

# Evaluating the quality of reporting the transitivity assumption in complex networks of interventions

Loukia M. Spineli<sup>1</sup>, Chrysostomos Kalyvas<sup>2</sup>, Svenja E. Seide<sup>3</sup>, Katerina Papadimitropoulou<sup>4</sup>

<sup>1</sup>Hannover Medical School, <sup>2</sup>MSD Europe Inc., <sup>3</sup>University Hospital Heidelberg, <sup>4</sup>Leiden University Medical Center

## Background

- **Transitivity assumption** is the cornerstone of **network meta-analysis (NMA)**. It implies that important effect modifiers are similarly distributed across the observed comparisons in a network of interventions.
- **Violation** of this assumption compromises the credibility of the estimated treatment effects of the comparisons in the network.
- **Most empirical studies** on the underlying assumptions for NMA have focused on the quality of the indirect comparisons and consistency evaluation.

## Objectives & setting

- To offer **an extensive empirical evidence** on the quality of reporting and assessing the transitivity assumption.
- **The ultimate goal** is to elucidate the frequency of systematic reviews with conclusions of questionable credibility.
- We used **356 systematic reviews with NMA** published between January 2011 and March 2017.

