

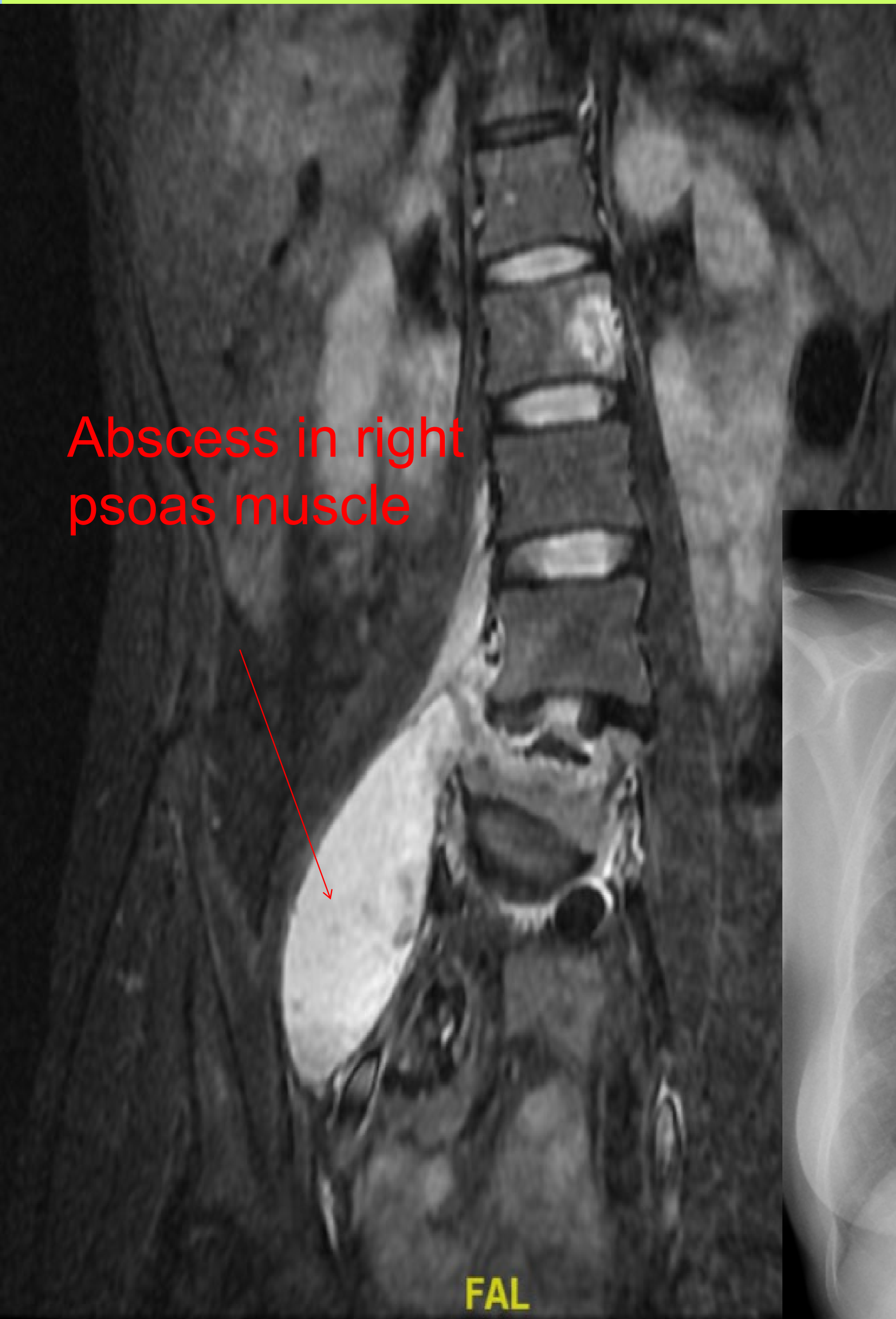
A VOLE LOT OF PROBLEMS

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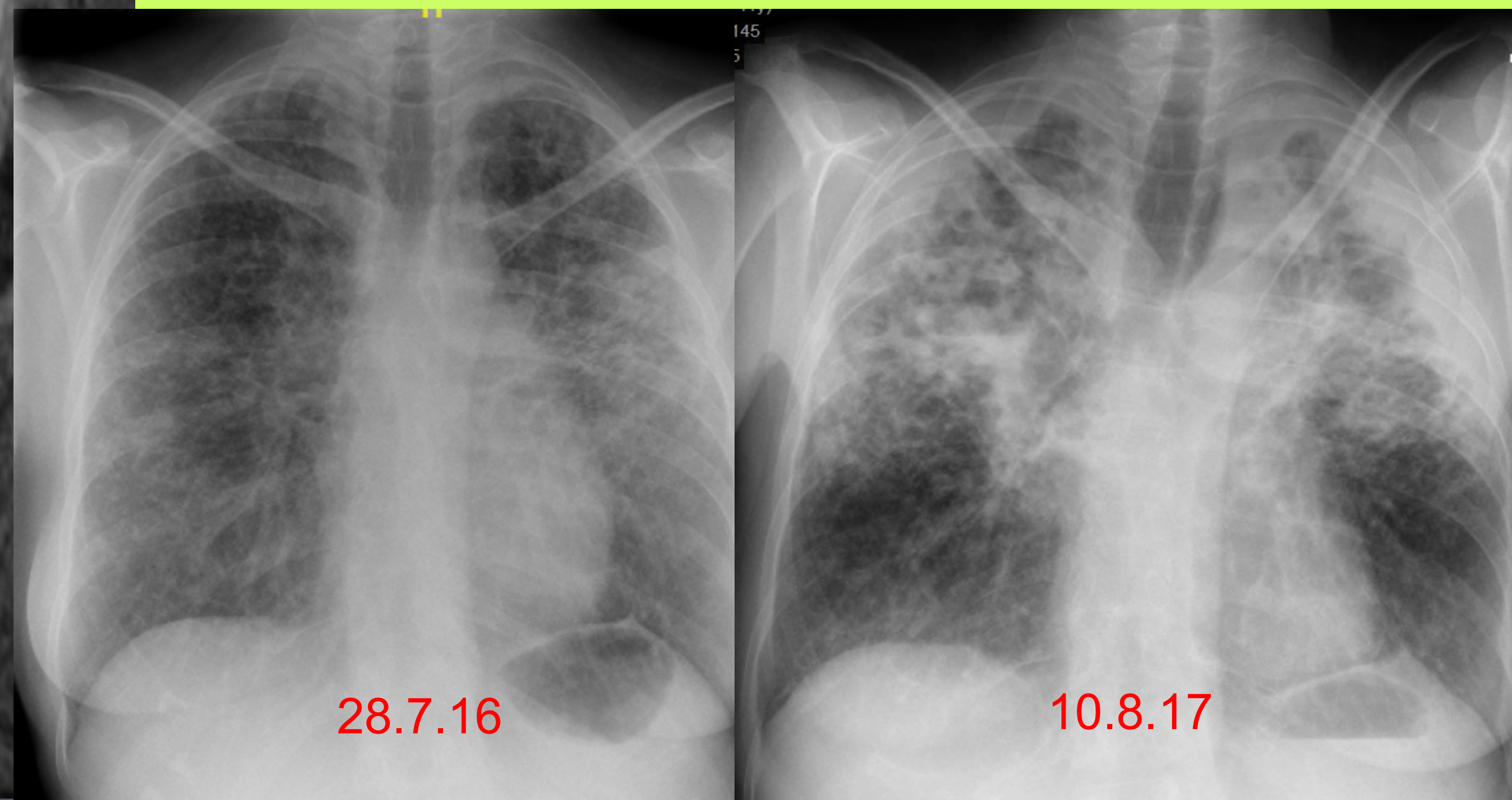
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CASE BRIEF: A 40 year old lady on prednisolone for a diagnosis of sarcoidosis (granulomas on biopsy and AFB smear negative) was referred following an MRI scan of her back. She had fairly good health prior to referral and lives in a rural area surrounded by fields and lakes. She had no unusual travel history or any known exposure to tuberculosis.



MRI scan showed destruction of the L4 vertebra, with an adjacent right psoas abscess. A radiological biopsy of the psoas abscess yielded no positive microbiology, including after prolonged cultures, and was 16s RNA PCR negative. Later an open biopsy of the vertebral bone and psoas abscess also yielded no growth. Previously sputum specimens had grown *Staphylococcus aureus*. For her spinal infection she had empirically been treated with Flucloxacillin and Clindamycin for 6 weeks, but her inflammatory markers remained elevated with a CRP 44. Her serum ACE was 44.



In the meantime her chest deteriorated and became productive of green sputum. Her chest X ray showed new bilateral, upper lobe cavitation. Three sputum samples were AFB smear positive, *M. tuberculosis* complex PCR positive, with no rifampicin resistance gene mutations. She was commenced on anti-mycobacterial treatment.

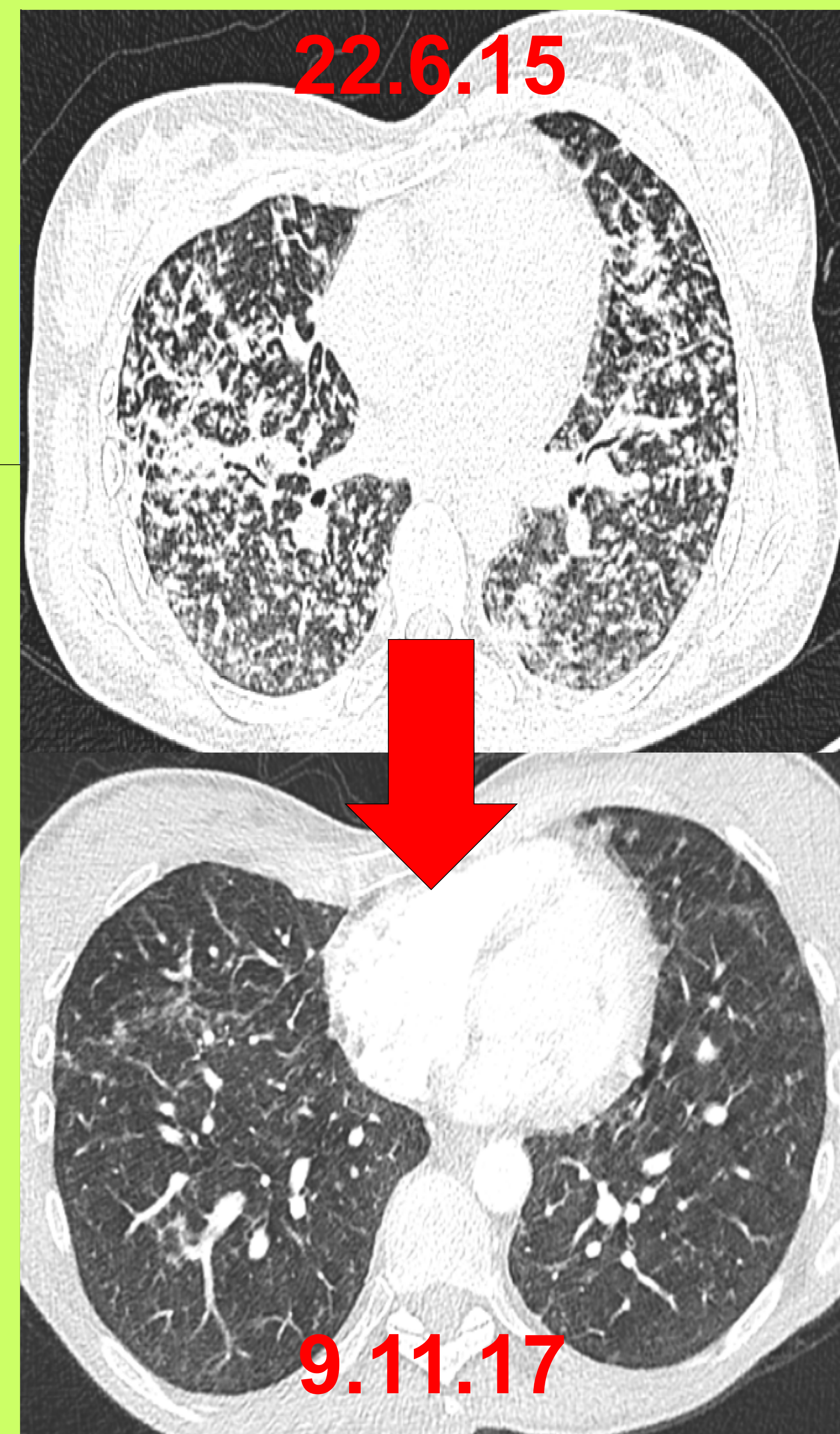
Further results revealed an unusual causative organism. It transpired that the patient lived close to fields and lakes, her cat was catching house mice and outdoor rodents and bringing them into the house. This included dead voles. The patient was left to then clear up their entrails.

OUTCOME: On treatment her sputum is now AFB smear and culture negative. Her CT scan shows improvement in her previous changes at the time of diagnosis of sarcoidosis. She has now stopped anti-microbials.

KEY MESSAGES

- Not all that is *M. tuberculosis* complex PCR positive is conventional *M. tuberculosis*
- Immunosuppression potentially increased susceptibility to exposure progressing to disease
- Case related problems with this organism included a pulmonary manifestation and an acute psoas abscess with vertebral destruction
- This organism, as reported in the literature, has proven difficult to process for sensitivities in the laboratory, post culture
- Voles have been implicated as a natural reservoir
- Clinical experience of this organism is limited

- Organism= *M. microti*



References

- Emmanuel FX *et al.* Human and animal infections with *Mycobacterium microti*, Scotland. *Emerg Infect Dis* 2007;13:1924-6.
- Kipar A *et al.* *Mycobacterium microti* tuberculosis in its maintenance host, the field vole (*Microtus agrestis*): characterisation of the disease and possible routes of transmission. *Vet Pathol* 2014; 51:903-14.
- Pantieux G *et al.* Pulmonary tuberculosis due to *Mycobacterium microti* : a study of six recent cases in France. *J Med Microbiol* 2010;59:984-9.
- Smith NH *et al.* *Mycobacterium microti*: More diverse than previously thought. *J Clin Microbiol* 2009;47:2552-9.