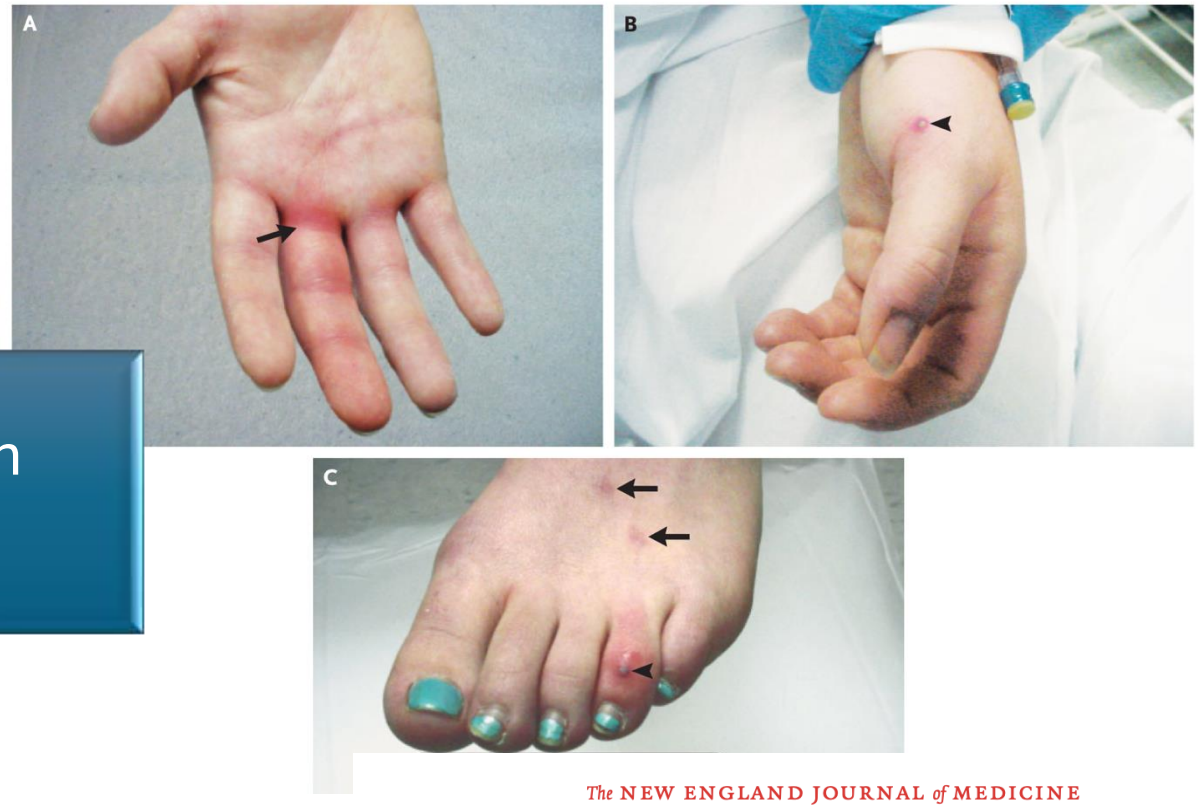
Litt mer om gonoré (Ng)

N Engl J Med
. 2005 Apr 21;352(16):e15.
doi: 10.1056/NEJMicm040620.

Komplikasjoner

- Transluminal spredning (Abscess)
- Hematogen spredning

Disseminated Gonococcal Infection



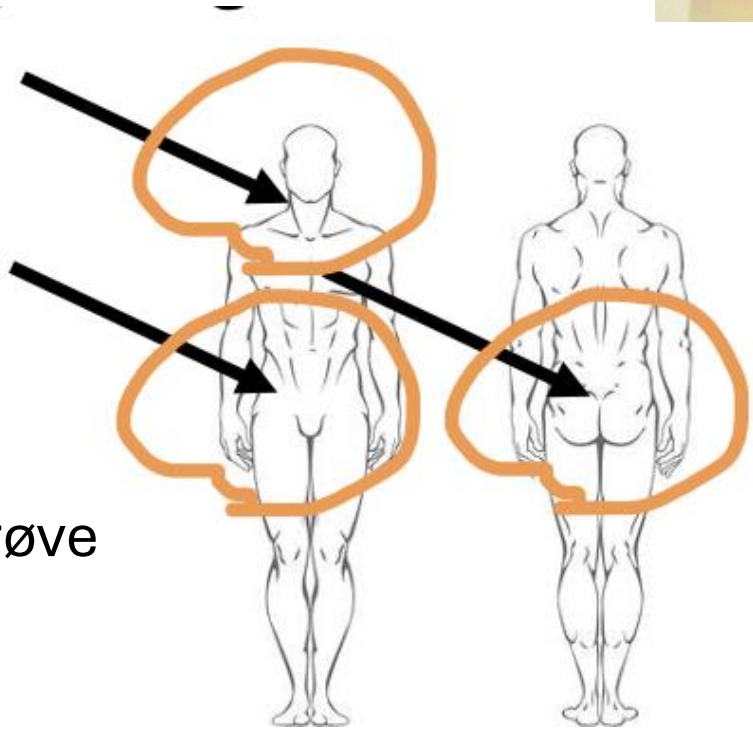
The NEW ENGLAND JOURNAL of MEDICINE

IMAGES IN CLINICAL MEDICINE

Disseminert gonokk infeksjon: septisk artritt, tenosynovitt, endokarditt, meningitt ....

Screening :Ct /Ng : NAT(f.eks PCR)

- Hals: penselprøve
- Anus: penselprøve
- Vagina: penselprøve
  -ikke urin -dårligere senstivitet



Frem til juni 2026
Ous- Eswab copan
(PCR- DNA)

- Penis : førstestråle urin (10-20ml)
- Neovagina: både urin og vaginalpenselprøve

«sikker test « = 2 uker etter siste risiko

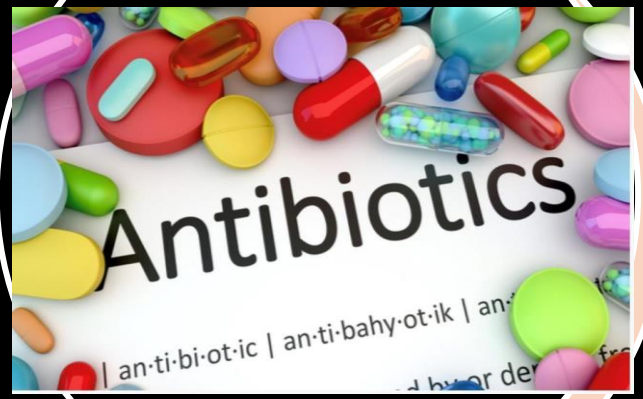
furst: (TMA-rRNA)

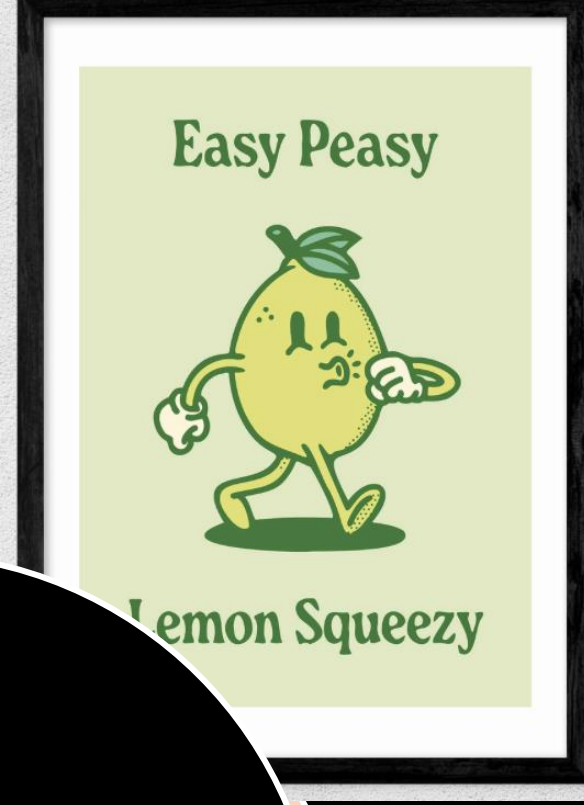
Oppsummering av SOI prøver og vindusperioden

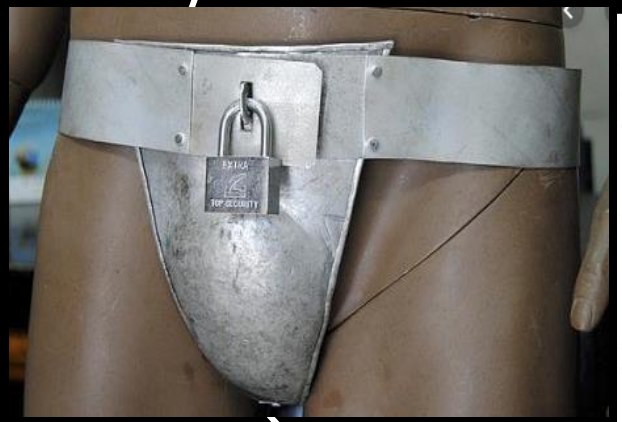
Type infeksjon	Prøvematerialet	Screening Analyse	Sikker test / vindusperioden
Klamydia **Gonoré** **M. genitalium*** **T. vaginalis***	-førstestråle urin (penis/neovagina) -pinneprøve sekret fra vagina +/- cervicalsekret -pinneprøve sekret fra neovagina -ev. pinneprøve hals, anus	NAT/PCR	2 uker
Hiv	serum	Hiv Ag/As test	45 dager (uten antiviralmedisin) 90 dager hvis PEP/PREP**
Syfilis	serum	T pallidum total As	90 dager **
Hepatitt B	serum	BsAg, BcAs, BsAs	6 måneder**
Hepatitt C	serum	Hep C As	6 måneder**

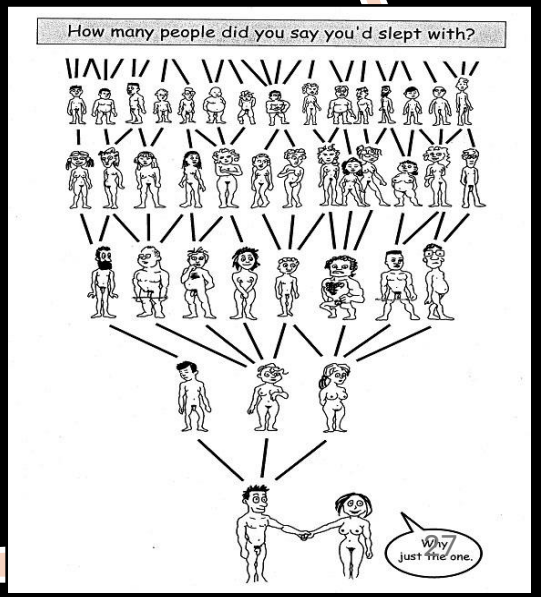
*tester ikke Mg eller Tv i halsen. Tester ikke Tv i anus
** ofte positive langt før dette

Tolkning Positiv NAT/ PCR = infeksjon









Uforventet positiv /diskordante svar

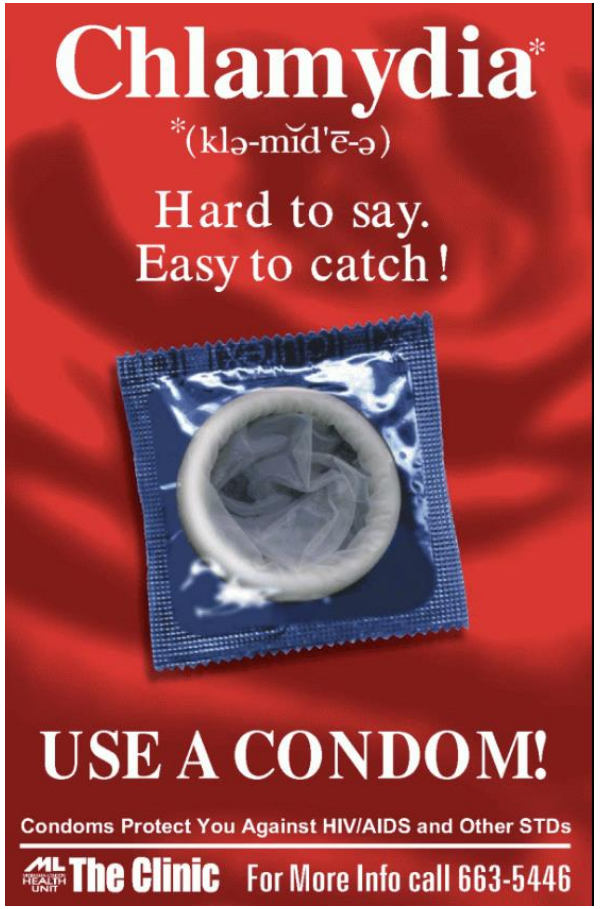
Vanlige kliniske spm:

- Har partneren min vært utro?
- Hvem smittet meg? Min ny partner eller eksen?
- Har jeg gonoré eller ikke?

Har partneren min vært "utro"?

- Marius er kjæreste med Nora i 1 år
- Nora testet pos Ct fra gynekolog (før spiral insettning)
- Han testet seg hos fastlege og er negative

Mulige forklaringer??



Kan du forklare Pål og Noras diskordante svar ?

- Nora er smittet med CT (intim kontakt med en annen/infisert gjenstand)
- Begge hadde CT, men Pål tok antibiotika og er nå kurert
- Prøvebytting (gynekolog)
- Kontaminasjon (prøvetaker/lab)
- Falsk positiv test hos Nora (dårlig spesificitet)? Falsk negativ hos Pål (lav senstivitet? (test performance ulike NAT tester)
- Pål har blitt spontant kvitt Ct?

Klinisk: samtale begge og tilby ny test til begge, (samme sted, samme analyse)
behandle Nora (risiko PID) +/- partnerbehandling for Pål(?)

Fallgruv diagnostikk NAT/PCR

- Testens-performance: sensitivit, specificitet
- Mutanter
- Human error
- Natural clearance
- Timing

Example of 4 NAAT for CT with different amplification, targets,+/- confirmation tests

Table I. Comparison of the characteristics of four commonly used automated NAAT platforms for the detection of *Chlamydia trachomatis* nucleic acid in clinical specimens.

	Abbott	BD	GenProbe	Roche
Name of test	Real-time CT/NG	BD Probe Tec	Aptima Combo AC2	Cobas c4800
Amplification method	Real-time PCR	Strand Displacement Amplification (SDA)	Transcription Mediated Amplification (TMA)	Real-time PCR
***Chlamydia trachomatis* targets**	Cryptic plasmid (dual targets)	Cryptic plasmid	23S rRNA	Cryptic plasmid and ompA gene (dual targets)
nvCT detection	Yes	Yes	Yes	Yes
Plasmid free *Chlamydia trachomatis* detection	No	No	Yes	Yes
Confirmation test using an alternative target	No	No	Yes (16S rRNA)	No
Internal control	Internal control (from extraction to amplification)	Extraction control only, no amplification control	None	Internal control (from extraction to amplification)
Validation for extra-genital site testing[96,99,100]	No data	Rectal (sensitivity 63%); oropharyngeal (sensitivity 67%)	Rectal (sensitivity 93%); oropharyngeal (sensitivity 100%)	NA[a]

[a]An older version of Roche Cobas PCR was evaluated, sensitivity for rectal *Chlamydia trachomatis* 91.4% to 95.8%

https://www.bashh.org/_userfiles/pages/files/resources/ct2015.pdf

JOURNAL OF CLINICAL MICROBIOLOGY, Mar. 2005, p. 1372–1373 Vol. 43, No. 3
0095-1137/05/$08.00+0 doi:10.1128/JCM.43.3.1372–1373.2005

Confirming Positive Results of Nucleic Acid Amplification Tests (NAATs) for *Chlamydia trachomatis*: All NAATs Are Not Created Equal

J. Schachter,[1]* E. W. Hook,[2] D. H. Martin,[3] D. Willis,[4] P. Fine,[5] D. Fuller,[6] J. Jordan,[7] W. M. Janda,[8] and M. Chernesky[9]

University of California, San Francisco, California[1]; University of Alabama, Birmingham, Alabama[2]; Louisiana State University Medical Center, New Orleans, Louisiana[3]; Florida State Department of Health, Jacksonville, Florida[4]; Planned Parenthood Foundation of Houston and Southeast Texas, Houston, Texas[5]; Wishard Memorial Hospital, Indianapolis, Indiana[6]; Magee-Womens Research Institute, Pittsburgh, Pennsylvania[7]; University of Illinois, Chicago, Illinois[8]; and St. Joseph's Health Care Regional Virology and Chlamydiology Laboratory, Hamilton, Ontario, Canada[9]

Received 4 August 2004/Returned for modification 7 October 2004/Accepted 14 November 2004

HVILKE NAT??

Diskordanse mellom ulike NAAT

N=2878 prøver fra menn og kvinner

- AC2: screening positiv CT :n= 850
  funn bekreftet med
  - -ACT 98.1%
  - - BD 82%
- ACT: screening positiv CT: n=927
  funn bekreftet med
  - -AC2 89.8%
  - - BD 75.1%
- BD: screening positiv CT: n=7
  funn bekreftet med
  - -AC2 96.9%
  - - ACT 96.9%

ACT mindre spesifikk?, AC2 bekreftet ikke alle fordi falske positiver

Vs

ACT mer sensitiv enn alle andre

TABLE 1. Confirming po
amplification tests

Specimen type and test	Confirmatory test	No. tested and % positive for group indicated[a]		
		Male	Female	Total
Both specimen types				
AC2		481	369	850
	ACT	97.5%	98.9%	98.1%
	BD	82.3%	81.6%	82.0%
ACT		512	415	927
	AC2	91.2%	88.0%	89.8%
	BD	76.6%	73.3%	75.1%
BD		406	314	720
	AC2	97.5%	96.2%	96.9%
	ACT	97.0%	95.9%	96.9%

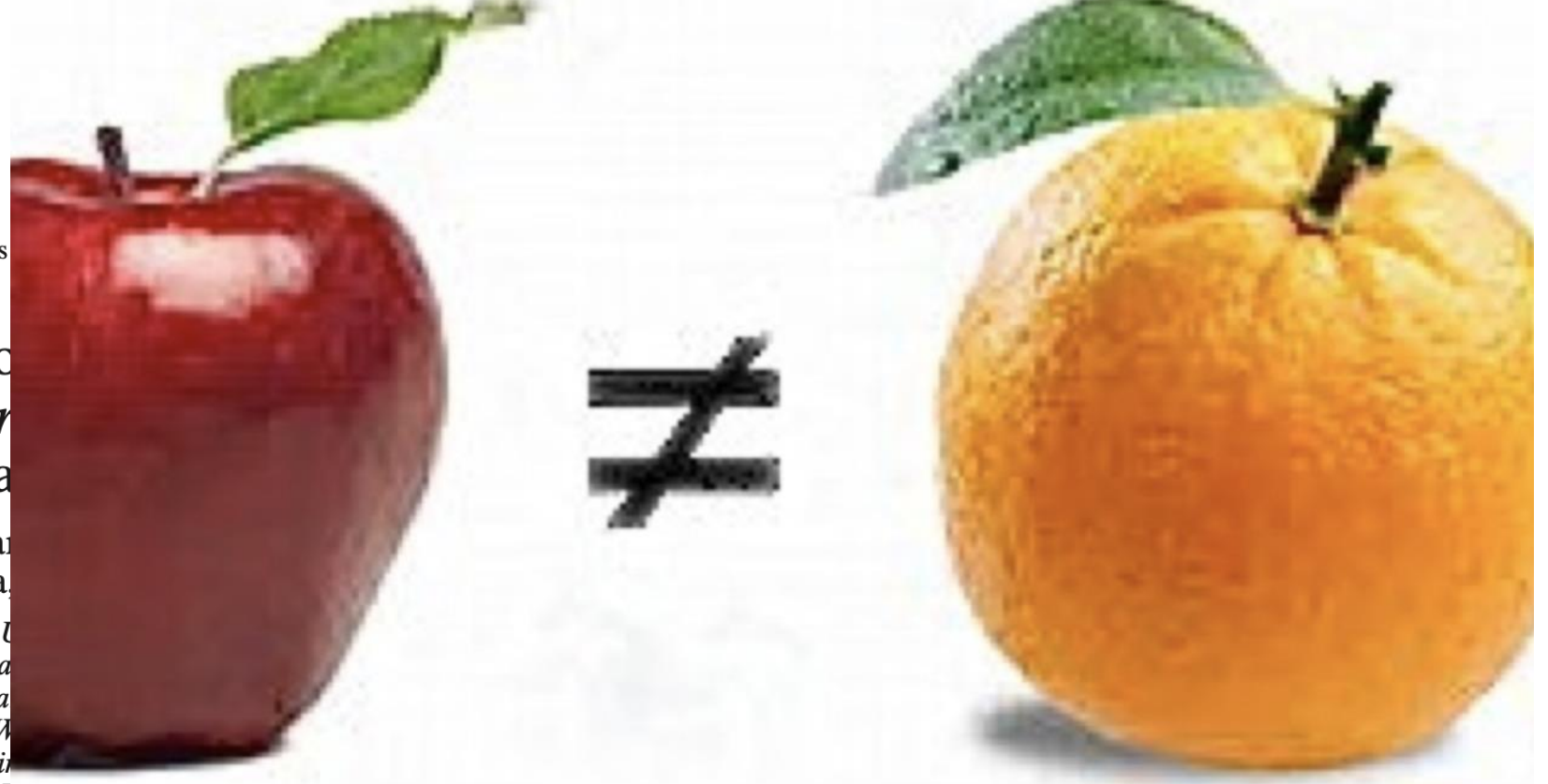
ACT oligonucleotide probes target rRNA sequences different from those for the AC2

JOURNAL OF CLINICAL MICROBIOLOGY, Mar. 2005, p. 1372–1373
0095-1137/05/$08.00+0 doi:10.1128/JCM.43.3.1372–1373.2005

Confirming Positive Results c
(NAATs) for *Chlamydia tr*
Crea

J. Schachter,[1]* E. W. Hook,[2] D. H. Ma
W. M. Janda,

University of California, San Francisco, California[1]; U
University Medical Center, New Orleans, Louisiana
Planned Parenthood Foundation of Houston a
Hospital, Indianapolis, Indiana[6]; Magee-W
University of Illinois, Chicago, Illi
Virology and Chlamydiology L



Received 4 August 2004/Returned for modification 7 October 2004/Accepted 14 November 2004

HVILKE NAT??

“ All NAATS are NOT Created Equal!”

The test

plification tests (NAATs). NAATs are the standard of care for all cases, including medico-legal cases and extra-genital infections.[52–56] Where diagnostic tests are available syndromic management of infection is not appropriate.

Although no test is 100% sensitive or specific, many highly sensitive and specific commercial NAAT assays are available.[52,57–64]

There remains debate as to whether a single reactive NAAT requires further confirmation by re-testing using a second NAAT with a different target/platform. Many authorities no longer recommend testing with a second platform (except for medico-legal cases) as the positive predictive value of a single positive result is high in the context of a high prevalence population (GRADE 1D).[65,66,67,68,69] However, confirmation may be appropriate in low prevalence settings. Additionally, laboratories

https://www.bashh.org/_userfiles/pages/files/national_guideline_for_the_management_of_infection_chlamydia_trachomatis_2026.pdf

Tolkning av NAT:
Fallgruv diagnostikk NAT f.eks CT

Testen

- **“ all NAATs are not created equal**
  -Ingen test har 100% sensitivitet specificetet
- Mutants?

Epidemiology

OPEN ACCESS

ORIGINAL RESEARCH

Rise and fall of the new variant of *Chlamydia trachomatis* in Sweden: mathematical modelling study

Joost H Smid,[1] Christian L Althaus ,[1] Nicola Low ,[1] Magnus Unemo,[2] Björn Herrmann [3]

► Additional material is published online only. To view, please visit the journal online (http://dx.doi.org/10.1136/sextrans-2019-054057).

[1]Institute of Social and Preventive Medicine, University of Bern, Bern, Switzerland
[2]Department of Laboratory Medicine, Clinical Microbiology, Faculty of Medicine and Health, Örebro University, Örebro,

ABSTRACT
Objectives A new variant of *Chlamydia trachomatis* (nvCT) was discovered in Sweden in 2006. The nvCT has a plasmid deletion, which escaped detection by two nucleic acid amplification tests (Abbott-Roche, AR), which were used in 14 of 21 Swedish counties. The objectives of this study were to assess when and where nvCT emerged in Sweden, the proportion of nvCT in each county and the role of a potential fitness difference between nvCT and co-circulating wild-type strains (wtCT).

tests (NAATs). The deleted sequence resulted in thousands of false negative test results[3] and nvCT spread undetected in 14 of 21 Swedish counties that used the Abbott m2000 (Abbott Laboratories, Abbott Park, Illinois, USA) and Cobas Amplicor/TaqMan 48 (Roche, Branchburg, New Jersey, USA) NAATs. The remaining seven Swedish counties used another NAAT, ProbeTEC (Becton Dickinson, BD, Franklin Lakes, New Jersey, USA) that used a different DNA target sequence on the plasmid. At the time of its detection in 2006–2007, the propor-

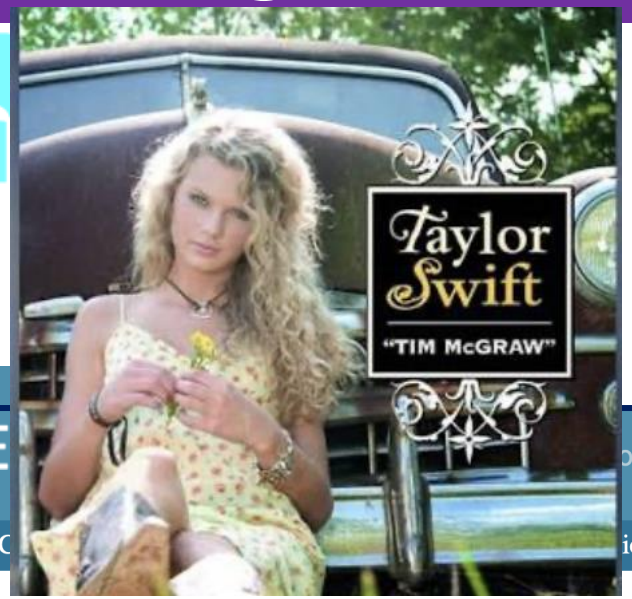
2006 : uforventet 25% nedgang i Ct forekomst I Halland,Sverige ? ??Noe galt med testen

Sexually Transmitted Diseases, May 2007, Vol. 34, No. 5, p.255–256
DOI: 10.1097/OLQ.0b013e31805ce2b9

Note

A Chlamydia trachomatis Strain With a 377-bp Deletion in the Cryptic Plasmid Causing False-Negative Nucleic Acid Amplification Tests

TORVALD RIPA, MD, PHD, AND PETER A. NILSSON, BA



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Articles

A variant of Chlamydia trachomatis with deletion in cryptic plasmid: implications for use of PCR diagnostic tests

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T Ripa , P Nilsson

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Research articles

Open Access

Can the Swedish new variant of Chlamydia trachomatis (nvCT) be detected by UK NEQAS participants from seventeen European countries and five additional countries/regions in 2009?

Like 0

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M Unemo[1] , A Rossouw[2] , V James[2] , C Jenkins[2]

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in the cryptic plasmid, a common NAAT target.
Additionally, in 2019, the Finnish new variant (F-nvCT) escaped detection on the Hologic AC2 assay with a C1515T mutation in the 23S rRNA gene target region and was subsequently also detected in Sweden, Norway and Denmark.[104–107] No cases of this F-nvCT were detected during a case-finding exercise by the UK Health Security Agency in England.[108,109] However, four samples with two other CT variants escaping AC2 assay detection were identified; nvCT-C1514T and nvCT-G1523A. These, plus an additional variant (G1526A) were recently reported in a small numbe during surveillance in Canada.[110] The AC2 assa updated to detect these variants, as well as potential arising due to mutations in that region of the 23S

However, this experience, along with the en SARS-CoV-2 escape variants, clearly shows using single target NAATs for molecular

RAPID COMMUNICATION

Chlamydia trachomatis samples testing falsely negative in the Aptima Combo 2 test in Finland, 2019

Kaisu Rantakokko-Jalava[1,3], Kati Hokynar[4], Niina Hieta[2,3], Anniina Keskitalo[1,3], Pia Jokela[5], Anna Muotiala[6], Rutta Kuusela[8], Hannu Sarkkinen[9], Janne Aittoniemi[10], Tytti Vuorinen[1,3], Antti J Hakanen[1,3], Mirja Puolakka

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3. University of Turku, Turku, Turku, Finland
4. Department nd
5. Department iki and Helsinki University Hospital, Husla
6. United Medi
7. Synlab Finla
8. Satadiag, Po
9. Fimlab, Laht
10. Fimlab Labo

Correspondenc va@tyks.fi)

RAPID COMMUNICATION

The 'Finnish new variant of *Chlamydia trachomatis*' escaping detection in the Aptima Combo 2 assay is widespread across Norway, June to August 2019

en[1,2], Hilde Kløvstad[1], Rikard Rykkvin[1], Einar Bredo Herrfurth-Erichsen[3], Joakim Sorthe[3], Gro Njølstad[4], Marit ndi Monsen Nygaard[4], Ellen Kristin Sandmoen[5], Carina Thilesen[6], Annette Onken[7], Inger Liljedal[8], Ronza emo[9]

ute of Public Health, Oslo, Norway
Health Microbiology Training Programme (EUPHEM), European Centre for Disease Prevention and Control
m, Sweden
oratory, Oslo, Norway
rsity Hospital, Bergen, Norway
l Trust, Department of Medical Microbiology, Tønsberg, Norway
ry Medicine, Department of Medical Microbiology, Skien, Norwa
pital Trust, Department of Microbiology, Drammen, Norway
l, Department for Laboratory Medicine, Levanger, Norway
g Centre for Gonorrhoea and other STIs, National Reference Lab
of Medicine and Health, Örebro University, Örebro, Sweden

ne Bjordal Johansen (tone.johansen@fhi.no)

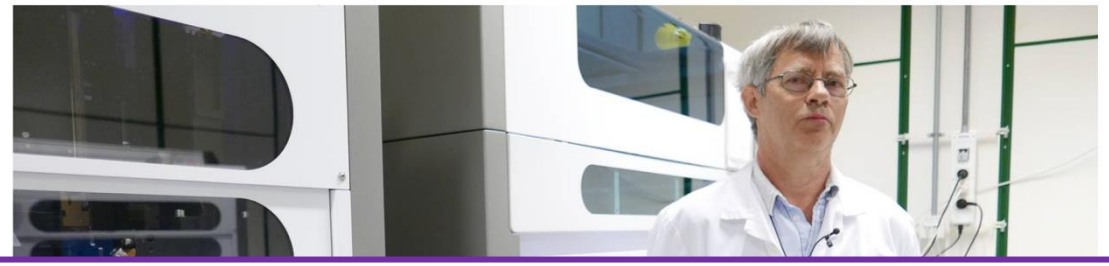
2019: Finland:
Diskordant par- kvinnelig partner pos (Abbott), mannlig partner var neg på ACT2, (pos på Allplex)

Oppdaget i Norge, , Danmark, Sverige

Fallgruv diagnotikk NAT

Ble feilinformert om positiv klamydiatest

Tusen pasienter kan ha fått feil svar på kjønnssykdomstest.



Anette Holth Hansen
Journalist

Lise Merete Olaussen
Journalist

Publisert 7. juni 2016 kl. 06:35

Skylder på leverandøren

Prøvene det er snakk om er tatt fra november 2015 til april 2016.

Og det skal være rundt tusen pasienter som kan ha fått feil svar på kjønnsykdomstester.

TESTET POSITIVT: Rundt tusen personer kan ha fått feil svar på klamydiatest. Årsak? – Maskinen som har analysert prøvene som er tatt, er ikke blitt renset på riktig måte, forteller leder Fredrik Müller ved avdeling for mikrobiologi ved Oslo universitetssykehus.

FOTO: LISE MERETE OLAUSSEN / NRK

Anette Holth Hansen
Journalist

Lise Merete Olaussen
Journalist

Publisert 7. juni 2016 kl. 06:35

https://www.nrk.no/stor-oslo/ble-feilinformert-om-positiv-klamydiatest-1.12985129

Forklare Pål og Nora

- ~~Nora er smittet med CT (intim kontakt med en annen/infisert gjenstand)~~
- ~~Pål hadde også Ct men tok antibiotika og er nå kurert~~
- ~~Prøvebytting (gynekolog)~~
- ~~Kontaminasjon (prøvetaker/lab)~~
- ~~Falske positive hos Nora (lav spesificitet)? Falske negative hos Pål (lav senstivitet? (test performance)~~
- Pål har blitt spontant kvitt Ct?)

Klinisk: samtale begge og reteste begge, (samme sted, samme analyse) behandle Nora (risiko PID) +/- partnerbehandling for Pål(?)

Natural course of Chlamydia infection

Bashh 2026

If untreated, infection may persist or resolve spontaneously.[7–16] Studies evaluating the natural history of untreated genital *C. trachomatis* infection have shown that clearance increases with the duration of untreated infection, with up to 50% of infections spontaneously resolving approximately 12 months from initial diagnosis.[7,10,13,15]

N= 82 women positive CT (substudy HPV infection)
Median f-up 5.7 years
544 cervical scrape

(median visits n= 6.5
follow up every 6-9 mnd)

Approximately 54% of the infections were cleared at 1 year
~82% were cleared at 2 years of follow-up

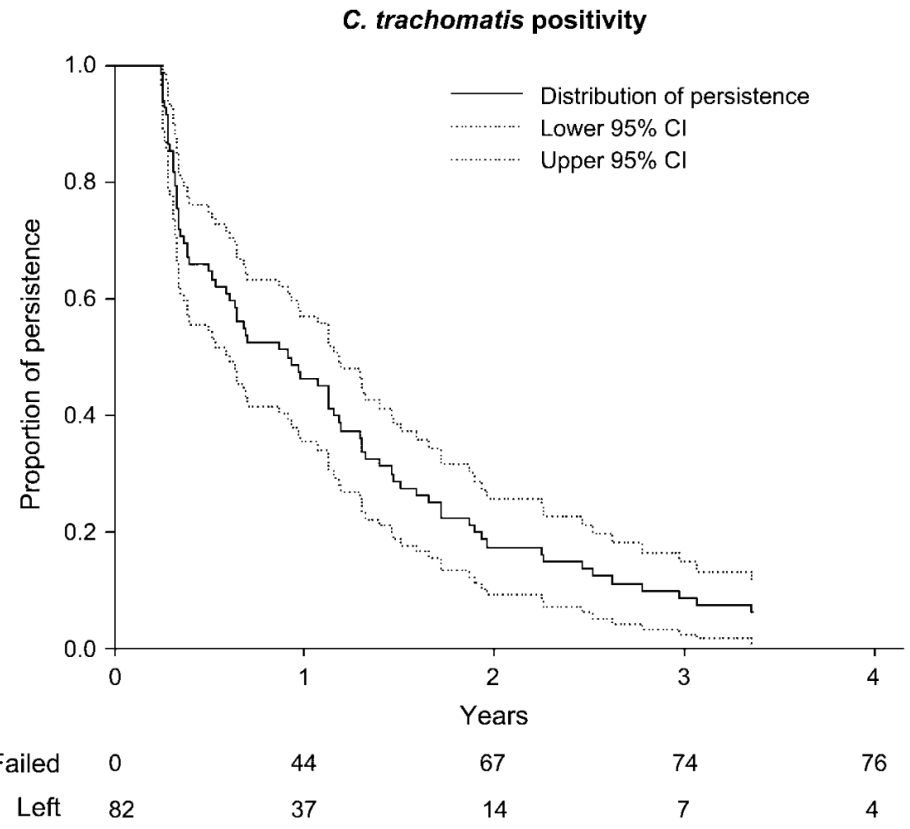


Figure 1. Persistence of *Chlamydia trachomatis* infection as a function of time. CI, confidence interval.

Clearance of *C. trachomatis* Infection in Colombia • JID 2005:191 (15 March) • 907

Tolkning av NAT: Fallgruv diagnostikk f.eks CT

Kan man bli smittet et sted (f.eks anus) UTEN at anal kontakt har skjedd?

CT pos anus uten analsex/kontakt??

- kvinner n = 654 (median alder 23 år)
- screen genital/ analt uavhengig av " indikasjon"
  - **203/654 (31.0%) oppga anal sex +/- symptomer**
  - **48/654 (7.3%) oppga finger/leker analt**
  - **403 /654 (61.6%) oppga ingen anal plager/ kontakt** "without indication "

- 71.2% (52/73) alle kvinner med urogenital chlamydia, hadde anorectal chlamydia samtidig

anorectal chlamydia 8.4% (55/654)

- 37/55 (67%) anorectal Ct hadde " INGEN " indikasjon for screening

Table 1 Characteristics of women attending the STI clinic routinely screened for urogenital and anorectal chlamydia

	Indication# N = 203 % (n)	Fingers/toys only N = 48 % (n)	Without indication N = 403 % (n)	Total N = 654 % (n)
Age				
≤ 21 years	19.2 (39)**	12.5 (6)**	41.2 (166)	32.3 (211)
22-28 years	27.1 (55)	25.0 (12)	40.0 (161)	34.9 (228)
≥ 29 years	53.7 (109)	62.5 (30)	18.9 (76)	32.9 (215)
Prostitutes/swingers	39.4 (80)*	66.7 (32)*	13.9 (56)	25.7 (168)
Chlamydia prevalence				
Urogenital	9.4 (19)	4.2 (2)	12.9 (52)	11.2 (73)
Anorectal	7.9 (16)	4.2 (2)	9.2 (37)	8.4 (55)
Anatomic site distribution chlamydia positives	N = 21	N = 2	N = 53	N = 76
Urogenital only	23.8 (5)	0 (0)	30.2 (16)	27.6 (21)
Anorectal only	9.5 (2)	0 (0)	1.9 (1)	3.9 (3)
Urogenital and anorectal	66.7 (14)	100 (2)	67.9 (36)	68.4 (52)

*P < 0.0001 compared to without indication by Chi square test.
**P < 0.0001 compared to without indication and age 29 years or older by Chi square test.
#Women with indication reported anal use of fingers and/or toys in 43.3% of consultations, symptoms in 9.9%, anal sex with a steady partner in 77.3%, and anal sex with a casual partner in 42.4%.

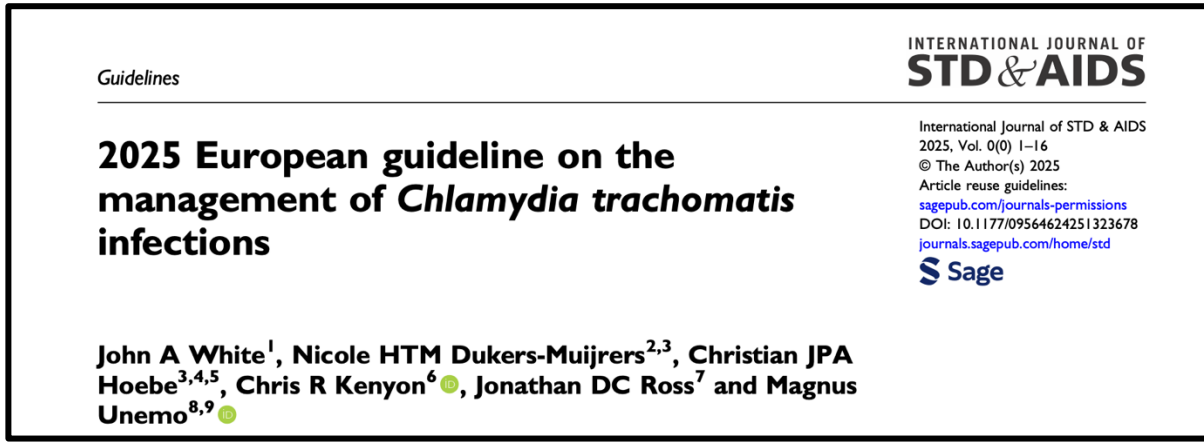
van Liere *et al. BMC Infectious Diseases* 2014, **14**:274
http://www.biomedcentral.com/1471-2334/14/274

Vanlige klinisk spm

- Har partneren min vært utro? Jeg har neg test- kjæreste har positiv test (f.eks Pål/ Noras ?)
- Hvem ble jeg smittet av – min ny partner eller eksen min ?

“ 2 uker for å utelukke Ct med sikkerhet …. men når kan man først avdekke Ct??”

Timing?- IUSTI 2025



Guidelines

INTERNATIONAL JOURNAL OF STD & AIDS

2025 European guideline on the management of *Chlamydia trachomatis* infections

International Journal of STD & AIDS
2025, Vol. 0(0) 1–16

DOI: 10.1177/09564624251323678
journals.sagepub.com/home/std
Sage

John A White[1], Nicole HTM Dukers-Muijrers[2,3], Christian JPA Hoebe[3,4,5], Chris R Kenyon[6], Jonathan DC Ross[7] and Magnus Unemo[8,9]

Evidence on the minimum time period between exposure to infection and identification of *C. trachomatis* on testing is lacking, although clinical experience suggests that a positive NAAT result may be observed within 1–3 days. Patients should be tested when they first present; however, if there is concern about a sexual exposure within the last 2 weeks, they should have a repeat NAAT test 2 weeks after the exposure [Low certainty; Grade 2].

https://iusti.org/wp-content/uploads/2025/03/white-et-al-2025-2025-european-guideline-on-the-management-of-chlamydia-trachomatis-infections.pdf

Persistence of sperm Vs Time since intercourse

"expectation of observing sperm in the vagina decreases significantly after 18 h (0.35) and again after 48 h (0.2), and beyond 96 h, the expectation of observing sperm in the vagina can be considered extremely low (0.02) "

Positiv NAT 1-3 dager?

JOURNAL OF FORENSIC SCIENCES
J Forensic Sci, May 2017, Vol. 62, No. 3
doi: 10.1111/1556-4029.13325
Available online at: onlinelibrary.wiley.com

PAPER

CRIMINALISTICS

David G. Casey,[1] Ph.D.; Katarina Domijan,[2] Ph.D.; Sarah MacNeill,[1] B.Sc.; Damien Rizet,[1] M.Sc.; Declan O'Connell,[1] B.Sc.; and Jennifer Ryan,[1] Ph.D.

The Persistence of Sperm and the Development of Time Since Intercourse (TSI) Guidelines in Sexual Assault Cases at Forensic Science Ireland, Dublin, Ireland

TABLE 2—*The proportion of sperm-positive vaginal swabs at different intervals with 95% CI.*

TSI (h)	No. of positive swabs	Total no. of swabs	Proportion of positive swabs	95% confidence interval
0–6	367	943	0.39	(0.36, 0.42)
06–12	265	746	0.36	(0.32, 0.39)
12–18	162	464	0.35	(0.31, 0.40)
18–24	127	493	0.26	(0.22, 0.30)
24–48	116	410	0.28	(0.24, 0.33)
48–72	13	208	0.06	(0.03, 0.11)
72–96	5	79	0.06	(0.02, 0.14)
96+	1	52	0.02	(0.002, 0.15)

TABLE 1—*The percentage of all sperm-positive vaginal swabs up to 72 h.*

TSI (h)	0–24	24–48	48–72	Total swabs
Positive	889	113	13	1015
Negative	1734	294	195	2223
Total	2623	407	208	3238
% Positive	34	28	6	31

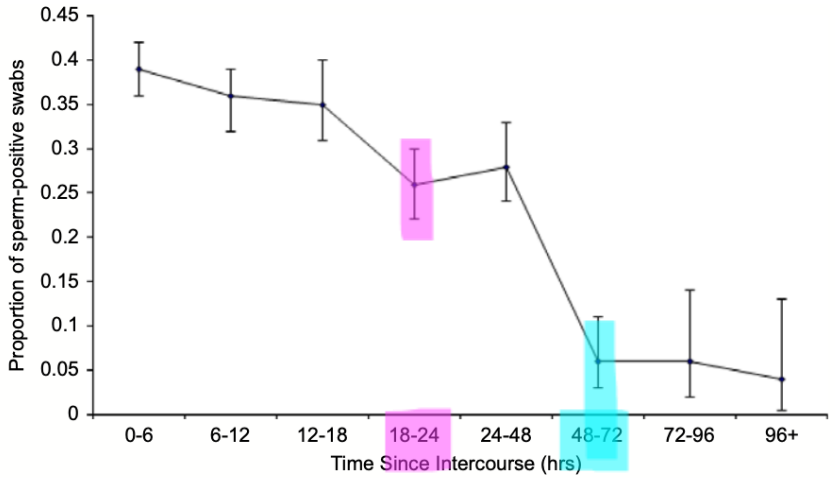


FIG. 1—*Proportion of sperm-positive vaginal swabs with 95% C.I. within each time interval [Color figure can be viewed at wileyonlinelibrary.com]*

Uforventet positiv /diskordante svar

Vanlige kliniske spm:

- Har partneren min vært utro?
- Hvem smittet meg? ny partner eller eks?
- Har jeg gonoré eller ikke?

Bjørn: hals prøve Ng pos….. 2 dager senere Ng neg??

OLAFIAKLINIKKEN

OUS

Sjekkpunkt

Furst :

TOLKNING :

- falsk positv furst?
- falsk negative ous?
- antibiotika?
- spontant kvitt av Ng?

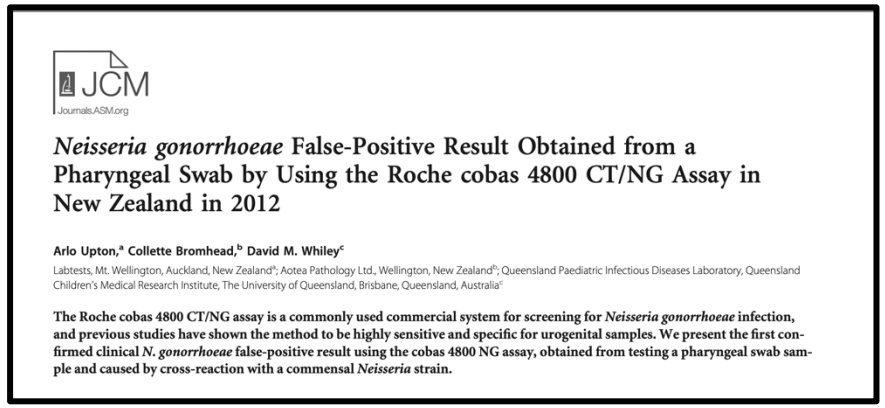
Kommer til Olafia for behandling
ny prøve :
Ng hals neg

Asymptomatisk MSM screen

Ng hals positiv

Falsk positiv gonore??

- Lav forekomst populasjon- NAT /PCR må bekreftes med test alternat gen sekvens
- Kryss reaksjon med *Neisseria meningiditis*



JCM
Journals.ASM.org

Neisseria gonorrhoeae False-Positive Result Obtained from a Pharyngeal Swab by Using the Roche cobas 4800 CT/NG Assay in New Zealand in 2012

Arlo Upton,[a] Collette Bromhead,[b] David M. Whiley[c]
Labtests, Mt. Wellington, Auckland, New Zealand[a]; Aotea Pathology Ltd., Wellington, New Zealand[b]; Queensland Paediatric Infectious Diseases Laboratory, Queensland Children's Medical Research Institute, The University of Queensland, Brisbane, Queensland, Australia[c]

The Roche cobas 4800 CT/NG assay is a commonly used commercial system for screening for *Neisseria gonorrhoeae* infection, and previous studies have shown the method to be highly sensitive and specific for urogenital samples. We present the first confirmed clinical *N. gonorrhoeae* false-positive result using the cobas 4800 NG assay, obtained from testing a pharyngeal swab sample and caused by cross-reaction with a commensal *Neisseria* strain.

Guidelines

INTERNATIONAL JOURNAL OF STD & AIDS

2020 European guideline for the diagnosis and treatment of gonorrhoea in adults

International Journal of STD & AIDS
0(0) 1–17

DOI: 10.1177/0956462420949126
journals.sagepub.com/home/std

gonorrhoea,[1,2,27,32,35–38,46,49,50,56–62] and appropriately-validated and quality-assured NAATs are recommended for testing and/or screening for infections at these sites.[1,2,35–38,63,64] However, most commercially available gonococcal NAATs are not licensed for testing oropharyngeal and rectal specimens, and differ in their sensitivity and especially specificity,[1,2,27,33,37,65–69] particularly when examining oropharyngeal specimens due to the frequent presence of non-gonococcal *Neisseria* species.

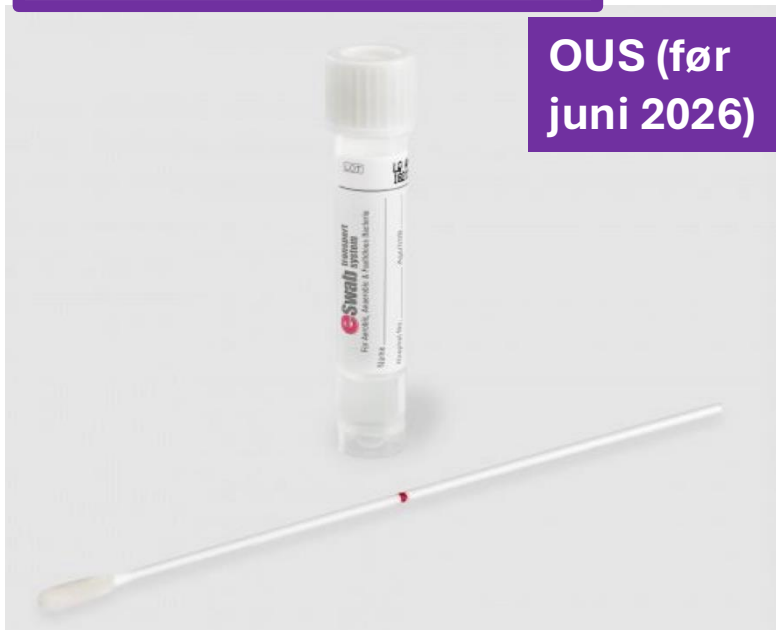
- **NAAT confirmatory testing:** The positive predictive value (PPV) of NAAT testing to detect *N. gonorrhoeae* should exceed 90%. The PPV is highly influenced by the gonorrhoea prevalence in the tested population and the specificity of the NAAT.[1,2,27,65–67] If the diagnostic NAAT used does not display a PPV exceeding 90%, positive specimens should be confirmed, i.e. by repeat testing with a NAAT targeting another genetic sequence, particularly if oropharyngeal specimens are tested [1C];[1,2,27,35,36,63,64,66,67,70–72]

"performance"

- sensitivitet
- spesificitet

OLAFIAKLINIKKEN

OUS (før juni 2026)



Ct: Ampli Sens PCR (DNA)[1]
Ng in-house, sanntids PCR (DNA)
Mg- in-house, sanntids PCR (DNA
TV: eSens PCR

Sjekkpunkt

Furst :

Ct: Aptima combo 2: rRNA: TMA[2]
Ng: Aptima combo 2: rRNA: TMA[2]
Mg: in house PCR
TV:

1.https://metodebok.no/index.php?action=topic&item=ZkrcyDpS
2.https://www.fda.gov/files/vaccines,%20blood%20&%20biologics/published/Package-Insert---Aptima-Combo2-Assay.pdf

Uforventet positiv /diskordan

Vanlige kliniske spm:

- Har partneren min vært utro?
- Hvem smittet meg? ny partner eller eks?
- Har jeg gonoré eller ikke?

SO kurs 2024-06. Medisinsk undersøkelse og behandling.pdf

-Viktige infeksjoner
-kjente komplikasjoner
-god behandling

Oslo

Medisinsk undersøkelse og behandling

Vivian Moe Dalaker
Dina Midttun
Katarina Skjælaaen

Prøvetakning ved Overgrepsmottaket

	Akutt	2 uker	5 uker	3 måneder	6 måneder (se kommentarer)
SOI PCR-prøver					
Klamydia	X	X			
Gonoré	X	X			
Blodprøver Serologi					
Hiv (Hiv-Ag/As)	X	X	X	X	
Hepatitt B (HbsAg og anti-HBs)	X			X	X * Tas dersom blodprøver ved 3 måneder viser ikke-immun status / HBsAb <10 IU
Hepatitt C** (anti-HCV)	X		X	X	X ** Ved høy smitterisiko
Syfilis	X		X	X	
Blodprøver Klinisk kjemisk					
ALAT Alle pasienter	X	X Gjentas hvis unormale prøver akutt	X	X	
Kreatinin og eGFR Kun ved hiv-PEP	X	X Gjentas hvis unormale prøver akutt			
Graviditet					
U-hCG (S-hCG)	X	X	X		

Serologisk screening

Review article

INTERNATIONAL JOURNAL OF STD & AIDS

International Journal of STD & AIDS
2015, Vol. 26(4) 215–224

DOI: 10.1177/0956462414542987
std.sagepub.com
SAGE

Probability of a false-negative HIV antibody test result during the window period: a tool for pre- and post-test counselling

Darlene Taylor[1,2], Monica Durigon[1], Heather Davis[3], Chris Archibald[4], Bernhard Konrad[2], Daniel Coombs[2], Mark Gilbert[1,2], Darrel Cook[1,5], Mel Krajden[1,5,6], Tom Wong[3] and Gina Ogilvie[1,7]

HIV (4 gen AgAs test)

- testing
  - -kan bli pos allerede 2 uker etter smitte
  - -sannsynlighet av falsk neg svar
  - 5% ved 34 dager
  - 1% ved 42 dager
  - 0% ved 50 dager

- vindusperioden UK: 45 dager*
- vindusperioden Ullevål : 45 dager *

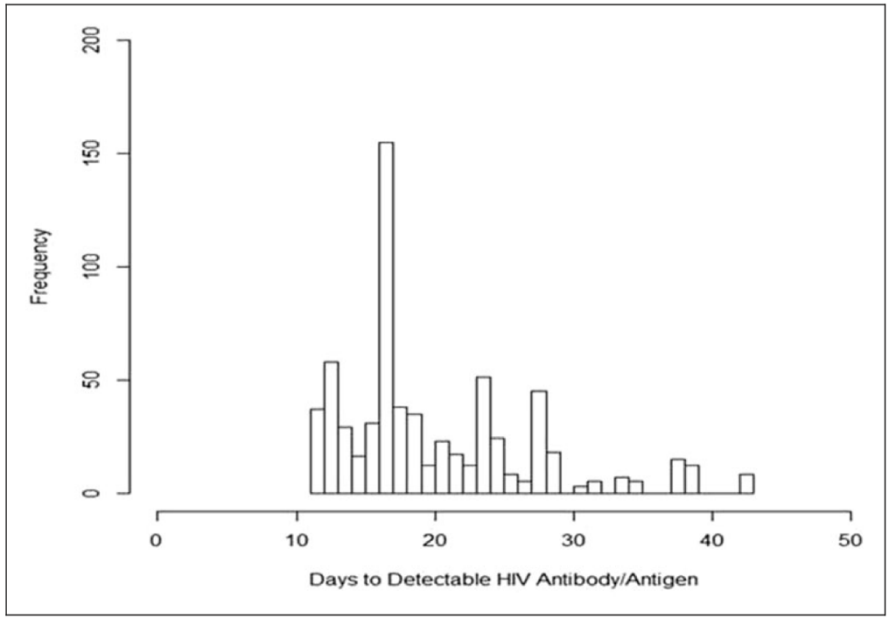


Figure 6. The distribution of WP days for fourth-generation tests.

***Uten ART/ PEP/PrEP**

https://www.bashh.org/_userfiles/pages/files/resources/hivtesting2020wiley.pdf

https://metodebok.no/emne/ZqW2t3hm

SO kurs 2024-06. Medisinsk undersøkelse og behandling.pdf

Oslo

Medisinsk undersøkelse og behandling

Vivian Moe Dalaker
Dina Midttun
Katarina Skjælaaen

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Blodprøver Serologi					
Hiv (Hiv-Ag/As)	X	X	X	X	
Hepatitt B (HbsAg og anti-HBs)	X			X	X * Tas dersom blodprøver ved 3 måneder viser ikke-immun status / HBsAb <10 IU
Hepatitt C** (anti-HCV)	X		X	X	X ** Ved høy smitterisiko
Syfilis	X		X	X	
Blodprøver **Klinisk kjemisk**					
ALAT Alle pasienter	X	X Gjentas hvis unormale prøver akutt	X	X	
Kreatinin og eGFR Kun ved hiv-PEP	X	X Gjentas hvis unormale prøver akutt			
Graviditet					
U-hCG (S-hCG)	X	X	X		

Serologisk screening: HIV

HIV (4 gen AgAs test)

- testing
  - -kan bli pos allerede 2 uker etter smitte
  - -sannsynlighet av falsk neg svar
  - 5% ved 34 dager
  - 1% ved 42 dager
  - 0% ved 50 dager

  - -vindusperioden UK: 45 dager*[1]
  - -vindusperioden Ullevål? : 45 dager uten PEP/PrEP

- Vurdere profylakse: PEP

* Uten ART/ PEP/PrEP
https://www.bashh.org/_userfiles/pages/files/resources/hivtesting2020wiley.pdf

Post

= after

Exposure

= a situation where HIV has a chance to get into someone's bloodstream

Prophylaxis

= a treatment to stop an infection happening

so....

PEP

= a treatment to stop a person becoming infected with HIV after it's got into their body

hiv PEP?

- Tid (<72 timer)
- Type eksponering
- Kilden høyere risiko for ubehandlet hiv

Antatt transmisjonsrate for hiv ved ubeskyttet eksponering fra kjent hivpositiv som ikke står på behandling

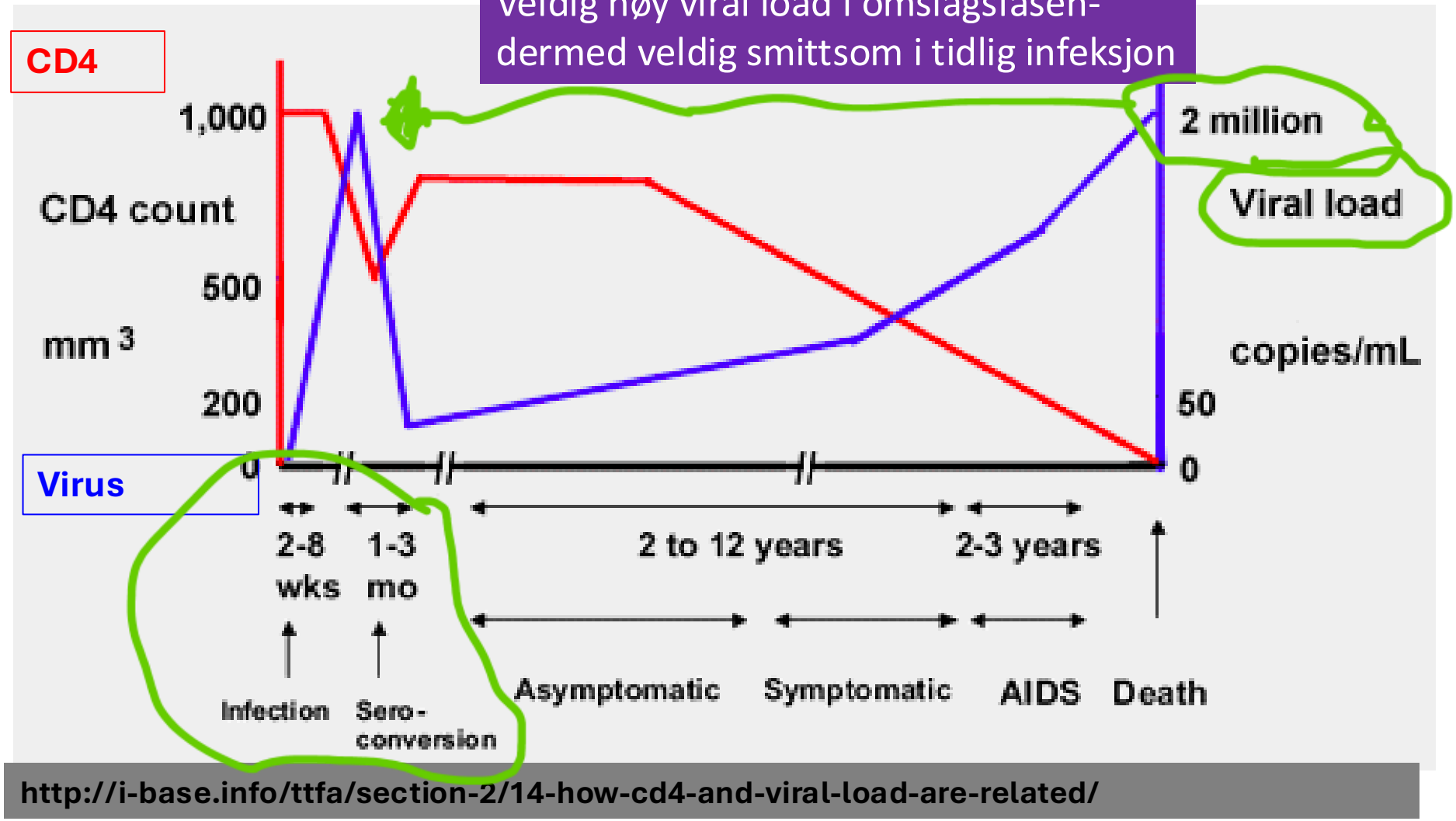
Eksponeringstype	Antatt transmisjonsrate
Reseptivt analt samleie	1 av 90
Reseptivt anal samleie med sædavgang	1 av 65
Reseptivt anal samleie uten sædavgang	1 av 170
Insertivt analt samleie	1 av 666
Insertivt analt samleie, ikke omskåret	1 av 161
Insertivt analt samleie, omskåret	1 av 909
Reseptivt vaginalt samleie	1 av 1000
Insertivt vaginalt samleie	1 av 1219
Reseptiv oralsex (oral partner som utfører fellatio)	< 1 av 10,000
Insertiv oralsex (genital partner)	< 1 av 10,000
Sæd på øyet	< 1 av 10,000
Stikkskade	1 av 333
Deling sprøyteutstyr (inkludert chemsex)	1 av 149

Hivfag.no

Risiko for hivsmitte?

https://hivfag.no/smitte-pep

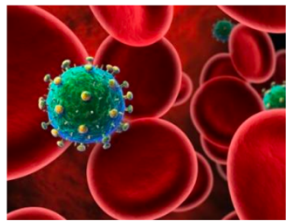
CD4 og VL uten ART



http://i-base.info/ttfa/section-2/14-how-cd4-and-viral-load-are-related/

Hiv profylakse - indikasjonsvurdering

- Seksuell kontakt og parametere ved **gjerningsperson**(er)
  - Flere gjerningsmenn
  - Kjent hiv positiv
  - Overgriper med høy risiko for hiv:
    - Overgriper fra utlandet/høyendemiske områder
    - Injiserende rusbrukere
    - Menn som har sex med menn (MSM)



Hiv.
Foto: BioMedical / Shutterstock / NTB scanpix

Oslo

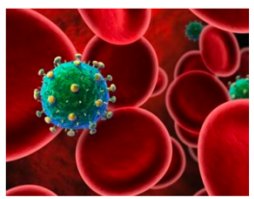
SO kurs 2024-06. Medisinsk undersøkelse og behandling.pdf

Medisinsk undersøkelse og behandling

Vivian Moe Dalaker
Dina Midttun
Katarina Skjælaaen

Hiv profylakse - indikasjonsvurdering

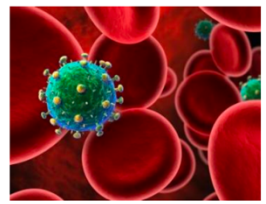
- Seksuell kontakt og parametere ved **pasient**
  - Sår/skade i slimhinner
  - Eksisterende SOI eller annen infeksjon i kroppsåpning



Hiv.
Foto: BioMedical / Shutterstock / NTB scanpix

Hiv profylakse - indikasjonsvurdering

- Større risiko for smitte:
  - Ved anal penetrasjon
  - Ved (store) slimhinneskader
  - Ved samtidig annen kjønnssykdom



Hiv.
Foto: BioMedical / Shutterstock / NTB scanpix

- Vær liberal, gi ved tvil og der pasient selv har sterkt ønske / stor bekymring for smitte.

HBV: blod og kroppsvæske

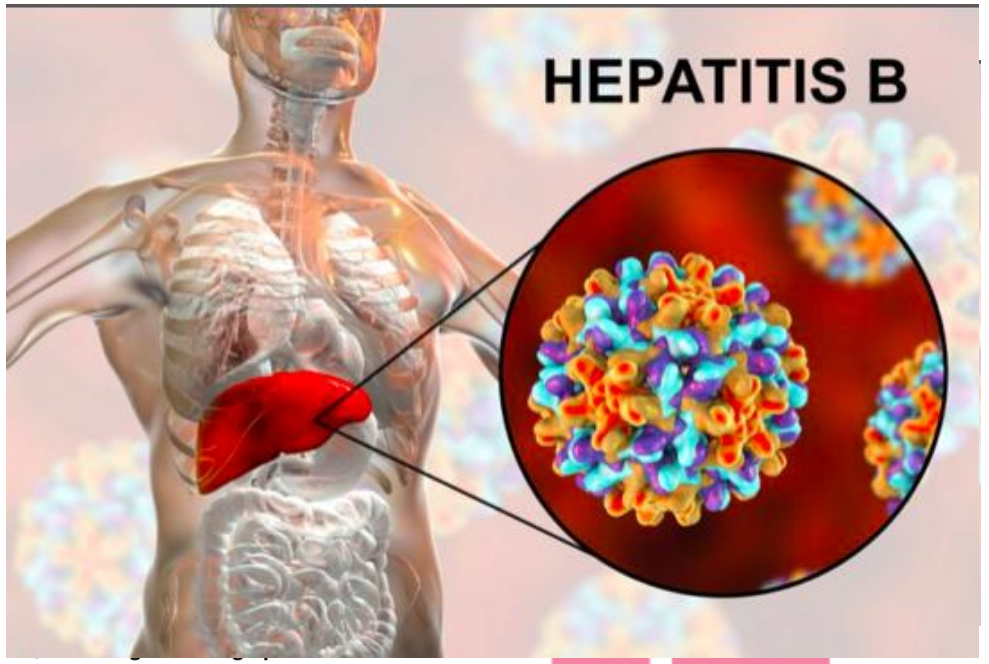
- profylakse:
  - Vaksinasjon; hurtig vaksinering for alle hvis ikke tidlgiere vaksinert[1] f.eks 0,7,21 dager, 1 år [2] ev 0,mnd 1,2, 12mnd [1]
  - Hep B immunoglobulin hvis <48 timer og

  kilden har kjent hepatitt B / ev tidligere non responder etter fulvaksinering[1]

- testing

  -0, 3mnd (6mnd hvis HbSas<10 ved 3 mnd)[2]

  Ofte oppdaget ved 60-90 dager [3]



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Gonoré	X	X			
Blodprøver Serologi					
Hiv (Hiv-Ag/As)	X	X	X	X	
Hepatitt B (HbsAg og anti-HBs)	X			X	X * Tas dersom blodprøver ved 3 måneder viser ikke-immun status / HBsAb <10 IU
Hepatitt C** (anti-HCV)	X		X	X	X ** Ved høy smitterisiko
Syfilis	X		X	X	
Blodprøver Klinisk kjemisk					
ALAT Alle pasienter	X	X Gjentas hvis unormale prøver akutt	X	X	
Kreatinin og eGFR Kun ved hiv-PEP	X	X Gjentas hvis unormale prøver akutt			
Graviditet					
U-hCG (S-hCG)	X	X	X		

1. https://www.fhi.no/va/vaksinasjonshandboka/vaksiner-mot-de-enkelte-sykdommene/hepatitt-b-vaksinasjon-og-immunglobulin/?term=#spesifikt-hepatitt-b-immunglobulin
2https://www.bashh.org/_userfiles/pages/files/resources/pep2021_2023amendment.pdf
3. https://www.fhi.no/sm/smittevernhandboka/sykdommer-a-a/hepatitt-b/?term=#smittemte-og-smittefrende-periode

Oslo

SO kurs 2024-06. Medisinsk undersøkelse og behandling.pdf

Medisinsk undersøkelse og behandling

Vivian Moe Dalaker
Dina Midttun
Katarina Skjælaaen

Medisinsk behandling - infeksjonsprofylakse

- Hepatitt B vaksine
  - 3 doser hurtigvaksinering

- Ved stor mistanke om hepatitt B smitte
  - Både vaksine og immunglobulin < 48 timer
  - Konferer infeksjonsmedisiner

Hepatitt B
Foto: iStock

Oslo

HCV

HHS Public Access
Author manuscript
Hepatology. Author manuscript; available in PMC 2015 April 03.

Published in final edited form as:
Hepatology. 2013 March ; 57(3): 881–889. doi:10.1002/hep.26164.

Sexual Transmission of Hepatitis C Virus Among Monogamous Heterosexual Couples: The HCV Partners Study

Smitte: Blod >>> sex

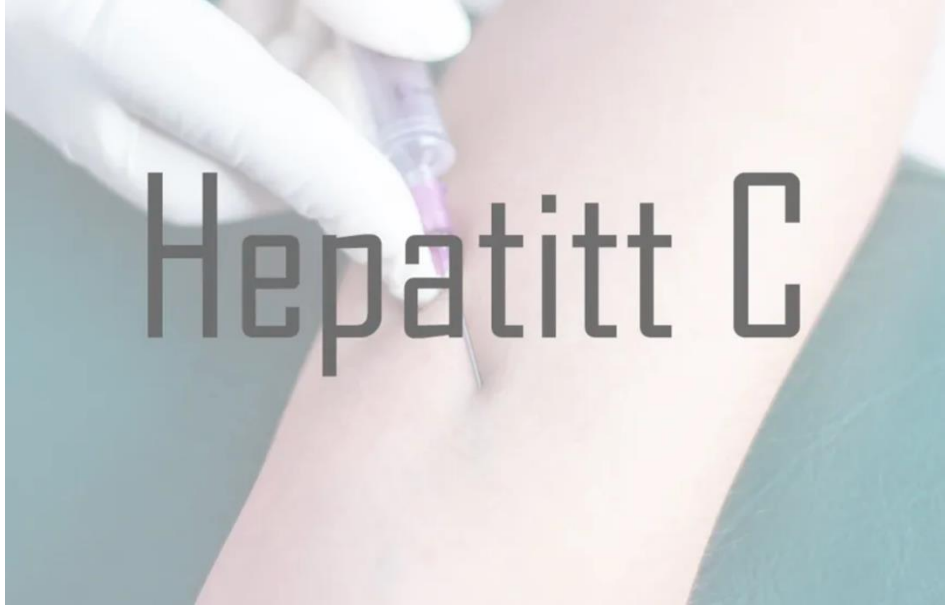
- Lav risiko monogame hetero hiv negative par (<0.1%/year) [1] :

"The estimated risk per sexual contact ranged from 1 per 380,000 to 1 per 190,000"[2]

- økt risiko MSM (mucosal og parentral)
  - Atferd: receptive anal sex uten kondom, traumatisk sex, gruppe sex, deler leker, party dop, chemsex
  - Biologisk: soi : særlig sår f.ek LGV/ syfilis

1https://www.bashh.org/resources/143/draft_guideline_for_consultation_viral_hepatitis_guidelines_deadline_by_7th_november
2. https://pubmed.ncbi.nlm.nih.gov/23175457/

Serologi



HCV:

- profylakse: ingen
- testing

  -0,5,12 uker (6mnd ved høy smittterisiko)

  (80% As pos 5-6 uker etter smitte
  RNA ofte pos ved 2 uker)

Prøvetakning ved Overgrepsmottaket

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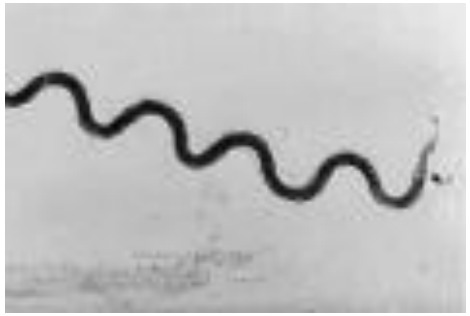
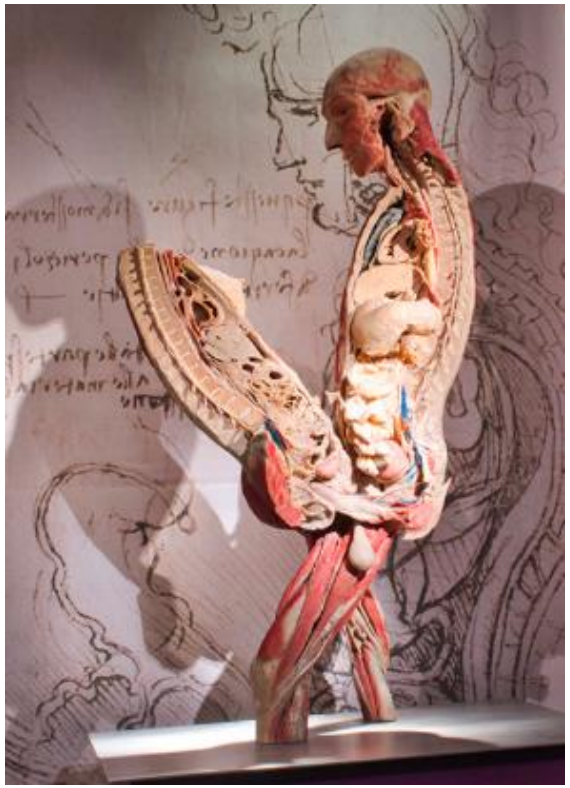
Hepatitt C** (anti-HCV)	X		X	X	X ** Ved høy smitterisiko
Syfilis	X		X	X	
Blodprøver Klinisk kjemisk					
ALAT Alle pasienter	X	X Gjentas hvis unormale prøver akutt	X	X	
Kreatinin og eGFR Kun ved hiv-PEP	X	X Gjentas hvis unormale prøver akutt			
Graviditet					
U-hCG (S-hCG)	X	X	X		

1https://www.fhi.no/sm/smittevernhandboka/sykdommer-a-a/hepatitt-c/?tid=#smittsomme-og-smittefrende-periode

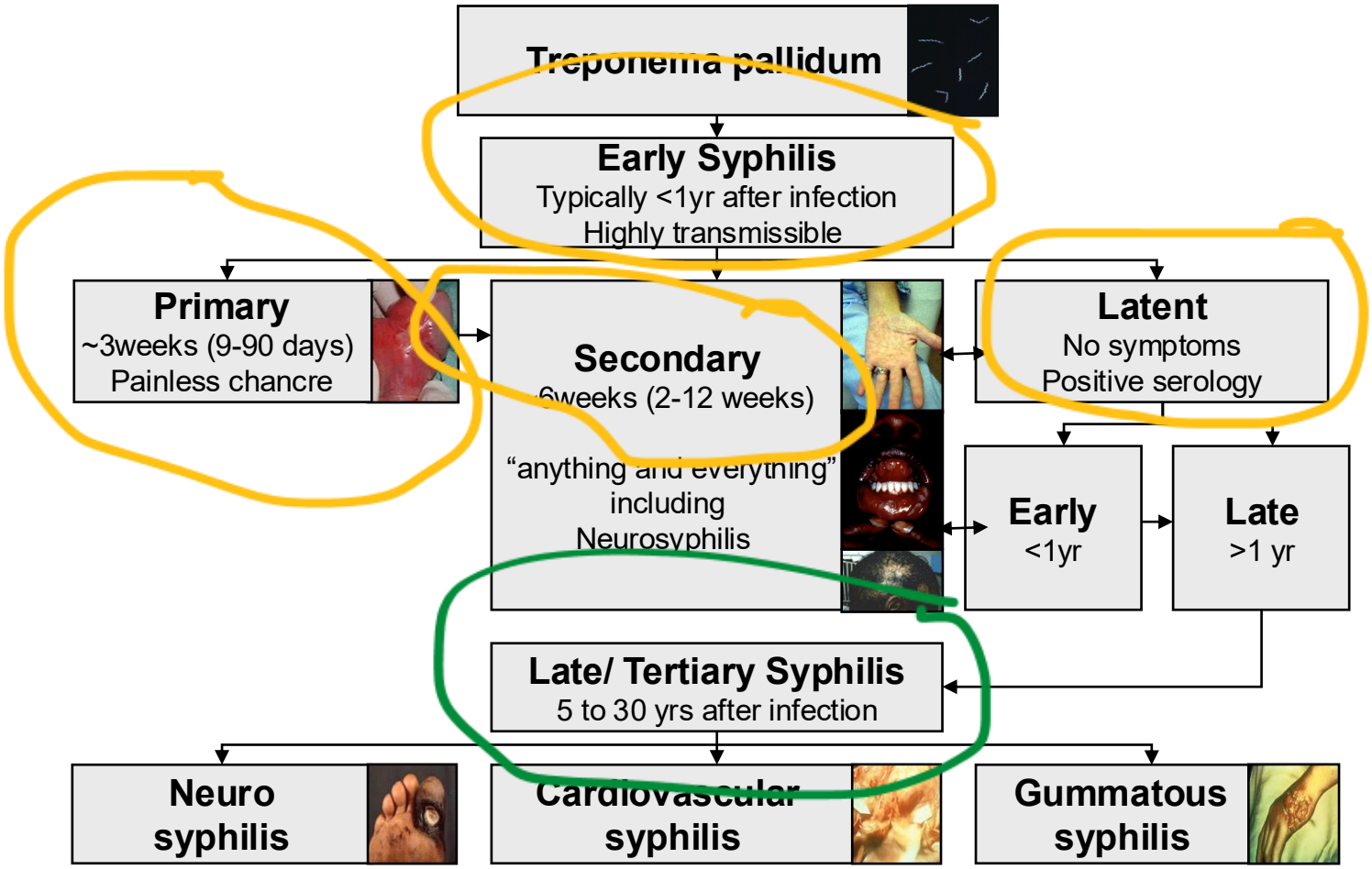
Syfilis





- Spirochete (bakterie)
- Smitte
  - direkte kontakt med lesjon
  - transplacental
  - ev blod
    - lite sannsynlig med gode blødoverføring rutinene
    - deler «utstyr» (chemsex- slamming)

Stages of syphilis



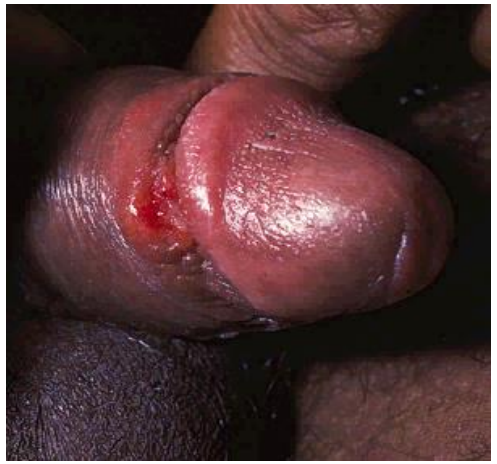
Diagnostikk i syfilis

- **Screening test = Syfilis serologi**
  - Screening test :Treponema pallidum total as
  - Hvis negative : utelukker infeksjon for 3 mnd siden
  - Hvis utslag i screening test utføres supplerende tester
    i)TPLA og ii) RPR (RU)

- OBS screening kan være negativ i primær syfilis

- **Syfilis PCR fra lesjon GOLD standard** (81-95% sensitivitet, 99% specifistet)

- Mørkefeltmikroskopi (ikke oral lesjoner,)



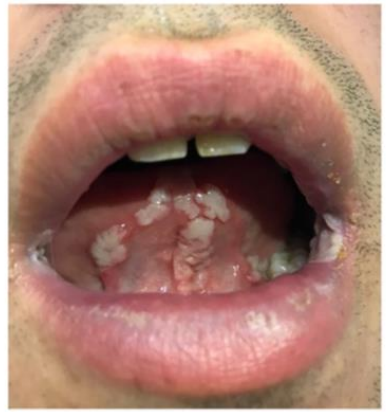


Fig. 16 Mucous patches on the tongue.

Kort om syfilis serologi

- Neg serologi utelukker infeksjon for 3 mnd siden
- sjanker oppstår ved inokulasjonsted (9-90 dager etter smitte)
- RPR begynner å slå ut 2 uker etter sjanker har opptått

- isolert “reaktiv/positiv”serologisk svar kan ikke skille mellom:
  - -tidligere behandlet syfilis
  - -behandlingstrengende infeksjon
  - - yaws , pinta , andre “ikke veneriske “ syfilis

Eksempel syfilis serologi utvikling

1 uke etter sjanker oppstå

2 uker etter sjanker oppstå

Dato	Trep P total	TPLA	RU	IgM
25.05.25	**neg**	Ikke utført	Ikke utført	Ikke utført
02.06.25	**pos**	**neg**	**1.4**	Ikke utført
26.06.25	**pos**	**pos**	**103**	Ikke utført

4 uker etter sjanker oppstå

Syfilis serologi kan være betydelig mer komplisert enn dette

False-negative syphilis serology

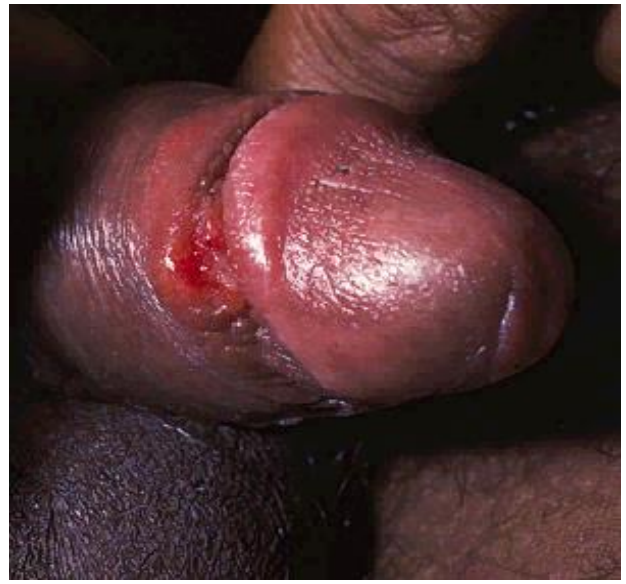
- Treponemal screening tests are negative before a chancre develops and may be for up to 2 weeks afterwards.
- Negative results within 3 months of infection cannot exclude early syphilis.
- False-negative screening results may be seen in immunocompromised individuals.
- A false-negative RPR test may occur in secondary or early latent syphilis due to the prozone phenomenon (false-negative result due to high antibody titres) when testing undiluted serum; in such cases negative tests on undiluted serum samples should be repeated on diluted samples .[55] This may be more likely to occur in individuals living with HIV.[56]

False-positive syphilis serology

- Occasional false-positive results may occur with any of the serological tests for syphilis.
- In general, false-positive reactivity is more likely in older individuals, those with autoimmune disease and people who inject drugs.
- In the absence of symptoms of syphilis or a history of syphilis, transient or persistent reactivity in a single treponemal test should be considered to be a false-positive result.

https://www.bashh.org/_userfiles/pages/files/syphilis_2024.pdf

Primær Syfilis



Inkubasjonstid: 2-3 uker (9-90 dager)

Typisk sjanker er:

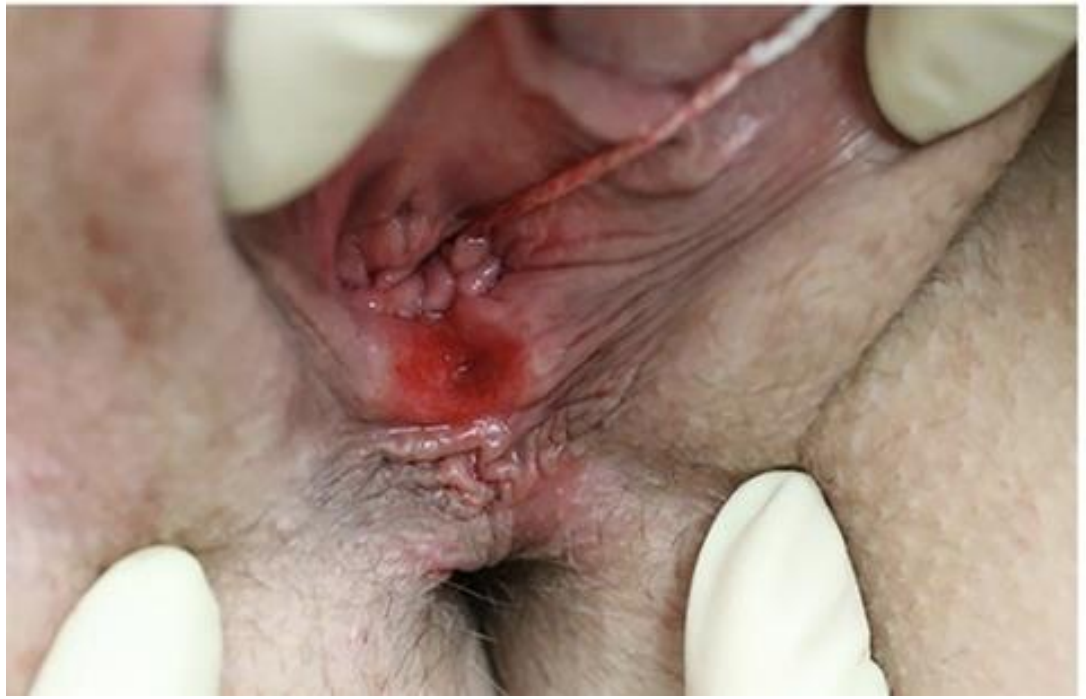
- Et enkelt hardt, uømt, bruskliknende sår
- genitalt/ analt/ oralt
- helbredes uten behandling innen 2-6 uker
- regional lymfeknutesvulst

OBS : Mange aldri legger merk til sjanker
Over halvparten er IKKE «typiske»

Diagnostikk primær syfilis :

SEROLOGI og PCR:

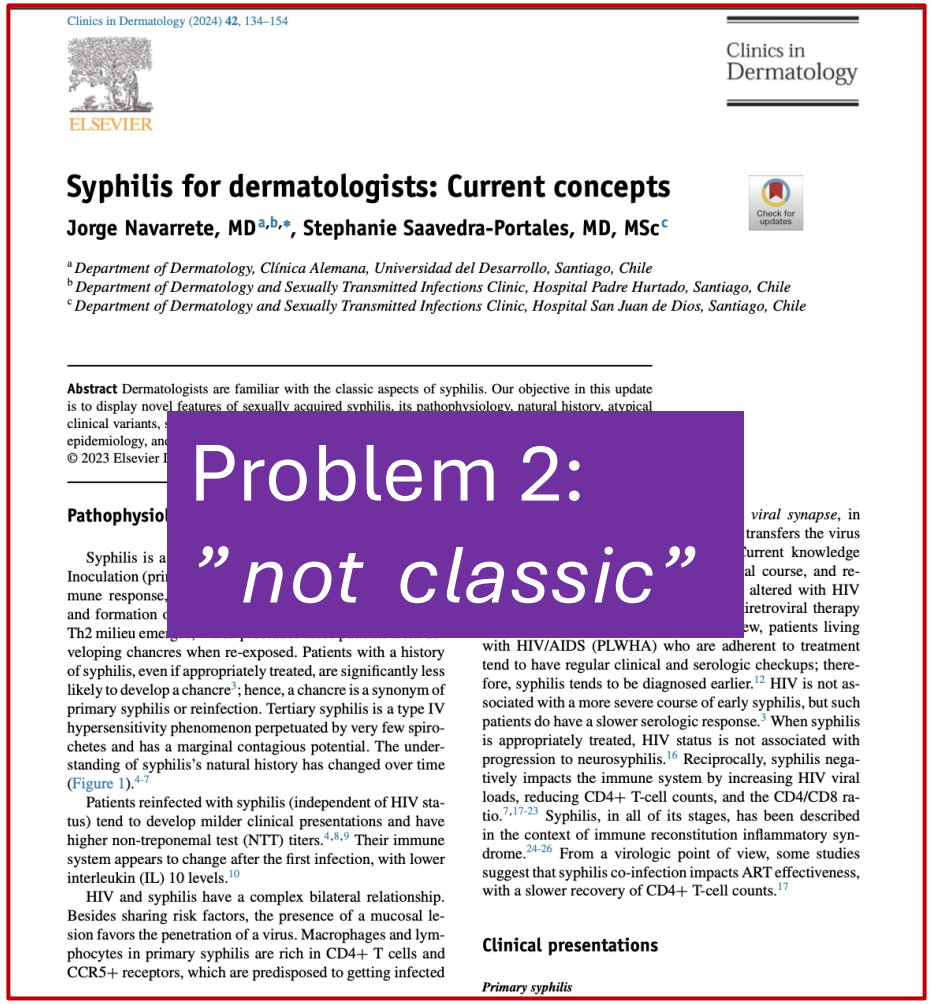
- T pallidum PCR POS fra lesjonen
- Serologi kan være negativ til tross for sjanker (tar tid for å utvikle antistoffer)
- RPR blir positive ca 2 uker etter sjanker oppstår



The Return of an Old Foe: Syphilis Among Women
Duggal, Ryan; Hufstetler, Kaitlin; Miele, Kathryn
Clinical Obstetrics and Gynecology68(2):152-158, June 2025.

Sår/ sjanker er ofte ikke den "klassiske/ typiske beskrivelsen"

- Up to 30% can be multiple
- ca 9% - 29% coexist with secondary syphilis
- 10% of chancres extragenital sites
- Up to 51% of chancres have some degree of pain, especially in extragenital sites



Clinics in Dermatology (2024) 42, 134–154

Clinics in Dermatology

ELSEVIER

Syphilis for dermatologists: Current concepts

Jorge Navarrete, MD[a,b,*], Stephanie Saavedra-Portales, MD, MSc[c]

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[c] Department of Dermatology and Sexually Transmitted Infections Clinic, Hospital San Juan de Dios, Santiago, Chile

Abstract Dermatologists are familiar with the classic aspects of syphilis. Our objective in this update is to display novel features of sexually acquired syphilis, its pathophysiology, natural history, atypical clinical variants, s
epidemiology, an

Problem 2:
"not classic"

Pathophysiol

viral synapse, in
transfers the virus
urrent knowledge
al course, and re-
altered with HIV
iretroviral therapy
ew, patients living
with HIV/AIDS (PLWHA) who are adherent to treatment tend to have regular clinical and serologic checkups; therefore, syphilis tends to be diagnosed earlier.[12] HIV is not associated with a more severe course of early syphilis, but such patients do have a slower serologic response.[3] When syphilis is appropriately treated, HIV status is not associated with progression to neurosyphilis.[16] Reciprocally, syphilis negatively impacts the immune system by increasing HIV viral loads, reducing CD4+ T-cell counts, and the CD4/CD8 ratio.[7,17-23] Syphilis, in all of its stages, has been described in the context of immune reconstitution inflammatory syndrome.[24-26] From a virologic point of view, some studies suggest that syphilis co-infection impacts ART effectiveness, with a slower recovery of CD4+ T-cell counts.[17]

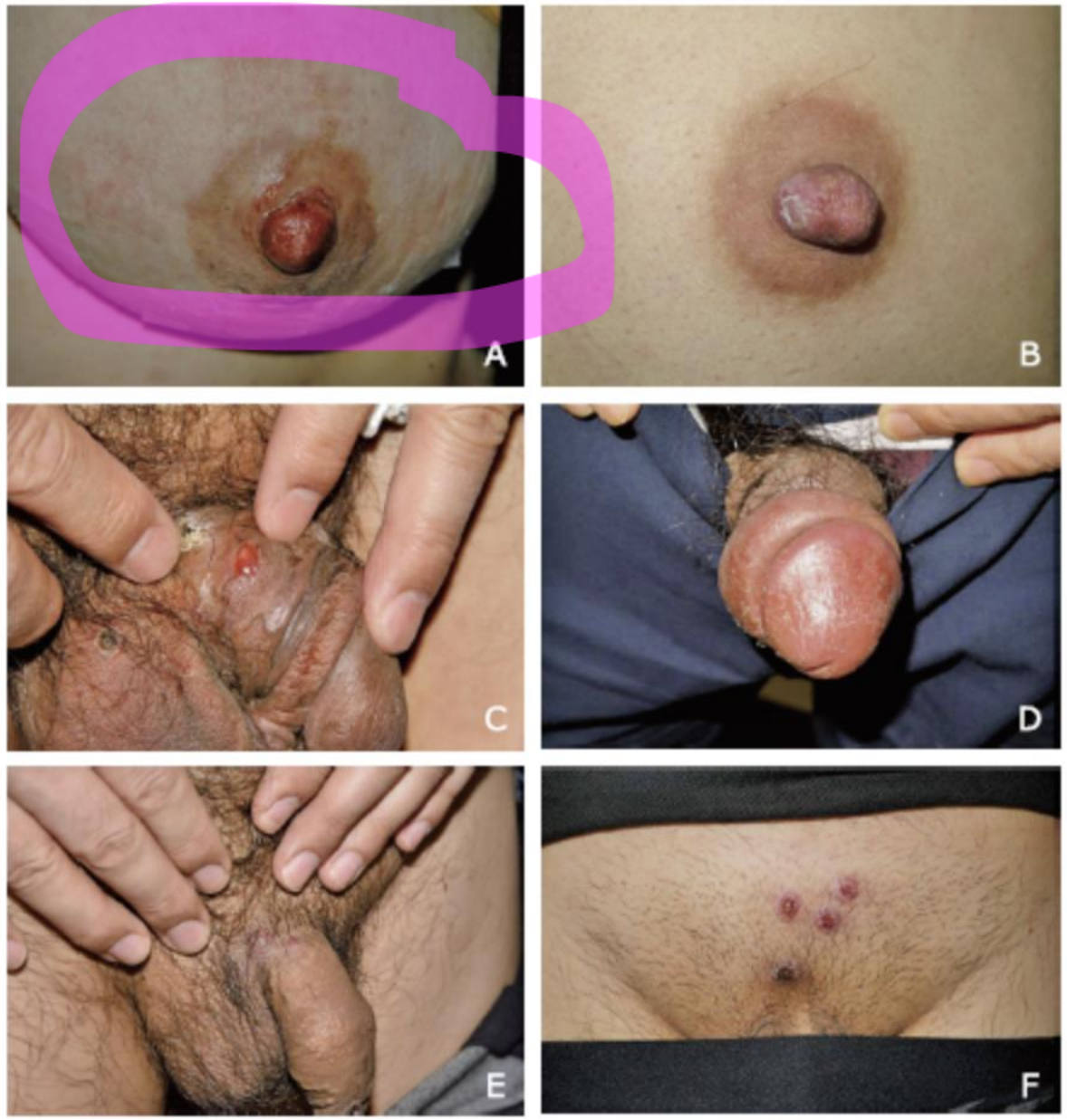
Syphilis is a
Inoculation (pri
mune response.
and formation
Th2 milieu eme
veloping chancres when re-exposed. Patients with a history of syphilis, even if appropriately treated, are significantly less likely to develop a chancre[3]; hence, a chancre is a synonym of primary syphilis or reinfection. Tertiary syphilis is a type IV hypersensitivity phenomenon perpetuated by very few spirochetes and has a marginal contagious potential. The understanding of syphilis's natural history has changed over time (Figure 1).[4-7]

Patients reinfected with syphilis (independent of HIV status) tend to develop milder clinical presentations and have higher non-treponemal test (NTT) titers.[4,8,9] Their immune system appears to change after the first infection, with lower interleukin (IL) 10 levels.[10]

HIV and syphilis have a complex bilateral relationship. Besides sharing risk factors, the presence of a mucosal lesion favors the penetration of a virus. Macrophages and lymphocytes in primary syphilis are rich in CD4+ T cells and CCR5+ receptors, which are predisposed to getting infected

Clinical presentations

Primary syphilis



The great imitator: atypical cutaneousmanifestations of primary syphilitic chancre.

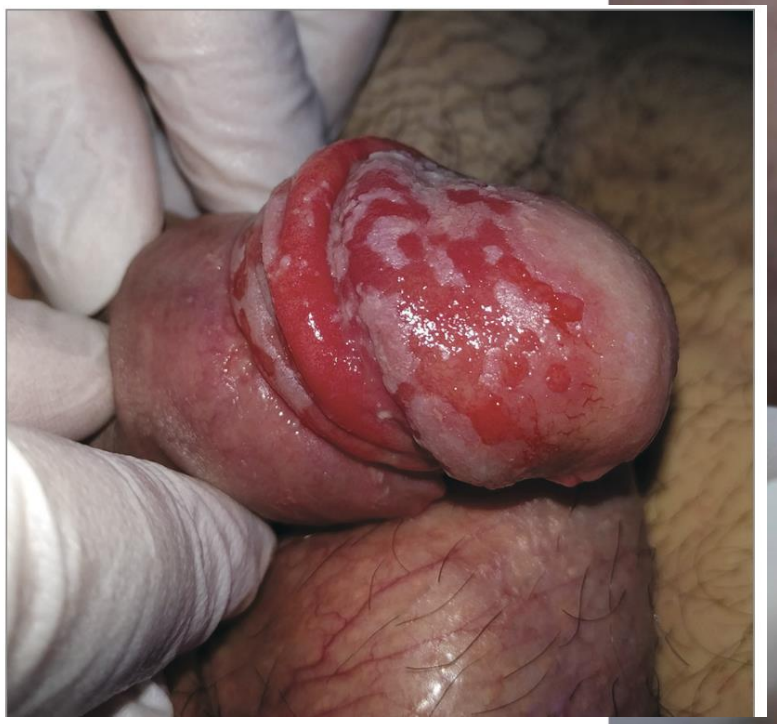
ChinMedSciJ. 2021;36:279–283.

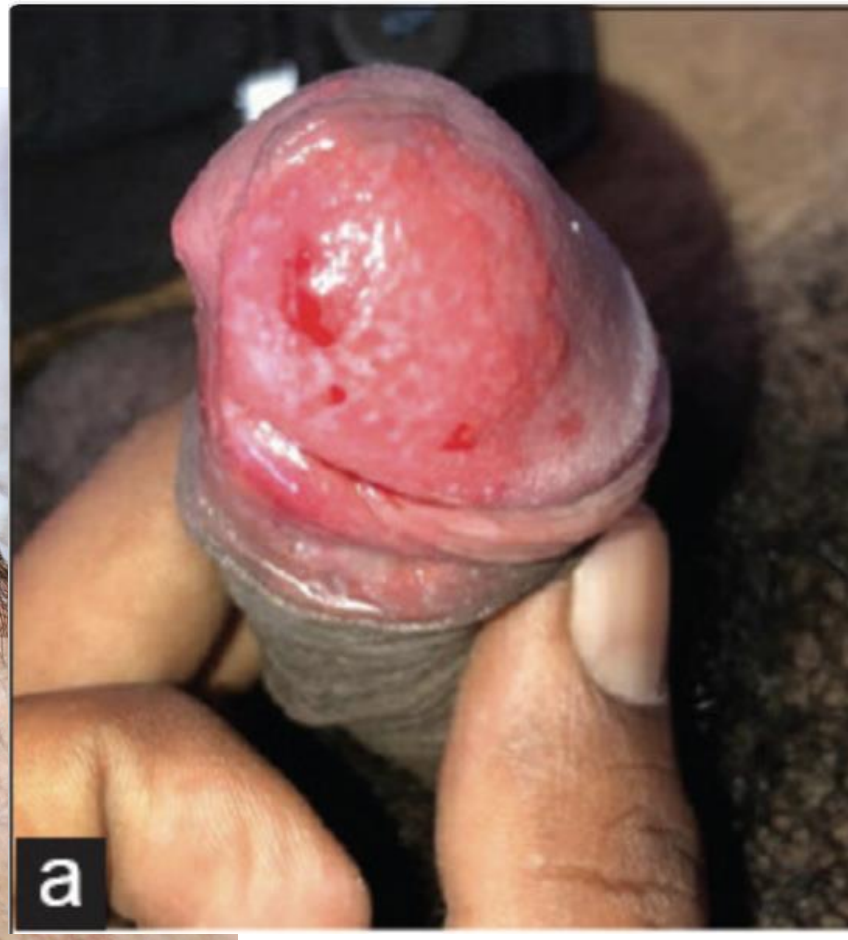
Gong HZ, Wu MY, Li J, Zheng HY.

gure 1. Macroscopic manifestations of the representative cases.

A. Chancre, erosive skin lesions located on the nipple, misdiagnosed as mammary Paget's disease; B. Chancre, scaly erythema on the nipple, misdiagnosed as mammary Paget's disease; C. Primary syphilis, multiple chancres; D. Primary syphilis presenting as syphilitic balanitis; E. Primary syphilis, multiple chancres on the root of the penis; F. Primary syphilis, multiple chancres on the pubis.

Follmann balanitis:
“Primary syphilis without a chancre”

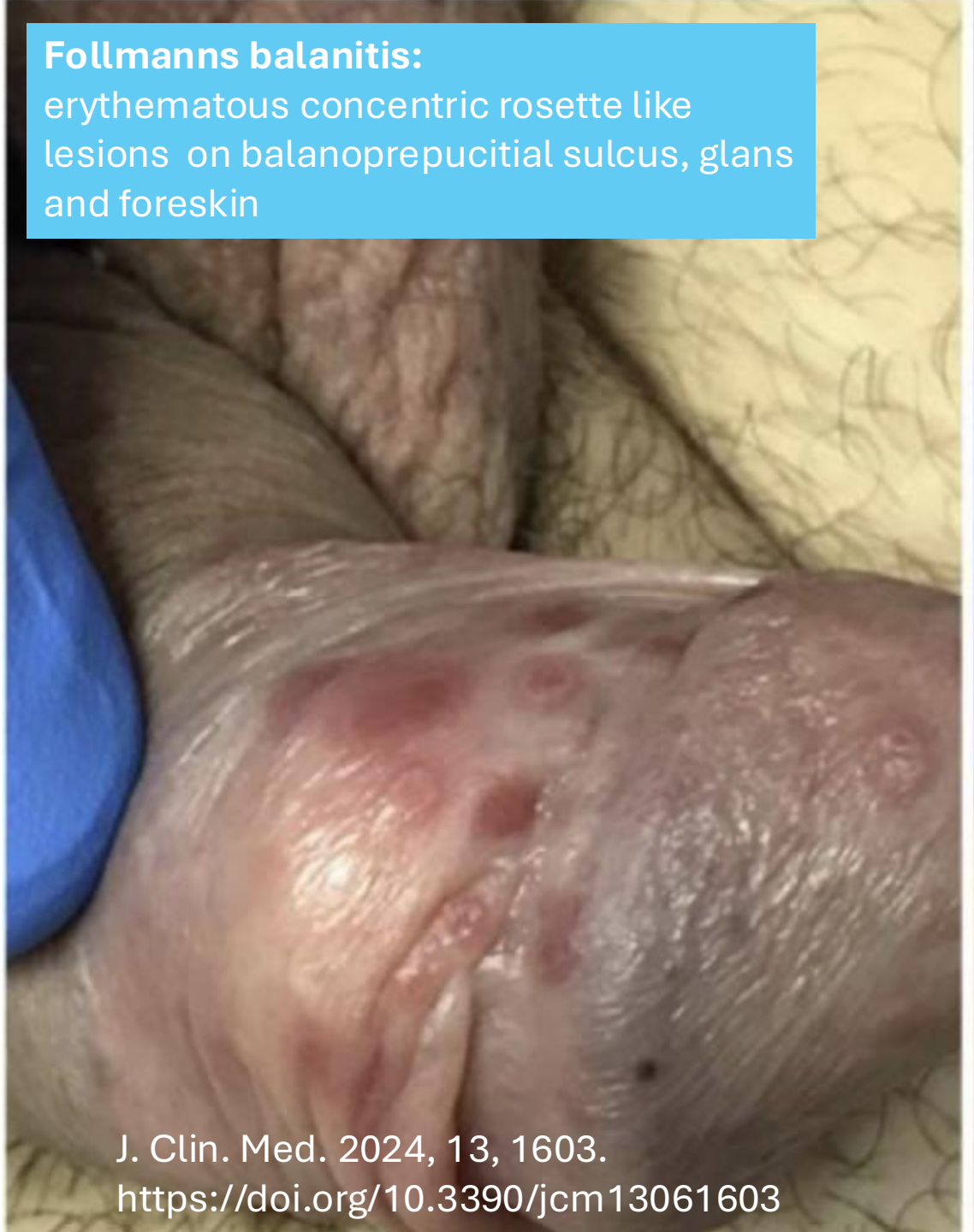




JAMA Dermatology September 2020 Volume 156, Number 9

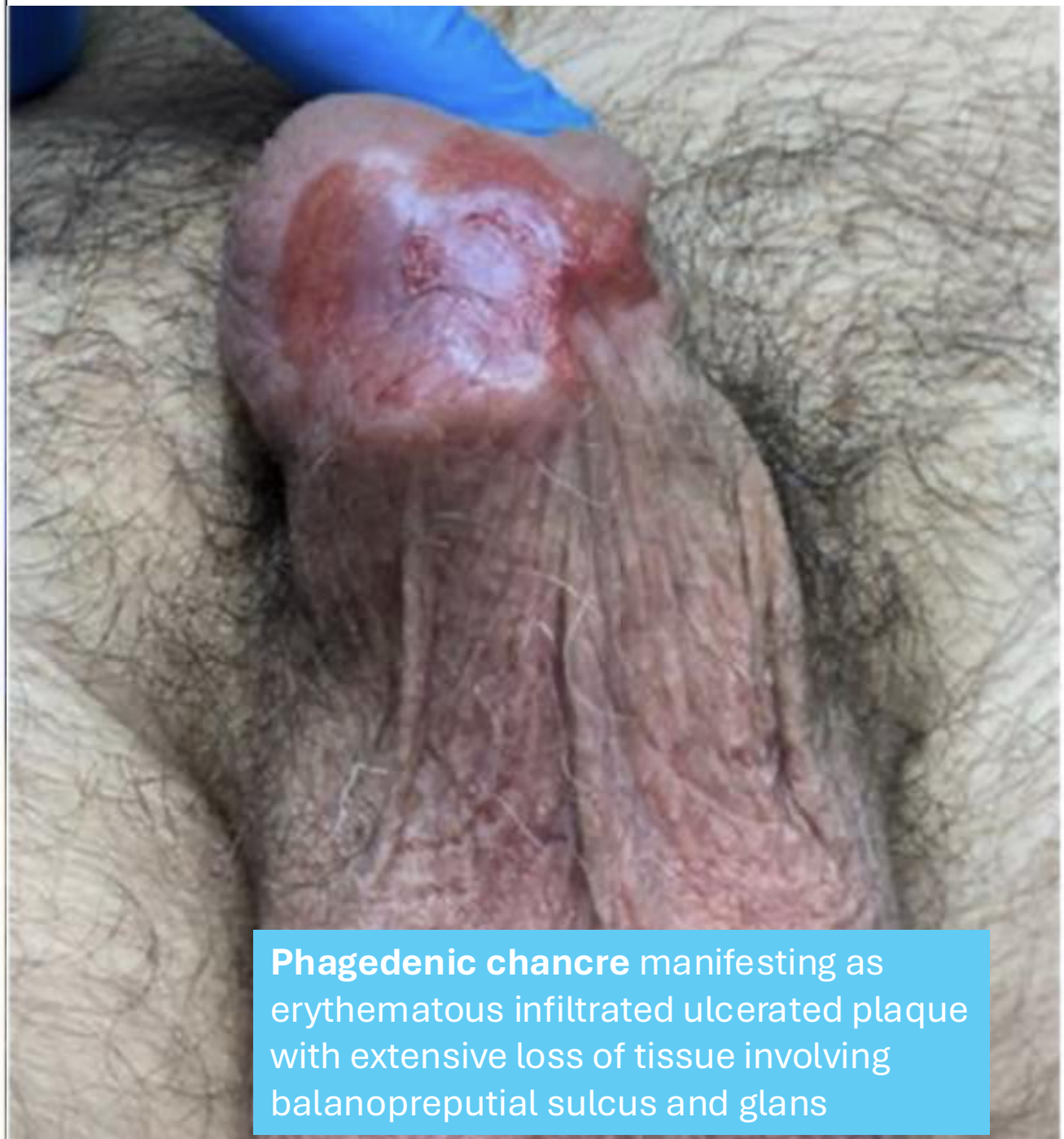
Ren X-q, Nie Q-l and Liu A-q (2022) Primary syphilis without chancre – A case report of rare syphilitic balanitis of Follmann.Front. Med. 9:958456. doi: 10.3389/fmed.2022.958456

Indian Journal of Sexually Transmitted Diseases and AIDS
Volume 44, Issue 2, July-December 2023



Follmanns balanitis:
erythematous concentric rosette like lesions on balanoprepucitial sulcus, glans and foreskin

J. Clin. Med. 2024, 13, 1603.
https://doi.org/10.3390/jcm13061603



Phagedenic chancre manifesting as erythematous infiltrated ulcerated plaque with extensive loss of tissue involving balanopreputial sulcus and glans

Forekomst soi I ulike populasjoner

- MSM

Open access Original research

BMJ Open

Sexually transmitted infections among patients attending a sexual assault centre: a cohort study from Oslo, Norway

Katarina Skjælaaen,[1,2] Helle Nesvold,[2] Mette Brekke ,[1] Miriam Sare,[3] Elisabeth Toverud Landaas,[3,4] Ibrahimu Mdala,[1] Anne Olaug Olsen,[5,6] Odd Martin Vallersnes [1,7]

Oslo

Prospective observational cohort study among patients attending a SAC from May 2017 to July 2019.

- N=645
- Female: n=602 (93.3%)
- Male:n=43 (6.7%)

- CT 8.7% kvinner, 4.8% menn
- Mg 6.9% kvinner, 0% menn
- Ng 0.7% kvinner, 0% menn
- Ingen nye tilfeller hiv, syphilis, hbv, hcv

Table 3 Sexually transmitted infections at primary examination among patients attending a sexual assault centre in Oslo, Norway

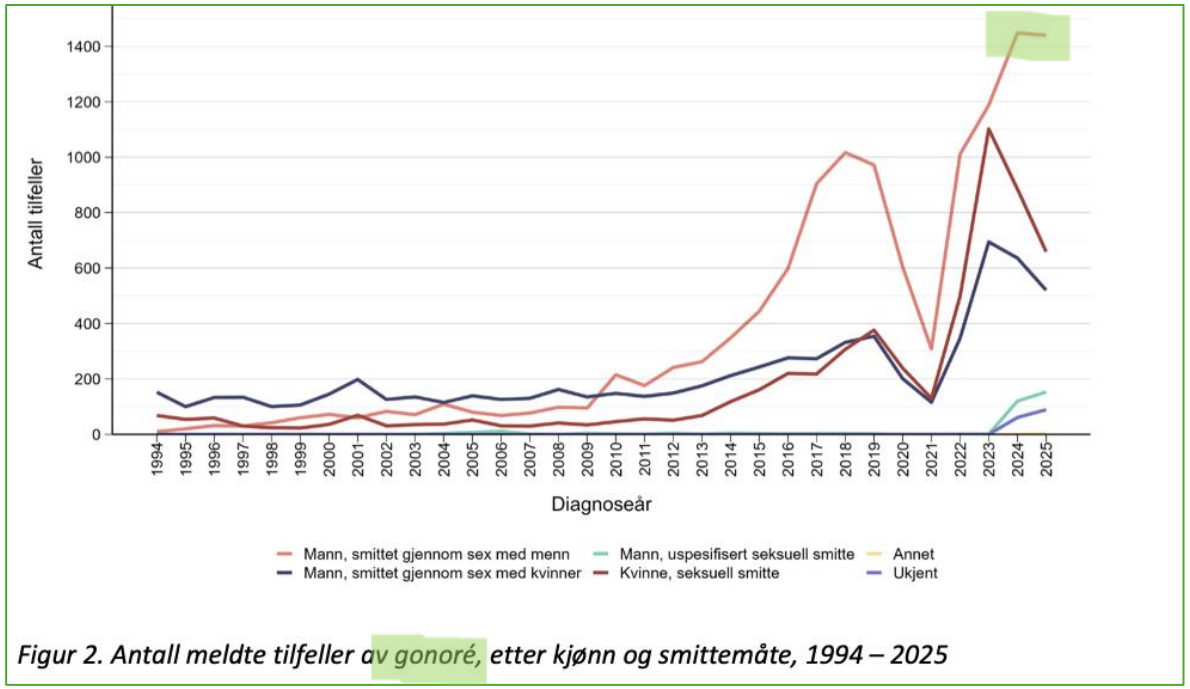
	Female n/N (%)	Male n/N (%)	Total n/N (%)
Chlamydia trachomatis			
Patients total	50/578 (8.7)	2/42 (4.8)	52/620 (8.4)
Cervix/vagina/urethra/urine*	49/573 (8.6)	0/42*	49/615 (8.0)
Anus	12/243 (4.9)	2/30 (6.7)	14/273 (5.1)
Mycoplasma genitalium			
Patients total	34/494 (6.9)†	0/35	34/529 (6.4)†
Cervix/vagina/urethra/urine*	28/490 (5.7)‡	0/34	28/524 (5.3)‡
Anus	8/212 (3.8)§	0/25	8/237 (3.4)§
Neisseria gonorrhoeae			
Patients total	4/593 (0.7)	0/42	4/635 (0.6)
Cervix/vagina/urethra/urine*	2/573 (0.3)	0/41	2/614 (0.3%)
Anus	1/238 (0.4)	0/30	1/268 (0.4)
Oropharynx	4/522 (0.8)	0/36	4/558 (0.7)
Hepatitis B			
Known chronic contagious infection	1/584 (0.2)	1/42 (2.4)	2/626 (0.3)
Previous infection	10/584 (1.7)	1/42 (2.4)	11/626 (1.8)
Previously vaccinated	181/584 (31.0)	15/42 (35.7)	196/626 (31.3)
Positive vaccination status during follow-up¶	360/420 (85.7)	24/32 (75.0)	384/452 (85.0)
Hepatitis C			
Known previous infection	12/585 (2.1)	2/42 (4.8)	14/627 (2.2)
HIV			
Known infection	1/586 (0.2)	0/42	1/628 (0.2)
Syphilis			
Known previous infection	1/576 (0.2)	2/39 (5.1)*	3/615 (0.5)

Proportions stated as positive tests (n) per patient tested (N).
Fourteen patients were tested for lymphogranuloma venereum, all negative.
Seven patients were tested for *Trichomonas vaginalis*, all negative.

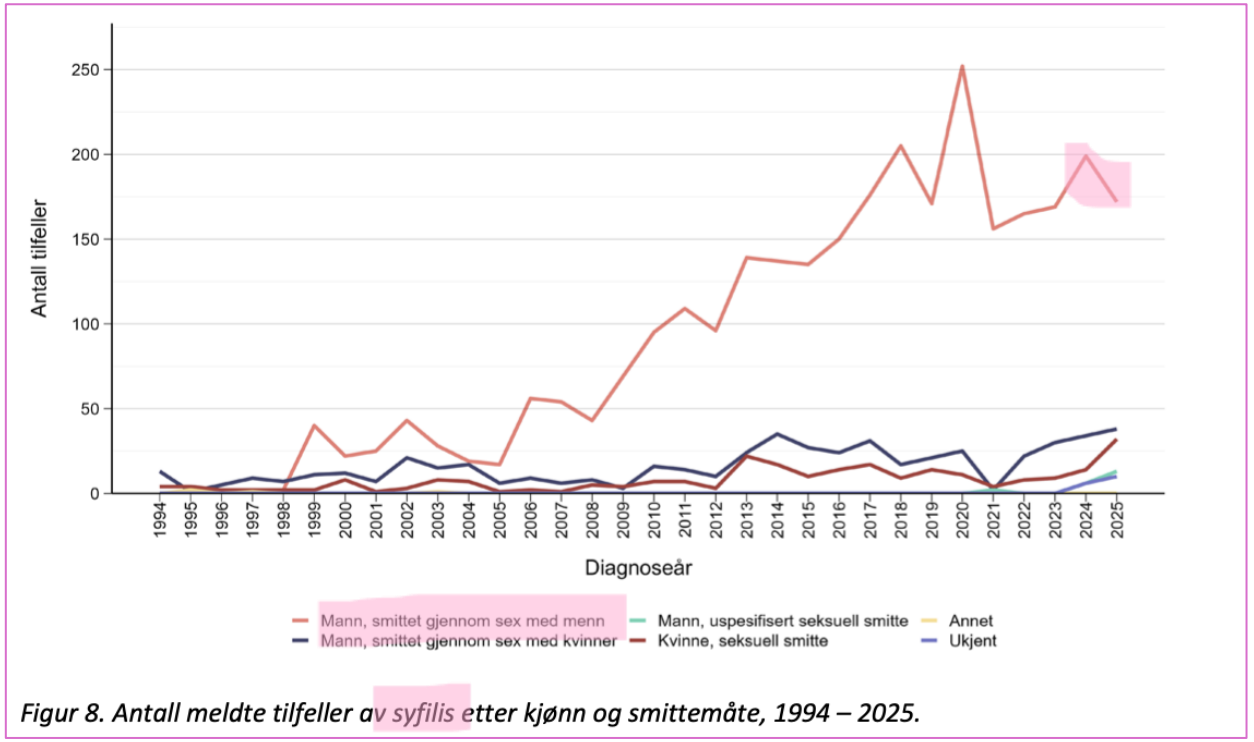
Skjælaaen K, et al. BMJ Open. 2022;12:e064934. doi:10

Forekomst soi i ulike populasjoner

- MSM- NG >>t pal >, lgv, mkopper,



Figur 2. Antall meldte tilfeller av gonoré, etter kjønn og smittemåte, 1994 – 2025



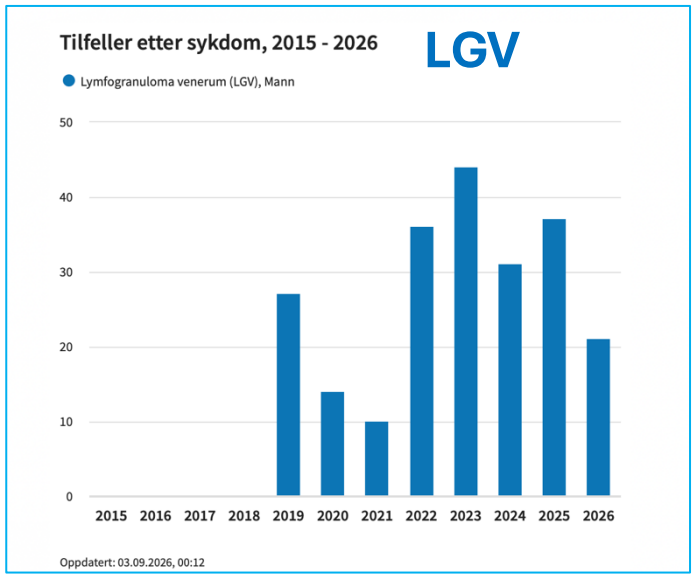
Figur 8. Antall meldte tilfeller av syfilis etter kjønn og smittemåte, 1994 – 2025.

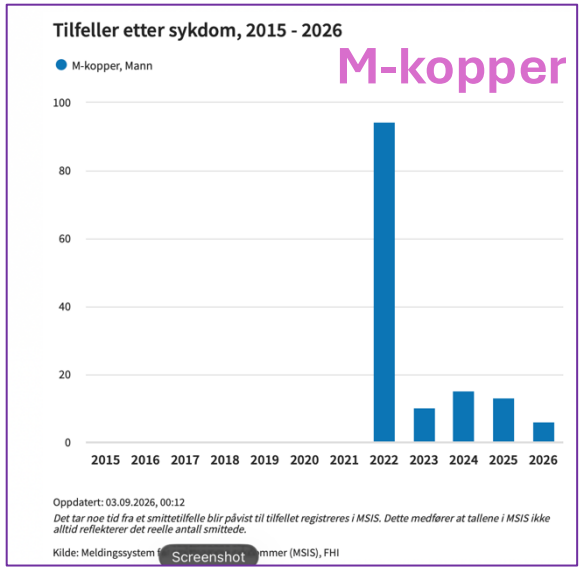
Forekomst soi i like populasjoner

- MSM- NG >>t pal >, lgv, mkopper,

3.2 Meldte tilfeller av LGV

I 2025 ble det meldt 37 tilfeller til MSIS, mot 31 tilfeller i 2024 og 43 tilfeller i 2023, alle blant msm. To tredeler av mennene var (73 %) var 35 år eller eldre. Vel 40 % var født utenfor Norge. Av de 37 tilfellene meldt i 2025, var 24 folkeregistrert bosatt i Oslo. For de 34 der antatt smittested var oppgitt, var 47 % (16) smittet i Norge, hvorav nesten alle (14) i Oslo. Blant de 18 som oppgir å ha blitt smittet i utlandet, oppga en tredel (6) Spania som antatt smittested.



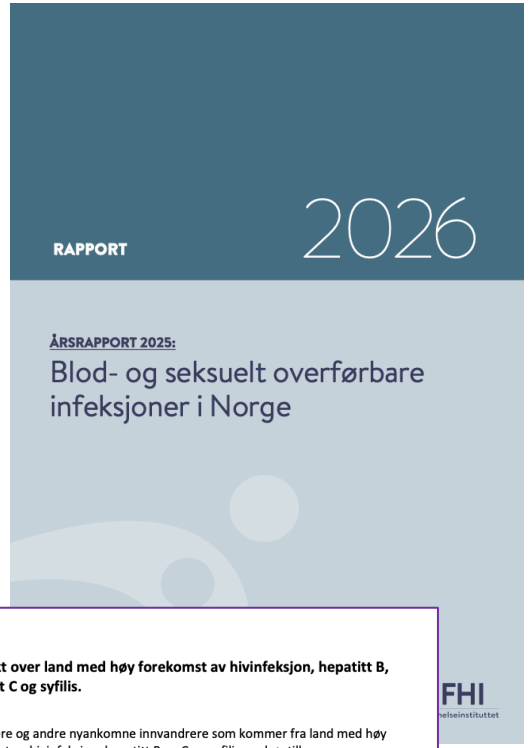


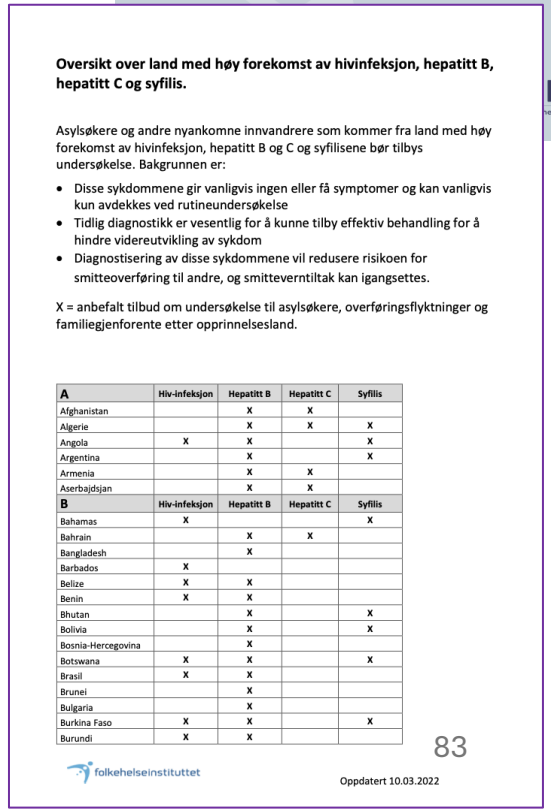
8.2 Meldte tilfeller av m-kopper

I 2025 ble 13 tilfeller meldt til MSIS, mot 15 i 2024, 10 i 2023 og 94 i 2022. Alle tilfellene meldt i 2025 var menn i alderen 28 – 47 år, med en medianalder på 33 år. De fleste var rapportert som seksuelt overført, 77 % blant msm. Åtte tilfeller ble rapportert smittet i utlandet og fem i Norge. Tolv av tilfellene var forårsaket av subtype II, mens det siste tilfellet er ikke typet. Antall meldte tilfeller av m-kopper etter diagnosemåned er presentert i Figur 17.

Forekomst soi i ulike populasjoner

- MSM- overrepresentert i Norge Ng, syfilis, lgv, m-kopper
- Anal penetrasjon/ sex:
  - høyere risiko for hiv/ hcv-smitte enn vaginal
- Synergi soi
  - syfilis/ gonore/ lgv og hiv smitte
  - lgv og hcv
- Opprinnelse : FHI-oversikt over land med høy forekomst hiv, hbv, hcv, syflis, BBV





Oversikt over land med høy forekomst av hivinfeksjon, hepatitt B, hepatitt C og syfilis.

Asylsøkere og andre nyankomne innvandrere som kommer fra land med høy forekomst av hivinfeksjon, hepatitt B og C og syfilisene bør tilbys undersøkelse. Bakgrunnen er:

- Disse sykdommene gir vanligvis ingen eller få symptomer og kan vanligvis kun avdekkes ved rutineundersøkelse
- Tidlig diagnostikk er vesentlig for å kunne tilby effektiv behandling for å hindre videreutvikling av sykdom
- Diagnostisering av disse sykdommene vil redusere risikoen for smitteoverføring til andre, og smitteverntiltak kan igangsettes.

X = anbefalt tilbud om undersøkelse til asylsøkere, overføringsflyktninger og familiegjenforente etter opprinnelsesland.

A	Hiv-infeksjon	Hepatitt B	Hepatitt C	Syfilis
Afghanistan		X	X	
Algerie		X	X	X
Angola	X	X		X
Argentina		X		X
Armenia		X	X	
Aserbajdsjan		X	X	
B	**Hiv-infeksjon**	**Hepatitt B**	**Hepatitt C**	**Syfilis**
Bahamas	X			X
Bahrain		X	X	
Bangladesh		X		
Barbados	X			
Belize	X	X		
Benin	X	X		
Bhutan		X		X
Bolivia		X		X
Bosnia-Hercegovina		X		
Botswana	X	X		X
Brasil	X	X		
Brunei		X		
Bulgaria		X		
Burkina Faso	X	X		X
Burundi	X	X		

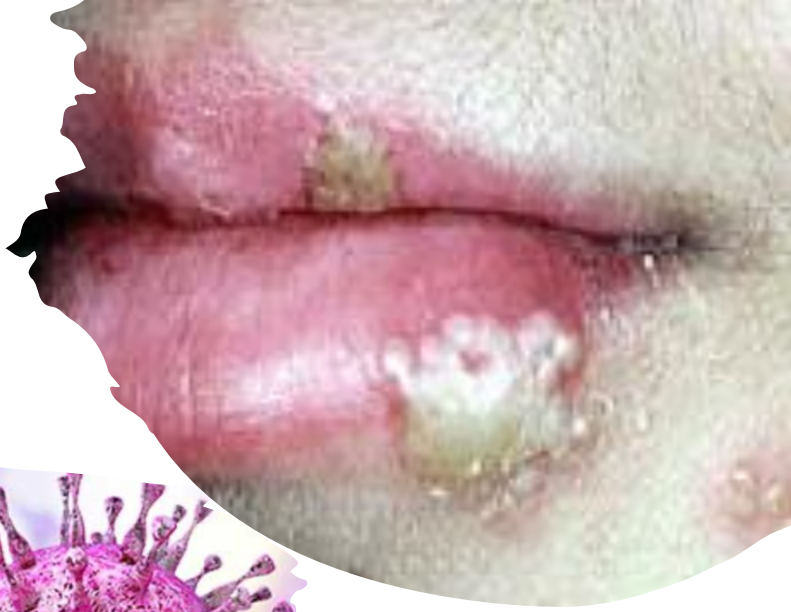
folkehelseinstituttet

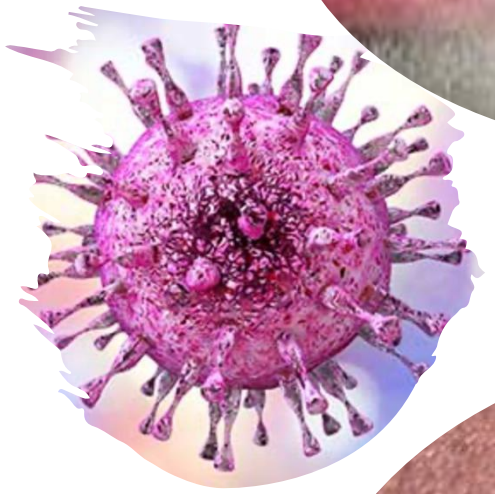
Oppdatert 10.03.2022

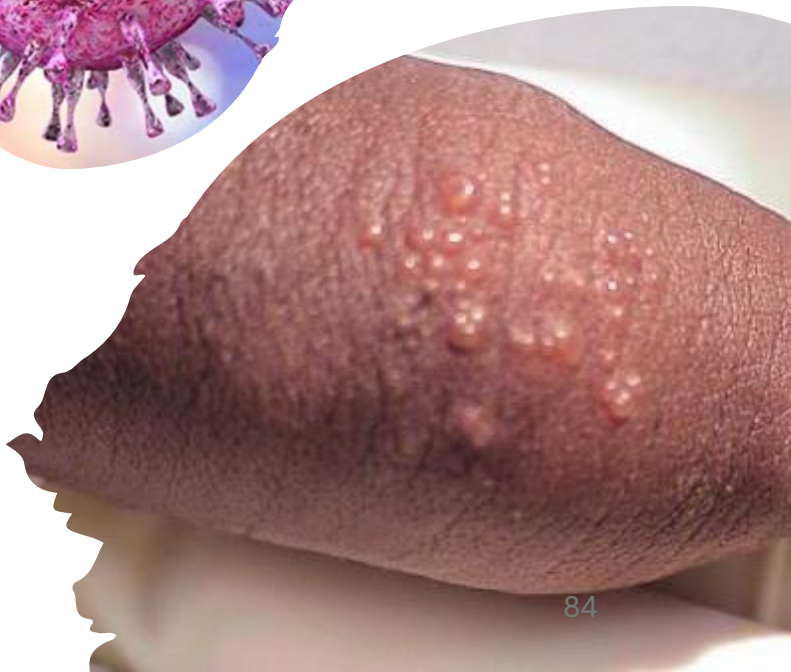
https://www.fhi.no/globalassets/dokumenterfiler/landliste-asylsokere_10_03_2022.pdf

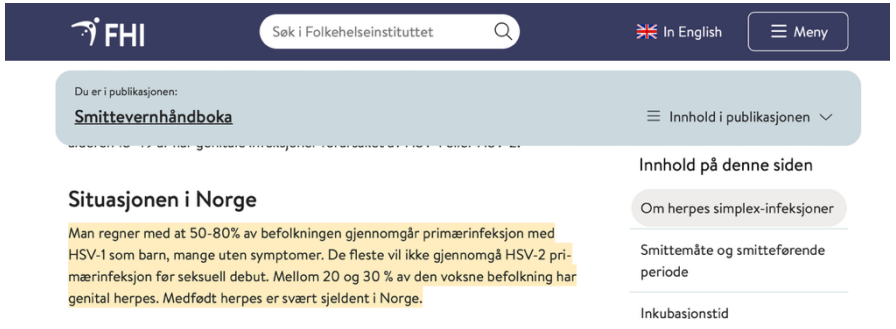
Herpes simplex virus 1 og 2

- «forkjølelse sår»
- vanligste årsak til genitale sår
- Smittemåte
  - Direkte kontaktsmitte med infisert slimhinne/hud
  - Inkubasjonstid ca 4 dager (2-12 dager)
- FHI
  - tidlgiere estimert ca 50-80% norsk befolkning får hsv 1 som barn (trolig betydelig lavere nå)
  - norske studier sero prevalens hsv 2 :
    i) gravide kvinner : 14 -27 %
    ii) blodgivere : 7%









Herpes simplex virus: global infection prevalence and incidence estimates, 2016

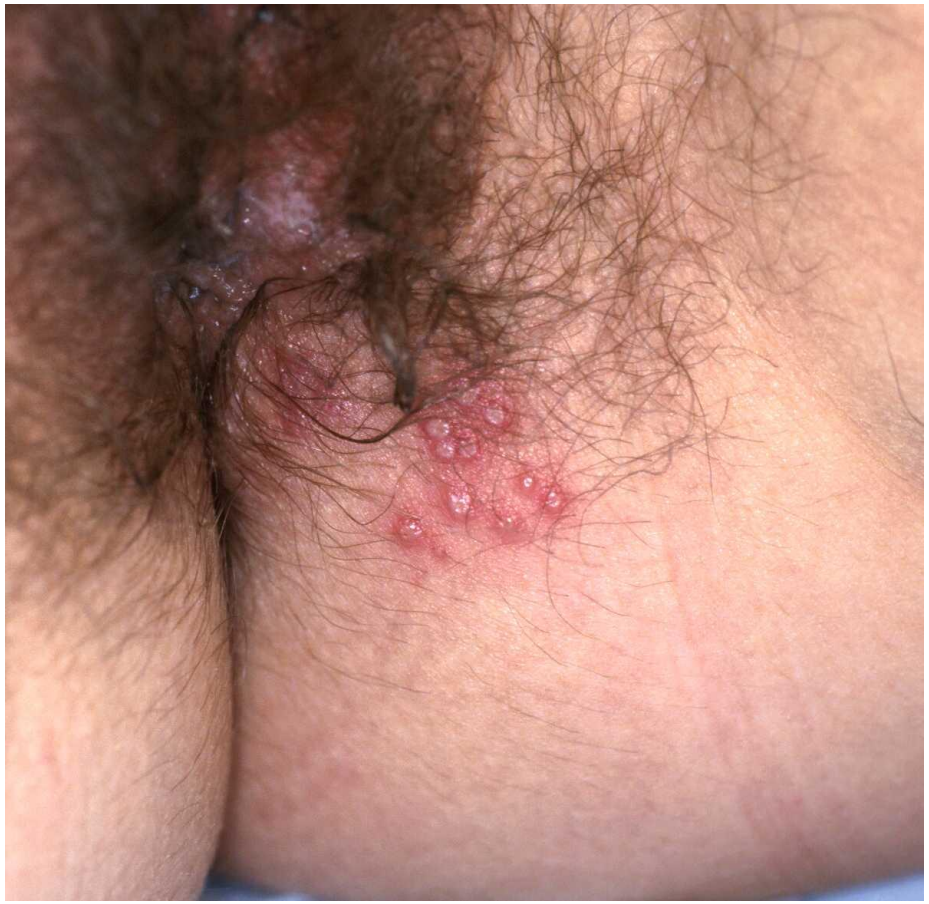
Charlotte James,[a] Manale Harfouche,[b] Nicky J Welton,[a] Katherine ME Turner,[c] Laith J Abu-Raddad,[b] Sami L Gottlieb[d] & Katharine J Looker[a]

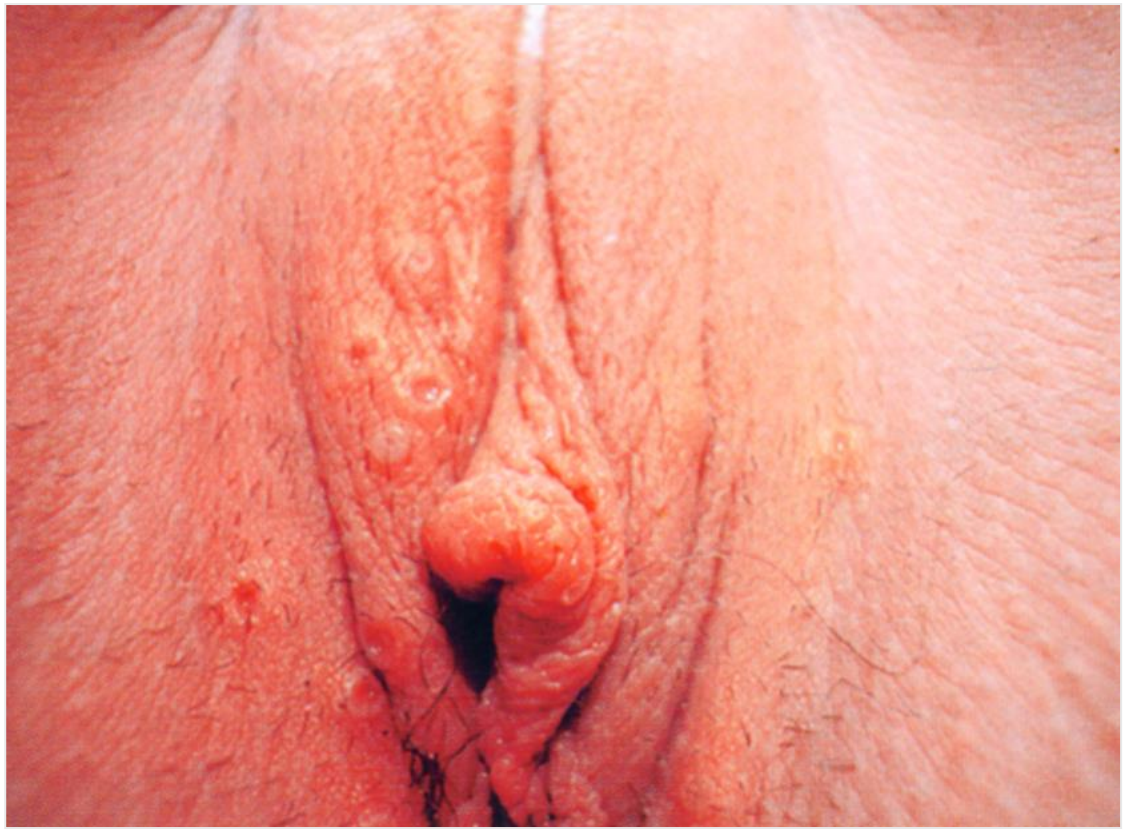
- HSV type 1 infection at any site, we estimated 3752.0 million people (95% UI: 3555.5 million–3854.6 million) of the world's population 0–49 years of age were infected, a prevalence of 66.6%
- 16.0–17.6% of the world's population 15–49 years of age, had genital HSV type 1 or HSV type 2 or both
-

	African Region	Region of the Americas	Eastern Mediterranean Region	European Region	South-East Asia Region	Western Pacific Region
Female						
Prevalence	43.9%	24.0%	7.6%	10.7%	9.6%	14.6%
Number	102.9 million	57.7 million	12.8 million	22.2 million	48.4 million	65.5 million
Male						
Prevalence	25.4%	11.6%	2.8%	5.3%	7.2%	7.1%
Number	59.3 million	28.0 million	5.1 million	11.1 million	38.5 million	36.0 million

Notes: Numbers are the year 2016 estimates of the number of people living aged 15–49 years of age with herpes simplex virus type 2 infection. Prevalences are the percentage of infected people in the age- sex- and region-specific population. Regions are World Health Organization definitions. Global estimates are presented in Table 1.

Typisk genital hsv utbrudd



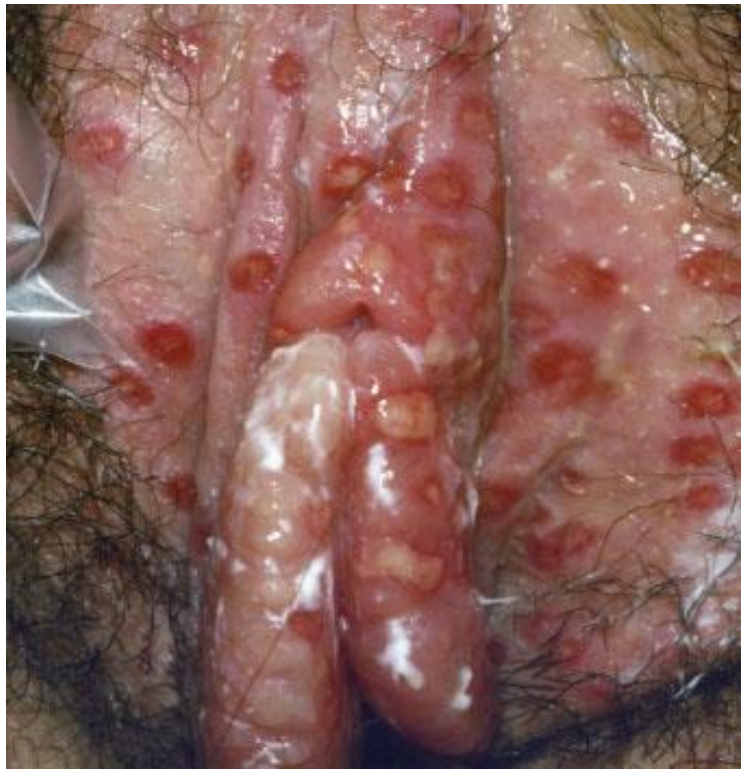


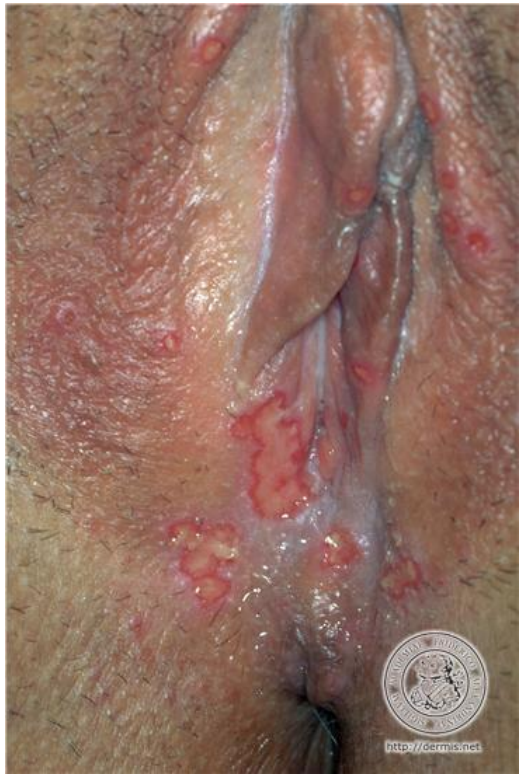
Source: Cincinnati STD/HIV Prevention Training Center

Diagnostikk anogenital HSV

- Pinneprøve fra vesikler/erosjoner for PCR HSV 1

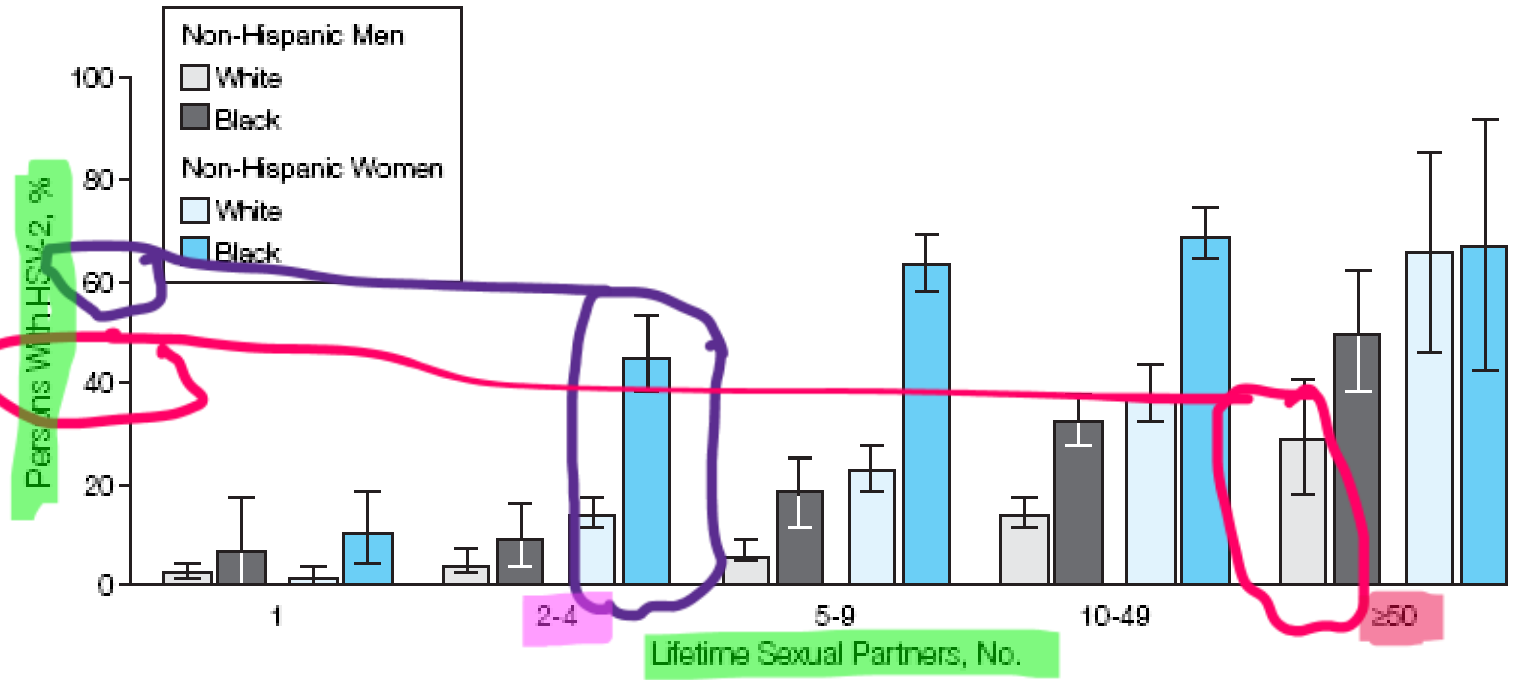
Beware of imitations.
? Syfilis?
Mpox ? VZV
?fixed drug eruption





Age-Adjusted Herpes Simplex Virus Type 2 Seroprevalence According to the Lifetime Number of Sex Partners, by Race/Ethnicity and Sex on NHANES in 1999-2004

Black women with 2-4 lifetime partners have higher prevelance of HSV2, than white men with >50 lifetime partners



Error bars indicate 95% confidence intervals; HSV-2, herpes simplex virus type 2; NHANES, National Health and Nutrition Examination Survey.

Source: Xu F et al. JAMA, 2006; 296(8):964-973.

Type specific HSV serologi screening?

- Falske positiv I lav forekomst populasjoner

https://www.bashh.org/_userfiles/pages/files/pateletal2024britishassociationofsexualhealthandhivuknationalguidelineforthemanagementofanogenital.pdf

Type specific HSV serology screening

sensitivity of commonly used tests ranges between

- 91.2 and 100% for HSV-1 and
- 90.6–100% for HSV-2

specificity ranges between

- 90.1 and 100% for HSV-1 and
- 95.3 and100% for HSV-2.

Table 1. Positive predictive values for HSV-2 antibody assays.

Clinic location	Prevalence (%)	Positive prediction value[a]
Sexually transmitted infection clinic	25	86%
General population antenatal clinic	5	50%

[a](for an assay with 95% sensitivity and specificity).

https://www.bashh.org/_userfiles/pages/files/pateletal2024britishassociationofsexualhealthandhivuknationalguidelineforthemanagementofanogenital.pdf

HSV serologi?

- IgM assays are not recommended as a marker of recent HSV infections, because
  - they are not type specific and
  - do not confidently differentiate recent from recurrent infections, (IgM response can be triggered by HSV reactivation)

- IgG indicates infection at some time in the past, without establishing when it occurred

Serology.

Key points in interpreting HSV serology:

1. A non type-specific HSV serology test is rarely useful
2. Type specific antibody tests can take time to become positive after infection
3. Patients with proven HSV infection can lose their HSV antibodies
4. HSV IgM testing is rarely useful
5. Serology can be useful for patients e.g.,
   Recurrent genital symptoms and HSV-2 can be considered unlikely in the absence of type-specific antibodies
   Counselling of potentially serodiscordant couples
   In pregnancy when initial herpes is diagnosed in the third trimester

https://www.bashh.org/_userfiles/pages/files/pateletal2024britishassociationofsexualhealthandhivuknationalguidelineforthemanagementofanogenital.pdf

Type specific HSV serologi?

- type specific epitopes on the surface glycoproteins gG-1 for HSV-1 and gG-2 for HSV-2
- primary and non-primary HSV-1 and HSV-2 infections can be identified by detecting seroconversion to gG-1 or to gG-2 IgG in paired serum samples, collected a few weeks apart, around the time of new genital lesions.
- However, up to 12% of patients will subsequently lose their IgG antibodies adding yet more complexity to the interpretation of serology.

Serology.

Key points in interpreting HSV serology:

1. A non type-specific HSV serology test is rarely useful
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4. HSV IgM testing is rarely useful
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   In pregnancy when initial herpes is diagnosed in the third trimester

Rift?: sopp Vs skade

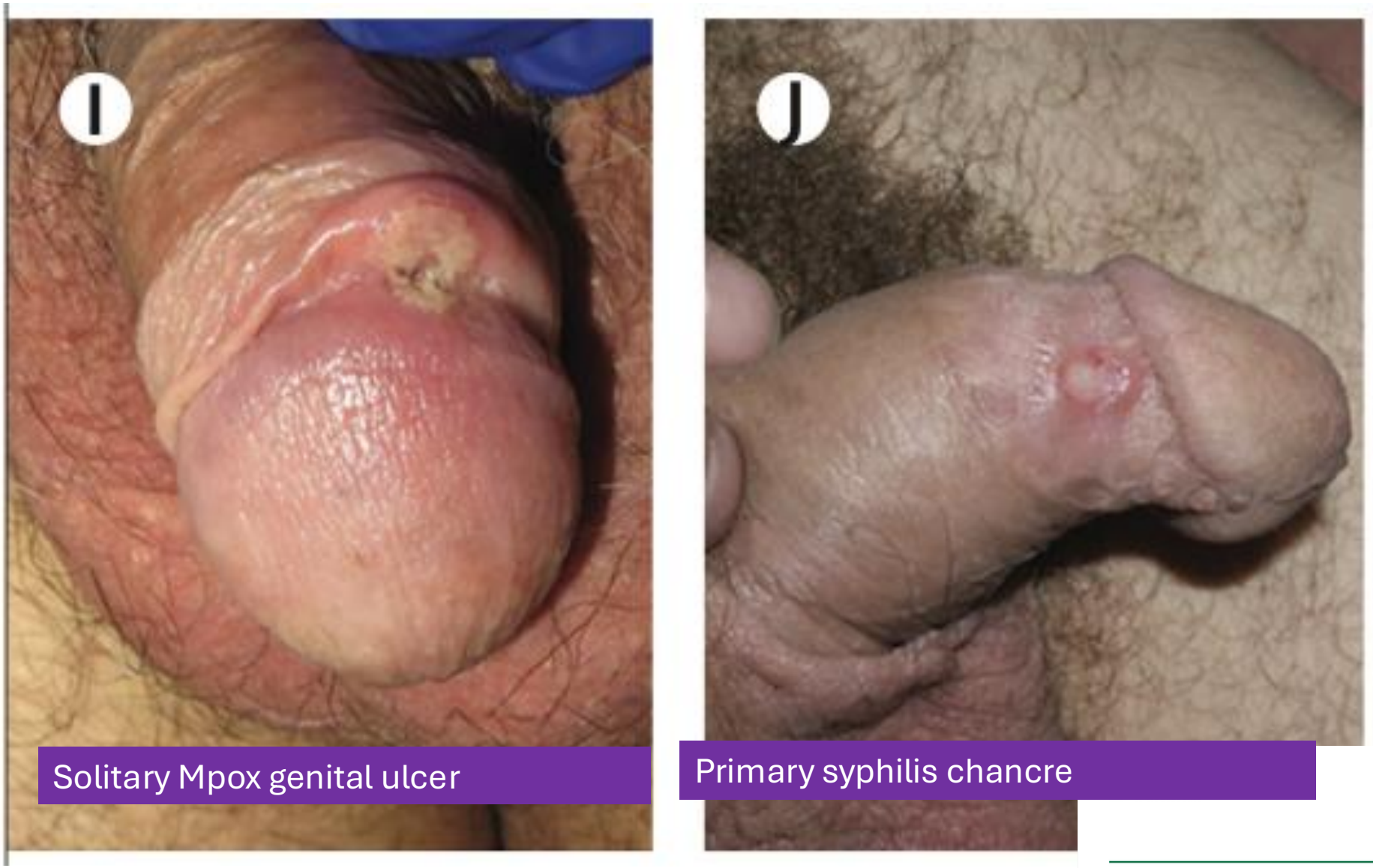
- Anamnese: langvarig vulva plager , lett få rifter?
- Tegn: lichenifikasjon, kløe , hypopigmentering
- Ingen indikasjon for sopp screeening

Sår / blemmer undersøkelse PLUS PCR

- BEWARE OF IMITATIONS

?Hsv, Mpox, syfilis

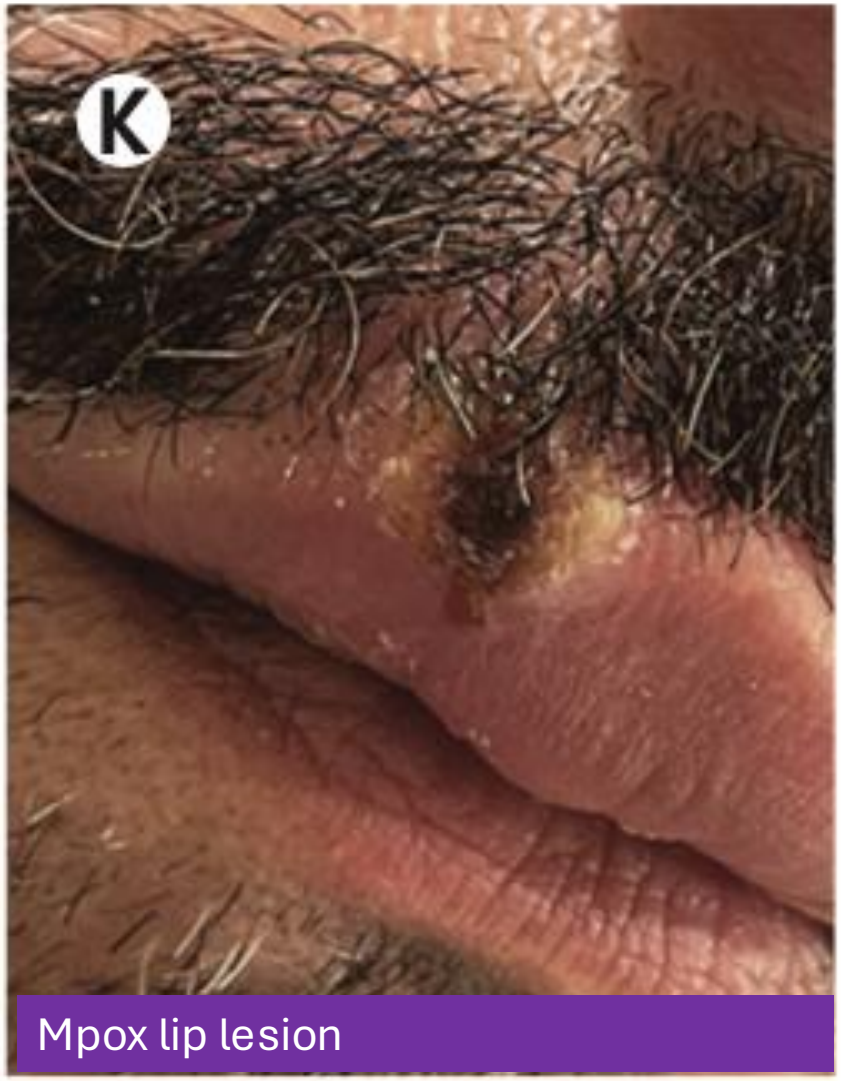
Hvilken er Mpox??



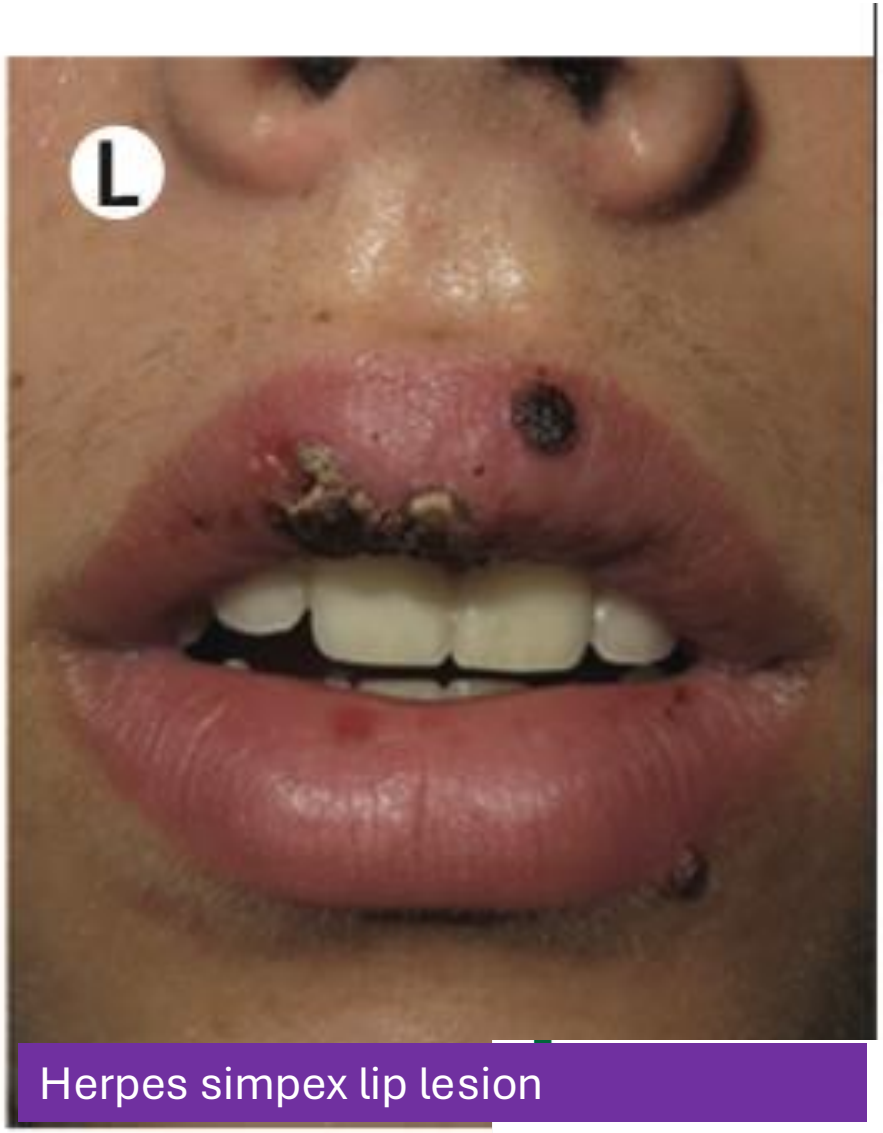
Solitary Mpox genital ulcer

Primary syphilis chancre

Hvilken er Mpox??

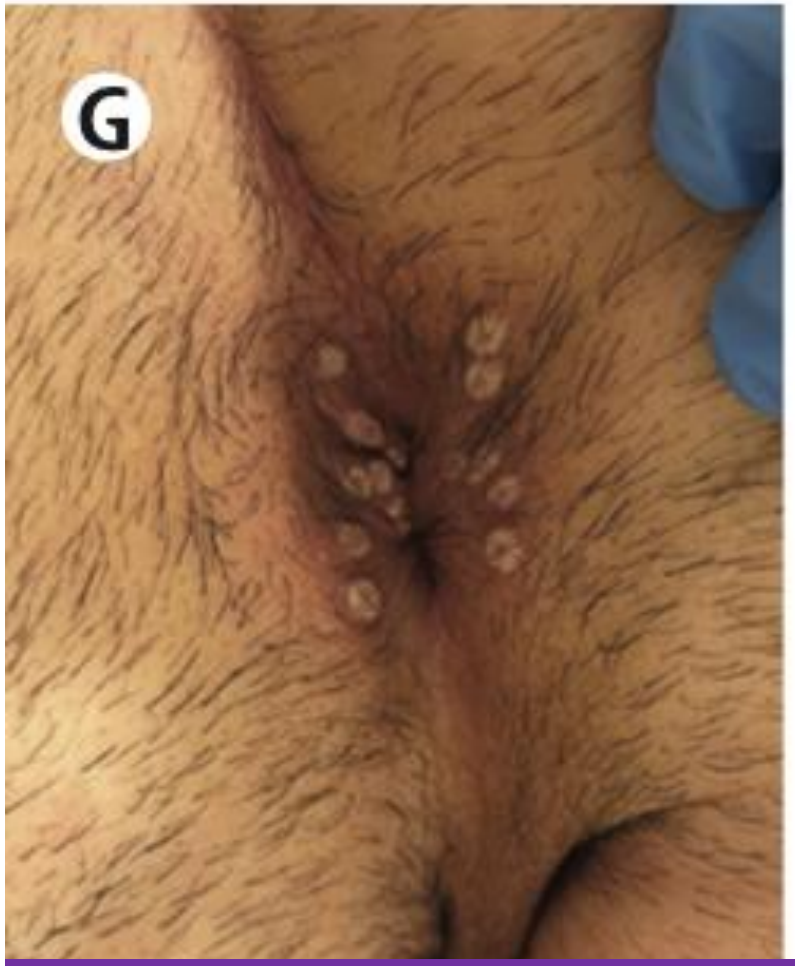


Mpox lip lesion

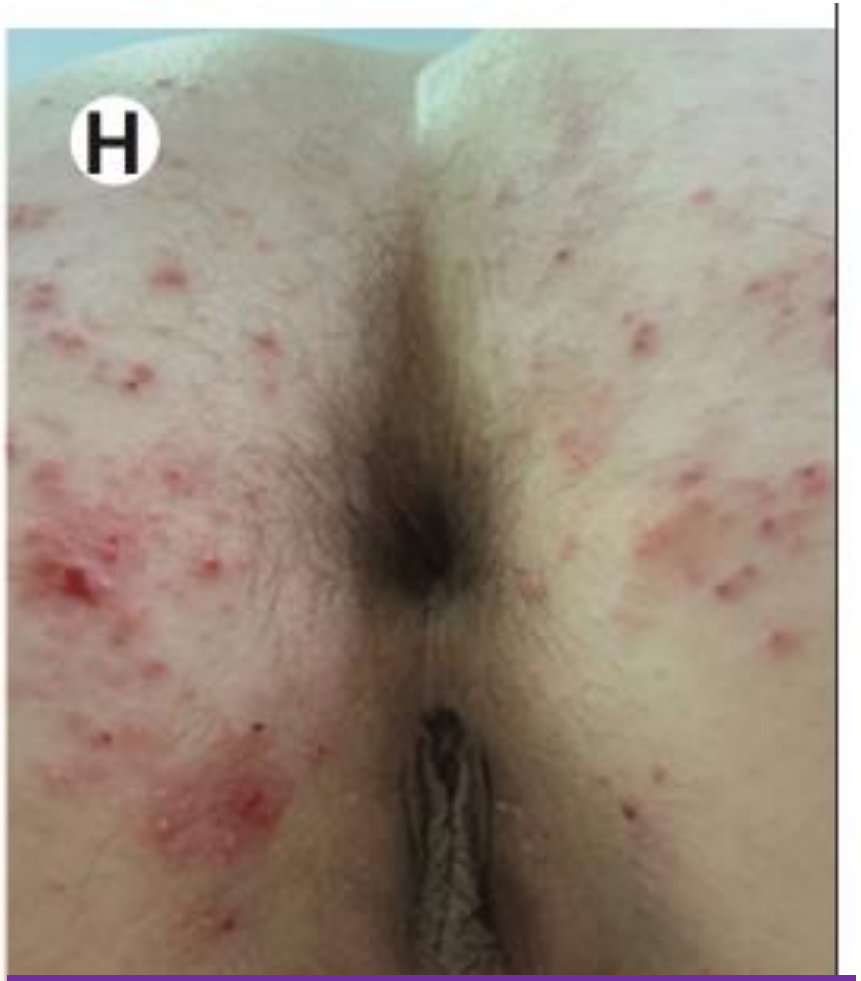


Herpes simpex lip lesion

Hvilken er Mpox??

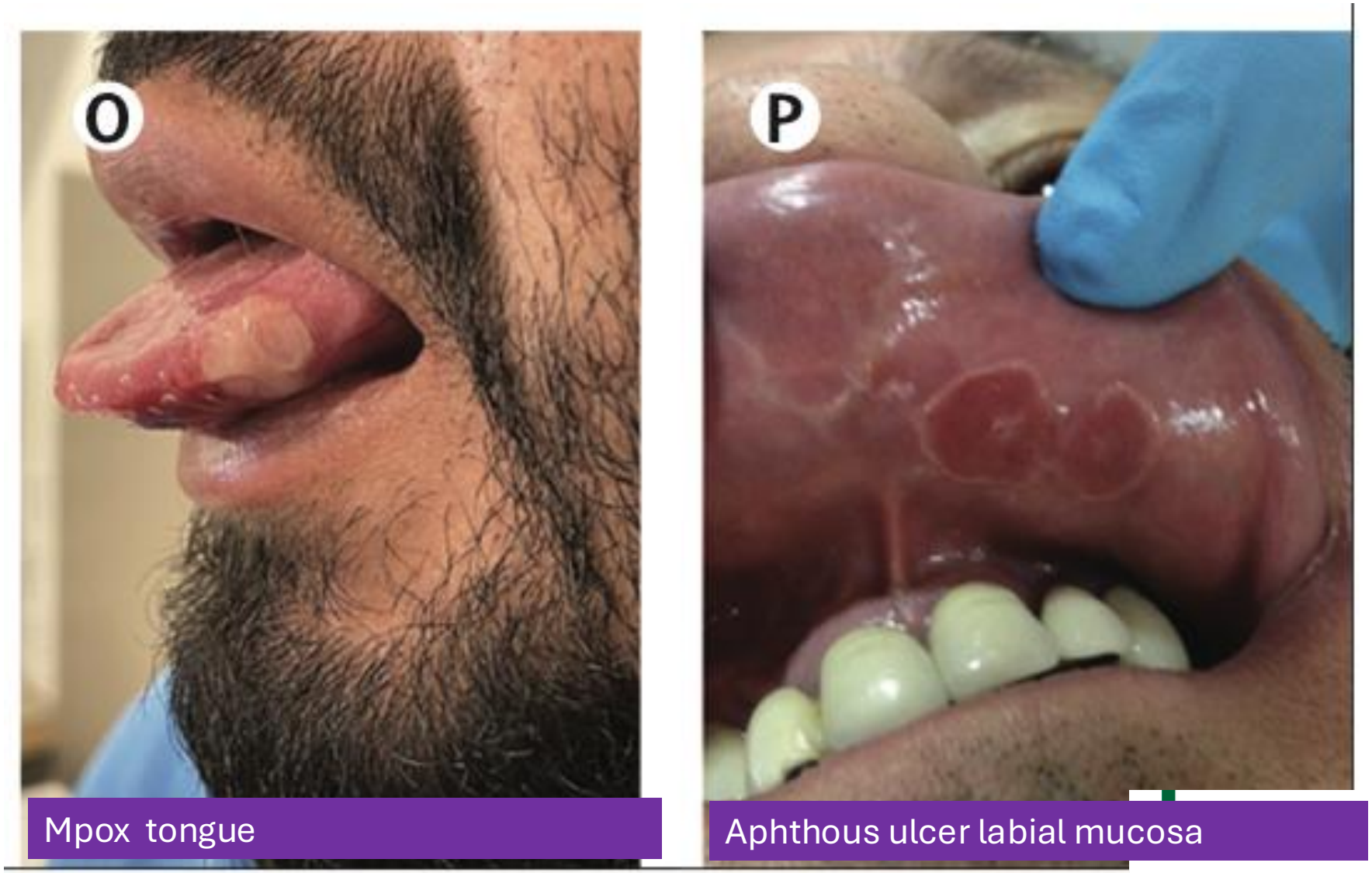


Localised perianal Mpox



Molluscum contagiosum

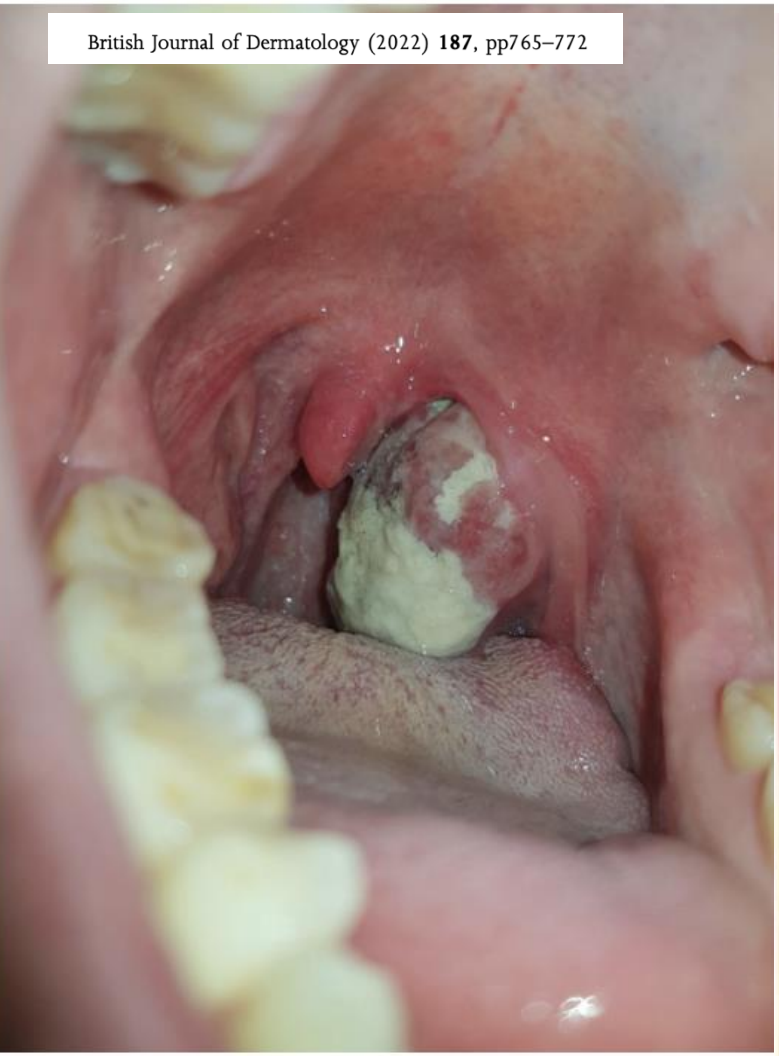
Hvilken er Mpox??

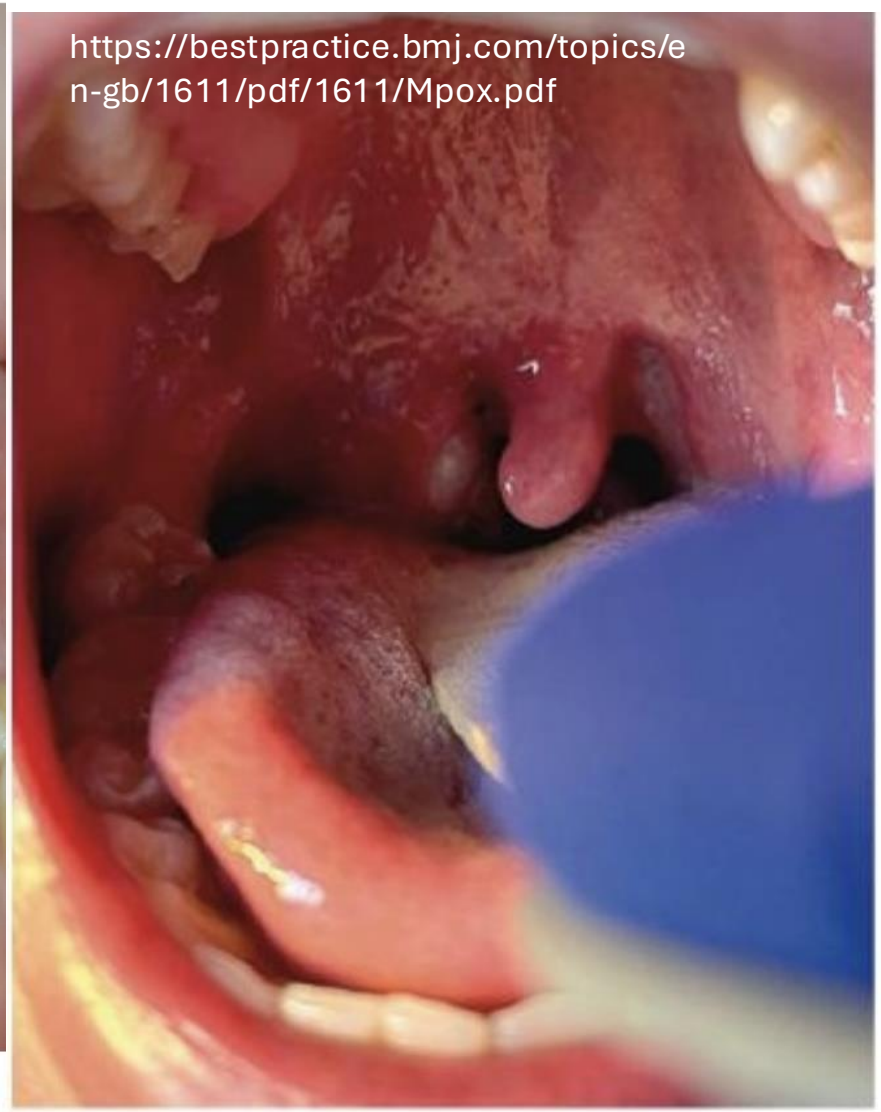


Mpox tongue

Aphthous ulcer labial mucosa

M-kopper komplikasjoner





Right tonsillar enlargement with an overlying pustular lesion and yellow-green exudate with slight deviation of the uvula

BMJ. 2022 Jul 28;378:e072410; CC-BY-NC 4.0 licence

Oral complications:

(receptive oral sex)

- Tonsilitis
- Peri tonsillar cellulitis
- Tonsillar/peritonsillar abscess
- Necrotising tonsillitis
- Epiglottitis

Airway management/ antibiotics/ surgery

Primær syfilis

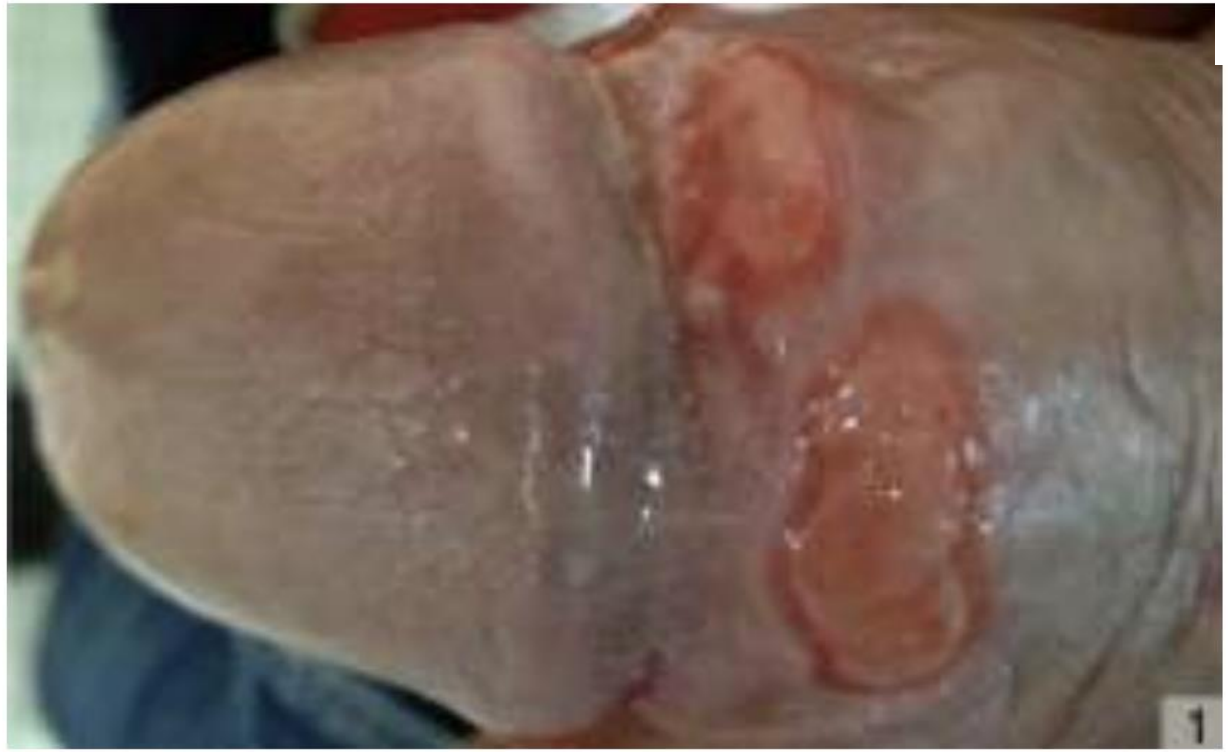


Figure 1 Multiple chancres on the shaft of a penis (photograph courtesy of Centro Sanitario Sandoval).

REVIEW

Atypical Cutaneous Manifestations in Syphilis☆

M. Ivars Lleó,[a,*] P. Clavo Escribano,[b] B. Menéndez Prieto[c]

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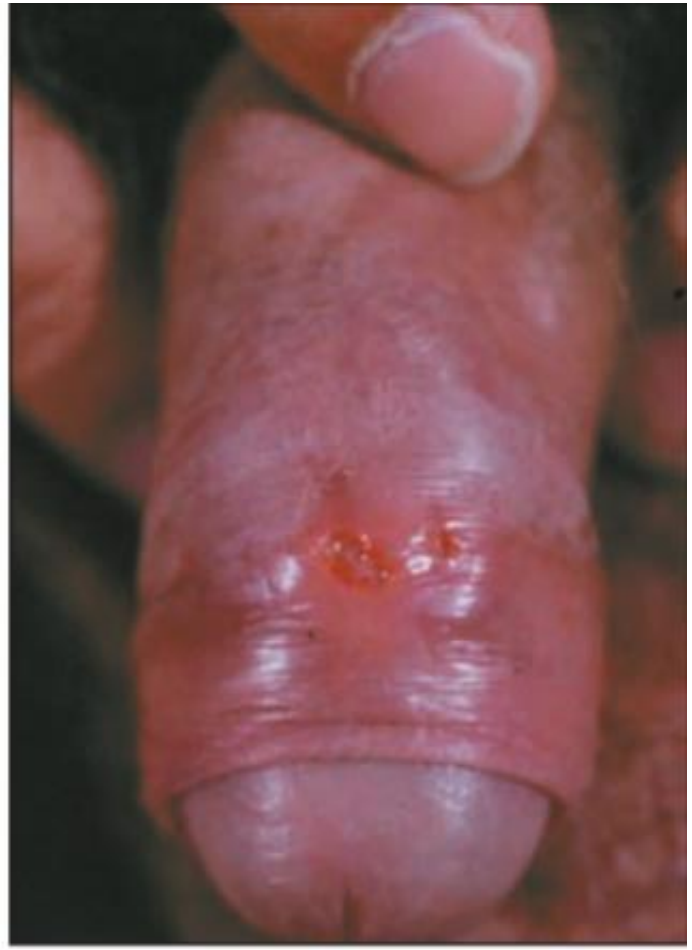
Lleó MI, Escribano PC, Prieto BM. Manifestaciones cutáneas atipícas en la sífilis. Actas Dermosifiliogr. 2016;107:275-283.

LGV



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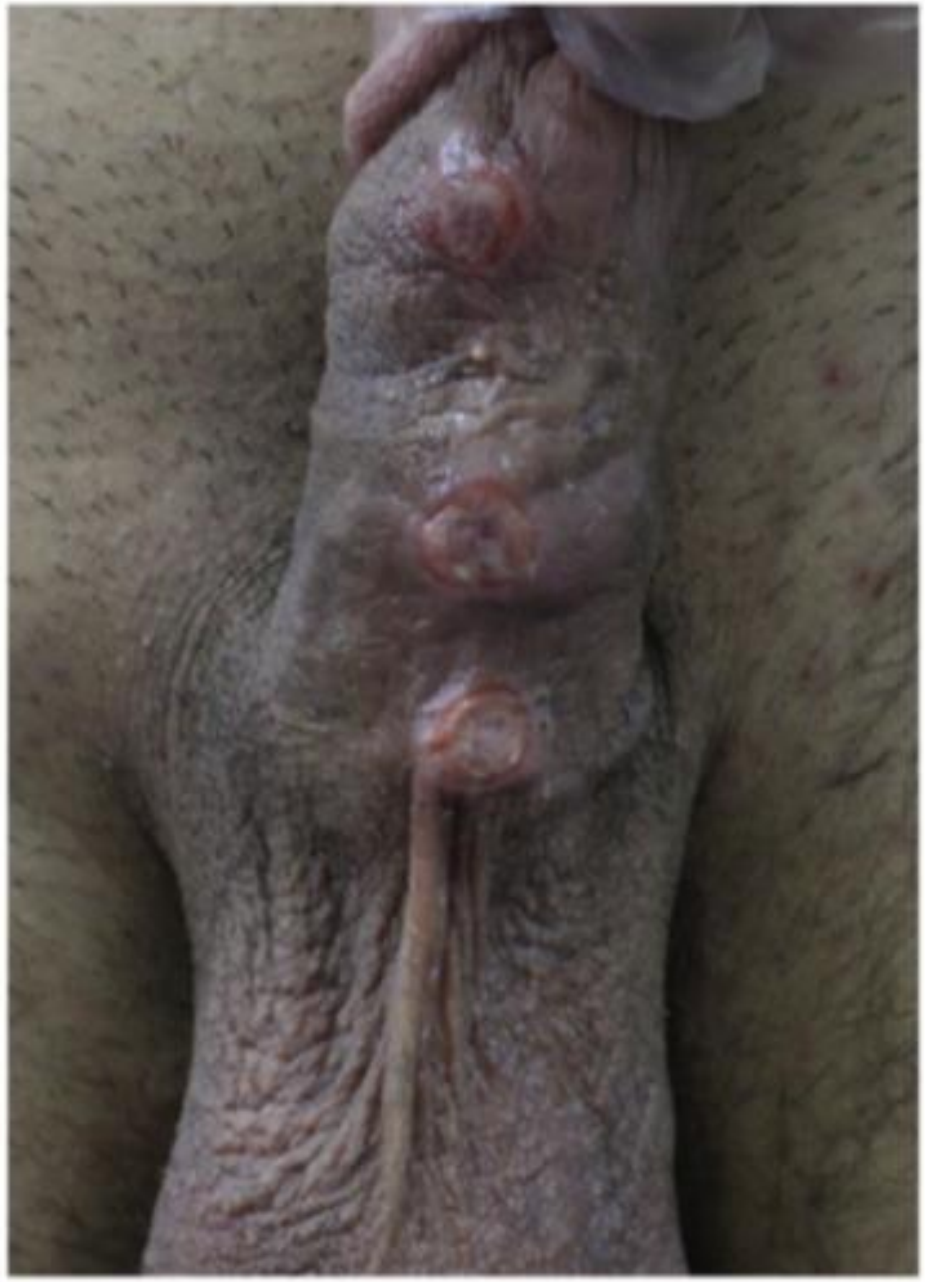
Institut national de santé publique du Québec

CMAJ • JAN. 18, 2005; 172 (2) 185

Primær syfilis

- «Typisk» enkelt sjanker- men kan ha flere samtidig



https://doi.org/10.1016/j.clindermatol.2019.01.007

Fig. 2 Multiple chancres.

Primær syfilis- ekstragenital lokalisasjon

- 33år MSM
- Hiv CD4 450
- Røyker

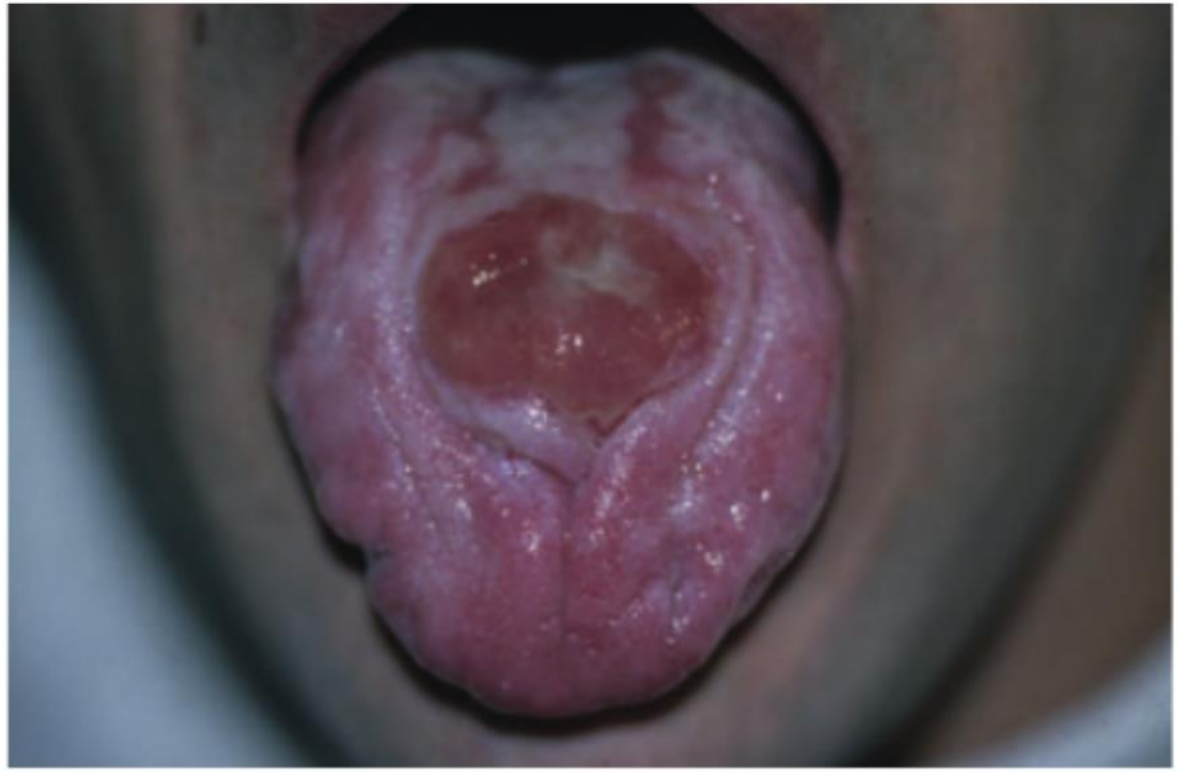


Figure 1 Firm, well-demarcated, indurated nodule, with superficial erosion, 20 mm in diameter on the dorsal aspect of the tongue.

M. Yébenes, A. Toll, A. Giménez-Arnau, M. Ferran, E. Parera, J. Fraga,* C. Barranco*,† and R. M. Pujol
*Departments of Dermatology and *Pathology, Hospital del Mar, IMAS,Passeig Maritim 25–29, 08003-Barcelona, Spain; and †Hospital Universitario de la Princesa, Madrid, Spain*
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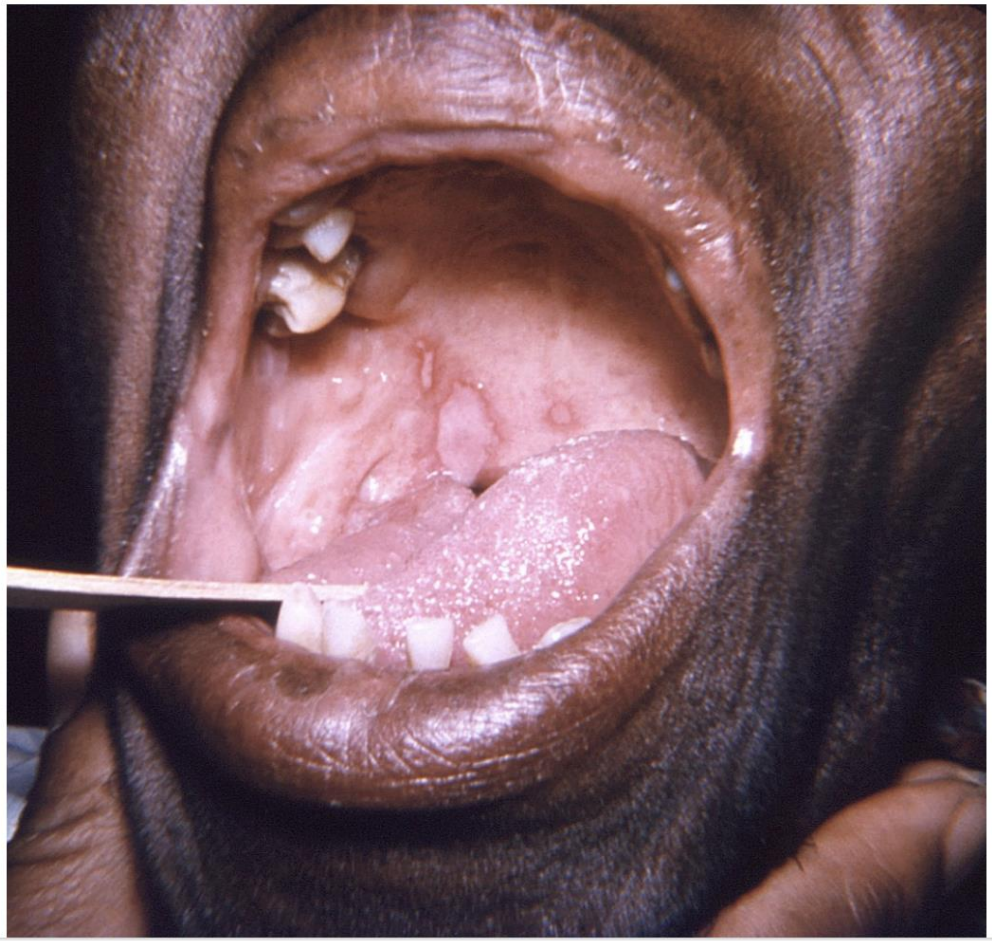
Clinical and Experimental Dermatology, 33, 500–522
doi: 10.1111/j.1365-2230.2008.02690.x

IMAGE

Herpes Labialis (Soft Palate and Tongue)



These ulcerative lesions on the soft palate are caused by herpes simplex virus type 1 (HSV-1).

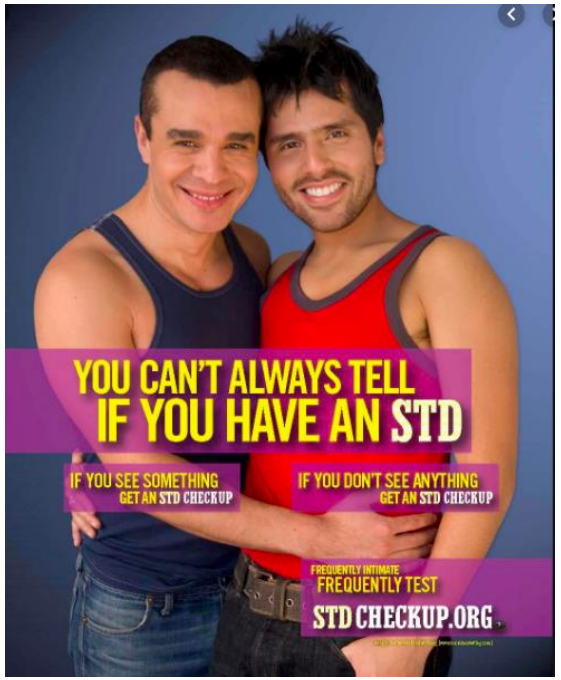
Image courtesy of Robert E. Sumpter via the Public Health Image Library of the Centers for Disease Control and Prevention.

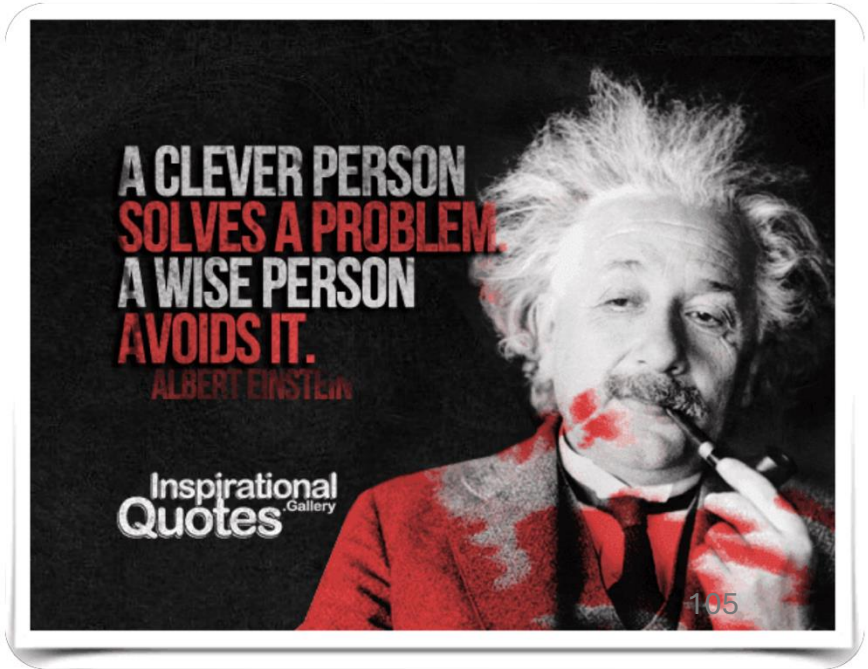
Oppsummering 1

Enig med deres rutiner

- soi screening og intervaller
- IKKE SCREEN FOR MG
- ? vurdere TV- (få tilfeller, men finnes- lett å behandle, lite resistens drivende)

- anbefalinger hbv og hiv PEP





Oppsummering 2

Symptomer:

- Vesikel/papul/sår: beware of imitations!!
  - PCR : HSV >syfilis > LGV >m kopper

- Smertefullt proktitt: HSV > LGV > m kopper>syfilis

- Utvidet sår testing

opprinnelse gjerningspersonen /ev land: høyere forekomst tropisk anogenial sår: lgv, chancroid

Oppsummering 3

- Ingen soi prøve er 100% sensitiv og 100% spesifikk
- Soi prøver er ikke bevis at
  - -kondom er brukt/ ikke brukt
  - -partner har hatt sex med en annen
  - -penetrasjon har skjedd
- (Endå mer komplisert i tilfeller barn- rapport hushold Vs overgrep)

- Fremtid: phylogenetics :whole genome sequencing?? Ikke helt der

Takk

Olafiaklinikken : direktelinje for helsepersonell : 23075842