

**Project Title**  
**Cancer Data Analysis (2012-2024)**

**Project Objective:**

This project focuses on analyzing cancer patient data from 2012 to 2024 using Microsoft Power BI. The objective of the project is to transform raw healthcare data into meaningful insights through data cleaning, modeling and interactive visualizations.

**Dataset Description:**

The dataset used in this project is Cancer Data from 2012 to 2024. It contains patient-level information including:

- **Patient ID**
- **Gender**
- **Age**
- **Country**
- **Cancer Type (Breast, Lung, Prostate, Colon, Cervical, Leukemia, Liver, Skin)**
- **Cancer Stage**
- **Smoking Status**
- **Alcohol use**
- **Treatment Cost**
- **Year**

The objective of this dataset is to analyze

- **Total patient Count**
- **Cancer Type distribution**
- **Average age by cancer Type**
- **Treatment cost analysis**
- **Impact of smoking and alcohol**
- **Country-wise treatment expenses**

The dataset was imported into Power BI from Excel

**Data Cleaning Steps:**

- Removed duplicate patient records
- Checked and handled missing/null values.

- Corrected datatypes (Age → Whole Number, Cost → Decimal, Date → Datatype)
  - Standardized cancer type names
  - Removed unnecessary columns
  - Verified categorical values (Gender, Stage, Country)
- These steps ensured clean and accurate data for analysis

### **Data Model:**

The data model follows a structured format

- **Main Table:** Cancer Data
- **Dimension Table:** Cancer Type, Country, Gender, Year

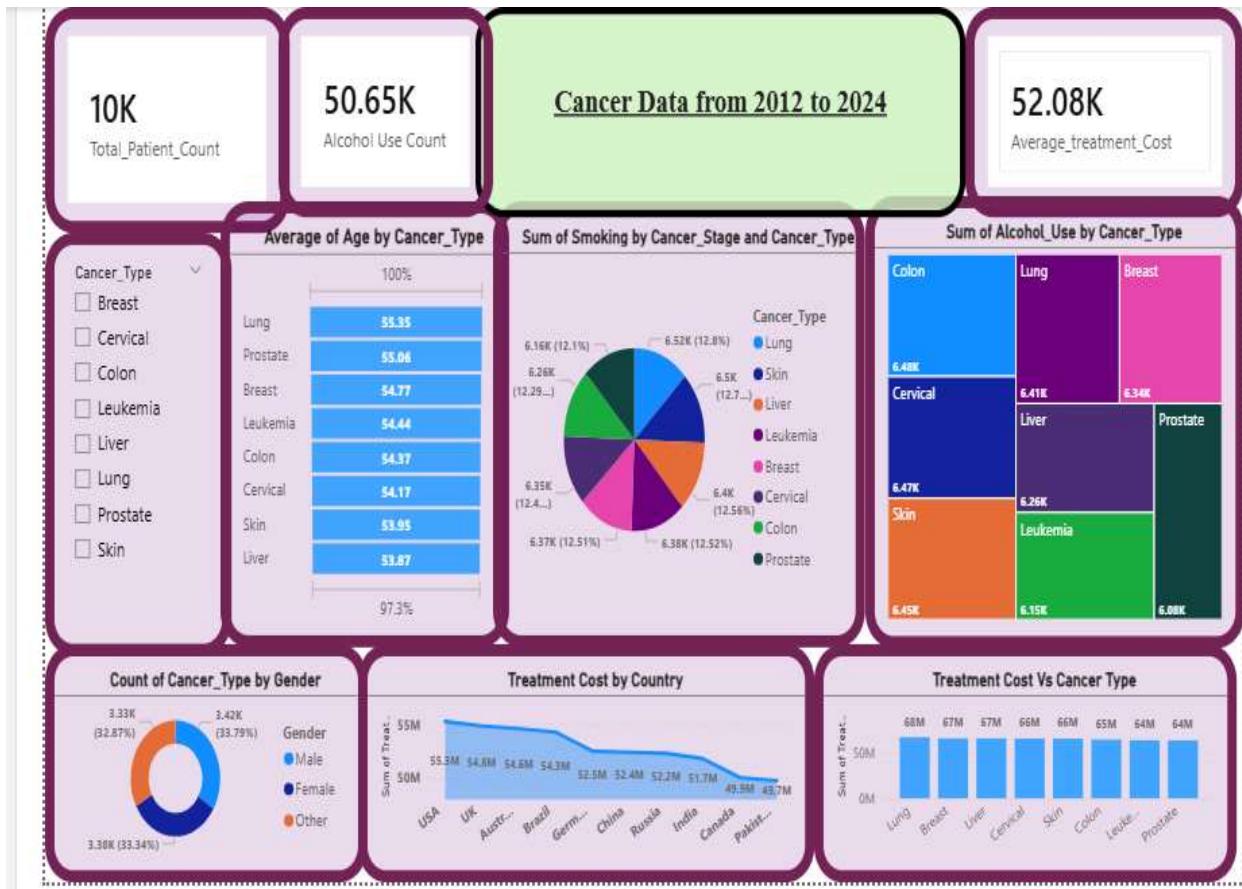
### **DAX Measures Created:**

- Total\_Patient\_Count =  
`count(global_cancer_patients_2015_2024[Patient_ID])`
- Average\_treatment\_Cost =  
`AVERAGE(global_cancer_patients_2015_2024[Treatment_Cost_USD])`
- Alcohol Use Count =  
`sum(global_cancer_patients_2015_2024[Alcohol_Use])`
- smoking\_count = `sum(global_cancer_patients_2015_2024[Smoking])`

### **Dashboard Insights Discovered:**

- Total Patients: 50K
- Average Treatment Cost: 52.47K
- Breast and Lung Cancers show higher Patient distribution.
- Average age varies across cancer types (around 49-51 years).
- Treatment cost differs significantly by country.
- Smoking and alcohol usage contribute across multiple cancer types.
- Certain cancer types show higher prevalence in specific genders.

## Dashboard:



## Conclusion:

This project studied Cancer Data Analysis (2012-2024). The result show that variations of cancer across the different type and different countries.