

# Syphilis as the great imitator: the clinical perspective

## ECCMID 2017

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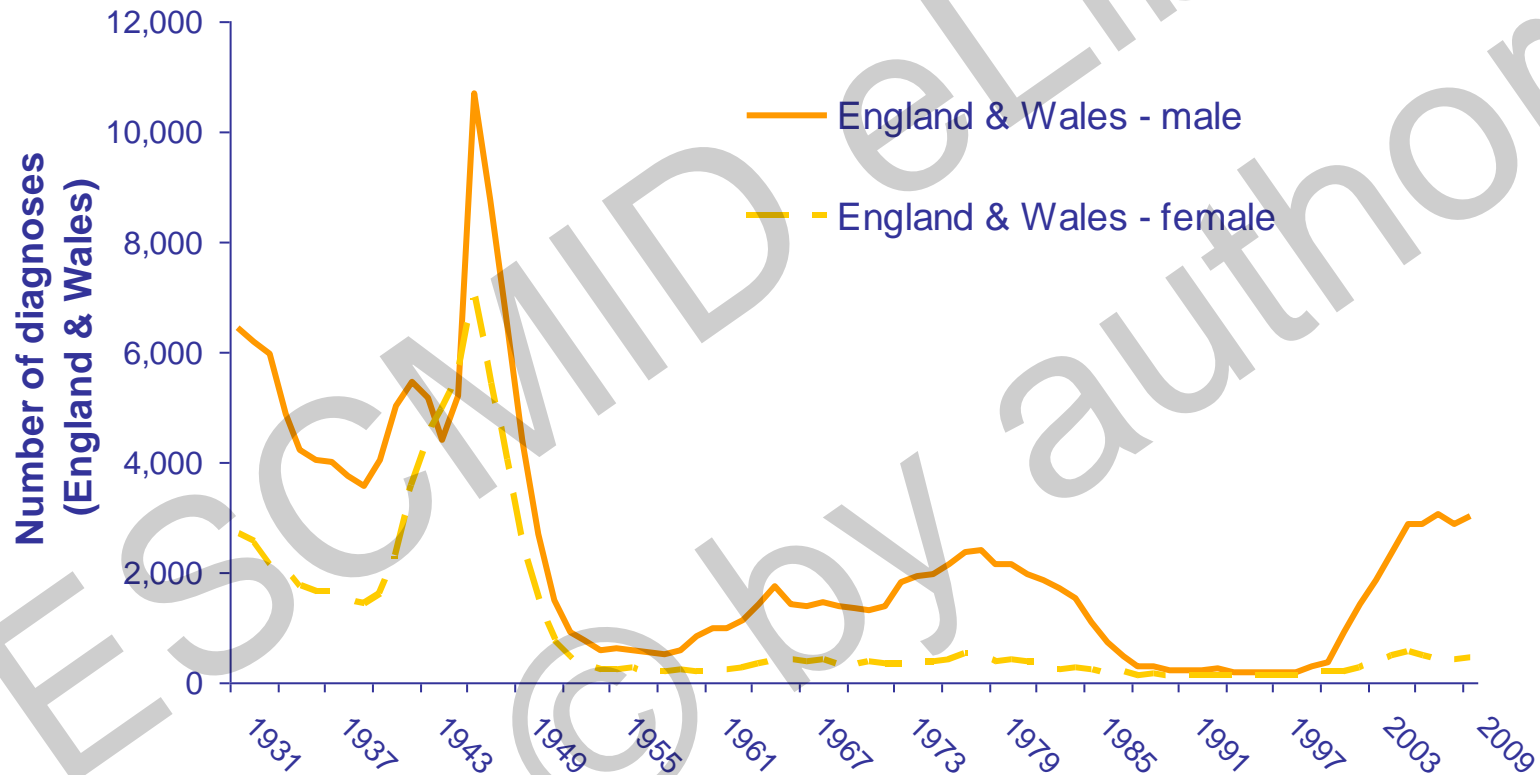


# Introduction

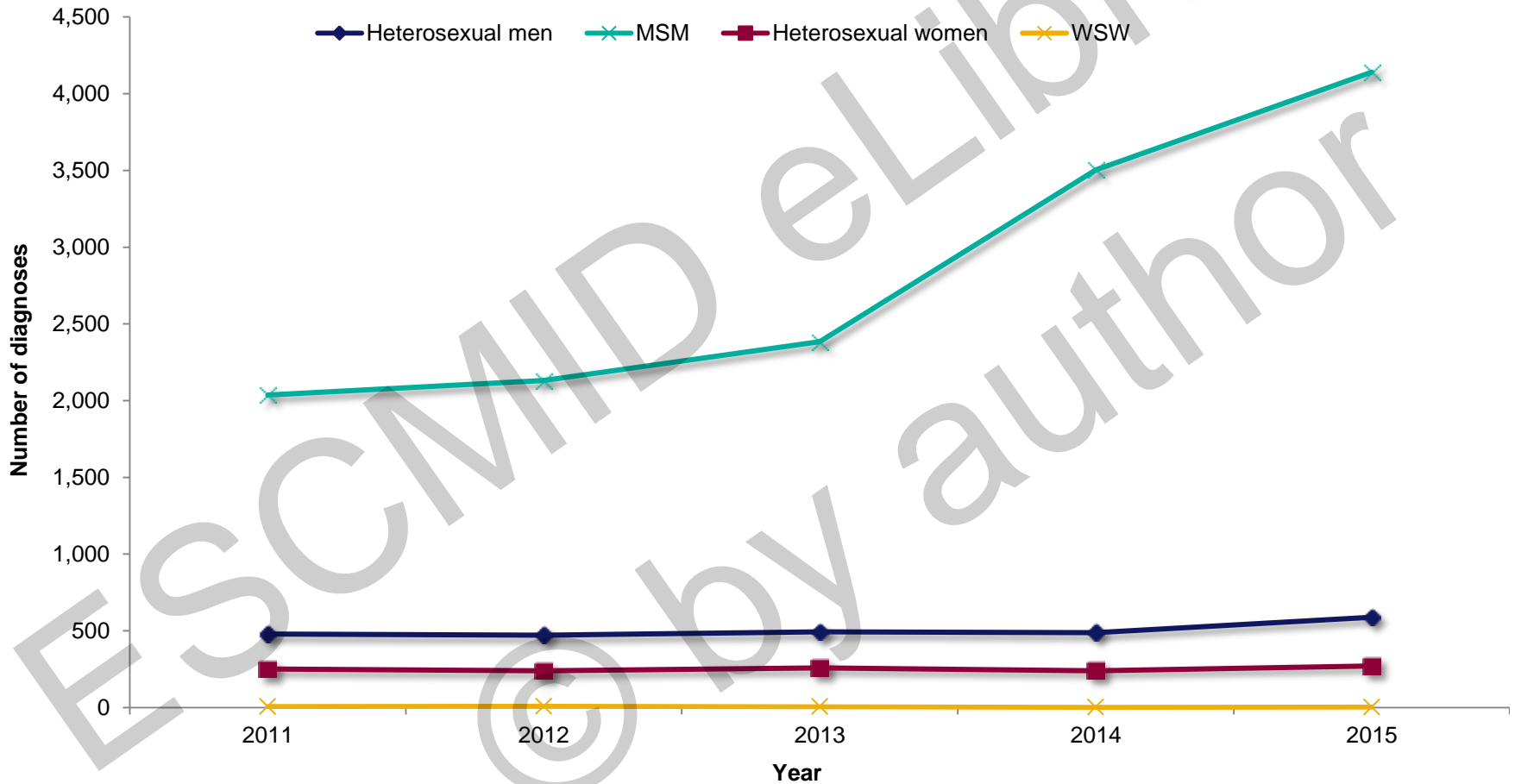
- Syphilis has re-emerged in Europe
- It is usually easy to diagnose
- Penicillin cures syphilis
- Screening populations at risk of syphilis is important for public health
- Recognition of syndromes associated with syphilis is essential



# Diagnoses of early syphilis GUM clinics, England & Wales 1931–2012

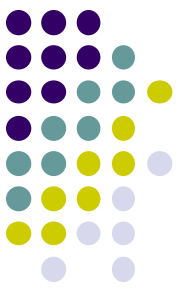


# Number of syphilis (primary, secondary & early latent) diagnoses by sexual risk: England, 2011–2015



- Data from routine GUM service returns
- Data type: service data

# Natural history of syphilis



- Incubation period 2-3 weeks
- Primary syphilis – an ulcer or ulcers
- Heals after 3-4 weeks
- Secondary syphilis – generalised infection rash, lymphadenopathy 6-12wks
- Latent syphilis  
positive serology but no symptoms or signs of syphilis  
Early < 2 years Late > 2 years



# Tertiary syphilis

## Pre-penicillin – the Oslo Study

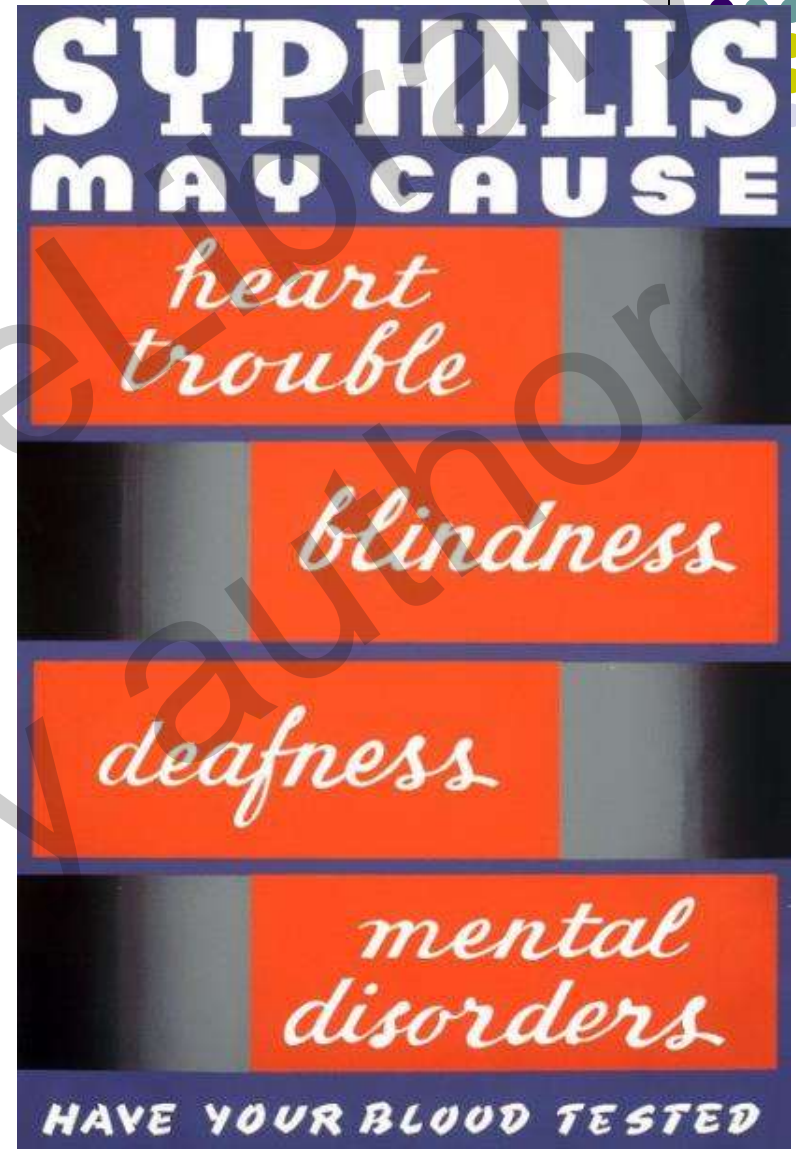
30% patients with untreated latent syphilis developed tertiary syphilis

- 15% gummas
- 10% cardiovascular
- 7% symptomatic late neurosyphilis

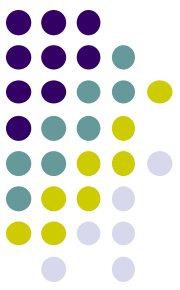
*J Chr Dis* 1955 2(3):311-44

Gummatous and cardiovascular syphilis are now rare.

Neurosyphilis is no longer uncommon



# Primary syphilis – “painless single genital ulcer”



How common are “atypical” presentations?

- HIV pos vs. HIV neg
- 1/3 HIV neg multiple
- 2/3 HIV pos multiple
- Painful ulceration associated with HIV

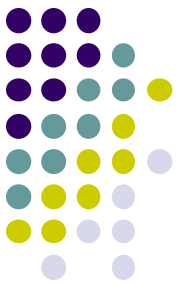
*Sex Transm Dis.* 2001 Mar;28(3):158-65



- N=183 Primary lesions were frequently painful (49.2%) or multiple (37.7%)
- Not associated with HIV infection

*Sex Transm Inf* 2016 Mar;92(2):110-5

# Extragenital / non-perianal primary syphilis - oral



Ulcers at the site of inoculation

Oral sex is an important transmission route – 44% of infections in London, UK

*Euro Surveill* 2004; 9:21-25






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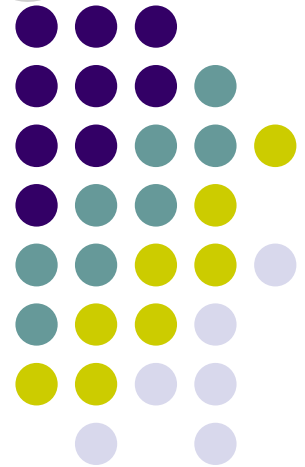
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
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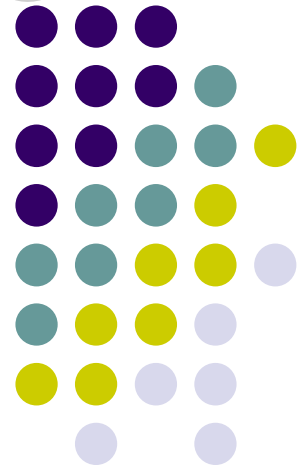
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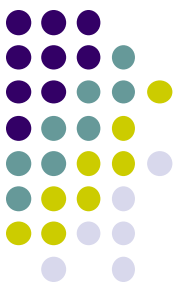
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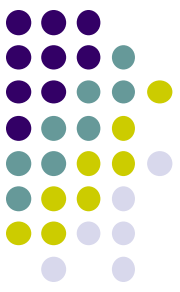


## Primary syphilis – overlap with secondary syphilis and neurosyphilis



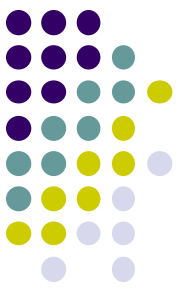
- Perseverance of the primary ulcer (s) in secondary syphilis
- HIV pos -24%
- HIV neg – 14%
- Neurological symptoms in 24% of patients with primary syphilis (42% secondary)
- CNS invasion by *T.pallidum* in primary syphilis
- *Sex Transm Dis.* 2001 Mar;28(3):158-65
- *Ann of Int Med.* 1988 1;109(11):855-62.

# Secondary syphilis – typical presentation



- Macular-papular rash
- Non-itchy
- Affecting palms and soles
- Generalised lymphadenopathy
- Mucosal ulceration
- Systemic symptoms – fever, myalgia, arthralgia

# Atypical rashes



- Pustular (image CDC)



- Mild (image CDC)



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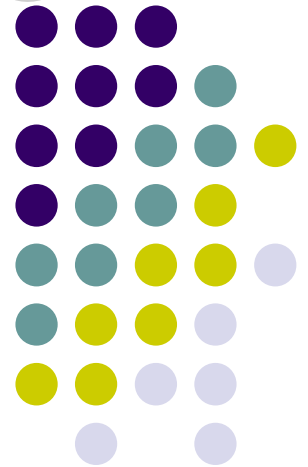
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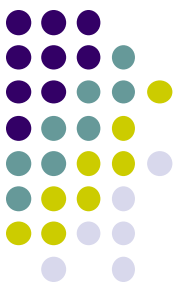
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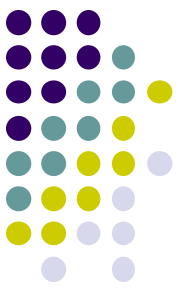
# Ulceronodular syphilis



- Early reports suggests it was much (60x) commoner in HIV positive individuals
- *Genitourin Med* 1996; 72: 176-181
- Similar to the descriptions of syphilis in 15<sup>th</sup> and 16<sup>th</sup> century



# Condylomata lata



- Masses usually in moist areas and opposing membranes in areas of mucosal ulceration
- Corners of mouth, vulval, perianal, genital
- Part of secondary syphilis (but other signs may be mild)

## Differential diagnoses

Viral warts *BMJ* 2015;350:h1259

Anal carcinoma - *Int J Sur Case reports* 2015; 17: 69–71

Anal intra-epithelial neoplasia

Image CDC



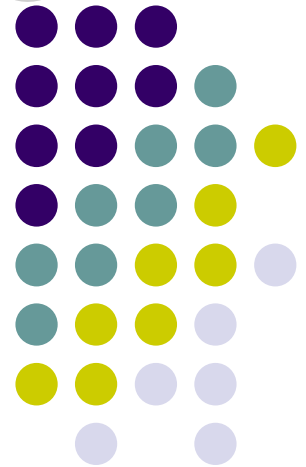
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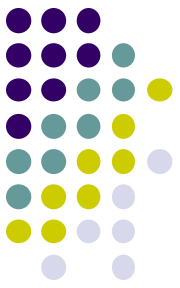
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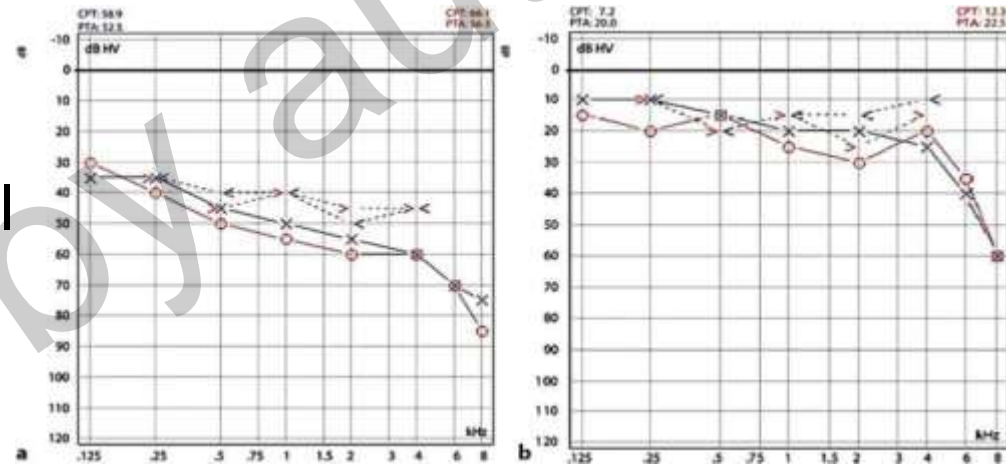
# Meningovascular syphilis



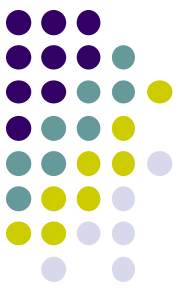
- Uveitis – anterior /posterior and pan uveitis
- High RPR titre
- Otosyphilis – sensorineural hearing loss - bilateral high frequency
- High RPR titre

High frequency hearing loss at diagnosis and 12 months later.

*Case Reports in Neuro* 2013 5(1): 61



# The non neurological manifestations - liver / kidney



## Kidney

- Nephrotic syndrome
- Sub-nephrotic albuminuria (most common presentation)
- Membranous glomerulonephritis
- Mesangial proliferative GN
- Rapidly progressive crescentic GN

## Liver


Syphilitic hepatitis

Common but usually asymptomatic and associated with raised liver enzymes only  
Usually ALT + AST + ALP raised. ALP particularly - cholestatic

*Case Reports in Medicine* 2014, Article 604794

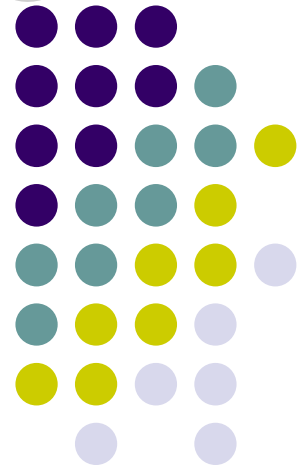
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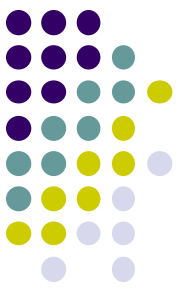
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# Cardiovascular syphilis – unusual



- Proximal aortitis
- Medial necrosis of the aorta

Usually:

- Aortic regurgitation
- Aortic aneurysm
- Coronary ostial occlusion


*Med J Aust* 2006; 184 (5): 240

CDC: image



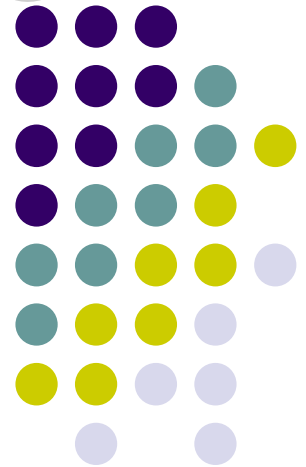
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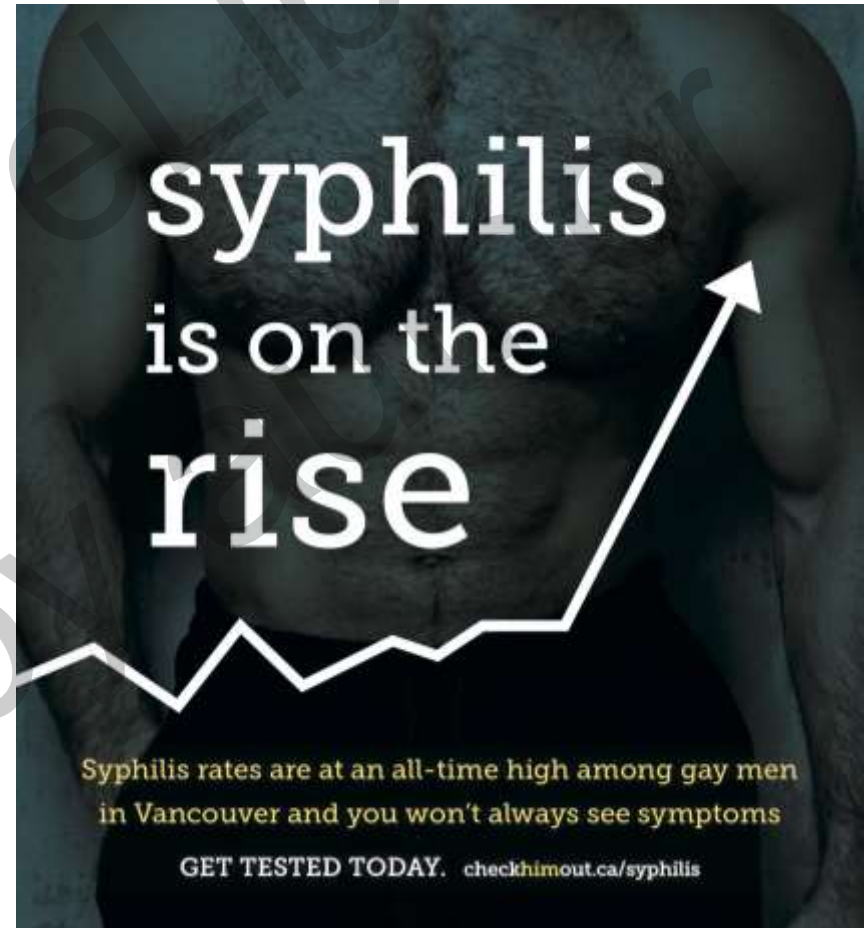


# Summary 1

Syphilis has returned to Europe

Early syphilis often differs from the “classical” descriptions

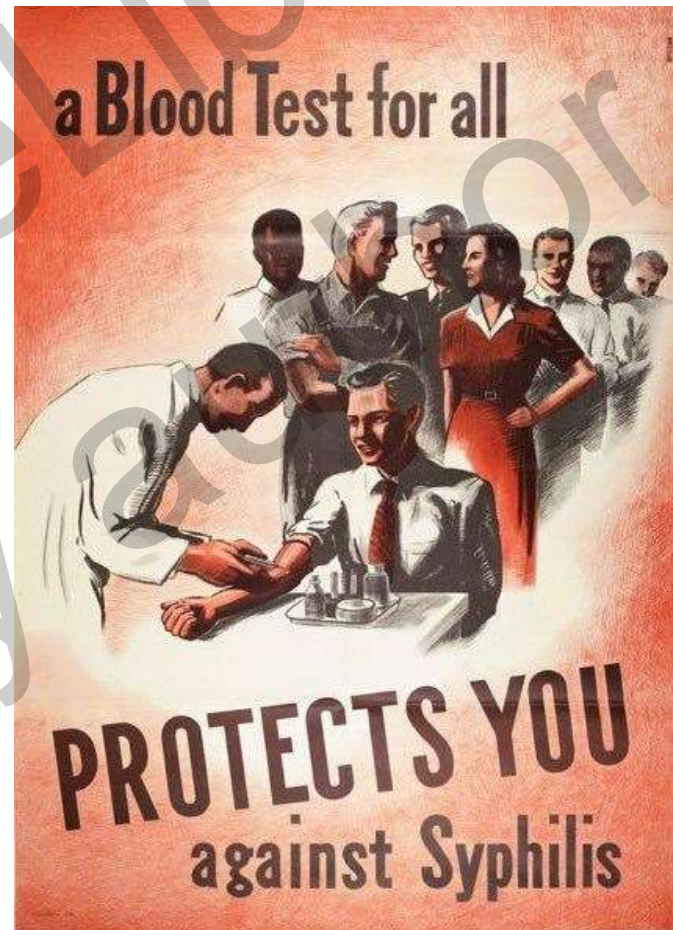
Have a low threshold for testing for syphilis



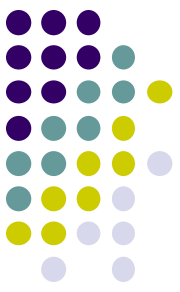
# Summary 2

## Important syphilis associated syndromes

- Any mucosal ulcer and any rash
- Alopecia
- Hepatitis / nephritis
- Anogenital masses and any atypical masses
- Uveitis / nerve deafness







- Thank you
- Questions?

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