# Health Care: Cancer Prediction

# Project Outline

### Introduction

Machine learning (ML) has become an increasingly important tool in cancer research and treatment, with the potential to improve our ability to predict cancer incidence and progression, identify high-risk individuals, and develop targeted and effective treatments.

In this report, we go through how ML algorithms can be used to process large volumes of data and identify patterns for cancer prediction that may be difficult for humans to detect.

We look at the importance of developing personalized risk scores for individuals, taking into account individual factors such as age, gender, occupational hazards etc and coming up with a possible risk level for the given parameters.

By leveraging the power of advanced algorithms and large datasets, ML is poised to help us better understand the underlying mechanisms of cancer, identify new biomarkers, and develop more personalized treatments.

### Model Creation

The data set was collected first. Then it was preprocessed and to ensure that they are standardized and ready for analysis.

The model was created using Logistic Regression. Results were compared with other models such as Naive Bayes and KNN.

The model can be hosted on flask application and predict dynamic input.

### Purpose

The project's objective is to develop a robust and accurate model that can take in the patient's input parameters and predict the likelihood that it is a malignant or benign cancer. This can help healthcare professionals make better decisions regarding diagnosis and treatment, ultimately improving patient outcomes and reducing the burden of cancer on society. The project requires extensive data preprocessing, feature selection, and model training using advanced ML algorithms, making it challenging. Overall, this project has the potential to make a significant impact on cancer diagnosis and treatment, paving the way for more effective preventive measures and personalized medicine. Moreover the project has been deployed using Flask so as to improve ease of use and grant better functionality.