

Assignment II for

EP16: Missing Values in Clinical Research

Multiple Imputation

13 – 17 May, 2019

Data

The **MI_{dat21}** data comprise data of 965 liver transplant patients that are followed up after receiving the transplant, from a multi-center study.

The dataset contains the following variables:

| variable | explanation |
|----------|--|
| ID | patient identifier |
| outcome | survival outcome |
| time | event time |
| bg_rec | blood group of the recipient (patient) |
| age_rec | age of the recipient (patient) |
| year | year the transplant was performed |
| graft | type of graft (HF: heart beating donor, full liver; HP: heart beating donor, partial liver; DF: domino transplant, full liver; LL: living donor, split liver; NF: non-heart beating donor, full liver; HR: heart beating donor, reduced liver; NP: non-heart beating donor; partial liver) |
| isc_time | ischemic time (time the organ was outside the body) |
| bg_don | blood group of the organ donor |
| center | study center identifier |
| age_don | age of the donor |
| birth | year of birth of the recipient (patient) |
| sex | sex of the recipient (patient) |
| bg_match | are the blood groups of donor and recipient equal? (<code>"factor(bg_don == bg_rec)"</code>) |

Analysis model of interest

The analysis model of interest is a time-to-event model with event time `time` and event indicator `outcome` and covariates `year`, `bg_match`, `isc_time`, `age_don`, `age_rec` and `sex`.