Survival curves illustrate prognosis. The percentage of patients reaching an endpoint (eg, death, recurrence of disease, or cure) is plotted on the y (vertical) axis against time on the x (horizontal) axis.

**PLOTTING A SURVIVAL CURVE**

Two common plotting methods are used. With the actuarial method, the x axis is divided into regular intervals (eg, by month) and percent survival is calculated for each interval. With the Kaplan-Meier method, percent survival is recalculated each time a patient dies (or reaches a different endpoint). Consider the example here (Figure).

*Time zero* is when each patient entered the trial. *Survival* is the percentage of patients still alive thereafter. *Median survival* is found by extending a horizontal line from the 50% survival point until it intersects the curve (24 months in this case).

**LIMITATIONS**

Survival curves have limitations. Consider a study that enrolls patients between 1996 and 2002 and ends in 2005. All that is known about a patient enrolled in 2002 who survived until 2005 is that he or she survived 3 years. Some patients also drop out of the study early or are lost to follow-up. Some patients die from causes other than the one under study.

*Censoring* is the process of excluding data from survival curves when information about survival is unknown. For a patient who drops out early, for example, only data obtained when the patient was followed would be included. The result is a more accurate picture of survival for the patients under study.

**REFERENCE**