

Focus on Faculty # 69

Catherine Goudie



I am an Assistant Professor in the Department of Pediatrics as well as an Associate Member of the Departments of Medicine, Human Genetics and Oncology at McGill University. In 2018 I joined the MUHC as a pediatric hematologist-oncologist as well as a researcher at the MUHC-Research Institute. Raised in the north shore of Montreal, I went to Medical School at Université Laval and completed my core Hematology-Oncology training at McGill, followed by a two-year fellowship in Cancer Genetics and Pediatric Solid Tumors at SickKids in Toronto.

On the clinical side, I lead a cancer surveillance clinic dedicated to children in the province who are diagnosed with cancer predisposition syndromes. I am also the co-director of a newly developed Cancer Genetics Fellowship program embedded within the Oncology Department. As a pediatric hematologist-oncologist, I get the opportunity to meet such young and brave children fighting the most difficult battle there is. During this time, it became clear that although cancer research is one of the most developed, there remains a lack of knowledge about the influence of genetics on cancer development in children and young adults. Cancer predisposition syndromes affect approximately one in ten children diagnosed with cancer. These genetic conditions increase the likelihood of a young person developing one or more cancers throughout their lifetime.

There are many ways to integrate research into a medical career, however, my path was not the customary way. I did not receive formal training within a master's degree or PhD but instead I was initiated into clinical research in the latter part of my training as a PGY-5 resident and quickly developed a passion for the field of cancer predisposition in children. In 2018 I received an FRQS Junior 1 clinician-scientist award.

Through my research program and unparalleled mentorship (*thank you to Dr. William Foulkes*), I led the creation of an E-health tool called the McGill Interactive Pediatric OncoGenetic Guidelines (MIPOGG). This project recently received funding from the TD Ready Challenge. The app was created for physicians trying to navigate through this new domain of cancer genetics in young people. The MIPOGG app has over 140 tumor-specific decisional algorithms designed to provide physicians with a yes or no answer to the complex question, whether a child requires a genetic evaluation based on the likelihood of having an underlying cancer predisposition syndrome. Over 500 people from more than 50 countries have downloaded this app. As the research develops so must the application, leading to the next step; integration of artificial intelligence through machine learning and enhanced pattern recognition within the MIPOGG app.

I have one young son (Edouard) and another child on the way. Outside of work, I love to spend time with my family, going up to our cottage and partaking in outdoor winter sports such as figure skating (an activity that I have held close to my heart since childhood) and cross-country skiing.