Medical Radiation Sciences
Radiation Therapy Clinical Practice 2

Information for Clinical Mentors

September 2nd – October 11th, 2024

6 weeks clinical placement

These students are commencing Clinical Practice 2 course (block B) in the third year of their Radiation Therapy degree.

Since CP2 block A (3 weeks placement) in April, students have completed three courses: **CT-PET, RT studies 4** and **Specialised Medical Radiation.** These academic theory courses incorporated the following concepts and skills:

- **CT & PET:** image evaluation, procedural protocols, principles of co-registration, image quality, artefacts, post processing and QA. CT/sim protocols, basic procedures and QA, image manipulation for planning prep, image fusion and contrast.
- **RT studies 4:** Head and neck malignancies and IMRT techniques, blood borne disease sites, lymphomas, and paediatric malignancies. Practical sessions including electron data and set up, H&N simulation and treatment image matching (thorax and H&N) and CBCT pelvis, Quality assurance and incident reporting, TBI & CSI techniques. Planning included: ICRU 62&71, electron breast boosts, step and shoot, IMRT, H&N, bolus, TCP/NTCP evaluation and an introduction to VMAT and particle therapy.
- **Specialised Medical Radiation:** MRI Image evaluation, procedural protocols principles of co-registration, image quality, artifacts post processing and QA. Ultrasound, MRI in RT planning and brachytherapy. Emerging technology was explored including MR-Linacs, Adaptive RT and Artificial intelligence in RT.

Prior to the Clinical Practice 2 placement the students have engaged in a **4-day pre-clinical workshop** at the university whereby problem solving, and additional planning skills were developed and enhanced. This week incorporated concepts and skills including:

- Pinnacle planning skills: Virtual simulation spine.
- Pinnacle planning skills: IMRT prostate
- Pinnacle planning skills: Multi-field lung
- Manual calculations
- Completion of a SXR treatment competency assessment
- VERT – Electron setup practice and CBCT matching
- SABR and vacbag ancillary equipment set up.
- Infection control revision

Expectations of students for CP2 (total 6 weeks):

- The main objective of the placement is to continue to participate in radiation therapy procedures. .
- During the 6-week placement, there are **4 treatment and 2 planning** practical assessments, and a number of participation records that need to be additionally recorded for simulation, imaging, patient care and communication, and treatment ancillary manufacture procedures.
- In the student's clinical workbook there is a section to be filled in by the student reflecting on their 6 weeks of experience. The clinical report is to be completed by the **Clinical Supervisor in the clinical department** in collaboration with the mentors involved with that student during their placements.
- There **is** the expectation that students will exhibit **safe practice** and **professional behaviour.**