

Identification of B Lymphocytes in Cancer Patient's Blood

Mayukh Mukherjee

Department of Biotechnology, Heritage Institute of Technology, Kolkata, India

Abstract

B lymphocytes, integral to the adaptive immune system, are known for generating immune responses through antibody production and aiding T-cell-mediated immunity against pathogens. However, their role in cancer biology remains less established. Recent findings indicate that cancer patients exhibit an increased total B-cell population compared to healthy individuals, suggesting a potential protective role against tumour growth via anti-tumour immune responses. Yet, the underlying biology is complex. This study investigates B-cell dynamics in breast cancer patients' blood, revealing shifts in B-cell subtypes that influence immune suppression and tumour progression. It has been well described, that there has been a dynamic relationship between the immune system and the development of cancer. The tumour microenvironment (TME) plays an essential role in modulating immune responses during the progress of cancer. Cancer still remains a major cause of death world-wide down the line.