



RACP
Specialists. Together

RACP Written Examination February 2018

Adult Medicine

Clinical Applications questions 1–100

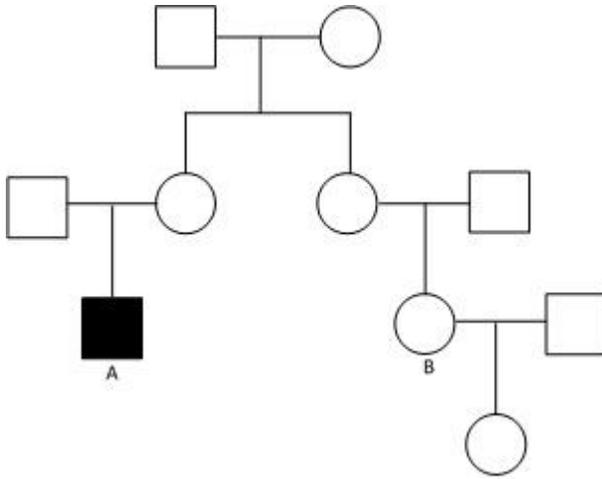
1. Febuxostat is a newer urate-lowering therapy than allopurinol. Based on randomised controlled trial data in chronic gout, what is the main benefit of febuxostat 80 mg daily over allopurinol 300 mg daily?
- A. Faster resolution of tophi.
 - B. Fewer cardiovascular events.
 - C. Fewer flares of acute gout.
 - D. Less radiologic articular changes.
 - E. Lower serum uric acid.
2. A 71-year-old male with hypertension, chronic obstructive pulmonary disease from cigarette smoking and previous coronary artery bypass grafting presents with a 3-day history of anuria and dyspnoea. He is taking ramipril, atorvastatin, amlodipine, clopidogrel and aspirin, amoxicillin, pantoprazole and inhaled corticosteroids. Blood pressure is 200/105 mmHg and an ECG shows previous anterior myocardial infarction. A renal ultrasound shows a 6 cm right kidney and an 11 cm left kidney. No urine is noted in the bladder. The creatinine is 900 $\mu\text{mol/L}$ and the patient requires urgent haemodialysis for acute pulmonary oedema.

What is the most likely diagnosis?

- A. Acute interstitial nephritis.
- B. Aortic dissection.
- C. Pyelonephritis.
- D. Renal thromboembolism.
- E. Urinary obstruction.

3. A 25-year-old man "A" underwent a general anaesthetic for an open reduction and fixation of a fractured femur. Following induction of anaesthesia with propofol and suxamethonium he developed tachycardia, tachypnoea, muscle rigidity and fever to 41 °C. He was treated with dantrolene for this episode of malignant hyperthermia and recovered.

This is an autosomal dominant disease. What is the chance that this man's relative "B" is at risk of an episode of malignant hyperthermia?



- A. 6.25%
- B. 12.5%
- C. 25%
- D. 50%
- E. 100%

4. A 40-year-old female with a history of gastro-oesophageal reflux managed with high-dose pantoprazole is admitted with severe hypertension and acute kidney injury (creatinine 315 $\mu\text{mol/L}$ [49–90]). She has a history of Raynaud's and you note peripheral telangiectasia and grade III fundal hypertensive changes. Urinalysis is bland and the full blood count shows normochromic normocytic anaemia with a platelet count of $115 \times 10^9/\text{L}$ [150–400]. The renal ultrasound is normal.

What is the most likely cause of her hypertension and AKI?

- A. Acute interstitial nephritis.
 - B. Conn syndrome.
 - C. Pheochromocytoma.
 - D. Systemic lupus erythematosus.
 - E. Systemic sclerosis.
5. A 75-year-old man presents to his local doctor with abrupt onset of painless visual blurring affecting the left eye only, and lasting 20 minutes. On reflection, he recalls a similar episode 1 week earlier while driving, but he was able to complete his journey because vision in the right eye was unaffected. Currently, the neurological examination is normal.

Which artery stenosis would be expected to cause this presentation?

- A. Basilar.
 - B. Left carotid.
 - C. Left vertebral.
 - D. Right carotid.
 - E. Right vertebral.
6. At initial diagnosis, which factor is most predictive of reduced survival in patients with metastatic renal cell cancer?
- A. Age < 60.
 - B. Chromophobe histology.
 - C. Eastern Cooperative Oncology Group (ECOG) performance status of 3.
 - D. Lung metastases.
 - E. Smoking history.

7. A few hours after completing the Auckland marathon a 24-year-old is taken to the Emergency Department by her concerned partner on account of increasing confusion. On assessment she is found to be disoriented in time and place, but has no focal neurological deficit. Other than mild tachypnoea and myalgia in her legs, the remainder of a full clinical examination reveals no abnormal findings.

The following biochemistry is obtained:

		Normal values
Sodium (Na)	122 mmol/L	[135–145]
Plasma osmolality	256 mOsm/L	[285–295]
Potassium (K)	3.6 mmol/L	[3.5–5.5]
Urine osmolality	432 mOsm/L	[300–900]
Creatinine	79 µmol/L	[45–90]
Glucose	4.8 mmol/L	[4.0–5.5]

What is the most appropriate way to correct her hyponatraemia?

- A. Fluid restriction.
 - B. IV hypertonic saline.
 - C. IV normal saline.
 - D. Oral demeclocycline.
 - E. Oral urea.
8. Pizotifen is a medication used in migraine prophylaxis. Apart from drowsiness, what is the most common adverse effect of pizotifen?
- A. Hepatitis.
 - B. Rash.
 - C. Rebound headache.
 - D. Seizures.
 - E. Weight gain.

9. A 28-year-old otherwise healthy woman who is 36/40 pregnant presents with dyspnoea for 1 week and left lower limb swelling for 2 days. Temperature is 37.4 °C, blood pressure is 136/86 mmHg, heart rate 98 beats per minute, oxygen saturations 98% on room air. Her left calf diameter measures 2 cm greater than the right. An ECG and chest radiograph are normal.

Which is the next most appropriate investigation?

- A. CT pulmonary angiogram.
 - B. D-dimer.
 - C. Echocardiogram.
 - D. Lower limb Doppler ultrasound.
 - E. Ventilation/perfusion scan.
10. A 71-year-old woman with hypertension and a remote smoking history of 20 pack years is found to have abnormal kidney function on a routine blood test. Her current medication is enalapril 10 mg daily and amlodipine 10 mg daily and her last blood pressure was 138/86 mmHg.

Her results are as follows:

		Normal values
Serum creatinine	168 µmol/L	[49–90]
Estimated glomerular filtration rate (eGFR)	31 mL/min/1.73 m ²	[90–130]
Sodium (Na)	138 mmol/L	[134–145]
Potassium (K)	4.7 mmol/L	[3.5–5.0]
Haemoglobin (Hb)	116 g/L	[120–160]
Calcium (Ca)	2.45 mmol/L	[2.20–2.55]
Phosphate (PO ₄)	1.3 mmol/L	[0.78–1.43]
Urine albumin:creatinine ratio (ACR)	11 mg/g	[< 3.5]

In addition to monitoring kidney function, what additional strategy should be the focus of her management?

- A. Dietary potassium restriction.
- B. Modification of cardiovascular risk.
- C. Planning for dialysis access.
- D. Reduction of proteinuria.
- E. Repletion of haematinics.

11. You are trying to decide whether to institute a screening program for type 2 diabetes. You find data indicating that a HbA_{1c} of 6.4% (46 mmol/mol) or greater has a sensitivity of 40% and a specificity of 80%. You estimate that the prevalence of undiagnosed type 2 diabetes in your community is 20%.

What will be the ratio of true positives to false positives if you institute a screening program?

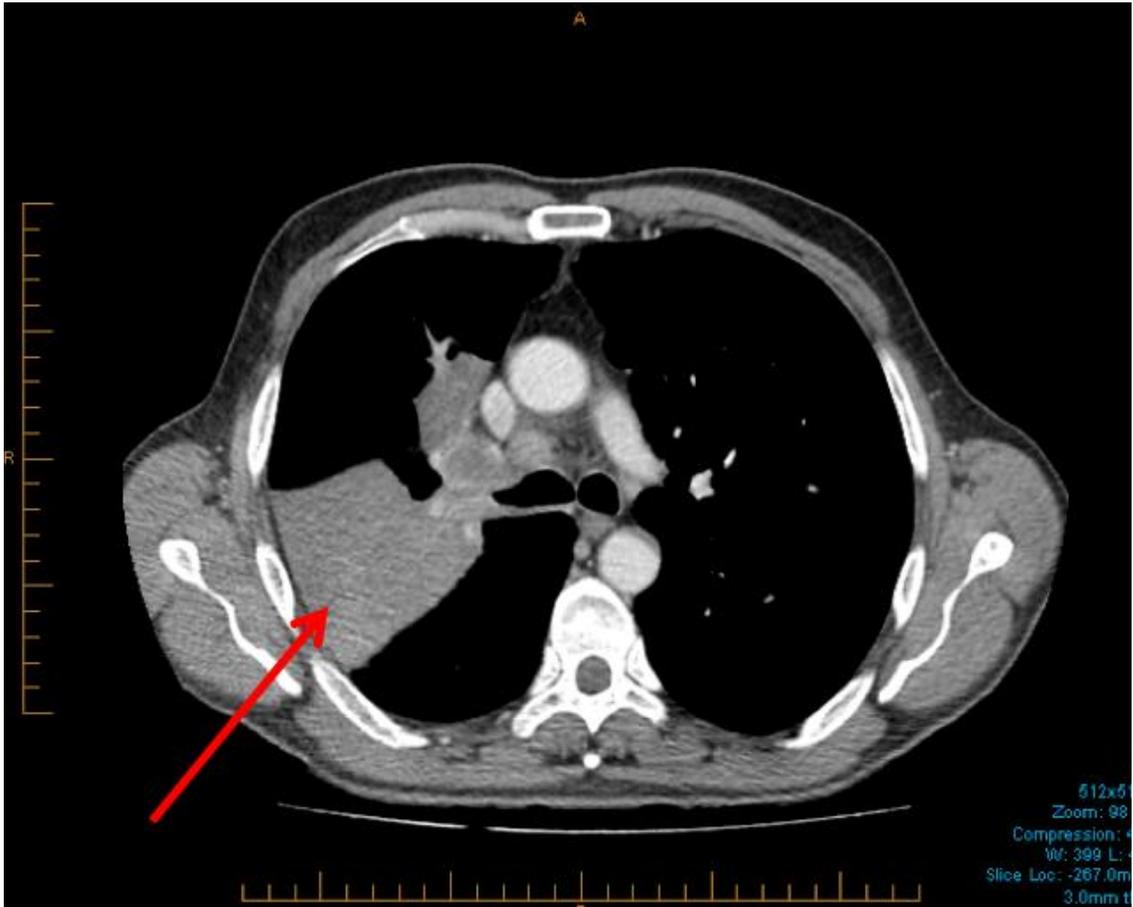
- A. 1:1
- B. 1:2
- C. 1:4
- D. 2:1
- E. 4:1

12. A 52-year-old man with known diabetes mellitus and hypertension presents with sudden onset of painless monocular visual loss 24 hours ago. Examination findings are as follows: left optic disc swelling seen on fundoscopy, visual acuity 6/6 on the right, 6/24 on the left; colour desaturation on the left; left relative afferent pupillary defect.

What is the most likely diagnosis?

- A. Carotid artery stenosis.
- B. Central retinal artery occlusion.
- C. Ischaemic optic neuropathy.
- D. Occipital stroke.
- E. Optic neuritis.

13. A 62-year-old man had a recent diagnosis of lung cancer. While waiting for his cancer treatment to commence, he presented to the hospital emergency with worsening dyspnoea and haemoptysis, a CT scan of the chest was performed.



What is the most likely cause of the opacity indicated by the arrow?

- A. Distal lung collapse.
- B. Lung cancer mass.
- C. Pneumonic consolidation.
- D. Pulmonary haemorrhage.
- E. Pulmonary infarct.

14. A 25-year-old woman presents for investigation of infertility and a karyotype is reported as 45 XO (Turner syndrome).

Which of the following conditions is associated with Turner syndrome and warrants commencement of regular screening?

- A. Aortic aneurysm.
- B. Breast cancer.
- C. Macular degeneration.
- D. Myelodysplasia.
- E. Uterine fibroids.

15. A 19-year-old male is currently in hospital with his third episode of lobar pneumonia due to *Streptococcus pneumoniae* in the last 2 years. He reports a background of chronic sinus symptoms and frequent bronchitis, and takes 4–6 courses of antibiotics per year. He also reports intermittent nonbloody diarrhoea.

Preliminary screening for immunodeficiency shows the following:

Pneumococcal antibodies:		Normal values
Total IgG	14 mg/L	[> 16]
IgG2	2 mg/L	[> 5]
Immunoglobulins:		
IgG	2.6 g/L	[7–16]
IgA	< 0.07 g/L	[0.8–4.0]
IgM	2.5 g/L	[0.4–2.5]
Lymphocyte subsets:		
CD4+	1023 cells/ μ L	[500–1650]
CD8+	477 cells/ μ L	[210–1200]
NK	135 cells/ μ L	[40–500]
CD19+	0 cells/ μ L	[80–600]

What is the most likely diagnosis?

- A. Common variable immunodeficiency (CVID).
- B. IgA deficiency.
- C. Specific antibody deficiency.
- D. X-linked agammaglobulinaemia.
- E. X-linked hyper IgM syndrome.

- 16.** In patients with essential thrombocytosis without the JAK2 mutation, what is the next most commonly mutated gene?
- A. Bcl2.
 - B. Calreticulin.
 - C. Dnmt3a.
 - D. Mpl.
 - E. p53.
- 17.** A 76-year-old man with prior mechanical aortic valve replacement requires a colonoscopy and likely colonic biopsy. What endocarditis prophylaxis is appropriate?
- A. Ampicillin.
 - B. Ceftriaxone.
 - C. Gentamicin.
 - D. Metronidazole.
 - E. No prophylaxis.
- 18.** You have been asked to see a patient on the ward with a 10-day-old tracheostomy. He has become acutely dyspnoeic with a respiratory rate of 34 breaths per minute and oxygen saturations of 88% on 40% inspired oxygen via mask. In addition to supplying 100% inspired oxygen to the face and via the tracheostomy, what should your initial management be?
- A. Further inflate the tracheostomy balloon.
 - B. Manually ventilate via the tracheostomy.
 - C. Remove the tracheostomy.
 - D. Replace existing tracheostomy tube with a fresh tracheostomy.
 - E. Suction the tracheostomy.

19. An 81-year-old female presents with delirium secondary to a urinary tract infection. Her regular medications include diazepam, isosorbide mononitrate, metoprolol, oxybutynin and sertraline.

Which one of these medications would be most appropriate to stop as part of the delirium management plan?

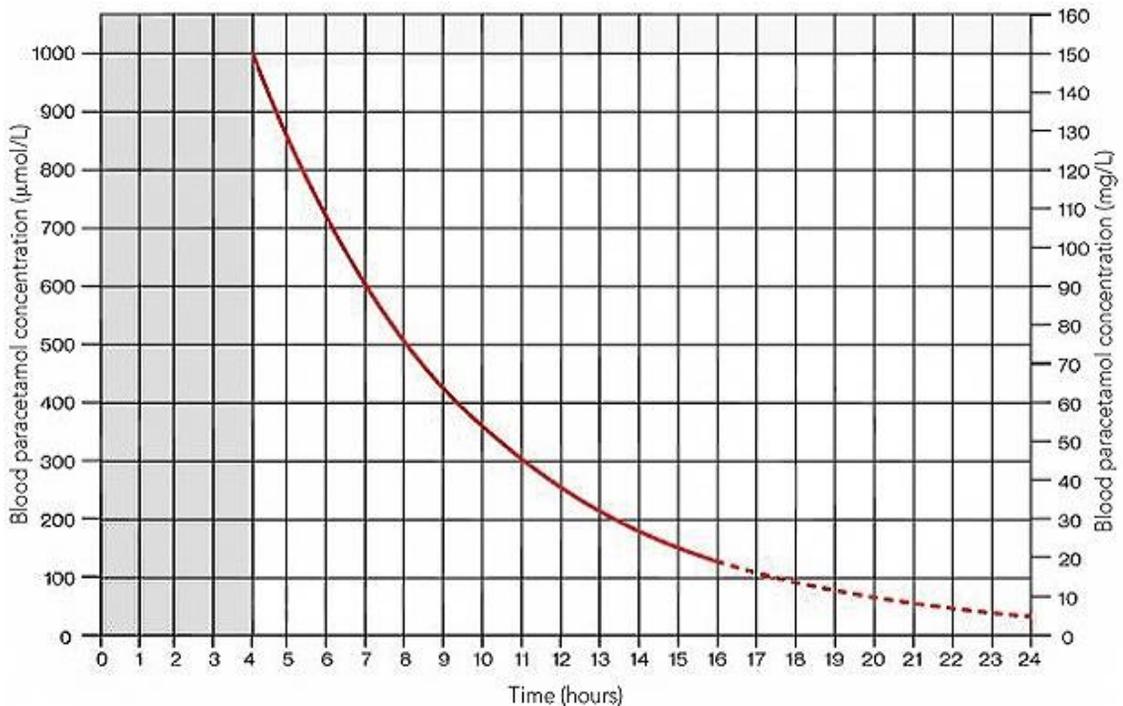
- A. Diazepam.
- B. Isosorbide mononitrate.
- C. Metoprolol.
- D. Oxybutynin.
- E. Sertraline.

20. A 19-year-old female with no other medical conditions presents to hospital after ingestion of 20 grams of paracetamol (immediate release formulation) combined with alcohol.

Appropriate blood tests are obtained on admission and intravenous acetylcysteine is commenced immediately.

Results of investigations obtained 6 hours post-ingestion include serum paracetamol 150 mg/L (1000 $\mu\text{mol/L}$) and blood alcohol concentration 0.07% w/v (70 mg/100 mL or 15.2 mmol/L).

The paracetamol nomogram is shown:



(Source: 2015 *Med J Aust* 203; 215–218)

What is the risk of this patient developing hepatitis due to paracetamol poisoning?

- A. < 5%
- B. 5–10%
- C. 11–20%
- D. 21–50%
- E. > 50%

21. What is the most common form of thyroid cancer?

- A. Anaplastic.
- B. Follicular.
- C. Medullary.
- D. Papillary.
- E. Squamous.

22. In addition to removing the cause, what is the immediate treatment for anaphylaxis?

- A. Adrenalin 0.1 mg IV.
- B. Adrenalin 0.5 mg IV.
- C. Adrenalin 0.5 mg IM.
- D. Adrenalin 1 mg IM.
- E. Adrenalin 5 mg nebulised.

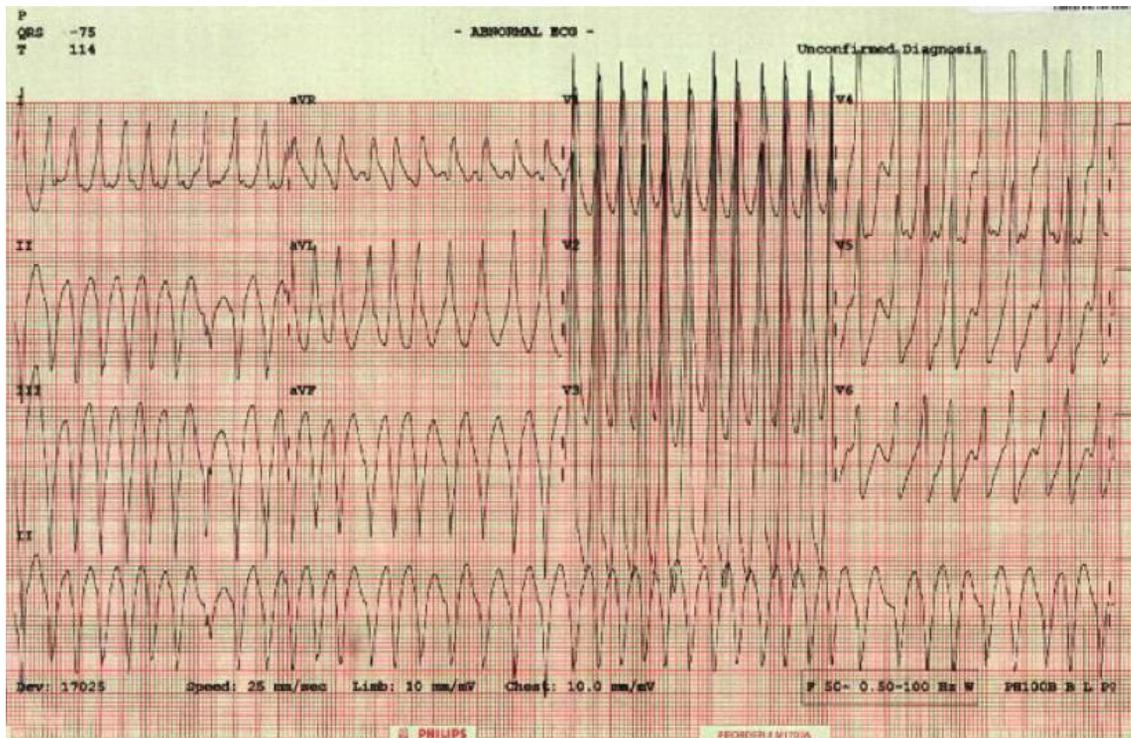
23. A 53-year-old male presents with 2 days of a red hot swollen right knee. His GP started him on an oral cephalosporin yesterday without any clinical benefit. He has a temperature of 37.4 °C and his full blood total white cell count is $11.3 \times 10^9/L$ [4.0–11.0].

An aspirate of the joint reveals 130,000 cells/mm³ with 95% neutrophils. Gram stain is negative and crystals are not seen.

What is the most appropriate initial management?

- A. Intra-articular steroids.
- B. Intravenous flucloxacillin.
- C. Oral cephalosporin.
- D. Oral colchicine.
- E. Surgical drainage of the knee.

24. A 45-year-old female presents with palpitations and light-headedness. The ECG is shown.



What is the cardiac rhythm?

- A. Atrial fibrillation.
- B. AV nodal re-entrant tachycardia.
- C. Multifocal atrial tachycardia.
- D. Torsade de pointes.
- E. Ventricular tachycardia.

25. A patient presents with severe sepsis, hypotension and a swollen red area of cellulitis on the right leg. You suspect necrotising fasciitis.

Confirmation of the diagnosis is best made by which of the following?

- A. Clinical crepitus.
- B. Clinical response to IV antibiotics.
- C. CT imaging.
- D. Culture of group A *Streptococcus*.
- E. Surgical exploration.

26. A 78-year-old previously well man develops left face and upper limb weakness, with complete resolution after 30 minutes, and is found to have a high-grade (70–99%) stenosis of the right internal carotid artery. In addition to commencing aspirin, and optimising antihypertensive and lipid-lowering medication, what is the most effective treatment to reduce long-term risk of ischaemic stroke?

- A. Carotid angioplasty and stenting.
- B. Carotid endarterectomy.
- C. Clopidogrel.
- D. Thrombolysis.
- E. Warfarin.

27. A patient with metastatic adenocarcinoma of unknown primary involving liver and bone presents with back pain, urinary incontinence and altered sensation in the legs. Clinical examination showed reduced sensation to pin prick and light touch in both legs and perineal region. The lower limb reflexes were reduced with down-going plantar reflex.

What is the most likely diagnosis?

- A. Cauda equina syndrome.
- B. Cerebral metastasis.
- C. Leptomeningeal carcinomatosis.
- D. Paraneoplastic peripheral neuropathy.
- E. Spinal cord compression.

- 28.** A 70-year-old man presents with an exacerbation of COPD. He has no known co-morbidities and takes only inhaled medications.

On examination, pulse is 100 beats per minute, blood pressure is 98/70 mmHg, and pulse oximetry is 81% on room air. Chest auscultation reveals bilateral wheeze.

Chest x-ray reveals no consolidation or pneumothorax. Arterial blood gases (on room air) show pH 7.32 [7.35–7.45], pO₂ 55 mmHg [80–110], pCO₂ 40 mmHg [35–45].

He was given bronchodilators, corticosteroids and controlled oxygen (2 L/min by nasal cannula) while initial investigations were performed. After 10 minutes, he still has bilateral wheeze and pulse oximetry has risen to 89%.

What is the most appropriate treatment now?

- A. Add IV aminophylline.
- B. Add IV salbutamol.
- C. Continue current therapy.
- D. Increase oxygen rate.
- E. Initiate non-invasive ventilation.

- 29.** A 64-year-old man is receiving candesartan, hydrochlorothiazide and amlodipine at maximal doses for hypertension. A 24-hour blood pressure monitor shows the average BP to be 164/86 mmHg.

The addition of which drug is likely to have the greatest effect in reducing the blood pressure?

- A. Hydralazine.
- B. Moxonidine.
- C. Perindopril.
- D. Prazosin.
- E. Spironolactone.

30. A 44-year-old man presents with treatment-refractory epilepsy characterised by complex partial seizures. He was admitted on Friday night following a cluster of at least four of his typical seizures, which are characterised by left-sided clonic movements and a clouding of consciousness. He appeared to be perfectly well over the weekend.

Now on Monday, you are called to see him, because he is convinced that his daughter has been replaced by a robot.

What is the most likely cause of his delusion?

- A. Interictal psychosis.
- B. Non-convulsive status epilepticus.
- C. Postictal confusion.
- D. Postictal psychosis.
- E. Schizophrenia.

31. A 45-year-old woman with rheumatoid arthritis controlled on methotrexate is found to have a urinary tract infection.

Which of the following antibiotics is contraindicated?

- A. Amoxicillin.
- B. Cefaclor.
- C. Ciprofloxacin.
- D. Nitrofurantoin.
- E. Trimethoprim.

32. A 65-year-old woman has a history of 8 months of repeated contact with her general practitioner with complaints of abdominal pain and a belief that she has bowel cancer. Her husband died around the time her symptoms began. She is not reassured by negative investigations and review by a gastroenterologist. She has lost 8 kg of weight and feels nervous and agitated. There is no history of preoccupation with physical health problems before this episode.

What is the most likely psychiatric diagnosis?

- A. Bereavement.
- B. Hypochondriasis (illness anxiety disorder).
- C. Major depression.
- D. Malingering.
- E. Somatisation disorder (somatic symptom disorder).

33. A 70-year-old man is found at home next to an empty pill bottle without a label. He has difficulty shifting, sustaining or focusing his attention. He exhibits aimless picking movements, is responding to visual hallucinations, is tachycardic, has a dry mouth and mydriasis.

What is the most likely cause of this clinical presentation?

- A. Anticholinergic toxicity.
- B. Benzodiazepine withdrawal.
- C. Cholinergic toxicity.
- D. Opioid toxicity.
- E. Psychostimulant overdose.

34. A 72-year-old man presents with a 3-month history of malaise, arthralgias, abdominal pain, and left foot weakness. In addition to left foot drop, examination reveals that he is hypertensive and has a non-blanching lace-like skin discolouration on his legs.

Laboratory findings:

		Normal values
Erythrocyte sedimentation rate (ESR)	102 mm/hr	[0–15]
C-reactive protein (CRP)	68 mg/L	[< 5]
Creatinine	120 μ mol/L	[45–90]
MSU	1+ proteinuria	

CT scan angiography shows multiple small vessel aneurysms in the renal and mesenteric arteries.

What is his autoantibody screening most likely to show?

- A. c-ANCA.
 - B. dsDNA autoantibodies.
 - C. No autoantibodies detected.
 - D. p-ANCA.
 - E. Rheumatoid factor.
35. Which of the following is the strongest indication for kidney biopsy in a 65-year-old man with a 6-year history of type 2 diabetes mellitus and proteinuria (urine albumin:creatinine ratio of 250 g/mol creatinine)?
- A. An increase in serum creatinine from 90 to 170 μ mol/L over 2 months.
 - B. Declining estimated glomerular filtration rate (eGFR) of 10 mL/min over 1 year.
 - C. Persistent microscopic haematuria.
 - D. Positive anti-neutrophil cytoplasmic antibodies specific for myeloperoxidase.
 - E. Positive antinuclear antibody in a titre of 1:640.

36. Following dyspnoea, what is the next most common clinical feature of acute pulmonary embolism?

- A. Calf swelling or pain.
- B. Haemoptysis.
- C. Pleuritic pain.
- D. Tachycardia.
- E. Wheezing.

37. A 60-year-old asymptomatic man on routine annual full blood examination (FBE) has the following results:

		Normal values
Haemoglobin	125 g/L	[130–170]
White cell count	$35 \times 10^9/L$	[4–10]
Platelets	$168 \times 10^9/L$	[150–400]
Differential includes:		
Neutrophils	$2.1 \times 10^9/L$	[2.0–7.0]
Lymphocytes	$31 \times 10^9/L$	[1.0–3.0]

He has palpable, maximal 2 cm bilateral cervical lymphadenopathy, but no hepatosplenomegaly. Peripheral blood flow cytometry of lymphocytes confirms chronic lymphocytic leukaemia.

What is the most appropriate management decision?

- A. Bone marrow biopsy.
- B. Chlorambucil.
- C. CT scan of chest and abdomen.
- D. Prednisolone.
- E. Serial monitoring of FBE.

38. A 58-year-old lady taking 20 mg rivaroxaban daily, presents with haematemesis. In addition to resuscitation and commencing a proton pump inhibitor, what is the next most appropriate therapeutic intervention to arrest the bleeding?

- A. Angiographic embolisation.
- B. Fresh frozen plasma.
- C. Gastroscopy.
- D. Idarucizumab.
- E. Octreotide infusion.

39. A 33-year-old lady with known ulcerative colitis is now 9 days post-admission having failed hydrocortisone and infliximab. She has a temperature of 38 °C, 12 bloody bowel actions a day, abdominal discomfort and anorexia despite ciprofloxacin and metronidazole. Stool testing is negative for viral, bacterial, protozoal and parasitic causes.

Blood tests reveal:

		Normal values
Sodium (Na)	140 mmol/L	[134–145]
Chloride (Cl)	97 mmol/L	[97–107]
Urea (Ur)	5.4 mmol/L	[3.1–8.1]
Creatinine (Cr)	72 µmol/L	[49–90]
Haemoglobin (Hb)	127 g/L	[120–160]
White cell count (WCC)	13.6 × 10 ⁹ /L	[4.0–11.0]
Platelets (Plt)	531 × 10 ⁹ /L	[150–400]
C-reactive protein	80 mg/L	[< 5.0]
Erythrocyte sedimentation rate	47 mm/hr	[7–8]
Bilirubin	18 µmol/L	[3–18]
Albumin (Alb)	27 g/L	[35–46]
Alanine transaminase (ALT)	28 U/L	[5–40]
Aspartate aminotransferase (AST)	20 U/L	[12–36]
Gamma glutamyltranspeptidase (GGT)	54 U/L	[5–65]

Abdominal x-ray shows a colonic diameter of less than 5 cm.

What is the most appropriate next step in managing her ulcerative colitis?

- A. Add meropenem.
- B. Commence methylprednisolone.
- C. Commence total parental nutrition.
- D. Refer for colectomy.
- E. Switch to cyclosporine.

- 40.** A 26-year-old man presents to hospital 3 hours after deliberate self-poisoning with 30 tablets of 240 mg of sustained-release verapamil. He is asymptomatic and clinical observations and blood results are normal.

What is the most appropriate treatment in addition to supportive care?

- A. Activated charcoal.
- B. Forced diuresis.
- C. Gastric lavage.
- D. Glucagon.
- E. Intravenous calcium.

- 41.** A 23-year-old man is found to have elevated plasma metanephrines (5 times upper limit of normal) and a unilateral 4 cm adrenal mass upon investigation for hypertension. He had neck surgery at the age of 11 for thyroid cancer. He is of normal body proportions and has no evidence of mucosal ganglioneuroma.

Which gene mutation is the likely cause of his adrenal and thyroid tumours?

- A. C-RET.
- B. MEN1.
- C. NF1.
- D. SDH-B.
- E. VHL.

- 42.** A 55-year-old woman presents to the hospital emergency department with severe right periorbital headache. On examination, there is complete ptosis on the right, the right eye is unable to move from an abducted and depressed position, and the right pupil is enlarged and minimally responsive to light.

What underlying vascular cause should be suspected?

- A. Middle cerebral artery occlusion.
- B. Pontine cavernoma.
- C. Posterior communicating artery aneurysm.
- D. Transverse sinus thrombosis.
- E. Vertebral artery dissection.

- 43.** A 35-year-old Somali lady with chronic hepatitis B is seen in clinic. Her liver function tests are normal. Her hepatitis B surface antigen is positive and surface antibody negative. An upper abdominal ultrasound reveals a liver of normal echotexture and size, with no splenomegaly or portal hypertension. A 2 cm hypoechoic lesion is noted in the right hepatic lobe.

What is the most appropriate next step to investigate the lesion?

- A. Positron emission tomography scan.
- B. Quadruple phase computed tomography.
- C. Repeat ultrasound in 6 months.
- D. Targeted liver biopsy.
- E. Transient elastography.

- 44.** A 64-year-old with rheumatoid arthritis has been stable on methotrexate and rituximab and low-dose prednisolone for 8 years. She presents with progressive alteration of her mental state and ataxia. An MRI shows widespread lesions of decreased signal on T1-weighted images and increased signal on T2-weighted and FLAIR images.

This is most consistent with which of the following diagnoses?

- A. Drug-induced cerebral lupus.
- B. Drug-induced demyelination.
- C. Progressive multifocal leucoencephalopathy.
- D. Rheumatoid vasculitis.
- E. Vascular dementia.

- 45.** An 83-year-old woman presents with increasing difficulty walking. She develops left buttock pain after walking approximately 700 m or standing for a prolonged period. The pain radiates to the left calf and is eased by leaning on a shopping trolley or resting for 5 minutes. She has no pain on sitting.

What is the most likely diagnosis?

- A. Ankylosing spondylitis.
- B. Osteoarthritis of the hip.
- C. Peripheral arterial disease.
- D. Spinal canal stenosis.
- E. Vertebral fracture.

- 46.** A 45-year-old woman presents with an acute onset of left hemiparesis. Her past medical history includes sensorineural hearing loss diagnosed at age 23, and insulin dependent diabetes diagnosed at age 30. Her brother has diabetes, and her mother has diabetes and hearing loss.

What is the most likely underlying diagnosis in this family?

- A. Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL).
- B. Hereditary haemorrhagic telangiectasia.
- C. Maturity onset diabetes in the young (MODY).
- D. Mitochondrial encephalopathy, lactic acidosis and stroke-like episodes (MELAS).
- E. Wolfram syndrome.

47. A 64-year-old woman with treated hypertension was found to have a right adrenal lesion by CT imaging when investigated for cholelithiasis 2 years previously. The lesion was described as rounded, hypodense (0 Hounsfield units), had a homogeneous appearance, and demonstrated no interval change on a repeat CT imaging 6 months later. Baseline investigations demonstrated normal aldosterone:renin ratio, normal plasma metanephrines, normal 24 hour urinary free cortisol, and a morning cortisol of 44 nmol/L [< 50] following 1 mg dexamethasone the night prior.

Two years later, she returns to the medical clinic for re-assessment of this adrenal lesion at the request of her new GP. What is the most appropriate recommendation?

- A. CT-guided adrenal biopsy.
- B. MRI adrenals.
- C. No further investigations.
- D. PET scan.
- E. Repeat dexamethasone suppression test.

48. A 53-year-old woman with advanced CKD is found to have worsening anaemia. She has co-morbidities of gastro-oesophageal reflux, hypothyroidism and intermittent constipation.

Her current medications include lisinopril 5 mg daily, atenolol 50 mg daily, pantoprazole 40 mg daily and thyroxine 100 mcg daily.

Laboratory tests prior to her outpatient appointment are as follows:

		Normal values
Haemoglobin	91 g/L	[115–160]
White cell count	$5.1 \times 10^9/L$	[4.0–11.0]
Platelets	$301 \times 10^9/L$	[140–400]
Iron	9 $\mu\text{mol/L}$	[9–30]
Transferrin	2.0 g/L	[2.0–3.6]
Transferrin saturation	9%	[15–45]
Ferritin	47 $\mu\text{g/L}$	[10–200]
C-reactive protein	3.1 mg/L	[< 5.0]

What is the best initial treatment for her anaemia?

- A. Erythropoietin.
 - B. Intravenous iron.
 - C. Oral iron.
 - D. Packed red cell transfusion.
 - E. Pentoxifylline.
49. What is the first-line drug therapy in idiopathic intracranial hypertension?
- A. Acetazolamide.
 - B. Frusemide.
 - C. Indomethacin.
 - D. Prednisone.
 - E. Topiramate.

50. Which one of the following drugs is most likely to increase the plasma concentration of dabigatran?

- A. Carbamazepine.
- B. Fluoxetine.
- C. Itraconazole.
- D. Probenecid.
- E. Verapamil.

51. A 38-year-old woman treated for advanced melanoma with pembrolizumab (anti-PD1 antibody) presents with new onset fatigue, generalised weakness, diarrhoea, anorexia and weight loss.

Supine blood pressure is 110/74 mmHg, standing blood pressure falls to 86/52 mmHg.

Initial investigations reveal:

		Normal values
Sodium (Na)	124 mmol/L	[135–145]
Potassium (K)	5.9 mmol/L	[3.5–5.5]
Urea	13.2 mmol/L	[3.1–8.1]
Creatinine	44 µmol/L	[49–90]
Glucose	3.6 mmol/L	[4.0–5.5]

What is the most likely cause for her acute presentation?

- A. Adrenal metastasis.
- B. Adrenalitis.
- C. Increased glucocorticoid clearance.
- D. Sellar metastasis.
- E. Syndrome of inappropriate antidiuretic hormone (SIADH).

- 52.** A 64-year-old woman has breathlessness on exertion. An echocardiogram is performed and shows a left ventricular ejection fraction of 55% and an estimated pulmonary artery pressure of 58 mmHg. Cardiac catheterisation is performed.

Which cardiac pressure measurement would best determine whether pulmonary hypertension is due to pulmonary arterial hypertension?

- A. Left ventricular pressure.
- B. Pulmonary artery pressure.
- C. Pulmonary capillary wedge pressure.
- D. Right atrial pressure.
- E. Right ventricular pressure.

- 53.** A 25-year-old professional basketball player presents with chest pain of sudden onset while training. His past medical history includes scoliosis surgery, and his family history was unremarkable. CT angiogram demonstrated a dissection of the aortic root.

Which of the following, in addition to the history above, would fulfil criteria for a diagnosis of Marfan syndrome?

- A. Arachnodactyly.
- B. Arm span to height ratio > 1.05 .
- C. Ectopia lentis.
- D. High arched palate.
- E. Pes planus.

54. A 50-year-old woman reports 6 months of burning pain in both feet, aggravated by contact with socks or bedsheets. Pain and temperature sensation is reduced below the knees, while proprioception, vibration and light touch sensation are preserved. Lower limb nerve conduction studies are normal.

What is the most likely diagnosis?

- A. Cauda equina syndrome.
- B. Functional neurological disorder.
- C. Lumbosacral plexopathy.
- D. Small-fibre neuropathy.
- E. Transverse myelitis.

55. A 28-year-old man presents with an itchy symmetrical erythematous vesicular rash with clusters on his shoulders, knees, buttocks and elbows. Which disease is associated with his presentation?

- A. Autoimmune hepatitis.
- B. Coeliac disease.
- C. Hepatitis C.
- D. Primary biliary cirrhosis.
- E. Ulcerative colitis.

56. A 22-year-old university student was diagnosed with type 1 diabetes 12 years ago and treated with multiple daily injections of insulin (basal insulin glargine plus prandial boluses of insulin aspart). She is seen for follow-up in the diabetes clinic. Measured HbA_{1c} has been > 85 mmol/mol (> 10%) for at least the last 5 years because of non-adherence. However, since she last attended clinic 3 months ago she has been regularly checking pre-meal capillary glucose levels, has been diligently counting carbohydrates and has not missed any basal or prandial insulin injections. Today's HbA_{1c} is 53 mmol/mol (7%).

As a consequence of rapidly improving glycaemic control, which diabetes complication is she now most at risk of developing?

- A. Amyotrophy.
- B. Foot ulcer.
- C. Gastroparesis.
- D. Nephropathy.
- E. Retinopathy.

57. The product information for alendronate states:

Alendronate (brand) "must be taken at least 30 minutes before the first food, beverage, or medication of the day with plain water only."

What is the main reason for this advice?

- A. Alendronate decreases the absorption of calcium.
- B. Alendronate decreases the absorption of vitamin D.
- C. Calcium decreases the absorption of alendronate.
- D. Food decreases the absorption of alendronate.
- E. Food increases the first pass metabolism of alendronate.

58. The product information for rivaroxaban states the following:

"Metabolism and Elimination

Of the administered rivaroxaban dose, approximately 2/3 undergoes metabolic degradation, with half then eliminated renally and the other half eliminated by the fecal route. The other 1/3 of the administered dose undergoes direct renal excretion as unchanged active substance in the urine, mainly via active secretion."

In a patient with a creatinine clearance of 35 mL/min (about a third of normal), which of the following is the best estimate of rivaroxaban clearance, relative to a patient with normal renal function?

- A. 1/3
- B. 2/3
- C. 2/9
- D. 4/9
- E. 7/9

59. A 42-year-old Sudanese male is diagnosed with advanced HIV with a CD4 count of 50 cells/ μ L [650–2000] and a viral load of 100,000 copies per mL. He is commenced on once daily antiretroviral. Baseline screening demonstrates he is Epstein–Barr virus (EBV) IgG positive and Toxoplasmosis IgG positive.

One month after commencing treatment he develops fever and cervical lymphadenopathy. What is the most likely cause for his lymphadenopathy?

- A. Drug reaction.
- B. Glandular fever.
- C. HIV-related lymphadenopathy.
- D. Immune reconstitution inflammatory syndrome (IRIS).
- E. Sarcoidosis.

60. Which factor is the strongest indication for surgery in native valve bacterial endocarditis?

- A. Intravenous drug use and tricuspid valve endocarditis.
- B. Mobile vegetation of 5 mm on echocardiography.
- C. Pulmonary infarction.
- D. Staphylococcal bacteraemia for 3 days despite therapy.
- E. Valve regurgitation resulting in heart failure.

61. A 40-year-old HIV positive man with a CD4 count of 450 cells/ μ L [650–2000] presents with a 3 day history of fever, cough, sputum production and a right lower lobe consolidation on chest x-ray.

What is the most likely organism causing his pneumonia?

- A. Methicillin resistant *Staphylococcus aureus*.
- B. *Mycobacterium avium* complex.
- C. *Mycobacterium tuberculosis*.
- D. *Pneumocystis jirovecii*.
- E. *Streptococcus pneumoniae*.

62. A 40-year-old woman with bronchiectasis has had three infective exacerbations requiring antibiotic treatment. Sputum culture has consistently revealed *Pseudomonas aeruginosa*.

Which long-term treatment is most appropriate to reduce the frequency of infective exacerbations?

- A. Amoxicillin-clavulanate.
- B. Azithromycin.
- C. Ciprofloxacin.
- D. Doxycycline.
- E. Trimethoprim-sulfamethoxazole.

63. A 20-year-old man presents to the Emergency Department with a severe exacerbation of asthma. There is no improvement following two doses of nebulised bronchodilators and IV hydrocortisone. What is the most appropriate next treatment?

- A. IM adrenaline.
- B. IV aminophylline.
- C. IV magnesium.
- D. IV methylprednisolone.
- E. IV salbutamol.

64. A patient receiving treatment for her metastatic colon cancer developed pain in her hands and diarrhoea. Her hands are shown on the photograph below:



Which of the following is the most likely treatment to have caused this problem?

- A. Bevacizumab.
- B. Capecitabine.
- C. Erlotinib.
- D. Irinotecan.
- E. Oxaliplatin.

65. What is the most common presenting symptom of pituitary apoplexy?

- A. Diplopia.
- B. Headache.
- C. Neck stiffness.
- D. Vertigo.
- E. Visual loss.

66. A 31-year-old woman has a history of facial swelling with ibuprofen and aspirin. After spraining her ankle she took paracetamol 1 g four times daily, and on the third day she woke up with swollen eyelids and upper lip swelling.

What is the best explanation for this?

- A. High-dose paracetamol inhibits COX-1.
- B. Paracetamol causes direct release of mast cell contents.
- C. She has an IgE-mediated reaction to an excipient common to all three medications.
- D. She has an underlying non-allergic condition causing angioedema.
- E. The paracetamol has been cross-contaminated with aspirin or ibuprofen.

67. A 35-year-old man presents with progressive cough for more than a year. He has had courses of antibiotics and inhalers with no lasting benefit. He works in an office, lives alone (no pets), does not smoke and has not travelled overseas. There is no family history of lung disease and he reports no contact with other persons with pulmonary disease or chest infection. Clinical examination is unremarkable.

His chest x-ray is shown:



Which of the following is the most likely diagnosis?

- A. Allergic bronchopulmonary aspergillosis.
- B. Granulomatosis with polyangiitis.
- C. Lung cancer.
- D. Sarcoidosis.
- E. Tuberculosis.

68. To diagnose type 2 diabetes mellitus in an asymptomatic patient, the patient must fulfil two diagnostic criteria, measured on separate days.

What is the purpose of this two-stage sequential testing?

- A. Decreases sensitivity.
- B. Decreases specificity.
- C. Increases sensitivity.
- D. Increases specificity.
- E. Increases the likelihood of a positive result.

69. Patients with drug reaction with eosinophilia and systemic symptoms (DRESS syndrome) are most likely to have additional involvement of which system in addition to the skin?

- A. Cardiovascular.
- B. Hepatic.
- C. Neurological.
- D. Renal.
- E. Respiratory.

70. What type of dementia is particularly sensitive to the adverse effects of antipsychotic medications?

- A. Alzheimer disease.
- B. Dementia with Lewy bodies.
- C. Frontotemporal dementia.
- D. Parkinson disease with dementia.
- E. Vascular dementia.

71. In a patient requiring urgent dialysis which of the following parameters would favour continuous renal replacement therapy (CRRT) rather than intermittent haemodialysis (IHD)?

- A. Active bleeding.
- B. Coagulopathy.
- C. Hyperkalaemia.
- D. Hypotension.
- E. Hypoxia.

72. An 88-year-old woman attends a hospital outpatient clinic complaining of generalised pain ("all over") and weakness. She is finding it increasingly difficult getting in and out of bed and up from chairs. She lives alone and is house bound. On examination she is thin, has proximal muscle weakness, a waddling gait and has difficulty getting up from the chair. The rest of the physical examination is normal.

Blood tests provided by her GP:

		Normal values
Haemoglobin	115 g/L	[120–160]
Mean corpuscular volume (MCV)	79 fL	[80–100]
Erythrocyte sedimentation rate (ESR)	31 mm/hr	[0–15]
Corrected calcium	2.10 mmol/L	[2.20–2.55]
Alkaline phosphatase	150 U/L	[41–119]
Albumin	30 g/L	[35–46]
Ferritin	90 µg/L	[30–400]
Thyroid-stimulating hormone	3.70 mIU/L	[0.35–3.60]
Free T ₄	10.0 pmol/L	[10.5–21.2]

What is the most likely cause of her symptoms?

- A. Hypoparathyroidism.
- B. Hypothyroidism.
- C. Iron deficiency anaemia.
- D. Osteomalacia.
- E. Polymyalgia rheumatica.

- 73.** A 54-year-old man presents with sudden onset palpitations and is found to be in atrial fibrillation. The decision is made to attempt pharmacological cardioversion. He is prescribed flecainide and metoprolol.

What is the purpose of metoprolol?

- A. Prevent 1:1 conduction if atrial flutter occurs.
- B. Reduce myocardial ischaemia if coronary artery disease is present.
- C. Reduce sympathomimetic complications of flecainide (e.g. tremor).
- D. Reduce the risk of flecainide induced ventricular arrhythmias.
- E. Synergistically increase the chance of reversion to sinus rhythm.

- 74.** A 45-year-old man presents with 2 weeks of right foot drop. Examination reveals numbness of the lateral aspect of the leg and weakness of ankle inversion, ankle dorsiflexion and toe extension, with normal knee and ankle reflexes.

Which clinical sign suggests a diagnosis of lumbar radiculopathy rather than peroneal neuropathy?

- A. Ankle inversion weakness.
- B. Lateral leg numbness.
- C. Normal ankle reflex.
- D. Normal knee reflex.
- E. Toe extension weakness.

- 75.** An 86-year-old lady with hypertension, type 2 diabetes and osteoporosis is found to have mild primary hyperparathyroidism. Her usual medications are metformin, quinapril, hydrochlorothiazide, cholecalciferol and alendronate.

In light of the new diagnosis, which of her medications should be discontinued?

- A. Alendronate.
- B. Cholecalciferol.
- C. Hydrochlorothiazide.
- D. Metformin.
- E. Quinapril.

76. A 35-year-old man presented with a painless testicular lump and imaging revealed bulky retroperitoneal lymph nodes.

Which tumour marker profile is most consistent with his diagnosis of pure seminoma testicular cancer?

	AFP	β HCG	LDH
Profile A	Normal	Elevated	Elevated
Profile B	Elevated	Normal	Normal
Profile C	Elevated	Normal	Elevated
Profile D	Elevated	Elevated	Elevated
Profile E	Normal	Normal	Normal

- A. Profile A.
- B. Profile B.
- C. Profile C.
- D. Profile D.
- E. Profile E.

77. A 32-year-old man has returned from 8 weeks in India 16 days previously. Since his arrival home, he has had fevers, abdominal pain, constipation and lethargy. Gram negative bacilli have grown in both aerobic and anaerobic blood culture samples 13 hours after being drawn.

What is the most likely diagnosis?

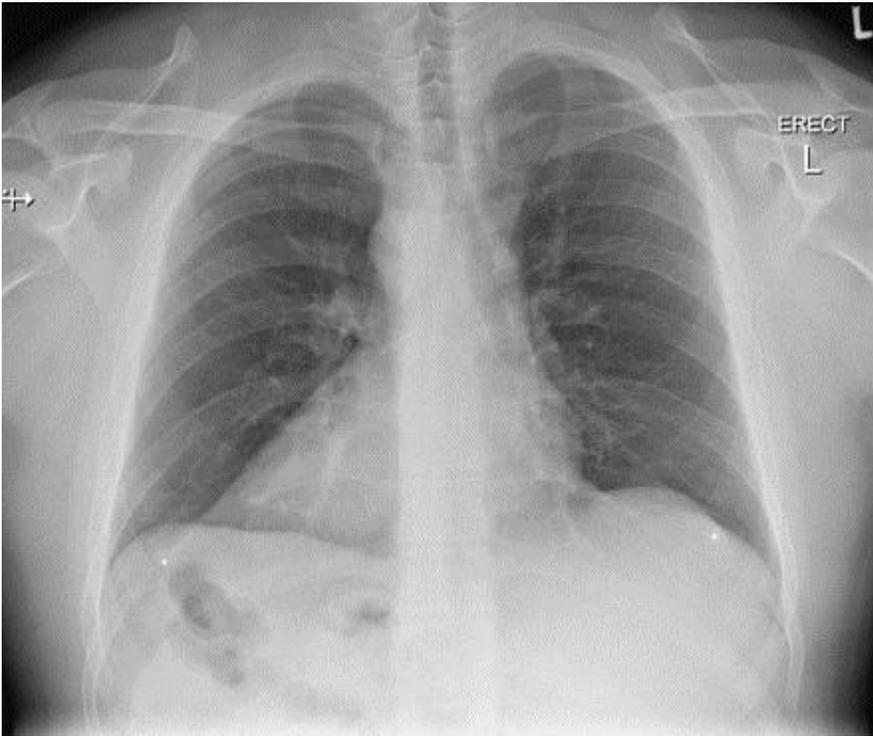
- A. Dengue.
- B. *Escherichia coli* O157.
- C. Leptospirosis.
- D. Malaria.
- E. Typhoid.

78. A 90-year-old resident of a nursing home develops offensive diarrhoea after a 7-day period of constipation. He is being treated with paracetamol and a transdermal opioid for chronic persistent pain and has also received long-term coloxyl with senna two tablets daily. He had a 5-day course of cephalexin for a urinary tract infection 5 days ago.

What is the most likely cause for the diarrhoea?

- A. *Clostridium difficile*.
- B. Diverticulitis.
- C. Drug-induced colitis.
- D. Laxative abuse.
- E. Overflow diarrhoea.

79. A 44-year-old man with a 10-pack year smoking history is seen in the outpatient clinic for persistent cough and sputum production. He has the following chest x-ray.



What is the most likely diagnosis?

- A. Chronic bronchitis.
- B. Pericardial effusion.
- C. Right lower lobe consolidation.
- D. Right middle lobe collapse.
- E. Situs inversus.

80. A 35-year-old man presents with fevers and myalgias 10 days after returning to Australia from Uganda.

He had no pre-travel advice or vaccinations and did not take antimalarials.

Investigations reveal *Plasmodium falciparum* (parasite count 9.2%), anaemia (haemoglobin 85 g/L [135–175]), thrombocytopenia (platelets $40 \times 10^9/L$ [150–400]), acute kidney injury and a raised bilirubin (60 $\mu\text{mol/L}$ [3–18]). The hospital has all antimalarial therapies available for emergency use.

Which antimalarial agent should be commenced?

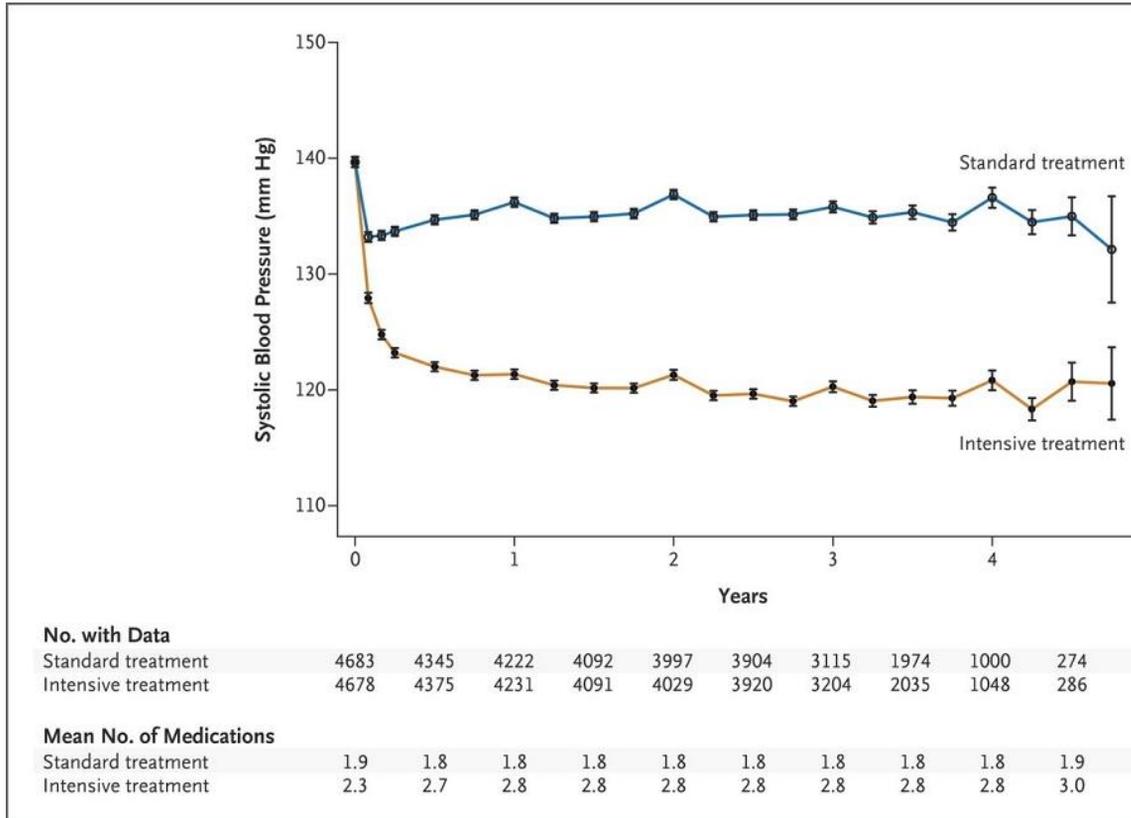
- A. Intravenous artesunate monotherapy.
- B. Intravenous quinine dihydrochloride monotherapy.
- C. Oral combination artemether+lumefantrine.
- D. Oral doxycycline monotherapy.
- E. Oral mefloquine monotherapy.

81. Use of antibiotics (especially vancomycin and broad-spectrum antibiotics) leads to an increase in the incidence of vancomycin-resistant *Enterococcus* (VRE).

What other factor contributes to colonisation with VRE?

- A. Antifungal drugs.
- B. Chronic immunosuppression.
- C. *Clostridium difficile* infection.
- D. Diabetes mellitus.
- E. Residential care.

82. In a planned 5-year trial of standard versus intensive blood pressure control, the mean systolic blood pressure between intensive and standard treatment is shown below with 95% confidence intervals indicated for each time point. Participants were recruited over 28 months. The trial was terminated early with a mean follow-up of 3.26 years.



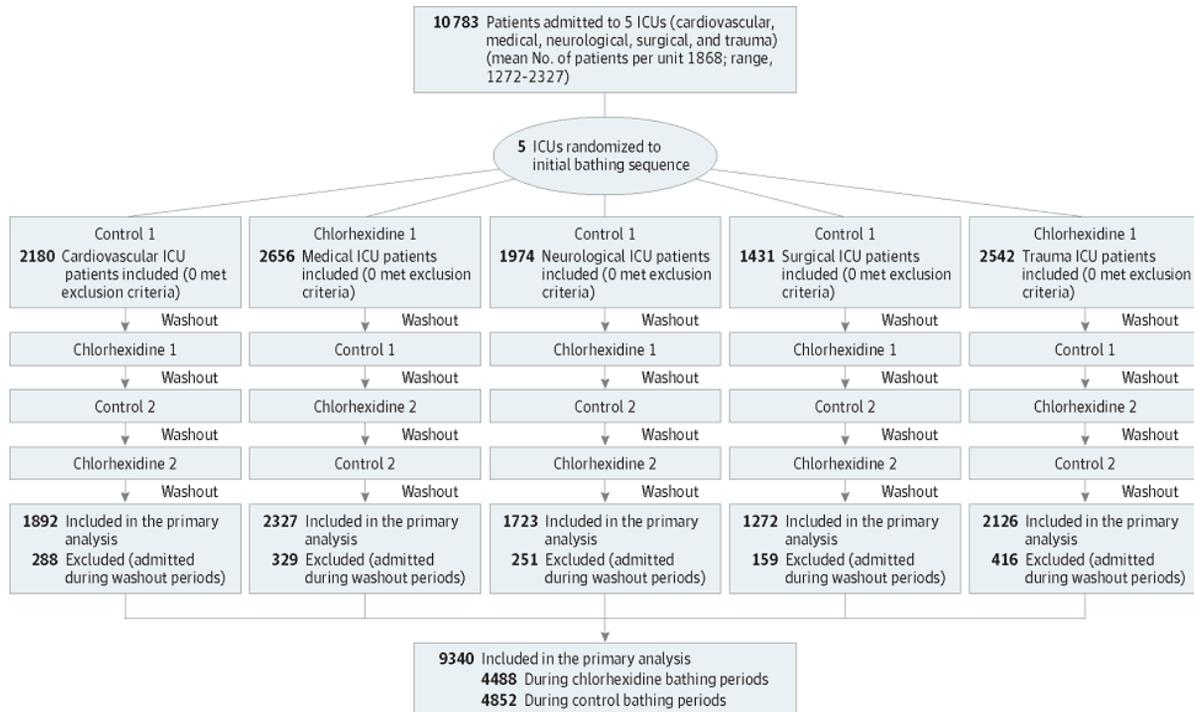
(Source: 2015 *N Engl J Med* 373; 2103–2116)

What is the most likely explanation for the increasing width of the 95% confidence interval after 4 years?

- A. Fewer participants with follow-up beyond 4 years.
- B. Increased drop-out rate after 3 years.
- C. Increased range of blood pressure among participants.
- D. Increasing difference in the number of medications in the intensive versus standard control arm.
- E. Reduced adherence to antihypertensive therapy.

- 83.** What is the main reason why immunotherapy (desensitisation) is routinely offered to patients with anaphylaxis caused by insect venom, but not to patients with anaphylaxis caused by food?
- A. Desensitisation has no effect on food allergies.
 - B. Greater diversity of allergenic epitopes with foods.
 - C. Oral administration is less likely to induce tolerance.
 - D. Risk of anaphylaxis is higher with foods.
 - E. Sustained tolerance is harder to achieve with foods.

84. A single institution determined the effect of bathing with chlorhexidine versus non-antimicrobial washes in its five intensive care units as illustrated in the diagram.



(Source: 2015 *JAMA* 313(4); 369–378)

What trial design is this an example of?

- A. Case-control study.
- B. Cluster-randomised controlled trial.
- C. Prospective cohort study.
- D. Randomised, double-blinded, placebo-controlled trial.
- E. Retrospective cohort study.

85. Disseminated intravascular coagulopathy is most commonly associated with which acute leukaemia?

- A. Eosinophilic.
- B. Lymphoid.
- C. Monocytic.
- D. Myeloid.
- E. Promyelocytic.

- 86.** In addition to cytotoxic T cells, which other immune cell is primarily dysfunctional in the pathophysiology of haemophagocytic lymphohistiocytosis?
- A. Dendritic.
 - B. Macrophage.
 - C. Mast.
 - D. Natural killer.
 - E. T helper.
- 87.** Which plasma component decreases during tumour lysis?
- A. Calcium.
 - B. Magnesium.
 - C. Phosphate.
 - D. Potassium.
 - E. Uric acid.
- 88.** The therapeutic benefit of hydroxyurea in sickle cell disease is achieved by increased synthesis of which haemoglobin subtype?
- A. HbA.
 - B. HbB.
 - C. HbE.
 - D. HbF.
 - E. HbS.
- 89.** Which antibiotic should be used in addition to lactulose for the management of refractory hepatic encephalopathy?
- A. Metronidazole.
 - B. Neomycin.
 - C. Rifaximin.
 - D. Sulfamethoxazole.
 - E. Vancomycin.

- 90.** Which of the following reduces the efficacy of tamoxifen in the treatment of oestrogen positive breast cancer?
- A. Alcohol.
 - B. Carbamazepine.
 - C. Paroxetine.
 - D. Voriconazole.
 - E. Warfarin.

91. A 70-year-old woman presents with 5 days of colicky generalised abdominal pain associated with 6 loose bowel actions a day. Examination reveals a tender abdomen, but no guarding. There is no blood or mucus in the stool. Her past history includes diabetes on metformin, hypertension on olmesartan, amlodipine and hydrochlorothiazide, chronic back pain on oxycodone and ibuprofen, functional dyspepsia on amitriptyline and reflux on calcium carbonate. She drinks a small glass of sherry every night and smokes 10 cigarettes a day.

Blood tests on presentation reveal:

		Normal values
Haemoglobin (Hb)	127 g/L	[120–160]
White cell count (WCC)	$10.8 \times 10^9/L$	[4.0–11.0]
Platelets (Plt)	$160 \times 10^9/L$	[150–400]
Lipase	170 U/L	[0–160]
Bilirubin	17 $\mu\text{mol/L}$	[3–18]
Albumin (Alb)	36 g/L	[35–46]
Alanine transaminase (ALT)	35 U/L	[5–40]
Aspartate aminotransferase (AST)	33 U/L	[12–36]
Gamma glutamyltranspeptidase (GGT)	64 U/L	[5–65]

Her abdominal x-ray is shown:



What is the most likely cause of her presentation?

- A. *Campylobacter* diarrhoea.
- B. Crohn disease.
- C. Faecal loading.
- D. Mesenteric ischaemia.
- E. Pancreatitis.

92. An 86-year-old patient is admitted to hospital with a chest infection. She has chronic atrial fibrillation with previous cardioembolic left middle cerebral infarct 12 months ago. Her medications include dabigatran 110 mg BD. When medically stable her creatinine clearance is 20 mL/min. She functions independently at home, walks with a frame and had one fall 6 months ago.

What is the best option for her long-term stroke prevention?

- A. Change to aspirin.
- B. Change to clopidogrel.
- C. Change to warfarin.
- D. Continue dabigatran.
- E. No antiplatelet or anticoagulation therapy.

QUESTIONS 93 AND 94 REFER TO THE FOLLOWING INFORMATION

Which neurological autoantibody target is associated with this condition?

93. Myasthenia gravis

- A. Acetylcholine receptor (AChR).
- B. Amphiphysin.
- C. Aquaporin 4 (AQP4).
- D. Ganglioside M1 (GM1).
- E. Glutamic acid decarboxylase (GAD).
- F. Leucine-rich, glioma inactivated 1 (LG1).
- G. Myelin-associated glycoprotein (MAG).
- H. *N*-methyl-D-aspartate receptor (NMDAR).

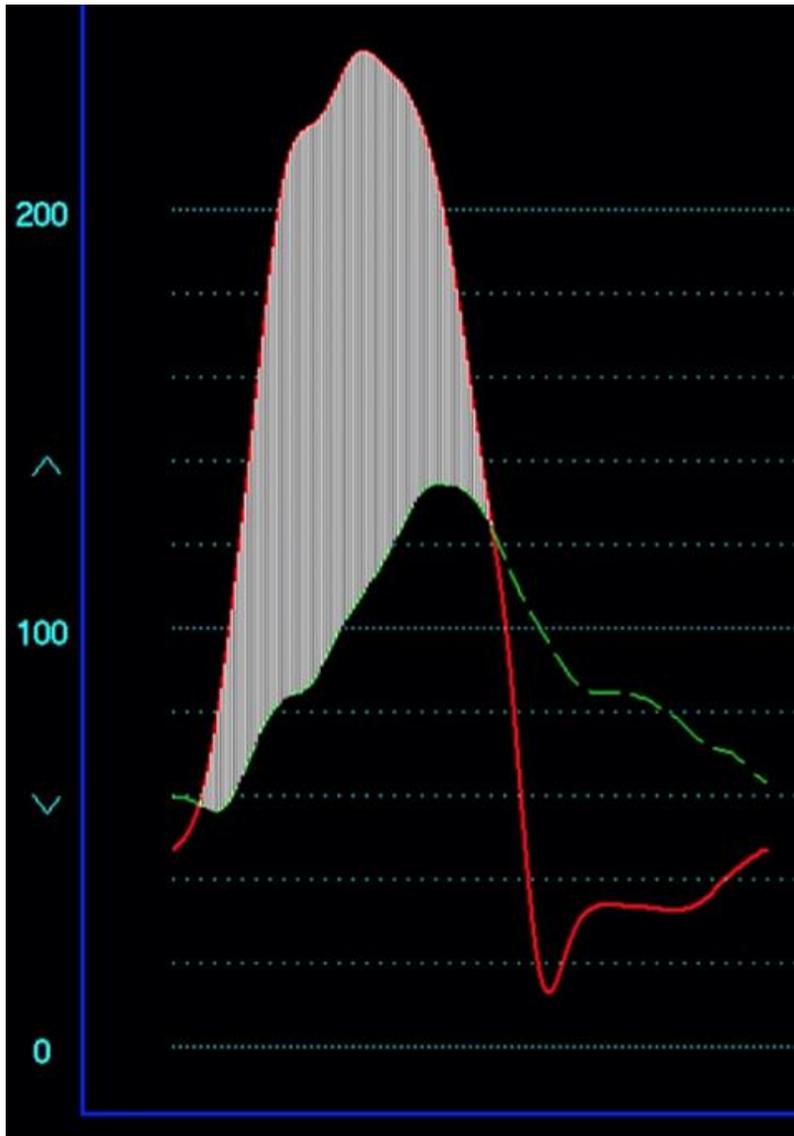
94. Neuromyelitis optica

- A. Acetylcholine receptor (AChR).
- B. Amphiphysin.
- C. Aquaporin 4 (AQP4).
- D. Ganglioside M1 (GM1).
- E. Glutamic acid decarboxylase (GAD).
- F. Leucine-rich, glioma inactivated 1 (LG1).
- G. Myelin-associated glycoprotein (MAG).
- H. *N*-methyl-D-aspartate receptor (NMDAR).

QUESTIONS 95 AND 96 REFER TO THE FOLLOWING INFORMATION

For the clinical scenario described, what is the cardiac lesion?

95. A 64-year-old woman undergoes cardiac catheterisation during which simultaneous pressure measurements (measured in mmHg) are recorded from the left ventricle (red solid line) and aorta (green dashed line). The pressure traces are shown in the figure.



- A. Aortic regurgitation.
- B. Aortic stenosis.
- C. Atrial septal defect.
- D. Coarctation of the aorta.
- E. Mitral regurgitation.
- F. Mitral stenosis.
- G. Patent ductus arteriosus.
- H. Ventricular septal defect.

96. A 46-year-old man undergoes cardiac catheterisation due to a history of breathlessness. Pressure measurements and oxygen saturations are shown in the table.

Cardiac chamber	Pressure (mmHg)	Oxygen saturation
SVC	-	61%
IVC	-	63%
RA	4	73%
RV	24/5	79%
PA	24/9	79%
PCW	11	94%
LV	124/10	99%
Ao	124/82	99%

- A. Aortic regurgitation.
- B. Aortic stenosis.
- C. Atrial septal defect.
- D. Coarctation of the aorta.
- E. Mitral regurgitation.
- F. Mitral stenosis.
- G. Patent ductus arteriosus.
- H. Ventricular septal defect.

QUESTIONS 97 AND 98 REFER TO THE FOLLOWING INFORMATION

Fungal infections cause significant morbidity and mortality. Please choose the most appropriate antifungal medication for the clinical situation described.

97. Which antifungal is first-line therapy for treatment of invasive aspergillosis?
- A. 5-Flucytosine.
 - B. Caspofungin.
 - C. Fluconazole.
 - D. Griseofulvin.
 - E. Itraconazole.
 - F. Liposomal amphotericin.
 - G. Terbinafine.
 - H. Voriconazole.
98. Which antifungal is first-line therapy for an intensive care patient with *Candida glabrata* candidaemia?
- A. 5-Flucytosine.
 - B. Caspofungin.
 - C. Fluconazole.
 - D. Griseofulvin.
 - E. Itraconazole.
 - F. Liposomal amphotericin.
 - G. Terbinafine.
 - H. Voriconazole.

QUESTIONS 99 AND 100 REFER TO THE FOLLOWING INFORMATION

You are the physician on call in a country regional hospital. For the listed clinical diagnosis, select the next most appropriate treatment option.

99. Thrombotic thrombocytopenic purpura.

- A. Cryoprecipitate.
- B. Direct antithrombin anticoagulant.
- C. Fresh frozen plasma.
- D. Intravenous immunoglobulin.
- E. Low molecular weight heparin.
- F. Platelets.
- G. Unfractionated heparin.
- H. Warfarin.

100. Acute immune thrombocytopenia.

- A. Cryoprecipitate.
- B. Direct antithrombin anticoagulant.
- C. Fresh frozen plasma.
- D. Intravenous immunoglobulin.
- E. Low molecular weight heparin.
- F. Platelets.
- G. Unfractionated heparin.
- H. Warfarin.