Table S1. Deterministic sensitivity analysis of the incremental cost-effectiveness ratio (ICER) of AB-MRI compared to DBT in the base-case scenario. The input parameters were varied within the lower and upper limit and the resulting ICER was computed. AB-MRI, abbreviated breast MRI; DBT, digital breast tomosynthesis; QALY, quality-adjusted life year.

Input parameter	Lower limit	Point estimate	Upper limit	ICER of lower limit (US-$ / QALY)	ICER of upper limit (US-$ / QALY)
Cost of AB-MRI (US-$)	150	314	450	−25,800.99	59,457.60
Incidence	0.002	0.004	0.01	64,207.31	−10,830.30
Cost of DBT (US-$)	150	214.2	300	39,032.38	−3,550.19
Sensitivity of DBT	0.30	0.391	0.50	7,521.37	45,530.66
Specificity of DBT	0.90	0.974	0.98	−8,858.75	23,754.34
Specificity of AB-MRI	0.80	0.867	0.95	30,230.82	9,626.22
Cost of biopsy (US-$)	500	1536	2000	8,495.08	26,321.27
Sensitivity of AB-MRI	0.90	0.957	0.97	24,038.99	20,217.80

Table S2. Cost-effectiveness acceptability analysis: Number of Monte Carlo iterations that fall below the assumed WTP-threshold for DBT and AB-MRI, as illustrated in Figure. 5. AB-MRI, abbreviated breast MRI; DBT, digital breast tomosynthesis; WTP, willingness to pay.

WTP (US-$)	DBT	AB-MRI
0	74.77%	25.23%
10,000	61.24%	38.76%
20,000	49.59%	50.41%
30,000	40.82%	59.18%
40,000	34.09%	65.91%
50,000	29.13%	70.87%
60,000	25.39%	74.61%
70,000	22.37%	77.63%
80,000	20.05%	79.95%
90,000	18.22%	81.78%
100,000	16.77%	83.23%
110,000	15.49%	84.51%
120,000	14.45%	85.55%
130,000	13.66%	86.34%
140,000	12.91%	87.09%
150,000	12.31%	87.69%
160,000	11.74%	88.26%
170,000	11.23%	88.77%
180,000	10.76%	89.24%
190,000	10.41%	89.59%
200,000	10.07%	89.93%

Table S3. Consolidated Health Economic Evaluation Reporting Standards (CHEERS)-checklist by ISPOR Health Economic Evaluation Publication Guidelines Good Reporting Practices Task Force [1, 2].

Section/item	Item No	Recommendation	Reported in Section and 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.	Title
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	Abstract
Introduction			
Background and objectives	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.	Section 1 Ll. 29-31 and 35-38
Methods			
Target population and subgroups	4	Describe characteristics of the base case population and subgroups analysed, including why they were chosen.	Section 4.1 Ll. 2-5
Setting and location	5	State relevant aspects of the system(s) in which the decision(s) need(s) to be made.	Section 4.1.1 Ll. 2-4
Study perspective	6	Describe the perspective of the study and relate this to the costs being evaluated.	Section 4.3.3 Ll. 1-3
Comparators	7	Describe the interventions or strategies being compared and state why they were chosen.	Section 4.2.1 Ll. 1-3
Time horizon	8	State the time horizon(s) over which costs and consequences are being evaluated and say why appropriate.	Section 4.4.1 Ll. 6-7
Discount rate	9	Report the choice of discount rate(s) used for costs and outcomes and say why appropriate.	Section 4.4.1 Ll. 4-5
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.	Section 4.3.2 Ll. 1-5
Measurement of effectiveness	11	Single study-based estimates: Describe fully the design features of the single effectiveness study and why the single study was a sufficient source of clinical effectiveness data. Synthesis-based estimates: Describe fully the methods used for identification of included studies and synthesis of clinical effectiveness data.	Section 4.3.2 Ll. 1-8
Measurement and valuation of preference based outcomes	12	If applicable, describe the population and methods used to elicit preferences for outcomes.	-
Estimating resources and costs	13	Single study-based economic evaluation: Describe approaches used to estimate resource use associated with the alternative interventions.	Section 4.3.3 Ll. 1-6

		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. 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 to opportunity costs.	
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.	Section 4.4.1 Ll. 2-4
Choice of model	15	Describe and give reasons for the specific type of decision analytical model used. Providing a figure to show model structure is strongly recommended.	Section 4.2.1 Ll. 1-3 Figure 5
Assumptions	16	Describe all structural or other assumptions underpinning the decision-analytical model.	Section 4.2.1 and 4.2.2
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.	Section 4.4.2 Ll. 1-8
Results			
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 2 and 3 Figure 1 and 2
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.	Table 1
Characterising uncertainty	20	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, study perspective). 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.	Section 2.2.1 and 2.2.2 Figure 1-4 Table 2
Characterising 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.	-
Discussion			
Study findings, limitations, generalisability, and current knowledge	22	Summarise key study findings and describe how they support the conclusions reached. Discuss limitations and the generalisability of the findings and how the findings fit with current knowledge.	Section 3 Ll. 18-23 and 57-76

Other			
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.	Funding section
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.	Conflicts of interest statement

References

1. Husereau, D.; Drummond, M.; Petrou, S.; Carswell, C.; Moher, D.; Greenberg, D.; Augustovski, F.; Briggs, A.H.; Mauskopf, J.; Loder, E.; et al. Consolidated Health Economic Evaluation Reporting Standards (CHEERS) statement. *Value Health J Int Soc Pharmacoeconomics Outcomes Res.* **2013**, *16*, 1–5.
2. Husereau, D.; Drummond, M.; Petrou, S.; Carswell, C.; Moher, D.; Greenberg, D.; Augustovski, F.; Briggs, A.H.; Mauskopf, J.; Loder, E.; 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 J Int Soc Pharmacoeconomics Outcomes Res.* **2013**, *16*, 231–250.