Núria Dueñas

Colorectal cancer risk personalization using polygenic risk score analysis in Lynch syndrome individuals

Short Bio	I got my degree in medicine by the University Autonoma of Barcelona in 2010 and I specialized as a medical oncologist in 2016. During these years, I took a particular interest in the study of cancer genetics and hereditary cancer and I collaborated in some research projects in this field. During the last years, I have focused my study on hereditary cancer syndromes, with special interest in Lynch syndrome. Since 2018 I work as a physician in the Hereditary Cancer Program of the Catalan Institute of Oncology (ICO/IDIBELL) in Barcelona and I am a PhD student in the Lynch syndrome/CMMRD group. My PhD study focus mainly on risk estimation and phenotype-genotype correlation in Lynch syndrome.
Home Institution	Catalan Institute of Oncology, Hereditary Cancer Program. L'Hospitalet de Llobregat, Barcelona, Spain
Host Institution	University Hospital Bonn, Institute of Human Genetics. Bonn, Germany
Project description	In LS, as in other hereditary cancer predisposition syndromes characterized by incomplete penetrance, one of the main challenges is to identify which risk-modifying factors may be modulating the expression of the oncological disease. Genetic risk modifiers (Polygenic risk model – PRS) have been described to model CRC risk in general population, but to date their effect on CRC risk in LS individuals is still little known. Our aim is to investigate whether different phenotypes in LS individuals can be in part attributable to the accumulation of low-risk alleles for CRC.
Personal statement	Carrying out this stay at Universitäts Klinikum Bonn is a unique opportunity as it would allow me to acquire new knowledge in translational research and in the development of research projects. Dr. Aretz is a renowned medical geneticist who is the leader of the research group Familial Colorectal Cancer in his home institution and his long–term research interest focuses on clinical and genetic aspects of LS and gastrointestinal polyposis. Collaborating with professionals from different specialties and different countries helps, not only to generate new knowledge, but also helps creating different ways of approaching scientific research. This knowledge will help both short and long term to the development of my personal skills in the field of hereditary cancer and therefore, this will enhance scientific research and clinical care at my institution.