Heart Disease Risk Analytics

Risk analysis metrics powered by PostgreSQL & Power BI

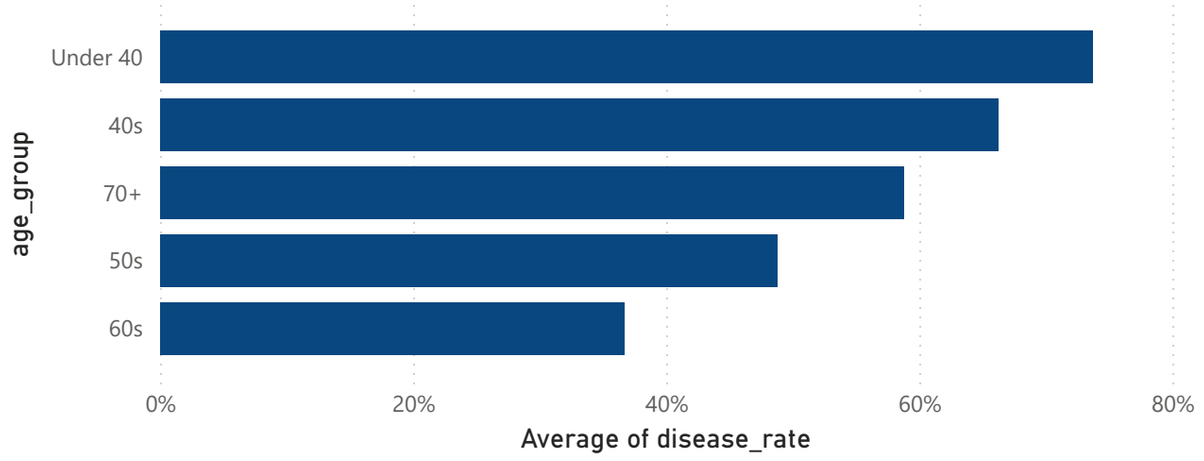
51.3%
Average of Disease rate

1025
Total Patients

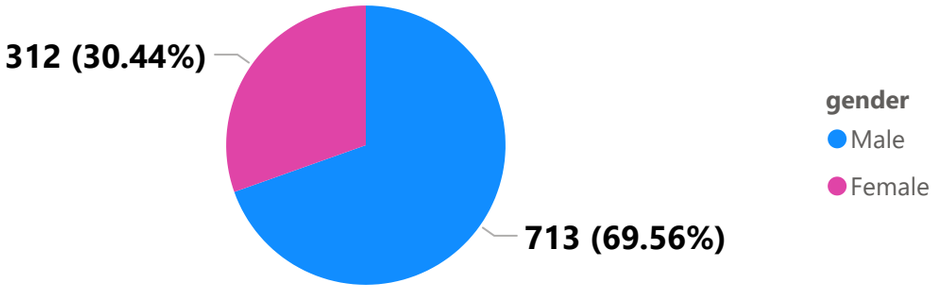
54.43
Avg Age

246.00
Avg Cholesterol

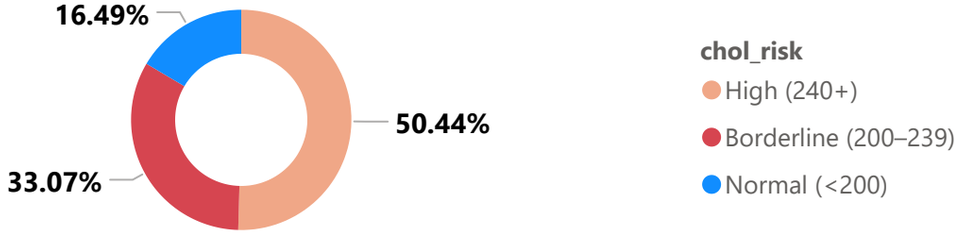
Disease Rate by Age group



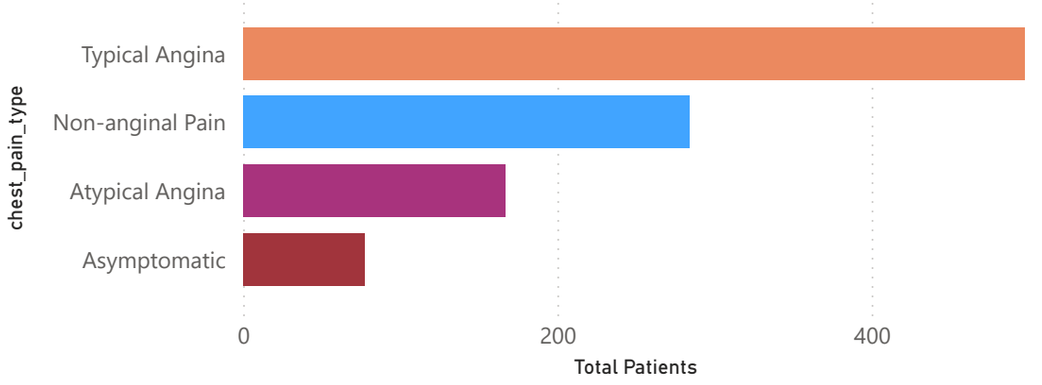
Gender Distribution



cholesterol risk by patients



Patient Distribution by Chest Pain Type



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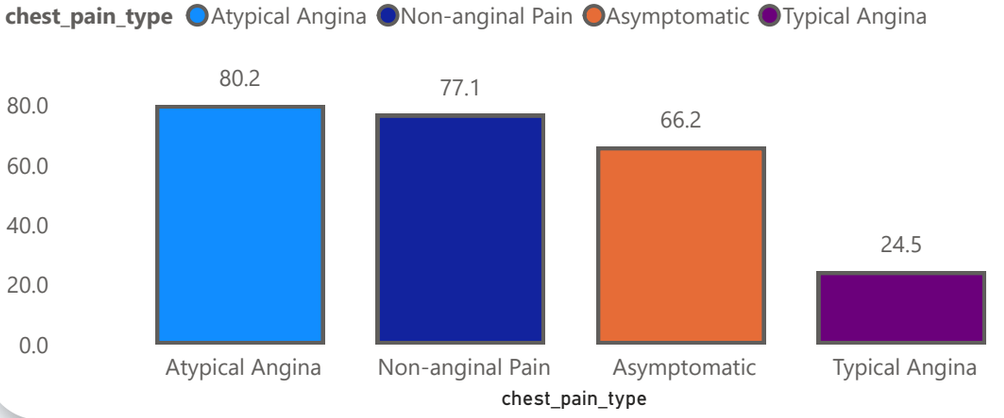
148.9

Average of Max heart rate

131.68

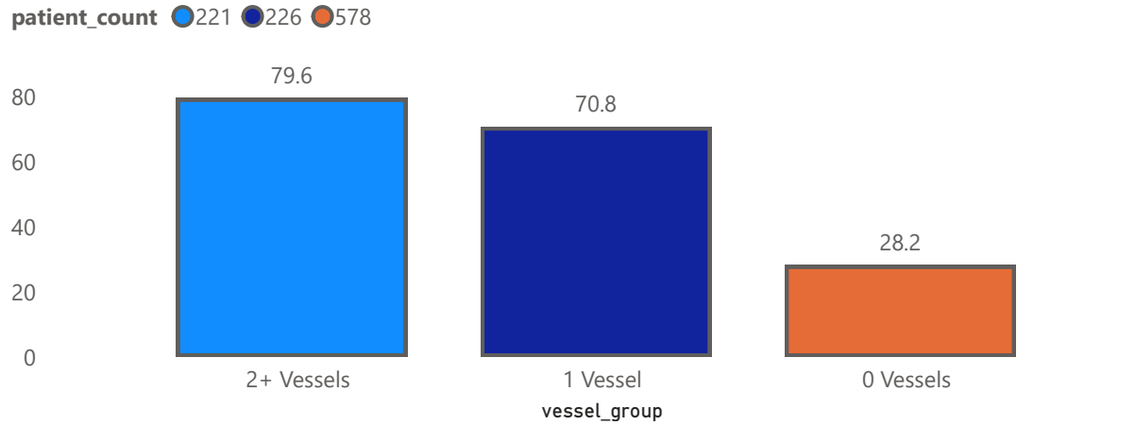
Average of Blood pressure

Disease Probability by Chest Pain



Impact of Physiological Stress on Heart Disease Risk

Impact of Arterial Blockage on Heart Disease Probability



Final Project Summary

Goal: I analyzed **1,025 patient records** to find the most reliable "red flags" for heart disease. Instead of just looking at basic facts like age, I looked at how symptoms and clinical tests actually predict a diagnosis.

The 3 Main Findings:

- **The Best Predictor:** Chest pain is the first sign, but it's specific. Patients with "Atypical" pain are significantly more likely to have a heart condition than those with standard chest pain.
- **The Physical Cause:** Blockages in major vessels (the ca column) are the strongest physical evidence. The risk of a heart disease diagnosis increases the moment even one narrowed vessel is detected during a scan.
- **The Stress Factor:** A patient's ability to handle exercise is a major "tell." Those who couldn't reach a high maximum heart rate or had poor recovery (ST depression) were consistently in the high-risk group.

The Conclusion: While demographics like age and gender provide context, Atypical pain and Vessel blockages are the two most critical signals for identifying heart disease in this dataset.