

Case 16 (May 22 2008): [N Engl J Med. 358\(21\):2266-2274](#)

Demographic: Female, 46yrs, Not-pregnant, America North, General speciality

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

bone pain
antalgic gait
pain with internal and external rotation of hip
swelling over anterior tibia
fatigue
microcytic anemia
hypophosphatemia
elevated alkaline phosphatase
hypocalcemia
elevated parathyroid hormone
osteopenia
enlarged parathyroid gland

Synonyms used by Isabel for the above query:

bone pain
fatigue
microcytic anemia
hypophosphatemia
elevated alkaline phosphatase
hypocalcemia
elevated parathyroid hormone
vitamin D deficiency

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

Final Diagnosis of the case according to NEJM:

Brown tumor associated with osteitis fibrosa cystica in a patient with celac disease, malabsorption, vitamin D deficiency, hypocalcemia, and secondary hyperparathyroidism.

Was the final diagnosis given by Isabel:

Yes, under Orthopedic disorders heading



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Isabel Differential:

<p>+ ORTHOPEDIC DISORDERS << click to expand</p> <p>Vit D Deficient Rickets / Osteomalacia ? RD</p> <p>Renal Osteodystrophy ? RD</p> <p>Osteitis Fibrosa Cystica ? RD</p> <div style="border: 1px solid black; background-color: #ffff00; padding: 5px;"> <p>Why did this diagnosis come up ?</p> <p>We matched the terms: BONE PAIN fatigue elevated parathyroid hormone increased alkaline phosphatase low serum phosphate low serum phosphorus PAIN pain PARATHYROID parathyroid</p> <p>Degree of match between query entered and Isabel database (Not clinical probability): 54%</p> </div> <p>Prepatellar Bursitis ? RD</p> <p>+ Malignant Bone Tumors ? RD</p>	<p>+ RHEUMATIC DISEASES << click to expand</p> <p>Osteoarthritis ? RD</p>
<p>- ENDOCRINE SYSTEM >> click to collapse</p> <p>+ Hypothyroidism ? RD</p> <p>+ Hyperthyroidism ? RD</p> <p>- Hyperparathyroidism ? RD</p> <div style="border: 1px solid black; background-color: #ffff00; padding: 5px;"> <p>Why did this diagnosis come up ?</p> <p>We matched the terms: BONE PAIN hypocalcemia adynamia PAIN pain OVER over ENLARG enlarged PARATHYROID parathyroid GLAND gland</p> <p>Degree of match between query entered and Isabel database (Not clinical probability): 48%</p> <ul style="list-style-type: none"> ---Familial Primary Hyperparathyroidism ---Hyperparathyroidism-Jaw Tumor Synd ---Primary Hyperparathyroidism ---Secondary/Tertiary Hyperparathyroidism </div> <p>+ Pseudohypoparathyroidism ? RD</p> <p>+ Pathological Hypercalcemia ? RD</p> <p>Pendred's Syndrome ? RD</p>	<p>+ RESPIRATORY DISORDERS << click to expand</p> <p>+ Lung Neoplasms ? RD</p>
<p>NUTRITIONAL DISORDERS</p> <p>Vit C Deficiency ? RD</p>	<p>NEPHROLOGY</p> <p>+ Renal Failure ? RD</p>
<p>+ INFECTIOUS DISEASES << click to expand</p>	<p>+ NEOPLASTIC DISEASES << click to expand</p>
<p>+ GASTROINTESTINAL DISORDERS << click to expand</p>	<p>+ HEMATOLOGY << click to expand</p>
<p>+ DERMATOLOGY << click to expand</p>	<p>+ NERVOUS SYSTEM DISORDERS << click to expand</p>
<p>+ CARDIAC DISORDERS << click to expand</p>	<p>+ TOXICOLOGY << click to expand</p>
<p>+ METABOLIC DISEASES << click to expand</p>	