BRACCO FELLOWSHIPS - EDUCATION IN RESEARCH

Project 18:

Immuno-radio-genomics in low-grade gliomas

NAME OF INSTITUTION: Medical University of Vienna, Department of Biomedical Imaging and Image-guided Therapy, Vienna/AUSTRIA

RESEARCH GROUP AND ITS MISSION:
The brain tumor imaging research group at the Medical University of Vienna have access to multimodal imaging techniques based on advanced high-field MRI and PET-MRI examinations. The intense collaboration with clinical neurooncologists, neuropathologists and neurosurgeons make up a multidisciplinary group of researchers with high common interest in CNS cancer patients care. The mission of the research group is to improve and establish diagnostic, predictive and prognostic biomarkers in neurooncology aiming towards precision medicine.

OBJECTIVES:
Whereas immune-modulating agents showed remarkable benefits in many types of cancer, their value in brain tumors remains to be established. This project will focus on the complex interplay between low-grade glioma and the immune system. The purpose of the study is to correlate multiparametric imaging data with immune markers and genomic alterations in low-grade gliomas to reveal surrogate parameters with prognostic and predictive value, aiming at a further stratification of patients that are likely to respond to immune-modulating therapies.

APPLICANT’S DUTIES:
- Retrospectively collect a study cohort with multiparametric imaging data of patients with low-grade gliomas
- Evaluate and quantify MR examinations
- Correlate multiparametric imaging data with immune markers and genomic alterations

APPLICANT’S BENEFITS:
- Participation on scientific outcomes of the project
- In-depth view into multiparametric neuroradiological imaging techniques including image acquisition and post-processing
Collaboration with multidisciplinary team members (clinical neurooncologists, neuropathologists, neurosurgeons)

Project Leader: Julia Furtner-Srajer, MD, PhD