A new smartphone app, when paired with a $200 portable attachment, can accurately detect and diagnose cancers without the need for surgery or tissue samples. A new study co-authored by Dr. Cesar Castro has proven the effectiveness of the smartphone application.

In addition to being effective, the process is relatively quick, too. Castro says, “From beginning to end it takes about 60 minutes.”

The add-on device that works with the application is a Nuclear Magnetic Resonance screener called microNMR, which operates quite similarly to how an MRI machine does. The only difference is that the microNMR looks at a very small section of cells in the body as opposed to looking deep into the body tissues as an MRI would do.

Dr. Castro is an oncologist at Massachusetts General Hospital in Boston.

“We’re trying to extract as much information from small amounts of cells, so that there’s minimal harm to the patient,” Castro says.

This is in sharp contrast to the current biopsy procedure which can take up to a week to get reliable results from and would require a much larger sample of tissue from patients.