**COMPARATIVE STUDY / RESULTS AND DISCUSSION**

**a) Support Vector Machine**

Therefore out of all the combinations possible, the attributes size\_of\_cancer and mobility showed highest accuracy of 90.69767%

Therefore, the feature selection method random forest shows accurate results for svm compared to boruta as boruta considers mobility as an tentative attribute.

**b) Neural Networks:**

From the generated neural networks, the accuracy of the neural network is 27.778% when we consider all the attributes and accuracy is 97% when we consider the main attributes size\_of\_cancer,age,surface and consistency as given in boruta.

Hence, boruta feature selection is suitable for neural network.

**c) K-Nearest Neighbour :**

From the above results, it is clear that the attributes selection based on boruta showed better results in knn (90.6% accuracy) than random forest feature selection (88.37% accuracy).

**d) Clustering :**

**1) Hierarchical Clustering**

True Positive : 100

True Negative 26

False Positive 16

False Negative 6

Accuracy : 78.37%

Error : 21.63%

**2) Fuzzy Clustering**

True Positive : 101

True Negative 29

False Positive 14

False Negative 5

Accuracy : 77.18%

Error : 22.82%

**3) K-Means Clustering**

True Positive : 101

True Negative 29

False Positive 14

False Negative 5

Accuracy : 77.18%

Error : 22.82%