gtsummary

Daniel D. Sjoberg, Karissa Whiting, Margaret Hannum, Emily C. Zabor, Michael Curry

Introduction

Data Summaries

The most common summary needed for research projects are simple summaries of data sets. To show use of gtsummary functions, we will use a simulated clinical trial data set containing baseline characteristics of 200 patients who received Drug A or Drug B as well as the outcome of tumor response to the treatment. The data set has label attributes (using the labelled package) for column names.

Table 1: Example data frame, `trial`

colname	label	class	values
trt	Chemotherapy Treatment	character	`Drug A`, `Drug B`
age	Age	numeric	`6`, `9`, `10`, `17` , ...
marker	Marker Level (ng/mL)	numeric	`0.003`, `0.005`, `0.013`, `0.015` , ...
stage	T Stage	factor	`T1`, `T2`, `T3`, `T4`
grade	Grade	factor	`I`, `II`, `III`
response	Tumor Response	integer	`0`, `1`
death	Patient Died	integer	`0`, `1`
ttdeath	Months to Death/Censor	numeric	`3.53`, `5.33`, `6.32`, `7.27` , ...

`tbl_summary()`

The `tbl_summary()` function can be used to easily create a basic summary statistic table. This is often the first table of clinical manuscripts and describes characteristics of the cohort under study. A simple example is shown below with some basic customizations using the function's main arguments. Notably, by specifying the "by" argument, you can divide your summary statistic into comparator groups. In this case, we will split the table by treatment arms.

```
tbl_summary_1 <-
  trial %>%
  select(age, grade, response, trt) %>%
  tbl_summary(by = trt)
```

1 is basic

Figure 1: Basic ‘tbl_summary()‘ example

Characteristic	**Drug A**, N = 98[1]	**Drug B**, N = 102[1]
Age	46 (37, 59)	48 (39, 56)
Unknown	7	4
Grade		
I	35 (36%)	33 (32%)
II	32 (33%)	36 (35%)
III	31 (32%)	33 (32%)
Tumor Response	28 (29%)	33 (34%)
Unknown	3	4

[1] Median (IQR); n (%)

`tbl_svysummary()`

`tbl_cross()`

`tbl_survfit()`

Customization

Model Summaries

`tbl_regression()`

`tbl_uvregression()`

In-line Reporting

Merging and Stacking

Themes

Print Engines