

## Description of the synthetic cancer data

1. Name: synthetic cancer data
2. Number of Variables for synthetic cancer data: 11 (10 numerical and 1 categorical)
3. Description of Variables for synthetic\_cancer\_data.
  - **Variable 1:Sample\_No (Numeric)**
  - **Variable 2:Thickness\_of\_Clump (Numeric)**:Benign cells are more likely monolayers and malignant or cancerous cells are multilayer
  - **Variable 3:Cell\_Size\_Uniformity(Numeric)**:Benign cells does not vary in size and malignant or cancer cell vary in size
  - **Variable 4:Cell\_Shape\_Uniformity(Numeric)**:Benign cells does not vary in shape and malignant or cancer cell vary in shape
  - **Variable 5:Marginal\_Adhesion(Numeric)**:Benign cells are more likely stick together and cancer cells are loose or does not stick together
  - **Variable 6:Single\_Epithelial\_Cell\_Size(Numeric)**:In benign cells epithelial cells are normal and malignant or cancer cells are significantly enlarged
  - **Variable 7:Bare\_Nuclei(Numeric)**:In benign cells the bare nuclei is not surrounded by cytoplasm and in cancer cells it is surrounded by cytoplasm
  - **Variable 8:Bland\_Chromatin(Numeric)**:Benign cells have uniform or fine chromatin and cancer cells have coarse chromatin
  - **Variable 9:Normal\_Nucleoli(Numeric)**:In Benign cells nucleoli is very small and in cancer cells nucleoli is more prominent
  - **Variable 10:Mitoses(Numeric)**:In benign cells the cell growth is normal and in cancer cells there is abnormal cell growth
  - **Variable 11:Outcome(Categorical)**:No denotes the presence of benign and Yes denotes the presence of malignant breast cancer