# **INTRODUCTION**

Cancer misdiagnosis may occur at any stage during the cancer misdiagnosis process. Human error, such as a doctor’s negligence or incompetence when deciding which kinds of cancer tests would be needed, can result in cancer misdiagnosis. Misdiagnosis of cancer may occur during the testing process, such as errors in performing diagnostic imaging or poor cell sample collection for a biopsy.

Our topic is about designing a clinical decision support system (CDSS) directed towards cancer patients, with adherence to Evidence-Based Medicine guidelines. According to (Dotson, 2015), Evidence-Based Medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The main objective of this system is to provide concrete medical information and aid in the diagnosis of cancer patients, in other words, improving the quality of care they receive.

The following aspects are discussed in the report below, quality standards applicable to the project, identification of the problem including factors that contribute to the problem, and clarification of the most important concepts. By addressing these aspects comprehensively, the purpose of this report is to provide a thorough overview and understanding, planning, and execution of a CDSS tailored for cancer patients, thereby improving patient care and clinical outcomes in oncology practice.

# **THE AIM (GOAL) OF THE PROJECT**

In response to the pressing issue of delayed cancer diagnosis and its detrimental impact on patient outcomes, this project aims to implement a Clinical Decision Support System (CDSS). Cancer misdiagnosis, which frequently results from human error and inefficiencies in the diagnostic procedure, can seriously jeopardize patient health and well-being (Hall et al.). By utilizing technology and evidence-based methods, this project seeks to address these challenges to enhance the timeliness and accuracy of cancer detection.

## **USING SMART PRINCIPLES**

* **SPECIFIC:** The project’s specific objective is to reduce the average time from symptom onset to diagnosis of cancer by 20% within the next 12 months.
* **MEASURABLE:** The project’s success will be measured by tracking the average time taken between the onset of symptoms and diagnosis, both before and after the CDSS was implemented. Through data analysis, the 20% reduction target will be monitored monthly.
* **ACHIEVABLE:** The objective can be achieved through the implementation of a CDSS, specifically designed for cancer patients, which will streamline the diagnostic procedure, provide healthcare professionals with evidence-based decision support, and facilitate timely referrals and intervals.
* **REALISTIC:** Given the potential benefits of CDSS in improving diagnostic efficiency and patient outcomes, achieving a 20% reduction in the average time to diagnosis is a reasonable and feasible project target.
* **TIMELY:** The project timeline spans 12 months, beginning in July 2025, beginning in July 2025, providing ample time for the implementation and evaluation of the CDSS. Ongoing evaluations and adjustments will ensure timely achievement of the goal.