Taliglucerase (Elelyso) for Gaucher Disease

The FDA has approved taliglucerase alfa (ta lee gloo´ se rays; Elelyso – Pfizer/Protalix), a recombinant form of glucocerebrosidase, for treatment of adults with Type 1 Gaucher disease. These patients have a genetic deficiency of the lysosomal enzyme glucocerebrosidase that leads to accumulation of glucosylceramide in the lysosomes of reticuloendothelial cells, primarily in the liver, spleen and bone marrow.  

Taliglucerase is the third form of the enzyme to become available in the US. Imiglucerase (Cerezyme) and velaglucerase (Vpriv) are produced in mammalian cell lines. Taliglucerase is produced using carrot plant root cells, which is less costly, according to the manufacturer.

In one trial, taliglucerase significantly reduced spleen volume and increased serum hemoglobin. In a trial in patients receiving chronic imiglucerase therapy, summarized in the package insert, clinical parameters remained stable following a switch to an equal dose of taliglucerase.

All 3 of these enzymes are usually given as an IV infusion over 1-2 hours every 2 weeks. Infusion reactions are common. Anaphylaxis and development of IgG anti-drug antibodies have been reported. For 1 year's treatment of a 70-kg patient at 60 units/kg every 2 weeks, taliglucerase will cost $324,870, imiglucerase $432,978 and velaglucerase $368,550.
