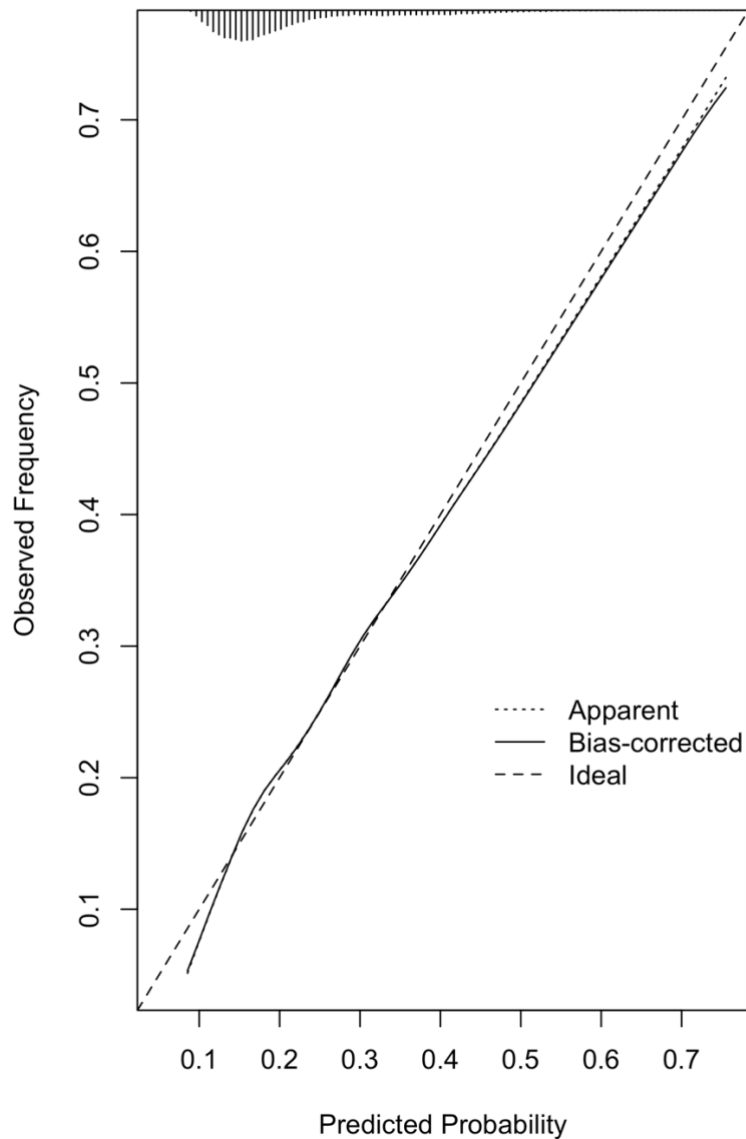Supplementary Figure 1: Inclusion Flow Diagram of Study Participants

Supplementary Figure 2: Calibration Plot for the CBP Risk Nomogram The figure shows the apparent and bias-corrected calibration curves for the nomogram predicting CBP risk. The apparent curve demonstrates the model's performance in the original dataset, while the bias-corrected curve was derived through bootstrap resampling (B = 1000) to account for overfitting. The diagonal dashed line represents perfect calibration. The close alignment of the bias-corrected curve with the diagonal line indicates excellent agreement between predicted probabilities and observed outcomes.

Supplementary Table 1: Displays the Generalized Variance Inflation Factor (GVIF) for each predictor in our multivariable model. A conservative threshold of VIF > 5 was used to flag potential multicollinearity.

Variable	GVIF
IMAT	2.90
LMM	1.99
Age	1.57
Sex	2.14
Activity Group	1.01
Diabetes mellitus	1.04
Dyslipidemia	1.11
Osteoporosis	1.06
Osteoarthritis	1.14