Appendix B

The questionnaire for prognostic factors and prediction models in acute aortic dissection

1. Study basic information

1.1 First author	
1.2 Year of Publication	
1.3 Region	
1.4 Period of Data Collection	
1.5 Dissection type	1) A 2) B 3) A/B
1.6 Outcome (such as in-hospital mortality、one-year mortality)	
1.7 age(SD)(years)	
1.8 male(%)	
1.9 Study purpose	1) Prediction performance of prognostic factors 2) Develop a model without validation 3) External validation

2. performance information of prognostic factors or prediction models

2.1 Prognostic factors	
2.1.1 predictors 1	
The name of the predictors	
Cut-off value(or score)	
AUC(95% CI)	
P value of Hosmer-Lemeshow test	
sensitivity	
specificity	
2.1.2 predictors 2	
The name of the predictors	
Cut-off value(or score)	
AUC(95% CI)	
P value of Hosmer-Lemeshow test	
sensitivity	
specificity	
2.1.3 predictors 3	
The name of the predictors	
Cut-off value(or score)	
AUC(95% CI)	
P value of Hosmer-Lemeshow test	
sensitivity	

specificity	
……	
2.2 Prediction models	
2.2.1 Number of predictors in model, please specify the name of the predictors.	
2.2.2 the type of model Check all that apply	1) derivation model 2) internal validation 3) external validation
2.2.2.1 Sampling method used for internal validation Check all that apply	1) Bootstrapping 2) Cross validation 3) Split-sample 4) Jackknifing procedure 5) Leave-one-out method 6) Monte Carlo simulations Other, specify
2.2.2.2 External validation Check all that apply	1) Temporal validation 2) Geographical validation 3) Other, specify
2.2.3 What was the method used for assess the overall performance Check all that apply	1) R^2 2) Nagelkerke's R^2 3) Brier Score 4) Other, specify
2.2.3.1 The reported value of the overall performance	
2.2.4 What was the method used for assessing discrimination Check all that apply	1) C statistic (ROC curve) 2) Harrell's overall c statistic 3) Discrimination Slope(Box plots) 4) Lorenz curve 5) Log-rank 6) Other, specify
2.2.4.1 The reported value of discrimination	
2.2.5 What was the method used for assessing calibration Check all that apply	1) P value of Hosmer-Lemeshow test 2) Calibration plot 3) Calibration slope 4) Other, specify
2.2.5.1 The reported value or judge of calibration	
2.2.6 Reclassification NRI, % (95% CI/P Value)(NRI, Net reclassification Index)	
2.2.7 Reclassification IDI, % (95% CI/P Value)(IDI, Integrative Discriminative Index)	

3. The questionnaire about the methodological characteristics consists of five domains

Domain 1: Study design

1.1 No. of Centers	
1.2 No. of patients	
1.3 No. of Events	
1.4 Source of data (e.g., cohort, case-control, randomized trial participants, EMR or registry data)	
1.5 Study design (Retrospective cohort、Prospective cohort、Nested case-control、Case-control study)	

Domain 2: Participants

2.1 Were appropriate data sources used, e.g., cohort, RCT, or nested case–control study data	1) Yes, specify 2) No, specify 3) Not reported
2.2 Whether did the study clearly describe inclusion criteria	1) yes 2) no 3) Not reported
2.3 Whether did the study clearly describe exclusion criteria	1) yes 2) no 3) Not reported

Domain 3: Predictors

3.1 Consistent definition/diagnostic criteria of predictors used in all participants	1) Yes 2) No 3) Not reported
3.2 Consistent measurement of predictors used in all participants	1) Yes 2) No 3) Not reported

Domain 4: Outcome

4.1 Consistent definition/diagnostic criteria of outcomes used in all participants	1) Yes 2) No 3) Not reported
4.2 Consistent measurement of outcomes used in all participants	1) Yes 2) No 3) Not reported

Domain 5: Analysis

5.1 Were all enrolled participants included in the analysis?	1) yes 2) no

	3) Not reported
5.2 Number of outcomes/events in relation to the number of predictors in multivariable analysis (Events Per Variable: EPVs)	1) ≥20 2) 10-20 3) <10
5.3 Statistical method for selecting predictors during addressing prognostic factors or prediction models Check all that apply	1) Backward selection 2) Forward selection 3) Added a specific predictor for existing model 4) All predictors included regardless of statistical significance 5) Univariate analysis of predictors by p value 6) Other, specify: 7) Not reported
5.4 Handling the predictors for addressing prognostic factors or prediction models Check all that apply	1) Continuous predictor was transformed into categories 2) Non-linear transformation 3) Not reported 4) Other, specify
5.5 Were missing outcome data reported, and the methods handling missing outcome	1) Yes, specify 2) No 3) Not reported
5.6 Was any missing predictor data reported, and the methods handling missing predictor	1) Yes, specify 2) No 3) Not reported
5.7 Model structure used in the study	1) Linear regression 2) Logistic regression 3) Multinomial logistic 4) Cox regression 5) Decision tree 6) Bayesian (and logistic) 7) Machine learning 8) Artificial neural network 9) Partial least squares-discriminant analysis 10) Other, specify
5.8 Were relevant model performance measures evaluated for addressing prognostic factors or prediction models Check all that apply	1) Both calibration and discrimination are evaluated 2) Only calibration is evaluated 3) Only discrimination is evaluated 4) Other, specify