

Conditional Probability & Bayes Rule Quiz

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In [1]: # load dataset
import pandas as pd

df = pd.read_csv('cancer_test_data.csv')
df.head()
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Out[1]:
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	patient_id	test_result	has_cancer
0	79452	Negative	False
1	81667	Positive	True
2	76297	Negative	False
3	36593	Negative	False
4	53717	Negative	False

```
In [2]: # What proportion of patients who tested positive has cancer?
df.query('test_result == "Positive"')['has_cancer'].mean()
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Out[2]: 0.34282178217821785
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In [3]: # What proportion of patients who tested positive doesn't have cancer?
1 - df.query('test_result == "Positive"')['has_cancer'].mean()
```

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Out[3]: 0.65717821782178221
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In [4]: # What proportion of patients who tested negative has cancer?
df.query('test_result == "Negative"')['has_cancer'].mean()
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Out[4]: 0.013770180436847104
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In [5]: # What proportion of patients who tested negative doesn't have cancer?
1 - df.query('test_result == "Negative"')['has_cancer'].mean()
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Out[5]: 0.98622981956315292
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In [ ]:
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