Application of the Gompertz Method for Evaluating Survival Gains in Patients Receiving Cardiac Resynchronization Therapy

In the paper by Finegold and coworkers (1), the methods used for the survival analysis have been described with insufficient detail. It appears, however, that lifespan gains were calculated through a separate analysis of each individual trial, were then “weighted according to study size,” and finally were “averaged across all trials.”

This step of the survival analysis, which is described by Finegold and coworkers (1) in their Results section and not in the Methods, needs to be clarified in at least 2 aspects. First, the weighting process is essential to any meta-analysis, because in this way, between-trial variations are explored and confidence intervals for differences are estimated. So, one question is why the results were presented exclusively on the basis of the pooled (or “average”) survival gain, without any information on the gains calculated for each individual trial and without any measure of statistical variability. Second, in the calculation of the trial-specific lifespan gains, the authors state that they “used the Gompertz method for this.” However, fitting a Kaplan-Meier curve to the Gompertz equation is a complex task from a mathematical and statistical viewpoint (2,3), and it is unfortunate that no details were provided on this point.

If these inconsistencies are clarified, this paper can be viewed as an important contribution in this field, mainly for reasons of cost-effectiveness. Given that the gain of 1 month can be valued at approximately €5,000 according to common benchmarks (4–7), this study shows that the clinical benefit of this procedure is not, as suggested by short-term data, only approximately 1 month (equivalent to €5,000, which would not even cover the device cost) but could be as high as 6.5 months (equivalent to more than €30,000, which is much more than the cost of the device).

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