

Like daclizumab, basiliximab is indicated for the prophylaxis of acute organ rejection in patients receiving renal transplants. It is used as part of an immunosuppressive regimen that includes cyclosporine and corticosteroids.

Basiliximab demonstrates an adverse effect profile similar to that of daclizumab. Administration of this drug is by central or peripheral intravenous infusion only. The dilute reconstituted basiliximab (20 mg/5 mL) is brought to a 50-mL volume with 0.9% sodium chloride injection or 5% dextrose injection and administered as an intravenous infusion over 20 to 30 minutes.

The recommended regimen for an adult is two doses of 20 mg each. The first dose is administered within 2 hours prior to transplantation surgery. The second dose is administered 4 days after surgery. For children and adolescents aged 2 to 15 years, the recommended regimen is two doses of 12 mg/m² each, up to a maximum of 20 mg per dose. The schedule is the same as for an adult.

Bevacizumab (Avastin)

Approved by the FDA in 2004, bevacizumab is used in combination with IV 5-fluorouracil-based chemotherapy for first- or second-line treatment of patients with metastatic carcinoma of the colon or rectum. It is a recombinant humanized IgG MAb that binds with vascular endothelial growth factor A (VEGF-A), a target antigen that binds to VEGF tyrosine kinase receptors on the surfaces of endothelial cells, signaling intracellular tyrosine kinases resulting in angiogenesis (26). Angiogenesis is a term used to describe the growth of new blood vessels and plays a crucial role in the development and maturation of tissues. It also plays a central feature in a number of diseases. In cancer, this process supplies the increased demand for oxygen and nutrients that facilitate tumor growth and metastasis. Thus, inhibition of angiogenesis is a possible treatment for some cancers.

This drug is available for injection, 25 mg/mL in single-use 4- and 16-mL vials. It is diluted for infusion using aseptic technique and the necessary amount withdrawn and diluted in a total volume of 100 mL 0.9% sodium chloride injection. The initial dosage

is delivered over 90 minutes as an IV infusion following chemotherapy. If the first infusion is well tolerated, the second infusion may be administered over a 60-minute period. If the second, 60-minute infusion is well tolerated, subsequent infusions can be administered over a 30-minute period.

The vials for injection must be refrigerated at 2°C to 8°C and protected from light. Freezing must be avoided and the vials not shaken. Diluted bevacizumab solutions for infusion may be stored at 2°C to 8°C for up to 8 hours.

Daclizumab (Zenapax)

Daclizumab is an immunosuppressive humanized IgG1 MAb produced by rDNA technology that binds specifically to the alpha unit (Tac subunit) of the human high-affinity IL-2 receptor that is expressed on the surface of activated lymphocytes. Daclizumab is a composite of human (90%) and murine (10%) antibody sequences.

Daclizumab is indicated for the prophylaxis of acute organ rejection in patients receiving renal transplants. It is used as part of an immunosuppressive regimen that includes cyclosporine and corticosteroids.

The recommended dose is 1 mg/kg intravenously as part of an immunosuppressive regimen. The calculated volume of daclizumab is mixed with 50 mL of sterile 0.9% sodium chloride injection and administered via a peripheral or central vein over 15 minutes. The standard course of daclizumab therapy is five doses. The first dose is administered not more than 24 hours before transplantation, and the remaining four doses are given at intervals of 14 days. Daclizumab is supplied in single-use glass vials that should be stored between 2°C and 8°C, but not frozen. The vials should not be shaken and the undiluted solution protected from direct sunlight. Diluted daclizumab is stable for 24 hours at 4°C or for 4 hours at room temperature.

Gemtuzumab Ozogamicin (Mylotarg)

Gemtuzumab ozogamicin targets myeloid leukemic cells, leaving precursor pluripotent stem cells relatively unscathed and is