

## **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:**

Lucia Vanovčanová, MD, PhD.

**Contact Address of the Home Institution:**

2nd Radiology dpt, Faculty of Medicine, Comenius University and St Elisabeth Cancer Institute, Heydukova 10, 812 50 Bratislava, Slovakia

**NOI Fellowship Title and Objectives:**

Prediction of breast tumor response to neoadjuvant chemotherapy based on identification of specific MR parameters

**NOI Fellowship Dates:** 09/01/2022 – 09/30/2022

**Contact Address of the Host Institution:**

Champalimaud Centre, Av. Brasília, 1400-038 Lisbon, Portugal

**Overview of NOI Fellowship experience:**

- clarification of cancer staging using a core cut biopsy of pathologically changed axillary lymph nodes before deciding on the optimal therapy
- marking of breast tumors and pathological lymph nodes using a carbo adsorbent solution before the start of neoadjuvant treatment and associated surgical approaches after neoadj. Chemotherapy
- verification of hypotheses and prediction of nonresponders to administered chemotherapy based on MR signs of breast tumors
- consultation of results and observations with colleagues from radiology and clinical oncology within multidisciplinary and scientific meetings



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

I will use the acquired knowledge in daily radiological practice: we plan to introduce a method of marking tumors and lymph nodes using a carbo adsorbent solution, representing a reliable, simple, cheap form of pre-operative localization. Similarly, we will try to apply the histology of axillary lymph nodes via core cut biopsy to the routine. After verifying the effectiveness of the mentioned procedures at our workplace, we will spread this knowledge and new methods to other diagnostic centres as a training and certification workplace for breast imaging in Slovakia.

I plan to continue to focus on the possibilities of predicting the response of breast tumors to neoadjuvant chemotherapy, which is based on the fusion of morphological, functional and immunohistochemical parameters of tumors. I see the chances of increasing the specificity of the method mainly in more accurate diagnosis of pathologically changed lymph nodes through core cut biopsy and subsequently in their selective dissection, making it possible to assess the predicted response accurately.

**Place and Date:** In Bratislava, October 14th, 2022

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**Signature**