

## **Pegaspargase: A review in acute lymphoblastic leukaemia**

Designed to treat acute lymphoblastic leukaemia, or ALL, pegaspargase is an important and effective treatment option for both paediatric and adult patients.

Pegaspargase is a modified form of the anti-ALL enzyme therapy L-asparaginase, derived mainly from *E. coli*. Unlike the native enzyme, pegaspargase is conjugated with polyethylene glycol, or pegylated—which offers various advantages, such as providing pegaspargase with a prolonged circulation time, allowing for less-frequent administration - every two weeks. And it may reduce immunogenicity compared with native (or non-pegylated) L-asparaginase.

Extensive evidence shows that, in adults and children newly diagnosed with ALL, intramuscular or intravenous administration of pegaspargase is an effective first-line treatment as part of a multi-agent chemotherapy regimen. It is also beneficial in patients with relapsed ALL who have hypersensitivity to *E. coli* L-asparaginase.

Regarding tolerability, pegaspargase showed a manageable profile in paediatric and adult patients with newly diagnosed ALL; the most common adverse events were generally consistent with those observed with *E. coli* L-asparaginase. A similar tolerability profile was observed in patients with relapsed ALL and hypersensitivity to the native enzyme.

Given its potentially reduced immunogenicity and more convenient dosage regimen compared with native L-asparaginase, pegaspargase remains a valuable treatment option for both children and adults with ALL.