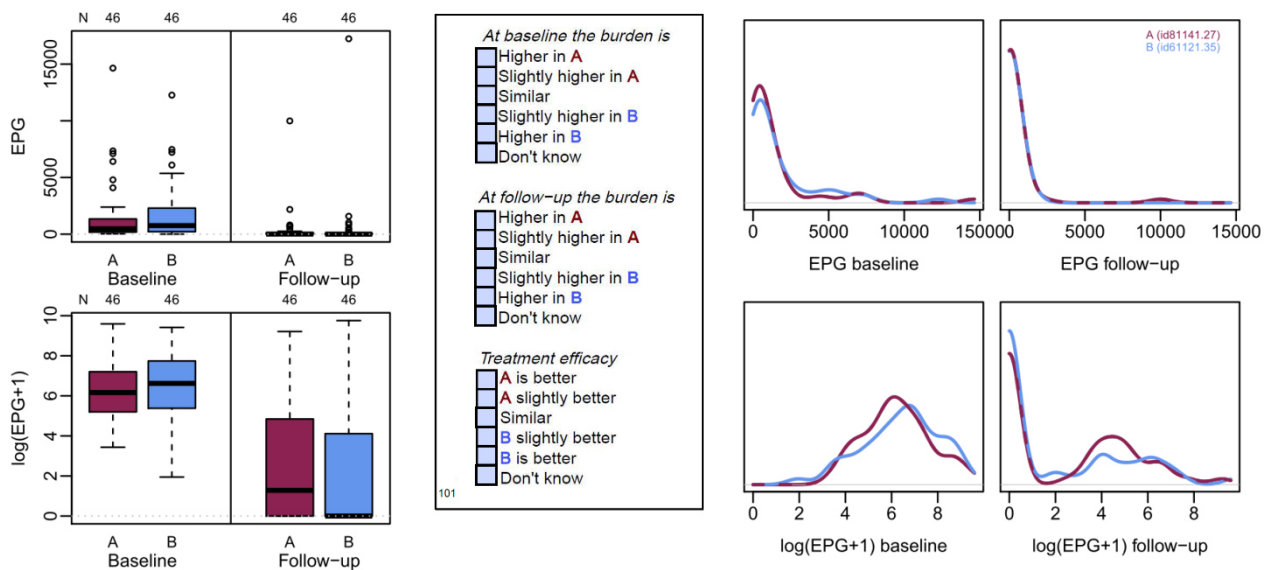


We would like to deeply thank you for your participation.

In helminthology, the “egg per gram of faeces (EPG)” is used as indicator for the severity of an infection. To quantify the effect of an intervention (e.g. anthelmintic drug), two main measures are usually applied: the Cure Rate (CR) and the Egg Reduction Rate (ERR). The CR depends highly on the baseline infection intensity; therefore, the ERR is more suitable for comparisons among different settings. However, the ERR can be calculated in different ways; whereby the arithmetic and geometric mean approaches are the currently exclusively used. The two approaches are characterised by different strength and weaknesses, e.g. the arithmetic mean is greatly influenced by outliers and skewed distributions while the geometric mean lacks an intuitive interpretation in the context of egg counts. Several examples from the scientific literature show, that the two approaches may result in substantially different estimates of the ERR. The main objective of this survey is to answer the question: "Which measure of central tendency is most suitable to describe worm burden and treatment efficacy in terms of egg reduction rates?" In detail, we will calculate a series of different measures of ERR (e.g. arithmetic/geometric means, quantiles, applying truncation or Winsorisation, etc.) to identify the approach which is in best agreement with the opinions of experts.

Below, you find samples of random egg counts from different parasites in human stool samples. All data originate from randomized clinical drug trials.

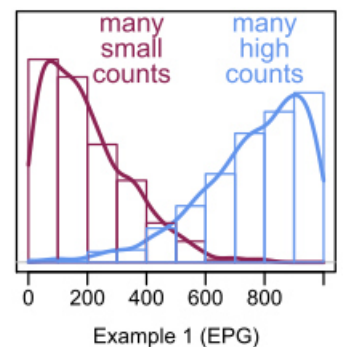
- Always 2 treatment arms are shown (A-red/B-blue)
- The upper row (graph 1-3) shows eggs per gram. For some species and distribution of the log transformed data might be easier to interpret (especially after treatment), they are presented in the lower row.
- The box-plots present the min, Q1, median, Q3, max, dots represent outliers. The treatment effect is in fact the change from baseline to follow-up.



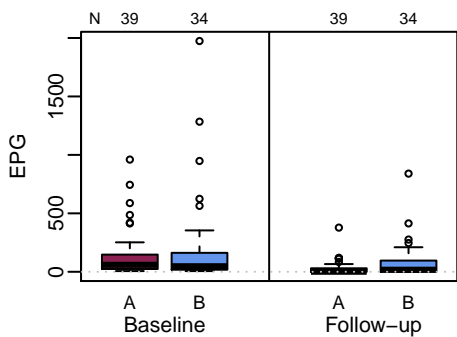
In case the box-plots are not sufficient for a judgement, the line graphs on the right present the density distributions. The density can be interpreted in the same way as a histogram, except that instead of bars a continuous line is shown (to avoid over plotting, see example right). At baseline EPG can be small but not zero; however, at follow-up the value associated with 0 EPG represents the CR.

Answer the questions:

1. Please look at the box plots and answer which treatment arm has in your opinion the higher burden at baseline and follow-up and which treatment performed better.
2. If the box plots are unclear, the graphs on the right provide additional information.



Please return the form to: Swiss TPH, Wendelin Moser, wendelin.moser@unibas.ch If you have any questions, don't hesitate to ask me, Tel: +41 61 284 8486.

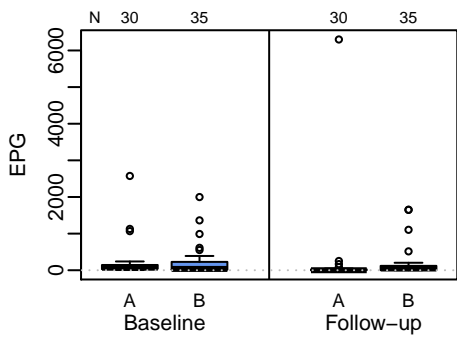
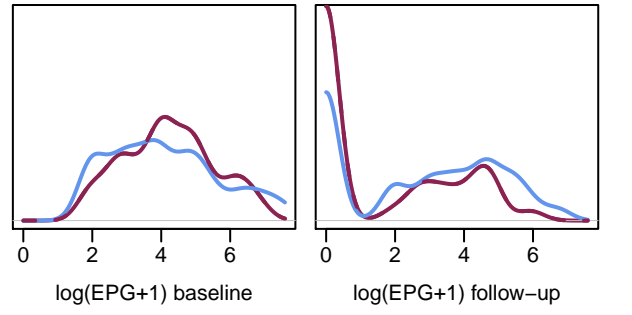
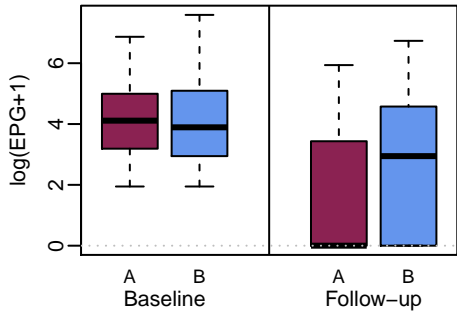
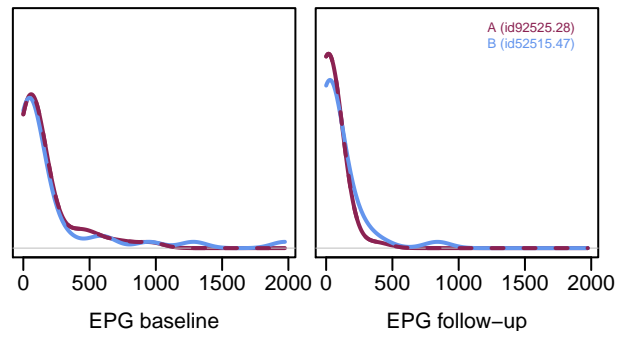


At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

111

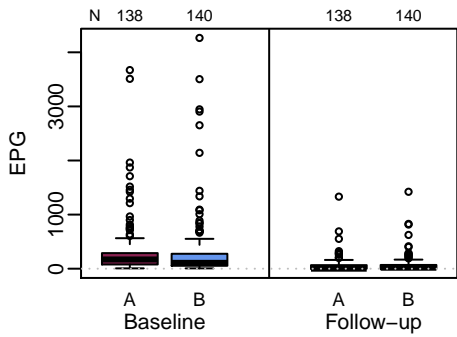
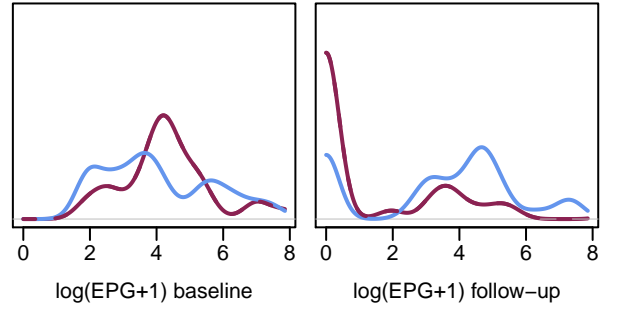
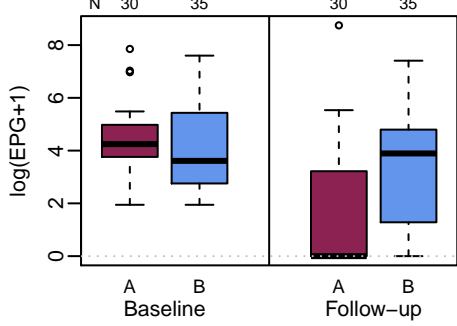
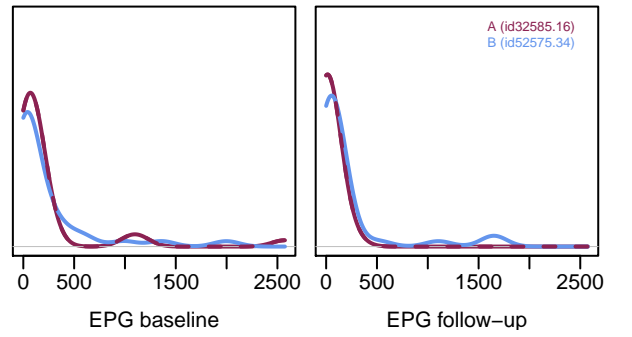


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Treatment efficacy
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 Don't know

111

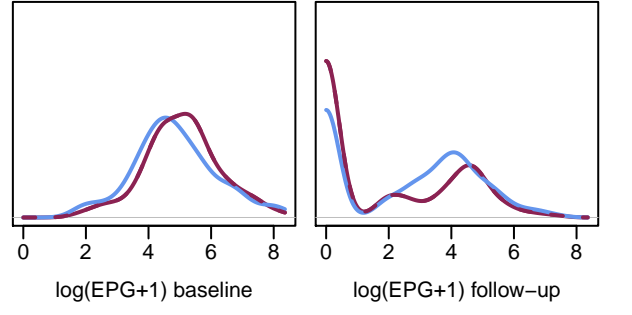
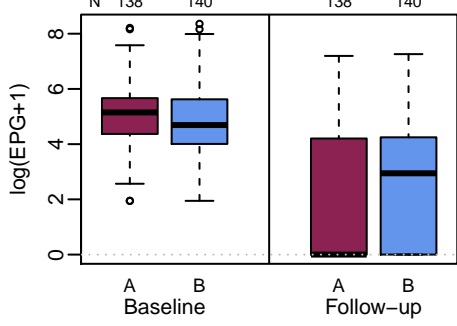
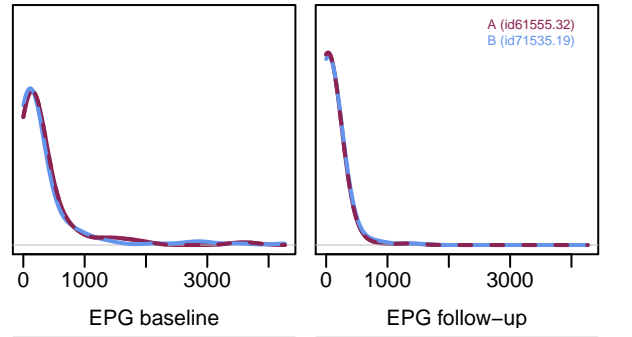


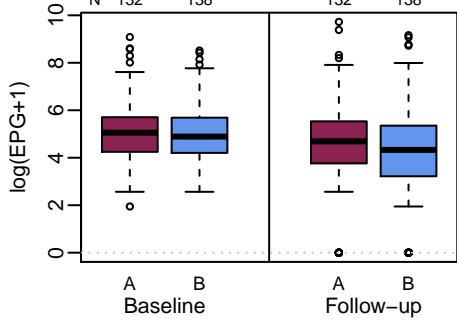
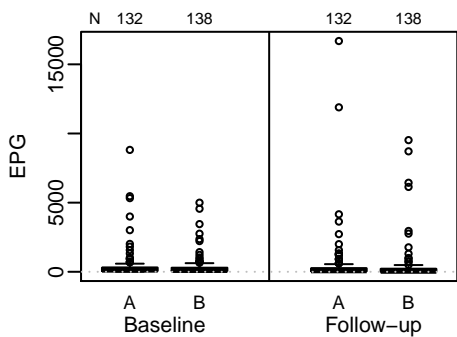
At baseline the burden is
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Treatment efficacy
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111

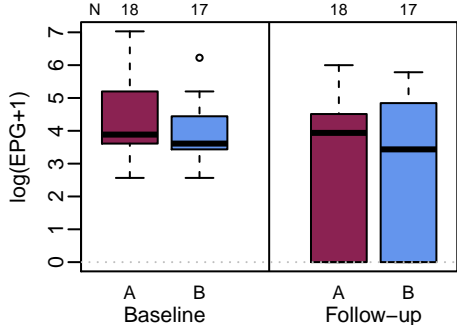
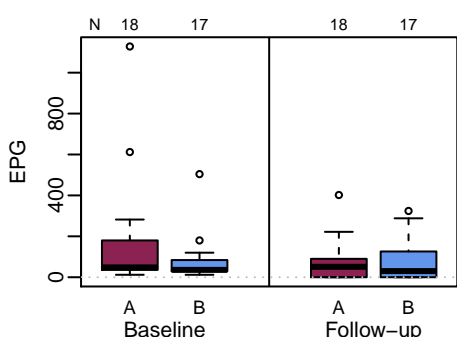
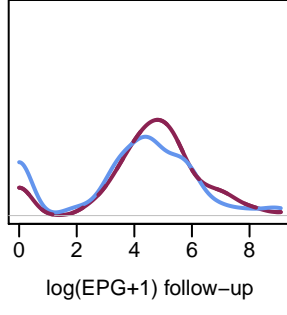
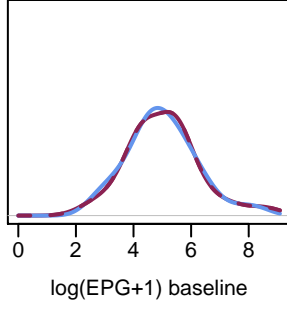
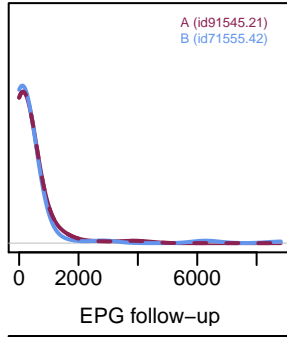
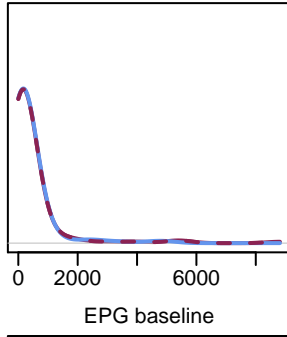




At baseline the burden is
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 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

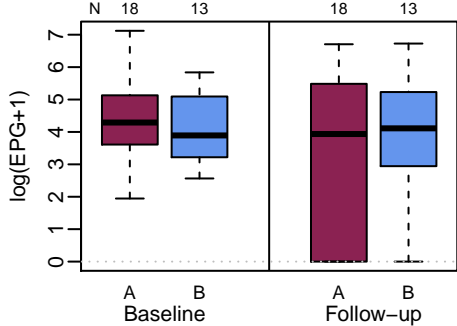
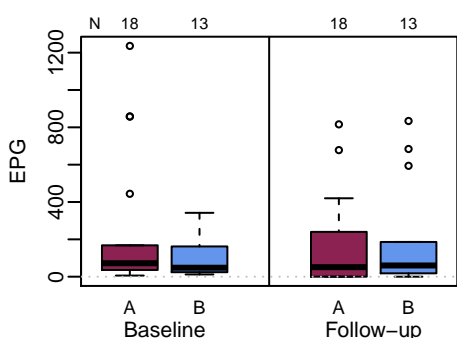
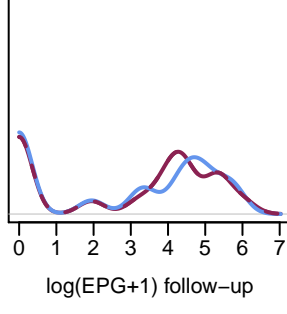
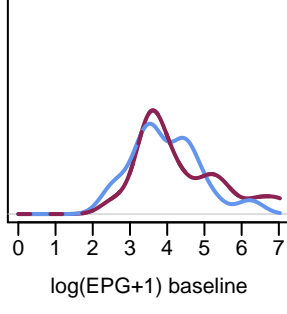
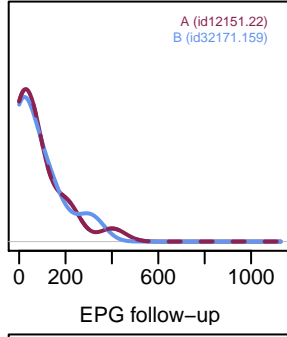
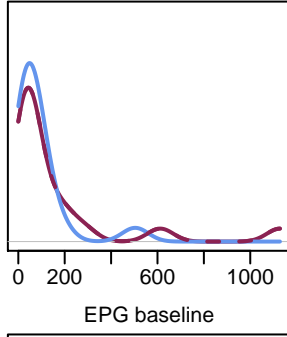
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

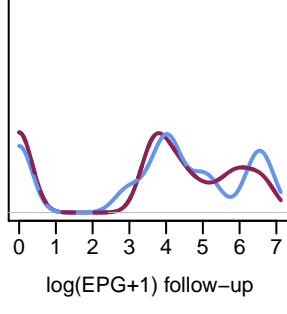
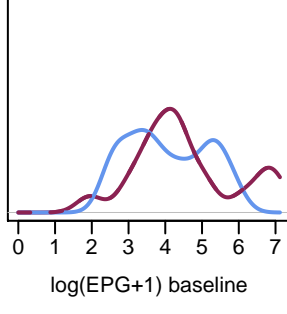
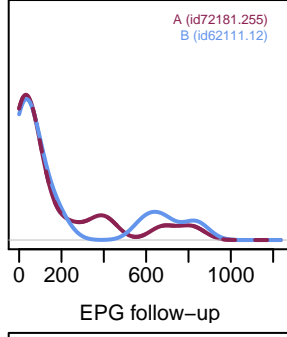
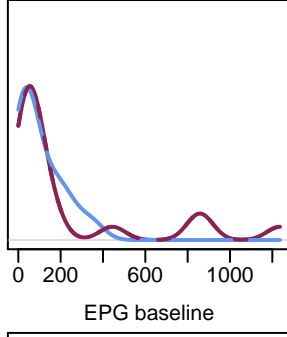
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

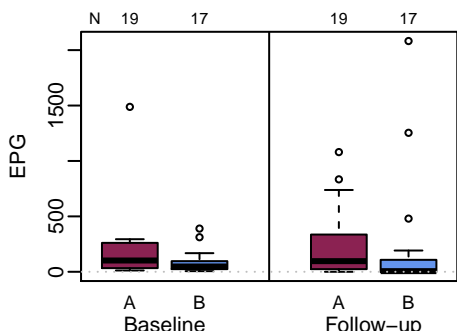


At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
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 Slightly higher in **A**
 Similar
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 Don't know

Treatment efficacy
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 Don't know

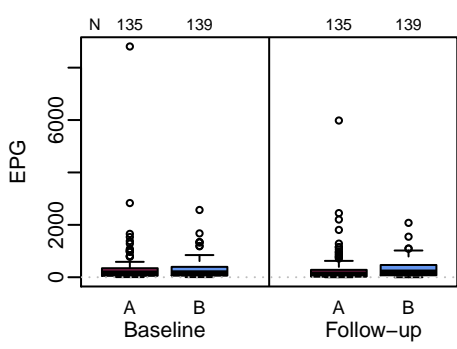
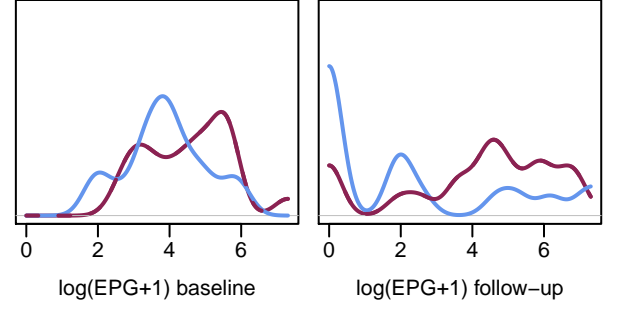
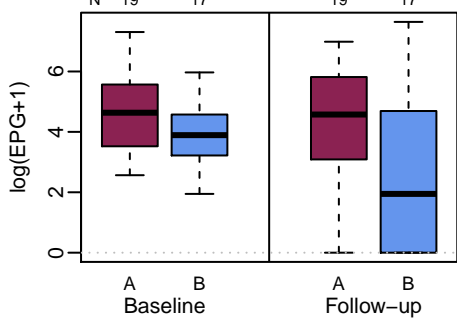
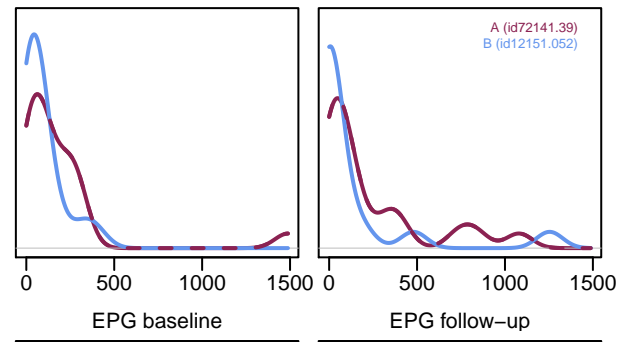




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 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
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 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

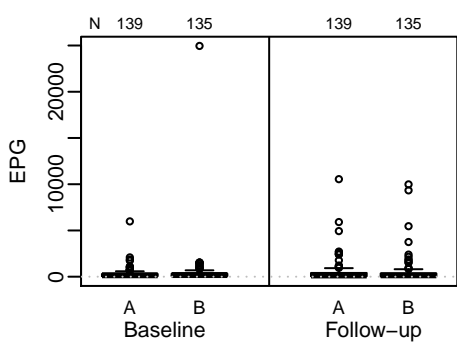
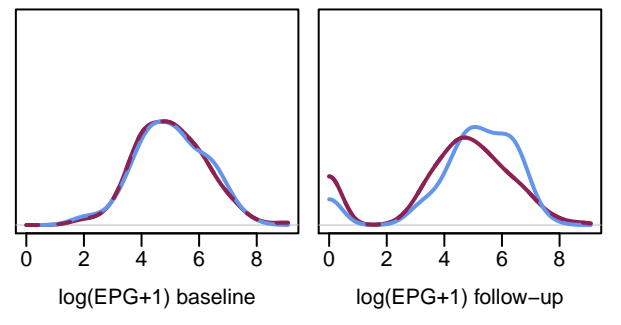
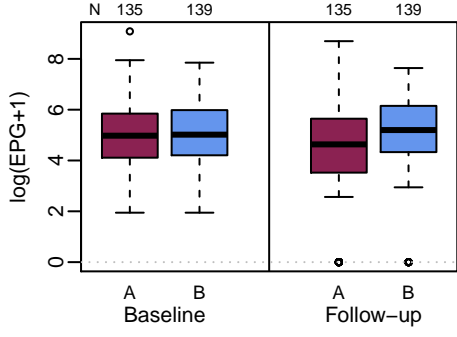
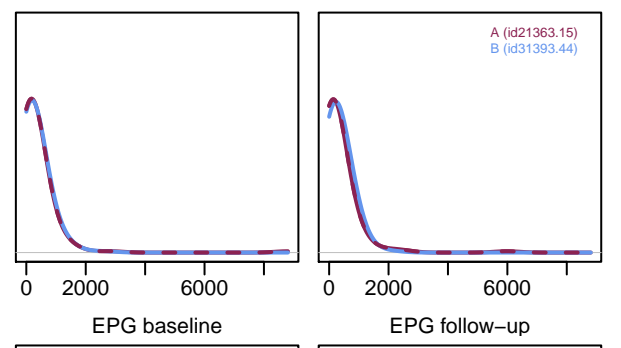
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



At baseline the burden is
 Higher in **A**
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At follow-up the burden is
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 Slightly higher in **B**
 Higher in **B**
 Don't know

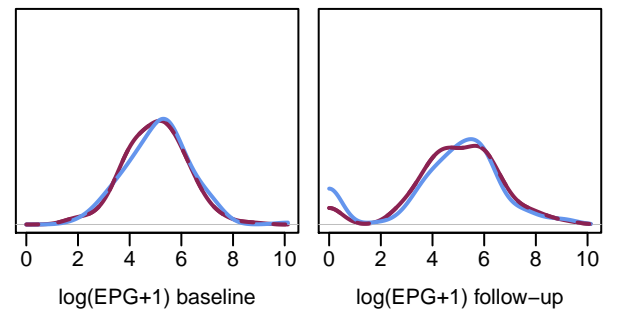
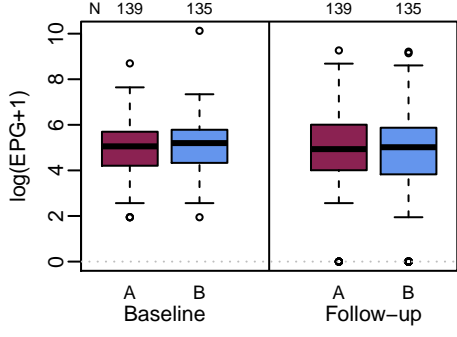
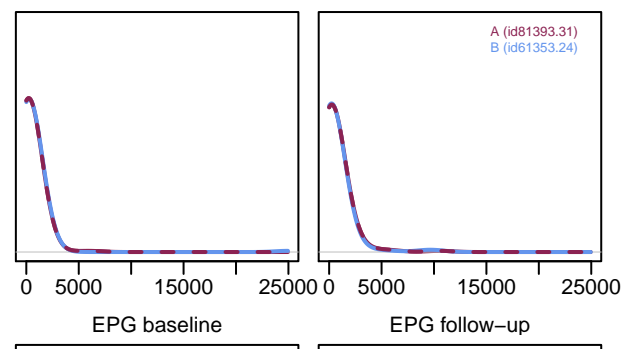
Treatment efficacy
A is better
A slightly better
 Similar
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B is better
 Don't know

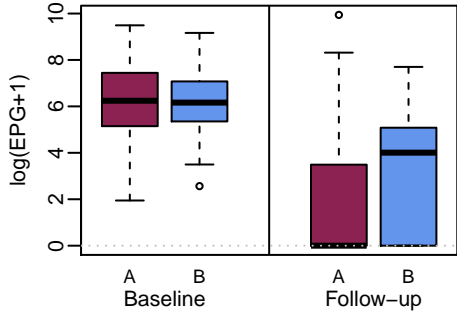
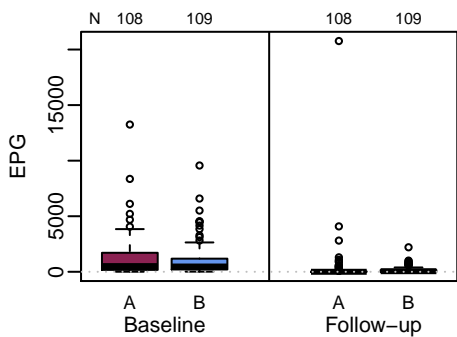


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 Higher in **B**
 Don't know

At follow-up the burden is
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 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
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 Don't know

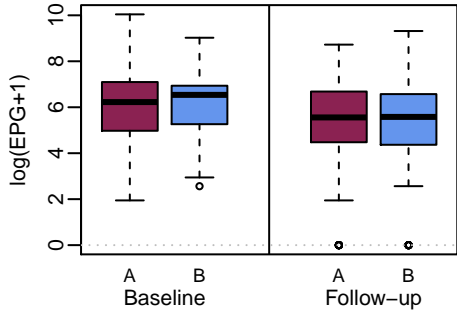
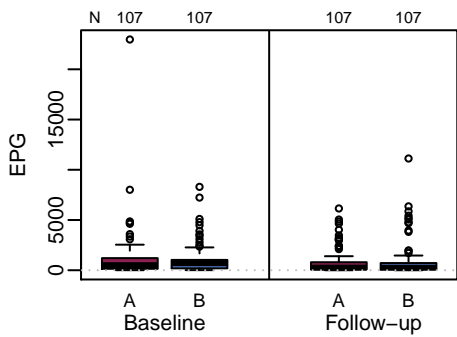
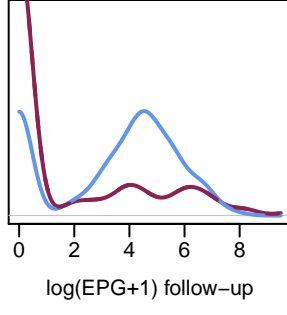
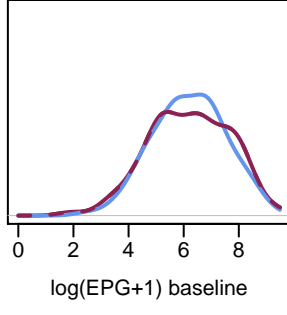
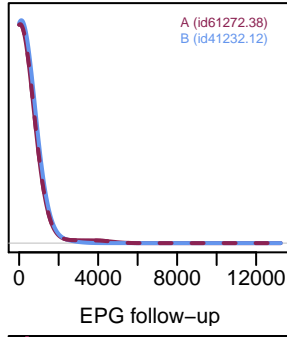
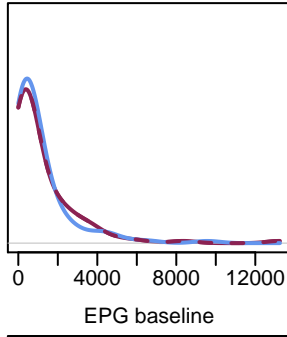




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 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

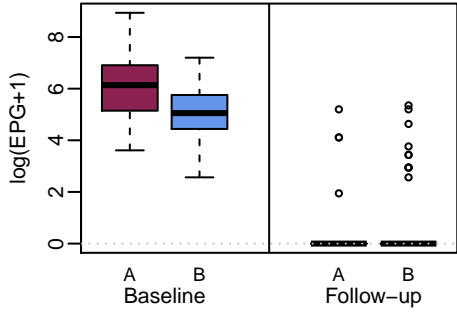
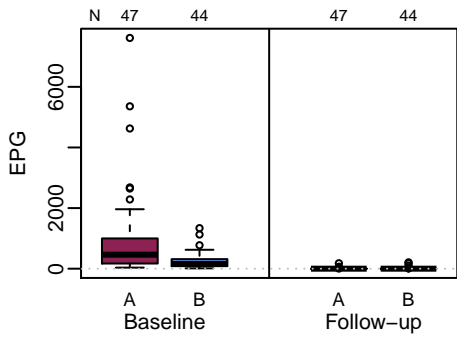
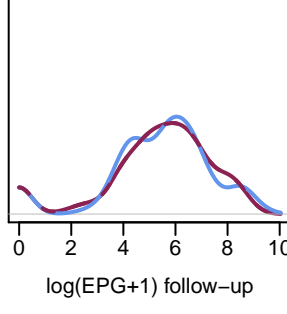
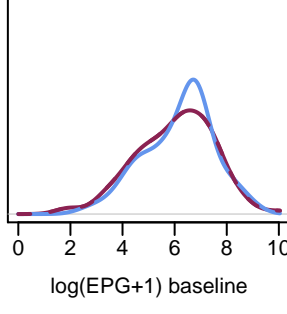
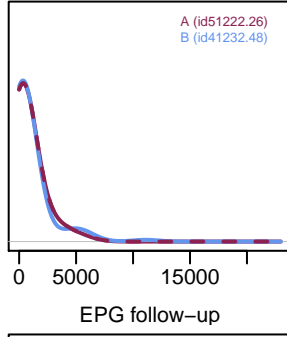
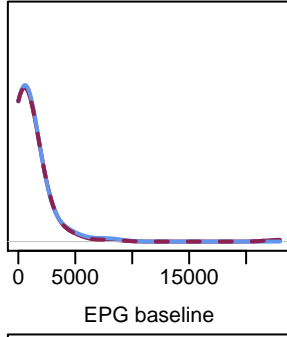
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



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 Higher in **A**
 Slightly higher in **A**
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 Higher in **B**
 Don't know

At follow-up the burden is
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 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

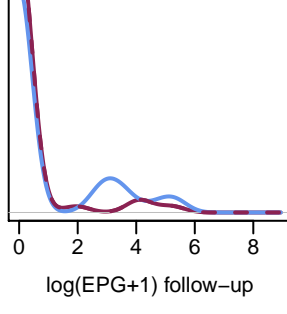
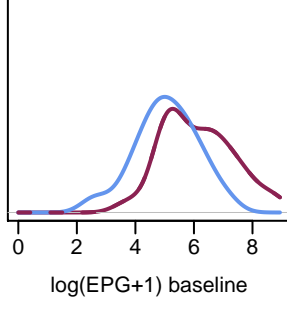
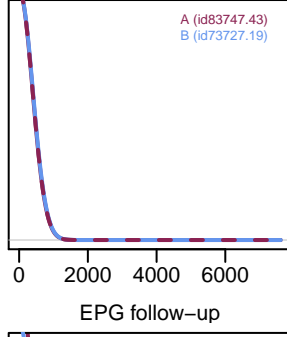
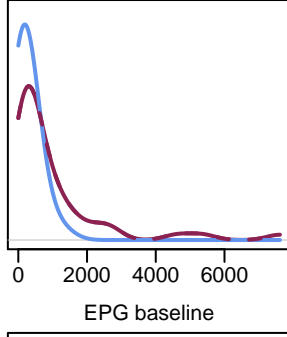
Treatment efficacy
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 Similar
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B is better
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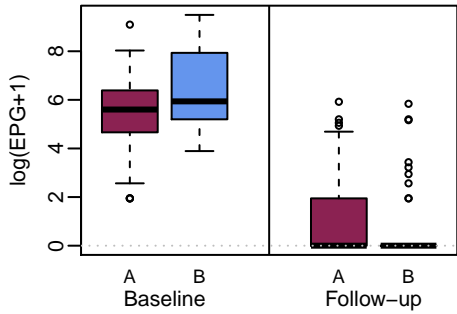
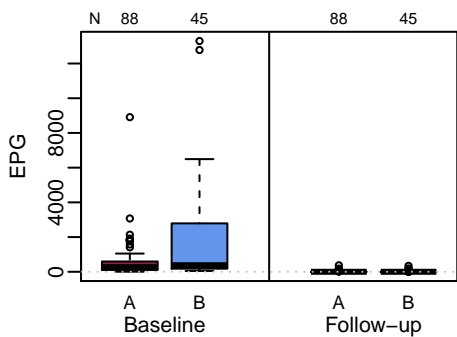


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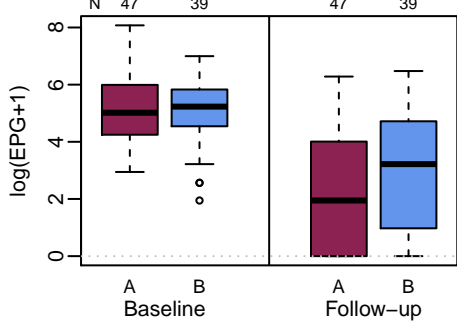
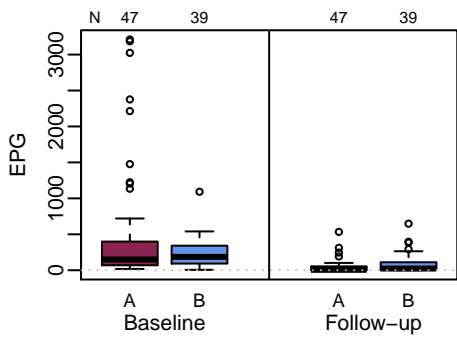
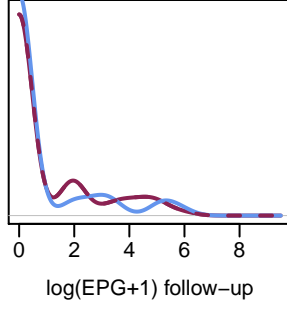
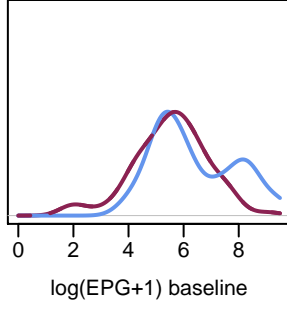
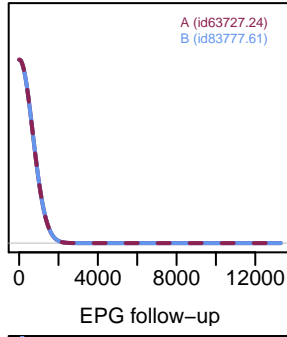
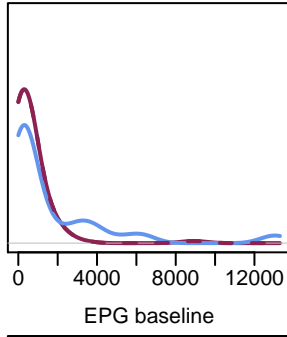




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 Don't know

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 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

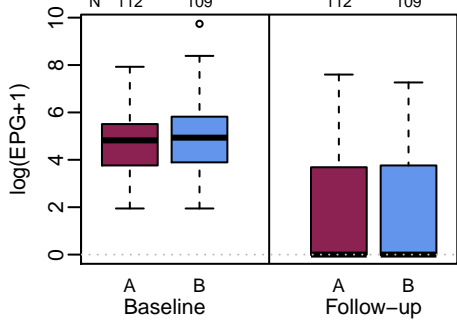
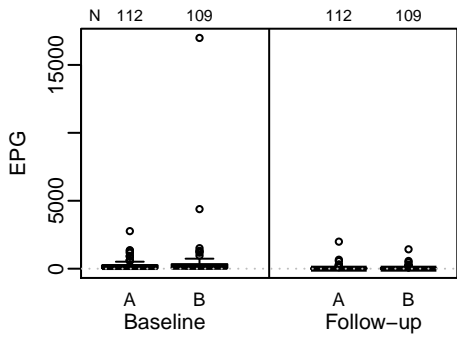
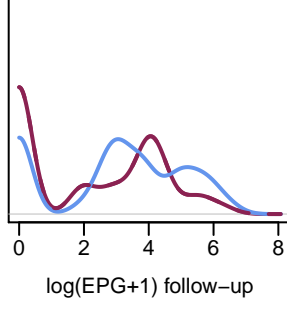
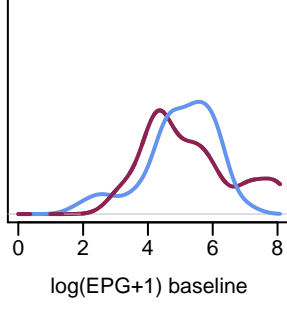
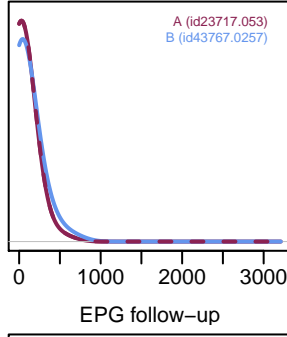
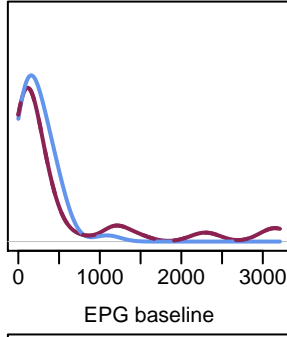
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

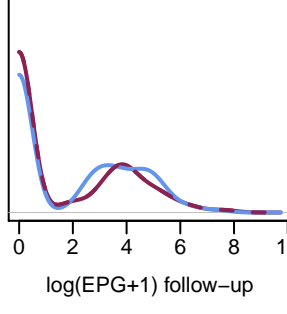
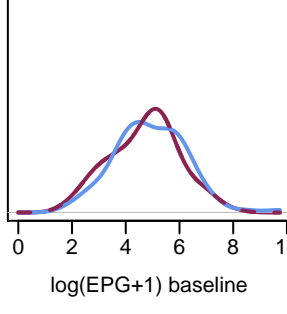
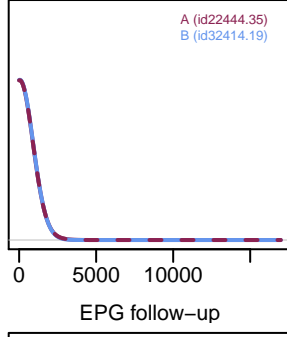
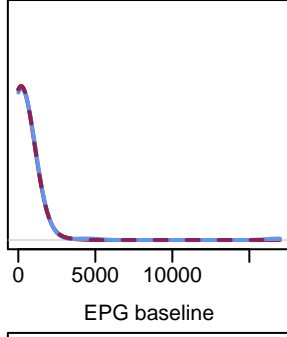
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

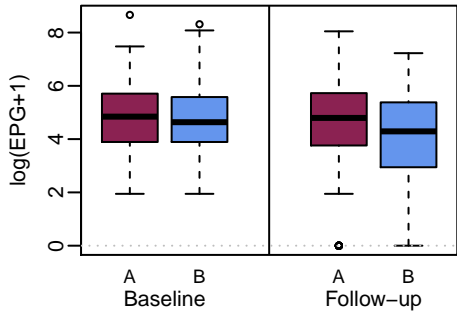
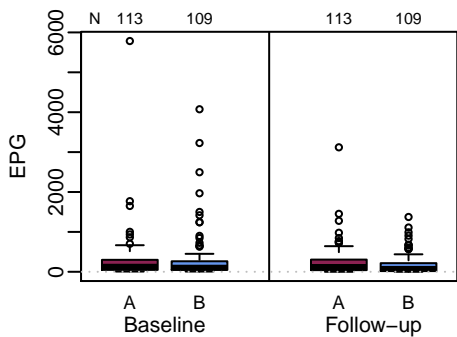


At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

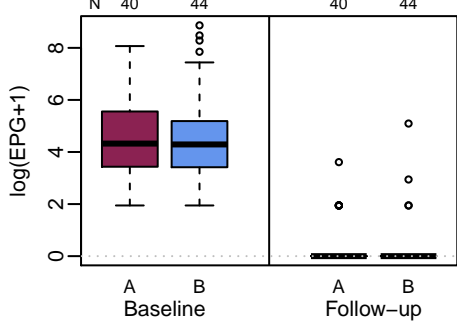
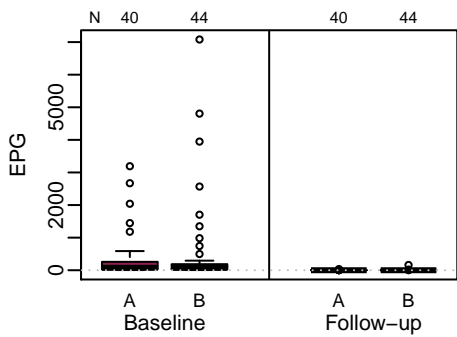
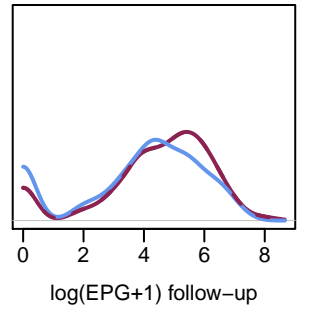
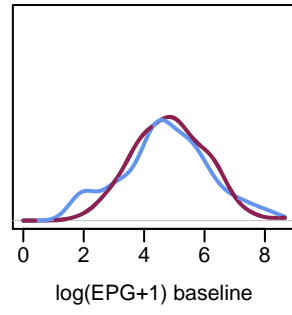
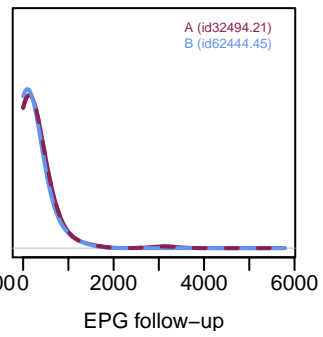
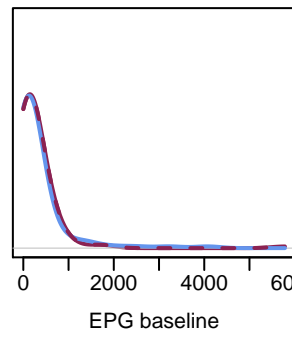




At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

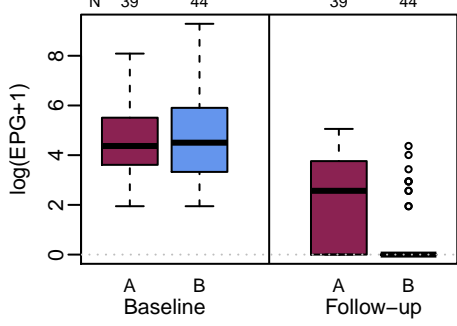
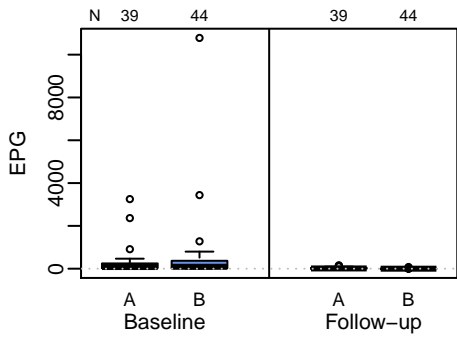
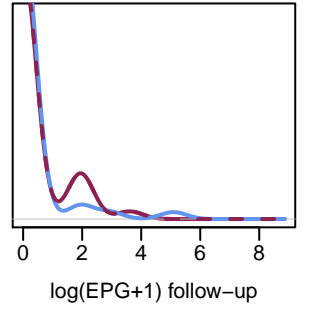
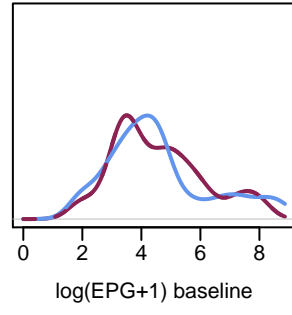
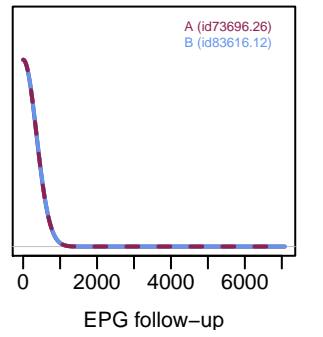
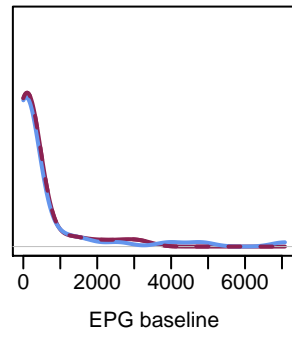
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

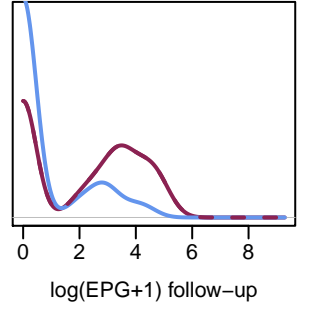
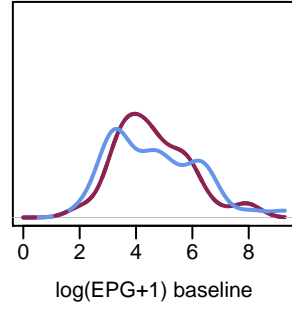
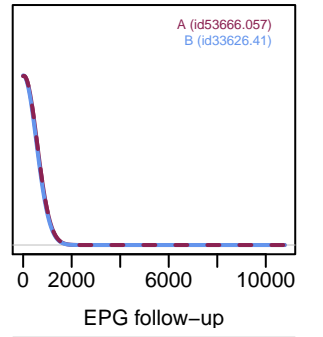
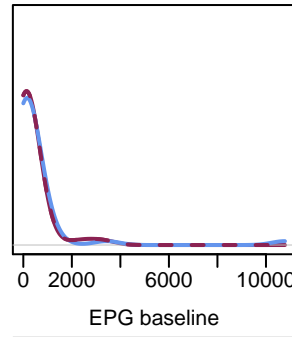
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

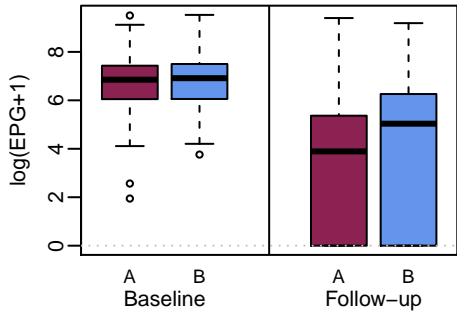
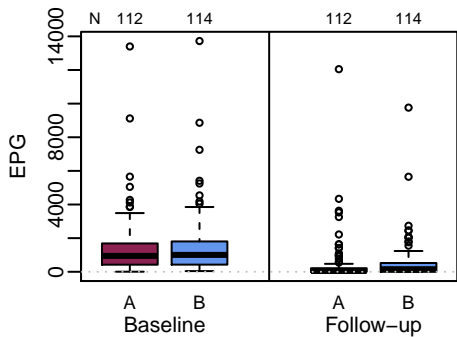


At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

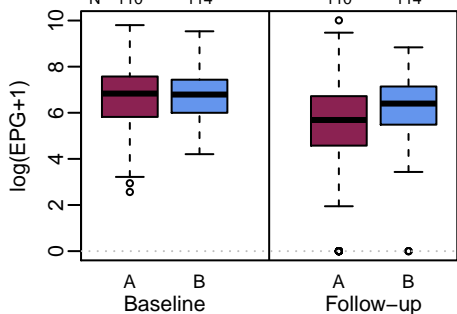
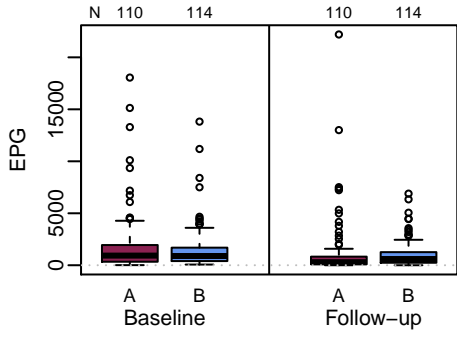
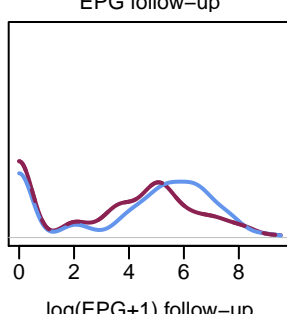
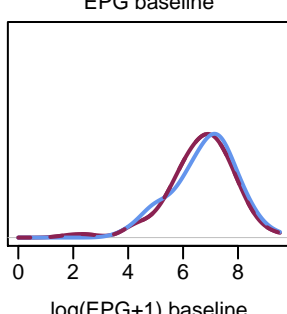
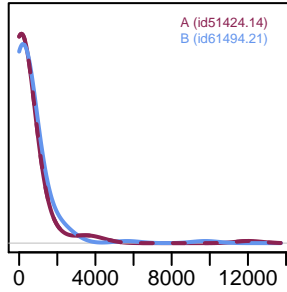
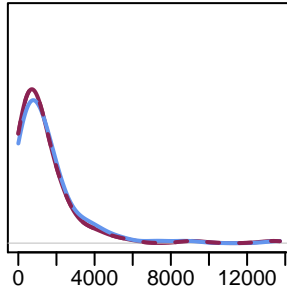




At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

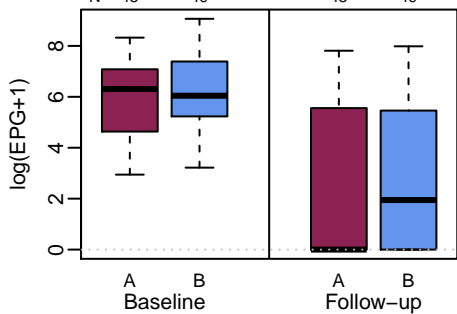
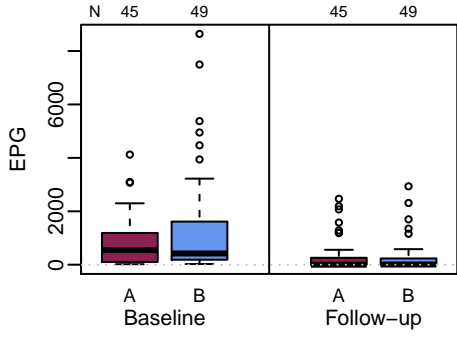
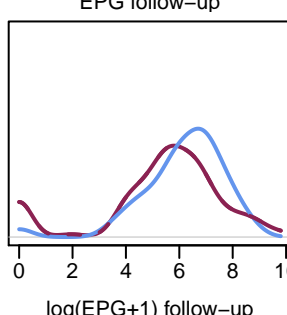
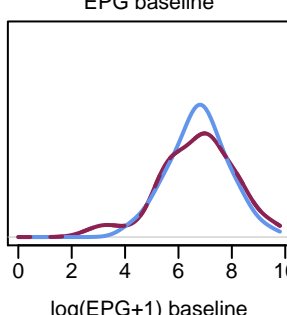
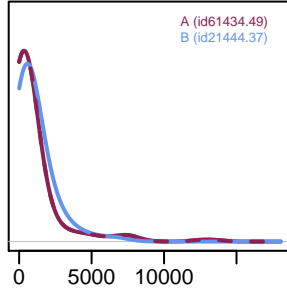
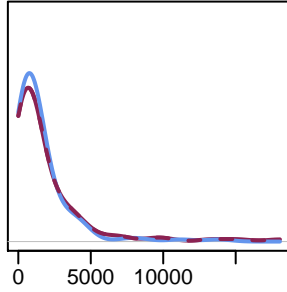
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

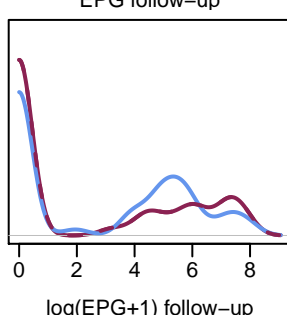
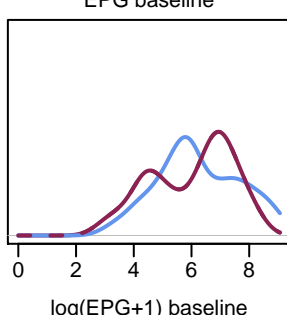
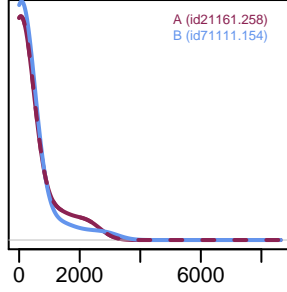
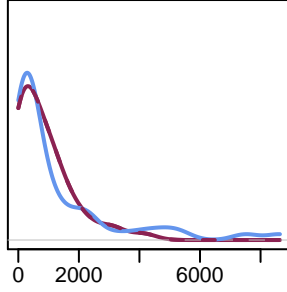
Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

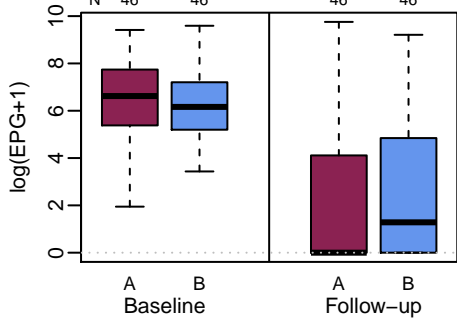
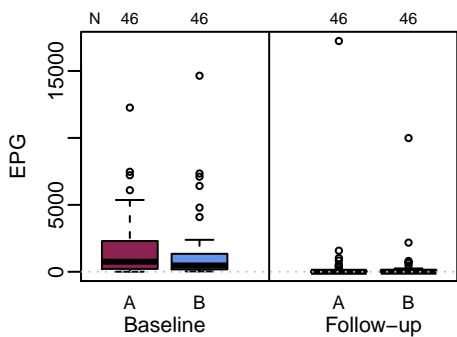


At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



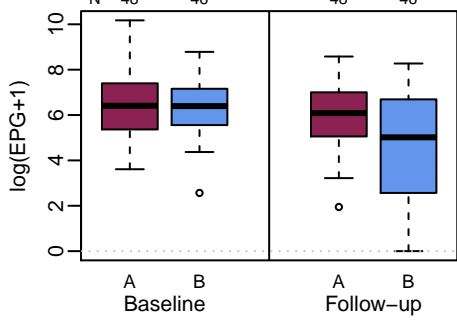
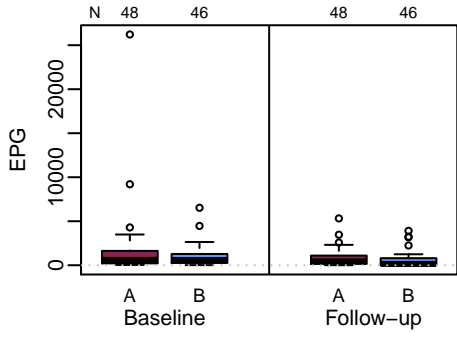
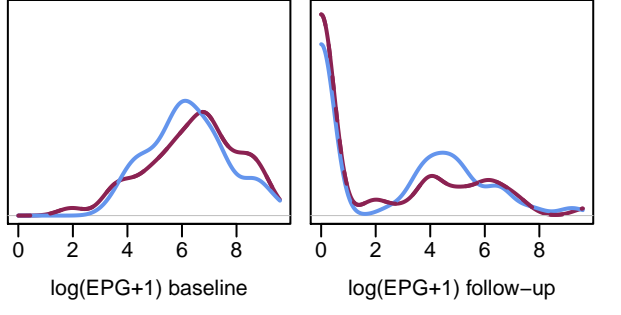
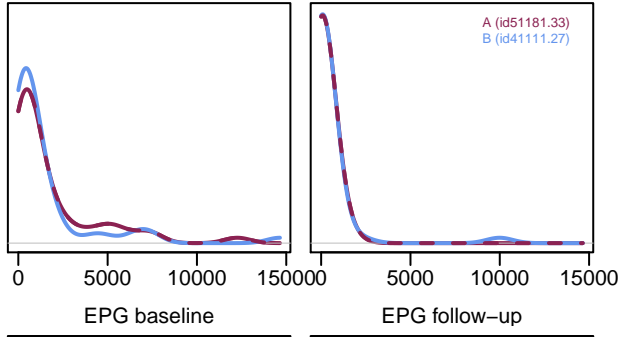


111

At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know



112

At baseline the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

At follow-up the burden is
 Higher in **A**
 Slightly higher in **A**
 Similar
 Slightly higher in **B**
 Higher in **B**
 Don't know

Treatment efficacy
A is better
A slightly better
 Similar
B slightly better
B is better
 Don't know

