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Network Meta-Interpolation: fast and accurate NMA with effect modification

Effect modification may cause bias in network meta-analysis (NMA). Existing population adjustment NMA methods use individual patient data to adjust for EM but disregard available subgroup information from aggregated data in the evidence network. Worse yet: these methods often rely on the shared effect modification (SEM) assumption. In this talk, we present Network Meta-Interpolation (NMI): a method using subgroup analyses to adjust for EM that does not assume SEM. The method balances effect modifiers across studies by turning treatment effect (TE) estimates at the subgroup- and study level into TE and standard errors at EM values common to all studies. Simulation results comparing NMI with standard NMA, network meta-regression (NMR) and Multilevel NMR (ML-NMR) will be presented, to demonstrate NMI's dominance in terms of estimation accuracy and CrI coverage, consistently across various scenarios.