FOR SHORT ANSWERS
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FOR LONG ANSWERS
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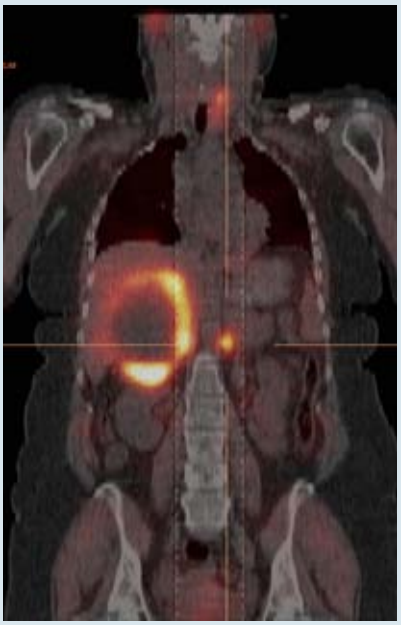

Coronal ^{123}I-MIBG SPECT fusion scan

PICTURE QUIZ A woman with episodic headaches, sweating, and palpitations

A 39 year old woman was referred to the headache clinic with a 10 year history of episodic headaches, sweating, and palpitations. The symptoms had intensified over the past one to two years. Since then she has been experiencing three to four episodes a day, mostly at night, of severe headache, chest tightness, sweating, palpitations, and "churning stomach." She had no medical history of note and took no regular drugs. Her mother had been diagnosed with metastatic cancer of unknown source in her early 60s.

On examination, her blood pressure was 100/80 mm Hg, with no postural drop; pulse was 86 beats/min and regular. She had a palpable left thyroid nodule but no associated lymphadenopathy, and other systemic examinations were unremarkable.

Magnetic resonance imaging of the head showed no abnormalities. Thyroid function tests were normal; 24 hour urinary catecholamines performed twice showed markedly raised noradrenaline (628 nmol/L and 613 nmol/L; reference range 0-450) and adrenaline (722 nmol/L and 915 nmol/L; 0-100), suggestive of phaeochromocytoma. Magnetic resonance imaging of the adrenals showed a large mass in the right upper quadrant and a small mass in the left adrenal. An iodine-123-meta-iodobenzylguanidine (^{123}I-MIGB) single photon emission computed tomography (SPECT) scan was performed (fig).

1 What does the ^{123}I-MIBG SPECT scan show?
2 What is the possible importance of the thyroid nodule?
3 What further investigations would you perform?
4 How would you manage this patient?

Submitted by Angus Jones, Matthew Bull, and Bijay Vaidya

Cite this as: *BMJ* 2011;342:d2977

STATISTICAL QUESTION

Screening tests: likelihood ratios

The accuracy of asking patients two questions as a screening tool for depression in primary care was assessed. The questions focused on depression and pleasure within the past month. Consecutive patients not taking psychotropic drugs who attended their general practice were invited to participate, of whom 421 agreed. Patients were asked the two questions at any time during their consultation, and if the response to either was positive then screening was considered "positive" and the patient deemed at "high risk" of depression; otherwise screening was considered "negative" and the patient deemed at "low risk" of depression. A self completed, computerised international diagnostic interview was used to diagnose depression.

The two questions showed a sensitivity of 97% and specificity of 67% as a screening tool for depression. The likelihood ratio was 2.9 for a positive test result and 0.05 for a negative test result. Overall, 157 of the 421 patients (37%) screened positive for depression.

Which one of the following statements best describes the likelihood ratio for a "positive" test result on screening?

a) Patients with a "positive" screening result are 2.9 times as likely to have diagnosed depression as a patient with a "negative" screening result.
b) For patients with diagnosed depression, a "positive" screening result is 2.9 times as likely to occur as a "negative" screening result.
c) A "positive" screening result is 2.9 times as likely to occur for a patient with diagnosed depression compared with a patient without a diagnosis of depression.

Submitted by Philip Sedgwick

Cite this as: *BMJ* 2011;342:d3986

CASE REPORT Jaundiced after a party

A 24 year old male student from Poland attended the emergency department with a one week history of jaundice. He also had orange urine and non-specific abdominal pain, which he attempted to relieve by drinking alcohol. He had experienced no vomiting or change in bowel habit or stool consistency.

There was no history of jaundice, illness, surgery, or blood transfusion. He was not taking any regular drugs and gave no history of drug allergies. He denied intravenous drug abuse but admitted taking ecstasy at a party a fortnight ago. He had recently spent two weeks in Poland over Christmas. During the previous week he had drunk about 21 units of alcohol. He was homosexual but had not been sexually active for two weeks before presentation.

On examination he was afebrile and overtly jaundiced. His abdomen was soft, non-tender, he had no palpable masses, and bowel sounds were present. It was noticed that he had an abdominal piercing. There were no signs of hepatic encephalopathy.

On admission his liver function tests were deranged: alanine aminotransferase (ALT) was 2891 IU/L (reference value <40), alkaline phosphatase (ALP) was 246 IU/L (30-130), bilirubin was 285 µmol/L (<17), albumin was 40 g/L (35-51), and international normalised ratio was 1.2 (0.9-1.2).

1 What is the differential diagnosis?
2 How would you confirm the diagnosis?
3 How can the condition be classified?
4 How would you manage this patient?

Submitted by Luke A E Pratsides, Jean Nehme, Mark R Thursz, and Robert D Goldin

Cite this as: *BMJ* 2011;342:d3441