$$\hat{\Lambda}\{t;\theta,\alpha\} = \int_0^t \frac{\sum_i \exp\left\{\int_0^{s-} D_i(u)du\theta\right\} Y_i(s)\left\{dN_i(s) - D_i(s)\theta ds - \alpha^\top L ds\right\}}{\sum_i \exp\left\{\int_0^{s-} D_i(u)du\theta\right\} Y_i(s)}$$

- Model misspecification: using cross-fitting to estimate the baseline hazard where I made it a step function
- Found the previous code used an approximate version of baseline hazard, where I made the denominator a step function, but the simulation is good
- Approximated the baseline hazard using step function, but simulation is wierd. $\hat{\alpha}$, average of 1000 repetition is not equal to 0.25, whether for $N = 800$ or $N = 1600$.
    - Checked the coding, changed the baseline hazard into the true function, $0.25t$, the estimation is accurate.
    - There are some trends, since when I thought of the proof that the convergence may be related to the $max_k\{T^{(k+1)} - T^{(k)}\}$, I changed the grid from 0.01 to the original value, that the time points estimation was conducted is changed from about 200 to 800 (for $N = 800$). the estimation is better, but it is still not equal