

# Validation Report

admiral (v0.4.0)

**Server:** <https://github.com>      **Repository:** [epijim/admiral](https://github.com/epijim/admiral)  
**Reference:** [refs/tags/v0.3.0-gh-action-example](https://github.com/epijim/admiral/refs/tags/v0.3.0-gh-action-example)  
**Commit SHA:** [a63a58d20c8c41ac79849e02a41ff656435e0f0f](https://github.com/epijim/admiral/commit/a63a58d20c8c41ac79849e02a41ff656435e0f0f)

Fri Oct 22 12:02:22 PM 2021

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## 1 Context

This report was generated via the GH-action [insightengineering/validatoR](https://github.com/insightengineering/validatoR) (gh-action ID: `__insightsengineering_thevalidatoR`). It produces automated documentation of the installation of this package on an open source R environment, focussing on:

- Installation environment description
- Testing coverage
- Traceability matrix of specifications (documented behaviours) and testing
- Risk assessment benchmarks

This report is fully automated, so is limited to assess whether unit tests and documentation are present and can execute without error. An assessment would be required that the tests and documentation are meaningful. Validation is system dependent, so specific to the validation environment environment used by this gh-action (see <https://github.com/insightengineering/thevalidatoR/blob/main/Dockerfile> for the base dockerfile, and details in this document for the session info).

## 2 Installation environment and package

### 2.1 System Info

Table 1: System info

Field	Value
OS	Ubuntu 20.04.3 LTS
Platform	x86_64-pc-linux-gnu
System	x86_64, linux-gnu
Execution Time	2021-10-22 12:02:43 UTC

## 2.2 Package installed

Table 2: Git information

Field	Value
branch	HEAD
commit 'SHA1'	a63a58d20c8c41ac79849e02a41ff656435e0f0f
commit date	2021-10-22 13:56:16 +0200

## 2.3 R Session Info

```
sessionInfo()
```

```
R version 4.1.1 (2021-08-10)
```

```
Platform: x86_64-pc-linux-gnu (64-bit)
```

```
Running under: Ubuntu 20.04.3 LTS
```

```
Matrix products: default
```

```
BLAS/LAPACK: /usr/lib/x86_64-linux-gnu/openblas-pthread/libopenblas-p0.3.8.so
```

```
locale:
```

```
[1] LC_CTYPE=en_US.UTF-8      LC_NUMERIC=C
[3] LC_TIME=en_US.UTF-8      LC_COLLATE=en_US.UTF-8
[5] LC_MONETARY=en_US.UTF-8  LC_MESSAGES=C
[7] LC_PAPER=en_US.UTF-8     LC_NAME=C
[9] LC_ADDRESS=C             LC_TELEPHONE=C
[11] LC_MEASUREMENT=en_US.UTF-8 LC_IDENTIFICATION=C
```

```
attached base packages:
```

```
[1] stats      graphics  grDevices  utils      datasets  methods    base
```

```
other attached packages:
```

```
[1] kableExtra_1.3.4 knitr_1.36      magrittr_2.0.1
```

```
loaded via a namespace (and not attached):
```

```
[1] pillar_1.6.4      compiler_4.1.1    prettyunits_1.1.1 remotes_2.4.1
[5] tools_4.1.1       testthat_3.1.0    digest_0.6.28      pkgbuild_1.2.0
[9] pkgload_1.2.3     viridisLite_0.4.0 memoise_2.0.0      evaluate_0.14
[13] lifecycle_1.0.1   tibble_3.1.5      pkgconfig_2.0.3    rlang_0.4.12
[17] rstudioapi_0.13   cli_3.0.1         curl_4.3.2         yaml_2.2.1
[21] xfun_0.27         fastmap_1.1.0     xml2_1.3.2         httr_1.4.2
[25] stringr_1.4.0     withr_2.4.2       systemfonts_1.0.3 desc_1.4.0
[29] fs_1.5.0          vctrs_0.3.8       devtools_2.4.2     webshot_0.5.2
```

```

[33] rprojroot_2.0.2  svglite_2.0.0    glue_1.4.2      R6_2.5.1
[37] processx_3.5.2   fansi_0.5.0      rmarkdown_2.11  sessioninfo_1.1.1
[41] callr_3.7.0      purrr_0.3.4      scales_1.1.1    ps_1.6.0
[45] ellipsis_0.3.2   htmltools_0.5.2  usethis_2.1.0   rvest_1.0.2
[49] colorspace_2.0-2 utf8_1.2.2        stringi_1.7.5   munsell_0.5.0
[53] cachem_1.0.6     crayon_1.4.1

```

```
capabilities()
```

```

      jpeg      png      tiff      tcltk      X11      aqua
      TRUE      TRUE      TRUE      TRUE      FALSE     FALSE
http/ftp  sockets  libxml  fifo      cledit      iconv
      TRUE      TRUE      TRUE      TRUE      FALSE     TRUE
      NLS      Rprof    profmem    cairo      ICU long.double
      FALSE     TRUE      TRUE      TRUE      TRUE      TRUE
libcurl
      TRUE

```

### 3 Metric based risk assessment

The following metrics are derived from the `riskmetric` R package. Metrics overlapping with `covr` and R CMD Check are removed.

Table 3: Package info assessed by the R package `riskmetric`

Metric	Status
NEWS file contains entry for current version number	TRUE
number of discovered vignettes files	11
software is released with an acceptable license	file LICENSE
number of downloads in the past year	0

## 4 Installation documentation

### 4.1 R CMD check

```

* using log directory ‘/tmp/RtmpPJTBoi/file1471f258b/admiral.Rcheck’
* using R version 4.1.1 (2021-08-10)
* using platform: x86_64-pc-linux-gnu (64-bit)
* using session charset: UTF-8
* using options ‘--no-manual --no-build-vignettes’
* checking for file ‘admiral/DESCRIPTION’ ... OK
* checking extension type ... Package
* this is package ‘admiral’ version ‘0.4.0’
* package encoding: UTF-8
* checking package namespace information ... OK
* checking package dependencies ... OK
* checking if this is a source package ... OK
* checking if there is a namespace ... OK
* checking for executable files ... OK
* checking for hidden files and directories ... OK
* checking for portable file names ... OK
* checking for sufficient/correct file permissions ... OK
* checking whether package ‘admiral’ can be installed ... OK

```

```
* checking installed package size ... NOTE
  installed size is 7.8Mb
  sub-directories of 1Mb or more:
    data 2.7Mb
    doc 4.3Mb
* checking package directory ... OK
* checking 'build' directory ... OK
* checking DESCRIPTION meta-information ... OK
* checking top-level files ... OK
* checking for left-over files ... OK
* checking index information ... OK
* checking package subdirectories ... OK
* checking R files for non-ASCII characters ... OK
* checking R files for syntax errors ... OK
* checking whether the package can be loaded ... OK
* checking whether the package can be loaded with stated dependencies ... OK
* checking whether the package can be unloaded cleanly ... OK
* checking whether the namespace can be loaded with stated dependencies ... OK
* checking whether the namespace can be unloaded cleanly ... OK
* checking loading without being on the library search path ... OK
* checking dependencies in R code ... NOTE
Namespace in Imports field not imported from: 'hms'
  All declared Imports should be used.
* checking S3 generic/method consistency ... OK
* checking replacement functions ... OK
* checking foreign function calls ... OK
* checking R code for possible problems ... OK
* checking Rd files ... OK
* checking Rd metadata ... OK
* checking Rd cross-references ... OK
* checking for missing documentation entries ... OK
* checking for code/documentation mismatches ... OK
* checking Rd \usage sections ... OK
* checking Rd contents ... OK
* checking for unstated dependencies in examples ... OK
* checking contents of 'data' directory ... OK
* checking data for non-ASCII characters ... NOTE
  Note: found 3 marked UTF-8 strings
* checking LazyData ... OK
* checking data for ASCII and uncompressed saves ... OK
* checking installed files from 'inst/doc' ... OK
* checking files in 'vignettes' ... OK
* checking examples ... OK
* checking for unstated dependencies in 'tests' ... OK
* checking tests ...
  Running 'testthat.R'
OK
* checking for unstated dependencies in vignettes ... OK
* checking package vignettes in 'inst/doc' ... OK
* checking running R code from vignettes ...
  'admiral.Rmd' using 'UTF-8'... OK
  'adsl.Rmd' using 'UTF-8'... OK
  'bds_exposure.Rmd' using 'UTF-8'... OK
  'bds_finding.Rmd' using 'UTF-8'... OK
```

```
'faq.Rmd' using 'UTF-8'... OK
'git_usage.Rmd' using 'UTF-8'... OK
'imputation.Rmd' using 'UTF-8'... OK
'occds.Rmd' using 'UTF-8'... OK
'pr_review_guidance.Rmd' using 'UTF-8'... OK
'programming_strategy.Rmd' using 'UTF-8'... OK
'writing_vignettes.Rmd' using 'UTF-8'... OK
NONE
* checking re-building of vignette outputs ... SKIPPED
* DONE

Status: 3 NOTEs
See
  '/tmp/RtmpPJTBoi/file1471f258b/admiral.Rcheck/00check.log'
for details.
```

## 4.2 Testing Coverage

```
admiral Coverage: 81.24%
R/dataset_vignette.R: 0.00%
R/lifecycle.R: 0.00%
R/user_helpers.R: 0.00%
R/warnings.R: 29.17%
R/iso_dtm.R: 45.45%
R/assertions.R: 58.52%
R/joins.R: 66.67%
R/derive_summary_records.R: 67.57%
R/call_derivation.R: 68.97%
R/derive_vars_duration.R: 71.11%
R/utils.R: 75.47%
R/derive_advs_params.R: 75.89%
R/derive_params_exposure.R: 78.33%
R/duplicates.R: 78.95%
R/derive_vars_age.R: 88.41%
R/derive_var_dthcaus.R: 91.04%
R/derive_extreme_flag.R: 95.88%
R/derive_vars_suppqual.R: 96.15%
R/derive_var_lstaltvdt.R: 97.10%
R/derive_var_ontrtfl.R: 97.14%
R/derive_vars_query.R: 98.66%
R/compute_duration.R: 100.00%
R/derive_adeg_params.R: 100.00%
```

```

R/derive_baseline.R: 100.00%
R/derive_date_vars.R: 100.00%
R/derive_derived_param.R: 100.00%
R/derive_disposition_dt.R: 100.00%
R/derive_disposition_reason.R: 100.00%
R/derive_disposition_status.R: 100.00%
R/derive_last_dose.R: 100.00%
R/derive_obs_number.R: 100.00%
R/derive_param_doseint.R: 100.00%
R/derive_var_ady.R: 100.00%
R/derive_var_aendy.R: 100.00%
R/derive_var_anrind.R: 100.00%
R/derive_var_astdy.R: 100.00%
R/derive_var_atirel.R: 100.00%
R/derive_var_basetype.R: 100.00%
R/derive_var_chg.R: 100.00%
R/derive_var_pchg.R: 100.00%
R/derive_var_trtdurd.R: 100.00%
R/derive_var_trtedtm.R: 100.00%
R/derive_var_trtsdtm.R: 100.00%
R/derive_vars_dtm_to_dt.R: 100.00%
R/derive_vars_dtm_to_tm.R: 100.00%
R/derive_vars_transposed.R: 100.00%
R/filter_extreme.R: 100.00%
R/test_helpers.R: 100.00%

```

### 4.3 Traceability

Traceability matrix that maps each unit test to the corresponding documentation, creating a link between intended use and testing.

#### 4.3.1 Testing matrix

Table 4: Traceability matrix mapping unit tests to documented behaviours.

Test Description	Documentation
duration and unit variable are added	man/assert_character_scalar.Rd
new observations are derived correctly with Boyd method	man/assert_character_scalar.Rd
new observations are derived correctly with Gehan & George method	man/assert_character_scalar.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_character_scalar.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
LSTALVDT is derived	man/assert_character_scalar.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/assert_character_scalar.Rd
Partial date imputed to the mid day/month	man/assert_character_scalar.Rd
Errors	man/assert_character_scalar.Rd
first observation is selected without grouping	man/assert_character_scalar.Rd
Partial date imputed to the last day/month, no DTF	man/assert_character_scalar.Rd
an error is issued if an invalid method is specified	man/assert_character_scalar.Rd
first observation for each group are selected	man/assert_character_scalar.Rd
No re-derivation is done if -DTF variable already exists	man/assert_character_scalar.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_character_scalar.Rd
new observations are derived correctly with Haycock method	man/assert_character_scalar.Rd
new observations are derived correctly with Fujimoto method	man/assert_character_scalar.Rd
Filter record within 'by_vars'	man/assert_character_scalar.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_character_scalar.Rd
new observations are derived correctly with Takahira method	man/assert_character_scalar.Rd
first observation for each group is flagged	man/assert_character_scalar.Rd
new observations are derived correctly with Mosteller method	man/assert_character_scalar.Rd
Test domain paramter	man/assert_character_scalar.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_character_scalar.Rd
call_derivation works	man/assert_character_scalar.Rd
LSTALVDT and traceability variables are derived	man/assert_character_scalar.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/assert_character_scalar.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_character_scalar.Rd
new observations are derived correctly for AVAL	man/assert_character_scalar.Rd
Derive worst flag works correctly with no worst_high option	man/assert_character_scalar.Rd
Derive RFICDT	man/assert_character_scalar.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_character_scalar.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_character_scalar.Rd
check 'set_values_to' mapping	man/assert_character_scalar.Rd
'target' is set to NA when 'start_date' < 'ref_start_date'	man/assert_character_scalar.Rd
Fujimoto - height and weight vectors	man/assert_character_scalar.Rd
'fns' as inlined	man/assert_character_scalar.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/assert_character_scalar.Rd
set new value to a derived record	man/assert_character_scalar.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/assert_character_scalar.Rd
IDVAR is missing, join by USUBJID	man/assert_character_scalar.Rd
new observations are derived correctly	man/assert_character_scalar.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_character_scalar.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
last observation for each group is flagged, filter works	man/assert_character_scalar.Rd
DTHCAUS is added from AE and DS	man/assert_character_scalar.Rd
'dthcaus' handles symbols and string literals correctly	man/assert_character_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' + 'ref_end_window'	man/assert_character_scalar.Rd
Partial date imputed to the first day/month	man/assert_character_scalar.Rd
Gehan-George - height and weight vectors	man/assert_character_scalar.Rd
Derive worst flag works correctly	man/assert_character_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'ref_end_date' and 'filter_pre_timepoint' are not specified	man/assert_character_scalar.Rd
Takahira - height and weight vectors	man/assert_character_scalar.Rd
'target' is set to NA when 'ref_start_date' is NA	man/assert_character_scalar.Rd
TRTSDDTM variable is added	man/assert_character_scalar.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/assert_character_scalar.Rd
'target' is set to 'Y' when 'start_date' is NA	man/assert_character_scalar.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/assert_character_scalar.Rd
'target' is set to NA when 'end_date' < 'ref_start_date' regardless of start_date being NA	man/assert_character_scalar.Rd
creates a new record for each group and new data frame retains grouping	man/assert_character_scalar.Rd
Haycock method - height and weight vectors	man/assert_character_scalar.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_character_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/assert_character_scalar.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_character_scalar.Rd
Partial date imputed to the last day/month	man/assert_character_scalar.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_character_scalar.Rd
ABLFL = Y using last observation within a subset	man/assert_character_scalar.Rd
'target' is set to 'Y' when 'filter_pre_timepoint' is not 'PRE' and 'start_date' = 'ref_start_date' and 'ref_end_date' is not specified	man/assert_character_scalar.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_character_scalar.Rd
Boyd - height and weight vectors	man/assert_character_scalar.Rd
TRTEDTM variable is added	man/assert_character_scalar.Rd
error on a dthcaus_source object with invalid mode	man/assert_character_scalar.Rd
DuBois-DuBois method - height and weight vectors	man/assert_character_scalar.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/assert_character_scalar.Rd
LSTALVDT is derived for Date class as well	man/assert_character_scalar.Rd
TRTDURD is added	man/assert_character_scalar.Rd
Mosteller method - single height and weight values	man/assert_character_scalar.Rd
ASTDY is added	man/assert_character_scalar.Rd



Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Multiple Records for each IDVAR	man/assert_character_scalar.Rd
ABLFL = Y average records within a subset	man/assert_character_scalar.Rd
Mosteller method - height and weight vectors	man/assert_character_scalar.Rd
‘target’ is set to Y when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la GSK	man/assert_character_scalar.Rd
AENDY is added	man/assert_character_scalar.Rd
Multiple IDVARs, differing types	man/assert_character_scalar.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_character_scalar.Rd
ADY is added	man/assert_character_scalar.Rd
new observations are derived correctly when zero_doses is Y	man/assert_character_scalar.Rd
Convert a complete – DTC into a date time object	man/assert_character_vector.Rd
no new observations are added if filtered dataset is empty	man/assert_character_vector.Rd
‘target’ is set to NA when ‘end_date’ < ‘ref_start_date’ regardless of start_date being NA	man/assert_character_vector.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_character_vector.Rd
ABLFL = Y average records within a subset	man/assert_character_vector.Rd
an error is issued if an invalid method is specified	man/assert_character_vector.Rd
Derive worst flag catches invalid parameters	man/assert_character_vector.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/assert_character_vector.Rd
LSTALVDT is derived for Date class as well	man/assert_character_vector.Rd
Partial date imputed to the last day/month, no DTF	man/assert_character_vector.Rd
duration and unit variable are added	man/assert_character_vector.Rd
‘target’ is set to NA when ‘start_date’ < ‘ref_start_date’	man/assert_character_vector.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_character_vector.Rd
Mosteller method - height and weight vectors	man/assert_character_vector.Rd
Partial date imputed to the first day/month	man/assert_character_vector.Rd
ABLFL = Y using last observation within a subset	man/assert_character_vector.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/assert_character_vector.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_character_vector.Rd
new observations are derived correctly with Takahira method	man/assert_character_vector.Rd
derive_last_dose works as expected with dates only	man/assert_character_vector.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_character_vector.Rd
Fujimoto - height and weight vectors	man/assert_character_vector.Rd
new observations are derived correctly	man/assert_character_vector.Rd
LSTALVDT and traceability variables are derived	man/assert_character_vector.Rd
Test domain paramter	man/assert_character_vector.Rd
Partial date imputed to the last day/month	man/assert_character_vector.Rd
new observations are derived correctly for AVAL	man/assert_character_vector.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_character_vector.Rd
no new observations are added if a parameter is missing	man/assert_character_vector.Rd
TRTDURD is added	man/assert_character_vector.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
‘target’ is set to ‘Y’ when ‘end_date’ > ‘ref_start_date’ when ‘start_date’ is missing	man/assert_character_vector.Rd
Boyd - height and weight vectors	man/assert_character_vector.Rd
DuBois-DuBois method - height and weight vectors	man/assert_character_vector.Rd
new observations are derived correctly with Fujimoto method	man/assert_character_vector.Rd
new observations are derived correctly with Gehan & George method	man/assert_character_vector.Rd
Takahira - height and weight vectors	man/assert_character_vector.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/assert_character_vector.Rd
Partial date imputed to the mid day/month	man/assert_character_vector.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_character_vector.Rd
first observation for each group are selected	man/assert_character_vector.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_character_vector.Rd
call_derivation works	man/assert_character_vector.Rd
Derive worst flag works correctly	man/assert_character_vector.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/assert_character_vector.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/assert_character_vector.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_character_vector.Rd
new observations are derived correctly when zero_doses is Y	man/assert_character_vector.Rd
derive_last_dose works as expected	man/assert_character_vector.Rd
new observations are derived correctly with Mosteller method	man/assert_character_vector.Rd
new observations are derived correctly with Boyd method	man/assert_character_vector.Rd
Derive worst flag works correctly with no worst_high option	man/assert_character_vector.Rd
Haycock method - height and weight vectors	man/assert_character_vector.Rd
new observations are derived correctly with constant parameters	man/assert_character_vector.Rd
first observation is selected without grouping	man/assert_character_vector.Rd
new observations are derived correctly with Haycock method	man/assert_character_vector.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘ref_end_date’ and ‘filter_pre_timepoint’ are not specified	man/assert_character_vector.Rd
‘target’ is set to Y when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la GSK	man/assert_character_vector.Rd
Errors	man/assert_character_vector.Rd
last observation for each group is flagged, filter works	man/assert_character_vector.Rd
Gehan-George - height and weight vectors	man/assert_character_vector.Rd
IDVAR is missing, join by USUBJID	man/assert_character_vector.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ and no ‘ref_end_window’ is specified, otherwise NA	man/assert_character_vector.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_character_vector.Rd
first observation for each group is flagged	man/assert_character_vector.Rd
Filter record within ‘by_vars’	man/assert_character_vector.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’ and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/assert_character_vector.Rd
‘target’ is set to ‘Y’ when ‘start_date’ is NA	man/assert_character_vector.Rd
Derive RFICDT	man/assert_character_vector.Rd
LSTALVDT is derived	man/assert_character_vector.Rd
derive_last_dose returns traceability vars	man/assert_character_vector.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_character_vector.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/assert_character_vector.Rd
Multiple Records for each IDVAR	man/assert_character_vector.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_character_vector.Rd
ASTDY is added	man/assert_character_vector.Rd
No re-derivation is done if –DTF variable already exists	man/assert_character_vector.Rd
‘target’ is set to NA when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la Roche	man/assert_character_vector.Rd
Mosteller method - single height and weight values	man/assert_character_vector.Rd
DTHCAUS is added from AE and DS	man/assert_character_vector.Rd
error on a dthcaus_source object with invalid mode	man/assert_character_vector.Rd
TRTSDTM variable is added	man/assert_character_vector.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_character_vector.Rd
an error is issued if PARAMCD is not set	man/assert_character_vector.Rd
TRTEDTM variable is added	man/assert_character_vector.Rd
AENDY is added	man/assert_character_vector.Rd
Multiple IDVARs, differing types	man/assert_character_vector.Rd
check ‘set_values_to’ mapping	man/assert_character_vector.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/assert_character_vector.Rd
ADY is added	man/assert_character_vector.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_character_vector.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_character_vector.Rd
DTHCAUS and traceability variables are added from AE and DS creates a new record for each group and new data frame retains grouping	man/assert_character_vector.Rd
set new value to a derived record	man/assert_character_vector.Rd
‘fns’ as inlined	man/assert_character_vector.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_data_frame.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_data_frame.Rd
call_derivation works	man/assert_data_frame.Rd
derive_agegr_fda works as expected	man/assert_data_frame.Rd
Partial date imputed to the first day/month	man/assert_data_frame.Rd
new observations are derived correctly for AVAL	man/assert_data_frame.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Errors	man/assert_data_frame.Rd
duration and unit variable are added	man/assert_data_frame.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_data_frame.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/assert_data_frame.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_data_frame.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_data_frame.Rd
Derive CQ and SMQ variables with two term levels	man/assert_data_frame.Rd
check ‘set_values_to’ mapping	man/assert_data_frame.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/assert_data_frame.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_data_frame.Rd
LSTALVDT is derived	man/assert_data_frame.Rd
no new observations are added if a parameter is missing	man/assert_data_frame.Rd
missing ‘AVAL’ is handled properly	man/assert_data_frame.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_data_frame.Rd
‘target’ is set to ‘Y’ when ‘start_date’ is NA	man/assert_data_frame.Rd
an error is issued if PARAMCD is not set	man/assert_data_frame.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/assert_data_frame.Rd
derive_agegr_ema works as expected	man/assert_data_frame.Rd
‘CHG’ is calculated as ‘AVAL - BASE’	man/assert_data_frame.Rd
LSTALVDT is derived for Date class as well	man/assert_data_frame.Rd
new observations are derived correctly	man/assert_data_frame.Rd
‘target’ is set to NA when ‘start_date’ < ‘ref_start_date’	man/assert_data_frame.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_data_frame.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/assert_data_frame.Rd
Partial date imputed to the mid day/month	man/assert_data_frame.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_data_frame.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/assert_data_frame.Rd
‘target’ is set to NA when ‘end_date’ < ‘ref_start_date’ regardless of start_date being NA	man/assert_data_frame.Rd
no new observations are added if filtered dataset is empty	man/assert_data_frame.Rd
DTHCAUS is added from AE and DS	man/assert_data_frame.Rd
Derive RFICDT	man/assert_data_frame.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_data_frame.Rd
ASTDY is added	man/assert_data_frame.Rd
Derive worst flag catches invalid parameters	man/assert_data_frame.Rd
derive_agegr_ema - pediatric version - works as expected	man/assert_data_frame.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ and no ‘ref_end_window’ is specified, otherwise NA	man/assert_data_frame.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive worst flag works correctly with no worst_high option	man/assert_data_frame.Rd
Derive worst flag works correctly	man/assert_data_frame.Rd
‘fns’ as inlined	man/assert_data_frame.Rd
validate_lstalvdt_source checks its inputs	man/assert_data_frame.Rd
new observations are derived correctly with constant parameters	man/assert_data_frame.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/assert_data_frame.Rd
LSTALVDT and traceability variables are derived	man/assert_data_frame.Rd
No re-derivation is done if -DTF variable already exists	man/assert_data_frame.Rd
IDVAR is missing, join by USUBJID	man/assert_data_frame.Rd
Multiple IDVARs, differing types	man/assert_data_frame.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘ref_end_date’ and ‘filter_pre_timepoint’ are not specified	man/assert_data_frame.Rd
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’ and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/assert_data_frame.Rd
ADY is added	man/assert_data_frame.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/assert_data_frame.Rd
Convert a complete - DTM into a date object	man/assert_data_frame.Rd
ABLFL = Y average records within a subset	man/assert_data_frame.Rd
new observations are derived correctly with Gehan & George method	man/assert_data_frame.Rd
two-sided reference ranges work	man/assert_data_frame.Rd
records are duplicated across different ‘BASETYPE’ values	man/assert_data_frame.Rd
records that do not match any condition are kept	man/assert_data_frame.Rd
first observation is selected without grouping	man/assert_data_frame.Rd
‘PCHG’ is calculated as ‘(AVAL - BASE) / abs(BASE) * 100’	man/assert_data_frame.Rd
creates a new record for each group and new data frame retains grouping	man/assert_data_frame.Rd
last observation for each group is flagged, filter works	man/assert_data_frame.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/assert_data_frame.Rd
new observations are derived correctly with Haycock method	man/assert_data_frame.Rd
an error is issued if an invalid method is specified	man/assert_data_frame.Rd
Filter record within ‘by_vars’	man/assert_data_frame.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_data_frame.Rd
new observations are derived correctly with Boyd method	man/assert_data_frame.Rd
new observations are derived correctly with Mosteller method	man/assert_data_frame.Rd
new observations are derived correctly with Takahira method	man/assert_data_frame.Rd
An error is thrown if a subject has multiple records per ‘PARAMCD’ and ‘BASETYPE’	man/assert_data_frame.Rd
AENDY is added	man/assert_data_frame.Rd
first observation for each group is flagged	man/assert_data_frame.Rd
ABLFL = Y using last observation within a subset	man/assert_data_frame.Rd
Derive when an adverse event is in multiple baskets	man/assert_data_frame.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
‘dthcaus’ handles symbols and string literals correctly	man/assert_data_frame.Rd
derive_last_dose returns traceability vars	man/assert_data_frame.Rd
new observations are derived correctly with Fujimoto method	man/assert_data_frame.Rd
Derive when dataset does not have a unique key when excluding ‘TERM_LEVEL’ columns	man/assert_data_frame.Rd
a ‘BASEC’ column of type ‘character’ is added to the input dataset	man/assert_data_frame.Rd
a ‘BASE’ column of type ‘numeric’ is added to the input dataset	man/assert_data_frame.Rd
Derive EOSSTT using default mapping	man/assert_data_frame.Rd
Partial date imputed to the last day/month	man/assert_data_frame.Rd
Partial date imputed to the last day/month, no DTF	man/assert_data_frame.Rd
first observation for each group are selected	man/assert_data_frame.Rd
Derive EOTSTT using a study specific mapping	man/assert_data_frame.Rd
error on a dthcaus_source object with invalid mode	man/assert_data_frame.Rd
derive_last_dose works as expected	man/assert_data_frame.Rd
TRTEDTM variable is added	man/assert_data_frame.Rd
TRTSDTM variable is added	man/assert_data_frame.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/assert_data_frame.Rd
derive_last_dose works as expected with dates only	man/assert_data_frame.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/assert_data_frame.Rd
derive_last_dose checks validity of start and end dose inputs	man/assert_data_frame.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_data_frame.Rd
Derive DCSREAS using default mapping	man/assert_data_frame.Rd
‘PCHG’ is set to ‘NA’ if ‘BASE == 0’	man/assert_data_frame.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_data_frame.Rd
input is returned as is if filter is NULL	man/assert_data_frame.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/assert_data_frame.Rd
Derive ATIREL	man/assert_data_frame.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_data_frame.Rd
set new value to a derived record	man/assert_data_frame.Rd
implicitly missing extreme ranges are supported	man/assert_data_frame.Rd
‘target’ is set to ‘Y’ when ‘end_date’ > ‘ref_start_date’ when ‘start_date’ is missing	man/assert_data_frame.Rd
‘target’ is set to NA when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la Roche	man/assert_data_frame.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/assert_data_frame.Rd
TRTDURD is added	man/assert_data_frame.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/assert_data_frame.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/assert_data_frame.Rd
‘target’ is set to Y when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la GSK	man/assert_data_frame.Rd
one-sided reference ranges work	man/assert_data_frame.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
new observations are derived correctly when zero_doses is Y	man/assert_data_frame.Rd
input is filtered if filter is not NULL	man/assert_data_frame.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/assert_data_frame.Rd
only the ‘target’ variable is added to the input dataset	man/assert_data_frame.Rd
Multiple Records for each IDVAR	man/assert_data_frame.Rd
Test domain paramter	man/assert_data_frame.Rd
the merge dataset is transposed and merged correctly	man/assert_data_frame.Rd
explicitly missing extreme ranges are supported	man/assert_data_frame.Rd
ATC variables are merged properly	man/assert_data_frame.Rd
filtering the merge dataset works	man/assert_data_frame.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_filter_cond.Rd
new observations are derived correctly	man/assert_filter_cond.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_filter_cond.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_filter_cond.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/assert_filter_cond.Rd
new observations are derived correctly with Fujimoto method	man/assert_filter_cond.Rd
no new observations are added if a parameter is missing	man/assert_filter_cond.Rd
call_derivation works	man/assert_filter_cond.Rd
Filter record within ‘by_vars’	man/assert_filter_cond.Rd
LSTALVDT is derived for Date class as well	man/assert_filter_cond.Rd
Derive worst flag catches invalid parameters	man/assert_filter_cond.Rd
new observations are derived correctly with Mosteller method	man/assert_filter_cond.Rd
assert_filter_cond works as expected	man/assert_filter_cond.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_filter_cond.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_filter_cond.Rd
LSTALVDT and traceability variables are derived	man/assert_filter_cond.Rd
derive_last_dose returns traceability vars	man/assert_filter_cond.Rd
new observations are derived correctly with Boyd method	man/assert_filter_cond.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_filter_cond.Rd
Derive worst flag works correctly with no worst_high option	man/assert_filter_cond.Rd
new observations are derived correctly with Gehan & George method	man/assert_filter_cond.Rd
new observations are derived correctly when zero_doses is Y	man/assert_filter_cond.Rd
derive_last_dose works as expected with dates only	man/assert_filter_cond.Rd
new observations are derived correctly with Takahira method	man/assert_filter_cond.Rd
error on a dthcaus_source object with invalid mode	man/assert_filter_cond.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/assert_filter_cond.Rd
TRTEDTM variable is added	man/assert_filter_cond.Rd
ABLFL = Y average records within a subset	man/assert_filter_cond.Rd
new observations are derived correctly with Haycock method	man/assert_filter_cond.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/assert_filter_cond.Rd
‘target’ is set to NA when ‘end_date’ < ‘ref_start_date’ regardless of start_date being NA	man/assert_filter_cond.Rd
derive_last_dose checks validity of start and end dose inputs	man/assert_filter_cond.Rd
Derive worst flag works correctly	man/assert_filter_cond.Rd
last observation for each group is flagged, filter works	man/assert_filter_cond.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_filter_cond.Rd
check ‘set_values_to’ mapping	man/assert_filter_cond.Rd
Derive RFICDT	man/assert_filter_cond.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ and no ‘ref_end_window’ is specified, otherwise NA	man/assert_filter_cond.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/assert_filter_cond.Rd
Derive EOTSTT using a study specific mapping	man/assert_filter_cond.Rd
assert_filter_cond works as expected	man/assert_filter_cond.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_filter_cond.Rd
ABLFL = Y using last observation within a subset	man/assert_filter_cond.Rd
Errors	man/assert_filter_cond.Rd
input is filtered if filter is not NULL	man/assert_filter_cond.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_filter_cond.Rd
DTHCAUS is added from AE and DS	man/assert_filter_cond.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_filter_cond.Rd
TRTSDTM variable is added	man/assert_filter_cond.Rd
Derive DCSREAS using default mapping	man/assert_filter_cond.Rd
derive_last_dose works as expected	man/assert_filter_cond.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_filter_cond.Rd
‘target’ is set to ‘Y’ when ‘start_date’ is NA	man/assert_filter_cond.Rd
no new observations are added if filtered dataset is empty	man/assert_filter_cond.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_filter_cond.Rd
first observation for each group is flagged	man/assert_filter_cond.Rd
new observations are derived correctly with constant parameters	man/assert_filter_cond.Rd
ATC variables are merged properly	man/assert_filter_cond.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/assert_filter_cond.Rd
‘target’ is set to NA when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la Roche	man/assert_filter_cond.Rd
‘target’ is set to ‘Y’ when ‘end_date’ > ‘ref_start_date’ when ‘start_date’ is missing	man/assert_filter_cond.Rd
filtering the merge dataset works	man/assert_filter_cond.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘ref_end_date’ and ‘filter_pre_timepoint’ are not specified	man/assert_filter_cond.Rd



Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
ABLFL = Y worst observation = HI within a subset	man/assert_filter_cond.Rd
Derive EOSSTT using default mapping	man/assert_filter_cond.Rd
new observations are derived correctly for AVAL	man/assert_filter_cond.Rd
creates a new record for each group and new data frame retains grouping	man/assert_filter_cond.Rd
set new value to a derived record	man/assert_filter_cond.Rd
LSTALVDT is derived	man/assert_filter_cond.Rd
‘fns’ as inlined	man/assert_filter_cond.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/assert_filter_cond.Rd
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’	man/assert_filter_cond.Rd
and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/assert_filter_cond.Rd
‘target’ is set to NA when ‘start_date’ < ‘ref_start_date’	man/assert_filter_cond.Rd
‘target’ is set to Y when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la GSK	man/assert_filter_cond.Rd
input is returned as is if filter is NULL	man/assert_filter_cond.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/assert_filter_cond.Rd
validate_lstalvdt_source checks its inputs	man/assert_filter_cond.Rd
the merge dataset is transposed and merged correctly	man/assert_filter_cond.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_filter_cond.Rd
Derive when an adverse event is in multiple baskets	man/assert_has_variables.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/assert_has_variables.Rd
assert_valid_queries checks VAR_PREFIX values	man/assert_has_variables.Rd
TRTEDTM variable is added	man/assert_has_variables.Rd
Derive DCSREAS using default mapping	man/assert_has_variables.Rd
an error is thrown if a required variable is missing	man/assert_has_variables.Rd
DTHCAUS is added from AE and DS	man/assert_has_variables.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_has_variables.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_has_variables.Rd
TRTSDTM variable is added	man/assert_has_variables.Rd
LSTALVDT is derived for Date class as well	man/assert_has_variables.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_has_variables.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_has_variables.Rd
first observation for each group are selected	man/assert_has_variables.Rd
Derive when dataset does not have a unique key when excluding ‘TERM_LEVEL’ columns	man/assert_has_variables.Rd
LSTALVDT is derived	man/assert_has_variables.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/assert_has_variables.Rd
LSTALVDT and traceability variables are derived	man/assert_has_variables.Rd
Derive CQ and SMQ variables with two term levels	man/assert_has_variables.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/assert_has_variables.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
no error is thrown if a required variable exists	man/assert_has_variables.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_has_variables.Rd
no error is thrown if a required variable exists	man/assert_has_variables.Rd
an error is thrown if a required variable is missing	man/assert_has_variables.Rd
'target' is set to Y when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la GSK	man/assert_integer_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' + 'ref_end_window'	man/assert_integer_scalar.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/assert_integer_scalar.Rd
'target' is set to 'Y' when 'start_date' is NA	man/assert_integer_scalar.Rd
'target' is set to NA when 'end_date' < 'ref_start_date' regardless of start_date being NA	man/assert_integer_scalar.Rd
'target' is set to NA when 'start_date' < 'ref_start_date'	man/assert_integer_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'ref_end_date' and 'filter_pre_timepoint' are not specified	man/assert_integer_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/assert_integer_scalar.Rd
'target' is set to 'Y' when 'filter_pre_timepoint' is not 'PRE' and 'start_date' = 'ref_start_date' and 'ref_end_date' is not specified	man/assert_integer_scalar.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/assert_integer_scalar.Rd
'target' is set to NA when 'ref_start_date' is NA	man/assert_integer_scalar.Rd
LSTALVDT and traceability variables are derived	man/assert_list_of.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_list_of.Rd
LSTALVDT is derived for Date class as well	man/assert_list_of.Rd
call_derivation works	man/assert_list_of.Rd
'dthcaus' handles symbols and string literals correctly	man/assert_list_of.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_list_of.Rd
DTHCAUS is added from AE and DS	man/assert_list_of.Rd
LSTALVDT is derived	man/assert_list_of.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_list_of.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_list_of.Rd
input is returned as is if filter is NULL	man/assert_logical_scalar.Rd
duration and unit variable are added	man/assert_logical_scalar.Rd
first observation is selected without grouping	man/assert_logical_scalar.Rd
ATC variables are merged properly	man/assert_logical_scalar.Rd
Partial date imputed to the mid day/month	man/assert_logical_scalar.Rd
Partial date imputed to the first day/month	man/assert_logical_scalar.Rd
filtering the merge dataset works	man/assert_logical_scalar.Rd
input is filtered if filter is not NULL	man/assert_logical_scalar.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Convert a complete – DTC into a date time object	man/assert_logical_scalar.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/assert_logical_scalar.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_logical_scalar.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_logical_scalar.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_logical_scalar.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/assert_logical_scalar.Rd
Derive worst flag works correctly with no worst_high option	man/assert_logical_scalar.Rd
Derive ATIREL	man/assert_logical_scalar.Rd
a ‘BASEC’ column of type ‘character’ is added to the input dataset	man/assert_logical_scalar.Rd
Derive worst flag works correctly	man/assert_logical_scalar.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/assert_logical_scalar.Rd
first observation for each group are selected	man/assert_logical_scalar.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_logical_scalar.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/assert_logical_scalar.Rd
new observations are derived correctly when zero_doses is Y	man/assert_logical_scalar.Rd
derive_agegr_ema works as expected	man/assert_logical_scalar.Rd
derive_last_dose works as expected with dates only	man/assert_logical_scalar.Rd
MAP based on diastolic and systolic blood pressure	man/assert_logical_scalar.Rd
ABLFL = Y average records within a subset	man/assert_logical_scalar.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/assert_logical_scalar.Rd
Errors	man/assert_logical_scalar.Rd
No re-derivation is done if –DTF variable already exists	man/assert_logical_scalar.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_logical_scalar.Rd
Derive DCSREAS using default mapping	man/assert_logical_scalar.Rd
derive_last_dose checks validity of start and end dose inputs	man/assert_logical_scalar.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/assert_logical_scalar.Rd
IDVAR is missing, join by USUBJID	man/assert_logical_scalar.Rd
derive_last_dose works as expected	man/assert_logical_scalar.Rd
derive_agegr_fda works as expected	man/assert_logical_scalar.Rd
Derive RFICDT	man/assert_logical_scalar.Rd
Filter record within ‘by_vars’	man/assert_logical_scalar.Rd
check ‘set_values_to’ mapping	man/assert_logical_scalar.Rd
Derive worst flag catches invalid parameters	man/assert_logical_scalar.Rd
last observation for each group is flagged, filter works	man/assert_logical_scalar.Rd
Multiple Records for each IDVAR	man/assert_logical_scalar.Rd
ABLFL = Y using last observation within a subset	man/assert_logical_scalar.Rd
the merge dataset is transposed and merged correctly	man/assert_logical_scalar.Rd
Takahira - height and weight vectors	man/assert_logical_scalar.Rd
LSTALVDT and traceability variables are derived	man/assert_logical_scalar.Rd
Convert a complete – DTM into a date object	man/assert_logical_scalar.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Multiple IDVARs, differing types	man/assert_logical_scalar.Rd
new observations are derived correctly with constant parameters	man/assert_logical_scalar.Rd
Test domain paramter	man/assert_logical_scalar.Rd
new observations are derived correctly	man/assert_logical_scalar.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_logical_scalar.Rd
Derive CQ and SMQ variables with two term levels	man/assert_logical_scalar.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_logical_scalar.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/assert_logical_scalar.Rd
Partial date imputed to the last day/month, no DTF	man/assert_logical_scalar.Rd
derive_agegr_ema - pediatric version - works as expected	man/assert_logical_scalar.Rd
ADY is added	man/assert_logical_scalar.Rd
AENDY is added	man/assert_logical_scalar.Rd
two-sided reference ranges work	man/assert_logical_scalar.Rd
implicitly missing extreme ranges are supported	man/assert_logical_scalar.Rd
explicitly missing extreme ranges are supported	man/assert_logical_scalar.Rd
one-sided reference ranges work	man/assert_logical_scalar.Rd
missing 'AVAL' is handled properly	man/assert_logical_scalar.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/assert_logical_scalar.Rd
derive_last_dose returns traceability vars	man/assert_logical_scalar.Rd
records are duplicated across different 'BASETYPE' values	man/assert_logical_scalar.Rd
'CHG' is calculated as 'AVAL - BASE'	man/assert_logical_scalar.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_logical_scalar.Rd
an error is issued if PARAMCD is not set	man/assert_logical_scalar.Rd
no new observations are added if filtered dataset is empty	man/assert_logical_scalar.Rd
no new observations are added if a parameter is missing	man/assert_logical_scalar.Rd
'target' is set to 'Y' when 'start_date' is NA	man/assert_logical_scalar.Rd
new observations are derived correctly for AVAL	man/assert_logical_scalar.Rd
assert_filter_cond works as expected	man/assert_logical_scalar.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/assert_logical_scalar.Rd
records that do not match any condition are kept	man/assert_logical_scalar.Rd
'target' is set to NA when 'end_date' < 'ref_start_date' regardless of start_date being NA	man/assert_logical_scalar.Rd
'PCHG' is calculated as $(AVAL - BASE) / \text{abs}(BASE) * 100$	man/assert_logical_scalar.Rd
first observation for each group is flagged	man/assert_logical_scalar.Rd
'fns' as inlined	man/assert_logical_scalar.Rd
set new value to a derived record	man/assert_logical_scalar.Rd
Partial date imputed to the last day/month	man/assert_logical_scalar.Rd
Gehan-George - height and weight vectors	man/assert_logical_scalar.Rd
Boyd - height and weight vectors	man/assert_logical_scalar.Rd
Fujimoto - height and weight vectors	man/assert_logical_scalar.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
an error is issued if an invalid method is specified	man/assert_logical_scalar.Rd
LSTALVDT is derived for Date class as well	man/assert_logical_scalar.Rd
validate_lstalvdt_source checks its inputs	man/assert_logical_scalar.Rd
‘PCHG’ is set to ‘NA’ if ‘BASE == 0’	man/assert_logical_scalar.Rd
error on a dthcaus_source object with invalid mode	man/assert_logical_scalar.Rd
DTHCAUS is added from AE and DS	man/assert_logical_scalar.Rd
TRTSDTM variable is added	man/assert_logical_scalar.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/assert_logical_scalar.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/assert_logical_scalar.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/assert_logical_scalar.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/assert_logical_scalar.Rd
only the ‘target’ variable is added to the input dataset	man/assert_logical_scalar.Rd
An error is thrown if a subject has multiple records per ‘PARAMCD’ and ‘BASETYPE’	man/assert_logical_scalar.Rd
Mosteller method - height and weight vectors	man/assert_logical_scalar.Rd
DuBois-DuBois method - height and weight vectors	man/assert_logical_scalar.Rd
Haycock method - height and weight vectors	man/assert_logical_scalar.Rd
new observations are derived correctly with Takahira method	man/assert_logical_scalar.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_logical_scalar.Rd
new observations are derived correctly with Haycock method	man/assert_logical_scalar.Rd
new observations are derived correctly with Gehan & George method	man/assert_logical_scalar.Rd
‘target’ is set to NA when ‘start_date’ < ‘ref_start_date’	man/assert_logical_scalar.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_logical_scalar.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘ref_end_date’ and ‘filter_pre_timepoint’ are not specified	man/assert_logical_scalar.Rd
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’ and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/assert_logical_scalar.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_logical_scalar.Rd
Derive when dataset does not have a unique key when excluding ‘TERM_LEVEL’ columns	man/assert_logical_scalar.Rd
Derive EOSSTT using default mapping	man/assert_logical_scalar.Rd
Derive EOTSTT using a study specific mapping	man/assert_logical_scalar.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/assert_logical_scalar.Rd
creates a new record for each group and new data frame retains grouping	man/assert_logical_scalar.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_logical_scalar.Rd
LSTALVDT is derived	man/assert_logical_scalar.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/assert_logical_scalar.Rd
ASTDY is added	man/assert_logical_scalar.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_logical_scalar.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
new observations are derived correctly with Boyd method	man/assert_logical_scalar.Rd
new observations are derived correctly with Fujimoto method	man/assert_logical_scalar.Rd
TRTDURD is added	man/assert_logical_scalar.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_logical_scalar.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/assert_logical_scalar.Rd
call_derivation works	man/assert_logical_scalar.Rd
Mosteller method - single height and weight values	man/assert_logical_scalar.Rd
new observations are derived correctly with Mosteller method	man/assert_logical_scalar.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/assert_logical_scalar.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/assert_logical_scalar.Rd
'target' is set to Y when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la GSK	man/assert_logical_scalar.Rd
TRTEDTM variable is added	man/assert_logical_scalar.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/assert_logical_scalar.Rd
Derive when an adverse event is in multiple baskets	man/assert_logical_scalar.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/assert_logical_scalar.Rd
new observations are derived correctly with Mosteller method	man/assert_numeric_vector.Rd
new observations are derived correctly with Gehan & George method	man/assert_numeric_vector.Rd
new observations are derived correctly	man/assert_numeric_vector.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_numeric_vector.Rd
MAP based on diastolic and systolic blood pressure	man/assert_numeric_vector.Rd
an error is issued if an invalid method is specified	man/assert_numeric_vector.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_numeric_vector.Rd
new observations are derived correctly with Takahira method	man/assert_numeric_vector.Rd
DuBois-DuBois method - height and weight vectors	man/assert_numeric_vector.Rd
Mosteller method - height and weight vectors	man/assert_numeric_vector.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_numeric_vector.Rd
Gehan-George - height and weight vectors	man/assert_numeric_vector.Rd
new observations are derived correctly with Boyd method	man/assert_numeric_vector.Rd
new observations are derived correctly with Haycock method	man/assert_numeric_vector.Rd
Boyd - height and weight vectors	man/assert_numeric_vector.Rd
Fujimoto - height and weight vectors	man/assert_numeric_vector.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_numeric_vector.Rd
Takahira - height and weight vectors	man/assert_numeric_vector.Rd
Mosteller method - single height and weight values	man/assert_numeric_vector.Rd
new observations are derived correctly with Fujimoto method	man/assert_numeric_vector.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Haycock method - height and weight vectors	man/assert_numeric_vector.Rd
DTHCAUS is added from AE and DS	man/assert_order_vars.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_order_vars.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_order_vars.Rd
first observation for each group are selected	man/assert_order_vars.Rd
Derive worst flag catches invalid parameters	man/assert_order_vars.Rd
first observation is selected without grouping	man/assert_order_vars.Rd
Derive worst flag works correctly	man/assert_order_vars.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_order_vars.Rd
last observation for each group is flagged, filter works	man/assert_order_vars.Rd
ABLFL = Y average records within a subset	man/assert_order_vars.Rd
Derive worst flag works correctly with no worst_high option	man/assert_order_vars.Rd
TRTEDTM variable is added	man/assert_order_vars.Rd
first observation for each group is flagged	man/assert_order_vars.Rd
TRTSDTM variable is added	man/assert_order_vars.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_order_vars.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_order_vars.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_order_vars.Rd
LSTALVDT is derived for Date class as well	man/assert_order_vars.Rd
LSTALVDT is derived	man/assert_order_vars.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_order_vars.Rd
LSTALVDT and traceability variables are derived	man/assert_order_vars.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/assert_order_vars.Rd
ABLFL = Y using last observation within a subset	man/assert_order_vars.Rd
new observations are derived correctly	man/assert_param_does_not_exist.Rd
no new observations are added if a parameter is missing	man/assert_param_does_not_exist.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_param_does_not_exist.Rd
new observations are derived correctly with constant parameters	man/assert_param_does_not_exist.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_param_does_not_exist.Rd
no new observations are added if filtered dataset is empty	man/assert_param_does_not_exist.Rd
new observations are derived correctly for AVAL	man/assert_param_does_not_exist.Rd
new observations are derived correctly with Haycock method	man/assert_param_does_not_exist.Rd
new observations are derived correctly with Mosteller method	man/assert_param_does_not_exist.Rd
new observations are derived correctly when zero_doses is Y	man/assert_param_does_not_exist.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_param_does_not_exist.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_param_does_not_exist.Rd
Errors	man/assert_param_does_not_exist.Rd
new observations are derived correctly with Fujimoto method	man/assert_param_does_not_exist.Rd
new observations are derived correctly with Gehan & George method	man/assert_param_does_not_exist.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_param_does_not_exist.Rd
new observations are derived correctly with Boyd method	man/assert_param_does_not_exist.Rd
new observations are derived correctly with Takahira method	man/assert_param_does_not_exist.Rd
Errors	man/assert_s3_class.Rd
Filter record within ‘by_vars’	man/assert_s3_class.Rd
call_derivation works	man/assert_s3_class.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_s3_class.Rd
DTHCAUS is added from AE and DS	man/assert_s3_class.Rd
LSTALVDT is derived	man/assert_s3_class.Rd
LSTALVDT and traceability variables are derived	man/assert_s3_class.Rd
‘fns’ as inlined	man/assert_s3_class.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_s3_class.Rd
LSTALVDT is derived for Date class as well	man/assert_s3_class.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_s3_class.Rd
set new value to a derived record	man/assert_s3_class.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_s3_class.Rd
check ‘set_values_to’ mapping	man/assert_s3_class.Rd
creates a new record for each group and new data frame retains grouping	man/assert_s3_class.Rd
new observations are derived correctly for AVAL	man/assert_s3_class.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_s3_class.Rd
ASTDY is added	man/assert_symbol.Rd
validate_lstalvdt_source checks its inputs	man/assert_symbol.Rd
Partial date imputed to the mid day/month	man/assert_symbol.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_symbol.Rd
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’ and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/assert_symbol.Rd
AENDY is added	man/assert_symbol.Rd
Derive RFICDT	man/assert_symbol.Rd
Errors	man/assert_symbol.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_symbol.Rd
Derive ATIREL	man/assert_symbol.Rd
ADY is added	man/assert_symbol.Rd
derive_agegr_ema works as expected	man/assert_symbol.Rd
ABLFL = Y using last observation within a subset	man/assert_symbol.Rd
LSTALVDT and traceability variables are derived	man/assert_symbol.Rd
call_derivation works	man/assert_symbol.Rd
An error is thrown if a subject has multiple records per ‘PARAMCD’ and ‘BASETYPE’	man/assert_symbol.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/assert_symbol.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_symbol.Rd



Table 4: Tracebility matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Partial date imputed to the first day/month	man/assert_symbol.Rd
first observation for each group are selected	man/assert_symbol.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_symbol.Rd
check 'set_values_to' mapping	man/assert_symbol.Rd
a 'BASEC' column of type 'character' is added to the input dataset	man/assert_symbol.Rd
derive_agegr_fda works as expected	man/assert_symbol.Rd
new observations are derived correctly for AVAL	man/assert_symbol.Rd
last observation for each group is flagged, filter works	man/assert_symbol.Rd
LSTALVDT is derived for Date class as well	man/assert_symbol.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/assert_symbol.Rd
Filter record within 'by_vars'	man/assert_symbol.Rd
creates a new record for each group and new data frame retains grouping	man/assert_symbol.Rd
TRTEDTM variable is added	man/assert_symbol.Rd
'target' is set to NA when 'end_date' < 'ref_start_date'	man/assert_symbol.Rd
regardless of start_date being NA	
derive_last_dose works as expected with dates only	man/assert_symbol.Rd
first observation is selected without grouping	man/assert_symbol.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'ref_end_date' and 'filter_pre_timepoint' are not specified	man/assert_symbol.Rd
TRTDURD is added	man/assert_symbol.Rd
'target' is set to 'source' where 'ABLFL' == 'Y'	man/assert_symbol.Rd
'target' is set to NA when 'start_date' < 'ref_start_date'	man/assert_symbol.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/assert_symbol.Rd
'target' is set to Y when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la GSK	man/assert_symbol.Rd
No re-derivation is done if -DTF variable already exists	man/assert_symbol.Rd
ATC variables are merged properly	man/assert_symbol.Rd
LSTALVDT is derived	man/assert_symbol.Rd
first observation for each group is flagged	man/assert_symbol.Rd
duration and unit variable are added	man/assert_symbol.Rd
derive_last_dose checks validity of start and end dose inputs	man/assert_symbol.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/assert_symbol.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/assert_symbol.Rd
filtering the merge dataset works	man/assert_symbol.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/assert_symbol.Rd
'target' is set to 'Y' when 'start_date' is NA	man/assert_symbol.Rd
only the 'target' variable is added to the input dataset	man/assert_symbol.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/assert_symbol.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive worst flag catches invalid parameters	man/assert_symbol.Rd
Derive EOTSTT using a study specific mapping	man/assert_symbol.Rd
Derive DCSREAS using default mapping	man/assert_symbol.Rd
derive_agegr_ema - pediatric version - works as expected	man/assert_symbol.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/assert_symbol.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/assert_symbol.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/assert_symbol.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_symbol.Rd
TRTSDTM variable is added	man/assert_symbol.Rd
derive_last_dose works as expected	man/assert_symbol.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_symbol.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_symbol.Rd
Partial date imputed to the last day/month, no DTF	man/assert_symbol.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/assert_symbol.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/assert_symbol.Rd
Derive EOSSTT using default mapping	man/assert_symbol.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/assert_symbol.Rd
DTHCAUS is added from AE and DS	man/assert_symbol.Rd
derive_last_dose returns traceability vars	man/assert_symbol.Rd
Partial date imputed to the last day/month	man/assert_symbol.Rd
error on a dthcaus_source object with invalid mode	man/assert_symbol.Rd
the merge dataset is transposed and merged correctly	man/assert_symbol.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_symbol.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/assert_symbol.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/assert_symbol.Rd
‘fns’ as inlined	man/assert_symbol.Rd
Derive worst flag works correctly with no worst_high option	man/assert_symbol.Rd
set new value to a derived record	man/assert_symbol.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_symbol.Rd
Derive worst flag works correctly	man/assert_symbol.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_symbol.Rd
ABLFL = Y average records within a subset	man/assert_symbol.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_unit.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_unit.Rd
new observations are derived correctly with Gehan & George method	man/assert_unit.Rd
new observations are derived correctly with Takahira method	man/assert_unit.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
new observations are derived correctly with Mosteller method	man/assert_unit.Rd
new observations are derived correctly with Boyd method	man/assert_unit.Rd
new observations are derived correctly	man/assert_unit.Rd
new observations are derived correctly with Haycock method	man/assert_unit.Rd
new observations are derived correctly with Fujimoto method	man/assert_unit.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_unit.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_unit.Rd
Derive when dataset does not have a unique key when excluding 'TERM_LEVEL' columns	man/assert_valid_queries.Rd
Derive CQ and SMQ variables with two term levels	man/assert_valid_queries.Rd
assert_valid_queries checks VAR_PREFIX values	man/assert_valid_queries.Rd
Derive when an adverse event is in multiple baskets	man/assert_valid_queries.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/assert_valid_queries.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/assert_valid_queries.Rd
assert_valid_queries checks VAR_PREFIX values	man/assert_valid_queries.Rd
filtering the merge dataset works	man/assert_vars.Rd
'target' is set to NA when 'end_date' < 'ref_start_date' regardless of start_date being NA	man/assert_vars.Rd
Partial date imputed to the last day/month, no DTF	man/assert_vars.Rd
new observations are derived correctly with Takahira method	man/assert_vars.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/assert_vars.Rd
Errors	man/assert_vars.Rd
new observations are derived correctly with Gehan & George method	man/assert_vars.Rd
implicitly missing extreme ranges are supported	man/assert_vars.Rd
new observations are derived correctly with Haycock method	man/assert_vars.Rd
DTHCAUS is added from AE and DS	man/assert_vars.Rd
duration and unit variable are added	man/assert_vars.Rd
Partial date imputed to the first day/month	man/assert_vars.Rd
'PCHG' is set to 'NA' if 'BASE == 0'	man/assert_vars.Rd
new observations are derived correctly with Fujimoto method	man/assert_vars.Rd
ABLFL = Y using last observation within a subset	man/assert_vars.Rd
Convert a complete - DTM into -TM, TM out is HH:MM:SS	man/assert_vars.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' + 'ref_end_window'	man/assert_vars.Rd
derive_agegr_fda works as expected	man/assert_vars.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_vars.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/assert_vars.Rd
call_derivation works	man/assert_vars.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
ASTDY is added	man/assert_vars.Rd
derive_last_dose works as expected with dates only	man/assert_vars.Rd
an error is issued if an invalid method is specified	man/assert_vars.Rd
'PCHG' is calculated as $(\text{AVAL} - \text{BASE}) / \text{abs}(\text{BASE}) * 100$	man/assert_vars.Rd
'dthcaus' handles symbols and string literals correctly	man/assert_vars.Rd
one-sided reference ranges work	man/assert_vars.Rd
error on a dthcaus_source object with invalid mode	man/assert_vars.Rd
Partial date imputed to the mid day/month	man/assert_vars.Rd
missing 'AVAL' is handled properly	man/assert_vars.Rd
'target' is set to NA when 'start_date' < 'ref_start_date'	man/assert_vars.Rd
'target' is set to 'Y' when 'filter_pre_timepoint' is not 'PRE' and 'start_date' = 'ref_start_date' and 'ref_end_date' is not specified	man/assert_vars.Rd
records that do not match any condition are kept	man/assert_vars.Rd
ADY is added	man/assert_vars.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/assert_vars.Rd
no new observations are added if filtered dataset is empty	man/assert_vars.Rd
last observation for each group is flagged, filter works	man/assert_vars.Rd
'CHG' is calculated as 'AVAL - BASE'	man/assert_vars.Rd
new observations are derived correctly with Boyd method	man/assert_vars.Rd
Derive EOSSTT using default mapping	man/assert_vars.Rd
No re-derivation is done if -DTF variable already exists	man/assert_vars.Rd
input is returned as is if filter is NULL	man/assert_vars.Rd
records are duplicated across different 'BASETYPE' values	man/assert_vars.Rd
IDVAR is missing, join by USUBJID	man/assert_vars.Rd
validate_lstalvdt_source checks its inputs	man/assert_vars.Rd
first observation for each group is flagged	man/assert_vars.Rd
Derive EOTSTT using a study specific mapping	man/assert_vars.Rd
Filter record within 'by_vars'	man/assert_vars.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_vars.Rd
Convert a complete - DTM into a date object	man/assert_vars.Rd
Derive ATIREL	man/assert_vars.Rd
ABLFL = Y average records within a subset	man/assert_vars.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_vars.Rd
a 'BASEC' column of type 'character' is added to the input dataset	man/assert_vars.Rd
two-sided reference ranges work	man/assert_vars.Rd
derive_last_dose works as expected	man/assert_vars.Rd
derive_last_dose checks validity of start and end dose inputs	man/assert_vars.Rd
Derive DCSREAS using default mapping	man/assert_vars.Rd
Test domain paramter	man/assert_vars.Rd
derive_agegr_ema works as expected	man/assert_vars.Rd
'target' is set to 'source' where 'ABLFL == 'Y''	man/assert_vars.Rd
check 'set_values_to' mapping	man/assert_vars.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
An error is thrown if a subject has multiple records per 'PARAMCD' and 'BASETYPE'	man/assert_vars.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_vars.Rd
ATC variables are merged properly	man/assert_vars.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'ref_end_date' and 'filter_pre_timepoint' are not specified	man/assert_vars.Rd
new observations are derived correctly with constant parameters	man/assert_vars.Rd
LSTALVDT and traceability variables are derived	man/assert_vars.Rd
derive_agegr_ema - pediatric version - works as expected	man/assert_vars.Rd
new observations are derived correctly	man/assert_vars.Rd
ABLFL = Y worst observation = LO within a subset	man/assert_vars.Rd
only the 'target' variable is added to the input dataset	man/assert_vars.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/assert_vars.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/assert_vars.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/assert_vars.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/assert_vars.Rd
input is filtered if filter is not NULL	man/assert_vars.Rd
Derive worst flag catches invalid parameters	man/assert_vars.Rd
Derive CQ and SMQ variables with two term levels	man/assert_vars.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/assert_vars.Rd
first observation for each group are selected	man/assert_vars.Rd
first observation is selected without grouping	man/assert_vars.Rd
LSTALVDT is derived for Date class as well	man/assert_vars.Rd
Multiple IDVARs, differing types	man/assert_vars.Rd
LSTALVDT is derived	man/assert_vars.Rd
'target' is set to NA when 'ref_start_date' is NA	man/assert_vars.Rd
AENDY is added	man/assert_vars.Rd
Multiple Records for each IDVAR	man/assert_vars.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/assert_vars.Rd
Derive worst flag works correctly	man/assert_vars.Rd
'target' is set to 'NA' if a baseline record is missing	man/assert_vars.Rd
Derive when dataset does not have a unique key when excluding 'TERM_LEVEL' columns	man/assert_vars.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_vars.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/assert_vars.Rd
ABLFL = Y worst observation = HI within a subset	man/assert_vars.Rd
new observations are derived correctly with Mosteller method	man/assert_vars.Rd
explicitly missing extreme ranges are supported	man/assert_vars.Rd
no new observations are added if a parameter is missing	man/assert_vars.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_vars.Rd
Derive when an adverse event is in multiple baskets	man/assert_vars.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/assert_vars.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/assert_vars.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/assert_vars.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/assert_vars.Rd
new observations are derived correctly for AVAL	man/assert_vars.Rd
derive_last_dose returns traceability vars	man/assert_vars.Rd
Partial date imputed to the last day/month	man/assert_vars.Rd
‘target‘ is set to Y when ‘end_date‘ is missing and ‘start_date‘ is before ‘ref_start_date‘ a la GSK	man/assert_vars.Rd
TRTDURD is added	man/assert_vars.Rd
the merge dataset is transposed and merged correctly	man/assert_vars.Rd
‘target‘ is set to ‘Y‘ when ‘start_date‘ is NA	man/assert_vars.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/assert_vars.Rd
new observations are derived correctly when zero_doses is Y	man/assert_vars.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_vars.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_vars.Rd
Derive RFICDT	man/assert_vars.Rd
TRTEDTM variable is added	man/assert_vars.Rd
Derive worst flag works correctly with no worst_high option	man/assert_vars.Rd
TRTSDTM variable is added	man/assert_vars.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/assert_vars.Rd
an error is issued if PARAMCD is not set	man/assert_vars.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_vars.Rd
creates a new record for each group and new data frame retains grouping	man/assert_vars.Rd
‘fns‘ as inlined	man/assert_vars.Rd
set new value to a derived record	man/assert_vars.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/assert_vars.Rd
DTHCAUS is added from AE and DS	man/assert_varval_list.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/assert_varval_list.Rd
new observations are derived correctly with Gehan & George method	man/assert_varval_list.Rd
new observations are derived correctly when zero_doses is NULL	man/assert_varval_list.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/assert_varval_list.Rd
check ‘set_values_to‘ mapping	man/assert_varval_list.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
new observations are derived correctly	man/assert_varval_list.Rd
Filter record within ‘by_vars’	man/assert_varval_list.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/assert_varval_list.Rd
new observations are derived correctly with Fujimoto method	man/assert_varval_list.Rd
‘dthcaus’ handles symbols and string literals correctly	man/assert_varval_list.Rd
new observations are derived correctly with Boyd method	man/assert_varval_list.Rd
DTHCAUS and traceability variables are added from AE and DS	man/assert_varval_list.Rd
set new value to a derived record	man/assert_varval_list.Rd
Errors	man/assert_varval_list.Rd
new observations are derived correctly with Takahira method	man/assert_varval_list.Rd
new observations are derived correctly with Mosteller method	man/assert_varval_list.Rd
new observations are derived correctly with Haycock method	man/assert_varval_list.Rd
new observations are derived correctly with constant parameters	man/assert_varval_list.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/assert_varval_list.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/assert_varval_list.Rd
new observations are derived correctly when zero_doses is Y	man/assert_varval_list.Rd
new observations are derived correctly for AVAL	man/assert_varval_list.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/assert_varval_list.Rd
an error is issued if PARAMCD is not set	man/assert_varval_list.Rd
no new observations are added if a parameter is missing	man/assert_varval_list.Rd
new observations are derived correctly with DuBois & DuBois method	man/assert_varval_list.Rd
no new observations are added if filtered dataset is empty	man/assert_varval_list.Rd
call_derivation works	man/assert_varval_list.Rd
LSTALVDT is derived	man/assert_varval_list.Rd
LSTALVDT and traceability variables are derived	man/assert_varval_list.Rd
LSTALVDT is derived for Date class as well	man/assert_varval_list.Rd
call_derivation works	man/call_derivation.Rd
call_derivation works	man/call_derivation.Rd
Gehan-George - height and weight vectors	man/compute_bsa.Rd
new observations are derived correctly with Takahira method	man/compute_bsa.Rd
Fujimoto - height and weight vectors	man/compute_bsa.Rd
new observations are derived correctly with Haycock method	man/compute_bsa.Rd
new observations are derived correctly with Fujimoto method	man/compute_bsa.Rd
new observations are derived correctly with DuBois & DuBois method	man/compute_bsa.Rd
new observations are derived correctly with Mosteller method	man/compute_bsa.Rd
Haycock method - height and weight vectors	man/compute_bsa.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/compute_bsa.Rd
Mosteller method - single height and weight values	man/compute_bsa.Rd
new observations are derived correctly with Gehan & George method	man/compute_bsa.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
DuBois-DuBois method - height and weight vectors	man/compute_bsa.Rd
new observations are derived correctly with Boyd method	man/compute_bsa.Rd
Boyd - height and weight vectors	man/compute_bsa.Rd
Takahira - height and weight vectors	man/compute_bsa.Rd
Gehan-George - height and weight vectors	man/compute_bsa.Rd
Mosteller method - height and weight vectors	man/compute_bsa.Rd
Mosteller method - single height and weight values	man/compute_bsa.Rd
Mosteller method - height and weight vectors	man/compute_bsa.Rd
Haycock method - height and weight vectors	man/compute_bsa.Rd
DuBois-DuBois method - height and weight vectors	man/compute_bsa.Rd
an error is issued if an invalid method is specified	man/compute_bsa.Rd
an error is issued if an invalid method is specified	man/compute_bsa.Rd
Takahira - height and weight vectors	man/compute_bsa.Rd
Boyd - height and weight vectors	man/compute_bsa.Rd
Fujimoto - height and weight vectors	man/compute_bsa.Rd
Partial date imputed to the last day/month	man/compute_dtf.Rd
Partial date imputed to the mid day/month	man/compute_dtf.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/compute_dtf.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/compute_dtf.Rd
compute DTF	man/compute_dtf.Rd
Partial date imputed to the first day/month	man/compute_dtf.Rd
call_derivation works	man/compute_dtf.Rd
compute DTF	man/compute_dtf.Rd
age in years	man/compute_duration.Rd
AENDY is added	man/compute_duration.Rd
duration and unit variable are added	man/compute_duration.Rd
default duration, i.e., relative day	man/compute_duration.Rd
ADY is added	man/compute_duration.Rd
fractional duration	man/compute_duration.Rd
age in months	man/compute_duration.Rd
TRTDURD is added	man/compute_duration.Rd
ASTDY is added	man/compute_duration.Rd
age in months	man/compute_duration.Rd
fractional duration	man/compute_duration.Rd
default duration, i.e., relative day	man/compute_duration.Rd
age in years	man/compute_duration.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/compute_map.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/compute_map.Rd
MAP based on diastolic and systolic blood pressure	man/compute_map.Rd
MAP based on diastolic and systolic blood pressure	man/compute_map.Rd
new observations are derived correctly	man/compute_qtc.Rd
new observations are derived correctly	man/compute_qtc.Rd
new observations are derived correctly	man/compute_rr.Rd



Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
compute TMF	man/compute_tmf.Rd
Partial date imputed to the first day/month	man/compute_tmf.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/compute_tmf.Rd
Partial date imputed to the mid day/month	man/compute_tmf.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/compute_tmf.Rd
No re-derivation is done if -DTF variable already exists	man/compute_tmf.Rd
compute TMF	man/compute_tmf.Rd
blank strings are turned into 'NA'	man/convert_blanks_to_na.Rd
attributes are preserved when converting blanks to 'NA'	man/convert_blanks_to_na.Rd
blank strings are turned into 'NA' inside data frames	man/convert_blanks_to_na.Rd
Partial date imputed to the last day/month	man/convert_dtc_to_dt.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/convert_dtc_to_dt.Rd
Partial date imputed to the mid day/month	man/convert_dtc_to_dt.Rd
Derive RFICDT	man/convert_dtc_to_dt.Rd
Partial date imputed to the last day/month, no DTF	man/convert_dtc_to_dt.Rd
Partial date imputed to the first day/month	man/convert_dtc_to_dt.Rd
call_derivation works	man/convert_dtc_to_dt.Rd
Convert a complete - DTC into a date object	man/convert_dtc_to_dt.Rd
LSTALVDT and traceability variables are derived	man/convert_dtc_to_dt.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/convert_dtc_to_dt.Rd
LSTALVDT is derived	man/convert_dtc_to_dt.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/convert_dtc_to_dt.Rd
Convert a complete - DTC into a date object	man/convert_dtc_to_dtm.Rd
Convert a complete - DTC into a date time object	man/convert_dtc_to_dtm.Rd
derive_last_dose works as expected	man/convert_dtc_to_dtm.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/convert_dtc_to_dtm.Rd
No re-derivation is done if -DTF variable already exists	man/convert_dtc_to_dtm.Rd
Convert a complete - DTC into a date time object	man/convert_dtc_to_dtm.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/convert_dtc_to_dtm.Rd
Partial date imputed to the first day/month	man/convert_dtc_to_dtm.Rd
Partial date imputed to the mid day/month	man/convert_dtc_to_dtm.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/convert_dtc_to_dtm.Rd
derive_last_dose works as expected with dates only	man/convert_dtc_to_dtm.Rd
TRTSDTM variable is added	man/convert_dtc_to_dtm.Rd
derive_last_dose returns traceability vars	man/convert_dtc_to_dtm.Rd
TRTEDTM variable is added	man/convert_dtc_to_dtm.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/convert_dtc_to_dtm.Rd
new observations are derived correctly	man/default_qtc_paramcd.Rd
derive_agegr_ema works as expected	man/derive_agegr_fda.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
derive_agegr_ema - pediatric version - works as expected	man/derive_agegr_fda.Rd
derive_agegr_fda works as expected	man/derive_agegr_fda.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/derive_baseline.Rd
An error is thrown if a subject has multiple records per 'PARAMCD' and 'BASETYPE'	man/derive_baseline.Rd
only the 'target' variable is added to the input dataset	man/derive_baseline.Rd
'target' is set to 'NA' if a baseline record is missing	man/derive_baseline.Rd
'target' is set to 'source' where 'ABLFL == 'Y''	man/derive_baseline.Rd
An error is thrown if a subject has multiple records per 'PARAMCD' and 'BASETYPE'	man/derive_baseline.Rd
a 'BASEC' column of type 'character' is added to the input dataset	man/derive_baseline.Rd
'target' is set to 'NA' if a baseline record is missing	man/derive_baseline.Rd
only the 'target' variable is added to the input dataset	man/derive_baseline.Rd
'target' is set to 'source' where 'ABLFL == 'Y''	man/derive_baseline.Rd
new observations are derived correctly	man/derive_derived_param.Rd
new observations are derived correctly with Mosteller method	man/derive_derived_param.Rd
new observations are derived correctly when zero_doses is NULL	man/derive_derived_param.Rd
no new observations are added if filtered dataset is empty	man/derive_derived_param.Rd
new observations are derived correctly with Fujimoto method	man/derive_derived_param.Rd
new observations are derived correctly when zero_doses is Y	man/derive_derived_param.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/derive_derived_param.Rd
new observations are derived correctly with constant parameters	man/derive_derived_param.Rd
new observations are derived correctly with Boyd method	man/derive_derived_param.Rd
new observations are derived correctly with DuBois & DuBois method	man/derive_derived_param.Rd
new observations are derived correctly with Takahira method	man/derive_derived_param.Rd
no new observations are added if a parameter is missing	man/derive_derived_param.Rd
new observations are derived correctly with Gehan & George method	man/derive_derived_param.Rd
new observations are derived correctly with Haycock method	man/derive_derived_param.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/derive_derived_param.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/derive_derived_param.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/derive_disposition_dt.Rd
Derive RFICDT	man/derive_disposition_dt.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/derive_disposition_dt.Rd
Derive RFICDT	man/derive_disposition_dt.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/derive_disposition_dt.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/derive_disposition_dt.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/derive_disposition_reason.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive DCSREAS using default mapping	man/derive_disposition_reason.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/derive_disposition_reason.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/derive_disposition_reason.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/derive_disposition_reason.Rd
Derive DCSREAS using default mapping	man/derive_disposition_reason.Rd
Derive EOTSTT using a study specific mapping	man/derive_disposition_status.Rd
Derive EOSSTT using default mapping	man/derive_disposition_status.Rd
Derive EOSSTT using default mapping	man/derive_disposition_status.Rd
Derive EOTSTT using a study specific mapping	man/derive_disposition_status.Rd
ABLFL = Y worst observation = HI within a subset	man/derive_extreme_flag.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/derive_extreme_flag.Rd
ABLFL = Y worst observation = LO within a subset	man/derive_extreme_flag.Rd
first observation for each group is flagged	man/derive_extreme_flag.Rd
ABLFL = Y average records within a subset	man/derive_extreme_flag.Rd
ABLFL = Y using last observation within a subset	man/derive_extreme_flag.Rd
last observation for each group is flagged, filter works	man/derive_extreme_flag.Rd
ABLFL = Y using last observation within a subset	man/derive_extreme_flag.Rd
Derive worst flag works correctly	man/derive_extreme_flag.Rd
ABLFL = Y worst observation = HI within a subset	man/derive_extreme_flag.Rd
Derive worst flag works correctly with no worst_high option	man/derive_extreme_flag.Rd
last observation for each group is flagged, filter works	man/derive_extreme_flag.Rd
ABLFL = Y worst observation = LO within a subset	man/derive_extreme_flag.Rd
first observation for each group is flagged	man/derive_extreme_flag.Rd
ABLFL = Y average records within a subset	man/derive_extreme_flag.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/derive_extreme_flag.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/derive_last_dose.Rd
derive_last_dose works as expected	man/derive_last_dose.Rd
derive_last_dose returns traceability vars	man/derive_last_dose.Rd
derive_last_dose works as expected with dates only	man/derive_last_dose.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/derive_last_dose.Rd
derive_last_dose checks validity of start and end dose inputs	man/derive_last_dose.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/derive_last_dose.Rd
derive_last_dose returns traceability vars	man/derive_last_dose.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = FALSE)	man/derive_last_dose.Rd
derive_last_dose checks validity of start and end dose inputs	man/derive_last_dose.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
derive_last_dose works as expected with dates only	man/derive_last_dose.Rd
derive_last_dose works as expected	man/derive_last_dose.Rd
last observation for each group is flagged, filter works	man/derive_obs_number.Rd
Derive worst flag works correctly with no worst_high option	man/derive_obs_number.Rd
‘dthcaus’ handles symbols and string literals correctly	man/derive_obs_number.Rd
first observation is selected without grouping	man/derive_obs_number.Rd
DTHCAUS is added from AE and DS	man/derive_obs_number.Rd
Derive worst flag works correctly	man/derive_obs_number.Rd
ABLFL = Y worst observation = HI within a subset	man/derive_obs_number.Rd
first observation for each group are selected	man/derive_obs_number.Rd
ABLFL = Y average records within a subset	man/derive_obs_number.Rd
LSTALVDT is derived for Date class as well	man/derive_obs_number.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/derive_obs_number.Rd
first observation for each group is flagged	man/derive_obs_number.Rd
LSTALVDT and traceability variables are derived	man/derive_obs_number.Rd
TRTEDTM variable is added	man/derive_obs_number.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/derive_obs_number.Rd
LSTALVDT is derived	man/derive_obs_number.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/derive_obs_number.Rd
DTHCAUS and traceability variables are added from AE and DS	man/derive_obs_number.Rd
TRTSDDTM variable is added	man/derive_obs_number.Rd
ABLFL = Y using last observation within a subset	man/derive_obs_number.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/derive_obs_number.Rd
ABLFL = Y worst observation = LO within a subset	man/derive_obs_number.Rd
an error is issued if an invalid method is specified	man/derive_param_bsa.Rd
new observations are derived correctly with Mosteller method	man/derive_param_bsa.Rd
new observations are derived correctly with DuBois & DuBois method	man/derive_param_bsa.Rd
new observations are derived correctly with Takahira method	man/derive_param_bsa.Rd
new observations are derived correctly with Haycock method	man/derive_param_bsa.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/derive_param_bsa.Rd
new observations are derived correctly with Gehan & George method	man/derive_param_bsa.Rd
new observations are derived correctly with Fujimoto method	man/derive_param_bsa.Rd
new observations are derived correctly with Boyd method	man/derive_param_bsa.Rd
an error is issued if an invalid method is specified	man/derive_param_bsa.Rd
new observations are derived correctly when zero_doses is Y	man/derive_param_doseint.Rd
new observations are derived correctly when zero_doses is NULL	man/derive_param_doseint.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/derive_param_map.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/derive_param_map.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
an error is issued if PARAMCD is not set	man/derive_param_map.Rd
an error is issued if PARAMCD is not set	man/derive_param_map.Rd
new observations are derived correctly	man/derive_param_qtc.Rd
new observations are derived correctly	man/derive_param_qtc.Rd
new observations are derived correctly	man/derive_param_rr.Rd
Errors	
	man/derive_params_exposure.Rd
new observations are derived correctly for AVAL	
	man/derive_params_exposure.Rd
Errors	man/derive_params_exposure.Rd
new observations are derived correctly for AVAL	man/derive_params_exposure.Rd
check ‘set_values_to’ mapping	
	man/derive_summary_records.Rd
Filter record within ‘by_vars’	
	man/derive_summary_records.Rd
check ‘set_values_to’ mapping	man/derive_summary_records.Rd
set new value to a derived record	
	man/derive_summary_records.Rd
Errors	
	man/derive_summary_records.Rd
‘fns’ as inlined	
	man/derive_summary_records.Rd
creates a new record for each group and new data frame retains grouping	man/derive_summary_records.Rd
call_derivation works	
	man/derive_summary_records.Rd
call_derivation works	man/derive_summary_records.Rd
creates a new record for each group and new data frame retains grouping	man/derive_summary_records.Rd
new observations are derived correctly for AVAL	man/derive_summary_records.Rd
set new value to a derived record	man/derive_summary_records.Rd
Errors	man/derive_summary_records.Rd
Filter record within ‘by_vars’	man/derive_summary_records.Rd
‘fns’ as inlined	man/derive_summary_records.Rd
ADY is added	man/derive_var_ady.Rd
ADY is added	man/derive_var_ady.Rd
AENDY is added	man/derive_var_aendy.Rd
AENDY is added	man/derive_var_aendy.Rd
implicitly missing extreme ranges are supported	man/derive_var_anrind.Rd
one-sided reference ranges work	man/derive_var_anrind.Rd
explicitly missing extreme ranges are supported	man/derive_var_anrind.Rd
missing ‘AVAL’ is handled properly	man/derive_var_anrind.Rd
two-sided reference ranges work	man/derive_var_anrind.Rd
ASTDY is added	man/derive_var_astdy.Rd
ASTDY is added	man/derive_var_astdy.Rd
Derive ATIREL	man/derive_var_atirel.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive ATIREL	man/derive_var_atirel.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/derive_var_base.Rd
a 'BASEC' column of type 'character' is added to the input dataset	man/derive_var_basec.Rd
records are duplicated across different 'BASETYPE' values	man/derive_var_basetype.Rd
records that do not match any condition are kept	man/derive_var_basetype.Rd
records are duplicated across different 'BASETYPE' values	man/derive_var_basetype.Rd
records that do not match any condition are kept	man/derive_var_basetype.Rd
'CHG' is calculated as 'AVAL - BASE'	man/derive_var_chg.Rd
'CHG' is calculated as 'AVAL - BASE'	man/derive_var_chg.Rd
DTHCAUS and traceability variables are added from AE and DS	man/derive_var_dthcaus.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/derive_var_dthcaus.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/derive_var_dthcaus.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/derive_var_dthcaus.Rd
'dthcaus' handles symbols and string literals correctly	man/derive_var_dthcaus.Rd
DTHCAUS is added from AE and DS	man/derive_var_dthcaus.Rd
'dthcaus' handles symbols and string literals correctly	man/derive_var_dthcaus.Rd
DTHCAUS is added from AE and DS	man/derive_var_dthcaus.Rd
DTHCAUS and traceability variables are added from AE and DS	man/derive_var_dthcaus.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/derive_var_dthcaus.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/derive_var_dthcaus.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/derive_var_dthcaus.Rd
LSTALVDT and traceability variables are derived	man/derive_var_lstalvdt.Rd
LSTALVDT is derived	man/derive_var_lstalvdt.Rd
LSTALVDT is derived for Date class as well	man/derive_var_lstalvdt.Rd
LSTALVDT is derived for Date class as well	man/derive_var_lstalvdt.Rd
LSTALVDT and traceability variables are derived	man/derive_var_lstalvdt.Rd
LSTALVDT is derived	man/derive_var_lstalvdt.Rd
'target' is set to NA when 'start_date' < 'ref_start_date'	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'ref_start_date' is NA	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' is NA	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'ref_end_date' and 'filter_pre_timepoint' are not specified	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'filter_pre_timepoint' is not 'PRE' and 'start_date' = 'ref_start_date' and 'ref_end_date' is not specified	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'end_date' < 'ref_start_date' regardless of start_date being NA	man/derive_var_ontrtfl.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
'target' is set to Y when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la GSK	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' + 'ref_end_window'	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'filter_pre_timepoint' is not 'PRE' and 'start_date' = 'ref_start_date' and 'ref_end_date' is not specified	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'end_date' < 'ref_start_date' regardless of start_date being NA	man/derive_var_ontrtfl.Rd
'target' is set to Y when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la GSK	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'end_date' > 'ref_start_date' when 'start_date' is missing	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'end_date' is missing and 'start_date' is before 'ref_start_date' a la Roche	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'ref_start_date' is NA	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' and no 'ref_end_window' is specified, otherwise NA	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' is NA	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'start_date' <= 'ref_end_date' + 'ref_end_window'	man/derive_var_ontrtfl.Rd
'target' is set to NA when 'start_date' < 'ref_start_date'	man/derive_var_ontrtfl.Rd
'target' is set to 'Y' when 'start_date' >= 'ref_start_date' and 'ref_end_date' and 'filter_pre_timepoint' are not specified	man/derive_var_ontrtfl.Rd
'PCHG' is set to 'NA' if 'BASE' == 0	man/derive_var_pchg.Rd
'PCHG' is set to 'NA' if 'BASE' == 0	man/derive_var_pchg.Rd
'PCHG' is calculated as $(AVAL - BASE) / \text{abs}(BASE) * 100$	man/derive_var_pchg.Rd
'PCHG' is calculated as $(AVAL - BASE) / \text{abs}(BASE) * 100$	man/derive_var_pchg.Rd
TRTDURD is added	man/derive_var_trtdurd.Rd
TRTDURD is added	man/derive_var_trtdurd.Rd
TRTEDTM variable is added	man/derive_var_trtedtm.Rd
TRTEDTM variable is added	man/derive_var_trtedtm.Rd
TRTSDTM variable is added	man/derive_var_trtsdtm.Rd
TRTSDTM variable is added	man/derive_var_trtsdtm.Rd
duration and unit variable are added	man/derive_vars_aage.Rd
ATC variables are merged properly	man/derive_vars_atc.Rd
ATC variables are merged properly	man/derive_vars_atc.Rd
Partial date imputed to the mid day/month	man/derive_vars_dt.Rd
call_derivation works	man/derive_vars_dt.Rd
Partial date imputed to the last day/month	man/derive_vars_dt.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/derive_vars_dt.Rd
Derive RFICDT	man/derive_vars_dt.Rd
Partial date imputed to the last day/month, no DTF	man/derive_vars_dt.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
call_derivation works	man/derive_vars_dt.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/derive_vars_dt.Rd
Partial date imputed to the first day/month	man/derive_vars_dt.Rd
Partial date imputed to the last day/month	man/derive_vars_dt.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/derive_vars_dt.Rd
Partial date imputed to the mid day/month	man/derive_vars_dt.Rd
Partial date imputed to the first day/month	man/derive_vars_dt.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/derive_vars_dt.Rd
Partial date imputed to the last day/month, no DTF	man/derive_vars_dt.Rd
Convert a complete – DTM into a date object	man/derive_vars_dtm_to_dt.Rd
Convert a complete – DTM into a date object	man/derive_vars_dtm_to_dt.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/derive_vars_dtm_to_tm.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/derive_vars_dtm_to_tm.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/derive_vars_dtm.Rd
No re-derivation is done if –DTF variable already exists	man/derive_vars_dtm.Rd
Partial date imputed to the mid day/month	man/derive_vars_dtm.Rd
Partial date imputed to the mid day/month	man/derive_vars_dtm.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/derive_vars_dtm.Rd
No re-derivation is done if –DTF variable already exists	man/derive_vars_dtm.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/derive_vars_dtm.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/derive_vars_dtm.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/derive_vars_dtm.Rd
Partial date imputed to the first day/month	man/derive_vars_dtm.Rd
Partial date imputed to the first day/month	man/derive_vars_dtm.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/derive_vars_dtm.Rd
duration and unit variable are added	man/derive_vars_duration.Rd
AENDY is added	man/derive_vars_duration.Rd
ASTDY is added	man/derive_vars_duration.Rd
ADY is added	man/derive_vars_duration.Rd
duration and unit variable are added	man/derive_vars_duration.Rd
TRTDURD is added	man/derive_vars_duration.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/derive_vars_query.Rd
Derive when an adverse event is in multiple baskets	man/derive_vars_query.Rd
Derive when dataset does not have a unique key when excluding ‘TERM_LEVEL’ columns	man/derive_vars_query.Rd
Derive CQ and SMQ variables with two term levels	man/derive_vars_query.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/derive_vars_query.Rd



Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive when an adverse event is in multiple baskets	man/derive_vars_query.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/derive_vars_query.Rd
Derive when dataset does not have a unique key when excluding 'TERM_LEVEL' columns	man/derive_vars_query.Rd
Derive CQ and SMQ variables with two term levels	man/derive_vars_query.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/derive_vars_query.Rd
Multiple Records for each IDVAR	man/derive_vars_suppqual.Rd
Multiple IDVARs, differing types	man/derive_vars_suppqual.Rd
IDVAR is missing, join by USUBJID	man/derive_vars_suppqual.Rd
Errors	man/derive_vars_suppqual.Rd
Test domain paramter	man/derive_vars_suppqual.Rd
Errors	man/derive_vars_suppqual.Rd
Test domain paramter	man/derive_vars_suppqual.Rd
Multiple IDVARs, differing types	man/derive_vars_suppqual.Rd
Multiple Records for each IDVAR	man/derive_vars_suppqual.Rd
IDVAR is missing, join by USUBJID	man/derive_vars_suppqual.Rd
the merge dataset is transposed and merged correctly	man/derive_vars_transposed.Rd
ATC variables are merged properly	man/derive_vars_transposed.Rd
filtering the merge dataset works	man/derive_vars_transposed.Rd
the merge dataset is transposed and merged correctly	man/derive_vars_transposed.Rd
filtering the merge dataset works	man/derive_vars_transposed.Rd
Derive worst flag works correctly	man/derive_worst_flag.Rd
Derive worst flag works correctly with no worst_high option	man/derive_worst_flag.Rd
Derive worst flag catches invalid parameters	man/derive_worst_flag.Rd
Derive worst flag catches invalid parameters	man/derive_worst_flag.Rd
Derive worst flag works correctly with no worst_high option	man/derive_worst_flag.Rd
Derive worst flag works correctly	man/derive_worst_flag.Rd
DTHCAUS and traceability variables are added from AE and DS	man/dthcaus_source.Rd
'dthcaus' handles symbols and string literals correctly	man/dthcaus_source.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/dthcaus_source.Rd
DTHCAUS is added from AE and DS	man/dthcaus_source.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/dthcaus_source.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/dthcaus_source.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/dthcaus_source.Rd
'dthcaus' handles symbols and string literals correctly	man/dthcaus_source.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/dthcaus_source.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/dthcaus_source.Rd
error on a dthcaus_source object with invalid mode	man/dthcaus_source.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
DTHCAUS and traceability variables are added from AE and DS	man/dthcaus_source.Rd
DTHCAUS is added from AE and DS	man/dthcaus_source.Rd
error on a dthcaus_source object with invalid mode	man/dthcaus_source.Rd
‘fns’ as inlined	man/expect_dfs_equal.Rd
derive_last_dose works as expected with dates only	man/expect_dfs_equal.Rd
new observations are derived correctly with DuBois & DuBois method	man/expect_dfs_equal.Rd
Test domain paramter	man/expect_dfs_equal.Rd
no new observations are added if a parameter is missing	man/expect_dfs_equal.Rd
new observations are derived correctly with Mosteller method	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ is NA	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘ref_end_date’ and ‘filter_pre_timepoint’ are not specified	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’ and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/expect_dfs_equal.Rd
missing ‘AVAL’ is handled properly	man/expect_dfs_equal.Rd
ABLFL = Y average records within a subset	man/expect_dfs_equal.Rd
derive_last_dose works as expected	man/expect_dfs_equal.Rd
implicitly missing extreme ranges are supported	man/expect_dfs_equal.Rd
Derive DTHDTC from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/expect_dfs_equal.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/expect_dfs_equal.Rd
derive_last_dose works as expected with dates only	man/expect_dfs_equal.Rd
new observations are derived correctly for AVAL	man/expect_dfs_equal.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la Roche	man/expect_dfs_equal.Rd
Derive RFICDT	man/expect_dfs_equal.Rd
set new value to a derived record	man/expect_dfs_equal.Rd
derive_last_dose returns traceability vars	man/expect_dfs_equal.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/expect_dfs_equal.Rd
derive_agegr_ema - pediatric version - works as expected	man/expect_dfs_equal.Rd
derive_last_dose works as expected	man/expect_dfs_equal.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/expect_dfs_equal.Rd
DTHCAUS and traceability variables are added from AE and DS	man/expect_dfs_equal.Rd
Derive worst flag works correctly with no worst_high option	man/expect_dfs_equal.Rd
first observation for each group are selected	man/expect_dfs_equal.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/expect_dfs_equal.Rd
derive_agegr_ema works as expected	man/expect_dfs_equal.Rd
ABLFL = Y worst observation = LO within a subset	man/expect_dfs_equal.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/expect_dfs_equal.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive ATIREL	man/expect_dfs_equal.Rd
new observations are derived correctly	man/expect_dfs_equal.Rd
Derive worst flag works correctly	man/expect_dfs_equal.Rd
new observations are derived correctly when zero_doses is Y	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ and no ‘ref_end_window’ is specified, otherwise NA	man/expect_dfs_equal.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/expect_dfs_equal.Rd
new observations are derived correctly with constant parameters	man/expect_dfs_equal.Rd
new observations are derived correctly with Haycock method	man/expect_dfs_equal.Rd
two-sided reference ranges work	man/expect_dfs_equal.Rd
Derive DCSREAS using default mapping	man/expect_dfs_equal.Rd
Filter record within ‘by_vars’	man/expect_dfs_equal.Rd
new observations are derived correctly	man/expect_dfs_equal.Rd
Test domain paramter	man/expect_dfs_equal.Rd
no new observations are added if filtered dataset is empty	man/expect_dfs_equal.Rd
the merge dataset is transposed and merged correctly	man/expect_dfs_equal.Rd
Derive worst flag works correctly with no worst_high option	man/expect_dfs_equal.Rd
derive_last_dose returns traceability vars	man/expect_dfs_equal.Rd
first observation for each group are selected	man/expect_dfs_equal.Rd
Derive worst flag works correctly	man/expect_dfs_equal.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/expect_dfs_equal.Rd
one-sided reference ranges work	man/expect_dfs_equal.Rd
ABLFL = Y worst observation = LO within a subset	man/expect_dfs_equal.Rd
DTHCAUS is added from AE and DS	man/expect_dfs_equal.Rd
new observations are derived correctly when zero_doses is NULL	man/expect_dfs_equal.Rd
call_derivation works	man/expect_dfs_equal.Rd
new observations are derived correctly when zero_doses is Y	man/expect_dfs_equal.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/expect_dfs_equal.Rd
first observation is selected without grouping	man/expect_dfs_equal.Rd
new observations are derived correctly with Mosteller method	man/expect_dfs_equal.Rd
last observation for each group is flagged, filter works	man/expect_dfs_equal.Rd
Partial date imputed to the last day/month, no DTF	man/expect_dfs_equal.Rd
TRTSDTM variable is added	man/expect_dfs_equal.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/expect_dfs_equal.Rd
records that do not match any condition are kept	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/expect_dfs_equal.Rd
LSTALVDT is derived	man/expect_dfs_equal.Rd
‘dthcaus’ handles symbols and string literals correctly	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ and no ‘ref_end_window’ is specified, otherwise NA	man/expect_dfs_equal.Rd
ABLFL = Y worst observation = HI within a subset	man/expect_dfs_equal.Rd
explicitly missing extreme ranges are supported	man/expect_dfs_equal.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
‘fns’ as inlined	man/expect_dfs_equal.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/expect_dfs_equal.Rd
Multiple IDVARs, differing types	man/expect_dfs_equal.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/expect_dfs_equal.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/expect_dfs_equal.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/expect_dfs_equal.Rd
call_derivation works	man/expect_dfs_equal.Rd
first observation is selected without grouping	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘ref_end_date’ and ‘filter_pre_timepoint’ are not specified	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘end_date’ < ‘ref_start_date’ regardless of start_date being NA	man/expect_dfs_equal.Rd
new observations are derived correctly with Boyd method	man/expect_dfs_equal.Rd
new observations are derived correctly with Boyd method	man/expect_dfs_equal.Rd
records are duplicated across different ‘BASETYPE’ values	man/expect_dfs_equal.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/expect_dfs_equal.Rd
duration and unit variable are added	man/expect_dfs_equal.Rd
only the ‘target’ variable is added to the input dataset	man/expect_dfs_equal.Rd
LSTALVDT is derived	man/expect_dfs_equal.Rd
Derive CQ and SMQ variables with two term levels	man/expect_dfs_equal.Rd
IDVAR is missing, join by USUBJID	man/expect_dfs_equal.Rd
derive_agegr_fda works as expected	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘start_date’ < ‘ref_start_date’	man/expect_dfs_equal.Rd
Multiple Records for each IDVAR	man/expect_dfs_equal.Rd
DTHCAUS and traceability variables are added from AE and DS	man/expect_dfs_equal.Rd
LSTALVDT is derived for Date class as well	man/expect_dfs_equal.Rd
expect_dfs_equal works	man/expect_dfs_equal.Rd
new observations are derived correctly with Gehan & George method	man/expect_dfs_equal.Rd
new observations are derived correctly with Fujimoto method	man/expect_dfs_equal.Rd
ABLFL = Y average records within a subset	man/expect_dfs_equal.Rd
Partial date imputed to the last day/month, no DTF	man/expect_dfs_equal.Rd
ABLFL = Y using last observation within a subset	man/expect_dfs_equal.Rd
TRTSDTM variable is added	man/expect_dfs_equal.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/expect_dfs_equal.Rd
Convert a complete – DTM into a date object	man/expect_dfs_equal.Rd
IDVAR is missing, join by USUBJID	man/expect_dfs_equal.Rd
Derive CQ and SMQ variables with two term levels	man/expect_dfs_equal.Rd
new observations are derived correctly with DuBois & DuBois method	man/expect_dfs_equal.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
new observations are derived correctly with Fujimoto method	man/expect_dfs_equal.Rd
input is returned as is if filter is NULL	man/expect_dfs_equal.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/expect_dfs_equal.Rd
first observation for each group is flagged	man/expect_dfs_equal.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/expect_dfs_equal.Rd
ABLFL = Y using last observation within a subset	man/expect_dfs_equal.Rd
set new value to a derived record	man/expect_dfs_equal.Rd
LSTALVDT and traceability variables are derived	man/expect_dfs_equal.Rd
‘dthcaus’ handles symbols and string literals correctly	man/expect_dfs_equal.Rd
new observations are derived correctly with Takahira method	man/expect_dfs_equal.Rd
only the ‘target’ variable is added to the input dataset	man/expect_dfs_equal.Rd
ABLFL = Y worst observation = HI within a subset	man/expect_dfs_equal.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/expect_dfs_equal.Rd
TRTEDTM variable is added	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ is NA	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘filter_pre_timepoint’ is not ‘PRE’ and ‘start_date’ = ‘ref_start_date’ and ‘ref_end_date’ is not specified	man/expect_dfs_equal.Rd
Multiple Records for each IDVAR	man/expect_dfs_equal.Rd
Filter record within ‘by_vars’	man/expect_dfs_equal.Rd
ATC variables are merged properly	man/expect_dfs_equal.Rd
input is filtered if filter is not NULL	man/expect_dfs_equal.Rd
TRTEDTM variable is added	man/expect_dfs_equal.Rd
Derive EOTSTT using a study specific mapping	man/expect_dfs_equal.Rd
Convert a complete – DTM into a date object	man/expect_dfs_equal.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/expect_dfs_equal.Rd
new observations are derived correctly for AVAL	man/expect_dfs_equal.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/expect_dfs_equal.Rd
new observations are derived correctly with Haycock method	man/expect_dfs_equal.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/expect_dfs_equal.Rd
‘target’ is set to Y when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la GSK	man/expect_dfs_equal.Rd
new observations are derived correctly when zero_doses is NULL	man/expect_dfs_equal.Rd
Multiple IDVARs, differing types	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘end_date’ > ‘ref_start_date’ when ‘start_date’ is missing	man/expect_dfs_equal.Rd
Derive EOSSTT using default mapping	man/expect_dfs_equal.Rd
expect_dfs_equal works	man/expect_dfs_equal.Rd
‘target’ is set to Y when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la GSK	man/expect_dfs_equal.Rd
last observation for each group is flagged, filter works	man/expect_dfs_equal.Rd
input is filtered if filter is not NULL	man/expect_dfs_equal.Rd
DTHCAUS is added from AE and DS	man/expect_dfs_equal.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/expect_dfs_equal.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
‘target’ is set to NA when ‘start_date’ < ‘ref_start_date’	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘ref_start_date’ is NA	man/expect_dfs_equal.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/expect_dfs_equal.Rd
LSTALVDT is derived for Date class as well	man/expect_dfs_equal.Rd
duration and unit variable are added	man/expect_dfs_equal.Rd
filtering the merge dataset works	man/expect_dfs_equal.Rd
first observation for each group is flagged	man/expect_dfs_equal.Rd
implicitly missing extreme ranges are supported	man/expect_dfs_equal.Rd
explicitly missing extreme ranges are supported	man/expect_dfs_equal.Rd
one-sided reference ranges work	man/expect_dfs_equal.Rd
Derive ATIREL	man/expect_dfs_equal.Rd
ATC variables are merged properly	man/expect_dfs_equal.Rd
Derive EOTSTT using a study specific mapping	man/expect_dfs_equal.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘end_date’ is missing and ‘start_date’ is before ‘ref_start_date’ a la Roche	man/expect_dfs_equal.Rd
new observations are derived correctly with Takahira method	man/expect_dfs_equal.Rd
two-sided reference ranges work	man/expect_dfs_equal.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/expect_dfs_equal.Rd
Derive EOSSTT using default mapping	man/expect_dfs_equal.Rd
records that do not match any condition are kept	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘start_date’ >= ‘ref_start_date’ and ‘start_date’ <= ‘ref_end_date’ + ‘ref_end_window’	man/expect_dfs_equal.Rd
records are duplicated across different ‘BASETYPE’ values	man/expect_dfs_equal.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/expect_dfs_equal.Rd
filtering the merge dataset works	man/expect_dfs_equal.Rd
LSTALVDT and traceability variables are derived	man/expect_dfs_equal.Rd
‘target’ is set to NA when ‘end_date’ < ‘ref_start_date’ regardless of start_date being NA	man/expect_dfs_equal.Rd
‘target’ is set to ‘Y’ when ‘end_date’ > ‘ref_start_date’ when ‘start_date’ is missing	man/expect_dfs_equal.Rd
Derive RFICDT	man/expect_dfs_equal.Rd
input is returned as is if filter is NULL	man/expect_dfs_equal.Rd
derive_agegr_ema works as expected	man/expect_dfs_equal.Rd
new observations are derived correctly with Gehan & George method	man/expect_dfs_equal.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/expect_dfs_equal.Rd
missing ‘AVAL’ is handled properly	man/expect_dfs_equal.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/expect_dfs_equal.Rd
no new observations are added if a parameter is missing	man/expect_dfs_equal.Rd
the merge dataset is transposed and merged correctly	man/expect_dfs_equal.Rd
derive_agegr_fda works as expected	man/expect_dfs_equal.Rd
new observations are derived correctly with constant parameters	man/expect_dfs_equal.Rd
Derive DCSREAS using default mapping	man/expect_dfs_equal.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
no new observations are added if filtered dataset is empty	man/expect_dfs_equal.Rd
derive_agegr_ema - pediatric version - works as expected	man/expect_dfs_equal.Rd
Derive EOTSTT using a study specific mapping	man/extract_duplicate_records.Rd
only the ‘target’ variable is added to the input dataset	man/extract_duplicate_records.Rd
ABLFL = Y using last observation within a subset	man/extract_duplicate_records.Rd
Derive CQ and SMQ variables with two term levels	man/extract_duplicate_records.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/extract_duplicate_records.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/extract_duplicate_records.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/extract_duplicate_records.Rd
Derive DCSREAS using default mapping	man/extract_duplicate_records.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/extract_duplicate_records.Rd
An error is thrown if a subject has multiple records per ‘PARAMCD’ and ‘BASETYPE’	man/extract_duplicate_records.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/extract_duplicate_records.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/extract_duplicate_records.Rd
Derive when dataset does not have a unique key when excluding ‘TERM_LEVEL’ columns	man/extract_duplicate_records.Rd
first observation is selected without grouping	man/extract_duplicate_records.Rd
first observation for each group is flagged	man/extract_duplicate_records.Rd
new observations are derived correctly with Mosteller method	man/extract_duplicate_records.Rd
new observations are derived correctly	man/extract_duplicate_records.Rd
Derive EOSSTT using default mapping	man/extract_duplicate_records.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/extract_duplicate_records.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/extract_duplicate_records.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/extract_duplicate_records.Rd
ABLFL = Y worst observation = LO within a subset	man/extract_duplicate_records.Rd
Derive worst flag works correctly with no worst_high option	man/extract_duplicate_records.Rd
first observation for each group are selected	man/extract_duplicate_records.Rd
new observations are derived correctly with Takahira method	man/extract_duplicate_records.Rd
a ‘BASE’ column of type ‘numeric’ is added to the input dataset	man/extract_duplicate_records.Rd
Derive RFICDT	man/extract_duplicate_records.Rd
new observations are derived correctly when zero_doses is Y	man/extract_duplicate_records.Rd
DTHCAUS and traceability variables are added from AE and DS	man/extract_duplicate_records.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/extract_duplicate_records.Rd
Derive when an adverse event is in multiple baskets	man/extract_duplicate_records.Rd
ABLFL = Y worst observation = HI within a subset	man/extract_duplicate_records.Rd
new observations are derived correctly with constant parameters	man/extract_duplicate_records.Rd
new observations are derived correctly when zero_doses is NULL	man/extract_duplicate_records.Rd
new observations are derived correctly with Fujimoto method	man/extract_duplicate_records.Rd
assert_valid_queries checks VAR_PREFIX values	man/extract_duplicate_records.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/extract_duplicate_records.Rd
new observations are derived correctly with Boyd method	man/extract_duplicate_records.Rd
a 'BASEC' column of type 'character' is added to the input dataset	man/extract_duplicate_records.Rd
new observations are derived correctly with DuBois & DuBois method	man/extract_duplicate_records.Rd
'dthcaus' handles symbols and string literals correctly	man/extract_duplicate_records.Rd
last observation for each group is flagged, filter works	man/extract_duplicate_records.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/extract_duplicate_records.Rd
Derive worst flag works correctly	man/extract_duplicate_records.Rd
new observations are derived correctly with Gehan & George method	man/extract_duplicate_records.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/extract_duplicate_records.Rd
new observations are derived correctly with Haycock method	man/extract_duplicate_records.Rd
DTHCAUS is added from AE and DS	man/extract_duplicate_records.Rd
TRTEDTM variable is added	man/extract_duplicate_records.Rd
ABLFL = Y average records within a subset	man/extract_duplicate_records.Rd
TRTSDDTM variable is added	man/extract_duplicate_records.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/extract_duplicate_records.Rd
multiplication works	man/extract_duplicate_records.Rd
multiplication works	man/extract_duplicate_records.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/extract_unit.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/extract_unit.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/filter_extreme.Rd
LSTALVDT and traceability variables are derived	man/filter_extreme.Rd
first observation for each group are selected	man/filter_extreme.Rd
TRTSDDTM variable is added	man/filter_extreme.Rd
LSTALVDT is derived for Date class as well	man/filter_extreme.Rd
first observation for each group are selected	man/filter_extreme.Rd
LSTALVDT is derived	man/filter_extreme.Rd
TRTEDTM variable is added	man/filter_extreme.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets, partial dates	man/filter_extreme.Rd
DTHCAUS and traceability variables are added from AE and DS	man/filter_extreme.Rd
first observation is selected without grouping	man/filter_extreme.Rd
first observation is selected without grouping	man/filter_extreme.Rd
'dthcaus' handles symbols and string literals correctly	man/filter_extreme.Rd
DTHCAUS/traceability are added from AE and DS, info available in 2 input datasets	man/filter_extreme.Rd
DTHCAUS is added from AE and DS	man/filter_extreme.Rd



Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive EOSSTT using default mapping	man/format_eoxxstt_default.Rd
Derive DCSREAS using default mapping	man/format_reason_default.Rd
Partial date imputed to the last day/month	man/impute_dtc.Rd
impute to first day/month if date is partial,Missing time part imputed with 00:00:00 portion	man/impute_dtc.Rd
Partial date imputed to the mid day/month	man/impute_dtc.Rd
max_dates parameter works	man/impute_dtc.Rd
impute to last day/month if date is partial,Missing time part imputed with 23:59:59 portion	man/impute_dtc.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/impute_dtc.Rd
Convert a complete – DTC into a date time object	man/impute_dtc.Rd
Partial date imputed to the first day/month	man/impute_dtc.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/impute_dtc.Rd
call_derivation works	man/impute_dtc.Rd
impute to MID day/month if date is partial,Missing time part imputed with 00:00:00 portion	man/impute_dtc.Rd
No re-derivation is done if –DTF variable already exists	man/impute_dtc.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/impute_dtc.Rd
derive_last_dose works as expected with dates only	man/impute_dtc.Rd
Partial date imputed to the last day/month, no DTF	man/impute_dtc.Rd
derive_last_dose works as expected	man/impute_dtc.Rd
TRTSDTM variable is added	man/impute_dtc.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/impute_dtc.Rd
impute to first day/month if date is partial,Missing time part imputed with 00:00:00 portion	man/impute_dtc.Rd
Convert a complete – DTC into a date object	man/impute_dtc.Rd
Derive RFICDT	man/impute_dtc.Rd
TRTEDTM variable is added	man/impute_dtc.Rd
default: no date imputation, time part set o 00:00:00	man/impute_dtc.Rd
LSTALVDT is derived	man/impute_dtc.Rd
derive_last_dose returns traceability vars	man/impute_dtc.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/impute_dtc.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/impute_dtc.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/impute_dtc.Rd
min_dates parameter works	man/impute_dtc.Rd
default: no date imputation,Missing time part imputed with 23:59:59 portion	man/impute_dtc.Rd
min_dates parameter works	man/impute_dtc.Rd
impute to MID day/month if date is partial,Missing time part imputed with 00:00:00 portion	man/impute_dtc.Rd
impute to last day/month if date is partial,Missing time part imputed with 23:59:59 portion	man/impute_dtc.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
default: no date imputation, Missing time part imputed with 23:59:59 portion	man/impute_dtc.Rd
LSTALVDT and traceability variables are derived	man/impute_dtc.Rd
default: no date imputation, time part set o 00:00:00	man/impute_dtc.Rd
max_dates parameter works	man/impute_dtc.Rd
Partial date imputed to the mid day/month	man/is_date.Rd
duration and unit variable are added	man/is_date.Rd
compute DTF	man/is_date.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/is_date.Rd
Partial date imputed to the first day/month	man/is_date.Rd
max_dates parameter works	man/is_date.Rd
Partial date imputed to the last day/month	man/is_date.Rd
call_derivation works	man/is_date.Rd
min_dates parameter works	man/is_date.Rd
AENDY is added	man/is_date.Rd
No re-derivation is done if -DTF variable already exists	man/is_date.Rd
derive_last_dose works as expected with dates only	man/is_date.Rd
derive_last_dose works as expected	man/is_date.Rd
default duration, i.e., relative day	man/is_date.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/is_date.Rd
derive_last_dose returns traceability vars	man/is_date.Rd
age in years	man/is_date.Rd
compute TMF	man/is_date.Rd
fractional duration	man/is_date.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/is_date.Rd
ADY is added	man/is_date.Rd
ASTDY is added	man/is_date.Rd
age in months	man/is_date.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/is_date.Rd
TRTDURD is added	man/is_date.Rd
ADY is added	man/is_timeunit.Rd
age in months	man/is_timeunit.Rd
duration and unit variable are added	man/is_timeunit.Rd
fractional duration	man/is_timeunit.Rd
AENDY is added	man/is_timeunit.Rd
ASTDY is added	man/is_timeunit.Rd
age in years	man/is_timeunit.Rd
default duration, i.e., relative day	man/is_timeunit.Rd
TRTDURD is added	man/is_timeunit.Rd
LSTALVDT is derived	man/is_valid_date_entry.Rd
max_dates parameter works	man/is_valid_date_entry.Rd
LSTALVDT and traceability variables are derived	man/is_valid_date_entry.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
impute to MID day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/is_valid_date_entry.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/is_valid_date_entry.Rd
impute to first day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/is_valid_date_entry.Rd
Partial date imputed to the mid day/month	man/is_valid_date_entry.Rd
TRTSDTM variable is added	man/is_valid_date_entry.Rd
min_dates parameter works	man/is_valid_date_entry.Rd
Partial date imputed to the first day/month	man/is_valid_date_entry.Rd
call_derivation works	man/is_valid_date_entry.Rd
impute to last day/month if date is partial, Missing time part imputed with 23:59:59 portion	man/is_valid_date_entry.Rd
TRTEDTM variable is added	man/is_valid_date_entry.Rd
Partial date imputed to the last day/month, no DTF	man/is_valid_date_entry.Rd
Partial date imputed to the last day/month	man/is_valid_date_entry.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/is_valid_date_entry.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/is_valid_date_entry.Rd
No re-derivation is done if -DTF variable already exists	man/is_valid_date_entry.Rd
Partial date imputed to the first day/month	man/is_valid_day.Rd
impute to first day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/is_valid_day.Rd
Partial date imputed to the mid day/month	man/is_valid_day.Rd
Partial date imputed to the mid day/month	man/is_valid_month.Rd
Partial date imputed to the first day/month	man/is_valid_month.Rd
impute to first day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/is_valid_month.Rd
Partial date imputed to the mid day/month	man/is_valid_time_entry.Rd
LSTALVDT is derived	man/is_valid_time_entry.Rd
max_dates parameter works	man/is_valid_time_entry.Rd
Partial date imputed to the first day/month	man/is_valid_time_entry.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/is_valid_time_entry.Rd
call_derivation works	man/is_valid_time_entry.Rd
derive_last_dose works as expected	man/is_valid_time_entry.Rd
Convert a complete - DTC into a date object	man/is_valid_time_entry.Rd
Partial date imputed to the last day/month, no DTF	man/is_valid_time_entry.Rd
derive_last_dose returns traceability vars	man/is_valid_time_entry.Rd
LSTALVDT and traceability variables are derived	man/is_valid_time_entry.Rd
TRTEDTM variable is added	man/is_valid_time_entry.Rd
TRTSDTM variable is added	man/is_valid_time_entry.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/is_valid_time_entry.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/is_valid_time_entry.Rd
Partial date imputed to the last day/month	man/is_valid_time_entry.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
derive <code>_last_dose</code> works as expected with dates only	man/is_valid_time_entry.Rd
impute to first day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/is_valid_time_entry.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/is_valid_time_entry.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/is_valid_time_entry.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/is_valid_time_entry.Rd
impute to last day/month if date is partial, Missing time part imputed with 23:59:59 portion	man/is_valid_time_entry.Rd
impute to MID day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/is_valid_time_entry.Rd
<code>min_dates</code> parameter works	man/is_valid_time_entry.Rd
Derive RFICDT	man/is_valid_time_entry.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/is_valid_time_entry.Rd
default: no date imputation, time part set o 00:00:00	man/is_valid_time_entry.Rd
No re-derivation is done if <code>-DTF</code> variable already exists	man/is_valid_time_entry.Rd
default: no date imputation, Missing time part imputed with 23:59:59 portion	man/is_valid_time_entry.Rd
LSTALVDT is derived	man/lstalvdt_source.Rd
LSTALVDT is derived for Date class as well	man/lstalvdt_source.Rd
LSTALVDT and traceability variables are derived	man/lstalvdt_source.Rd
LSTALVDT and traceability variables are derived	man/lstalvdt_source.Rd
validate <code>_lstalvdt_source</code> checks its inputs	man/lstalvdt_source.Rd
LSTALVDT is derived	man/lstalvdt_source.Rd
validate <code>_lstalvdt_source</code> checks its inputs	man/lstalvdt_source.Rd
LSTALVDT is derived for Date class as well	man/lstalvdt_source.Rd
<code>call_derivation</code> works	man/params.Rd
Derive RFICDT	man/signal_duplicate_records.Rd
Derive EOTSTT using a study specific mapping	man/signal_duplicate_records.Rd
<code>assert_valid_queries</code> checks <code>VAR_PREFIX</code> values	man/signal_duplicate_records.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/signal_duplicate_records.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/signal_duplicate_records.Rd
TRTSDTM variable is added	man/signal_duplicate_records.Rd
ABLFL = Y worst observation = HI within a subset	man/signal_duplicate_records.Rd
new observations are derived correctly with Fujimoto method	man/signal_duplicate_records.Rd
new observations are derived correctly with constant parameters	man/signal_duplicate_records.Rd
Derive decides between <code>TERM_NAME</code> and <code>TERM_ID</code> based on the type of the variable	man/signal_duplicate_records.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/signal_duplicate_records.Rd
new observations are derived correctly	man/signal_duplicate_records.Rd
new observations are derived correctly with Boyd method	man/signal_duplicate_records.Rd
last observation for each group is flagged, filter works	man/signal_duplicate_records.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
ABLFL = Y using last observation within a subset	man/signal_duplicate_records.Rd
An error is thrown if a subject has multiple records per ‘PARAMCD’ and ‘BASETYPE’	man/signal_duplicate_records.Rd
first observation for each group is flagged	man/signal_duplicate_records.Rd
new observations are derived correctly with Gehan & George method	man/signal_duplicate_records.Rd
TRTEDTM variable is added	man/signal_duplicate_records.Rd
new observations are derived correctly with Mosteller method	man/signal_duplicate_records.Rd
new observations are derived correctly with Haycock method	man/signal_duplicate_records.Rd
first observation for each group are selected	man/signal_duplicate_records.Rd
a ‘BASEC’ column of type ‘character’ is added to the input dataset	man/signal_duplicate_records.Rd
Derive CQ and SMQ variables with two term levels	man/signal_duplicate_records.Rd
Derive DCSREAS using default mapping	man/signal_duplicate_records.Rd
Derive EOSSTT using default mapping	man/signal_duplicate_records.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/signal_duplicate_records.Rd
only the ‘target’ variable is added to the input dataset	man/signal_duplicate_records.Rd
ABLFL = Y worst observation = LO within a subset	man/signal_duplicate_records.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/signal_duplicate_records.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/signal_duplicate_records.Rd
first observation is selected without grouping	man/signal_duplicate_records.Rd
new observations are derived correctly with Takahira method	man/signal_duplicate_records.Rd
DTHCAUS and traceability variables are added from AE and DS	man/signal_duplicate_records.Rd
‘dthcaus’ handles symbols and string literals correctly	man/signal_duplicate_records.Rd
new observations are derived correctly with DuBois & DuBois method	man/signal_duplicate_records.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/signal_duplicate_records.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/signal_duplicate_records.Rd
Derive worst flag works correctly	man/signal_duplicate_records.Rd
Derive when an adverse event is in multiple baskets	man/signal_duplicate_records.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/signal_duplicate_records.Rd
ABLFL = Y average records within a subset	man/signal_duplicate_records.Rd
DTHCAUS is added from AE and DS	man/signal_duplicate_records.Rd
ABLFL = Y using last observation within a subset and multiple baselines possible	man/signal_duplicate_records.Rd
Derive worst flag works correctly with no worst_high option	man/signal_duplicate_records.Rd
new observations are derived correctly when zero_doses is NULL	man/signal_duplicate_records.Rd
new observations are derived correctly when zero_doses is Y	man/signal_duplicate_records.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/signal_duplicate_records.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/signal_duplicate_records.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive when dataset does not have a unique key when excluding ‘TERM_LEVEL’ columns	man/signal_duplicate_records.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/signal_duplicate_records.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/signal_duplicate_records.Rd
new observations are derived correctly with Haycock method	man/suppress_warning.Rd
Derive EOSSTT using default mapping	man/suppress_warning.Rd
derive_last_dose works as expected with dates only	man/suppress_warning.Rd
new observations are derived correctly with Mosteller method	man/suppress_warning.Rd
new observations are derived correctly with DuBois & DuBois method	man/suppress_warning.Rd
IDVAR is missing, join by USUBJID	man/suppress_warning.Rd
derive_last_dose works as expected	man/suppress_warning.Rd
Derive EOTSTT using a study specific mapping	man/suppress_warning.Rd
derive_last_dose returns traceability vars	man/suppress_warning.Rd
new observations are derived correctly whenever HEIGHT and WEIGHT are available regardless of visit	man/suppress_warning.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/suppress_warning.Rd
Multiple IDVARs, differing types	man/suppress_warning.Rd
new observations are derived correctly when zero_doses is Y	man/suppress_warning.Rd
new observations are derived correctly when zero_doses is NULL	man/suppress_warning.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/suppress_warning.Rd
new observations are derived correctly for AVAL	man/suppress_warning.Rd
ATC variables are merged properly	man/suppress_warning.Rd
Test domain paramter	man/suppress_warning.Rd
filtering the merge dataset works	man/suppress_warning.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/suppress_warning.Rd
‘dthcaus’ handles symbols and string literals correctly	man/suppress_warning.Rd
Multiple Records for each IDVAR	man/suppress_warning.Rd
new observations are derived correctly with constant parameters	man/suppress_warning.Rd
TRTSDTM variable is added	man/suppress_warning.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/suppress_warning.Rd
Derive DCSREAS using default mapping	man/suppress_warning.Rd
new observations are derived correctly with Takahira method	man/suppress_warning.Rd
the merge dataset is transposed and merged correctly	man/suppress_warning.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/suppress_warning.Rd
DTHCAUS and traceability variables are added from AE and DS	man/suppress_warning.Rd
Derive when an adverse event is in multiple baskets	man/suppress_warning.Rd
new observations are derived correctly with Fujimoto method	man/suppress_warning.Rd
LSTALVDT is derived for Date class as well	man/suppress_warning.Rd
LSTALVDT is derived	man/suppress_warning.Rd
only the ‘target’ variable is added to the input dataset	man/suppress_warning.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/suppress_warning.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. *(continued)*

Test Description	Documentation
Derive RANDDT from the relevant ds.DSSTDTC	man/suppress_warning.Rd
TRTEDTM variable is added	man/suppress_warning.Rd
a 'BASEC' column of type 'character' is added to the input dataset	man/suppress_warning.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/suppress_warning.Rd
Derive RFICDT	man/suppress_warning.Rd
Derive CQ and SMQ variables with two term levels	man/suppress_warning.Rd
Derive decides between TERM_NAME and TERM_ID based on the type of the variable	man/suppress_warning.Rd
new observations are derived correctly with Boyd method	man/suppress_warning.Rd
new observations for MAP based on DIABP and SYSBP are derived correctly	man/suppress_warning.Rd
LSTALVDT and traceability variables are derived	man/suppress_warning.Rd
new observations are derived correctly	man/suppress_warning.Rd
Derive when query dataset does not have QUERY_ID or QUERY_SCOPE column	man/suppress_warning.Rd
new observations are derived correctly with Gehan & George method	man/suppress_warning.Rd
new observations for MAP based on DIABP, SYSBP, and HR are derived correctly	man/suppress_warning.Rd
a 'BASE' column of type 'numeric' is added to the input dataset	man/suppress_warning.Rd
DTHCAUS is added from AE and DS	man/suppress_warning.Rd
'target' is set to 'source' where 'ABLFL == 'Y''	man/suppress_warning.Rd
Derive when dataset does not have a unique key when excluding 'TERM_LEVEL' columns	man/suppress_warning.Rd
call_derivation works	man/suppress_warning.Rd
DTHCAUS and traceability variables are added from AE and DS	man/warn_if_inconsistent_list.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/warn_if_inconsistent_list.Rd
'dthcaus' handles symbols and string literals correctly	man/warn_if_inconsistent_list.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/warn_if_inconsistent_list.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/warn_if_inconsistent_list.Rd
LSTALVDT and traceability variables are derived	man/warn_if_inconsistent_list.Rd
LSTALVDT is derived	man/warn_if_inconsistent_list.Rd
DTHCAUS is added from AE and DS	man/warn_if_inconsistent_list.Rd
derive_last_dose checks validity of start and end dose inputs - time component (check_dates_only = TRUE)	man/warn_if_invalid_dtc.Rd
LSTALVDT and traceability variables are derived	man/warn_if_invalid_dtc.Rd
impute to last day/month if date is partial,Missing time part imputed with 23:59:59 portion	man/warn_if_invalid_dtc.Rd
max_dates parameter works	man/warn_if_invalid_dtc.Rd
impute to MID day/month if date is partial,Missing time part imputed with 00:00:00 portion	man/warn_if_invalid_dtc.Rd
min_dates parameter works	man/warn_if_invalid_dtc.Rd

Table 4: Traceability matrix mapping unit tests to documented behaviours. (*continued*)

Test Description	Documentation
compute TMF	man/warn_if_invalid_dtc.Rd
TRTEDTM variable is added	man/warn_if_invalid_dtc.Rd
derive_last_dose returns traceability vars	man/warn_if_invalid_dtc.Rd
derive_last_dose works as expected with dates only	man/warn_if_invalid_dtc.Rd
Derive RFICDT	man/warn_if_invalid_dtc.Rd
compute DTF	man/warn_if_invalid_dtc.Rd
impute to first day/month if date is partial, Missing time part imputed with 00:00:00 portion	man/warn_if_invalid_dtc.Rd
default: no date imputation, Missing time part imputed with 23:59:59 portion	man/warn_if_invalid_dtc.Rd
Convert a complete – DTC into a date time object	man/warn_if_invalid_dtc.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/warn_if_invalid_dtc.Rd
call_derivation works	man/warn_if_invalid_dtc.Rd
LSTALVDT is derived	man/warn_if_invalid_dtc.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/warn_if_invalid_dtc.Rd
Partial date imputed to the last day/month, no DTF	man/warn_if_invalid_dtc.Rd
default: no date imputation, time part set o 00:00:00	man/warn_if_invalid_dtc.Rd
Convert a complete – DTC into a date object	man/warn_if_invalid_dtc.Rd
Partial date imputed to the mid day/month	man/warn_if_invalid_dtc.Rd
Partial date imputed to the first day/month	man/warn_if_invalid_dtc.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/warn_if_invalid_dtc.Rd
derive_last_dose works as expected	man/warn_if_invalid_dtc.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/warn_if_invalid_dtc.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/warn_if_invalid_dtc.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/warn_if_invalid_dtc.Rd
No re-derivation is done if –DTF variable already exists	man/warn_if_invalid_dtc.Rd
Partial date imputed to the last day/month	man/warn_if_invalid_dtc.Rd
TRTSDTM variable is added	man/warn_if_invalid_dtc.Rd
derive_disposition_reason checks new_var_spe and reason_var_spe	man/warn_if_vars_exist.Rd
a warning is issued when a variable to be derived already exists in the input dataset	man/warn_if_vars_exist.Rd
ADY is added	man/warn_if_vars_exist.Rd
Derive ATIREL	man/warn_if_vars_exist.Rd
Partial date imputed to the first day/month	man/warn_if_vars_exist.Rd
Derive EOSSTT using default mapping	man/warn_if_vars_exist.Rd
DTHCAUS is added from AE and DS	man/warn_if_vars_exist.Rd
Convert a complete – DTM into –TM, TM out is HH:MM:SS	man/warn_if_vars_exist.Rd
Derive EOTSTT using a study specific mapping	man/warn_if_vars_exist.Rd
default: no date imputation, time part set o 00:00:00, add DTF, TMF	man/warn_if_vars_exist.Rd
Derive DCTREAS, DCTREASP using a study specific mapping	man/warn_if_vars_exist.Rd



Table 4: Traceability matrix mapping unit tests to documented behaviours. (*continued*)

Test Description	Documentation
duration and unit variable are added	man/warn_if_vars_exist.Rd
DTHCAUS is added from AE and DS if filter is not specified	man/warn_if_vars_exist.Rd
Partial date imputed to the mid day/month	man/warn_if_vars_exist.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59	man/warn_if_vars_exist.Rd
Derive RANDDT from the relevant ds.DSSTDTC	man/warn_if_vars_exist.Rd
default: no date imputation, time part set o 00:00:00, add DTF	man/warn_if_vars_exist.Rd
Partial date imputed to the last day/month, no DTF	man/warn_if_vars_exist.Rd
Convert a complete – DTM into a date object	man/warn_if_vars_exist.Rd
No re-derivation is done if –DTF variable already exists	man/warn_if_vars_exist.Rd
Derive DCSREAS using default mapping	man/warn_if_vars_exist.Rd
‘target’ is set to ‘NA’ if a baseline record is missing	man/warn_if_vars_exist.Rd
call_derivation works	man/warn_if_vars_exist.Rd
DTHCAUS and traceability variables are added from AE and DS	man/warn_if_vars_exist.Rd
ASTDY is added	man/warn_if_vars_exist.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets, partial dates	man/warn_if_vars_exist.Rd
Derive RFICDT	man/warn_if_vars_exist.Rd
Partial date imputed to the last day/month, Missing time part imputed with 23:59:59, no imputation flag	man/warn_if_vars_exist.Rd
TRTDURD is added	man/warn_if_vars_exist.Rd
Partial date imputed to the last day/month	man/warn_if_vars_exist.Rd
Derive DTHDT from the relevant ds.DSSTDTC, impute partial death dates with 1st day/month	man/warn_if_vars_exist.Rd
AENDY is added	man/warn_if_vars_exist.Rd
a ‘BASEC’ column of type ‘character’ is added to the input dataset	man/warn_if_vars_exist.Rd
An error is thrown if a subject has multiple records per ‘PARAMCD’ and ‘BASETYPE’	man/warn_if_vars_exist.Rd
‘target’ is set to ‘source’ where ‘ABLFL == ‘Y’	man/warn_if_vars_exist.Rd
only the ‘target’ variable is added to the input dataset	man/warn_if_vars_exist.Rd
a ‘BASE’ column of type ‘numeric’ is added to the input dataset	man/warn_if_vars_exist.Rd
DTHCAUS/traceabiity are added from AE and DS, info available in 2 input datasets	man/warn_if_vars_exist.Rd
‘dthcaus’ handles symbols and string literals correctly	man/warn_if_vars_exist.Rd
a warning is issued when a variable to be derived already exists in the input dataset	man/warn_if_vars_exist.Rd

#### 4.3.2 Untested

Table 5: Untested behaviours: documentation that is not covered by any test.

Exported package object	Documentation
assert_character_scalar()	man/assert_character_scalar.Rd
assert_character_vector()	man/assert_character_vector.Rd

Table 5: Untested behaviours: documentation that is not covered by any test. *(continued)*

Exported package object	Documentation
assert_data_frame()	man/assert_data_frame.Rd
assert_has_variables()	man/assert_has_variables.Rd
assert_integer_scalar()	man/assert_integer_scalar.Rd
assert_list_of()	man/assert_list_of.Rd
assert_logical_scalar()	man/assert_logical_scalar.Rd
assert_numeric_vector()	man/assert_numeric_vector.Rd
assert_order_vars()	man/assert_order_vars.Rd
assert_param_does_not_exist()	man/assert_param_does_not_exist.Rd
assert_s3_class()	man/assert_s3_class.Rd
assert_symbol()	man/assert_symbol.Rd
assert_unit()	man/assert_unit.Rd
assert_vars()	man/assert_vars.Rd
assert_varval_list()	man/assert_varval_list.Rd
call_derivation()	man/call_derivation.Rd
compute_bmi()	man/compute_bmi.Rd
dataset_vignette()	man/dataset_vignette.Rd
derive_aage()	man/derive_aage.Rd
derive_agegr_fda()	man/derive_agegr_fda.Rd
derive_duration()	man/derive_duration.Rd
derive_extreme_flag()	man/derive_extreme_flag.Rd
derive_param_bmi()	man/derive_param_bmi.Rd
derive_params_exposure()	man/derive_params_exposure.Rd
derive_query_vars()	man/derive_query_vars.Rd
derive_summary_records()	man/derive_summary_records.Rd
derive_suppqual_vars()	man/derive_suppqual_vars.Rd
derive_var_ontrtfl()	man/derive_var_ontrtfl.Rd
desc()	man/reexports.Rd
dthcaus_source()	man/dthcaus_source.Rd
exprs()	man/reexports.Rd
get_duplicates_dataset()	man/get_duplicates_dataset.Rd
is_valid_hour()	man/is_valid_hour.Rd
is_valid_sec_min()	man/is_valid_sec_min.Rd
list_all_templates()	man/list_all_templates.Rd
lstalvdt_source()	man/lstalvdt_source.Rd
params()	man/params.Rd
suppress_warning()	man/suppress_warning.Rd
use_ad_template()	man/use_ad_template.Rd
vars()	man/reexports.Rd
warn_if_inconsistent_list()	man/warn_if_inconsistent_list.Rd
warn_if_invalid_dtc()	man/warn_if_invalid_dtc.Rd

### 4.3.3 Testing granularity

An indicator of test granularity by whether the function is directly tested.

Table 6: Granularity of unit tests: directly tested exported functions.

Exported package object	Tested Directly
assert_character_scalar()	FALSE
assert_character_vector()	FALSE
assert_data_frame()	FALSE
assert_filter_cond()	TRUE
assert_has_variables()	TRUE
assert_integer_scalar()	FALSE
assert_list_of()	FALSE
assert_logical_scalar()	FALSE
assert_numeric_vector()	FALSE
assert_order_vars()	FALSE
assert_param_does_not_exist()	FALSE
assert_s3_class()	FALSE
assert_symbol()	FALSE
assert_unit()	FALSE
assert_valid_queries()	TRUE
assert_vars()	FALSE
assert_varval_list()	FALSE
call_derivation()	TRUE
compute_bmi()	FALSE
compute_bsa()	TRUE
compute_dtf()	TRUE
compute_duration()	TRUE
compute_map()	TRUE
compute_qtc()	TRUE
compute_rr()	FALSE
compute_tmf()	TRUE
convert_blanks_to_na()	TRUE
convert_dtc_to_dt()	TRUE
convert_dtc_to_dtm()	TRUE
dataset_vignette()	FALSE
default_qtc_paramcd()	FALSE
derive_aage()	FALSE
derive_agegr_ema()	FALSE
derive_agegr_fda()	FALSE
derive_baseline()	TRUE
derive_derived_param()	FALSE
derive_disposition_dt()	TRUE
derive_disposition_reason()	TRUE
derive_disposition_status()	TRUE
derive_duration()	FALSE
derive_extreme_flag()	TRUE
derive_last_dose()	TRUE
derive_obs_number()	FALSE
derive_param_bmi()	FALSE
derive_param_bsa()	TRUE
derive_param_doseint()	FALSE

Table 6: Granularity of unit tests: directly tested exported functions. *(continued)*

Exported package object	Tested Directly
derive_param_map()	TRUE
derive_param_qtc()	TRUE
derive_param_rr()	FALSE
derive_params_exposure()	TRUE
derive_query_vars()	FALSE
derive_summary_records()	TRUE
derive_suppqual_vars()	FALSE
derive_var_ady()	TRUE
derive_var_aendy()	TRUE
derive_var_anrind()	FALSE
derive_var_astdy()	TRUE
derive_var_atirel()	TRUE
derive_var_base()	TRUE
derive_var_basec()	TRUE
derive_var_basetype()	TRUE
derive_var_chg()	TRUE
derive_var_dthcaus()	TRUE
derive_var_lstalvdt()	TRUE
derive_var_ontrtfll()	TRUE
derive_var_pchg()	TRUE
derive_var_trtdurd()	TRUE
derive_var_trtedtm()	TRUE
derive_var_trtsdtm()	TRUE
derive_vars_aage()	FALSE
derive_vars_atc()	TRUE
derive_vars_dt()	TRUE
derive_vars_dtm_to_dt()	TRUE
derive_vars_dtm_to_tm()	TRUE
derive_vars_dtm()	TRUE
derive_vars_duration()	TRUE
derive_vars_query()	TRUE
derive_vars_suppqual()	TRUE
derive_vars_transposed()	TRUE
derive_worst_flag()	TRUE
desc()	FALSE
dthcaus_source()	TRUE
expect_dfs_equal()	TRUE
exprs()	FALSE
extract_duplicate_records()	TRUE
extract_unit()	FALSE
filter_extreme()	TRUE
format_eoxxstt_default()	FALSE
format_reason_default()	FALSE
get_duplicates_dataset()	FALSE
impute_dtc()	TRUE
is_date()	FALSE

Table 6: Granularity of unit tests: directly tested exported functions. (*continued*)

Exported package object	Tested Directly
is_timeunit()	FALSE
is_valid_date_entry()	FALSE
is_valid_day()	FALSE
is_valid_hour()	FALSE
is_valid_month()	FALSE
is_valid_sec_min()	FALSE
is_valid_time_entry()	FALSE
list_all_templates()	FALSE
lstalvdt_source()	TRUE
params()	FALSE
signal_duplicate_records()	FALSE
suppress_warning()	FALSE
use_ad_template()	FALSE
vars()	FALSE
warn_if_inconsistent_list()	FALSE
warn_if_invalid_dtc()	FALSE
warn_if_vars_exist()	TRUE