



**Clinical
Oncology**

The Royal College of Radiologists

**The Royal College of Radiologists
RCR-Cyclotron Trust Visiting Fellowships 2015/16 (Clinical Oncology)**

POST-VISIT REPORT

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

Please complete all sections of this form.

1. Name of Visiting Fellow	Tony Millin	
2. Name of joint Visiting Fellow (if applicable)	Nachi Palaniappan	
3. Institution(s) of Visiting Fellow(s)	Velindre Cancer Centre, Cardiff	
4. Name of Host(s)	Roi Dagan	
5. Institution(s) of host(s)	University of Florida Proton Therapy Institute	
6. Expenses claimed	£1501.53	
7. Visit Dates (ACTUAL)	a. 13/6/16	24/6/16
8. 2 nd visit dates (if applicable)	a. Start date	b. End Date
9. Aims of the visit	<p>The aim of the visit was to increase my knowledge of all aspects of the the process of radiotherapy treatments using protons including basic physics, machine set up, quality assurance, treatment planning, patient referral and patient treatment including the aspects of the process relating to the referral of local patients to the international centre and in the possible development of a local service.</p> <p>I was particularly interested in the application of range uncertainty margins, their impact on plan quality and the comparison of treatment plans produced with protons compared to those of similar / identical sites with photons.</p>	
10. Activities undertaken	<p>During my time at the centre I observed a range of clinical activities being undertaken including</p> <ul style="list-style-type: none">(i) Treatment process on the proton treatment machines, including the observation of snout changes, their highly efficient (and caring) method of anaesthetising and treating paediatric patients for a range of treatment sites including brain, H&N, pelvis etc and using their smaller room used to deliver treatments to the eye. I also observed their online imaging strategies on set and discussed with the treatment technicians the challenges associated with PBT.(ii) Control of the proton beam line by the IBA engineers performing such activities such as tuning of the cyclotron etc.	

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- (iii) Treatment process on the proton treatment machines, including the observation of snout changes, their highly efficient (and caring) method of anaesthetising and treating paediatric patients for a range of treatment sites including brain, H&N, pelvis etc and using their smaller room used to deliver treatments to the eye. I also observed their online imaging strategies on set and discussed with the treatment technicians the challenges associated with PBT.
 - (iv) Control of the proton beam line by the IBA engineers performing such activities such as tuning of the cyclotron etc.
 - (v) Pre treatment scanning and on treatment review scanning using the department's CT and MR scanners
 - (vi) The manufacture of apertures and compensators
 - (vii) A range of treatment planning activities for the range of treatment sites undertaken including the review of plans and the dosimetric impact of changes in patient anatomy etc.
 - (viii) Various multi disciplinary meetings where new and on treatment patients were discussed
 - (ix) Teaching sessions aimed at resident staff
 - (x) Patient lunch time meetings consisting of a lunch attended by patient representatives, clinicians and other staff including talks on proton therapy aimed at a lay audience.

In addition to this I spent time discussing aspects of machine commissioning, quality assurance, machine manufacture, machine calibration and interdepartmental audit with members of the medical physics team.

11. Benefits of the visit (short term)

My knowledge of the complexities of the treatment process associated with proton beam therapy increased considerably during my time at Florida. Although I was aware of many of the concepts involved, much of the detail had previously escaped me and my appreciation of the complexity and uncertainties of the process increased.

The experience of observing another centre's working practices was also very valuable and instigated a few discussions into process improvement locally.

12. Envisaged benefits of the visit (longer term)

I expect to utilise the knowledge gained from the visit to aid in discussions with local clinicians about the benefits that may be obtained from treating with PBT on an individual patient basis and in discussions concerning future patient referrals / research with a local proton centre and in developing future plans for my centre locally.

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

The department was very open, welcoming and knowledgeable but weren't as used to hosting visiting physicists as clinicians.

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

When required

15. Any additional comments

I would like to thank all of the team at Jacksonville who made the visit enjoyable, interesting and informative.

Signed: Tony Millin Date: 7th February 2017

Report approved by: **Clinical Oncology Professional Support and Standards Board**

Date 11.05.17

Please return this form to Miss Ritu Verma, Professional Standards Administrator at: ritu_verma@rcr.ac.uk