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Case 16 (May 27 2010): [N Engl J Med. 362\(21\):2013-2022](#)

Demographic: Male, 48 yrs, North America

Clinical features extracted from the case and entered into the query box:

shoulder pain
lytic scapula lesions
cough with green sputum
elevated white cell count
severe fatigue
sweats
myalgias
anxiety
smoker

Synonyms used by Isabel for the above query:

shoulder pain
elevated white cell count
sweats
myalgias
anxiety
smoker
severe fatigue

STOP !

Before you read further you might want to construct your own:

- Complete differential diagnosis
- Final diagnosis

In the following section you will find:

- The differential diagnosis constructed by the MGH panel
- The final diagnosis of the case
- Which of the MGH panel differential diagnoses did Isabel contain
- Did Isabel suggest the final diagnosis

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Differential Diagnoses considered by the MGH panel:

- Sarcoidosis
- Blastomycosis
- Erdheim-Chester Disease

Final Diagnosis of the case according to NEJM:

- Langerhans cell histiocytosis

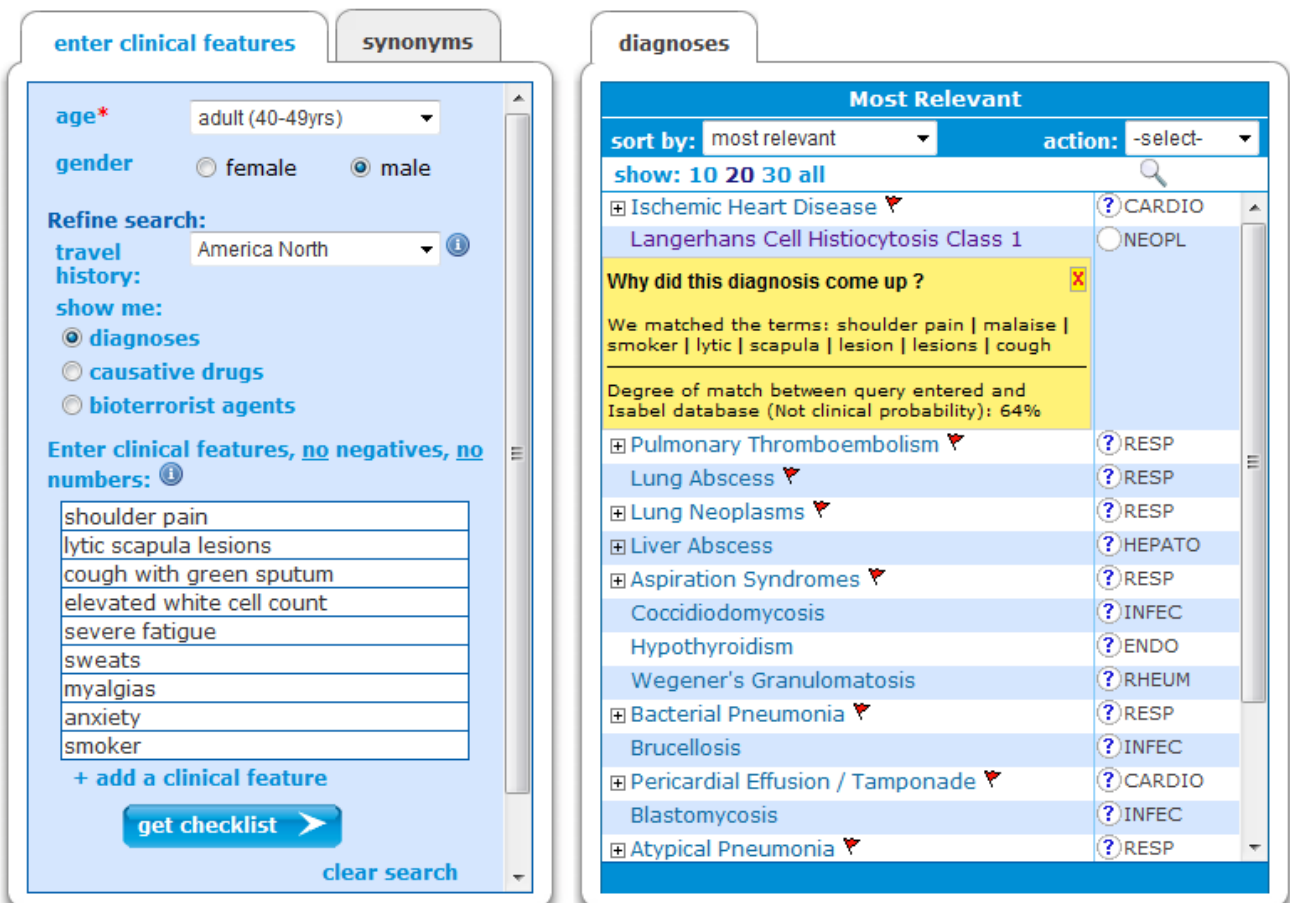
Differential Diagnoses of the case as given by Isabel:

- Sarcoidosis in Respiratory
- Blastomycosis in Infectious
- Erdheim-Chester Disease in Neoplastic

Was the final diagnosis given by Isabel:

- Yes, Langerhans cell histiocytosis in Neoplastic

Isabel Differential:



The screenshot shows the Isabel healthcare interface. On the left, the 'enter clinical features' tab is active, showing a form with the following details:

- age*: adult (40-49yrs)
- gender: female male
- Refine search: travel history: America North
- show me: diagnoses, causative drugs, bioterrorist agents
- Enter clinical features, no negatives, no numbers:
 - shoulder pain
 - lytic scapula lesions
 - cough with green sputum
 - elevated white cell count
 - severe fatigue
 - sweats
 - myalgias
 - anxiety
 - smoker
- + add a clinical feature
- get checklist button
- clear search button

On the right, the 'diagnoses' tab is active, showing a list of 'Most Relevant' diagnoses. The top result is 'Langerhans Cell Histiocytosis Class 1' with a 64% match probability. Other diagnoses include Ischemic Heart Disease, Pulmonary Thromboembolism, Lung Abscess, Lung Neoplasms, Liver Abscess, Aspiration Syndromes, Coccidioidomycosis, Hypothyroidism, Wegener's Granulomatosis, Bacterial Pneumonia, Brucellosis, Pericardial Effusion / Tamponade, Blastomycosis, and Atypical Pneumonia.

Diagnosis	System
Ischemic Heart Disease	CARDIO
Langerhans Cell Histiocytosis Class 1	NEOPL
Pulmonary Thromboembolism	RESP
Lung Abscess	RESP
Lung Neoplasms	RESP
Liver Abscess	HEPATO
Aspiration Syndromes	RESP
Coccidioidomycosis	INFEC
Hypothyroidism	ENDO
Wegener's Granulomatosis	RHEUM
Bacterial Pneumonia	RESP
Brucellosis	INFEC
Pericardial Effusion / Tamponade	CARDIO
Blastomycosis	INFEC
Atypical Pneumonia	RESP