

1) A 64 year old man has central chest pain. Which single set of findings is most likely in the diagnosis of myocardial infarction?

- A. high troponin T and high creatine kinase (muscle-brain) (CK-MB)
- B. high troponin T and high lactate dehydrogenase (LDH)
- C. high troponin T and low CK-MB
- D. normal troponin T and high LDH
- E. normal troponin T and normal CK-MB

2) A 25 year old woman has fever, haematuria, splenomegaly and splinter haemorrhages. Which is the most likely diagnosis?

- A. Burkitt's lymphoma
- B. carcinoid syndrome
- D. endocarditis
- E. enteric fever
- E. pneumococcal pneumonia

3) Which single condition is a recognised complication of essential (primary) hypertension?

- A. aortic stenosis
- B. cerebral infarction
- C. chronic glomerulonephritis
- D. extradural haemorrhage
- E. right ventricular outflow tract hypertrophy

4) A 68 year old woman has a sudden collapse after a flu-like illness lasting seven days. She is cyanotic, hypotensive, and tachycardic with a high jugular venous pressure. Which is the single most likely cause?

- A. mitral valve prolapse
- B. myocardial infarction
- C. pulmonary embolism
- D. subarachnoid haemorrhage
- E. thyrotoxic storm

5) A 72 year old man with chronic obstructive pulmonary disease has reduced lung transfer factor for carbon monoxide (TLCO). Which one of the following is measured by the TLCO?

- A. alveolar carbon monoxide concentration
- B. pulmonary gas transfer
- C. pulmonary transluminal oxygen gradient
- D. total lung compliance
- E. total lung oxygenation capacity

6) A 68 year old woman had a post mortem. The lungs were heavy and macroscopically had scattered firm grey areas. Histologically, the alveolar spaces were filled with neutrophils. Which is the single most likely diagnosis?

- A. adult respiratory distress syndrome
- B. bronchopneumonia
- C. chronic obstructive pulmonary disease
- D. CMV pneumonitis
- E. tuberculosis

7) A 87 year old man has a longstanding, non-healing ulcer on the side of his nose. It has an opalescent sheen and multiple telangiectases running over the surface. The centre is depressed and necrotic. What is the single most likely diagnosis?

- A. basal cell carcinoma
- B. squamous cell carcinoma
- C. keratoacanthoma
- D. melanoma
- E. solar keratosis

8) An 89 year old man has Alzheimer's disease and dies. Which is the single most likely macroscopic finding in his brain?

- A. cerebellar atrophy
- B. compression of the lateral ventricles
- C. increased volume of the hippocampus
- D. narrowing of cerebral gyri and widening of sulci
- E. plaques of demyelination in the white matter

9) A 42 year old woman with primary hyperparathyroidism develops muscular weakness due to hypophosphataemia. What is the single most likely reason for this?

- A. her rate of bone resorption is reduced
- B. her serum calcium concentration is raised
- C. her serum magnesium concentration is high
- D. parathyroid hormone has a renal phosphaturic effect
- E. vitamin D activity is impaired in this condition

10) A 44 year old man has been recently diagnosed with diabetes mellitus. He is noted to have a large tongue, widely spaced teeth and sweaty palms. Which single condition should be considered?

- A. acromegaly
- B. gigantism
- C. haemochromatosis
- D. Hurler's syndrome
- E. Klinefelter's syndrome

11) A 43 year old man has pancreatic adenocarcinoma. Which single factor conveys risk in the development of this disease?

- A. acute pancreatitis
- B. chronic gastritis
- C. chronic recurrent pancreatitis
- D. hepatic steatosis
- E. low fat diet

12) A 33 year old man has a squamous cell carcinoma of the bladder. Which single risk factor makes this diagnosis more likely?

- A. being male
- B. cystitis cystica
- C. schistosomiasis
- D. smoking
- E. working with aniline dyes

13) A 46 year old woman with primary biliary cirrhosis is being considered for liver transplantation. Which is the single most likely indication for the procedure?

- A. high levels of serum alkaline phosphatase
- B. intractable pruritus
- C. low serum albumin
- D. raised IgM levels
- E. rising titre of anti-mitochondrial antibodies

14) A 47 year old woman has bony pain and erythema at the site of an orthopaedic procedure two weeks ago. Which single investigation will best exclude osteomyelitis?

- A. C-reactive protein
- B. CT scan
- C. leucocyte count
- D. magnetic resonance imaging
- E. plain X-ray

15) A 24 year old woman with systemic lupus erythematosus is under clinic review. What is the single most likely finding in her serum?

- A. decreased IgM levels
- B. decreased levels of C4
- C. decreased levels of Interleukin-1
- D. increased levels of C1 inhibitor
- E. increased levels of C3

16) A 21 year old student has meningism and conjunctival petechiae. A lumbar puncture shows turbid cerebrospinal fluid with a high protein level. Microscopy reveals Gram negative diplococci. What is the single most likely cause for her illness?

- A. haemophilus influenzae
- B. listeria monocytogenes
- C. neisseria gonorrhoeae
- D. neisseria meningitidis
- E. streptococcus pneumoniae

17) In which single complication of infective endocarditis are no microorganisms identifiable at the complication site?

- A. cerebral infarct
- B. glomerulonephritis
- C. mycotic aneurysm
- D. splenic infarct
- E. valve regurgitation

18) A 19 year old contact lens wearer has bilateral red, watery, itchy eyes. Which is the single most likely diagnosis?

- A. adenoviral conjunctivitis
- B. allergic conjunctivitis
- C. bacterial conjunctivitis
- D. chlamydial conjunctivitis
- E. herpetic keratitis

19) A 35 year old African woman has a haemoglobin level of 6g/dL. A blood film shows microcytic, hypochromic red blood cells with target cells. What is the single most likely diagnosis?

- A. anaemia of chronic disease
- B. iron deficiency anaemia
- C. sickle cell disease
- D. sideroblastic anaemia
- E. thalassaemia trait

20) A 46 year old woman requires a blood transfusion but is concerned about the possibility of contracting viral hepatitis. Which hepatitis viruses are routinely tested for in blood for transfusion?

- A. hepatitis A and C
- B. hepatitis A, B and D
- C. hepatitis B and C
- D. hepatitis B, C and E
- E. hepatitis C and D

21) A 74 year old woman has carcinoma of the colon. Which is the single most likely associated condition?

- A. Crohn's disease
- B. familial polyposis coli
- C. Hirschsprung's disease
- D. sporadic adenomatous polyps
- E. ulcerative colitis

22) A 45 year old hypertensive man has sudden onset of central chest pain, radiating to the left arm, associated with tingling and numbness. The pain radiates to his back and he has nausea, vomiting and sweating. A chest x-ray shows mediastinal widening. Which is the single most likely diagnosis?

- A. acute myocardial infarction
- B. aortic dissection
- C. aortic regurgitation
- D. pulmonary embolism
- E. tension pneumothorax

23) A 65 year old woman has palpitations and has a pulse rate of 185bpm. By the time she reaches medical help she is better and her pulse is 80bpm and regular. Which is the single most likely cause for her palpitation?

- A. atrial fibrillation
- B. atrial flutter
- C. sinus tachycardia
- D. ventricular fibrillation
- E. ventricular tachycardia

24) A 72 year old woman has breathlessness one day after a dynamic hip screw. She has a respiratory rate of 25 breaths per minute, is tachycardic with a heart rate of 90 beats per minute, her blood pressure is 110/70 mmHg and her oxygen saturation is 90% on room air. Her heart sounds are normal and her chest is clear. Which is the single most appropriate treatment?

- A. aspirin
- B. clopidogrel
- C. low molecular weight heparin
- D. unfractionated heparin
- E. warfarin

25) An 81 year old man with COPD has an increase in cough, sputum viscosity, wheeze and breathlessness. He is able to complete short sentences with a respiratory rate of 18 breaths per minute. Which is the single best initial treatment?

- A. antibiotics, nebulised β_2 agonist, nebulised anti-cholinergic, intravenous steroids
- B. antibiotics, nebulised β_2 agonist, nebulised anti-cholinergic, oral steroid
- C. antibiotics, nebulised β_2 agonist, oral steroid, montelukast
- D. nebulised β_2 agonist, montelukast, intravenous steroid, nebulised anti-cholinergic
- E. nebulised β_2 agonist, nebulised anti-cholinergic, intravenous steroids

26) A 70 year old man has shortness of breath secondary to a pleural effusion. The protein content of the pleural fluid is 45 g/l. What is the most likely cause of his effusion?

- A. congestive cardiac failure
- B. chronic liver failure
- C. malabsorption
- D. nephrotic syndrome
- E. non small cell lung cancer

27) An 83 year old woman has had increasing confusion and wandering for 8 months. She has no significant past medical history. Which single pathology is most likely to account for her cognitive decline?

- A. Cushing's disease
- B. diabetes mellitus
- C. Gilbert's syndrome
- D. hypoparathyroidism
- E. hypothyroidism

28) A 79 year old woman has a resting tremor of her right hand, difficulty walking and falls over the last two years. She has a festinant gait, truncal rigidity and is unable to gaze upwards. Which single diagnosis is the most likely cause of her problem?

- A. diffuse Lewy Body disease
- B. idiopathic Parkinson's disease
- C. multi-system atrophy
- D. progressive supranuclear palsy
- E. vascular parkinsonism

29) A 79 year old woman has urinary frequency, urgency and urgency incontinence. What is the next single best investigation?

- A. dipstick urinalysis
- B. frequency-volume chart (bladder diary)
- C. multi-channel cystometry
- D. renal tract ultrasound
- E. video urodynamics

30) A 93 year old man has a series of falls. He has been progressively forgetful and has had episodic hallucinations over the past year. Which is the single most likely diagnosis?

- A. Alzheimer's disease
- B. diffuse Lewy body disease
- C. multi-infarct dementia
- D. multi-system atrophy
- E. Parkinson's disease

31) A 35 year old man with type 1 diabetes has microalbuminuria. Which single treatment should be started?

- A. atenolol
- B. frusemide
- C. lisinopril
- D. nifedipine
- E. prednisolone

32) A 42 year old man has long standing lethargy and deranged kidney function. He takes lisinopril 5 mg once daily for hypertension and all his siblings have kidney disease. His blood pressure is 150 / 95 mmHg. He is pale and has a palpable liver and kidneys. He has a haemoglobin of 8.2 g/dl and creatinine of 255 $\mu\text{mol/l}$. Which single finding does not support a diagnosis of adult polycystic kidney disease?

- A. elevated serum creatinine
- B. family history of kidney disease
- C. hypertension
- D. hypochromic microcytic anaemia
- E. palpable liver and kidneys

33) A 50 year old woman has a five year history of pain in the middle of both feet, back, hips, and metacarpals. She has an elevated serum ferritin, with normal liver function tests and glucose concentration, full blood count, and erythrocyte sedimentation rate. Which single option is the most likely diagnosis?

- A. acute lymphoblastic leukaemia
- B. haemochromatosis
- C. multiple myeloma
- D. sickle cell disease
- E. Wilson's disease

34) A 30 year old woman has a blood stained nipple discharge associated with a small palpable retro-areolar mass. What is the single most likely diagnosis?

- A. cyst
- B. fat necrosis
- C. fibroadenoma
- D. mammary fistula
- E. papilloma

35) A 45 year old man has had an anterior resection for carcinoma of the rectum and received post operative radiotherapy. One year after treatment he has bilateral lower limb oedema. What is the single most likely cause?

- A. anastomotic cancer recurrence
- B. deep inguinal and para-aortic lymph node recurrence
- C. deep venous thrombosis
- D. hypoalbuminaemia
- E. liver metastasis

36) A 22 year old man has a suspected diagnosis of peritonitis. Which single symptom best describes the patient if the diagnosis is correct?

- A. abdominal rigidity
- B. frequent vomiting
- C. hyperactive bowel sounds
- D. rolling about in pain
- E. tenderness on rectal examination

37) A 22 year old obese woman has a fever of 37.8°C 24 hours after appendicectomy. What is the single most likely cause?

- A. pulmonary atelectasis
- B. pulmonary embolism
- C. pelvic abscess
- D. thrombophlebitis
- E. urinary tract infection

38) What is the single best treatment for severe osteoarthritis of the hip?

- A. allopurinol
- B. gold
- C. joint replacement surgery
- D. methotrexate
- E. prednisolone

39) A 70 year old man has pain on chewing his food. He has tenderness in the temporal region and proximal muscle weakness in his arms. What is the single most appropriate treatment for him?

- A. aspirin
- B. ibuprofen
- C. hydrocortisone
- D. methyl-prednisolone
- E. prednisolone

40) A 36 year old woman has thickening of her skin over her fingers and Raynaud's phenomenon. She has multiple telangiectasia over her face and difficulty swallowing. Which single antibody is she most likely to have?

- A. anti centromere antibody
- B. anti Jo-1 antibody
- C. anti topoisomerase antibody
- D. c-ANCA
- E. high titre of anti-DNA antibody

41) A 22 year asthmatic woman has a painful right hip and inability to weight bear. She is otherwise well. She has had a number of recent admissions during which she needed high dose steroids. Her X-ray shows some destruction of her right femoral head. What is the single most likely diagnosis?

- A. avascular necrosis
- B. gouty arthritis
- C. myositis ossificans
- D. osteoid osteoma
- E. septic arthritis

42) A 42 year old Bangladeshi man has 3 months of low back pain. He sweats at night, and has recently lost weight. X-rays show loss of normal architecture and some collapse of his L3 vertebra. What is the single most likely diagnosis?

- A. muscle strain
- B. osteoporotic fracture
- C. renal stone
- D. spondylolisthesis
- E. tuberculous infection

43) A 28 year old Caucasian man with HIV infection has increasing shortness of breath, a dry cough and decreasing exercise tolerance. Chest x-ray shows bilateral diffuse infiltrates. What is the single most likely cause?

- A. adult respiratory distress syndrome
- B. lobar pneumonia
- C. pulmonary embolism
- D. pneumocystis jervovicii pneumonia
- E. tuberculosis

44) A 68 year old man who has had a left middle cerebral artery infarct walks into doors. Which single description best describes his visual field defect?

- A. left homonymous hemianopia
- B. left upper quadrantanopia
- C. para-central visual defect
- D. right homonymous hemianopia
- E. right upper quadrantanopia

45) A 72 year old woman has dysphagia, regurgitation of food and severe halitosis. She has a small mass on the left side of her neck. Which is the single most appropriate investigation?

- A. barium swallow
- B. cervical x-ray
- C. MRI of neck
- D. oesophagoscopy
- E. ultrasound of mass

46) In clinical trials, treatment groups of subjects are often similar with respect to their characteristics at baseline. Which single statement best describes the method which accounts for this?

- A. blinding
- B. informed consent
- C. intention to treat analysis
- D. placebo effect
- E. randomization

47) A 70 year old man with known ischaemic heart disease has permanent atrial fibrillation with a ventricular rate of 70. He is asymptomatic. Which is the single best management option?

- A. anticoagulate with 300mg aspirin a day
- B. anticoagulate with warfarin
- C. direct current cardioversion
- D. regular cardiology review
- E. rhythm control with amiodarone

48) A man with type 1 diabetes has influenza. He is off his food and is worried about the risk of developing hypoglycaemia. Which is the single most appropriate intervention?

- A. an oral glucose tolerance test
- B. change to intravenous insulin
- C. gradually reduce the dose of insulin
- D. maintain usual insulin regimen
- E. stop insulin immediately

49) A 50 year old man with epigastric burning pain has an oesophago-gastro-duodenoscopy (OGD) which shows gastro-oesophageal reflux. Which single oral medication is the most effective for his condition?

- A. bismuth
- B. gaviscon
- C. magnesium trisilicate
- D. omeprazole
- E. ranitidine

50) A 47 year old woman has generalized pruritis, jaundice, dry eyes and mouth. She is otherwise well and drinks no alcohol. She has a markedly raised alkaline phosphatase. Which is the single most useful investigation?

- A. anti IgM antibody
- B. anti-nuclear antibody
- C. hepatitis B surface antigen
- D. liver function tests
- E. mitochondrial antibodies

51) Which is the single best treatment for the prevention of variceal bleeding in a 43 year old alcoholic man with portal hypertension and varices?

- A. amlodipine
- B. metoclopramide
- C. omeprazole
- D. ondansetron
- E. propranolol

52) A 65 year old man has a persistent fever, profuse diarrhoea and abdominal pain two weeks after finishing antibiotics following an elective hip replacement. There are reddened ulcers and yellowish plaques on his colonic mucosa at sigmoidoscopy. Which is the single most likely diagnosis?

- A. Clostridium perfringens enterocolitis
- B. Crohn's disease
- C. pseudomembranous colitis
- D. ulcerative colitis
- E. viral gastroenteritis

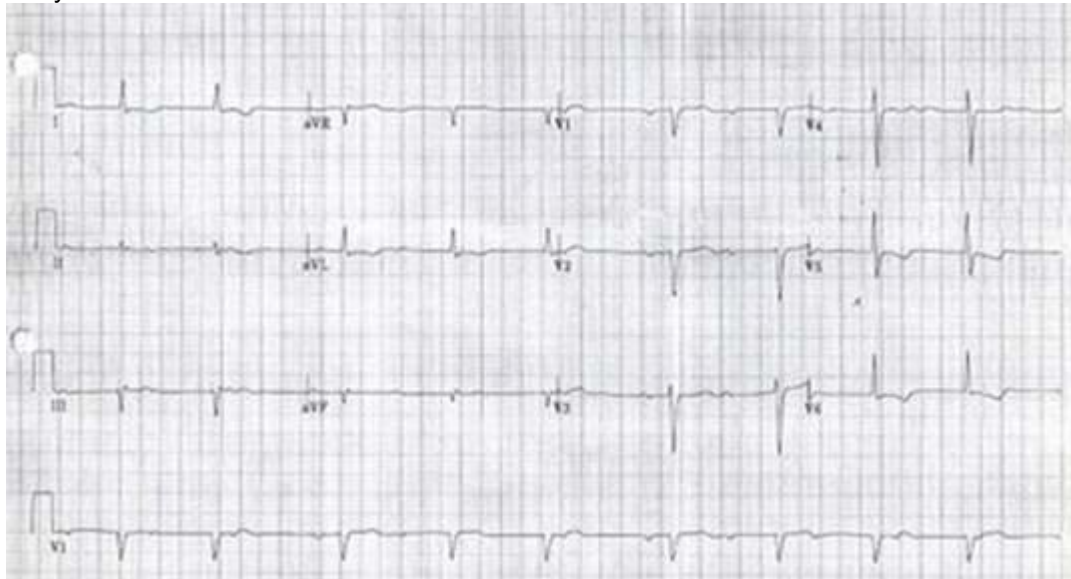
53) A 56 year old obese man has recurrent abdominal pain radiating to his back and made worse by eating spicy foods and bending over. Antacids relieve his pain. Which is the single most appropriate next investigation?

- A. abdominal x-ray
- B. abdominal CT scan
- C. double contrast barium meal
- D. Helicobacter pylori breath test
- E. oesophagogastrroduodenoscopy (OGD)

54) A 42 year old woman with tiredness and a macrocytic anaemia has a small bowel biopsy suggesting coeliac disease. Which is the single most sensitive and specific serum antibody which confirms this diagnosis?

- A. anti-endothelial antibody
- B. anti-gliadin antibody
- C. anti-intrinsic factor antibody
- D. anti-mitochondrial antibody
- E. anti-transglutaminase antibody

55) A 48 year old man has had an inferior myocardial infarction. He has a monitored arrhythmia. His 12 lead ECG is shown below.



Which is the single most likely heart rhythm?

- A. atrial fibrillation
- B. Mobitz Type 1 atrioventricular block
- C. Mobitz Type 2 atrioventricular block
- D. premature ventricular contractions (ventricular extrasystole)
- E. Type 1 atrioventricular block

56) A 76 year old woman with repeated falls is investigated with a 24-hour Holter monitor. She dies with the monitor in place. A segment of the trace is below.



What is the single best diagnosis?

- A. alternating current interference
- B. movement artefact
- C. torsade des pointes
- D. ventricular fibrillation
- E. ventricular tachycardia

57) A 38 year old woman has two day history of cough and malaise. Her chest radiograph is below.



What is the single most likely diagnosis?

- A. atypical pneumonia
- B. broncho-alveolar cell carcinoma
- C. lobar pneumonia
- D. pleural effusion
- E. right lower lobe collapse

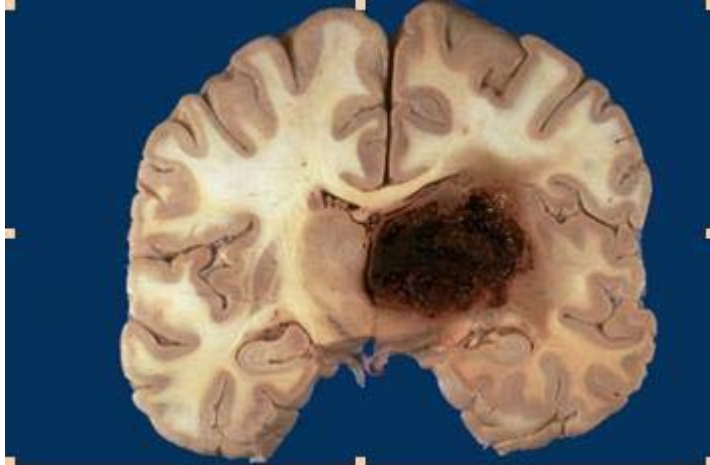
58) An 80 year old woman has weight loss. She has a chest radiograph performed.



Which is the single most important finding?

- A. abnormal right diaphragmatic shadow
- B. enlarged right hilum
- C. hyper-expanded lung fields
- D. lesion in the left lower lobe
- E. normal chest x-ray

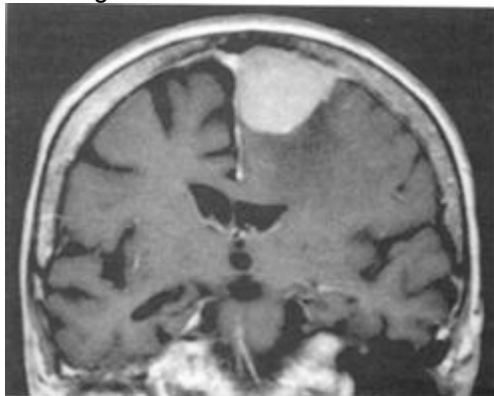
59) An 83 year old woman is found dead in the street. At post mortem, the brain contains the lesion shown in a coronal section of the cerebral hemispheres.



Which is the single most likely underlying cause?

- A. hypertension
- B. malignancy
- C. ruptured berry aneurysm
- D. thromboembolus
- E. trauma

60) A healthy 78 year old woman has had fits for the last two years. She has no focal neurological deficit. Her CT scan is below.



What is the single most likely diagnosis?

- A. cerebral abscess
- B. glioma
- C. meningioma
- D. metastatic malignancy
- E. subdural haematoma

61) A 69 year old woman has a pre-operative assessment in preparation for a total hip replacement. The results of blood grouping and antibody screening tests are shown.

Typing of patient's red cells				Reaction of patient's serum with red cells		
Anti-A	Anti-B	Anti-A & Anti-B	Anti-D	A cells	B cells	O cells
-	-	-	-	++	++	-

Which one of the following is the patient's blood group?

- A. A Rhesus D negative
- B. AB Rhesus D negative
- C. AB Rhesus D positive
- D. O Rhesus D negative
- E. O Rhesus D positive

62) A 54 year old man has anaemia. His hands are shown below.



What is the single most likely cause of the anaemia?

- A. haemolytic anaemia
- B. iron deficiency anaemia
- C. pernicious anaemia
- D. refractory anaemia
- E. sideroblastic anaemia

63) A 68 year old woman has an anterior resection of the rectum and sigmoid colon because of bowel obstruction. The surgical specimen is below, opened to show the mucosal surface.



What is the single most likely pathological diagnosis?

- A. adenocarcinoma
- B. adenoma
- C. signet ring carcinoma
- D. squamous cell carcinoma
- E. transitional cell carcinoma

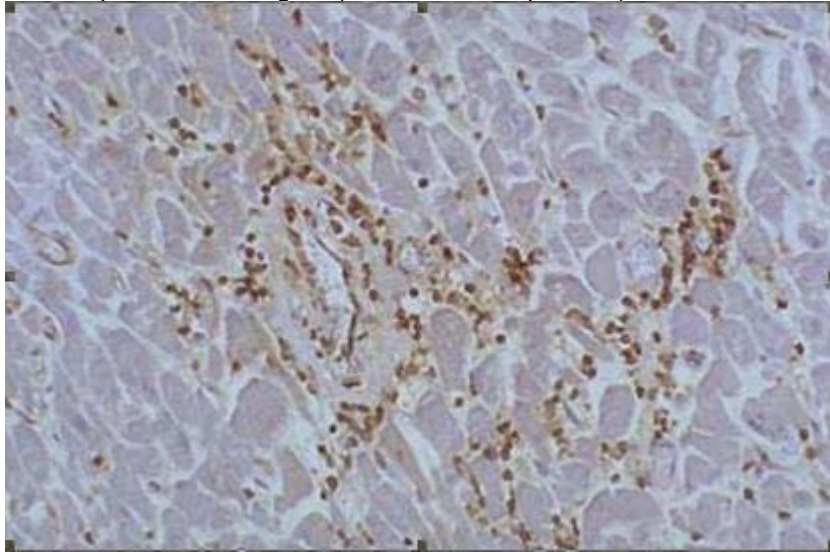
64) A 62 year old woman with constipation has pain and bleeding on defaecation. Examination is impossible due to discomfort. Her anus is shown in the picture:



What is the single most likely diagnosis?

- A. fissure in ano
- B. fistula in ano
- C. haemorrhoids
- D. perianal abscess
- E. pruritis ani

65) The section below shows tissue from the transplanted heart of a 32 year old with cardiomyopathy. Biopsy was taken six months after transplantation. The section has been exposed to an antibody that detects CD3+ antigen and counterstained with an immunoperoxidase reagent (brown colour = positive).



What is the single most likely explanation for these findings?

- A. ciclosporin toxicity
- B. cytomegalovirus infection
- C. recurrence of viral myocarditis, the cause of the cardiomyopathy
- D. rejection episode
- E. vasculitis due to immune complex deposition

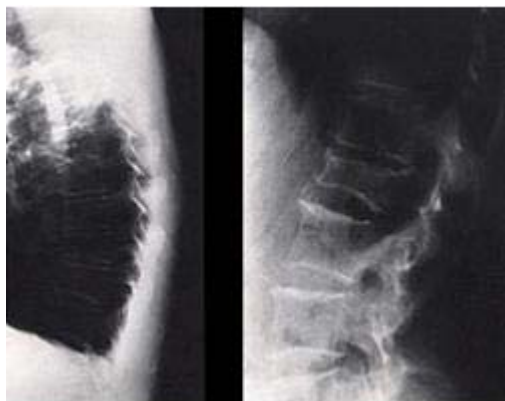
66) A 76 year old woman has a rash and chronic joint pain. A photograph of her hands is shown below.



What is the single most likely diagnosis?

- A. osteoarthritis
- B. osteogenesis imperfecta
- C. psoriatic arthropathy
- D. rheumatoid disease
- E. tophaceous gout

67) A 65 year old woman has slowly worsening lower back pain. Her investigation results are below.



Alkaline Phosphatase: Normal
Corrected Calcium: Normal
Phosphate: Normal

What is the single most likely diagnosis?

- A. bony metastases
- B. osteomalacia
- C. osteoporosis
- D. myeloma
- E. Paget's disease

68) A 20 year old man has a fever and a sore throat. He has palpable lymphadenopathy in the cervical and inguinal areas and an enlarged spleen.

Blood tests show:

Haemoglobin	11.0 g/dl
WCC	$12 \times 10^9/l$
Platelets	$145 \times 10^9/l$
Urea	7 $\mu\text{mol/l}$
Creatinine	80 $\mu\text{mol/l}$
Sodium	140 mmol/l
Potassium	4.2 mmol/l
Bilirubin	22 $\mu\text{mol/l}$
AST	90 U/l
ALP	280 U/l
Albumin	32 g/l
CRP	110 mg/l

What is the single most likely diagnosis?

- A. Clostridium difficile infection
- B. infectious mononucleosis
- C. schistosomiasis
- D. streptococcal pneumonia
- E. typhoid fever

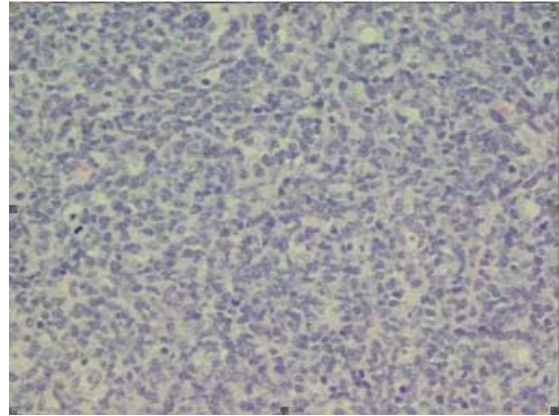
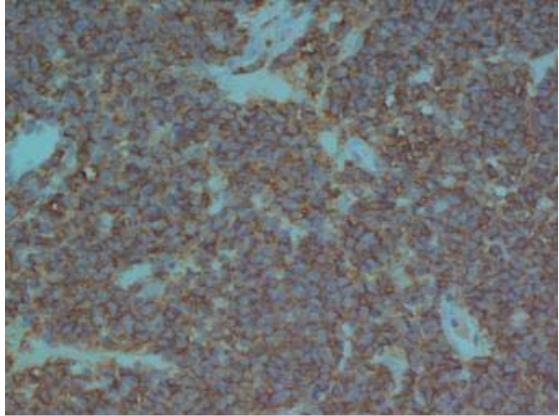
69) A 28 year old man has recurrent nose bleeds. He is recovering from an upper respiratory tract infection. His blood count is:

Hb	12.2 g/dL
WCC	$9.9 \times 10^9/L$
Plts	$9 \times 10^9/L$

Which is the single most likely diagnosis?

- A. acute leukaemia
- B. disseminated intravascular coagulation
- C. haemophilia
- D. Hodgkin's lymphoma
- E. immune thrombocytopenia

70) A 28 year old man has facial swelling, breathlessness on exertion and distended neck veins. A superior mediastinal mass is biopsied and the section shown is stained with haematoxylin and eosin, and with immunoperoxidase using an anti-CD20 antibody.



Which is the single most likely diagnosis?

- A. chronic lymphocytic leukaemia
- B. high grade non-Hodgkin's lymphoma
- C. Hodgkin's lymphoma
- D. metastatic squamous cell carcinoma
- E. multiple myeloma

71) A 76 year old man has a persistent discharge from his right ear. The image is that seen through the otoscope.



What is the single most likely diagnosis?

- A. cholesteatoma
- B. foreign body
- C. otitis externa
- D. otitis media
- E. perforation of ear drum

72) A 19 year old cleaner in an apiary has developed facial swelling (picture). A provisional diagnosis of a type I immune reaction to bee sting is made.



Which is the single most important future risk from this reaction?

- A. auto-immune uveitis
- B. bronchospasm
- C. hypertension
- D. Reiter's syndrome
- E. Sjogren's syndrome involving the lacrimal gland

73) A 56 year old woman has chest pain lasting for an hour. Her ECG is below



What is the single most appropriate treatment?

- A. aspirin
- B. aspirin and streptokinase
- C. clopidogrel
- D. clopidogrel and aspirin
- E. primary per-cutaneous coronary intervention

74) A 50 year old man is acutely confused. He drinks excessive alcohol and has an enlarged liver. His blood test is shown:

Haemoglobin	8.5 g/dl
MCV	105 fl
WCC	$6 \times 10^9/l$
Plts.	$200 \times 10^9/l$
INR	2.2
ALT	125 U/l (5-35)
AST	96 U/l (1-31)
ALP	230 U/l (20-120)
GGT	132 U/l (4-35)
Bilirubin	85 $\mu\text{mol/l}$ (1-22)

What is the single most likely diagnosis?

- A. alcoholic hepatitis
- B. chronic active hepatitis
- C. cirrhosis of the liver
- D. hepatocellular carcinoma
- E. viral hepatitis

75) A 63 yr old diabetic woman has severe constant upper abdominal pain. Her pulse is 105bpm, BP 115/75mmHg and temp 37.5oC. Her abdomen is tender with guarding and reduced bowel sounds. Her blood tests show:

Haemoglobin	11.8 g/dL
Sodium	145 millimol/L
Bilirubin	65 $\mu\text{mol/L}$
WCC	$17 \times 10^9/\text{dL}$
Potassium	3.9 millimol/L
ALP	105iu/L
Platelets	$194 \times 10^9/\text{dL}$
Urea	6.2 millimol/L
ALT	64 iu/L
Glucose	15.5mM
Creatinine	84 $\mu\text{mol/L}$
Albumin	39 g/L
Amylase	1310 i.u/L

What is the single most likely diagnosis?

- A. acute cholecystitis
- B. acute pancreatitis
- C. diabetic ketoacidosis
- D. perforated peptic ulcer
- E. urinary tract infection

ANSWERS

- 1 A. Both of these indicate myocardial damage in the context of myocardial infarction. Serum LDH activity does not increase until 24-48 hours after chest pain and peaks at three days.
- 2 C. The combination of features is characteristic of this disorder.
- 3 B. Hypertension is the most influential risk factor in stroke.
- 4 C. Infections, respiratory or otherwise, have been associated with an increased risk of venous thromboembolism.
- 5 B. The TLCO measures the integrity of the alveolar-capillary surface area for gas transfer. It may be reduced in disorders that damage the alveolar walls (septa) such as emphysema, which leads to a loss of effective surface area and in disorders that thicken or damage the walls eg: pulmonary fibrosis. The TLCO is also reduced in interstitial lung diseases such as hypersensitivity pneumonitis or dust-inhalation diseases such as asbestosis. Because the transfer of CO depends upon how much blood is present in the lung capillaries, TLCO can be reduced due to anaemia and raised in polycythaemia.
- 6 B. The pathologic features of the lung in ARDS derive from severe injury to the alveolocapillary unit. Extravasation of intravascular fluid dominates the onset of the disease and the term ARDS is often simplistically equated with permeability pulmonary oedema. As the process unfolds, however, oedema is overshadowed by cellular necrosis, epithelial hyperplasia, inflammation, and fibrosis.
- 7 A. The keratoacanthoma has a central keratinised horn; the basal cell carcinoma typically has the features noted and may also have a depressed centre.
- 8 D. Atrophy is not specific to Alzheimer's disease and there is considerable overlap between the changes associated with ageing.
- 9 D. Although B is also correct, this is not the most accurate explanation.
- 10 A. The features are typical of acromegaly. Gigantism occurs before fusion of the epiphyses in adolescence.
- 11 C. Hepatic steatosis leads to a risk of cirrhosis.
- 12 C. The other risk factors are for transitional cell carcinoma.
- 13 C. The correct answer suggests hepatic failure. The others are features of the disease and suggest progression.
- 14 D. This investigation is the most likely to reveal early infection.
- 15 B. SLE and bacterial endocarditis lead to this feature and a decrease in C3.
- 16 D. This is the classical finding in a woman of this age.
- 17 B. This is a complication from immune complex deposition, rather than directly related to the bacterium.
- 18 B. This is the commonest problem, the others are less likely.
- 19 B. This is the typical blood film of iron deficiency, thalassaemia causes microcytosis, but the anaemia is unusual with just the trait.
- 20 C. This is the current testing schedule (2008).
- 21 D. The majority of carcinoma at this age is due to sporadic polyps.
- 22 B. This is a fairly classical description of a dissection, radiation to the back is a characteristic feature.
- 23 A. This is the most common arrhythmia of the older person. Ventricular fibrillation will result in collapse.
- 24 C. The most likely diagnosis is that of pulmonary embolus, the best treatment at this stage is low molecular weight heparin.
- 25 B. The incorrect options all include a compound which is not indicated in COPD.
- 26 E. The protein content of the effusion suggests an exudate. The causes of this are chronic inflammation and malignancy. All the other causes are transudates (generally protein content <30g/L).
- 27 E. The single reversible cause of dementia here is hypothyroidism.
- 28 D. The clinical description is of one of the "Parkinson's plus" syndromes. Of these, PSP is characteristically associated with a progressive paralysis of upwards gaze.
- 29 A. A dipstick urinalysis is the next simplest examination to perform, all others either will add nothing to the diagnosis or are unnecessarily invasive.
- 30 B. This is a classical description of DLB – drop attacks and neuropsychiatric symptoms occur early in the disease.
- 31 C. ACE inhibitor treatment is associated with a reduction in proteinuria and delay to renal failure.

- 32 D. Iron deficiency anaemia would not be likely in this context. A normochromic, microcytic anaemia would be found in this condition.
- 33 B. This would be a typical description of haemochromatosis, and the serum ferritin is characteristically chronically raised.
- 34 E. This is a characteristic description.
- 35 B. This would cause the symptoms described, whereas DVT is unlikely to be bilateral, hypoalbuminaemia occurs late and the symptoms would be a late manifestation of hepatic metastases.
- 36 A. This is a characteristic finding.
- 37 A. This would be the commonest early cause.
- 38 C. The other options either lead to symptomatic relief or are not indicated in osteoarthritis.
- 39 E. The diagnosis is giant cell arteritis and the treatment for this is oral prednisolone.
- 40 A. The autoantibody most commonly associated with systemic sclerosis.
- 41 A. This is a complication of steroid therapy.
- 42 E. Of the two options causing vertebral collapse, TB is the most likely.
- 43 D. The most likely cause of bilateral pulmonary infiltrates.
- 44 D. The stroke is on the left and thus the right side of his body will be affected. The right visual fields relate to this and therefore he will have a right homonymous hemianopia.
- 45 A. She has a pharyngeal pouch, The best way to delineate this would be by barium swallow.
- 46 E. This describes the intended effect of randomization.
- 47 B. He will need anticoagulation with warfarin if in AF but he would benefit from an attempt at rhythm control in the first instance.
- 48 D. This man should carry on with his usual insulin regimen, infection will most likely lead to hyperglycaemia.
- 49 D. The PPI is more effective than the H₂ antagonist.
- 50 E. The history and the type of patient suggests primary biliary cirrhosis, (F:M ratio 10:1).
- 51 E. The beta blocker lowers portal blood pressure, bleeding is more likely if this is above 12mmHg.
- 52 C. This is a characteristic description of pseudoembranous colitis – prophylactic antibiotics have been used for the operation.
- 53 E. He should have an OGD – his age makes pathology other than GORD more common, this is the recommended course of action for all those over 45 years of age.
- 54 E. Although options A and B are found in coeliac disease, option E fulfils the criterion.
- 55 B. This is Wenkebach or Mobitz type 1 heart block, there is an increasing P-R interval culminating in a dropped ventricular systole with a repeating cycle.
- 56 D. This is a trace of VF – learn to recognise it.
- 57 C. There is consolidation of the right lower lobe along anatomical boundaries – hence lobar pneumonia.
- 58 D. This is a description of the abnormal mass lying behind the heart.
- 59 A. This is an intracerebral haemorrhage, the most likely underlying cause of hypertension.
- 60 C. The history suggests a chronic lesion. The circumscribed nature of the lesion makes a meningioma most likely.
- 61 D. No reactivity to anti – D, no native AB antigen and the serum reacts with A and B type cells.
- 62 C. This is vitiligo, a single organ autoimmune condition, associated with other similar conditions. Pernicious anaemia (anti-intrinsic factor) fulfills this condition.
- 63 A. This is the most likely cancer to occur at this site.
- 64 A. A fissure in ano. Haemorrhoids would cause these symptoms but there is either a prolapsed pile or nothing to see in this case.
- 65 D. The positive staining suggests T cell activation associated with rejection.
- 66 C. She has arthritis mutilans, a severe erosive arthropathy associated with psoriasis.
- 67 C. There is vertebral collapse, consistent with osteoporosis. There is no sclerosis, such as that which might be found with Paget's or some metastases and no loss of architecture that might be seen with erosive malignancy.
- 68 B. This is the only cause of splenomegaly.
- 69 E. This is the most likely problem after a respiratory tract infection.
- 70 B. The predominance of lymphocytes and the absence of the Reed-Sternberg cell make this the best option.

71 A. Cholesteatoma occurs if skin from the inner side of the tympanic membrane sloughs off and mixes with ear wax that penetrates to the middle ear and fails to drain through the Eustachian tube. The accumulation of dead skin and wax causes a cyst-like mass, the cholesteatoma. If left untreated the mass can cause serious damage to the eardrum and ossicles. In serious cases, cholesteatomas can erode into the mastoid and can cause cerebral infection.

72 B. She has been sensitized to the antigen and this is likely to lead to anaphylaxis.

73 E. The treatment of choice in myocardial infarction, however in this inferior infarction, there may be some debate: see R. A. Lange and Others Should Thrombolysis or Primary Angioplasty Be the Treatment of Choice for Acute myocardial infarction NEJM 1996, 24th October.

74 A. The MCV and mild anaemia combined with the LFT make this more likely.

75 B. The raised amylase is a characteristic feature.