

## LIFE TABLE

A life table is often used by medical researchers interested in the probability that a patient might die over a period of observations. This might be done, for example, for patients that have received treatment for cancer. However, a life table can be used for a variety of other applications. For example, assume you are a successful auto sales company and have advertised a free annual checkup for any new automobile purchased from this dealer. Each year is an opportunity to observe repair or replacement of specific parts for the autos sold. Assume you have sold 200 new cars this year. The “Start” of observations is “0” when the car is sold. The “End” of the first year since purchase is a “1”, and so on for each subsequent year. The “Alive” that is recorded each year’s observation is the number of autos that needed no repair or part replaced. The “Died” is the number that did require a repair or replacement part (excluding normal maintenance like oil and fuel filters.) Of course, some customers may have sold their car during any one year’s observation (or moved out of state, etc. and are lost for observation. These are called “Censored” subjects.

Once the data have been collected over a number of yearly observations, you can determine the probability that a repair or replacement will be required (you may use your parts department to determine which parts were most likely to have failed or even create a separate life table for each of specific parts you may suspect might fail.)