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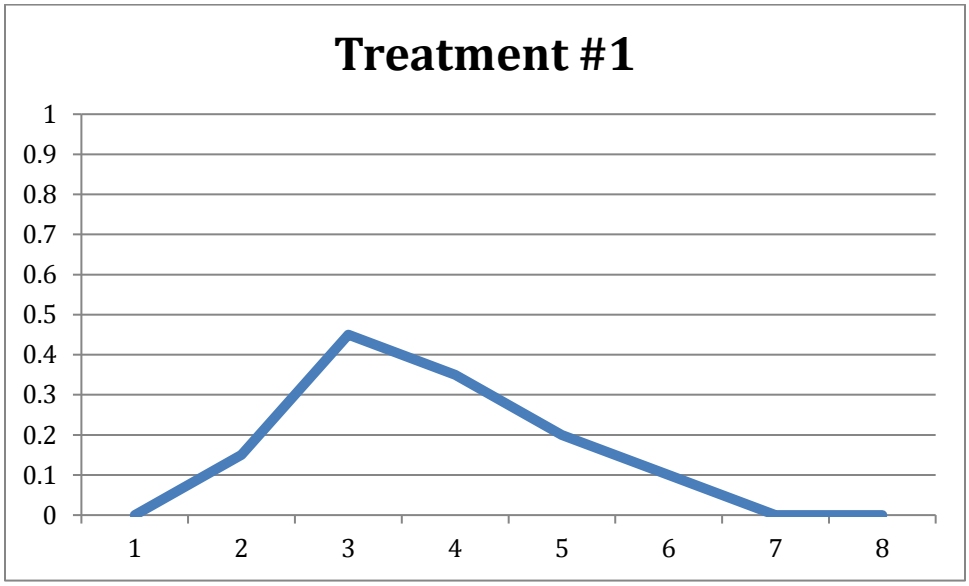
# Appendix

**This appendix was part of the submitted manuscript and has been peer reviewed.**
**It is posted as supplied by the authors.**

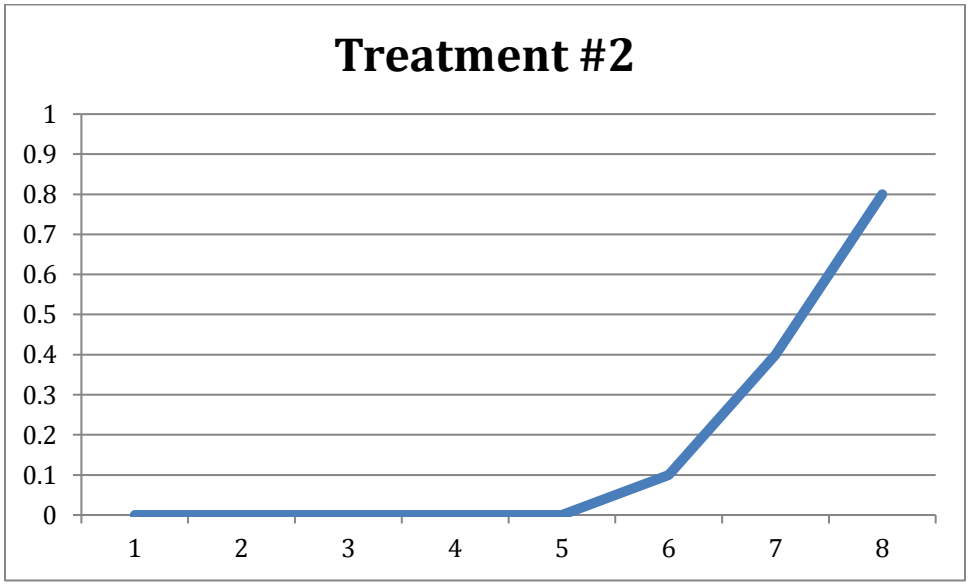
Appendix to: Rochwerg B, Brignardello-Petersen R, Guyatt G. Network meta-analysis in health care decision making. *Med J Aust* 2018; 209: 151-154. doi: 10.5694/mja18.00001.

**Appendix. Interpretation of Rankograms**

Although associated with many limitations, rankograms can be used to rank competing interventions. A rankogram plots the probability of any specific treatment to assume any of the possible ranks. Consider a condition which has 8 potential treatments, based on the pooled NMA estimates, each treatment could have the possibility of being ranked from first to eighth.

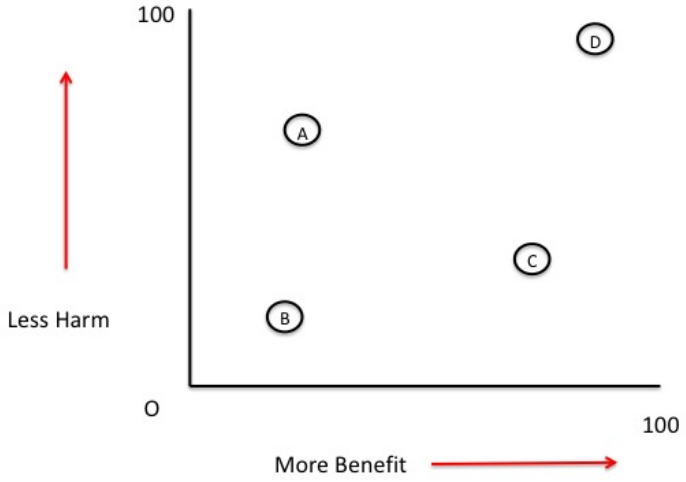



In this graph, the y-axis represents probability, while the x-axis represents rank from 1 to 8. Treatment #1 has the highest likelihood of being third, although the distribution of probability includes anywhere from second to sixth. Ideally, we would see peaks in the rankogram or a steep increase in the cumulative ranking plot corresponding to the most probable rank for a specific treatment.



Treatment #2 above shows a steep increase in cumulative probability around rank #8, suggesting that this treatment is most likely the worst of the options. The limitations of SUCRA are further delineated in the manuscript accompanying this paper.

The need for simultaneous consideration of multiple outcomes, including both beneficial and harmful, is an issue also present in traditional pairwise meta-analysis, however is magnified in NMA due to the multiple comparisons. One potential solution to this challenge is clustering (see graph below). SUCRA rankings for multiple interventions for two relevant outcomes can be plotted with one outcome on the x-axis and the other on the y-axis. Interventions that cluster towards a higher ranking for increased benefit and decreased harm would be more optimal as compared to the opposite situation.




Cluster plot of SUCRA rankings for 2 different outcomes, one beneficial (x-axis) and one harmful (y-axis). Interventions that cluster to the upper-right corner (e.g. D) would be better treatment choices than interventions that cluster to the bottom-left corner (e.g. B).