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CASE REPORT

Acute breathlessness and metastatic cancer

A 56 year old woman with endometrial leiomyosarcoma and metastatic involvement of her lungs presented with a three day history of acute breathlessness from a background of intermittent breathlessness. Two months previously she had started chemotherapy with gemcitabine and docetaxel, and three days before admission she had completed her third cycle. A computed tomography scan done two weeks earlier showed minimal change in the bulk of the cancer, but a filling defect in her iliac vein. Thrombosis was suspected, and anticoagulation treatment was started.

The woman denied any cough, haemoptysis, fevers, or pain. On examination she had normal bilateral breath sounds, a respiratory rate of 35 breaths per minute, oxygen saturation of 87% on 15 l/min oxygen, a temperature of 38°C, heart rate sinus 120 beats per minute, blood pressure of 90/60 mm Hg, and normal heart sounds. The only abnormality on her chest radiograph was pulmonary metastases.

Her respiratory and haemodynamic compromise was thought to be caused by a pulmonary embolism, and she was given 250 ml of intravenous colloid. This increased her tachypnoea, and new bilateral wheeze was heard on auscultation. A computed tomography pulmonary angiogram was performed and showed a filling defect in her right ventricle, diffuse bilateral pulmonary infiltrates, but no filling defects in her pulmonary vessels.

- 1 What is the differential diagnosis of her breathlessness?
- 2 How would you treat her breathlessness once the diagnosis is established?
- 3 What is the differential diagnosis of the filling defect in her right ventricle?

Submitted by Chloe Bloom

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PRIZE QUIZ: The placenta

Each week we offer a prize of a *BMJ* memory stick to the person who answers correctly, in the quickest time, a set of exam questions taken from OnExamination. To enter the quiz, go to www.onexamination.com/endgames. The competition closes at midnight on Wednesday, and the winner will be announced in the print *BMJ*. Once the competition closes answers to this question can be viewed at

www.onexamination.com/Endgames/LastEndgame.aspx.

Here's one question from this week's quiz on the placenta from the MRCOG:

Which of the following statements regarding the retained placenta are true?

- Affects about 15% of all deliveries
- There is a mortality rate of up to 10% if left untreated
- The risk of major haemorrhage decreases after 30 minutes of placental retention
- An ultrasound scan can distinguish between trapped placenta and adherent placenta
- For adherent placenta, injection of 10 IU of oxytocin in 30 ml saline is a worthwhile first line option.

The winner of the prize quiz on wound healing was Dr Weekitt Kittisupamongkol

STATISTICAL QUESTION

t tests

Twenty four office workers are chosen randomly from an office. Their heights are measured when they arrive at work in the morning, and again before they go home the same evening.

What statistical test would best be used to test the hypothesis that their morning heights are no different from their evening heights?

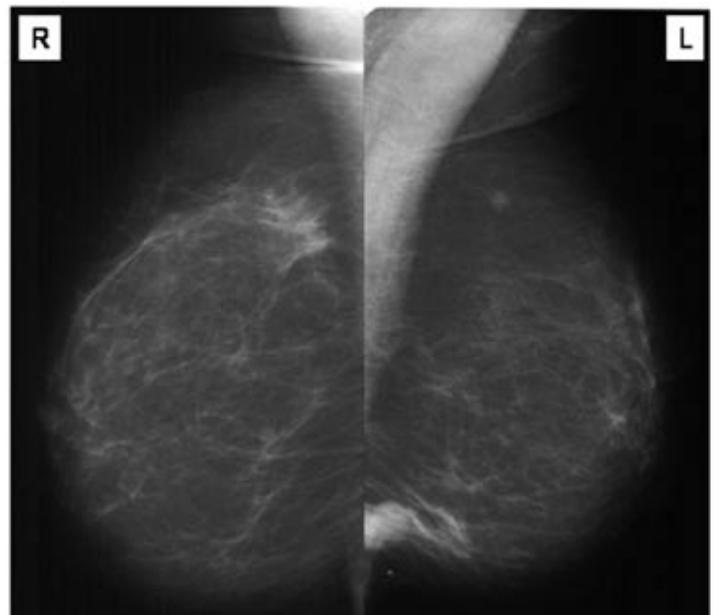
- a) Two sample t test
- b) One sided t test
- c) One sample t test
- d) Paired t test

Submitted by John Fletcher

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PICTURE QUIZ

Breast imaging



The figure shows the left and right mammograms of an 81 year old woman with a short history of a lump in the right breast. Clinical examination showed a mass in the upper outer quadrant, which felt as if it might be a breast carcinoma.

- 1 What is shown in the right breast?
- 2 What is shown in the left breast?
- 3 What would be the next step in investigating this patient?

Submitted by Peter Britton

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