

## 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](mailto: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](mailto:grant@noisk.sk).

### **Name and titles of NOI Fellow:**

Ing. Miroslava Dobroňová

### **Contact Address of the Home Institution:**

National Cancer Institute, Klenová 1, 83310 Bratislava

### **NOI Fellowship Title and Objectives:**

Predicting the movement of an oncology patient during radiation on a linear accelerator

**NOI Fellowship Dates:** 1.3.2024 - 9.4.2024

### **Contact Address of the Host Institution:**

The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute  
460 W 10th Ave, Columbus, OH 43210, USA

### **Overview of NOI Fellowship experience:**

During my internship, I had the opportunity to spend 6 weeks at a prestigious, growing radiation oncology department. During the first two weeks, I rotated in different positions. I spent some time with the doctor in the outpatient clinic, at the CT simulator, at the linear accelerator, a day with dosimetrists, a day at the breast radiation oncology center, a day at the proton center, and part with the development of FLASH radiotherapy. This rotation alone gave me invaluable insight into the workflow and patient management at a local hospital. During the rotation, I focused on the management of patient movement and the possibilities of (not) collecting data in local conditions, which have strict rules for patient data protection. During the rest of the stay, I focused on clinical practice, primarily on studying the best practices of stereotactic irradiation of non-small cell lung cancer and the second part by training on the FLASH electron accelerators that are developed at the workplace.



Ing. Miroslava Dobronova in the front of the Institute.



Prof. Arnab Chakravarti, M.D., PhD. and Ing. Miroslava Dobronova at OSU

**Possible Knowledge Transfer for the Improvements in Oncology in Slovakia:**

Part of the knowledge obtained during consultation with experts during the internship can immediately contribute to the harmonization of the standards and quality of stereotactic irradiation of patients with NSCLC non-small cell lung cancer, which will be presented on behalf of NOÚ by my colleague at the all-Slovak Stereotactic Workshop on May 15, 2024. I will present the experience gained about innovative flash radiotherapy at the 6th conference of the Slovak Society of Radiation Oncology during a lecture entitled: "Developments of FLASH radiotherapy and its challenges". Furthermore, thanks to this internship, the relationship between our National Oncology Institute and the James Cancer Hospital was deepened and a part of the commitment from the Memorandum of Understanding signed in 2023 was fulfilled. In addition, on 16.5.2024, our institute will be visited by Prof. Chakravarti, Chief of Radiation Oncology at James Cancer Hospital. Last but not least, I brought us physics experts contacts, thanks to which we can deepen cooperation between the Slovak Society of Medical Physics and Biophysics SLS SSLFB, the European Federation of Medical Physicists EFOMP and the American Association of Medical Physicists AAPM.

**Place and Date**

Bratislava, April 15<sup>th</sup>, 2024

---

**Signature**