Survival (time to event) data II

In this Endgames article (BMJ 2010;341:c3665, doi:10.1136/bmj.c3665), statement c is true and not false as indicated. The survival curves presented are “plotted going up.” Time zero on the plot represents when patients were randomised to treatment groups. At that stage, none of the participants had achieved a fully sustained return to work and therefore the probability was equal to zero. The probabilities, so called Kaplan-Meier probabilities, are cumulative ones. The curves therefore represent the probability of a fully sustained return to work by a particular time, or earlier, after randomisation (c is true).

Kaplan-Meier plots are often “plotted going down.” See http://www.bmj.com/content/347/bmj.f7118 for an example. For the trial above, this would entail plotting the proportion of participants that had not experienced a fully sustained return to work. If “plotted going down,” the survival curve would start at the probability of 1.0 and decline with time. The probabilities are still cumulative ones and would, in principle, contain the same information as a curve “plotted going up.” However, since the time until a fully sustained return to work incorporated censored data then the interpretation of a curve “plotted going down” is slightly different. For such curves, the Kaplan-Meier probabilities would represent the probability of experiencing a fully sustained return to work so many days, or longer, after starting treatment. Then statement c would be false.

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