



$$\underline{P(C'|F') = 0.1}$$

$$P(T'|C') = 0.8$$

$$P(T'|C) = 0.01$$

$$P(T|F,C) = P(T|C) \Rightarrow P(T,C,F) = P(T|C)P(C|F)P(F)$$

Find  $P(C'|F',T')$

If we use

$$\text{incorrect } P(C|F,T) = P(C|P_a(C)) = P(C|F)$$

$$P(C'|F',T') = P(C'|F') = 0.1$$

$$\text{If we use } P(C'|F',T') = \frac{P(C',F',T')}{P(F',T')} = \frac{\overset{0.1}{P(C'|F')} \overset{0.8}{P(T'|C')} \cancel{P(F')}}{\sum_C \overset{0.1}{P(C',F')} \overset{0.8}{P(T'|C')} \cancel{P(F')}} = \frac{0.08}{0.08 + 0.009} = 0.89$$

$$P(C'|F',T') = \frac{0.08}{0.08 + 0.009} = \boxed{0.89}$$