STAT 6390: Analysis of Survival Data

Textbook coverage: Chapter 2

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Survivor, hazard and cumulative hazard functions

- Suppose the actual (uncensored, untruncated) survival time of an individual is t and can be regarded as the observed value of a variable, T.
- We assume the support of T is non-negative or $(0, \infty)$.
- We call T the *random variable* associated with the survival time, and we define T has a cumulative distribution function given by $F(t) = P(T \leq t)$.
- The survival function of T is then defined as

$$S(t) = 1 - P(T \leq t) = 1 - F(t).$$

- Why are we more interested in $S(t)$?

Loading `survMisc`, Ver 0.4.6.

- Most datasets in the book are available via `R` package **`survMisc`**, version 0.4.6 or eariler.
- Archived `R` package can be installed as follows

```
> ## install.package("devtools")
> library(devtools)
> install_version("survMisc", version = "0.4.6")
```

- `install.package()` installs the latest version.
- `install_version()` installs a specified package.