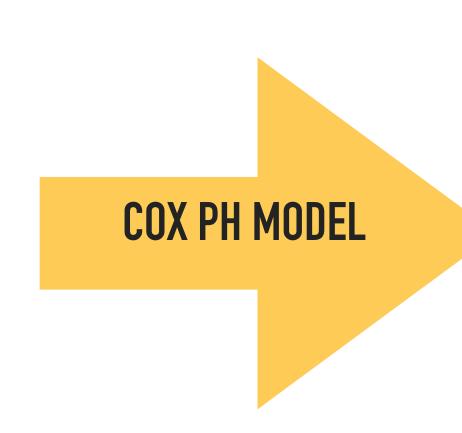
The vision of a clinical risk score

- Framingham risk score: all predictors are on an absolute scale
 - Age (Years)
 - Cholesterol (mg/dL)
 - If smoker (Yes/No)
 - HDL cholestrol (mg/dL)
 - Systolic blood pressure (mm Hg)



$$\hat{y} = X\beta$$

Why we do not have an omics-based clinical risk score?

- Gene expression platforms are measured on a relative scale
 - Sequencing depth in RNA-Seq:

$$\hat{y} = X\beta \qquad \hat{y} = (X - 1)\beta$$

Use of different reagents between experiments:

$$\hat{\beta} = (X^T X)^{-1} X y$$