Goodness of fit of the selected models was further evaluated by reviewing probability plots. The LIFEREG procedure uses an iterative algorithm developed by Turnbull (1976) to compute a non-parametric maximum likelihood estimate of the cumulative distribution function (CDF) for the data and uses an inverse distribution scale to plot CDF as a straight line. The CDF estimated from the data plots is compared with the straight line to evaluate the deviation to the assumed distribution. We took out the effect of the covariates and created the probability plots for the residuals. The probability plots showed that the selected distribution for most transition types fits the data well, while the models for the transition from low to moderate and from moderate to low have a moderate deviation from the selected model. As a sensitivity analysis for the violation of the distribution assumption, we implemented a semi-parametric model—the Cause-Specific Subdistribution Hazards (CSSH) model from Fine and Gray (1999) and compared the parameter estimates for the transition from low to moderate (Supplementary Table SVIII) and from moderate to low (Supplementary Table SIX). As this model can only work with right censored data, the midpoint of the time interval is used for the cases with observed transitions. The parameter estimates between the CSSH model and the AFT model with log-normal distribution are mostly consistent in terms of the significant covariates and the direction of the parameter estimates. This provides evidence of robustness to the model distribution assumption.

Supplementary Table SVIII Comparison of parameter estimates between the AFT model and the CSSH model for the transition from low to moderate.

	AFT	CSSH	Direction of signs
≥25, <30 years			
≥30, <35 years	Significant	Significant	Consistent
≥35 years	Significant	Significant	Consistent
Currently not married			
Hispanic	Significant	Significant	Consistent
Black, Non-Hispanic	Significant	Significant	Consistent
Asian, Non-Hispanic	Significant	Consistent	
Other	Significant		Consistent

ATF, accelerated failure time; CSSH, Cause-Specific Subdistribution Hazards.