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Case 36 (November 19 2009): [N Engl J Med. 361\(21\):2080-2087](#)

Demographic: Male, 23 yrs, America North, General speciality

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

fevers
myalgias
fatigue
night sweats
weight loss
mediastinal lymphadenopathy
elevated lactate dehydrogenase
elevated alkaline phosphatase
testicular mass

Synonyms used by Isabel PRO for the above query:

elevated lactate dehydrogenase
elevated alkaline phosphatase
fevers
weight loss
night sweats
fatigue
testicular mass
mediastinal lymphadenopathy
myalgias

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 PRO contain
- Did Isabel PRO suggest the Final diagnosis

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Differential Diagnoses considered by the MGH panel:

- Large-B-cell lymphoma
- T-cell lymphoblastic lymphoma
- Hodgkin's lymphoma
- Burkitt's lymphoma
- Osteosarcoma

Final Diagnosis of the case according to NEJM:

Ewing's sarcoma of the bone, with metastasis to the lung and mediastinal lymph nodes

Differential Diagnoses of the case as given by Isabel PRO:

- Large-B-cell lymphoma – under Non-hodgkin's lymphoma in Neoplastic diseases
- T-cell lymphoblastic lymphoma - under Non-hodgkin's lymphoma in Neoplastic diseases
- Hodgkin's lymphoma – in Neoplastic diseases
- Burkitt's lymphoma - under Non-hodgkin's lymphoma in Neoplastic diseases
- Osteosarcoma – under malignant bone tumors in Neoplastic diseases

Was the final diagnosis given by Isabel PRO:

Yes, Ewings sarcoma under malignant bone tumors in Neoplastic diseases.

Isabel PRO Final Diagnosis:

The screenshot displays the Isabel PRO interface. On the left, under 'ENTER CLINICAL FEATURES', there are dropdown menus for age (young adult (16 - 30 years)), gender (male), pregnancy (- not specified -), region (America North), and speciality (General). Below these is a text input area for 'ENTER QUERY TERMS ON SEPARATE LINES:' containing terms like fevers, myalgias, fatigue, night sweats, weight loss, mediastinal lymphadenopathy, elevated lactate dehydrogenase, elevated alkaline phosphatase, and testicular mass. A 'Get Checklist' button is visible. On the right, under 'DEGREE OF MATCH', a list of '8 NEOPLASTIC DISEASES' is shown, with 'Ewing's Sarcoma' highlighted under 'Malignant Bone Tumors'. A yellow box explains the match: 'Why did this diagnosis come up? We matched the terms: elevated lactate dehydrogenase | fever | fevers | weight loss | fatigue | mediastinal lymphadenopathy'. Below this, it states 'Degree of match between query entered and Isabel database (Not clinical probability): 57%'. At the bottom, a list of '12 Body Systems' is shown, including Infectious, Rheumatic, Respiratory, Cardiac, Gastrointestinal, Nervous System, Endocrine, Liver, Nephrology, Hematology, Urologic, and Neoplastic diseases.

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