# THE GREAT PRETENDER :

# Multi-system Langerhans Cell Histiocytosis Mimicking Hepatic Micro-Abscesses


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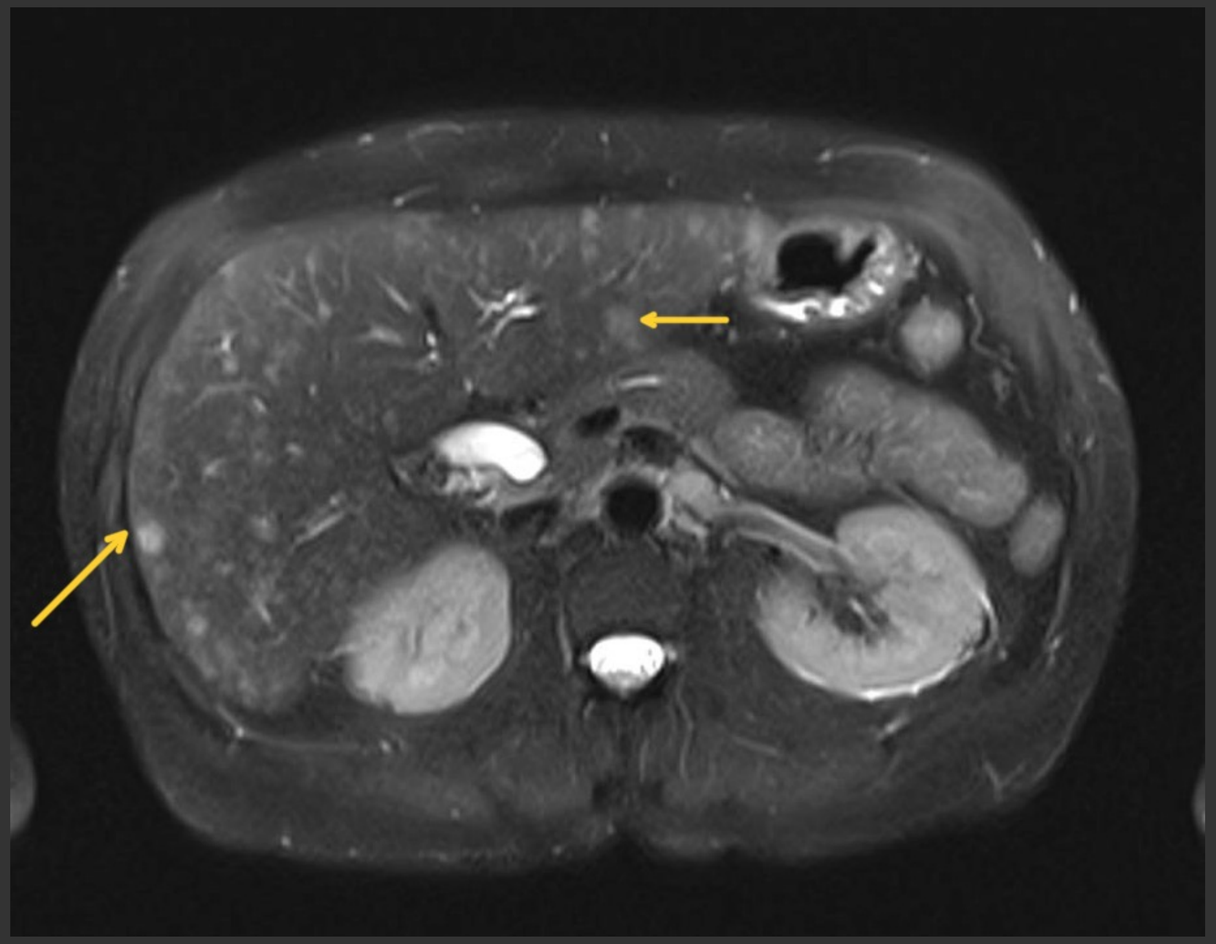
# Introduction

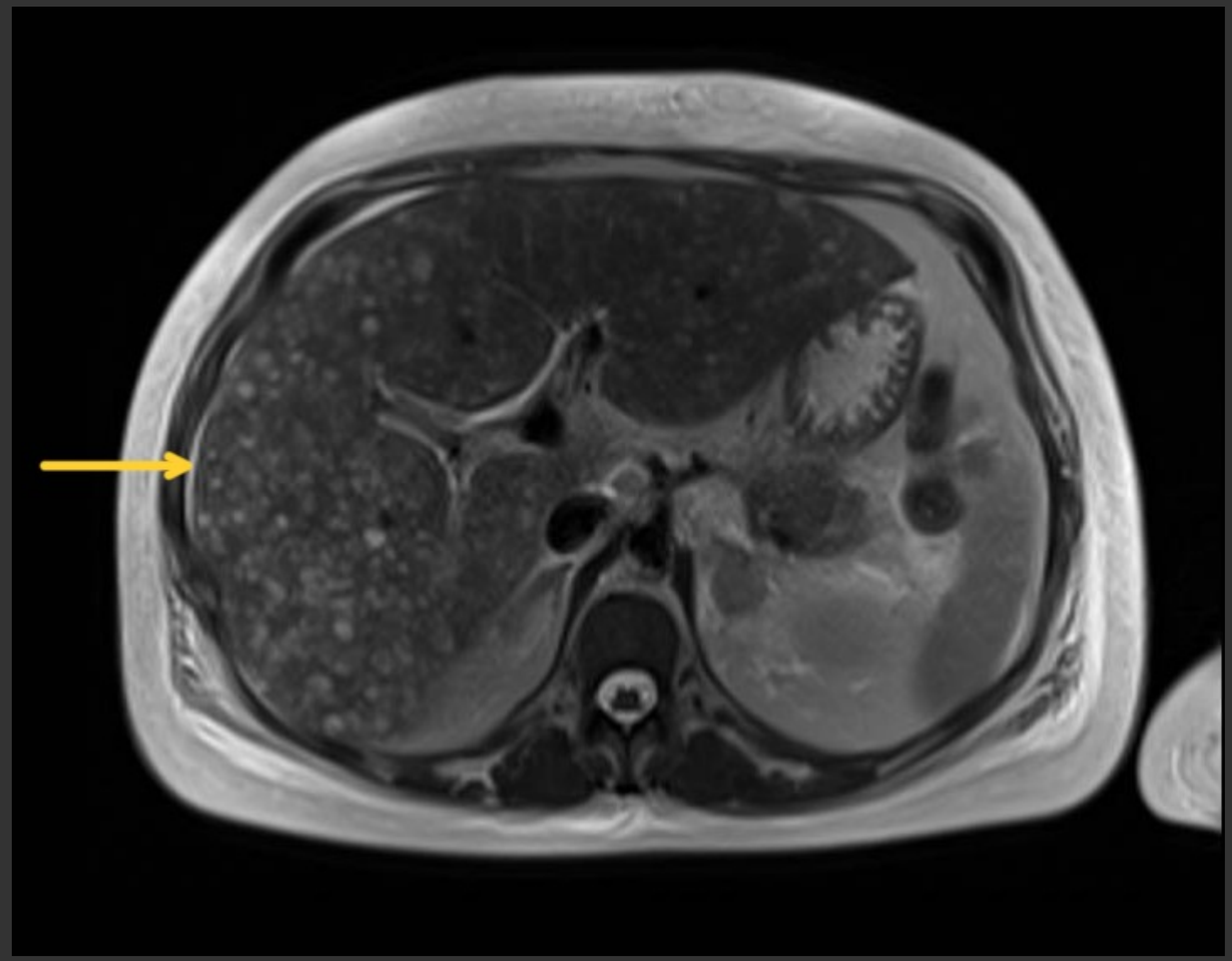
- Langerhans cell histiocytosis (LCH) is a rare clonal myeloid dendritic cell disorder.
- Adult multisystem disease is uncommon and frequently under-recognised.
- Hepatic involvement is rare and can closely mimic infection or granulomatous disease.
- Diagnosis is often delayed due to non-specific imaging and partial treatment response.

# Clinical Presentation -

- Middle aged woman
- 2 month history of -
  - Night sweats
  - Weight loss
  - Right upper quadrant abdominal pain
  - No foreign travel
  - No immunosuppression

# Initial Imaging CT- TAP





Multiple tiny nodular lesions scattered in the liver showing peripheral enhancement and minimal restriction.

# MRI Liver

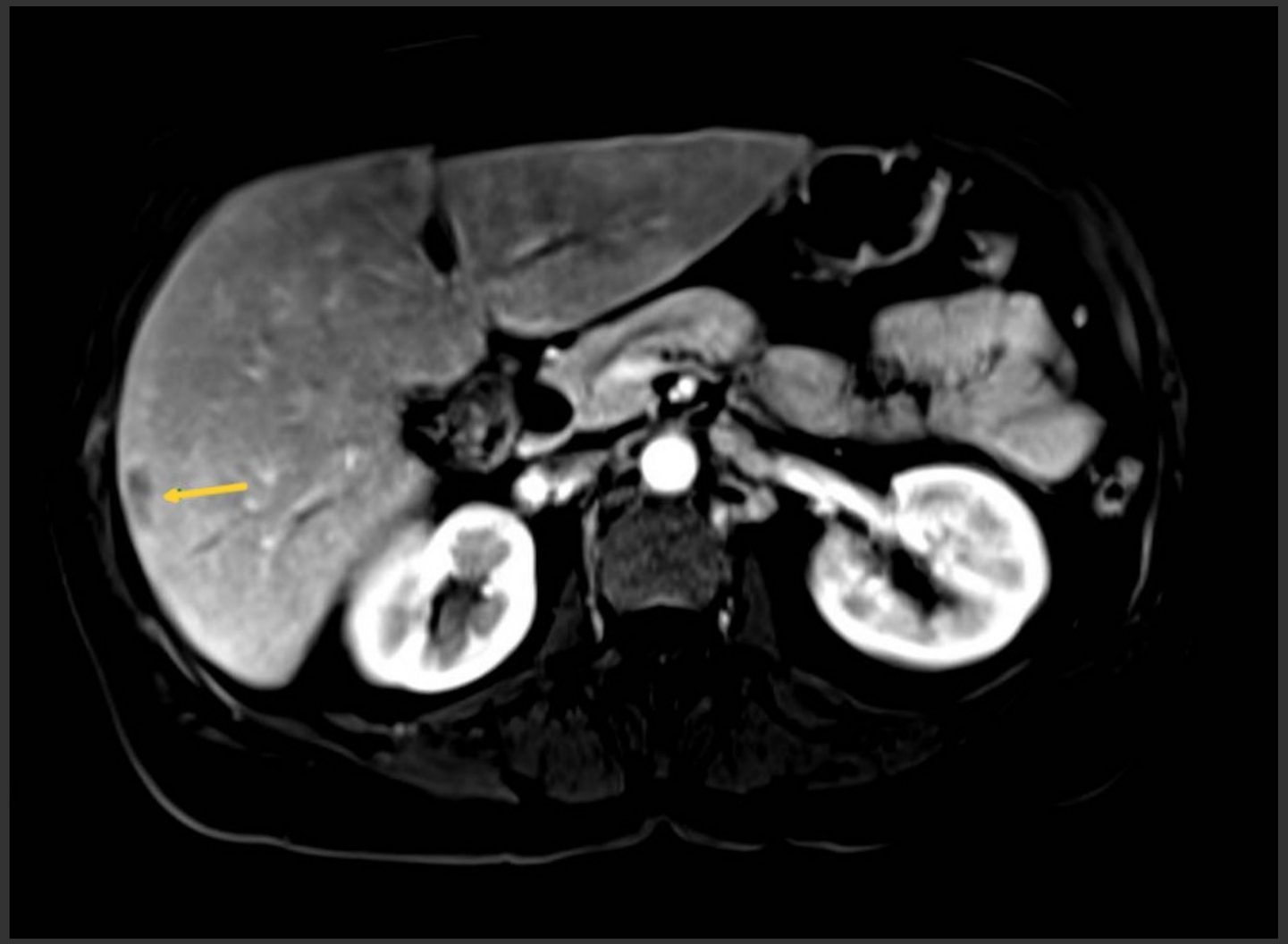
Multiple nodular lesions in the liver showing

- peripheral enhancement

- restricted diffusion

- discrete lesions

- no conglomeration or larger abscess formation.



# Histology

Liver biopsy :

- Micro-abscesses
- Occasional reactive granulomas
- Cultures initially negative

# Early Differentials

- Bacterial abscesses
- Fungal infection
- Disseminated tuberculosis
- Granulomatous disease

# MDT Discussion

- Differentials included —
    - partially treated TB,
    - sarcoidosis
    - bacterial abscess
    - fungal abscess
- Actinomycosis was considered but felt unlikely based on imaging and biopsy.
- Imaging follow-up recommended.

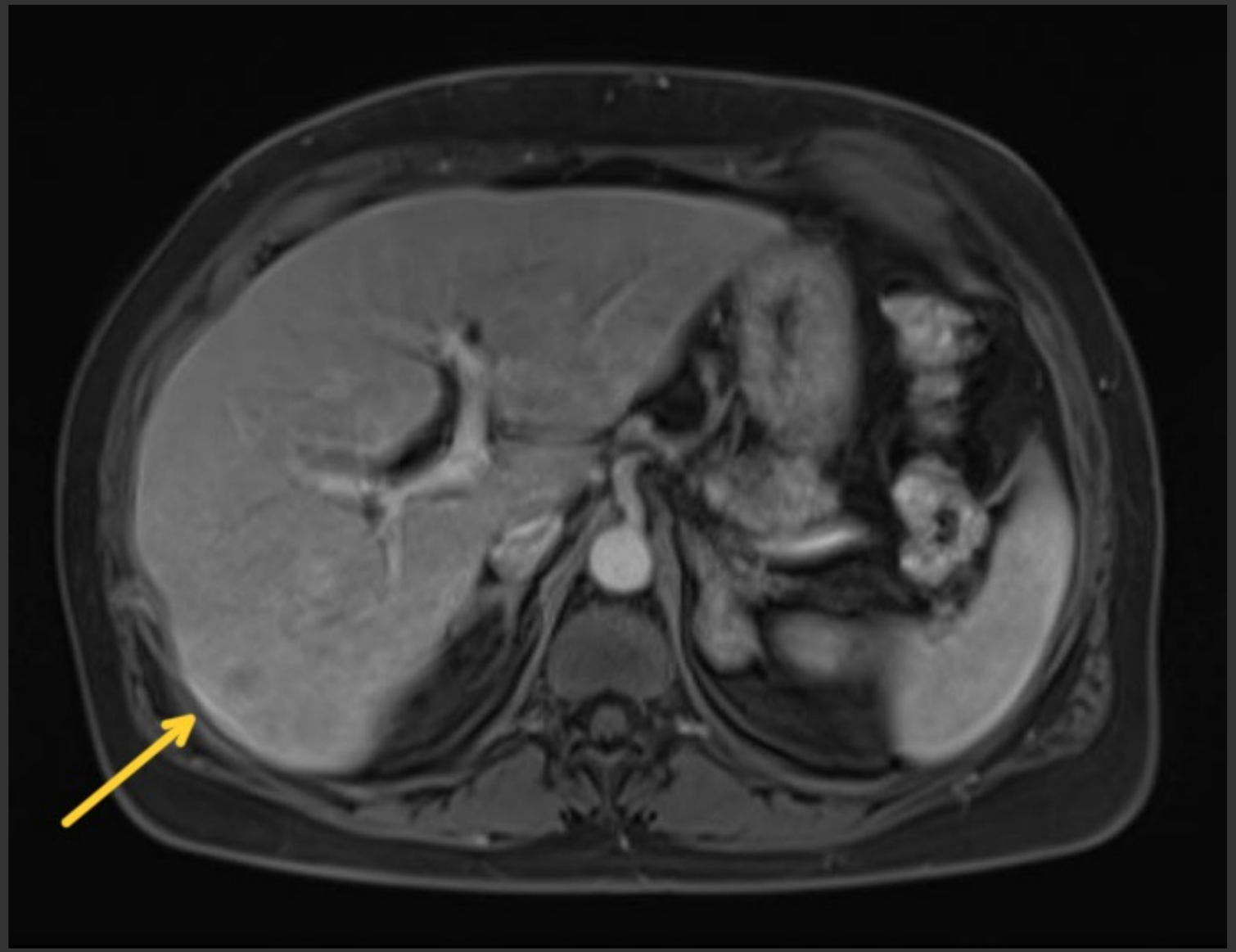
# Treatment and microbiology

- Prolonged antibiotics : Co-amoxiclav + amoxicillin (six weeks)
- Extensive microbiology, negative TB, fungal, bacterial and viral causes.
- Later, culture growth -  Streptococcus oralis.

# Interval Imaging -

# (MRI Liver)

**Regression, but not resolution.**

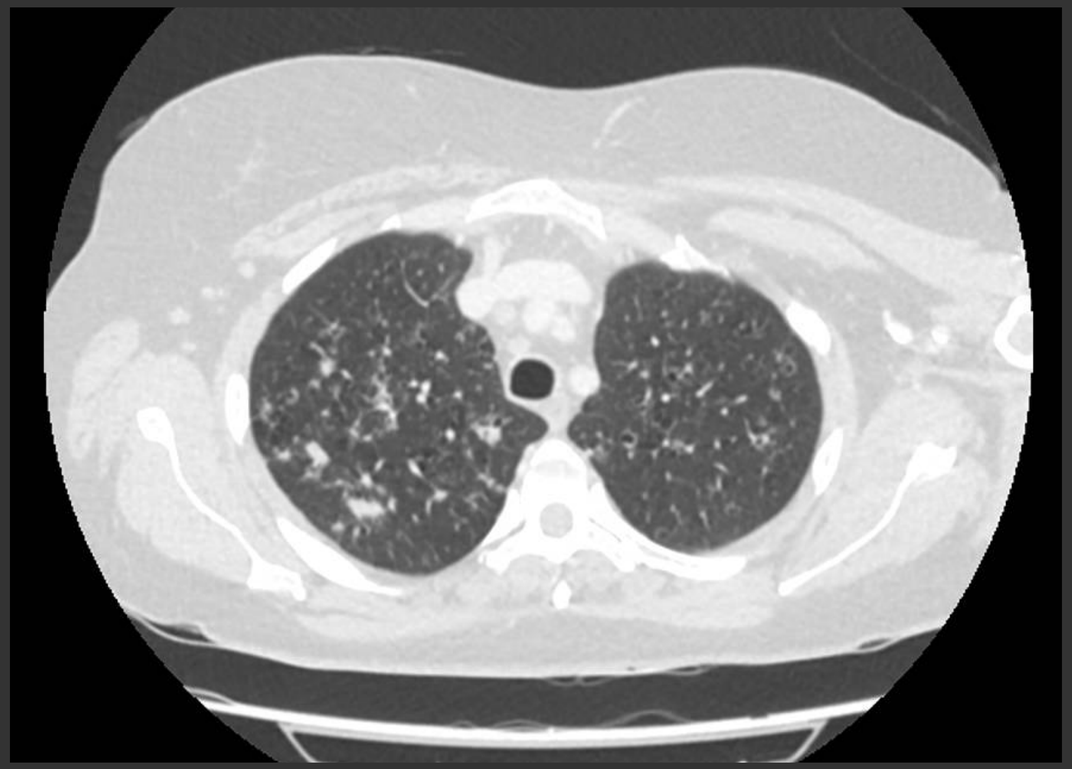


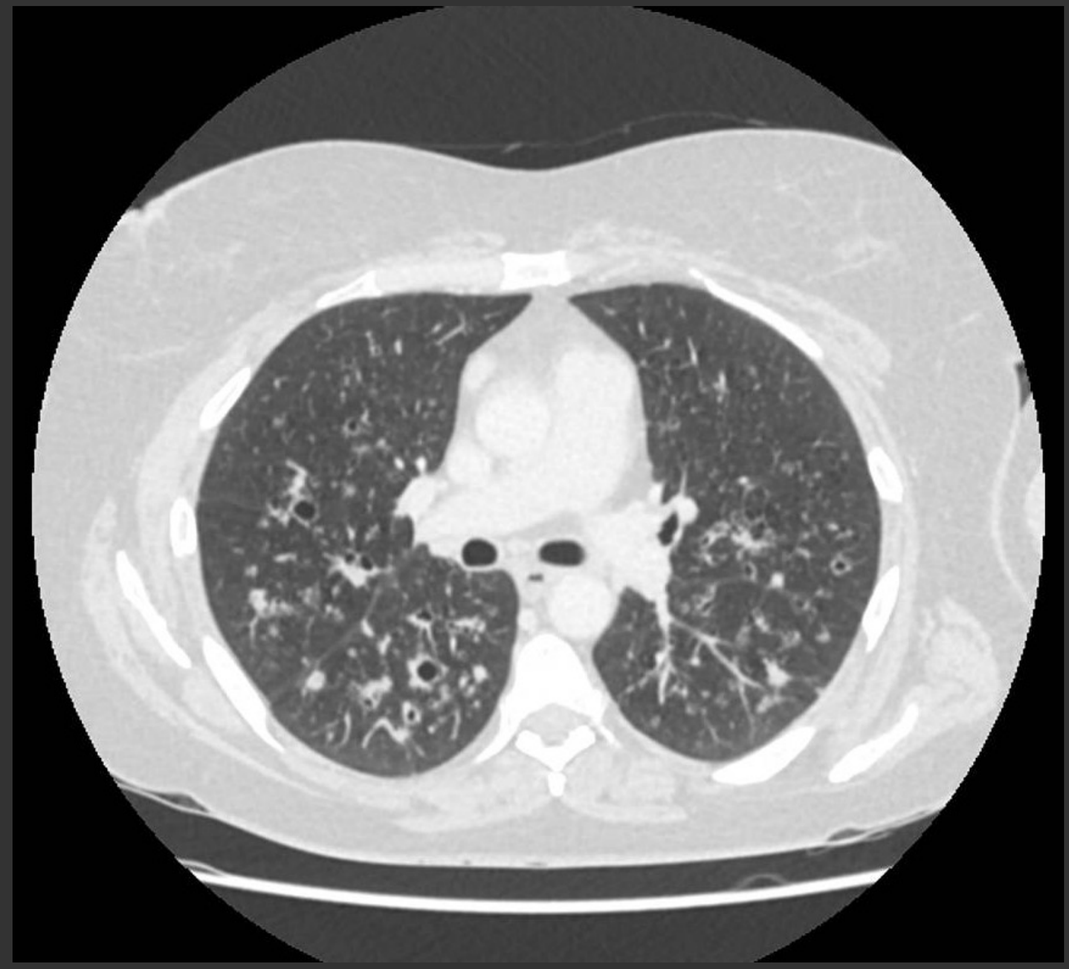
# Disease, evolution: new systemic features

- Re-presentation with
  - Fever
  - Polyuria
  - Polydipsia
  - Cough
  - Raised inflammatory markers
  - Multisystem pathology

# New imaging: CT thorax

- New pulmonary nodules with cavitation
- Imaging pattern inconsistent with resolving infection
- Prompted re-evaluation of unifying diagnosis

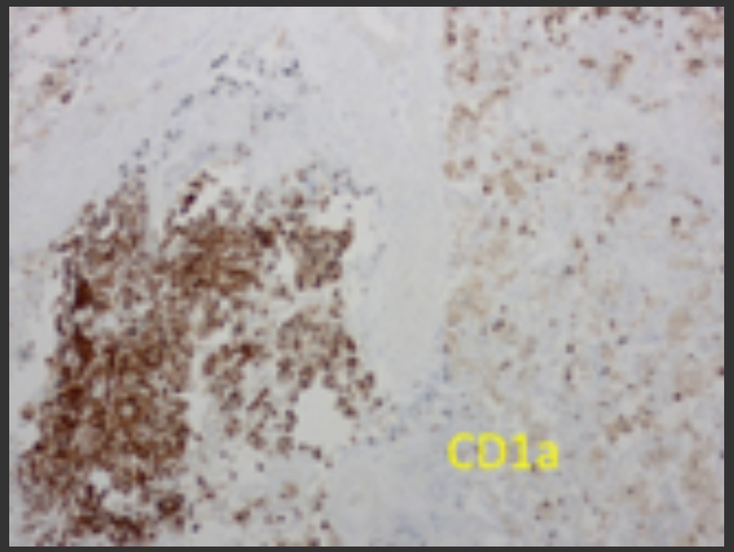


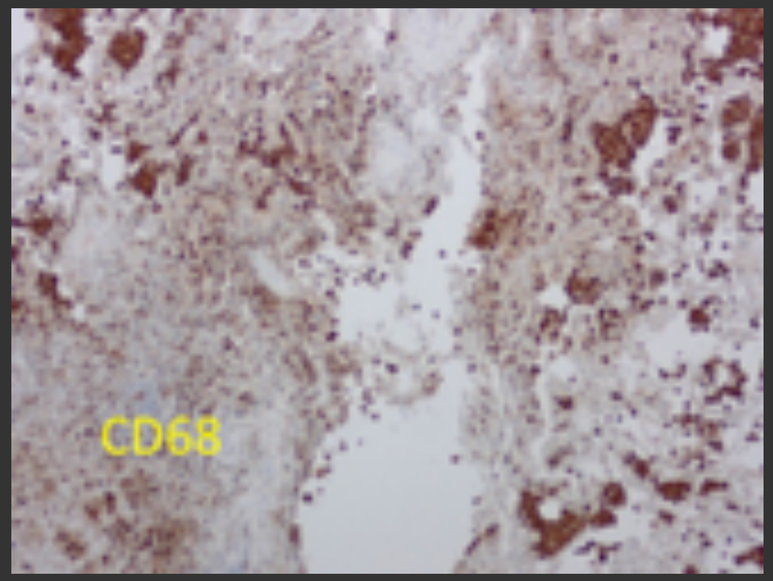


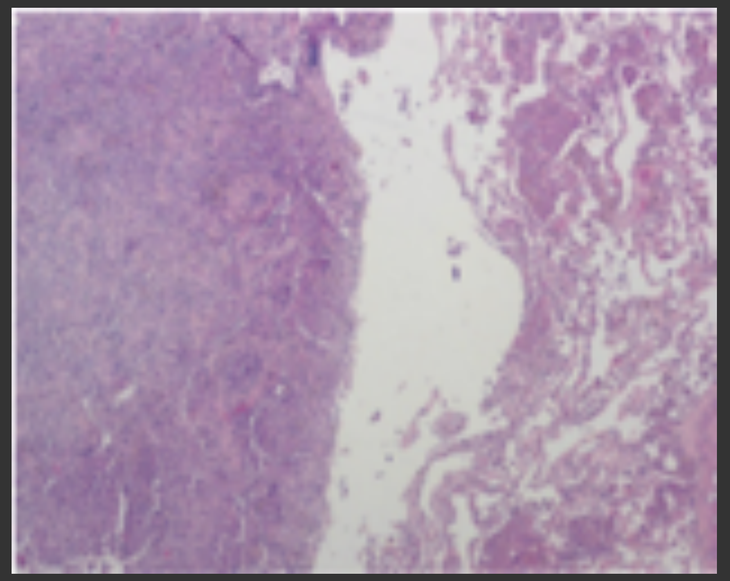
# Diagnostic turning point: lung biopsy

<u>VATS lung biopsy</u> :

- Granulomatous inflammation
- CD1a-positive Langerhans cells
- Diagnostic of Langerhans cell histiocytosis



*Final Diagnosis -*

# MULTI-SYSTEM LANGHERHANS CELL HISTIOCYTOSIS

**Disease Spectrum :**

Involvement:

- Liver
- Lungs
- Central nervous system : cranial diabetes insipidus

Associated history :

Recurrent meningitis

Anterior skull base defect with CSF leak

# Discussion

LCH is driven by MAPK–ERK pathway activation

- Adult LCH often presents as an indolent, multisystem disease.
- Hepatic LCH may progress from inflammatory infiltrates to fibrosis.
- Imaging may mimic infection and show misleading partial treatment response.

IMAGING EVOLUTION over time was the critical diagnostic clue in this case

- MDT discussion and repeat tissue sampling were essential.

# Learning points

- Hepatic LCH is a rare but important mimic of infection.
- Lack of sustained radiological response should prompt reassessment.
- Imaging is central to recognising a typical disease behaviour.
- MDT collaboration and histological confirmation a key diagnosis.

# References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