

FOR SHORT ANSWERS

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FOR LONG ANSWERS

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Fig 1 | Chest radiograph on admission



Fig 2 | Patient on admission

PICTURE QUIZ Breathlessness and plethora

A 61 year old man presented to the emergency department with sudden onset breathlessness associated with cough productive of purulent sputum. He had been diagnosed with squamous cell carcinoma of the bronchus one month earlier. His staging was T4N2M1. Two weeks earlier he had developed a pathological clavicular fracture and was due to start radiotherapy. On admission he had no haemoptysis or chest pain. However, his blood pressure was 80/40 mm Hg, pulse rate was 140-160 beats/min, and respiratory rate was 18 breaths/min.

On examination he had swelling and plethora of the face and neck. Crepitations were heard in the right mid zone of his lung field. Heart sounds were normal. His jugular venous pressure was non-pulsatile and was raised to the level of his ear lobes. His breathlessness and facial swelling were exacerbated by lying flat and coughing.

Electrocardiography showed sinus tachycardia. Arterial blood gas on room air showed a partial pressure of oxygen of 7 kPa, and a partial pressure of carbon dioxide of 4.2 kPa.

Chest radiography was performed (fig 1). An echocardiogram showed no pericardial effusion but moderate left ventricular function and no right ventricular dysfunction. Figure 2 is a picture of the patient at admission.

- 1 What is the most likely diagnosis?
- 2 What are the likely causes of this condition?
- 3 What further investigation would you do?
- 4 How would you manage this patient?

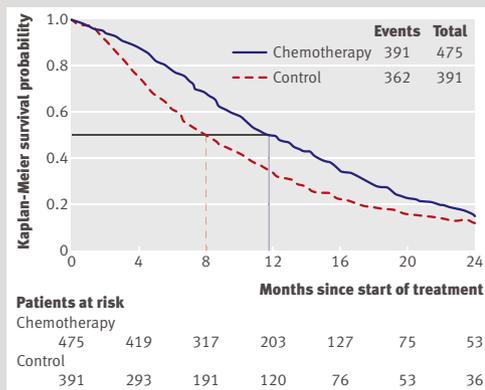
Submitted by Janet Dua, Wui-hang Cheung, Sabina Russell, and Zaid Dabbagh

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STATISTICAL QUESTION

Survival (time to event) data: median survival times

A meta-analysis investigated the effects of palliative chemotherapy in patients with locally advanced or metastatic colorectal cancer. Randomised controlled trials that compared palliative chemotherapy with supportive care were included. Seven trials with a common study period of 24 months were identified, providing individual data on a total of 866 patients. Outcome measures included the length of time until death after starting treatment. The Kaplan-Meier survival curves for the length of time until death for the treatments of palliative chemotherapy and supportive care were presented (figure). The median survival time was estimated to be 8.0 months in the supportive care group and 11.7 months in the chemotherapy group.



Kaplan-Meier survival curves of overall survival for the chemotherapy and supportive care groups. The numbers of events (total deaths in each group) are indicated. The median survival time for each treatment group is the length of time corresponding to the probability of 0.5

Which one of the following best describes the median survival time of 11.7 months for the chemotherapy group?

- a) Chemotherapy was delivered for an average of 11.7 months.
- b) Half of the patients undergoing chemotherapy were alive at 11.7 months after starting treatment.
- c) The probability of surviving 11.7 months or longer after starting chemotherapy was 0.5.

Submitted by Philip Sedgwick and Katherine Joekes

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ON EXAMINATION QUIZ

Shortness of breath and palpitations

This week's question is on shortness of breath and palpitations and is taken from the onExamination revision questions for the MRCGP exam.

A 52 year old woman comes to the surgery with increasing shortness of breath. She particularly likes to walk her dog but is finding this increasingly difficult to do because of reduced tolerance for exercise. On further questioning she tells you she is noticing periods of fast, irregular palpitations, which can occur at any time of the day.

On examination she has flushed cheeks, her blood pressure is 142/95 mm Hg, and you notice that her jugular venous pressure is raised. You think that you can hear a diastolic murmur. In a subsequent letter from the cardiologist, he describes this as a loud first heart sound, an opening snap, and a mid-diastolic rumble, best heard at the apex.

Which of the following is the most likely diagnosis?

- A Aortic regurgitation
- B Left atrial myxoma
- C Mitral regurgitation
- D Mitral stenosis
- E Paroxysmal atrial fibrillation