

# **Power BI Breast Cancer Risk Prediction Analysis**

## **Columns details:**

This dataset consists of a group of breast cancer patients who had surgery to remove their tumor. The dataset consists of the following variables:

1. **Patient\_ID:** unique identifier ID of a patient
2. **Age:** age at diagnosis (years)
3. **Gender:** Male/Female
4. **Protein1, Protein2, Protein3, and Protein4:** expression levels (undefined units)
5. **Tumor\_Stage:** I, II, III
6. **Histology:** Infiltrating Ductal Carcinoma, Infiltrating Lobular Carcinoma, Mucinous Carcinoma
7. **ER status:** Positive/Negative
8. **PR status:** Positive/Negative
9. **HER2 status:** Positive/Negative
10. **Surgery\_type:** lumpectomy, Simple Mastectomy, Modified Radical Mastectomy, Other
11. **Date\_of\_Surgery:** Date on which surgery was performed (in DD-MON-YY)
12. **Date\_of\_Last\_Visit:** Date of last visit (in DD-MON-YY) [can be null in case the patient didn't visit again after the surgery]
13. **Patient\_Status:** Alive/Dead [Can be null in case the patient didn't visit again after the surgery and there is no information available whether the patient is alive or dead].

## **Notes about Medical term in this dataset:**

- Lumpectomy (lum-PEK-tuh-me) is surgery to remove cancer or other abnormal tissue from your breast.
- simple mastectomy removes all breast tissue but leaves your pectoral muscles beneath
- A modified radical mastectomy is a procedure in which the entire breast is removed, including the skin, areola, nipple, and most axillary lymph nodes, but the pectoralis major muscle is spared

- HER2-positive breast cancer is a breast cancer that tests positive for a protein called human epidermal growth factor receptor 2 (HER2). This protein promotes the growth of cancer cells.
- Invasive ductal carcinoma (IDC), also known as infiltrating ductal carcinoma, is a type of breast cancer that starts in the milk ducts of the breast and moves into nearby tissue.
- Invasive lobular carcinoma, also known as infiltrating lobular carcinoma, begins in the milk-producing glands (lobules) of the breast. As an invasive type of cancer, ILC has spread beyond its original tumour site. Over time, ILC may become metastatic breast cancer.

Mucinous carcinoma is a rare type of cancer. In mucinous carcinoma, cancer cells form in mucin, the main component of mucus. Mucins are proteins that help with the function of healthy cells. In mucinous carcinoma, the mucin around cancer cells becomes part of the tumour.

### **Acknowledgement:**

I would like to express my gratitude to the original owners of this dataset, as it is not owned by me. The dataset used in this data analysis project is attributed to its rightful owners. All credit and recognition go to them for providing such valuable data.