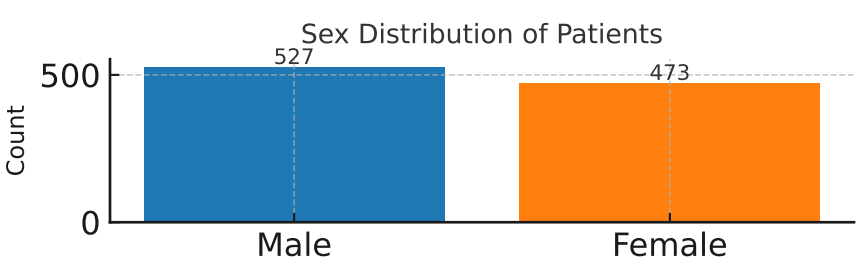
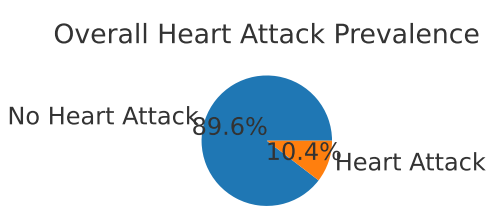
Executive Summary

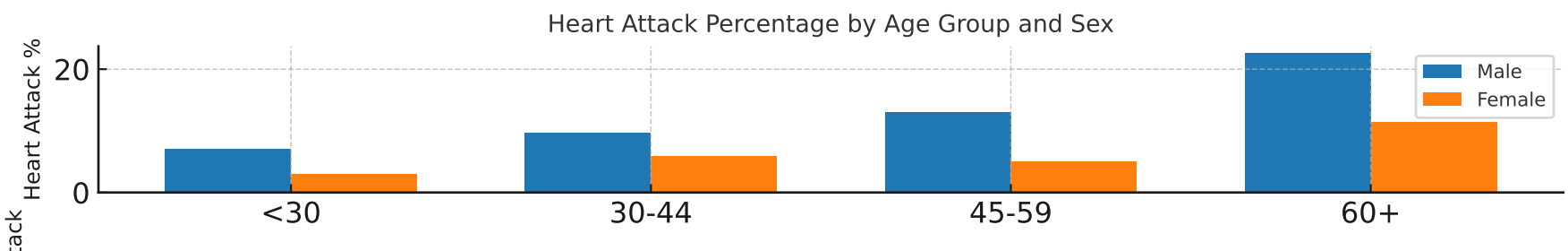
This report summarizes the key findings from the analysis of patient data related to heart attack events, stratified by age, sex, smoking status, and cholesterol levels. The dataset comprises 1,000 patient records with comprehensive cardiovascular risk factor measurements.

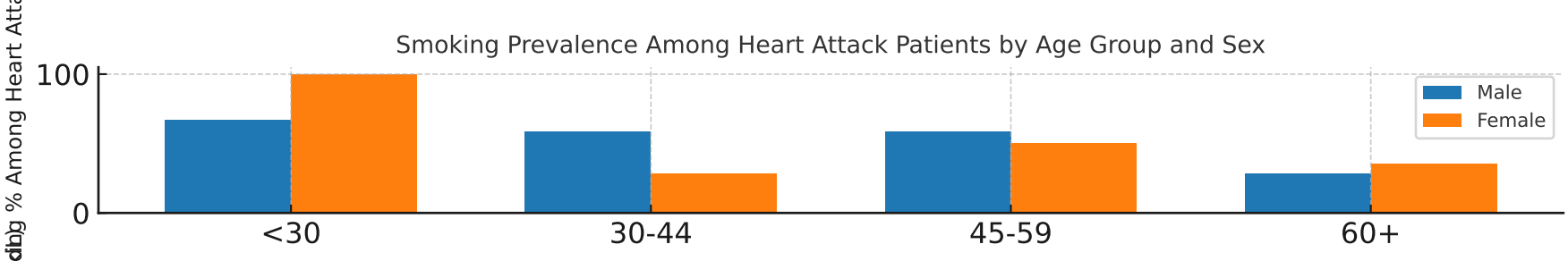
Key Highlights:
- Complete dataset with no missing values for age or cholesterol.
- Male patients constitute 52.7% of the population; females 47.3%.
- Overall heart attack prevalence is 10.4%.
- Average patient age is 49.9 years (range 18 to 94).
- Cholesterol quartiles indicate borderline to high levels for many patients.
- Smoking is a significant instigator, especially in heart attack patients.
- Heart attack risk increases with age, notably in 60+ age group.
- Males and older smokers exhibit the highest heart attack prevalence.

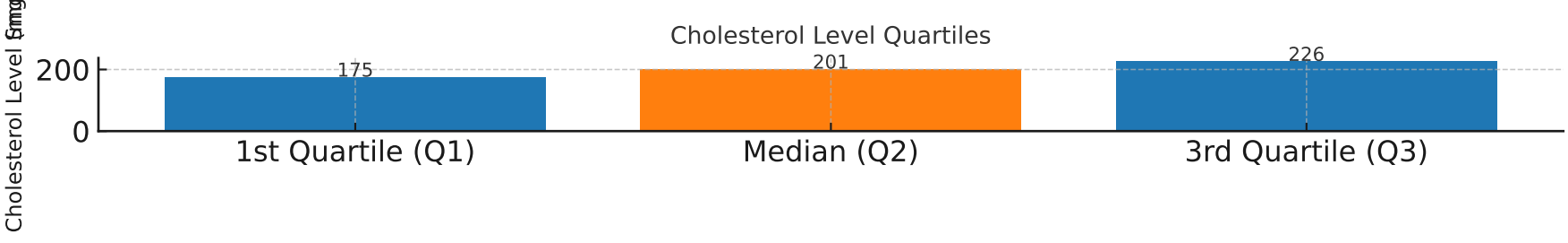
This report integrates SQL query results and provides actionable insights to support clinical risk stratification and targeted interventions.











Strategic Recommendations:

- Heart attack prevalence is higher among males, particularly smokers and older age groups.
- Targeted smoking cessation programs could significantly reduce heart attack incidence.
- Continuous monitoring of cholesterol and blood pressure remains critical for risk stratification.
- Future analyses should include multivariate modeling incorporating diabetes and LDL/HDL cholesterol.
- Data quality is high with no missing critical values, enabling reliable analytics.
- Focused preventive care for the 60+ demographic is recommended to mitigate risk.

These insights support data-driven clinical and public health strategies to improve cardiovascular outcomes.