Death-table.R

Admin

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```r
library(tern)
```

```
## Loading required package: rtables
```

```
## Loading required package: formatters
```

```
##
## Attaching package: 'formatters'
```

```
## The following object is masked from 'package:base':
##
##     %||%
```

```
## Loading required package: magrittr
```

```
##
## Attaching package: 'rtables'
```

```
## The following object is masked from 'package:utils':
##
##     str
```

```
## Registered S3 method overwritten by 'tern':
##   method    from
##   tidy.glm  broom
```

```r
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
adsl <- random.cdisc.data::cadsl

# Ensure character variables are converted to factors and empty strings and NAs are explicit
missing levels.
adsl <- df_explicit_na(adsl) %>% filter(SAFFL == "Y")

# Reorder the levels in "DTHCAT" to put Other category at the end.
adsl$DTHCAT <- factor(adsl$DTHCAT, levels = c("ADVERSE EVENT", "PROGRESSIVE DISEASE", "OTHE
R", "<Missing>"))

dthcaus_levels <- levels(adsl[adsl$DTHCAT == "OTHER", ]$DTHCAUS)

# create a helper variable DTHCAUS_other
adsl <- adsl %>%
  mutate(
    DTHCAUS_other = factor(ifelse(
      DTHCAT == "OTHER" & DTHCAUS != "Post-study reporting of death", as.character(DTHCAUS),
NA
    ), levels = c("LOST TO FOLLOW UP", "SUICIDE", "UNKNOWN", "MISSING")) %>% explicit_na()
  )

lyt <- basic_table(show_colcounts = TRUE) %>%
  split_cols_by("ACTARM", split_fun = add_overall_level("All Patients", first = FALSE)) %>%
  count_values(
    "DTHFL",
    values = "Y",
    .labels = c(count_fraction = "Total number of deaths"),
    .formats = c(count_fraction = "xx (xx.x%)")
  ) %>%
  analyze_vars(
    vars = c("DTHCAT"),
    var_labels = c("Primary Cause of Death"),
    table_names = "primary_cause"
  ) %>%
  split_rows_by("DTHCAT", split_fun = keep_split_levels("OTHER"), child_labels = "hidden") %
>%
  count_values(
    "DTHCAUS",
    values = dthcaus_levels[5],
    .labels = c(count_fraction = "Post-study reportings of death"),
    .formats = c(count_fraction = "xx (xx.x%)"),
    .indent_mods = c(count_fraction = 2L),
    table_names = "post_study_deaths"
  ) %>%
  count_values(
    "DTHCAUS",
    values = dthcaus_levels[-5],
    .labels = c(count_fraction = "All other causes"),
    .formats = c(count_fraction = "xx (xx.x%)"),
    .indent_mods = c(count_fraction = 2L),
    table_names = "all_other_causes"
  ) %>%
  analyze_vars(
    "DTHCAUS_other",
    .stats = "count_fraction",
```

```
    .indent_mods = c("count_fraction" = 3L),
    show_labels = "hidden"
  )

result <- build_table(lyt, df = adsl)

result
```

```
##                                   A: Drug X    B: Placebo   C: Combination   All Patien
ts
##                                    (N=134)      (N=134)        (N=132)         (N=400)
##
   ─────────────────────────────────────────────────────────────────────────────────────
## Total number of deaths           25 (18.7%)   23 (17.2%)    22 (16.7%)       70 (17.
5%)
## Primary Cause of Death
##   n                                  25           23            22               70
##    ADVERSE EVENT                   9 (36%)      7 (30.4%)    10 (45.5%)        26 (37.
1%)
##    PROGRESSIVE DISEASE             8 (32%)      6 (26.1%)     6 (27.3%)        20 (28.
6%)
##    OTHER                           8 (32%)     10 (43.5%)     6 (27.3%)        24 (34.
3%)
##      Post-study reportings of death 1 (12.5%)   2 (20.0%)     1 (16.7%)       4 (16.7%)
##      All other causes             7 (87.5%)    8 (80.0%)     5 (83.3%)        20 (83.
3%)
##        LOST TO FOLLOW UP          2 (28.6%)     2 (25%)       2 (40%)          6 (30%)
##        SUICIDE                    2 (28.6%)     2 (25%)       1 (20%)          5 (25%)
##        UNKNOWN                    1 (14.3%)    1 (12.5%)        0              2 (10%)
##        MISSING                    2 (28.6%)    3 (37.5%)      2 (40%)          7 (35%)
```