**Accelerator Design, Radiobiology & Quality Assurance,**
**Brachytherapy & Radiotherapy Verification Imaging**

**Chelsea**

**Day 1: Tuesday 8th March 2022**

| | | |
|---|---|---|
| 08.35 - 08.50 | Registration & Coffee | |
| 08.55 - 09:00 | Welcome & Introduction | |
| 09.05 - 09.55 | Medical electron Linear Accelerators | TBA |
| 10.00 – 11.00 | Quality Control of Linacs | TBA |
| 11.05 | Discussion | |
| 11.20 | Refreshments | |
| 11.40 – 12.40 | Radiotherapy Fractionation | TBA |
| 12.40 – 13.00 | Managing Gaps | TBA |
| 13.05 | Lunch | |
| 13.55 – 14.40 | Production of a Clinical Beam | TBA |
| 14.45 – 15.30 | Multileaf Collimators: Characteristics & Commissioning | TBA |
| 15.30 – 16.00 | Extremes I: kV X-ray Units | TBA |
| 16.05 | Refreshments | |
| 16.20 – 17.20 | Accuracy and Quality in Radiotherapy: An overview | TBA |
| 17.25 – 18.25 | Extremes III(a): Tomotherapy | TBA |
| 18.45 | Course Meal | |

**Day 2: Wednesday 9th March 2022**

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|---|---|---|
| 09.00 – 10.00 | Practical use of Radiobiology in Treatment Planning | TBA |
| 10.05 – 10.35 | Introduction to Cell Radiobiology | TBA |
| 10.40 | Refreshments | |
| 11.00 – 12.00 | Tumour Cell Radiobiology | TBA |
| 12.05 – 12.55 | Radiobiology of Normal Tissues | TBA |
| 13.00 | Lunch | |
| 13.50 – 14.50 | Modelling the probability of Tumour Control (TCP) | TBA |
| 14.55 – 15.55 | Modelling Normal Tissue Complication Probability | TBA |
| 16.00 | Refreshments | |

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| 16.20 – 16.50 | Quality Assurance In Clinical Trials | TBA |
| 16.55 – 17.25 | Extremes II: Cyberknife | TBA |

## Day 3: Thursday 10th March 2022

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|---|---|---|
| 09.00 – 09.45 | Clinical Indication for Brachytherapy | TBA |
| 09.50 – 10.20 | Intracavitary Dosimetry | TBA |
| 10.25 – 11.05 | Transperineal Prostate Brachytherapy | TBA |
| 11.10 | Refreshments | |
| 11.30 – 12.20 | The Radiobiology of Brachytherapy | TBA |
| 12.25 – 13.20 | Gynaecology Cancers | TBA |
| 13.25 | Lunch | |
| 14.20 – 15.15 | 3D Image based Brachytherapy Planning | TBA |
| 15.20 – 15.50 | Calibration and QA of Brachytherapy Sources | TBA |
| 15.55 | Refreshments | |
| 16.15 – 17.00 | Radiation Protection Issues in Brachytherapy | TBA |
| 17.05 – 17.30 | Course Quiz | TBA |

## Day 4: Friday 11th March 2022

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|---|---|---|
| 08.30 – 09.15 | IT Essentials for Radiotherapy | TBA |
| 09.20 – 10.15 | Image Handling in Radiotherapy | TBA |
| 10.20 | Refreshments | |
| 10.45 – 11.45 | Errors & Margins in Image Guided Radiation Therapy & SBRT | TBA |
| 11.50 – 12.35 | IGRT Techniques | TBA |
| 12.40 | Lunch | |
| 14.00 – 14.45 | Radiation Protection in External Beam Radiotherapy | TBA |
| 14.50 – 15.50 | Image Guidance in Radiotherapy: Accuracy, Frequency & Dose & MPE Trials | TBA |
| 15.55 | Refreshments | |
| 16.10 – 16.55 | MR Linacs | TBA |
| 17.00 – 17.30 | Research & Development Opportunities in RT | TBA |
| 17.35 | Cheese & Wine Evening | |

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**Day 5: Saturday 12th March 2022**
**Workshop Sessions**

# Practical Workshop Sessions
# Assembly Point: Radiotherapy Basement at 9.00 am

| | 09.15 | 10.05 | 10.50 | 11.15 | 12.05 |
|---|---|---|---|---|---|
| Basic QA | **1** | **2** | | **3** | **4** |
| Franklin<br>Brachytherapy Treatment Planning – CT and MRI image based | **2** | **3** | | **4** | **1** |
| Master Plan<br>Iodine seeds & ultrasound for Prostate and examples | **3** | **4** | | **1** | **2** |
| Beige Planning<br>HDR, QA & Source Calibration | **4** | **1** | | **2** | **3** |
| HDR Treatment Suite | | | | | |

**Evaluation forms will be collected at the end of the course**
**Thank you**

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