Meet Your Match

Using molecular tests to select the most appropriate treatment leads to better outcomes.

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Genetic testing of tumors and using the results to guide treatment can lead to longer survival, a recent study shows.

Unlike traditional chemotherapy, which kills fast-growing cells throughout the body, targeted therapies work against cancer with specific genetic characteristics (Click here for more info). Drugs that work against cancer with certain mutations regardless of location could be especially beneficial for people with rare cancers that receive little research.

Apostolia Maria Tsimberidou, MD, PhD, of the University of Texas MD Anderson Cancer Center in Houston, presented findings from the IMPACT trial, which compared the long-term survival of people treated with matched targeted therapy that was selected by genetic testing and those treated with nonmatched therapy.

The study included more than 3,700 people who had exhausted standard treatment options or had incurable rare cancers. A third had at least one targetable genetic alteration. Within this group, 711 people received matched targeted therapy while the rest received unmatched therapy because no appropriate targeted drugs were available.

Treatment with matched therapy led to higher response rates, slower disease progression and longer survival. The overall response rate was 16 percent in the matched therapy group compared with 5 percent in the nonmatched group. After three years, 15 percent of people in the matched therapy group were still alive compared with 7 percent in the nonmatched group; after 10 years, the overall survival rates were 6 percent and 1 percent, respectively.

“I’m optimistic that in the next few years, we will dramatically improve outcomes of patients with cancer with the increasing use of precision medicine,” says Tsimberidou.

The National Cancer Institute’s NCI-MATCH study is exploring a similar approach, using a test that looks for mutations in more than 140 genes that can be targeted by drugs. Launched in August 2015, the trial has nearly 40 treatment arms and is enrolling patients at more than 1,100 cancer centers and community hospitals throughout the United States.