

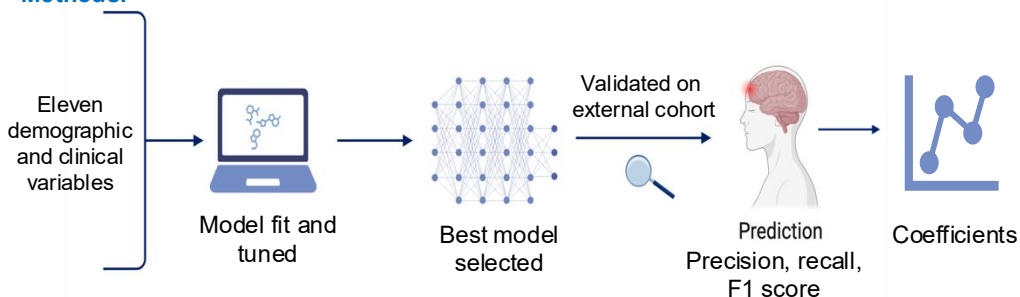
Nomogram for the Prediction of Response to anti-CGRP mAbs: the CGRP Score

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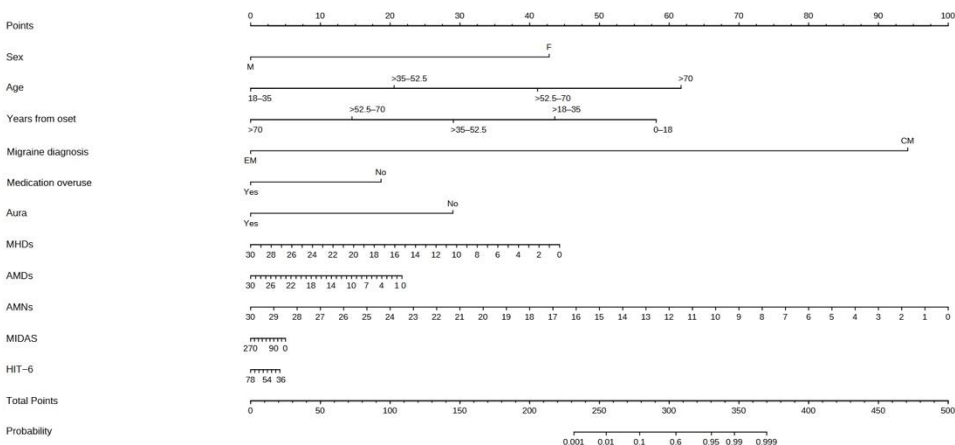
Aim: This study aimed to create, using a machine learning (ML)-based model, a score to predict 12-month response to anti-CGRP mAbs in patients with migraine using demographic and clinical **baseline** variables and to create a **nomogram** applicable in clinical settings.

Methods:



Results: We included 429 patients (study cohort) and 109 patients for the validation cohort. The logistic classification ML model achieved an overall average weighted F1-score of 70.5% between the two test sets, with good performance in identifying “responders” (precision: 0.75, recall: 0.84, F1-score: 0.79). The model had an accuracy of 74% when tested against the validation cohort.

Nomogram generation: The coefficients of response for each variable and their weight were transposed into the nomogram, a tool to estimate response probability, providing a total score named “**CGRP Score**” (CGRP mAbs, **G**lobal **R**esponse **P**rediction).



Conclusion: This ML-based predictive score demonstrated good performance in identifying responders to anti-CGRP mAbs. The nomogram is a predictive, easy pen- and paper- visual tool, possibly applicable in clinical practice.

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