Abacavir  
Stavudine  
protease inhibitors:  
nelfinavir  
lopinavir  
Panadol enhances warfarin effect  
Safest statin with warfarin: atorvastatin  
Theophylline/Salicylate overdose: charcoal  
Carbon monoxide poisoning: cerebellar signs most effective sign of neurological toxicity  
First degree heart block, widening of QRS: beta blocker  
Eye dilated: TCAs (imipramine), cocaine  
Diethylene glycol with renal failure: HD and oral ethanol  
Lead poisoning: motor neuropathy  
H Pylori Triple therapy: OAC  
Carbamazepine: diplopia ataxia  
Phenytoin toxicity: slurred speech ataxia blurred vision  
Yellow green halo: digoxin  
Salicylate poisoning: resp alkalosis first seen  
Within 1 hour: gastric lavage, activated charcoal  
INR very high due to warfarin: FFP  
IV NAC: given up to 10hours in Panadol poisoning  
Methadone: heroin withdrawal help  
ITP: Prednisolone  
Dog bite: co amoxiclav  
Ondansetron: vomiting post chemo  

RENAI
Sarcoidosis: cranial DI  
RTA type 1: nephrocalcinosis  
Wegener: ENT(sinusitis), bx shows Segmental crescentic glomerulonephritis and granulom,tx cyclophosphamide and pred,anti-protease 3  
Goodpasture: IgA mesangium deposition  
HSP: IgA mesangium deposition  
Tuberous sclerosis: hypopigmented patches, periungal fibromas  
UTI in DM patients: renal papillary necrosis (hematuria, oliguria,severe loin pain)  
Xanthogranulomatous pyelonephritis: palpable flank mass, unilateral, rapid course  
HUS, picture, travel to korea: Hantavirus  
Child with metabolic alkalosis and hypokalemia: Bartter's syndrome  
Bartter(high renin/aldo, BP normal)s vs Liddle (low renin/aldo, HTN)  
ADPKD: Chromosome 16 commoner than 4  
Fabry's disease: peripheral neuropathy, cardiac conduction defect  

ENDO
MEN 1: AAI  
(Parathyroid (hyperplasia), Pancrease, Pituitary(adenoma))  
MEN 2A: PPT (Pheo ParaThyroid(adenoma) Thyroid- medullary)  
MEN 2B: PPT + MN (Marfanoid, Neuromas)  

Bartter's syndrome: only HYPOKALEMIA (BP normal)  
DM: HLA DR3  
Carcinoid: plasma chromogranin A, urinary 5 HIAA  
TSH: 0.4-5  
T4: 10-22  
T3: 5-10  
Pregnancy: PTU  
Hashimoto:chance of progressing to thyroid lymphoma
A 25-year-old Turkish woman arrived in the United Kingdom with a three month history of weight loss and intermittent fevers. On examination, the patient was emaciated, febrile (39°C) and pale, and an enlarged liver (5 cm below the costal margin) and spleen (10 cm below the costal margin) were present.

Haemoglobin 72 g/L (115-165)
White cell count 2.4 x 10^9/L (4-11)
Platelet count 117 x 10^9/L (150-400)

Thick and thin films no parasites identified. CXR normal. What is the most likely diagnosis? Visceral leishmaniasis

Myasthenia Gravis: Electrical recordings of single motor unit activity commonly reveal variation in the latency of the various muscle fibre responses (jitter)

Left parietal lobe haemorrhage: Acalculia

A 50-year-old man is admitted to the hospital with a third attack of renal stones in the last six months. He suffers from Crohn’s disease and has previously had a limited small bowel resection, but his disease is now quiescent. Apparently there is a history of high calcium levels in other blood relatives. On examination his BP is 115/72 mmHg, his BMI is 19.5, he has a midline scar consistent with a previous laparotomy.

Haemoglobin 120 g/L (115-165)
White cell count 6.4 x 10^9/L (4-11)
Platelets 272 x 10^9/L (150-400)
Serum sodium 138 mmol/L (135-146)
Serum potassium 4.1 mmol/L (3.5-5)
Creatinine 85 µmol/L (79-118)
Calcium 2.89 mmol/L (2.20-2.67)

Which of the following is the most likely diagnosis? Familial hypocalciuric hypercalcaemia

Vaccination for patient with sickle cell anaemia: Usual childhood immunisations, yearly influenza vaccine, five yearly Pneumovax vaccine (meningococcal already part of childhood immunization schedule)

A 53-year-old woman with inoperable cancer has pain due to posterior abdominal wall infiltration. This has been controlled well with Kapake (codeine 30 mg and paracetamol 500 mg), two tablets four times per day. The patient has been admitted with nausea and vomiting the cause of which is, as yet, unknown. Because she cannot retain her analgesics, she has severe pain in her loin. What is the best option for controlling her pain until the vomiting settles? Subcutaneous diamorphine by continuous infusion

Reduce MST to 100mg BD and add naproxen

Which of the following investigations is not done routinely for a patient with an acute sickle cell crisis? Bone X ray

Parkinson’s disease: Inheritance pattern of this disease is not known

Lady with 2 previous PE presenting with 3rd PE, already on long term warfarin: refer for IVC filter

A 20-year-old man presented after ingesting a drug at a party. Investigations revealed a serum creatine kinase of 10,000 IU/L (NR 24-195). Which one of the following drugs is most likely to have been responsible? Ecstasy (MDMA)

A patient who was recently admitted to the medical receiving unit with general malaise has been found to have deranged renal function. Your registrar asks you to arrange 'an urgent scan' to exclude obstruction of the kidneys. Which of the following is most appropriate? US KUB

Women with multiple genital ulcer: Herpes Simplex

A 19-year-old intravenous drug user presents to the emergency department with a fever of 38.5°C, dyspnoea, and right sided pleuritic chest pain. Bilateral cavitating lesions are seen in both lungs on his chest x ray (septic emboli) What is the most likely diagnosis? Endocarditis of the tricuspid valve

A 45-year-old solicitor had an onset of severe, crushing, substernal chest pain while attending a football match. He collapsed on his way to the car. Bystander cardiorespiratory resuscitation was begun immediately and he is cardioverted for VF by the attending paramedics. He arrives intubated and ventilated in the Emergency department where his 12 lead ECG shows inferior ST elevation.

pH 7.13 (7.35-7.45)
PaO2 560 mmHg (90-110)
PaCO2 18 mmHg (35-45)
drinker before admission taking 80 units of alcohol per week. Which of the following management options would be most helpful in this situation? **Diazepam**

- A patient presents with a 36 hour history of varicella zoster in the T4 dermatome. She complains of severe pain in the skin supplied by T4. What is the most appropriate management? **Aciclovir**

- A 25-year-old woman is admitted on the medical intake. She is 10 weeks post partum and has been generally unwell for two weeks with malaise, sweats and anxiety. On examination she is haemodynamically stable, and clinically euthyroid.

  Free T4 33 pmol/L (9-23)
  Free T3 8 nmol/L (3.5-6)
  TSH <0.02 mU/L (0.5-5)

  What is the most appropriate management? **Propranolol 20 mg tds**

- Jejunal biopsy: **can be used to diagnose Whipple’s disease**

- NF1: **Pigmented spots on the iris are a characteristic feature**

- A 23-year-old man with an otherwise insignificant past medical history, presented with a sharp painful left eye over the last one day. Ocular examination revealed a left mildly red eye with mild reduction of visual acuity. There were no ocular discharges to note. What is the most likely diagnosis? **Herpetic keratitis**

- A 51-year-old man presents with increasing lethargy over the past few months. He has had to give up his job as a storeman, and it now takes him 15 minutes to get up one flight of stairs and he has difficulty getting up out of a chair. On examination his BP is 135/82 mmHg, pulse is 85 and regular. His heart sounds are normal and his chest is clear. He has clear proximal muscle weakness, with sparing of distal muscle power. His CK is elevated at 1200. Which of the following antibodies is most likely to be elevated? **Anti-Jo antibody**

- Phenytoin toxicity: **Decreased protein binding of phenytoin**

- RAS. SBP 155. **Add bisoprolol to his anti-hypertensive regimen**

- Which of the following is the strongest independent predictor of cardiovascular death in a patient with impaired glucose tolerance? **Triglycerides**

- 40-year-old man is admitted with a one day history of increasing drowsiness. He had a diarrhoeal illness two weeks ago from which he made a full recovery. He says that over the past three days he had developed double vision and he has difficulty walking like he was drunk. On examination he has mild proximal weakness and brisk symmetric reflexes. Sensation is intact and plantars are down going. Which of the following is the most likely diagnosis? **Bickerstaff’s encephalitis**

- A 72-year-old female presents with a two month history of poor appetite, lethargy, intermittent fever and night sweats. She has poor dentition and over the last 12 months has required dental extraction. On examination, a murmur consistent with mitral regurgitation is heard. A transthoracic echocardiogram reveals a vegetation on the mitral valve. What is the likeliest cause of her endocarditis? **S. mutans**

- **Ciprofloxacin: Interference with DNA replication**

- **Calcium** 2.81 mmol/L (2.20-2.67)
  **Phosphate** 0.7 mmol/L

  Ca**

- **Creatinine normal. Dx: Primary hyperPTH**

- A 52-year-old man returns for repeat endoscopy. He was last scoped some six months earlier after persistent indigestion, upon which both duodenal ulceration and Helicobacter was found. He underwent eradication therapy, but has been suffering worse indigestion, particularly over the past four to six weeks. On examination his BP is 132/72 mmHg, his pulse is 70 and regular. He has mild epigastric tenderness.

  Haemoglobin 109 g/L (135-177)
  White cell count 7.2 ×10^9/L (4-11)
  Platelets 240 ×10^9/L (150-400)
  Serum sodium 143 mmol/L (135-146)
  Serum potassium 4.0 mmol/L (3.5-5)
  Creatinine 110 μmol/L (79-118)
  Serum gastrin 850 pg/ml (<200)

  Repeat endoscopy: extensive duodenal ulceration.

  Which of the following is the most appropriate next step in his management? **Secretin stimulation test**

- **Type 2 diabetes for some five years and currently takes metformin 1 g twice daily. HbA1c 9%. Start bedtime intermediate acting insulin**
Pemphigus: oral involvement

A 70-year-old man who has had type 2 diabetes for 20 years is referred to the clinic because of poor glycaemic control despite recent dietetic input.

He has a history of two previous myocardial infarctions, and gets exertional angina at 50 yards. He has previously had angioplasty to both his lower limbs and despite this has a claudication distance of 40 yards. He has New York Heart Association failure class II-III.

Additionally he has diabetic maculopathy, and distal sensory neuropathy.

His home blood monitoring readings are 10-15 mmol/L before breakfast.

His current treatment includes; metformin 500 mg tds, glimepiride 4 mg daily, insulin detemir 20 units at night, perindopril 8 mg OD, furosemide 80 mg daily, aspirin 75 mg daily and atorvastatin 20 mg daily.

On examination his BMI is 33, with a BP of 140/70 mmHg.

Investigations show:

- HbA1c 77 mmol/mol (20-46)
- 9.2%  (3.8-6.4)
- Fasting glucose 13.4 mmol/L  (3.0-6.0)
- Creatinine 130 µmol/L  (60-110)
- Liver function Normal

Which of the following strategies is the most appropriate for his glycaemic control? Add liraglutide 1.2 mg daily

A 35-year-old business man presents with anxiety and palpitations after 'snorting' cocaine. The patient denies any prior use and has also consumed some alcohol.

On examination, he is distressed and sweating with a temperature of 38°C, pulse of 138 beats per minute (regular) and a blood pressure of 216/110 mmHg. His ECG reveals a sinus tachycardia. Which of the following is the most appropriate initial treatment for this man? Diazepam

Nobody can gain intravenous access as the patient is too unwell. A femoral line is not possible due to contractures. You do not have the experience to do an central venous cannulation. Which of the following is the best option for administering intravenous fluids/emergency drugs in this situation of inability to gain venous access? Intraosseous

A 17-year-old female with type 1 diabetes, who is known to be poorly compliant with treatment, is admitted with ketotic hyperglycaemia. The respiratory rate is 41 per minute and the blood pressure 85/66 mmHg. She is confused and lethargic. An arterial blood gas shows the pH to be 7.01, and the potassium is 4.9 mmol/L. Which condition carries the highest risk of mortality to this patient? Cerebral oedema

Internal jugular vein and relations: On the right side crosses the first part of the subclavian artery

Which of the following features would be consistent with a diagnosis of pemphigus? Oral involvement

A 29-year-old female with Turner syndrome is referred by the GP concerned about her blood pressure. She is pyrexial 38.6, his BP is 95/60 mmHg, pulse is 95 and regular. His saturations are 93% on air. CXR - Right sided consolidation with evidence of cavitation. Tx: Clarithromycin and co-amoxiclav

A 24-year-old male presents with shortness of breath, chest pains and cough. He is a smoker of 10 pack/years and occasionally uses cocaine and ketamine. He uses PRN salbutamol inhaler for asthma diagnosed in childhood. He has been treated by his GP for chest infections four times in the past seven months, with different courses of antibiotics. On examination he has a white exudate on his tongue and...
- AKI: Tenofovir
- What PCR value in mg/mmol approximates to a 24 hour urine protein collection of 1g? **100mg/mmol**
- Stroke mimic: hypoglycemia
- A 75-year-old lady attends the Emergency department with a stroke affecting her left arm and leg. A CT scan confirms that there is a right CVA. Carotid scanning shows stenosis of 50% on the right and 90% on the left. After a couple of days of physiotherapy her symptoms are much improved. What is the best course of action? **Discharge and urgent outpatient follow up**
- associated with HIV: Psoriasis
- acute onset well demarcated painful vesicular rash on the face: **herpes zoster**

- A 62-year-old man presents with extreme fatigue, weight loss and night sweats. He has been feeling very unwell for the past few months and has taken early retirement from his job. He has problems eating because he feels constantly full. He has gross hepatosplenomegaly.

  
  Hb  89 g/L (135-180)  
  WCC  25.0 ×10^9/L (4-11)  
  Increased neutrophils, basophils and eosinophils  
  PLT  171 ×10^9/L (150-400)  
  Bone marrow: Hypercellular with increased myeloid cell line precursors  

  He starts imatinib therapy but is unable to tolerate it due to diarrhoea, which fails to resolve with a series of interventions. Which of the following is the most appropriate next treatment for him? **Nilotinib**

- A 71-year-old man attends the memory clinic with his wife. She has noticed that he has become progressively more forgetful over the past few years and has begun to wander at night. Most recently he became lost whilst shopping in the local village and had to be brought home by the police. This caused his wife significant distress. He easily demonstrates short-term memory loss, with relative preservation of memory for events from his 40s. He also has visuospatial dysfunction. CT head: Mild cortical atrophy

Which of the following is the most likely diagnosis? **Alzheimer’s disease**

- Episodes of probable cataplexy. Clinical examination is unremarkable. Thyroid function tests are normal. The patient is suspected of having narcolepsy. Which of the following tests will be most useful in diagnosis? **Multiple sleep latency test**

- You are an SHO working in the Emergency department when a 67-year-old gentleman with known COPD attends via ambulance. He has a short history of increasing breathlessness. He denies a productive cough. On arrival he is dyspnoeic with a respiratory rate of 33. Other observations are as follows saturations 88% on 28% O2, HR 105 bpm, BP 118/86 mmHg, temperature 36.9°C. On examination he has a widespread polyphonic wheeze. A blood gas 45 minutes after arrival and following initial treatment is performed, results are as below.

  
  pH  7.24 (7.36-7.44)  
  PCO2  8.8 kPa (4.7-6.0)  
  PO2  8.4 kPa (11.3-12.6)  

What should your management be? **Call ITU for consideration on invasive ventilation**

- In a randomised controlled trial of comparing drug A (group A) and drug B (group B) for the treatment of diabetes mellitus, it was found that the HbA1c was 53 mmol/mol in group A and 56 mmol/mol in group B (p=0.8). Which of the following statements is correct? **Type I error is unlikely**

- In a study of the utility of serum procalcitonin level for early diagnosis of bacteraemia, 100 consecutive febrile patients admitted to hospital were tested for serum procalcitonin and culture of bacteria. It was reported that serum procalcitonin level above 0.5 microgram/L had a specificity of 90% in detecting bacteraemia. Which of the following statements is correct?

  **10% of the patients who do not have bacteraemia would be expected to have serum procalcitonin level above 0.5 µg/L**

Explanation:

Specificity will be higher if 200 patients instead of 100 patients were tested

Specificity defines the ability of the test to correctly exclude a disease - in this case the proportion of healthy patients known not to have the disease who will test negative for it. It is calculated by dividing the number of true negatives by the sum of the true negatives and false positives.
Which of the following is the most appropriate treatment? **Calcium and Vitamin D**
- past year or two she has had increasing problems with regurgitation of rotten food, has lost weight and acquired a chronic cough. According to her partner she has problems with halitosis which have not improved on multiple visits to the dentist. On examination her BP is 145/82 mmHg, pulse is 70 and regular and her BMI is 27. She has a neck mass which appears to gurgle when she swallows. **Pharyngeal pouch**
- Resp alkalosis with low PaO2 and PaCO2: **Pulm Embolism**
- Your next patient in the care of the elderly clinic is a 79-year-old lady who you initially saw two months ago with a history of palpitations. She has a history of stable coronary artery disease (CAD) and controlled hypertension on bendroflumethiazide. She remains active and lives alone independently. When you saw her last you sent her for an echo. This demonstrates good LV function, mild concentric LVH and a dilated LA (AP diameter 5.7 cm). A 24 hour ECG has shown AF throughout, maximal rate 135. On questioning during this consultation she has noted a few episodes of palpitations lasting a few hours. Today her ECG confirms AF. What is the most appropriate initial management of her arrhythmia? **Start bisoprolol**
- A 35-year-old man has just been diagnosed with dermatitis herpetiformis. Besides starting on a gluten-free diet, his dermatologist has decided to start him on oral dapsone. What laboratory test needs to be within the normal range before commencing therapy? **G6PD levels**
- Lady with PR bleed: **Flex sigmoidoscopy**
- A 21-year-old woman presents with a six month history of bilateral wrist pain, generalised aching, morning stiffness and an intermittent subjective fever. She has a medical history of grade 4 acne, which she states has become worse over her nasal bridge and cheeks despite being commenced on minocycline one year ago. She tells you that her mother has rheumatoid arthritis. An autoimmune screen demonstrated positivity for ANA, P-ANCA and anti-DNA histone; negative anti-ds DNA antibody; normal complement C3, C4 levels. Which of the following should be your first management step? **Stop minocycline**
- **MMR contraindicated in pregnant patients**
- Breast screening: In young patients with a BRCA mutation, mammographic screening has a low sensitivity for detecting tumours
- Lithium: **coarse tremors**
- Prevent steroid induced osteoporosis: **Arenitrate (>65 years)
- lesions on his face for the past three years. The lesions are worse after sun exposure. **Interface dermatitis**
- A 55-year-old woman presents with longstanding well-controlled seropositive RA, treated with methotrexate (20 mg/week), predonisone 5 mg/day, presents with cough productive of green phlegm, fever (38.5°C), and severe sore throat. On examination, she BP is 110/70 mmHg, SaO2 is 98% on air, there is an occasional crackle at the right base. A chest x-ray is normal. FBC, UEC, and LFTs are also normal. The CRP is 34 mg/L. Which of the following is the most appropriate course of action? **IV antibiotics, stop methotrexate**
- A 29-year-old man presents with a painful swollen right knee one month after an episode of gastroenteritis. There is no personal or family history of chronic skin diseases and he drinks alcohol occasionally. On examination there is a right knee effusion, and the knee aspirate shows plenty of leucocytes, no crystals, and no organisms on Gram stain or culture. What is the next step in his management? **Oral NSAIDs**
- A 45-year-old man presents with an insidious onset of binocular horizontal diplopia and left sided facial pain. On examination he has a left abducens nerve palsy and numbness over the maxillary division of the left trigeminal nerve. Of the following which is the most likely anatomical site of his neurological lesion? **Petrus apex**
- Common in UC and Crohn’s: **Pseudopolyp**
- Bloody diarrhea with L sided tenderness. (think UC, more common than crohn’s): **Diffuse mucosal inflammation**
- You see a 44-year-old woman with a three month history of progressive pain, swelling and stiffness in both knees. Her symptoms are worse in the morning, and it takes an hour or so to loosen up the joints. She has had no recent preceding illness and there is no personal or family history of any chronic skin conditions. Since she was a teenager she has had painful fingers and toes when they are exposed to cold weather, but her digits do not change colour. She has also recently had pain and stiffness in her fingers and toes in the morning, and this fluctuates from day to day. She occasionally drinks alcohol. On examination you find reduced flexion and extension and an effusion in both knees. She has bilateral metatarsalgia on squeezing her toes. Examination of her fingers is normal and there is no psoriasis of her skin or nails.

| Haemoglobin | 131 g/L | (130-180) |
- Decreasing the sample size will increase the width of the 95% confidence interval of the correlation coefficient.
- Kaplan Meier survival curves can be used to compare the survival between the two groups.
- A 67-year-old woman presents with severe back pain and urinary retention with overflow. She says that her lower back has been aching for the past six weeks, but the pain has become significantly worse over the past 48 hours. There is a medical history of hypertension, but nothing else of note. Her BP is 142/82 mmHg, pulse is 73 and regular. She is unable to get off the couch due to distal lower limb weakness. Tone is increased bilaterally and her reflexes are increased. As you chat to her you notice fasciculation. There is perianal loss of sensation. Which of the following is the most likely diagnosis? **Conus medullaris syndrome**
- A 24-year-old lady with a BMI of 36 and on the combined oral contraceptive pill presented with a one month history of increasing vertex headaches, worse in the mornings and worse on coughing and sneezing. She also complained of blurry vision in both eyes. Fundoscopy revealed bilateral extensive papilloedema with a lot of flame shaped haemorrhages around and on the optic discs. Which one of the following is the best long term management of this patient? **Reduce weight**
- Which one of the following cutaneous lesions is associated with HIV infection? **Psoriasis**
- A 45-year-old man is referred to the dermatology clinic, with an intensely itchy, red, scaling rash which affects his scalp predominantly and is worse in spring and winter time. He also has a patch on his chest and around his beard. On examination he has a severe scalp rash with crusting and scaling of skin. Scalp biopsy: Hyperkeratosis, acanthosis and focal spongiosis. First line treatment: **Ketoconazole shampoo**
- MRSA cellulitis tx: **Doxycycline**
- Soon after administration he developed hearing loss, tinnitus and vertigo. Which diuretic is most likely to have caused this? **Furosemide**
- A 45-year-old man presented to the Emergency department with a 48 hour history of bilateral swollen ankles. He is known to have a history of an acute gout episode affecting his left first MTPJ. He had recently been travelling in Europe and returned yesterday. During his trip he had had one episode of night sweats which he put down to the possibility of having caught flu. He also mentioned that he had noticed feeling less fit than previously during activities. Clinical examination revealed a low grade pyrexia of 37.7°C but was otherwise well. Blood results showed an elevated ESR 40 and CRP 15, FBC, renal profile and LFTs were otherwise unremarkable. Physical examination revealed normal abdominal, chest and cardiovascular findings. There were two patches of eczema rash over his knees, which were painful. There were no features of synovitis elsewhere. Which of the following would be the most appropriate next investigation? **CXR**
- Chronic diarrhoea. This has worsened over the past six months so that she is opening her bowels up to eight times per day with watery motions. The stool is normal smelling and tea coloured without blood or mucus. Her GP has been encouraging her to use codeine and loperamide to manage her symptoms.

<table>
<thead>
<tr>
<th>Haemoglobin</th>
<th>110 g/L</th>
<th>(115-160)</th>
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<tbody>
<tr>
<td>White cell count</td>
<td>6.8 x109/L</td>
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<tr>
<td>Platelets</td>
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<tr>
<td>Sodium</td>
<td>141 mmol/L</td>
<td>(135-146)</td>
</tr>
<tr>
<td>Potassium</td>
<td>3.0 mmol/L</td>
<td>(3.5-5)</td>
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<tr>
<td>Bicarbonate</td>
<td>15 mmol/L</td>
<td>(22-30)</td>
</tr>
<tr>
<td>Creatinine</td>
<td>83 µmol/L</td>
<td>(79-118)</td>
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</tbody>
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Abdominal ultrasound Pancreatic mass

Which of the following is the most appropriate medical management of her diarrhoea? **Somatostatin analogue**
- A 24-year-old wearer of daily disposable contact lenses presented with a two day history of red eye with associated soreness. Examination revealed a small corneal ulcer on her right eye. What would be first line treatment? **Levofloxacin hourly**
- Which of the following features seen on barium studies is typical of both ulcerative colitis and Crohn’s disease? **Pseudopolyps**
- Primary iron overload? **Haemochromatosis**
- Hyperthyroidism: **Decreased libido**
- Corticosteroids: **Increased osteoblast apoptosis**
- A 37-year-old man with advanced lymphoma is admitted to a hospice for control of a variety of symptoms. He is known to have advanced mediastinal disease. After three days you are called to assess him as he has complained to the nurses of shortness of breath. On arrival in his room he looks unwell. He is struggling to...
- A 14-year-old old boy presents with a sore throat and macroscopic haematuria. What would light microscopy of a kidney biopsy most likely show? **Mesangial hypercellularity**

- Which of the following hormones acts through cyclic AMP as the second messenger? **PTH**

- Diabetes mellitus and suffers from recurrent chest infections is referred to the gastroenterology team with chronic diarrhoea. The letter from his GP states the patient has had persistently abnormal liver function tests over the last three months and an abdominal ultrasound scan showed a fatty liver and gallstones. Given the most likely diagnosis, what is the disease prevalence in northern Europe? **1:3000**

- What is the most compatible joint finding of patients suffering from Henoch-Schönlein purpura? **Transient non-deforming oligoarthritis**, mostly large joints of the legs

- In a randomised controlled trial of drug A for treatment of hypercholesterolaemia, 100 patients received drug A and 100 patients received placebo. In the treatment group, serum cholesterol decreased from a mean of 6.5 to 5.5 mmol/L. In the control group, cholesterol decreased from a mean of 6.8 to 6.1 mmol/L. The authors concluded that drug A was effective in reducing cholesterol as \( p = 0.01 \). Which of the following statements is true? **Drug A is effective in reducing cholesterol by an average of 0.3 mmol/L**

- In an international randomised controlled trial comparing regimen A (group A) and regimen B (group B) for the treatment of medullary thyroid cancer, 100 patients were allocated to group A and 100 patients were allocated to group B. It was found that the five year cumulative relapse in group A was 20% and the five year cumulative relapse of group B was 30%. Which of the following statements is correct? **Log-rank test can be used to test the difference in relapse rate between the two groups**

- In a randomised controlled trial comparing drug A (group A) and drug B (group B) for the treatment of diabetes mellitus, 100 patients were recruited to group A and 100 patients were recruited to group B. It was found that the HbA1c was 98 mmol/mol in group A and 87 mmol/mol in group B \( (p = 0.008\), 2-sided test\). Which of the following statements is correct? **The p value for a one-sided test is**

- In a randomised controlled trial comparing drug A and drug B for treatment of diarrhoea caused by this organism? **Mesangial hypercellularity**

- Which one of the following measures would be most effective in reducing transmission of E coli O157:H7 during an outbreak of diarrhoea caused by this organism? **Ensuring meat cooked thoroughly**

- A 14-year-old girl is referred to haematology after being investigated for heavy menstrual bleeding and recurrent nose bleeds. Her gynaecologist testing shows a normal PT, but mildly prolonged aPTT. Further tests ordered by the haematologist show decreased levels of factor VIII and von Willebrand factor. She is diagnosed with type 1 von Willebrand disease. Her mother has the same pathology and her two other sisters are unaffected. What is the method of inheritance of this common clotting disorder? **Autosomal dominant with variable penetrance**

- Cholera toxin: cAMP as second messenger

- Anthrax: **painless eschar**

- Chlamydia trachomatis: erythromycin

- Anaphylaxis: **0.5 ml of 1:1000 adrenaline IM**

- Aortic valve bioprosthesis: **calcification with stenosis** (mechanism for failure/replacement after 10 years)

- Which one of the following measures would be most effective in reducing transmission of E coli O157:H7 during an outbreak of diarrhoea caused by this organism? **Ensuring meat cooked thoroughly**

- A 16-year-old female presents with ankle swelling four days after having had a sore throat. On examination she had a blood pressure of 125/80 mmHg and ankle oedema. **Creatinine** 90 µmol/L \((60-110)\)

  **Albumin** 25 g/L \((37-49)\)

  24 hour urinary protein 9 g \(<0.2\)

  What is the most likely diagnosis? **IgA nephropathy**

- **Leukotrienes stimulate mucus secretion**

- A 30-year-old woman presents with jaundice and her investigations reveal:

  **Haemoglobin** 90 g/L \((115-165)\)

  **Reticulocyte count** 180 ×10^9/L \((25-85)\)

  **Serum bilirubin** 50 µmol/L \((1-22)\)

  Her blood film reveals the presence of spherocytes.
- typhoid fever. However, she has a 1-month-old infant and wishes to continue to breastfeed. Which of the following antibiotics is the most appropriate therapy for her? **Ceftriaxone**
- mechanism of action of warfarin? **Inhibition of vitamin K epoxide reductase**
- autoimmune thyroiditis. Which of the following is the most appropriate therapy for her? **Thyroid lymphoma**
- Mutation in which of the following is associated with Alport syndrome? **Collagen, type IV, alpha 5 gene**
- thrombophilia and her heparin resistance? **Antithrombin III deficiency**
- prolonged corrected QT interval on his ECG. Which of the following drugs is the most likely cause? **Sotalol**
- diazepam and dosulepin, and the ambulance crew say that she has taken an overdose of her medication. Her BP is 140/80 mmHg, pulse 130 bpm, respiratory rate 7 per minute and O2 sat 98% on air. Which of the following is the most appropriate next action? **Obtain an ECG**
- most compelling indication for taking HRT? **Control flushing**
- typical side effect of olanzapine? **Akathisia**
- BCG vaccination: **provides protection against leprosy**
- dabigatran (an oral thrombin inhibitor). His estimated creatinine clearance was 30 ml/min/1.73 m. How should we advise the patient before colonoscopy examination? **Stop dabigatran three to five days before colonoscopy.**
- precordial thump: **Is more successful with pulseless VT than VF**
- oncoplastic virus? **HPV 16**
- porphyric attack trigger: **sodium valproate**
- teratoma of the testis tumor marker: **AFP**
- Hba1c<9.1%. Start **bedtime intermediate acting insulin**
- Taxi driver with HF, Hba1c 8.4%. Start **gliclazide**
- successfully treated for PCP. She was re-admitted with acute breathlessness with left-sided chest pain ten days after her discharge from the hospital. Examination revealed that she was hypoxic and found to have diminished breath sounds on the left side of chest. What is the most likely cause of her recent admission? **Pneumothorax**
- hypercalcaemia of malignancy? On neurological examination hyporeflexia may be exhibited
- vagus nerve supplies the palatal muscles
- which echocardiographic feature is the most important risk factor for sudden cardiac death? **Significant thickening of the interventricular septum**
- Through blockade of which of the following receptors is the antiarrhythmic effect of amiodarone most attributed? **Potassium channels**
- oseltamivir? It is of value in **prophylaxis against influenza**
- Which of the following is responsible for the activation of aciclovir? **Thymidine kinase**
- exertional thigh cramps. He described his urine turning to burgundy colour especially after prolonged exertion. Urine: positive for myoglobin. Dx: Glycogen storage disease. Lx: **muscle biopsy**
- DM guy with heart failure: **Substitute pioglitazone with gliclazide 80 mg bd**
- Guy with IGT, risk of developing type 2 diabetes: **33% over 6 years (random: 64.5% if individuals had both IGT and impaired fasting glycaemia (IFG).**
- mechanism of action of DDAVP in von Willebrand’s disease? **Stimulates release of von Willebrand’s factor from endothelial cells**
- mortality associated with severe acute pancreatitis? **Approx. 20%**
- Vitamin D replacement reduces the incidence of fractures in the elderly
- Where does RNA splicing occur? **nucleus**
- loose stools. He was dehydrated, weak and in shock. He had previously been complaining of large stool volumes for a one month period. Stool colour was normal. There was no history of laxative abuse and no significant past medical history. What is the most likely diagnosis? **VIPoma**
- Ofloxacin: **tendon rupture**
- pooled plasma derivatives? **end product is a freeze dried product**
- blood film for malaria parasites is reported as negative. What is the next most appropriate investigation? **Blood culture**
- Pregnant woman with hypothyroidism: She will probably be able to remain on 100 mcg for the duration of the pregnancy