

Propositions accompanying the thesis:

## Extended Joint Models for Longitudinal & Time-to-event Data with applications in Cardiothoracic Surgery

1. Intermediate events are common in follow-up studies, and ignoring their occurrence affects the quality of the predictions. (this thesis)
2. Dynamic predictions that are adaptive to the timing of the intermediate event can become the basis for methodology that can be used to predict the optimal time for the future treatment. (this thesis)
3. While the specification of the inter-relationships between outcomes should be driven by clinical background knowledge, to the extent possible, this is not always feasible in practice as the identification of their association structure might be the research question itself. (this thesis)
4. The subject-specific nature of the missing at random characterization in shared parameter models comes with the advantage of more flexible comparisons regarding the causes of missingness. (this thesis)
5. Good communication of existing methodology is as important in practice as the development of methodology itself. (this thesis)
6. Processes that cause events and drive outcomes rarely act independently and in isolation in nature. We should always keep that in mind when developing statistical models.
7. Once in a conference, one said, "I do not believe in random effects." That's when I started thinking about random effects as a sort of religion. They are unobservable entities that we rely on, explaining what is still unknown to us, much like gods are. Thankfully, in that case, the "unknown" can be set as a quantity normally distributed around zero with finite variance. But still, you may either believe in that quantity or not.
8. Coding is an essential skill for a statistician. With a simple method that is available in software, one may do a naive analysis. With an advanced method that is not available in software, one may do nothing yet.
9. Looking for statistical answers without having any specific research questions is like googling symptoms without advising your doctor. You will find something that fits.
10. Logical validity is not a guarantee of truth. (David Foster Wallace - Infinite Jest)
11. Uncertainty is inherently unsustainable. Eventually, everything either is or isn't. (Rick Sanchez, Rick and Morty Season 2)

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