Data Analysis and Statistical Inference
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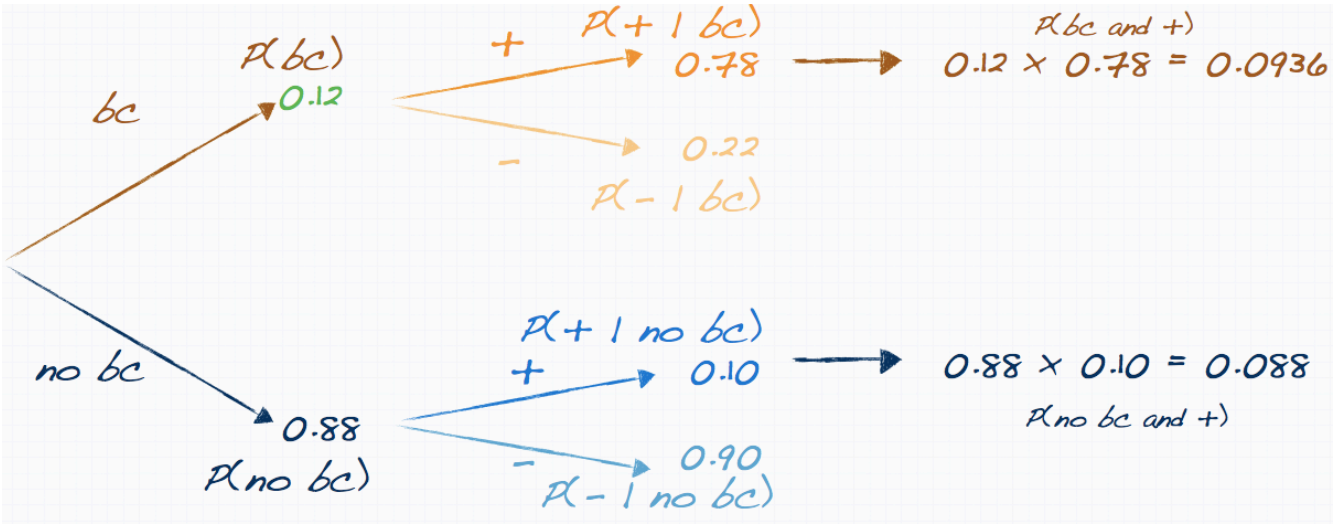
In-Video Quiz Questions for
Unit 2: Part 2 – (4) Examples of Bayesian Inference

(06:00)

1. What should the new prior probability that this woman has cancer, given that she already tested positive once, i.e. what is the new prior probability?
    (a) 0.017
    (b) 0.12
    (c) 0.0133
    (d) 0.88

(07:22)

2. What is the probability of having breast cancer if this second mammogram also yields a positive result, i.e. what is the new posterior probability? Choose the closest answer.



    (a) 0.0936
    (b) 0.088
    (c) 0.48
    (d) 0.52

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Answers:

1. b

Explanation: We use the posterior probability from the previous stage (test) at the prior probability for the new stage, i.e. we update the prior with the posterior.

2. d

Explanation: 0.0936/(0.0936+0.088) ≈ 0.52