### Quantitative functional MR imaging and correlation with pathology

**Vesna Miladinovic**

Duration: 3 months

**Short Bio**

My PhD project focuses on optimization of diagnosis, treatment and treatment follow up of chordomas and chondrosarcomas of the axial skeleton - two rare bone malignancies. Imaging has, in addition to histopathology, an important role in their diagnosis and treatment. Proton therapy has been successfully used as an adjunct to resection or as definitive treatment. The main objective is to determine if functional MRI parameters change within 6 months from the start of proton beam therapy, and earlier than volumetric changes, which could help in evaluation of the response to the treatment and its personalization.

**Home Institution**

Leiden University Medical Center (LUMC)

**Host Institution**

The Institute of Cancer Research (ICR)

**Project Description**

Main focus of this fellowship was on testing and improving the MRI-histopathology correlation pipeline in soft tissue sarcomas and look for different ways of approach to the analysis of pathological specimens and relating them to the functional imaging findings. This pipeline is based on the European Organization for Research and Treatment of Cancer-Soft Tissue and Bone Sarcoma Group (EORTC-STBSG) recommendations for pathological examination [1] and was already tested for prostate cancer by the hosting research group [2].

**Personal Statement**

Overall, during my stay at the ICR, I have worked with a group of amazing and highly skilled people from whom I have learned different imaging and pathology processing tools and techniques. At the same time, I also perceived different perspectives on question asking and problem solving. Implementation of all the skills and outside of the box thinking that I have learned during this fellowship will be a great asset to all the potential hurdles I might encounter in my further research. This fellowship was a wonderful life experience that I would most certainly recommend to any researcher.