

FEx Net 2022 Collated SAQs- General Surgery

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Question 1 (12 Marks)

A 60 year old man has presented to the ED with severe epigastric abdominal pain.

- 1. List 4 serious differential diagnoses. For each diagnosis, state the supportive findings on abdominal examination and a key finding on investigation. (12 marks)**

Diagnosis	Findings on abdominal examination	Key finding on investigation

Question 2 (10 Marks)

A 72 year old woman has presented with abdominal pain and fever of 2 days duration.

Some of her blood results are given below.

Na	125	mmol/L	(135 – 145)
K	4.4	mmol/L	(3.5 – 5.1)
Cl	89	mmol/L	(100 – 110)
HCO ₃	14	mmol/L	(22 – 32)
Glucose	7.5	mmol/L	(3.0 – 7.8)
Urea	23.7	mmol/L	(2.9 – 8.2)
Creatinine	219	mmol/L	(64 – 108)
Protein	65	g/L	(60 – 83)
Albumin	22	g/L	(35 – 50)
Bilirubin	255	umol/L	(<20)
Bili (conj)	198	umol/L	(<4)
ALP	867	U/L	(56 – 119)
Gamma GT	412	U/L	(<55)
ALT	178	U/L	(<45)
AST	153	U/L	(<35)
CK	55	U/L	(46 – 171)

1. List the abnormalities with likely explanations.

(7 marks)

2. Give your overall clinical interpretation.

(3 marks)

Question 3 (10 Marks)

A 38 year old woman presents with right upper quadrant pain and jaundice for 3 days. She has a past history of cholelithiasis and a penicillin sensitivity producing a rash.

Her observations are as follows:

BP	95/70	mmHg
HR	125	/min
RR	24	/min
O ₂ saturations	99%	on room air
Temperature	39.2	°C
GCS	15	

1. What is the presumptive diagnosis?

2. List four (4) important investigations to obtain in this woman.

3. List four (4) management priorities.

4. The woman responds to your treatment and her vital signs normalise. You are asked to write ongoing orders for admission. List 4 orders and their doses.

Question 4 (13 Marks)

A 54 year old man has presented to the ED with epigastric abdominal pain and fevers for the last 24 hours.

Some of his blood results are provided below

Protein	88	g/L	(60 – 80)	GGT	503	U/L	(<38)
Albumin	32	g/L	(35 – 50)	ALT	190	U/L	(<34)
Globulin	55	g/L	(25 – 45)	AST	181	U/L	(<31)
Bilirubin	88	umol/L	(<20)	LDH	415	U/L	(120 – 250)
Bili (conj)	62	umol/L	(<4)	Lipase	120	U/L	(<70)
ALP	540	U/L	(30 – 110)				

1. Provide an explanation for the following results:

Prot 88, Alb 32, Glob 55 (1 mark)

Bili 88, Bili (conj) 62 (1 mark)

ALP 540, GGT 503, ALT 190, AST 181 (1 mark)

2. What is the most likely diagnosis? (2 marks)

You have decided to perform further radiological investigation in to the cause of the abnormalities shown.

3. List 2 pros and 2 cons for each of the investigations listed. (8 marks)

	Pros	Cons
CT scan		
USS scan		

Question 5 (10 marks)

A 27 year old woman with no significant comorbidities presents to the emergency department with constant right upper quadrant abdominal pain for 16 hours duration. She feels hot and generally unwell and notes that she has had prior episodes of transient RUQ pain following meals but has never had any investigation.

Her vital signs are:

T 38.1

P112

BP 135/86

RR 21

SaO2 99% RA

On examination she has significant RUQ tenderness and you suspect acute cholecystitis. Your intern has some questions relating to biliary disease.

Name 4 features on abdominal ultrasound that are consistent with cholecystitis (4 marks)

What is the normal diameter of the common bile duct? (1 mark)

Name 3 causes of extrahepatic biliary obstruction (3 marks)

Name 2 complications of extrahepatic biliary obstruction (2 marks)

Question 6 (10 marks)

A 78 year old woman from a nursing home presents with generalised abdominal pain and vomiting for the past 24 hours.

Her observations are as follows:

BP	165/82	mmHg
HR	90	/min
RR	20	/min
O ₂ saturations	96%	on room air
Temperature	36.2	°C
GCS	14	(E4, V4, M6) normal for patient

An AXR is taken and shows no obstruction.

Her CXR is shown below:



1. What is the presumptive diagnosis?

2. List five (5) important features demonstrated on this xray. Include three (3) positive and two (2) negative findings.

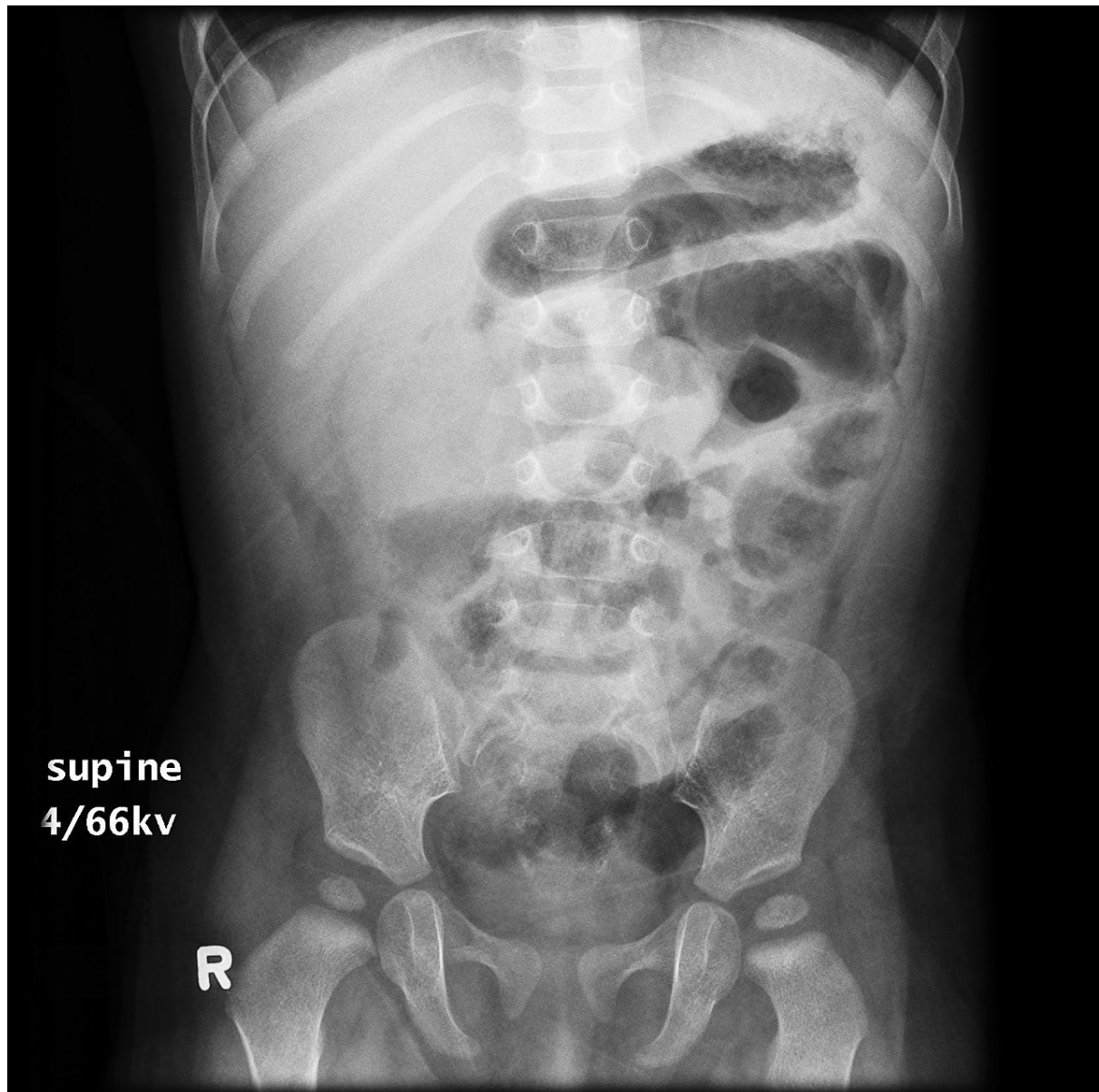
3. List four (4) immediate management priorities.

4. What is the role of a nasogastric tube in this patient?

Question 7 (11 Marks)

An 18 month old boy has been brought to your ED with vomiting and abdominal distension.

His abdominal x-ray is given below.



1. List the abnormalities on the x-ray, including your interpretation. (3 marks)

2. List 2 methods of definitive management of this problem. (2 marks)

The patient looks pale. His vital signs are:

Alert

Pulse 160 /min

BP 90/40 mmHg

RR 30 /min

O2 sats 99% room air

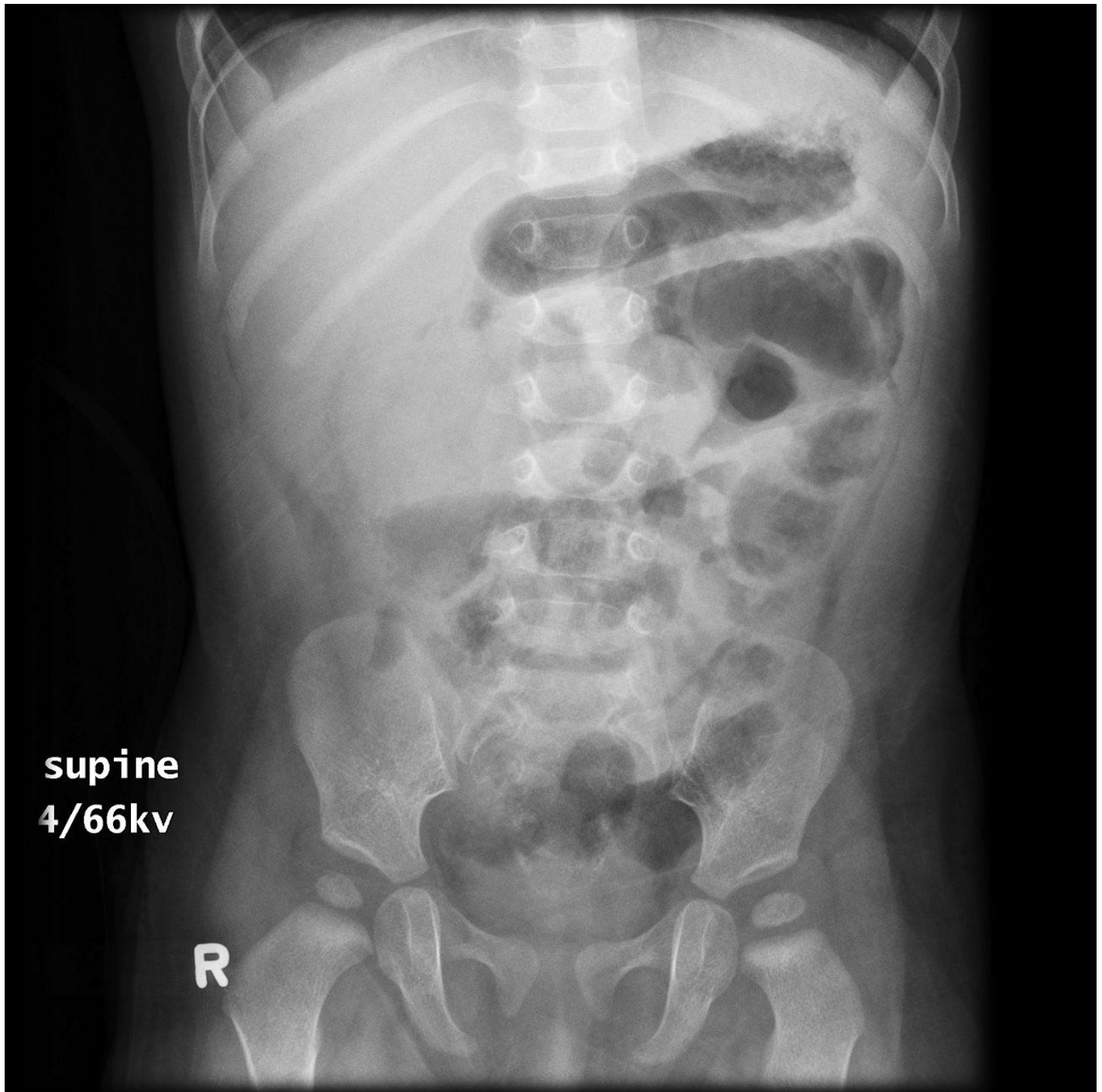
3. List your 3 main management steps, including details. (3 marks)

4. List 3 complications of this condition. (3 marks)

Question 8 (13 Marks)

A 3 year old boy has been brought to your urban district ED with abdominal pain.

His abdominal Xray is shown.



1. Describe the abnormalities on the Xray and give your diagnosis. (2 marks)

The patient appears quite distressed and is crying inconsolably. He looks pale. His vital signs are:

AVPU	Alert	
Pulse	140	/min
BP	85/45	mmHg
RR	26	/min
O2 saturations	99%	room air

2. List the important details of your management, including disposition. Give doses and end-points where appropriate. (5 marks)

3. List 2 management options for this condition. For each option, outline when it would be used. (4 marks)

Management option	When it would be used

4. List 2 complications of this condition. (2 marks)

Question 9 (10 marks)

A 65 year old woman has presented to the ED with severe generalised abdominal pain.

Examination reveals a generally tender and guarded abdomen.

Her vital signs are:

GCS	15	
Pulse	120	/min
BP	95/55	mmHg
O2 sats	96%	room air

A slice from her abdominal CT scan is provided below:



1. List 5 abnormalities in the CT scan. (5 marks)

2. What is the likely diagnosis? (1 mark)

3. State 4 components of your management of this patient. (4 marks)

Question 10 (18 marks)

A 60 year old lady presents to ED with generalised abdominal pain. She was about to have dinner when she noticed onset of constant severe pain. This is associated with nausea without vomiting.

She denies any change in bowel motions or complaints of melaena. She has been well of late with no fevers, chills, rigors or sweats. She has no complaints of urinary symptoms. She has a past medical history of paroxysmal atrial fibrillation, insulin dependent diabetes mellitus and chronic obstructive airway disease. On clinical examination, she is generally tender with no evidence of peritonism. Bowel sounds were present and normal.

Her regular medications include:

- Aspirin 100mg PO OD
- Lantus 30 units SC NOCTE
- Novorapid 10 --- 15 units SC TDS
- Salbutamol INH PRN
- Salmeterol/Fluticasone INH BD

Her observations are;

Temp	37.3 degrees
BP	160/80 mmHg
Pulse	110 bpm 92%
O2 Sats.	RA
RR	22 breaths/min
GCS	15/15

I. **Based on the assessment above, what is the MOST LIKELY diagnosis?**

(1 mark)

--

An initial abdominal XRAY was performed. Refer to prop booklet. (Image A)



II. Based on this XRAY, list 2 relevant positive and negatives. (2 marks)

Relevant positives (0.5 each)	Relevant negatives(0.5 each)

III. List three (3) other differential diagnoses that should be considered?

(3 marks)

IV. List five (5) important aspects to the management of this patient. (5 marks)

A CT abdomen has been performed. (Image B)

V. On this axial image, what does the arrow indicate?

(1 mark)

VI. List 3 other causes of this CT finding.

(3 marks)

- VII. Apart from the above CT finding, list 3 other findings on assessment which would indicate poor prognosis. (3 marks)



Image B

Question 11 (12 Marks)

A 55 year old man is brought to your ED with sudden onset abdominal pain and vomiting. His past medical history includes atrial fibrillation with poor compliance with medications. He has had 10mg of intravenous Morphine with little relief of his symptoms.

His vitals signs are:

HR 110/min (irregular)

BP 110/70mmHg 20/

RR min

SpO2 93% RA

Questions:

1. List 5 differential diagnoses you would consider for this patient's presentation.

(5 marks)

2. List & justify 5 investigations would you request in the ED.

(5 marks)

Investigation	Justification

3. Despite multiple Morphine boluses of 0.1mg/kg/dose given over an hour, he remains in severe pain.

**List 3 other options for analgesia that could be provided in the ED?
(2 marks)**

Question 12 (10 Marks)

A 10-year-old boy presents to the Emergency department with abdominal pain.

1. What clinical features of the history and examination make a diagnosis of appendicitis more likely? (4 marks)

After history and physical examination, you decide the most likely diagnosis is appendicitis but want to exclude other causes of abdominal pain in children.

2. List **four** tests and the diagnosis they would exclude in the table below. (4 marks)

Test	Diagnosis

After referral to the Surgical registrar on call you are asked to keep the child nil by mouth.

3. Please prescribe maintenance fluid in the table below for the next 12 hours. Assume only 1000ml bags of intravenous fluid are available. (2 marks)

Date	Route	Fluid type	Additive and dose	Total volume	Rate (ml/hr)

Question 13 (10 Marks)

A 25 year old lady presents with severe epigastric pain and vomiting.

Her biochemistry results are shown below.

Biochemistry

			Reference range
Na	132	mmol/L	135 - 145
K	3.9	mmol/L	3.5 - 5.0
Cl	101	mmol/L	101 - 111
HCO ₃	24	mmol/L	22 - 32
Urea	4.6	mmol/L	2.5 – 7.8
Creat	60	umol/L	40 - 80
ALP	248	U/L	30 - 120
GGT	309	U/L	7 - 64
AST	27	U/L	10 - 50
ALT	55	U/L	7 - 56
Bilirubin	43	umol/L	0 – 20
Lipase	448	U/L	0 - 60

1. What is your diagnosis?

2. What are the two (2) most likely underlying causes and why?

3. List four (4) complications of this condition.

4. List five (5) features that will help determine prognosis on admission?

Question 14 (10 Marks)

A 60 year female presents to your ED with a clinical history and examination suggesting acute pancreatitis.

1) List **6** potential aetiologies of this condition (3 marks).

2) List **1** biochemical severity scoring systems used to predict this condition with **4** criteria (4 marks).

Scoring System: _____

Criteria:

3) List **3** *local* and **3** *systemic* complications of this condition (3 marks).

LOCAL	SYSTEMIC

Question 15 (13 Marks)

A 30 year old male presents with acute onset persistent, severe epigastric abdominal pain. He has associated nausea and vomiting, and you suspect acute pancreatitis.

His vital signs are:

P 100 beats/min (regular)

BP 95/77 mmHg

SaO2 97% on room air

Temp 37.4 degrees C

Questions:

1- List six (6) potential causes of acute pancreatitis to enquire about in the history

(6 Marks)

2- List three features on CT scan associated with severe disease:

(3 Marks)

3- He is admitted to hospital, and his wife asks what complications might be expected?

List four potential complications:

(4 Marks)

Question 16 (14 marks)

A 49 year old man presents to ED 1 week after abdominal surgery. The GP letter reports he had a '*laparotomy for a perforated viscus*' at an interstate hospital.

On examination he is febrile and has the appearances of an abdominal wound shown in the clinical photograph provided

(i) State your interpretation of the appearances of the photograph provided (1 mark)

i)

(ii) List three (3) patient and three (3) surgical factors that could contribute to this complication (6 marks)

Patient Factors	Surgical Factors

(iii) List two (2) further laboratory based investigations to perform in this case (2 marks)

i)

ii)

(iv) State one (1) general wound closure technique commonly used in ED and state two (2) advantages and disadvantages of the method (5 marks)

Method of Wound Closure	Advantage(s)	Disadvantage(s)
	(1)	(1)
	(2)	(2)



Question 17 (14 Marks)

A 65 year old man has presented with two weeks of intermittent fevers, and now abdominal pain and frank red PR bleeding. He has a history of mild mitral stenosis and chronic atrial fibrillation, for which he takes dabigatran, and an abdominal aortic aneurysm which has been repaired endovascularly one year ago.

List two likely diagnoses (2 marks)

List four investigations you would order, and for each, provide one rationale. (8 marks)

List one drug that may be used to reverse the effect of dabigatran. (1 mark)

List three organisms which may cause vascular prosthetic infection. (3 marks)

Question 18 (12 Marks)

A 42 year old man presents with lower abdominal pain and difficulty passing stool or flatus. He has an abdominal Xray which is shown below.



Outline the key finding on this abdominal Xray (1 mark)

List 2 complications that may arise from this condition (2 marks)

List patient factors that necessitate this condition be handled in the operating theatre (4 marks)

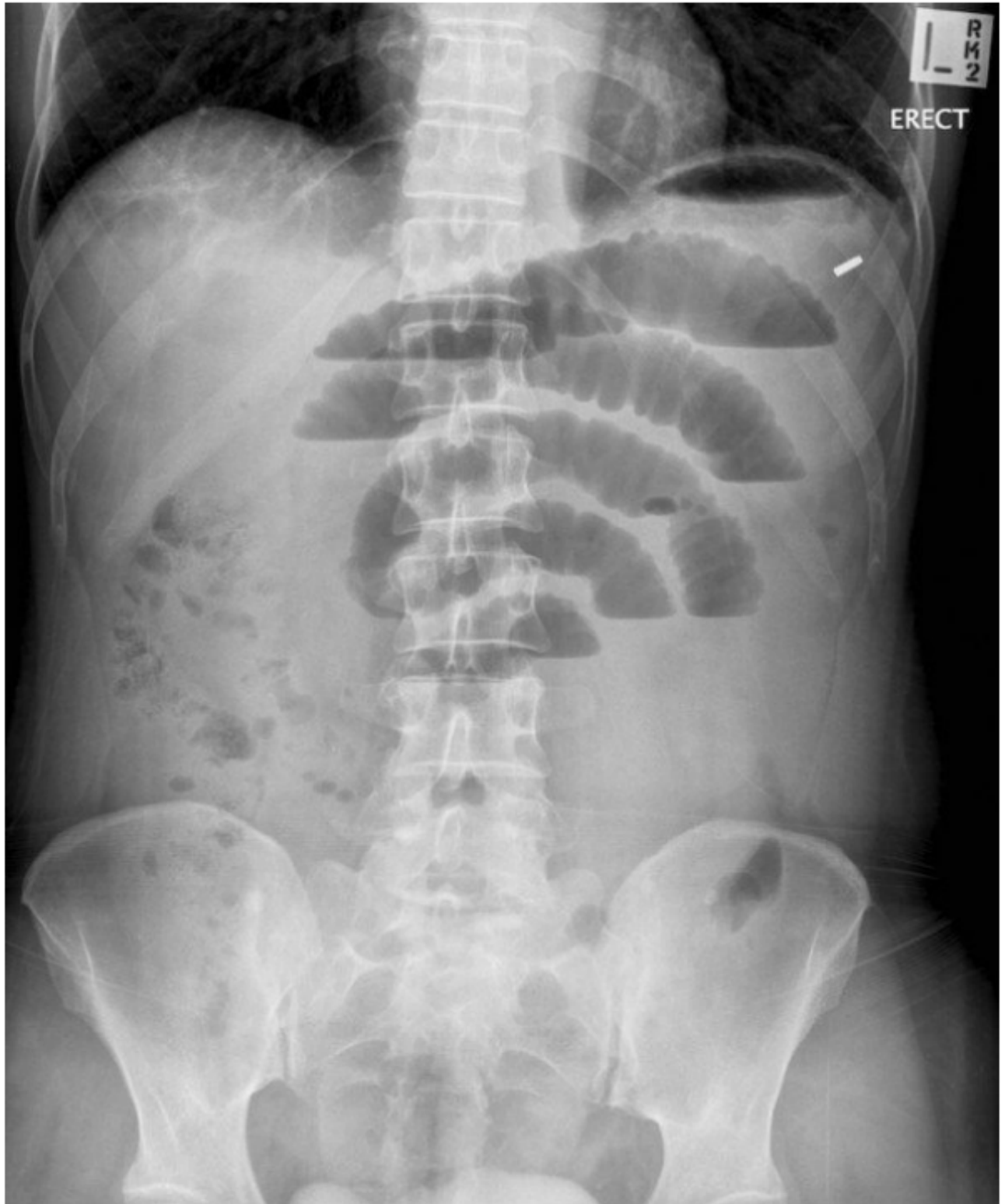
Outline your options for anaesthesia for removal of the foreign body in the ED (2 marks)

List 3 techniques for removing this foreign body (3 marks)

Question 19 (12 Marks)

A 45 year old man has been brought to the ED with abdominal pain for 6 hours.

His abdominal x-ray is provided in the below



1. What is the pathology demonstrated?

(1 mark)

2. List 3 radiological features of the x-ray which support your diagnosis.

(3 marks)

(1) _____

(2) _____

(3) _____

3. List the 2 most common causes of this pathology. List one examination finding that would support each cause.

(4 marks)

Cause	Examination finding

4. List 3 metabolic complications you might expect in this patient. Provide a likely cause for each complication. (6 marks)

Metabolic complication	Cause

Question 20 (12 Marks)

A 45 year old man has presented with colicky central abdominal pain. Your assessment is consistent with small bowel obstruction.

1. List 3 causes of small bowel obstruction. For each, state a feature of your history or examination that would suggest its presence. (6 marks)

Cause	Feature of history or examination

2. List 3 complications of small bowel obstruction. For each, state the management principles. (6 marks)

Complication	Management principles

Question 21 (13 Marks)

A 75 year old man has been brought to the ED from his high level care nursing home with abdominal pain.

His abdominal x-ray is provided **Below**.



1. Give your diagnosis, supported by the abnormal radiological findings. (4marks)

Diagnosis: _____

Radiological Findings: _____

2. List three possible methods for management of this problem. (3 marks)

3. List six considerations when determining the **ceiling of care** for this gentleman.
(6 marks)

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

Question 22 (14 Marks)

A 75 year old man has been brought to the ED with abdominal pain. He has come from a nursing home. His background history includes dementia and ischaemic heart disease.

An Xray has been performed:



1. Give your diagnosis/diagnoses with supportive Xray findings. (4 marks)

2. List 3 specific treatment options for this patient's problem. (3 marks)

3. List 2 features of your supportive treatment. Include doses and end-points. (4 marks)

4. List 3 important considerations in determining your ceiling of care. (3 marks)
