



Figure 6.1: Survival benefit is defined as the difference in 5-year life-expectancy with and without transplantation. While patients are waiting for LT, time passes and disease severity typically changes. At the moment of transplantation, benefit is estimated. The survival up until transplantation (‘survival before LT’) is used to predict waiting list survival in absence of transplantation (‘survival without LT’). Without LT survival is then contrasted to posttransplant survival (‘with LT’) to calculate benefit.

first registration is suboptimal, as LT candidates on average have to wait six to eight months for transplantation.⁵ During this time, liver disease will typically progress,^{24,25} patients can drop out,⁵ or HCC could be downstaged.⁶ This changes survival rates as compared to baseline.^{20,21,23,26} Because survival is gained from the moment of possible transplantation, benefit should be counted from that moment on, see Figure 6.1. Lastly, benefit evaluation reflective of the current US population and allocation is missing.

Therefore, the goal of this study was to estimate survival gain from transplantation in a large and recent US cohort. We compared LT survival benefit between non-HCC and HCC patients. Life expectancy with transplantation was contrasted to life expectancy without transplantation. We constructed an online benefit application that calculates life expectancy gained from transplantation based on specified patient characteristics.