Hypertension

As part of a study performed in Norway, 70,000 people in the general population had their blood pressure measured; two readings were obtained and the second reading was used in the analysis. The people were followed for mortality outcome over a 10-year period after the blood-pressure measurement using death files in the Norwegian Central Bureau of Statistics. The results shown below were obtained from the subgroup of 5,034 men ages 50-59 at baseline:

|  |  |
| --- | --- |
|  | 10-year Mortality Outcome |
| DBP (mm Hg) | Dead | Alive | Total |
|  100+ | 124 | 295 | 419 |
|  <=99 | 764 | 3,851 | 4,615 |
| Total | 888 | 4,146 | 5,034 |

1. If we regard a diastolic blood pressure of >=100 mm Hg as a screening test for predicting mortality over the next 10 years, then what is the sensitivity of the test?

2. What is the specificity of the test?

3. If the subjects in the study sample are considered representative of the general population, then what is the predictive value positive and negative of the test?

4. Suppose the threshold for positivity were changed from 100+ to 95+. Would the sensitivity and specificity increase, decrease, or remain the same?