



**The Royal College of Radiologists  
RCR-Cyclotron Trust Visiting Fellowships 2014/15 (Clinical Oncology)**

**POST-VISIT REPORT**

**Date for Return: This report must be completed and emailed to the RCR within 2 months of the end of your visit**

Please complete all sections of this form.

<b>1. Name of Visiting Fellow</b>	<b>Dr Thankamma Ajithkumar</b>	
<b>2. Name of joint Visiting Fellow (if applicable)</b>		
<b>3. Institution(s) of Visiting Fellow(s)</b>	<b>Cambridge University Hospitals NHS Foundation Trust, Cambridge</b>	
<b>4. Name of Host(s)</b>	<b>Prof. Beate Timmermann</b>	
<b>5. Institution(s) of host(s)</b>	<b>West German Proton Centre, Essen</b>	
<b>6. Expenses claimed</b>	<b>£1,000</b>	
<b>7. Visit Dates (ACTUAL)</b>	<b>a. Start Date 8 June 2015</b>	<b>b. End Date 19 June 2015</b>
<b>8. 2<sup>nd</sup> visit dates (if applicable)</b>	<b>a. Start date</b>	<b>b. End Date</b>
<b>9. Aims of the visit</b>		
<b>General</b>		
<ul style="list-style-type: none"> <li>To understand the principles of patient selection and clinical benefits of proton beam therapy</li> <li>To learn about the complexities of treatment planning, delivery, and verification for tumours at different body sites</li> <li>To gain an insight into the European practice of Particle beam therapy</li> </ul>		
<b>Specific</b>		
<ul style="list-style-type: none"> <li>To ascertain the established and evolving clinical indications and benefits of proton beam therapy in paediatric cancers</li> <li>To study the evolving role of proton beam therapy in pancreatic and hepatobiliary tumours.</li> </ul>		
<b>10. Activities undertaken</b>		

**General aims**

In order to achieve the general aims of the visit, I undertook the following activities:

- Orientation to clinical referral pathways for patients from Germany and aboard and I met with case management team to understand the challenges of obtaining necessary information to plan and arrange appropriate proton therapy.
- Observed new patient consultation and consent and attended daily multidisciplinary meetings to discuss referrals for proton therapy
- Observed all steps in proton treatment technique, such as target localization, target delineation, therapy planning by clinicians, dosimetrists, and physicists, treatment sessions including patients under anaesthesia, and follow-up clinic assessing proton therapy side-effects and their management
- Observed treatment verification using CT/MRI and re-planning if needed during treatment
- Attended weekly paediatric radiology meeting and regional neuroblastoma meeting.

**Specific aims**

- Reviewed plans of children treated with radiotherapy – including brain tumours, neuroblastoma, and sarcoma. I also helped with outlining normal organs and target volumes for brain tumours and RMS.
- There was no patient treated for hepato-biliary tumour. However, I observed treatment of head and neck tumours, mainly adenoid cystic carcinoma and involved field radiotherapy for Hodgkin lymphoma.

**11. Benefits of the visit (short term)**

- My knowledge of proton therapy has improved by observing the practice at WPE and also through personal reading (a useful textbook is ‘Proton and Carbon Ion therapy’ edited by C-M Charlie Ma & Tony Lomax, Publisher CRC press) and reviewing interesting cases treated previously
- I have improved my skills in outlining critical organs in the brain and understand proton treatment planning.
- I have improved understanding of the role of protons for a variety of clinical situations and of the relative merits and demerits of the use of different techniques of proton therapy (use of SUFD, diffuse scanning, and IMPT)
- During this visit, I analysed the short-term outcome and patterns of cyst enlargement for patients treated with protons in WPE


**12. Envisaged benefits of the visit (longer term)**

I have established a contact with WPE and the team at WPE are keen to collaborate on an academic level.

**13. Please outline any problems you encountered before, during or after your visit**

None

**14. When do you intend to submit an article for the RCR Newsletter?**

<b>Late 2015</b>	
<b>15. Any additional comments</b>	
The team at WPE was very welcoming and eager to assist with my learning process. It would be an ideal place to visit to understand European practice of proton therapy.	
<b>Signed:</b> 	<b>Date:</b> 11/09/2015
<b>Report approved by:</b>	<b>Clinical Oncology Professional Support and Standards Board</b>
<b>Date</b>	<b>17/09/2015</b>