Table i. PRISMA checklist.

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	Title
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Line 63-68
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Line 68-72
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Line 91 (Table 1)
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Line 79-81
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Appendix Table 2
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Lines 81-88
Data collection	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the	Lines 99-

Section and Topic	Item #	Checklist item	Location where item is reported
process		process.	107
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Lines 99-107
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Lines 99-107
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Lines 120-138
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	N.A.
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	N.A.
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	N.A.
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Lines 141-143
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	N.A.
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	N.A.
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	N.A.
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	N.A.
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	N.A.
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Lines 94-96 and Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	N.A.
Study characteristics	17	Cite each included study and present its characteristics.	Line 93-96 Line 151-160 Table 3
Risk of bias in	18	Present assessments of risk of bias for each included study.	Table 5

Section and Topic	Item #	Checklist item	Location where item is reported
studies			
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	N.A.
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	N.A.
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Lines 162-182
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	N.A.
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	N.A.
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Lines 178-179
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	N.A.
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Lines 217-218
	23b	Discuss any limitations of the evidence included in the review.	Lines 198-214
	23c	Discuss any limitations of the review processes used.	Lines 195-198
	23d	Discuss implications of the results for practice, policy, and future research.	Lines 263-282
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Line 80
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	N.A.
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	N.A.
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	N.A.
Competing interests	26	Declare any competing interests of review authors.	N.A.
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	N.A.

Table ii. Search syntaxes for the Pubmed, Embase, and Cochrane databases.

Database	Embase	PubMed	Cochrane database
Date	10 January 2023	10 January 2023	10 January 2023
Number of hits	1,144	1,803	237
Search strategy	'artificial intelligence'/exp OR 'cluster analysis'/exp OR 'machine learning'/exp OR 'decision support system'/exp OR 'deep learning'/exp OR 'unsupervised machine learning'/exp OR 'supervised machine learning'/exp OR 'artificial intelligence':ti,ab,kw OR 'deep learning':ti,ab,kw OR 'machine learning':ti,ab,kw OR 'medical decision support':ti,ab,kw OR 'adaptive health system':ti,ab,kw OR 'learning health system'/exp OR 'learning health system' OR 'digital phenotyp*':ti,ab,kw OR 'phenotyping algorithm':ti,ab,kw OR 'semi supervised learning':ti,ab,kw OR 'neural network':ti,ab,kw OR 'machine intelligence':ti,ab,kw OR 'predictive algorithm*':ti,ab,kw OR 'bayes point machine' OR 'boosted	((artificial intelligence[MeSH Terms]) OR (cluster analysis[MeSH Terms]) OR (deep learning[MeSH Terms]) OR (machine learning[MeSH Terms]) OR (unsupervised machine learning[MeSH Terms]) OR (supervised machine learning[MeSH Terms]) OR (decision support systems, clinical[MeSH Terms]) OR "artificial intelligenc*"[tiab] OR "deep learning*"[tiab] OR "machine learning*"[tiab] OR "medical decision support*"[tiab] OR "adaptive health system*"[tiab] OR "learning health system*"[tiab] OR "digital phenotyp*"[tiab] OR "phenotyping algorithm*"[tiab] OR "semi-supervised learning"[tiab] OR "neural network"[tiab] OR "machine intelligence"[tiab] OR "predictive algorithm*"[tiab]) OR "bayes point machine" OR "boosted decision tree" OR "penalized logistic regression" OR	#1 MeSH descriptor: [Artificial Intelligence] explode all trees #2 MeSH descriptor: [Cluster Analysis] explode all trees #3 MeSH descriptor: [Supervised Machine Learning] explode all trees #4 MeSH descriptor: [Machine Learning] explode all trees #5 MeSH descriptor: [Decision Support Systems, Clinical] explode all trees #6 MeSH descriptor: [Supervised Machine Learning] explode all trees #7 #1 OR #2 OR #3 OR #4 OR #5 OR #6 #8 (artificial intelligence):ti,ab,kw (Word variations have been searched) #9 (deep learning):ti,ab,kw (Word variations have been searched) #10 (machine learning):ti,ab,kw (Word variations have been searched)

decision tree' OR 'support vector machine' OR nlp:kw OR 'natural language processing' OR 'penalized logistic regression' AND ('traumatology'/exp OR 'orthopedic surgeon' exp OR fracture:ti,ab,kw OR 'skeletal fixation':ti,ab,kw]	"support vector machine" OR "NLP" OR "Natural language processing" AND ("traumatology"[MeSH Terms] OR "orthopaedic trauma"[tiab] OR "orthopedic trauma"[tiab] OR "Orthopedic Procedures"[Mesh] OR "fracture"[tiab] OR skeletal fixation*[tiab])	#11 (medical decision support):ti,ab,kw (Word variations have been searched) #12 (adaptive health system):ti,ab,kw (Word variations have been searched) #13 (learning health system OR digital phenotyp*):ti,ab,kw (Word variations have been searched) #14 (phenotyping algorithm OR semi supervised learning OR neural network OR machine intelligence OR predictive algorithm OR bases point machine OR boosted decision tree OR support vector machine OR NLP OR natural language processing OR penalized logistic regression):ti,ab,kw (Word variations have been searched) #15 #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 #16 MeSH descriptor: [Traumatology] explode all trees #17 MeSH descriptor: [Orthopedic Procedures] explode all trees #18 (fracture or skeletal fixation):ti,ab,kw (Word variations have been searched) #19 #16 OR #17 OR #18 #20 #15 AND #19

Table iii. Overview of baseline characteristics extracted from the included studies (n = 45).

Author, year	Year	Journal	Study type	Study goal	Injury type	Number of patients	Outcome	Digital application
Anderson	2020	Clin Orthop Relat Res	Developmental	Prognostic	ACL ruptures	10,919	Prolonged opioid use	No
Bevevino	2014	Clin Orthop Relat Res	Developmental	Prognostic	Calcaneus fractures	134	Need for amputation	No
Bolourani	2021	J Am Coll Surg	Developmental	Prognostic	Lower extremity fractures	1,098	Amputation and PTA	No
Bulstra	2022	Journal of Hand Surgery	Developmental	Diagnostic	Scaphoid fractures	422	True scaphoid fracture	No
Cao	2021	Journal of Personalized Medicine	Developmental	Prognostic	Hip fractures	134,915	Mortality	No
Cary	2021	JAMDA	Developmental	Prognostic	Hip fractures	17,140	Mortality	No
Chen	2020	Medicina	Developmental & External validation	Prognostic	Hip fractures	8,954/1,580	Mortality	No
Chen	2021	PeerJ	Developmental	Prognostic	Patellar fractures	137	Sarcopenia	No
Cui	2018	Injury	Developmental	Prognostic	Hip fractures	150	Osteonecrosis	No
DeBaun	2021	JAAOS	Developmental	Prognostic	Hip fractures	19,835	Mortality	No
Dong	2022	BMC Musculoskeletal Disorders	Developmental	Prognostic	Thoracolumbar burst fractures	150	Adverse events on radiographic follow-up	No
Forssten	2021	Journal of Personalized Medicine	Developmental	Prognostic	Hip fractures	124,707	Mortality	No
Harris	2022	Clin Orthop Relat Res	Developmental	Prognostic	Hip fractures	82,168	30-day mortality, 30-	Yes

								day major complication	
Hendrickx	2020	Journal of Orthopaedic Trauma	Developmental	Diagnostic	Tibia fractures	263	Posterior Malleolar Fracture	Yes
Hertz	2020	Injury	Developmental	Diagnostic	Pelvic fractures	6,975	Bladder rupture	No
Huang	2022	BMC Geriatrics	Developmental	Prognostic	Hip fractures	161	Lacunar cerebral infarction	No
Huang	2021	Frontiers in Medicine	Developmental & External validation	Prognostic	Pelvic fractures	510	Blood transfusion	No
Karnuta	2019	Journal of Orthopaedic Trauma	Developmental	Prognostic	Hip fractures	98,562	Length of stay and Medicare inpatients payments	No
Kitcharanant	2022	BMC Geriatrics	Developmental	Prognostic	Hip fractures	492	1-year mortality	Yes
Kuit, van de	2022	Clin Orthop Relat Res	Developmental	Prognostic	Hip fractures	875	Revision surgery	No
Lei	2022	Mortality	Developmental & External validation	Prognostic	Hip fractures	391/165	In-hospital mortality	Yes
Lin	2010	Injury	Developmental	Prognostic	Hip fractures	286	Mortality	No
Liu	2022	Frontiers in Surgery	Developmental	Prognostic	Hip fractures	1,596	Early acute kidney injury	No
Lu	2022	The American Journal of Sports Medicine	Developmental	Prognostic	ACL ruptures	1,663	Secondary meniscal tear	Yes
Lu	2021	Knee Surgery, Sports	Developmental	Prognostic	ACL ruptures	4,709	Overnight stay	Yes

		Traumatology, Arthroscopy						
Martin	2022	The Journal of Bone and Joint Surgery (Am)	Developmental	Prognostic	ACL ruptures	24,935	The probability of revision ACL after 1, 2, and/or 5 years	No
Merrill	2019	The Journal of Foot & Ankle Surgery	Developmental	Prognostic	Ankle fractures	50,005	Morbidity; mortality; length of stay > 3 days; readmission	No
ML consortium	2021	The Journal of Bone and Joint Surgery (Am)	Developmental	Prognostic	Tibia fractures	1,822	Infection	Yes
ML consortium	2021	Journal of Orthopaedic Trauma	Developmental	Prognostic	Tibia fractures	1,198	Unplanned subsequent surgery	Yes
Oosterhoff	2021	Geriatric Orthopaedic Surgery & Rehabilitation	Developmental	Prognostic	Hip fractures	28,207	Delirium	Yes
Oosterhoff	2022-5-29	Eur J Trauma Emerg Surg	Developmental	Prognostic	Hip fractures	2,478	Mortality	Yes
Oosterhoff	2022-5-10	Clin Orthop Relat Res	External validation	Prognostic	Hip fractures	6,270	Delirium	Yes
Ottenbacher	2004	Annals of Epidemiology	Developmental	Prognostic	Hip fractures	4,122	Follow-up living setting	No
Ricciardi	2022	Bioengineering	Developmental	Prognostic	Femur fractures	1,082	Length of stay	No
Shi	2013	Brazilian Journal of Medical and Biological Research	Developmental	Prognostic	Hip fractures	2,150	Mortality	No

Shimizu	2022	Journal of Clinical Medicine	Developmental	Prognostic	Hip fractures	7,033	Refracture	No
Shtar	2021	Archives of Physical Medicine and Rehabilitation	Developmental	Prognostic	Hip fractures	1,625	Rehabilitation outcomes	Yes
Wang	2021	JMIR Medical Informatics	Developmental & External validation	Prognostic	Hip fractures	259/376	Osteonecrosis	Yes
Xing	2022	Frontiers in Medicine	Developmental	Prognostic	Hip fractures	591	Mortality	No
Yang	2022	Frontiers in Public Health	Developmental	Prognostic	Thoracolumbar burst fractures	161	Perioperative blood loss	No
Ye	2022	The American Journal of Sports Medicine	Developmental	Prognostic	ACL ruptures	432	Postoperative graft failure, residual laxity, MCID of PROMs and return to sports	No
Zhang	2020	Injury	Developmental	Prognostic	Hip fractures	448	Mortality	No
Zhao	2021	Frontiers in Surgery	Developmental	Prognostic	Hip fractures	245	Delirium	No
Zheng	2022	International Journal of General Medicine	Developmental	Prognostic	Hip fractures	85	Mortality	Yes
Zhong	2021	International Journal of Medical Informatics	Developmental	Prognostic	Hip fractures	182	Length of stay	No

ACL, anterior cruciate ligament; JAAOS, Journal of the American Academy of Orthopaedic Surgeons; JAMDA, Journal of the American Medical Directors Association; JMIR, Journal of Medical Internet Research; MCID, minimal clinically important difference; PROM, patient-reported outcome measure; PTA, peritraumatic amputation.

Table iv. Overview of the TRIPOD items per study (n = 45).

First author, year	1	2	3a	3b	4a	4b	5a	5b	5c	6a	6b	7a	7b	8	9	10a	10b	10c	10d
Anderson, 2020	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	Yes	Yes		Yes
Bevevino, 2013	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Bolourani, 2021	No	No	Yes	No	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No		Yes
Bulstra, 2022	No	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Cao, 20121	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Cary, 2021	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	No	No		Yes
Chen, 2020	No	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	No	Yes	No	Yes	No		Yes
Chen, 2021	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes		Yes
Cui, 2018	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes		Yes
DeBaun, 2020	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	No	Yes		Yes
Dong, 2022	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No		Yes
Forssten, 2021	No	No	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No	Yes	Yes	No	Yes		Yes
Harris, 2022	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Hendrickx, 2020	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	Yes		Yes
Hertz, 2020	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	No	No	No		Yes
Huang, 2021*	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	No	Yes
Huang, 2022	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	Yes	No	Yes		Yes
Karnuta, 2019	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	No	No		Yes
Kitcharant, 2022	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes		Yes
Kuit, van de 2022	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Lei, 2022*	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes
Lin, 2010	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	No	Yes	No		Yes
Liu. 2022	No	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Lu, 2021	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes		Yes
Lu, 2022	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	Yes	No	Yes		Yes
Martin, 2022	No	No	No	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes	Yes	No		Yes
Merrill, 2019	No	No	Yes	No	Yes	Yes	No	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes		Yes
MLC 2020	Yes	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
MLC 2021	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Oosterhoff 2022-5-10	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes		Yes
Oosterhoff 2022-5-29*	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes
Oosterhoff, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes	Yes		Yes
Ottenbacher, 2004	No	No	No	No	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Ricciardi, 2022	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No		Yes
Shi, 2013	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes		Yes
Shimizu, 2022	No	No	Yes	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No	No		No

Shtar, 2021*	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	No	No	Yes
Wang, 2021*	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Xing, 2022	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes	No	Yes	No		Yes
Yang, 2022	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No	No	No		Yes
Ye, 2022	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes		Yes
Zhang, 2020	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes	Yes		Yes
Zhao, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No		Yes	No	Yes		Yes
Zheng, 2022	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	No	No		Yes
Zhong, 2021	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes	Yes		Yes

Author	10e	11	12	13a	13b	13c	14a	14b	15a	15b	16	17	18	19a	19b	20	21	22
Anderson, 2020		No		Yes	Yes		Yes	No	No	No	Yes		Yes		Yes	Yes	No	No
Bevevino, 2013		No		Yes	Yes		No	No	No	No	Yes		Yes		Yes	Yes	No	No
Bolourani, 2021		No		Yes	Yes		No	Yes	No	No	No		Yes		Yes	Yes	No	No
Bulstra, 2022		No		No	No		No	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No
Cao, 20121		No		No	Yes		No	Yes	No	No	No		Yes		Yes	Yes	Yes	No
Cary, 2021		No		No	Yes		No	No	No	No	Yes		Yes		Yes	Yes	No	No
Chen, 2020		No		No	No		No	Yes	No	No	Yes		Yes		Yes	Yes	No	No
Chen, 2021		No		Yes	No		No	Yes	Yes	No	Yes		Yes		Yes	Yes	Yes	No
Cui, 2018		No		Yes	No		No	No	No	No	No		Yes		Yes	Yes	No	No
DeBaun, 2020		No		Yes	No		No	Yes	No	No	No		Yes		Yes	Yes	No	No
Dong, 2022		No		Yes	No		No	Yes	No	No	No		Yes		Yes	Yes	Yes	No
Forssten, 2021		No		Yes	No		No	No	No	No	Yes		Yes		Yes	Yes	Yes	No
Harris, 2022		No		Yes	Yes		No	No	Yes	No	Yes		Yes		Yes	Yes	Yes	No
Hendrickx, 2020		No		Yes	Yes		No	No	Yes	Yes	No		Yes		Yes	Yes	Yes	No
Hertz, 2020		No		Yes	No		No	No	No	No	No		Yes		Yes	Yes	No	No
Huang, 2021*	No	No	No	Yes	No	No	No	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes	No
Huang, 2022		No		Yes	Yes		No	Yes	No	No	No		Yes		Yes	Yes	Yes	No
Karnuta, 2019		No		No	No		No	No	No	No	Yes		Yes		Yes	Yes	No	No
Kitcharant, 2022		No		Yes	Yes		Yes	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No
Kuit, van de 2022		No		No	No		No	No	No	No	Yes		Yes		Yes	Yes	Yes	No
Lei, 2022*	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Lin, 2010		No		Yes	No		Yes	No	No	No	Yes		Yes		Yes	Yes	No	No
Liu. 2022		No		Yes	No		Yes	No	Yes	Yes	No		Yes		No	No	Yes	No
Lu, 2021		No		Yes	No		No	No	Yes	Yes	No		Yes		Yes	Yes	Yes	No
Lu, 2022		No		Yes	Yes		Yes	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No
Martin, 2022		No		Yes	Yes		No	No	Yes	Yes	No		Yes		Yes	Yes	Yes	No
Merrill, 2019		No		No	No		Yes	No	No	No	No		Yes		Yes	Yes	No	No
MLC 2020		No		Yes	Yes		No	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No

Study	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MLC 2021		No		Yes	Yes		No	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No
Oosterhoff 2022-5-10		No		No	Yes		No	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No
Oosterhoff 2022-5-29*	No	No	Yes	No	Yes	Yes	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Oosterhoff, 2021		No		Yes	Yes		No	No	Yes	Yes	Yes		Yes		Yes	Yes	Yes	No
Ottenbacher, 2004		No		No	Yes		No	Yes	No	No	No		Yes		Yes	No	No	No
Ricciardi, 2022		No		Yes	No		No	No	No	Yes	No		Yes		Yes	No	Yes	No
Shi, 2013		No		Yes	Yes		Yes	No	No	No	Yes		Yes		Yes	Yes	No	No
Shimizu, 2022		No		No	No		No	No	No	No	No		Yes		Yes	Yes	Yes	No
Shtar, 2021*	Yes	No	No	No	Yes	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No
Wang, 2021*	Yes	No	No	Yes	No	No	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
Xing, 2022		No		Yes	No		No	No	No	No	No		Yes		Yes	Yes	Yes	No
Yang, 2022		No		Yes	No		No	No	No	No	No		Yes		Yes	Yes	Yes	No
Ye, 2022		No		Yes	No		No	No	No	No	No		Yes		Yes	Yes	No	No
Zhang, 2020		No		Yes	No		No	Yes	Yes	Yes	Yes		Yes		Yes	Yes	No	No
Zhao, 2021		No		Yes	No		Yes	Yes	No	No	Yes		Yes		Yes	Yes	Yes	No
Zheng, 2022		No		Yes	Yes		No	No	No	No	Yes		Yes		Yes	Yes	Yes	No
Zhong, 2021		No		Yes	No		No	Yes	Yes	Yes	Yes		Yes		Yes	Yes	No	No

*Studies that performed external validation. In these studies, TRIPOD items concerning validation (for example item 10c) could be scored.

Table v. Overview of the PROBAST domains per study (n = 45).

First author, year	Domain 1 Participants	Domain 2 Predictors	Domain 3 Outcome	Domain 4 Analysis	Overall
Anderson, 2020	Low	Low	Low	Low	Low
Bevevino, 2013	Low	Low	Unclear	High	High
Bolourani, 2021	Low	Unclear	Low	High	High
Bulstra, 2022	Low	Low	Low	Low	Low
Cao, 20121	Low	Low	Low	High	High
Cary, 2021	Low	Low	Low	Unclear	Unclear
Chen, 2020	Low	Low	Unclear	High	High
Chen, 2021	Low	Unclear	Unclear	Unclear	Unclear
Cui, 2018	Low	Low	Unclear	High	High
DeBaun, 2020	Unclear	Unclear	Low	High	High
Dong, 2022	Low	Low	Low	High	High
Forssten, 2021	Low	Low	Low	Low	Low
Harris, 2022	Low	High	Low	High	High
Hendrickx, 2020	Low	Low	Low	Low	Low
Hertz, 2020	Low	Low	Unclear	High	High
Huang, 2021	Low	Low	Unclear	High	High
Huang, 2022	High	Low	Low	High	High
Karnuta, 2019	Low	Low	Low	High	High
Kitcharant, 2022	Low	Low	Low	Low	Low
Kuit, van de 2022	Low	Low	Low	Low	Low
Lei, 2022	Low	Low	Low	High	High
Lin, 2010	Low	Low	Low	High	High
Liu. 2022	Low	Low	Low	Low	Low
Lu, 2021	Low	High	Low	Low	High
Lu, 2022	Low	High	Low	Low	High
Martin, 2022	Unclear	Unclear	Low	High	High
Merrill, 2019	Low	Low	Low	High	High
MLC 2020	Low	Low	Unclear	Low	Unclear
MLC 2021	Low	Low	Low	Low	Low
Oosterhoff 2022-5-10	Low	Low	Low	Low	Low
Oosterhoff 2022-5-29	Low	Low	Low	Low	Low
Oosterhoff, 2021	Low	Low	Low	Low	Low
Ottenbacher, 2004	Low	Unclear	Low	High	High
Ricciardi, 2022	Low	Low	Low	High	High
Shi, 2013	Low	Low	Low	High	High
Shimizu, 2022	Low	Low	Low	High	High
Shtar, 2021	Low	Low	High	High	High

Wang, 2021	Unclear	Low	Unclear	High	High
Xing, 2022	Low	Low	Low	High	High
Yang, 2022	Low	Low	Low	High	High
Ye, 2022	Low	Low	Low	High	High
Zhang, 2020	Low	Low	Low	High	High
Zhao, 2021	Low	Unclear	Low	High	High
Zheng, 2022	Low	Low	Low	High	High
Zhong, 2021	Low	Unclear	Low	High	High