through its interaction with osteoclasts (OCs) during adult skeletal remodeling. Osteoclasts, essential for bone remodeling, are influenced by CD38 inhibition, which not only impedes bone resorption but also reinstates T-cell functionality, thus preventing the advancement of bone disease. **Treatment with anti-CD38 monoclonal antibodies:** The increase of CD38 on cancer cells and its role in cancer progression has prompted researchers to create various monoclonal antibodies (mAbs) that target CD38. Commercially available CD38 monoclonal antibodies for multiple myeloma treatment include daratumumab. Additional novel drugs are currently in clinical trials, including MOR202 (Felzartamab) (completely human), TAK079 (Mezagitamab) (fully human), FTL004 (humanized Ig1), SAR442085 (totally human engineered), and TNB-738 (entirely human). Their anticancer efficacy relies on Fc-dependent immunological effector mechanisms and immunomodulatory actions that eradicate CD38 regulatory T cells, hence reinstating T-cell and NK-cell-mediated antitumor immune responses.

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27

EXPANSION OF INDICATIONS FOR HEMATOPOIETIC STEM CELL TRANSPLANTATION (HSCT): CURRENT STATUS AND FUTURE DIRECTIONS

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Hematopoietic Stem Cell Transplantation (HSCT) is examined under 3 headings. 1. Autologous bone marrow transplantation 2. Syngeneic bone marrow transplantation 3. Allogeneic bone marrow transplantation (myeloablative, non-myeloablative) a. Sibling b. Unrelated c. Haploidentical Bone marrow, peripheral stem cell and cord blood are used as stem cell sources. Autologous stem cell transplantation It is based on the principle of being able to apply much higher doses of chemotherapy to patients and overcoming the bone marrow damage that will occur in the meantime by means of stem cells obtained from the patient himself. Therefore, the sensitivity of the tumor to chemotherapy and the dose-response relationship are of great importance in the success of the treatment. Autologous stem cell transplantation (ASCT) is an important treatment option in the treatment of hematological malignancies such as multiple myeloma and lymphoma. While it finds a place in the first-line treatment of multiple myeloma, it is a very important treatment approach in chemosensitive relapse disease in diffuse large B-cell lymphomas. The place of ASCT in acute leukemias is controversial and other No significant superiority has been shown to treatment options. ASCT has also been used in some solid organ tumors other than M. myeloma and lymphomas. With the introduction of high-dose chemotherapy in the nineties, it has been shown that survival rates of 30% can be achieved even in patients with negative prognostic factors in germ cell tumors. It has been determined that autologous stem cell transplantation increases survival in childhood cancers such as medulloblastoma, soft tissue sarcoma, osteosarcoma, Ewing sarcoma, and retinoblastoma. Allogeneic stem cell transplantation HSCT is a treatment modality with a potential curative effect in many malignant and benign diseases. The use of a reduced-intensity conditioning regimen has also enabled transplantation in elderly patients. Developments in transplantation technology, advances in preventive and supportive treatments have led to positive developments in early and late-term outcomes of transplantation. Donors can be categorized as HLA-compatible sibling or other family donors and unrelated donors. A well-matched unrelated donor requires a 10/10 or 8/8 match in high-resolution class 1 (HLA-A,B,C) and class 2 (HLA-DRB1, -DQB1) antigen assessment. If there is at least 1 incompatibility at the antigen or allele level in HLA A,B,C or DR, an incompatible unrelated donor is mentioned. A haplo-idetic donor is defined as at least 1 haplotype among family members being genetically identical to the patient. Its most important advantage is that it is easier and faster to find a donor for many patients. The fact that graft versus host disease (GvHD) events are more common and the relative chance of relapse is a significant disadvantage. It can be successfully applied especially in malignant diseases such as acute myeloid and lymphoblastic leukemias, relapsed refractory lymphomas, relapsed refractory multiple myeloma and also in thalassemia, sickle cell anemia, immune deficiencies and autoimmune diseases.

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28

MANAGEMENT OF INHIBITORS IN HEMOPHILIA

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Introduction: The improved understanding of Acute Myeloid Leukemia (AML) pathobiology has led to significant advances in treatment options. AML is a highly heterogeneous disease, with clinical, morphological, cytogenetic, and molecular variability, which is crucial for developing targeted therapies within different subgroups. The "7+3" regimen (7 days of cytarabine and 3 days of daunorubicin) remains the standard, but its long-term efficacy is limited, with remission rates below 40% in younger, fit patients. In contrast, for older patients or those unsuitable for intensive chemotherapy, median survival is approximately 9 months, and 5-year survival rates are under 10%. Treatment strategies are typically tailored, with intensive chemotherapy preferred for younger/fit patients, and low-intensity therapies for older/unfit patients. This section reviews emerging targeted treatment options. **Antibody-Drug Conjugates (ADCs):** Gemtuzumab ozogamicin (GO), a CD33-targeted ADC combined with high-dose cytarabine, has increased survival rates from 50% to 75-80%. IMGN779, a novel anti-CD33 ADC, is highly effective against AML cells, including those with adverse molecular abnormalities, and its sensitivity is correlated with CD33