

Comparative economics of a 12-gene assay for predicting risk of recurrence in stage II colon cancer

PharmacoEconomics

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Online Resource 2 Quality assurance checklist

Various grading assessment tools are available for cost-effectiveness studies. The International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Consolidated Health Economic Evaluation Reporting Standards (CHEERS) checklist was specifically targeted to assess the quality of economic analyses using decision-analytic techniques, and was applied herein to guide the study design and reporting.

Supplemental Table 1 ISPOR Consolidated Health Economic Evaluation Reporting Standards [1]

Section/item	Recommendation	
Title and abstract		
Title	Identify study as an economic evaluation, or use more specific terms such as “cost-effectiveness analysis” and describe the interventions compared.	✓
Abstract	Provide a structured summary of objectives, perspective, setting, methods (including study design and inputs), results (including base-case and uncertainty analyses), and conclusions.	✓
Introduction		
Background and objectives	Provide an explicit statement of the broader context for the study.	✓
	Present the study question and its relevance for health policy or practice decisions.	✓
Methods		
Target population and subgroups	Describe characteristics of the base-case population and corresponding subgroups analyzed and include the rationale for why they were chosen.	✓
Setting and location	State relevant aspects of the system(s) in which the decision(s) need(s) to be made.	✓
Study perspective	Describe the perspective of the study and relate this to the costs being evaluated.	✓
Comparators	Describe the interventions or strategies being compared and state why they were chosen.	✓
Time horizon	State the time horizon(s) over which costs and consequences are being evaluated and specify reason(s) as to why they are appropriate.	✓
Discount rate	Report the choice of discount rate(s) used for costs and outcomes and specify reason(s) as to why they are appropriate.	✓
Choice of health outcomes	Describe what outcomes were used as the measure(s) of benefit in the evaluation and their relevance for the type of analysis performed.	✓

Measurement of effectiveness	<p><i>Single study-based estimates:</i> Describe fully the design features of the single effectiveness study and why the single study was a sufficient source of clinical effectiveness data.</p> <p><i>Synthesis-based estimates:</i> Describe fully the methods used for the identification of included studies and synthesis of clinical effectiveness data.</p>	N/A ✓
Measurement and valuation of preference-based outcomes	If applicable, describe the population and methods used to elicit preferences for outcomes.	✓
Estimating resources and costs	<p><i>Single study-based economic evaluation:</i> Describe approaches used to estimate resource use associated with the alternative interventions. Describe primary or secondary research methods for valuing each resource item in terms of its unit cost. Describe any adjustments made to approximate opportunity costs.</p> <p><i>Model-based economic evaluation:</i> Describe approaches and data sources used to estimate resource use associated with model health states. Describe primary or secondary research methods for valuing each resource item in terms of its unit cost. Describe any adjustments made to approximate to opportunity costs.</p>	N/A ✓
Currency, price data, and conversion	Report the dates of the estimated resource quantities and unit costs. Describe methods for adjusting estimated unit costs to the year of reported costs (if necessary). Describe methods for converting costs into a common currency base and the exchange rate.	✓
Choice of model	Describe and give reasons for the specific type of decision-analytic model used. Providing a figure to show model structure is strongly recommended.	✓
Assumptions	Describe all structural or other assumptions underpinning the decision-analytic model.	✓
Analytic methods	Describe all analytic methods supporting the evaluation. This could include methods for dealing with skewed, missing, or censored data; extrapolation methods; methods for pooling data; approaches to validate or make adjustments (e.g., half-cycle corrections) to a model; and/or methods for handling population heterogeneity and uncertainty.	✓
Results		
Study parameters	Report the values, ranges, references, and if used, probability distributions for all parameters. Report reasons or sources for distributions used to represent uncertainty where appropriate. Providing a table to show the input values is strongly recommended.	✓
Incremental costs and outcomes	For each intervention, report mean values for the main categories of estimated costs and outcomes of interest, as well as, mean differences between the comparator groups. If applicable, report incremental cost-effectiveness ratios.	✓

Characterizing uncertainty	<p><i>Single study-based economic evaluation:</i> Describe the effects of sampling uncertainty for estimated incremental cost, incremental effectiveness, and incremental cost-effectiveness, together with the impact of methodological assumptions (such as discount rate, study perspective).</p> <p><i>Model-based economic evaluation:</i> Describe the effect(s) on the results of uncertainty for all input parameters, and uncertainty related to the structure of the model and assumptions.</p>	<p>N/A</p> <p>✓</p>
Characterizing heterogeneity	If applicable, report differences in costs, outcomes, or cost-effectiveness that can be explained by variations between subgroups of patients with different baseline characteristics, or other observed variability in effects that are not reproducible by more information.	N/A
Discussion		
Study findings, limitations, generalizability, and current knowledge	Summarize key study findings and describe how they support the conclusions of the study. Discuss limitations and generalizability of the findings and how the findings fit with current knowledge.	✓
Other		
Source of funding	Describe how the study was funded and the role of the funder in the identification, design, conduct, and reporting of the analysis. Describe other non-monetary sources of support.	✓
Conflicts of interest	Describe any potential for conflict of interest among study contributors in accordance with journal policy. In the absence of a journal policy, we recommend authors comply with International Committee of Medical Journal Editors' recommendations.	✓

Source: Husereau et al. *Value Health* 2013 [1].

Third column should contain page numbers according to the checklist. Confirmations were provided instead to accommodate differences in print and online access.

Reference

1. Husereau D, Drummond M, Petrou S, Carswell C, Moher D, Greenberg D et al. Consolidated Health Economic Evaluation Reporting Standards (CHEERS)-Explanation and Elaboration: A Report of the ISPOR Health Economic Evaluation Publication Guidelines Good Reporting Practices Task Force. *Value in health : the journal of the International Society for Pharmacoeconomics and Outcomes Research*. 2013;16(2):231-50. doi:10.1016/j.jval.2013.02.002.