Maarten van Smeden

List of Publications by Year
in descending order

105 papers	7,596 citations	136950 32 h-index	66911 78 g-index
112 all docs	112 docs citations	112 times ranked	12434 citing authors

#	Article	IF	Citations
1	Prediction models for diagnosis and prognosis of covid-19: systematic review and critical appraisal. BMJ, The, 2020, 369, m1328.	6.0	2,134
2	Calculating the sample size required for developing a clinical prediction model. BMJ, The, 2020, 368, m441.	6.0	804
3	Calibration: the Achilles heel of predictive analytics. BMC Medicine, 2019, 17, 230.	5.5	745
4	Protocol for development of a reporting guideline (TRIPOD-AI) and risk of bias tool (PROBAST-AI) for diagnostic and prognostic prediction model studies based on artificial intelligence. BMJ Open, 2021, 11, e048008.	1.9	313
5	Sample size for binary logistic prediction models: Beyond events per variable criteria. Statistical Methods in Medical Research, 2019, 28, 2455-2474.	1.5	296
6	No rationale for 1 variable per 10 events criterion for binary logistic regression analysis. BMC Medical Research Methodology, 2016, 16, 163.	3.1	281
7	Latent Class Models in Diagnostic Studies When There is No Reference Standard--A Systematic Review. American Journal of Epidemiology, 2014, 179, 423-431.	3.4	168
8	Development and validation of the ISARIC 4C Deterioration model for adults hospitalised with COVID-19: a prospective cohort study. Lancet Respiratory Medicine,the, 2021, 9, 349-359.	10.7	161
9	Guidelines and quality criteria for artificial intelligence-based prediction models in healthcare: a scoping review. Npj Digital Medicine, 2022, 5, 2.	10.9	147
10	Systematic evaluation and external validation of 22 prognostic models among hospitalised adults with COVID-19: an observational cohort study. European Respiratory Journal, 2020, 56, 2003498.	6.7	145
11	Time to reality check the promises of machine learning-powered precision medicine. The Lancet Digital Health, 2020, 2, e677-e680.	12.3	126
12	Minimum sample size for external validation of a clinical prediction model with a binary outcome. Statistics in Medicine, 2021, 40, 4230-4251.	1.6	122
13	Cardiac complications in patients hospitalised with COVID-19. European Heart Journal: Acute Cardiovascular Care, 2020, 9, 817-823.	1.0	108
14	Three myths about risk thresholds for prediction models. BMC Medicine, 2019, 17, 192.	5.5	101
15	Reflection on modern methods: five myths about measurement error in epidemiological research. International Journal of Epidemiology, 2020, 49, 338-347.	1.9	97
16	Value of composite reference standards in diagnostic research. BMJ, The, 2013, 347, f5605-f5605.	6.0	78
17	The harm of class imbalance corrections for risk prediction models: illustration and simulation using logistic regression. Journal of the American Medical Informatics Association: JAMIA, 2022, 29, 1525-1534.	4.4	74
18	Sample size considerations and predictive performance of multinomial logistic prediction models. Statistics in Medicine, 2019, 38, 1601-1619.	1.6	70

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19	Measurement error is often neglected in medical literature: a systematic review. Journal of Clinical Epidemiology, 2018, 98, 89-97.	5.0	69
20	Clinical prediction models: diagnosis versus prognosis. Journal of Clinical Epidemiology, 2021, 132, 142-145.	5.0	60
21	Impact of predictor measurement heterogeneity across settings on the performance of prediction models: A measurement error perspective. Statistics in Medicine, 2019, 38, 3444-3459.	1.6	55
22	Regression shrinkage methods for clinical prediction models do not guarantee improved performance: Simulation study. Statistical Methods in Medical Research, 2020, 29, 3166-3178.	1.5	55
23	Methodology over metrics: current scientific standards are a disservice to patients and society. Journal of Clinical Epidemiology, 2021, 138, 219-226.	5.0	54
24	Diagnostic Test Accuracy in Childhood Pulmonary Tuberculosis: A Bayesian Latent Class Analysis. American Journal of Epidemiology, 2016, 184, 690-700.	3.4	52
25	The quality of studies evaluating antimicrobial stewardship interventions: a systematic review. Clinical Microbiology and Infection, 2019, 25, 555-561.	6.0	51
26	Critical appraisal of artificial intelligence-based prediction models for cardiovascular disease. European Heart Journal, 2022, 43, 2921-2930.	2.2	50
27	Optimizing design of research to evaluate antibiotic stewardship interventions: consensus recommendations of a multinational working group. Clinical Microbiology and Infection, 2020, 26, 41-50.	6.0	49
28	Bias due to composite reference standards in diagnostic accuracy studies. Statistics in Medicine, 2016, 35, 1454-1470.	1.6	42
29	Prediction Models for Physical, Cognitive, and Mental Health Impairments After Critical Illness: A Systematic Review and Critical Appraisal. Critical Care Medicine, 2020, 48, 1871-1880.	0.9	42
30	Prognostic factors for adverse outcomes in patients with COVID-19: a field-wide systematic review and meta-analysis. European Respiratory Journal, 2022, 59, 2002964.	6.7	42
31	Random measurement error: Why worry? An example of cardiovascular risk factors. PLoS ONE, 2018, 13, e0192298.	2.5	41
32	Age is the main determinant of COVID-19 related in-hospital mortality with minimal impact of pre-existing comorbidities, a retrospective cohort study. BMC Geriatrics, 2022, 22, 184.	2.7	35
33	Series: Pragmatic trials and real world evidence: Paper 6. Outcome measures in the real world. Journal of Clinical Epidemiology, 2017, 90, 99-107.	5.0	34
34	Minimum sample size calculations for external validation of a clinical prediction model with a time‐to‐event outcome. Statistics in Medicine, 2022, 41, 1280-1295.	1.6	34
35	Evaluating Diagnostic Accuracy in the Face of Multiple Reference Standards. Annals of Internal Medicine, 2013, 159, 195.	3.9	32
36	Title, abstract, and keyword searching resulted in poor recovery of articles in systematic reviews of epidemiologic practice. Journal of Clinical Epidemiology, 2020, 121, 55-61.	5.0	32

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37	Changing predictor measurement procedures affected the performance of prediction models in clinical examples. Journal of Clinical Epidemiology, 2020, 119, 7-18.	5.0	31
38	Does a bounding exercise program prevent hamstring injuries in adult male soccer players? â€" A clusterâ€‐RCT. Scandinavian Journal of Medicine and Science in Sports, 2019, 29, 515-523.	2.9	28
39	Safety and Efficiency of Diagnostic Strategies for Ruling Out Pulmonary Embolism in Clinically Relevant Patient Subgroups. Annals of Internal Medicine, 2022, 175, 244-255.	3.9	27
40	Concerns about composite reference standards in diagnostic research. BMJ: British Medical Journal, 2018, 360, j5779.	2.3	26
41	How variation in predictor measurement affects the discriminative ability and transportability of a prediction model. Journal of Clinical Epidemiology, 2019, 105, 136-141.	5.0	26
42	Why methods matter in a meta-analysis: a reappraisal showed inconclusive injury preventive effect of Nordic hamstring exercise. Journal of Clinical Epidemiology, 2021, 140, 111-124.	5.0	26
43	The year in cardiovascular medicine 2021: digital health and innovation. European Heart Journal, 2022, 43, 271-279.	2.2	26
44	Clinical prediction models for mortality in patients with covid-19: external validation and individual participant data meta-analysis. BMJ, The, 0, , e069881.	6.0	24
45	Validation of prediction models in the presence of competing risks: a guide through modern methods. BMJ, The, 0, , e069249.	6.0	23
46	The Effects of Lower-Extremity Plyometric Training on Soccer-Specific Outcomes in Adult Male Soccer Players: A Systematic Review and Meta-Analysis. International Journal of Sports Physiology and Performance, 2020, 15, 3-17.	2.3	22
47	A Workflow for Missing Values Imputation of Untargeted Metabolomics Data. Metabolites, 2020, 10, 486.	2.9	20
48	A cautionary note on the use of the missing indicator method for handling missing data in prediction research. Journal of Clinical Epidemiology, 2020, 125, 188-190.	5.0	20
49	Ruling out pulmonary embolism across different healthcare settings: A systematic review and individual patient data meta-analysis. PLoS Medicine, 2022, 19, e1003905.	8.4	19
50	Risk, Clinical Course, and Outcome of Ischemic Stroke in Patients Hospitalized With COVID-19: A Multicenter Cohort Study. Stroke, 2021, 52, 3978-3986.	2.0	18
51	Validation study of the SCREENIVF: an instrument to screen women or men on risk for emotional maladjustment before the start of a fertility treatment. Fertility and Sterility, 2017, 107, 1370-1379.e5.	1.0	17
52	Approaches to addressing missing values, measurement error, and confounding in epidemiologic studies. Journal of Clinical Epidemiology, 2021, 131, 89-100.	5.0	17
53	Comment on Williamson et al. (OpenSAFELY): The Table 2 Fallacy in a Study of COVID-19 Mortality Risk Factors. Epidemiology, 2021, 32, e1-e2.	2.7	17
54	COVID-19 prediction models should adhere to methodological and reporting standards. European Respiratory Journal, 2020, 56, 2002643.	6.7	16

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55	Lessons learnt when accounting for competing events in the external validation of time-to-event prognostic models. International Journal of Epidemiology, 2022, 51, 615-625.	1.9	15
56	Developing, validating, updating and judging the impact of prognostic models for respiratory diseases. European Respiratory Journal, 2022, 60, 2200250.	6.7	14
57	Measurement error in continuous endpoints in randomised trials: Problems and solutions. Statistics in Medicine, 2019, 38, 5182-5196.	1.6	13
58	Novel diabetes subgroups. Lancet Diabetes and Endocrinology,the, 2018, 6, 439-440.	11.4	12
59	Projecting the impact of triple CFTR modulator therapy on intravenous antibiotic requirements in cystic fibrosis using patient registry data combined with treatment effects from randomised trials. Thorax, 2022, 77, 873-881.	5.6	11
60	Performance of binary prediction models in high-correlation low-dimensional settings: a comparison of methods. Diagnostic and Prognostic Research, 2022, 6, 1.	1.8	11
61	Artificial Intelligence and Statistics: Just the Old Wine in New Wineskins?. Frontiers in Digital Health, 2022, 4, 833912.	2.8	11
62	Event rate net reclassification index and the integrated discrimination improvement for studying incremental value of risk markers. Statistics in Medicine, 2017, 36, 4495-4497.	1.6	10
63	Towards an appropriate framework to facilitate responsible inclusion of pregnant women in drug development programs. Trials, 2018, 19, 123.	1.6	9
64	Forcing dichotomous disease classification from reference standards leads to bias in diagnostic accuracy estimates: A simulation study. Journal of Clinical Epidemiology, 2019, 111, 1-10.	5.0	9
65	Risk prediction models for discrete ordinal outcomes: Calibration and the impact of the proportional odds assumption. Statistics in Medicine, 2022, 41, 1334-1360.	1.6	9
66	Response Adjusted for Days of Antibiotic Risk (RADAR): evaluation of a novel method to compare strategies to optimize antibiotic use. Clinical Microbiology and Infection, 2017, 23, 980-985.	6.0	8
67	Adaptive sample size determination for the development of clinical prediction models. Diagnostic and Prognostic Research, 2021, 5, 6.	1.8	8
68	New‐user and prevalent‐user designs and the definition of study time origin in pharmacoepidemiology: A review of reporting practices. Pharmacoepidemiology and Drug Safety, 2021, 30, 960-974.	1.9	8
69	Mecor: An R package for measurement error correction in linear regression models with a continuous outcome. Computer Methods and Programs in Biomedicine, 2021, 208, 106238.	4.7	8
70	Sex- and age specific association of new-onset atrial fibrillation with in-hospital mortality in hospitalised COVID-19 patients. IJC Heart and Vasculature, 2022, 39, 100970.	1.1	8
71	Efficient Sampling in Unmatched Case–Control Studies When the Total Number of Cases and Controls Is Fixed. Epidemiology, 2017, 28, 834-837.	2.7	7
72	Machine Learning Compared With Pathologist Assessment. JAMA - Journal of the American Medical Association, 2018, 319, 1725.	7.4	7

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73	Predicting 1‑Year Mortality in Older Hospitalized Patients: External Validation of the HOMR Model. Journal of the American Geriatrics Society, 2019, 67, 1478-1483.	2.6	7
74	Evaluation of the Value of Waist Circumference and Metabolomics in the Estimation of Visceral Adipose Tissue. American Journal of Epidemiology, 2022, , .	3.4	7
75	Propensity Score Estimation Using Classification and Regression Trees in the Presence of Missing Covariate Data. Epidemiologic Methods, 2018, 7, .	0.9	6
76	Challenges in measuring interprofessional–interorganisational collaboration with a questionnaire. BJGP Open, 2018, 2, bjgpopen18X101385.	1.8	6
77	Prediction models for living organ transplantation are poorly developed, reported, and validated: a systematic review. Journal of Clinical Epidemiology, 2022, 145, 126-135.	5.0	6
78	Protect pregnant women by including them in clinical research. BMJ: British Medical Journal, 2018, 362, k4013.	2.3	5
79	Measures of (injury and illness) occurrence: a primer on epidemiological concepts and terminology for authors. Science and Medicine in Football, 2022, 6, 137-140.	2.0	4
80	Problems in detecting misfit of latent class models in diagnostic research without a gold standard were shown. Journal of Clinical Epidemiology, 2016, 74, 158-166.	5.0	3
81	Investigation of the "m" in the cmRCT (cohort multiple randomized controlled trial) design revealed dependence between trial results. Journal of Clinical Epidemiology, 2018, 101, 119-123.	5.0	3
82	Sampling Strategies for Internal Validation Samples for Exposure Measurement–Error Correction: A Study of Visceral Adipose Tissue Measures Replaced by Waist Circumference Measures. American Journal of Epidemiology, 2021, 190, 1935-1947.	3.4	3
83	Management of superficial venous thrombosis based on individual risk profiles: protocol for the development and validation of three prognostic prediction models in large primary care cohorts. Diagnostic and Prognostic Research, 2021, 5, 15.	1.8	3
84	Prediction models: stepwise development and simultaneous validation is a step back. Journal of Clinical Epidemiology, 2021, , .	5.0	3
85	Cardiovascular vulnerability predicts hospitalisation in primary care clinically suspected and confirmed COVID-19 patients: A model development and validation study. PLoS ONE, 2022, 17, e0266750.	2.5	3
86	A generic nomogram for multinomial prediction models: theory and guidance for construction. Diagnostic and Prognostic Research, 2017, 1, 8.	1.8	2
87	Adjustment for unmeasured confounding through informative priors for the confounder-outcome relation. BMC Medical Research Methodology, 2018, 18, 174.	3.1	2
88	Quantitative Bias Analysis for a Misclassified Confounder. Epidemiology, 2020, 31, 796-805.	2.7	2
89	Causal analyses of existing databases: the importance of understanding what can be achieved with your data before analysis (commentary on Hernán). Journal of Clinical Epidemiology, 2022, 142, 261-263.	5.0	2
90	Testing for Two-Way Interactions in the Multigroup Common Factor Model. Structural Equation Modeling, 2013, 20, 98-107.	3.8	1

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91	Response to the commentary on â€œA nomogram was developed to enhance the use of multinomial logistic regression modelling in diagnostic researchâ€. Journal of Clinical Epidemiology, 2016, 78, 7-9.	5.0	1
92	The prognostic value of the hamstring outcome score to predict the risk of hamstring injuries. Journal of Science and Medicine in Sport, 2021, 24, 641-646.	1.3	1
93	Identifying adults with acute rhinosinusitis in primary care that benefit most from antibiotics: protocol of an individual patient data meta-analysis using multivariable risk prediction modelling. BMJ Open, 2021, 11, e047186.	1.9	1
94	Patient factors associated with referral to inpatient rehabilitation following knee or hip arthroplasty in a public sector cohort: A prognostic factor study. Journal of Evaluation in Clinical Practice, 2021, 27, 809-816.	1.8	1
95	A comparison of full model specification and backward elimination of potential confounders when estimating marginal and conditional causal effects on binary outcomes from observational data. Biometrical Journal, 2024, 66, .	1.0	1
96	The Preventive Effect Of A Bounding Exercise Programme On Hamstring Injuries In Amateur Male Soccer. Medicine and Science in Sports and Exercise, 2018, 50, 622-623.	0.4	0
97	Comparability of treatment arms does not preventÂcorrelated trial results. Journal of Clinical Epidemiology, 2019, 106, 144-145.	5.0	0
98	Flaws in the Development and Validation of a Coronavirus Disease 2019 Prediction Model. Clinical Infectious Diseases, 2021, 73, 557-558.	5.8	0
99	A weighting method for simultaneous adjustment for confounding and joint exposure-outcome misclassifications. Statistical Methods in Medical Research, 2021, 30, 473-487.	1.5	0
100	Why clinical context and relevant protocols matter: author's reply. Journal of Clinical Epidemiology, 2021, , .	5.0	0
101	QCOVID in Scotland: time to recalibrate our expectations?. Thorax, 2022, 77, 429-430.	5.6	0
102	159â€¦HaOS or CHaOS? The prognostic value of the hamstring outcome score (HaOS) to predict the risk of hamstring injury. , 2021, , .		0
103	Are Off-Field Activities an Underestimated Risk for Hamstring Injuries in Dutch Male Amateur Soccer Players? An Exploratory Analysis of a Prospective Cohort Study. Journal of Science in Sport and Exercise, 2022, 4, 28-36.	1.0	0
104	External validation of the MSKCC nomogram to estimate five-year overall survival after surgery for stage Iâ€"III colon cancer in a Dutch population. Acta OncolÃ³gica, 2022, 61, 560-565.	1.8	0
105	Optimising telephone triage of patients calling for acute shortness of breath during out-of-hours primary care: protocol of a multiple methods study (Opticall). BMJ Open, 2022, 12, e059549.	1.9	0