Possible marginal survival functions

	Parameters	$h(t)$	$S(t)$	$S^{-1}(U)$
Weibull	$\lambda, \rho > 0$	$\lambda\rho t^{\rho-1}$	$\exp(-\lambda t^{\rho})$	$\left(-\frac{\log(U)}{\lambda}\right)^{1/\rho}$
Gompertz	$\lambda, \gamma > 0$	$\lambda\exp(\gamma t)$	$\exp\left\{-\frac{\lambda}{\rho}[\exp(\gamma t)-1]\right\}$	$\frac{1}{\gamma}\log\left(1-\frac{\gamma}{\lambda}\log(U)\right)$
logLogistic	$\alpha \in \mathbb{R}, \kappa > 0$	$\frac{\exp(\alpha)\kappa t^{\kappa-1}}{1+\exp(\alpha)t^{\kappa}}$	$\frac{1}{1+\exp(\alpha)t^{\kappa}}$	$\left(-\frac{1-1/U}{\exp(\alpha)}\right)^{1/\kappa}$
logNormal	$\mu \in \mathbb{R}, \sigma > 0$	$\frac{\exp\left\{-[\log(t)-\mu]^2/2\sigma^2\right\}}{t\sqrt{2\pi}\sigma\left[1-\Phi\left(\frac{\log(t)-\mu}{\sigma}\right)\right]}$	$1-\Phi\left(\frac{\log(t)-\mu}{\sigma}\right)$	$\exp\left(\mu+\sigma\Phi^{-1}(1-U)\right)$

with $\Phi(\cdot)$ the cdf of a standard Normal.