Project Charter for Requirements Engineering Project

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Project Name:
Cancer risk prediction

Problem Statement:
Cancer still remains one of the most fatal diseases that the medical world has failed to find a cure for. Looking at the cancer statistics based on race and ethnicities, gives us a rather interesting finding. In the United States alone, Lung, prostate, and breast cancer are most common among African-Americans followed by Caucasians, Hispanics, Asians, and American Natives. Cancer deaths (those who die from the disease) continue to be disproportionately higher among African-Americans. [1] Other reasons leading to cancer can include a person's lifestyle, current health condition, physical activity, sun exposure, smoking, alcohol consumption and medical diagnosis information. It is thus worth studying how different reasons lead to cancer and if there are ways to predict it in the early stages to prevent fatality.

Project Goal:
Identifying different cancers in an apparently healthy, asymptomatic population by means of prediction from their race/ethnicities, lifestyle and hereditary information or other procedures. Preventative and therapeutic strategies can be developed using these early prediction methods by physicians.

Project Scope:
This study will include different ethnic groups in the United States, divisions will also be made on the basis of lifestyle, physical activities, personal habits and hygiene, etc.

Benefits:

Early cancer risk predictions and diagnosis can be used to improve healthy lifestyle and improve cancer outcomes by providing care at the earliest possible stage, so people have the best chance for successful treatment.

Algorithms:

Bayesian applications

Reference:

[1] Race and ethnicity as cancer risk factors
https://www.mdanderson.org/cancerwise/race-and-ethnicity-as-cancer-risk-factors.h00-158592156.html