An atypical case of Neurosyphilis – the Great Pretender is back

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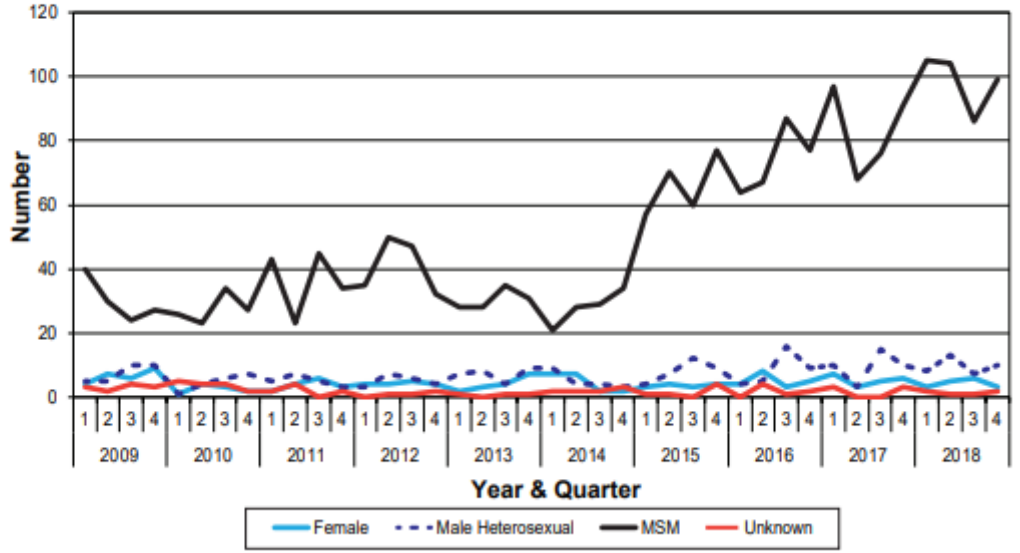
Why is this important?

Figure 1b: Number of infectious syphilis diagnoses in Scotland by gender and sexual orientation and quarter year, 2009-2018.



“Please review this gentleman who has had pain and numbness in the right lower limb…”

- 31 year old man
- Gradual onset of symptoms over one year
- Right lower limb pain and numbness
- Sphincter involvement
- Cognitive difficulties

Social and sexual history

- Lithuanian, moved to Scotland 9 years ago
- One monogamous sexual relationship in the past 11 years
- No intravenous/recreational drug misuse
- No sexual contact with men
- Works as fish filleter
- Left school age 18
- No family history of syphilis/neurological disorders

Examination

- Cardio/resp/abdo: unremarkable
- No rashes/skin lesions/chancre
- Neuro:
  - Thinning of right quadriceps
  - Tone NORMAL, Power NORMAL
  - Reduced left knee jerk, absent right knee jerk, absent bilat ankle jerks, absent distal vibration sense

Investigations

- Serology
- CSF
- MRI head (during treatment and six months later)
- MRI spine
- Nerve conduction studies (post-treatment)
- Cognitive testing
- ECHO, ECG
- CXR

HIV NEGATIVE

Date	Syphilis antibody EIA	T pallidum particle agg TPPA	Treponema pallidum IgM EIA TP	RPR
7/9/18 (clinic)	POSITIVE	POSITIVE	Negative	1:4
21/9/18 (admission)	POSITIVE	Not tested	Negative	1:8
31/10/18 (post-treatment)	POSITIVE	POSITIVE	Negative	1:4
17/6/19 (follow-up)	POSITIVE	POSITIVE	Negative	1:2

CSF criteria

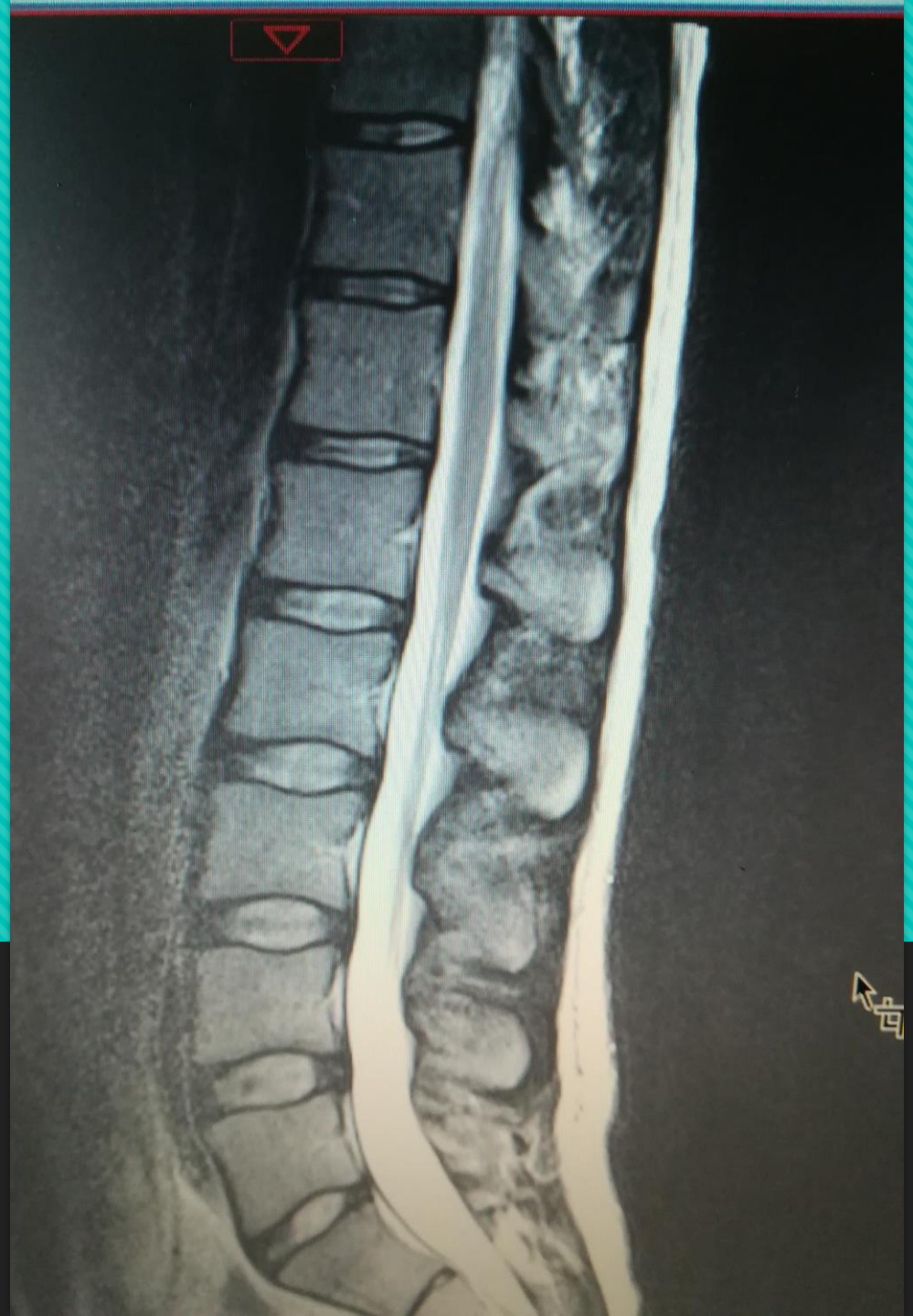
Table 2. The CSF criteria supporting a diagnosis of neurosyphilis (58, 136).

CSF parameters	In HIV-negative individuals	In HIV-positive individuals
WBC	>5 μL	>20 μL OR 6–20 μL (on ART/plasma HIV VL undetectable, or blood CD4 < 200)
Protein	>0.45 g/l	>0.45 g/l
RPR/VDRL	+	+
TPPA	>1:320	>1:320

CSF

Date	Cell count per µl	Protein mg/ml	Glucose (CSF/plasma)	Oligoclonal bands	Cytology
2/10/18	88 WBC ⇧ 11680 RBC	1.15 ⇧	3 / 4.4	Some paired and unpaired (inflammatory pattern)	More lymphocytes than expected, nil malignant
17/10/18	2 WBC (N) 788 RBC	0.45 (N)	3.3 / 5.3	Some paired and unpaired (inflammatory pattern)	

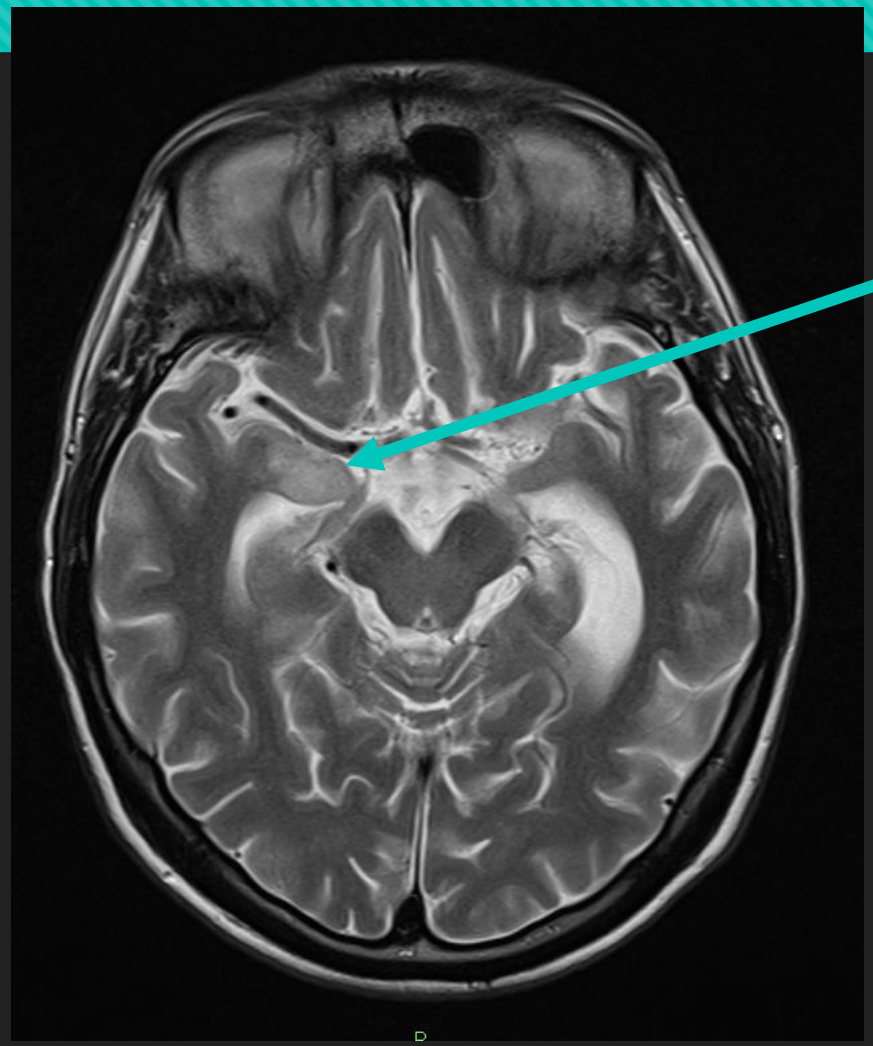
MRI spine



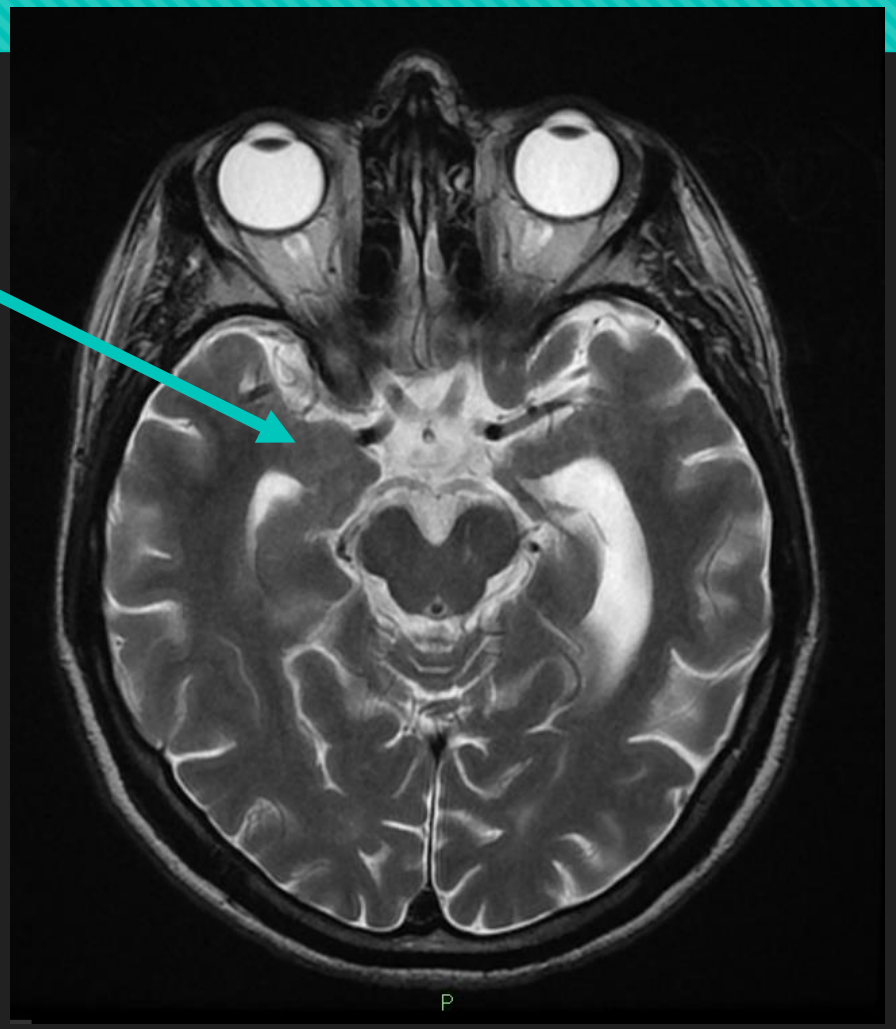
Treatment

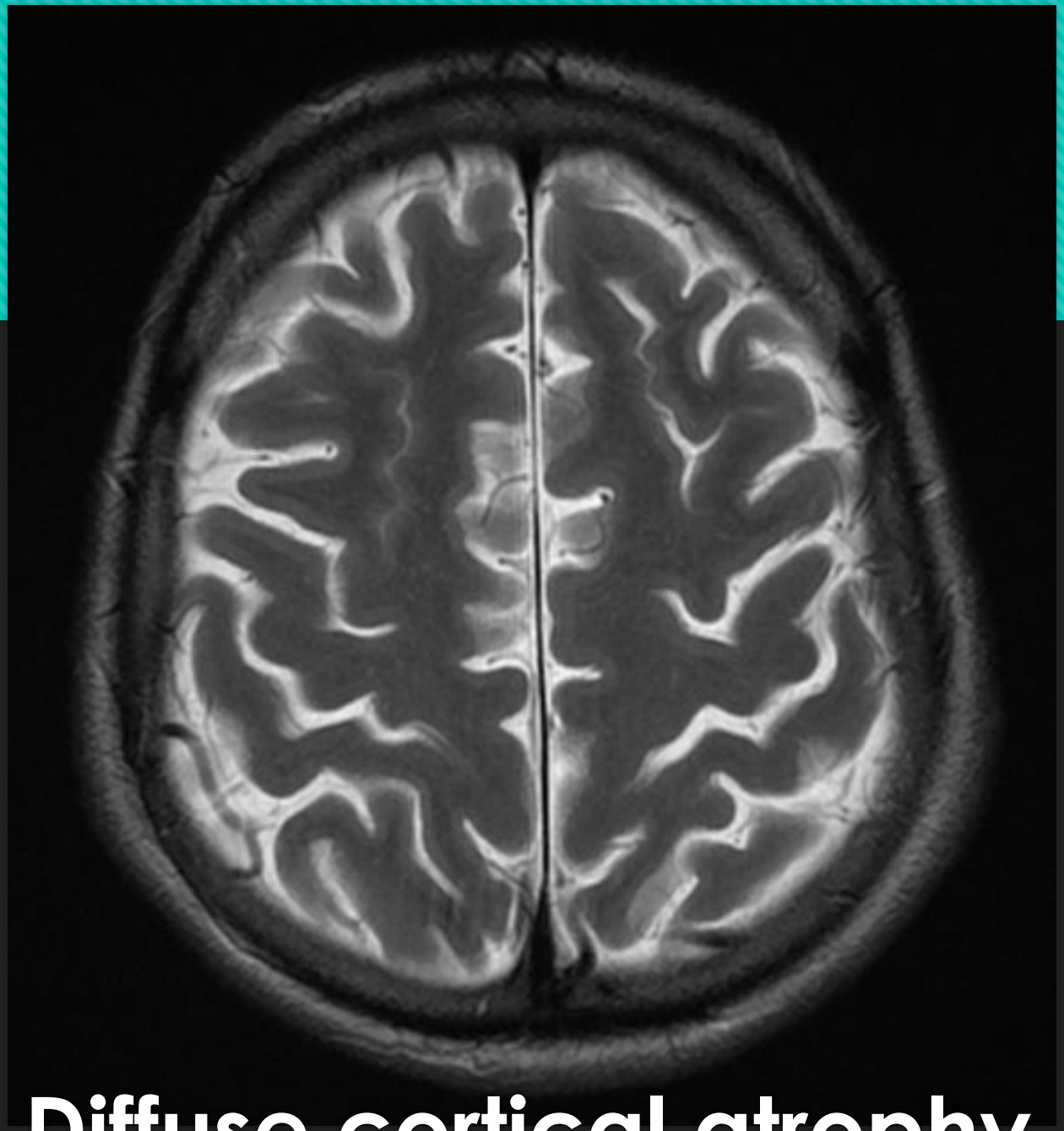
- Benzyl Penicillin 2.4g IV 4 hourly for 2 weeks, prednisolone 60mg OD for 3 days
- Catheterisation
- Physiotherapy

MRI head before and after



Right amygdala lesion





Diffuse cortical atrophy

After treatment

- Improvement in cognitive symptoms
- Improvement in cauda equina symptoms
- Successfully decatheterised
- Back to work

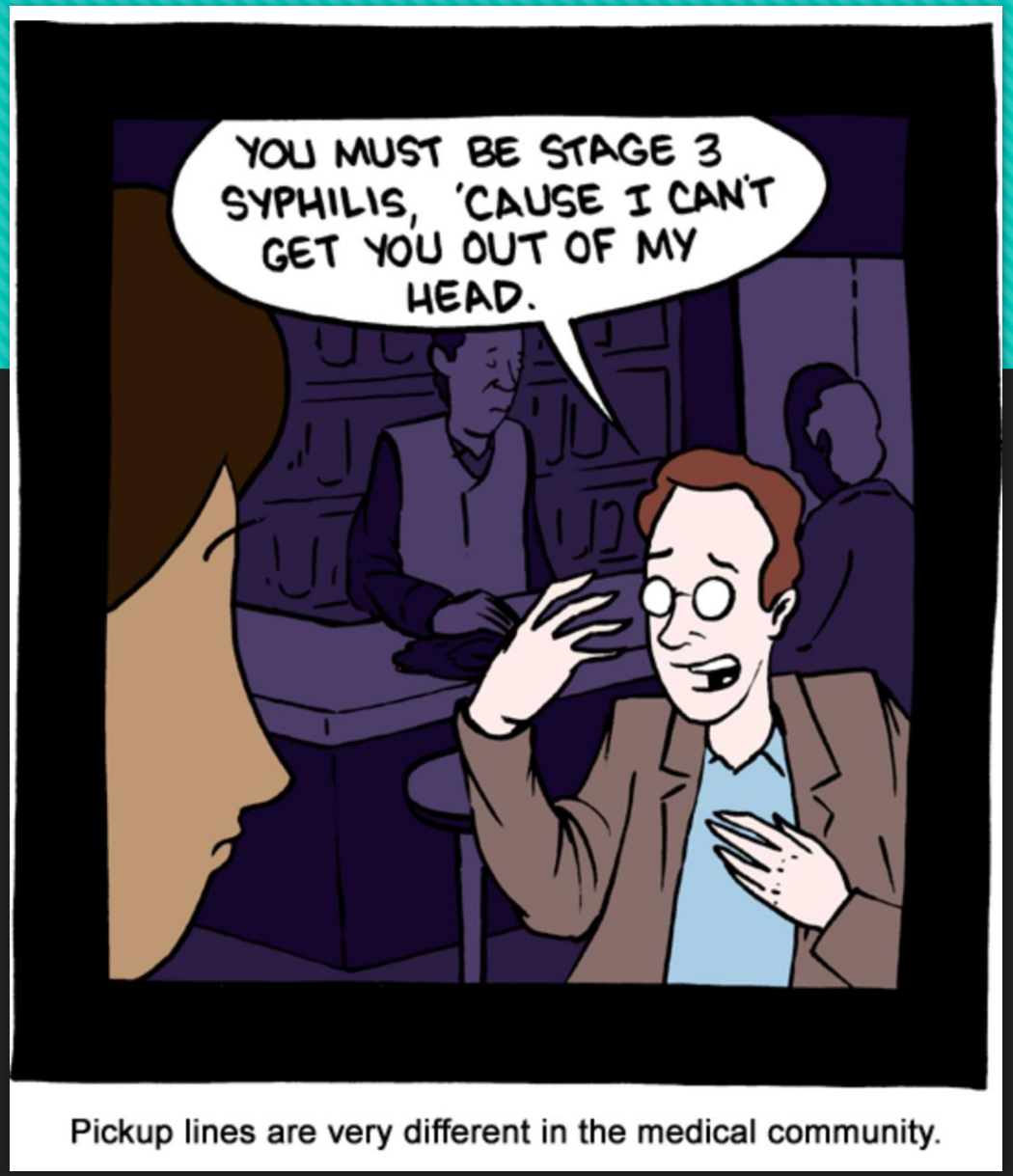
What happens next?

- Annual neurology follow-up
- Repeat lumbar puncture and consider further treatment with doxycycline
- Follow-up with neuropsychologist in Sept 2019

Learning points

- Test for syphilis in cases with abnormal neurological presentations
- Neurosyphilitic symptoms may not fully improve
- We still don't understand everything about syphilis!

Questions?



Pickup lines are very different in the medical community.

References

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