

Biological Agents for Hematological Malignancies: A Literature review (Pharm.D)

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Abstract

Immunobiological agents arose in the 20th century, since then they have gradually evolved and were extensively studied in a number of disease types. One particular area of success has been the management of hematological malignancies. These malignancies present a special challenge in health care. The only cure is a stem cell transplant which requires eradication of the cancerous cells prior to transplant through the use of conventional chemotherapeutic regimens that can severely diminish a patient's quality of life and have a high risk of relapse. This review focuses on four distinctive therapeutic modalities; interferons and interleukins, monoclonal antibodies, asparaginase enzymes, and CAR-T-cell therapy, that have proven to be successful in the management of various blood malignancies. Our aim in this review is to summarize the clinical experience with these therapies starting with the first FDA approval and up to the present day in order to help guide practitioners and researchers in their quest to find the most appropriate therapy for their patients.