



SCHOOL

ESTRO Technology Transfer Grant report

Use of stereotactic body radiotherapy in clinical practice for liver and pancreatic tumours

Institute visited: Erasmus MC Kanker Instituut, Rotterdam, The Netherlands

Dates: 12 – 14 February 2020

Aim of the visit

Treatment with stereotactic body radiotherapy (SBRT) is often recommended for pancreatic and liver cancers as well as in liver metastases in order to increase the dose delivered to these sites while keeping the number of treatment sessions to a minimum. At the same time, nearby organs such as the small bowel are radiosensitive, hence an increased dose to these organs can cause significant toxicity. Therefore, although SBRT is an important treatment technique for this group of patients, expertise and knowledge are required to deliver it.

The aim of this visit, at a European centre that was highly specialised in these tumour sites, was to answer practical questions on the workflow of this technique that would help us to establish an SBRT programme for these cancers. More specifically, during this visit I focused on ways in which we could address uncertainties with regard to the workflow of SBRT, from patient selection and motion compensation to treatment planning and treatment delivery.

Details of the scientific content of the visit

A very detailed timetable had been established for each day of the programme, which had been split into activities related to the two organ sites: liver and pancreatic lesions. It included presence at the tumour-board that identified and discussed potential cases, as well as at the CyberKnife™ during patient treatment. In our centre, at present, we do not have a CyberKnife™ but this machine is currently under consideration to replace one of our machines.

The visit included discussions with planners, who were also involved in the contouring of the organs at risk and the target volumes. This practice was very different from that used in our department, where all the contours are undertaken by the physicians. This was a very informative session as I discussed the established simulation, planning and treatment protocols of the department. In addition, although motion compensation is accounted differently with CyberKnife™ treatments, I had the opportunity to discuss with the department's physicists our practice with 4D computed tomography (CT) and breath control. Finally, I enjoyed dedicated sessions with the liver and pancreas specialists Dr Mendez and Dr Nuyttens, respectively, to discuss their current practices, treatment protocols and studies that could help us to establish SBRT in our department. They kindly offered substantial advice on how we could establish our hospital's SBRT programme, including guidance on different hypofractionation protocols and target delineation.

This visit gave me valuable insights that enabled me to set the foundations for the confident establishment of SBRT for pancreatic and hepatic lesions at our department in a university hospital, to improve the quality of care of our patients.

I would like to thank Drs Mendez and Nuyttens, Mr Wilhelm den Toom and Dr Milder for the time they dedicated to discuss clinical cases and protocols and to answer patiently my questions, as well as Dr Manaskova for impeccable organisation of this visit in order to achieve my objectives.



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