Molecular profiling can provide clinically meaningful information to help people with pancreatic cancer and their providers select effective treatments, the Pancreatic Cancer Action Network (PanCAN) announced last week.

Results from a study published in the American Association for Cancer Research journal, Clinical Cancer Research, showed that pancreatic cancer patients who had “actionable” mutations and received matched targeted therapy had better outcomes than those who did not.

“There has been a longstanding notion that precision medicine cannot benefit pancreatic cancer patients,” said study coauthor and PanCAN chief science officer Lynn Matrisian, PhD, MBA. “We now have to rethink that position as this research exemplifies a changing tide in the way we should treat pancreatic cancer patients, ensuring molecular profiling is an integral part of their treatment journey.”

Pancreatic cancer is often detected at a late stage and is difficult to treat. About 55,400 people will be diagnosed with pancreatic cancer and about 44,300 will die of it this year, according to the American Cancer Society. Although pancreatic cancer accounts for about 3 percent of all cancer cases in the United States, it is responsible for 7 percent of cancer-related deaths.

Michael Pishvaian, MD, of Georgetown Lombardi Comprehensive Cancer Center in Washington, DC, and colleagues conducted a study to determine whether “multiomic” molecular profiling of pancreatic tumors could identify mutations that make them susceptible to targeted therapies.

The researchers tested tumor samples from 640 pancreatic cancer patients at nearly 300 academic and community practices between 2014 and 2017. More than 90 percent of samples were found to be adequate for next-generation sequencing.

Molecular profiling was done through PanCAN’s Know Your Tumor service, offered in partnership with the health care artificial intelligence company Perthera. Each patient receives a detailed report that describes genomic (genetic) and proteomic (protein) changes in their tumor and lists relevant treatment options and available clinical trials. PanCAN recommends molecular profiling
for all people with pancreatic cancer.

A tumor review board found that half of the patients had genomic alterations that were considered actionable, meaning a relevant targeted therapy is available; just over a quarter had mutations deemed highly actionable. Common actionable alterations included changes in DNA repair genes such as BRCA or ATM (8.4 percent) and cell cycle genes such as CDK4/6 (8.1 percent). In addition, 5 percent had actionable proteomic alterations.

The 17 patients with highly actionable biomarkers who received matched targeted therapy had longer progression-free survival (meaning they were still alive with no worsening of disease) than those who received unmatched therapy (4.1 versus 1.9 months, respectively). Although the numbers were small, the association was statistically significant, indicating that it was probably not attributable to chance alone.

“A comprehensive precision medicine system can be implemented in community and academic settings, with highly actionable findings observed in over 25 percent of pancreatic cancers,” the study authors concluded. “Patients whose tumors have highly actionable alterations and receive matched therapy demonstrated significantly increased progression-free survival.”

These results, they added, support further prospective evaluation of precision oncology for people with pancreatic cancer.

[Click here](https://www.cancerhealth.com/article/precision-medicine-pancreatic-cancer) to read the study abstract.

[Click here](https://www.cancerhealth.com/article/precision-medicine-pancreatic-cancer) to read a PanCAN news report about the study.