

**S4** Parameter estimates of the finalized parametric model by donor source and adjusted for regions in the United States. List of clinical covariates (shown in Table S2). Weibull as baseline hazard.  $\phi$  indicates EHA analysis.

Weibull	Post-Transplant time lapse			
	$\leq 100$ days	>100 days & $\leq 365$ days	>365 days	>365 days $^\phi$
<u>Unrelated</u>				
lambda	6.2631 (4.5953, 8.5364)	0.7672 (0.5725, 1.0280)	0.0139 (0.0022, 0.0882)	0.0016 (0.0000, 0.1546)
k	0.9613 (0.9599, 0.9627)	1.2334 (1.1879, 1.2807)	1.6590 (1.6184, 1.7005)	1.4842 (1.4236, 1.5474)
log-likelihood	1025.613	-662.5459	-4948.671	-6972.142
<u>Related</u>				
lambda	5.5735 (4.1923, 7.4097)	0.3354 (0.0871, 1.2914)	0.0093 (0.0006, 0.1450)	0.0003 (0.0000, 1.1865)
k	1.0037 (1.0035, 1.0038)	1.3964 (1.3144, 1.4836)	1.5175 (1.4757, 1.5604)	1.4883 (1.4035, 1.5782)
log-likelihood	1028.346	-327.6726	-2299.933	-3206.876