

## **Agenda MI Comp Risks meeting ISCB**

Location: ISCB, Leuven (Belgium)

Attendees: Ed Bonneville (EB), Hein Putter (HP), Liesbeth de Wreede (LdW), Matthieu Resche-Rigon (MRR), Bart Mertens (BM) and Jacques-Emmanuel Galimard (JEG)

### **1. Summary of work since last meeting**

- Simulation study implemented on computer cluster, for cause-specific hazards (code available on Gitlab).
- Can draw time to event for single and independent Weibull distributions
- Tried different kinds of MAR mechanism (MAR\_W)
- Added smcfcs from Bartlett into comparison

### **2. Simulation study**

#### **a. Run through set-up document**

#### **b. Look at and discuss results on Shiny app**

- Interaction no longer useful with MAR\_W mechanism, though ch12 is still good
- As beta is larger, approximation wanes
- Winner most of the time (in terms of bias) is smcfcs

### **3. Future directions**

- Fine & Gray model, with Taylor approximations but also maybe with smcfcs or full Bayesian.
- Including censoring
- Different MAR mechanisms, using DAGs to explain where bias may arise from
- Binary covariates, multiple missingness patterns
- Non-normal covariates, or  $Z$  highly skewed with an association with  $t$
- Estimates of cumulative incidence