Bayesian algorithm

=== Run information ===

Scheme: weka.classifiers.bayes.NaiveBayes

Relation: breast-cancer

Instances: 286

Attributes: 10

        age

        menopause

        tumor-size

        inv-nodes

        node-caps

        deg-malig

        breast

        breast-quad

        irradiat

        Class

Test mode: evaluate on training data

=== Classifier model (full training set) ===

Naive Bayes Classifier

                    Class

Attribute   no-recurrence-events   recurrence-events

                (0.7)   (0.3)

===

age

 10-19   1.0   1.0

 20-29   2.0   1.0

 30-39   22.0   16.0

 40-49   64.0   28.0

 50-59   72.0   26.0

 60-69   41.0   18.0

 70-79   6.0   2.0

80-89	1.0	1.0
90-99	1.0	1.0
[total]	210.0	94.0

menopause

lt40	6.0	3.0
ge40	95.0	36.0
premeno	103.0	49.0
[total]	204.0	88.0

tumor-size

0-4	8.0	2.0
5-9	5.0	1.0
10-14	28.0	2.0
15-19	24.0	8.0
20-24	35.0	17.0
25-29	37.0	19.0
30-34	36.0	26.0
35-39	13.0	8.0
40-44	17.0	7.0
45-49	3.0	2.0
50-54	6.0	4.0
55-59	1.0	1.0
[total]	213.0	97.0

inv-nodes

0-2	168.0	47.0
3-5	20.0	18.0
6-8	8.0	11.0
9-11	5.0	7.0
12-14	2.0	3.0
15-17	4.0	4.0
18-20	1.0	1.0
21-23	1.0	1.0

24-26	1.0	2.0
27-29	1.0	1.0
30-32	1.0	1.0
33-35	1.0	1.0
36-39	1.0	1.0
[total]	214.0	98.0
node-caps		
yes	26.0	32.0
no	172.0	52.0
[total]	198.0	84.0
deg-malig		
1	60.0	13.0
2	103.0	29.0
3	41.0	46.0
[total]	204.0	88.0
breast		
left	104.0	50.0
right	99.0	37.0
[total]	203.0	87.0
breast-quad		
left_up	72.0	27.0
left_low	76.0	36.0
right_up	21.0	14.0
right_low	19.0	7.0
central	18.0	5.0
[total]	206.0	89.0
irradiat		
yes	38.0	32.0
no	165.0	55.0
[total]	203.0	87.0

Time taken to build model: 0 seconds=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correctly Classified Instances   215   75.1748 %

Incorrectly Classified Instances   71   24.8252 %

Kappa statistic   0.3693

Mean absolute error   0.3012

Root mean squared error   0.4278

Relative absolute error   72.0082 %

Root relative squared error   93.6095 %

Total Number of Instances   286

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.866	0.518	0.798	0.866	0.831	0.374	0.760	0.879	no-recurrence-events
	0.482	0.134	0.603	0.482	0.536	0.374	0.760	0.610	recurrence-events
Weighted Avg.	0.752	0.404	0.740	0.752	0.743	0.374	0.760	0.799	

=== Confusion Matrix ===

```
  a   b   <-- classified as
174  27 |   a = no-recurrence-events
 44  41 |   b = recurrence-events
```