



## Sample sequential item explanation

Each sequential item is made up of 4-6 selected response questions that are all related to a specific case scenario.

- This sample has **4** selected response questions.

Within a sequential item, every question logically succeeds the previous question i.e. after the first question is answered, additional information is added to facilitate answering the second question, and so on.

- Additional information in this sample is in **light blue**.

Candidates may be required to 1) select the single best answer, 2) select multiple correct answers or 3) order the answers in a specific way.

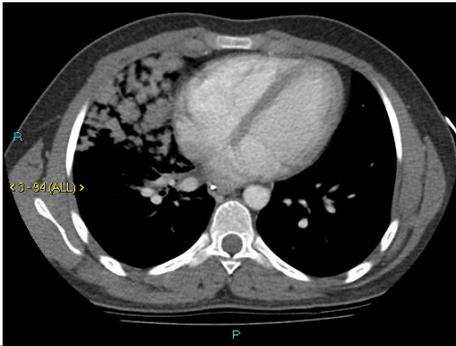
- This sample has single-best-answer questions as well as a multiple-select question.

**On the examination day you will not be allowed to return to previous questions!**



### MEDICAL HISTORY

- A 42-year-old man presents at the emergency department with massive haemoptysis.
- He has been taking non-steroidal anti-inflammatory drugs regularly for lower back pain for the past 6 weeks.
- He has a history of recurrent lung infection but no known underlying pulmonary disease.
- His pulse rate is 90 beats per minute, his blood pressure is 110/70 mm Hg and his oxygen saturation is 92% on room air.



**A Chest CT was performed which showed right middle lobe pulmonary haemorrhage.**

After discussion with the attending interventional radiologist he was referred for endovascular treatment. A thoracic aortogram was performed.

**Q1.** Which vessel is the most likely source of the bleeding? **Select one option only:**

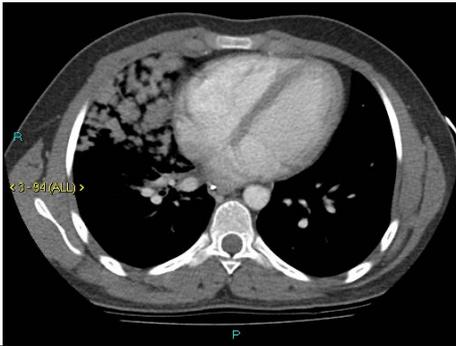
- Right pulmonary artery
- Right internal mammary artery
- Right intercosto-bronchial trunk
- Right intercostal artery



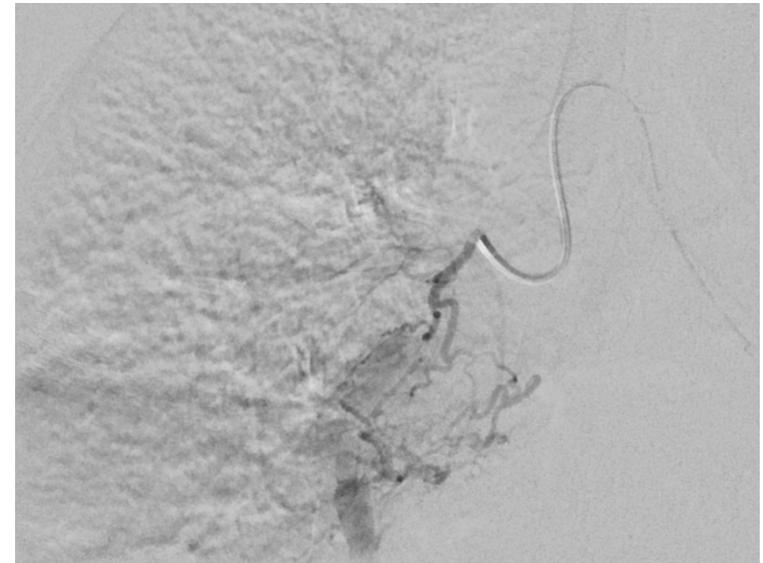


### MEDICAL HISTORY

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A Chest CT was performed which showed right middle lobe pulmonary haemorrhage.



Superselective catheterisation of a right bronchial artery was performed, then further angiography was performed (see image).

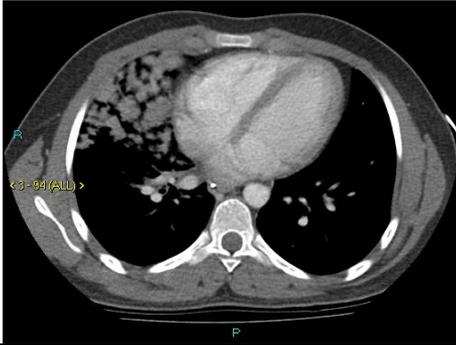
**Q2:** Which of the following statements is the most appropriate? **Select one option only:**

- Embolisation is contraindicated due to spinal artery filling
- Embolisation is contraindicated due to arteriovenous shunting
- Embolisation is contraindicated due to vessel perforation
- There is no contraindication for embolisation
- Embolisation is contraindicated due to the presence of microaneurysms

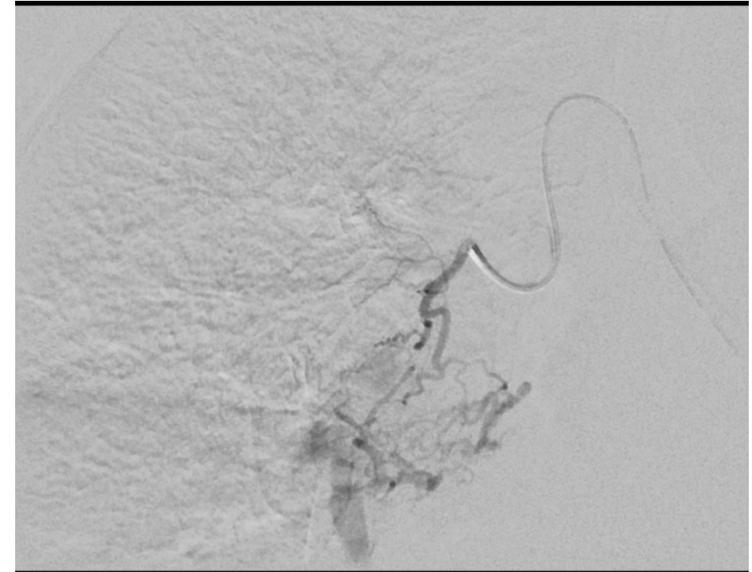


### MEDICAL HISTORY

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A Chest CT was performed which showed right middle lobe pulmonary haemorrhage.



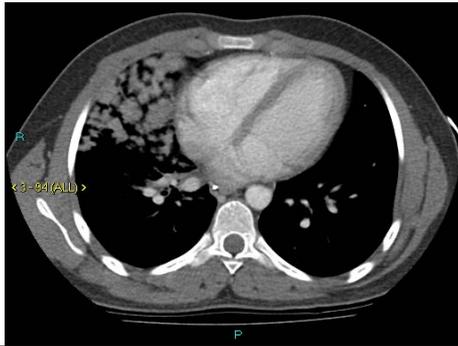
Following superselective catheterisation with a microcatheter, bronchial artery embolisation was performed.

**Q3:** Which is the most appropriate embolic agent?  
**Select one option only:**

- Microcoils
- N-Butyl cyanoacrylate glue
- Polyvinyl alcohol particles (350-500 micrometers)
- Polyvinyl alcohol particles (150-250 micrometers)

**MEDICAL HISTORY**

- A 42-year-old man presents at the emergency department with massive haemoptysis.
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A Chest CT was performed which showed right middle lobe pulmonary haemorrhage.

On the 9<sup>th</sup> post-procedural day, the patient had another 100 mls haemoptysis. Repeat angiography was performed.

**Q4:** Which are the most likely sources of recurrent bleeding in this patient?

**Select all that apply:**

- Systemic collaterals from right internal mammary artery
- Systemic collaterals from right phrenic artery
- Collaterals from right pulmonary artery
- Further right bronchial artery supply



## Answer Key

**Q1.** Right intercosto-bronchial trunk

**Q2.** There is no contraindication for embolisation

**Q3.** Polyvinyl alcohol particles (350-500 micrometers)

**Q4.** Systemic collaterals from right internal mammary artery,  
& Systemic collaterals from right phrenic artery,  
& Further right bronchial artery supply