

Dr. Bhumi Bhatt is a postdoctoral fellow working under the mentorship of Dr. Vickie Baracos in the Department of Oncology, Faculty of Medicine and Dentistry (FoMD), University of Alberta. She earned her PhD in 2023 from the Department of Laboratory Medicine and Pathology at the University of Alberta.

Dr. Bhatt's doctoral research, published in *Nature* (2025, PMID: 40931079), represents the first large-scale investigation providing a comprehensive transcriptional landscape of human skeletal muscle in patients with cancer. She generated an extensive data set, comprising ~35,000 RNA from each muscle sample of patients with cancer. To achieve meaningful biological and clinical inferences she employed **Bioinformatics, advanced statistical** and **Machine learning** to analyze this data. Her groundbreaking work identified molecular subtypes of human skeletal muscle and novel pathophysiological mechanisms underlying cancer cachexia, a devastating skeletal muscle wasting syndrome affecting 60-80% of patients with advanced cancer.

In her current postdoctoral research, Dr. Bhatt focuses on elucidating the **clinical epidemiology** of cancer cachexia. Leveraging her bioinformatic skills, she utilizes large **Population data sets** that represent **Alberta-wide cohorts** of patients with cancer to study the clinical outcomes. Input information includes hundreds of thousands of data points on weight loss and the corresponding losses of muscle and fat tissue, acquired from **clinical diagnostic imaging**, as well as treatment regimens, lab tests and patient outcomes.