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 2020

The Examining Board has prepared the following report on the AUTUMN 2020 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.

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Medical Director, Education and Training

FIRST EXAMINATION FOR THE FELLOWSHIP IN CLINICAL ONCOLOGY EXAMINERS' REPORT – AUTUMN 2020

The pass rates achieved at the AUTUMN 2020 sitting of the First Examination for the Fellowship in Clinical Oncology are summarised below.

	All Candidates		UK-trained Candidates		UK First Attempt Candidates	
Overall*	37/81	46%	20/53	38%	10/33	30%
Cancer Biology & Radiobiology	56/73	77%	42/54	78%	39/45	87%
Clinical Pharmacology	36/73	49%	24/54	44%	23/48	48%
Medical Statistics	70/91	77%	41/58	71%	34/47	72%
Physics	62/84	74%	35/50	70%	29/36	81%

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 and Radiobiology

Candidates performed well in most areas, and results were consistent with previous sittings. Improvements in knowledge and understanding are required in the following areas:

Cancer Biology

- Mechanisms of cell death.
- Consequence of mutations in oncogenes and tumour suppressors including translocations and signalling pathways.
- The influence of environmental and non-environmental factors in secondary cancer risk.
- Mechanisms of radiation immune response and immune checkpoint inhibitors

Radiation Biology

- The influence of dose-rate and cell cycle effects on radiosensitivity.
- Radiation tolerances of tissues.
- Principles of cell survival and parameters describing cell survival curves.

The examiners would also like to remind trainees to read the questions and answers carefully, and provide their single best answer.

Clinical Pharmacology

Candidates are reminded to be familiar with the pharmacology of supportive therapies and analgesics. Candidates will also be required to apply their pharmacological knowledge in response to common scenarios encountered in cancer therapeutics.

Medical Statistics

Overall, trainees performed very well in this exam.

In particular, candidates had a solid understanding of variable types and reasons for why variables may have to be transformed, as well as the recognition and interpretation of common plot types such as Kaplan-Meier and forest plots. Candidates applied basic calculations with confidence, such as the derivation of positive and negative predictive values and number need to treat. Concrete examples of confidence intervals were interpreted well.

Trainees could improve their performance by identifying further implications of their knowledge, e.g. the impact of altering study designs on diagnostic accuracy outcomes and the results of meta-analyses. Understanding of the difference between sample and population statistics as well as the necessary assumptions for different statistical tests, could be improved.

Please note that future exam questions will be aligned to a greater extent with clinical practice, by putting more emphasis on the interpretation of statistical content in research papers.

Physics

The examiners acknowledge the difficult circumstances that have been imposed on candidates and course teachers this year. It is encouraging that candidates continued to perform well despite these disruptions. The examiners noted that questions relating to clinical treatment calculations were answered well.

In general, candidates struggled with questions relating to more technical aspects of radiotherapy equipment. In particular, questions in the areas of radiation protection, QA and dosimetry appeared to prove difficult. Candidates are encouraged to consult their reading lists for more information, while course leaders are encouraged to ensure that these areas are sufficiently covered in course programmes. Practical sessions where these topics can be covered while referring directly to a treatment machine are highly beneficial but will depend on local resources.

Meanwhile, examiners encourage candidates to ensure they have a basic knowledge of alternative radiotherapy technologies (e.g. CyberKnife, Tomotherapy, etc). Course leaders can help by ensuring explanations of these technologies are explained as part of the course materials.