

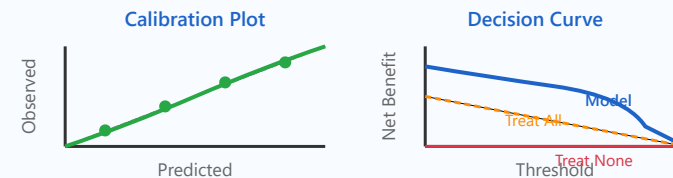
# Clinical Risk Scores

*Translate complex models into simple, actionable scoring systems*

## Development Pipeline

- 1 Select Predictors** Clinical relevance + Statistics
- 2 Fit Regression** Logistic/Cox regression
- 3 Convert to Points**  $\beta \rightarrow$  Integer scores
- 4 Create Tool** Nomogram/Calculator
- 5 Validate Externally** Different population

## Validation Metrics



### Performance Requirements:

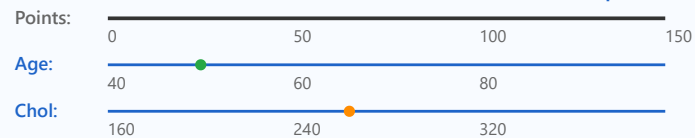
C-index > 0.7

Good calibration

Net benefit +

External val

## Example Nomogram: Cardiovascular Risk



Total: 75 points  
→ 15% 10-year risk

Low

Med

High

Risk Categories

## ✓ Clinical Examples

APACHE II (ICU mortality) • Framingham Risk Score (CVD) • MELD Score (liver transplant) • GRACE Score (ACS) • CHA<sub>2</sub>DS<sub>2</sub>-VASc (stroke risk)