

Supplemental Table 5. AMSTAR quality assessment of included systematic reviews

	Smartt 2009 ¹⁴	OHTAC 2010 ¹⁵	Ward 2011 ¹⁶	Hornberger 2012 ¹⁷	Rouzier 2013 ¹⁸
<p>1. Was an ‘a priori’ design provided? The research question and inclusion criteria should be established before the conduct of the review.</p>	Yes, reported following criteria used by Marchionni et al [11]	Unclear – protocol not available or mentioned in published review	Yes	Unclear – protocol not available or mentioned in published review	Unclear – protocol not available or mentioned in published review
<p>2. Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.</p>	Unclear	Unclear	No – one reviewer screened all titles and abstracts, full-text reports, and extracted data.	Yes	Unclear
<p>3. Was a comprehensive literature search performed? At least two electronic sources should be searched. The report must include years and databases used (e.g. Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated and where feasible the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found.</p>	Yes	Yes	Yes	Yes – did not search EMBASE	Yes – did not search EMABSE
<p>4. Was the status of the publication (i.e. grey literature) used as an inclusion criterion? The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc.</p>	Yes – included conference abstracts if they provided relevant data	Yes – excluded conference abstracts	Yes – included conference abstracts. Other grey literature were included only “if deemed to provide important information”	Unclear – did not reported including or excluding conference abstracts	No – include conference abstracts
<p>5. Was a list of studies (included and excluded) provided? A list of included and excluded studies should be provided.</p>	No – included studies only, did not provide description of excluded studies	No – included studies only, did not provide description of excluded studies	Yes	No – included studies only, did not provide description of excluded studies	Yes – provided complete description of included studies, and numbers of and reasons for excluded studies

<p>6. Were the characteristics of the included studies provided? In an aggregated form such as a table, data from the original studies should be provided on the participants, interventions and outcomes. The ranges of characteristics in all the studies analyzed e.g. age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported.</p>	Yes	Yes	Yes	Yes	Yes
<p>7. Was the scientific quality of the included studies assessed and documented? 'A priori' methods of assessment should be provided (e.g., for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo controlled studies, or allocation concealment as inclusion criteria); for other types of studies alternative items will be relevant.</p>	Yes	Unclear – did not report individual study quality	Yes	Yes, but not for studies evaluating cost-effectiveness	Yes
<p>8. Was the scientific quality of the included studies used appropriately in formulating conclusions? The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating the recommendations.</p>	Yes	Yes	Yes	Yes	Yes
<p>9. Were the methods used to combine the findings of studies appropriate? For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e. Chi-squared test for homogeneity, I^2). If heterogeneity exists a random effects model should be used an/or the clinical appropriateness of combing should be taken into consideration (i.e. is it sensible to combine?)</p>	Yes - studies were not pooled and no meta-analysis performed	Yes - studies were not pooled and no meta-analysis performed	Yes – meta-analysis was not considered due to heterogeneity	Yes - studies were not pooled and no meta-analysis performed	Yes - studies were not pooled and no meta-analysis performed
<p>10. Was the likelihood of publication bias assessed? An assessment of publication bias should include a combination of graphical aids (e.g., funnel plot, other available tests) and/or statistical tests (e.g., Egger regression test).</p>	No	No	No	No	Unclear – not reported
<p>11. Was the conflict of interest stated? Potential sources of support should be clearly acknowledged in both the systematic review and the included studies.</p>	Unclear – review author's COI not reported	Yes – no COI declared	Yes – no COI declared	Yes – study funded by Genomics Health, Inc	Yes – two authors received funding from Genomics Health Inc for their work on this

					study; 2 other authors received prior funding from Genomics Health Inc.
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