Additional file 2

Commonly used conditional latency survival distribution and parametric mixture cure rate models

	$S(t\|Y=0)$*	$S(t)^{\dagger} = \pi + (1-\pi)S(t\|Y=0)$	$h(t)^{\ddagger}$
Exponential	$e^{-\theta_1 t}$	$\pi + (1-\pi)e^{-\theta_1 t}$	$\frac{\theta_1(1-\pi)e^{-\theta_1 t}}{\pi + (1-\pi)e^{-\theta_1 t}}$
Weibull	$e^{-(\theta_1 t)^{\theta_2}}$	$\pi + (1-\pi)e^{-(\theta_1 t)^{\theta_2}}$	$\frac{\theta_1\theta_2(\theta_1 t)^{\theta_2-1}(1-\pi)e^{-(\theta_1 t)^{\theta_2}}}{\pi + (1-\pi)e^{-(\theta_1 t)^{\theta_2}}}$
Lognormal	$1-\Phi\left(\frac{\log(t)-\theta_1}{\theta_2}\right)$	$1-(1-\pi)\Phi\left(\frac{\log(t)-\theta_1}{\theta_2}\right)$	$\frac{\frac{(1-\pi)}{t\theta_2}\phi\left(\frac{\log(t)-\theta_1}{\theta_2}\right)}{1-(1-\pi)\Phi\left(\frac{\log(t)-\theta_1}{\theta_2}\right)}$
Loglogistic	$\frac{1}{1+(\theta_1 t)^{\theta_2}}$	$\pi + \frac{(1-\pi)}{1+(\theta_1 t)^{\theta_2}}$	$\frac{(1-\pi)\theta_1\theta_2(\theta_1 t)^{\theta_2-1}}{[1+(\theta_1 t)^{\theta_2}]^2\left[\pi + \frac{(1-\pi)}{1+(\theta_1 t)^{\theta_2}}\right]}$

* Survival function for the population subject to event of interest;
† Survival function for the entire population;
‡ Hazard function for the entire population.