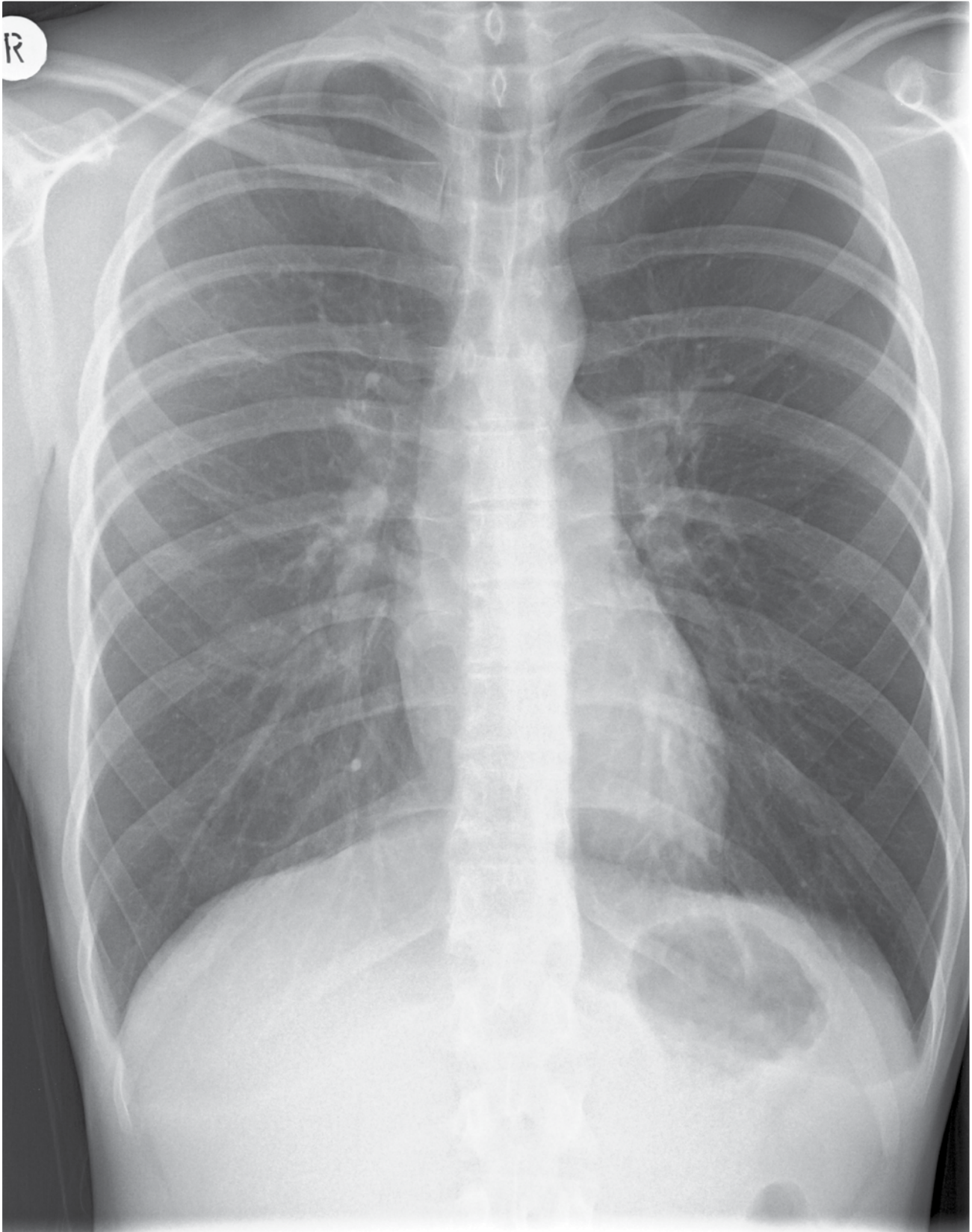


 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 1

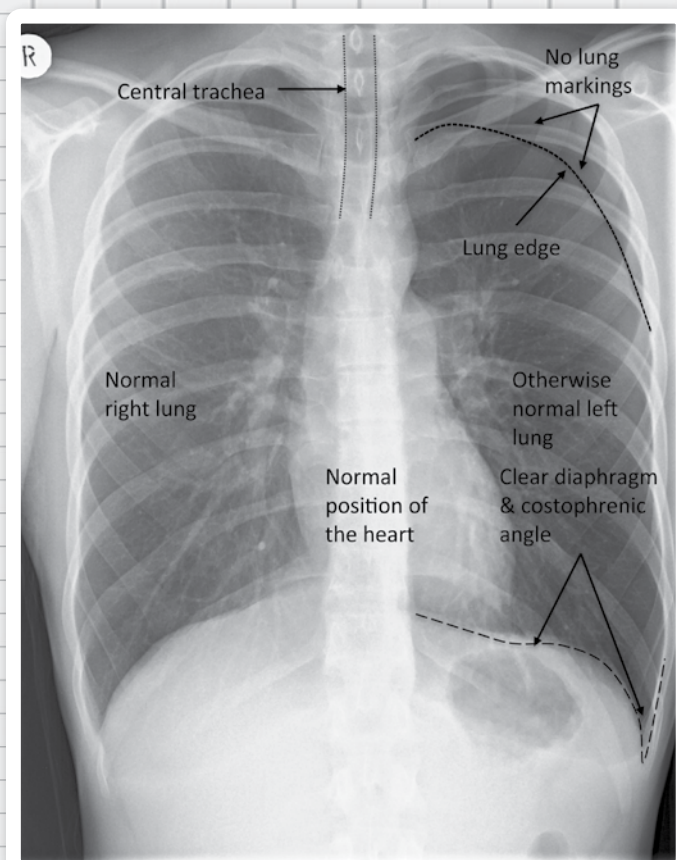
An 18 year old male presents to the A&E department with shortness of breath, following an episode of sudden onset left-sided pleuritic chest pain. There is no history of trauma. He is a slim, tall, healthy young man. His clinical examination is unremarkable, but he is still mildly dyspnoeic. You request a chest X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is a PA chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth and the date and time the X-ray was performed.
- The patient is well centred, there is satisfactory inspiratory achievement and the X-ray is adequately penetrated.
- The most striking abnormality is the asymmetry of the apices, with a lung edge visible at the left apex. There are no lung markings visible peripheral to this. The findings are consistent with a left apical pneumothorax.
- There is no evidence of a mediastinal shift.
- The lungs are clear, with no masses, nodules, consolidation or collapse visible.
- The heart is not enlarged and the cardiac and mediastinal contours are normal.
- Both hemidiaphragms and the costophrenic angles are clearly demarcated.
- No free subdiaphragmatic gas is seen.
- There is no abnormality of the imaged soft tissues or skeleton; in particular, there are no rib fractures.

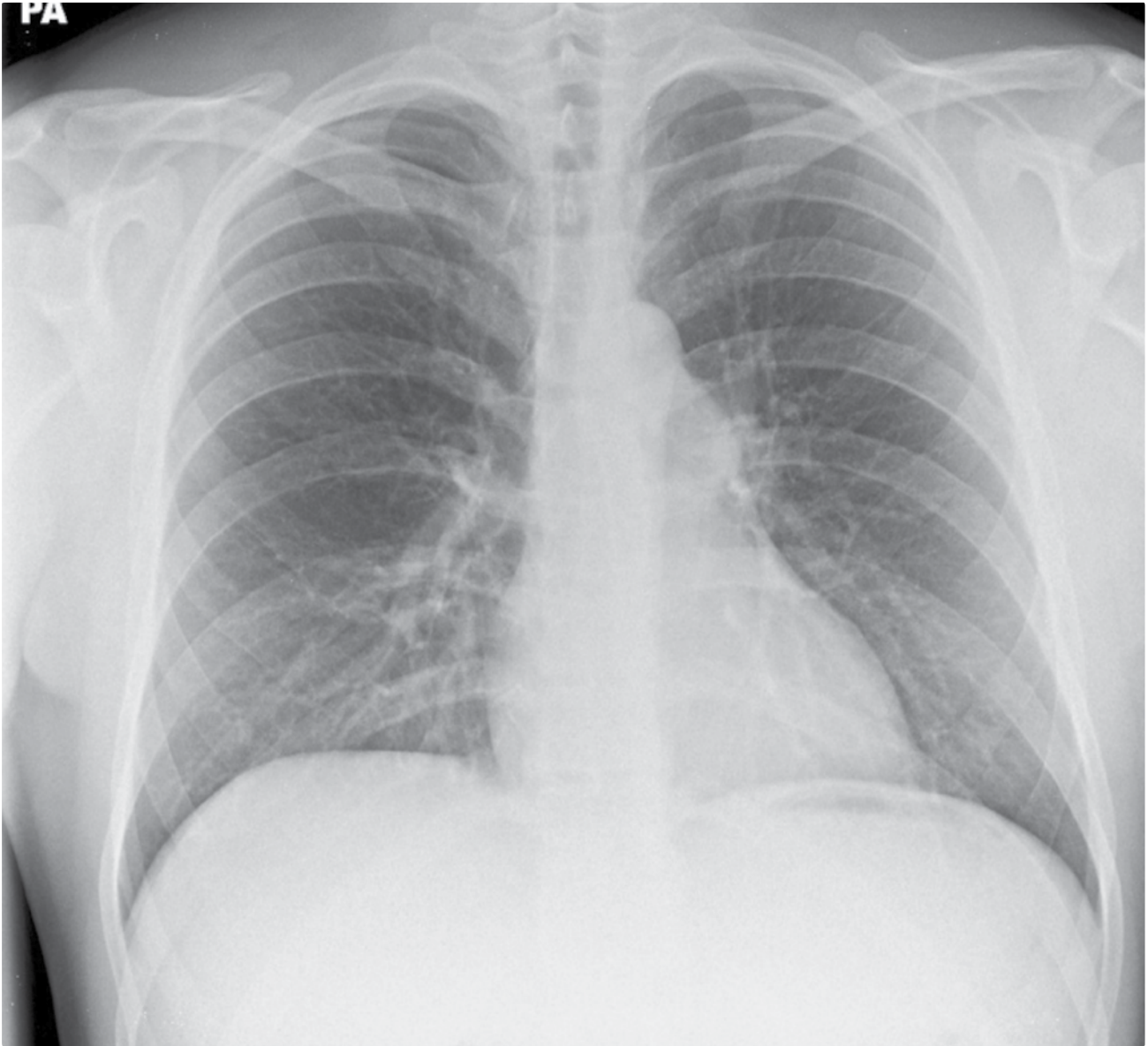


IN SUMMARY — This chest X-ray shows a small left apical pneumothorax. As the patient is mildly symptomatic, he should be admitted for observation and supplementary oxygen if required. The pneumothorax is probably too small to attempt aspiration or drainage, and it should resolve with conservative measures.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 2

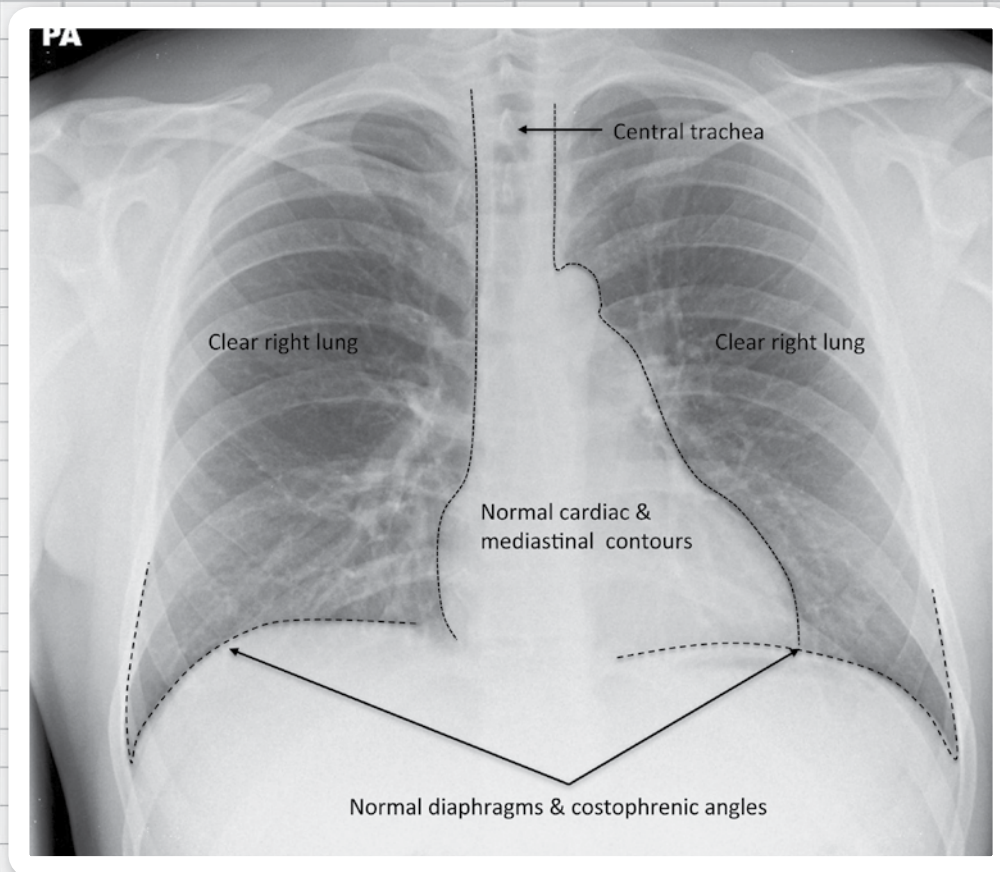
A 40 year old woman has presented to A&E with increased breathlessness and left-sided pleuritic chest pain. She had no significant past medical history but takes the oral contraceptive pill. She returned from a holiday in Australia three days ago. Clinical examination reveals a raised respiratory rate. A chest X-ray was requested to look for any lung pathology.



PRESENT YOUR FINDINGS...



- This is a PA chest X-ray in an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is well centred. There is adequate inspiratory effort and satisfactory penetration.
- The trachea is central.
- The lungs are clear, with no masses, nodules, consolidation or collapse visible.
- The heart is not enlarged and the cardiac and mediastinal contours are normal.
- Both hemidiaphragms and the costophrenic angles are clearly demarcated.
- No free subdiaphragmatic gas is seen.
- There is no abnormality of the imaged soft tissues or skeleton.

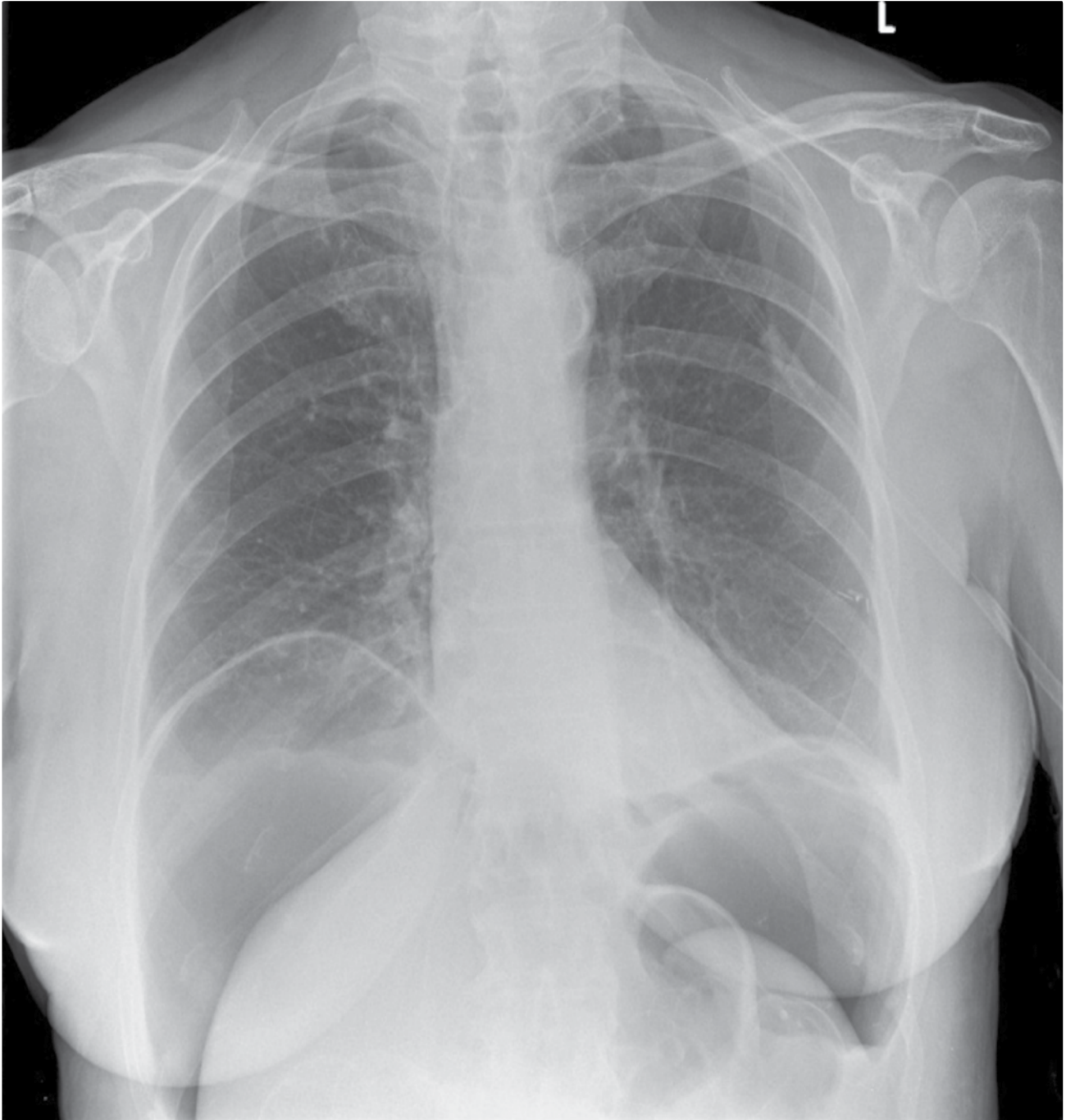


***IN SUMMARY** – This is a normal chest X-ray showing no obvious abnormality. If there is clinical suspicion of pulmonary embolus, a CTPA should be considered.*

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 3

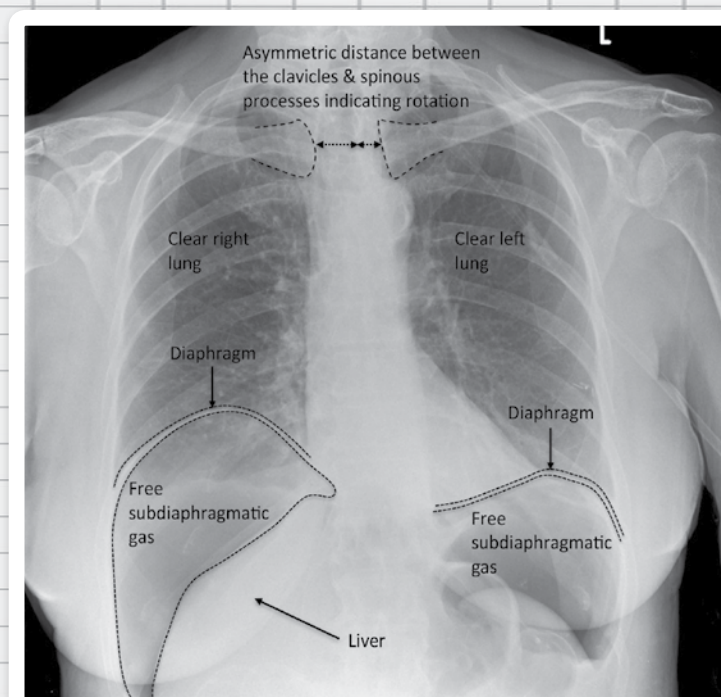
An 60 year old woman presents to A&E with severe abdominal pain. She recently injured her back and has been using a lot of analgesia. On examination, she is unwell with a peritonitic abdomen. PR examination is unremarkable. You request an erect chest X-ray to look for evidence of a perforation.



PRESENT YOUR FINDINGS...



- This is an AP erect chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is slightly rotated to the right. There is adequate inspiratory achievement and penetration.
- The most striking abnormality is the large pneumoperitoneum.
- The trachea is central.
- The lungs are clear, with no masses, nodules, consolidation or collapse visible.
- The heart is not enlarged and the cardiac and mediastinal contours are normal.
- Both hemidiaphragms and the costophrenic angles are clearly demarcated.
- There is no abnormality of the imaged soft tissues or skeleton.



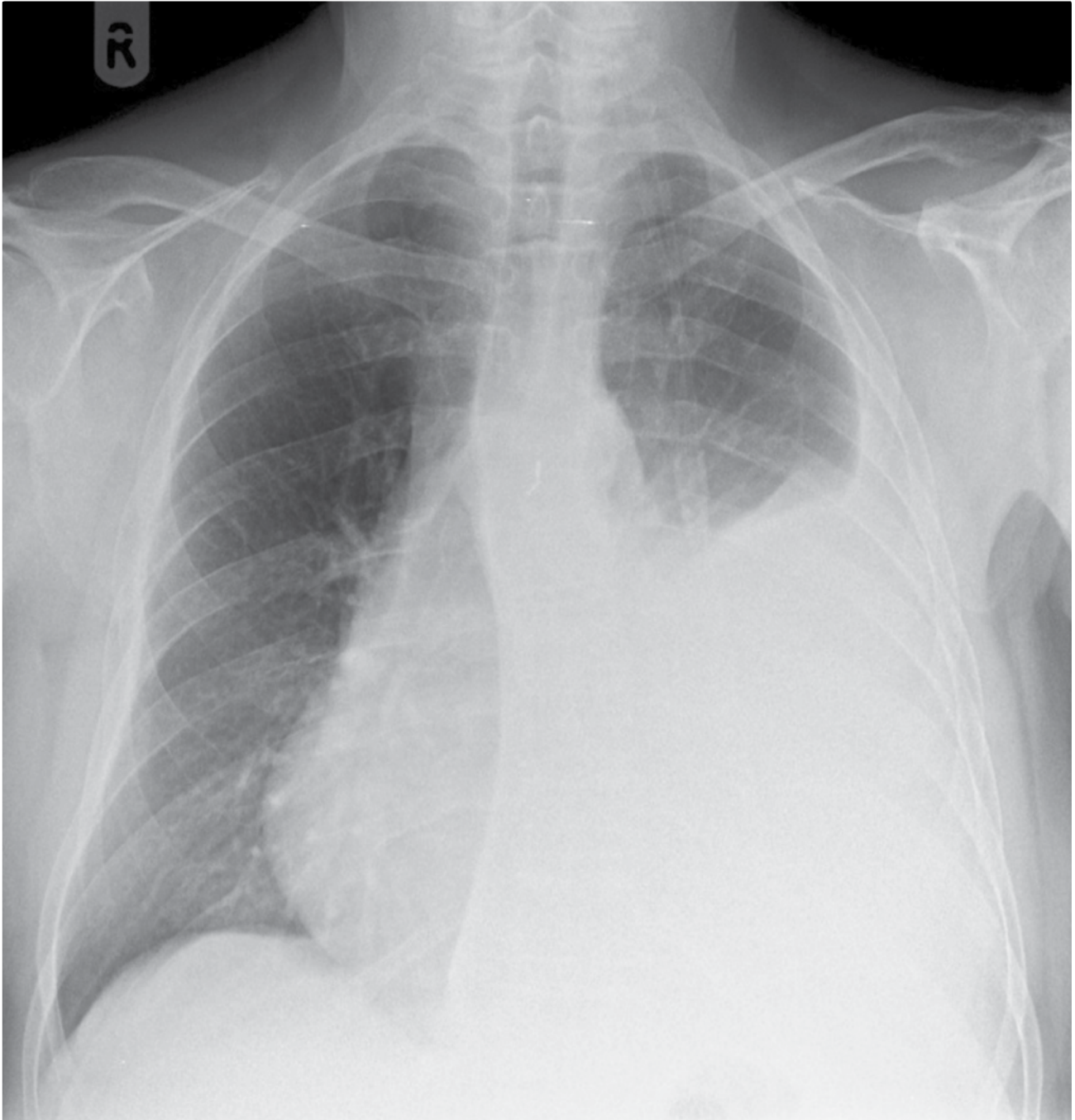
IN SUMMARY – This chest X-ray shows a large volume of free subdiaphragmatic gas. Given the history and examination, it is most likely secondary to perforation, possibly of a peptic ulcer from use of non-steroidal anti-inflammatory drugs. The patient should be made nil by

mouth, given adequate analgesia and fluid resuscitated as necessary. An urgent referral to the general surgeons is required. A contrast enhanced CT of the abdomen and pelvis could be considered to identify the site of the perforation.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 4

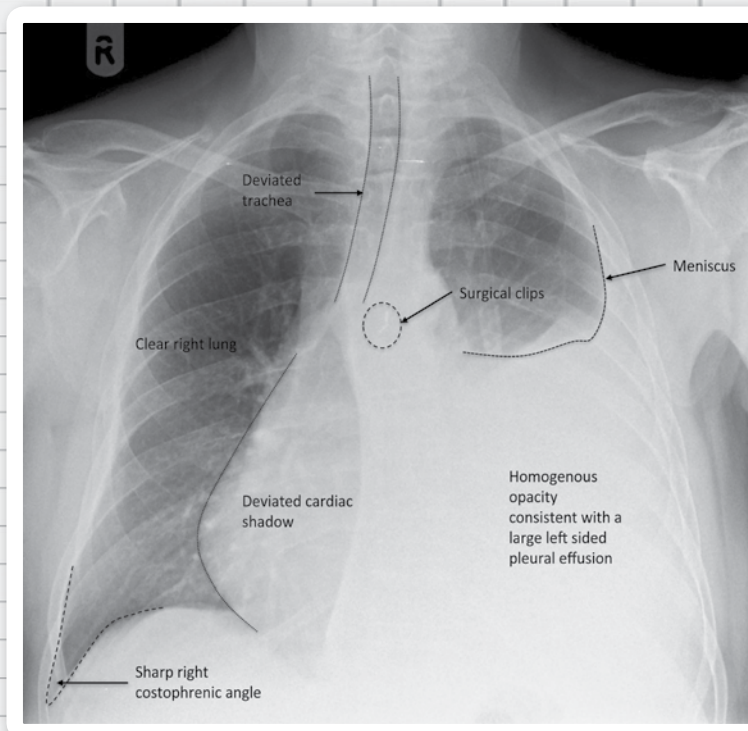
A 74 year old man presents with gradually increasing breathlessness. He is a lifelong smoker. Apart from a "smoker's cough", which he has had for several months, he is otherwise well. On examination, he has oxygen saturations of 86% on room air, an increased respiratory rate and reduced air entry on the left with a dull percussion note. You request a chest X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is a PA chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is not rotated, there is satisfactory inspiratory achievement and the X-ray is adequately penetrated.
- The most striking abnormality is the large homogenous opacity projected over the lower two thirds of the left lung. A meniscus is visible superolaterally. These findings are consistent with a large pleural effusion.
- There is associated mediastinal shift to the right.
- The right lung shows no area of consolidation and no lobar collapse or pulmonary masses/nodules. The visible left lung is also clear.
- There are two surgical clips projected over the origin of the left main bronchus.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are identified.



IN SUMMARY – This chest X-ray shows a large left sided pleural effusion, which has caused a right sided mediastinal shift. The differential diagnosis for this is initially wide; however, given the clinical findings, I am concerned there is an underlying malignancy. I would ask the patient about the nature of the previous thoracic

surgery. Routine bloods are required to assess for evidence of infection. I would start the patient on supplementary oxygen. A chest drain should be inserted to help relieve the symptoms and a sample of the pleural fluid should be sent for analysis (cytology, biochemistry, microbiology). A post procedural chest X-ray will be required. Depending on the results of the above, further imaging in the form of a CT may be helpful.

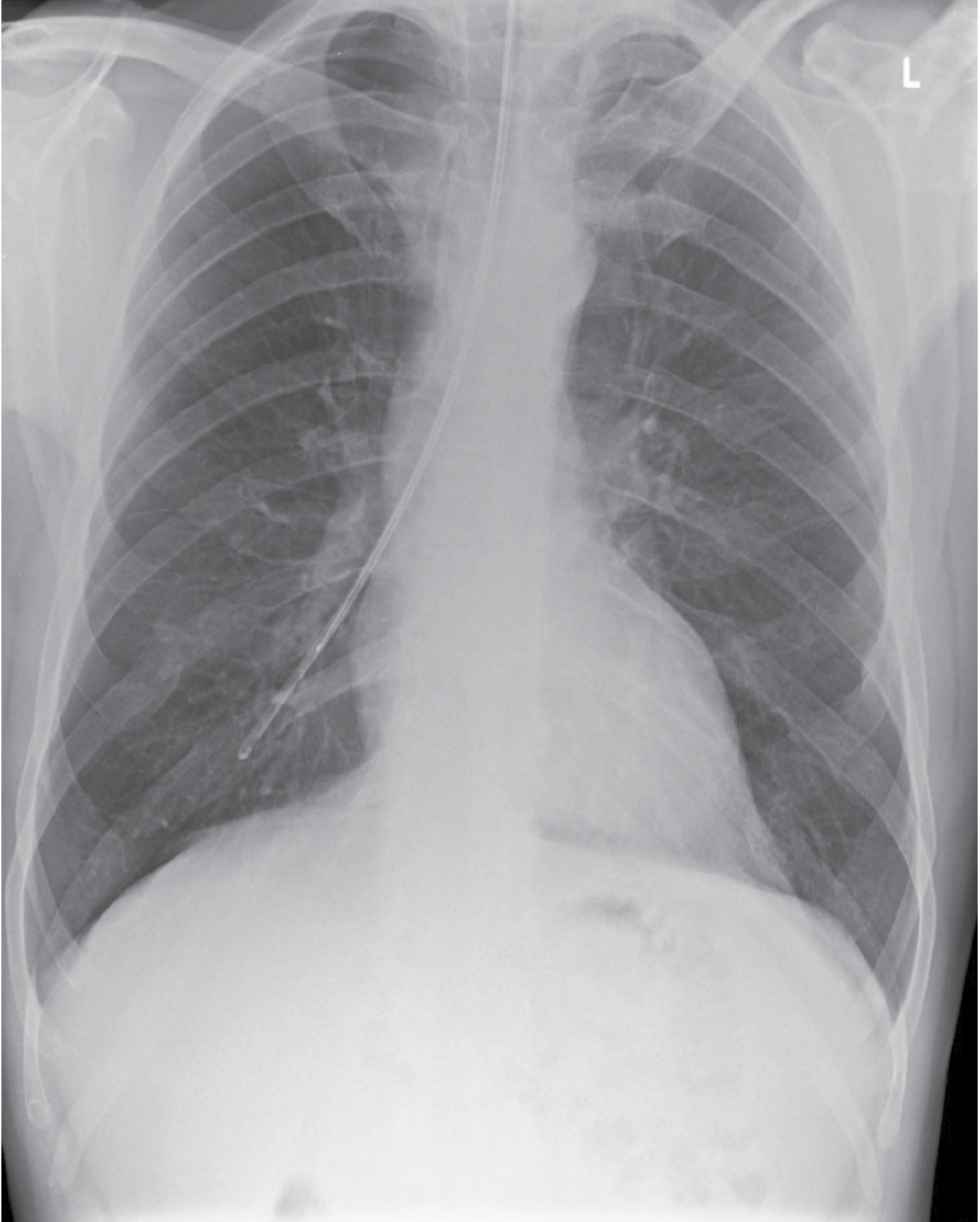


PRESENT YOUR FINDINGS...



CHEST X-RAYS - CASE 5

A 57 year old patient who has a previous diagnosis of laryngeal cancer is admitted with increasing dysphagia. As part of his initial management, you try to pass a NG tube, but you are unable to aspirate anything back. You therefore request a chest X-ray to assess its position.



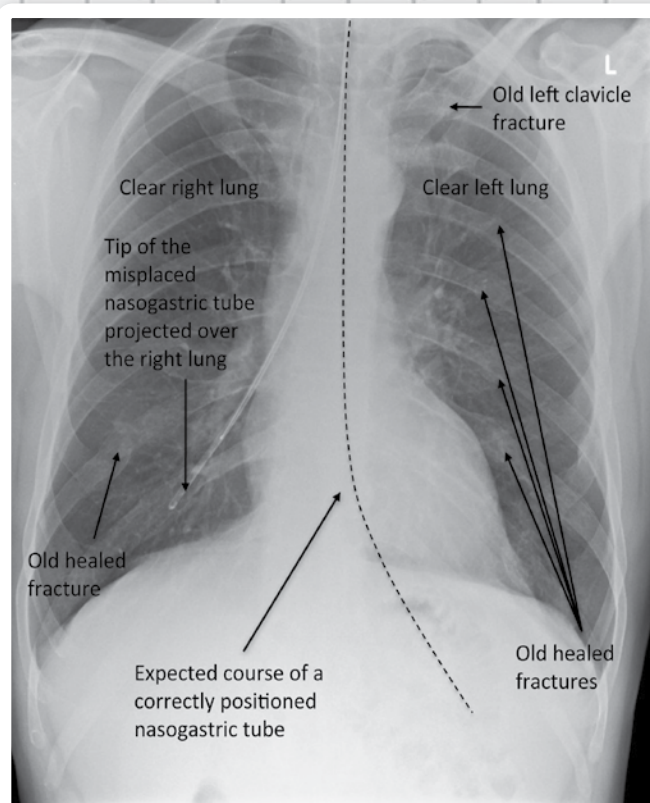
PRESENT YOUR FINDINGS...



- This is a PA chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth, and the date and time the X-ray was performed.
- The patient is well centred. There is adequate inspiratory achievement and penetration.
- The most striking abnormality is the inappropriate placement of the NG tube. The NG tube is projected over the right main

bronchus, with its tip in the right lung. The NG tube must be resited before use.

- The trachea is central and the cardiac and mediastinal contours are unremarkable.
- The lungs are clear, showing no area of consolidation, lobar collapse or pulmonary masses/nodules.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- No free subdiaphragmatic gas is evident.
- There are old healed fractures of the medial end of left clavicle, the 4th, 5th, 6th and 7th ribs on the left, and the 7th rib on the right. No other skeletal or soft tissue abnormalities are identified.

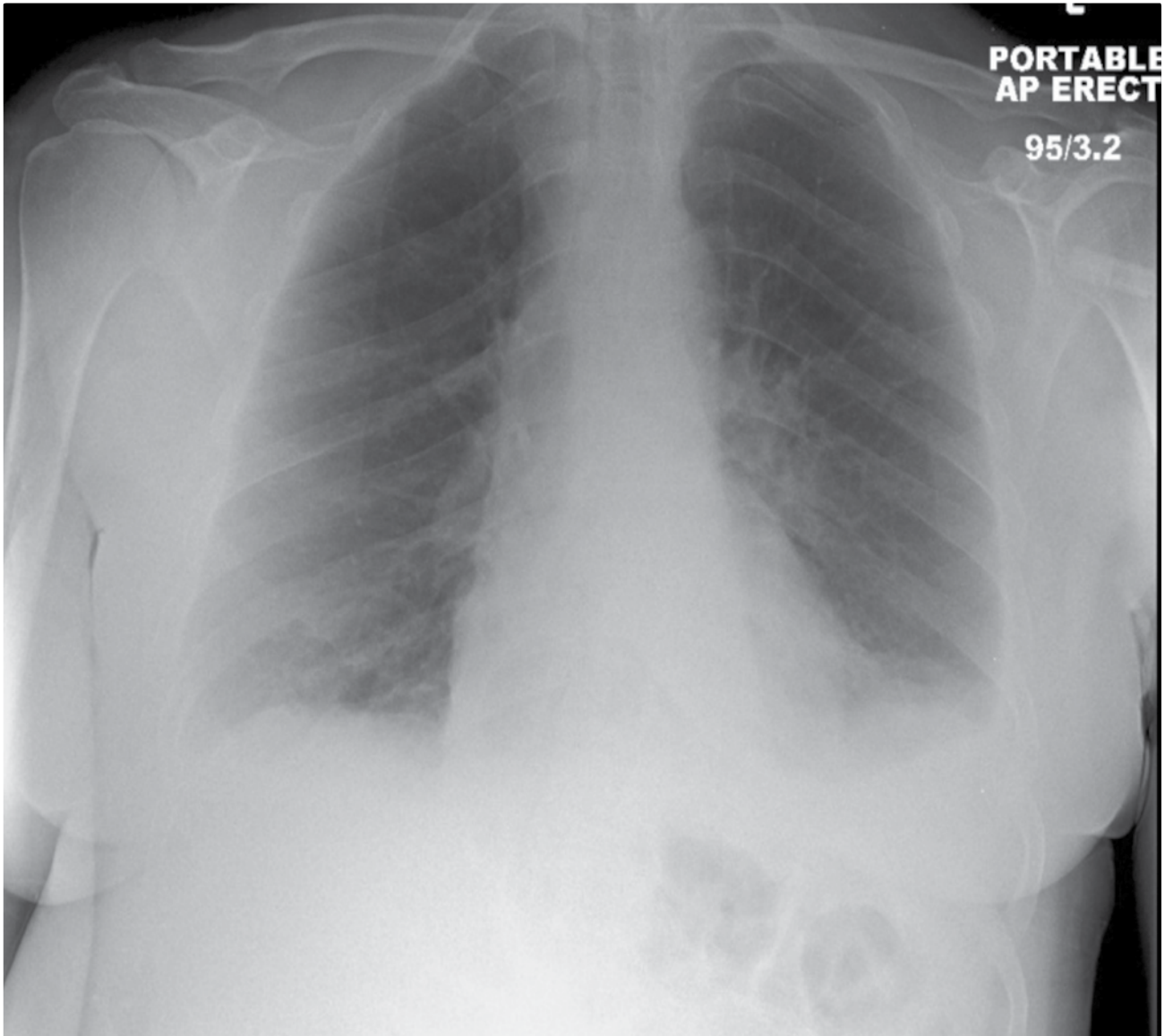


IN SUMMARY – This chest X-ray shows a misplaced NG tube, which needs to be resited before use, and multiple healed fractures.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 6

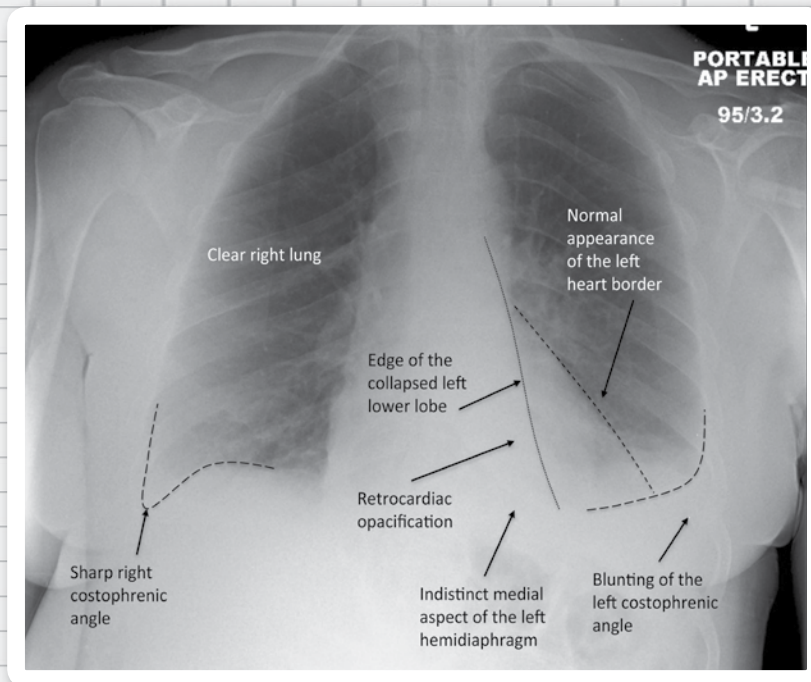
A 65 year old female is in the high dependency unit. She suffered a subarachnoid haemorrhage two days ago. She has since had the culprit aneurysm coiled. You are reviewing her as she has become dyspnoeic and hypoxic. She has an increased respiratory rate. Chest examination is largely unremarkable. You request a portable chest X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is a portable AP erect chest X-ray in an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is slightly rotated. There is adequate inspiratory achievement. It is slightly under penetrated but otherwise technically adequate.
- There is a dense left sided retrocardiac opacity with a linear edge. This results in the appearance of a double left heart border. The medial aspect of the left hemidiaphragm is not visible, indicating the pathology is within the left lower lobe. These findings are in keeping with a left lower lobe collapse.
- The lungs are otherwise clear, with no consolidation or masses/nodules.
- There is blunting of the left costophrenic angle, suggestive of a small pleural effusion.
- The right costophrenic angle and hemidiaphragm are sharply defined.
- Allowing for patient rotation, the cardiac and mediastinal contours are unremarkable.
- There is no evidence of free subdiaphragmatic air. No skeletal or soft tissue abnormalities are identified.



IN SUMMARY –

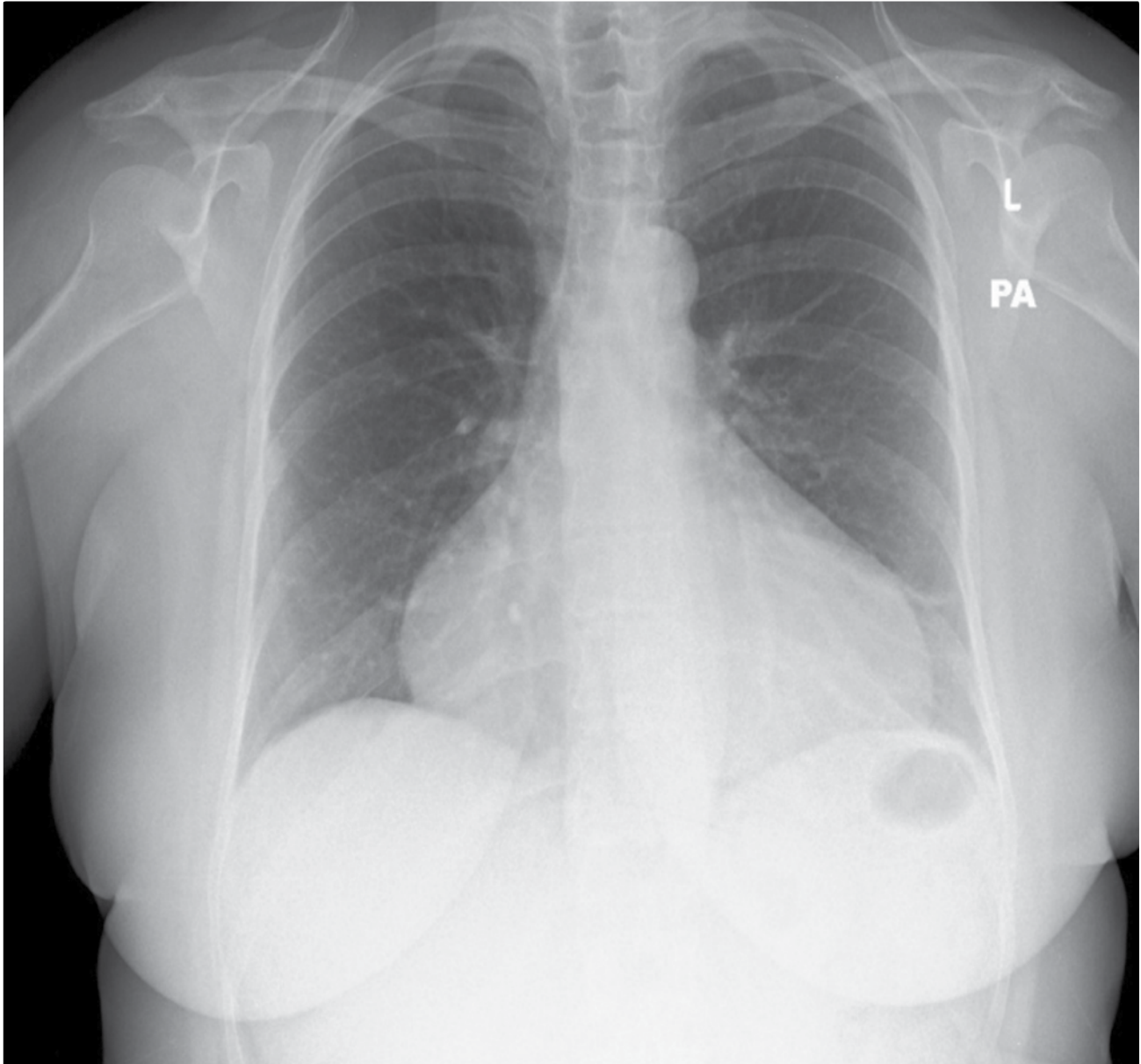
This chest X-ray shows a left lower lobe collapse. There is also a small left sided pleural effusion. The cause of the lobar collapse is most likely due to mucus plugging.

Review of previous chest X-rays would be useful to ensure this is a new finding. The patient should be treated with chest physiotherapy and supplementary oxygen. Follow up chest X-ray to ensure the changes are resolving is also required.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 7

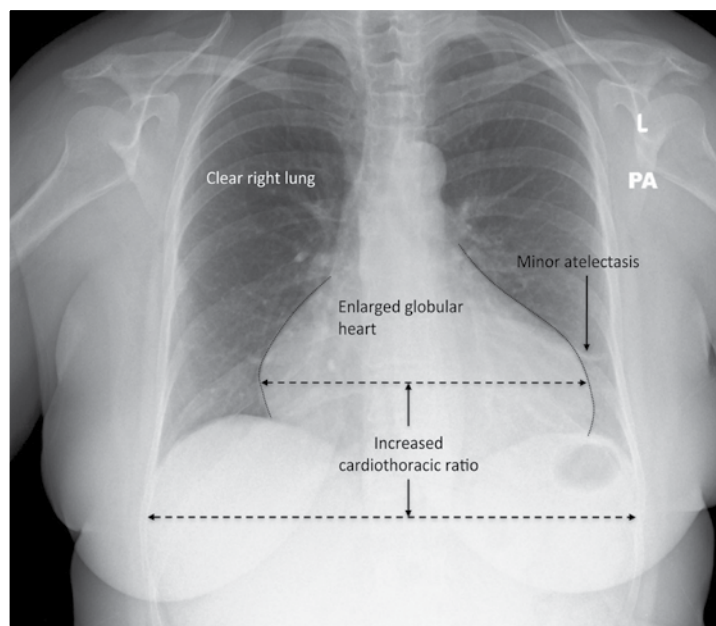
A 50 year old female presents to hospital with increasing breathlessness on exertion and chest pain. Examination reveals slightly muffled heart sounds, a raised jugular venous pulse and a clear chest. You request a chest X-ray.



PRESENT YOUR FINDINGS...



- This is a PA chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is slightly rotated to the right. There is satisfactory inspiratory achievement and adequate penetration.
- The most striking abnormality is an enlarged heart, with a cardiothoracic ratio of $>50\%$. It also has a globular appearance, in keeping with a pericardial effusion.
- Apart from minor left basal atelectasis, the lungs are clear, with no consolidation, lobar collapse or pulmonary masses/nodules.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- Allowing for the patient's rotation, the trachea appears central.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are identified.



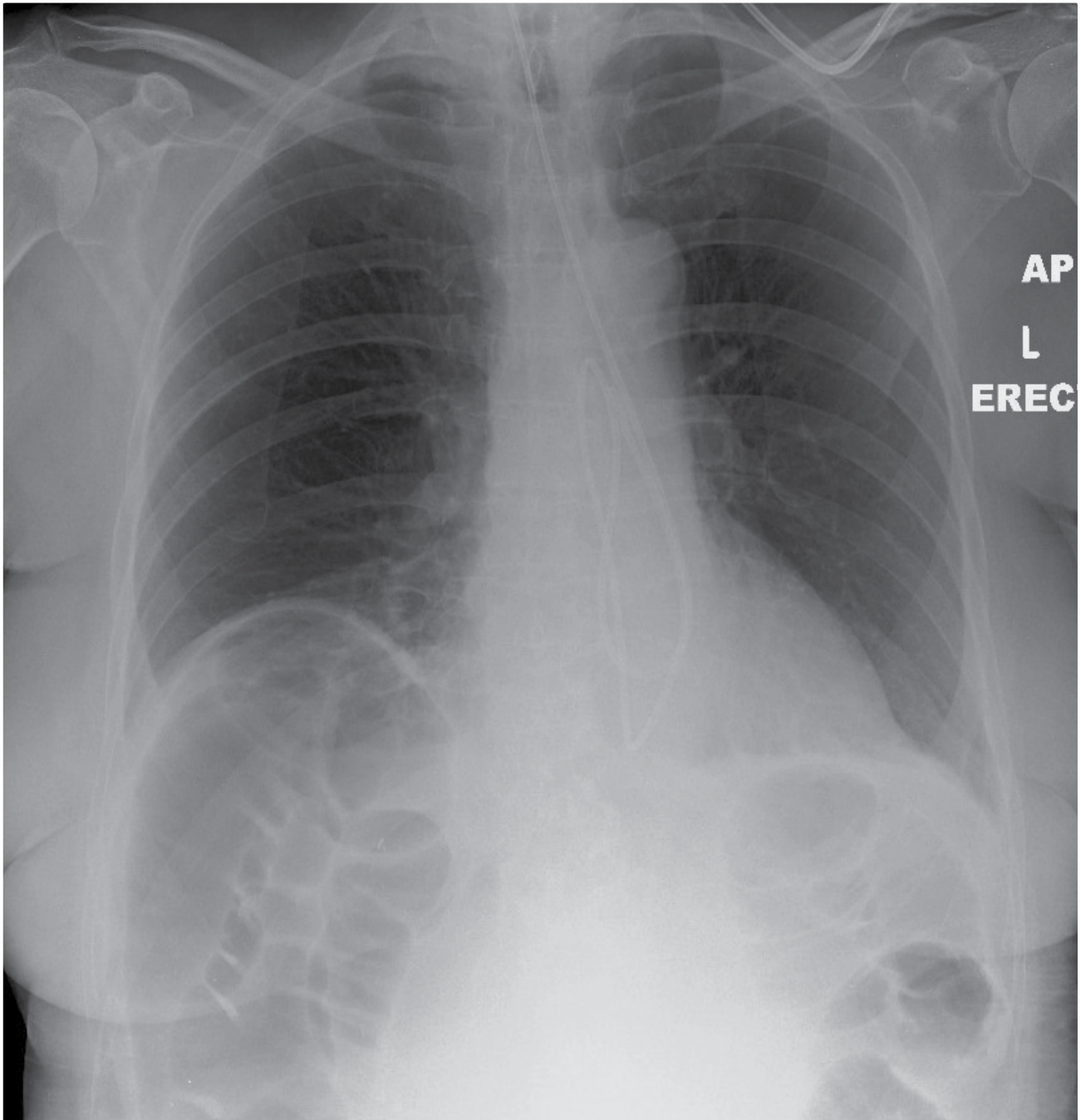
IN SUMMARY – This chest X-ray shows a large globular shaped heart, in keeping with a pericardial effusion. The differential diagnosis of a pericardial effusion is large. Blood tests, including full blood count (to look for infection), U&Es

(to look for renal failure) and thyroid function tests (to look for hypothyroidism), should be performed. An ECG will be required to assess for evidence of ischaemia and pericarditis. I would discuss further investigations and management with cardiology. Since she is symptomatic, she may require a therapeutic pericardiocentesis.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 8

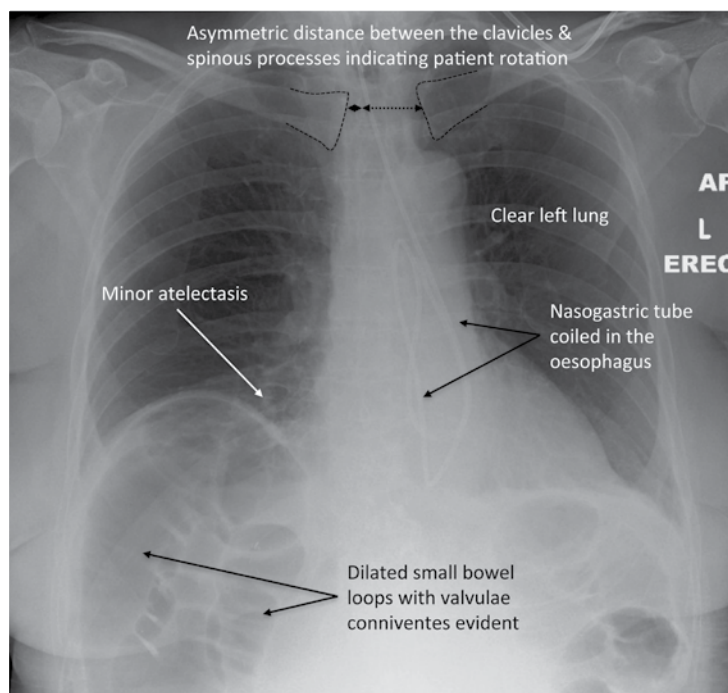
A 76 year old female in a nursing home was admitted with small bowel obstruction. The nurses on the ward have inserted a NG tube to decompress the small bowel. It was easy to pass the NG tube, but it was not possible to aspirate anything from it. The nurses have informed you and you request a chest X-ray to check its position.



PRESENT YOUR FINDINGS...



- This is an AP erect chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to check the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is slightly rotated to the left. There is adequate inspiratory achievement and penetration.
- The NG tube is coiled in the oesophagus. It should be withdrawn completely and reinserted.
- Apart from some minor atelectasis in the right lower zone, the lungs are clear.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- Allowing for patient rotation, the trachea is central and the cardiac and mediastinal contours are unremarkable.
- Multiple distended gas-filled loops of bowel noted below the hemidiaphragm. Valvulae conniventes are evident, suggesting small bowel obstruction.
- There is no evidence of free subdiaphragmatic air.
- No skeletal or soft tissue abnormalities are identified.



IN SUMMARY –

This chest X-ray shows the NG tube is coiled in the oesophagus and needs resiting.

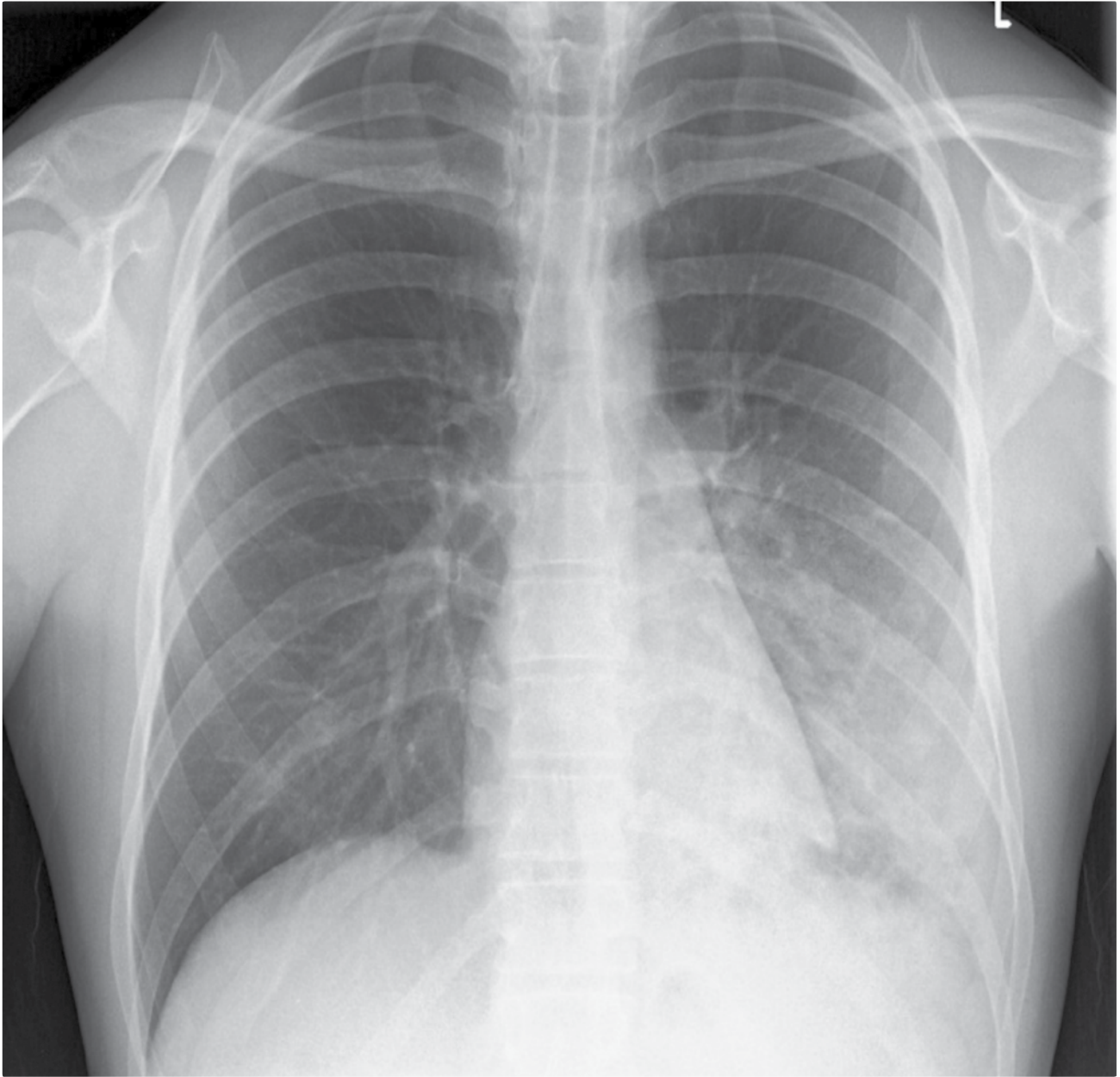
A follow-up chest X-ray following re-insertion may be required if there is no aspirate from

the tube. The patient also has dilated small bowel loops, which are seen under the right hemidiaphragm – a formal abdominal X-ray would be helpful.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 9

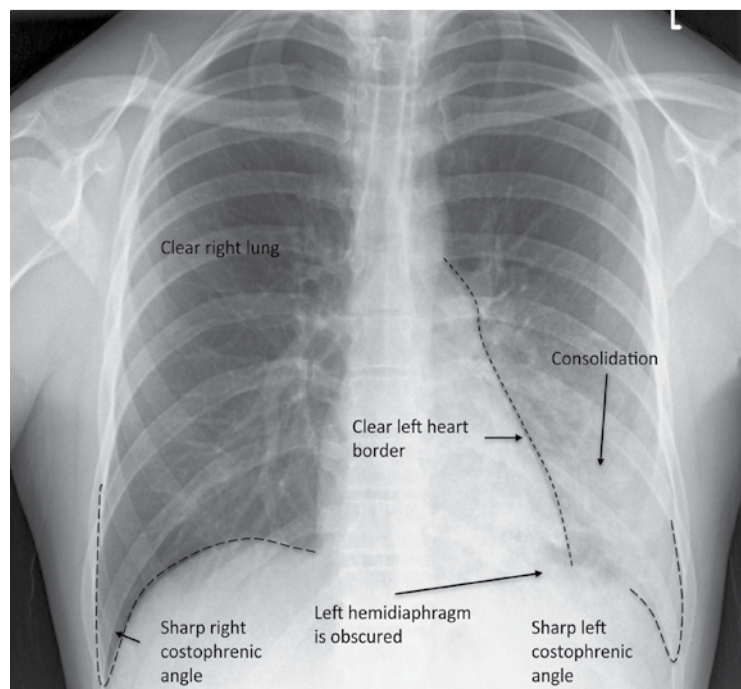
A 35 year old homeless man presents with breathlessness and a productive cough. On examination, he has a raised temperature and increased inspiratory rate. There are crackles at the left base. You request a chest X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is a PA chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is well centred. There is satisfactory inspiratory achievement and adequate penetration, but the top of the lung apices are cut off.
- The most striking abnormality is the patchy airspace opacification in the left lower zone. This obscures the left hemidiaphragm; however, the left heart border remains clear. The findings are consistent with left lower lobe consolidation.
- The remaining lungs are clear.
- The cardiac and mediastinal contours are normal.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are identified.



IN SUMMARY –

This chest X-ray shows left lower lobe consolidation. Given the clinical findings, the most likely cause for this is community acquired pneumonia.

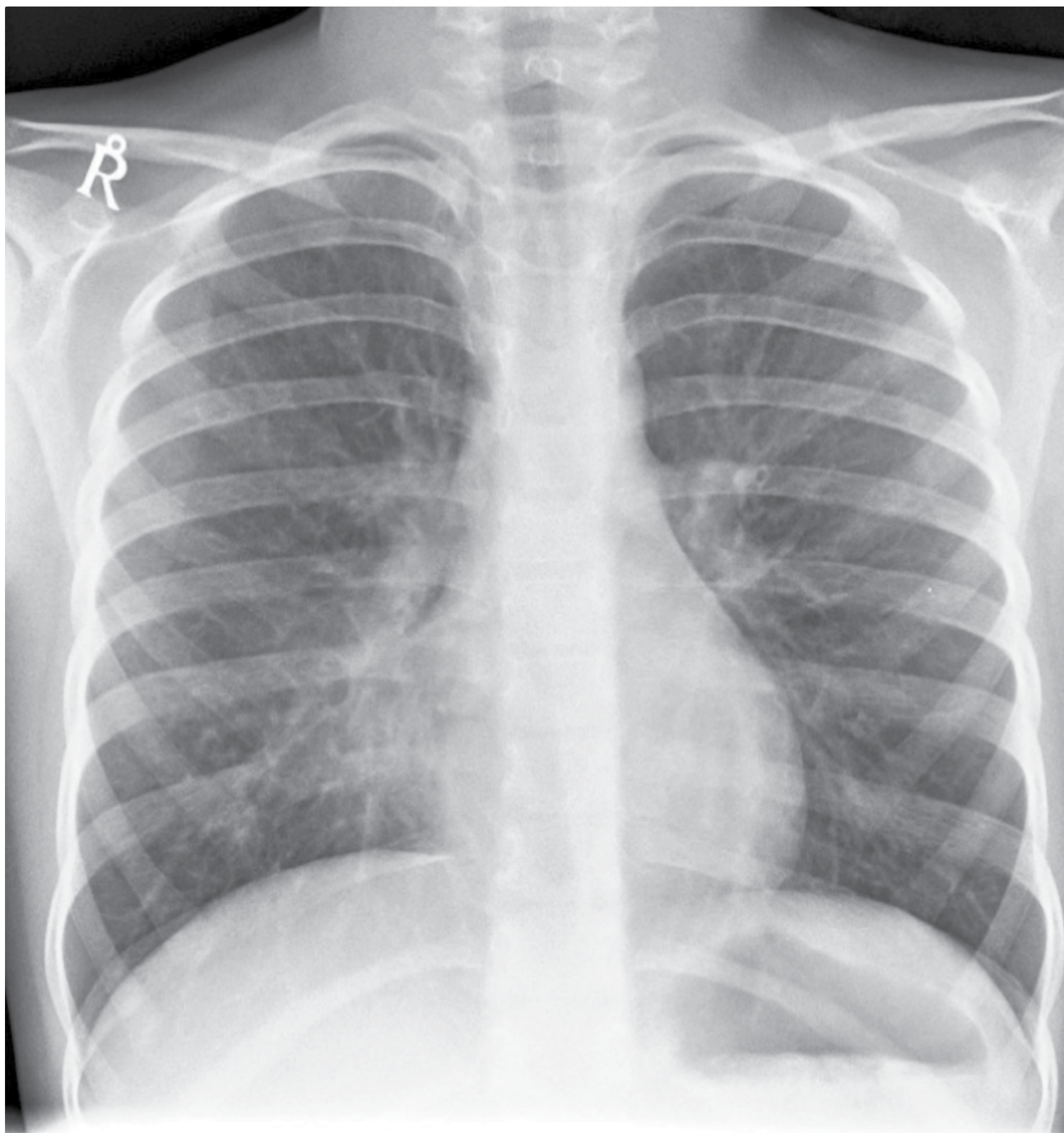
The patient should be assessed using the CURB 65 clinical scoring system

and treated with appropriate antibiotics. A follow-up chest X-ray should be performed in 4–6 weeks following the commencement of treatment to ensure resolution of the pneumonia.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 10

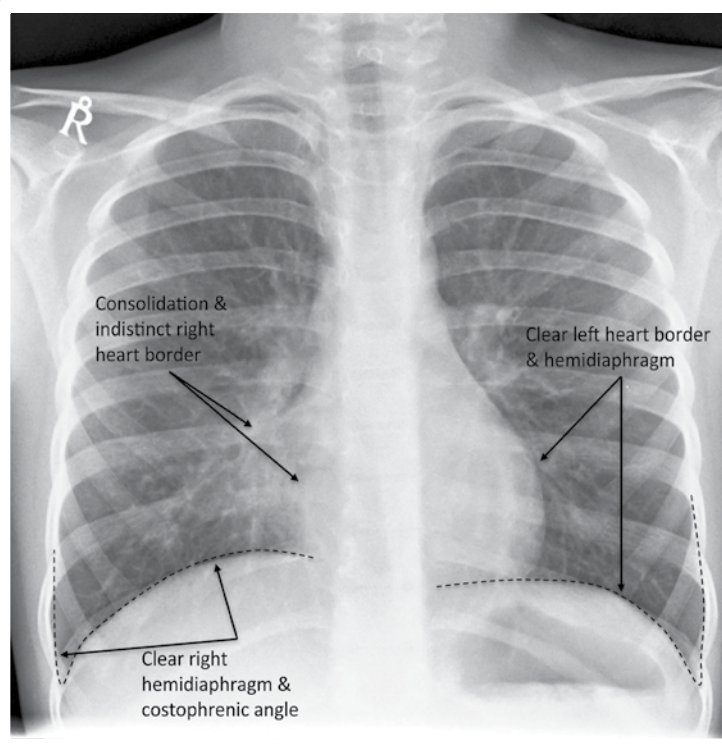
A 7 year old girl is brought into A&E by her father. She has developed a cough and fever. On examination, she has some crackles in the right mid and lower zones. You request a chest X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is a PA chest X-ray.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is not rotated. There is satisfactory inspiratory achievement and adequate penetration.
- The most striking abnormality is the patchy airspace opacification identified in the right mid zone of the lung. The right heart border is indistinct but the right hemidiaphragm remains clear, implying right middle lobe consolidation.
- The cardiomedastinal contours are otherwise normal.
- The left lung is clear, with no consolidation, lobar collapse or pulmonary masses/nodules.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are identified.



IN SUMMARY –

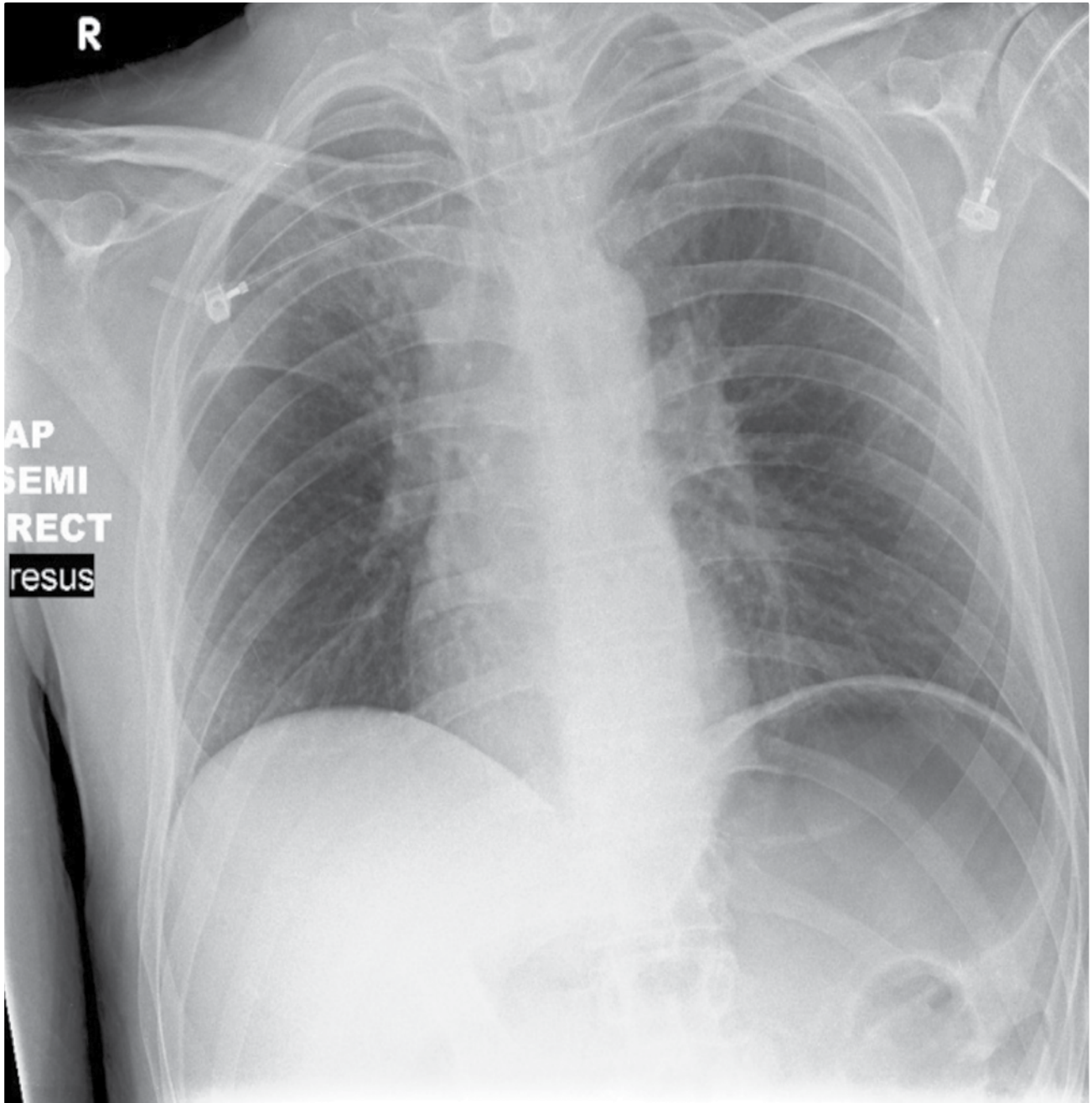
This chest X-ray shows right middle lobe consolidation, which is most likely due to pneumonia given the clinical history. The patient should be treated with appropriate antibiotics. A follow-up chest X-ray should be

requested 4–6 weeks following the commencement of treatment to ensure resolution of the pneumonia.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 11

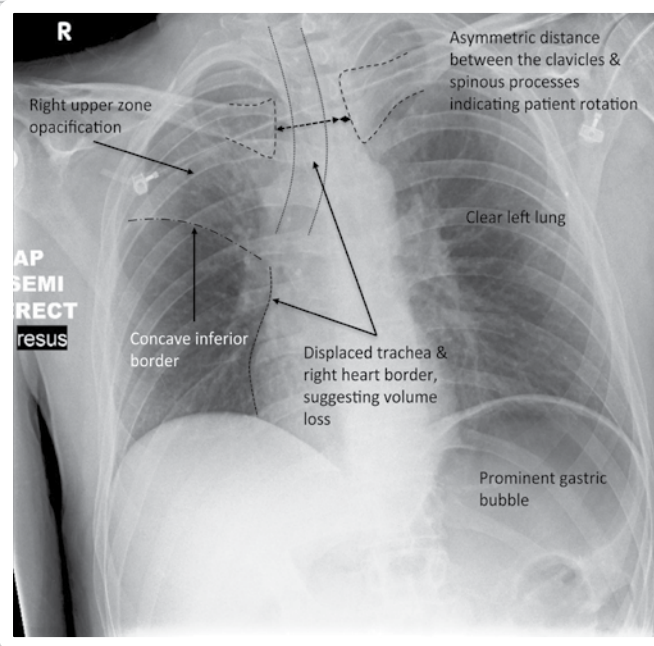
A 39 year old known asthmatic male presents to the A&E department for the third time this month with worsening shortness of breath. The patient is hypoxic and tachycardic, with reduced air entry on the right. You request a portable chest X-ray in the resuscitation room.



PRESENT YOUR FINDINGS...



- This is a portable AP chest X-ray in an adult.
- There are no patient identifiable data on the X-ray. I would like to check the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is leaning towards the right. He is also rotated to the right. There is inadequate inspiratory achievement, but satisfactory penetration.
- The most striking abnormality is the increased opacification in the right upper zone. This has a concave inferior border. There is volume loss in the right upper zone, as shown by the deviation of the trachea and mediastinum (more than would be expected for the patient's rotation). These findings are in keeping with a right upper lobe collapse.
- The cause for the collapse is not clearly identified. In particular, there is no obvious mass.
- The left lung is clear, with no consolidation, lobar collapse or pulmonary masses/nodules.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- There is no evidence of free subdiaphragmatic air. However, there is a prominent gastric bubble.
- No skeletal or soft tissue abnormalities are identified.



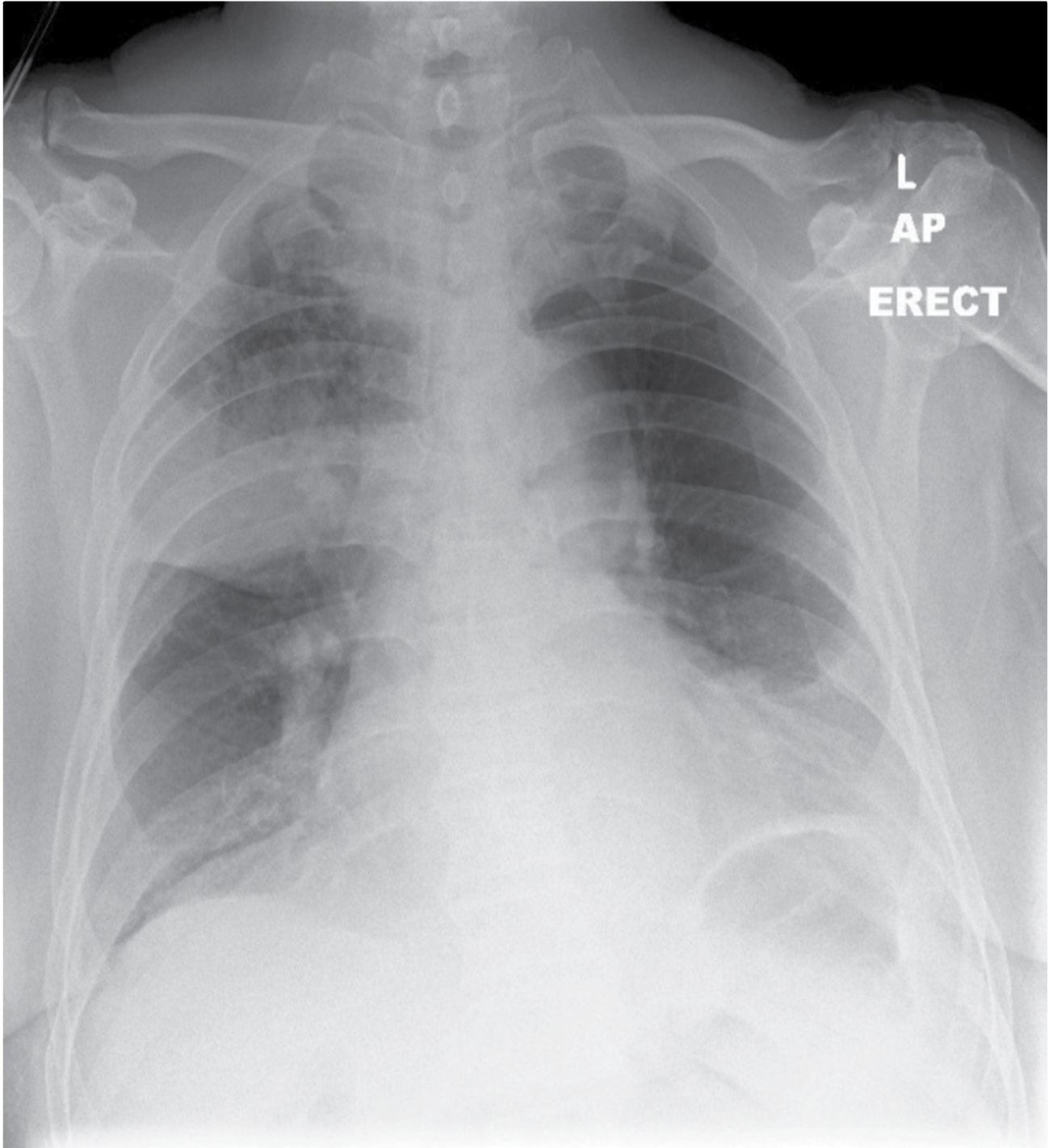
IN SUMMARY – This chest X-ray shows right upper lobe collapse. The cause is not clearly shown, but given the patient is young and asthmatic, I think it is most likely due to mucus plugging. The patient should be treated for an acute exacerbation of asthma, as well as having chest physiotherapy.

A follow up X-ray following appropriate treatment should be requested to ensure resolution of the lobar collapse. If the collapse persists, then we should consider a CT of the chest to assess for an alternative cause of the lobar collapse, such as a malignancy.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 12

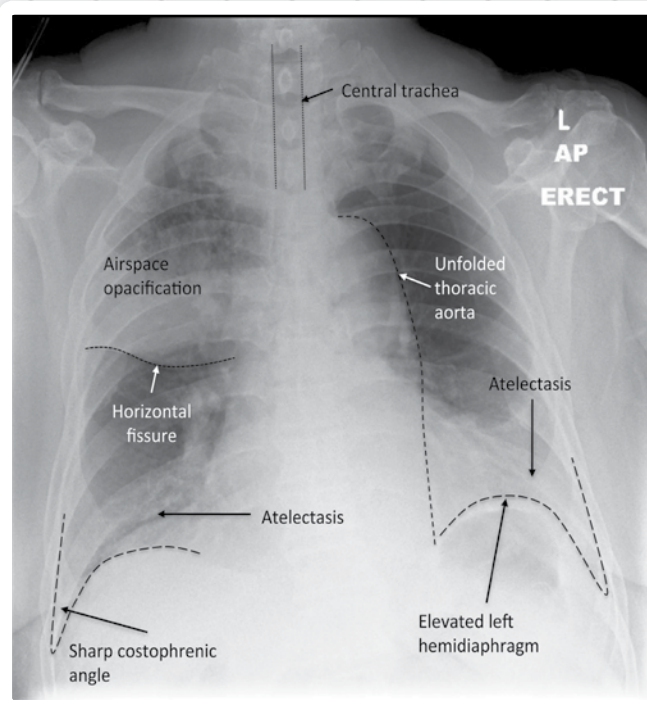
An 80 year old male patient is admitted with confusion and a fever. Examination is difficult but you think there are some right sided crackles. A chest X-ray is requested for further assessment of these findings.



PRESENT YOUR FINDINGS...



- This is an AP erect chest x-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to check the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is not rotated. There is satisfactory inspiratory achievement and penetration.
- The most striking abnormality is the patchy airspace opacification identified in the right upper lobe of the lung. The inferior margin of this consolidation is outlined by the horizontal fissure. It is important to note that the right heart border is clear, implying that the right middle lobe is not affected and there is no evidence of associated volume loss, mitigating against lobar collapse.
- There is bibasal atelectasis, but the lungs are otherwise clear.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- The left hemidiaphragm is elevated.
- There is mild unfolding of the thoracic aorta, but the cardiac and mediastinal contours are otherwise unremarkable.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are identified.



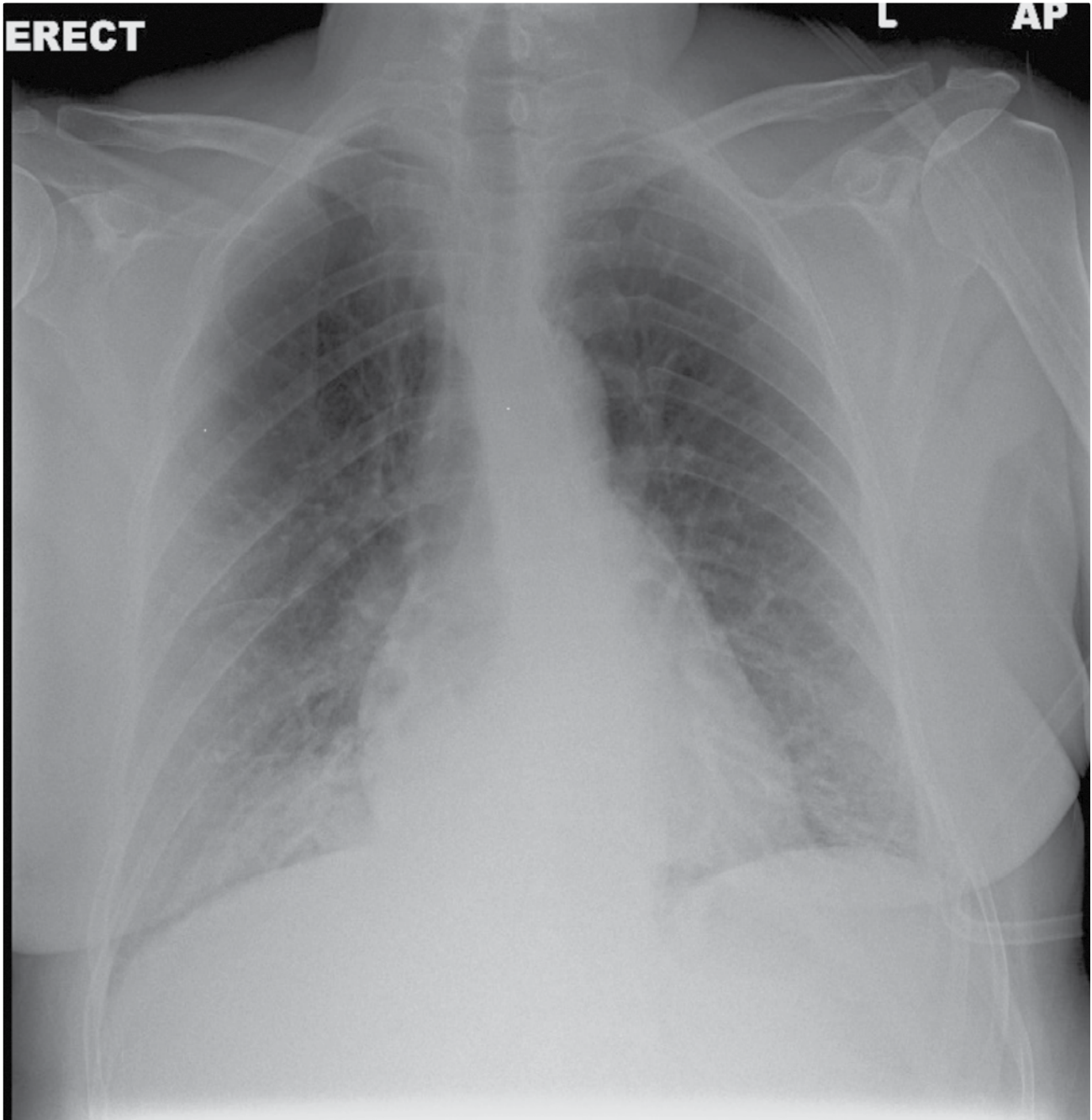
IN SUMMARY – This chest X-ray shows right upper lobe consolidation, in keeping with community acquired pneumonia. The severity of the pneumonia should be assessed with the CURB 65 scoring system and appropriate antibiotics commenced. The patient may also need supplementary oxygen and fluids. A follow-up chest X-ray should be requested

in 4-6 weeks following the commencement of treatment to ensure resolution of the pneumonia. The left hemidiaphragm is elevated. This may be related to the left basal atelectasis; however, I would like to review previous X-rays to see if this is a new or longstanding finding.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 13

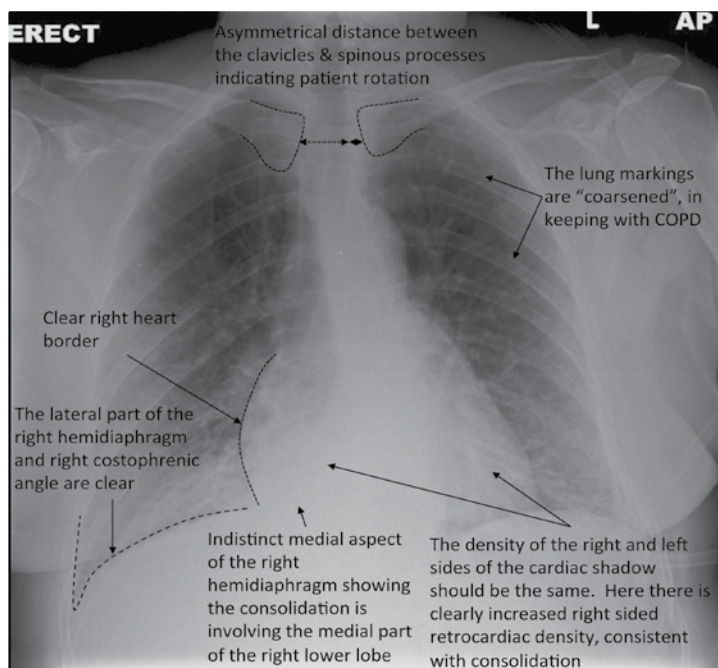
A 73 year old woman with background COPD presents to A&E with a productive cough, increasing shortness of breath and a fever. Clinical examination reveals reduced air entry and some crackles in the right lung. A chest X-ray is performed.



PRESENT YOUR FINDINGS...



- This is an AP erect chest X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and date and time the X-ray was performed before making any further assessment.
- The patient is slightly rotated to the right, and the X-ray is under penetrated. It is otherwise a technically adequate examination with a satisfactory inspiratory achievement and no areas cut off.
- The most striking abnormality is increased density in the right lower zone. This is most notable behind the right side of the cardiac shadow. The medial aspect of the right hemidiaphragm is obscured but the right heart border is clear, indicating there is right lower lobe consolidation.
- Elsewhere in the lungs, there are coarsened lung markings in keeping with COPD but no other areas of consolidation and no lobar collapse or pulmonary masses/nodules.
- Allowing for the rotation, the trachea, mediastinal and cardiac contours, and hila are unremarkable.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are noted.



IN SUMMARY –

This chest X-ray shows right lower lobe consolidation with background changes of COPD. Given the clinical findings, these changes are consistent with right lower lobe pneumonia.

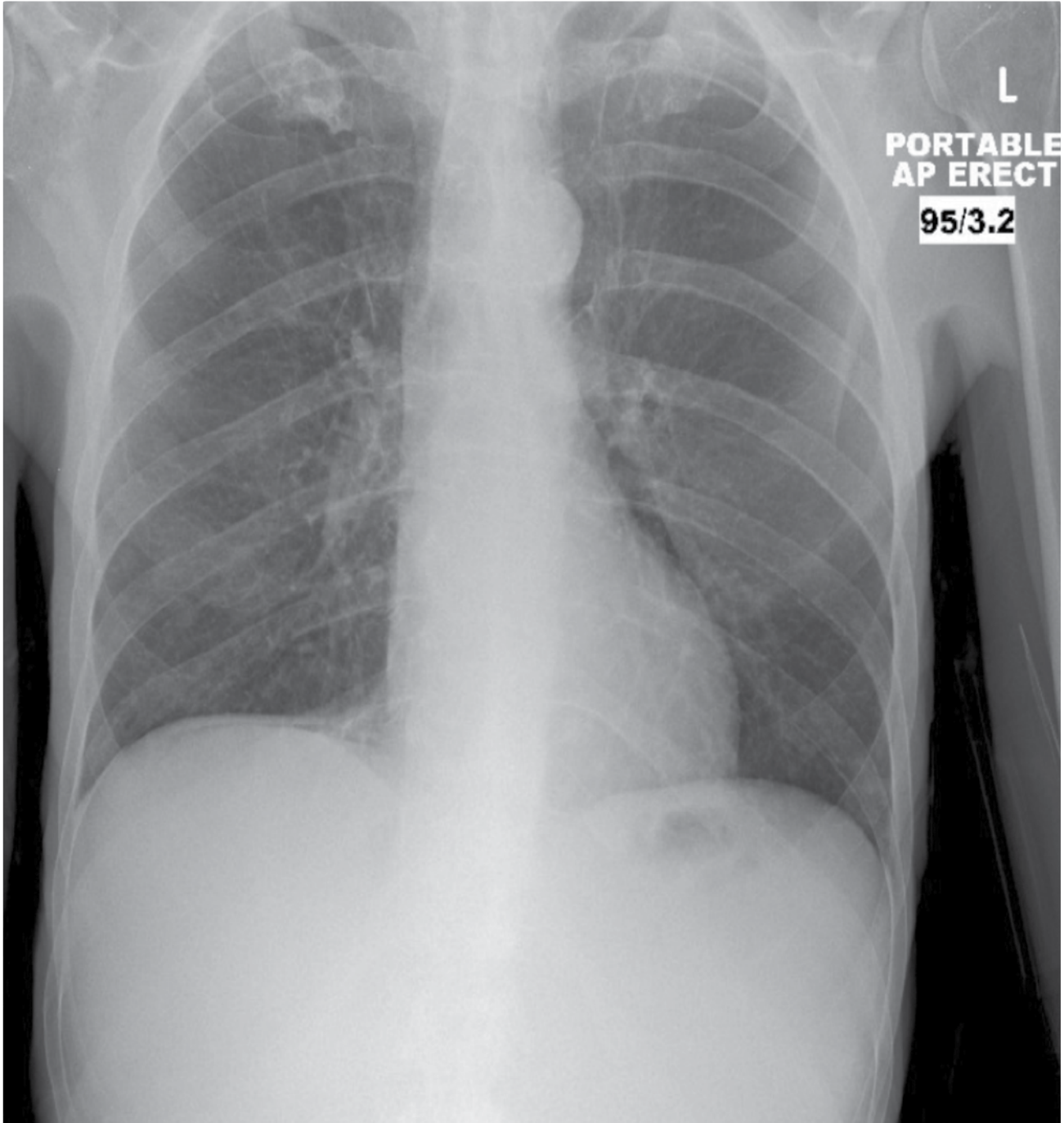
A follow up chest

X-ray in 4-6 weeks after appropriate antibiotic treatment should be considered to ensure resolution of the pneumonic changes.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 14

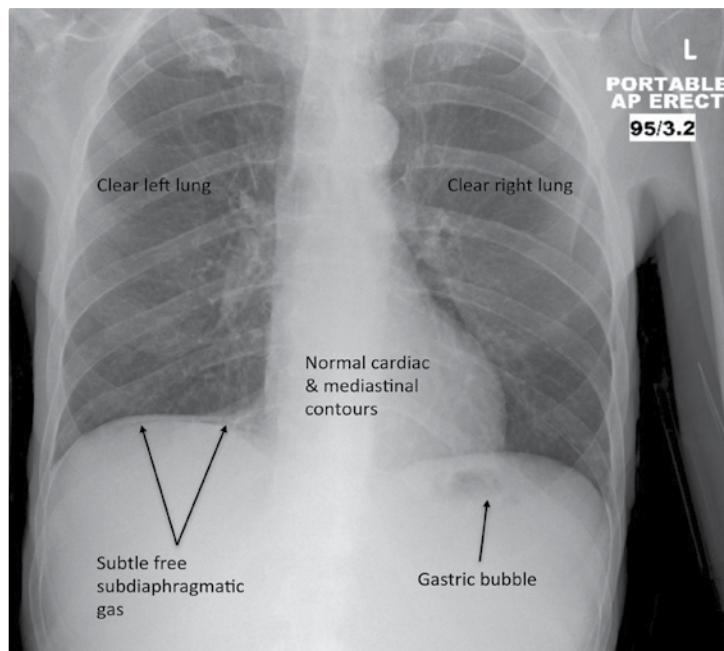
A 73 year old man has presented to A&E with severe abdominal pain. He has a past history of hypertension, diabetes and osteoarthritis. He is taking a variety of medications, including metformin, lisinopril and ibuprofen. On examination, he is tachycardiac, with peritonism in his upper abdomen. You request a chest X-ray as part of your assessment.



PRESENT YOUR FINDINGS...



- This is a portable AP erect chest x-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The lung apices and clavicles have not been included in the X-ray. The patient appears well centred and there is adequate inspiratory achievement and penetration.
- The trachea is central.
- The lungs are clear, with no masses, nodules, consolidation or collapse visible.
- The heart is not enlarged and the cardiac and mediastinal contours are normal.
- Both hemidiaphragms and the costophrenic angles are clearly demarcated.
- There is a very subtle slither of free air underneath the right hemidiaphragm. The air under the left hemi diaphragm represents the gastric bubble.
- There is no abnormality of the imaged soft tissues or skeleton.



IN SUMMARY –

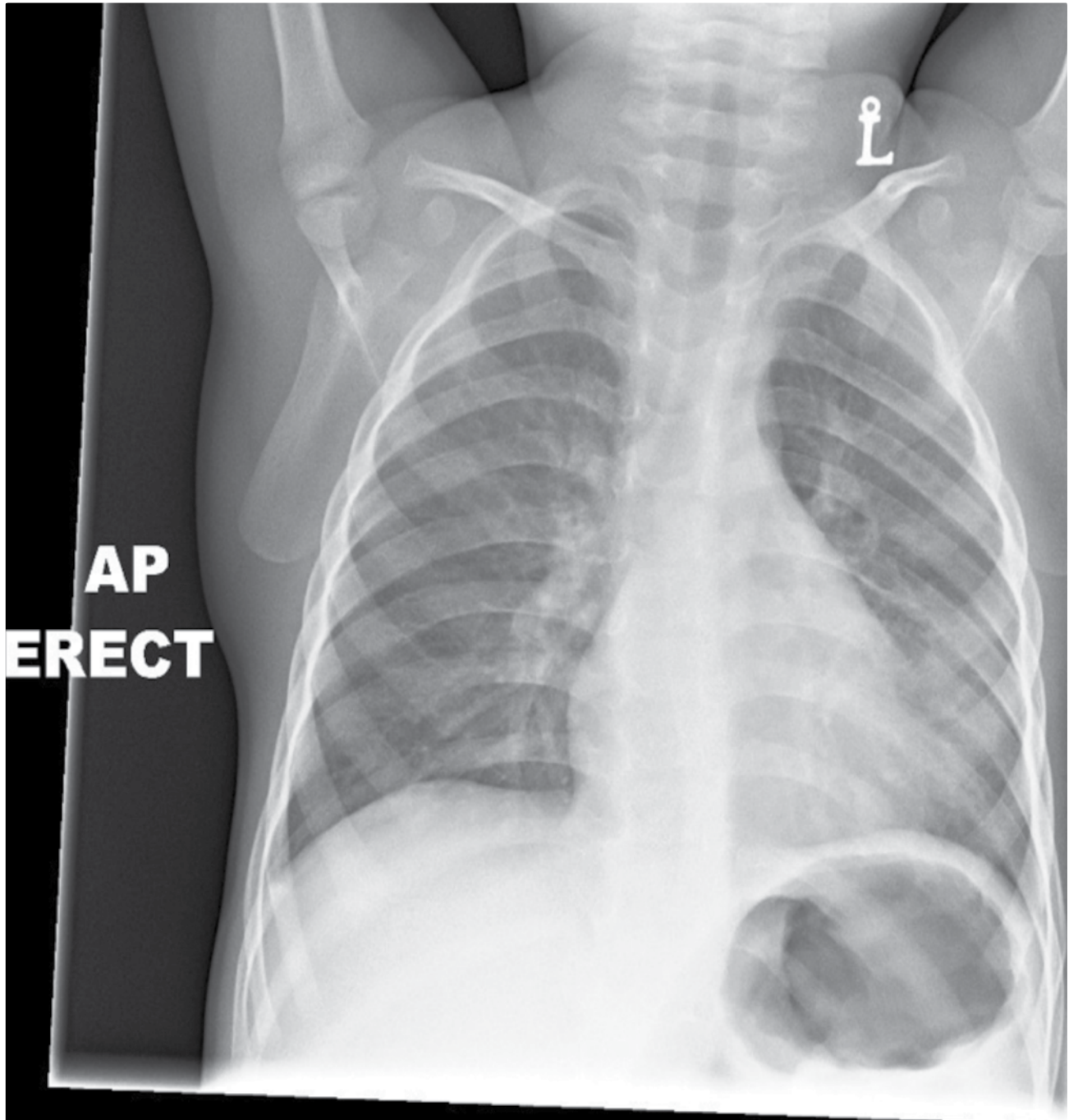
This chest X-ray shows free subdiaphragmatic gas, most likely related to a perforation. The patient should be made nil by mouth, have routine bloods performed, given appropriate

analgesia and fluid resuscitation and referred urgently to the general surgeons. The site of perforation may be a peptic ulcer, given that the patient is on long-term ibuprofen; however, a CT of the abdomen and pelvis with IV contrast may be required for further assessment, in which case his metformin should be withheld.

 **PRESENT
YOUR
FINDINGS...**

 CHEST X-RAYS - CASE 15

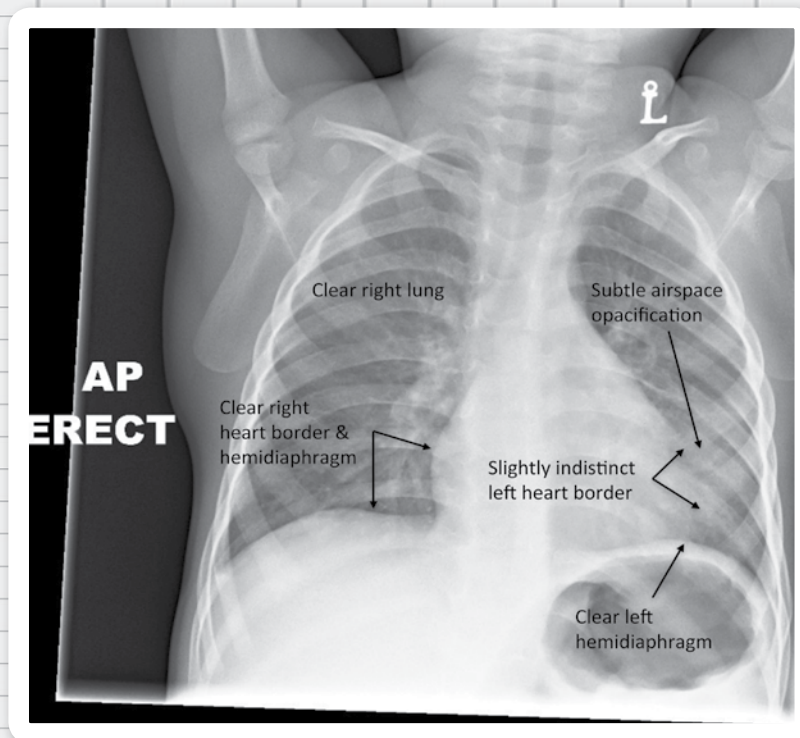
A 4 year old boy is brought in by his mother with a cough and fever. On examination, he is pyrexial, with an increased respiratory rate. Chest examination is difficult but you think there may be left sided crackles. You request a chest X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is an AP erect chest X-ray of a child.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth and the date and time the X-ray was performed.
- The patient is slightly rotated (as demonstrated by the asymmetrical appearance of the clavicles). There is satisfactory inspiratory achievement and penetration.
- There is subtle airspace opacification obscuring the left heart border. The left hemidiaphragm remains clear. These findings are in keeping with lingula consolidation.
- The cardiomeastinal contours are otherwise normal.
- The right lung is clear, with no area of consolidation, lobar collapse or pulmonary masses/nodules.
- The costophrenic angles are sharp, with no evidence of pleural effusion.
- There is no free subdiaphragmatic gas.
- No skeletal or soft tissue abnormalities are identified.



IN SUMMARY –

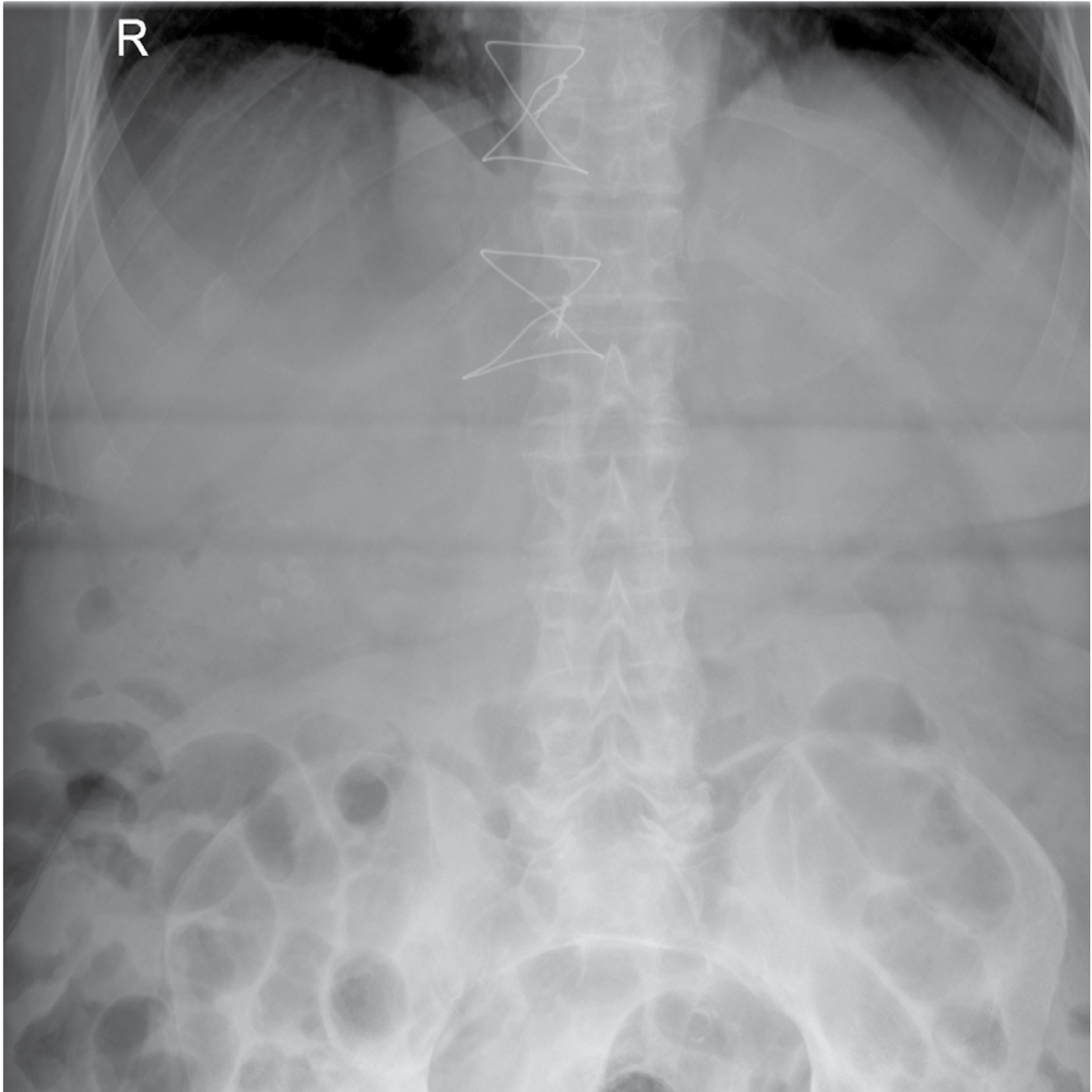
This chest X-ray shows consolidation within the lingula. Given the clinical findings, the most likely cause is pneumonia. He should be

treated with appropriate antibiotics and paracetamol (to lower his temperature).

 **PRESENT
YOUR
FINDINGS...**

 ABDOMINAL X-RAYS - CASE 1

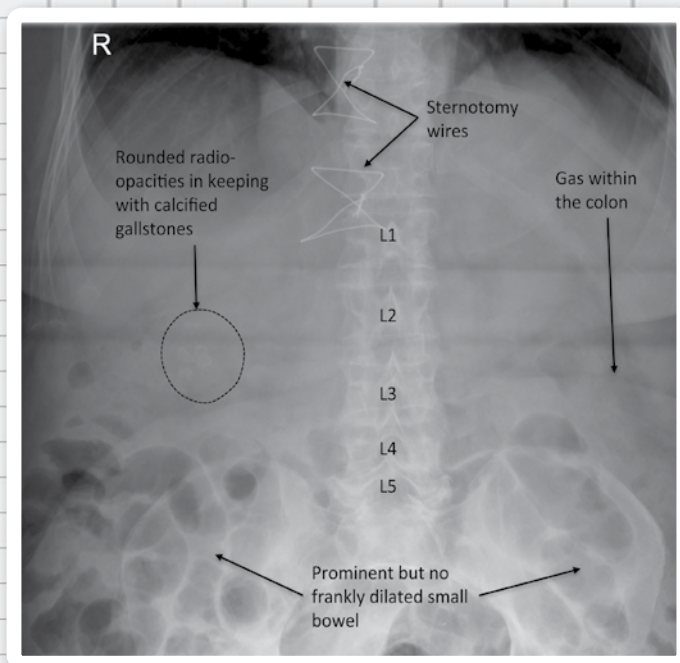
A 70 year old woman, who has a past history of ischaemic heart disease, hypertension and obesity, presents with ongoing intermittent episodes of upper abdominal pain, nausea and constipation. Below is her abdominal X-ray.



PRESENT YOUR FINDINGS...



- This is a supine AP abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth, and the date and time that the X-ray was performed before making any further assessment.
- The lower pelvis, hernial orifices and flanks are not completely imaged. The X-ray is therefore technically inadequate.
- There are some prominent gas filled loops of small bowel in the lower half of the imaged abdomen. These are not frankly dilated.
- Some gas is visible in the large bowel but the lower pelvis is not fully included, therefore I am unable to ascertain whether there is gas in the rectum.
- There is no evidence of definite obstruction and no features of perforation or mucosal oedema.
- There are at least 4 small round radio-opacities projected over the right upper quadrant at the level of L2/3. Given their position, they are in keeping with gallbladder calculi.
- No abnormality of the other visible abdominal organs is evident.
- Midline sternotomy sutures are in situ.
- No major skeletal or soft tissue abnormality is visible.



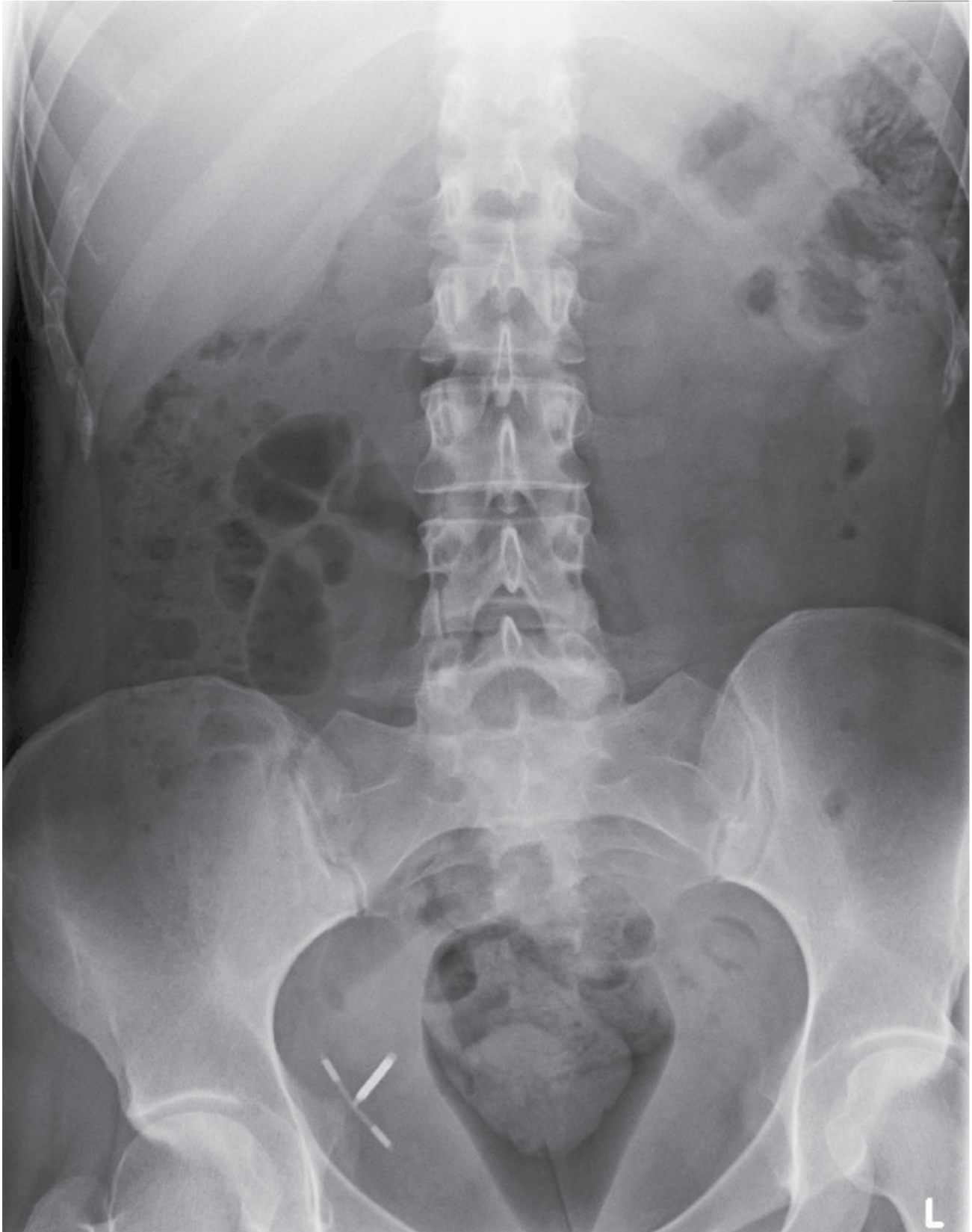
IN SUMMARY – This abdominal X-ray shows prominent small bowel loops (meaning the diameter is the 'upper limit of normal') but no perforation, mucosal oedema or definite obstruction. There are calcified gallstones present, which may partly account for the patient's symptoms. The lower half of the abdomen has not been imaged.

The differential diagnosis for this lady remains wide. I would like to assess the patient to determine whether her presentation may be related to gallstone pathology. Routine blood tests and a chest X-ray should be performed. Depending on the above, an ultrasound to assess the gallbladder and biliary tree may be appropriate.

 **PRESENT
YOUR
FINDINGS...**

 ABDOMINAL X-RAYS - CASE 2

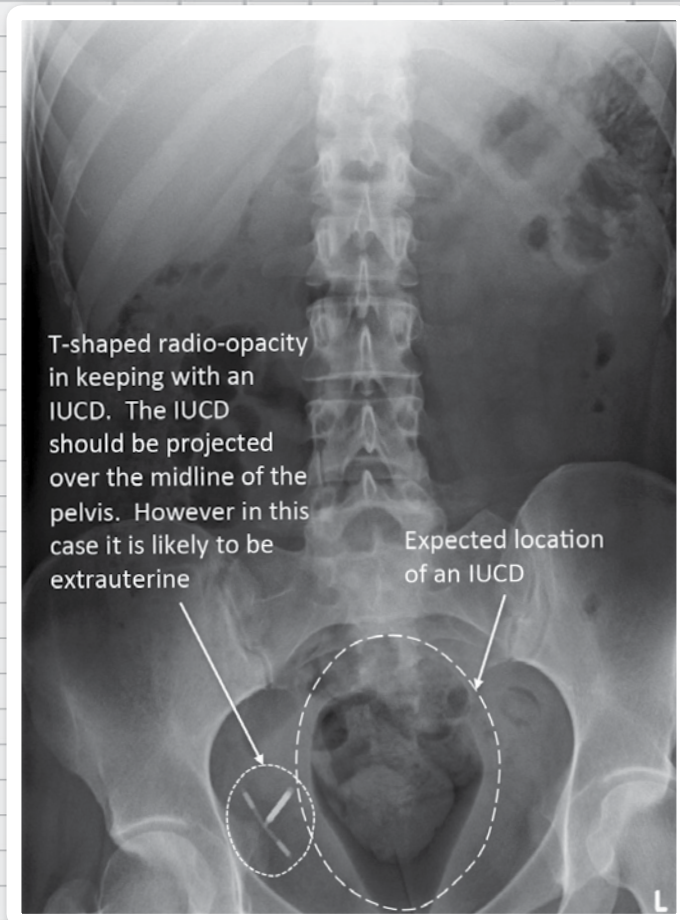
A 34 year old woman presents to A&E with lower abdominal pain and nausea. She has recently had an IUCD inserted by her GP. On examination with a speculum, the strings of the IUCD were not visible, and an ultrasound scan could not identify the IUCD within the uterine cavity. An abdominal X-ray has subsequently been performed.



PRESENT YOUR FINDINGS...



- This is a supine AP abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth and time that the X-ray was performed before making any further assessment.
- The hemidiaphragms and hernial orifices are not completely imaged. The X-ray is therefore technically inadequate; however, the salient abnormality is displayed.
- Within the pelvis, a T-shaped radiopaque object is projected to the right of the midline and is in keeping with an IUCD. Its position, coupled with the clinical and ultrasound examinations, suggests it is outside the uterus.
- The bowel gas pattern is normal, with no plain X-ray evidence of obstruction, perforation or mucosal oedema.
- There is no obvious abnormality of the visible solid abdominal organs.
- No major skeletal or soft tissue abnormality is evident.



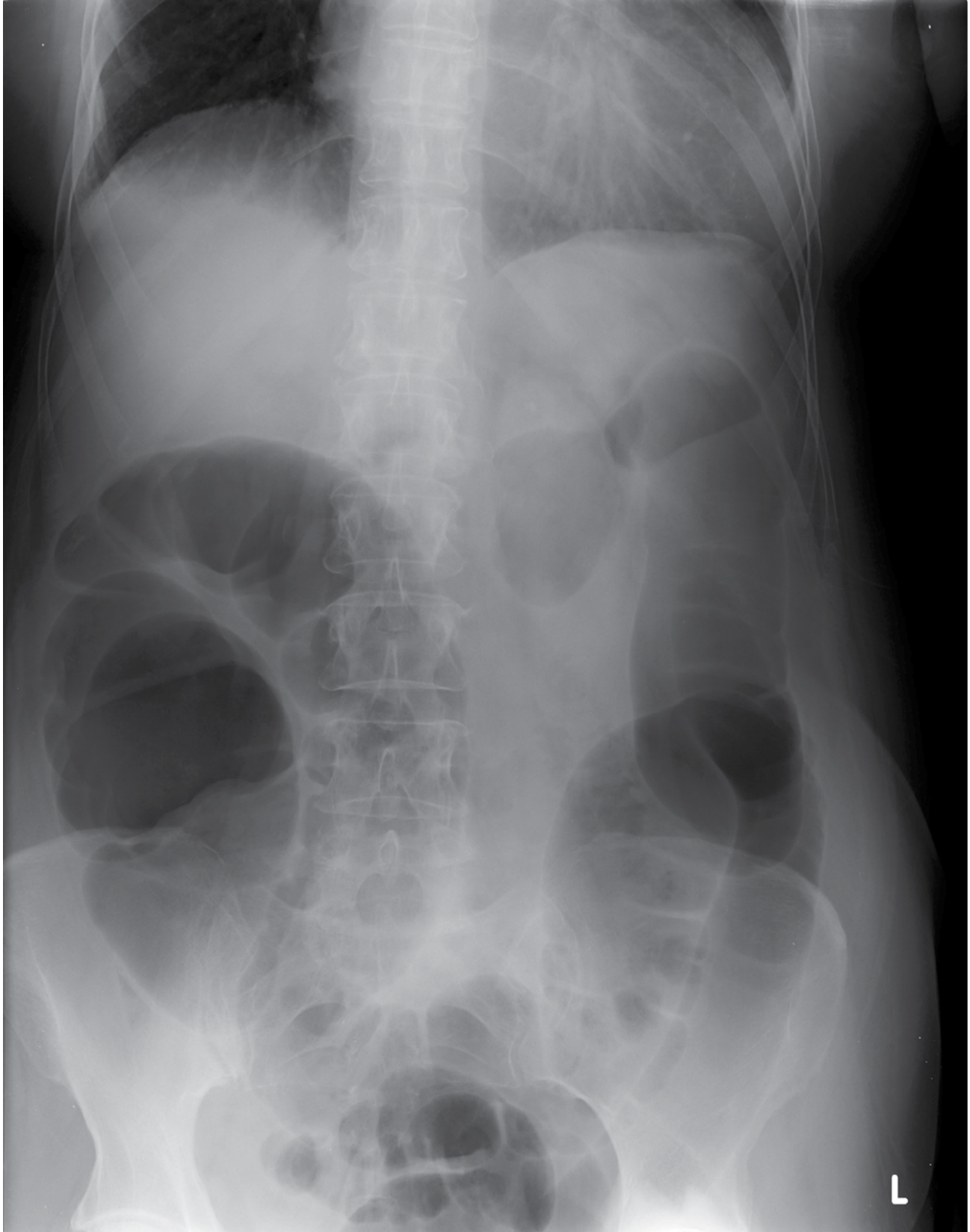
IN SUMMARY – This abdominal X-ray shows an IUCD projected over the right side of the pelvis. Its position, coupled with the clinical and ultrasound examinations, suggests it has migrated outside the uterus.

There is a risk of infection and damage to adjacent organs, such as the bowel or bladder. An urgent gynaecology review is required.



ABDOMINAL X-RAYS - CASE 3

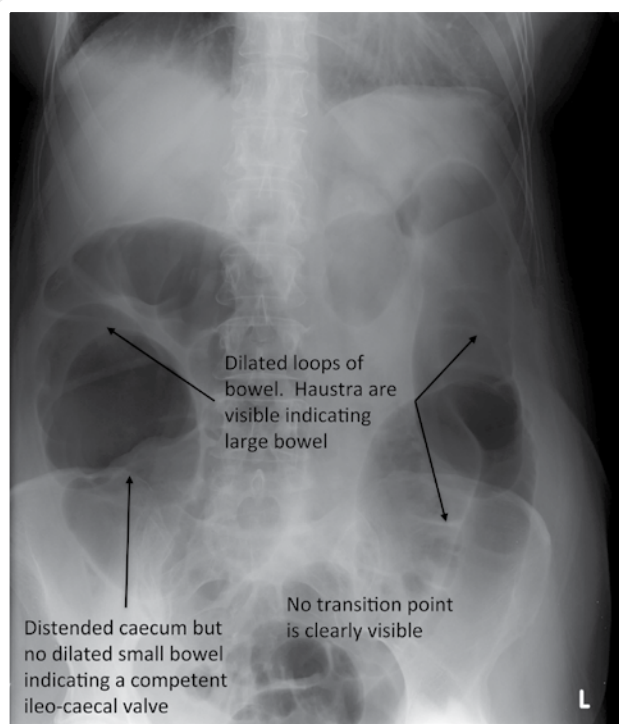
A 55 year old man who has diabetes and hypertension presents with severe central abdominal pain with associated vomiting. He has not passed a bowel movement or flatus for the past 24-48 hours. Below is his abdominal X-ray.



PRESENT YOUR FINDINGS...



- This is a supine abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth, date and time that the X-ray was performed before making any further assessment.
- The hernial orifices are not completely imaged. The X-ray is therefore technically inadequate.
- The most striking abnormality is markedly dilated loops of large bowel within the whole abdomen. The site of obstruction is difficult to identify on this X-ray and the rectum is not clearly seen.
- There is no dilatation of the small bowel, suggesting the ileo-caecal valve is competent.
- There is no X-ray evidence of perforation or mucosal oedema.
- There is no obvious abnormality of the solid abdominal organs.
- No major skeletal or soft tissues abnormality can be identified.



IN SUMMARY – This abdominal X-ray shows large bowel dilatation with no evidence of perforation. This site of obstruction is not clearly identifiable and the ileo-caecal valve appears competent.

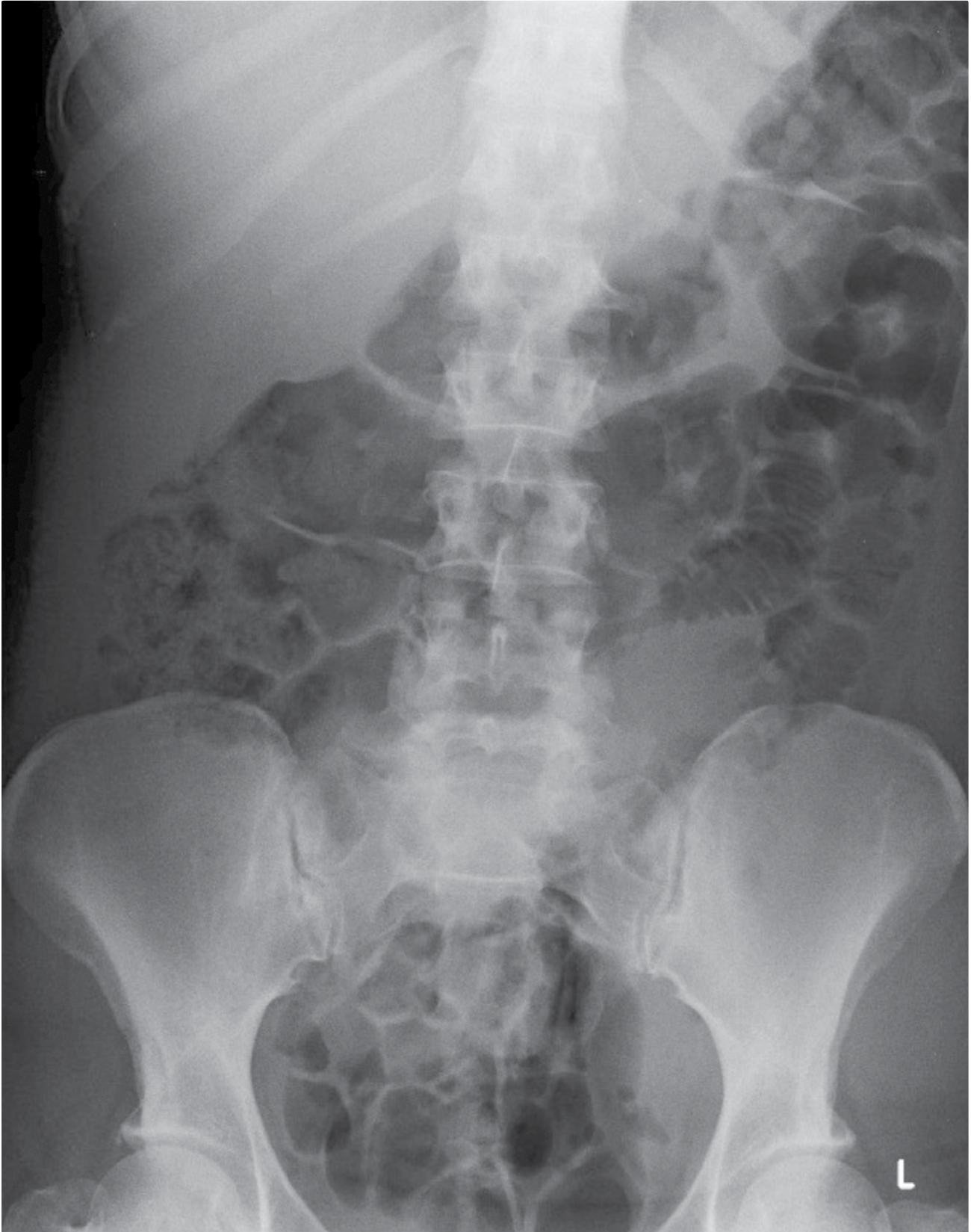
My differential diagnosis includes mechanical bowel obstruction (malignancy, inflammatory or ischaemic strictures) and functional obstruction.

I would ensure routine blood tests and an erect chest X-ray have been performed, make the patient nil by mouth and consider commencing IV fluids. An urgent surgical review is required, with a view to requesting a CT abdomen and pelvis with contrast to investigate for a potential cause of obstruction.



ABDOMINAL X-RAYS - CASE 4

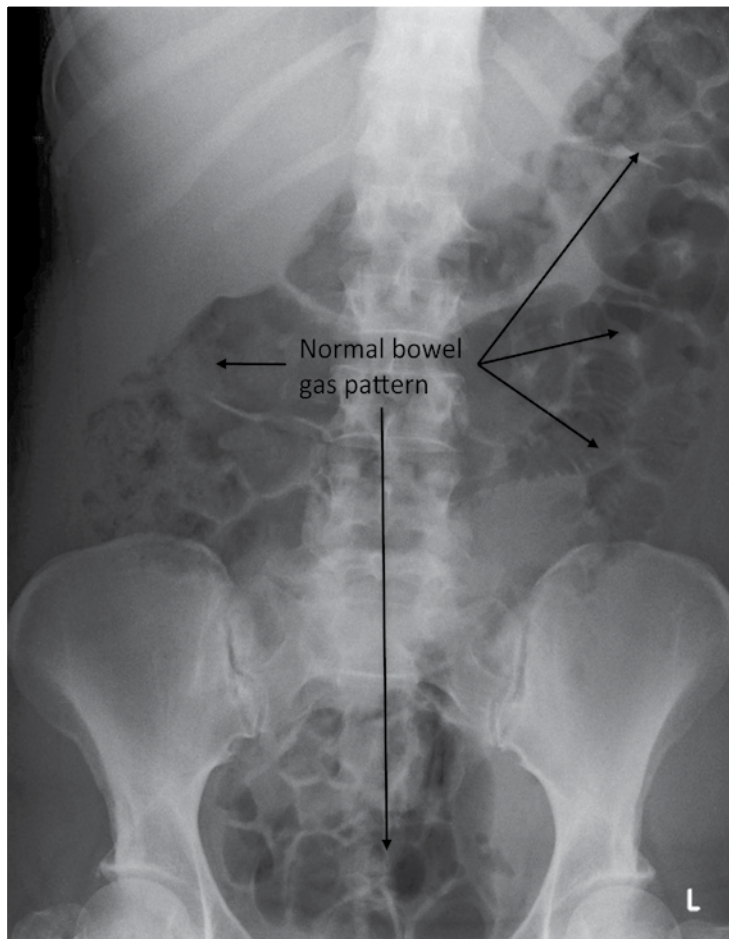
A 50 year old man with no significant past medical history presents to A&E with generalised abdominal pain and nausea. He has not opened his bowels for 4 days. Below is his abdominal X-ray.



PRESENT YOUR FINDINGS...



- This is a supine AP abdominal X-ray.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth and the date and time that the X-ray was performed before making any further assessment.
- The hemidiaphragms, hernial orifices and flanks are not completely imaged. The X-ray is therefore technically inadequate.
- The bowel gas pattern is normal, with no X-ray evidence of obstruction, perforation or mucosal oedema.
- There is no obvious abnormality of the visible solid abdominal organs.
- No major skeletal or soft tissues abnormality is visible.

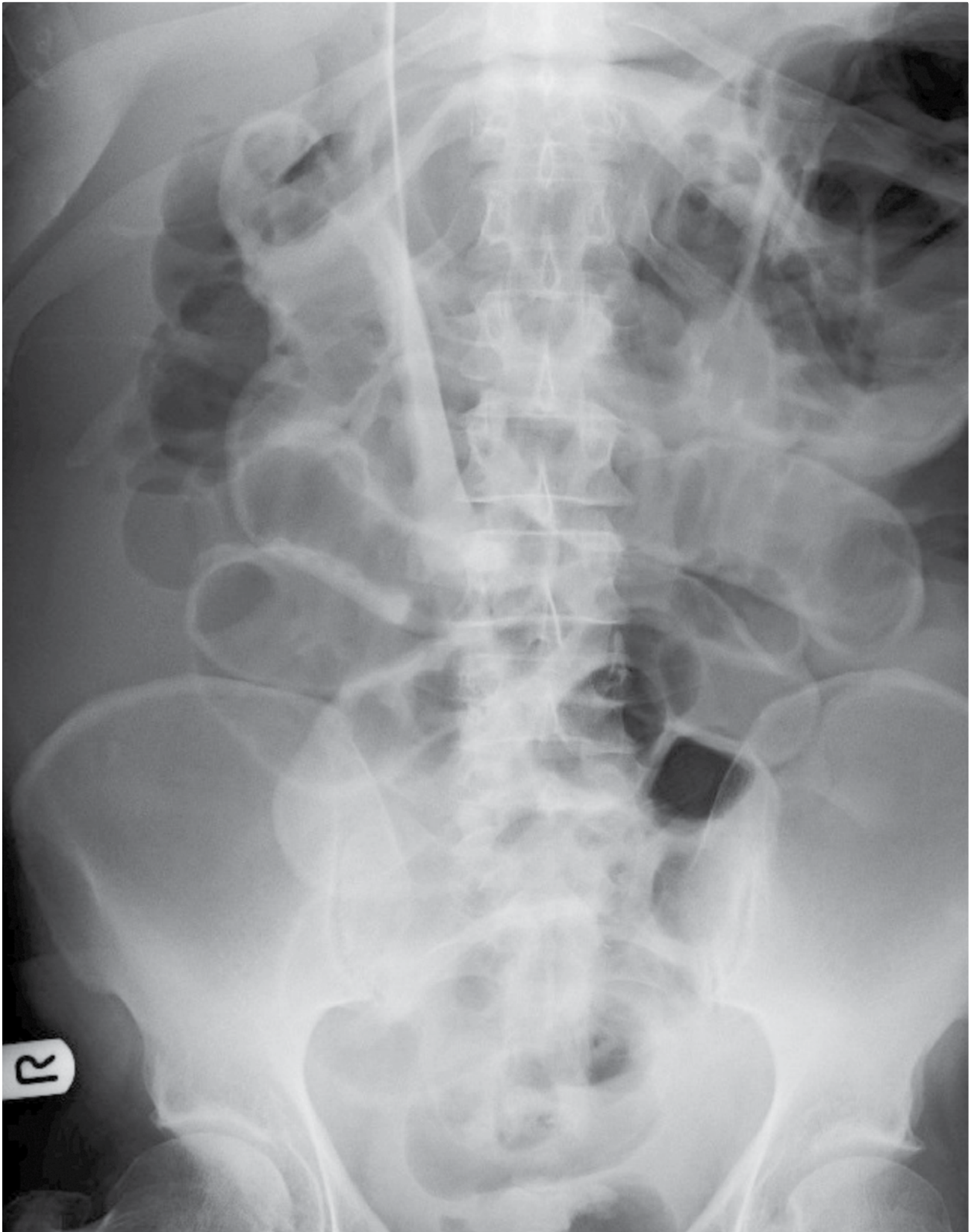


IN SUMMARY – This is a normal abdominal X-ray with no features to explain the presenting symptoms. The differential diagnosis for this patient's presentation remains wide. Clinical assessment (history and examination) along with routine blood tests and an erect chest X-ray should help to guide further management.



ABDOMINAL X-RAYS - CASE 5

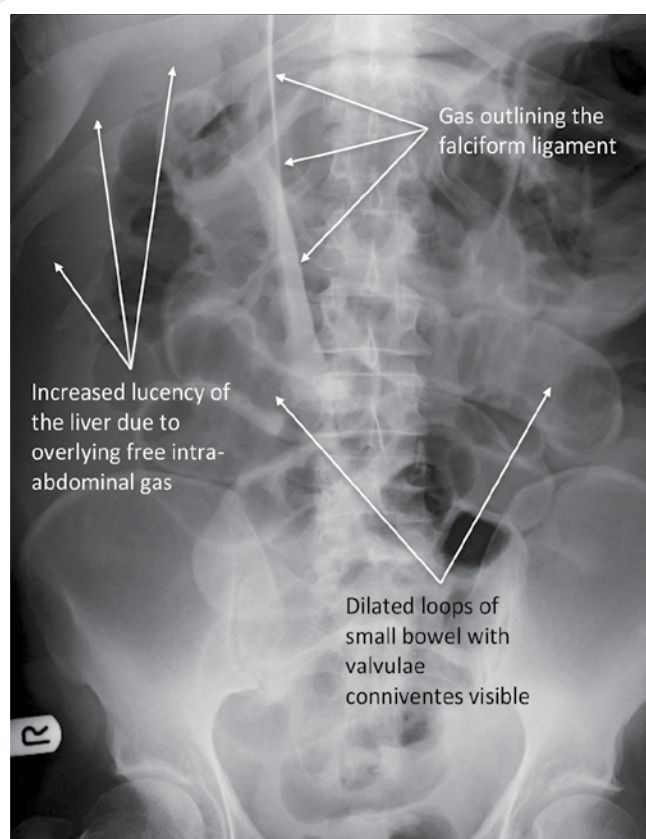
A 32 year old man, who has had previous abdominal surgery, presents with central abdominal pain and bilious vomiting. His abdomen is diffusely tender and peritonitic. Below is his abdominal X-ray.



PRESENT YOUR FINDINGS...



- This is a supine abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth, and the date and time that the X-ray was performed before making any further assessment.
- The hemidiaphragms, hernial orifices and flanks are not completely imaged. The X-ray is therefore technically inadequate.
- The most striking abnormality is that there are several loops of gas filled dilated small bowel in the centre of the X-ray.
- The large bowel is not obviously seen, which supports the suspicion of complete small bowel obstruction with collapsed distal large bowel.
- The falciform ligament is clearly visible and the liver appears hyperlucent. These findings are consistent with free intra-abdominal gas.
- There is no evidence of mucosal oedema.
- No major skeletal or soft tissues abnormality is identified.



IN SUMMARY – This abdominal X-ray shows small bowel obstruction with evidence of pneumoperitoneum.

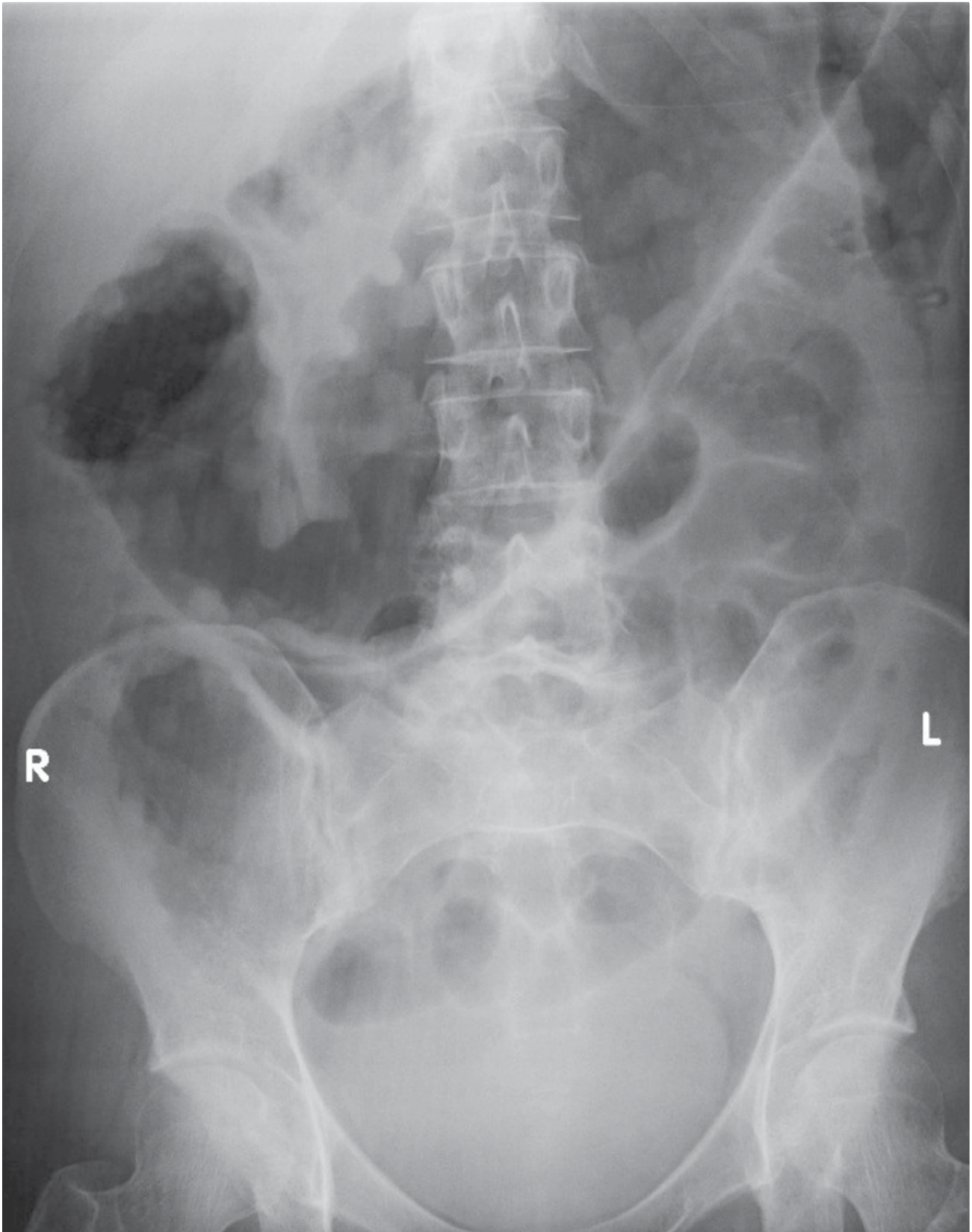
There is a wide differential diagnosis for small bowel obstruction, but given the previous surgery one must consider adhesions. The pneumoperitoneum may be secondary to the small bowel obstruction, or conversely, the small bowel dilatation may represent a functional obstruction secondary to peritoneal contamination following a perforation.

The patient should be nil by mouth, have an NG inserted to decompress the small bowel, commenced on IV fluid and given appropriate analgesia. I would arrange for an urgent surgical review. A CT of the abdomen and pelvis will probably be required for further assessment.



ABDOMINAL X-RAYS - CASE 6

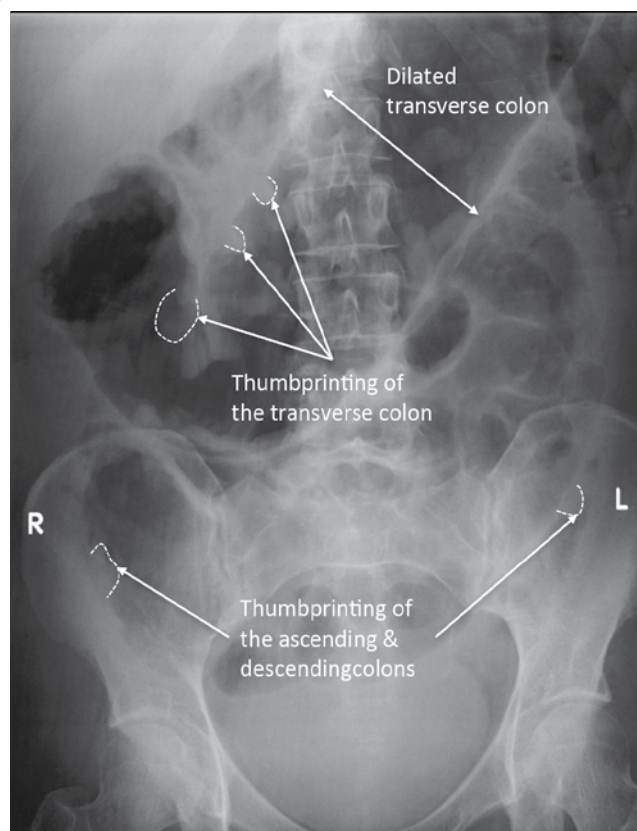
A 35 year old man is being treated for a flare of ulcerative colitis. Clinically, he has not been responding well and a repeat abdominal X-ray has been performed.



PRESENT YOUR FINDINGS...



- This is a supine AP abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth, and the date and time that the X-ray was performed before making any further assessment
- The hemidiaphragms, hernial orifices and flanks are not completely imaged. The X-ray is therefore technically inadequate; however, the salient abnormality is displayed.
- The most striking abnormality is a markedly dilated, abnormal transverse colon with loss of the normal haustral markings.
- There is thumbprinting within the transverse colon, as well as the ascending and descending colon. No gas is visible in the rectum.
- There is no X-ray evidence of perforation.
- There is no obvious abnormality of the visible abdominal organs.
- No major skeletal or soft tissues abnormalities are identified. In particular, the sacroiliac joints appear normal.



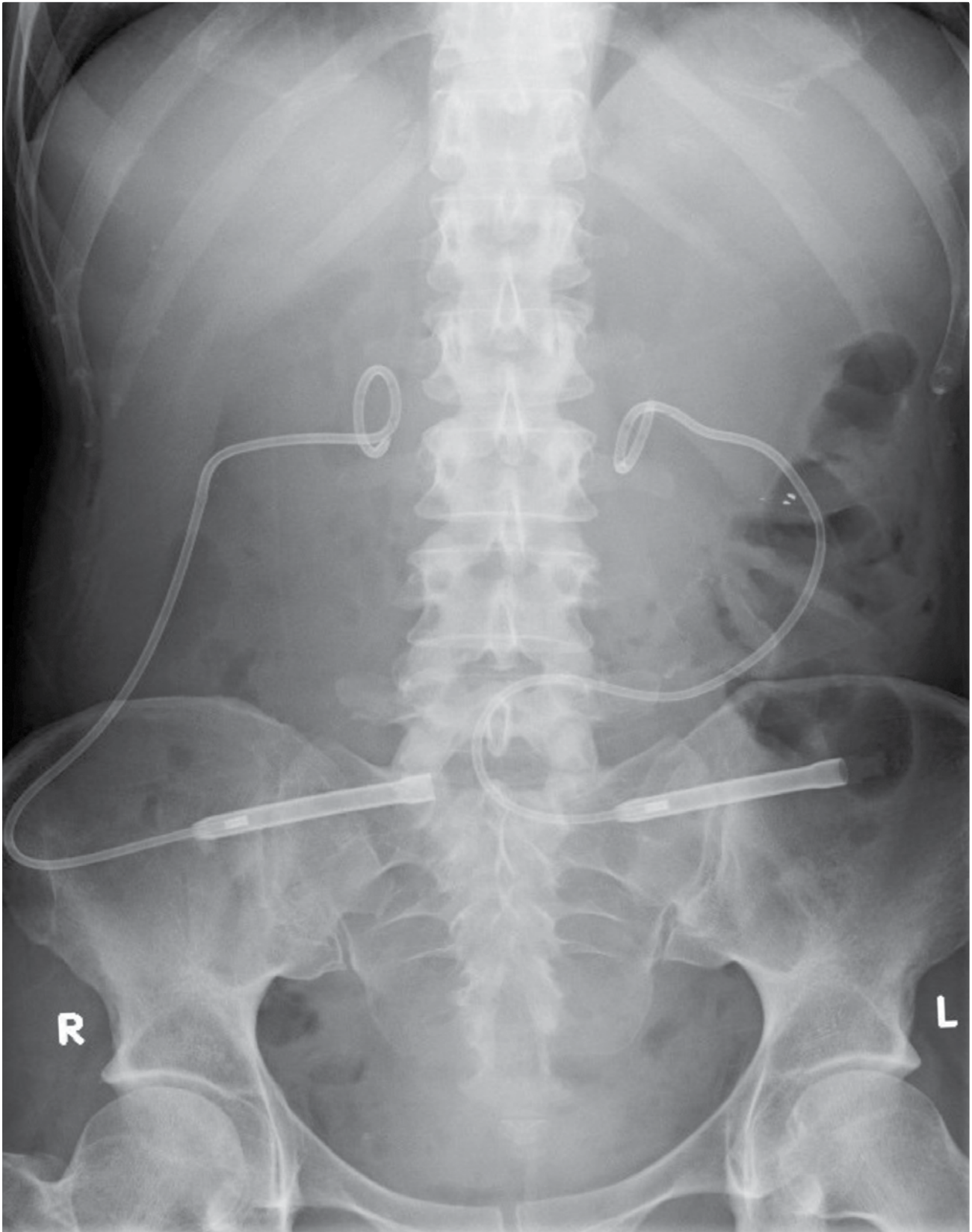
IN SUMMARY – This abdominal X-ray is grossly abnormal. The findings are consistent with marked mucosal oedema and toxic dilatation of the transverse colon, in keeping with the history of inflammatory bowel disease.

This patient requires urgent medical and surgical review. He should be made nil by mouth with IV fluid resuscitation and electrolyte replacement. A decision regarding continued medical management versus surgical treatment (colectomy) should be made by senior doctors.

 **PRESENT
YOUR
FINDINGS...**

 ABDOMINAL X-RAYS - CASE 7

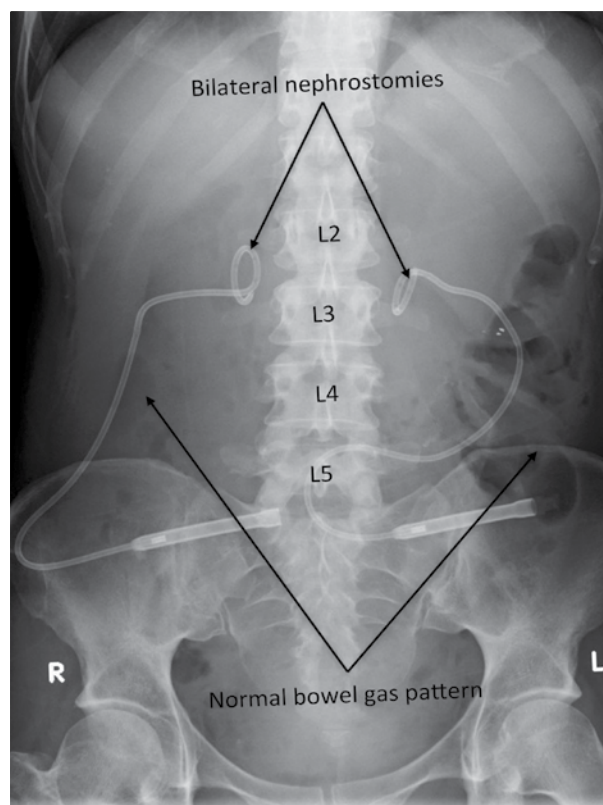
A 65 year old man, who has recently been diagnosed with advanced bladder cancer, was admitted to hospital 6 days ago with urinary obstruction. He has not opened his bowels for the last 5 days and has developed abdominal pain. An abdominal X-ray has been performed.



PRESENT YOUR FINDINGS...



- This is a supine AP abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth and date and time that the X-ray was performed before making any further assessment.
- The hernial orifices are not completely imaged, therefore the film is technically inadequate.
- There are bilateral radio-opaque tubes in situ, each of which has a coiled end projected over the transverse processes of L2/3. These are consistent with bilateral nephrostomy catheters and were presumably recently inserted to relieve the urinary obstruction.
- The bowel gas pattern is normal, with no plain X-ray evidence of obstruction, perforation or mucosal oedema.
- There is no obvious abnormality of the visible solid abdominal organs.
- No skeletal or soft tissues abnormalities are identified.



IN SUMMARY – This abdominal X-ray shows bilateral renal nephrostomies in situ but no evidence of bowel obstruction, perforation or mucosal oedema.

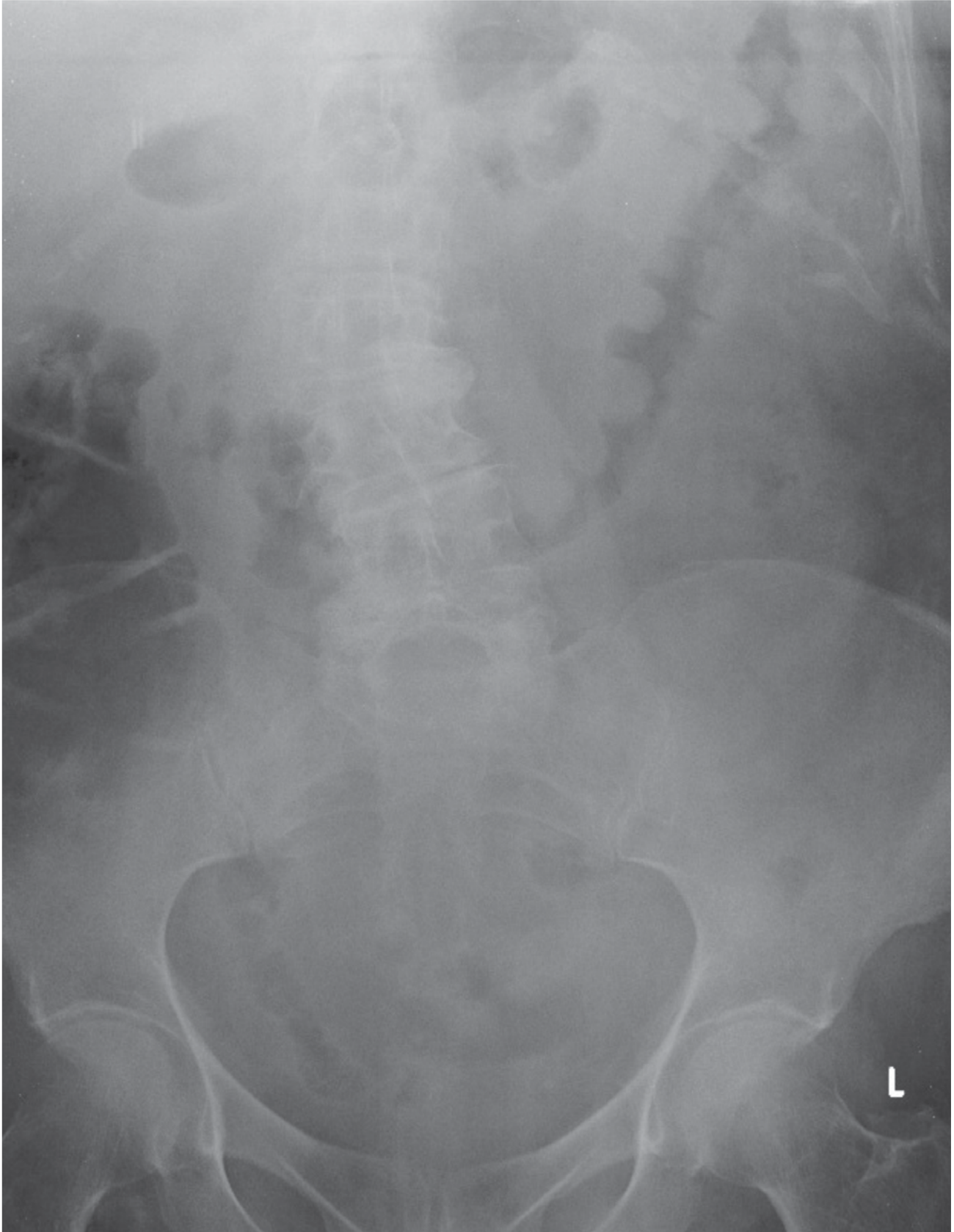
The cause of the patient's symptoms is not demonstrated; however, my differential diagnosis includes potential nephrostomy complications such as catheter obstruction, displacement or urinary leakage, and other causes of an acute abdomen.

I would like to examine the patient, in particular looking for evidence of peritonism and displacement/obstruction of the nephrostomies. An erect chest X-ray and routine bloods, including renal function and inflammatory markers, should be performed. I would discuss the patient with my seniors, as further imaging such as a CT or fluoroscopic nephrostograms may be required.



ABDOMINAL X-RAYS - CASE 8

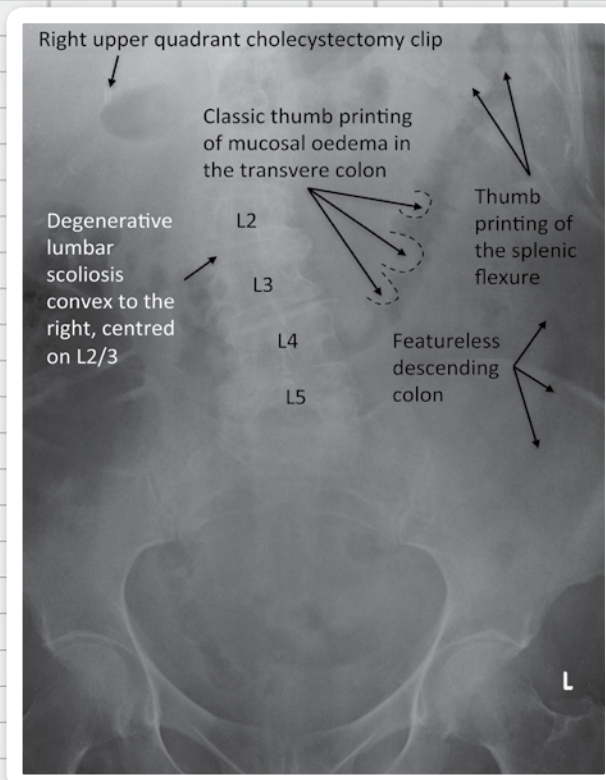
A 74 year old woman, who has a past history of ischaemic heart disease, atrial fibrillation and COPD, presents with a 10 hour history of severe central abdominal pain. She has had a few episodes of diarrhoea but no vomiting. Below is her abdominal X-ray.



PRESENT YOUR FINDINGS...



- This is a supine abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth and date and time that the X-ray was performed before making any further assessment.
- The hemidiaphragms, hernial orifices and flanks are not completely imaged. The X-ray is therefore technically inadequate.
- The most striking abnormality is marked mucosal oedema and thumb printing
- affecting the transverse colon and extending to the splenic flexure.
- There is no toxic dilatation.
- The descending colon is empty and featureless. Elsewhere, the bowel gas pattern is unremarkable, with no plain X-ray evidence of obstruction or perforation.
- There is a surgical clip projected over the right upper quadrant, in keeping with a previous cholecystectomy. No obvious abnormality of the solid abdominal organs is evident.
- There is no obvious abnormality of the visible solid abdominal organs.
- A degenerative lumbar scoliosis convex to the right centred on L2/3 is present. No other skeletal or soft tissues abnormality is visible.



IN SUMMARY – This abdominal X-ray shows marked mucosal oedema of the transverse colon. There is no evidence of toxic dilatation currently.

*My differential diagnosis for mucosal oedema includes ischaemic, infective (such as *Clostridium difficile*) and inflammatory causes. Other possibilities include malignancy and haemorrhage; however, given the clinical details and the watershed distribution of the colitis, ischaemia would be highest on my differential.*

Routine bloods, a serum lactate and stool samples should be acquired. Urgent discussion with the general surgeons is needed, and a CT of the abdomen and pelvis with contrast (arterial and portal venous phases) should be considered.



PRESENT YOUR FINDINGS...



ABDOMINAL X-RAYS - CASE 9

A 2 day old premature neonate develops abdominal distension and bloody stools. On examination, the abdomen feels tense and there are decreased bowel sounds. Below is his abdominal X-ray.



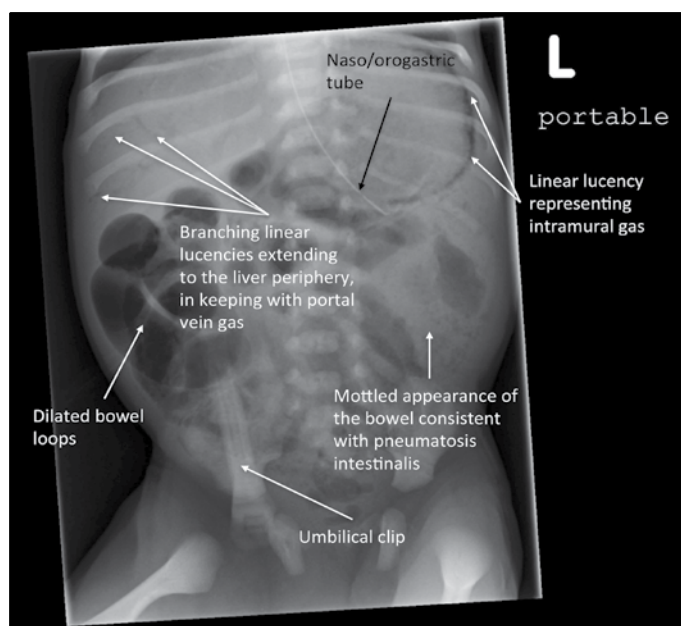
L

portable

PRESENT YOUR FINDINGS...



- This is a portable supine AP abdominal X-ray of a neonate.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth, and the date and time that the X-ray was performed before making any further assessment.
- The X-ray is technically adequate.
- There are multiple abnormalities demonstrated. There are dilated loops of bowel within the right side of the abdomen. At this age, differentiation between the small and large bowel is difficult on X-rays.
- The bowel in the left flank has a mottled appearance and a linear lucency is evident in the left upper quadrant. These findings are consistent with pneumatosis intestinalis with intramural gas in the stomach.
- Linear gas patterns projected over the liver are present. The linear gas patterns most likely represent gas within the portal venous system as they extend out towards the liver periphery/edge (as opposed to pneumobilia in which the gas is central within the liver).
- There is no evidence of pneumoperitoneum.
- A naso/orogastric tube is in situ, with its tip in the stomach, and an umbilical clip is present projected over the right lower quadrant.



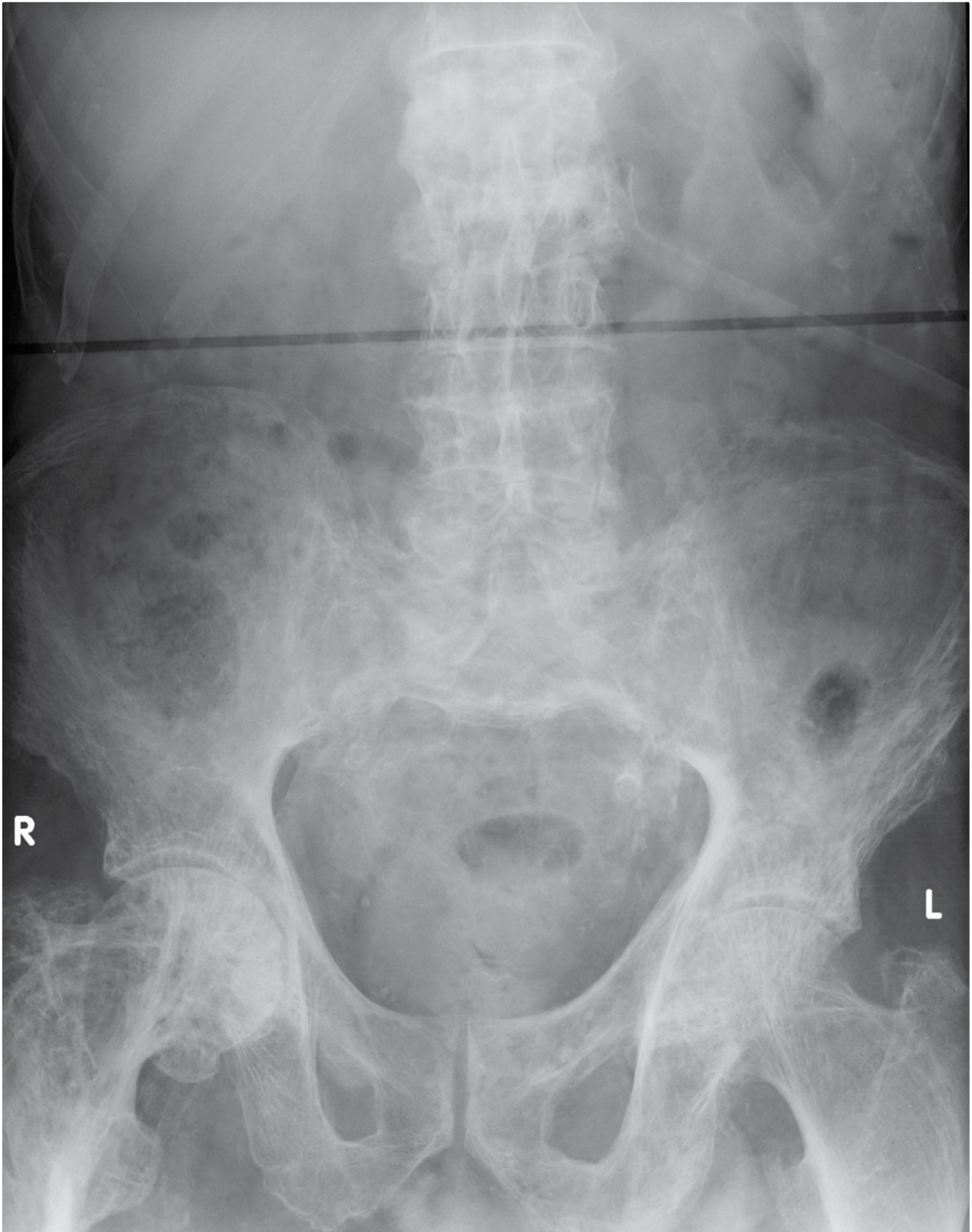
IN SUMMARY – This abdominal X-ray shows dilated bowel loops, pneumatosis intestinalis and portal venous gas. These findings, in combination with the clinical presentation, are in keeping with necrotising enterocolitis. There is no evidence of pneumoperitoneum.

The patient should be made nil by mouth and IV fluid commenced. Routine bloods including inflammatory markers, as well as blood cultures, should be taken. IV antibiotics in accordance with local guidelines should be started and an urgent surgical review arranged.



ABDOMINAL X-RAYS - CASE 10

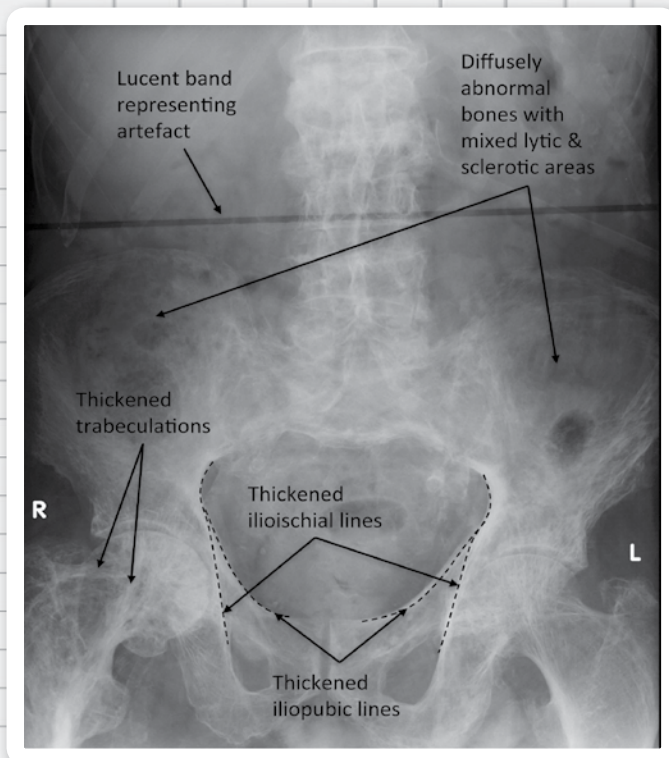
A 70 year old man has an abdominal X-ray for vague abdominal pain and symptoms of altered bowel habit. His X-ray is shown below.



PRESENT YOUR FINDINGS...



- This is a supine AP abdominal X-ray of an adult.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth, and the date and time that the X-ray was performed before making any further assessment.
- The hemidiaphragms and flanks are not completely imaged. The X-ray is therefore technically inadequate.
- The most striking abnormality is the diffusely abnormal bones. The pelvis and imaged femori are expanded with a mixed lytic and sclerotic pattern. There is thickening of the iliopubic and ilioischial lines and of the trabeculations. The spine appears to be involved as well but is difficult to assess on this projection.
- The bowel gas pattern is normal and there is no X-ray evidence of obstruction, perforation or mucosal oedema.
- No obvious abnormality of the solid abdominal organs is visible.
- There is a thin horizontal lucent line running transversely across the image which is due to artefact.



IN SUMMARY – The bones are diffusely abnormal, particularly the pelvis and femori. The appearances are classical for Paget's disease which is a chronic bone disorder characterised by excessive and disorganised bone remodelling. I would review the patient's routine blood tests and expect to see elevated levels of alkaline phosphatase (ALP) to be in keeping with Paget's disease.

No cause for the patient's abdominal symptoms is demonstrated and further investigations should be guided by the history and examination.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 1

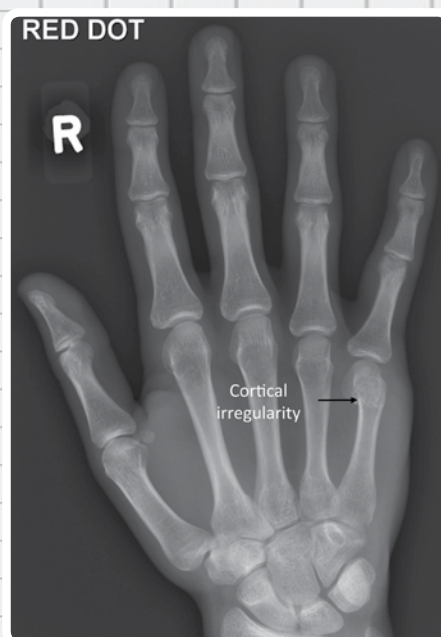
A 22 year old man punched another person whilst intoxicated. He has presented to A&E with pain in his right little finger.



PRESENT YOUR FINDINGS...



- These are AP, oblique and lateral X-rays of the right hand of a skeletally mature patient.
- There are no patient identifiable data on the X-rays. I would like to confirm the patient's name, date of birth and date and time that the X-rays were performed before making any further assessment.
- The X-rays are technically adequate, with no important areas cut off.
- There is a simple, transverse fracture through the neck of the 5th metacarpal. Volar angulation of the distal fracture fragment is present. No shortening.
- Overlying soft tissue swelling is evident.
- The rest of the bones are normal, with no other fracture visible and no areas of bone destruction, lucency or abnormal bone texture.



IN SUMMARY – These X-rays show a minimally angulated fracture through the neck of the 5th metacarpal. The fracture is consistent with a punch injury. Treatment options are determined by the degree of functional impairment and include conservative management with buddy strapping of the 5th digit or operative reduction and fixation.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 2

A 14 year old boy presents to A&E with pain over the lateral aspect of his foot following an inversion injury. He is tender over the base of the 5th metatarsal but able to weight bear. X-rays have been performed for further assessment.



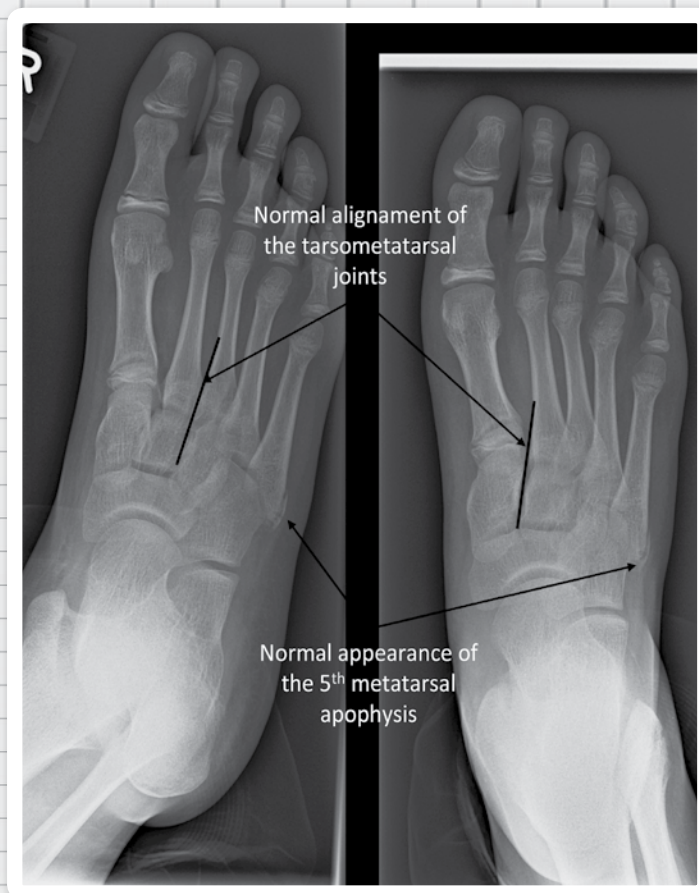
PRESENT YOUR FINDINGS...



- These are frontal and oblique X-rays of the right foot of a skeletally immature patient.
- There are no patient identifiable data on the X-rays. Confirmation of the patient's name and date of birth, and the date and time when

the X-rays were performed is required before making any further assessment.

- The X-rays are technically adequate, with no important areas cut off.
- Normal appearance of the bones with no fracture visible.
- The alignment of the right midfoot is normal.
- No areas of bone destruction, lucency or abnormal bone texture are visible.
- The soft tissues are unremarkable.



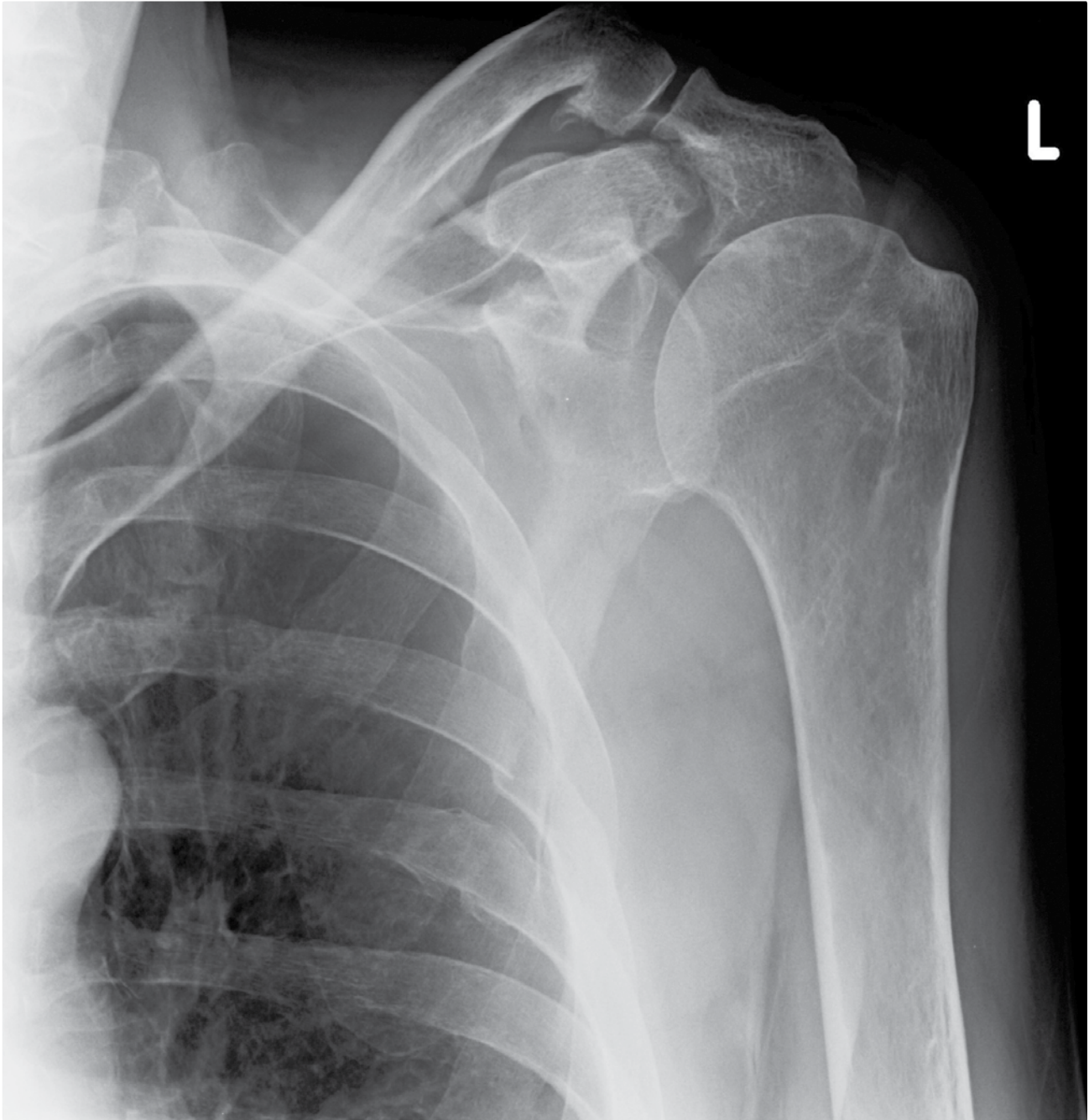
IN SUMMARY –

These X-rays show a normal right foot with no acute bony injury visible.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 3

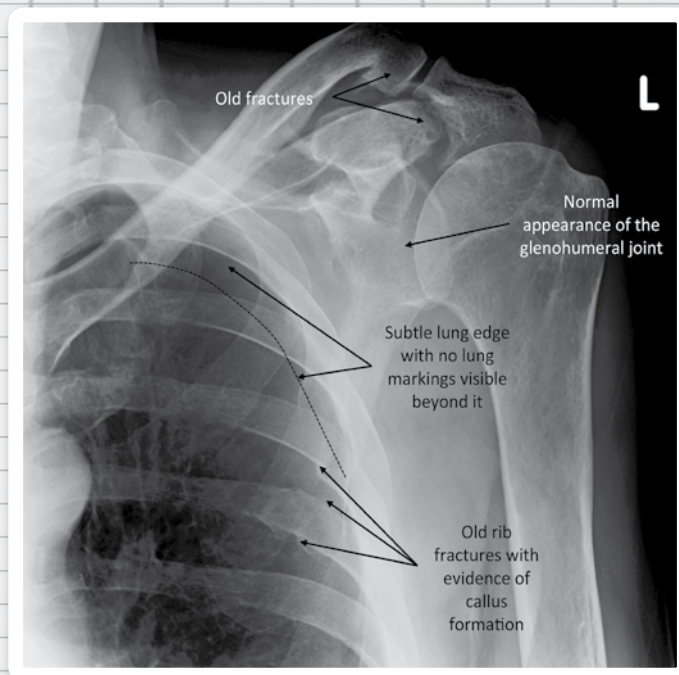
A 57 year old man was knocked off his bicycle by a car. He developed pain around his left shoulder and rib cage and felt winded. He was brought to A&E by ambulance. He is tender around the left shoulder girdle but able to move his arm. An X-ray of his shoulder has been performed.



PRESENT YOUR FINDINGS...



- This is an AP X-ray of the left clavicle and shoulder in a skeletally mature patient.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name, date of birth and the date and time the X-ray was performed before making any further assessment.
- The X-rays is adequately exposed but I would also like to see a "second" view of the left shoulder.
- There are old fractures of the lateral aspect of the clavicle and the coracoid.
- In addition, old healed fractures of the left 5th and 6th ribs are evident.
- I cannot see any acute fracture. The left glenohumeral joint appears to be intact although I would like to review a "second" view of the shoulder to confirm this.
- No areas of bone destruction, lucency or abnormal bone texture.
- There is a small left apical pneumothorax visible in the imaged lung, no other lung abnormality.
- The soft tissues are unremarkable.



IN SUMMARY – This X-ray shows a small apical left sided pneumothorax and old fractures of the left clavicle, coracoid and 5th and 6th ribs. The cause of the pneumothorax is not visible. I would like to request a PA chest X-ray for further

assessment of the pneumothorax and to look for any acute rib fractures. Additionally, I would like to review a second view of the left shoulder to ensure there is no dislocation.



PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 4

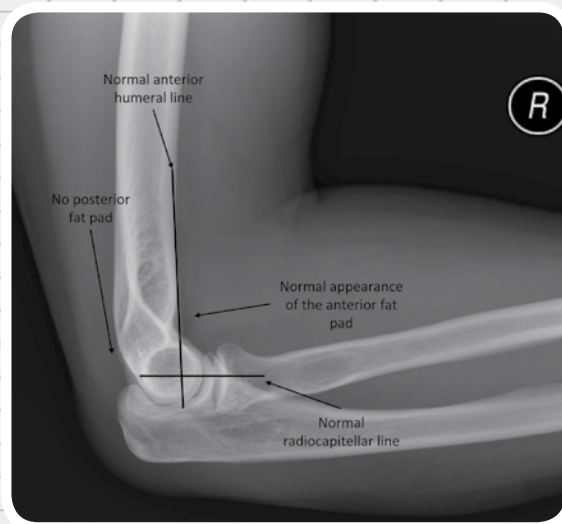
A 42 year old woman fell off her bike, landing on her right elbow. It is tender on palpation, with a reduced range of movement. X-rays of the elbow have been performed.



PRESENT YOUR FINDINGS...



- These are lateral and frontal X-rays of the right elbow of a skeletally mature patient.
- There are no patient identifiable data on the X-rays. Confirmation of the patient's name and date of birth, and the date and time when the X-rays were performed is required before making any further assessment.
- The X-rays are technically adequate with no important areas cut off.
- There is normal alignment of the elbow joint.
- No fracture or joint effusion is visible.
- No areas of bone destruction, lucency or abnormal bone texture.
- The soft tissues are unremarkable.



IN SUMMARY – These X-rays show a normal right elbow with no evidence of a fracture, effusion or dislocation.



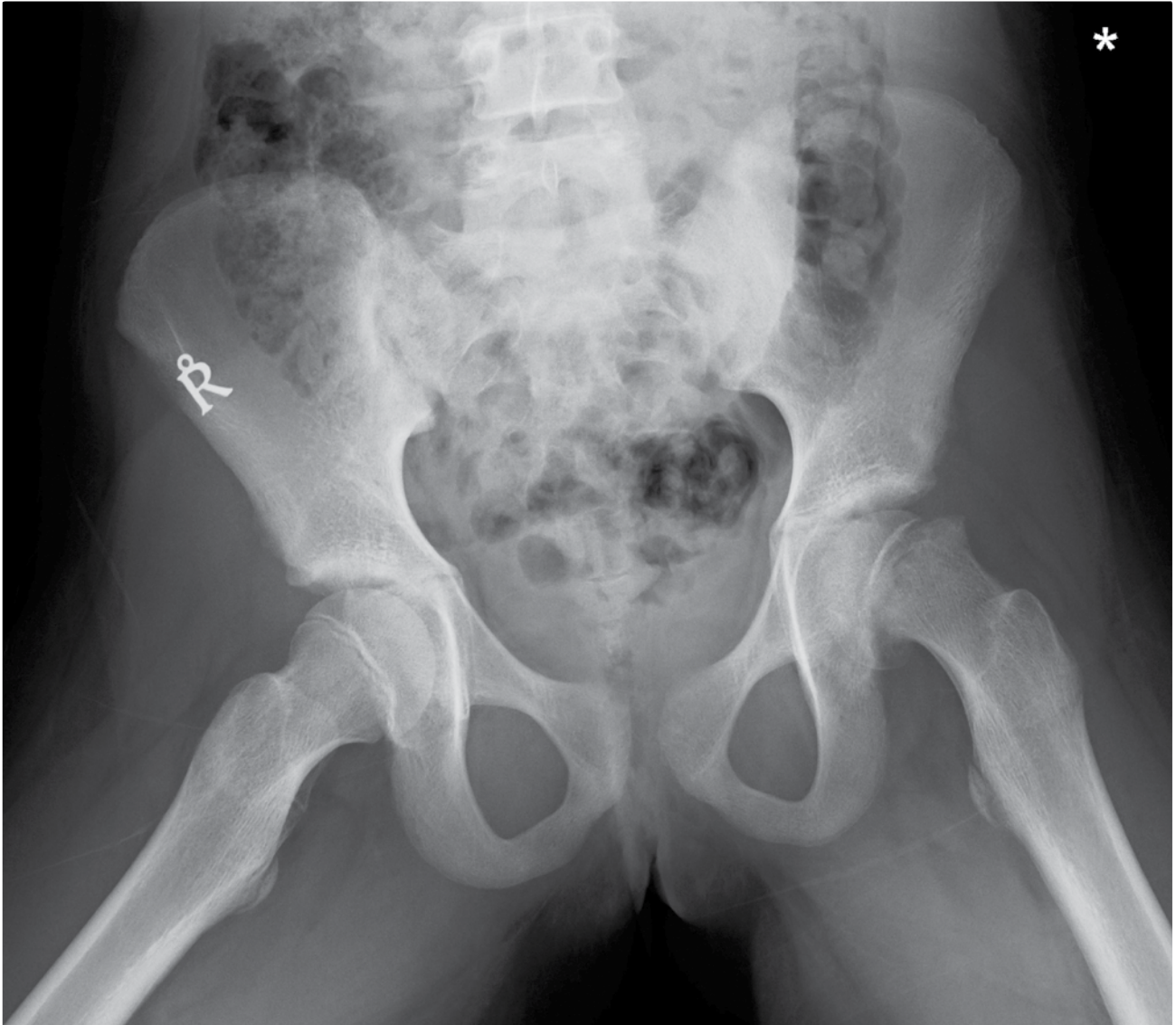


PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 5

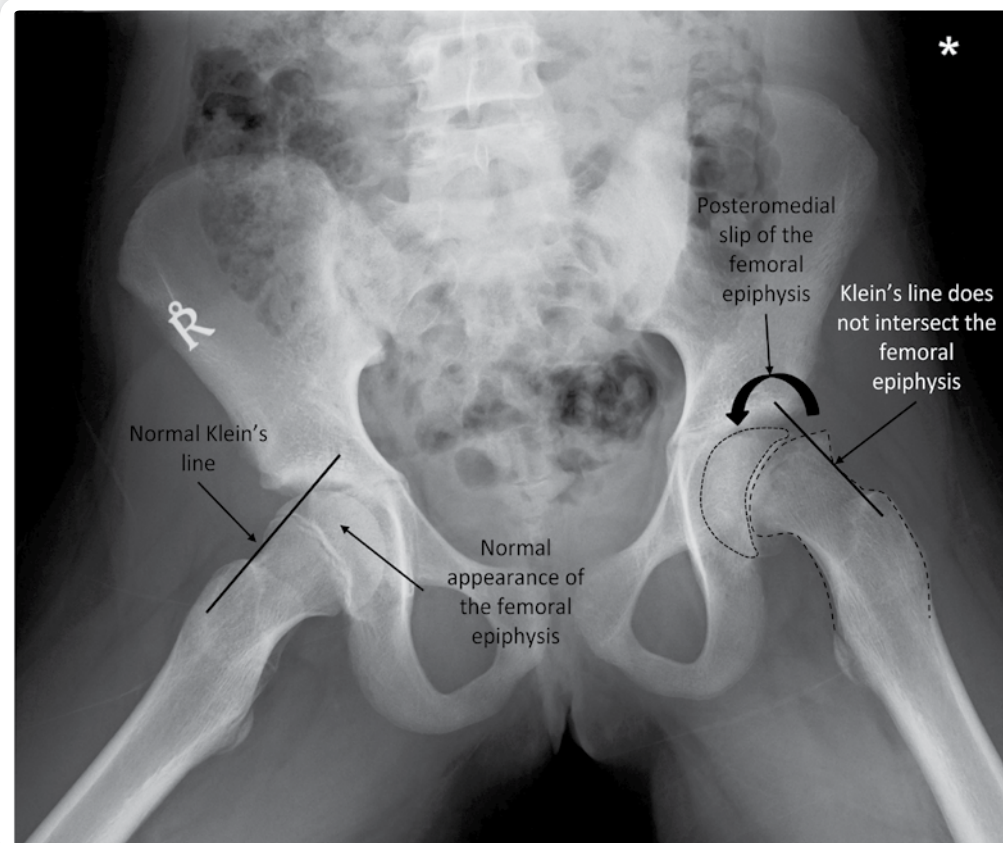
An 11 year old girl presents with progressive left hip pain and a limp which has worsened over the last few days. She is systemically well, with no fever, but is finding it painful to weight bear. A pelvic X-ray is performed.



PRESENT YOUR FINDINGS...



- This is a “frog leg” lateral X-ray of the hips in a skeletally immature patient.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient’s name, date of birth and the date and time the X-ray was performed before making any further assessment.
- The X-ray is adequately exposed, with no important areas cut off.
- There is abnormal alignment of the left epiphysis with respect to the femoral metaphysis. The epiphysis has slipped medially, with irregularity of the physis. These findings are in keeping with a slipped upper femoral epiphysis.
- No other fracture or bony abnormality is visible. In particular, the right upper femoral epiphysis appears normal.
- No significant abnormality of the soft tissues is evident.



***IN SUMMARY** – This X-ray demonstrates a left slipped upper femoral epiphysis. The right upper femoral epiphysis appears normal. The patient should be referred to orthopaedics as it will require operative fixation. The right hip may be prophylactically fixed at the same time.*



PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 6

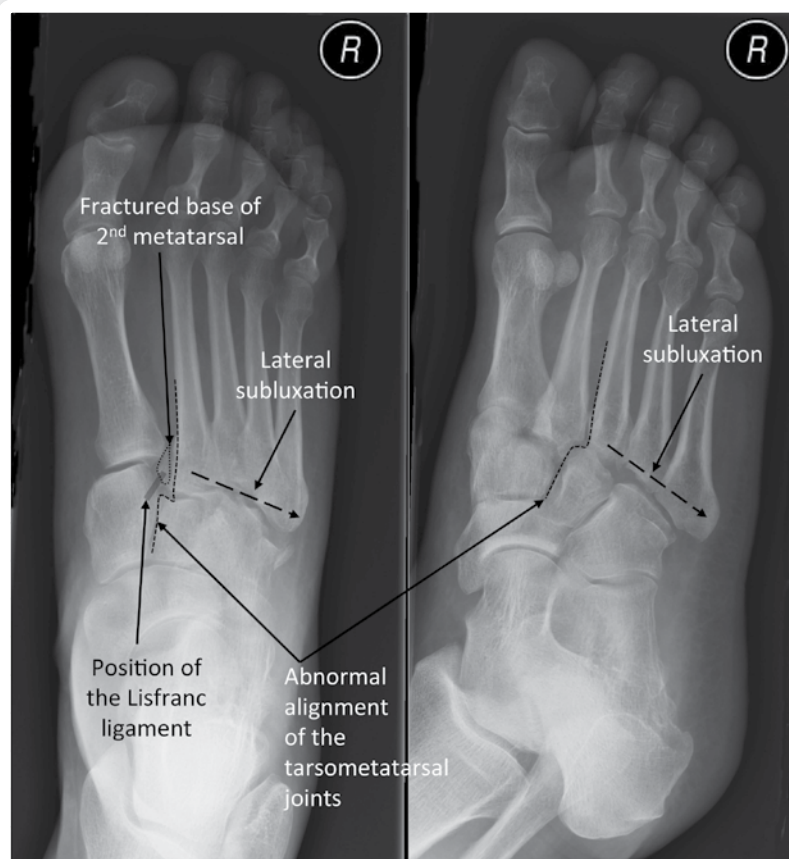
A 45 year old has fallen over whilst running for a bus. She is unsure how she landed on her foot but is unable to weight bear. She is tender over the mid and forefoot. X-rays have been performed.



PRESENT YOUR FINDINGS...



- These are frontal and oblique X-rays of the right foot.
- There are no patient identifiable data on the X-rays. Confirmation of the patient's name and date of birth, and the date and time when the X-rays were performed is required before making any further assessment.
- The X-rays are technically adequate, with no important areas cut off.
- There is loss of the normal alignment of the 2nd metatarsal with the middle cuneiform and the 3rd metatarsal with the lateral cuneiform – the 2nd to 5th metatarsals have subluxed laterally.
- There is a small vertical fracture at the base of the 2nd metatarsal visible on the AP view. There is minor medial displacement of the small fracture fragment but no significant angulation or shortening. This is consistent with an avulsion fracture at the insertion of the Lisfranc ligament on the base of the 2nd metatarsal.
- No other dislocation or fracture is evident.
- No areas of bone destruction, lucency or abnormal bone texture are visible.
- The soft tissues are unremarkable.



IN SUMMARY –

These X-rays show a fracture at the base of the 2nd metatarsal, and dislocation of the 2nd-5th tarso-metatarsal joints (Lisfranc injury). Such injuries are unstable and urgent orthopaedic referral is required. The patient may

require a CT of the foot for further assessment of the fracture/ fractures prior to operative fixation.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 7

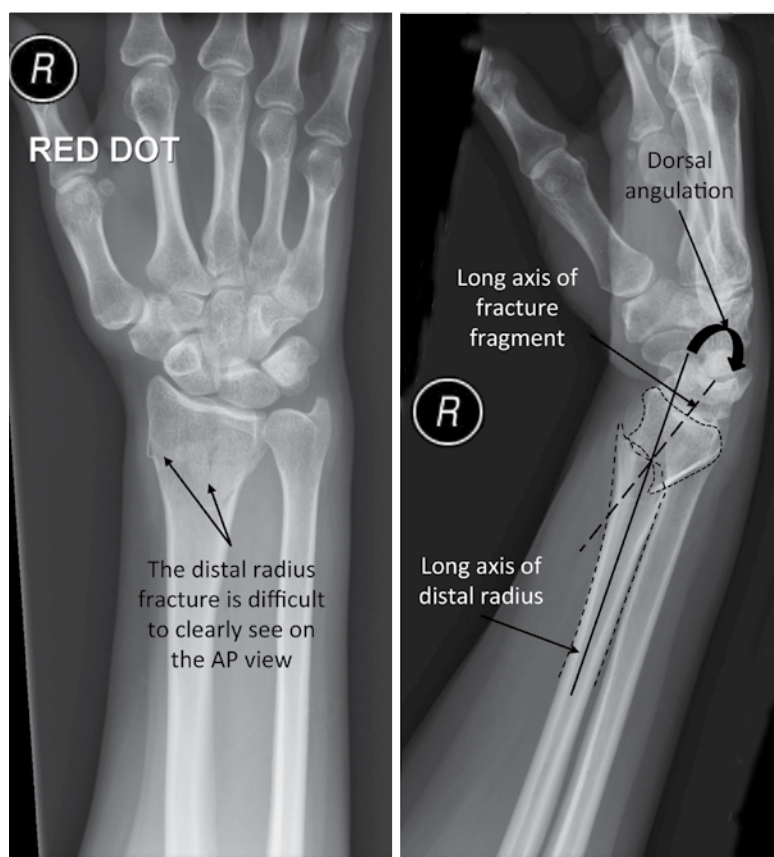
A 60 year old woman has tripped on the pavement. She landed on her outstretched right hand. Her right wrist is swollen, tender on palpation, and she has a reduced range of movement. She works as a secretary and is right hand dominant. You request X-rays for further assessment.



PRESENT YOUR FINDINGS...



- These are AP and lateral X-rays of the right wrist in a skeletally mature patient.
- There are no patient identifiers on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any assessment.
- The X-rays are adequately exposed with no important areas cut off.
- There is a simple transverse fracture through the distal radius. A small amount of dorsal angulation is visible on the lateral view. There is no significant displacement, rotation or shortening.
- No other fracture is visible.
- Alignment of the carpal bones is normal.
- No areas of bone destruction, lucency or abnormal bone texture are visible.
- There is some soft tissue swelling on the dorsal aspect of the right wrist, but no significant soft tissue abnormality.



IN SUMMARY –

These X-rays show a distal radial fracture with mild dorsal angulation. Given the patient's job, it would be appropriate to reduce this fracture into a better position. Repeat X-rays following

manipulation and casting are required, and the patient should be referred to the fracture clinic.



PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 8

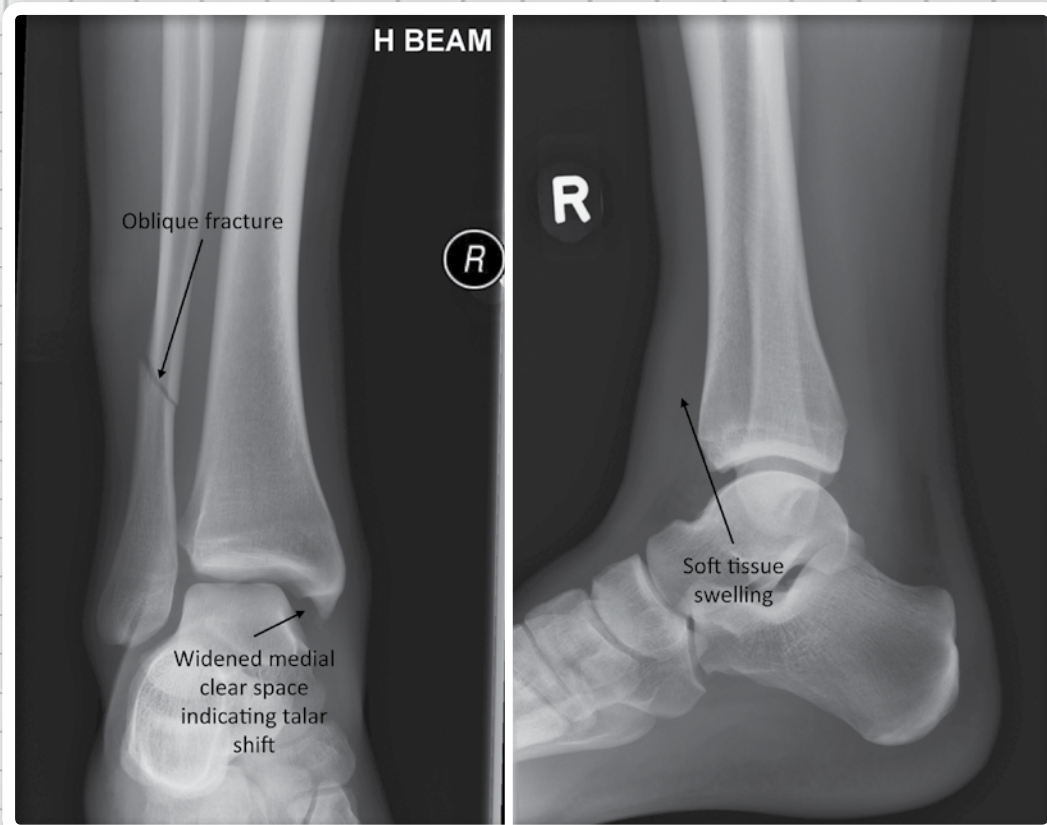
A 40 year old man was playing in football when he was tackled and fell over his right ankle. He felt immediate pain around the lateral aspect of his ankle and was unable to weight bear. He has come to A&E department for assessment.



PRESENT YOUR FINDINGS...



- These are AP and lateral X-rays of the right ankle in a skeletally mature patient.
- There are no patient identifiable data on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequately exposed with no important areas cut off.
- There is an oblique fracture through the distal third of the fibula. The fracture is minimally displaced and proximal to the syndesmosis. There is no shortening.
- There is widening of the medial joint space indicating talar shift (implying rupture of the deltoid ligaments).
- No other fractures are visible.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- There is some subtle soft tissue swelling over the fracture but no other significant abnormality of the soft tissues.



IN SUMMARY – These X-rays show a right Weber C ankle fracture with talar shift. This is an unstable injury which will require surgical fixation. The ankle should be put into a cast and the patient referred to orthopaedics.



PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 9

A 54 year old woman fell, "going over" her left ankle. Her ankle and lateral aspect of the foot are painful on weight bearing and palpable. There is some soft tissue swelling over the lateral aspect of the foot.



PRESENT YOUR FINDINGS...



- These are AP and oblique X-rays of the left foot in a skeletally mature patient.
- There are no patient identifiable data on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequately exposed, with no important areas cut off.
- There is a minimally displaced oblique fracture through the base of the 5th metatarsal. This extends to the tarsometatarsal joint surface. There is no shortening.
- No other fracture is visible.
- Alignment of the midfoot is normal.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- There is no significant abnormality of the soft tissues.



IN SUMMARY – These X-rays show a fracture through the base of the 5th metatarsal. Given its appearance, it is consistent with an avulsion fracture (at the site of the insertion point of peroneus brevis). The patient should be fitted with a walking boot and referred to the fracture clinic.



PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 10

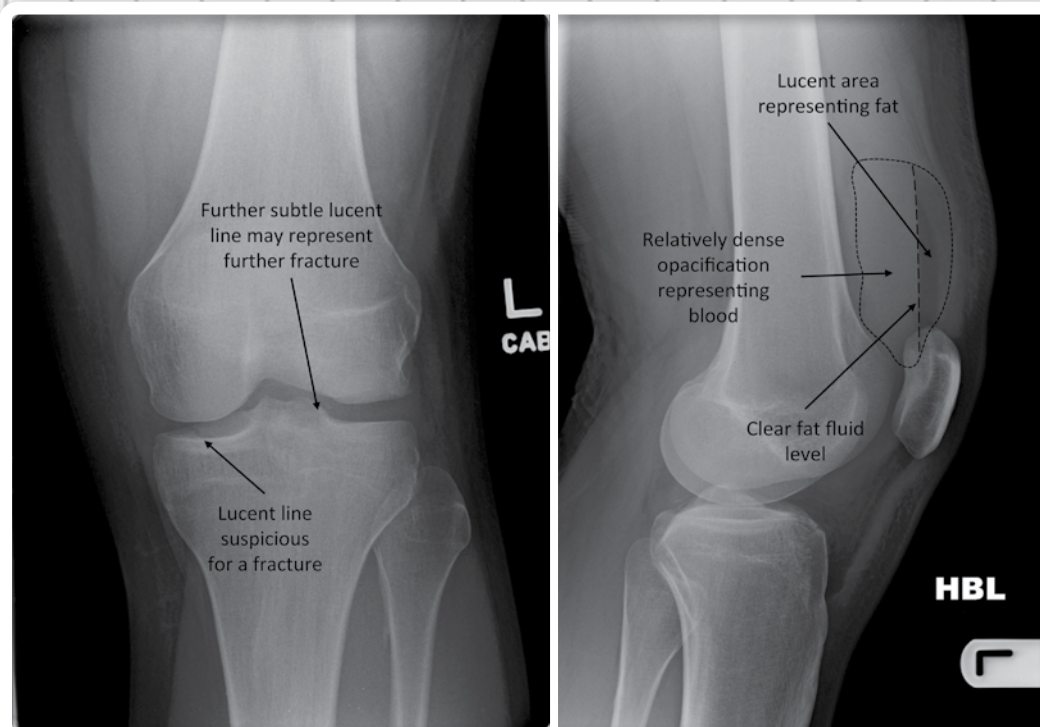
A 24 year old man attends A&E after falling off his motorbike. He complains of a painful right knee and is unable to weight bear. X-rays of the knee have been performed.



PRESENT YOUR FINDINGS...



- These are horizontal beam lateral and frontal X-rays of the right knee of a skeletally mature patient.
- There are no patient identifiable data on the X-rays. Confirmation of the patient's name and date of birth, and the date and time when the X-rays were performed is required before making any further assessment.
- The X-rays are technically adequate, with no important areas cut off.
- The most obvious abnormality is the large knee effusion visible on the lateral view. This has a fluid-fluid level, and is consistent with a lipohaemarthrosis.
- The underlying fracture is difficult to see but there is a lucent line in the medial tibial plateau visible on the frontal view which is suspicious for a fracture. Additionally there may be a fracture of the tibial spine.
- No other fractures are visible.
- Alignment of the knee is normal.
- No areas of bone destruction, lucency or abnormal bone texture are evident.



***IN SUMMARY** – These X-rays show a lipohaemarthrosis with likely fractures of the medial tibial plateau and possible tibial spine. Referral to orthopaedics is required with a view to requesting a CT for further assessment of the fracture fragments prior to possible fracture fixation.*

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 11

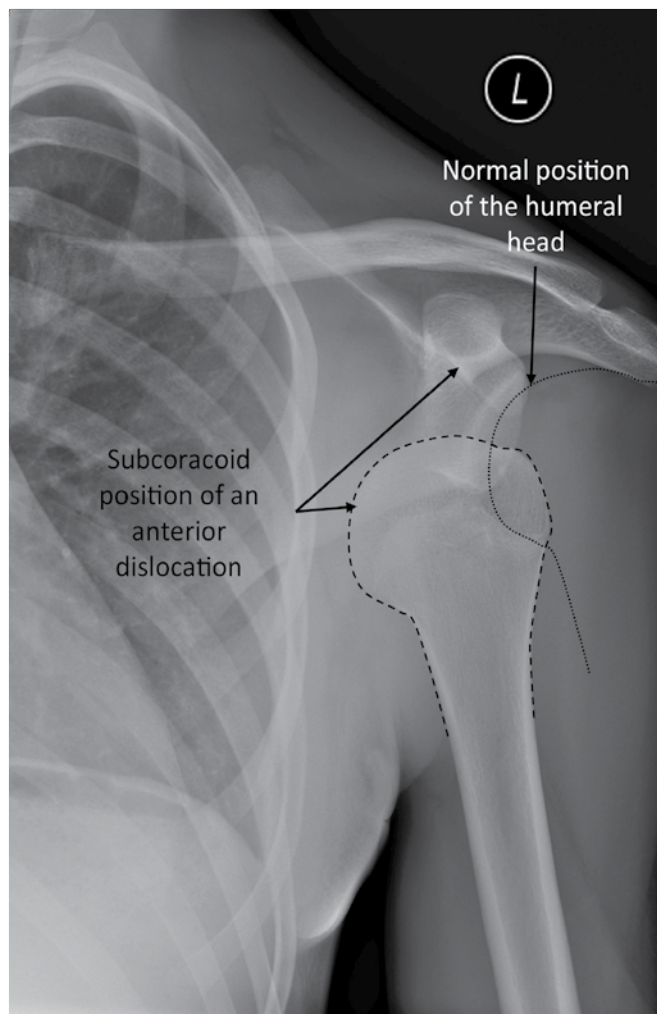
A 34 year old man fell and landed on his left shoulder. He is in a great deal of pain and unable to move his shoulder. There is an obvious deformity of the left shoulder on clinical assessment. You request an X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is an AP X-ray of the left shoulder.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth, and the date and time when the X-ray was performed before making any further assessment.
- The X-ray is technically adequate, with no important area cut off.
- The left humeral head has an abnormal subcoracoid position, consistent with an anterior dislocation.
- No fracture is visible.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- The acromio-clavicular joint appears normal on this non-dedicated, single view.
- The visible left lung appears normal.
- No significant abnormality of the soft tissues is visible.



IN SUMMARY –

These X-ray shows an anterior shoulder dislocation. No associated fracture is visible. The patient should have the shoulder relocated under sedation. A post reduction X-ray is required to confirm relocation of the glenohumeral joint and assess for any fractures.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 12

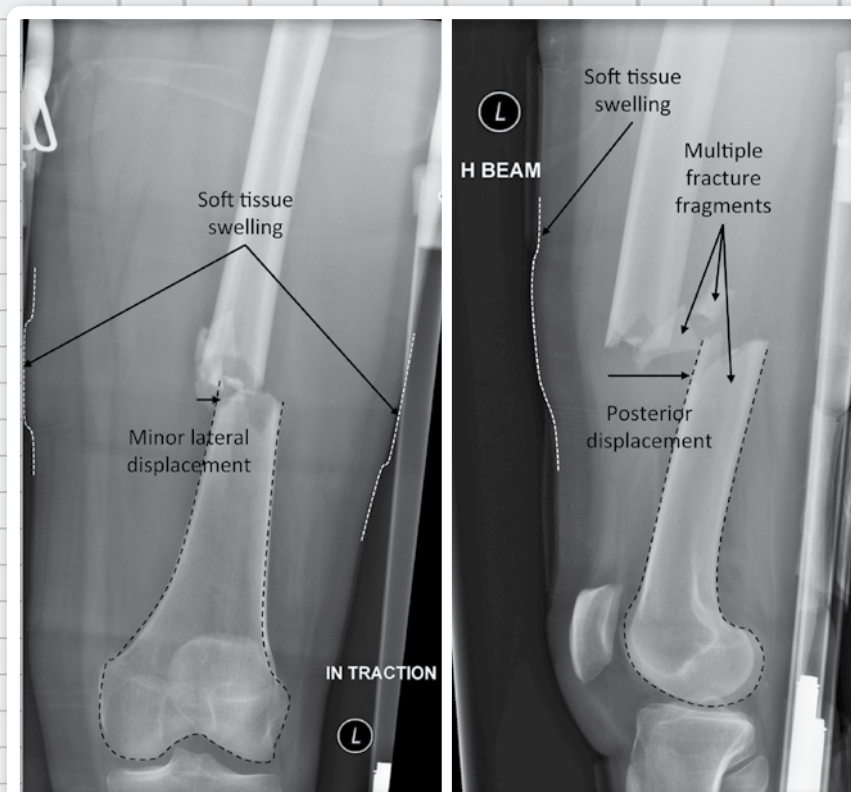
A 22 year old man was a passenger in a road traffic accident. He had to be extracted from the car by the fire service and complained of severe pain in his left thigh. His leg was splinted by the ambulance crew. X-rays of the left femur were performed in A&E.



PRESENT YOUR FINDINGS...



- These are AP and lateral X-rays of the left femur in a skeletally mature patient.
- There are no patient identifiable data on the radiograph. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequately penetrated with no important areas cut off.
- The patient has been imaged with the left femur in traction.
- There is a comminuted transverse fracture involving the middle third of the femur.
- There is marked posterior displacement of the largest fracture fragment with minor lateral displacement. No significant angulation, rotation or shortening is present.
- Normal appearance of the partially imaged knee joint.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- There is some soft tissue swelling overlying the fracture but no X-ray evidence of this being an open fracture.



IN SUMMARY –

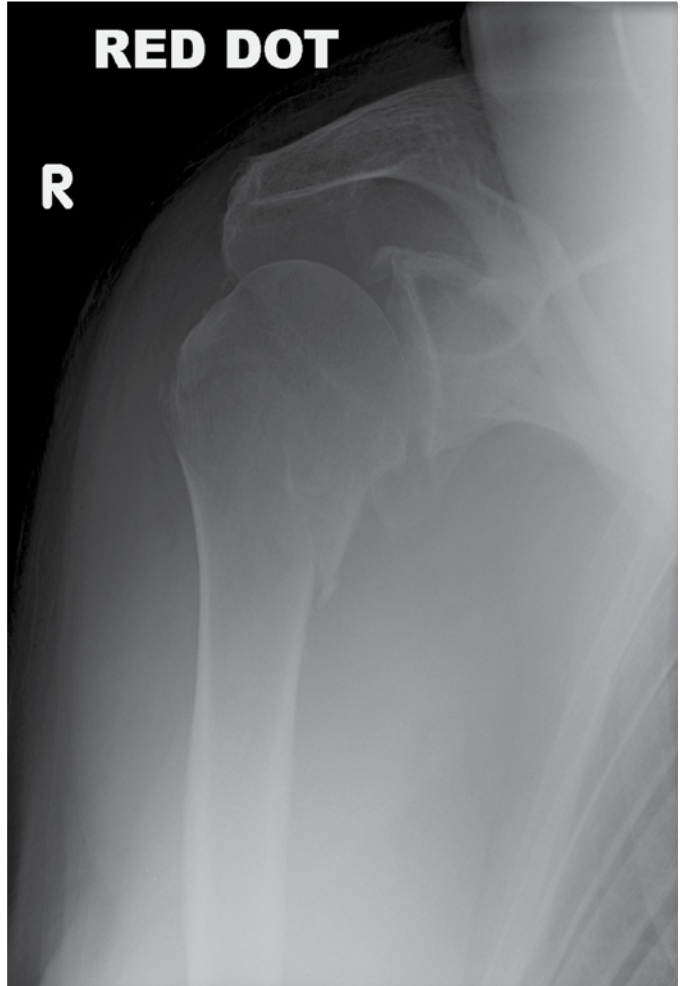
These X-rays show a displaced, comminuted left mid shaft femoral fracture. The patient should have been assessed along the ATLS guidelines (ABCDE). I would check the distal

neurovascular status of the limb. An attempt to reduce the fracture under sedation in A&E should be considered, however this patient will require operative fixation.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 13

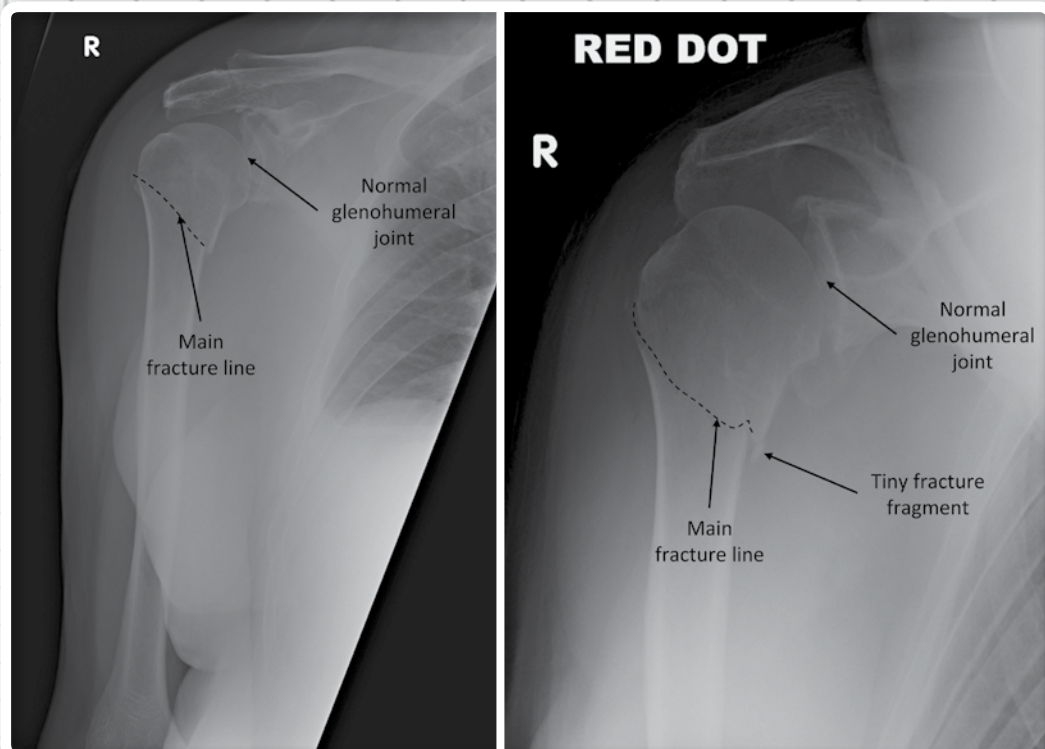
A 72 year old woman slipped on ice injuring her right shoulder. It is swollen and tender on palpation, with a reduced range of movement. X-rays of the right shoulder have been performed.



PRESENT YOUR FINDINGS...



- These are AP and apical oblique X-rays of the right shoulder in a skeletally mature patient.
- There are no patient identifiable data on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequately penetrated, with no important areas cut off.
- There is a minimally displaced oblique fracture through the right surgical neck of the humerus. There is no shortening. It appears to be a comminuted fracture.
- No other fracture is visible.
- The glenohumeral joint is intact and the acromio-clavicular joint appears normally aligned.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- The imaged right lung is clear.
- The soft tissues are unremarkable.



***IN SUMMARY** – These X-rays show a minimally displaced, comminuted fracture through the right humeral surgical neck. The patient should be treated with a sling and referred to the fracture clinic.*

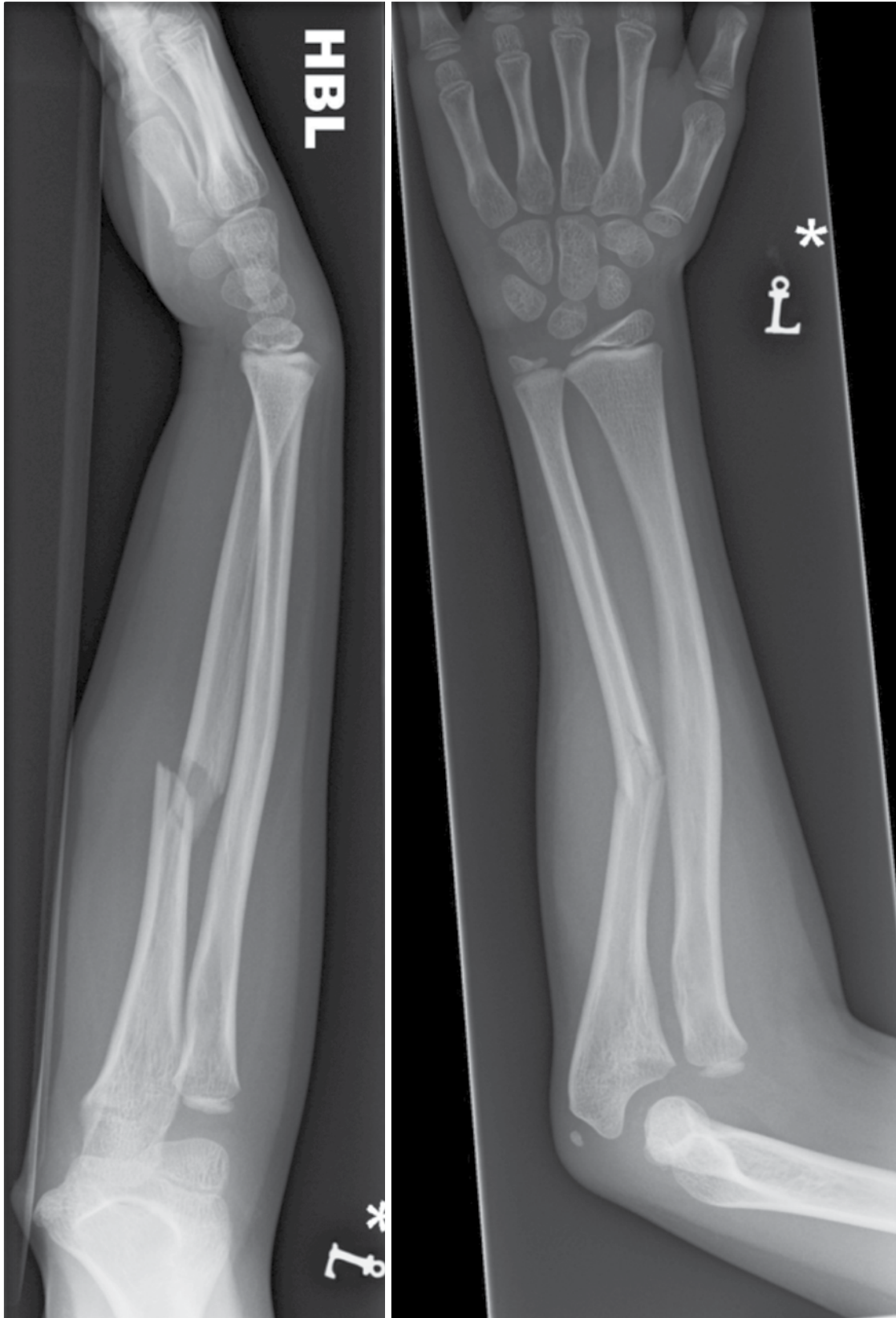


PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 14

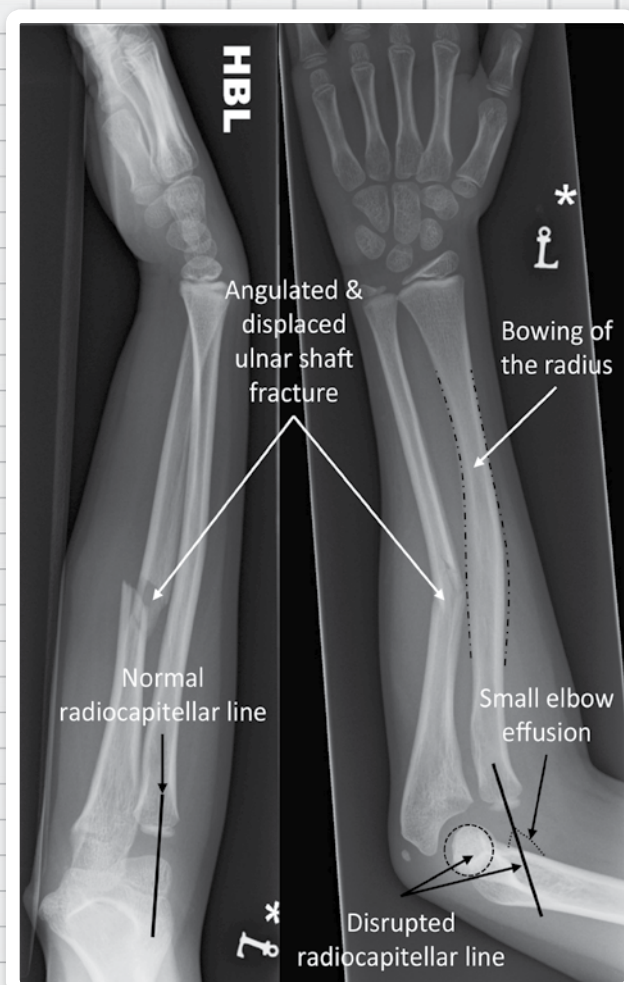
A 12 year old girl fell off a trampoline, injuring her left forearm. Assessment in A&E reveals tenderness and swelling over the mid forearm. She is having difficulty moving the arm. You request X-rays of the forearm for further assessment.



PRESENT YOUR FINDINGS...



- These are AP and lateral X-rays of the left forearm in a skeletally immature patient.
- There are no patient identifiers on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequately exposed, with no important areas cut off.
- There is a fracture through the mid shaft (diaphysis) of the ulna. There is ulnar and dorsal angulation and dorsal displacement of the distal fragment. No shortening is apparent.
- In addition, there is disruption of the radiocapitellar line on the AP view, indicating anterior dislocation of the radial head.
- There is a possible small elbow joint effusion.
- There is bowing of the mid radius, in keeping with a plastic deformity (children's bones are flexible and may bend/bow rather than break following trauma). No other fracture is visible.
- No areas of bone destruction, lucency or abnormal bone texture are visible.
- Apart from small elbow effusion associated with the fracture, the soft tissues are unremarkable.

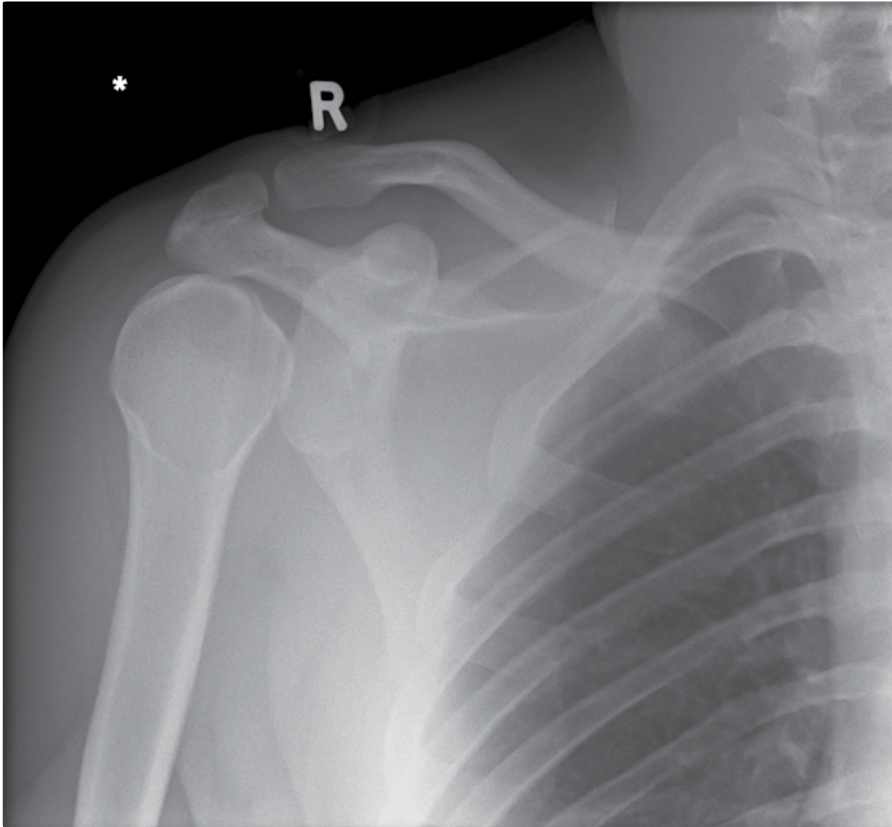


IN SUMMARY – These X-rays show a displaced ulnar shaft fracture with associated anterior dislocation of the radial head. These findings are consistent with a Monteggia fracture. The patient should be referred to orthopaedics for consideration of operative fixation.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 15

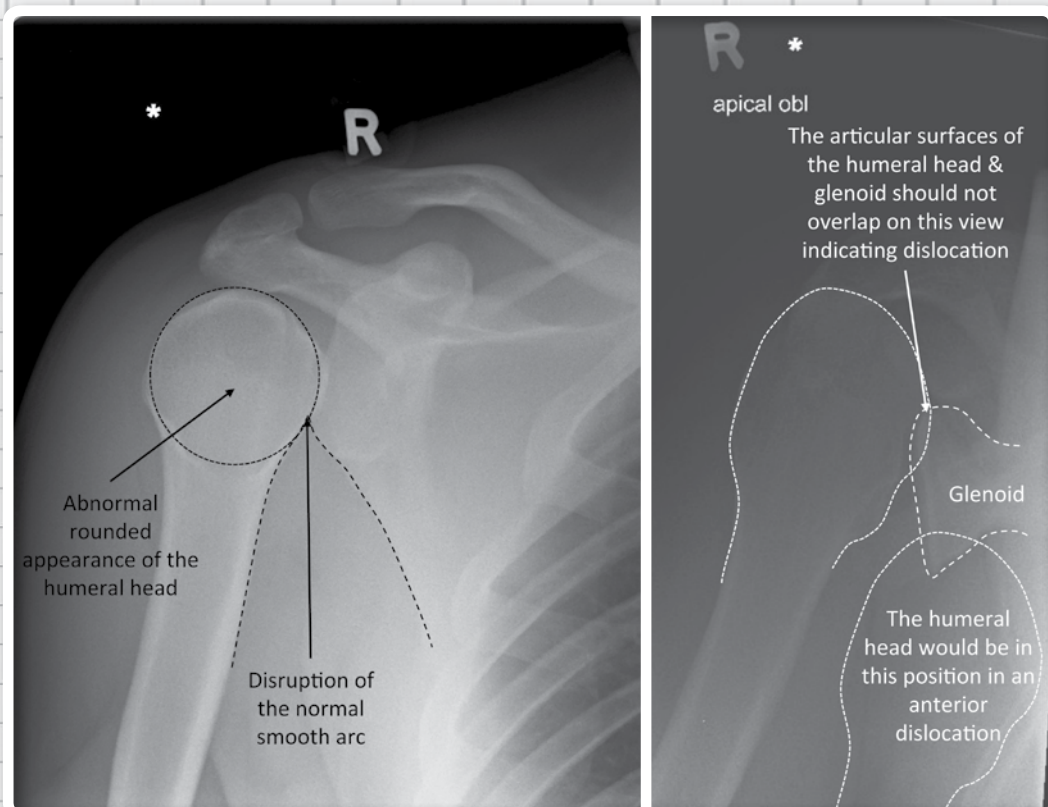
A 37 year old epileptic woman has been brought into A&E following a seizure. She is complaining of pain in her right shoulder. She is unable to move the shoulder. You request X-rays for further assessment.



PRESENT YOUR FINDINGS...



- These are frontal and apical oblique X-rays of the right shoulder of a skeletally mature patient.
- There are no patient identifiable data on the X-rays. I would like to check the patient's name and date of birth, and the date and time when the X-rays were performed before making any further assessment.
- The X-rays are technically adequate, with no important areas cut off.
- The left humeral head has an abnormal rounded appearance on the frontal X-ray. In addition, the normal smooth arc connecting the medial aspect of the proximal humerus and the lateral part of the scapula is disrupted. These findings are in keeping with a posterior shoulder dislocation, which is confirmed on the apical oblique view.
- There is no fracture.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- The soft tissues and imaged lung are unremarkable.

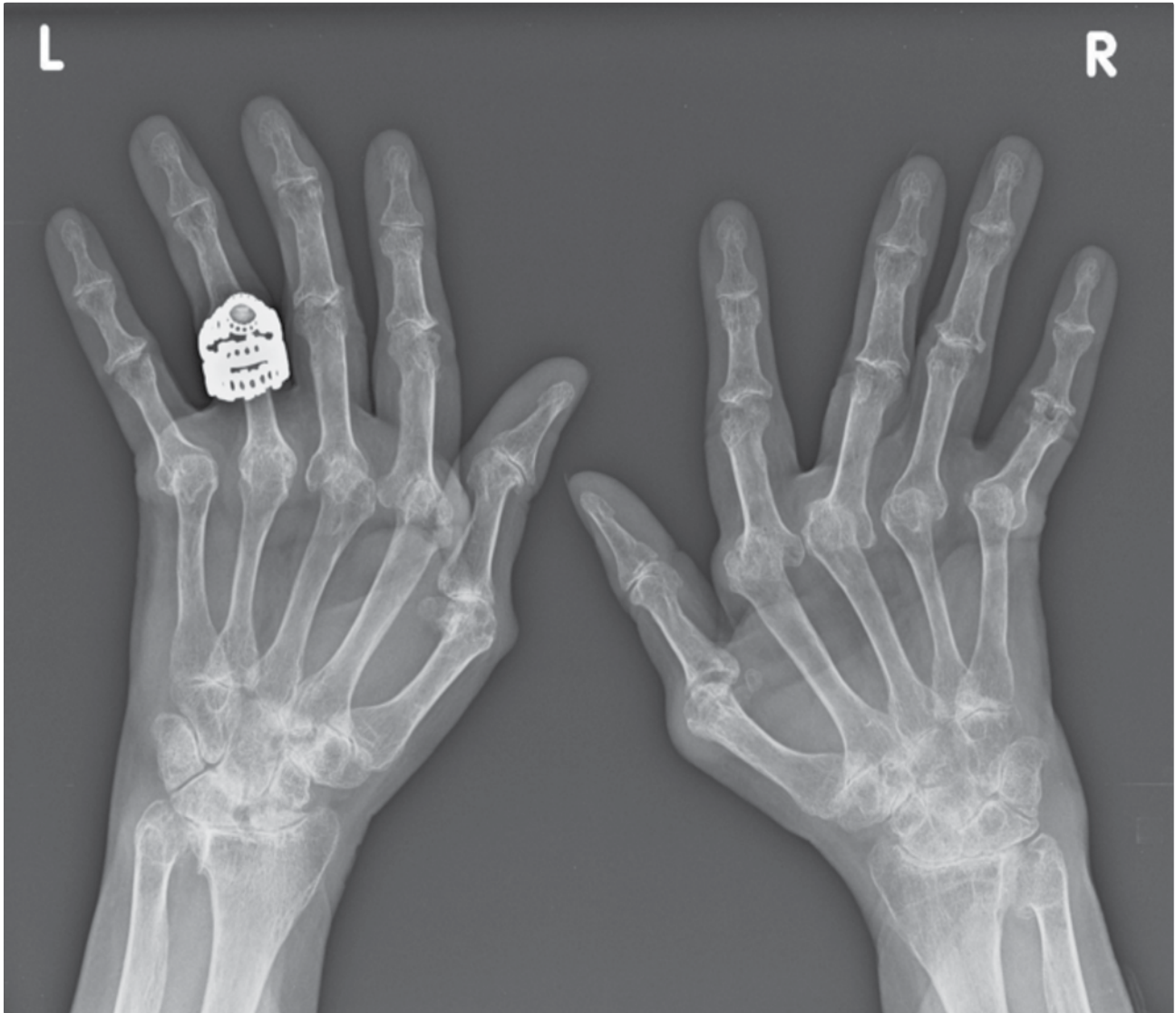


***IN SUMMARY** – These X-rays show a posterior shoulder dislocation. An attempt should be made to relocate the shoulder under sedation. A post reduction X-ray is needed to assess the relocation and identify any fractures.*

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 16

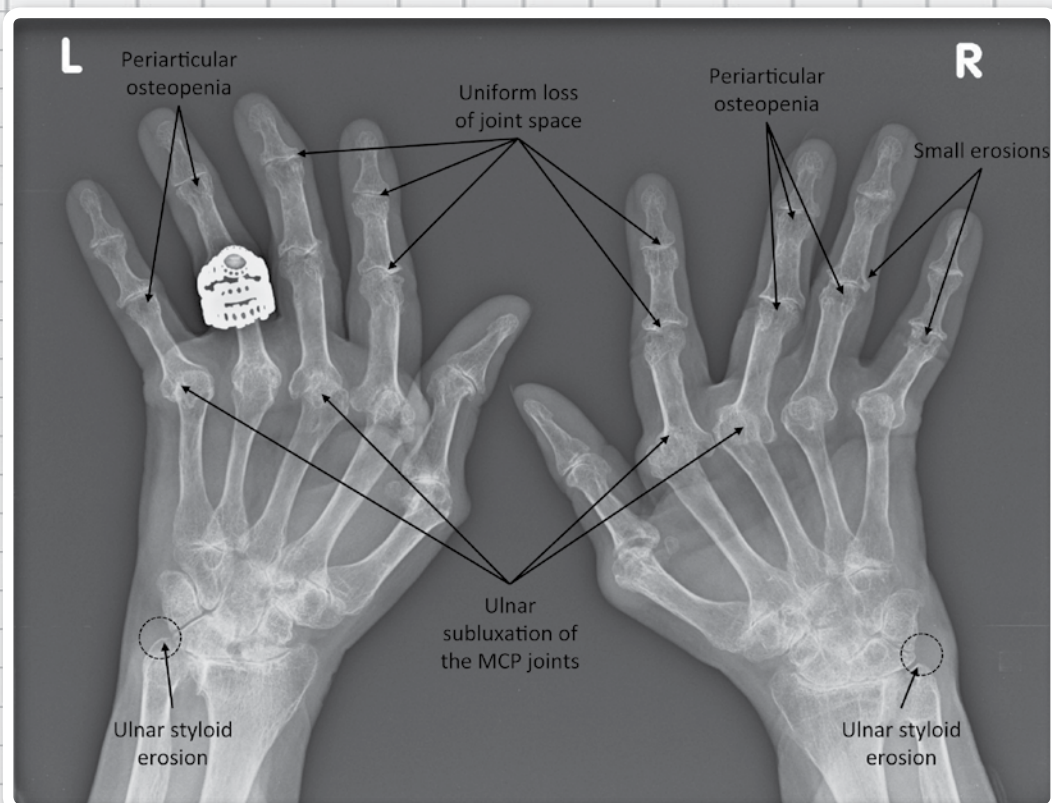
During your finals examination you are asked to assess a 60 year old lady's hands. She has had painful and sore hands for several years and is struggling to perform activities of daily living. After your clinical assessment, you tell the examiner you would request an X-ray for further assessment.



PRESENT YOUR FINDINGS...



- This is a PA X-ray of both hands in a skeletally mature patient.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth, and the date and time the X-ray was performed before making any further assessment.
- The X-ray is adequately exposed, with no important areas cut off. There is a metallic artefact from a ring projected over the proximal interphalangeal joint of the left 4th finger.
- There are bilateral, symmetrical abnormalities.
- The metacarpophalangeal joints are predominantly affected, with marked ulnar subluxation evident.
- There is uniform loss of joint space.
- There is periarticular osteopenia, most notably around the interphalangeal joints.
- There are erosions of the ulnar styloids bilaterally as well as some of the interphalangeal joints.
- The soft tissues appear unremarkable. In particular, there is no significant soft tissue swelling, which goes against acute inflammation/synovitis.

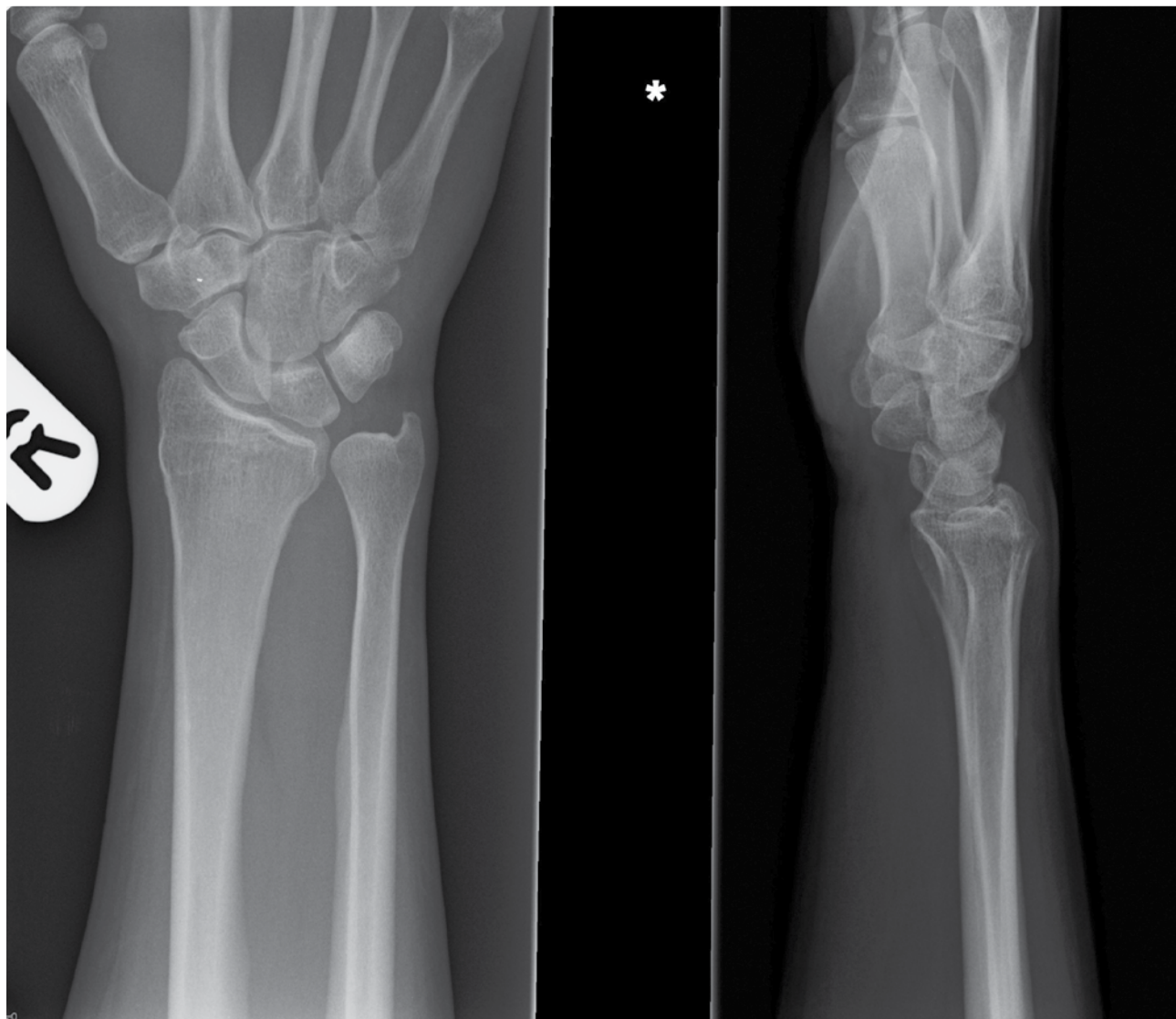


***IN SUMMARY** – The X-ray shows a bilateral, symmetrical erosive arthropathy predominantly involving the metacarpophalangeal joints. The differential diagnoses for an erosive arthropathy include psoriatic arthritis, Reiter's syndrome and gout; however, the radiographic appearances are typical of rheumatoid arthritis.*

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 17

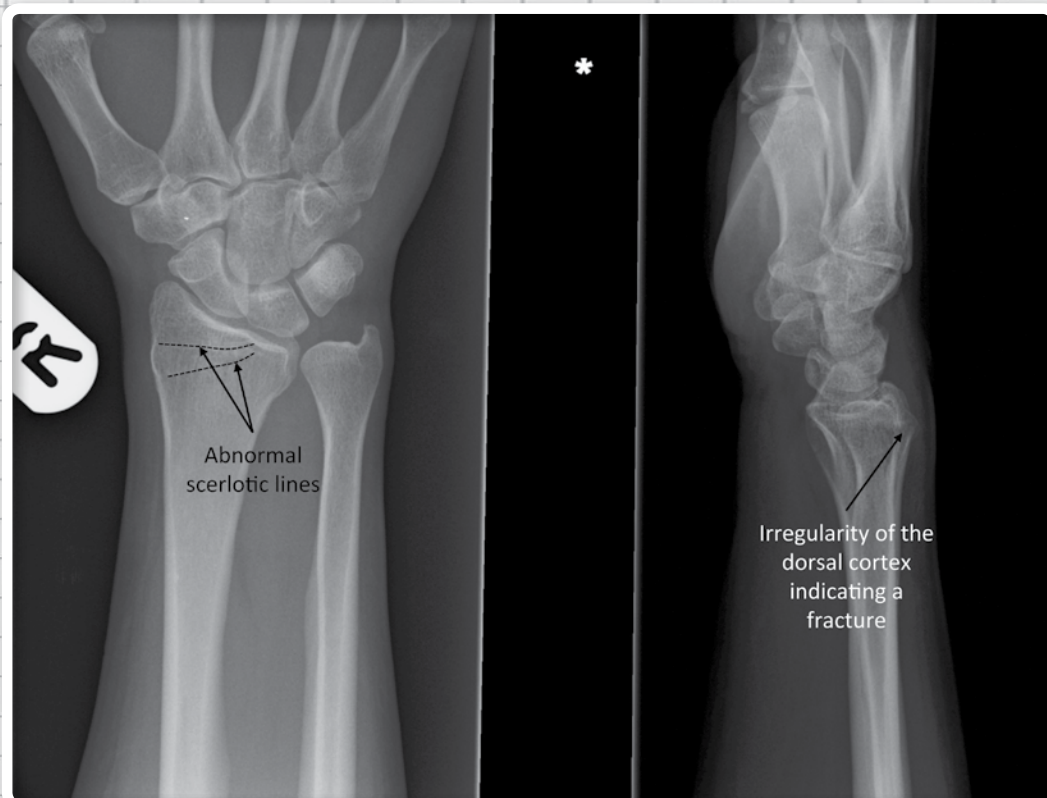
A 46 year old woman tripped whilst walking her dog, injuring her right wrist. She presents to A&E complaining of pain around the wrist. On examination, there is some mild swelling over the dorsum of the wrist and associated tenderness. X-rays of the right wrist have been performed.



PRESENT YOUR FINDINGS...



- These are AP and lateral X-rays of the right wrist in a skeletally mature patient.
- There are no patient identifiers on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequate exposed, with no important areas cut off.
- There is a subtle sclerotic line in the distal radius visible on the AP view. The dorsal cortex of the distal radius is irregular on the lateral X-ray.
- No other fracture is visible.
- There is a normal alignment of the carpal bones.
- No areas of bone destruction, lucency or abnormal bone texture are evident.
- There is mild soft tissue swelling dorsally around the fracture.

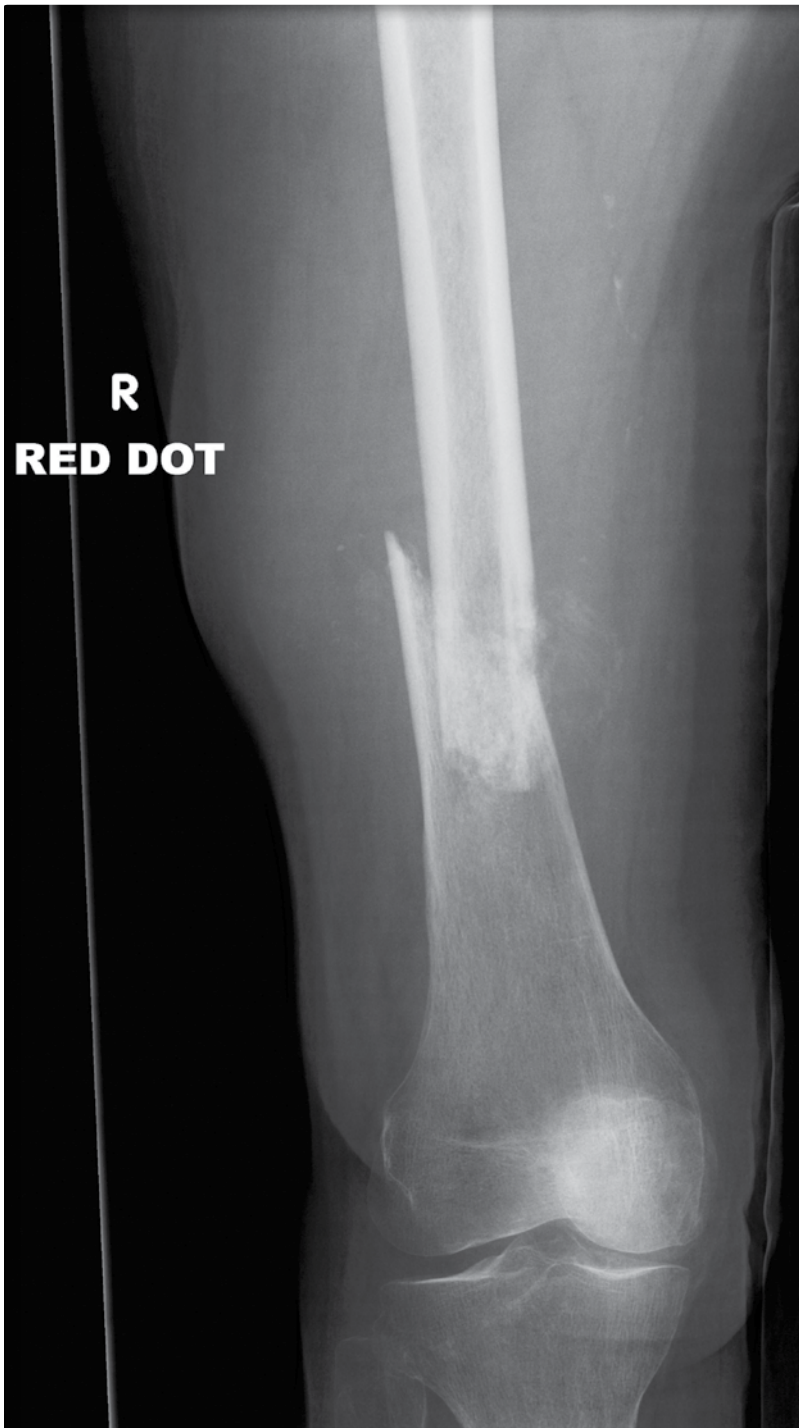


***IN SUMMARY** – These X-rays show a minimally displaced distal radius fracture. Given its good position, it is not necessary to attempt manipulation/reduction. Therefore, the patient should be treated with a cast or splinting and referred to the fracture clinic.*

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 18

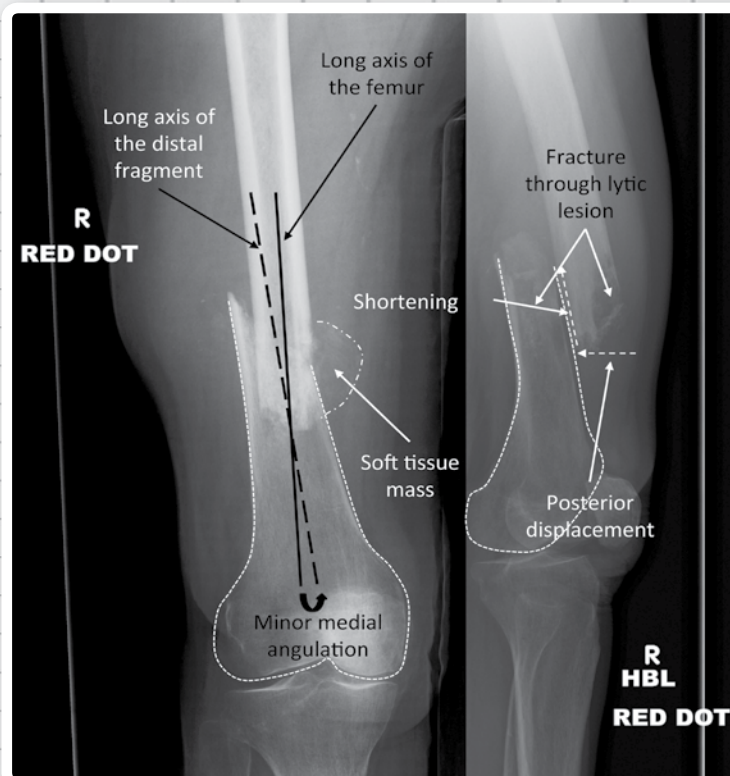
A 62 year old woman fell whilst shopping, injuring her right leg. She is very sore in the mid shaft of her right leg and unable to weight bear. She has been brought into A&E by ambulance. She is very tender on palpation of the right thigh and unable to move the leg. She is distally neurovascularly intact. X-rays of the right femur have been performed.



PRESENT YOUR FINDINGS...



- These are AP and lateral X-rays of the right femur in a skeletally mature patient.
- There are no patient identifiable data on the X-rays. I would like to confirm the patient's name and date of birth, and the date and time the X-rays were performed before making any further assessment.
- The X-rays are adequately penetrated, although the proximal femur has not been included.
- There is a transverse fracture through the distal third of the right femoral shaft.
- There is significant posterior displacement and shortening with minor medial angulation. Normal alignment of the right knee joint is evident.
- At the site of the fracture, there is a heterogenous but predominantly lytic bone lesion. There is evidence of cortical destruction and a possible soft tissue mass. These findings are suggestive of an aggressive bone lesion.
- No other fracture or dislocation is visible
- There is soft tissue swelling over the shaft of the right femur.



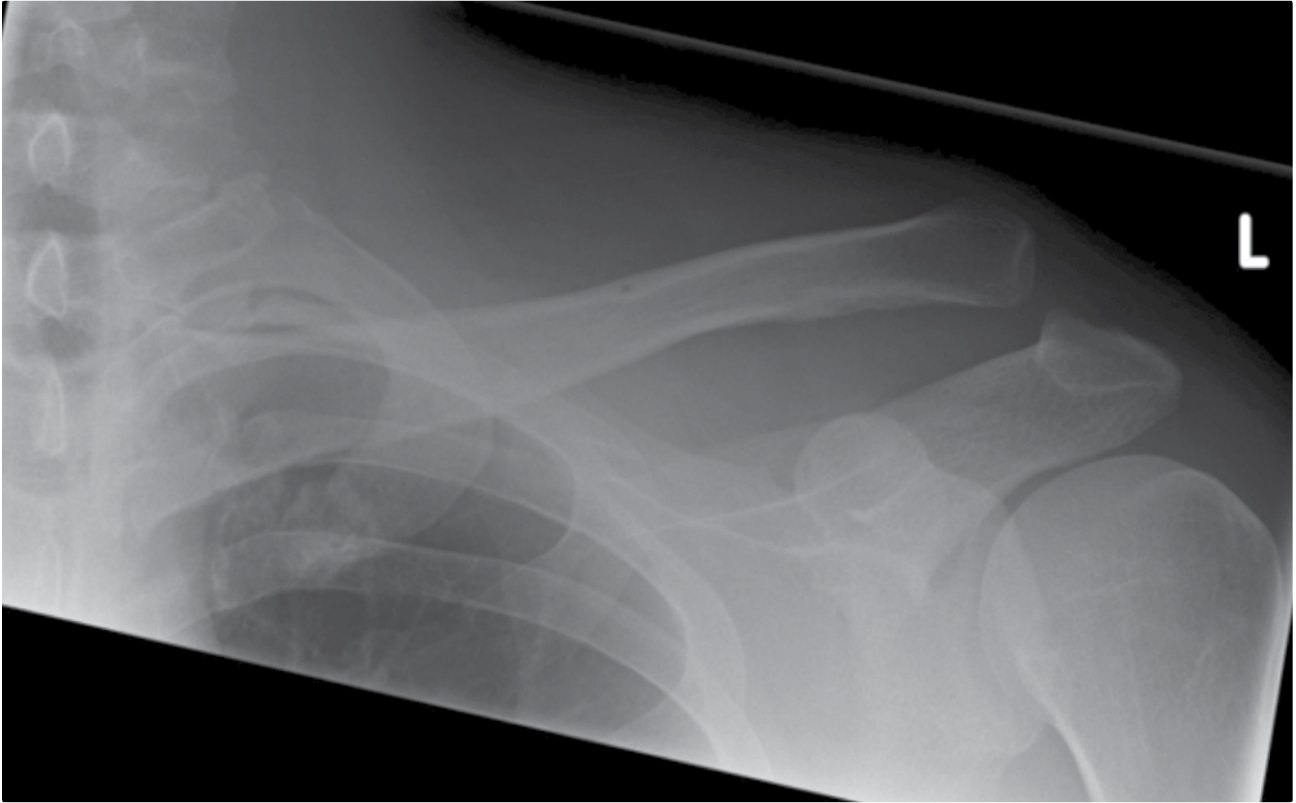
IN SUMMARY – These X-rays show a displaced pathological fracture of the right shaft of the femur. An attempt at reducing and splinting the fracture should be made under sedation. Adequate analgesia should be prescribed. Further X-rays of the entire femur will be required to look for further bone lesions prior to surgical fixation.

Given the age of the patient, the underlying bone lesion is most likely a metastasis, with the two most likely primaries in a female being breast and lung cancer. The patient will require a full history and examination, including a breast exam, routine bloods and a chest X-ray. Further imaging will be guided by the above but will likely involve a CT for staging.

 **PRESENT
YOUR
FINDINGS...**

 ORTHOPAEDIC X-RAYS - CASE 19

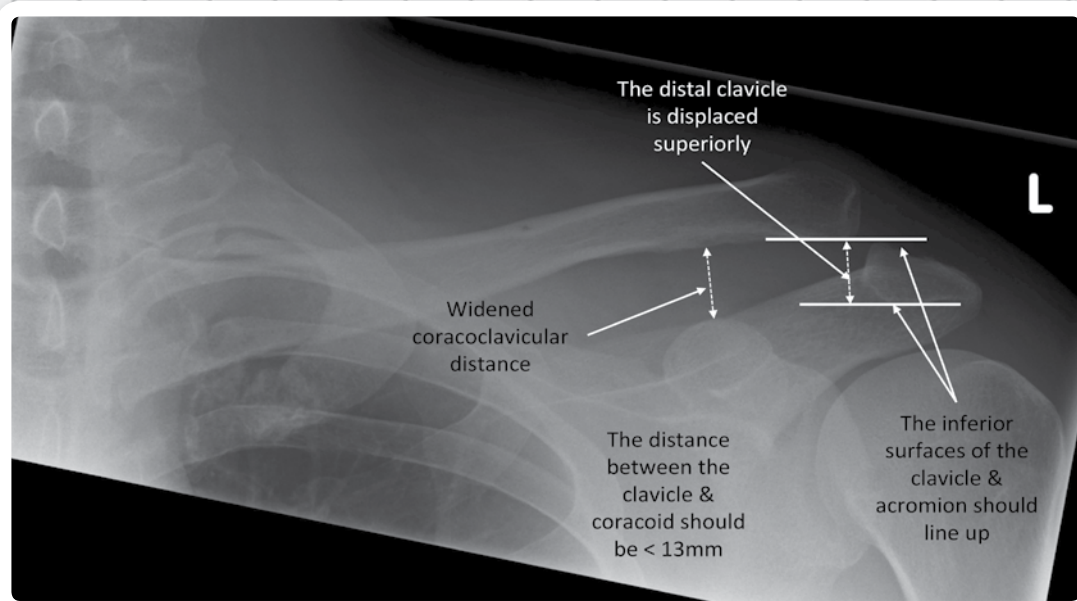
A 47 year old woman slipped on her way to work and landed on her left clavicle and shoulder. She is tender on palpation of the left clavicle, with a normal range of movement in the shoulder. An X-ray is performed.



PRESENT YOUR FINDINGS...



- This is a single frontal view of the left clavicle in a skeletally mature patient.
- There are no patient identifiable data on the X-ray. I would like to confirm the patient's name and date of birth, and the date and time when the X-ray was performed before making any further assessment.
- The X-ray is technically adequate, with no important area cut off.
- The alignment of the left acromio-clavicular joint is abnormal and the clavicular-coracoid distance is increased.
- There is no fracture or glenohumeral joint dislocation visible on this single view.
- There is a normal alignment of the shoulder joint.
- There are no areas of bone destruction, lucency or abnormal bone texture.
- The visualised left lung apex is clear.
- There is some soft tissue swelling superiorly to the left ACJ. The soft tissues are otherwise unremarkable.



IN SUMMARY – This X-ray shows a disruption of the left acromio-clavicular joint. Management includes placing the left arm in a collar and cuff and referring the patient to the fracture clinic.



PRESENT YOUR FINDINGS...



ORTHOPAEDIC X-RAYS - CASE 20

A 29 year old man was playing tennis when he sustained an inversion injury and presented to A&E with a painful right ankle and foot. The lateral view of his ankle X-ray is shown below.



PRESENT YOUR FINDINGS...



- This is a lateral X-ray of the right ankle in a skeletally mature patient.
- No patient identifiable date is present on this X-ray. I would like to confirm the patient's name, date of birth and date and time the X-ray was performed before making any further assessment.
- The X-ray is technically adequate, with no important areas cut off.
- There is a minimally displaced transverse fracture at the base of the 5th metatarsal. It is not possible to fully assess the fracture on this single ankle X-ray - AP and oblique X-rays of the foot are required.
- No other fractures are visible.
- The ankle joint appears normal on this single view.
- There are no areas of bony destruction/lucency or abnormal texture.
- No significant abnormality of the soft tissues is evident.



IN SUMMARY –

This lateral X-ray shows a minimally displaced fracture at the base of the 5th metatarsal. This is in keeping with an avulsion fracture (at the peroneus brevis tendon insertion site). It requires further assessment on formal foot X-rays. I would also like to assess the AP ankle X-ray to complete my assessment of the ankle. Treatment of this type of fracture

usually involves fitting a walking boot and referring the patient to the fracture clinic.