# 4.THE PROBLEM NOTED

**4.1 Problem**: Delay in diagnosing cancer in a patient.

**Nature of the problem**: The problem involves a delay in the diagnosis of cancer because patient’s poor background and lack of income from home that led to be unable to afford medicals and chemotherapy for patient, which can lead to delayed initiation of treatment and potentially worsen patient outcomes. Delays can occur at various stages, including the recognition of symptoms by the patient or health practitioner, referral to specialists, and completion of diagnostic tests.

**Extent and intensity** of **the problem**: A delay in diagnosing cancer can have a significant impact on patient health and well-being. It can lead to the progression of the disease, a need for more aggressive treatment, and a lower chance of survival. (Neal, 2015) The problem affects not only the patient but also their family and caregivers. For example, a delayed cancer diagnosis can be exemplified by colorectal cancer. A study published in the British Journal of Cancer found that delays in diagnosing colorectal cancer significantly affected survival rates. Those who received their diagnosis over a year after their symptoms first showed, had a poorer prognosis compared to those identified within three months. More specifically, the five-year survival rate dropped from 85% for patients diagnosed within three months to around 40% for patients diagnosed a year later. (Neal, 2015)

**Factors/variables contributing to the problem**:

* **Healthcare environment**: Lack of access to diagnostic tools or specialized healthcare services, long waiting times for appointments or test results. (O’Malley, 2005) discovered that unequal distribution of diagnostic equipment and rare health care services has inadequate effects on the diagnosis and treatment of cancer individuals. The study also emphasized that patients from rural setting or those coming from the low-income bracket also spend a lot of time due to health facility related reasons as they—lacking diagnostic centres and specialist.
* **Human resources**: Inadequate training or awareness among healthcare providers regarding cancer symptoms, diagnostic guidelines, or communication with patients.
* **Patient factors**: Lack of awareness about cancer symptoms, fear or stigma associated with cancer, reluctance to seek medical attention.

**4.2 Root Cause Analysis:**

1. **Identify the problem**: Delay in diagnosing cancer in a patient.
2. **Identify Causal Factors**: Determine the underlying causes of delays, such as healthcare system issues, patient-related factors, or healthcare provider-related factors.
3. **Healthcare System Issues:**

* Analyze scheduling and referral processes to identify bottlenecks.
* Evaluate the availability and capacity of diagnostic facilities and personnel.

1. **Patient-Related Factors:**

* Conduct surveys and focus groups to understand patient knowledge, attitudes, and behaviours regarding symptom reporting and healthcare utilization.
* Assess socioeconomic barriers such as transportation, insurance coverage, and access to primary care.
* Evaluation of medical institution documents regarding scheduling and timing of appointments and tests.
* Having interviews and distributing questionnaires to patients, healthcare providers, and administrators.
* Statistical examination of patient results linked to timing of diagnosis.

**4.3 Develop Solutions**: To address the root causes, such as implementing screening programs, improving access to healthcare services, or enhancing patient education and awareness. Our main purpose is to create mobile application that will help the doctors diagnose the patient to show which symptoms a patient have about the cancer.

**4.4 Implement Solutions**: Implement the proposed solutions and monitor their effectiveness.

**4.5 Evaluate Outcomes:** Assess the impact of the solutions on reducing delays in diagnosing cancer. (Brown & Johnson, 2022)