

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
SPRING 2019**

The Examining Board has prepared the following report on the SPRING 2019 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 Frances Yuille
Medical Director, Education and Training

**FIRST EXAMINATION FOR THE FELLOWSHIP IN CLINICAL ONCOLOGY
EXAMINERS' REPORT – SPRING 2019**

The pass rates achieved at the SPRING 2019 sitting of the First Examination for the Fellowship in Clinical Oncology are summarised below.

	All Candidates		UK-trained Candidates		UK First Attempt Candidates	
Overall*	66/122	55%	35/57	61%	6/17	35%
Cancer Biology & Radiobiology	53/93	60%	21/36	58%	9/18	50%
Clinical Pharmacology	80/106	75%	26/39	67%	12/20	60%
Medical Statistics	60/95	63%	28/42	67%	15/24	63%
Physics	71/112	63%	36/51	71%	14/22	64%

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 pass rate reflects the fact that candidates have a good overall knowledge of cancer biology; with DNA repair, oncogenes and tumour suppressor genes being done well.

Examiners would like to draw attention to the cell cycle and immune surveillance/autoimmunity. Given the increasing use of immune agents and the importance of the immune tumour microenvironment, candidates are reminded that these emerging areas should be a point of focus.

Radiobiology

Improvements in knowledge and understanding are required in the following areas:

- The parameters describing cell survival curves and how they vary for specific cell types.
- Mechanisms underpinning the oxygen effect.
- The effect of tumour proliferation on biologically effective dose.
- Definitions and characteristics of stochastic and deterministic effects.
- Normal tissue effects including dose tolerances and implications for retreatment.
- Awareness of typical TCP and NTCP curves for a range of treatments.

Clinical Pharmacology

Overall, questions were answered well. Candidates had a good knowledge of mechanism of action of anticancer drugs.

Areas for improvement were pharmacokinetics, drug formulation, and supportive medications.

Medical Statistics

Candidates did very well answering direct questions on statistical terminology and definitions. Other questions that were answered well included those relating to the interpretation of data provided in tabular or graphical form. Areas that were less well understood included the determinants of statistical power other than sample size, the application of interim analysis and causes of bias and its implications. We suggest that attention should be given to greater understanding of the application of statistical methods in clinical scenarios, as this will be given greater emphasis in future sittings.

Physics

Candidates demonstrated good knowledge of basic physical principles as well as operational principles of linacs and dosimetry. An improvement in the answering of questions relating to DVH interpretation and principles of 3D treatment planning was noted.

However, candidates struggled with questions relating to IMRT; we advise candidates to review ICRU 83 for further guidance. Knowledge of in vivo dosimetry could also be improved. Candidates would benefit from increased practice in simple calculations using monitor units and percentage depth dose data. Knowledge of current legislation should also be improved, specifically IRMER17.