The article discusses the role of immune cells in the tumor microenvironment (TME) of B-cell lymphoma, a group of hematological malignancies with variable features and behaviors.NK cells with CD3-CD56+ and/or CD16+ markers were found to have antitumorigenic functions, with low baseline peripheral blood NK cell count associated with shorter PFS in DLBCL and FL. Additionally, TANs and T cells were also found to have either pro-tumorigenic or antitumorigenic effects in various lymphomas based on markers and detection methods used in the study.The TME consists of various elements like blood vessels, extracellular matrix, immune cells, and signaling molecules, which can either inhibit or promote tumor progression.The interplay between immune cells and tumor cells in the tumor microenvironment (TME) is crucial for understanding the pathogenesis and progression of B-cell lymphoma and developing therapeutic strategies.The complex interactions between immune cells and tumor cells in the TME have implications for B-cell lymphoma prognosis, highlighting the importance of immune cell modulation in developing effective treatment strategies.Some immune cells in the TME can be activated to support tumor growth, influenced by factors like cellular matrix and secreted molecules.Immune cells such as tumor-associated macrophages (TAMs) play a significant role in tumor progression, drug resistance, and recurrence in B-cell lymphoma.TAMs can be classified into antitumor (M1) and pro-tumor (M2) macrophages, with M2-like TAMs contributing to tumor progression by producing cytokines and growth .factors