rtables - Reporting tables with R:: CHEAT SHEET

build table(adsl)

append_topleft(" Attribute") |>

Basics

The **rtables** R package is designed to create and display complex tables with R.

Every rtable layout is constructed starting with **basic_table** and is rendered using build table.

CODE

tbl_a <- basic_table() |> split_cols_by("ARM") |> split_rows_by("STRATA1") |> analvze("AGE") |> build_table(adsl)

TABLE OUTPUT

		ARM X	ARM Y
A B	Mean	33.32	35.86
	Mean	33.65	38.00

Layout & Tabulation

CUSTOMIZED TABLE CODE

ANALYZE & SUMMARIZE FUNCTIONS analyze() analyze_colvars()

summarize row groups()

LAYOUT MODIFIERS

append_topleft() add_colcounts() add_overall_col()

CUSTOMIZED TABLE OUTPUT

<pre>pasic_table(show_colcounts = TRUE) > split_cols_by("ARM") > add_overall_col("TOTAL") ></pre>	Biomarker 2 Level Attribute	ARM X (N=42)	ARM Y (N=40)	TOTAL (N=82)
split_rows_by("BMRKR2",	LOW	22 (52.4%)	25 (62.5%)	47 (57.3%)
<pre>split_label = "Biomarker 2 Level", label_pos = "topleft") ></pre>	Age (yrs) mean	33.5	36.4	35.1
<pre>summarize_row_groups() ></pre>	Stratif. Term			
<pre>analyze("AGE", var_labels = "Age (yrs)", afun = mean, format = "xx.x") ></pre>	A B	9 (21.43%) 13 (30.95%)	12 (30.00%) 13 (32.50%)	21 (25.61%) 26 (31.71%)
<pre>analyze("STRATA1", var_labels = "Stratif. Term",</pre>	HIGH	20 (47.6%)	15 (37.5%)	35 (42.7%)
<pre>afun = function(x, .N_col) lapply(table(x),</pre>	Age (yrs) mean	33.5	37.7	35.3
function(xi) rcell(Stratif. Term			
xi * c(1, 1 / .N_col), format = "xx (xx.xx%)"	B B	10 (23.81%) 10 (23.81%)	9 (22.50%) 6 (15.00%)	19 (23.17%) 16 (19.51%)
))) >				

For more information on customizing tables, see the Introduction vignette

Customization Options

ANALYZE & SUMMARIZE FUNCTIONS

Argument	Input	Effect on Table
afun/cfun	Analysis function	The function is used to calculate cell values
var_labels	Labels for variables being analyzed	Labels are printed in the leftmost column
format	Format string or function	Format is applied to render cell values
na_str	String to represent NA values	String is printed in place of missing values
inclNAs	TRUE or FALSE	Changes whether records with NA are included in analysis
show_labels	"default", "visible", or "hidden"	var_labels are printed or hidden in the table
indent_mod	Number of spaces to indent by	Current analysis rows are indented
section_div	String to divide split sections by	String is printed between groups defined by current split

Simple Tabulation

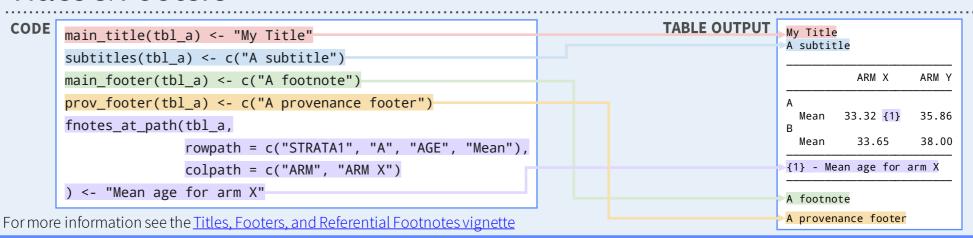
Quick tables with **qtable** – an extension of base::table for exploratory work & data summarization.

For more information on quick tables, see the Ouick Start vignette article

ODE	qtable(adsl,
	row_vars = c(
	<pre>col_vars = c("ARM"), avar = "AGE", afun = mean</pre>
)

TABLE OUTPUT (N=42)(N=40)33.00 33.44 39.25 32.75 34.50 Χ 34.29 34.50 Ζ 26.25 47.50 35.75 36.57

Titles & Footers





Split Functions

Split functions are used to **add, remove, or transform** the levels of the variable used in a split.

ROW SPLITSCOLUMN SPLITSsplit_rows_by()split_cols_by()split_rows_by_multivar()split_cols_by_multivar()split_rows_by_cuts()split_cols_by_cuts()split_rows_by_cutfun()split_cols_by_cutfun()split_rows_by_quartiles()split_cols_by_quartiles()

SPLIT FUNCTIONS

 $\begin{tabular}{ll} remove_split_levels() & add_overall_level() & trim_levels_in_group() \\ keep_split_levels() & add_combo_levels() & trim_levels_to_map() \\ \end{tabular}$

drop_split_levels()

drop_and_remove_levels()

CODE TABLE OUTPUT

```
basic_table() |>
  split_cols_by(
    "ARM",
    split_fun = remove_split_levels(c("ARM Y"))
) |>
  split_rows_by(
    "STRATA1",
    split_fun = reorder_split_levels(c("B", "A"))
) |>
  analyze("AGE") |>
  build_table(adsl)
```

For information on custom split functions, see ?custom split funs

Sorting & Pruning

Sorting functions are used to **reorder table rows** according to a given criteria function. Pruning functions are used to **remove table rows** according to a given criteria.

SORT FUNCTION SORTING CRITERIA FUNCTIONS ARM X tbl <- basic table() |> sort_at_path() cont_n_allcols() split cols by("ARM") |> 19 (45.2%) split_rows_by("STRATA2") |> cont n onecol() summarize_row_groups() |> 23 (54.8%) 0 (0.0%) build table(adsl) PRUNE FUNCTION PRUNING CRITERIA FUNCTIONS all_zero_or_na() prune_table() prune_empty_level() content_all_zeros_nas() tbl |> ARM X sort_at_path(all zero() prune zeros only() low obs pruner() "STRATA2", 23 (54.8%) scorefun = cont n allcols 19 (45.2%)

For more information see the <u>Pruning and Sorting vignette</u>

Rendering

rtables prints output in ASCII format in the R console.
rtable objects can also be paginated, converted to different output types in the console, and exported to various file types.

R SESSION OUTPUT

Viewer(tbl)

ARM X

33.65

33.32

ARM Y

19 (47.5%)

21 (52.5%)

0 (0.0%)

ARM Y

21 (52.5%)

19 (47.5%)

Mean

Mean

toString(tbl)

as_html(tbl)

tt_to_flextable(tbl)

PAGINATION

```
paginate_table(
    tbl,
    page_type = "letter",
    font_family = "Courier",
    font_size = 8,
    landscape = FALSE,
    verbose = FALSE
)
```

For more information on pagination, see ?paginate_table

EXPORT







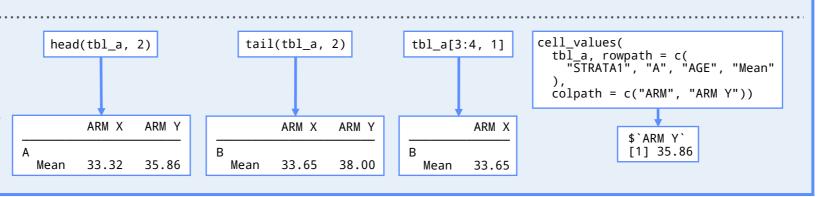


export_as_txt(tbl, "tbl.txt")

export_as_tsv(tbl, "tbl.tsv")

Access & Modify

ACCESSORS head(tbl,n) cell_values(tbl,rowpath, colpath) tail(tbl,n) value_at(tbl,rowpath, colpath) tbl[x,y] top_left(tbl) MODIFIERS tbl[x,y]<- rcell(...) rbind(tbl_1,tbl_2) top_left(tbl)<- "XXX" cbind_rtables(tbl_1,tbl_2)



prune_table()

