

## 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:**

Kristýna Kozáková, MD

**Contact Address of the Home Institution:**

National Cancer Institute, Klenova 1, 833 10 Bratislava 3, Slovakia

**NOI Fellowship Title and Objectives:**

Oncologic intensive care in the treatment of germ cell tumors.

**NOI Fellowship Dates:** 02/01/2022 – 03/31/2022

**Contact Address of the Host Institution:**

Indiana University Melvin and Bren Simon Comprehensive Cancer Center (SCC), 535 Barnhill Drive, Indianapolis, IN 46202; Indiana University Hospital, 550 N University Blvd, Indianapolis, IN 46202; IU Health Methodist Hospital, 1701 N Senate Blvd, Indianapolis, IN 46202

**Overview of NOI Fellowship experience:**

2-months-observership in Indianapolis, Indiana (USA) indeed exceeded my expectations. Under the guidance of my mentor Dr. Roberto Machado, I was able to observe three hospitals, in seven different departments in total. My focus was on critical care, anesthesiology, and oncology. Since the American health care system is rather more specialized, I had to do rotations on many departments to see all I needed. School of Medicine in Indianapolis is not just the only one in the state, but also the largest medical school in the United States. Therefore, you can find here a bunch of specialized health care centers and research facilities. I met great people in Indiana, a lot of experts with generous hearts, willing to help me reach my goals. I really appreciated that every health care team I joined, has accepted me as their own. In some cases, we even became good friends and hopefully, we will meet again soon, e.g., while cooperating on our very first conference together.

The first department I observed was MICU (Medical ICU) at University Hospital, where I worked with Dr. Machado and Dr. Wolf, the pulmonary critical care specialists. I followed the rounds, new admissions, and decision-making in taking care of critically ill immunosuppressed patients with oncologic diseases, post-transplant, and also COVID-19 patients with respiratory failure. We were taking care of patients with severe septic shock, respiratory failure, ARDS (acute respiratory distress syndrome) on mechanical ventilation, and kidney, or liver failure. My biggest achievements during this time were improving my medical English and learning the differences between the European/Slovak and American health care system. I also learned the dissimilarities in pharmaceuticals and hospital hierarchy.

My next workplace was CVCC (Cardiovascular Critical Care Unit) in the Methodist Hospital, where I stayed for a week. Here I worked with Dr. Duncan, Dr. Smith, and their ECMO (extracorporeal membrane oxygenation) team. I learned the ECMO basics, its indications, troubleshooting, and management of mechanical ventilation during ECMO treatment for respiratory failure. Later I got the opportunity to come back and join the team while taking care of a young male patient with a germ cell tumor who developed rare ARDS after chemotherapy with pulmotoxic bleomycin.

For the next week, I became a part of the anesthesiology group and observed surgical procedures in 20 general ORs and 8 rooms in Simon Cancer Center. The majority of the surgeries were oncologic cases, large abdominal or multivisceral resections including surgical removal of germ cell tumors. With Dr. Wolfe and his colleagues, I participated in the perioperative anesthetic management of various procedures, and in pain management with the APS (acute pain service) team. A huge opportunity for me was an interesting case following an ERAS (enhanced recovery after surgery) protocol in a patient with a germ cell tumor undergoing retroperitoneal dissection of the tumor with nephrectomy and trans-aortic bi-iliac bypass. During 5-hours long surgery we had to take care of a massive reperfusion syndrome when restoring the blood flow of both lower extremities after 90 minutes of iliac vessel occlusion. It took only a week and a few days to get the patient on his feet and get him home in pretty good shape. While observing in the OR, I got in touch with a bronchoscopy suite team, where I worked with Dr. Kniese and his colleagues. Their focus area was various fiberoptic bronchoscopy procedures under general anesthesia. I even got a chance to actively participate in difficult airway training, where we also trained with the same disposable bronchoscopes, we use in our hospital at home.

The fifth working place I observed was the Surgical ICU (SICU) with attends Dr. Falimirski and Dr. Webb. Here we took care of postoperative complications, such as sepsis, bleeding, organ failure or any other surgical complication. To this unit, we admitted the above-mentioned patient with germ cell tumor and transaortic bi-iliac bypass.

My two last stops were the oncology ward and oncologic outpatient clinic in SCC. Here I observed the treatment management of newly diagnosed tumors, mostly on multidisciplinary meetings such as thoracic or urogenital-tumor boards. With oncologists (Dr. Adra, Dr. Albany, Dr. Einhorn...) we discussed patients' new therapeutic options when conventional treatment strategies failed.



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

SCC Comprehensive Research center in Indianapolis is one of only 70 National Cancer Institute-designated cancer centers in the United States. In 2018, the IU SCC managed 380 clinical trials. Collaboration with such an institute can help us improve our cancer care in Slovakia, which has already been proven after successful observerships of our clinical oncologists from NCI Bratislava. I truly hope my observing in Indiana was only a start and that other anesthesiology and oncology critical care observers from Slovakia will follow my motivation.

**Place and Date:** In Bratislava, April 30<sup>th</sup>, 2022

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Signature