New Agents and Future Directions in Biotherapy

Patricia Sorokin, RN, BSN

The area of biologic therapy has been undergoing numerous changes as new agents and combinations of chemotherapy and biotargets are investigated. This article reviews several new biotherapies and describes the results of clinical trials evaluating these agents.

Rituximab

Rituximab, a chimeric anti-CD20 monoclonal antibody (MOAB), is indicated in the treatment of patients with relapsed or refractory low-grade or follicular, CD20+ B cell non-Hodgkin's lymphoma (NHL) (O’Neal, 2001). In April 2001, the U.S. Food and Drug Administration (FDA) approved rituximab (Rituxan®, Genentech, Inc. and IDEC Pharmaceuticals Corporation, South San Francisco, CA) as a treatment for bulky disease and approved dosing schedules of eight weekly doses as initial treatment and four weekly doses for retreatment (Genentech, Inc., 2001). Combining rituximab with other approved agents or regimens for the treatment of NHL is being explored. For example, the use of a combination of cyclophosphamide, doxorubicin, vincristine, prednisone (the “CHOP” regimen), and rituximab resulted in a 95% response rate in 40 patients with low-grade B cell lymphoma (Czuczman et al., 1999). Another multicenter trial combined rituximab with interferon. The overall response rate in 38 patients with relapsed or refractory low-grade or follicular NHL was 45%. Long-term follow-up in this group of patients may determine whether this treatment combination leads to a significantly longer time to progression than with single-agent rituximab (Davis, Maloney, et al., 2000).

Rituximab is being investigated as an option for patients with cancers or disorders other than NHL, such as chronic lymphocytic leukemia (CLL). In a small Italian study of seven patients with refractory or relapsed CLL, rituximab was administered using schedules designed for patients with follicle cell lymphoma and was well tolerated. Although rituximab was not effective in treating nodal and splenic disease, all patients experienced a significant reduction in their peripheral blood (PB) lymphocyte count. Based on the responses...