

**Case 23 (July 24 2008):** [N Engl J Med. 359\(4\):405-414](#)

**Demographic:** Male, 26 years, America North, General speciality

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

back pain  
profuse diaphoresis  
muscle spasms  
pleural effusion  
dyspnea on exertion  
non-productive cough  
tachycardic  
mediastinal lymphadenopathy  
atelectasis  
lung ground-glass opacities

**Synonyms used by Isabel for the above query:**

back pain  
dyspnea on exertion  
pleural effusions  
muscle spasms  
tachycardic  
atelectasis

**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



***Differential Diagnoses considered by the MGH panel:***

Chronic Granulomatous Disease  
Pneumocystis Pneumonia

***Final Diagnosis of the case according to NEJM:***

Poorly differentiated adenocarcinoma of the lung, with an activating mutation in the EGFR gene.

***Differential Diagnoses of the cases given by Isabel:***

Chronic Granulomatous Disease – under Immunologic system  
Pneumocystis Pneumonia – under Atypical Pneumonia in Respiratory system

***Was the final diagnosis given by Isabel:***

Yes, Bronchogenic Carcinoma under Lung Neoplasms in Respiratory system heading.

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**Isabel Differential:**

<b>- RESPIRATORY DISORDERS</b> >> click to collapse	<b>+ INFECTIOUS DISEASES</b> << click to expand
<ul style="list-style-type: none"> <li><a href="#">Asthma</a> <span style="float: right;">? RD</span></li> <li><a href="#">Bacterial Pneumonia</a> <span style="float: right;">? RD</span></li> <li><a href="#">Atypical Pneumonia</a> <span style="float: right;">? RD</span> <ul style="list-style-type: none"> <li><a href="#">Emphysema</a> <span style="float: right;">? RD</span></li> </ul> </li> <li><a href="#">Pulmonary Thromboembolism</a> <span style="float: right;">? RD</span></li> <li><a href="#">Lung Neoplasms</a> <span style="float: right;">○ RD</span></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Tuberculosis</a> <span style="float: right;">? RD</span></li> <li><a href="#">Brucellosis</a> <span style="float: right;">? RD</span></li> <li><a href="#">Anthrax</a> <span style="float: right;">? RD</span></li> </ul>
<div style="border: 1px solid black; background-color: #ffff00; padding: 5px;"> <p><b>Why did this diagnosis come up ?</b> <span style="float: right;">✕</span></p> <p><b>We matched the terms:</b> pleural effusion   atelectasis   cough   mediastin   mediastinal   lymphadenopathi   lymphadenopathy   opac   opacities</p> <hr/> <p><b>Degree of match between query entered and isabel database (Not clinical probability): 46%</b></p> <ul style="list-style-type: none"> <li>Benign Lymphocytic Angiitis</li> <li>Bronchioloalveolar Carcinomas</li> <li><b>Bronchogenic Carcinoma</b></li> <li>Lung Carcinosarcomas</li> <li>Lymphoproliferative Disorders of the Lung</li> <li>Non-Small Cell Lung Cancer</li> <li>Pleural Mesothelioma</li> <li>Primary Sarcoma of the Lung</li> <li>Pseudotumor of the Lung</li> <li>Pulmonary Metastases</li> <li>Small Cell Lung Carcinoma</li> <li>Thoracic Tumors</li> </ul> </div>	<b>LIVER DISORDERS</b> <ul style="list-style-type: none"> <li><a href="#">Liver Abscess</a> <span style="float: right;">? RD</span></li> </ul>
	<b>+ CARDIAC DISORDERS</b> << click to expand
	<b>+ IMMUNOLOGIC SYSTEM</b> << click to expand
	<b>+ ENVIRONMENTAL HEALTH HAZARDS</b> << click to expand
	<b>+ TOXICOLOGY</b> << click to expand
<ul style="list-style-type: none"> <li><a href="#">Pleural Effusion</a> <span style="float: right;">? RD</span></li> <li><a href="#">Pulmonary Complications of HIV</a> <span style="float: right;">? RD</span></li> <li><a href="#">Pneumothorax Conditions</a> <span style="float: right;">? RD</span> <ul style="list-style-type: none"> <li><a href="#">Pulmonary TB</a> <span style="float: right;">? RD</span></li> </ul> </li> <li><a href="#">Sarcoidosis</a> <span style="float: right;">? RD</span> <ul style="list-style-type: none"> <li><a href="#">Bronchiectasis</a> <span style="float: right;">? RD</span></li> </ul> </li> <li><a href="#">Interstitial Lung Disease</a> <span style="float: right;">? RD</span></li> </ul>	