



The Royal College of Radiologists
RCR-Cyclotron Trust Visiting Fellowships 2016/17 (Clinical Oncology)

POST-VISIT REPORT

PLEASE NOTE: This report must be completed and emailed to the RCR within 2 months of the end of your visit.

1. Name of Visiting Fellow	Charles Fong (clinical)	
2. Name of joint Visiting Fellow (if applicable)	Andrew Dumbill (physics)	
3. Institution(s) of Visiting Fellow(s)	Queen Elizabeth Hospital Birmingham	
4. Name of Host(s)	Cristina Bono (administrative); Dr Barbara Vischioni (clinical); Dr Mario Ciocca (medical physics)	
5. Institution(s) of host(s)	CNAO, Pavia, Italy	
6. Expenses claimed	£ 1588.03	
7. Visit Dates (ACTUAL)	a. Start Date 22.05.2017	b. End Date 01.06.2017
8. 2nd visit dates (if applicable)	a. Start date	b. End Date
9. Aims of the visit		
<p><i>Clinical Perspective</i></p> <ul style="list-style-type: none">• increase understanding of how patient clinical, tumour histology, and anatomic location act as factors influencing the selection of CIRT versus PBT• improve understanding of the radiobiological and physical factors influencing the selection of CIRT versus PBT• gain insight on RBE models for CIRT and how it is incorporated for treatment planning and dose-(hypo)fractionation; and appreciate the limitations/knowledge gap at current state• understand how beam quality variation and dose inhomogeneity within a treatment volume is accounted for, e.g. impact of field and beam number arrangement; PTV margins• appreciate patient set-up, image-guidance and tumour motion management techniques / frequency in the setting of CIRT and PBT• Gain insight on early clinical outcomes on patients treated with CIRT at CNAO• Gain insight on set-up, methodological and quality assurance issues for early phase CIRT clinical trials		

10. Activities undertaken

- Weekly MDT x2
- New patient consultations
- Post-treatment toxicity follow-up (immediate to 2-3 years post-CIRT) – very insightful
- Treatment planning –discussion with planners; discussion with clinicians during plan review/approval
- Observe on-set treatment – image-guidance and verification issues
- Proton therapy for intraocular melanoma with fixed horizontal beam line – observation of treatment planning and delivery
- Time with mentor to talk through treatment pathways, guidelines, individual cases and institutional results, as well as challenges for the institution
- Dedicated tutorial sessions with radiobiologist and clinician regarding carbon ion radiobiology and treatment issues
- Very lucky to observe up close and personal the synchrotron unit (once-in-six-months servicing/maintenance weekend)

11. Benefits of the visit (short term)

- Greatly increased personal understanding of carbon ion therapy (and proton beam therapy) in terms of current indication/evidence base and limitations
- Realised how important on-treatment image guidance needs to be especially with CIRT – high risk of missing target volume with very sharp dose fall-off
- Appreciated how difficult it is to set up collaborative trials in CIRT due to RBE modelling and QA standardisation issues

12a Envisaged benefits of the visit longer term (your own practice)

- Continuing interest in CIRT/PBT as a treatment modality – relevant to my practice would be head and neck/skull base adenoicystic cancers, mucosal melanomas, chordoma/chondrosarcomas, salivary gland tumours, and envisage be involved in RCR in relevant discussion forums
- Much more confident, balanced and open in approaching potential referral/option regarding CIRT – having seen real-life outcomes.
- Given the opportunity, it would be interesting in future to visit Japanese institutions or attend relevant conferences there to understand how they achieve impressive published clinical outcomes with CIRT

12b. Envisaged benefits to the wider group (dissemination to others in your centre/clinical oncology community/multiprofessional team)	
<ul style="list-style-type: none"> • Comprehensive trip findings and knowledge dissemination in departmental meeting July 2017 – generated positive interest and reviews • CIRT is gaining momentum worldwide – one centre in the USA will be setting up this treatment facility, RCR-Cyclotron is to be commended for this fellowship opportunity in stimulating interest and awareness amongst UK oncologists in early-career years • It is noteworthy that Norwegian health service has an agreement with CNAO for patient referral/treatment with CIRT and PBT for agreed clinical indications 	
13. Please outline any problems you encountered before, during or after your visit	
14. Any additional comments	
<ul style="list-style-type: none"> • Very good English spoken by all staff in CNAO, and I am grateful that my mentor took the time to translate for me during MDT discussion • This centre has both CIRT and fixed gantry proton beam facility – it was a good learning opportunity for me to compare various aspects of both treatment modalities, and how that would compare with mobile gantry proton beam with cone beam CT imaging facility • Having an interested physicist as my fellow visiting colleague synergistically enhanced our understanding on both clinical and physics aspects of CIRT 	
15. Do you have any 'top tips' that you would like to share with prospective visiting fellows?	
<ul style="list-style-type: none"> • More beneficial if trainee is post-FRCR/final year/post-CCT stage 	
Signed:	C.FONG Date: 15.08.2017
Report approved by:	Clinical Oncology Professional Support and Standards Board
Date	06.10.2017

Please return this form to Miss Irina Beleca, Professional Standards Administrator at: irina_beleca@rcr.ac.uk