Supplementary Material

Automated Algorithms for Seizure Forecast: A Systematic Review and Meta-Analysis

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This Supplementary Material provides the forest plots for Brier Skill Score (BSS) and Area Under the ROC Curve (AUC), stratified according to type of input data (Surrogate Measures of the Preictal State vs Cyclic Distribution of Events), source of data (i.e. dataset used), input data (EEG vs heart rate vs seizure times vs other inputs), forecast horizon (<1h, 1h, 24h), train/test approach (retrospective vs prospective/pseudo-prospective), and study (i.e. algorithms proposed by the same study). The dashed line illustrates the estimated overall score, and the diamonds represent either the overall or subgroup summary. Additional information provided includes the horizon of the forecast, the sample size, total number of seizures, and the train-test approach (which was either (pseudo-)prospective, P, or retrospective, R). (*) Identifies the work of Leguia et al. that only reported the median number of seizures (143, interquartile range of 13-1233).

Subgroup analysis: Type of input data

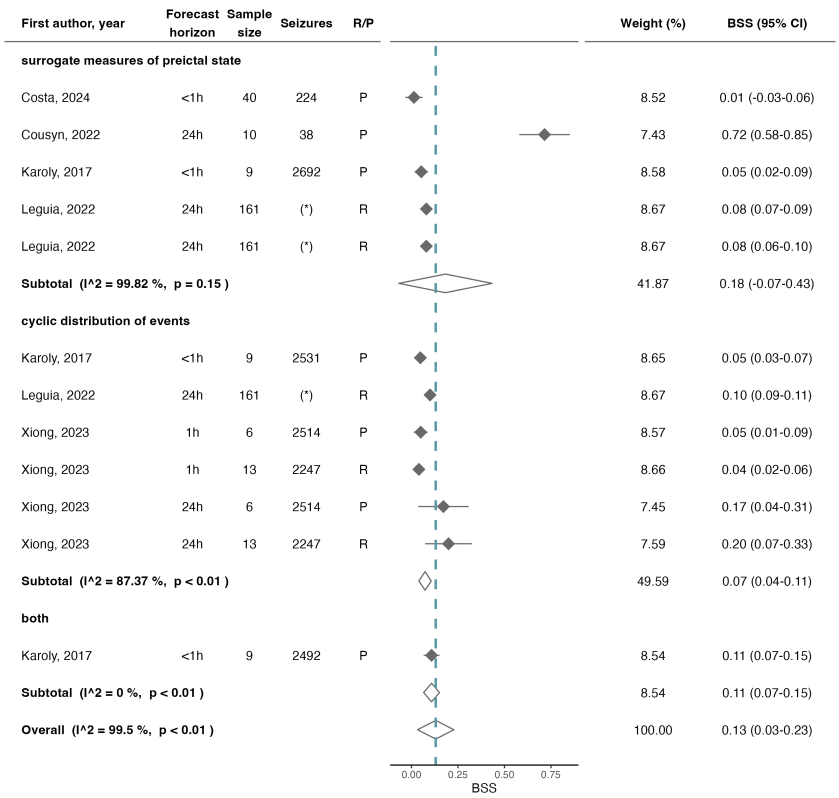

Fig. 1: Forest plot of BSS of seizure forecast algorithms, overall and stratified by type of input data.

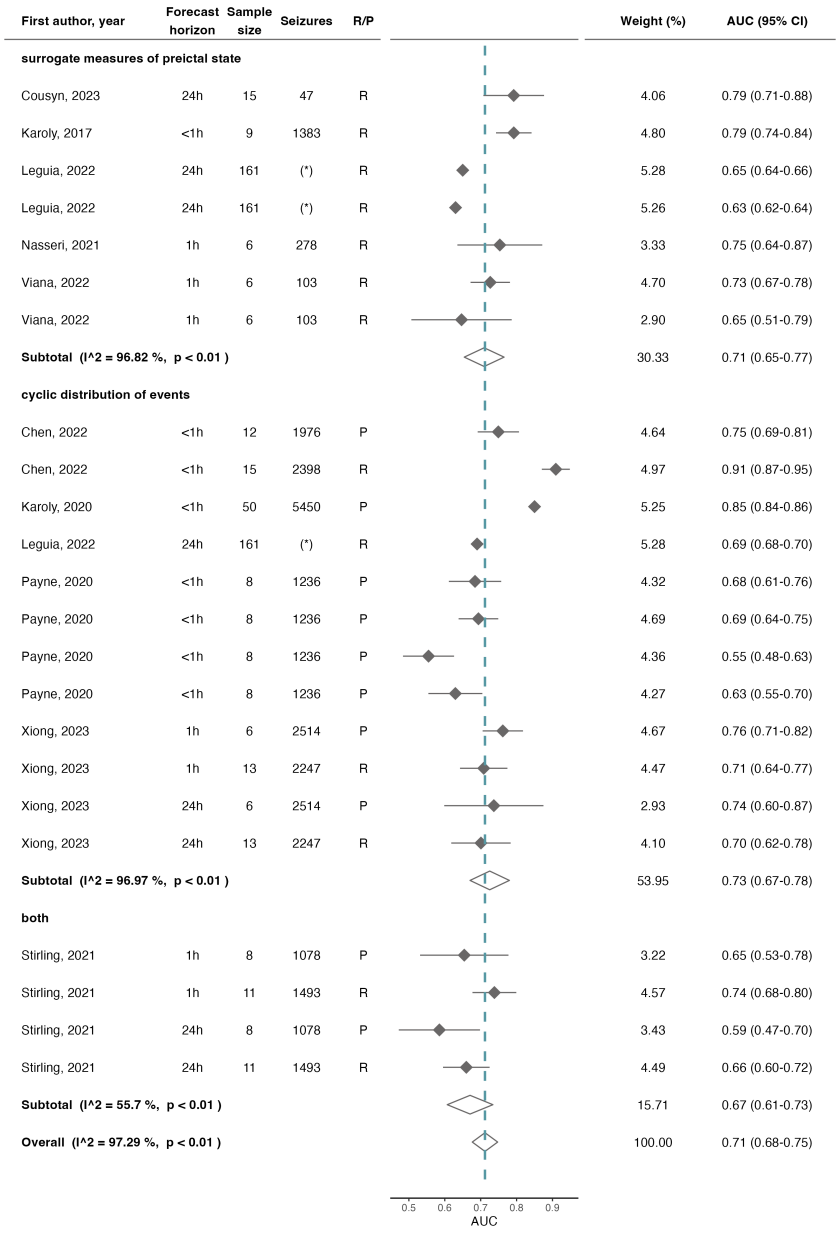

Fig. 2: Forest plot of AUC of seizure forecast algorithms, overall and stratified by type of input data.

Subgroup analysis: Data source

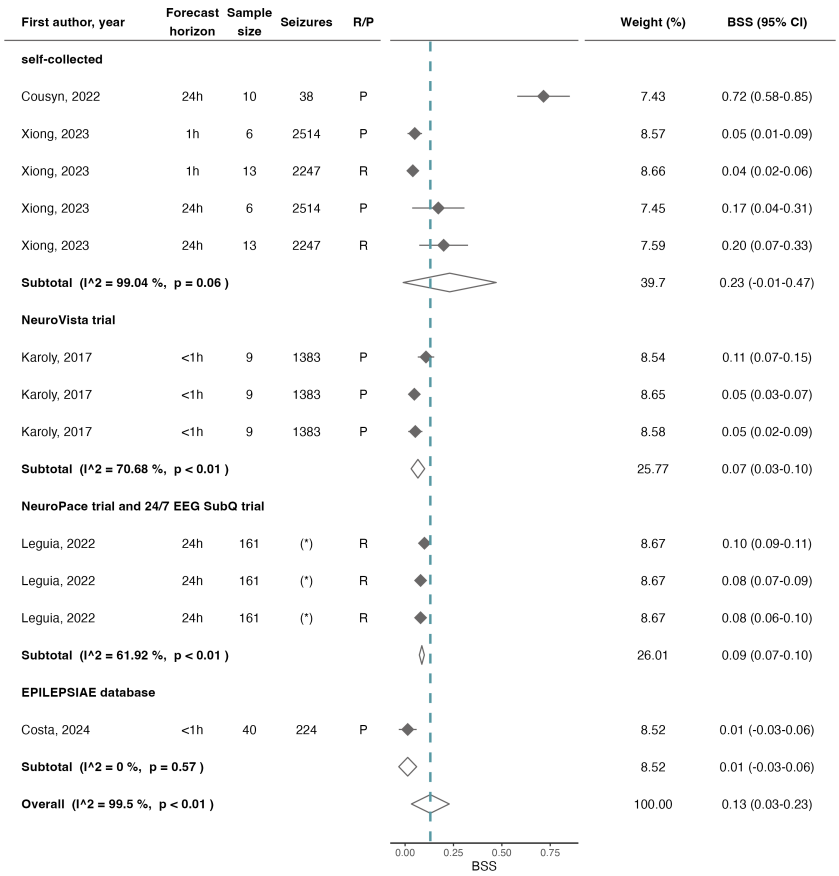

Fig. 3: Forest plot of BSS of seizure forecast algorithms, overall and stratified by data source.

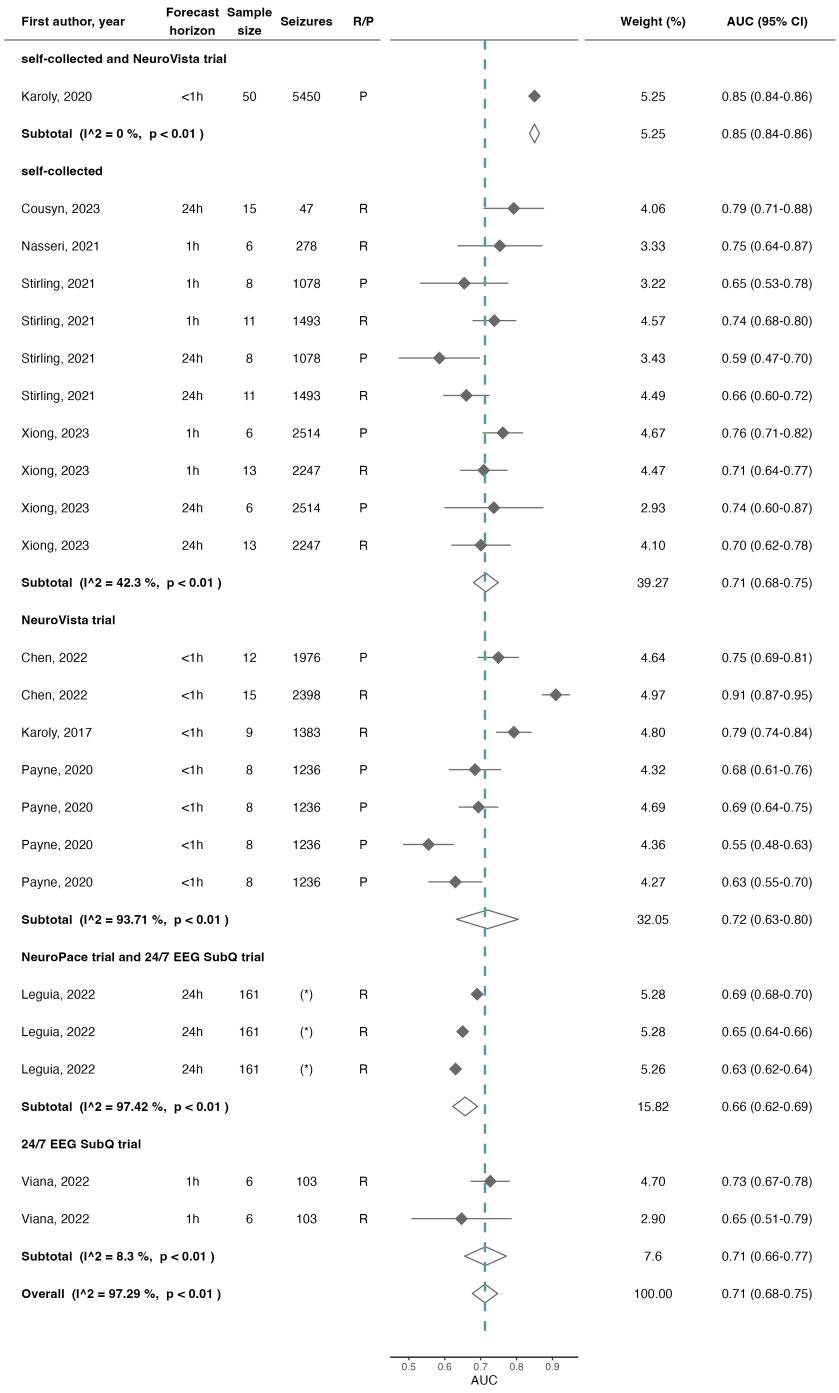

Fig. 4: Forest plot of AUC of seizure forecast algorithms, overall and stratified by data source.

Subgroup analysis: Input data

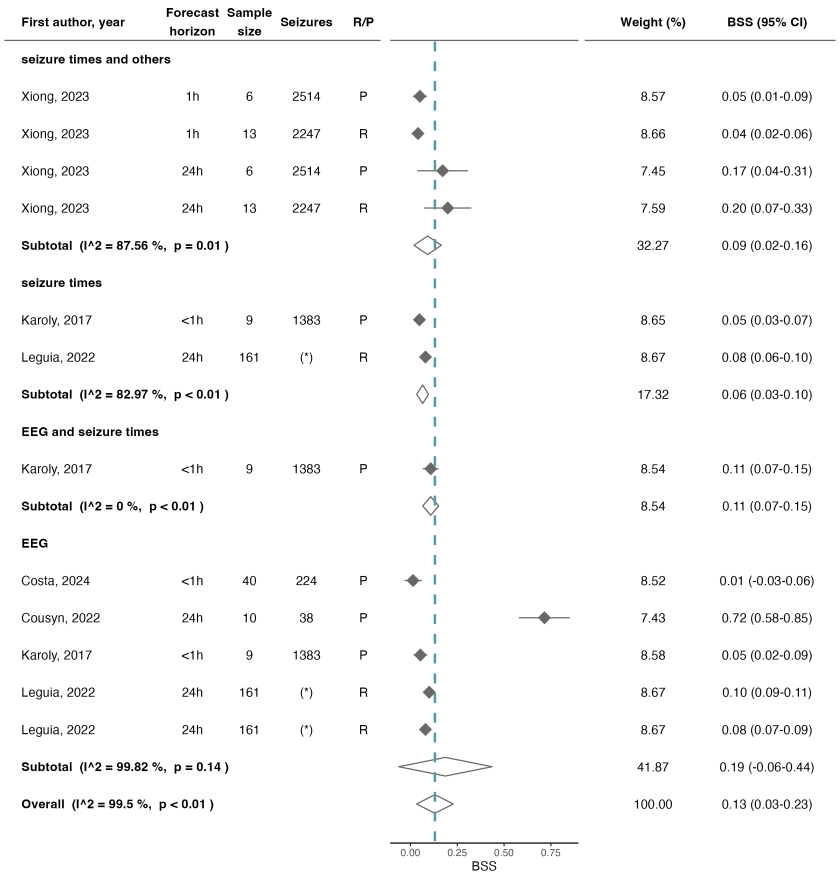

Fig. 5: Forest plot of BSS of seizure forecast algorithms, overall and stratified by input data.

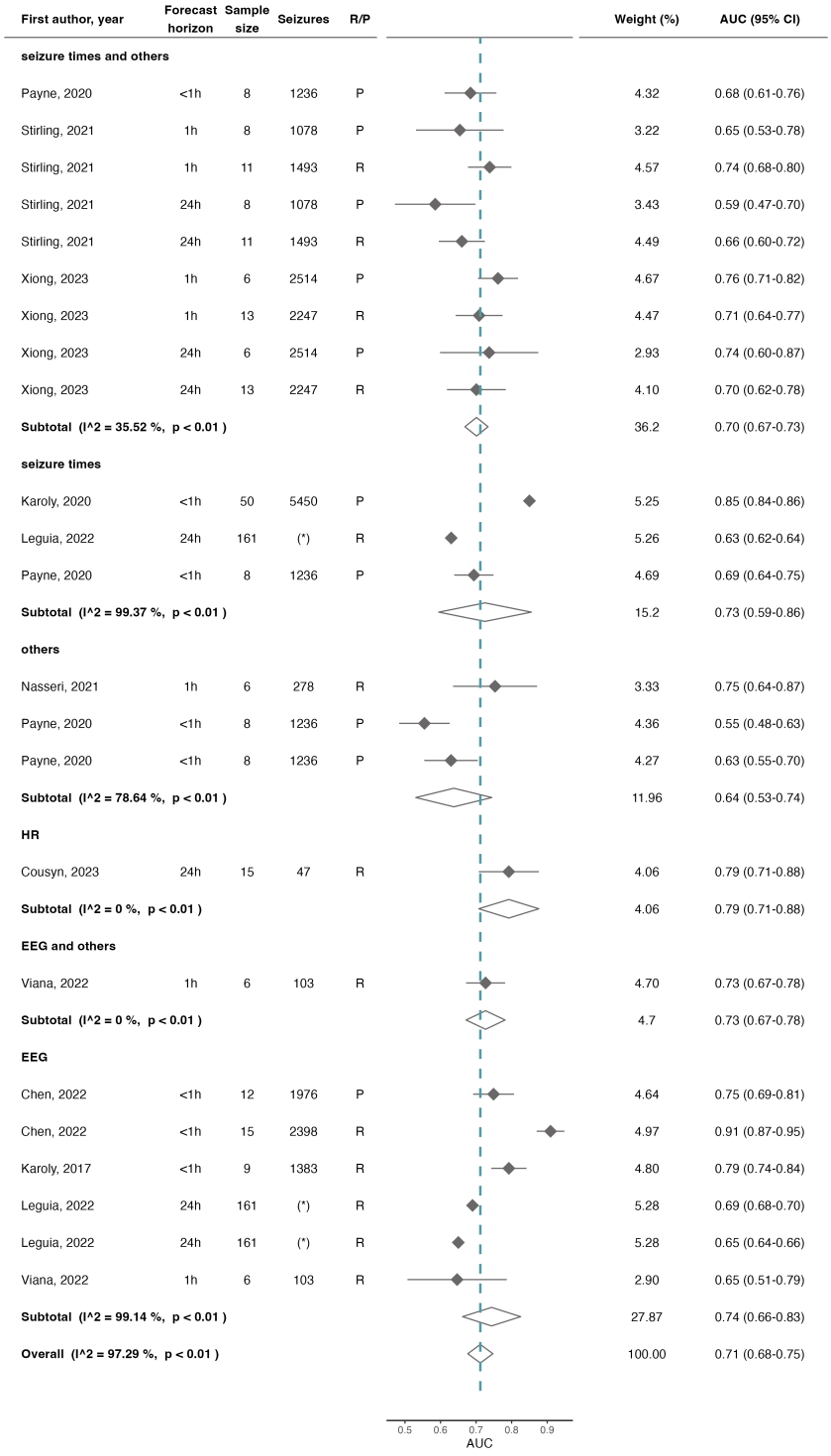

Fig. 6: Forest plot of AUC of seizure forecast algorithms, overall and stratified by input data.

Subgroup analysis: Forecast horizon

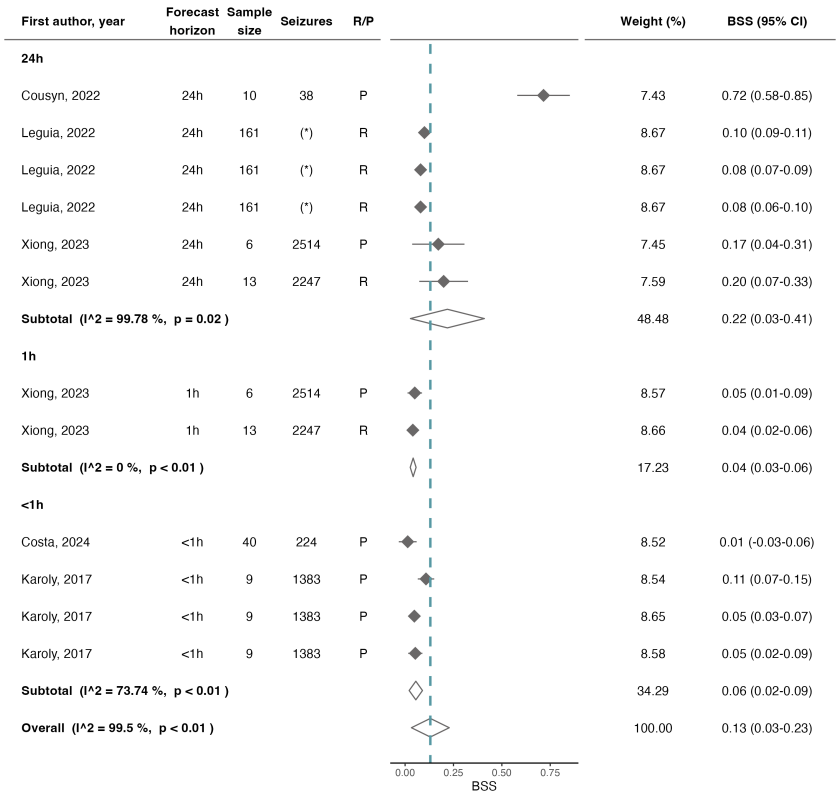

Fig. 7: Forest plot of BSS of seizure forecast algorithms, overall and stratified by forecast horizon.

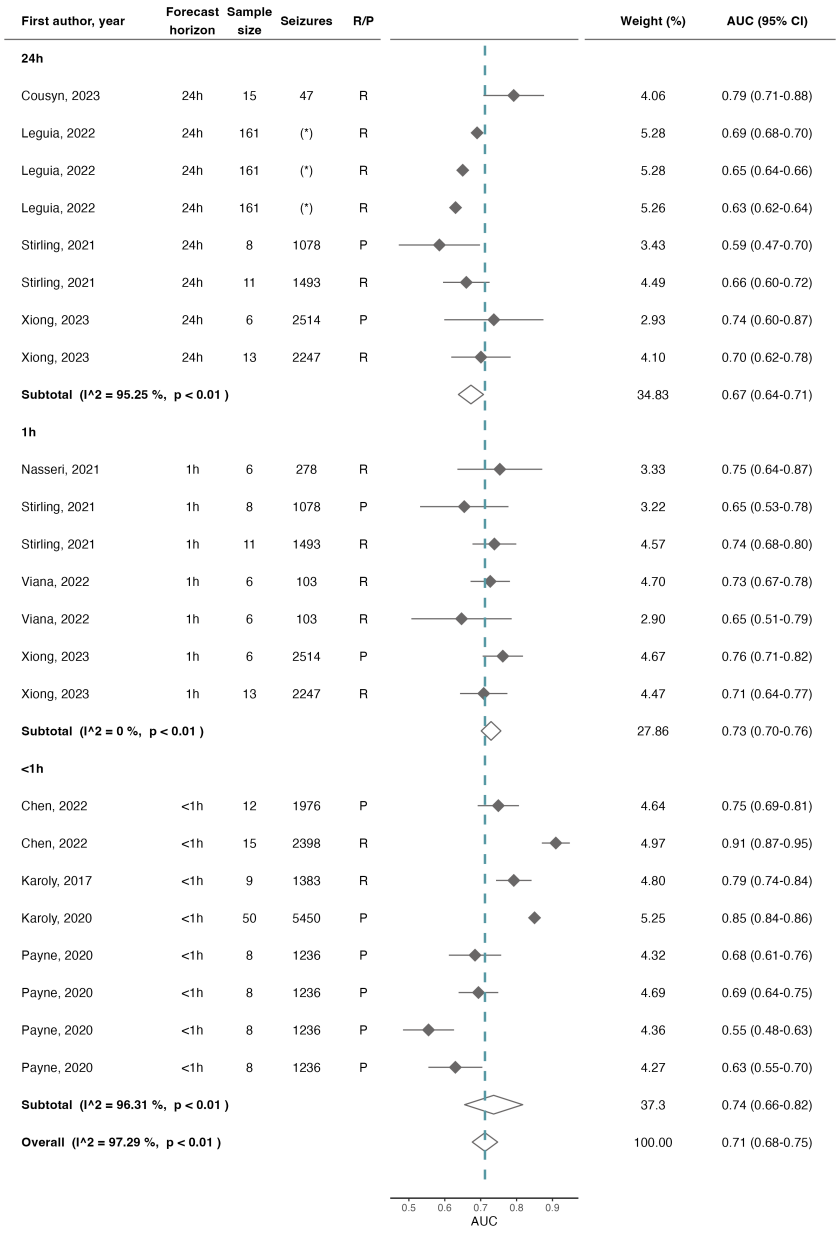

Fig. 8: Forest plot of AUC of seizure forecast algorithms, overall and stratified by forecast horizon.

Subgroup analysis: Train-test approach

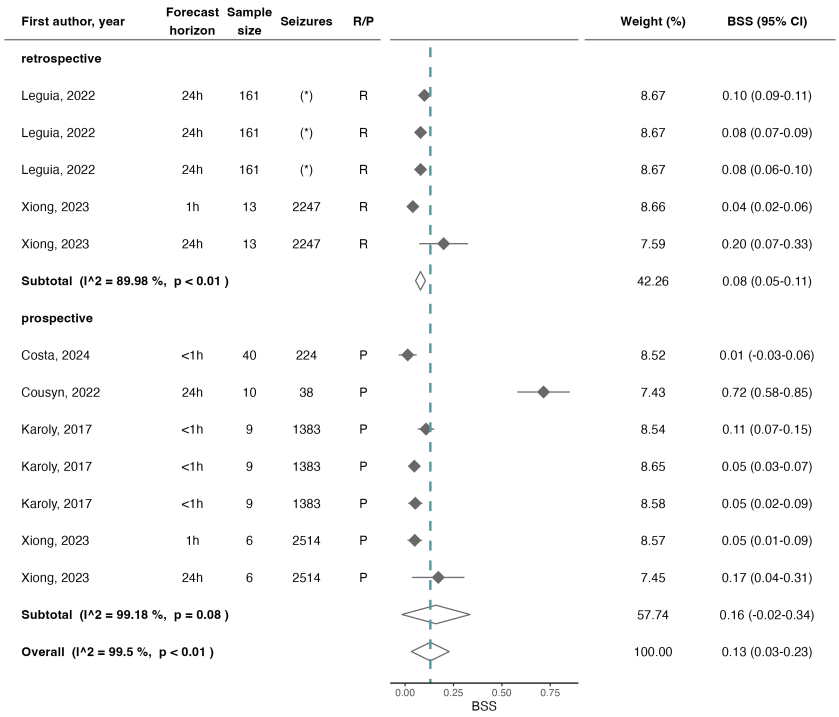

Fig. 9: Forest plot of BSS of seizure forecast algorithms, overall and stratified by train-test approach.

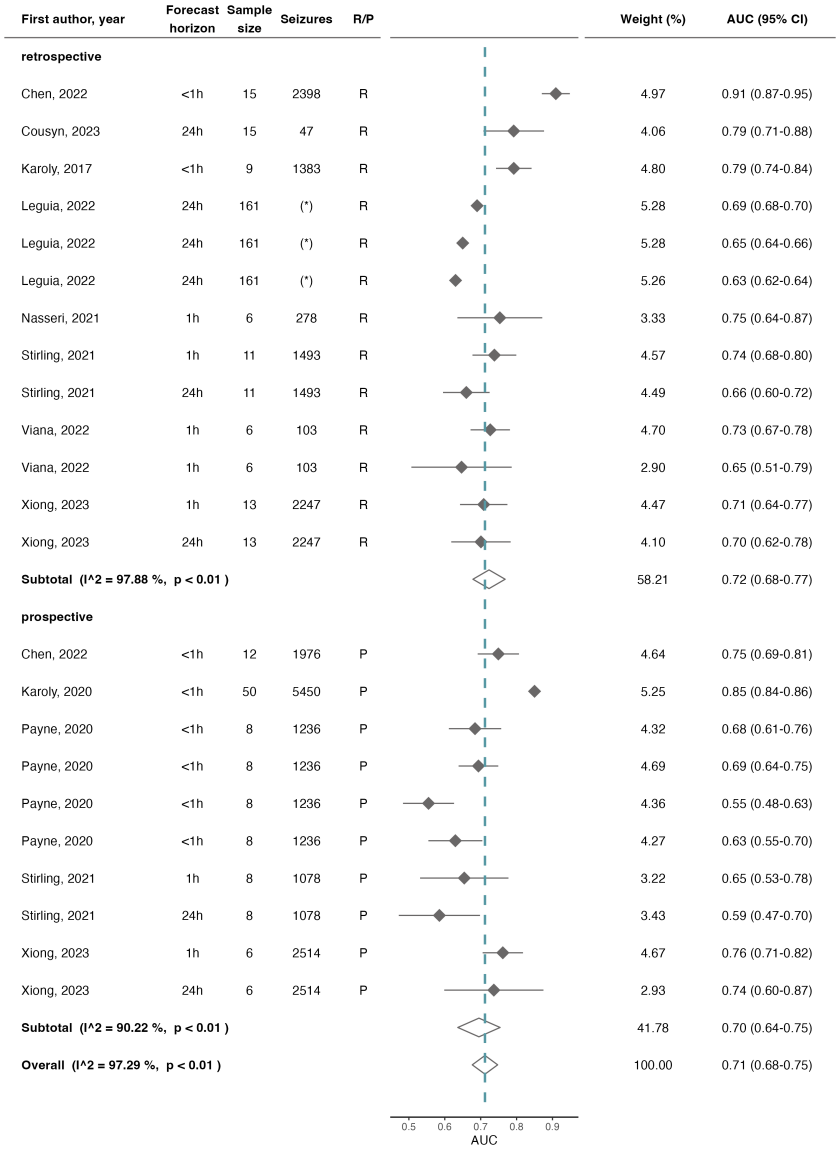

Fig. 10: Forest plot of AUC of seizure forecast algorithms, overall and stratified by train-test approach.

Subgroup analysis: Study

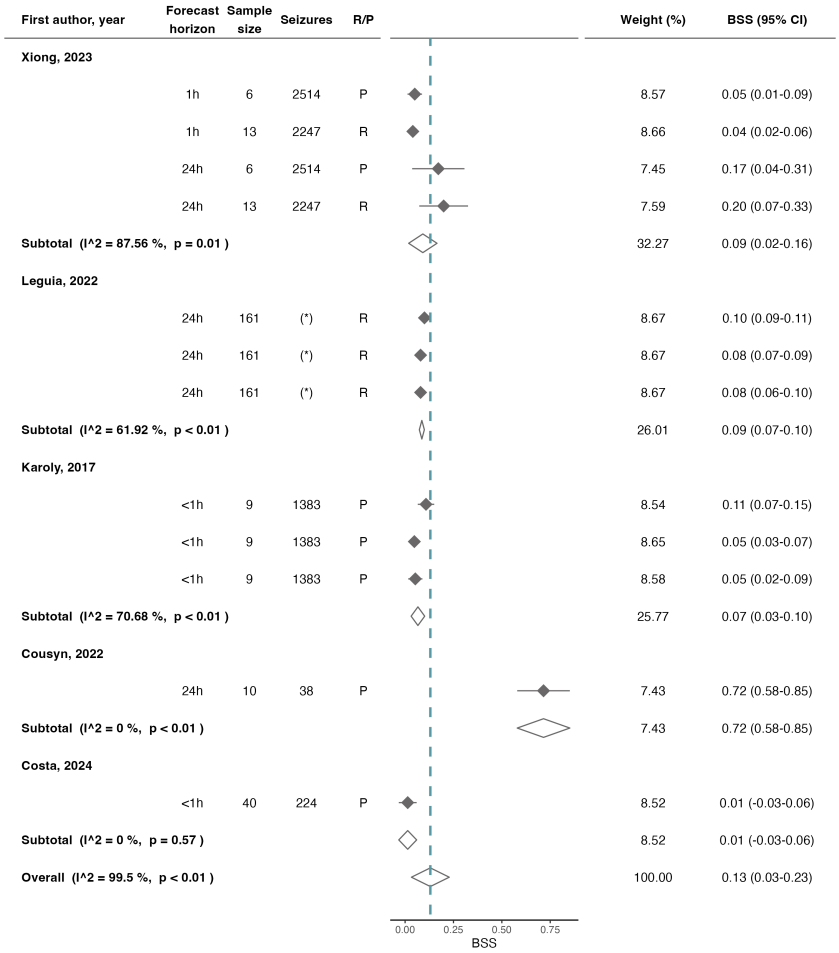

Fig. 11: Forest plot of BSS of seizure forecast algorithms, overall and stratified by study.

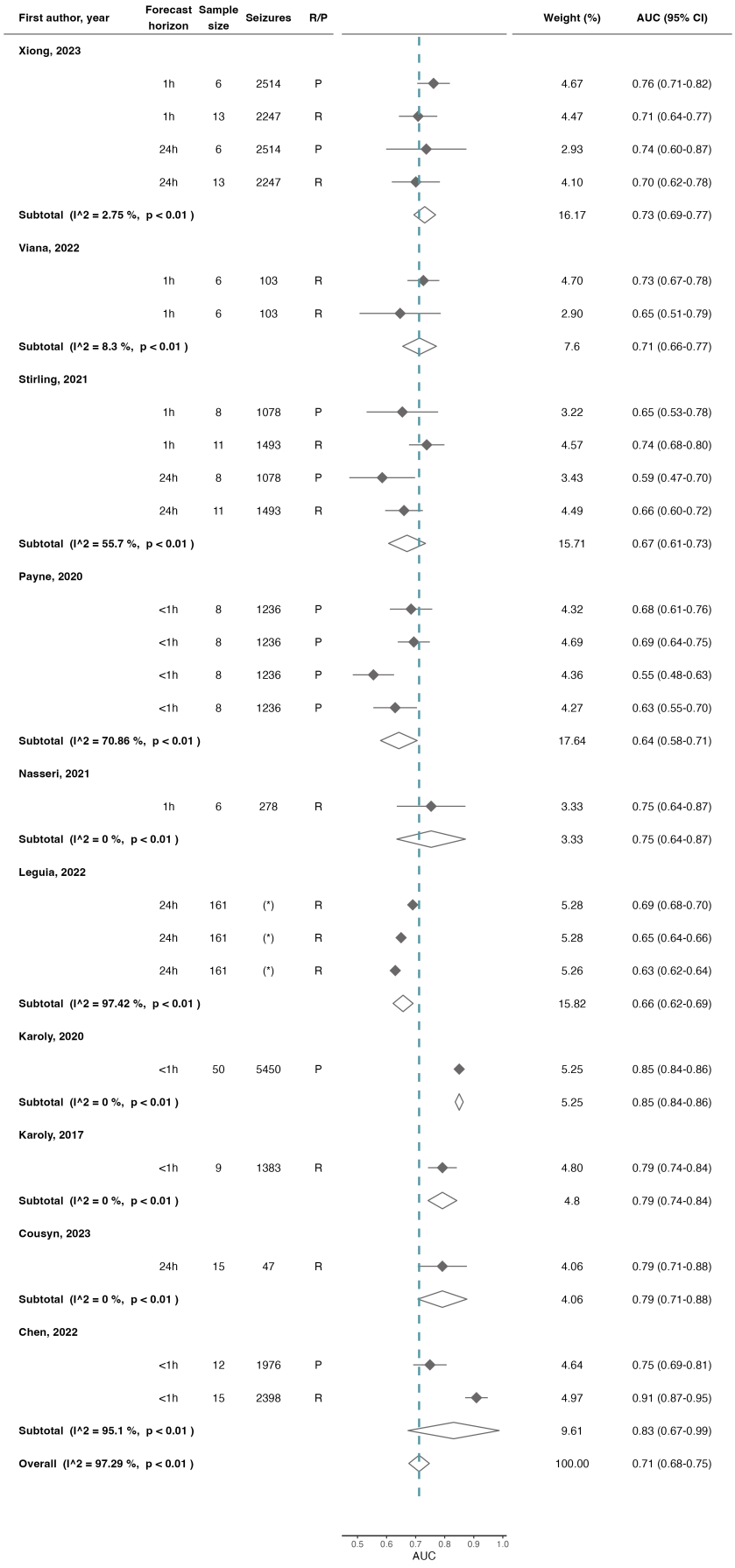

Fig. 12: Forest plot of AUC of seizure forecast algorithms, overall and stratified by study.