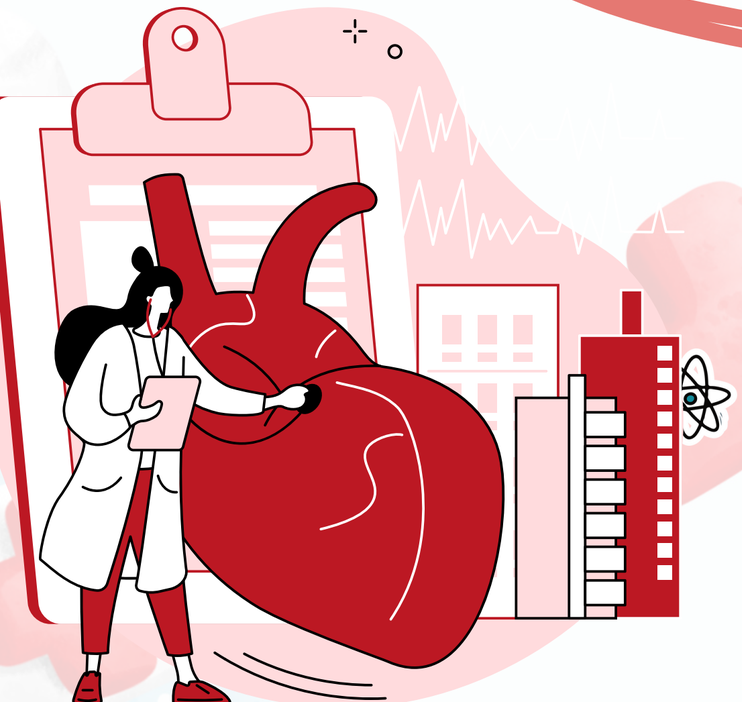
Heart Attack Prediction

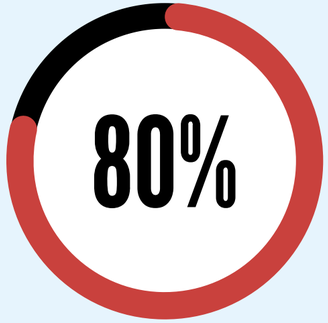


Bárbara Castelo | Ironhack | 2024

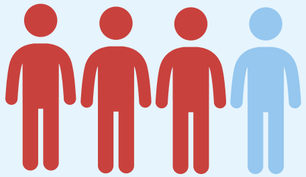
Impact of Cardiovascular Diseases

1°

Leading cause of death worldwide



of deaths are caused by heart attacks and strokes.



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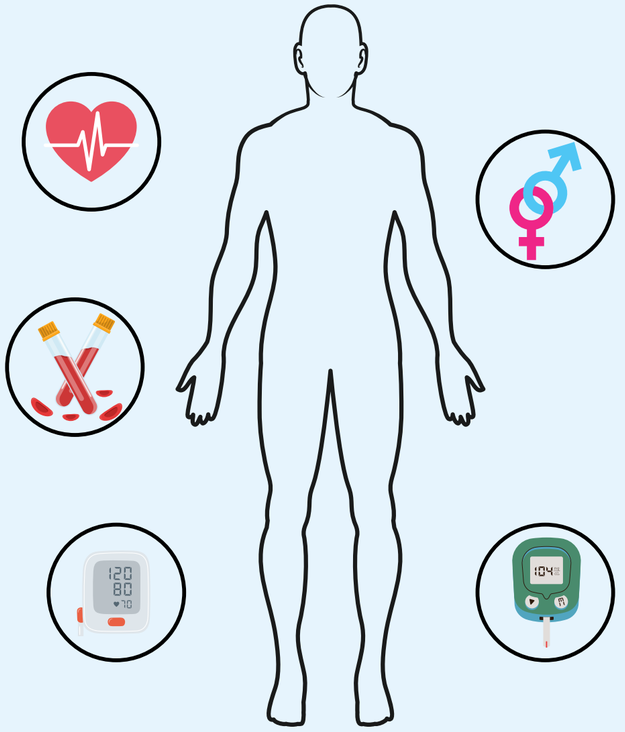
deaths happen in countries with low to middle income levels.

Risk factors:

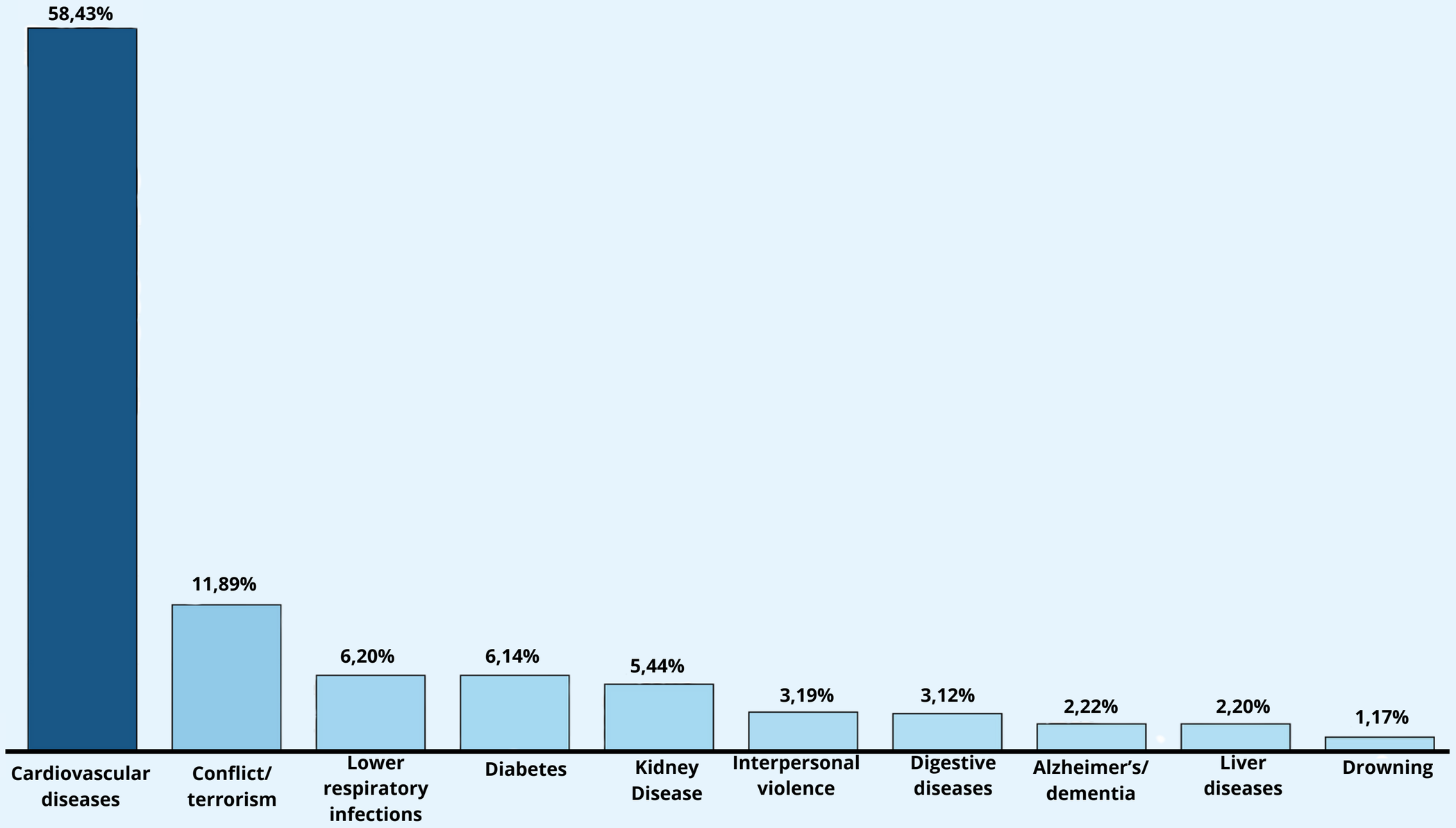
Dataset

- The heart attack datasets belong at Zheen hospital in Erbil, Iraq
- January 2019 - May 2019.
- The attributes of this dataset are:

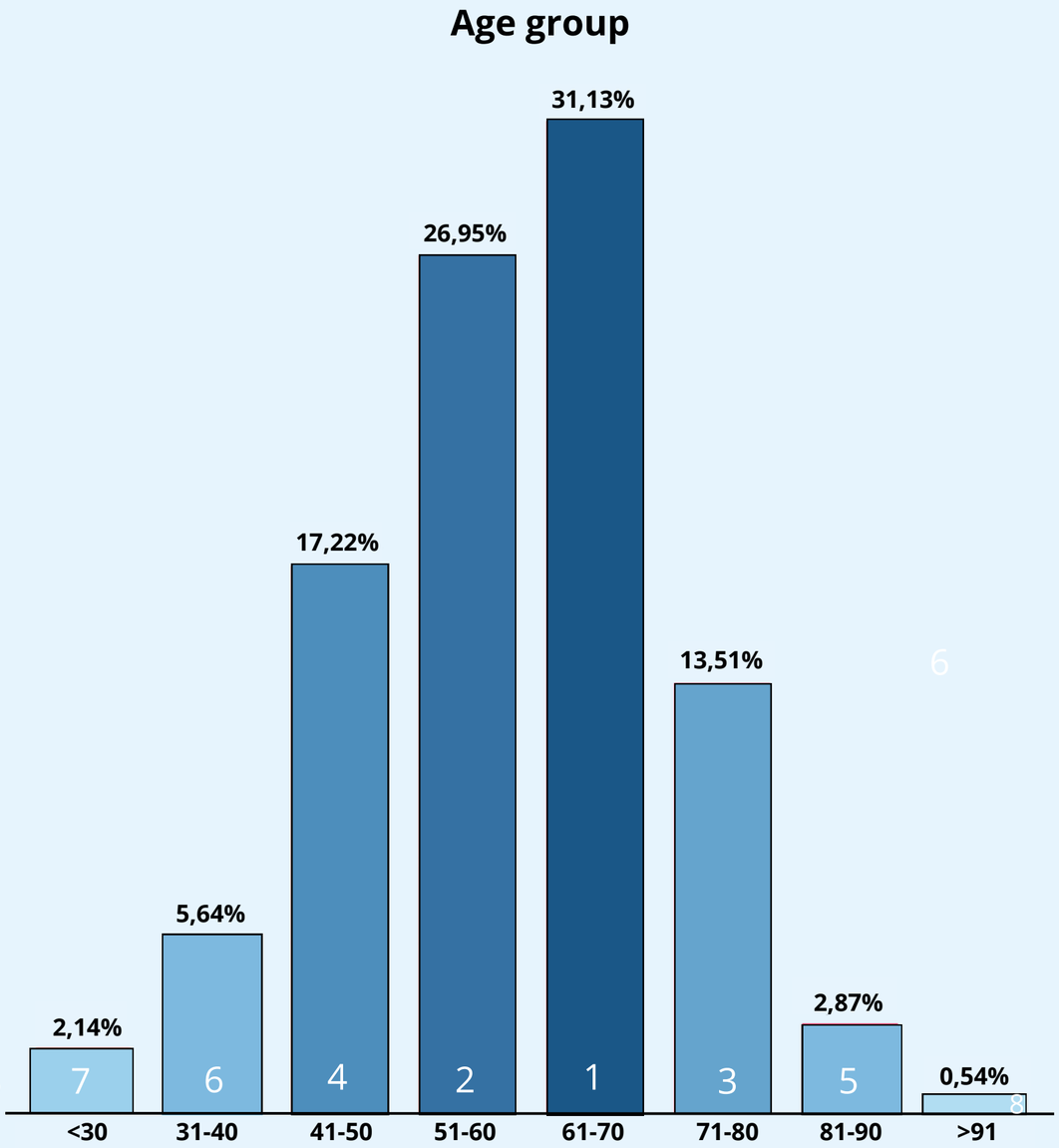
- Age
- Gender
- Heart Rate
- Systolic blood pressure
- Diastolic blood pressure
- Blood sugar
- Ck-mb
- Troponin
- Result

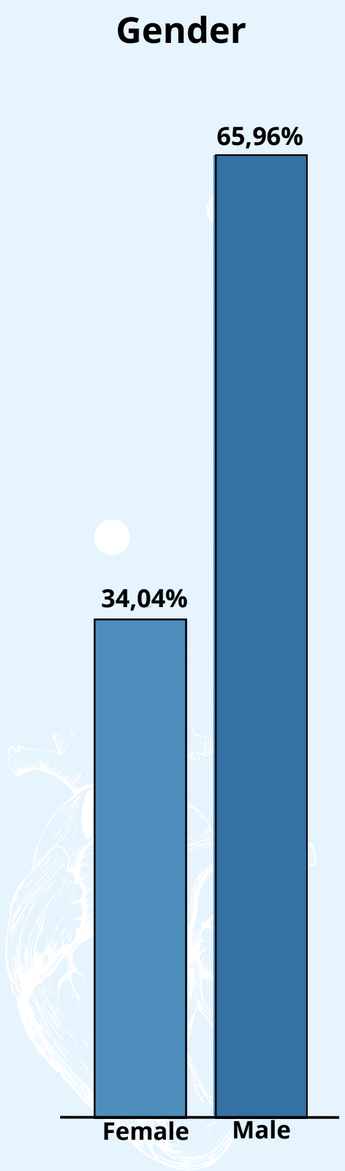


Causes of death in the last 32 years (Iraq)



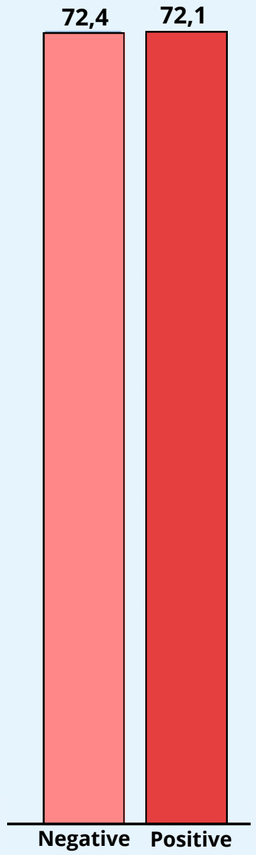
Demographic profile:



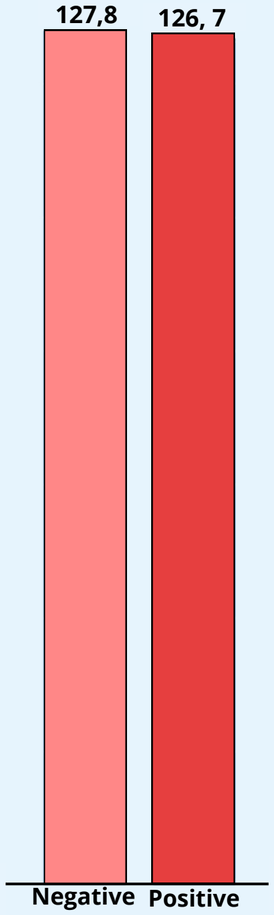


Patients’ Cardiovascular Metrics

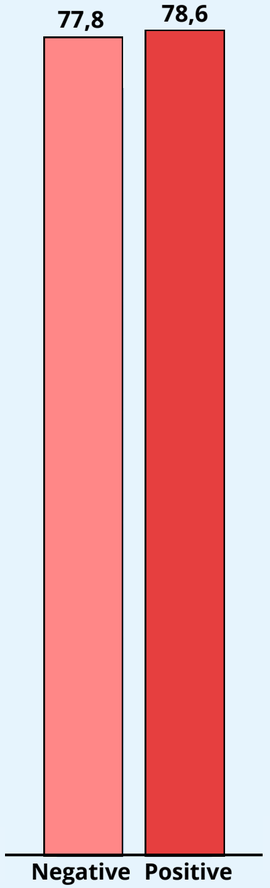
Diastolic blood pressure



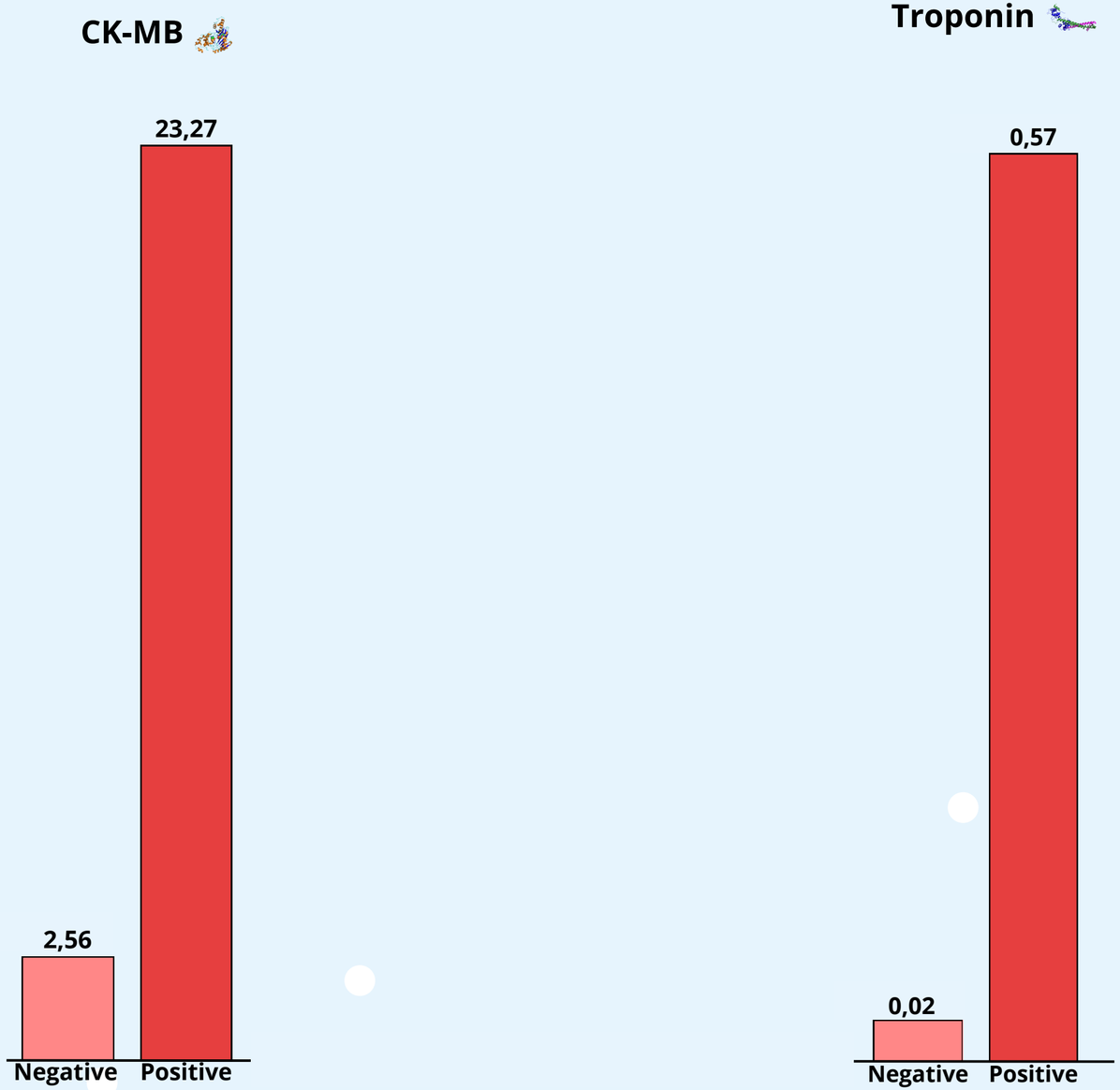
Systolic blood pressure



Heart rate



Patients' blood test findings:



Model

Heart attack in the past hours

Random Forest: 0.98

- Gradient Boosting: 0.97
- Decision Tree: 0.97
- Logistic Regression: 0.74
- SVM: 0.66

Heart attack in the next 6 months

Decision Tree: 0.86

- Random Forest: 0.82
- Gradient Boosting: 0.81
- Logistic Regression: 0.67
- SVM: 0.64

Predictive Healthcare Services

A Forecasting Tool for Patient Management in Healthcare: Designed to Evaluate the Likelihood of Heart Attacks and Monitor Post-Event Recovery.

Thank you!