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**University Hospital, Geelong  
Emergency Medicine  
Trial Fellowship Exam  
Short Answer Questions (SAQ)**

Week 11

**DIRECTIONS TO CANDIDATE**

1. Answer each question in the space provided in this question paper.
2. Do not write your name on this question paper.
3. Enter your examination number in the space below.
4. Cross out any errors completely.
5. Do not begin the exam until instructed to do so.
6. Do not take examination paper or materials from this room.
7. The booklet binder may be removed during the exam.

**QUESTION & ANSWER  
BOOKLET**

**Question 1 (18 marks)**

A 65 year old man presents with symptoms suggestive of right renal colic.

a. State six (6) aims in the use of radiological investigation for this patient. (6 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

**Question 1 (continued)**

- b. List three (3) types of ureteric calculi that have different chemical composition. List two (2) clinical or epidemiological features for each type of calculi. (9 marks)

<b>Calculi type (3 marks)</b>	<b>Feature (6 marks)</b>
<b>1.</b>	<b>1.</b>
	<b>2.</b>
<b>2.</b>	<b>1.</b>
	<b>2.</b>
<b>3.</b>	<b>1.</b>
	<b>2.</b>

**Question 1 (continued)**

The patient is confirmed to have a single renal calculi on CTKUB. This is his first episode of renal calculi.

- c. What is the role of medical expulsive therapy in his management? State three (3) points in your answer. (3 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**Question 2 (12 marks)**

A 25 year old emergency department nurse sustains a needle stick from a used venepuncture needle from a known patient in the Emergency Department. The details of the exposure are obtained and documented.

- a. Other than details of the exposure, list six (6) key features in history that you would seek from this nurse. (6 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

### Question 2 (continued)

The source is identified as having Hepatitis B, Hepatitis C and HIV.

- a. List the approximate risk of transmission of each virus for this patient (3 marks)

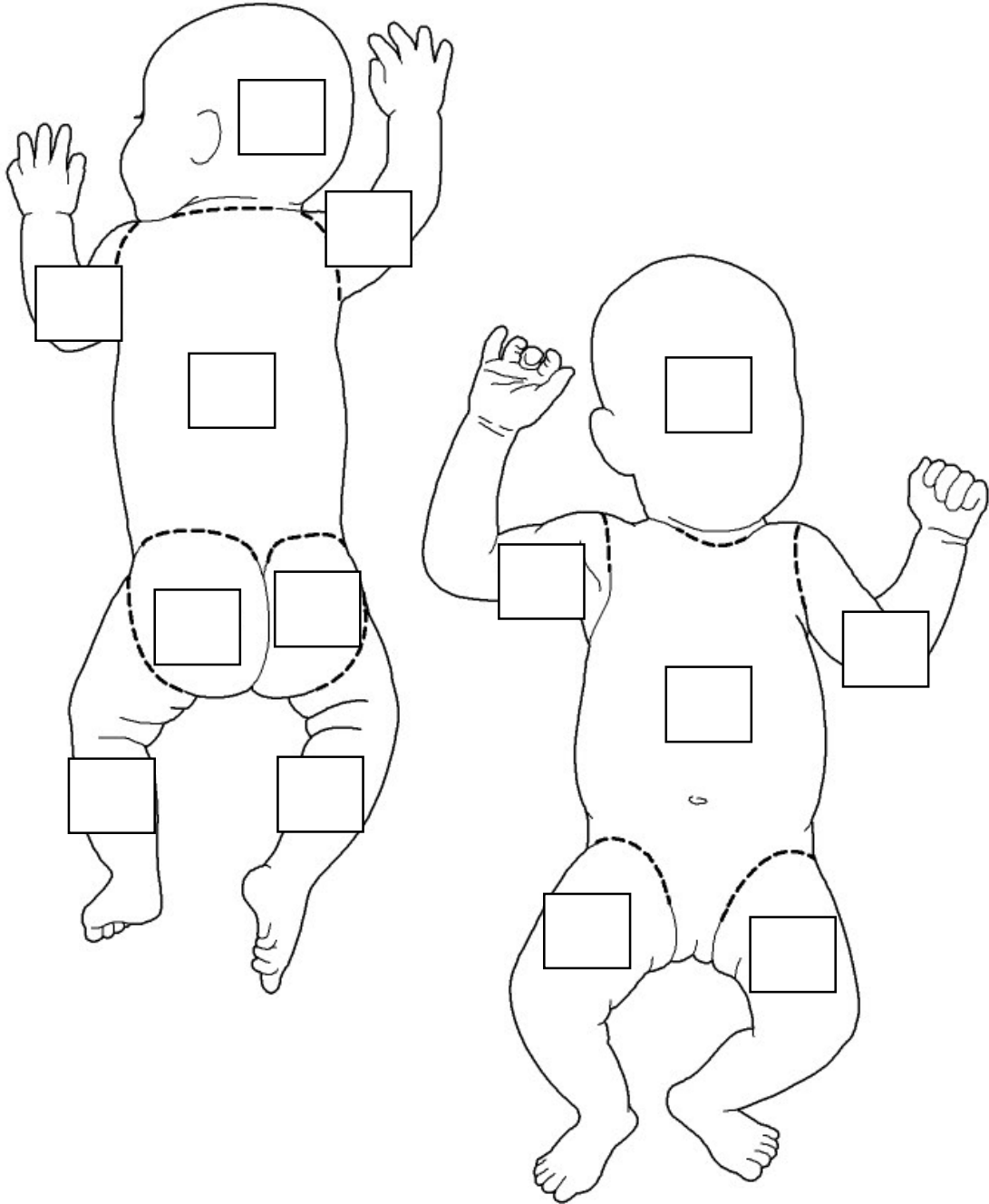
<b>Virus</b>	<b>Risk of transmission (%) (3 marks)</b>
<b>Hepatitis B</b>	
<b>Hepatitis C</b>	
<b>HIV</b>	

- b. Complete the table below, listing the time course of required serological testing for this patient. (6 marks)

<b>Serological Test</b>	<b>Timeframe of test/s (3 marks)</b>
<b>Hepatitis B</b>	
<b>Hepatitis C</b>	
<b>HIV</b>	

**Question 3 (12 marks)**

- a. Complete the chart below, stating the percentage of burn estimation for an infant for the areas indicated with a box. (7 marks)



**Question 3 (continued)**

A 35 year old man is brought into your emergency department with extensive burns to his upper body following a house fire.

b. State three (3) indications for emergency escharotomy. (3 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

c. Assuming adequate analgesia and sedation, consent and explanation, list two (2) steps in the procedure of upper limb escharotomy. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_



**Question 4 (12 marks)**

A 76 year old woman presents to your emergency department with one hour of severe chest pain.

**An ECG is taken- refer to the props booklet- page 1.**

a. State four (4) abnormal findings in this ECG. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

b. What is the significance of these ECG changes for this patient? State four (4) points in your answer. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 4 (continued)**

The cardiology registrar does not agree with your assessment of this ECG and its' significance.

- c. State four (4) pieces of information from a bedside ECHO that would support your case. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 5 (12 marks)**

A 52 year old Italian woman presents to your emergency department with gradually increasing breathlessness over the last 3 days. It is 1 week since her last chemotherapy treatment for cancer. She has a portocath in situ.

Her observations on arrival are:

BP	130/60	mmHg
PR	110	/min
RR	28	/min
Temp	37.8	°C
Oxygen saturation	90%	Room air

**A Chest X-ray is taken- refer to the props booklet- page 2**

a. Other than the portocath, list four (4) abnormalities shown in this xray. (4 marks)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

### Question 5 (continued)

Her FBE shows normal Hb and platelet counts. Her WCC is 1.5 (ref 4-11) and her neutrophil count is 0.4 (ref 2.0- 7.5).

b. State your antibiotic choice/s. (2 marks)

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c. State two (2) points to justify your choice/s. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

d. Other than U+E and LFT, list four (4) key investigations that you would order for this patient in the emergency department. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 6 (12 marks)**

A 65 year old man presents with abdominal distension and pain. The patient is noted to have free fluid on an Emergency Department screening ultrasound.

**An aspirate of peritoneal fluid is taken- refer to the props booklet- page 3.**

- a. State the most likely diagnosis. (1 mark)

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- b. List five (5) likely causes for this condition. (5 marks)

1. 

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2. 

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3. 

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4. 

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5. 

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**Question 6 (continued)**

- c. List three (3) key pathological investigations that you would perform in the emergency department. State one (1) justification for your choice. (6 marks)

<b>Investigation (3 marks)</b>	<b>Justification (3 marks)</b>
1.	
2.	
3.	

**Question 7 (12 marks)**

a. List four (4) drugs for which multiple dose charcoal may be of benefit. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 7 (continued)**

b. List four (4) drugs for which charcoal is not indicated, independent of the time of ingestion. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

c. List four (4) drugs for which haemodialysis is the elimination method of choice in the management of severe toxicity from overdose. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_



**Question 8 (8 marks)**

A 34 year old woman presents to your emergency department with a history of abdominal pain, vomiting and diarrhoea for two weeks.

**An arterial blood gas has been taken- refer to the props booklet- page 4.**

- a. Provide two (2) calculations to help you to interpret these results. (2 marks)

Derived value 1: \_\_\_\_\_

\_\_\_\_\_

Derived value 2: \_\_\_\_\_

\_\_\_\_\_

- b. Using the scenario and the derived values, define the primary acid/base abnormality/s. (2 marks)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Question 8 (continued)**

- c. Using the scenario and the derived values, define the secondary acid/base abnormality/s. (2 marks)

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- d. State one (1) likely unifying explanation for these results. (2 marks)

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**Question 9 (18 marks)**

A 20 year old female presents after a marine envenomation.

- a. List two (2) historical findings that are consistent with Box Jellyfish envenomation. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

- b. List two (2) examination findings that are consistent with Box Jellyfish envenomation. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 9 (continued)**

c. List two (2) historical findings that are consistent with Irukandji envenomation. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

d. List two (2) examination findings that are consistent with Irukandji envenomation. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 9 (continued)**

e. Complete the table below, listing the role of each management modality. (10 marks)

	<b>Box jellyfish (5 marks)</b>	<b>Irukandji (5 marks)</b>
<b>Mainstay of treatment (2 marks)</b>		
<b>Role of application of ice (2 marks)</b>		
<b>Role of vinegar application (2 marks)</b>		
<b>Role of pressure immobilisation (2 marks)</b>		
<b>Role of antivenom (2 marks)</b>		

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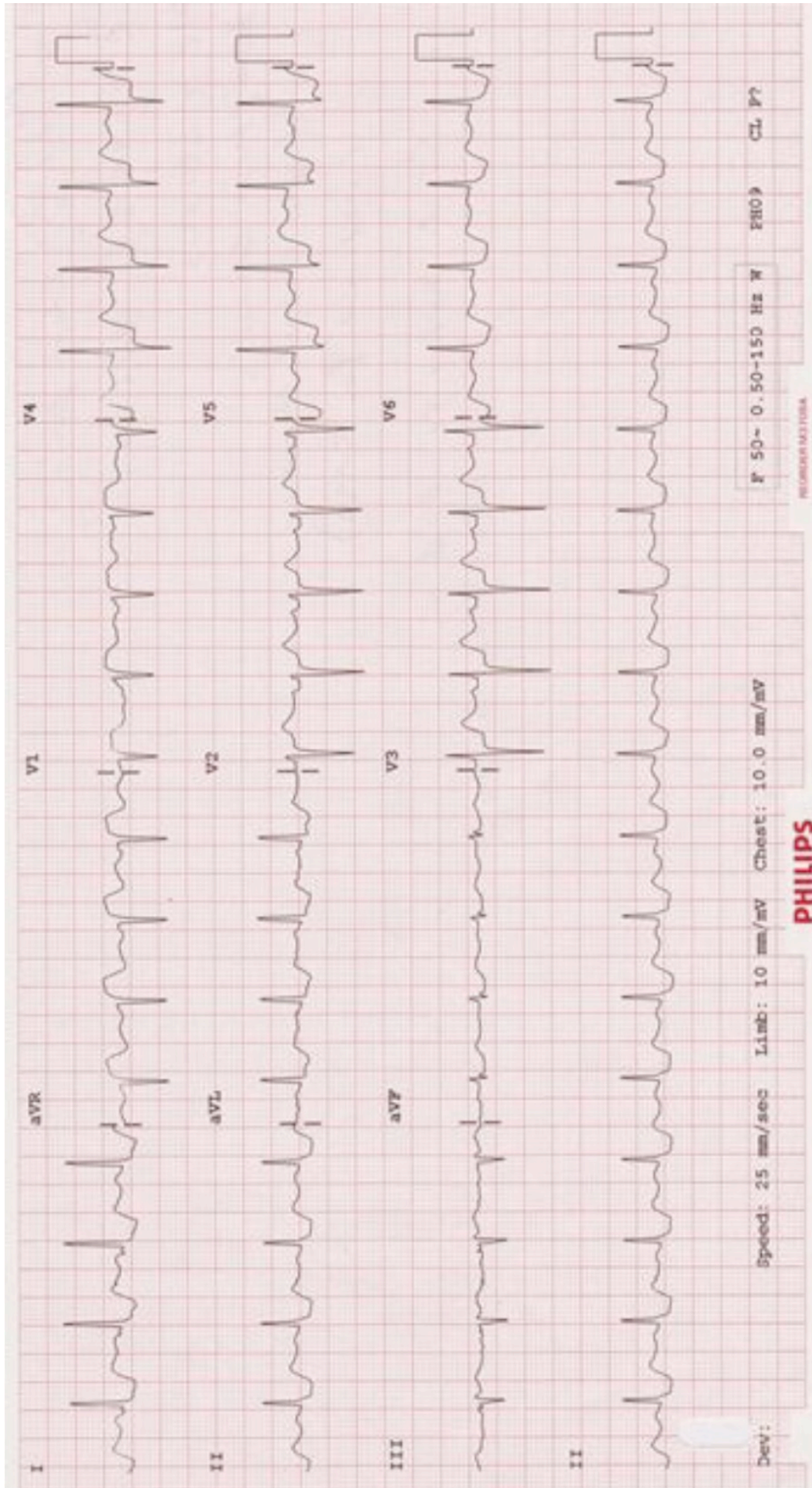
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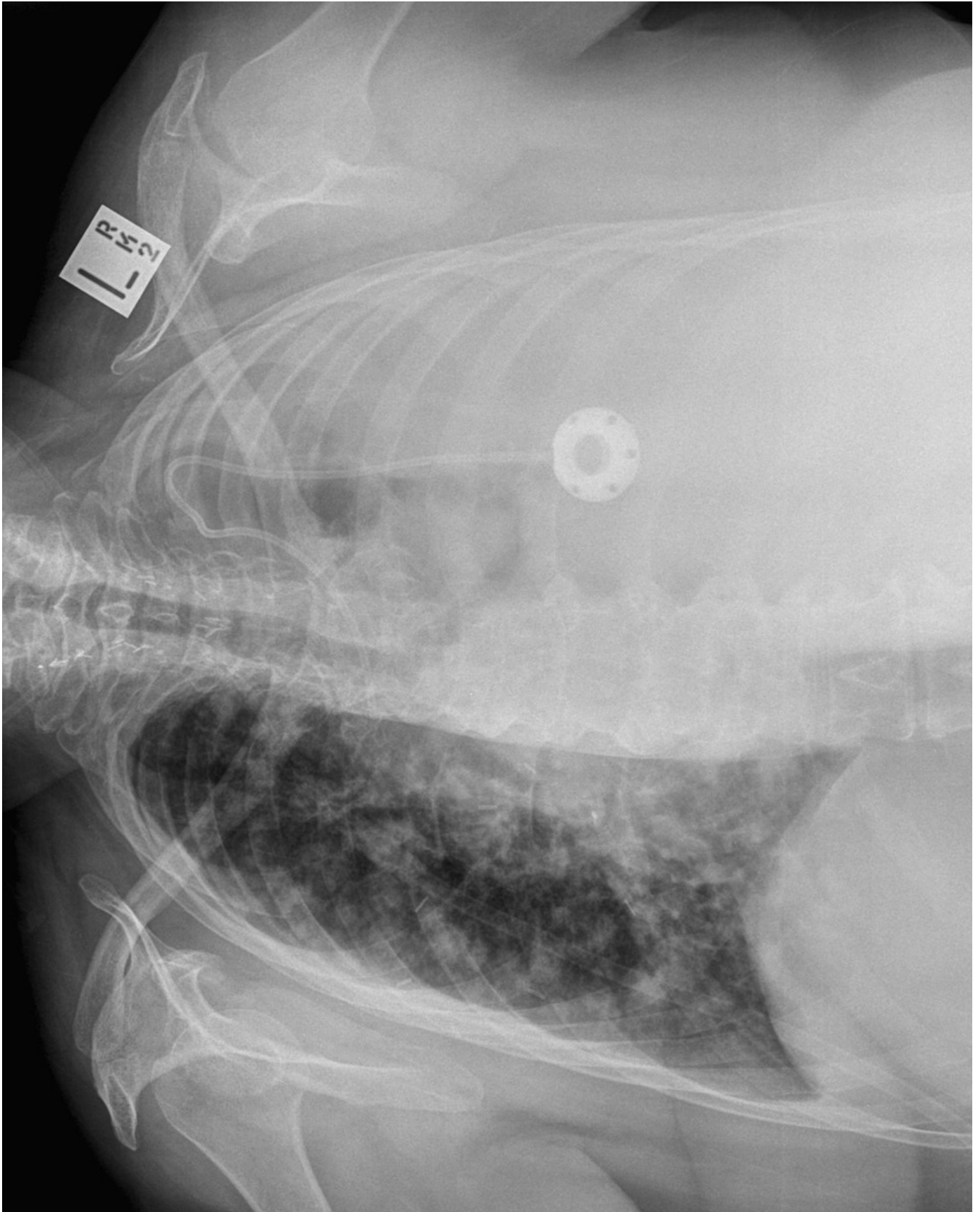
**PROP BOOKLET**

Question 4





**Question 5**



## Question 6

### Peritoneal fluid

Appearance	dark brown
White blood cell count	1500
Polymorph count	1000
Glucose	0.1 mg/Dl
LDH	450
Albumin	36 g/dL
Serum Albumin	34 g/dL

**Question 8**

		<b>Reference Range</b>
FIO <sub>2</sub>	0.21	
pH	7.21	(7.35-7.41)
pCO <sub>2</sub>	31 mm/Hg	(33-47)
pO <sub>2</sub>	83 mm/Hg	(85-110)
Bicarb	12 mmol/L	(21-27)
Base excess	-14	(-3 - +3)
Na <sup>+</sup>	135 mmol/L	(134-146)
K <sup>+</sup>	2.8 mmol/L	(3.5-4.5)
Cl <sup>-</sup>	111 mmol/L	(95-105)