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Erythrocyte-encapsulated L-asparaginase Suspension

National Cancer Institute

Source

National Cancer Institute. *Erythrocyte-encapsulated L-asparaginase Suspension*. NCI Thesaurus. Code C99767.

A suspension of erythrocytes encapsulating L-asparaginase with potential antineoplastic activity. Upon administration of erythrocyte-encapsulated L-asparaginase suspension, L-asparagine is hydrolyzed to L-aspartic acid and ammonia in plasma, thereby depleting tumor cells of asparagine. Due to low asparagine synthetase activity in tumor cells, de novo synthesis of asparagine is suppressed within tumor cells. Shortage of asparagine prevents synthesis of important proteins necessary for tumor cell growth. Encapsulation of asparaginase in erythrocytes decreases the immunogenicity of exogenous protein, enhances its circulation time and may limit toxicity.