

**ORIGINAL RESEARCH ARTICLE**

# Cost-effectiveness of nivolumab plus chemotherapy for advanced gastric/gastroesophageal junction/esophageal adenocarcinoma in the United States

**Supplementary Files**
**Table S1. Consolidated health economic evaluation reporting standard checklist<sup>1</sup>**

Section	Item no	Recommendation	Reported on page no/line no
Title and abstract			
Title	1	Identify the study as an economic evaluation or use more specific terms such as “cost-effectiveness analysis” and describe the interventions compared.	Page 1/line 1
Abstract	2	Provide a structured summary of objectives, perspective, setting, methods (including study design and inputs), results (including base case and uncertainty analyses), and conclusions.	Page 2
Introduction			
Background and Objectives <sup>6</sup>	3	Provide an explicit statement of the broader context for the study. Present the study question and its relevance for health policy or practice decisions.	Page 3
Methods			
Target population and subgroups	4	Describe the characteristics of the base case population and subgroups analyzed, including why they were chosen.	Page 6/line 251 – 264
Setting and location	5	State relevant aspects of the system(s) in which the decision(s) need(s) to be made.	Page 3 – 4/line 172 – 182
Study perspective	6	Describe the perspective of the study and relate this to the costs being evaluated.	Page 4/line 189 – 196
Comparators	7	Describe the interventions or strategies being compared and state why they were chosen.	Page 6/line 225 – 237
Time horizon	8	State the time horizon(s) over which costs and consequences are being evaluated and why appropriate.	Page 5/line 189 – 196, 217 – 220
Discount rate	9	Report the choice of discount rate(s) used for costs and outcomes and say why appropriate.	Page 5/line 189 – 190
Choice of health outcomes	10	Describe what outcomes were used as the measure(s) of benefit in the evaluation and their relevance for the type of analysis performed.	Page 1/line 62 – 63
Measurement of effectiveness	11a	<i>Single study-based estimates:</i> Describe fully the design features of the single effectiveness study and why the single.	
	11b	<i>Synthesis-based estimates:</i> Describe fully the methods used for the identification of included studies and synthesis of clinical effectiveness data.	Page 6/line 225 – 237
Measurement and valuation of preference-based outcomes	12	If applicable, describe the population and methods used to elicit preferences for outcomes. Clinical effectiveness data.	
Estimating resources and costs	13a	<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	

(Cont'd...)

**Table S1. (Continued)**

Section	Item no	Recommendation	Reported on page no/line no
		resource item in terms of its unit cost. Describe any adjustments made to approximate opportunity costs.	
	13b	Model-based economic evaluation: 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 opportunity costs.	Page 4 – 5/line 170 – 196
Currency, price date, and conversion	14	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.	Page 5/line 196
Choice of model	15	Describe and give reasons for the specific type of decision analytical model used. Providing a figure to show the model structure is strongly recommended.	Page 5/line 205 – 208
Assumptions	16	Describe all structural or other assumptions underpinning the decision-analytical model.	Page 4/line 175 – 182
Analytical methods	17	Describe all analytical 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 (such as half-cycle corrections) to a model; and methods for handling population heterogeneity and uncertainty.	Page 4 – 5/line 170 – 209
<b>Results</b>			
Study parameters	18	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.	Table 1
Incremental costs and outcomes	19	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.	Page 6/line 267 – 274
Characterizing uncertainty	20a	Single study-based economic evaluation: Describe the effects of sampling uncertainty for the estimated incremental cost and incremental effectiveness parameters, together with the impact of methodological assumptions (such as discount rate and study perspective).	
	20b	Model-based economic evaluation: Describe the effects on the results of uncertainty for all input parameters and uncertainty related to the structure of the model and assumptions.	Page 7/line 275 – 293
Characterizing heterogeneity	21	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 reducible by more information.	N/A
<b>Discussion</b>			
Study findings, limitations, generalizability, and current knowledge	22	Summarize key study findings and describe how they support the conclusions reached. Discuss limitations and the generalizability of the findings and how the findings fit with current knowledge.	Page 7 – 8
<b>Other</b>			
Source of funding	23	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.	Page 9/line 437 – 438

(Cont'd...)

Table S1. (Continued)

Section	Item no	Recommendation	Reported on page no/line no
Conflicts of interest	24	Describe any potential for conflict of interest of 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.	Page 9/line 430 – 431

Note: Items to include when reporting economic evaluations of health interventions. The Professional Society for Health Economics and Outcomes Research (ISPOR) Consolidated Health Economic Evaluation Reporting Standards (CHEERS) task force report. Explanation and elaboration: A report of the ISPOR Health Economic Evaluations Publication Guidelines Good Reporting Practices Task Force, provides examples and further discussion of the 24-item CHEERS Checklist and the CHEERS Statement. It may be accessed via the Value in Health or the ISPOR Health Economic Evaluation Publication Guidelines - CHEERS: Good Reporting Practices webpage: <http://www.ispor.org/TaskForces/EconomicPubGuidelines.asp>. For consistency, the CHEERS Statement checklist format is based on the format of the CONSORT statement checklist.

Table S2. Akaike information criterion and Bayesian information criterion scores of fitted distributions in CheckMate 649

Distribution	OS of nivolumab+chemotherapy		PFS of nivolumab+chemotherapy	
	AIC	BIC	AIC	BIC
Exponential	2495.429	2503.747	2352.077	2360.395
Weibull	2476.009	2488.486	2341.917	2354.394
Gamma	2470.575	2483.052	2335.369	2347.846
Log-normal	2463.815	2476.293	2321.059	2333.537
Log-logistic	2461.043	2473.52	2316.007	2328.484
Gompertz	2492.662	2505.139	2353.808	2366.285

Abbreviations: AIC: Akaike information criterion; BIC: Bayesian information criterion; OS: Overall survival; PFS: Progression-free survival.

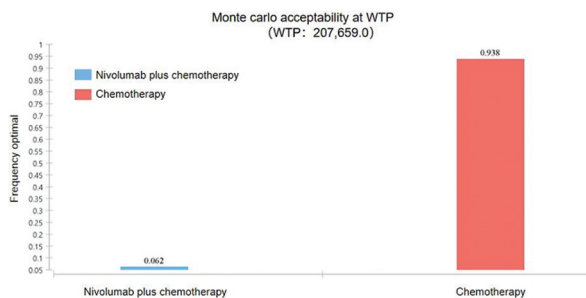


Figure S1. Acceptability at WTP

Reference

- Husereau D, Drummond M, Petrou S, *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 Health.* 2013;16(2):231-250.  
doi: 10.1016/j.jval.2013.02.002