

## ABSTRACT

One of the most deadly diseases for humans is cancer. Cancer itself is the uncontrolled growth of abnormal cells in the body. Cancer has a greater potential for cure if detected as early as possible. One of the cancers that is difficult to detect early is ovarian cancer, as currently there are still no definite symptoms indicating that someone is infected with ovarian cancer. Even with the use of supporting tools such as ultrasound (USG), it is still not certain whether someone is truly infected with ovarian cancer or if it is a fibroid or cyst.

Based on the problem description, this Project Capstone Design provides a solution in the form of a pre-ovarian cancer *assessment* application system that can be used for early detection and to increase awareness of the dangers of ovarian cancer, especially among women. The system used in the application for early detection of ovarian cancer is by providing a questionnaire containing questions about symptoms that may be experienced by patients infected with ovarian cancer. From the patient's answers, the application processes the data and generates an output in the form of a value indicating the potential of the patient being infected with ovarian cancer.

In this study, three tests were conducted. The first test was a data processing test using probability and statistics methods. This test determines the accuracy level of the application in detecting ovarian cancer. From this test, an accuracy level of 80% was obtained. The second test was an application test, which aimed to determine the specifications of the device that can run the application. The results of this test showed that the device running the application must have a minimum operating system of Android 6 Marshmallow. It was also found that the application is lightweight as it only uses 8% of CPU and 0.230MB of RAM. The third test involved *server* and database testing, where 1000 *requests* were sent to the *server* within 1 second, resulting in a throughput value of 107.3 *requests* per second with an *error rate* of 0%.

Keywords: cancer, ovary, *assessment* application, ovarian cancer