$$\mathbb{P}\left(X_i \leq c < X_i \leq x \;\middle|\; m_0(I) = m_0,\ m(I) = m,\ X_i > c \right)$$

$$\eta^T y \;|\; Ay \leq b$$

$$Y \sim N(0, I)$$

$\eta^T y \;|$

$$\mathbb{P}\left(\frac{Y_i}{\eta^T y} \leq x,\ AY \leq b \right)$$

$$\mathbb{P}(AY \leq b) \rightarrow \boxed{\text{known}}$$

also known!

$$\mathbb{P}\left(c < Y_i \leq x, \longleftrightarrow \right)$$

$$\mathbb{P}\left(\longleftrightarrow \right)$$