

Meta-analysis of two studies in the presence of heterogeneity with applications in rare diseases:

Supplementary material

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1 Example applications

The following figures (1–5) show data and effect estimates in analogy to Figure 1 in the main paper, but as a sensitivity check in addition using the log-normal and inverse-gamma priors. Note that half-Normal and log-Normal priors are assumed for the heterogeneity (τ) while the inverse-Gamma prior is assumed for the squared heterogeneity (τ^2); see also Section 3.7.

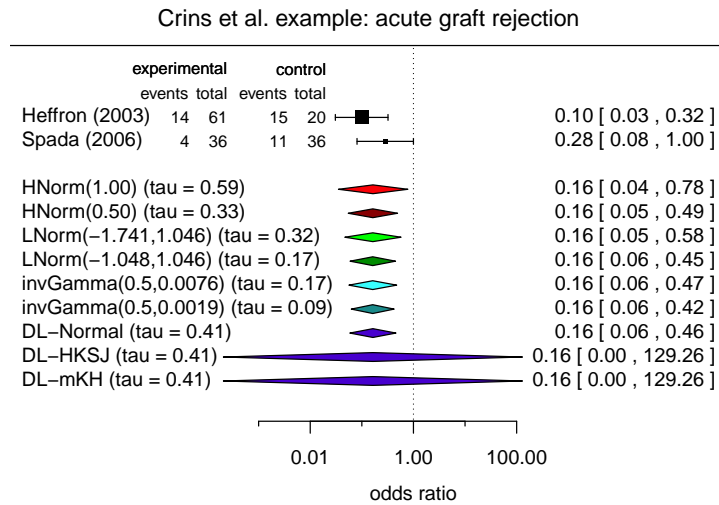


Figure 1: Crins & al. example: acute rejection, randomized studies.

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Miller et al. example: mortality

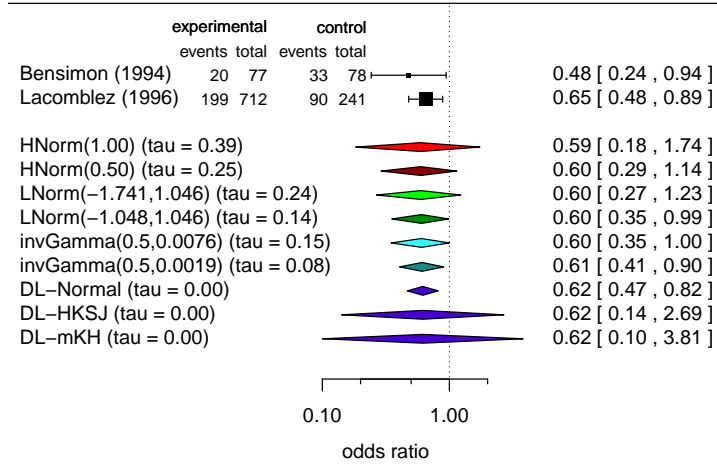


Figure 2: Miller & al. example: mortality.

Mozobil example: HSC mobilization

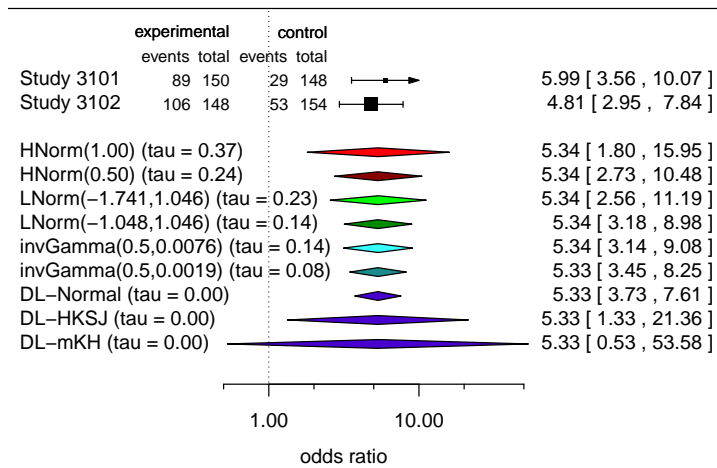


Figure 3: Mozobil example: HSC mobilization.

Romiplostim example: rescue medication incidence

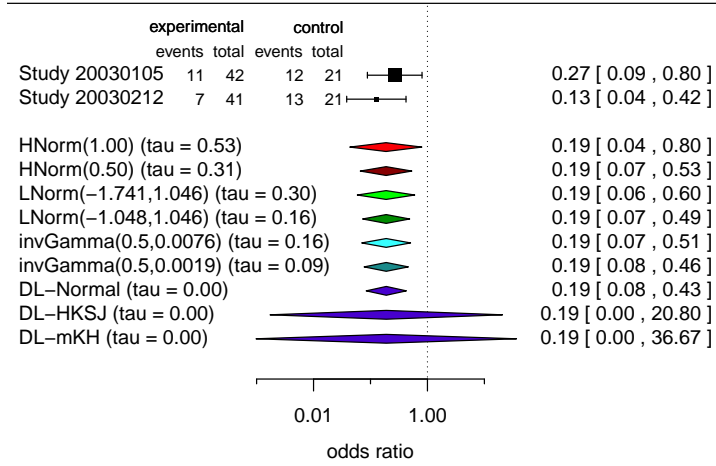


Figure 4: Romiplostim example: rescue medication.

Krystexxa example: infusion reaction

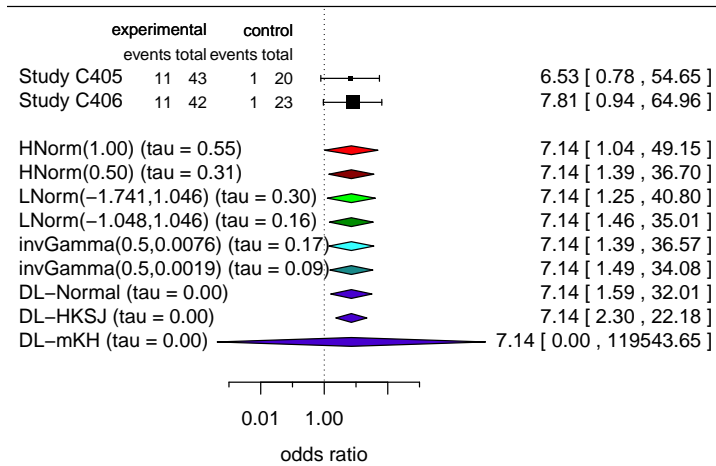


Figure 5: Krystexxa example: infusion reaction

2 Simulation results

The following figures (6–8) illustrate the results of the simulation study (analogous to Section 4 in the main paper), in addition showing results for the corresponding log-normal and inverse-gamma priors; see also Section 3.7 for the exact prior definitions.

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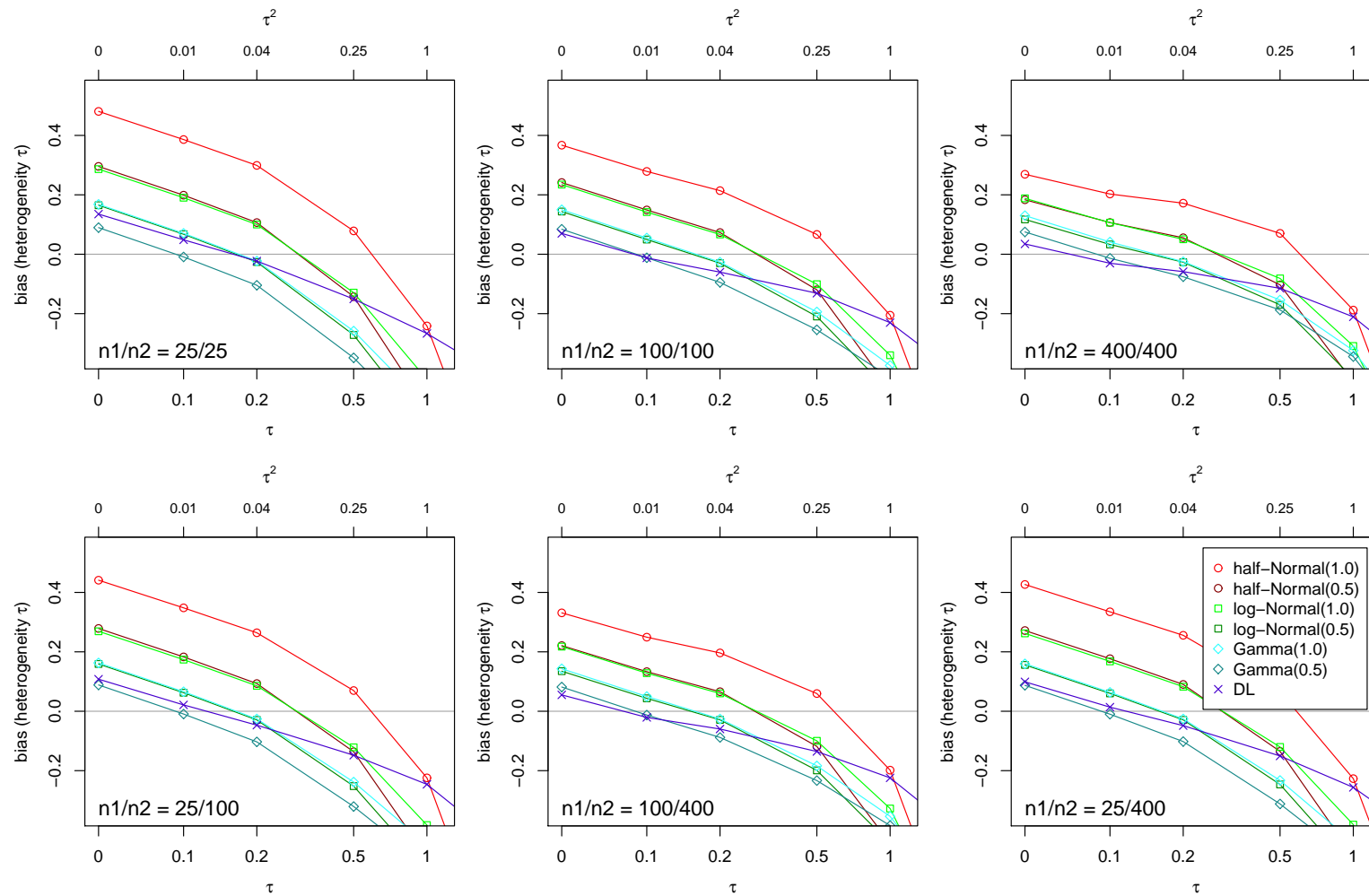


Figure 6: Heterogeneity bias.

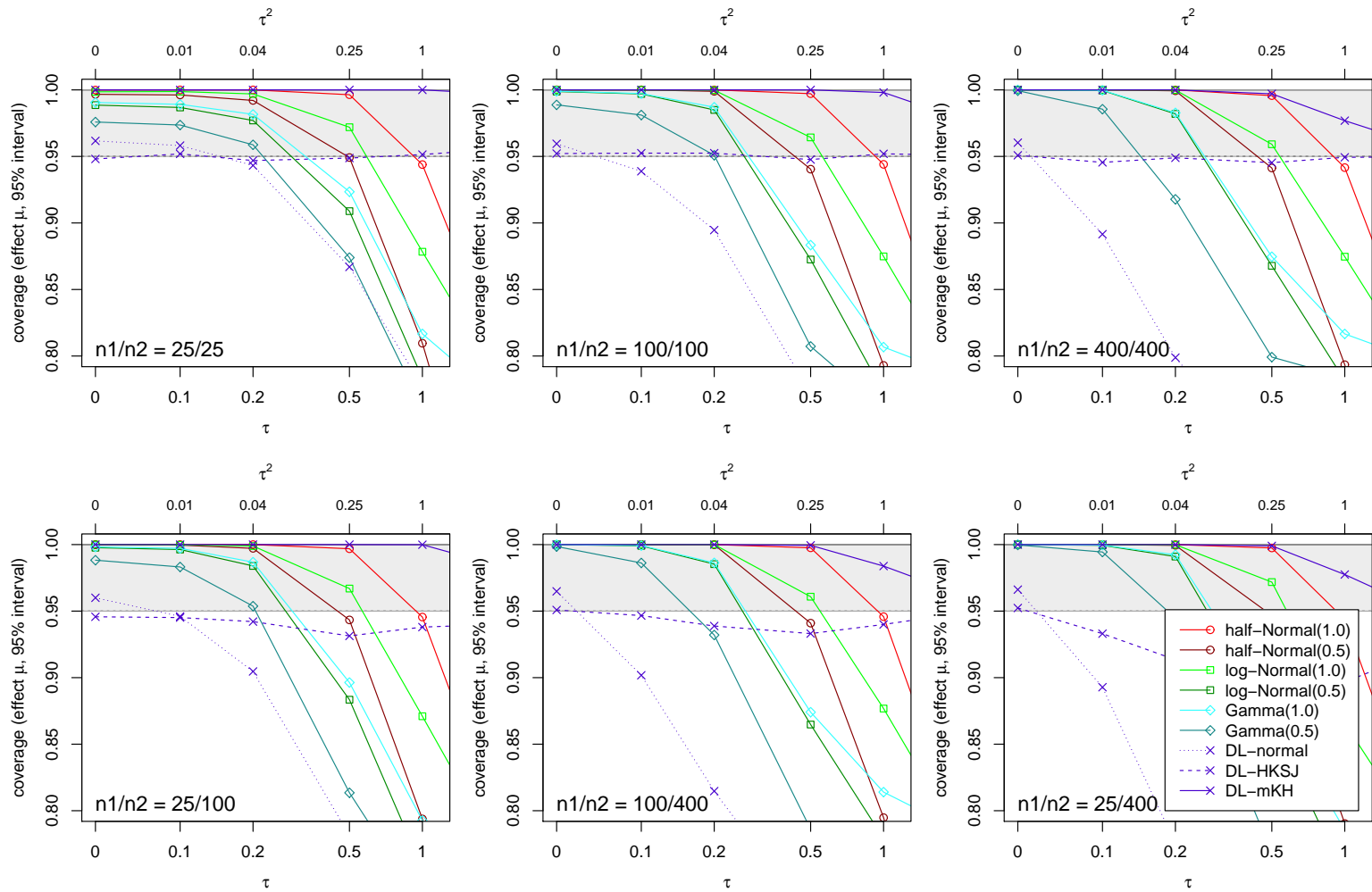


Figure 7: Effect estimate coverage (dotted: normal approx., dashed: HKSJ, solid: mKH).

L

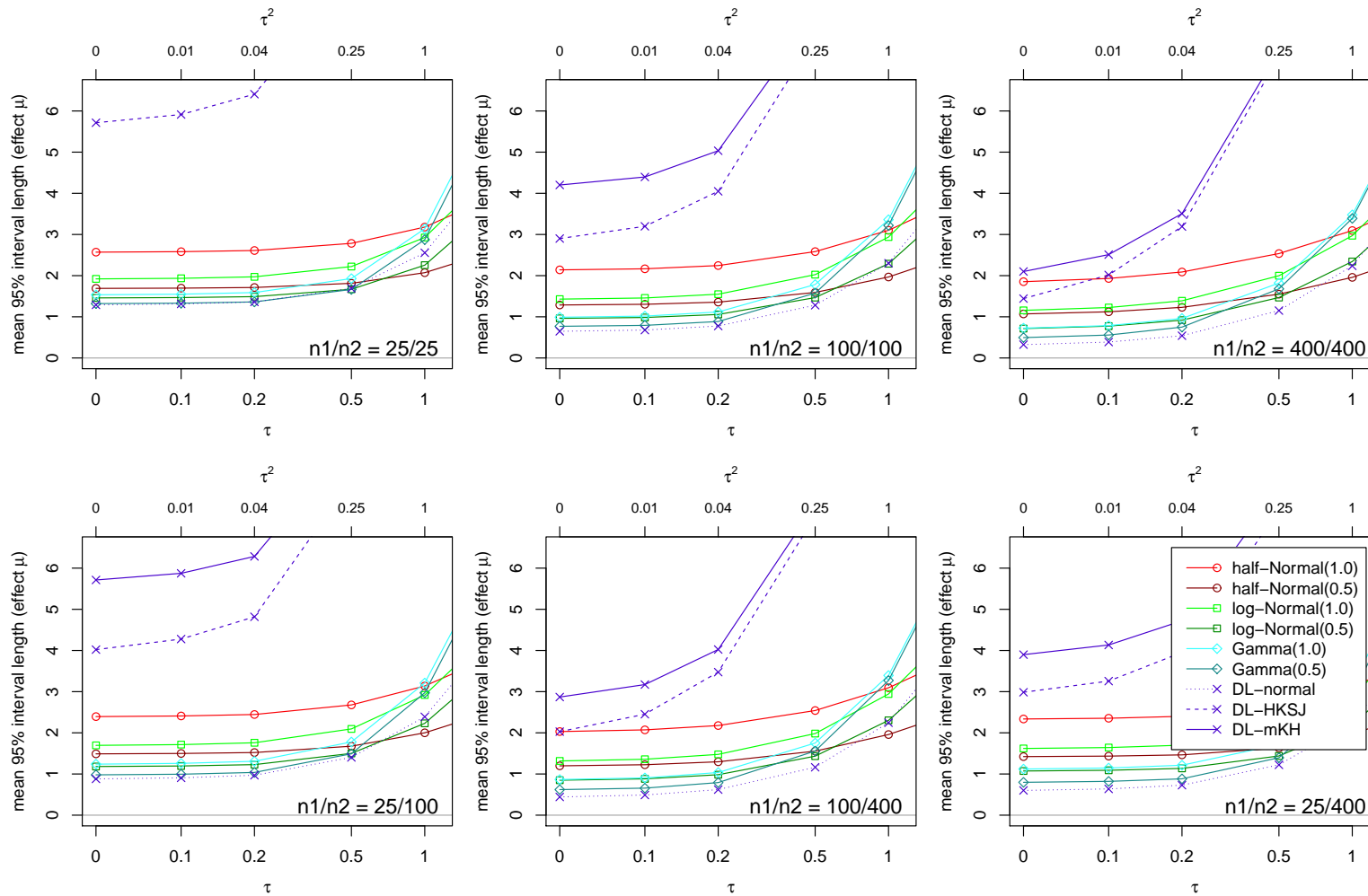


Figure 8: Mean effect CI length (dotted: normal approx., dashed: HKSJ, solid: mKH).