

PROJECT DEVELOPMENT PHASE

Date	25.11.2022
Team ID	PNT2022TMID49830
Project Name	Visualizing and Predicting Heart Disease with an Interactive DashBoard

Story:

INTRODUCTION:

Thallium is a chemical element with the symbol Tl and atomic Number 81. It is a gray post-transition metal that is not found free in nature. When isolated, thallium resembles tin, but discolours when exposed to air. Chemists William Crookes and Claude-Auguste Lamy discovered thallium Independently in 1861, in residues of sulfuric acid production. Both used the Newly developed method of flame spectroscopy, in which thallium produces A notable green spectral line.

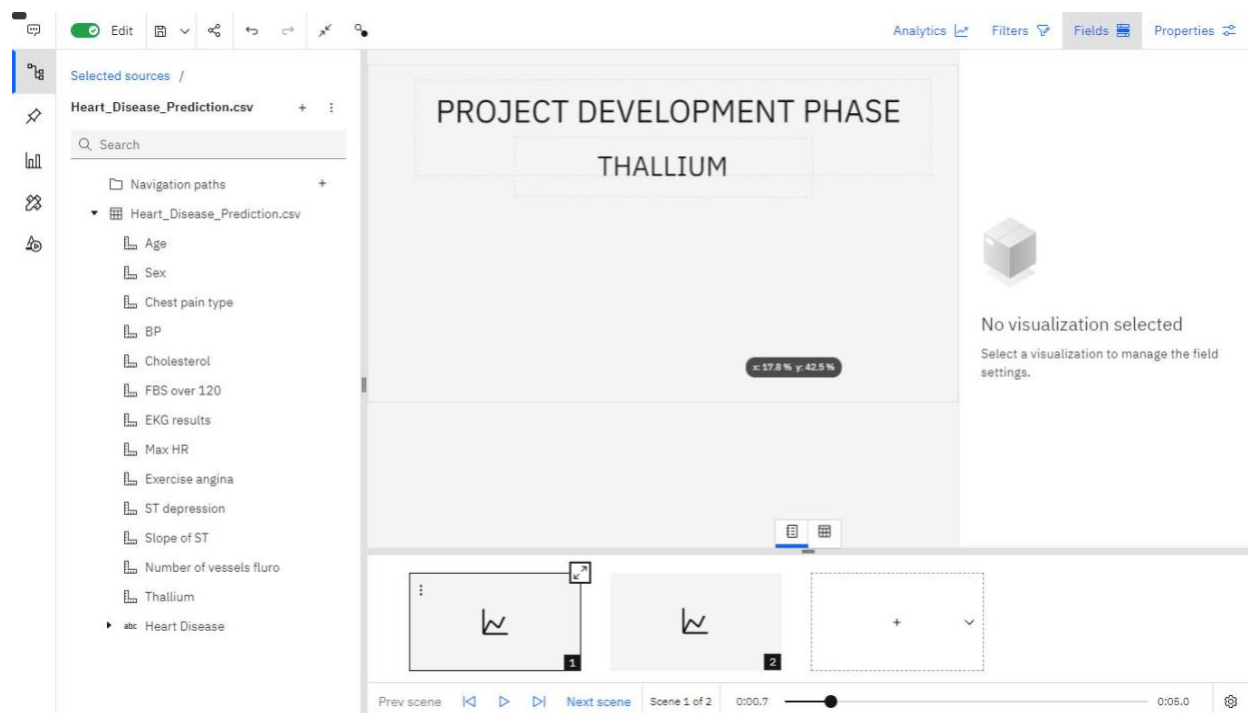
The radioisotope thallium-201 (as the soluble chloride $TlCl$) is Used in small amounts as an agent in a nuclear medicine scan, during one Type of nuclear cardiac stress test. Soluble thallium salts (many of which are Nearly tasteless) are highly toxic, and they were historically used in rat Poisons and insecticides. Because of their nonselective toxicity, use of these Compounds has been restricted or banned in many countries. Thallium Poisoning usually results in hair loss. Because of its historic popularity as a Murder weapon, thallium has gained notoriety as "the poisoner's poison" and "inheritance powder" (alongside arsenic).

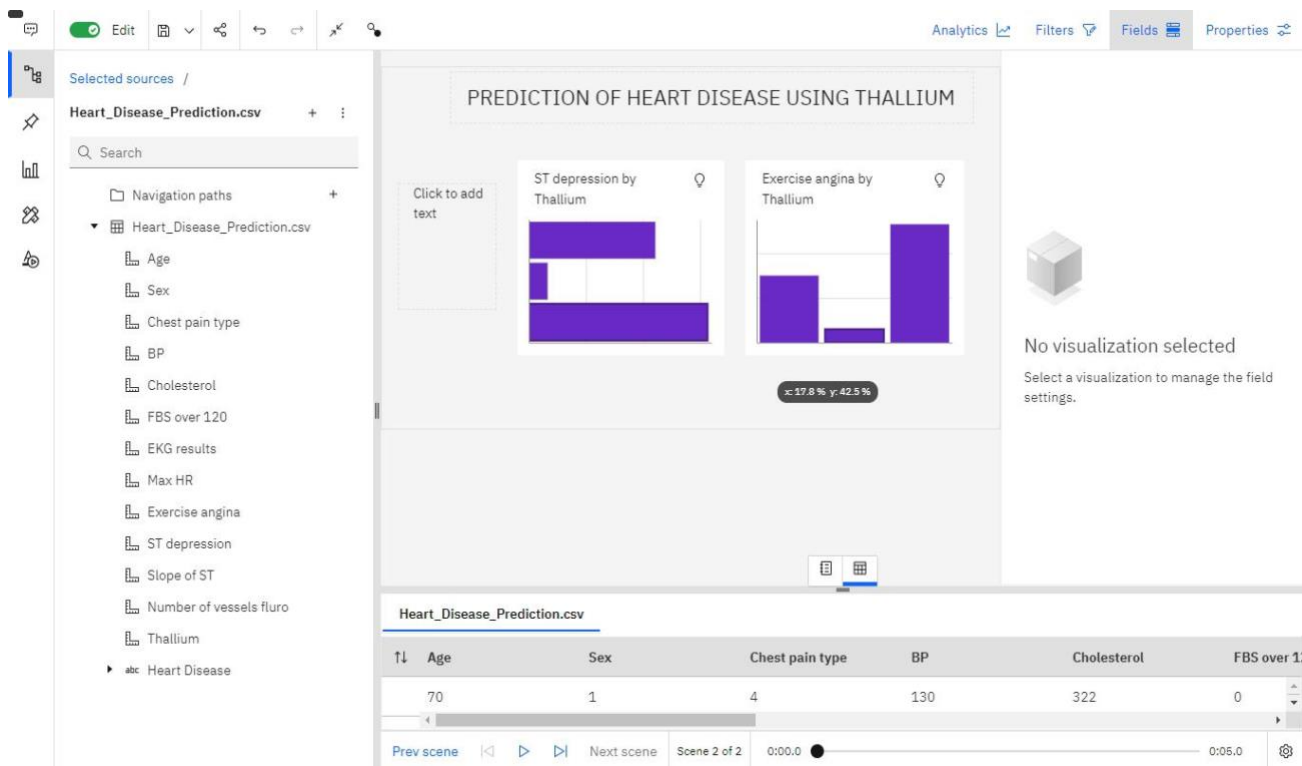
THALLIUM RELATED TO HEART :

Thallium can affect your nervous system, lung, heart, liver, And kidney if large amounts are eaten or drunk for short periods of time and Can even cause death. Temporary hair loss, vomiting, and diarrhea can also Occur and death may result after exposure to large amounts of thallium for short periods.

PREDICTION OF HEART DISEASE USING THALLIUM-201:

Due to its high sensitivity and specificity in detecting coronary Artery disease (CAD), thallium-201 myocardial perfusion imaging (MPI) is Commonly used to evaluate patients with chest pain. Moreover, thallium-201MPI has been demonstrated as a useful method to predict cardiovascular Events. It has been suggested that the incidence of major cardiovascular events In patients with chest pain and normal thallium-201 MPI is less than 1% per Year.





Conclusion:

The thallium stress test is a safe and effective diagnostic test to Determine the health of the heart. There are various factors contributing to Cardiac diseases. However, with advanced diagnostic aids and high-level Treatment protocols, cardiac conditions can be treated effortlessly with the Best possible patient outcome. An abnormal thallium stress test is indicative Of further testing with coronary angiography. Also, patients diagnosed with Severe blockages should seek immediate treatment with angioplasty, stent, Or bypass. Prompt treatment can offer the best prognosis for these patients

