

**Figure 1** Properties of estimated treatment contrasts for scenarios without treatment by pattern interactions. Numerical values (and Monte Carlo simulation errors) are available in Supplemental Material Tables S2-S4 (and Tables S5-S7).

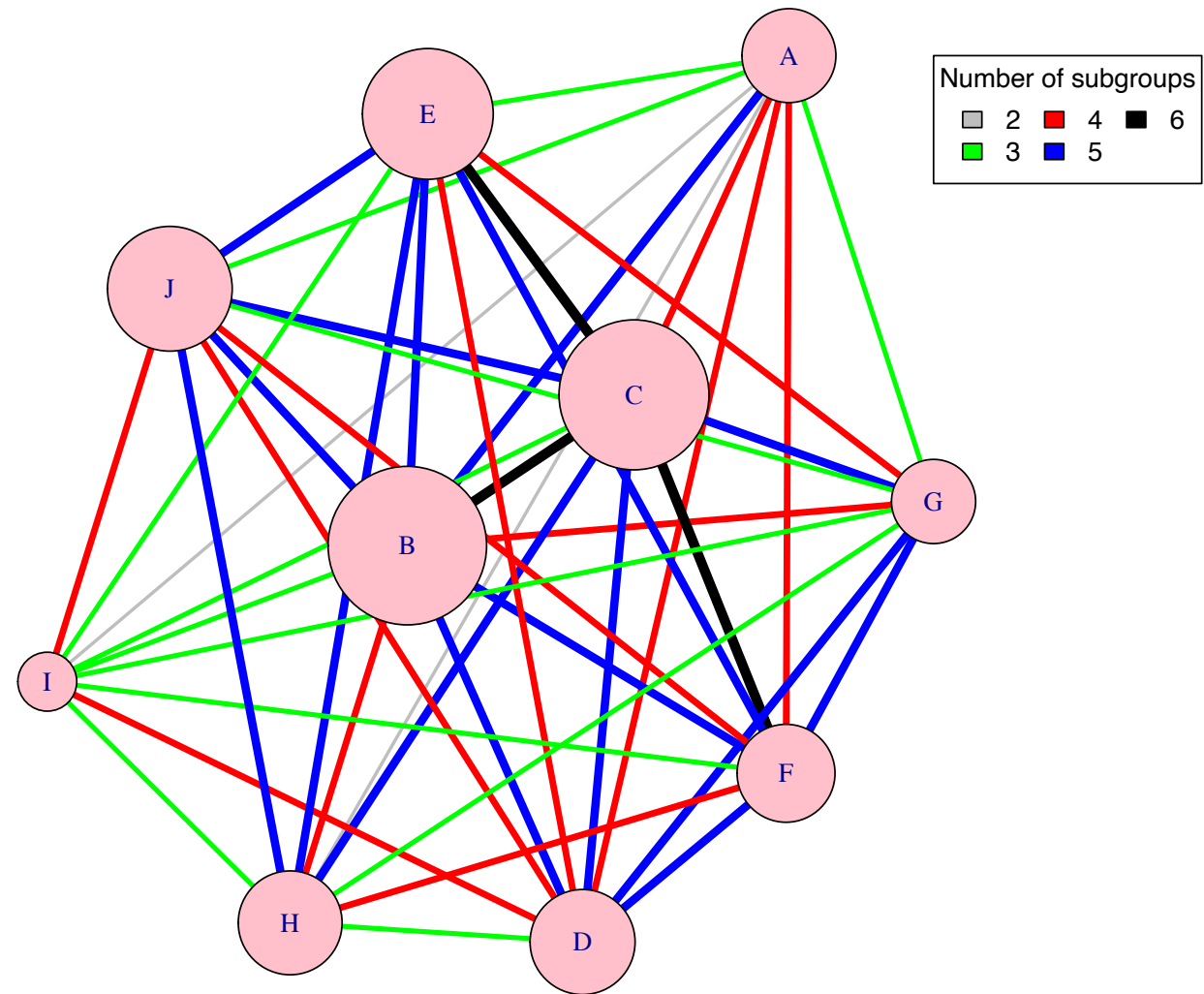
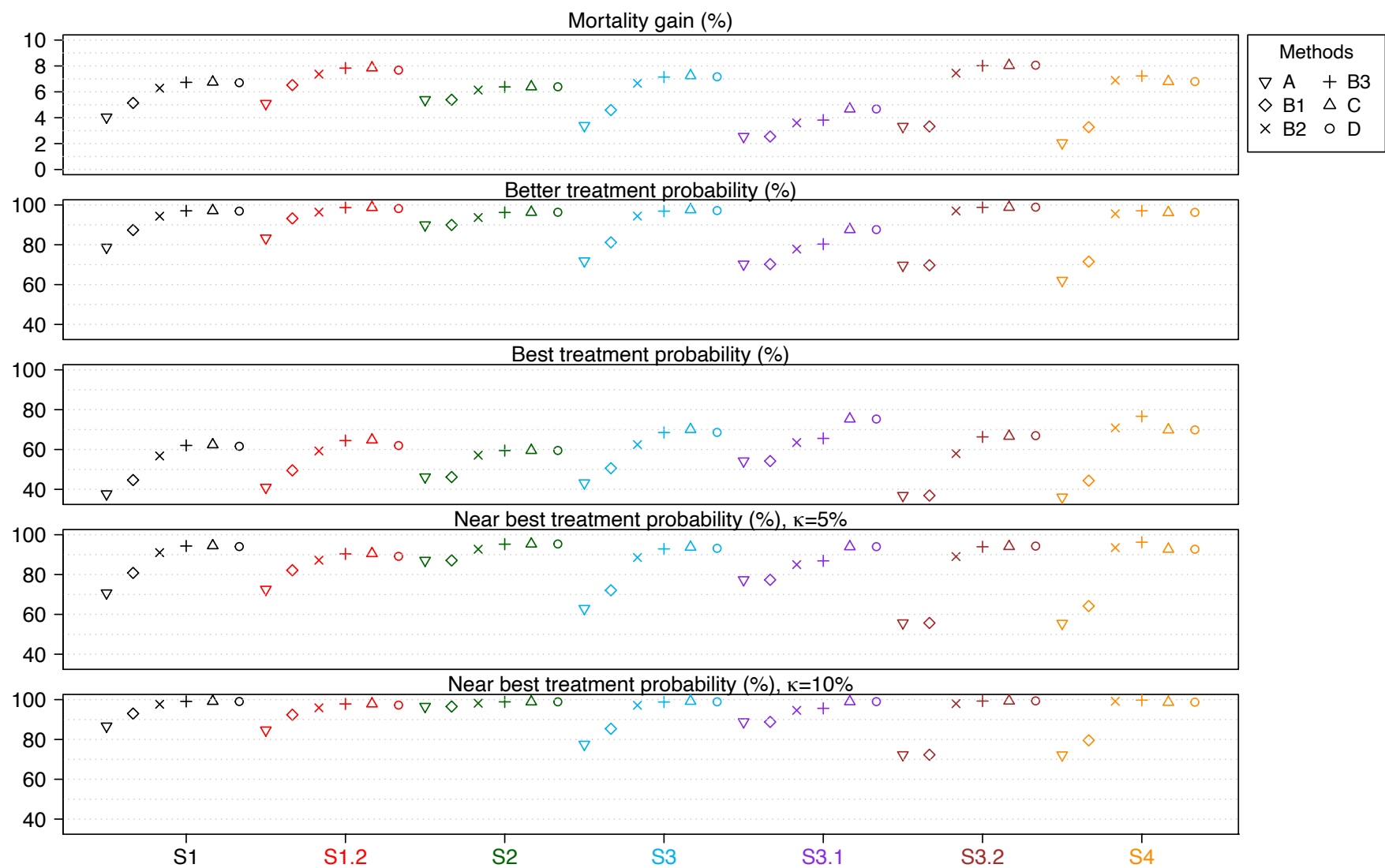
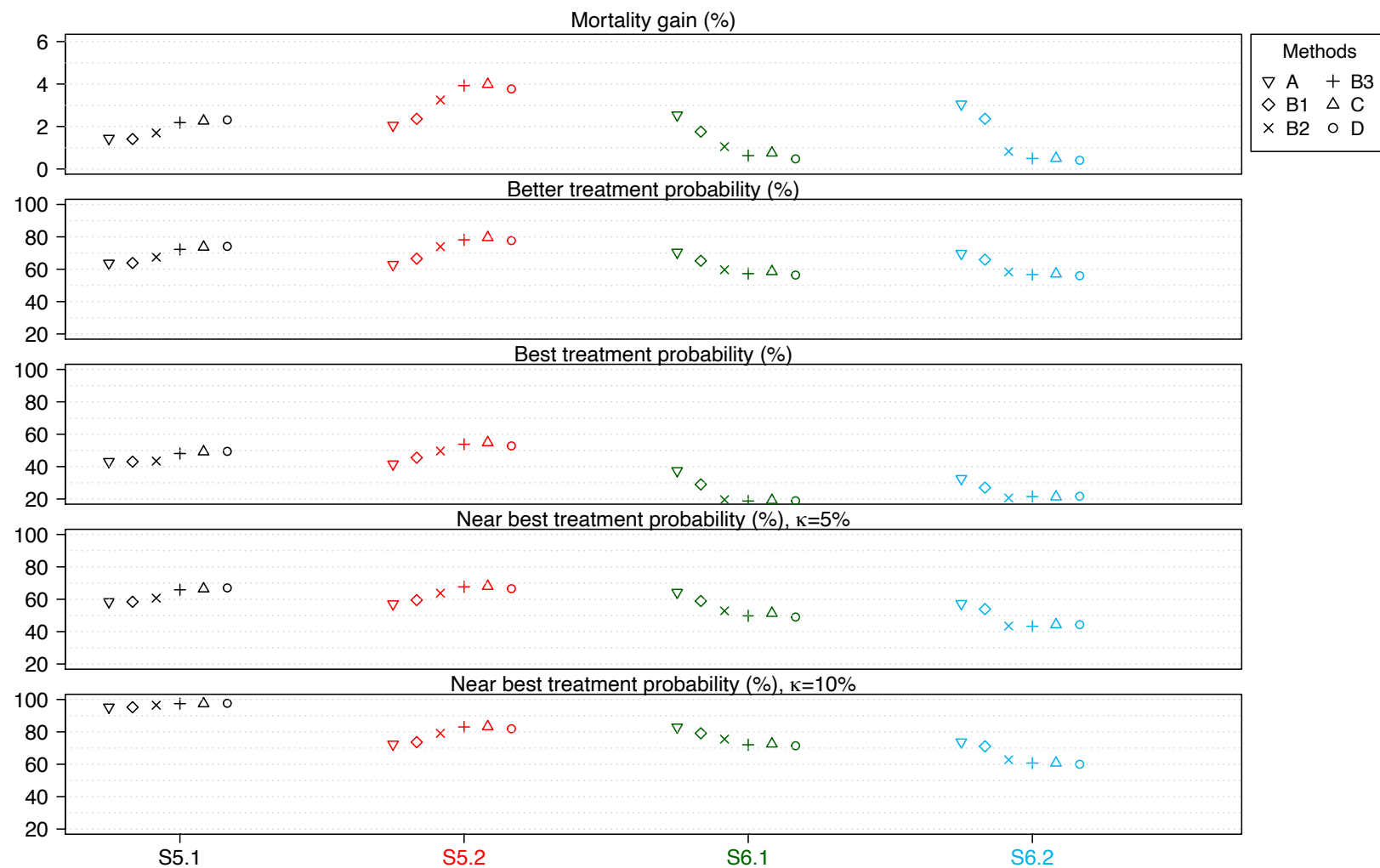


Figure 2 Network map of direct comparisons for scenarios 1, 1.1 and 1.2.



**Figure 3** Performance measures of all six methods for scenarios without treatment by pattern interactions. Numerical values and Monte Carlo simulation errors ( $< 0.016$  or 1.6% for all cases) are available in Supplemental Material Tables S8 and S9.



**Figure 4** Performance measures of all six methods for scenarios when treatment by pattern interactions exist (quantitative interactions in S5.1 and S5.2; qualitative interactions in S6.1 and S6.2). Numerical values and Monte Carlo simulation errors ( $<0.0023$  or  $0.2\%$  for all cases) are available in Supplemental Material Tables S8 and S9.