



The Royal College of Radiologists

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RCR-Cyclotron Trust Visiting Fellowships 2022/23 (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	William Croxford	
2. Name of joint Visiting Fellow (if applicable)	Kamran Fathi	
3. Institution(s) of Visiting Fellow(s)	Christie NHS Foundation Trust	
4. Name of Host(s)	Eugen Hug	
5. Institution(s) of host(s)	MedAustron	
6. Expenses claimed	£	
7. Visit Dates (ACTUAL)	a. Start Date 3/9/2023	b. End Date 15/9/2023
8. 2nd visit dates (if applicable)	a. Start date	b. End Date
9. Aims of the visit		
<ol style="list-style-type: none">1. To gain knowledge RE indications and eligibility criteria for carbon ion therapy in sarcoma cancer.2. To gain experience in carbon ion therapy consultations, consent, and discussion with patients.3. To learn about the pre-treatment pathway for carbon ion therapy.4. To gain knowledge around the differences in contouring and planning between proton and carbon ion therapy. Including any potential differences in management during treatment, and early and late toxicity.5. To increase links with a European centre delivering proton beam therapy treatment. This can improve mutual support for complex cases, and research opportunities. This could also be helpful if UK patients want to pursue carbon ion therapy.6. To share learning surrounding new planning techniques we have implemented in sarcoma, such as simultaneous integrated boost (SIB) technique.7. To explore increasing indications for proton beam therapy in sarcoma cancer, and other cancers.8. To exchange treatment strategies for complex patients: such as motion management mitigation techniques for cardiac sarcoma, and whole lung radiotherapy techniques for Ewing's sarcoma.		

10. Activities undertaken

Note: Wherever carbon ion therapy is written below, this also applied to proton therapy also.

New patient and follow up consultations.

Carbon ion therapy delivery, carbon ion therapy treatment set up and CT/MR.

Research team and outcomes meeting.

Outlining/contouring.

RTQA meetings.

New referral meetings.

Planning observation.

IGRT management.

Multiple meetings with consultants/physicists/radiographers – carbon ion therapy for prostate, carbon ion therapy physics and research, head of physics – carbon ion therapy, sarcoma, H+N, paediatrics, admin/patient intake and coordination, nursing team and management, PATHY trial concept, MATEO eye treatment service set up,

Tour of institute including ion generation, discussion around synchrotron etc.

Lectures – 4 country event around particle therapy – invited to attend for 2 days, information on both carbons and protons.

Opportunity to present our institution and our research/work.

Also newer proton indications seen – HCC, pancreas, IH Cholangio.

11. Benefits of the visit (short term)

A very beneficial and helpful visit in many ways.

Improved understanding of carbon ion therapy, from set up to treatment delivery and follow up including late toxicity.

Better understanding of the complex physics behind this newer treatment modality. The different RBE models between Europe/China and Japan and how they interact (or do not).

Improved understanding of LET dose distribution and the importance of this particular in carbon ion therapy in large sarcomas.

Improved understanding of when to consider carbon ion therapy and possible when to consider a referral abroad.

Teamwork with another international centre which creates chances for short term collaboration.

CPD for my practice.

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

Improved understanding of RBE/LET, mainly RE for carbon, but also thus for my own proton practice going forward.

Discussions around similar but very slightly different approaches to PBT treatments for sarcoma helpful to consider when returning to Manchester.

Links with an international European centre for complex case discussion in the future and collaboration with projects/research. Discussions in Austria had but also potential links in other centres discussed.

Improve confidence in when carbon ion therapy can be helpful (e.g. certain sarcomas, ACC H+N etc.) and should perhaps be considered. Know when to consider international referral longer term.

12b. Envisaged benefits to the wider group (dissemination to others in your centre/clinical oncology community/multiprofessional team)

Enhanced carbon ion therapy knowledge – opportunity to help guide colleagues in my centre/elsewhere in the UK.

Research collaboration and case discussion - this extends beyond myself e.g. linking the HPB/UGI team already.

Reflections of similar challenges faced by other countries, what works well and less well.

They have limited beam angles here so they have more complex set up position(s) for each treatment – these can be discussed and considered with the wider team in Manchester for more complex cases.

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

No problems – a very helpful and supportive centre to visitors.

14. Any additional comments

I would highly recommend MedAustron as a centre to visit for particle therapy. They are busy and treat many of the common indications but also newer and less common sites.

They provide a timetable of various meetings and to join different departments. It is very international and English is often spoken in meetings (although I think it is polite to learn at least a bit of German e.g. thank you etc.)

I felt thoroughly involved at all times and also looked out for by the administrative team and doctors/physicists/radiographers.

Despite being very busy, they always made time to explain things or even bring out a quick PowerPoint talk on a topic!

15. Do you have any 'top tips' that you would like to share with prospective visiting fellows?

Just engage as above and you would have a great experience.

I stayed at Le Parc hotel which is actually very nice but not walking distance to the centre in Wiener Neustadt. No buses due to works so taxi needed to be used as over 1 hour walk. I would suggest either trying to find a nearer hotel or perhaps staying in Vienna which is beautiful and a 30 minute train ride to the centre of Wiener Neustadt.

Thank you to the cyclotron trust for funding the visit and to my colleagues in Manchester for covering!

Signed: William Croxford



Date: 13/9/2023

Report approved by: Clinical Oncology Professional Support and Standards Board

Date 9/11/23