Model	Parameter	95% C.I.	2.5 years	5.0 years	7.5 years	10 years
Power-law		Lower	0.1784	0.2464	0.2711	0.2803
	$\hat{\alpha}_f$		0.2652	0.2794	0.2918	0.2953
		Upper	0.3520	0.3123	0.3125	0.3104
		Lower	-0.0218	1.1065	1.3567	1.4275
	$\hat{g}_f$		1.3231	1.3595	1.4667	1.4912
		Upper	2.6679	1.6126	1.5768	1.5549
Fast/slow		Lower	0.9327	-1.7684	-0.2701	-0.0387
	$\hat{F}_{\text{slow}}$		0.9907	0.1088	0.1357	0.1885
		Upper	1.0487	1.9861	0.5415	0.4157
		Lower	0.1959	-1.8579	-0.2941	-0.0675
	$\hat{k}_{\text{slow}}$		0.2362	0.0000	0.0000	0.0350
		Upper	0.2764	1.8579	0.2941	0.1374
		Lower	-171.7421	-0.1297	0.1855	0.2443
	$\hat{k}_{\text{fast}}$		8.5029	0.2875	0.3017	0.3139
		Upper	188.7480	0.7046	0.4179	0.3834
Simple		Lower	0.2262	0.2325	0.2223	0.2137
	$\hat{k}$		0.2423	0.2392	0.2271	0.2180
		Upper	0.2583	0.2459	0.2320	0.2223

The addition of variability affected estimation of the power-law model parameters for the different time intervals: the exact parameter values $\alpha_f = 0.3660$ and $g_f = 2.3365$ were not recovered, but they were not expected to be recovered. The estimated parameter values were, however, consistent as more data were included, and converged to fixed values that produced trajectories that were very close to the true trajectory. Further, all four of the estimated values of $\hat{\alpha}_f$ were contained in the 95% confidence intervals for each time interval, with decreasing confidence interval widths as more data were added indicating convergence to a stable value. The estimated values of $\hat{g}_f$ behaved similarly, except for the estimated parameter value for the 2.5 year data set which was outside the confidence intervals for the three longer time intervals.

The addition of variability clearly impacted estimation of the parameters and 95%

confidence intervals for the two-compartment double exponential decay fast/slow model. The extremely wide confidence interval for k_{fast} and the 2.5 year data set clearly indicate an ill-conditioned parameter covariance matrix, a consequence of over-fitting a model given the amount of data. In addition, for the 5.0 year data set, the confidence intervals for F_{slow}, k_{slow}, and k_{fast} all contain zero, possibly indicating a slightly ill-conditioned parameter covariance matrix. In fact, k_{slow} is equal to zero to at least four decimal places (actually seven), producing an essentially constant term for the slow decay compartment, a result that is not biologically plausible given that a two compartment model was assumed. The 7.5 year data set also produced a confidence interval for k_{slow} that contained zero, and this time interval should have been long enough and contained enough data points to successfully estimate three independent parameters for identifiable compartments in the two-compartment double exponential decay fast/slow decomposition model. The estimated parameters for the 10 year data set were comparable in magnitude to those from the no added variability scenario, but the values were different.

The addition of variability did not have a significant impact on the parameter values and confidence intervals for the simple exponential decay model, which produced comparable estimated parameter values to the no added variability scenario and, essentially, behaved as they did for the no added variability scenario. The only difference from the no added variability scenario was that the 95% confidence intervals overlaped for the 2.5 and 5.0 year data sets in the added variability scenario, but the estimates of the characteristic rates $\hat{k}$ for these two data sets were outside the overlap regions and were still statistially significantly different.