

The Royal College of Radiologists

#### THE FACULTY OF CLINICAL ONCOLOGY

### TO: TRAINING PROGRAMME DIRECTORS REGIONAL POST-GRADUATE EDUCATION ADVISERS

### **COLLEGE TUTORS**

### **EXAMINATION CANDIDATES**

### FIRST EXAMINATION FOR THE FELLOWSHIP IN CLINICAL ONCOLOGY AUTUMN 2016

The Examining Board has prepared the following report on the AUTUMN 2016 sitting of the First Examination for the Fellowship in Clinical Oncology. It is the intention of the Specialty Training Board that the information contained in this report should benefit candidates at future sittings of the examinations and help those who train them. This information should be made available as widely as possible.

#### **Dr Seamus McAleer**

Medical Director, Education and Training

## FIRST EXAMINATION FOR THE FELLOWSHIP IN CLINICAL ONCOLOGY EXAMINERS' REPORT – AUTUMN 2016

The pass rates achieved at the AUTUMN 2016 sitting of the First Examination for the Fellowship in Clinical Oncology are summarised below.

	All Candidates		UK-trained Candidates		UK First Attempt Candidates	
Overall*	62/116	53.4%	35/56	62.5%	20/33	60.6%
Cancer Biology & Radiobiology	71/97	73.2%	32/44	72.7%	24/33	72.7%
Clinical Pharmacology	88/115	76.5%	36/43	83.7%	33/36	91.7%
Medical Statistics	58/101	57.4%	31/43	72.1%	27/33	81.8%
Physics	63/106	59.4%	39/53	73.6%	28/38	73.7%

This examiners' report does not provide an in depth breakdown of performance on individual questions but is intended to guide trainers and candidates by highlighting particular areas of concern. Candidates are reminded that it is recommended that all modules are attempted at the first sitting, to maximise chances of success over the total of four permitted attempts.

## **Cancer Biology**

The candidates performed extremely well at this sitting and displayed good discrimination, indicating success for those who had a good knowledge of the whole syllabus. However, failings were noted in certain areas. Candidates are advised to focus more on mechanisms of cell death, mechanisms of HER2 activation and causation of human tumours, including syndromes listed in the syllabus.

## Radiobiology

Overall the candidates performed well, demonstrating a good understanding of radiobiology. Improvements are required in the following areas:

- Greater understanding of the differences between stochastic and tissue reactions (deterministic effects)
- DNA lesions and associated repair times
- The role of the clonogenic survival assay and the application of the linear-quadratic model
- Retreatment with radiation
- Understanding of cellular systems (hierarchical, flexible)

Candidates are reminded to read the question carefully and choose the 'single best answer'

# **Clinical Pharmacology**

The examiners noted that overall the candidates have performed well. The candidates scored highly on mechanism of action of individual drugs. However they performed less well on questions involving:

- Interpretation of clinical data
- Pharmacokinetics of common anti-neoplastic drugs
- Application of drug metabolism to clinical scenarios
- National drug and policy guidelines.

# **Medical Statistics**

The overall pass rate was consistent with previous sittings. Questions on many topics were answered well. Candidates are encouraged to focus on the following topics:

- Survival analysis; in particular differentiating between different methods
- Study design including an understanding of the phases of clinical trials and their governance
- Interpretation of 2x2 tables for screening tests

Candidates should be able to apply their theoretical statistical knowledge to practical clinical problems.

# Physics

Examiners were pleased with overall candidate performance in this module. However, basic principles of radiotherapy planning with photons are not well understood, in particular:

- The use of wedges
- Clinical use of electrons
- Simple monitor unit calculations including PDDs

Additionally, the following questions were not well answered:

- VMAT implementation
- Linac beam generation
- IRMER roles and legislation