



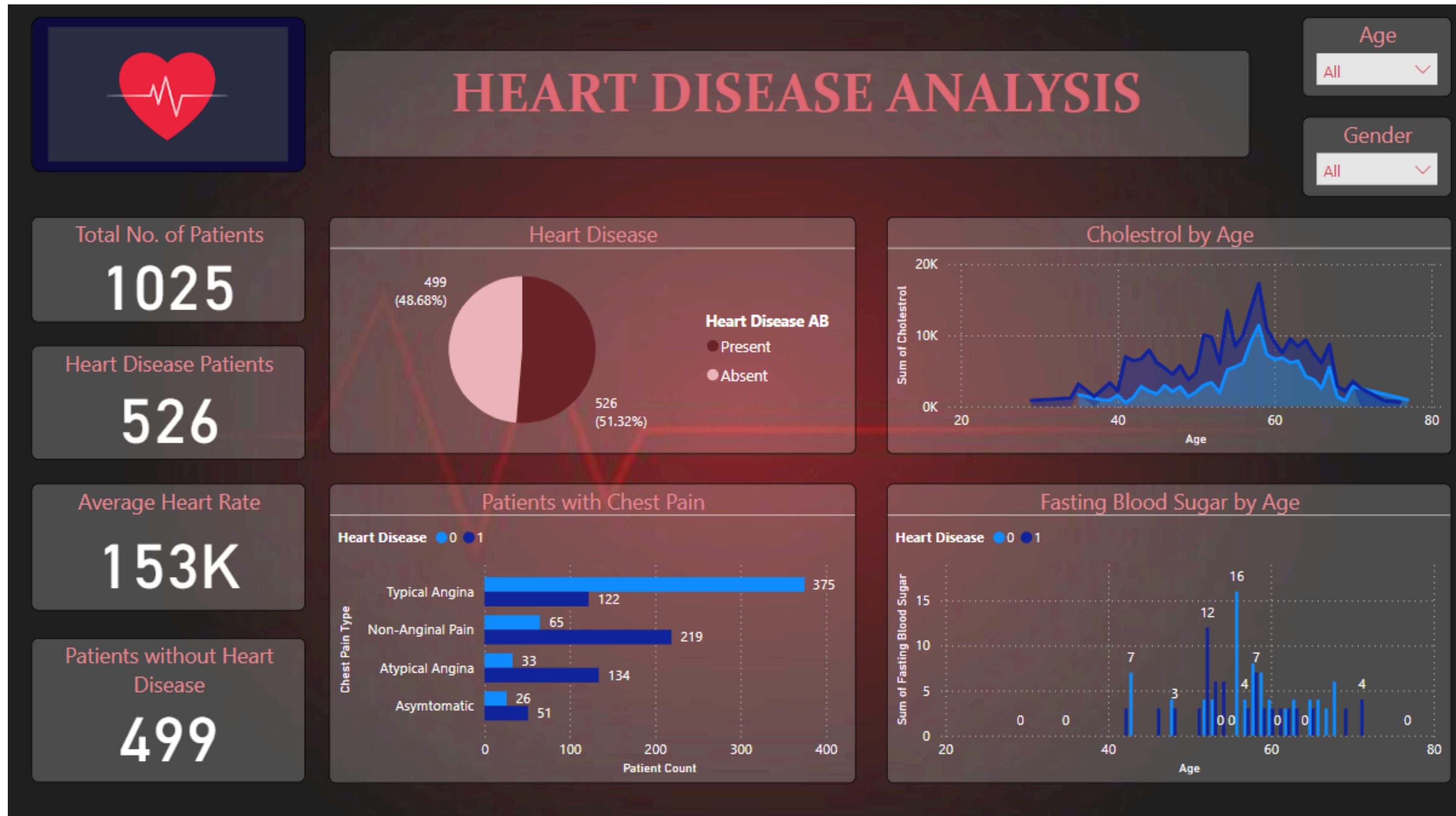
# **Heart Disease Analysis**

# Overview

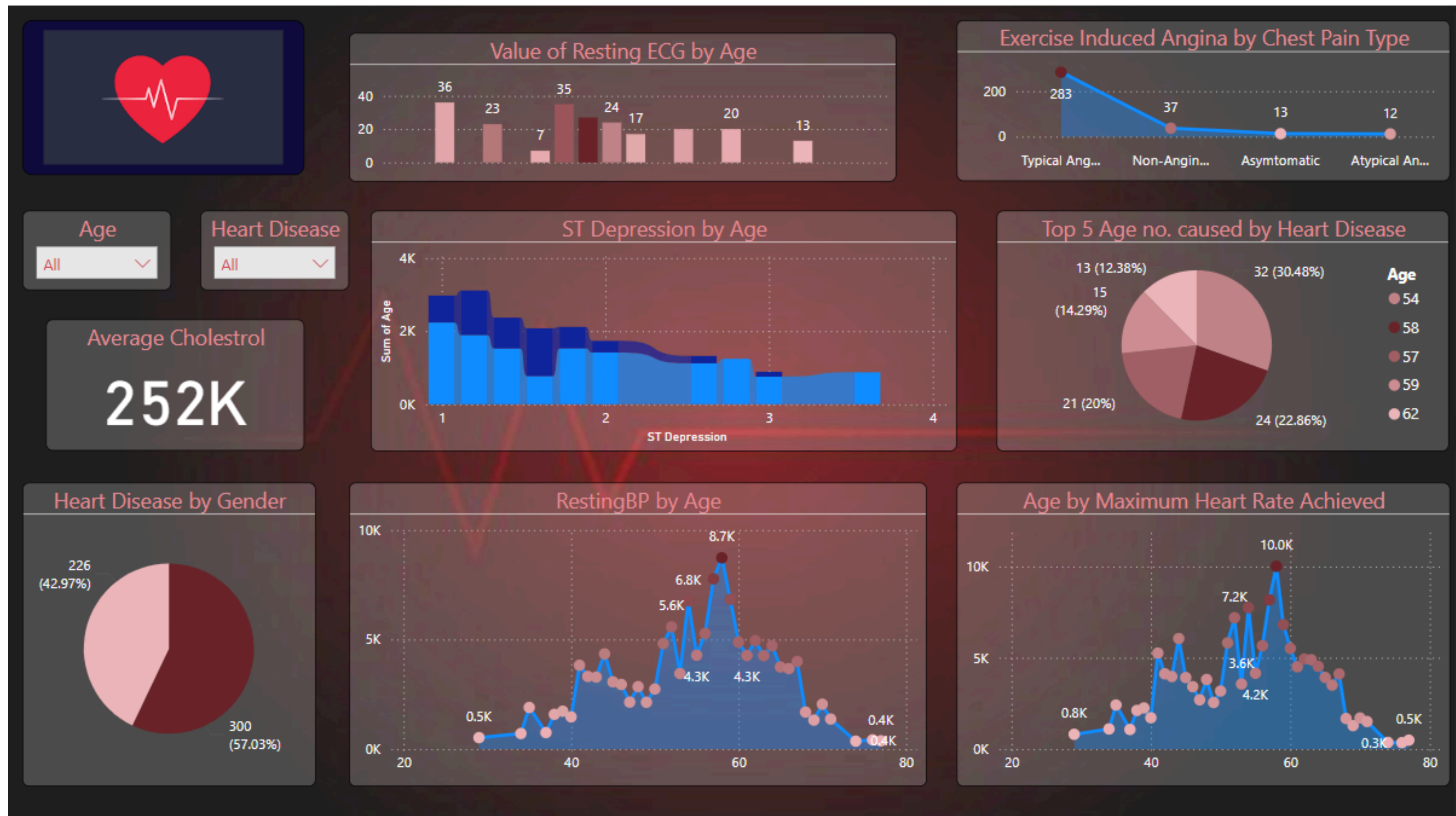
A comprehensive analysis of heart disease data, including various metrics and visualizations that offer insights into the correlation between different health indicators and the presence of heart disease. The dataset appears to include information on 1,025 patients, analyzing key factors such as age, gender, cholesterol levels, blood pressure, chest pain, heart rate, fasting blood sugar, and the presence of heart disease.

- Identifying and quantifying the most critical factors contributing to heart disease in a diverse patient population.
- Understanding the complex interplay between different health metrics (e.g., cholesterol, blood pressure, blood sugar) and their impact on heart disease risk.
- Determining how demographic factors, particularly age and gender, influence the prevalence and severity of heart disease.

# DASHBOARD



# DASHBOARD

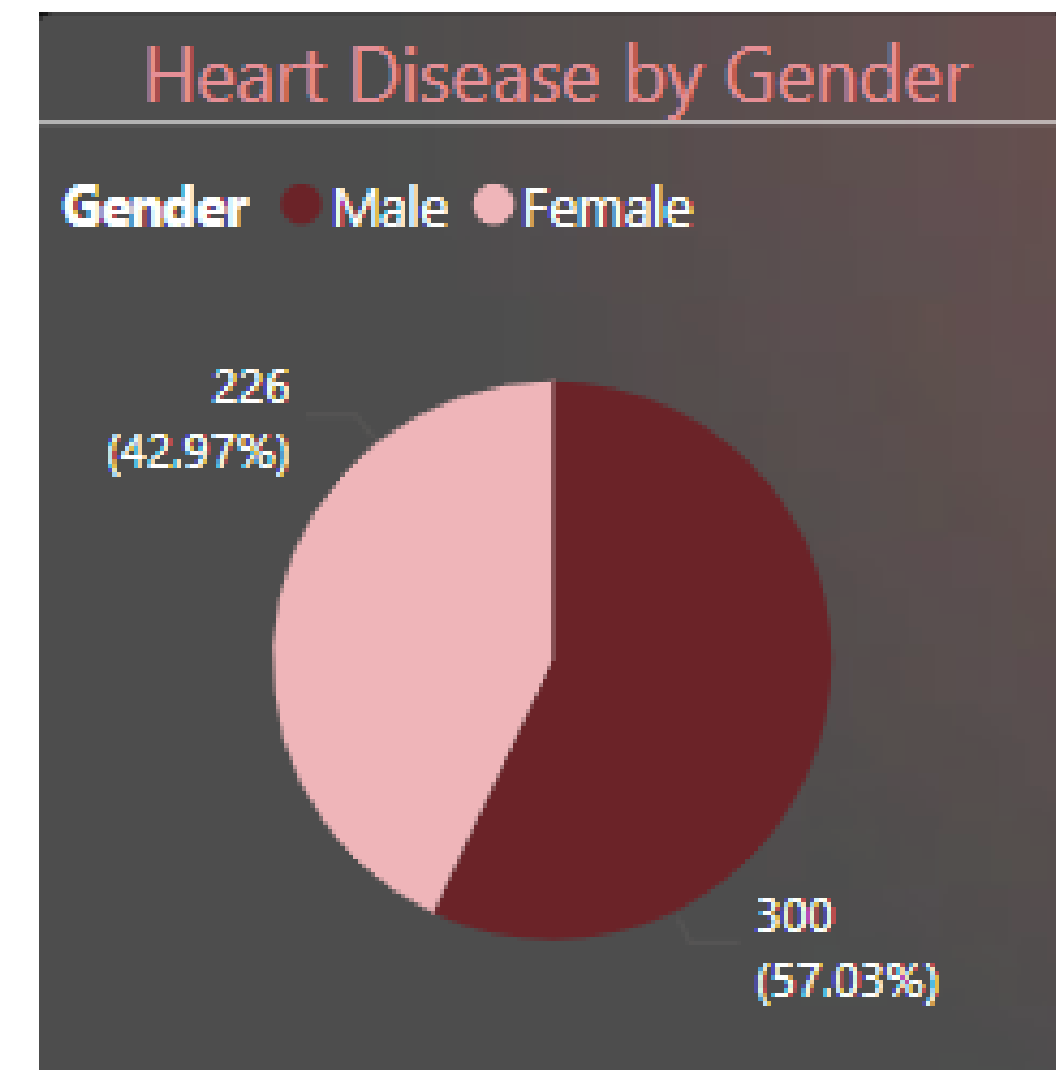
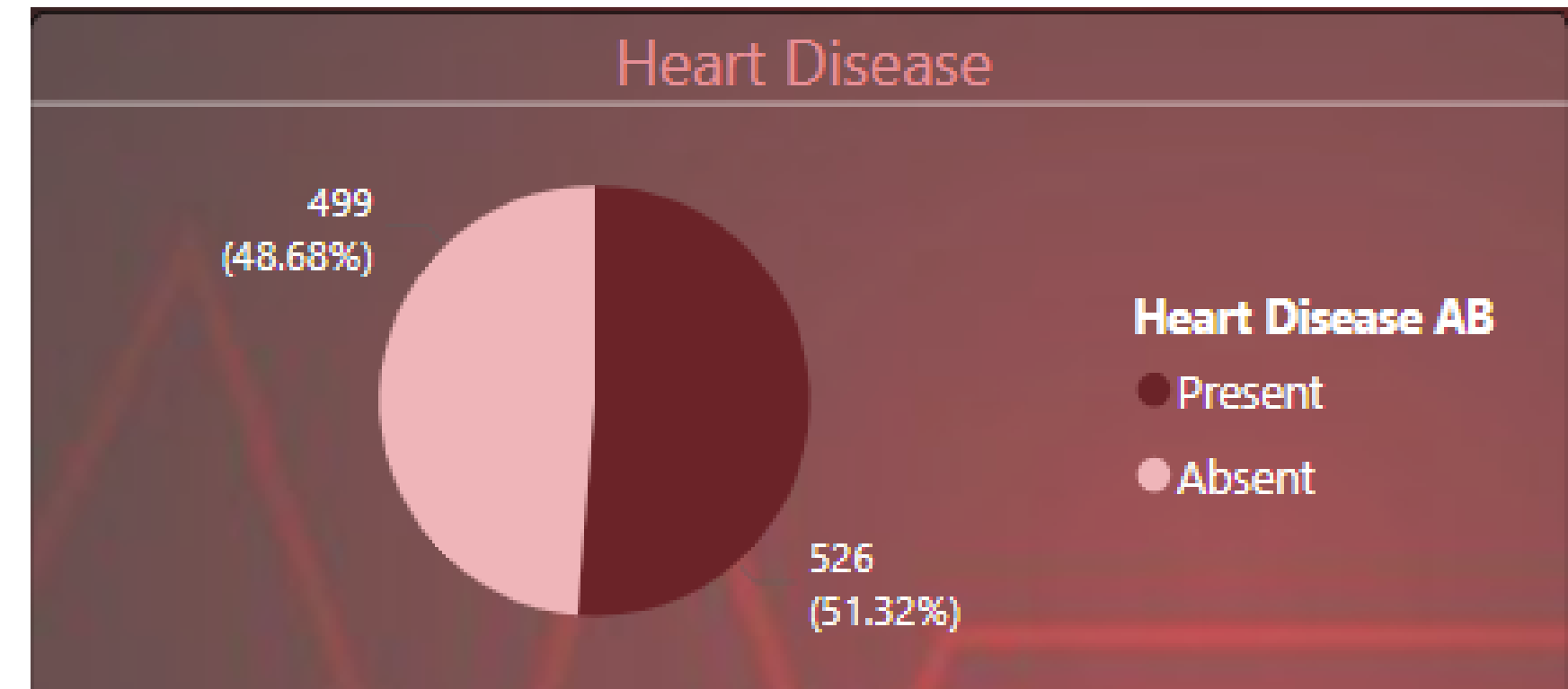


# Heart Disease By Gender:

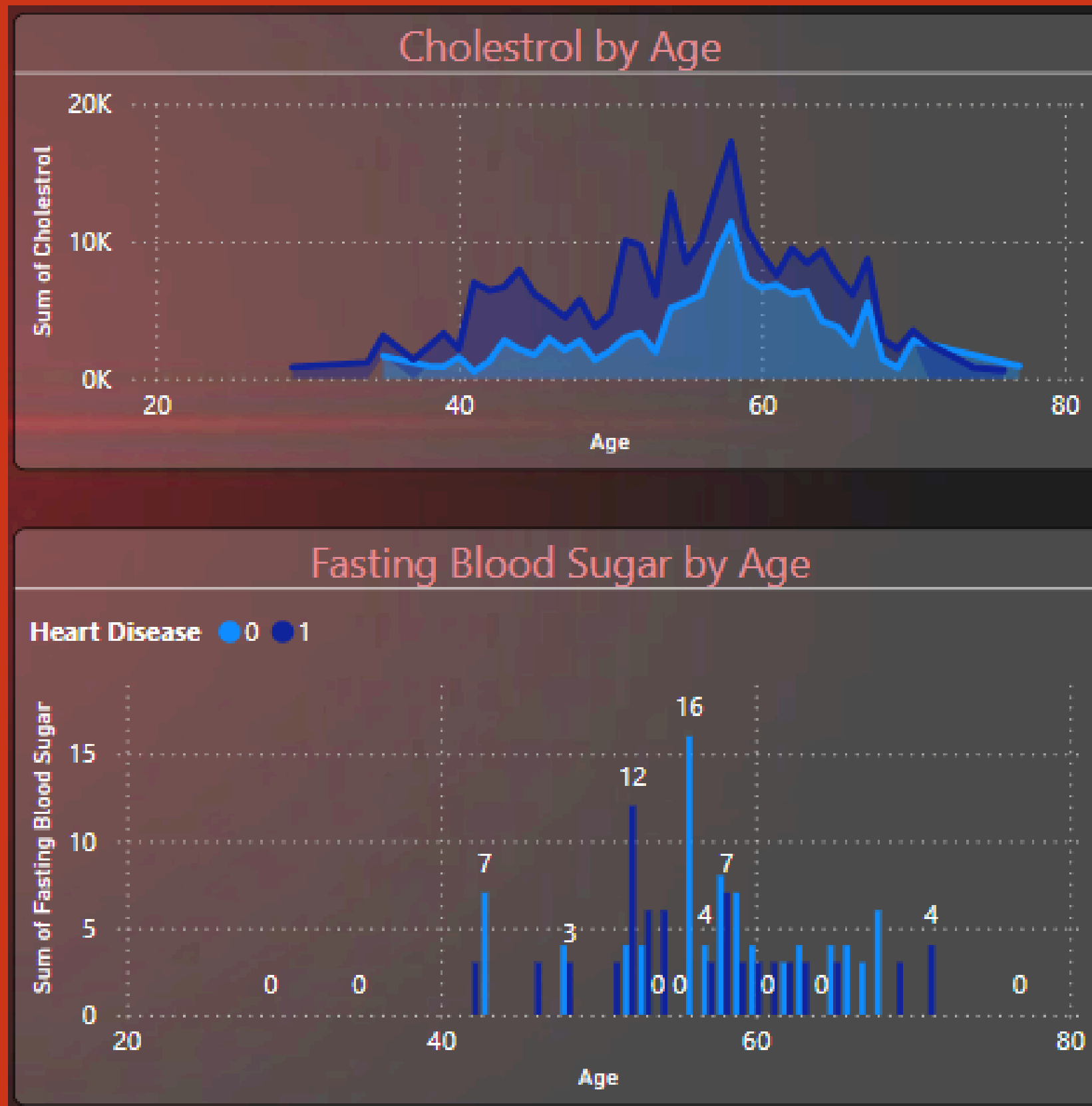
- The Heart Disease Present vs. Absent chart gives a snapshot of how widespread the condition is among the entire patient group, the Heart Disease by Gender chart delves deeper into the demographic nuances, revealing that males are disproportionately affected. This comparison underscores the importance of targeted public health strategies that address both general and gender-specific risks.

## Data Breakdown:

- Male Patients: 300 patients (57.03% of those with heart disease).
- Female Patients: 226 patients (42.97% of those with heart disease).
- Heart Disease Present: 526 patients (51.32% of the total patient population).
- Heart Disease Absent: 499 patients (48.68% of the total patient population).



# Cholesterol And Fasting Blood Sugar By Age



- Insight: Cholesterol levels tend to peak during middle age (around 40-60 years) and then decline in older age groups And Higher fasting blood sugar levels are more common among older patients with heart disease, with spikes observed particularly in patients aged 50-60.
- Implication: Middle-aged individuals may require more rigorous monitoring and management of cholesterol to prevent heart disease And Managing blood sugar levels is crucial, especially in older adults, to mitigate the risk of developing or worsening heart disease.

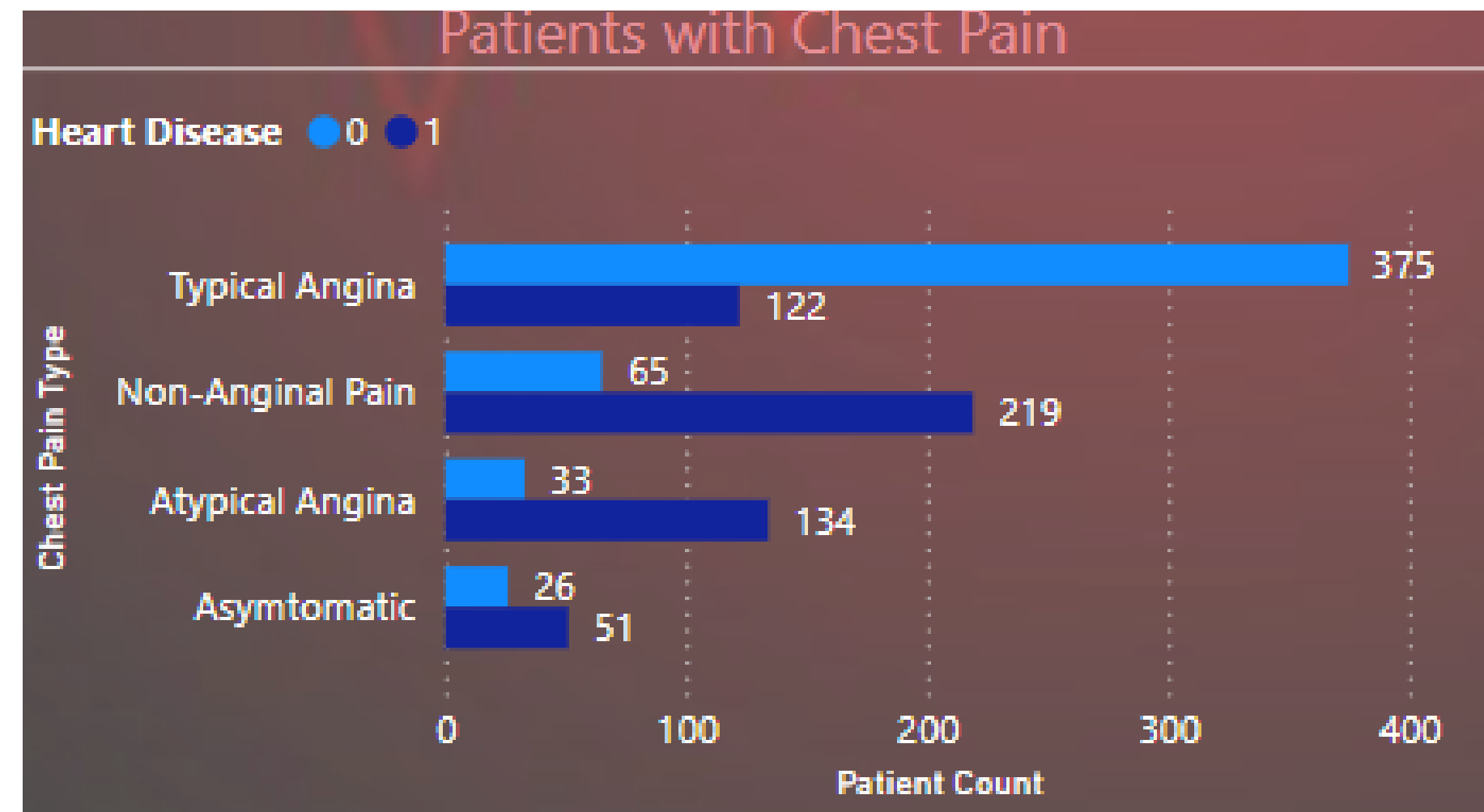


# Patients With Chest Pain:

- The visualizations focusing on patients with chest pain provide an important breakdown of how different types of chest pain are associated with the presence or absence of heart disease.
- The chart analyzes a total of 1,025 patients, categorizing them based on the type of chest pain they experience and whether they have been diagnosed with heart disease.

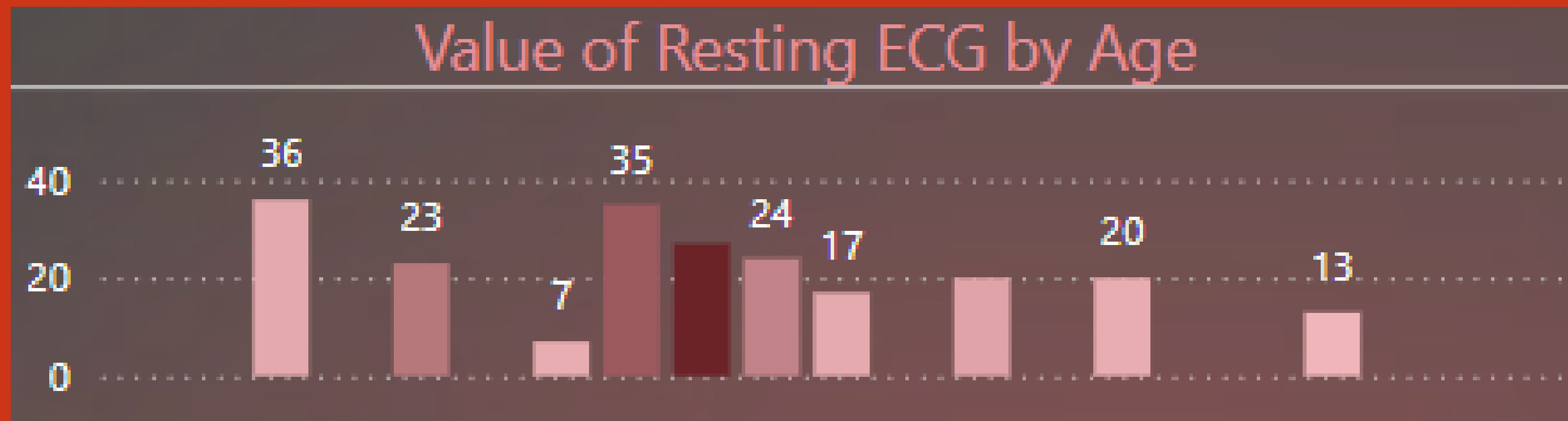
Chest Pain Types Analyzed:

1. Type 0: Typical Angina
2. Type 1: Atypical Angina
3. Type 2: Non-Anginal Pain
4. Type 3: Asymptomatic



# Value Of Resting ECG By Age:

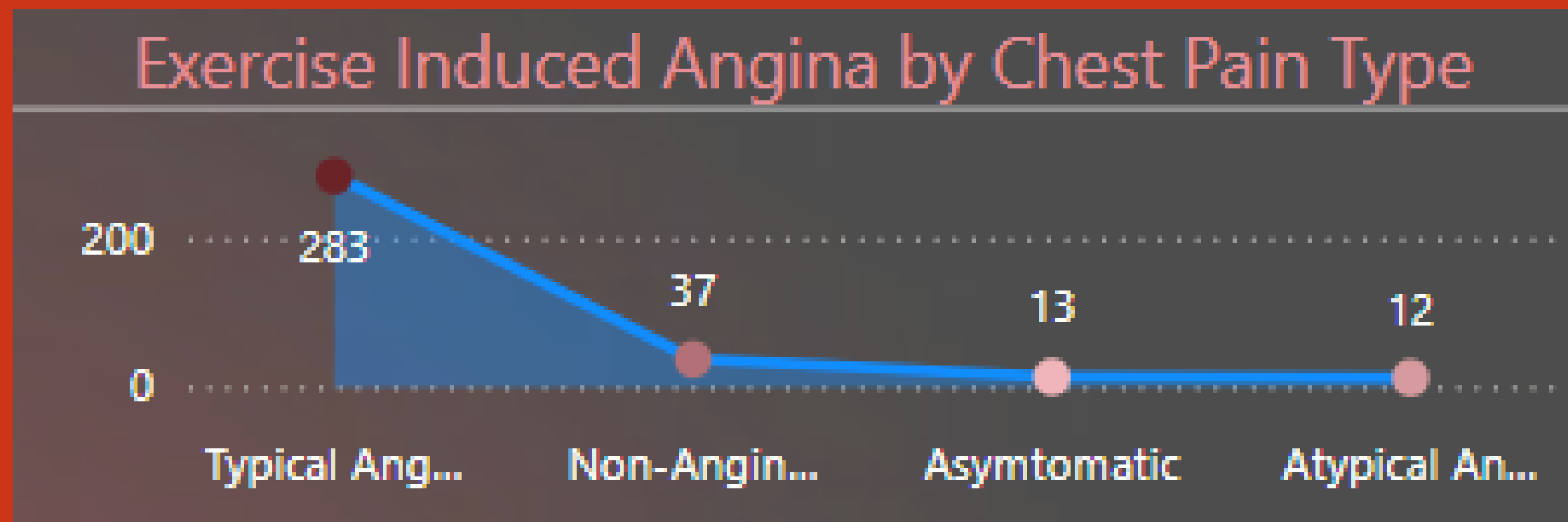
- Age-Specific Patterns: The visualization reveals that the likelihood of abnormal ECG results varies with age, peaking in middle-aged individuals. This suggests that age-specific patterns exist in cardiovascular health, with certain age groups being more susceptible to ECG abnormalities.
- Preventive Measures: The data underlines the importance of using ECGs as a preventive measure, particularly for individuals in their 40s to 60s. Early detection through ECGs could lead to timely interventions that prevent the progression of heart disease.



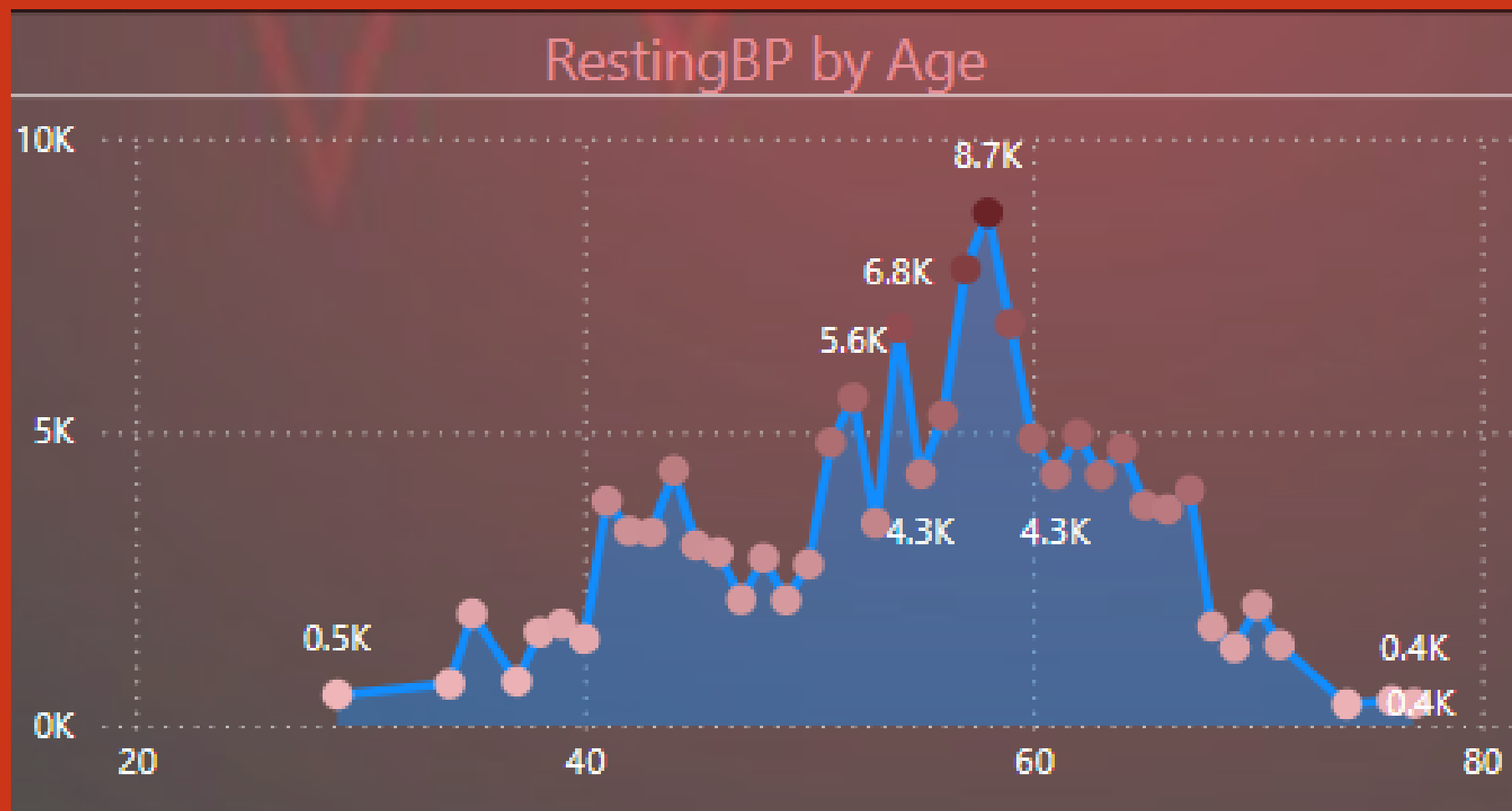
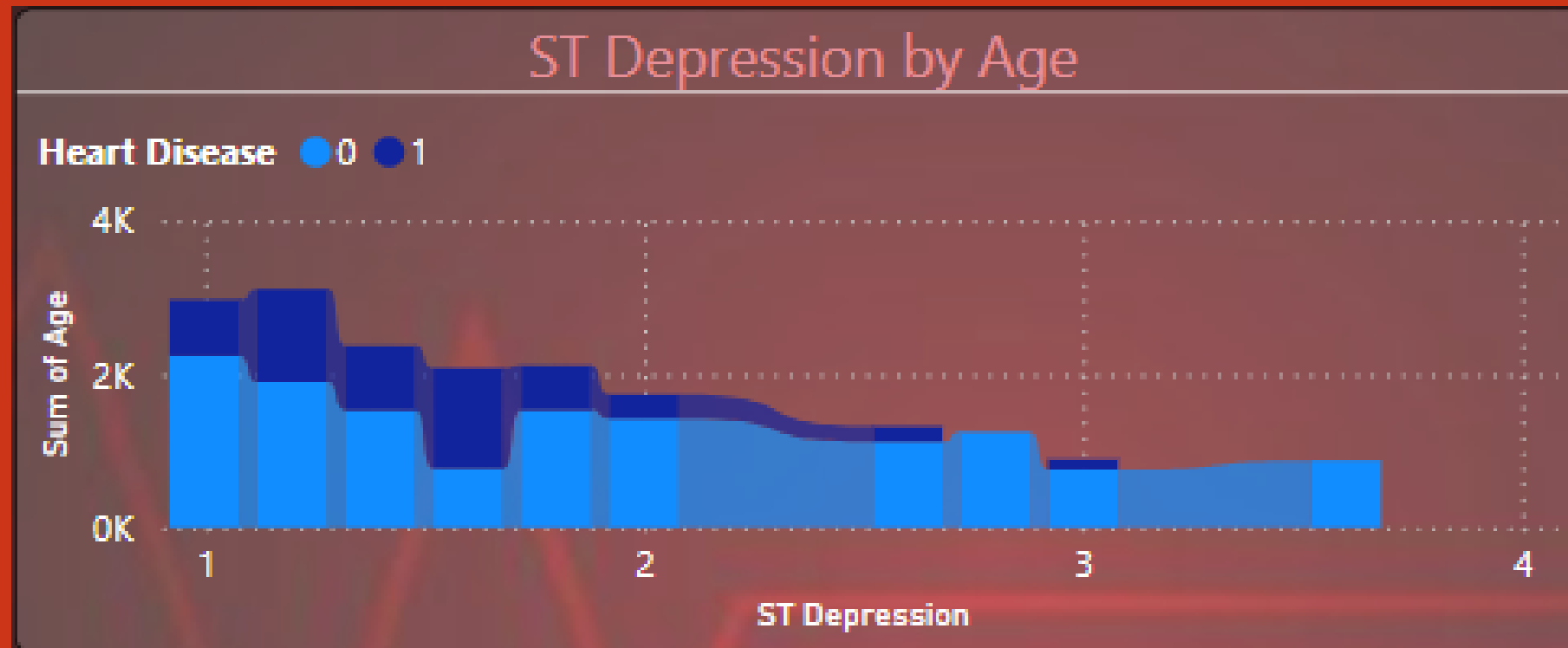


# Exercise Induced Angina By Chest Pain Type:

- Exercise-Induced Angina as a Marker: The data clearly shows that patients with typical angina are most likely to suffer from exercise-induced angina, making it a strong indicator of underlying heart disease.
- Risk Variation by Pain Type: There is a gradient of risk for exercise-induced angina depending on the type of chest pain, with typical angina presenting the highest risk, followed by atypical angina, non-anginal pain, and asymptomatic cases.
- Clinical Implications: This visualization reinforces the importance of tailored exercise recommendations and monitoring for patients based on their chest pain type, as the likelihood of angina triggered by physical activity varies significantly across these groups.



# ST Depression And RestingBP By Age



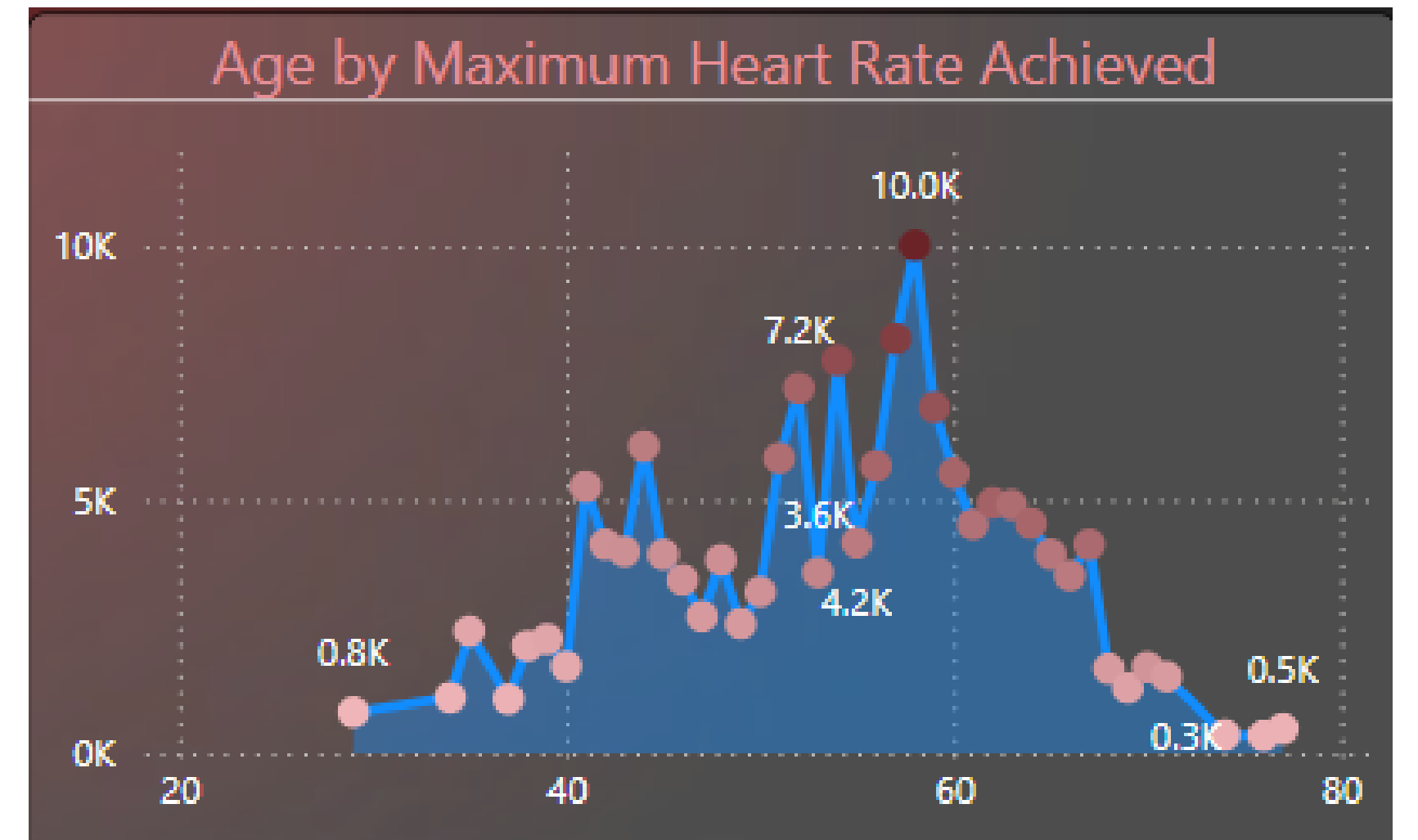
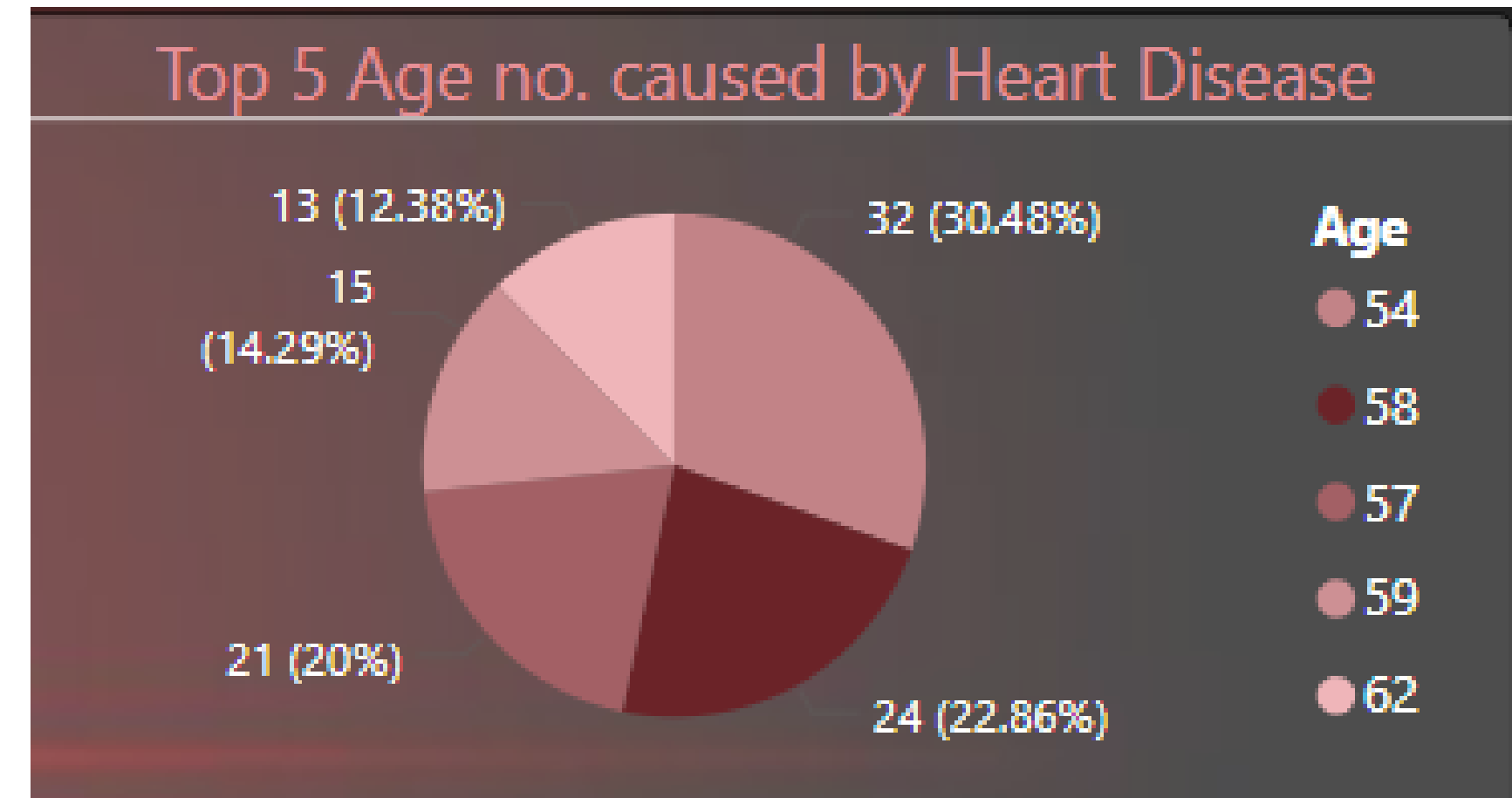
- Insight: ST depression, a marker often associated with heart disease, is observed across various age groups, with higher occurrences in older patients And Resting blood pressure is highest in patients aged 40-60, which is also the age group where heart disease is more prevalent.
- Implication: ST depression could be a critical diagnostic marker in older adults for detecting underlying heart conditions And Regular monitoring and management of blood pressure in middle-aged individuals could help in reducing the incidence of heart disease.

# Top Age Groups Caused By Heart Disease:

- Insight: The most affected age groups are between 54 and 62 years, with these groups showing the highest percentages of heart disease cases.
- Implication: This age range is a critical period for the onset of heart disease, suggesting that preventive measures should be particularly emphasized for individuals approaching or within this age bracket.

# Age By Maximum Heart Rate Achieved:

- Insight: The maximum heart rate achieved decreases with age, with a more pronounced decline in patients with heart disease.
- Implication: This trend may indicate declining cardiovascular fitness with age, particularly in heart disease patients. Regular cardiovascular exercise might help maintain heart health as people age.



# Conclusion



The visualizations collectively highlight the importance of a multifaceted approach to heart disease management, emphasizing early detection, gender and age-specific interventions, and the need for vigilance even in the absence of typical symptoms. This comprehensive understanding is crucial for improving patient outcomes and reducing the overall impact of heart disease.

THANK YOU!!!

