

Article: Public Preferences for Emerging Cancer Screening Modalities: A Systematic Review of Discrete Choice Experiments

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Supplementary Table 1. Searching terms by database.

Database	Searching term
PubMed	("discrete choice"[Title/Abstract] OR "conjoint"[Title/Abstract] OR "stated preference"[Title/Abstract]) AND ("cancer screening"[Title/Abstract] OR "cancer detection"[Title/Abstract] OR "cancer prediction"[Title/Abstract] OR "cancer diagnos*"[Title/Abstract] OR "Early Detection of Cancer"[Mesh]) AND (("blood-based"[Title/Abstract] OR "liquid biopsy"[Title/Abstract] OR "blood test"[Title/Abstract] OR "Liquid Biopsy"[Mesh]) OR (("multi-cancer"[Title/Abstract] OR "multicancer"[Title/Abstract]) AND "early detection"[Title/Abstract]) OR ("genom*"[Title/Abstract] OR "genetic"[Title/Abstract] OR "polygenic"[Title/Abstract] OR "pharmacogenetic"[Title/Abstract] OR "Genetic Testing"[Mesh] OR "Precision Medicine"[Mesh]) OR ("artificial intelligence"[Title/Abstract] OR "computer-aided diagnosis"[Title/Abstract] OR "deep learning"[Title/Abstract] OR "machine learning"[Title/Abstract] OR "Artificial Intelligence"[Mesh] OR "Machine Learning"[Mesh]) OR ("breath analysis"[Title/Abstract] OR "exhaled breath"[Title/Abstract] OR "Breath Tests"[Mesh]) OR ("colon capsule endoscopy"[Title/Abstract] OR "Capsule Endoscopy"[Mesh]) OR ("mobile health"[Title/Abstract] OR "mHealth"[Title/Abstract] OR "smartphone-based app*"[Title/Abstract] OR "smartphone app*"[Title/Abstract] OR "Telemedicine"[Mesh]))
Embase	("discrete choice":ti,ab,kw OR "conjoint":ti,ab,kw OR "stated preference":ti,ab,kw OR 'discrete choice experiment'/exp OR 'conjoint analysis'/exp) AND ("cancer screening":ti,ab,kw OR "cancer detection":ti,ab,kw OR "cancer prediction":ti,ab,kw OR "cancer diagnos*":ti,ab,kw OR 'cancer screening'/exp OR 'cancer diagnosis'/exp OR 'early cancer diagnosis'/exp) AND (("blood-based":ti,ab,kw OR "liquid biopsy":ti,ab,kw OR "blood test":ti,ab,kw OR 'liquid biopsy'/exp) OR (("multi-cancer":ti,ab,kw OR "multicancer":ti,ab,kw) AND "early detection":ti,ab,kw) OR ("genom*":ti,ab,kw OR "genetic":ti,ab,kw OR "polygenic":ti,ab,kw OR "pharmacogenetic":ti,ab,kw OR 'genetic screening'/exp OR 'personalized medicine'/exp) OR ("artificial intelligence":ti,ab,kw OR "computer-aided diagnosis":ti,ab,kw OR "deep learning":ti,ab,kw OR "machine learning":ti,ab,kw OR 'artificial intelligence'/exp OR 'machine learning'/exp OR 'deep learning'/exp) OR ("breath analysis":ti,ab,kw OR "exhaled breath":ti,ab,kw OR 'breath analysis'/exp OR 'breath condensate'/exp) OR ("colon capsule endoscopy":ti,ab,kw OR 'capsule endoscopy'/exp) OR ("mobile health":ti,ab,kw OR "mHealth":ti,ab,kw OR "smartphone-based app*":ti,ab,kw OR "smartphone app*":ti,ab,kw OR 'mobile health application'/exp))
Scopus	TITLE-ABS-KEY("discrete choice" OR "conjoint" OR "stated preference") AND TITLE-ABS-KEY("cancer screening" OR "cancer detection" OR "cancer prediction" OR "cancer diagnos*") AND (TITLE-ABS-KEY("blood-based" OR "liquid biopsy" OR "blood test") OR (TITLE-ABS-KEY("multi-cancer" OR "multicancer") AND TITLE-ABS-KEY("early detection"))) OR TITLE-ABS-KEY("genom*" OR "genetic" OR "polygenic" OR "pharmacogenetic") OR

Database	Searching term
	TITLE-ABS-KEY("artificial intelligence" OR "computer-aided diagnosis" OR "deep learning" OR "machine learning") OR TITLE-ABS-KEY("breath analysis" OR "exhaled breath") OR TITLE-ABS-KEY("colon capsule endoscopy") OR TITLE-ABS-KEY("mobile health" OR "mHealth" OR "smartphone-based app*" OR "smartphone app*"))
Web of Science	TS=("discrete choice" OR "conjoint" OR "stated preference") AND TS=("cancer screening" OR "cancer detection" OR "cancer prediction" OR "cancer diagnos*") AND (TS=("blood-based" OR "liquid biopsy" OR "blood test") OR (TS=("multi-cancer" OR "multicancer") AND TS=("early detection")) OR TS=("genom*" OR "genetic" OR "polygenic" OR "pharmacogenetic") OR TS=("artificial intelligence" OR "computer-aided diagnosis" OR "deep learning" OR "machine learning") OR TS=("breath analysis" OR "exhaled breath") OR TS=("colon capsule endoscopy") OR TS=("mobile health" OR "mHealth" OR "smartphone-based app*" OR "smartphone app*"))
EconLit	("discrete choice" OR "conjoint" OR "stated preference"). ti,ab AND ("cancer screening" OR "cancer detection" OR "cancer prediction" OR "cancer diagnos*"). ti,ab AND ((("blood-based" OR "liquid biopsy" OR "blood test"). ti,ab OR ((("multi-cancer" OR "multicancer"). ti,ab AND ("early detection"). ti,ab) OR ("genom*" OR "genetic" OR "polygenic" OR "pharmacogenetic"). ti,ab OR ("artificial intelligence" OR "computer-aided diagnosis" OR "deep learning" OR "machine learning"). ti,ab OR ("breath analysis" OR "exhaled breath"). ti,ab OR ("colon capsule endoscopy"). ti,ab OR ("mobile health" OR "mHealth" OR "smartphone-based app*" OR "smartphone app*"). ti,ab)

Supplementary Table 2. Data extraction fields.

Data Category	Data Fields
Study characteristics	Publication year Author Sample size Population surveyed Stated preference method
Screening programme characteristics	Cancer type Novel modality Target screening population
DCE design and analysis methods	Number of options per choice set Number of attributes studied Maximum number of attribute levels Attributes and levels studied Inclusion of opt-out option Analysis model Calculation of uptake and/or willingness-to-pay Preference heterogeneity analysis method
Study findings	Significant attributes Most important attribute Least important attribute Opt-out results Uptake/willingness-to-pay results Drivers of preference heterogeneity

Supplementary Table 3a. Quality assessment results using the DIRECT Checklist for DCEs in health research: Part 1 of 2

Checklist items		Jones 2024 ¹	Knight 2015 ²	Weymann 2018 ³	Kilambi 2014 ⁴	Wong 2018 ⁵	Venning 2022 ⁶	Veldwijk 2016 ⁷	Wang 2025 ⁸	Veldwijk 2019 ⁹	Heidenreich 2022 ¹⁰	Benning 2014 ¹¹
Purpose and rationale												
1	Describe the real-world context and decision-maker that the hypothetical choice context seeks to replicate or inform											
2	Provide a rationale for using a DCE to answer the research question											
Attributes and levels												
3	Describe how attributes and levels were derived (e.g. literature review, interviews, focus groups, expert input)											
4	Provide the final list of attributes and levels											
Experimental design												
5	Report the number of alternatives per choice set and whether they were labelled or unlabelled											
6	Describe response options (e.g. forced choice, opt-out, status quo)											
7	Describe the type of experimental design (e.g. orthogonal, D-efficient, Bayesian efficient, partial profile)											
8	Describe which effects are identified in the design (e.g. main effects, higher order interactions, functional form)											

Checklist items		Jones 2024 ¹	Knight 2015 ²	Weymann 2018 ³	Kilambi 2014 ⁴	Wong 2018 ⁵	Venning 2022 ⁶	Veldwijk 2016 ⁷	Wang 2025 ⁸	Veldwijk 2019 ⁹	Heidenreich 2022 ¹⁰	Benning 2014 ¹¹
9	Describe the number of choice sets, blocks and choice sets per block											
10	Indicate how the experimental design was obtained (software, catalogue, other)											
Survey design												
11	Provide a sample choice set and the instructions and background information given to respondents (e.g. providing the survey as an appendix)											
12	Report any randomisation (e.g. choice set order, attribute order, alternative order, framing effects)											
13	Describe what was checked in piloting (e.g. understanding, respondent burden, timing, wording)											
14	Report whether information from the pilot was used to update the experimental design (e.g. priors, functional form of attributes) or survey design											
Sample and data collection												
15	Report respondent inclusion/exclusion criteria											
16	Describe how data were collected (e.g. mail, personal interview, web survey)											

Checklist items		Jones 2024 ¹	Knight 2015 ²	Weymann 2018 ³	Kilambi 2014 ⁴	Wong 2018 ⁵	Venning 2022 ⁶	Veldwijk 2016 ⁷	Wang 2025 ⁸	Veldwijk 2019 ⁹	Heidenreich 2022 ¹⁰	Benning 2014 ¹¹
17	Report the response rate or cooperation rate, if possible											
18	Report the final sample size and how the sample size was determined											
19	Describe respondent characteristics and representativeness of target population, if known											
Econometric analysis												
20	Indicate coding of data (e.g. effects, dummy, continuous) including definitions											
21	Report whether any respondents were removed and why (e.g. suspected fraudulent responses, rationality tests)											
22	Provide the rationale for model choice (e.g. conditional logit, mixed logit, latent class) and assumptions (e.g. error variance)											
23	Report model specification											
Reporting of results												
24	Report the model performance, goodness of fit (if comparing models)											

Checklist items		Jones 2024 ¹	Knight 2015 ²	Weymann 2018 ³	Kilambi 2014 ⁴	Wong 2018 ⁵	Venning 2022 ⁶	Veldwijk 2016 ⁷	Wang 2025 ⁸	Veldwijk 2019 ⁹	Heidenreich 2022 ¹⁰	Benning 2014 ¹¹
25	Describe methods used for analysis of model results (e.g. calculation of marginal rate of substitution, attribute relative importance, welfare gain)											
26	Report measures of precision for the output(s) of interest (e.g. confidence intervals) and how these were derived											

Colour code: blue indicates Fully Met, yellow indicates Partially Met, orange indicates Not Met

Supplementary Table 3b. Quality assessment results using the DIRECT Checklist for DCEs in health research: Part 2 of 2

Checklist items		Zhao 2021 ¹²	Norman 2022 ¹³	Peters 2020 ¹⁴	Osborne 2018 ¹⁵	Pearce 2025 ¹⁶	Woode 2025 ¹⁷	Jagemann 2024 ¹⁸	Gaube 2024 ¹⁹	Snowell 2022 ²⁰	Spinks 2016 ²¹	Gelhorn 2023 ²²	Groothuis- Oudshoorn 2014 ²³
Purpose and rationale													
1	Describe the real-world context and decision-maker that the hypothetical choice context seeks to replicate or inform												
2	Provide a rationale for using a DCE to answer the research question												
Attributes and levels													
3	Describe how attributes and levels were derived (e.g. literature review, interviews, focus groups, expert input)												
4	Provide the final list of attributes and levels												
Experimental design													
5	Report the number of alternatives per choice set and whether they were labelled or unlabelled												
6	Describe response options (e.g. forced choice, opt-out, status quo)												
7	Describe the type of experimental design (e.g. orthogonal, D-efficient, Bayesian efficient, partial profile)												
8	Describe which effects are identified in the design (e.g.												

Checklist items		Zhao 2021 ¹²	Norman 2022 ¹³	Peters 2020 ¹⁴	Osborne 2018 ¹⁵	Pearce 2025 ¹⁶	Woode 2025 ¹⁷	Jagemann 2024 ¹⁸	Gaube 2024 ¹⁹	Snoswell 2022 ²⁰	Spinks 2016 ²¹	Gelhorn 2023 ²²	Groothuis- Oudshoorn 2014 ²³
	main effects, higher order interactions, functional form)												
9	Describe the number of choice sets, blocks and choice sets per block												
10	Indicate how the experimental design was obtained (software, catalogue, other)												
Survey design													
11	Provide a sample choice set and the instructions and background information given to respondents (e.g. providing the survey as an appendix)												
12	Report any randomisation (e.g. choice set order, attribute order, alternative order, framing effects)												
13	Describe what was checked in piloting (e.g. understanding, respondent burden, timing, wording)												
14	Report whether information from the pilot was used to update the experimental design (e.g. priors, functional form of attributes) or survey design												
Sample and data collection													
15	Report respondent inclusion/exclusion criteria												

Checklist items		Zhao 2021 ¹²	Norman 2022 ¹³	Peters 2020 ¹⁴	Osborne 2018 ¹⁵	Pearce 2025 ¹⁶	Woode 2025 ¹⁷	Jagemann 2024 ¹⁸	Gaube 2024 ¹⁹	Snoswell 2022 ²⁰	Spinks 2016 ²¹	Gelhorn 2023 ²²	Groothuis- Oudshoorn 2014 ²³
16	Describe how data were collected (e.g. mail, personal interview, web survey)												
17	Report the response rate or cooperation rate, if possible												
18	Report the final sample size and how the sample size was determined												
19	Describe respondent characteristics and representativeness of target population, if known												
Econometric analysis													
20	Indicate coding of data (e.g. effects, dummy, continuous) including definitions												
21	Report whether any respondents were removed and why (e.g. suspected fraudulent responses, rationality tests)												
22	Provide the rationale for model choice (e.g. conditional logit, mixed logit, latent class) and assumptions (e.g. error variance)												
23	Report model specification												
Reporting of results													
24	Report the model performance, goodness of fit (if comparing models)												

Checklist items		Zhao 2021 ¹²	Norman 2022 ¹³	Peters 2020 ¹⁴	Osborne 2018 ¹⁵	Pearce 2025 ¹⁶	Woode 2025 ¹⁷	Jagemann 2024 ¹⁸	Gaube 2024 ¹⁹	Snoswell 2022 ²⁰	Spinks 2016 ²¹	Gelhorn 2023 ²²	Groothuis- Oudshoorn 2014 ²³
25	Describe methods used for analysis of model results (e.g. calculation of marginal rate of substitution, attribute relative importance, welfare gain)												
26	Report measures of precision for the output(s) of interest (e.g. confidence intervals) and how these were derived												

Colour code: blue indicates Fully Met, yellow indicates Partially Met, orange indicates Not Met

Supplementary Table 4. Uptake rates.

Scenario	Uptake (95% CI*)
Wong 2018⁵ (Genetic testing)	
<u>Base case</u> Buccal swab, specialist doctor, hospital, SGD 175 OOP cost	3.70%
<u>Feasible alternative</u> Buccal swab, nurse educator, hospital, SGD 50 OOP cost	60.50%
<u>Cheaper alternative</u> Buccal swab, specialist doctor, hospital, SGD 50 OOP cost	87%
<u>Pricier alternative</u> Buccal swab, specialist doctor, hospital, SGD 300 OOP cost	0%
<u>Most preferred alternative</u> Buccal swab, specialist doctor, private family clinic, SGD 50 OOP cost	88.90%
Wang 2025⁸ (Genetic testing)	
<u>Scenario 1</u> \$0 OOP genetic test cost, screening other than mammogram, \$0 OOP annual screening cost, insurance coverage, <25% familial risk correlation, results conveyed by medical professional using risk report	Non-supporter: 58% Supporter: 98%
<u>Scenario 2</u> \$299 OOP genetic test cost, more frequent mammogram screening, \$0 OOP annual screening cost, no insurance coverage, >50% familial risk correlation, results conveyed directly to patient using risk report	Non-supporter: 19% Supporter: 96%
<u>Scenario 3</u> \$499 OOP genetic test cost, mastectomy, \$499 OOP annual screening cost, no insurance coverage, >50% familial risk correlation, direct to patient using risk report	Non-supporter: 2% Supporter: 81%
Weymann 2018³ (Genetic testing)	
<u>Traditional diagnostic testing</u> 40/100 individuals receive a definitive diagnosis, patients undergo 3 tests, 3 months wait for results	NA
<u>Scenario 1</u> MPS genetic testing, 60/100 individuals receive a definitive diagnosis, patients undergo 1 test, 3 weeks wait for results	Scenario 1: 34% (29%, 39%) Traditional diagnostic testing: 5% (2%, 7%)
<u>Scenario 2</u> MPS genetic testing, 80/100 individuals receive a definitive diagnosis, patients undergo 1 test, 3 weeks wait for results	Scenario 2: 74% (68%, 79%) Traditional diagnostic testing: 2% (0%, 3%)
<u>Scenario 3</u> MPS genetic testing, 90/100 individuals receive a definitive diagnosis, patients undergo 1 test, 1.5 months wait for results	Scenario 3: 80% (74%, 87%) Traditional diagnostic testing: 1% (0%, 3%)
Knight 2015² (Genetic testing)	
<u>Scenario 1</u> USD 500 test cost, 0% chance of false negatives, results shared with GP	97% (95%, 99%)
<u>Scenario 2</u> USD 500, 20% chance of false negatives, results shared with insurance companies	41% (25%, 57%)
Ong 2024²⁴ (Liquid biopsy)	
<u>Base case</u> Two-day stool-based test, no pain, 80% sensitivity, recommended by the government's Health Promotion Board, SGD 5 OOP cost, no risk of complications	NA
<u>Alternative</u> Blood-based test, no pain, 80% sensitivity, recommended by the government's Health Promotion Board, SGD 5 OOP cost, no risk of complications	Compared to base case: Strong supporters: 0.2% increase (-1.2%, 1.6%) Weak supporters: 5.9% increase (3.6%, 8.2%)

Scenario	Uptake (95% CI*)
Benning 2014¹¹ (Liquid biopsy)	
Initial choice shares	Stool: 16.8% Blood: 26.3% Combi: 43.3% Opt out: 13.6%
<u>Lowest utility</u> Lowest sensitivity level, highest chance of unnecessary follow-up test, lowest risk reduction level, limited scientific evidence	Stool: 13.5% Blood: 22.5% Combi: 38.1% Opt out: 25.9%
<u>Highest utility</u> Highest sensitivity level, lowest chance of unnecessary follow-up test, highest risk reduction level, strong scientific evidence	Stool: 16.3% Blood: 27.2% Combi: 50.8% Opt out: 5.73%
<u>Average utility</u> Average sensitivity level, average chance of unnecessary follow-up test, lowest risk reduction level, limited scientific evidence	Stool: 16.4% Blood: 27.3% Combi: 40.3% Opt out: 16.1%
<u>Average utility</u> Average sensitivity level, average chance of unnecessary follow-up test, lowest risk reduction level, limited scientific evidence for blood and combi-test but strong scientific evidence for stool test	Stool: 20.1% Blood: 26.0% Combi: 38.5% Opt out: 15.4%
Zhao 2021¹² (Liquid biopsy)	
<u>Base case</u> LDCT scan only, annual screening interval, mobile screening vehicle, low radiation, low fees (RMB 50)	NA
<u>Alternative</u> LDCT + blood test, screening at a general hospital, low radiation, low fees	Compared to base case: 40% increase
Peters 2020¹⁴ (Liquid biopsy, breath analysis)	
EAC screening VS no screening	70.50%
Upper endoscopy	16.1% decrease
Transnasal endoscopy	12.2% decrease
Cell collection device	6.6% decrease
Breath analysis	12.7% increase
Blood test	13.7% increase
100% sensitivity	17.6% increase
90% sensitivity	10.2% increase
80% sensitivity	0.4% increase
70% sensitivity	15% decrease
60% sensitivity	25% decrease
100% specificity	9% increase
90% specificity	1.4% increase
80% specificity	2.7% increase
70% specificity	5.8% decrease
60% specificity	9.4% decrease
Gelhorn 2022²² (MCED)	
<u>Screening A</u> 50 types of cancer tested, 55.2% sensitivity, 99.3% specificity, 11% cancer type unknown	Overall: 72% FMC: 79% SS: 83% WoS: 24%
<u>Single-cancer screening blood test</u> One cancer tested for, 3 true positives, 0 false negatives, 1300 false positives, 0% unknown cancer type	Compared to hypothetical MCED profile: FMC: 38.0% (28.2%, 47.8%) SS: 28.1% (23.3%, 32.9%) WoS: 47.6% (35.6%, 59.5%)

Scenario	Uptake (95% CI*)
Hypothetical MCED profile 50 cancers tested, 66 true positives, 54 false negatives, 69 false positives, 10.5% unknown cancer type	Compared to single-cancer screening blood test: FMC: 62.0% (52.2%, 71.8%) SS: 71.9% (67.1%, 76.7%) WoS: 52.4% (40.5%, 64.4%)
Spinks 2016²¹ (mHealth)	
3 alternatives Skin self-examination, skin cancer clinic, general practitioner in-person	Skin self-examination: 3.7% Skin cancer clinic: 55.3% General practitioner in-person: 41.0%
4 alternatives Skin self-examination, skin cancer clinic, general practitioner in-person, teledermoscopy	Skin self-examination: 1.2% Skin cancer clinic: 18.3% General practitioner in-person: 13.6% Teledermoscopy: 66.8%
Groothuis-Oudshoorn 2014²³ (Nanopill)	
CRC screening VS no screening	57.3% (55.7%, 58.8%)
Colonoscopy 90% sensitivity, 90% specificity, 100/10000 complications, 10 year screening interval	39.2% (36.8%, 41.6%)
Sigmoidoscopy 70% sensitivity, 90% specificity, 10/10000 complications, 5 year screening interval	37.5% (35.2%, 39.8%)
iFOBT 80% sensitivity, 90% specificity, no complications, 2 year screening interval	75.8% (73.9%, 77.7%)
Nanopill 100% sensitivity, 100% specificity, 1/10000 complications, 1 year screening interval	78.8% (77.0%, 80.5%)
Nanopill 100% sensitivity, 100% specificity, 1/10000 complications, 2 year screening interval	81.0% (79.4%, 82.6%)
Nanopill 100% sensitivity, 90% specificity, 1/10000 complications, 1 year screening interval	77.3% (75.4%, 79.2%)
Nanopill 90% sensitivity, 100% specificity, 1/10000 complications, 1 year screening interval	73.8% (71.7%, 75.7%)
Nanopill 95% sensitivity, 95% specificity, 1/10000 complications, 1 year screening interval	75.6% (73.7%, 77.4%)
Nanopill 90% sensitivity, 95% specificity, 1/10000 complications, 2 year screening interval	75.6% (73.7%, 77.4%)
Pearce 2025¹⁶ (AI)	
Scenario 1: Supplementing current practice with AI (i.e., double human reading both with access to AI results) compared to replacing one human in double human reading with AI (i.e., one human + one AI read)	5.3% increase
Scenario 2: AI implemented only once evidence of high levels of accuracy were available (the AI is more accurate than 100% of radiologists) compared to at current levels (62%)	21.9% increase

Scenario	Uptake (95% CI*)
Scenario 3: Implementing an international algorithm that is representative of most women (75%) compared to implementing a locally developed algorithm that is representative of all women (100%).	18.1% decrease
Woode 2025¹⁷ (AI)	
Alternative 1 2 radiologists, 85% sensitivity, 90% specificity, 14 days waiting time, government accountable for misdiagnoses	NA
Alternative 2 1 radiologist & 1 AI system, 85% sensitivity, 90% specificity, 10 days waiting time, AI evidence informed by clinical trial & real world data, all minorities represented, government accountable for misdiagnoses	Alternative 1: 24.41% Alternative 2: 55.40% Opt-out: 20.19%
Alternative 3 2 AI systems, 85% sensitivity, 90% specificity, 10 days waiting time, AI evidence informed by clinical trial & real world data, all minorities represented, government accountable for misdiagnoses	Alternative 1: 34.67% Alternative 2: 43.65% Opt-out: 21.68%

*if reported

Supplementary Table 5. Willingness to pay (WTP) estimates.

Scenario	Reported WTP (95% CI*)	WTP (2024 USD)
Venning 2022⁶ (Genetic testing)		
Test accuracy: 90% VS 60%	AUD 176.26 (USD 125.35)	128.12
Cancer type: multicancer test VS pancreatic cancer only	AUD 145.16 (USD 103.23)	95.85
Testing process: primary care provider VS online	AUD 25.66 (USD 18.25)	15.05
Impact of result on life insurance: no impact VS impact	AUD 16.79 (USD 11.94)	9.16
Kilambi 2014⁴ (Genetic testing)		
P(CRC) = 12.5%, risk-reducing expenditure = USD 5,000	Accurate test information: USD 1921 (1066, 2775) Inaccurate test information: USD 1769 (910, 2627)	Accurate test information: 2488.23 Inaccurate test information: 2291.35
P(CRC) = 25%, risk-reducing expenditure = USD 10,000	Accurate test information: USD 1880 (1028, 2731) Inaccurate test information: USD 1732 (872, 2591)	Accurate test information: 2435.12 Inaccurate test information: 2243.42
P(CRC) = 50%, risk-reducing expenditure = USD 20,000	Accurate test information: USD 1647 (770, 2525) Inaccurate test information: USD 1519 (627, 2412)	Accurate test information: 2133.32 Inaccurate test information: 1967.53
Wong 2018⁵ (Genetic testing)		
Sample type: buccal swab VS dried blood spot	SGD 2.65 (0.79, 4.51)	2.21
Person conducting pretest discussion: specialist doctor VS nurse educator	SGD 28.39 (25.35, 31.42)	23.69
Person conducting pretest discussion: non-specialist doctor VS nurse educator	-SGD 16.53 (-19.18, -13.88)	-13.79
Test location: private family clinic VS hospital	SGD 7.70 (4.22, 11.17)	6.43
Test location: public primary-care clinic VS hospital	- SGD 5.86 (-8.94, -2.79)	-4.89
Weymann 2018³ (Genetic testing)		
<u>Scenario 1</u> MPS genetic testing, 60/100 individuals receive a definitive diagnosis, patients undergo 1 test, 3 weeks wait for results	USD 400 (300, 500)	465.31
<u>Scenario 2</u> MPS genetic testing, 80/100 individuals receive a definitive diagnosis, patients undergo 1 test, 3 weeks wait for results	USD 1245 (1027, 1462)	1448.27
<u>Scenario 3</u> MPS genetic testing, 90/100 individuals receive a definitive diagnosis, patients undergo 1 test, 1.5 months wait for results	USD 1541 (1224, 1859)	1792.60
Knight 2015² (Genetic testing)		
Test VS no test	USD 622 (476, 778)	785
Chance of FN: 0% VS 10%	USD 248 (161, 338)	312.99
Chance of FN: 0% VS 20%	USD 507 (379, 640)	639.87
Chance of FN: 10% VS 20%	USD 258 (164, 356)	325.61
Who sees test results: GP VS Genetics health professional	USD 111 (18, 208)	140.09
Who sees test results: GP VS Insurance companies	USD 999 (815, 1193)	1,260.80

Scenario	Reported WTP (95% CI*)	WTP (2024 USD)
Who sees test results: Genetics health professional VS Insurance companies	USD 888 (719, 1063)	1,120.71
Zhao 2021¹² (Liquid biopsy)		
Screening tool: blood test VS CT only	-RMB 72.08 (-325.16, 213.78)	-10.12
Screening tool: blood test + CT VS CT only	RMB 154.01(-120.21, 431.63)	21.62
Screening interval: once in a lifetime VS annual screening	- RMB 434.79 (-620.20, -293.84)	-61.02
Venue: community hospital VS mobile screening vehicle	RMB 139.29 (5.07, 277.37)	19.55
Venue: general hospital VS mobile screening vehicle	RMB 237.47 (124.93, 363.43)	33.33
Extra radiation from screening: 1 month VS no extra	WTP (95% CI*)	-49.17
Osborne 2018¹⁵ (Liquid biopsy)		
Sample type: stool test	- AUD \$20.950 (-25.188, -17.163)	-17.15
Sample type: saliva test	AUD 7.965 (5.399, 10.634)	6.52
Sample type: blood test	AUD 12.985 (9.942, 16.419)	10.63
Sensitivity: 70%	- AUD 88.768 (-98.414, -80.636)	-72.65
Sensitivity: 80%	AUD 1.365(0.126, 2.653)	1.12
Sensitivity: 90%	AUD 87.403 (79.292, 97.028)	71.54
Norman 2022¹³ (Liquid biopsy, breath analysis)		
Type of scan: CT+breath test VS CT only	AUD 149 (118, 180)	108.30
Type of scan: CT+blood test VS CT only	AUD 104 (78, 131)	75.59
Venue: private hospital VS public hospital	- AUD 3 (-25, 19)	-2.18
Venue: community radiology practice VS public hospital	AUD 0 (-22, 23)	0
Distance from home: 30km VS <5km	- AUD 54 (-81, -28)	-39.25
Distance from home: >50km VS <5km	- AUD 151 (-186, -116)	-109.76
Time spent at location: 60min VS 45min	- AUD 8(-35, 18)	-5.81
Time spent at location: 75min VS 45min	- AUD 36 (-71, -2)	-26.17
Speed of results: 14 days VS same day	- AUD 114 (-142, -85)	-82.86
Speed of results: 28 days VS same day	- AUD 193 (-232, -154)	-140.28
Radiation from CT screen: 1 month extra VS no extra	- AUD 81 (-111, -51)	-58.88
Radiation from CT screen: 3 months extra VS no extra	- AUD 171 (-212, -130)	-124.29
Snoswell 2022²⁰ (mHealth)		
Method of screening: dermatologist via teledermoscopy VS GP in person	AUD 1.73 (-10.78, 14.25)	1.26
Method of screening: skin cancer clinic VS GP in person	- AUD 10.12 (-22.06, 1.82)	-7.36
Who reviews the result: dermatologist via teledermoscopy VS GP in person	AUD 41.01 (28.56, 53.46)	29.81
Time away from usual activities: >4h VS 1-2h	- AUD 59.26 (-74.38, -44.14)	-43.07
Time away from usual activities: 3-4h VS 1-2h	- AUD 49.07 (-64.25, -33.89)	-35.67
Chance of melanoma detection: >95% VS 65-75%	AUD 100.56 (77.16, 123.96)	73.09
Chance of melanoma detection: 85-95% VS 65-75%	AUD 75.85 (58.12, 93.58)	55.13
Wait time for results: 3 days VS <4h	- AUD 14.60 (-26.61, -2.58)	-10.61
Wait time for results: 1 day VS <4h	AUD 5.78 (-5.80, 17.35)	4.20
Number of non-cancerous lesions removed to detect one skin cancer: 3 VS 10	AUD 70.46 (52.52, 88.40)	51.21

Scenario	Reported WTP (95% CI*)	WTP (2024 USD)
Number of non-cancerous lesions removed to detect one skin cancer: 5 VS 10	AUD 30.09 (18.67, 41.51)	21.87
Spinks 2016²¹ (mHealth)		
Base case 3 options (skin self-examination, skin cancer clinic, GP screening), 1-2h away from usual activities, >95% chance of melanoma detection, <4 hours wait time for results, results reviewed by a GP, 5 non-cancerous moles removed to detect one skin cancer	NA	
Intermediate case 3 options (skin self-examination, skin cancer clinic, GP screening), 1-2h away from usual activities, >95% chance of melanoma detection, <4 hours wait time for results, results reviewed by dermatologist, 3 non-cancerous moles removed to detect one skin cancer	NA	
Teledermoscopy as an additional (fourth) screening mode, result reviewed by dermatologist, 3 non-cancerous moles need to be removed to detect one skin cancer	Compared to base case: AUD 110 Compared to intermediate case: AUD 52	Compared to base case: 96.80 Compared to intermediate case: 45.76
Pearce 2025¹⁶ (AI) – using waiting time for results as "payment"		
AI Accuracy: per 1% increase	0.7 days	
Role of AI: one specialist + one AI VS 2 specialists with access to AI results	-10 days	
Role of AI: AI as triage VS 2 specialists with access to AI results	-21 days	
Role of AI: AI only VS 2 specialists with access to AI results	-39 days	
Sovereignty: international for-profit company VS Australian Department of Health (non-profit)	-28 days	NA
Sovereignty: Australian for-profit company VS Australian Department of Health (non-profit)	-10 days	
Representation: 75% of women VS 100%	-3 days	
Representation: 50% of women VS 100%	-8 days	

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