

Package: admiralophtha (via r-universe)

October 12, 2026

Type Package

Title ADaM in R Asset Library - Ophthalmology

Version 1.5.0.9004

Description Aids the programming of Clinical Data Standards Interchange Consortium (CDISC) compliant Ophthalmology Analysis Data Model (ADaM) datasets in R. ADaM datasets are a mandatory part of any New Drug or Biologics License Application submitted to the United States Food and Drug Administration (FDA). Analysis derivations are implemented in accordance with the ``Analysis Data Model Implementation Guide" (CDISC Analysis Data Model Team, 2021,
<<https://www.cdisc.org/standards/foundational/adam/adamig-v1-3-release-package>>).

License Apache License (>= 2)

URL <https://pharmaverse.github.io/admiralophtha/>,
<https://github.com/pharmaverse/admiralophtha/>

BugReports <https://github.com/pharmaverse/admiralophtha/issues/>

Depends R (>= 4.1)

Imports admiral (>= 1.5.0), admiraldev (>= 1.5.0), dplyr (>= 1.1.1),
hms (>= 0.5.3), lifecycle (>= 0.1.0), lubridate (>= 1.7.4),
magrittr (>= 1.5), purrr (>= 0.3.3), rlang (>= 0.4.4), stringr
(>= 1.4.0), tidyr (>= 1.0.2), tidyselect (>= 1.1.0)

Suggests devtools, diffdf, DT, here, htmltools, knitr, lintr, methods,
miniUI, pharmaversesdtm (>= 1.3.0), pkgdown, rmarkdown,
roxygen2, spelling, testthat (>= 3.0.0), tibble, usethis, withr

VignetteBuilder knitr

Config/roxygen2/markdown TRUE

Config/roxygen2/version 8.1.0

Config/testthat/edition 3

Encoding UTF-8

```
Language en-US
LazyData true
Roxygen list(markdown = TRUE, roclets = c("`collate", "`namespace",
  "`admiraldev::rdx_roclet"))
Config/pak/sysreqs cmake make libicu-dev libuv1-dev libxml2-dev
Repository https://pharmaverse.r-universe.dev
Date/Publication 2026-09-28 13:44:28 UTC
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RemoteRef HEAD
RemoteSha b8ac8ccd6d9862fca1edbb3c6d5e6284ad5a93c9
```

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admiralophtha_adbcva	<i>Best Corrected Visual Acuity Analysis Dataset</i>
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Description

An example Best Corrected Visual Acuity (BCVA) analysis dataset

Usage

```
admiralophtha_adbcva
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 7672 rows and 116 columns.

Source

Derived from the OE and ADSL datasets using `{admiral}`, `{admiralophtha}` and the **ADBCVA template**.

See Also

Other datasets: [admiralophtha_adga](#), [admiralophtha_adoe](#), [admiralophtha_advfq](#)

admiralophtha_adga	<i>Geographic Atrophy Analysis Dataset</i>
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Description

An example Geographic Atrophy analysis dataset

Usage

```
admiralophtha_adga
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 11508 rows and 103 columns.

Source

Derived from the OE and ADSL datasets using `{admiral}`, `{admiralophtha}` and the [ADGA template](#).

See Also

Other datasets: [admiralophtha_adbcva](#), [admiralophtha_adoe](#), [admiralophtha_advfq](#)

admiralophtha_adoe	<i>Ophthalmology Exam Analysis Dataset</i>
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Description

An example Ophthalmology Exam Analysis dataset

Usage

```
admiralophtha_adoe
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 19136 rows and 103 columns.

Source

Derived from the OE and ADSL datasets using `{admiral}`, `{admiralophtha}` and the [ADOE template](#).

See Also

Other datasets: [admiralophtha_adbcva](#), [admiralophtha_adga](#), [admiralophtha_advfq](#)

admiralophtha_advfq	<i>Visual Function Questionnaire Analysis Dataset</i>
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Description

An example Visual Function Questionnaire (VFQ) analysis dataset

Usage

```
admiralophtha_advfq
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 972 rows and 93 columns.

Source

Derived from the ADSL and QS datasets using `{admiral}`, `{admiralophtha}` and the [ADVFAQ template](#). The full, open-source VFQ questionnaire can be accessed [here](#).

See Also

Other datasets: [admiralophtha_adbcva](#), [admiralophtha_adga](#), [admiralophtha_adoe](#)

convert_etdrs_to_logmar	<i>ETDRS -> LogMAR conversion</i>
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Description

Convert ETDRS score to LogMAR units

Usage

```
convert_etdrs_to_logmar(value)
```

Arguments

value	object containing ETDRS score to convert to logMAR.
Permitted values	a numeric value, e.g. 2, -5, 1.4
Default value	none

Details

ETDRS value converted to logMAR as:

$$\log MAR = -0.02 * ETDRS + 1.7$$

Source for conversion formula: Beck, R.W., et al. A computerized method of visual acuity testing. American Journal of Ophthalmology, 135(2), pp.194-205. doi:[https://doi.org/10.1016/s0002-9394\(02\)01825-1](https://doi.org/10.1016/s0002-9394(02)01825-1).

Value

The input value converted converted to logMAR units.

Author(s)

Rachel Linacre

See Also

[convert_logmar_to_etdrs\(\)](#)

Examples

```
library(tibble)
library(dplyr)
library(admiral)

oe <- tribble(
  ~STUDYID, ~USUBJID, ~OETESTCD, ~OEMETHOD, ~OESTRESN,
  "XXX001", "P01", "VACSCORE", "logMAR EYE CHART", 1.08,
  "XXX001", "P02", "VACSCORE", "logMAR EYE CHART", 1.66,
  "XXX001", "P03", "VACSCORE", "logMAR EYE CHART", 1.60,
  "XXX001", "P04", "VACSCORE", "ETDRS EYE CHART", 57,
  "XXX001", "P05", "VACSCORE", "ETDRS EYE CHART", 62
)

adbcva <- oe %>%
  filter(OETESTCD == "VACSCORE" & toupper(OEMETHOD) == "ETDRS EYE CHART") %>%
  mutate(AVAL_LOGMAR = convert_etdrs_to_logmar(OESTRESN))

adbcva
```

`convert_logmar_to_etdrs`*LogMAR → ETDRS conversion*

Description

Convert LogMAR score to ETDRS units

Usage

```
convert_logmar_to_etdrs(value)
```

Arguments

`value` object containing logMAR score to convert to ETDRS.

Permitted values a numeric value, e.g. 2, -5, 1.4

Default value none

Details

logMAR value converted to ETDRS as:

$$ETDRS = -(logMAR - 1.7)/0.02$$

Source for conversion formula: Beck, R.W., et al. A computerized method of visual acuity testing. American Journal of Ophthalmology, 135(2), pp.194-205. doi:[https://doi.org/10.1016/s0002-9394\(02\)01825-1](https://doi.org/10.1016/s0002-9394(02)01825-1).

Value

The input value converted to ETDRS units.

Author(s)

Nandini R Thampi

See Also

[convert_etdrs_to_logmar\(\)](#)

Examples

```
library(tibble)
library(dplyr)
library(admiral)

oe <- tribble(
  ~STUDYID, ~USUBJID, ~OETESTCD, ~OEMETHOD, ~OESTRESN,
  "XXX001", "P01", "VACSCORE", "logMAR EYE CHART", 1.08,
  "XXX001", "P02", "VACSCORE", "logMAR EYE CHART", 1.66,
  "XXX001", "P03", "VACSCORE", "logMAR EYE CHART", 1.60,
  "XXX001", "P04", "VACSCORE", "ETDRS EYE CHART", 57,
  "XXX001", "P05", "VACSCORE", "ETDRS EYE CHART", 62
)

adbcva <- oe %>%
  filter(OETESTCD == "VACSCORE" & toupper(OEMETHOD) == "LOGMAR EYE CHART") %>%
  mutate(AVAL_ETDRS = convert_logmar_to_etdrs(OESTRESN))

adbcva
```

derive_var_afeye	<i>Derive Affected Eye</i>
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Description

Derive Affected Eye (AFEYE) in occurrence datasets

Usage

```
derive_var_afeye(dataset, loc_var, lat_var, loc_vals = "EYE")
```

Arguments

dataset	Input dataset. Permitted values a dataset, i.e., a data.frame or tibble Default value none
loc_var	Location variable, usually XXLOC. Permitted values an unquoted symbol, e.g., AVAL Default value none
lat_var	Laterality variable, usually XXLAT. Permitted values an unquoted symbol, e.g., AVAL Default value none
loc_vals	xxLOC values for which AFEYE is derived. Permitted values a character vector, e.g. c("EYE", "RETINA") Default value "EYE"

Details

Affected Eye is derived in the occurrence dataset using laterality and Study Eye. This assumes Study Eye has already been added from ADSL.

Value

The input occurrence dataset with Affected Eye (AFEYE) added.

Author(s)

Lucy Palmen

Examples

```
library(tibble)
library(admiral)

adae1 <- tribble(
  ~STUDYID, ~USUBJID, ~STUDYEYE, ~AELOC, ~AELAT,
  "XXX001", "P01", "RIGHT", "EYE", "RIGHT",
  "XXX001", "P01", "RIGHT", "EYE", "LEFT",
  "XXX001", "P01", "RIGHT", "EYE", "",
  "XXX001", "P01", "RIGHT", "", "RIGHT",
  "XXX001", "P02", "LEFT", "", "",
  "XXX001", "P02", "LEFT", "EYE", "LEFT",
  "XXX001", "P04", "BILATERAL", "EYE", "RIGHT",
  "XXX001", "P05", "RIGHT", "EYE", "RIGHT",
  "XXX001", "P05", "RIGHT", "EYE", "BILATERAL",
  "XXX001", "P06", "BILATERAL", "", "",
  "XXX001", "P06", "BILATERAL", "", "RIGHT",
  "XXX001", "P07", "BILATERAL", "EYE", "BILATERAL",
  "XXX001", "P08", "", "EYE", "BILATERAL",
  "XXX001", "P09", "NONSENSE", "EYE", "BILATERAL",
  "XXX001", "P09", "BILATERAL", "EYE", "NONSENSE",
  "XXX001", "P09", "BILATERAL", "NONSENSE", "BILATERAL",
  "XXX001", "P10", "RIGHT", "EYE", "BOTH"
)

derive_var_afeye(adae1, loc_var = AELOC, lat_var = AELAT)

adae2 <- tribble(
  ~STUDYID, ~USUBJID, ~STUDYEYE, ~AELOC, ~AELAT,
  "XXX001", "P01", "RIGHT", "EYES", "RIGHT",
  "XXX001", "P02", "RIGHT", "RETINA", "LEFT",
  "XXX001", "P03", "LEFT", "", ""
)

derive_var_afeye(adae2, loc_var = AELOC, lat_var = AELAT, loc_vals = c("EYES", "RETINA"))
```

derive_var_bcvacritxfl

Adds CRITx/CRITxFL pairs to BCVA dataset

Description

[Deprecated] The `derive_var_bcvacritxfl()` function has been deprecated in favor of `admiral::derive_vars_crit_fl` - please see the [criterion flag section of the ADBCVA vignette](#) for more details.

Adds a criterion variables CRITx and their corresponding flags CRITxFL to a dataset containing BCVA records

Usage

```
derive_var_bcvacritxfl(
  dataset,
  crit_var,
  bcva_ranges = NULL,
  bcva_uplims = NULL,
  bcva_lowlims = NULL,
  additional_text = "",
  critxfl_index = NULL
)
```

Arguments

- | | |
|-------------|---|
| dataset | Input dataset containing BCVA data (usually ADBCVA).
Permitted values a dataset, i.e., a <code>data.frame</code> or <code>tibble</code>
Default value none |
| crit_var | Variable with respect to which CRITx/CRITxFL are derived (usually CHG or AVAL).
Permitted values an unquoted symbol, e.g., AVAL
Default value none |
| bcva_ranges | List of numeric vectors. For each vector <code>c(a,b)</code> in <code>bcva_ranges</code> , a pair of variables CRITx, CRITxFL is created with the condition: <code>a <= crit_var <= b</code> . If criterion flags of that type are not required, then leave as <code>NULL</code> .
Permitted values a list containing one or more numeric vectors, each of length two. E.g. <code>list(c(1, 2), c(3, 4))</code>
Default value <code>NULL</code> |
| bcva_uplims | List containing one or more numeric elements. For each element <code>a</code> in <code>bcva_uplims</code> , a pair of variables CRITx, CRITxFL is created with the condition: <code>crit_var <= a</code> . If criterion flags of that type are not required, then leave as <code>NULL</code> .
Permitted values a list containing one or more numeric scalars. E.g. <code>list(2, -4)</code>
Default value <code>NULL</code> |

bcva_lowlims	List containing one or more numeric elements. For each element <code>b</code> in <code>bcva_lowlims</code>, a pair of variables <code>CRITx</code>, <code>CRITxFL</code> is created with the condition: <code>crit_var >= b</code>. If criterion flags of that type are not required, then leave as <code>NULL</code>. Permitted values a list containing one or more numeric scalars. E.g. <code>list(2, -4)</code> Default value <code>NULL</code>
additional_text	string containing additional text to append to <code>CRITx</code>. Permitted values a character scalar, i.e., a character vector of length one Default value <code>""</code>
critxfl_index	positive integer detailing the first value of <code>x</code> to use in <code>CRITxFL</code>. If not supplied, the function takes the first available value of <code>x</code>, counting up from <code>x = 1</code>. Permitted values a positive integer, e.g. 2 or 5 Default value <code>NULL</code>

Details

This function works by calling `derive_var_bcvacritxfl()` once for each of the elements in `bcva_ranges`, `bcva_uplims` and `bcva_lowlims`. NOTE: if `crit_var` is equal to `NA`, then the resulting criterion flag is also marked as `NA`.

Value

The input BCVA dataset with additional column pairs `CRITx`, `CRITxFL`.

Author(s)

Edoardo Mancini

See Also

Other deprecated: [derive_var_bcvacritxfl_util\(\)](#)

derive_var_studyeye	<i>Derive Study Eye</i>
---------------------	-------------------------

Description

Derive Study Eye (STUDYEYE) in the ADSL dataset

Usage

```
derive_var_studyeye(dataset_adsl, dataset_sc, sctestcd_value = "FOCID")
```

Arguments

dataset_adsl	ADSL input dataset. Permitted values a dataset, i.e., a data.frame or tibble Default value none
dataset_sc	SC input dataset. Permitted values a dataset, i.e., a data.frame or tibble Default value none
sctestcd_value	SCTESTCD value flagging Study Eye selection records. Permitted values a character scalar, i.e., a character vector of length one Default value "FOCID"

Details

Study Eye is derived in ADSL using the "Study Eye selection" records in the SC SDTM dataset.

Value

The input ADSL dataset with an additional column named STUDYEYE.

Author(s)

Edoardo Mancini

Examples

```
library(tibble)
library(admiral)

adsl <- tribble(
  ~STUDYID, ~USUBJID,
  "XXX001", "P01",
  "XXX001", "P02",
  "XXX001", "P03",
  "XXX001", "P04",
  "XXX001", "P05"
)

sc <- tribble(
  ~STUDYID, ~USUBJID, ~SCTESTCD, ~SCSTRESC,
  "XXX001", "P01", "FOCID", "OS",
  "XXX001", "P01", "ACOHORT", "COHORT1",
  "XXX001", "P02", "FOCID", "OD",
  "XXX001", "P02", "ACOHORT", "COHORT3",
  "XXX001", "P04", "FOCID", "OU",
  "XXX001", "P05", "FOCID", "OD",
  "XXX001", "P06", "FOCID", "OS"
)

derive_var_studyeye(adsl, sc)
```

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