Table 1 Checklist of items to include when reporting a study developing or validating a multivariable prediction model for diagnosis or prognosis. **Section of Title and abstract & Introduction.**

Section/topic	Item	Checklist item	Line
Title and abstract			
Title	1	Identify the study as developing and/or validating a multivariable prediction model, the target population, and the outcome to be predicted.	Line 1-2
Abstract	2	Provide a summary of objectives, study design, setting, participants, sample size, predictors, outcome, statistical analysis, results, and conclusions.	Line 45-60
Introduction			
Background and objectives	3a	Explain the medical context (including whether diagnostic or prognostic) and rationale for developing or validating the multivariable prediction model, including references to existing models.	Line 64-86
	3b	Specify the objectives, including whether the study describes the development or validation of the model, or both.	Line 87-91

Table 2 Checklist of items to include when reporting a study developing or validating a multivariable prediction model for diagnosis or prognosis. **Section of Methods.**

Section/topic	Item	Checklist item	Line
Methods			
Source of data	4a	Describe the study design or source of data (e.g., randomized trial, cohort, or registry data), separately for the development and validation data sets, if applicable.	Line 95-99
	4b	Specify the key study dates, including start of accrual; end of accrual; and, if applicable, end of follow-up.	Line 108
Participants	5a	Specify key elements of the study setting (e.g., primary care, secondary care, general population) including number and location of centers.	Line 95-111
	5b	Describe eligibility criteria for participants.	Line 100-109
	5c	Give details of treatments received, if relevant.	Line 107 Line 118-121
Outcome	6a	Clearly define the outcome that is predicted by the prediction model, including how and when assessed.	Line 121-123
	6b	Report any actions to blind assessment of the outcome to be predicted.	Line 123-125
Predictors	7a	Clearly define all predictors used in developing the multivariable prediction model, including how and when they were measured.	Line 114-118
	7b	Report any actions to blind assessment of predictors for the outcome and other predictors.	Line 123-125
Sample size	8	Explain how the study size was arrived at.	Line 100-109
Missing data	9	Describe how missing data were handled (e.g., complete-case analysis, single imputation, multiple imputation) with details of any imputation method.	Line 110
Statistical analysis methods	10a	Describe how predictors were handled in the analyses.	Line 150-156
	10b	Specify type of model, all model-building procedures (including any predictor selection), and method for internal validation.	Line 128-140
	10c	For validation, describe how the predictions were calculated.	Line 140-141
	10d	Specify all measures used to assess model performance and, if relevant, to compare multiple models.	Line 136-141
	10e	Describe any model updating (e.g., recalibration) arising from the validation, if done.	Line 145-147
Risk groups	11	Provide details on how risk groups were created, if done.	Line 141-145
Development vs. validation	12	For validation, identify any differences from the development data in setting, eligibility criteria, outcome, and predictors.	Line 140-141

Table 3 Checklist of items to include when reporting a study developing or validating a multivariable prediction model for diagnosis or prognosis. **Section of Results.**

Section/topic	Item	Checklist item	Line
Results			
Participants	13a	Describe the flow of participants through the study, including the number of participants with and without the outcome and, if applicable, a summary of the follow-up time. A diagram may be helpful.	Line 178-180
	13b	Describe the characteristics of the participants (basic demograph\ics, clinical features, available predictors), including the number of participants with missing data for predictors and outcome.	Line 160-175 Table 1
	13c	For validation, show a comparison with the development data of the distribution of important variables (demographics, predictors and outcome).	Line 174-175 Table 1.
Model development	14a	Specify the number of participants and outcome events in each analysis.	Table 1 Fig. 4, Fig. 5
	14b	If done, report the unadjusted association between each candidate predictor and outcome.	Line 123-125
Model specification	15a	Present the full prediction model to allow predictions for individuals (i.e., all regression coefficients, and model intercept or baseline survival at a given time point).	Line 178-185
	15b	Explain how to use the prediction model.	Line 185-187
Model performance	16	Report performance measures (with CIs) for the prediction model.	Line 189-193 Fig. 2, Fig. 3
Model updating	17	If done, report the results from any model updating (i.e., model specification, model performance).	Line 145-147

Table 4 Checklist of items to include when reporting a study developing or validating a multivariable prediction model for diagnosis or prognosis. **Section of Discussion & Other Information.**

Section/topic	Item	Checklist item	Line
Discussion			
Limitations	18	Discuss any limitations of the study (such as nonrepresentative sample, few events per predictor, missing data).	Line 276-282
Interpretation	19	For validation, discuss the results with reference to performance in the development data, and any other validation data.	Line 227-245
	19	Give an overall interpretation of the results, considering objectives, limitations, results from similar studies, and other relevant evidence.	Line 211-245
Implications	20	Discuss the potential clinical use of the model and implications for future research.	Line 246-275
Other Information			
Supplementary information	21	Provide information about the availability of supplementary resources, such as study protocol, Web calculator, and data sets.	L292-293
Funding	22	Give the source of funding and the role of the funders for the present study.	L294-295

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*As the checklist was provided upon initial submission, the line number reported may be changed due to copyediting and may not be referable in the published version.