Syphilis abounds in the digital age

NZMA CME South July 2011.

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Acknowledgements to CDC (USA) for the syphilis pictures and to ESR Wellington for the statistics.

Syphilis and Chlamydia increased in past 10 years.

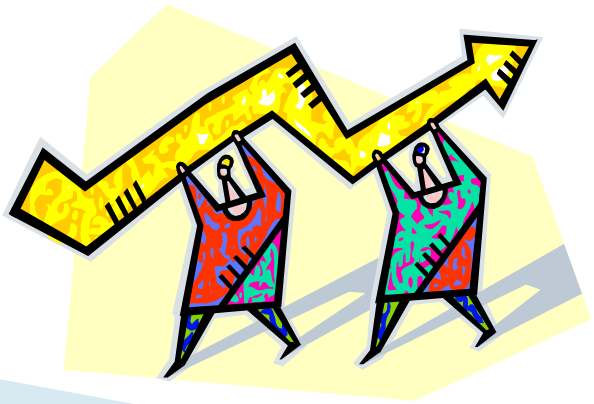
Gonorrhoea nationally decreased but some DHB's increased.

Good news is recent decline in HPV (warts), herpes and non-specific urethritis.

HIV relatively steady after a peak in 2008

Chlamydia = still top of the pops.

- Chlamydia =most common infection diagnosed in STI in NZ.
- NZ rates = x2 of UK, USA
  x3 of Aussie (1)



Chlamydia:

70% =<25 90% < 30.

Contrast with syphilis:

- Average age = 40
- Age range – 15-71yrs
- Highest number = men > 40

Syphilis as a sentinel disease:

Trends in syphilis case numbers = important as a marker for behaviours associated with HIV transmission.

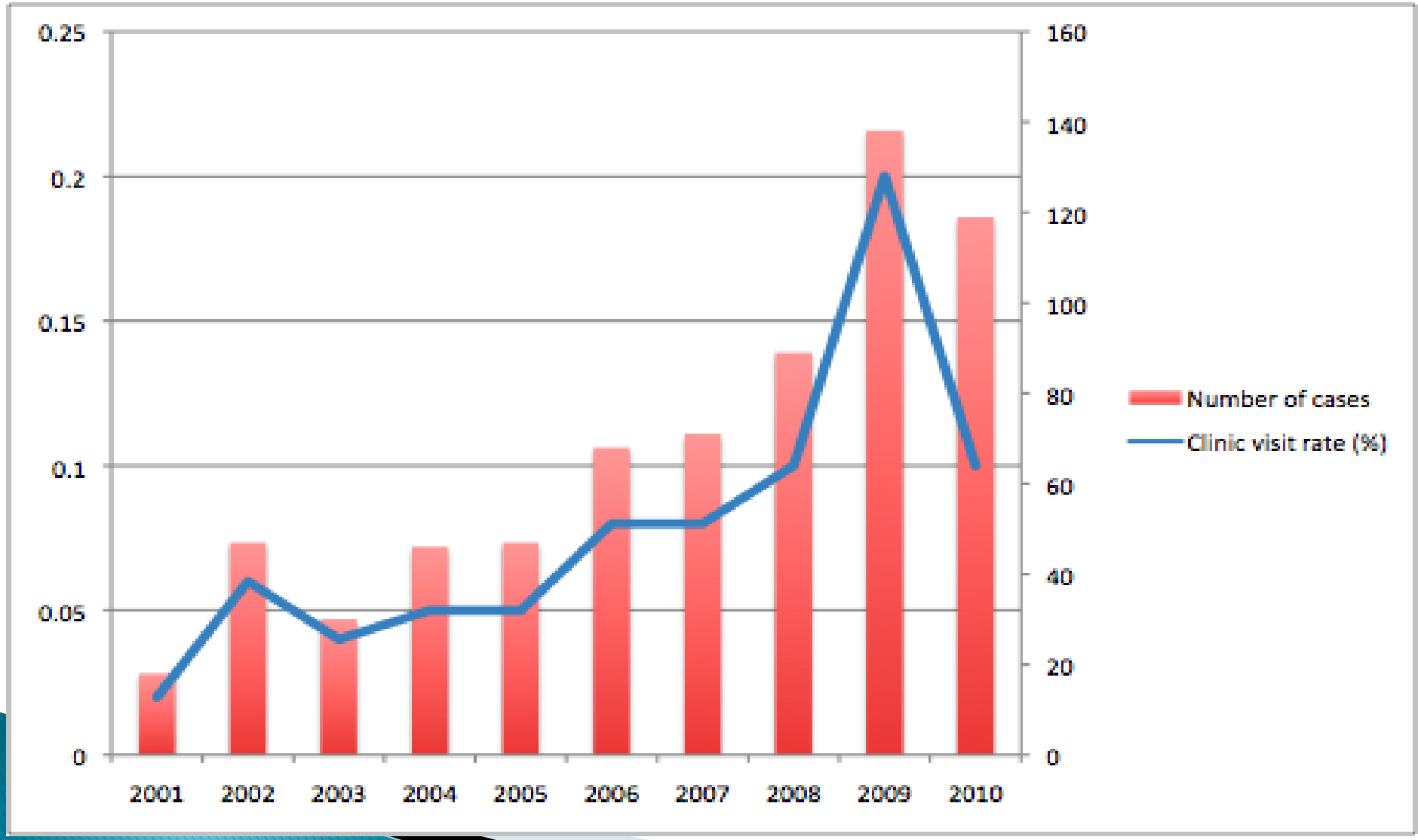
Syphilis demographics:

- 80% of pos. syphilis = men
- 50% European, 15% PI, 10% Maori.
- Most in Auck, Wellington, Chch.
- Stats do not include GPs or hospitals

Are we missing cases in GP land?

- Need to think of it to diagnose it
- Need to ask for the right test
- Need to be aware that it can present with a huge range of s+s – so if something is weird – think syphilis
- Need to always test for it if considering HIV
- Sexual behaviour still the key indicator

Syphilis in NZ (1).



NZ part of a world wide trend--

Particularly at risk:

--younger HIV pos.patients

--men who have sex with men

--bisexuals

--txt for sex groupies

Dunedin's mini-syphilis outbreak.

- Used to see 1 case a yr.
- Dec. 2008 – 4 cases in 3 weeks, 2 females, two males.
- 5th one in Feb. = elderly woman.
- Approx. 30 contacts, ph. numbers for half, less than 1/3 successfully traced.
- Follow up ongoing x 1 yr.
- Since then a trickle, but still svl a year

Txt for sex in Dunedin.

- Internet dating website
- Multiple casual partners, mostly unprotected.
- Age range – 20's to late 60's.
- All working, middle-class, "respectable" people in different professions.
- One used the internet to diagnose himself.

Syphilis – hidden pitfalls.

- 2 / 4 had presented to colleagues before – lymphadenopathy (FNA = reactive changes), mouth ulcers.
- But sexual health clinic also missed it…series of missed opportunities – then played catchup for several months.

Likely to be more cases in the community.

Syphilis = Great mimic

- Different stages = different presentations
- Can involve just about every system in the body.
- Easily missed and difficult to diagnose unless you consider it.

Stages of syphilis.

- **<u>Infectious – first 1-2 years:</u>**

  -- primary: 9 – 90 days – painless chancre

  -- secondary: 6w – 6 months – rash, lympadenopathy

  -- early latent – no symptoms

- **Non-infectious (except in pregnancy) after 2 yrs:**

  -- late latent – 2-4 years

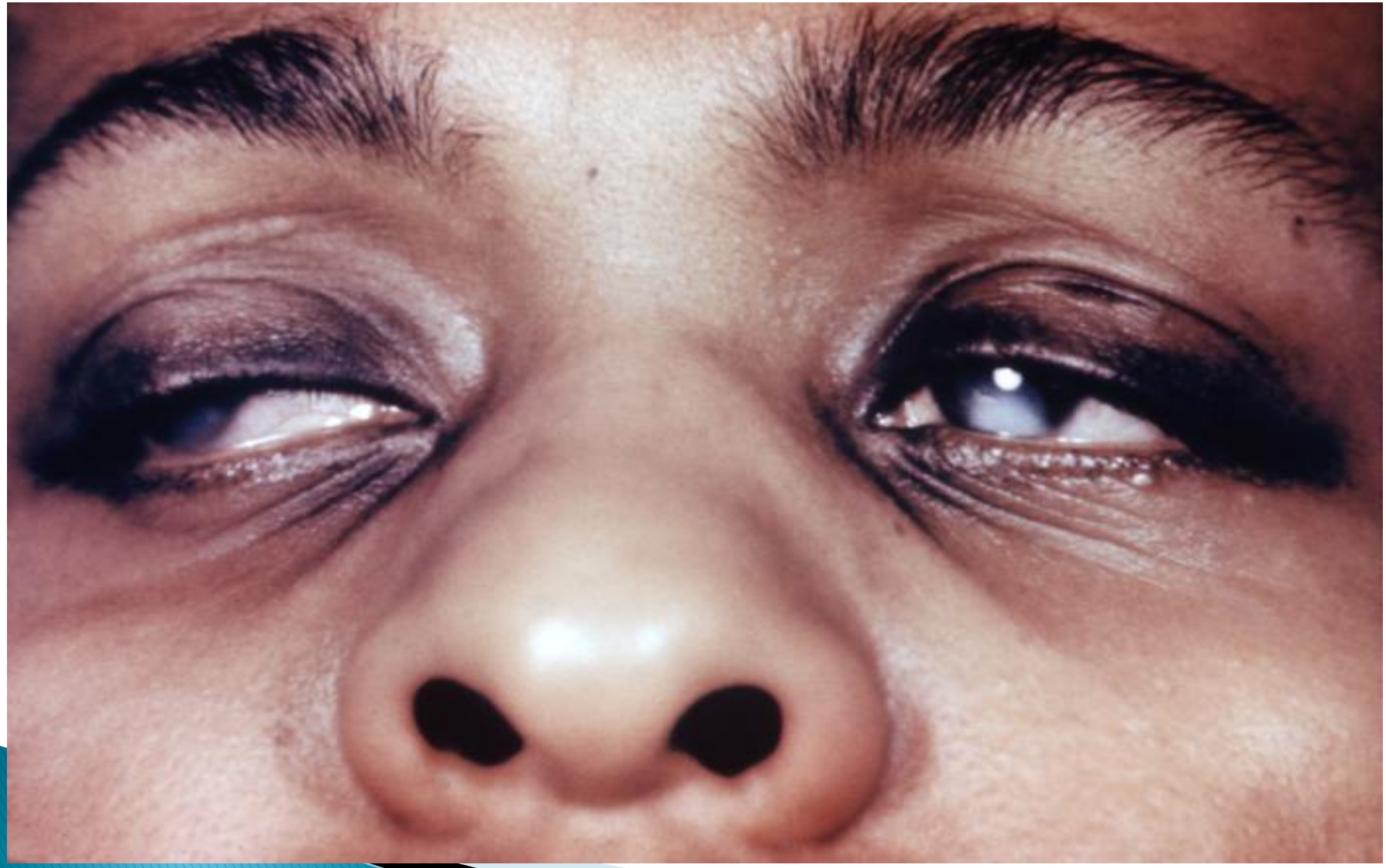
  -- tertiary – 5-20 years – CVS, Neuro.

  Abt 1/3 will progress to tertiary syphilis.

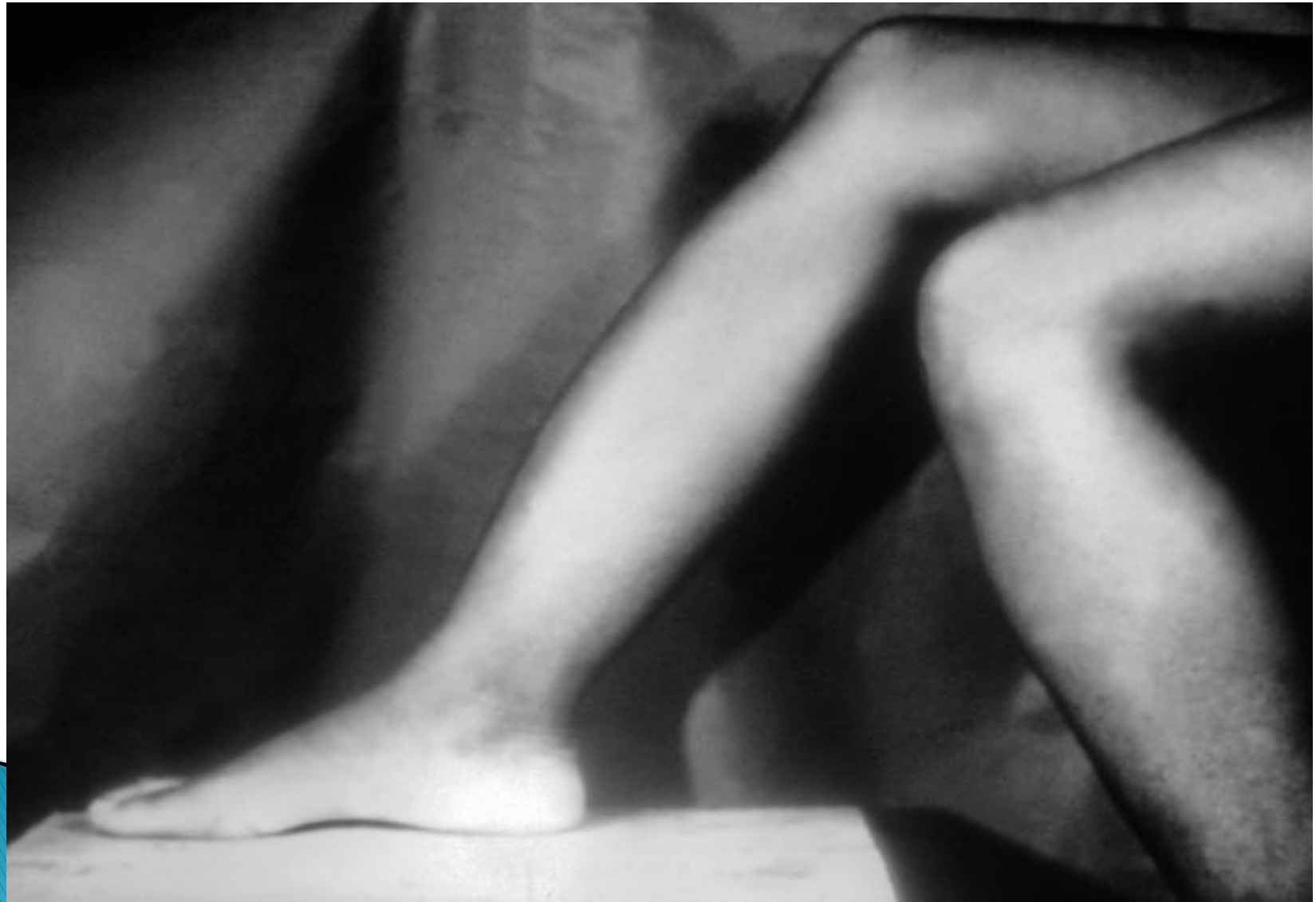
Special caution – syphilis in pregnancy.

- Mother can still infect the foetus for 4-5 yrs-- stillbirths, congenital syphilis.
- Baby may be born ok but develop problems weeks – months later
- All pregnant women tested for syphilis and now HIV.

Congenital syphilis – keratitis.

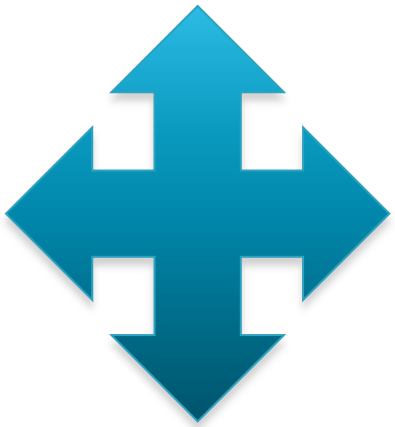


Congenital syphilis – sabre shins.



Transmission.

- Usually skin to skin – moist mucosa and microtrauma – so condoms only partially proctective.
- Rate of acquisition = 30%



HIV and syphilis.

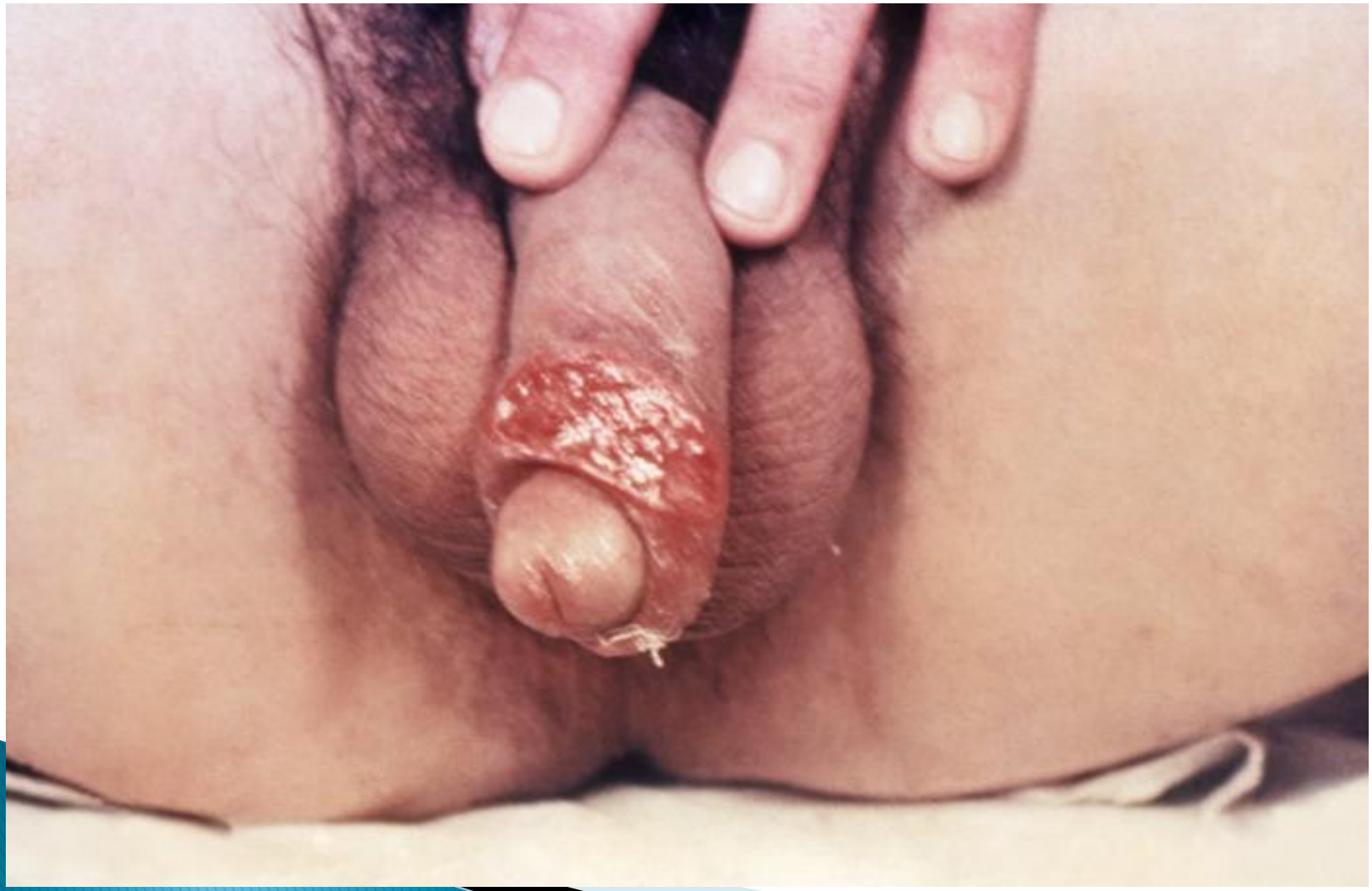
- If syphilis present – 2-3 x risk of catching HIV.

- Syphilis more readily transmitted than other STIs, including by oral sex. (2)

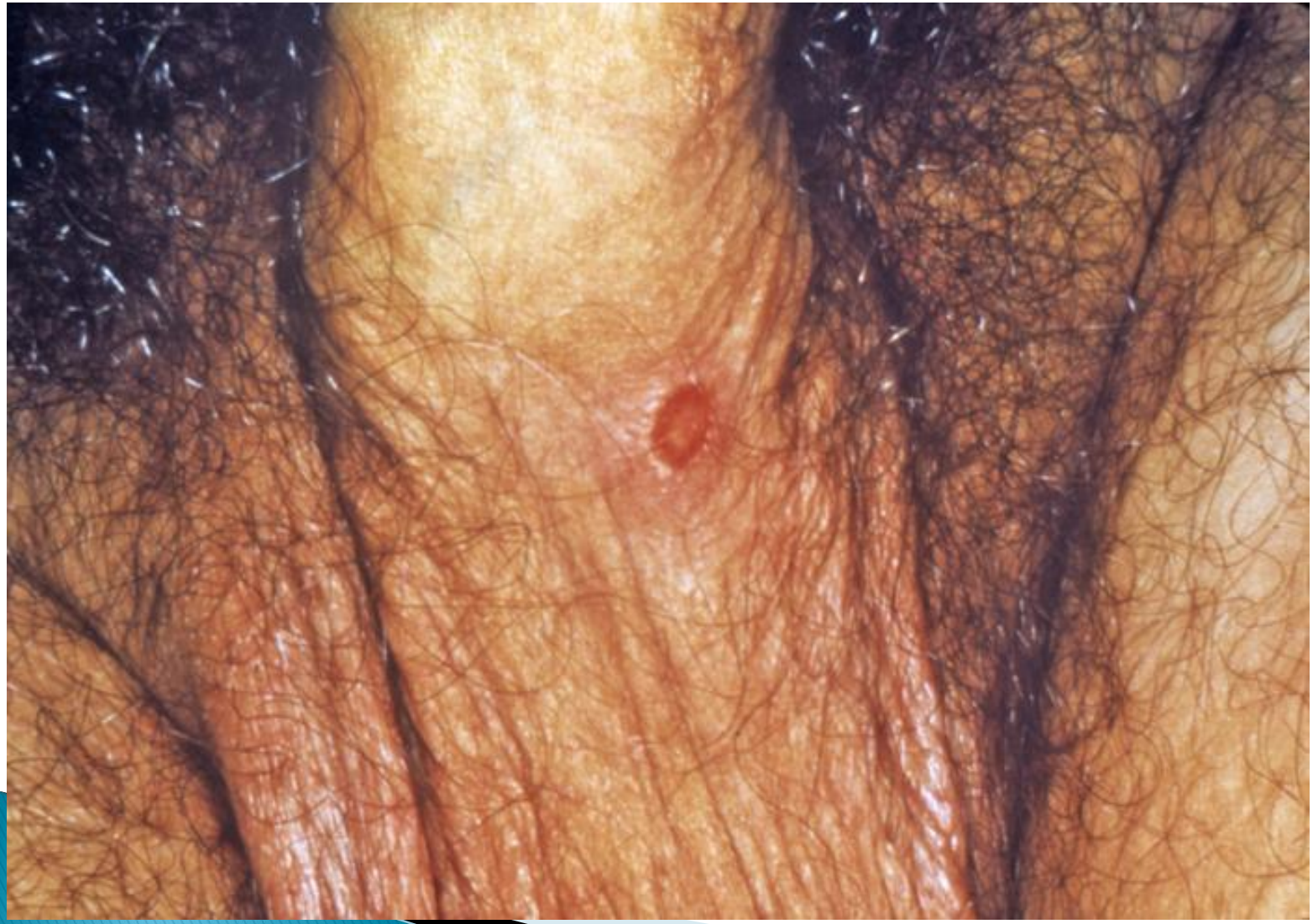
Primary syphilis – Chancre.

- Macule – papule – ulcer
- Painless so may go unnoticed
- Punched out with clear-cut edges
- Rubbery, thickened base and indurated
- Produces serous fluid, does not bleed easily
- Usually oval or round

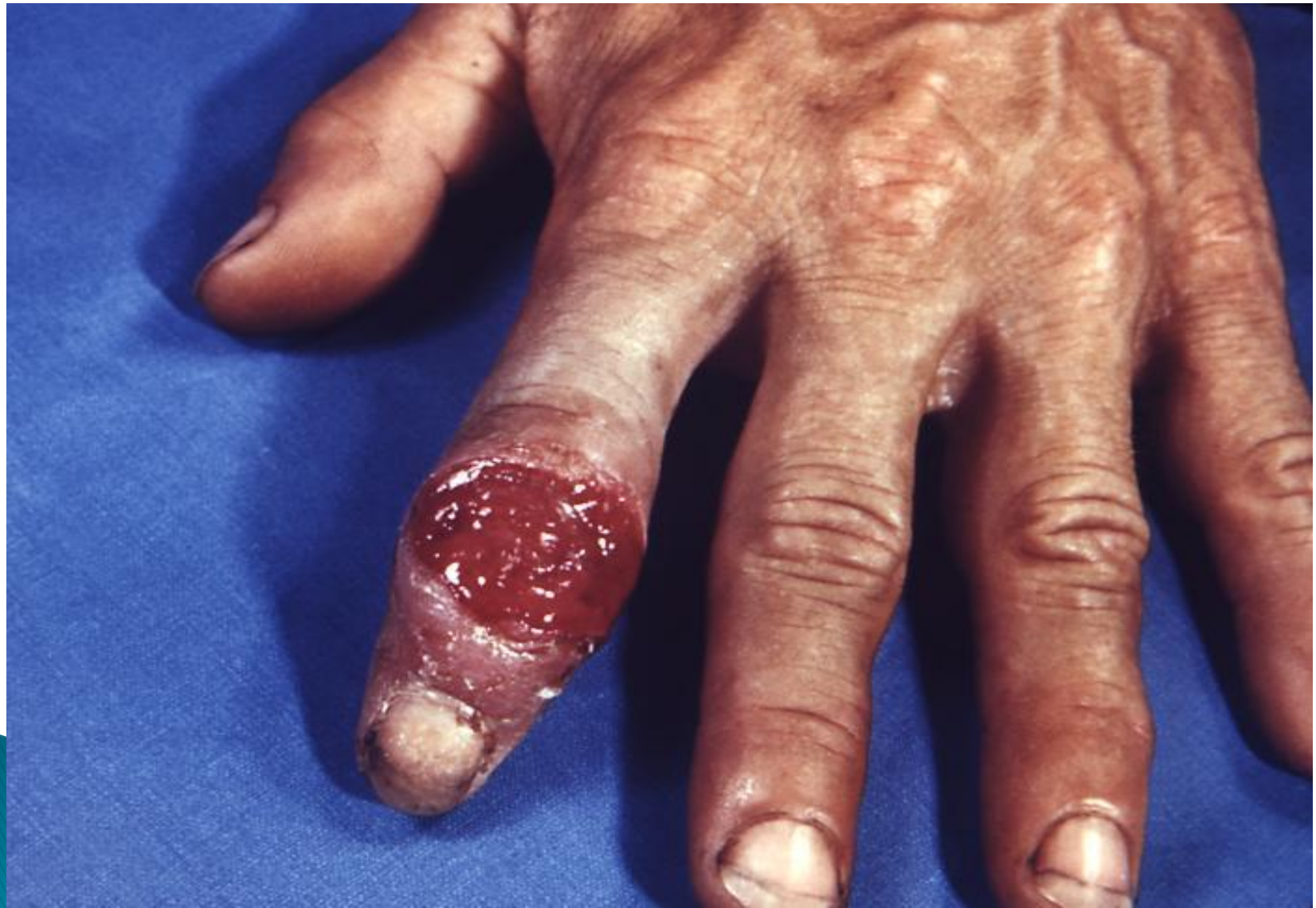
Chancre



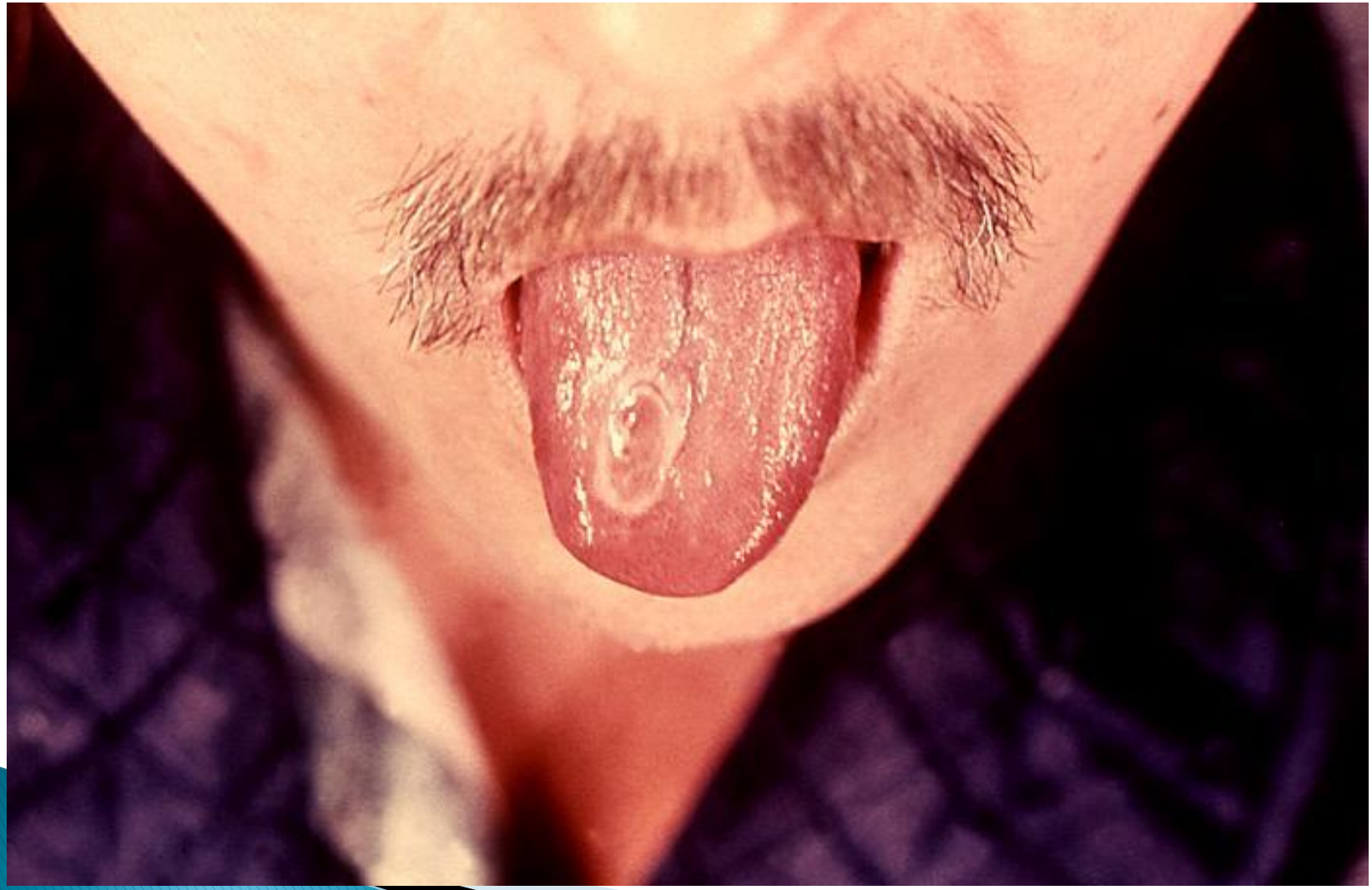
Chancre



Chancres –not just in the genital area.



Chancre – tongue



Differential dx of primary chancre.

- Herpes
- Erosive balanitis
- Trauma
- Scabies
- Zoster
- Cancer
- Fixed drug eruption

Secondary syphilis:

- Chancre can heal or overlap with secondary

- <u>Huge range of presentations:</u>

--flu-like s+s: sore throat, fever, headache, malaise, gnl aches and pains

--wt loss

Secondary syphilis –cont.

- Lymphadenopathy (50 – 80%)

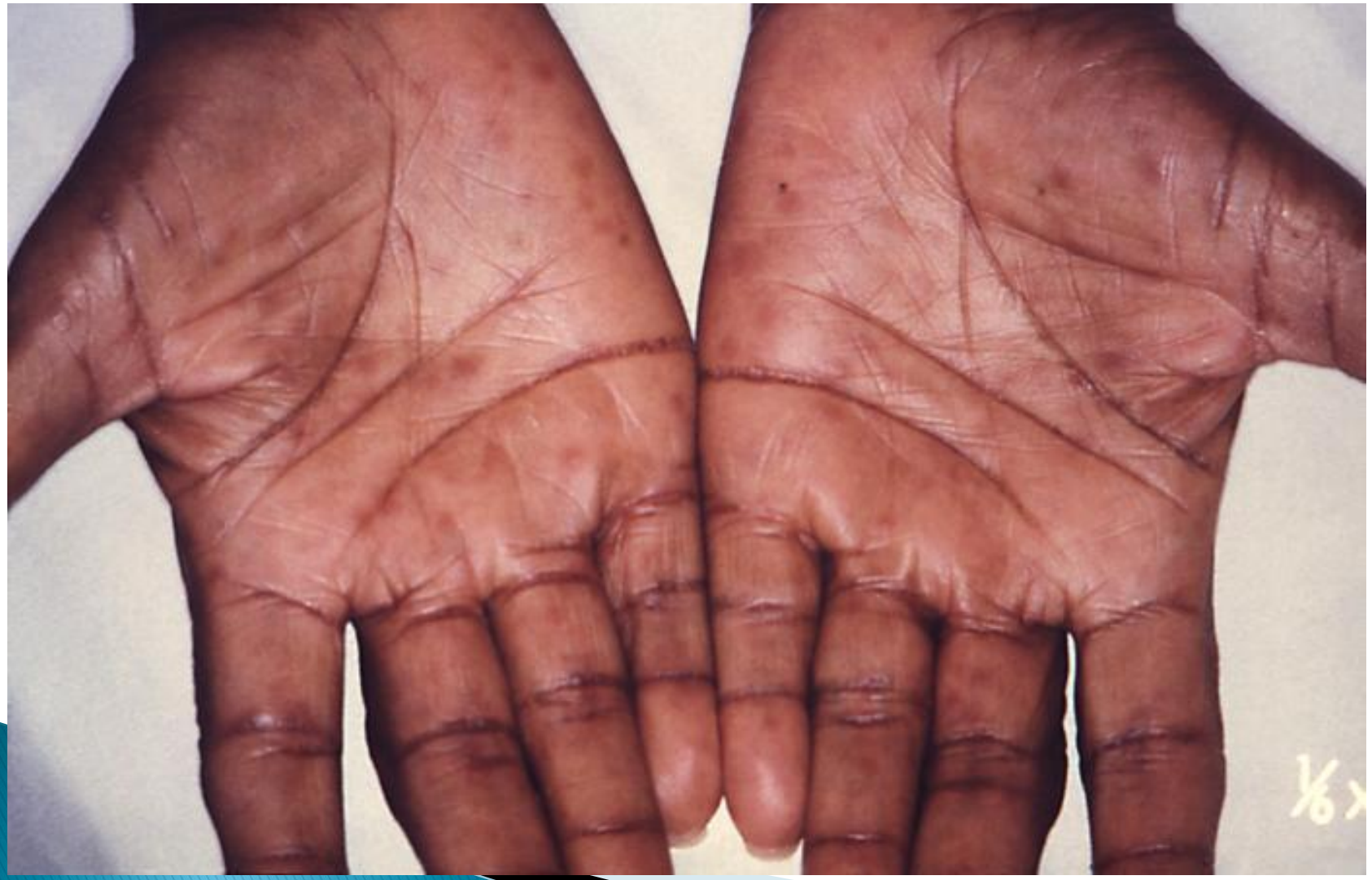
--often starts in groin and anal area
--painless, bilat.
--rubbery
--non-suppurrative
--usually becomes generalised

Secondary syphilis – cont.

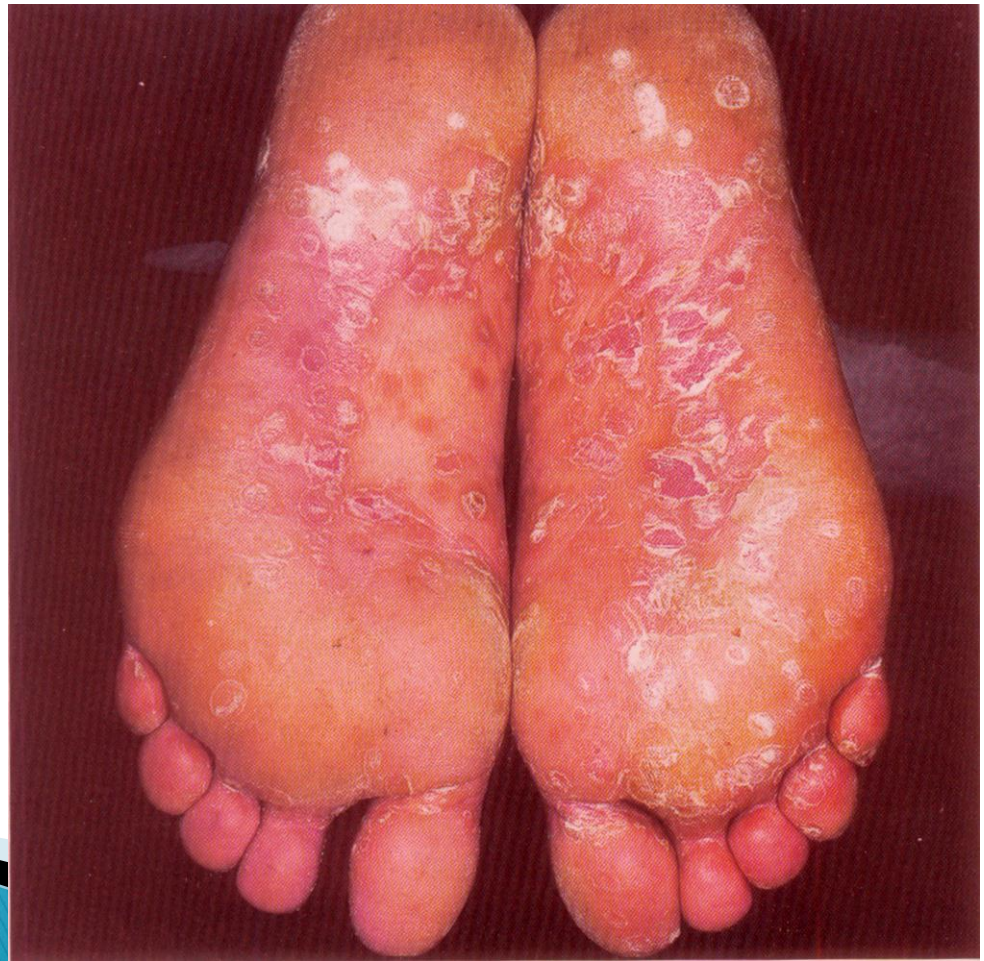
- Rash (75 – 100%):

-- oval rose pink rash
-- non-irritant
-- over trunk, flexor surfaces
-- particularly on soles and palms

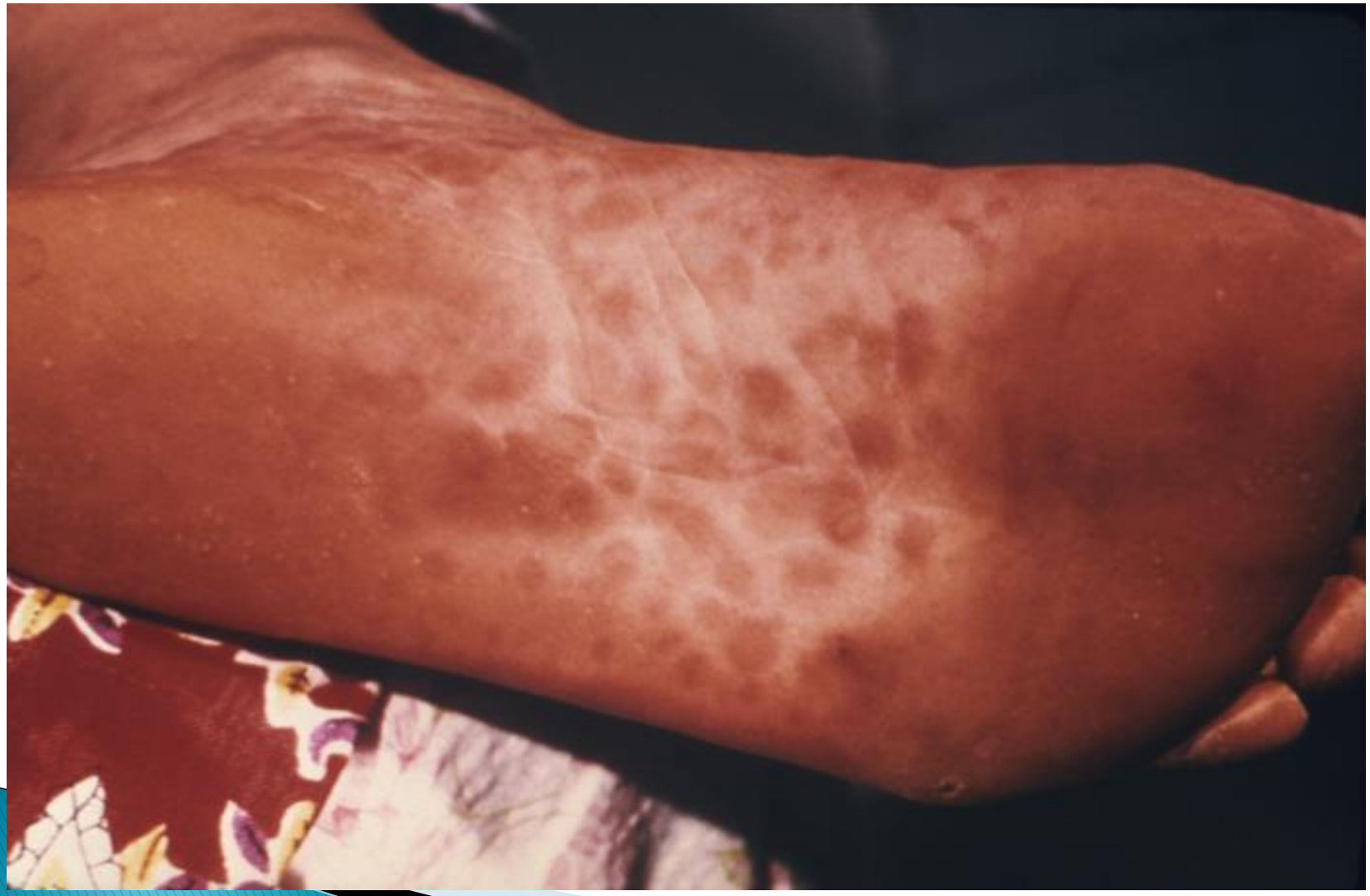
Rose pink rash on hands + feet.



Syphilitic rash.

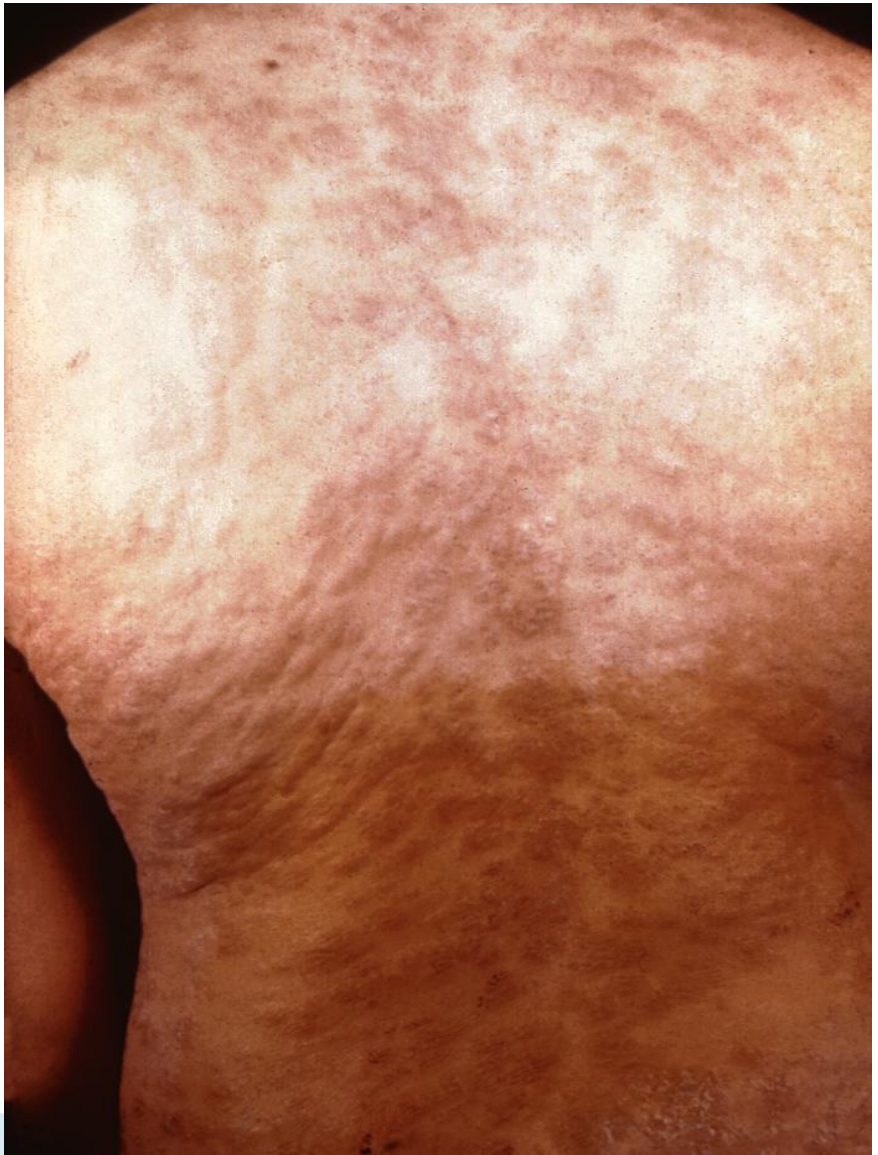


Non-itchy,non painful oval rash

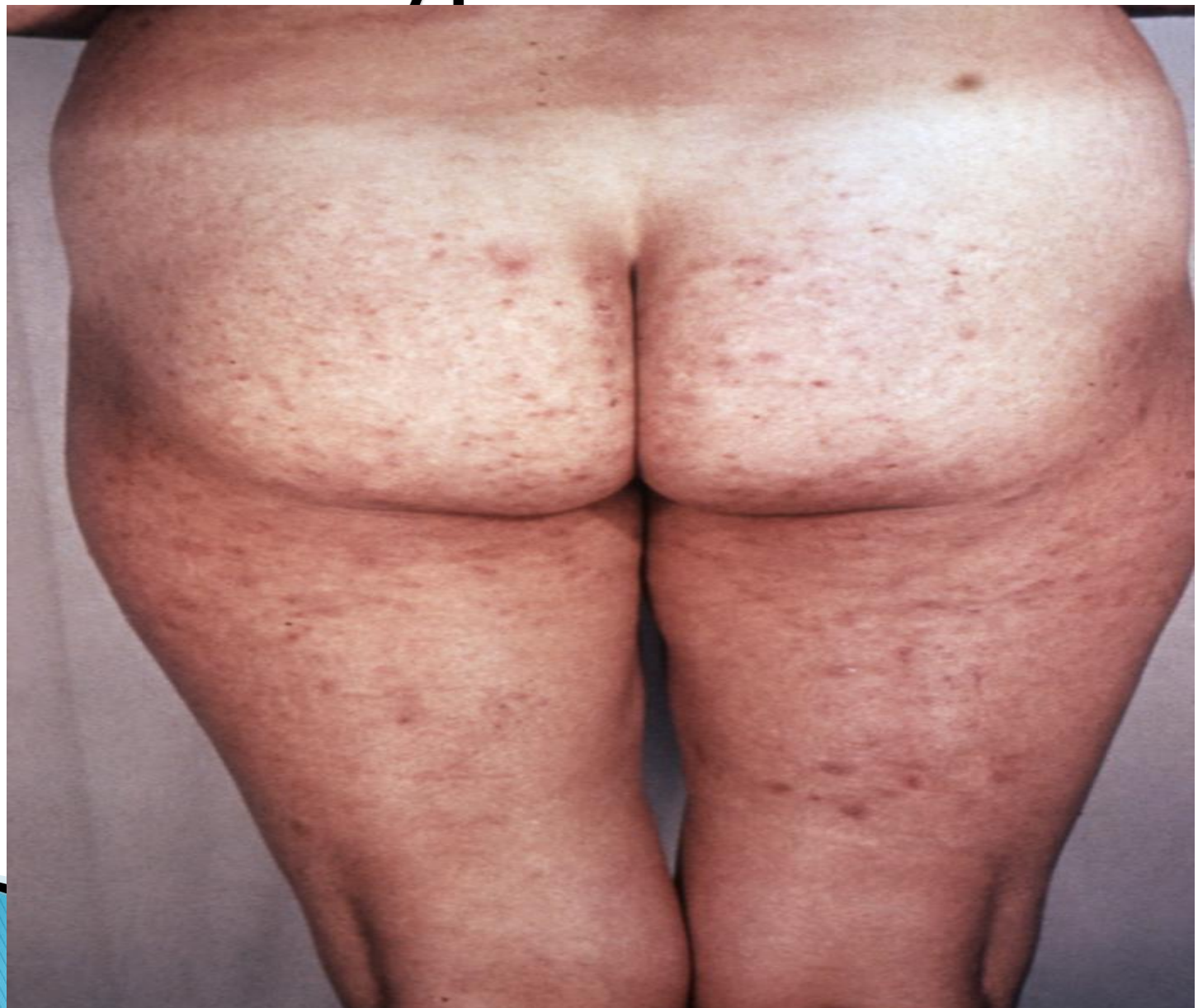


Wide differential to rash.

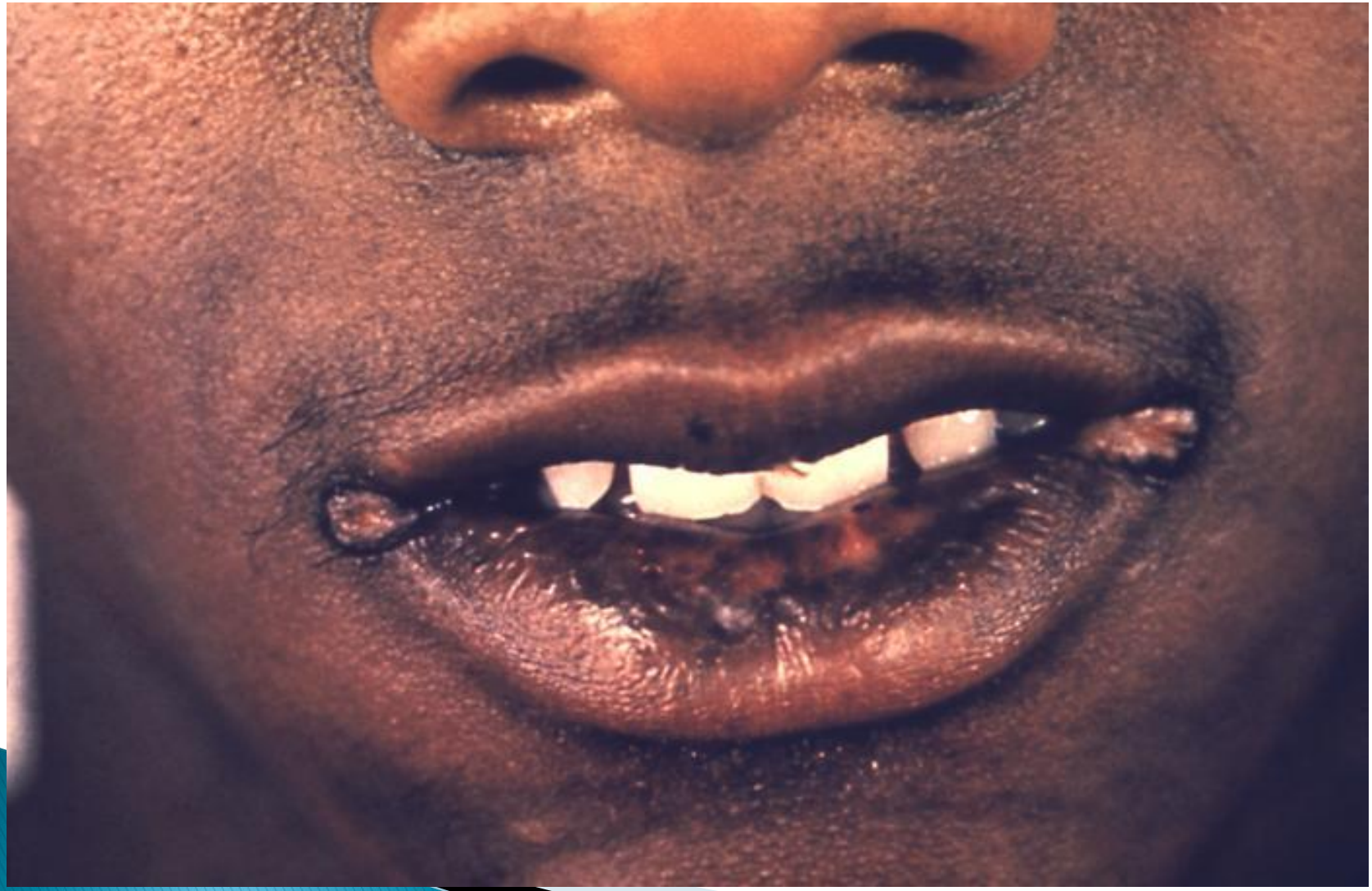
- Viral exanthams
- Pityriasis rosea
- Tinea versicolor
- Seb.dermatitis
- Erythema Multiforma
- Leprosy
- Psoriasis
- Fungal infections
- Granuloma annulare
- Scabies



Scabies or syphilis?



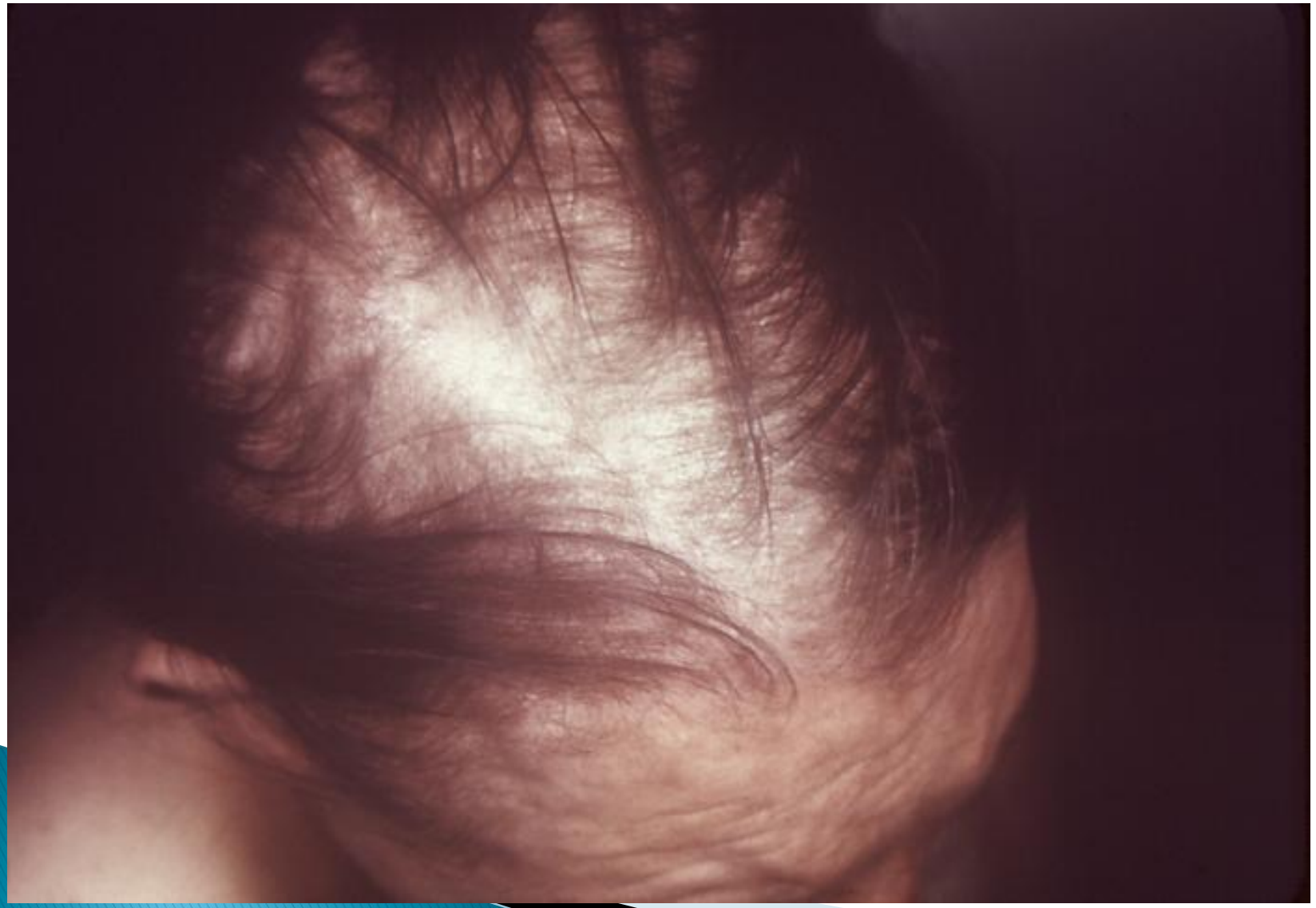
Secondary syphilis – papules at the corners of the mouth.



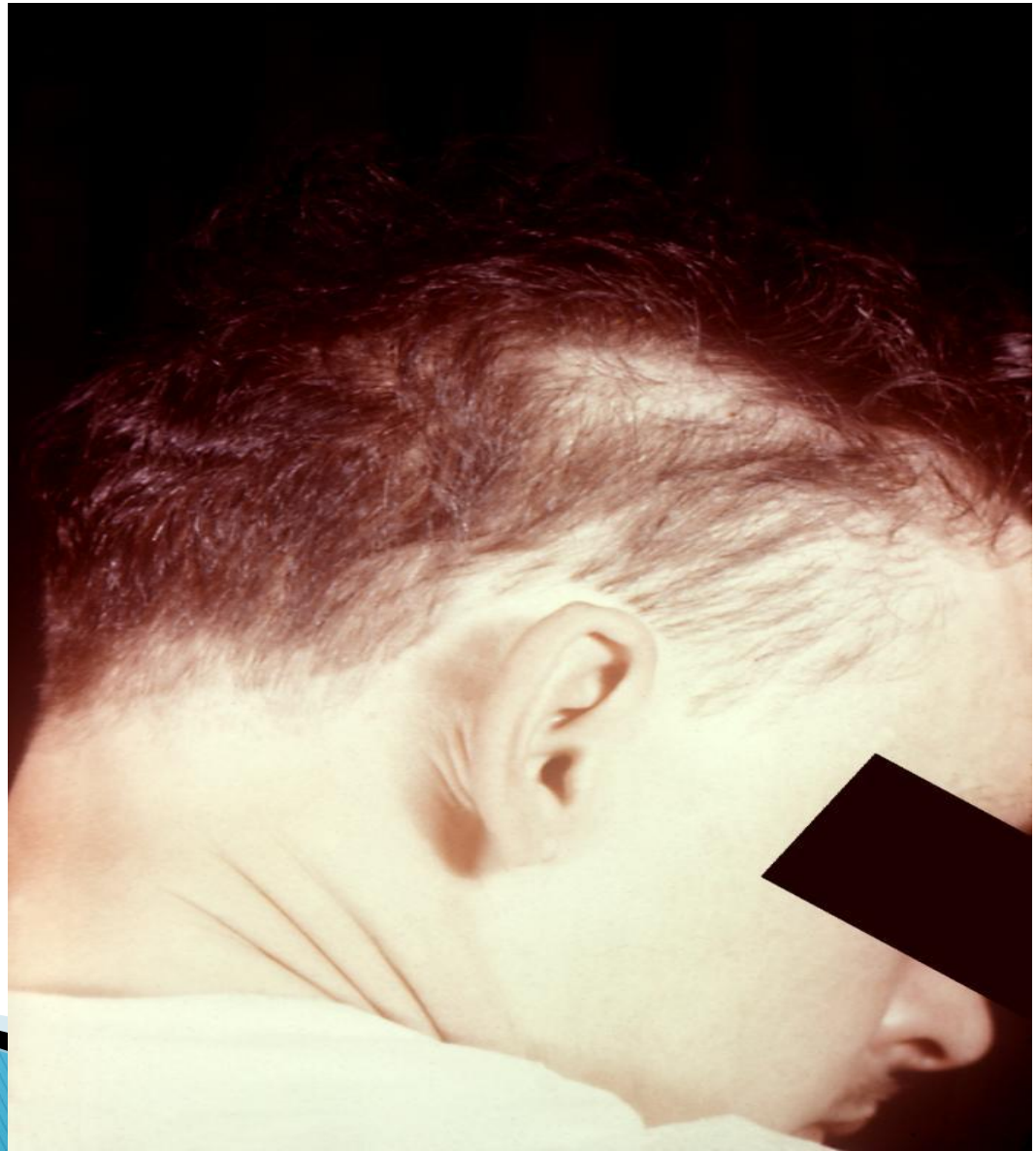
Other manifestations of secondary syphilis – something for everyone...

- Mouth ulcers – coalesce to form snail track ulcers
- Alopecia and hair thinning
- Pustules and folliculitis
- Hepatitis
- Bursitis, osteitis, arthritis
- Uveitis, choroiditis
- Nephrotic syndrome

Thinning hair.



Thinning hair.



Secondary syphilis –cont.

- Neurological:

--- meningitis
--- cranial nerve palsies
--- strokes – particularly in young people
--- syphilitic deafness

And just to make it even trickier –

- All s +s of secondary syphilis resolve

  – even if untreated.

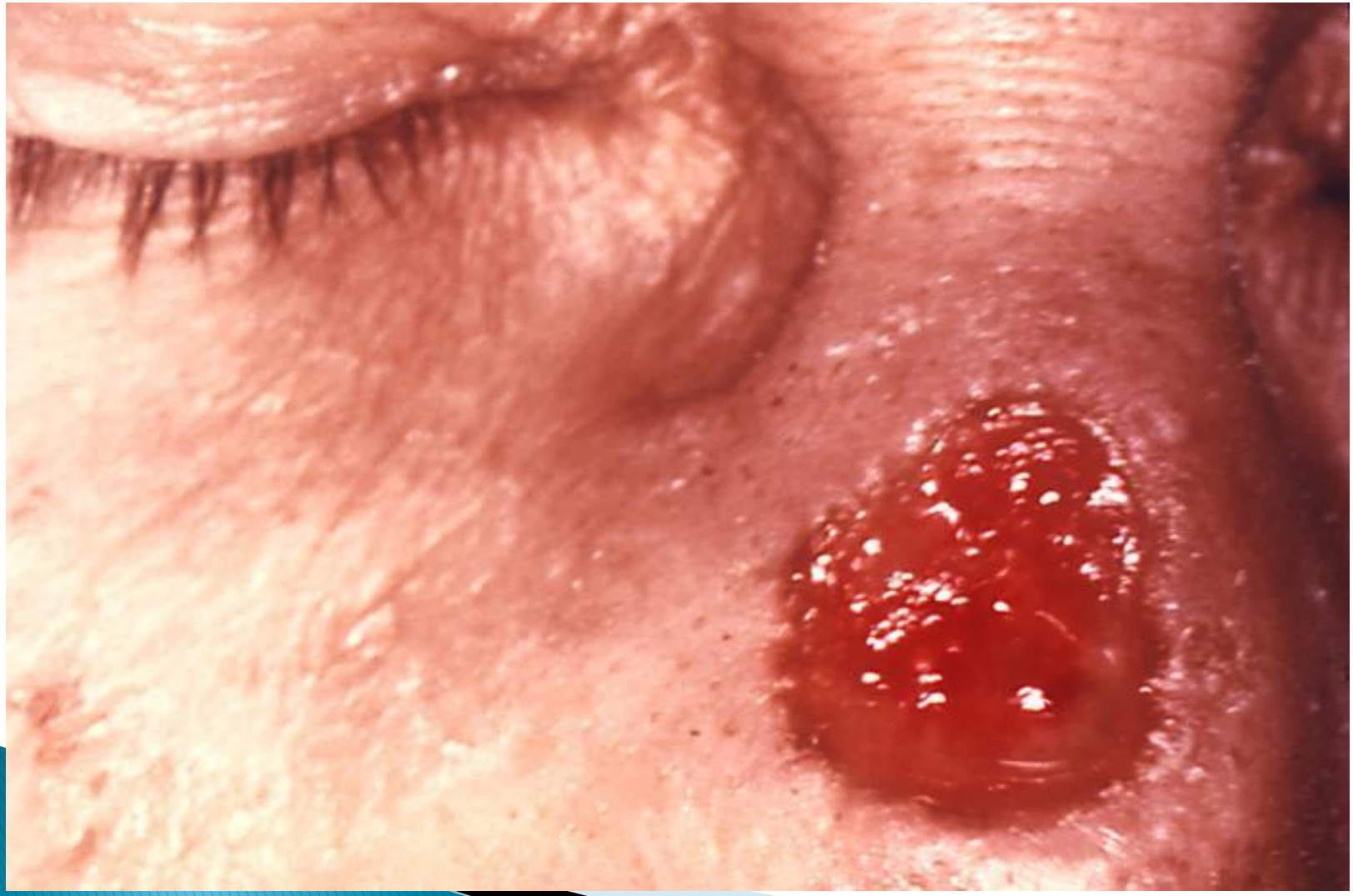
- Go into latent phase– early then late

Tertiary syphilis.

- 1/3 go onto tertiary syphilis:

-- benign gummatous syphilis – 1-10 yrs
-- cardiovascular syphilis – 5-30 years (aortitis – aortic aneurysms)
-- neurosyphilis- vasculitis, headaches, vertigo, tabes dorsalis, general paresis and dementia.

Gumma- granuloma with central necrotic area.



Tabes dorsalis.

- Posterior column problems – decreased vibration and position sense
- Ataxia, bladder problems
- Lightning pains
- Charcot's joints
- Ulcers of the feet and loss of pain sensation
- Argyll-Robertson pupils – small, irreg.

Argyll Robertston pupil.

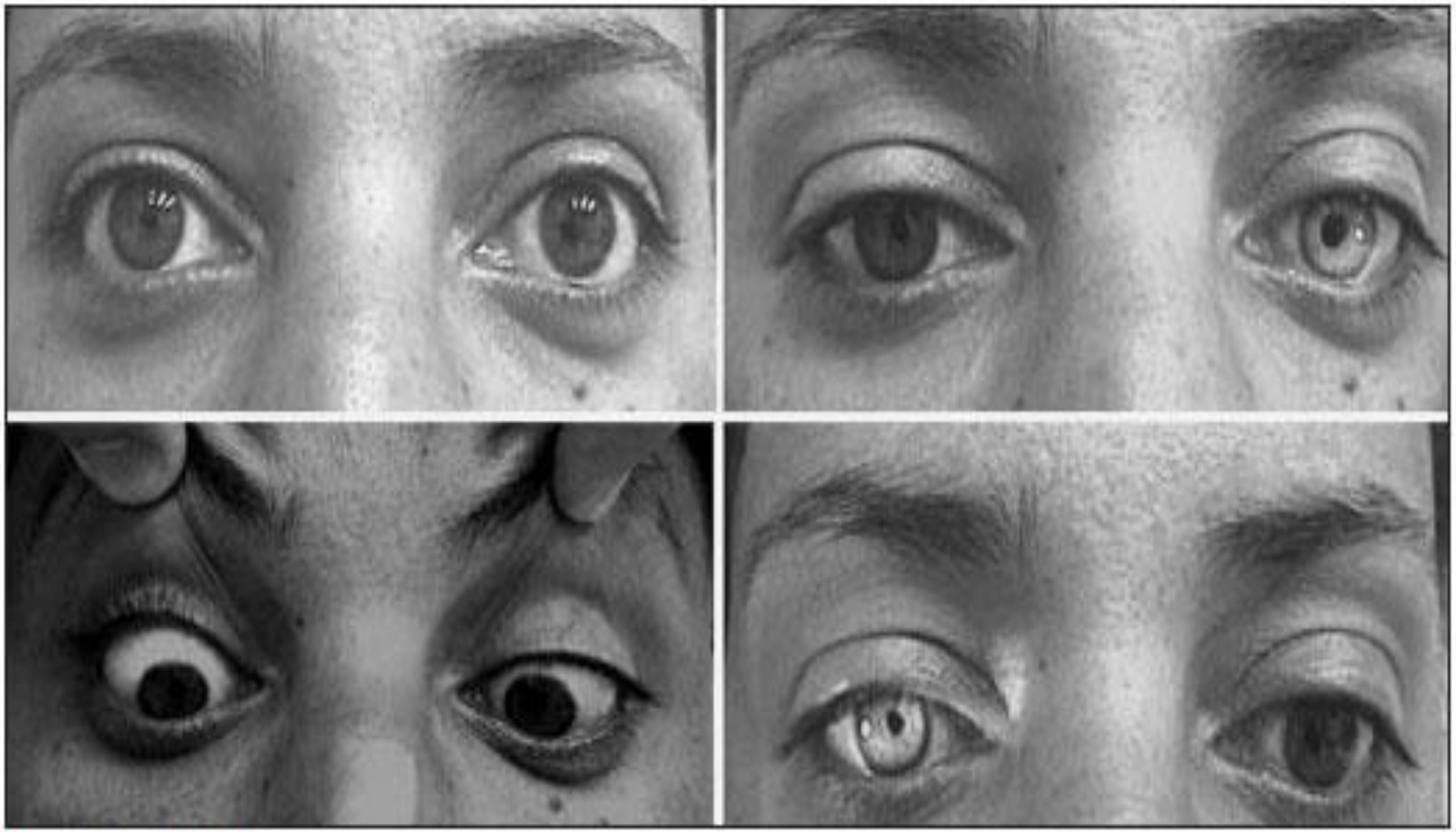
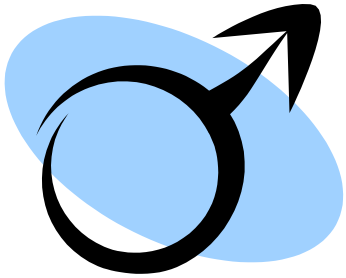


Figure. Argyll Robertson pupil.

General paresis

- Progressive dementia
- May progress to psychosis
- Men more than women
- Takes 10-20 years to develop.



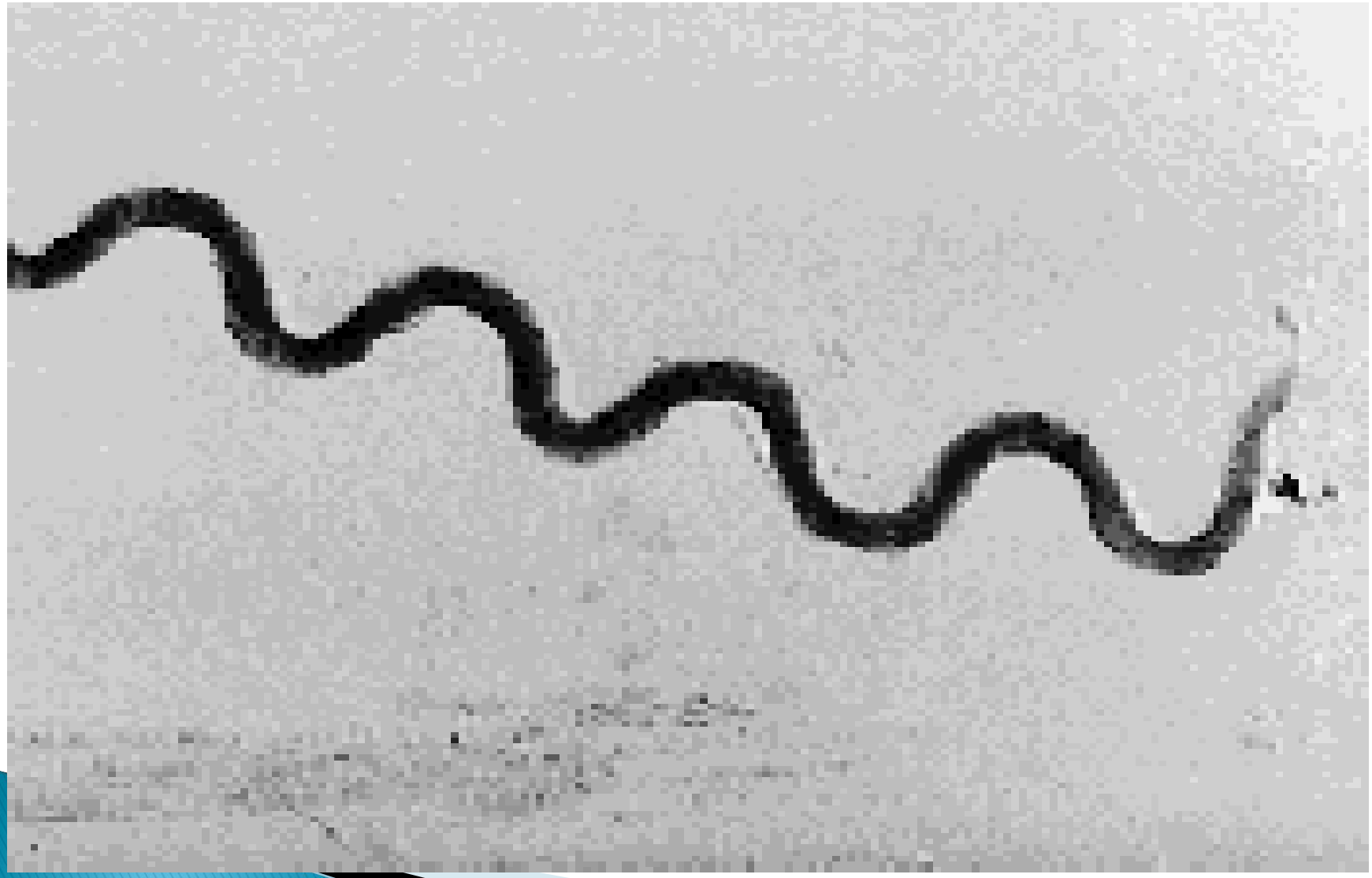
Key to diagnosis:

- High index of suspicion – need to think of it to dx it.

- Early ie before serology positive:

-- serous fluid to look for treponemes under dark ground microscopy – but tricky.

Treponema pallidum.



Syphilis serology.

- Specific tests:

---EIA – most sensitive + specific (IgM /IgG)
---Then RPR (non specific) + TPHA (specific treponemal test) titres
-- dark field microscopy – challenge to do and need exudate from ulcer – can be attempted eary on before other tests likely to be pos.

Can get biological false pos. – low titre eg lupus.

Tests.

- Ask for “syphilis serology” or discuss with your lab – very useful to give them clinical details as well.

- Note if patient pregnant and HIV status or if has other conditions ie lupus or is immunosuppressed.

- If in doubt – discuss with sexual health or infectious diseases colleague.

Test interpretation.

- Can be tricky – non specific test titres (eg RPR) should drop or go back to zero with treatment
- Specific antibody tests (eg TPPA) – remain positive for life.
- Consult colleagues.
- If in doubt – treat and do partner notification and treatment.

Public Health considerations.

- Syphilis = not a notifiable disease
- VD Regulations apply only if patient defaults on treatment – discuss with local Medical Officer of Health.
- Won't be able to say when/how long person has had it – pragmatic approach to partner tracing.

Enhanced syphilis surveillance in NZ.

- Started a yr ago
- Alongside Aids epidemiology unit at Uni of Otago Preventative and Social Medicine Dept.
- Voluntary and needs patient consent
- Is anonymous – done with a code
- Refer to local sexual health clini or contact Preventative and Social Medicine – opportunity to capture cases from GP/hospital.

Treatment.

- Benzathine penicillin G 2.4mu IMI
- Weekly for 3 weeks unless within 1st year.
- Doxy 100mg bd x 30 days if pen. sensitive but less successful.
- Follow up serology at 3m, 6m and 1 yr depending on stage, titres etc.
- Neurosyphilis – need aq crystalline pen IV x 10 days.

HIV positive patients.

- Treat as for late latent ie with 3 injections of pen.
- Need lumbar puncture to exclude neurosyphilis.
- Need meticulous follow up - liaise with HIV /infectious diseases clinic.

Jarisch-Herxheimer reaction.

- In 50-80% of patients treated for early syphilis – warn patients abt it.
- Within 8-24 hours
- Flu -like febrile illness: malaise, headache, myalgia, chills, rigours.
- Resolves in 24-48 hours,
- Due to release of cytokines and lymphokines as treponemes die.
- Treat with panadol, rest, reassurance.

Yaws.

- Can get exactly same antibody blood tests results as syphilis.
- Cause = Treponema pertunue – not STI
- Was common in Pacific ‘til 1960 – WHO eradication programme but still some in PNG, Indonesia and Solomon Islands.
- Dx on age/hx of patient – if in doubt, treat for syphilis with weekly injections x 3.

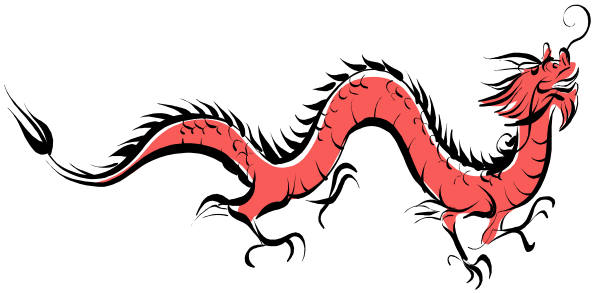
Yaws.

Yaws.

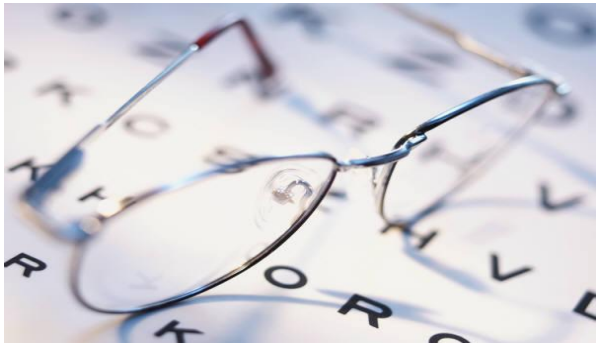
The last word – Isaac Asimov's Luetic Lament.

There was a young man of Back Bay
Who thought syphilis just went away.
And thought that a chancre
Was merely a canker
Acquired in lascivious play.
Now first he got acne vulgaris
The kind that is rampant in Paris

It covered his skin
From forehead to shin
And now people ask where his hair is.
With symptoms increasing in number,
His aorta's in need of a plumber
His hearing is cavorting
His wife is aborting
And now he's acquired a gumma.



Consider his terrible plight –
His eyes won't react to light
His hands are apraxic. His gait is ataxic.
He's developing gun barrel sight.
His passions are as strong as before
But his penis is flaccid, and sore.
His wife now has tabes
And sabre-shinned babies



She’s really worse off than a whore.
There are pains in his belly and knees,
His sphincters have gone by degrees.
Paroxysmal incontinence,
With all its concomitants,
Brings on quite unpredictable pees.

Though treated in every known way,
His spirochetes grow day by day.
He's developed paresis,
Converses with Jesus,
And thinks he's the Queen of the May.

Questions.

References.

1. Sexual Transmitted Infections in NZ. ESR Annual Reports, 2002-2010.

   www.surv.esr.cri.nz

2. The facts about syphilis. Auckland Sexual Health Service Fact sheets. www.ashs.org.nz