

Supplemental Figures

Supplemental Figure S1. Kinetic Profiles of Plasma Asparaginase Activity After 84 Doses of 2,500 IU/m² of Pegaspargase in 48 Patients and Lower Doses in 2 Patients (Thin Dashed Curves).

Dotted lines are induction doses; solid lines are consolidation doses.

Supplemental Figure S2. Kinetic Profiles of Plasma Asparaginase Activity After Induction and Consolidation Doses of 2,500 IU/m² of Pegaspargase in 32 Patients Monitored After Both Doses.

Dotted lines are induction doses; solid lines are consolidation doses.

The horizontal dashed blue line indicates the 0.02 IU/mL asparaginase threshold for asparagine depletion. Vertical dashed black lines indicate day 22 after administration, the lower limit of the 96% confidence interval of asparagine depletion. Twenty one patients had similar levels after dose #2, 5 had higher levels (gray highlighted), 6 had evidence for delayed accelerated clearance after dose #2 (dashed outline). Only one patient had evidence for silent inactivation (solid black outline).

Supplemental Figure S3.

A. Percent Degradation of Asparagine as a Function of Asparaginase Levels from 0.001 to 0.1 IU/mL *In Vitro* at 37° and 4° C. Data from Lanvers-Kaminsky[20]. The regression curves are derived from the 4°C data.

B. Pegaspargase Kinetics at Low Levels of Enzyme and Substrate. At normal and lower concentrations of asparagine, the velocity of pegaspargase is directly and nearly linearly proportional to asparagine concentration.