

Research highlights

This project aims to leverage cutting-edge techniques in single-cell transcriptome analysis and spatial transcriptomics to uncover the intricate molecular landscapes at play in rectal cancer, specifically focusing on tumour-associated immune cells. Our primary emphasis lies in elucidating the molecular signatures of the myeloid compartment and cancer-associated fibroblasts (CAFs), while also investigating their dynamic interplay with malignant cells and other components of the tumour microenvironment (TME).

To achieve this, we are embarking on a study involving 60 patients, from whom we will procure fresh cancer samples, adjacent normal tissue, as well as peripheral blood samples collected both pre- and post-treatment. To ensure the comprehensive collection of patient samples, significant efforts have been invested in designing an experimental workflow. We have set-up a collaboration with a research group based in the UK and are finalizing a material transfer agreement (MTA) necessary for the shipment of relevant tissue samples to the University of Copenhagen. Though this process has caused a slight delay in project initiation, it is a crucial step that we anticipate completing within the next two weeks.

Moreover, we have successfully recruited a postdoctoral researcher, expected to commence on May 1st, who will play a pivotal role in driving this project forward. Additionally, we are actively establishing further collaborations with research groups specialising in spatial transcriptomics. Once the MTA is finalised, we will commence our research activities, poised to unlock new insights into the molecular underpinnings of rectal cancer.