CRITICAL APPRAISAL CHECKLIST FOR AN ARTICLE ON DECISION ANALYSIS.

Study Design: Secondary analysis of primary studies.

Adapted from:

Richardson WS, Detsky AS. Users' guides to the medical literature. VII. How to use a clinical decision analysis. A. Are the results of this study valid? *JAMA* 1995; 273: 1292-1295.

Richardson WS, Detsky AS. Users' guides to the medical literature. VII. How to use a clinical decision analysis. B. What are the results and will they help me in caring for my patients? *JAMA* 1995; 273: 1610-1613.

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DOES THIS STUDY ADDRESS A CLEAR ISSUE?	Yes	Can't tell	No
1. Were the following clearly stated: • Patient group to which the decision analysis should be applied. • Their health problem. • Who is providing the care. • The setting for that care.			

ARE THE RESULTS VALID?	Yes	Can't tell	No
2. Were all important strategies and outcomes included? Consider: • Does the model (probably illustrated in a decision tree diagram) fit your clinical model well enough to be valid?			
3. Were all of the realistic clinical strategies compared?			
4. Were all clinically relevant outcomes considered: Consider: • Does the decision model include outcomes that matter to patients? • Does it address not only quantity of life, but also quality?			
5. Was an explicit and sensible process used to identify, select and combine the evidence into probabilities? **Consider:** • Do the authors give enough information about how they searched the literature and identified the studies they include? • Do they assess the quality of the studies included? • Do they give enough detail about how they assigned the probability values?			

6. Were the utilities obtained in an explicit and sensible way from credible sources? Consider: • Do they report the source of their utility ratings? • Are the individuals making the ratings representative of the type of patients that the decision analysis is aimed at?			
7. Was the potential impact of any uncertainty in the evidence determined? Consider: • Have the authors carried out a sensitivity analysis?			

WHAT ARE THE RESULTS?	**Yes**	**Can't tell**	**No**
8. In the baseline analysis, does one strategy result in a clinically important gain for patients? **9. If not, is the result a toss-up?**			
10. Could uncertainty in the evidence change the result? Consider: • How robust is the result to sensitivity analysis?			

WILL THE RESULTS HELP ME WITH THIS PATIENT?	**Yes**	**Can't tell**	**No**
11. Do the probabilities apply to my patient's clinical characteristics? Consider: • If not, do the results of the sensitivity analysis help?			

12. Do the utilities reflect those of your patient? Consider: • Can your patient state their utilities in a usable and stable form?			

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Decision analysis	The application of explicit quantitative methods to analyse decisions made under conditions of uncertainty. A decision analysis model must compare at least two decision options. The process involves identifying all the available management options, and the potential outcomes of each, in a series of decisions that have to be made about patient care. The range of choices are plotted on a decision tree.
Decision tree	Illustrates all the potential choices and subsequent outcomes in diagrammatic form. The decisions and outcomes are presented in the order in which they are likely to occur, hence it is hierarchical in structure.
Decision node	A point in a decision tree where a decision has to be made. Generally illustrated by a square. The lines emanating from a decision node represent the clinical strategies being compared.
Chance node	Chance events that may occur following a decision. Generally illustrated by a circle. The probability of these events occurring are included in the decision tree
Outcome node	The final outcome of a decision path. Generally illustrated by a triangle or rectangle.
Probability	The chance of the event occurring. The probabilities resulting from a chance node must add up to 1.0.
Utility	The preference or desirability of a particular outcome.

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