

$$P(Y_i \geq y \mid |I| \leq \dots, |I_0| \neq \dots, Y_i > c)$$

$$= E[1(\cdot)]$$

$$= \sum P(Y_i \geq y)$$

$$P(A|B) = E_I \left[P(Y_i \geq y \mid \cdot, I) \mid |I|, |I_0|, Y_i > c \right]$$

I don't involve Y_i then here

$$= \sum_I P(Y_i \geq y \mid \cdot, I) P(I = I \mid |I|, |I_0|, Y_i > c)$$

$y > c$
so $y > c$ is redundant

$$\frac{P(Y_i > y \mid I)}{P(Y_i > c \mid I)} \quad \frac{P(Y_i > y, Y_i > c, I)}{P(Y_i > c, I)}$$

constant