

## MRCPath Part 1 in Histopathology

### Multiple Choice Question (MCQ) samples

These sample questions will allow you to become familiar with the style of the questions that will be used in the MRCPath Histopathology Part 1 Examination. They also serve to illustrate the breadth of the topics that will be covered. Please note that this is not intended to be a “mock” examination and answers are therefore not provided.

#### QUESTION 1

A 48 year old man is involved in a road traffic accident and sustains multiple fractures. Forty-eight hours later he develops symptoms of pulmonary insufficiency, neurological symptoms, anaemia and thrombocytopenia. Despite treatment, he dies and an autopsy is performed.

Identify the most likely cause of death.

##### Option list

- A Air embolism
- B Disseminated intravascular coagulation
- C Fat embolism
- D Pulmonary thromboembolism
- E Systemic arterial thromboembolism

#### QUESTION 2

A 69 year old retired carpenter presents with recurrent nose bleeds. Rhinoscopy reveals an exophytic granular mass arising over the middle turbinate bone.

Identify the test most likely to confirm the probable diagnosis.

##### Option list

- A AE1/AE3
- B CD45
- C Neurone specific enolase
- D Periodic acid Schiff +/- diastase
- E Reticulin

#### QUESTION 3

At the multi-disciplinary team meeting (MDT), a glial tumour is being discussed. A surgeon asks to see the features associated with a good prognosis.

Identify which of the following features you should demonstrate.

### Option list

- A Cells with hair-like processes
- B Cystic change
- C Necrosis
- D Pseudopalisading
- E Vascular proliferation

### QUESTION 4

A 47 year old woman has a pelvic ultrasound scan that reveals the presence of a left ovarian cyst, 10cm in diameter. She has a moderately raised level of the tumour marker CA125. A CT scan confirms the presence of the ovarian cyst, but does not show any other lesion. A laparotomy is performed and a hysterectomy-salpingo-oophorectomy is carried out, together with omentectomy and peritoneal washings. Histopathological examination of the ovarian cyst shows what appears to be a borderline ovarian tumour of serous type. However, the omentum shows psammoma bodies and small papillary serous epithelial structures on the surface and embedded within the fat, the latter haphazardly arranged and surrounded by granulation tissue and an inflammatory infiltrate. Peritoneal washings contain papillary fragments of bland serous epithelium.

Identify the correct designation of this tumour.

### Option list

- A Borderline ovarian tumour of serous type with endosalpingiosis
- B Borderline ovarian tumour of serous type with non-invasive desmoplastic implants
- C Primary peritoneal adenocarcinoma of serous type with synchronous ovarian borderline tumour
- D Stage 1 serous cystadenocarcinoma of ovary with benign serous implants
- E Stage 3 serous cystadenocarcinoma of ovary with peritoneal spread

### QUESTION 5

You are asked to perform an autopsy on a 54 year old alcoholic man who was found dead in sheltered accommodation. Post mortem examination reveals a large quantity of blood in the upper gastrointestinal tract, together with hepatic cirrhosis. The gastric and duodenal mucosa is normal.

Identify the most likely source of the bleeding.

### Option list

- A Angiodysplasia
- B Crohn's disease
- C Jejunal diverticulum
- D Oesophageal varices
- E Trauma to the mouth

## QUESTION 6

A 32 year old man presents with a scrotal mass. Ultrasound is highly suggestive of tumour, and orchidectomy is performed. Histological examination demonstrates, predominantly, seminoma. However, in one section there is a different histological pattern, suggestive of embryonal carcinoma. This is thought to be indicative of a mixed germ cell tumour.

Select the immunohistochemical antigen that would confirm the presence of embryonal carcinoma.

### Option list

- A CD30
- B CEA
- C C-kit
- D hcg
- E PLAP

## QUESTION 7

You are asked to conduct an audit of confidentiality by your Clinical Director. During this, the trainee pathologists inform you of the following practices, all which concern them.

- 1 Reports are sent by fax to the patient reception area of the Breast Clinic.
- 2 Verbal reports are given to the Consultant by telephone.
- 3 Results of cervical biopsies are sent by post to a neighbouring Trust's Department of Cytopathology because they reported the cervical smear.
- 4 Malignant diagnoses are submitted to the Regional Cancer Registry.
- 5 Patient histories are discussed at multi-disciplinary team meetings.

Identify which one of these practices breaches Caldicott guidelines.

### Option list

- A Cancer Registry staff, who are not responsible for the patient's care, will receive the information.
- B Patient details will be discussed with staff not directly responsible for the patient's file.
- C Reception staff not involved in the patient's care will see the reports.
- D Reports may be lost by the postal service.
- E Verbal reports may be transcribed incorrectly.

## QUESTION 8

A 27 year old man presents with a hard lump in his thyroid gland. He is just under two metres tall, and has disproportionately long limbs, as well as small lumps in his mouth and skin. A fine needle aspirate (FNA) of the thyroid gland is performed, and this is reported as “Thy 5”, with a comment that this is likely to be a medullary carcinoma of the thyroid. On further questioning, the patient reveals that his father had an operation to remove an adrenal gland a year previously. He is referred to a clinical geneticist for counselling.

Identify the genetic condition this man is most likely to be suffering from.

### Option list

- A Gardner’s syndrome
- B Marfan’s syndrome
- C Multiple endocrine neoplasia syndrome
- D Tuberosc sclerosis
- E Von Recklinghausen’s disease

## QUESTION 9

Peer review will involve questionnaires sent to colleagues and clinicians with whom you have regular contacts.

Identify the term used for this managerial process.

### Option list

- A -180° review
- B 90° review
- C 180° review
- D 270° review
- E 360° review

## QUESTION 10

A 70 year old man dies suddenly at home, and undergoes a Coroner’s post mortem. At autopsy a deep, central intra-cerebral haemorrhage is identified, involving the right internal capsule and basal ganglia. Blood extends into the ventricular system.

Identify which of the following findings would be most relevant in establishing the pathogenesis of the haemorrhage.

### Option list

- A Atrial septal defect
- B Calcification of mitral valve ring
- C Intra-atrial thrombus
- D Left ventricular hypertrophy
- E Severe carotid artery atheroma