Mammogram screening for breast cancer in women age 40-50:

"The probability that one of these women has breast cancer is **0.8 percent**. If a woman <u>has</u> breast cancer, the probability is **90 percent** that she will have a positive mammogram. If a woman <u>does not have</u> breast cancer, the probability is **7 percent** that she will still have a positive mammogram."

Imagine a woman who has a positive mammogram.
What is the probability that she actually has breast cancer?

Researchers asked 24 German doctors this question.

- 8 said $\leq 10\%$
- 8 said 90%
- 8 said between 50% and 80%

American doctors: 95 out of 100 guessed around 75%.