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Pegaspargase

National Cancer Institute

Source

National Cancer Institute. *Pegaspargase*. NCI Thesaurus. Code C1200.

A complex of polyethylene glycol conjugated with L-asparaginase. Asparaginase hydrolyzes L-asparagine to L-aspartic acid and ammonia, thereby depleting these cells of asparagine and blocking protein synthesis and tumor cell proliferation, especially in the G1 phase of the cell cycle. The agent also induces apoptosis in tumor cells. Pegylation decreases the enzyme's antigenicity. Asparagine is critical to protein synthesis in leukemic cells, which cannot synthesize this amino acid due to the absence of the enzyme asparagine synthase. (NCI04)