

Article V

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Attributable fractions with survival data

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ABSTRACT

Attributable fraction (AF) is an important concept in clinical and epidemiological studies. The concept has mainly been discussed in relation to case–control studies, cross-sectional studies, and follow-up studies of fixed length. Here, we propose and discuss several ways of defining and estimating AFs with right-censored survival data, and thus with varying lengths of follow-up. In particular, we define the attributable hazard fraction, the AF before time t , and the AF within study. These measures have different interpretations and may give different numerical values, as illustrated in an application to real data on time to the first receiving of cash benefits for hearing impairment in children. The results underline the need for careful selection of the type of measure and interpretation when reporting AFs for survival data.

KEY WORDS: attributable risk; bootstrapping; censoring; intervention; proportional hazards; time to event