

A New Test Uses a Single Drop of Blood to Screen for 13 Types of Cancer

A team of researchers in a Tokyo-based National Cancer Center (NCC) has developed a new blood test that can diagnose 13 types of cancer, as originally reported by *The Japan News*. With more than 100 types of cancer, there are many variables, and diagnoses can sometimes come too late.

The Japanese team of researchers, with help from Toray Industries, Inc., are able to use just a drop of blood to detect the following cancers:

- Stomach cancer
- Colorectal cancer
- Esophageal cancer
- Glioma
- Ovarian cancer
- Prostate cancer
- Bladder cancer
- Bone and soft tissue tumors
- Lung cancer
- Breast cancer
- Biliary tract cancer
- Liver cancer
- Pancreatic cancer

The microRNA (miRNA), a substance that is secreted from cells into the blood and controls the movements of genes, can communicate between healthy cells and cancer cells, allowing for the cancer detection to occur. The study used blood samples from 40,000 patients, where the researchers were able to identify miRNA that connected with each type of cancer

A New Test Uses a Single Drop of Blood to Screen for 13 Types of Cancer

listed, achieving more than 95 percent accuracy. They were also able to diagnose early stage 1 cancers, with 96 percent accuracy. Breast cancer was successfully diagnosed with 97 percent accuracy.

However, since the blood samples were preserved, there is a chance that the miRNA could have changed. To counteract this possibility, clinical tests are planned for August 2017 with fresh blood from 3,000 people.

Chief of the Molecular Pathology Department of the Tokyo Medical University said, “In Europe, research aimed at early detection of diseases using miRNA is being actively pursued, but there haven’t been any studies where analysis was conducted on so many patients like this one. So, this should prove very useful.”

This Japanese team’s method is the first of its kind that can diagnose multiple types of cancer from a single test. If detected early enough, this could potentially enhance a patient’s chances of being properly diagnosed, giving a higher chance for survival.

The hope is to eliminate the practice of conducting multiple tests on a single patient. The head of Molecular and Cellular Medicine Division at the National Cancer Center Research Institute, Takahiro Ochiya said, “patients will not need to take multiple tests. In the future, it will become possible to identify cancer stages and characteristics.”

The researchers received approval to continue to clinical tests from the NCC’s research and ethics screening committee. The team’s goal is to receive government approval in order to open their method for practical use in the next three years.

A New Test Uses a Single Drop of Blood to Screen for 13 Types of Cancer

Share with friends and coworkers:

- [Click to email this to a friend \(Opens in new window\)](#)
- [Click to share on Twitter \(Opens in new window\)](#)
- [Click to share on Facebook \(Opens in new window\)](#)
- [Click to share on Pinterest \(Opens in new window\)](#)
- [Click to share on LinkedIn \(Opens in new window\)](#)
- [Click to share on Tumblr \(Opens in new window\)](#)
- [Click to share on Reddit \(Opens in new window\)](#)