

# FRACP RECALL PAPER

2005

RPA VERSION

## 2005 FRACP RECALL PAPER – RPA VERSION

### PAPER 1 – MEDICAL SCIENCES

#### Q1

A drug is given in tablet form in a dose of 100mg. The same drug is given intravenously in a dose of 50mg (in 2 ml). Using the following information, what is the bioavailability of drug A?

	Drug A (100mg)	Drug B (50mg)
T $\frac{1}{2}$	7 hours	4 hours
AUC	45	25
Vd	100	150

This table was had a lot more irrelevant information. (eg. clearance,

- a. 50%
- b. 60%
- c. 70%
- d. 80%
- e. 90%

#### Q2

Which is the most potent stimulator of gastric acid secretion?

- a. gastrin
- b. histamine
- c. somatostatin
- d. ACh
- e. Vagotomy

#### Q3

Which of the following viruses is most closely associated with cancer of the cervix?

- a. EBV
- b. CMV
- c. HPV
- d. HIV

- e. HSV

**Q4**

In which location is diabetic neuropathic arthropathy most likely to occur?

- a. knee
- b. midfoot
- c. 1<sup>st</sup> metatarsophalangeal joint
- d. shoulder
- e. ankle

**Q5**

In IgA nephropathy, which of the following is the best predictor of progression to ESRF?

- a. creatinine clearance
- b. proteinuria
- c. hypertension
- d. serum IgA levels
- e. gender

**Q6**

Which of the following best describes the mechanism of action of sulphonylureas?

- A. Increased insulin synthesis
- B. Enhancement of binding of insulin to its receptor
- C. Increased insulin secretion
- D. Promotion of proteolytic cleavage of pro-insulin to insulin and C-peptide
- E. Beta- cell proliferation

**Q7**

Pressure volume loop showed for LV from an experiment in an animal.

Administration of which of the following medications is most likely to result in the above change?

- A. Noradrenaline
- B. Metoprolol
- C. GTN
- D. Isoprenaline
- E. Metamurinol

**Q8**

Visual blindness and jaw claudication are a result of arterial ischaemia in giant cell arteritis.

Which of the following pathological findings best describes the cause of the ischaemia?

- A. Concentric hyperplasia of the intima
- B. Thrombosis of the artery
- C. Vasospasm
- D. Aneurysm formation and haemorrhage
- E. Arterial dissection and haemorrhage

**Q9**

Which of the following anti-epileptic medications is most likely to cause weight gain?

- A. Lamotrigine
- B. Sodium valproate
- C. Topiramate
- D. Carbamazepine
- E. Phenytoin

**Q11**

Which of the following best describes the process by which DNA is transformed into mRNA?

- a. translation
- b. transcription
- c. reverse transcription
- d. hybridisation
- e. elongation

**Q12**

Which of the following interventions has been shown in animal experiments to prolong lifespan in mammals?

- a. exercise
- b. antioxidants
- c. immunisation
- d. caloric restriction
- e. hormone replacement therapy

**Q13**

There is a rare genetic disease in which 95% of those with the disease have the same mutation. There is an intron which is highly variable and is present in the general population at the same frequency as the diseased.

What is the **least** likely explanation for this?

- a. repeat DNA sequence adjacent to the gene
- b. "bottleneck" phenomenon
- c. selective advantage
- d. pseudogene?
- e. ?

**Q14**

Patient presents with difficulty swallowing solids and liquids. Given a manometry that shows high resting lower oesophageal sphincter pressure with poor progression of peristaltic waves.

Most likely diagnosis.

- a. oesophageal cancer
- b. achalasia
- c. presbyesophagus
- d. oesophageal spasm
- e. hiatus hernia

**Q15**

Middle aged man presents with progressive SOB. Strong smoking history since 13 yo and worked in construction and other blue collared industries. CXR was abnormal but not given.

CT scan (HRCT) shows round atelectasis in the LLL. There are areas of thickened pleura.

Most likely diagnosis.

- a. silicosis
- b. asbestosis
- c. emphysema
- d. pulmonary fibrosis
- e. asbestosis related pleural disease

**Q16**

A new test has been developed which has a sensitivity of 95% and a specificity of 90% for a rare condition. If the prevalence for this condition in the population is 1:100,000, which of the following is the closest estimate of the positive predictive value for this test?

- A. 0.01%
- B. 0.05%
- C. 0.1%
- D. 1%
- E. 2%

**Q17**

In addition to decreasing the gastrointestinal absorption of calcium, which of the following is the most important factor in net bone loss with the use of prednis(ol)one?

- A. increased renal calcium loss
- B. decreased 1,25 Vitamin D production
- C. decreased testosterone production
- D. suppression of osteoblast activity
- E. decreased adrenal androgen production

**Q18**

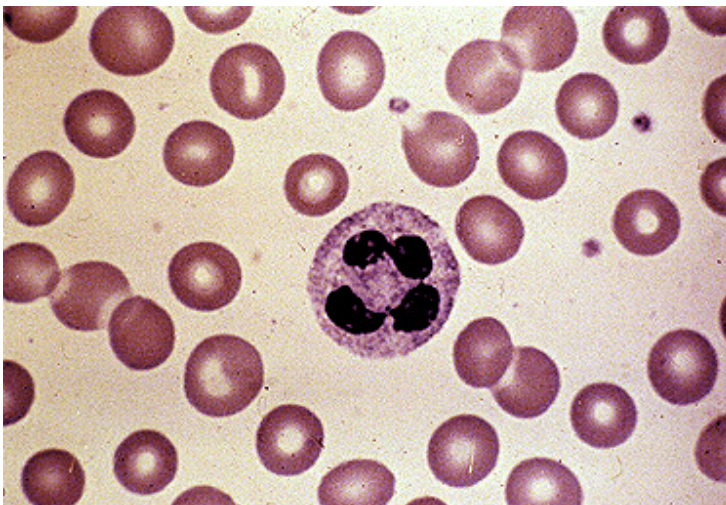
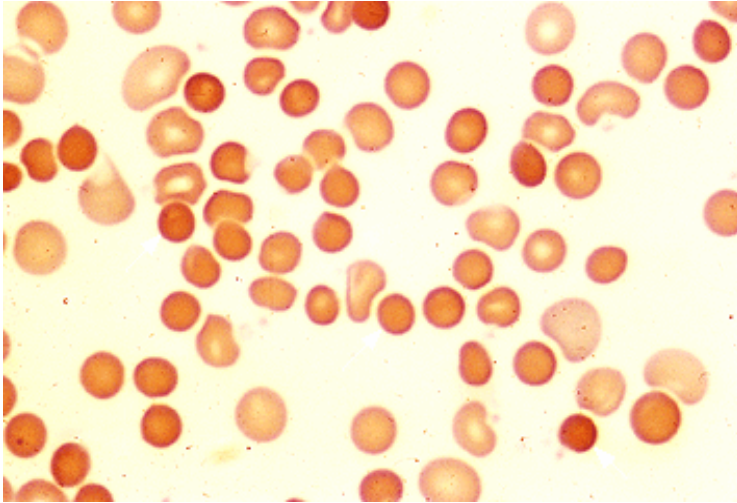
A 67 year old female has anemia and jaundice 9 days following subtotal colectomy for adenocarcinoma on a background of ulcerative colitis. She is on medications for her ulcerative colitis including salazopyrine. She was transfused 3 units of packed cells at the time of the operation. Examination reveals jaundice but is otherwise normal.

Hb	87
MCV	99 [66-96]
Reticulocyte count	126 [15-110]

Review of her pretransfusion blood revealed no alloantibodies.

Blood film is shown:

[combination of these two]



Which of the following is the most likely cause for her anaemia?

- A. Iron deficiency
- B. Folate deficiency
- C. Red cell aplasia
- D. Delayed haemolytic transfusion reaction
- E. Recurrent bleeding from anastomosis

**Q19**

A man with aortic regurgitation undergoes cardiac catheterisation:

Cardiac output 7.5L/min  
Heart rate 75/min  
LVEDV 200mL

LVESV 50mL

If the regurgitant fraction is the volume of blood regurgitated across the valve in a cardiac cycle over the amount of blood pumped across the valve in one cycle, what is the regurgitant fraction?

- A. 35%
- B. 33%
- C. 50%
- D. 66%
- E. 75%

**Q20**

Which of the following best describes the action of zanamivir in the treatment of influenza?

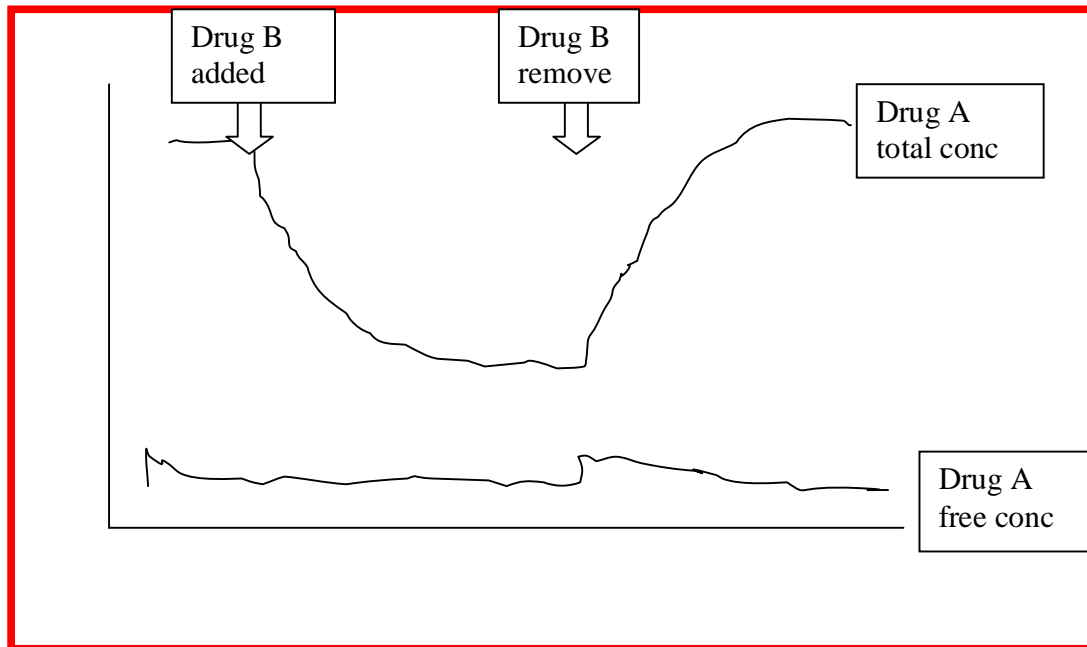
- A. inhibition of M2 ion channels
- B. inhibition of viral neuraminidase
- C. inhibition of DNA polymerase
- D. inhibition of reverse transcriptase
- E. inhibition of viral haemagglutinin activity

**Q21**

Which is the best test to screen for diabetic nephropathy?

- A. 24hr urine protein
- B. Spot albumin:creatinine ratio
- C. Spot albumin
- D. 12 hour albumin
- E. creatinine

**Q22**



X axis – time

Y axis – drug concentration

Top line total concentration

Bottom line free drug concentration  $\Rightarrow$  the free drug concentration graph is not remembered 100% accurately in the above diagram. At the time drug B was added there was small rise in free drug A conc, which then decayed to a new steady state (slightly higher than baseline). Then once drug B removed the opposite change to reach original level over 5 half lives.

Which of the following describes the main effect that Drug B has on Drug A?

- A. Displacement from protein binding sites
- B. Induction of metabolism
- C. Inhibition of metabolism
- D. Gut binding

### Q23

The most important principle when selecting chemotherapy agents for a combination chemotherapy regimen in the treatment of malignancy ?

- A) Select drugs with similar toxicity profiles
- B) Select drugs with partial activity
- C) Select drugs with same treatment free interval
- D) Drugs with similar schedules of administration
- E) Minimise interactions between drugs

**Q24**

A 54 yo man presents with pain and reduced range of motion in his neck. C-spine X-Ray is shown. What abN seen on the x-ray is most likely to explain the reduced movement?

Lateral C-spine x-ray shown:

Lots of controversy regarding what this X-ray actually showed!!!  
Some copies of the paper apparently had a band of calcification along the posterior ligament. Others are certain they didn't get the same paper! Some felt disc space was reduced in some disc. Some felt the zygoapophseal joints were very prominent.

- A) zygoapophseal fusion
- B) degenerative disc disease
- C) c-spine instability
- D) calcification of the posterior longitudinal ligament
- E) DISH

**Q25**

Which of the following features is most characteristic of healthy ageing muscle?

- A) Type 1 fibre atrophy
- B) Type 2 fibre atrophy
- C) Decreased capillary density
- D) Reduced oxidative capacity
- E) Increased lipid accumulation within muscle

**Q26**

What is the mechanism / pathogenesis of trigeminal neuralgia?

- a) herpes ganglionitis
- b) demyelination
- c) microvascular compression
- d) neuroma
- e) vascular steal

**Q27**

The following is a part of an exon in a gene encoding for a protein.

A diagram of the nucleotide sequence is shown in the appropriate reading frames:

C-T-G/A-G-C/T-C-T/G-A-C (unable to recall sequence; each nucleotide was numbered in order)

Which of the following mutation/s (substitution/s) in a nucleotide is **least** likely to change the amino acid sequence of the protein?

- A. C to T at position 1
- B. T to C at position 2
- C. G to A at position 3
- D. G,C,T to A,G,C at positions 5,6,7
- E. C,T,C to G,C,A at positions 6,7,8

Unable to remember exact options and exact nucleotide sequence of the exon, but definitely 3 options of single base sub and 2 options with triple base sub which crossed reading frames. Opinion is divided at RPA regarding whether a stop codon was formed as a result of the options.

### Q28

A male in his 20's. Has had three episodes of pancreatitis. He has two first degree relatives with chronic pancreatitis. A CT scan is shown which shows a calcified mass in the pancreas. What is the most likely cause of the patient's pancreatitis?

- A. Haemochromatosis
- B. Hyperparathyroidism
- C. Hereditary pancreatitis
- D. Cystic fibrosis
- E.

### Q29

A young male in his twenties presents with tiredness, poor concentration. Wakes up at 5am every day in order to complete his work. BMI 31.

A diagram of a sleep study is shown:

It shows about 8hrs of the patient's recordings –

Stage of sleep: very little REM sleep, very fragmented

O<sub>2</sub> sats: periods of hypoxia throughout the night during sleep

Patient had frequent limb movements associated with arousals

Top graph showed AHI over time, this graph was above 50 most of night, mainly hovering b/w 50-100.

What is the cause of this patient's symptoms?

- A. Obesity-hypoventilation syndrome
- B. Obstructive sleep apnoea
- C. Narcolepsy
- D. Periodic limb movement disorder
- E. Cataplexy

**Q30**

Patient on haemodialysis for management of chronic renal failure. What is the strongest predictor of mortality in this group of patients?

- A. urea reduction ratio
- B. urea post-dialysis
- C. PO<sub>4</sub> level
- D. PTH
- E. albumin

**Q31**

What is the cell most reliant on secretion of mediators into the extracellular space for the destruction of pathogens?

- A) Neutrophils
- B) Eosinophils
- C) NK cells
- D) Macrophages
- E) Lymphocytes

**Q32**

Which investigation is most specific test for pernicious anaemia?

- A) B12 levels
- B) Anti parietal cell antibodies
- C) Anti- intrinsic factor Ab
- D) Anti- endomysial Ab

**Q33**

A 36 year old lady with a strong family history of cardiovascular disease has the following results

Cholesterol 9.0  
 HDL 1.2  
 Trig 2.8

What is the most likely cause for these lipid abnormalities?

- A) Apo 3500
- B) CETP deficiency
- F) abetalipoproteinemia
- G) reduced LDL receptor activity
- H) LCAT deficiency

### Q34

What is the main pathophysiological mechanism for malignant ascites?

- A) CCF
- B) Hypoalbuminemia
- C) Obstruction of lymphatics
- D) Portal vein thrombosis
- E) Portal hypertension

### Q35

Drug A and B are both given to healthy patients and the following pharmacokinetic parameters were obtained:

	A	B
Vd	50L	350L
Hepatic Cl	4	Nil
Renal Cl	0.7	7
Protein binding	Nil	25%
Molecular weight	346	366

Drug A has a much shorter half life than drug B following haemodialysis. What aspect of Drug B would make this the case?

Because drug B has

- a) higher Vd
- b) lower hepatic clearance
- c) higher renal clearance
- d) higher protein binding
- e) higher molecular weight

### Q36

45yo female with 20 year history of SLE characterised by rash, arthralgia, glomerulonephritis. Treated previously with prednisone, hydroxychloroquine and cyclophosphamide. Currently on prednisone 7.5mg daily and hydroxychloroquine. Presents with chest pain and ECG demonstrates anterior ST elevation. On examination she is obese, BMI 31. Lungs clear, heart sounds dual with no murmur, JVP not elevated. She dies during further assessment.

The most likely cause of death is -  
 a coronary artery atherosclerosis  
 b carotid emboli  
 c vasculitis of coronary arteries  
 d Libman-Sacks endocarditis  
 e pericardial effusion and tamponade

**Q37**

36yo male presents with 3 week history of lethargy. Recently returned from beach holiday. On examination he is suntanned, mildly dehydrated, other exam normal. CXR (shown in exam - shows bilateral hilar lymphadenopathy). UEC - Creatinine 300, Urea 18, Ca 3.00, K 5. PTH low.

The mechanism of the hypercalcaemia is -

a increased secretion of 1,25-dihydroxy vitD  
 b secretion of PTH related peptide  
 c mineralocorticoid deficiency  
 d increased Calcium absorption  
 e bony metastases

**Q38**

The normal age related change in fat distribution is best described as

	Appendicular	Visceral	Truncal(central)	Subcutaneous
a	inc	inc	dec	dec
b	dec	inc	inc	dec
c	dec	inc	inc	inc
d	inc	dec	dec	inc
e	dec	dec	inc	dec

**Q39**

A patient presents with unilateral facial weakness. Which of the following is most likely to indicate a peripheral cause for the weakness?

- A. Frontalis weakness.
- B. Lateral rectus palsy.
- C. Taste disturbance.
- D. Facial numbness.
- E. Nystagmus.

**Q41**

The main reason why Gentamicin is not recommended as first line antibiotic treatment for coliform CNS infection is because?

- a) seizure
- b) poor CNS penetration
- c) poor activity in low O<sub>2</sub> tension
- d) poor activity in acidic environment
- e) ototoxicity

**Q46**

42 yr old male non-smoker with no risk factors for IHD has an exercise stress test. After 7 min he reached maximal heart rate of 160 with horizontal ST depression of 0.7mm in the inferior leads. He was asymptomatic

Graph shown showing pre-test probability on x-axis and post-test probability on y-axis. 3 lines are plotted on the graph, representing 0.5mm ST depression, 1mm ST depression and 2mm ST depression respectively.

Using the graph **a** had to estimate pre-test probability then use graph to work out PPV/post test probability

What is the probability that this man has coronary artery disease (ie. Positive predictive value) ?

- a 80%-90%
- b 30-40%
- c 10-20%
- d 20-30%
- e 0-10%

**Q47**

Most common cause of seizures in the elderly population?

- A. CVA
- B. Alzhemiers

- C. Alcohol
- D. Hypothyroid
- E. Primary epilepsy

**Q48**

42 year old woman receiving radiotherapy for NHL.  
Most likely second tumour to develop in this lady?

- a breast
- b lung
- c colon
- d thyroid
- e bone marrow

**Q49**

With regards to staging of NSCLC, the best method to detect metastatic disease in the mediastinal lymph nodes

- A. PET
- B. CT
- C. CTPA
- D. HRCT
- E. Mediastinoscopy

**Q50**

Repeat question from 2004

Insulin requirements increase with time in type II DM. What is the main reason for increasing insulin requirements?

- A. insulin resistance
- B. reduced insulin sensitivity
- C. Reduced b-cell secretion
- D. ?
- E. ?

**Q51**

Polymorphisms have been found in the B2 adrenergic receptor. They occur with the following frequency in a population:

20% have a particular polymorphism in codon 20

22% have a particular polymorphism in intron 16  
 18% have mutations at both positions

The most likely reason for this pattern is:

- A. linkage disequilibrium
- B. confers selective advantage
- C. mutations in the hypervariable areas flanking the mutations
- D. low rate of recombination

**Q52**

The strongest contraindication to the use of bupropion is

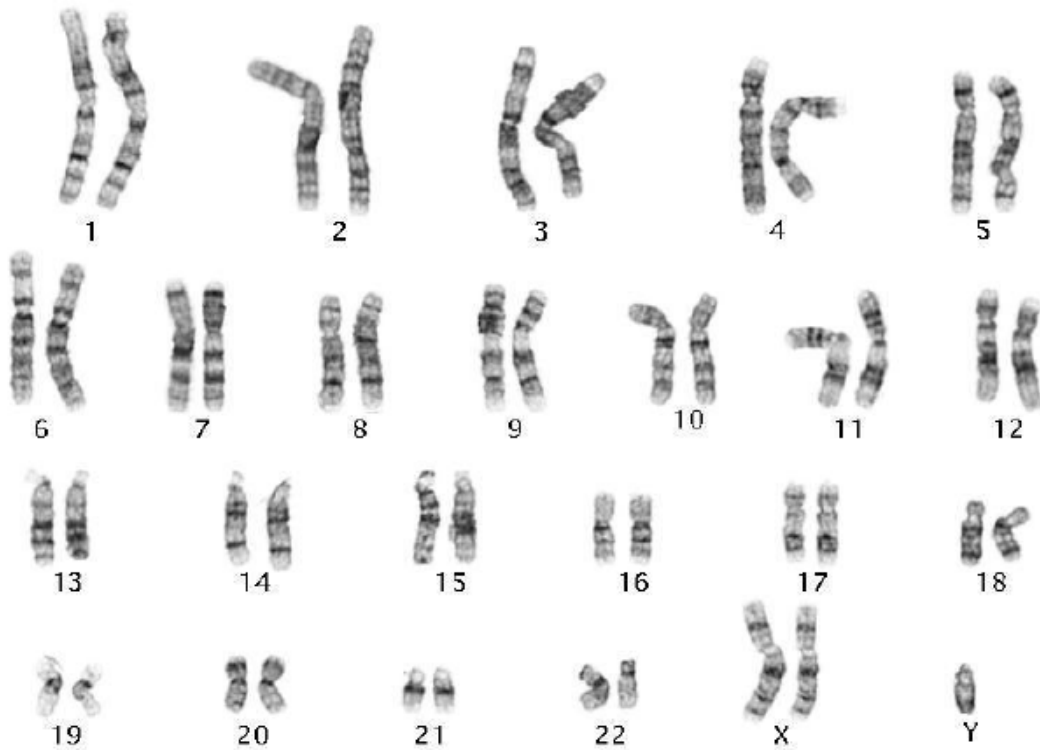
- A. anxiety
- B. depression
- C. epilepsy
- D. peptic ulcer disease
- E. ischaemic heart disease

**Q53**

Changes in the aorta that occur with age are:

	Aortic diameter	distensibility	Speed of reflected wave
A	↑	↑	↑
B	↔	↓	↑
C	↓	↓	↓
D	↑	↓	↑
E	↓	↑	↓

**Q54**



The most common association with the chromosomal abnormality shown above is

- A. Testicular atrophy
- B. Clitoral hypertrophy
- C. Gynaecomastia
- D. Penile hypoplasia
- E. Short stature

**Q56**

The mechanism of action of carbimazole involves

- a. Na/I exchanger
- b. Inhibition of thyroid peroxidase
- c. Inhibition of 5'-deiodinase
- d. Inhibition of thyroxine binding to thyroxine binding globulin
- e. Decreased synthesis of thyroglobulin

**Q57**

Biggest cause of incontinence in the elderly?

- f. Urge

- g. Stress
- h. Overflow
- i. Delirium
- j. Infection

**Q58**

57 yo man with exertional dyspnoea and the following lung function tests;

	Pre bronchodilator	Post bronchodilator
FEV1/FVC	36%	35%
FEV1	1.150L	1.350L (% change about 17%)
TLC	121%	
RV	160%	
DLCO	38%	
KCO	51%	

The most likely diagnosis is;

- k. Chronic bronchitis
- l. Asthma
- m. Emphysema
- n. Pulmonary fibrosis
- o. Bronchiectasis

**Q59**

Which of the following blood products is most likely to cause transfusion related sepsis?

- p. Packed cells
- q. Platelets
- r. FFP
- s. Immunoglobulin
- t. Cryoprecipitate

**Q60**

Which of the following would limit release of cobalamin from R-protein?

- u. Pancreatic insufficiency
- v. Crohns disease
- w. Coeliac disease
- x. Ileal resection
- y. *H. pylori* chronic gastritis

**Q61**

In the treatment of hepatitis C with ribavirin and interferon, which is the best predictor of sustained virological response?

- A. Bilirubin
- B. Viral genotype
- C. Age
- D. Viral load
- E. Degree of fibrosis

**Q62**

Efalizumab is a monoclonal antibody used in the treatment of psoriasis. It is an antibody against an adhesion molecule CD11a. Its mechanism of action is best described as:

- A. Interference with extravasation of T cells into tissues
- B. Inhibits cytokine secretion by phagocytic cells
- C. Inhibits chemokine secretion by endothelial cells
- D. Depletes peripheral T cells
- E ??

**Q63**

Which of the following electrolyte abnormalities is most likely to occur in tumour lysis syndrome?

	Potassium	Phosphate	Calcium
A	↓	↑	↑
B	↓	↓	↓
C	↑	↑	↑
D	↑	↑	↓
E	↑	↓	↓

**Q65**

Which of the following best explains the mechanism of the formation of the chimeric gene, such as BCR/ABL?

- A. Disulfide bond between cytosine residues of different peptides
- B. Post-transcriptional ligation of homologous mRNA
- C. In frame ligation of 5' end of one gene to 3' end of another
- D. Formation of hybrid mRNA by bidirectional promotor
- E. Deletion of exon

**Q66**

Repeat

What is the most common cause of travellers' diarrhoea

- A) giardia
- B) enterotoxigenic e.coli
- C) campylobacter
- D) shigella
- E) salmonella

**Q67**

Mechanism of Bosentan in pulmonary hypertension?

- A) platelet aggregation inhibitor
- B) thromboxane inhibitor
- C) endothelin-1 receptor antagonist
- D) phosphodiesterase inhibitor
- E) reversal of hypoxic vasoconstriction

**Q68**

Middle-aged man with chronic HT, and a smoker has acute development of right-sided hemiparesis, no sensory loss, some slurred speech but normal language function

Which of following left sided lesions is the likely cause?

- A) MCA thrombus
- B) MCA perforator occlusion
- C) PICA occlusion
- D) ICA thrombus
- E) Amyloid angiopathy

**Q69**

Young man suffering from a panic disorder, which of the following is he likely to experience?

- A) benzodiazepine dependence
- B) somatisation
- C) major depression
- D) abnormal illness behaviour
- E) Post traumatic stress disorder

**Remembered 63 out of the 70 questions**

## PAPER 2 – CLINICAL APPLICATIONS

### Q1

A middle aged man with a history of hypertension and hypercholesterolaemia presents with chest pain and myalgias. He is currently taking simvastatin 40mg and hydrochlorothiazide 25mg (duration of treatment not given). He is commenced on slow-release diltiazem and discharged. He represents several weeks later with muscle pain, weakness, and episodes where he has “discolouration in his urine”. On examination, he has mild proximal limb weakness. There is no neck weakness or bulbar weakness. He does not have a rash. A long list of blood results is given. Significant results: Na 140 K 2.9 Cr 100 AST 150 ALT 250 Alb 35 CK 30 000. No TFT results given. What is the most likely cause of this patient’s muscle weakness?

- A. Hypokalaemic myopathy.
- B. Simvastatin myopathy.
- C. Diltiazem myopathy.
- D. Hypothyroid myopathy.
- E. Polymyositis.

### Q2

An elderly lady presents with a scalp laceration after a syncopal episode. On further questioning, she states that she has had several syncopal episodes in the past week or so. She is on a number of medications, including aspirin and metoprolol. Which of the following abnormalities on her ECG would be least likely to help you in deciding to use electrophysiological studies to investigate the patient?

- A. Polymorphic ventricular ectopic beats.
- B. Paroxysmal atrial fibrillation with a rate of 110 beats per min.
- C. Sinus bradycardia.
- D. Intermittent second degree heart block during sleep.
- E. Significantly prolonged QT interval.

### Q3

Which of the following diabetes-related neurological problems is most likely to improve with time?

- A. Diabetic amyotrophy.
- B. Painful peripheral neuropathy.
- C. Absent reflexes.

- D. Autonomic dysfunction.
- E. Gastroparesis.

**Q4**

An 80 year-old lady undergoes a bone mineral density study which reveals a T score of -2.5 at the lumbar spine and -3.0 at the hip. She has poor mobility and rarely goes outside. She also has a history of breast cancer at age 60, treated with mastectomy and radiotherapy, and reflux oesophagitis. No mention of previous fractures. In addition to commencing oral calcium, which of the following medications would be appropriate as initial treatment?

- A. Raloxifene.
- B. Vitamin D.
- C. Calcitonin.
- D. Hormonal replacement therapy.
- E. Teriparatide.

**Q5**

Which of the following constitutes the greatest contraindication to giving the influenza vaccine?

- A) History of egg anaphylaxis.
- B) Previous local reaction to the vaccine.
- C) Immunosuppression.
- D) Pregnancy.
- E) Recent pneumococcal vaccine

**Q6**

A study is performed looking at the effects of a new cholesterol-lowering agent ("Notzofat") on cardiovascular events. The initial study is performed on a group of patients who presented to hospital following a myocardial infarct. The results, after 2 years, are as follows:

Treatment	No of cardiovascular events	Number of patients
Drug	200	2000
Placebo	400	2000

If the study is repeated on a group of asymptomatic patients from the community who are found to have high cholesterol on screening, which of the following is least likely to change?

- A. Absolute risk reduction.
- B. Cost-benefit ratio.

- f. Risk-benefit ratio.
- g. Number needed to treat.
- h. Relative risk reduction.

**Q7**

Antibiotic prophylaxis is most strongly indicated prior to which of the following procedures?

- A. ERCP with sphincterotomy.
- B. Colonoscopy with polypectomy.
- C. Sigmoidoscopy in a patient with a prosthetic knee replacement.
- D. PEG insertion.
- E. Oesophagoscopy with variceal banding.

**Q8**

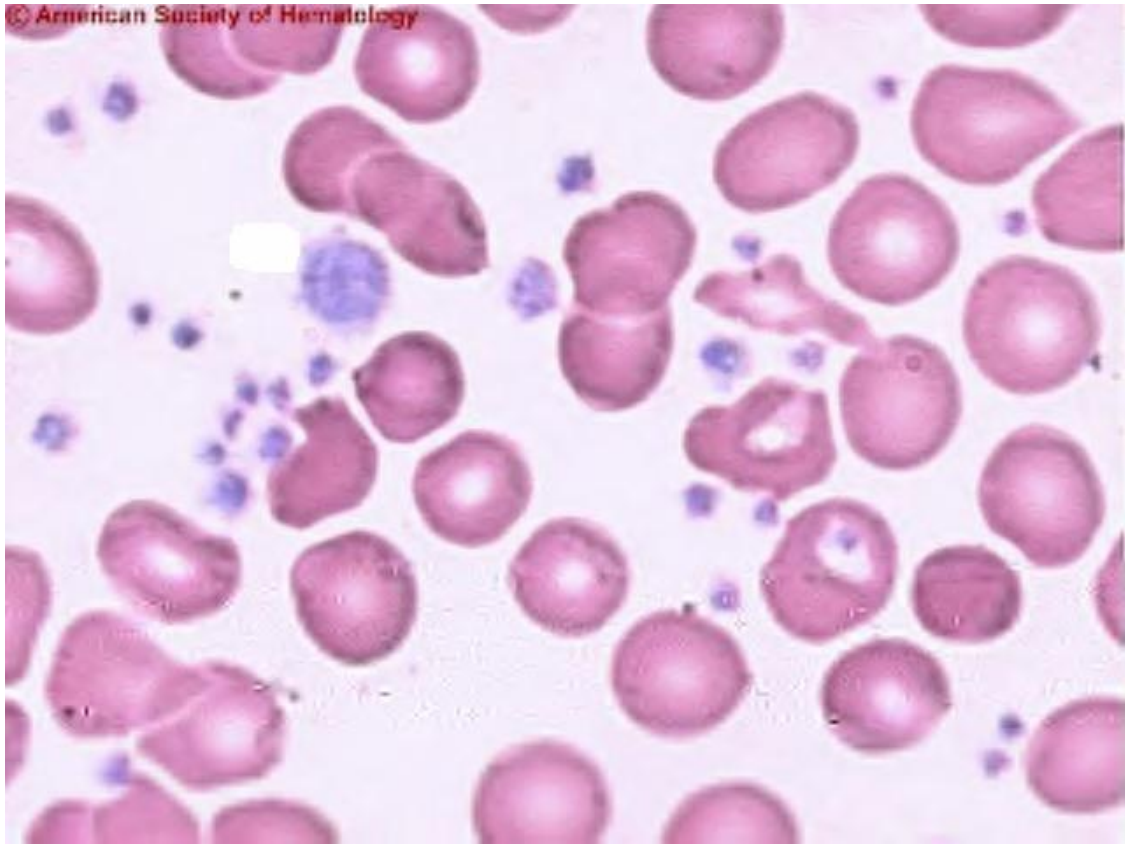
A 24 yo man is admitted with Staph. Aureus bacteraemia. He is commenced on IV Vancomycin. During the early stages of the first infusion, he develops diffuse erythema over the trunk and extremities. His BP drops to 100/70. The most appropriate next step in management?

- A) Cease vancomycin and change to linezolid
- B) Cease vancomycin and change to synercid
- C) Rapid vancomycin desensitisation protocol
- D) Slow rate of infusion
- E) Give next dose of vancomycin with IV hydrocortisone cover

**Q9**

A 40 year old man presents with fatigue and easy bruising. His FBC and blood film are shown below.

Hb 125  
WCC 10.4  
Plts 1,080



Blood film similar to this with occasional target cell and one Howell-Jolly bodied RBC.

The most likely diagnosis is

- A) Essential thrombocythemia
- B) Occult blood loss
- C) Occult malignancy
- D) CML
- E) Myelofibrosis

**Q10**

A 40 yo man presents with low back pain which is worse at night. Most appropriate initial investigation ?

- A) Lumbar spine x-ray
- B) CT lumbar spine
- C) MRI spine
- D) Bone scan

**Q11**

The strongest contraindication to vaccination with influenza vaccine?

- A) Known egg allergy
- B) Previous local reaction to influenza vaccine
- C) Recent pneumococcal vaccination
- D) Immunossuppressed
- E) Pregnancy

**Q12**

Repeat question from 2004

In recent years, the therapeutic effects of targeting adhesion molecules are gaining increasing recognition. Using your knowledge of the pathogenesis of disease, which of the following diseases is most likely to benefit from drugs which target the alpha4-integrin which is involved in the adhesion cascade of leukocytes on blood vessel walls?

- A. Myasthenia gravis
- B. MS
- C. SLE
- D. Crohn's Disease
- E. RA

**Q13**

The major cause of death in patients more than six months following cardiac transplantation is:

- A) Graft vs host reaction
- B) Opportunistic infection
- C) Rejection
- D) Malignancy
- E) Coronary artery disease

**Q14**

A 50 year old diabetic man presents with R foot drop. On examination, there is weakness of ankle dorsiflexion and weakness of extension of the big toe on the R foot. Reduced sensation over the lateral aspect of the lower leg and foot.

Nerve conduction studies show:

	Latency	Velocity	Amplitude
--	---------	----------	-----------

R peroneal nerve			
R tibial nerve			
R sural nerve			

All values for above table were in reference range

EMG: Large polyphasic motor units in the following muscles à tibialis anterior, extensor hallucis longus and gluteus medius.

The most likely diagnosis is?

- A) L5 radiculopathy
- B) S1 radiculopathy
- C) Peroneal nerve compression
- D) Peripheral neuropathy
- E) ? Spinal cord compression (?cant remember exactly but was UMN lesion)

### Q15

Woman in her first trimester of pregnancy, which of the following should be most avoided due to teratogen effect in the first trimester?

- A) Warfarin
- B) ACEI
- C) NSAIDS
- D) Frusemide
- E) Tetracycline

### Q16

Patient has osteoarthritis of the R hip. You prescribe a walking stick. What instructions would you give this patient?

- A) Stick in left hand advanced with left leg
- B) Stick in left hand advanced with right leg
- C) Stick in right hand advanced with right leg
- D) Stick in right hand advanced with left leg
- E) Stick in right hand advanced with both legs

### Q17

Man comes to ED with ischaemic chest pain. Treatment is instituted. The following coagulation results are obtained

APTT= 100 (35-45)

Mixing study 50:50 = 60

INR = 1.2

Fibrinogen level 4.5 (slightly above normal)

thrombin time = 200 (markedly prolonged)

reptilase time < 22 [normal]

What is likely cause?

- A) lupus anticoagulant
- B) unfractionated heparin
- C) DIC
- D) Thrombolysis
- E) LMWH

## Q22

A 56 year old female presents with a 12 month history of swollen fingers. Her XR is below:



Most likely diagnosis?

- A. Rheumatoid arthritis
- B. SLE
- C. Psoriatic arthritis

- D. Scleroderma
- E. Gout

**Q23**

A 35 year old man has a background of episodes of macroscopic haematuria. First episode was with a pneumonia 6 months ago. He had another episode with an upper respiratory tract infection which lasted about 6 days. His FBC, EUC, LFT and coags are all normal. CXR is normal. He has no proteinuria.

Most likely diagnosis?

- A. Wegener's
- B. Goodpasture's
- C. IgA nephropathy
- D. Henoch Schonlein Purpura
- E. Post-streptococcal GN

**Q24**

In a patient with Paget's disease that has pelvic pain not relieved by simple analgesics, which is the best option?

- A. Etidronate
- B. Alendronate
- C. Calcitonin
- D. Calcitriol
- E. Teriparatide

**Q25**

A 70 year old man develops severe retrosternal chest pain while playing soccer. He has a background of type 2 DM and hypertension. His ECG shows ST elevation on presentation and he is thrombolysed with tenecteplase and started on IV heparin. He is also given morphine and metoclopramide for management of his symptoms.

Soon after the IV heparin is started he starts vomiting. His heart rate is 50 and BP is 180/100. He is drowsy but there are no focal neurological signs.

Most likely cause of deterioration?

- A. Intracranial haemorrhage
- B. Painless myocardial ischaemia
- C. Allergy to tenecteplase
- D. Morphine reaction
- E. Hypertensive encephalopathy

**Q26**

A 56 year old forestry worker presents 2 weeks after a tick bite. He is generally unwell and has myalgias. He has a macular rash on his trunk and limbs – the rash is non-blanching and not itchy (shown below).



[Could not find better picture – picture in exam was of lower leg with multiple small red papular lesions which almost looked like small scabs]

What is the most appropriate treatment?

- A) Treat expectantly
- B) Doxycycline
- C. Ciprofloxacin
- D. Ceftriaxone
- E. Phenoxyethyl penicillin (penicillin V)

**Q27**

87 yo woman in nursing home, demented, incontinent of urine and faeces and immobile. Red area of skin over heels and normal skin overlying sacrum. What is the best management to reduce risk of pressure ulcers?

- a. Massage heels
- b. Elevate head of bed 45 degrees
- c. Elevate heels
- d. Turn patient every 4 h
- e. Insertion of urinary catheter

**Q28**

67yo man with diffuse large cell lung tumour and brain mets. At diagnosis, neuro exam was normal. He initially received steroids and whole brain irradiation 3 weeks ago. He is still on steroids. He now presents with proximal weakness, normal reflexes, 3-4/5

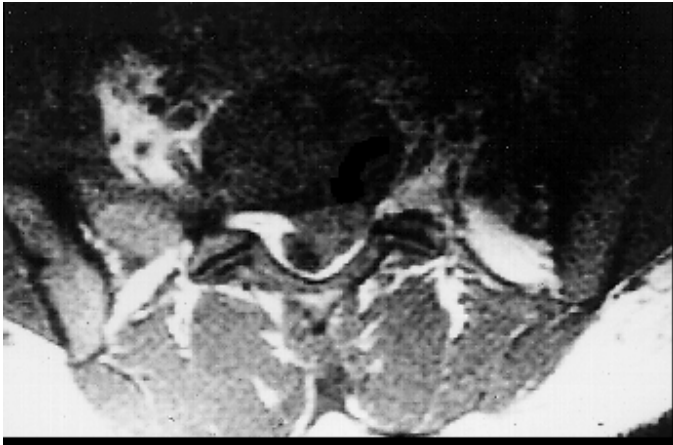
power proximally and normal power distally. What is the most likely cause of the weakness?

- f. Recurrence of tumour/progression
- g. Eaton-Lambert syndrome
- h. Steroid myopathy
- i. Paraneoplastic syndrome

**Q29**

57 yo man present with pain in the buttock and down the back of left leg.

MRI of spine shown.



Most likely cause of symptoms is?

- j. L5/S1 disc protrusion
- k. Schwannoma at S1
- l. Spinal infiltration of tumour at S1
- m. Piriformis syndrome

**Q30**

This is a repeat Q from 2004, but remembered more accurately

60yo woman with long standing RA. Has been on MTX for 10 years, 10mg/week, and takes prednisone, 7.5mg/d and metformin. On examination, she had rheumatoid nodules. Suffers from DM II and BMI 28. Following are her bloods, (stable over the last 6 months)

Bili normal  
ALP normal  
GGT normal

ALT 90  
AST 60  
Alb 32  
ESR 30  
ANA speckled 1:80  
Anti SMA weakly positive

A liver biopsy is planned.

What would be the most likely finding on liver biopsy?

- n. cirrhosis
- o. MTX hepatotoxicity
- p. NAFLD
- q. Viral hepatitis
- r. Autoimmune hepatitis

**Q31**

A young man has known hepatitis B infection. His blood results are:

LFTs normal  
HbsAg +  
HbeAg -  
HBV DNA-

Unfortunately he also develops lymphoma and is planned to have CHOP chemotherapy (agents listed in brackets)

What is the most appropriate course of action?

- A. change the chemotherapy regime
- B. commence prophylactic therapy for his hepatitis B
- C. monitor his LFTs during and after the chemotherapy
- D. monitor his eAg during and after the chemotherapy
- E. no specific therapy

**Q32**

A man with chronic renal failure secondary to GN on haemodialysis. He receives a 3 injection course of hepatitis B vaccination as per guidelines. Six weeks after his last injection his Ig level is still <10. What should be done next?

- A. measure the Ig level again in 3 months
- B. nothing
- C. re-immunise with Freund's adjuvant
- D. hepB IVIg
- E. re-immunise with up to three more injections

**Q33**

In a 60 year old lady who has history of smoking 20 cigarettes a day since the age of 15, her lung function tests reveal:

FEV1 38%  
FVC 78%

Which of the following therapies is most likely to improve her quality of life?

- A. tiotropium
- B. ipratropium
- C. salbutamol
- D. salmeterol
- E. theophylline

**Q34**

One week post trans-sphenoidal resection of a histologically confirmed non-secretory pituitary adenoma a man has the following blood results:

T4	normal
TSH	low
Cortisol (AM)	200
Cortisol (post stimulation)	680 (> 550)
GH	low
LH	low
FSH	low

(actual numbers and ranges were given)

The next most appropriate management is:

- A. repeat in 6 weeks (someone else said months, but I remembered weeks)
- B. give T4 replacement
- C. give GH replacement
- D. give hydrocortisone

E. give testosterone replacement

### Q35

Predictive gene testing (before disease is evident) can be justified on medical, ethical and social grounds. For which one of the following conditions is predictive gene testing most justified on medical grounds?

		Intervention available	Premorbid phenotype	Penetrance by 70 years of age
A	FAP	yes	yes	100% (colon cancer)
B	HNPCC (Lynch syndrome)	yes	no	60% (cancer)
C	Presenilin-1 associated dementia	no	no	60% (dementia)
D	PCKD Type I	no	yes	60% (renal failure)
E	Huntington's disease	no	no	100% (chorea)

### Q36

A middle aged gentleman with history of splenectomy for ITP. Now presents with occasional bruising and platelet count of 44. What is the most appropriate management?

- A. Observation
- B. Prednisone
- C. IV Ig
- D. Plasmapheresis
- E. Danazol

### Q37

A 52 yo man with a past history of inferior AMI presents with a 6 hours history of ischaemic chest pain. ECG showed ST elevation anteriorly (?V1-3) as well as old inferior Q waves. He was thrombolysed, with rapid resolution of his chest pain and ST elevation. However, you noted on a subsequent ECG that there is development of Q waves anteroseptally.

CK3000

ECGs not given

What is the next investigation most likely to guide management?

- A. Coronary angiogram
- B. Anterior wall myocardial perfusion viability study
- C. Exercise stress test
- D. Stress echocardiography
- E. ?

**Q38**

A young guy around 25 years old with schizophrenia.  
On long term depot haloperidol, presents with involuntary movements in one hand.  
Most likely cause?

- a akathasia
- b tardive dyskinesia
- c drug induced parkinson disease
- d essential tremor

**Q39**

Man in his 50s presents with a red, swollen, tender 1st MTP joint. He has a background of DM, HT, chronic renal failure

What is the best treatment option?

- a flucloxacillin
- b allopurinol
- c prednisone
- d NSAID
- e colchicine

**Q40**

An obese 56 yr old lady with a history of osteoarthritis of the knee. She has been treated previously with intra articular steroid injections with no effect.

Next best management option?

- A. NSAID
- B. Oral steroids
- C. Paracetamol
- D. Weight reduction
- E. Exercise program

**Q50**

Repeat

A 35 year old man who is receiving EPO therapy for anaemia associated with ESRF presents with lethargy. There is no obvious source of bleeding. Investigations show:

Hb 65 (110-160)  
MCV 109 (83-97)  
Reticulocyte count  $15 \times 10^9$  (50-100)

The most likely cause of his anaemia is:

- a. red cell aplasia
- b. reduced iron stores
- c. non-neutralising EPO antibodies
- d. aluminium toxicity
- e. myelodysplasia

**Q51**

A 53 year old male oyster farmer present with swelling and pain in his right 3<sup>rd</sup> and 4<sup>th</sup> metacarpophalangeal joints and right wrist present over a 6 week period. He remembers cutting his right hand recently and the wound draining serous fluid. On examination there is swelling of the 3<sup>rd</sup> and 4<sup>th</sup> MCP joints and wrist with no erythema.

Which of the following would be the next best step?

- a. Viral PCR
- b. Fungal culture
- c. Gram stain and culture
- d. AFB stain
- e. Synovial Rheumatoid factor

**Q52**

The most likely electrolyte abnormality seen in a 65yo male started on an SSRI is-

- a hyponatraemia
- b hypocalcaemia
- c hyperkalaemia
- d hypokalaemia
- e increased creatinine

**Q53**

The most common side effect of starting oxybutynin in an elderly gentleman with urinary incontinence is –

- a dry mouth
- b constipation
- c gastro-oesophageal reflux
- d blurred vision
- e urine retention

**Q54**

45yo male complains of lethargy and feeling depressed. He lost his job 12 months ago and his wife and children recently left him. He is not sleeping. He has recently increased his daily alcohol intake to 50-60g/day from 20-30g/day. He is most likely suffering from

- a major depression
- b alcohol dependence
- c personality disorder
- d Benzo dependance
- e Anxiety disorder

**Q55**

40yo female with a 3week history of a recurrent diffuse erythematous skin rash on her legs. Picture shown.

The presence of which of the following is most suggestive of urticarial vasculitis -

- a duration > 72 hours
- b lack of response to antihistamines
- c associated angioedema
- d dermatographia
- e ?

**Q56**

A 55 year man with CRF from GN is being considered for renal replacement therapy. Which of the following is the strongest indication for dialysis?

- A) Serum urea 50
- B) K 6.1
- C) Peripheral neuropathy
- D) Pericarditis
- E) Peripheral oedema

**Q57**

A young man presents with abdominal pain. He has the following electrolyte result

Na 142  
K 2.9  
Cl 114  
HCO<sub>3</sub> 13  
U 20  
Creat 80  
Ca 2.6  
Po<sub>4</sub> 0.8

Above most likely due to

- a) salicylate intoxication
- b) lactic acidosis
- c) renal tubular acidosis
- d) ketoacidosis
- e) vomiting

**Q58**

A 36 year old female presents following a one month holiday in Thailand. On the day after returning to Australia she develops fever, myalgia, headache and retroorbital pain. The symptoms settle after four days. However, 2 days after the fever subsides she develops a macular rash on her chest and abdomen and her fever returns. WCC normal and platelet count normal. 3 thick and thin films –ve for malaria.

What is the most likely cause of her symptoms?

- A) Typhus
- B) Typhoid
- C) Dengue
- D) Leptospirosis
- E) Acute schistosomiasis

**Q59**

A 67 year old man presents following sudden onset of visual disturbance in his left eye. He describes his vision clouding as if a curtain was pulled across his eyes. The symptoms resolved over a few minutes. He is an ex smoker with a history of hypertension. A carotid angiogram was performed. (angiogram shown with arrow pointing to stenosis of proximal internal carotid artery and indicating that it was 70 % stenosed).

What is most likely to reduce this mans chance of a stroke in the next 12 months?

- A) Aspirin
- B) Aspirin and dipyridamole
- C) Clopidogrel
- D) Early (< 6 weeks) revascularization
- E) Late revascularization

**Q60**

A young gentleman with IgA nephropathy. Which of the following findings in isolation is the most important indication for a renal biopsy?

- A. 90 glomerular RBC per hpf
- B. Proteinuria of 0.9g/day (<0.12)
- C. BP of 145/90
- D. Cr 105
- E. Serum IgA level

**Q61**

Repeat

A 45 year old woman with HCV presents with a three year history a purpuric itchy rash on her lower limbs. Some of the lesions have become ulcerated.

Results of LFT(given ) show mildly raised AST and ALT. With positive cryoglobulins with a cryocrit of 8%.

What is the most appropriate therapy?

- A) Prednisone & plasmapheresis
- B) Prednisone & cyclophosphamide
- C) Cyclophosphamide & interferon
- D) Prednisone and ribavirin
- E) Peg interferon and Ribavirin

**Q62**

Repeat

What drug is most likely to result in acute respiratory distress?

- A) Bleomycin
- B) ATRA
- C) MTX
- D) Cyclophosphamide
- E) cisplatin

**Q63**

A young woman presents following a paracetamol OD. What is most likely to predict an increased immediate risk of suicide?

- A) feeling of hopelessness
- B) the number of paracetamol tablets consumed
- C) family history of suicide
- D) Lack of social support
- E) A history of substance abuse

**Q64**

A 30 year old with a history of heavy tobacco abuse with a dry cough. He has a history of controlled epilepsy.

Which of the following is most likely to result in long term smoking cessation?

- A) Brief advice
- B) Individual counselling
- C) Nicotine replacement
- D) Group therapy
- E) Antidepressant therapy?

**Q65**

23 yo female who has a micro-prolactinoma is being treated with bromocriptine. She now presents at 6 weeks gestation. What is the next best step in management?

- A. Change to cabergoline
- B. Increase bromocriptine
- C. Terminate pregnancy
- D. Cease bromocriptine
- E. Continue bromocriptine at present dose

**Q66**

What is the most appropriate immediate treatment of alcohol withdrawal?

- A. Diazepam
- B. Midazolam
- C. Phenytoin
- D. Acamprosate
- E. Naltrexone

**Q67**

A man in his 40's. Hepatitis B positive. Has had 4 flares over the last 5 years. Presents with lethargy and mild jaundice.

LFT's abnormal: raised GGT, ALP, ALT, AST, Bili (22) {ALT>AST} – (can't remember figures)

HBsAg positive

HBeAg negative

NB: No HBV DNA given and no mention of lamivudine or any other treatment in stem

What is the most likely reason for this patient's presentation?

- A. Hepatoma
- B. YMDD mutant
- C. Pre-core mutant
- D. Hepatitis D superinfection
- E. Cholelithiasis

### Q68

Male in his 70's with a background of hypertension, presents with right hemi-sensory loss. No weakness of upper or lower limbs. Slurred speech but able to create and understand language

A T1 weighted and DWI MRI shown.

The DWI MRI is shown which shows hyperintensity around the posterior horn of the lateral ventricle.

What is the most likely cause of this patient's presentation?

- A. Left MCA thrombosis
- B. Left penetrating artery thrombosis
- C. Internal carotid artery occlusion
- D. Intra-cerebral haemorrhage
- E.

### Q69

16 yo girl from a school party. Presents with agitation, tachycardia, BP normal (?120/80), hyperthermic. What is the most likely cause of this presentation?

- A. Ecstasy
- B. Magic mushroom
- C. ?GHB
- D.
- E.

**Q70**

70yo male presents with headaches and dizziness. Past heavy smoker. Plethoric. Recent angina.

FBC shows Hb 207, MCV low, neutrophilia and WCC slightly elevated, platelets elevated 499

Normal plasma volume

Raised Red Cell Mass

Serum EPO 4.9 (4.8-20).

What is the most likely diagnosis?

- A. PRV
- B. CAL
- C. High affinity Hb
- D. Dehydration
- E. Essential thrombocythaemia

**Q71**

Breast tissue biopsy with immunohistochemistry stain for HER 2 and ER/PR given (HER2 was very brown, ER/PR very slightly brown)

Stem : A woman with metastatic breast cancer. Menopausal status not given. What would be the best treatment option?

- A. Trastuzumab but not letrozole
- B. Trastuzumab with letrozole
- C. Tamoxifen and Trastuzumab
- D. Tamoxifen only
- E. Chemotherapy

**Q72**

A 38-year-old woman presents with a six-week history of increasing shortness of breath while playing tennis and a two-week history of increasing muscle weakness. She reports mild symmetrical polyarthralgia of the hands, wrists and knees for six months and Raynaud's phenomenon during the recent winter. Examination reveals proximal muscle weakness and a hyperkeratotic rash with fissuring on the palmar and lateral surfaces of the fingers on both hands. Investigations reveal a serum creatine kinase (CK) level of 890 U/L [16-139] and an interstitial pulmonary infiltrate on high resolution computed tomography (CT) scan of the chest.

Autoantibody tests show the following results:

anti-nuclear antibody (ANA) test	titre 1:2560, speckled pattern
anti-ENA (extractable nuclear antigens) antibodies	Jo-1 positive
anti-DNA antibodies	negative

The most likely diagnosis is:

- A. dermatomyositis.
- B. progressive systemic sclerosis.
- C. polymyositis (anti-synthetase syndrome).
- D. systemic lupus erythematosus.
- E. Sjögren's syndrome.

### Q73

Repeat question

ICU patient. Initially presented with sepsis. Difficulty weaning off ventilator. Diffuse weakness. Plantars down-going bilaterally. Nerve conduction studies consistent with axonal injury. EMG shows small polyphasic motor units

What is the most likely diagnosis?

- A. Critical illness polyneuropathy
- B. Critical illness myopathy
- C. Polymyositis
- D. Steroid myopathy
- E. AIDP

### Q74

An elderly man with severe dementia was noticed by his daughter to be stooping forward and drooling excessively one morning while eating breakfast. She calls you in your office concerned about her father. He is unable to communicate due to his dementia but points to his sternum. He has a past history of CVA (??other comorbidities). The daughter states he is able to move all 4 limbs.

What is the most likely cause for his presentation?

- A. CVA.

- B. AMI
- C. pneumonia
- D. Foreign body in oesophagus
- E ?

**Q75**

A gentleman has just recovered from an AMI. He has been commenced on various medications including atorvastatin 20mg daily for secondary prevention of cardiovascular events. You repeat his lipid profile 3 months later.

Total cholesterol 5.5 mM  
HDL 1.1 mM  
Triglycerides 9 mM

Which of the following steps in management is most likely to reduce the triglyceride level?

- A. Increasing atorvastatin to 40mg daily
- B. Addition of a bile acid binding resin
- C. Addition of ezetimibe (inhibitor of cholesterol absorption)
- D. Addition of a fibrate
- E. ??

**Q76**

What is the most effective intervention in reducing hyperphosphataemia in CRF?

- A) low phosphate diet
- B) oral phosphate binders
- C) calcitriol
- D) parathyroidectomy
- E) dialysis

**Q77**

32 yo man with no siblings, presents with tiredness.

Hb 100

MCV 64

Fe studies Fe low, Ferritin 29, Transferrin sats 25%, transferrin level 3.1

EPG shows B-thalasemia trait

What would be the most appropriate next step

- F) Upper endoscopy
- G) Advising partner regarding genetic screening

- H) Check the parents genetic status
- I) Fe tablets

**Q78**

A 65 year old man presents to hospital with central crushing chest pain. Subsequent tests reveal anterior myocardial infarction and he is thrombolysed and intravenous heparin is commenced. Three days later, he develops a painful swelling in his left leg and doppler ultrasound reveals thrombosis to the left iliac vessels.

Platelet count 80  
ELISA for HITTS is positive.

In addition to ceasing heparin, which of the following would be the most appropriate treatment for this man?

- A. Observation
- B. Dalteparin
- C. Warfarin
- D. Clexane
- E. Danaparoid

**Q79**

Which of the following clinical associations is most likely to occur in the setting of spinal canal stenosis?

- A. increasing pain on prolonged weight bearing
- B. increasing numbness on prolonged weight bearing
- C. loss of lumbar lordosis
- D. reduced proprioception on prolonged weight bearing
- E. degenerative changes on plain radiography

**Q80**

Dementia is a relatively common condition in the elderly. 5% of the normal adult population develop dementia over a period of five years. However, this risk is increased threefold in high risk populations such as carriers of the APO E e4 allele. The incidence of APO E e4 allele carrier state in the normal population is 10%.

Which of the following percentages represents the best estimate of the proportion of people with dementia without the APO E e4 allele?

- A. 15%
- B. 33%
- C. 60%
- D. 70%
- E. 85%

**Q81**

A 71 year old man comes to your clinic for regular review. He is currently well with dyspnoea on moderate exertion. He has a history of ischaemic heart disease and hypertension. His medications include simvastatin 40mg daily, aspirin 100mg daily and enalapril 10mg daily.

On examination, his BP 125/75, PR 80, chest is clear and there is no evidence of peripheral oedema. JVP 1+, HSD with a soft systolic murmur. ECG shows old anterior q waves. CXR reveals an increased cardiothoracic ratio 13.8/25 and echocardiography reveals a depressed left ventricular systolic function (fractional shortening 18%) Serum electrolytes are performed and they are normal.

Which of the following is the most appropriate management for this man at this time?

- F) increase the dose of his ACE inhibitor
- G) add angiotensin-II-receptor
- H) antagonistadd frusemide
- I) add a beta-blocker
- J) add spironolactone

**Q82**

A 25 year old woman presents with fatigue and weight gain. She has no past medical history and has not been in hospital before. On examination she has acne, central obesity with abdominal violaceous striae and there are bruises on her forearms. Serum cortisol and serum ACTH are performed and they are both low. Which of the following is the most likely diagnosis?

- A. Cushings disease
- B. Pseudocushings syndrome
- C. Factitious Cushings syndrome
- D. Ectopic ACTH production
- E. Adrenal adenoma

**Q83**

A surgical colleague has sent to you a 77 year old gentleman with a history of diabetes

and smoking for preoperative management prior to an elective inguinal hernia repair. He maintains an active lifestyle and ceased smoking 15 years ago. He injects insulin twice daily and his blood glucose levels have been fairly stable. He is also on a statin and an ACE inhibitor

On examination, his chest is clear, he is normotensive and has a PR 70. CXR is clear.

Which of the following medications will he most likely benefit from perioperatively?

- A. Metoprolol
- B. Aspirin
- C. Angiotensin-II-receptor antagonist
- D. Magnesium Sulfate
- E. Nitrate patch

**Q84**

35 year old female presents with progressive worsening of her daily headaches over the last 6 months. Over this time, she has tried panadeine forte two tablets taken every 6 hours with partial effect. Her headaches are frontal, dull and range from moderate to severe. At times she has suffered nausea with these episodes. The headaches have troubled her during the day, but she also has been having difficulty sleeping at night because of her headaches. On examination, her optic fundi are normal, BP 130/80 and she is afebrile. Full neurological examination is normal. CT and lumbar puncture are also normal.

Apart from ceasing her simple analgesics, which of the following would represent the best initial treatment?

- A. Slow release tramadol
- B. Slow release morphine
- C. Amitriptylline at bedtime
- D. Prochlorpromazine PRN
- E. Dihydroergotamine

**Q85**

50 yo man with SOB and chest pain with facial swelling and plethora. He was a smoker. Given a CT chest that shows large mediastinal mass (middle mediastinal, definitely not anterior). No pleural effusion. What is the most likely malignancy?

- a. lymphoma
- b. melanoma
- c. thymoma
- d. germ cell tumour

e. bronchogenic carcinoma

**Q86**

A 81 year old man who collapsed in the street while running for the bus. Has a past history of hypertension and hypercholesterolaemia. Takes felodipine. On examination was hemodynamically stable. Soft systolic murmur was heard but area not specified. CK slightly elevated at 230, troponins are pending.

ECG shows LVH, LAD with abnormal ST segments in V5-6 (ST depression /T wave changes). Inferior leads are normal. What is the most next most appropriate?

- a. observation
- b. thrombolysis
- c. IV heparin
- d. amiodarone
- e. coronary angiogram

**Q87**

A patient presents with his first episode of oesophageal variceal bleeding that was banded. What is the most appropriate step to prevent recurrent bleeding?

- a. liver transplantation
- b. propranolol
- c. isosorbide mononitrate
- d. TIPS
- e. repeated endoscopies and banding

**Q88**

Indian lady who migrated to New Zealand presents with weakness, difficulty getting out of chair and painful hips and pelvis. She is a strict vegetarian.

PTH 16

Ca slightly low 2.12

Phos 0.70

ALP 400

What is the next best test?

- a. bone scan
- b. bone biopsy
- c. PTHrP
- d. Vitamin D
- e. 24 hour urinary calcium

**Q89**

A young female with Crohn's disease. Which of the following is most associated with fetal abnormalities in pregnancy?

- K) Azathioprine
- L) Prednisone
- M) Methotrexate
- N) Mesalazine
- O) Sulphasalazine

**Q90**

A middle aged lady with mild diarrhoea, weight loss and pruritis with papulovesicular lesions on forearms and elbows.

What is the most likely to confirm the diagnosis?

- P) Peri-lesional biopsy with direct immunofluorescence staining
- Q) Biopsy of one of the lesions
- R) Jejunal biopsy
- S) Faecal fat
- T) Response to gluten free diet

**Q91**

A patient has a deep venous thrombosis and will be anticoagulated for 6 months. Which of the following is the strongest indicator for prolonged anticoagulation?

- a. it was an unprovoked event (no risk factors)
- b. heterozygous mutation for factor V leiden
- c. heterozygous mutation for prothrombin G20210A
- d. lupus anticoagulant
- e.

**Q92**

Patient with chronic diarrhoea and weight loss.

IgG endomysial AB 43 (high)

IgA endomysial AB 0

IgA gliadin AB <5 (<5)

What is the next best investigation?

- A. Serum IgA levels
- B. Tissue transglutaminase level
- C. Jejunal biopsy
- D.
- E.

**Q93**

Repeat question from 2004

Lady with UTI, grew enterococcus in her urine. Urine culture continues to grow enterococcus despite 5 days of oral cephalexin.

What is the most likely reason for this?

- A. Adequate drug plasma concentration
- B. Poor genitourinary tract penetration
- C. Antibiotic resistance
- D. Inadequate course of antibiotics
- E. ?

**Q94**

Young guy, presented post VF arrest with a down time of 17 minutes. Resuscitated GCS 3 currently.

ECG shown – Rate 90. LBBB, mild (approx 1mm) ST elevation laterally, J waves  
Currently temperature 34 degrees celsius

What is the main priority in the care of this patient?

- A. Primary PTCA
- B. Thrombolysis
- C. Testing for brainstem death
- D. Cool to 33 degrees celsius
- E. Non contrast head CT

**Q95**

67 year old gentleman, long standing history of previous smoking  
Known severe COPD, presents with progressive SOB

Lung function tests shown

FEV1 ?15% predicted

FVC 50% predicted

DLCO 19% predicted

(there may have been more information)

What is the best management to improved his dyspnoea?

- A. Bronchodilators
- B. Pulmonary rehab
- C. Inhaled steroids
- D. LVRS
- E. Lung transplant

**Q97**

Which phase of a clinical trial best assesses the activity of a cytotoxic agent?

- A. In vitro testing
- B. Phase 1
- C. Phase 2
- D. Phase 3
- E. Phase 4

**Q98**

Which of the following drugs is most likely to increase circulating insulin levels?

- F) Metformin
- G) Rosiglitazone
- H) Repaglinide
- I) Acarbose
- J) Orlistat

**Q99**

A 40y old female presents to you with left knee pain which is worse after weight bearing. She has type II diabetes mellitus, hypertension and a BMI of 36. On examination there is no swelling but there is pain on movement through all range of motions.

Bilateral knee xray is shown which shows: decreased joint space in medial compartment narrowed in the R (unaffected) knee. Valgus deformity both sides. L knee fairly normal.

After commencing paracetamol and what else is important in the initial management of this lady?

- a. Quadriceps strengthening exercises
- b. arthroscopy
- c. dietician referral for weight loss
- d. inject with steroids
- e. NSAIDS

**Q100**

Repeat from 2004

A 42 year old female presents with thoracic back pain and weakness present for 2 days. On examination she has upgoing plantar reflexes and 2-3/5 weakness bilaterally of her lower limbs. L>>R. Pain and temperature sensation is also reduced in R lower limb. Hyperreflexia bilaterally and upgoing plantars

T2 weighted MRI of spine (sagittal and transverse) shown:

Lots of contention about what this MRI actually showed  
There was a swollen segment of thoracic spinal cord and two vertebral bodies (T4 and T6) adjacent to this area had increased signal.

Which of the following is the cause of her presentation?

- a. transverse myelitis
- b. spinal cord compression
- c. syringomyelia
- d. anterior spinal artery thrombosis
- e. sciatica

**Remembered 86 out of 100**