```
C:\Users\chole\miniconda3\python.exe C:/Users/chole/Desktop/Cervical_cancer_behavior_risk/
models.py
 Shape of complete dataset
X shape:  (72, 19)
y shape:  (72,)

 Shape of split dataset
X_train shape:  (54, 19)
y_train shape:  (54,)
X_test shape:  (18, 19)
y_test shape:  (18,)


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Logistic Regression results

Best model parameters
{'model__C': 0.08858667904100823, 'model__class_weight': {0: 1, 1: 1.4736842105263157}}

Best model score (accuracy)
0.9466666666666667
--------------------------------------------------------
Test data results

Classification report
              precision    recall  f1-score   support

           0       0.92      0.85      0.88        13
           1       0.67      0.80      0.73         5

    accuracy                           0.83        18
   macro avg       0.79      0.82      0.80        18
weighted avg       0.85      0.83      0.84        18


AUC score
0.823076923076923

Accuracy score
0.8333333333333334
--------------------------------------------------------
Test data results with changed threshold

Best Threshold=0.686739, G-Mean=0.894

Classification report
              precision    recall  f1-score   support

           0       0.93      1.00      0.96        13
           1       1.00      0.80      0.89         5

    accuracy                           0.94        18
   macro avg       0.96      0.90      0.93        18
weighted avg       0.95      0.94      0.94        18


AUC score
0.9

Accuracy score
0.9444444444444444


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categorical Naive Bayes results

Best model parameters
```

File - models
 {'alpha': 0.0677966102677966}

 Best model score (accuracy)
 0.8699999999999999

 Test data results

 Classification report
                precision   recall f1-score   support

            0   1.00   0.92   0.96   13
            1   0.83   1.00   0.91   5

     accuracy   0.94   18
    macro avg   0.92   0.96   0.93   18
 weighted avg   0.95   0.94   0.95   18

 AUC score
 0.9615384615384616

 Accuracy score
 0.9444444444444444

 Test data results with changed threshold

 Best Threshold=0.999951, G-Mean=1.000

 Classification report
                precision   recall f1-score   support

            0   1.00   1.00   1.00   13
            1   1.00   1.00   1.00   5

     accuracy   1.00   18
    macro avg   1.00   1.00   1.00   18
 weighted avg   1.00   1.00   1.00   18

 AUC score
 1.0

 Accuracy score
 1.0

 Process finished with exit code 0