Precision medicine, genomic testing revolutionizing cancer treatment

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Experts estimate humans have 19,000 genes. Scientists are learning as much as they can about genes and genetic abnormalities.

“With advances in genomic testing, we know there are a vast number of genetic abnormalities, but we’ve learned not all abnormalities are equal. Some cause problems. Others don’t appear to,” Meric-Bernstam explains.

It’s not uncommon for cancer patients to have several abnormalities.

“Patients can get genomic testing that shows a list of genetic abnormalities, but that’s only helpful if something can be done with that information,” Meric-Bernstam says.

An oncologist with a list of a patient’s genetic alterations has a starting point.

“The first question is, ‘What is known about those particular abnormalities?’” says Vivek Subbiah, M.D.

“We have to know if any of the abnormalities are known to be important to cancer. And if there’s more than one, do we know how to predict which would be best to target with treatment?”

If the answers to these questions are yes, the right problem has been identified. Then the questions move to treatments. Is there a drug that targets that abnormality? If so, can the patient get it? Many of these targeted therapies are being tested in clinical trials, and patients have to meet specific criteria to join the trial to get the drug.

Read full, original post: Genetics expertise helps make precision medicine a reality