

## Job Description

Job title:	Specialist Radiographer in Radiotherapy Physics (Dosimetrist)
Division:	Cancer Services
Board/corporate function:	Surgery and Cancer
Salary band:	Band 7
Responsible to:	Lead Dosimetrist
Accountable to:	Head of Radiotherapy Physics
Hours per week:	37.5
Location:	Radiotherapy Physics, 1st floor East, 250 Euston Road

## University College London Hospitals NHS Foundation Trust

University College London Hospitals NHS Foundation Trust (UCLH) is one of the most complex NHS trusts in the UK, serving a large and diverse population. In July 2004, we were one of the first NHS trusts to achieve Foundation Trust status.

We provide academically-led acute and specialist services, to people from the local area, from throughout the United Kingdom and overseas.

Our vision is to deliver top-quality patient care, excellent education and world-class research. We provide first-class acute and specialist services across eight sites:

- University College Hospital (incorporating the Elizabeth Garrett Anderson Wing)
- National Hospital for Neurology and Neurosurgery
- Eastman Dental Hospital
- Royal National Throat, Nose and Ear Hospital
- Royal London Hospital for Integrated Medicine
- University College Hospital Macmillan Cancer Centre
- The Hospital for Tropical Diseases

We are dedicated to the diagnosis and treatment of many complex illnesses. UCLH specialises in women's health and the treatment of cancer, cardiac, infection, neurological, gastrointestinal and oral disease. It has world class support services including critical care, imaging, nuclear medicine and pathology.

The Surgery and Cancer Board comprises of Surgery, Cancer services and Imaging, led by the Medical Director.

The Radiotherapy Physics Department consists of Physicists, Planning Radiographers, Physics practitioners (clinical technologists) and Radiotherapy Engineers. At any given time, there may also be several additional staff undertaking training in the Department, including STP and PTP Physics trainees, Radiographers rotating through Treatment Planning, Student Radiographers, Oncology Registrars and Medical Physics MSc students.

The Department is part of a multi-disciplinary team in the Department of Clinical Oncology, which sees about 2000 new patients and administers over 3000 new courses of radiotherapy treatment per year. There are 27 NHS clinical oncologists covering all Cancer Specialties. The Department of Clinical Oncology has a varied patient base suitable for the development of complex radiotherapy including total body irradiation, paediatric practice, head and neck, and sarcoma treatments. There are also close relationships with the academic department in nuclear medicine and the academic department of oncology, which has a major research interest in targeted radioisotope therapy.

The Radiotherapy Department is located on the UCH site and the estate includes six accelerator bunkers and ten protected ward rooms. The Radiotherapy Department is equipped with four Varian TrueBEAM linear accelerators. One of the four machines is a stereotactic linac and two are equipped with 6DoF couches; one modern orthovoltage unit and a busy Nucletron High Dose Rate Microselectron unit. Planning equipment includes a Siemens CT simulator with full 3D imaging capabilities, including Respiratory Gating. The department also has access to PET/CT and PET/MR units for radiotherapy planning.

The Trust has been identified as one of the first two NHS centres to offer proton beam therapy (PBT) through an integrated service with the existing radiotherapy and radiotherapy physics departments

The proton service houses four Varian ProBeam 360degree gantries; a Philips Dual-Energy CT and Philips dedicated Planning MR scanner.

Radiotherapy Physics Services supplies Treatment Planning services to Radiotherapy. Treatment planning is performed using Eclipse planning system and brachytherapy planning on Oncentra. The Department offers a variety of specialised treatment services and is continually developing advanced treatment techniques. Treatments offered include: Dynamic IMRT and VMAT, SABR(lung and oligometastatic disease), SRS, IGRT, CT-based TBI; Ultrasound-guided and CT-planned HDR brachytherapy and high precision conformal radiotherapy, utilising MR/PET/CT fusion. PBT planning is also performed using Eclipse.

The Department has an integrated ARIA Radiotherapy Network to transfer treatment parameters and images between the various pieces of equipment, as well as to streamline the patient flow. This network enables easy and fast Recording and Verification of complex treatments. The Radiotherapy Department as a whole has a policy of Quality Assurance for Radiotherapy and is accredited to ISO 9000-2000.

The Radiotherapy Physics group has a close collaborative relationship with UCL Medical Physics and Bioengineering group with several PhD projects in related areas of proton radiotherapy, Image-guided Radiotherapy and Adaptive radiotherapy.

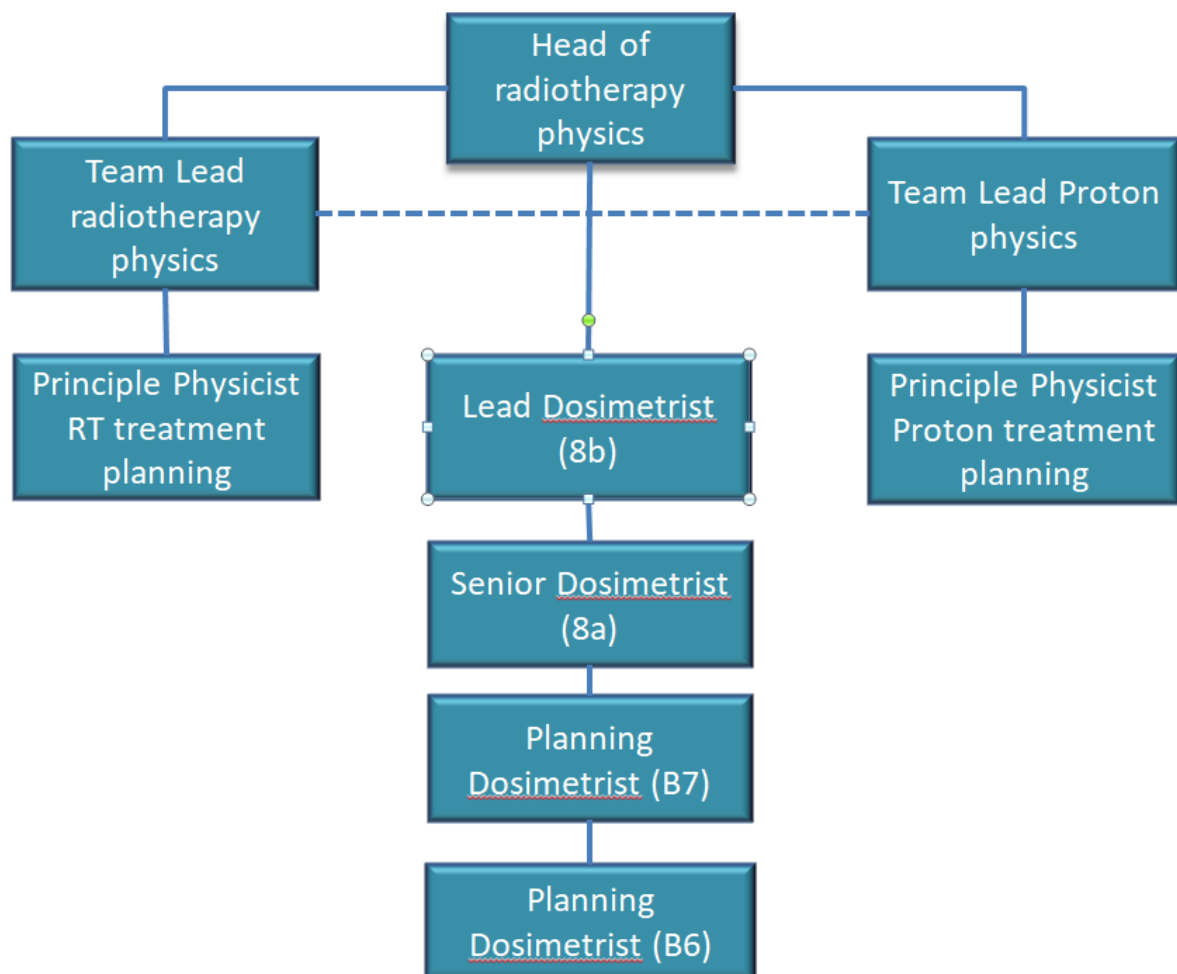
### **Job Purpose**

- To participate fully in the provision of external beam treatment planning service provided by the Radiotherapy Physics Group.
- To liaise closely with the Senior and Lead Planning Dosimetrist in the provision of the Radiotherapy service.
- To participate in the implementation and audit of Quality Assurance programmes related to Treatment Planning.
- The post holder carries out a highly specialised operator role in Treatment Planning with the production of highly complex treatment plans.

- To provide advice and guidance, where necessary, to the Radiotherapy Department in matters relating to treatment plans and techniques.
- To participate in research, development and implementation of new techniques.
- To participate in audit and process improvement.

### Key Working Relationships

The post holder will report to the Lead Dosimetrist and will come under the line management of the Head of Radiotherapy Physics. Please condensed organisational chart below for the dosimetry team.



The post holder will be expected to liaise closely with members of the Radiotherapy department and clinical oncologists and specialist registrars.

### Key Results Areas

- The Treatment Planning services to Radiotherapy will be provided in a timely and efficient manner. These include the production and checking of both routine and highly complex radiotherapy treatment plans and entry of complex data onto departmental computer systems.
- The work of the Treatment Planning section will be closely co-ordinated with the Pre-treatment and Treatment Superintendents to ensure that workload flows smoothly through the Department, thus delivering a prompt and high quality service to patients.

- The training needs of all grades of staff starting or rotating through the Treatment Planning Section will be fulfilled to the satisfaction of the Head of Radiotherapy Physics.
- New treatment techniques will be implemented within a multi-disciplinary approach.

### **Main Duties and Responsibilities**

#### **1. CLINICAL SCIENTIFIC**

- Produce routine and complex radiotherapy treatment plans and carry out associated dosimetry calculations in accordance with clinical prescription and agreed procedures.
- Ensure that all the necessary patient data, including complex information, images and other investigations are available for the production of treatment plans.
- Using all relevant data, analyse requirements and make judgements regarding treatment parameters and patient / dose effects to produce the required dose distribution over the treatment volume using computerised planning systems and other devices as appropriate.
- Provide clinical staff with advice on treatment plan options and effect on dose distribution to create optimum treatment plan. Discuss and implement any actions that result, documenting appropriately.
- Perform and analyse routine Quality Assurance procedures for treatment planning systems.
- Provide pre-treatment and treatment radiography staff with advice on planning aspects of treatment.
- Review and analyse all forms of offline imaging and advice clinical staff on the potential impact to dosimetry on patients that are changing during treatment.
- Advise and participate in developments in imaging for verification.
- Understand the operation of the treatment machines and appreciate their potential and limitations with regard to treatment techniques. Use this knowledge in the production of treatment plans.
- Participate in multi-disciplinary working parties and development groups to negotiate, agree and implement changes in Radiotherapy practice.
- The post holder will be expected to communicate and document highly complex information to various other staff groups and participate in multi-disciplinary staff meetings.
- The post holder will be able to maintain appropriate radiographic skills by arranging time to be spent on treatment units.
- Act as an operator under the definitions of the IR(ME)R regulations in accordance with Trust Policies and Practices.

#### **2. MANAGERIAL**

- Perform and analyse routine Quality Assurance procedures for treatment planning systems.
- Prioritise and manage own caseload. Working to deadlines and manipulate own case load to accommodate emergencies and patients requiring further unscheduled planning procedures.
- Review upcoming patients on site specific teams, to insure appropriate pathway and tasks have been booked. Liaise with Senior/ Lead dosimetrists with concerns and non-standard requests.

#### **3. Teaching, Training and Research**

- To participate in the department's training and competency programme.
- Participate in clinical audit and trials.
- Conduct research into new techniques.
- Test and adapt techniques to meet specific medical requirements.
- Mentoring for dosimetrists, and other trainees as needed.
- Assisting in training needs of City University radiographic students.

#### 4. Professional

- Participate in Continuing Professional Development.
- To maintain State registration
- Attend seminars, conferences and courses as part of CPD and as part of service development.
- Ensure all work complies with current UK legislation for work with ionising radiation (IRR99, IRMER 2000).

#### 5. Miscellaneous

- Ensure compliance with accredited Quality Systems in the areas of work in which the postholder carries responsibility. Participate in, and actively contribute to the operation and development of Quality Systems.
- Carry out all duties in accordance with the requirements of the Health & Safety at Work Act, relevant Statutory Regulations, Approved Codes of Conduct and Local Rules.
- Take personal responsibility for promoting a safe environment and safe patient care by identifying areas of risk and following the Incident, Serious Incidents and Near Misses reporting policy and procedures.
- Duties are performed during normal working hours. In practice, the postholder may sometimes be required to perform duties outside the normal working hours of the Department.
- Perform other appropriate duties which may be required from time to time by the Head of Radiotherapy Physics.

#### 6. General

To adhere to the UCLH Service Commitment "Putting Patients First" and adopt a professional approach to customer care at all times.

To comply with the Trust's Equal Opportunities Policy and treat staff, patients, colleagues and potential employees with dignity and respect at all times.

To take personal responsibility for promoting a safe environment and safe patient care by identifying areas of risk and following the Incident, Serious Incidents and Near Misses reporting policy and procedure.

To take personal responsibility for ensuring that UCLH resources are used efficiently and with minimum wastage and to comply with the Trust's Standing Financial Instructions (SFIs).

To comply with Trust policies for personal and patient safety and for prevention of healthcare-associated infection (HCAI); this includes a requirement for rigorous and consistent compliance with Trust policies for hand hygiene, use of personal protective equipment and safe disposal of sharps.

In accordance with the Trust's responsibilities under the Civil Contingencies Act 2004, undertake work and alternative duties as reasonably directed at variable locations in the event of and for the duration of a significant internal incident, major incident or pandemic.

To be aware of and adhere to all Trust policies and procedures, the Health and Safety at Work Act and the Data Protection Act.

To maintain confidentiality at all times.

## Other

The job description is not intended to be exhaustive and it is likely that duties may be altered from time to time in the light of changing circumstances and after consultation with the post holder.

You will be expected to actively participate in annual appraisals and set objectives in conjunction with your Lead and manager. Performance will be monitored against set objectives.

## Our Vision and Values

The Trust is committed to delivering top quality patient care, excellent education and world-class research.

We deliver our vision through [values](#) to describe how we serve patients, their families and how we are with colleagues in the Trust and beyond.

### We put your **safety** and wellbeing above everything

Deliver the best outcomes	Keep people safe	Reassuringly professional	Take personal responsibility
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### We offer you the **kindness** we would want for a loved one

Respect individuals	Friendly and courteous	Attentive and helpful	Protect your dignity
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### We achieve through **teamwork**

Listen and hear	Explain and involve	Work in partnership	Respect everyone's time
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### We strive to keep **improving**

Courage to give and receive feedback	Efficient and simplified	Develop through learning	Innovate and research
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## Person Specification

Requirements	Essential	Desirable	Assessment Criteria			
			A	I	R	T/P
<b>Knowledge and Qualifications</b>	<p>BSc Therapeutic Radiography or Diploma of the College of Radiographers D.C.R.T.</p> <p>State registration or eligible</p>	<p>Evidence of further study/ ongoing education</p>	<p>A</p> <p>A</p> <p>A</p>			
<b>Experience</b>	<p>Knowledge of varied radio therapeutic techniques.</p> <p>Experience with Microsoft applications such as Word and Excel</p> <p>Treatment Planning experience</p> <p>Experience of 3-D Treatment Planning systems.</p>	<p>Experience of Adaptive planning techniques and processes</p> <p>Knowledge of Trials processes and planning QA</p> <p>Knowledge of Varian treatment equipment and techniques.</p> <p>Experience with ARIA Radiation Oncology Management system</p>	<p>A</p> <p>A</p> <p>A</p> <p>A</p> <p>A</p> <p>A</p>	<p>I</p> <p>I</p> <p>I</p> <p>I</p> <p>I</p> <p>I</p>		
<b>Skills and Abilities</b>	<p>Must demonstrate good patient care at all times</p> <p>Able to concentrate frequently when subject to unpredictable</p>			<p>I</p> <p>I</p>		

	<p>working patterns</p> <p>Able to concentrate for prolonged periods</p>	Flexibility and ability to use own initiative and be innovative		I		
<b>Communication</b>	<p>Excellent communication skills with an ability to relate confidently to all hospital staff</p> <p>Skills to function and contribute to within a multidisciplinary setting</p> <p>Must be able to communicate in a sensitive manner when talking to patients.</p> <p>Must be able to communicate complex information in a manner suitable to the patient's understanding</p>			I		
<b>Personal and People Development</b>	<p>Evidence of Continuing personal development (CPD)</p> <p>Willingness to attend courses and keep abreast of developments in the service</p>	Experience of training junior Staff including doctors and radiographers	A	I		
<b>Specific Requirements</b>	<p>Ability to demonstrate an understanding of Capacity and Demand conflicts and how to resolve them</p> <p>Participation in Quality Audits for service improvement</p> <p>Able to vary working hours to meet needs of the department</p>	<p>Understanding of Quality systems within Radiotherapy</p> <p>Ability to participate in introduction of new radiotherapy techniques and to implement</p>	A	I		



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A= Application Form  
 I= Interview  
 R-References  
 T/P=Test/Presentation