

E. NOI FELLOWSHIP REPORT – SHORT-TERM BENEFITS

NOI Fellowship Report concerning the evaluation of the short-term benefits must be sent no later than 30 days after the end of the fellowship to grant@noisk.sk. Specifically, indicate the scope of work during the fellowship in the report and highlight the achievement of goals together with the possibility of knowledge transfer for the Oncology in Slovakia. Attach the relevant photo documentation to the fellowship report.

NOI Grant with its assigned number must be acknowledged in all publications or presentations related to the fellowship results, and a citation of the publication or information about the conferences needs to be sent to grant@noisk.sk.

Name and titles of NOI Fellow:

Michaela Švajdová, MD.

Contact Address of the Home Institution:

Central Military Hospital - teaching hospital Ruzomberok, Clinic of Radiation and Medical Oncology, Ruzomberok, Slovakia

NOI Fellowship Title and Objectives:

Contouring and planning of selected oncological diagnoses with a specific focus on State-of-the-Art Radiotherapy for Head and Neck cancers, Stereotactic Radiotherapy, implementation of 4-D CT, and respiratory gating.

NOI Fellowship Dates: 02/01/2020 – 03/03/2020

Contact Address of the Host Institution:

The James Cancer Center (JCC) and Solove Research Institute, Columbus, Ohio, United States of America

Overview of NOI Fellowship experience:

From Feb 1 to March 3, I visited the James Cancer Center and Solove Research Institute as an international scholar in the capital of the state of Ohio, Columbus. This comprehensive cancer center is the third largest cancer hospital in the country and it belongs to one of the most advanced oncological centers in the United States of America, which is the world's leader in modern treatment technologies and implementation of the latest scientific knowledge into the clinical practice. In the JCC numerous ongoing clinical trials are open for enrollment and colleagues can actively receive up-to-date preliminary information about trial results via regular weekly conferences. Clinical research is massively supported in this institution and the organization and workflow hand-in-hand strongly encourage the colleagues to take part in it. Except for clinical workdays, the colleagues also have academic days when they can specifically focus on their own research projects (interpretation of the obtained preliminary data, writing publications) so that they don't have to do these scientific activities in their free time at home. Above all, I appreciated the teamwork not only in this institution, but also frequent and regular cooperation between institutions in the whole country. Colleagues from the USA cooperate on important scientific projects in numerous multicentric clinical studies and gathering multi-institutional big data can have a crucial impact on clinical practice worldwide. Colleagues regularly meet at World Conferences and all their personal costs are paid by the employer.

The Department of Radiation Oncology itself is divided into three separate Clinics. Clinic A focuses on the treatment of gastrointestinal and thoracic malignancies, Clinic B almost entirely focuses on head and neck cancer and Clinic C is specific for brain and prostate cancer. JCC actively uses eight linear accelerators (Varian TrueBeam™) including stereotactic radiosurgery (SRS) and stereotactic body radiotherapy (SBRT) with the use of linac-based RT (Varian Edge™), Leksell Gamma Knife (Elekta Icon™) and CyberKnife™ technologies. Brachytherapy (BRT) for gynecological malignancies and prostate cancer takes place here, as well as intraoperative radiotherapy (IORT) for various diagnoses. A complex and modern Proton Therapy Center is being built next to the JCC and it will be part of this comprehensive cancer center. Located at a comfortable

distance of approximately 800 meters, the famous Stefanie Spielman Comprehensive Breast Center (CBC) is located which is a part of the JCC itself where two more Varian TrueBeam™ linear accelerators including 6-D couch, 4-D CT with respiratory gating, and deep-inspiration breath hold (DIBH) system are found.

My internship took place in Clinic B where patients with head and neck cancer (mostly human papillomavirus-associated oropharyngeal carcinoma) received their radiation treatment. I also managed to attend the process of decision-making (tumor boards, chart rounds) in Clinic A and C as well. The staff prepared a timetable for me in advance, but I could make any type of change in it and see something else if I wanted to. Colleagues from the JCC were very generous and kind and they were willing to share their knowledge with me. I took part in all tumor boards (ENT, CNS, special committee for spinal metastases, GIT, GU, thoracic, gynecological, and pediatric malignancies) and all chart rounds that were properly scheduled for every week at an exact hour and a proper conference room. The tumor boards would last for two hours sometimes, with approximately 30-40 new patients discussed within a single board, always with a radiologist present. Therefore, it was possible not only to discuss and decide the case but also to see any appropriate graphical documentation. Chart rounds were especially important because they clearly demonstrated some key differences in contouring and planning compared to our clinic, which might be crucial for the state-of-the-art quality of radiation therapy treatment. I really cherished the enthusiasm of not only the doctors from the team but also their nurses and radiation therapists. Above all, the workflow in the institution strongly favored a precise examination and communication with the patient with an unlimited amount of time dedicated to the patient. Within a twelve-hour worktime, one specialist examined approximately 10 patients. In Clinic B I witnessed the whole process of examination of new patients, follow-up visits (using flexible endoscopy mostly), and the process of enrollment of new patients into clinical trials.



Possible Knowledge Transfer for the Improvements in Oncology in Slovakia:

The major benefits of my scholarship resided in:

- getting familiar with workflow at the clinical and research part of the Department of Radiation Oncology of the JCC, most of all Clinic B, dedicated to head and neck cancer radiation treatment;
- working under supervision of prestigious head and neck radiotherapy specialists and members of the Faculty (Dukagjin Blakaj, MD, assoc. prof. Sujith Baliga, MD, PhD, Mauricio Gamez, MD, PhD, Sachin Jhavar, MD, prof. John Grecula, MD, PhD, Khaled Dibs, MD, Darrion Mitchell, MD, PhD) where we could discuss the patients in person, change current knowledge, including preliminary results of ongoing clinical trials;
- thanks to open access to all medical journals I could gather many up-to-date articles for free to write my own critical review on re-irradiation of recurrent head and neck cancer, which I plan to publish abroad;
- establishing cooperation on a shared scientific project which we plan to launch together in a short time;

- enabling other colleagues from my institution to take part in the scholarship as well (doctors and medical physicists);
- implementation of up-to-date scientific knowledge and State-of-the-Art decision-making in various diagnoses including head and neck, GIT, thoracic, breast, prostate, and CNS malignancies, in our Clinic.

Place and Date: In Ruzomberok, March 29th, 2020

Signature