



## JOHANNESBURG OFFICE EXAMINATIONS & CREDENTIALS

### APPENDIX B\*

#### Syllabus for Part II of the FC Rad Onc(SA) examination:

##### 1.0 General Oncology and tumour pathology ( Please also see blue-print)

- The candidate should be familiar with all aspects of oncological disease: Symptoms, signs, differential diagnoses, work up and staging of patients with tumours seen in oncological practice should be known.
- The candidate should be able to adequately interpret X-rays, scans, pathology and other laboratory results.
- The candidate should know and be able to plan and describe general oncological treatment options for all cancer patients including those routinely treated by other specialities eg Medicine, Surgery and Gynaecology. Principles as well as complications of curative and palliative cancer surgery should be known.
- The expected benefits, complications and limitations of all treatment options should be known.
- Knowledge of diseases that are non-malignant but are commonly treated in the practice of radiotherapy and/or chemotherapy is required. (eg Pituitary adenoma, acoustic neuroma, arterio-venous malformation, keloid, heterotopic ossification, thyroid eye disease, etc)
- Candidate should have knowledge of cancer prevention techniques, screening, early detection and education of the public.
- The candidate should be able to discuss supportive care/symptomatic treatment in oncology and terminal care.
- Knowledge of quality of life assessment is required.

In addition the following specific areas will be examined:

##### 1.1 Applied Physics.

- Patient set-up, positioning, imaging, contouring, treatment techniques, quality assurance, external beam planning and plan evaluation, special radiotherapy techniques( IMRT, VMAT, stereotaxis, protons, brachytherapy)

##### 1.2 Applied Radiobiology

- Radiotherapy schedule modification, radiation and drug interactions, late effects of cancer treatment, Radiation in special circumstances(e.g. pregnancy, re-treatment), biological plan optimization.

##### 1.3 Applied molecular medicine and pharmacology

- Molecular markers of cancer, molecular biology and cancer treatment, principles of chemotherapy, side effects of chemotherapy and biological therapy, including immunotherapy

##### 1.4 Applied tumour pathology

- Tumour pathology(all sites)
- Report interpretation

##### 1.5 Applied physiology

- Nausea and vomiting
- Tumour lysis syndrome
- Bone metastases
- Neutropenia and neutropenic sepsis
- Endocrine – thyroid, pituitary, adrenal, calcium metabolism

**1.6 Palliative care**

- Pain and fatigue
- Bowel and urinary obstruction
- Communication
- Delirium
- Dyspnoea
- Supportive care and end of life care

**1.7 Psycho-social aspects of cancer management**

- Depression and anxiety in cancer patients
- Burn-out in oncologists and health care workers
- Self-care

**1.8 Medical Ethics**

- Clinical ethics
- Research ethics

**1.9 Evidence based medicine**

- Levels of evidence
- Statistics in practice e.g. p-value, null hypothesis, survival analysis, hazard ratio's etc.)

**2.0 Radiation and Medical Oncology (Paper 2 and Paper 3- see also blue-print)**

These 2 papers are system-based and will contain case-based questions.

**2.1 Radiotherapy:**

An in depth system-based knowledge of the use and applications of radiotherapy and chemotherapy as well as biological and hormonal therapy applicable to tumours is essential. The candidate must be able to contrast this with other forms of treatment available and justify its use.

The candidate should be able to:

- 2.1.1 Justify the intent of radiation treatment and explain the rationale of sequencing in relation to other treatment modalities for any specific cancer.
- 2.1.2 Describe the treatment planning process wrt:
  - Positioning and immobilisation
  - Simulation/scanning
  - Delineation of tumour/treatment volumes and critical structures
- 2.1.3 Describe and justify the radiotherapy technique for a given tumour
- 2.1.4 Prescribe a course of treatment and describe:
  - Dose, fractionation schedules, and treatment length.
  - Normal tissue tolerances and limitations
- 2.1.5 Discuss plan assessment/appraisal
- 2.1.6 Discuss treatment supervision including:
  - Verification
  - Diagnosis, grading and treatment of acute toxicities of treatment and assessment of the impact of treatment on quality of life.
- 2.1.7 Discuss clinical applications, rationale and techniques of:
  - brachytherapy
  - Radio-isotope therapy
  - Other specialised radiation techniques e.g. VMAT, IMRT, IGRT, protons

**2.2 Systemic therapy ( Chemotherapy, hormonal therapy, biological therapy)**

The candidate should have an in depth knowledge of the principles and indications for systemic therapies used in the curative and palliative setting and be able to describe:-

- 2.2.1 Classification and mechanism of action of cytotoxics.
- 2.2.2 Side effects and toxicities, as well as management of these
- 2.2.3 Commonly used therapeutic regimens and schedules
- 2.2.4 Rationale of sequencing in relation to other treatment modalities
- 2.2.5 Interactions with radiotherapy
- 2.2.6 Biological therapies
- 2.2.7 Indications for radiosensitisers
- 2.2.8 Knowledge of recent literature pertaining to oncologic diseases is expected

## APPENDIX C

Additional Curricula requirements prior to the Part II examination

### 1.0 Statistics and Statistical Critique of a Published Article. ( See guideline in Portfolio)

After completion of the Part I examination, the candidate will provide a written statistical critique of a published article which will be marked and approved by the candidate's Head of Department.

#### 1.1 Aim:

The trainee is to become acquainted with Statistics as applied to Oncology at a similar time as undertaking the commentary.

### 2.0 Learning Portfolio (See Documents for template)

The Learning Portfolio documents the trainee's experience.

It includes a log book and templates for the completion of case reports in Radiation Oncology, Medical Oncology and palliative care.

The case reports should cover a broad range of disease sites and cover all major groupings of sites under the blue print for the Part II examinations - that is breast, gynaecology, head and neck, upper gastro-intestinal tract, lower upper gastro-intestinal tract, urology, respiratory, lymphomas, central nervous system as well as a miscellaneous group to include paediatrics and sarcomas.

In addition, trainees will be encouraged to use the Learning Portfolio to learn applied basic sciences and the associated roles of an Oncologist in Health Care Practice ie Collaborator, Communicator, Health Advocate, Manager, an ethically based Professional and Scholar.

The Learning Portfolio is to be signed off by the Head of Department prior to the trainee sitting the Part II examinations and needs to be presented to the examiners at the time of the Part II oral examination

**JOHANNESBURG**

\*Currently in the process of being updated