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B-LINEAGE PROGENITORS AND CD38-POSITIVE B CELLS ARE ASSOCIATED WITH SURVIVAL RATES IN BREAST CANCER PATIENTS

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Objective: The immune system plays an increasingly important role in the development of targeted strategies for breast cancer. According to mRNA sequencing data from The Cancer Genome Atlas (TCGA) high expression B cell signatures has beneficial effects on survival rates in many tumors. Bone marrow (BM) is poorly understood from the point of view of the prognostic role of hematopoietic cells and subpopulations of lymphocytes in patients with breast cancer (BC). **Methodology:** . Study was carried out in 107 BC patients. The immunological and morphological methods were applied.

Multiparameter flow cytometry with antibodies to B-cell populations was used (CD19, CD20, CD5, CD38, CD10, CD45, HLA-DR, CD27), FACSCANTO II. Studies of BM lymphocyte subpopulations were carried out in the gate of CD45++ cells. The duration of the follow-up period after surgery was 8 years. **Results:** The total percentage of B cells in BM was significantly associated with the prognosis of BC. B-1 cells were associated with progression-free and disease-free survival. Disease progression was observed at low levels of B1 cells. In cases more than 10% B-lymphocytes in the BM of BC patients overall survival (OS) rates were more favorable ($p = 0.01$). Especially for BC with a high Ki-67. Disease progression was observed in 1/3 of BC patients with low levels of B1 cells. CD38 expression on B cells was a prognostically favorable factor: the role is realized during 5–10 years of follow-up after surgery. Level CD38+ B cells more than 10% correlated with high OS, $p = 0.02$. The presence of CD10+CD19+ B-lineage precursors was associated with a more favorable prognosis (OS, the threshold level 12%, $p = 0.04$). The prognostic role of the CD10 antigen was realized when patients were observed for more than 5 years. **Conclusion:** . Total relative number of (more than 10 %) of BM CD19+ cells were significantly related to OS in BC. B-cell precursors and CD38+ B cells were associated with favorable prognosis. Prognostic role of B-lineage precursors and CD38-positive cells was in the periods of 5–10 years after surgery.

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SUCCESSFUL CHEMOTHERAPY ADMINISTRATION DESPITE HYPERSPLENISM AND PANCYTOPENIA: A CASE OF METASTATIC RECTAL ADENOCARCINOMA

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Introduction: Cytopenias in oncology patients present a significant barrier to the administration of chemotherapy. Hypersplenism is one of the leading causes of cytopenia. In this case report, we aim to present a patient diagnosed with metastatic rectal adenocarcinoma, who developed hypersplenism due to liver metastasis and was successfully treated with chemotherapy despite the cytopenias. **Case Report:** In September 2023, a 42-year-old female patient was diagnosed with rectal adenocarcinoma with liver metastasis. Genetic analysis revealed K-Ras, N-Ras, and BRAF mutant/wild type, MSI stable, and Her2 negative. The patient received 3 cycles of FOLFIRINOX chemotherapy. During follow-up, her hemogram results were as follows: hemoglobin: 8.6 g/dL, platelets: $26 \times 10^3/\mu\text{L}$, leukocytes: $0.81 \times 10^3/\mu\text{L}$, and neutrophils: $0.37 \times 10^3/\mu\text{L}$. PET-CT evaluation showed regression in the metastatic lesions and newly developed splenomegaly