

In general:

$$P(A|C) = \frac{P(A \cap C)}{P(C)}$$

$$= \frac{P(A \cap B \cap C) + P(A \cap \bar{B} \cap C)}{P(A \cap B \cap C) + P(\bar{A} \cap B \cap C) + P(A \cap \bar{B} \cap C) + P(\bar{A} \cap \bar{B} \cap C)}$$

$$= \frac{P(C|A \cap B) \cdot P(B|A) \cdot P(A) + P(C|A \cap \bar{B}) \cdot P(\bar{B}|A) \cdot P(A)}{P(C|A \cap B) \cdot P(B|A) \cdot P(A) + P(C|\bar{A} \cap B) \cdot P(B|\bar{A}) \cdot P(\bar{A}) + P(C|A \cap \bar{B}) \cdot P(\bar{B}|A) \cdot P(A) + P(C|\bar{A} \cap \bar{B}) \cdot P(\bar{B}|\bar{A}) \cdot P(\bar{A})}$$

With A = Intracranial lesion (0 = absent, 1 = present) , B = Fractureskull (0 = absent, 1 = present) and C = Seizure (0 = absent, 1 = present)

$$P(A = 0 | C = 0) = \frac{0.994 \cdot 0.987 \cdot 0.923 + 0.972 \cdot 0.012 \cdot 0.923}{0.994 \cdot 0.987 \cdot 0.923 + 0.972 \cdot 0.012 \cdot 0.923 + 0.990 \cdot 0.851 \cdot 0.076 + 0.916 \cdot 0.148 \cdot 0.076} = 0.925$$