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Rituximab and Hyaluronidase Human

National Cancer Institute

Source

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A combination preparation of rituximab, a genetically engineered chimeric murine/human immunoglobulin (Ig) G1 kappa monoclonal antibody directed against the CD20 antigen, and the recombinant form of the human enzyme hyaluronidase, with antineoplastic activity. Upon subcutaneous administration of rituximab and hyaluronidase human, the hyaluronidase reversibly depolymerizes the polysaccharide hyaluronan in the subcutaneous tissue. This increases the permeability of the subcutaneous tissue and enhances the absorption of rituximab into the systemic circulation. In turn, rituximab targets and binds to CD20 expressed on tumor cells, and induces tumor cell lysis primarily through the induction of complement dependent cytotoxicity (CDC) and antibody-dependent cell mediated cytotoxicity (ADCC). When administered subcutaneously, hyaluronidase, an endoglycosidase, increases the dispersion and absorption of co-administered drugs. CD20 is expressed on the surface of pre-B and mature B-lymphocytes, and is overexpressed in a variety of B-cell malignancies.