

Wynants, L., van Smeden, M., McLernon, D. J., Timmerman, D., Steyerberg, E. W., & Van Calster, B. (2019). Three myths about risk thresholds for prediction models. BMC Medicine (Vol. 17, Issue 1). <https://doi.org/10.1186/s12916-019-1425-3>

Short summary

Clinical prediction models estimate a patient's risk of having a disease or experiencing an event. Defining a risk threshold for intervention is challenging and often done in an ad hoc way. Three common myths about risk thresholds can lead to inappropriate patient risk stratification: assuming that risk stratification is always better than a continuous risk estimate, assuming false positives and false negatives are equally costly, and assuming there is a universally optimal risk threshold. Presenting results for multiple risk thresholds can help. Using context-dependent risk thresholds can avoid inappropriate allocation (or non-allocation) of interventions and generate better clinical outcomes.