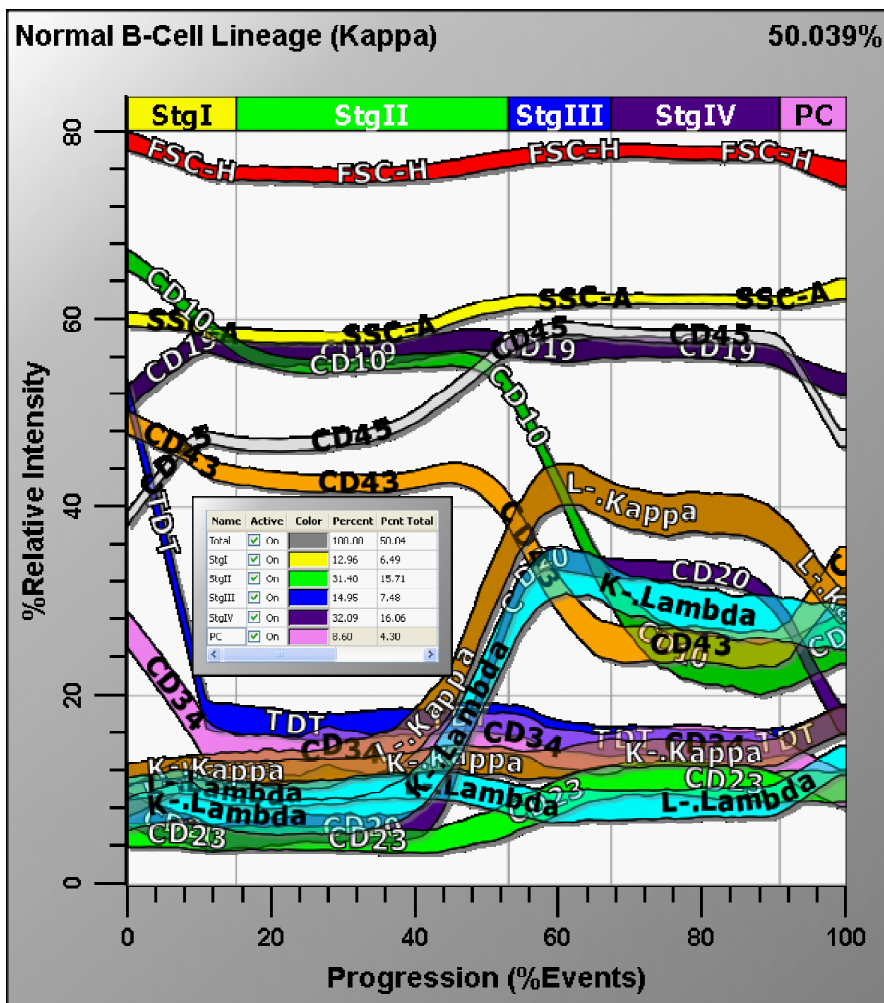# GemStone™

12-Parameter B-Cell Lineage Analysis

Data kindly provided by Dr. Frederic Preffer, Boston, MA

The above graph summarizes 12 parameter correlations associated with the lineage of B-cells in a normal marrow specimen (CD19, SSC, TdT, CD10, CD20, CD45, CD43, CD34, CD23, FSC, Kappa, and Lambda). The x-axis delineates the lineage progression where the percentages of all the sub-categories are directly read from the axis. The y-axis represents the relative intensity of all the parameters. The width of the bands is set to 0.2 SD's and therefore corresponds to the variability of the data as the cells differentiate. The tightly coordinated parameter transitions associated with the stages of B-cell maturation are clearly shown. The percentages of each of the B-cell states are summarized in the table. These percentages account for population overlap due to measurement error. It should be noted that this one graph represents all the correlations that would be present in 66 two-parameter histograms.

Think of it as the MRI of cytometry.

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GemStone™ is a revolutionary new paradigm for analysis of high-dimensional, flow cytometry data. Think of it as the MRI of cytometry.

Based on the patent-pending Probability State Modeling™ system, GemStone eliminates the problems that have faced cytometry analysis for decades, providing a solution that is science-based, data-driven, scalable, and reproducible.

GemStone is in development and preliminary testing, but you can get a preview of the technology at our web site, www.vsh.com.

Features:

▶ Novel analysis approach defines populations without gates.

▶ Unlike conventional analysis, GemStone's Probability State Models actually *improve* with additional parameters.

▶ Parametric Overlay plots present *all* parameters in a simple, correlated display that is easily understood by anyone with a basic understanding of biology.

▶ Advanced Panel Integration™ provides a new platform for analyzing and co-plotting all parameters for all files in a panel, revealing the true relationships of markers.

▶ A discovery tool - allowing scientists to understand new and previously hidden relationships of measured parameters.

▶ State Vector arrows and animations let you undersand your data as never before. Data zooming, a batch system with a built-in database, and database parameter mapping are a few of the innovative new features.