

# R package meta

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# Some History on **meta**

- Development of first meta-analysis functions in R around the year 2000
- Purpose 1: use in my PhD project on statistical tests for funnel plot asymmetry (or tests for publication bias)
- Purpose 2: use for additional statistical analyses in Cochrane reviews not possible in Review Manager 4
- Development aim 1: easy to use (only for me in the beginning)
- Development aim 2: output that is easy to understand by clinical partners
- Completed my PhD in 2004 and became head of IT at the IMBI, Freiburg (permanent position)
- First publication on CRAN: February 2006

# R package **meta** (I)

Function	Comment
<code>metabin</code>	Meta-analysis of binary outcome data
<code>metacont</code>	Meta-analysis of continuous outcome data
<code>metagen</code>	Generic inverse variance meta-analysis
<code>metainc</code>	Meta-analysis of incidence rates
<code>metacor</code>	Meta-analysis of single correlations
<code>metaprop</code>	Meta-analysis of single proportions
<code>metarate</code>	Meta-analysis of single incidence rates
<code>metamean</code>	Meta-analysis of single mean values
<code>read.mtv</code>	Import RevMan 4 data files
<code>read.rm5</code>	Import RevMan 5 data files
<code>metacr</code>	Meta-analysis of outcome data from Cochrane review
<code>forest</code>	Forest plot
<code>funnel</code>	Plot to assess funnel plot asymmetry
<code>metabias</code>	Test for funnel plot asymmetry
<code>trimfill</code>	Trim and fill method for meta-analysis

## R package **meta** (II)

Function	Comment
<code>metareg</code>	Meta-regression (wrapper function to R package <b>metafor</b> )
<code>radial</code>	Radial plot
<code>labbe</code>	L'Abbe plot
<code>baujat</code>	Baujat plot
<code>bubble</code>	Bubble plot
<code>metacum</code>	Cumulative meta-analysis
<code>metainf</code>	Leave-one-out method
<code>metabind</code>	Combine results of several meta-analyses
<code>metamerge</code>	Merge results of two meta-analyses based on the same data set
<code>metaadd</code>	Add pooled results from an (external) meta-analysis

# The Future

- Publish new version of **meta** on CRAN with risk of bias function **rob** and revised R functions **forest** and **metamerge**
- Some minor additions
- Get **meta** ready for the second edition of our book “Meta-Analysis with R”
- Main focus: R packages **netmeta** and **crossnma** for network meta-analysis