Medical Xpress

Personalized medicine helps cancer patients survive

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Cancer patients can survive longer under treatments based on their individual genetic profiles, according to a nationwide study released jointly today by Phoenix-area healthcare organizations.

The study shows that molecular profiling of patients can identify specific treatments for individuals, helping keep their cancer in check for significantly longer periods, and in some cases even shrinking tumors.

Study results were released today at the 100th annual meeting of the American Association for Cancer Research in Denver by Dr. Daniel Von Hoff, Physician-In-Chief of the Phoenix-based Translational Genomics Research Institute (TGen), and the study's Principal Investigator.

The study included 66 patients at nine centers across the United States, including Scottsdale Heathcare. Dr. Von Hoff also is the Chief Scientific Officer of TGen Clinical Research Services (TCRS) at Scottsdale Healthcare, a partnership between TGen and Scottsdale Healthcare that is administered by the Scottsdale Clinical Research Institute (SCRI) at Scottsdale Healthcare.

All of the patients had previously experienced growth of their tumors while undergoing as many as two to six prior cancer treatments, including conventional chemotherapy.

However, after molecular profiling identified precise targets, new

treatments were administered that resulted in patients experiencing significant periods of time when there was no progression of their cancer.

"This clinical trial was unique because patients acted as their own control," said Dr. Von Hoff. "We compared each patient's progression-free survival, following treatment based on molecular profiling, to how their tumors progressed under their prior treatment regimens, before molecular profiling."

In a significant number of patients, the targeted treatments provided significantly longer periods when tumors did not progress, or even shrunk, said Dr. Von Hoff, who also is a Medical Director of US Oncology and a former Director of the Arizona Cancer Center at the University of Arizona.

Dr. Von Hoff said the new study was done in a way that avoided issues surrounding tumor subtypes and differences in individual biology, which have confounded other clinical trials.

He said this clinical trial demonstrated the value of personalized medicine, in which treatments are prescribed based on an individual's specific genetic makeup. The type of drugs, dosages, their delivery and other treatment aspects - all are based on each patient's individual medical needs.

Among the patients, 27 percent had breast cancer, 17 percent had colorectal cancer, 8 percent had ovarian cancer and 48 percent had cancers that were classified as miscellaneous.

Patients experienced varying levels of improvement. Among those with breast cancer, the period of progression-free survival increased for 44 percent of patients; for colorectal, 36 percent of patients; for ovarian, 20

percent of patients; and for miscellaneous cancers the improvement was seen in 16 percent of patients.

"With this trial, we are showing the power of personalized medicine using the tools we already have available to us. As these tools become more precise and more effective, the value of personalized medicine will increase," Dr. Von Hoff said.

The molecular profiling for this research study was performed by Caris Diagnostics (Caris Dx) in Phoenix.

These results are the first in a series of studies in support of Target Now™, a commercially-available oncology testing service offered exclusively by Caris Dx. Target Now uses cutting-edge molecular profiling techniques, including both DNA microarray and immunohistochemical (IHC) analysis, to provide individualized information about a patient's tumor as an aid to the treating oncologist.

"This trial is evidence of an important breakthrough in the treatment of cancer. We are excited to work with Dr. Von Hoff and TGen as we make this important molecular diagnostic information available to physicians to aid in therapy-selection decision making," said David D. Halbert, Chairman and CEO of Caris Diagnostics. "The valuable information provided through the Target Now panel of tests improves patient care while reducing costs for the payer."

Clinical studies were conducted by TCRS at the Virginia G. Piper Cancer Center at Scottsdale Healthcare Shea Medical Center. Scottsdale Healthcare is a primary clinical research site for TGen.

"Patients in our community have access to ground-breaking, world-class research right in their own backyard thanks to this collaboration," said Tom Sadvary, president and CEO of Scottsdale Healthcare. "Our goal is

reducing the time it takes to get new treatment discoveries from the research lab to the patient. We are thrilled to see these advances in personalized medicine taking place right here in Scottsdale."

The recent clinical study was dubbed the Bisgrove Trial, after longtime Scottsdale Healthcare supporter Jerry Bisgrove. The trial was funded through a $5 million grant from Mr. Bisgrove's Stardust Foundation to the Scottsdale Healthcare Foundation. Mr. Bisgrove has been a patient at Scottsdale Healthcare and is a member of the Scottsdale Healthcare Foundation Board of Trustees. In honor of the Stardust gift, the research building at the Virginia G. Piper Cancer Center at Scottsdale Healthcare Shea Medical Center is named the Debi and Jerry Bisgrove Research Pavilion.

"The Stardust Foundation is proud to have played a key role in the advancements in cancer research represented by Dr. Von Hoff's clinical trial. We believe we are closer than ever to finding a cure for this devastating disease that affects so many millions," Mr. Bisgrove said.

Source: The Translational Genomics Research Institute