

QUESTION 1a

PROB OF OSA = YES

$$P(\text{AGE} = \text{LOWER} | \text{OSA YES}) = 6/9$$

$$P(\text{BMI} = \text{MED} | \text{OSA YES}) = 4/9$$

$$P(\text{GENDER} = \text{MALE} | \text{OSA YES}) = 6/9$$

$$P | \text{OSA YES} = 9/14$$

PROB OF OSA = NO

$$P(\text{AGE} = \text{LOWER} | \text{OSA NO}) = 1/5$$

$$P(\text{BMI} = \text{MED} | \text{OSA NO}) = 1/5$$

$$P(\text{GENDER} = \text{MALE} | \text{OSA NO}) = 1/5$$

$$P | \text{OSA NO} = 5/14$$

$$6/9 \times 4/9 \times 6/9 \times 9/14 = P | \text{OSA YES} = 0.12698$$

$$1/5 \times 1/5 \times 1/5 \times 5/14 = P | \text{OSA NO} = 0.00285$$

THE INDIVIDUAL HAS A LIKELIHOOD FOR OSA
PROBABILITY