UCSF500 Cancer Gene Panel Test

genomics.ucsf.edu/UCSF500







BEST IN NORTHERN CALIFORNIA

UCSF Medical Center and UCSF Benioff Children's Hospitals provide exceptional cancer care to patients of all ages.

UCSF500 CANCER GENE PANEL TEST

5-10%

A change in diagnosis may be seen in a subset of patients, particularly for rare or unusual tumors, based on UCSF500 findings.

15-20%

We identify a genetic predisposition that may affect the family in a significant portion of patients.

20-30%

A molecular finding that can lead to a change in treatment is identified in a substantial number of cases.

WORLD-CLASS EXPERTISE FOR CLINICAL INTERPRETATION

The UCSF500 Cancer Gene Panel leverages world-class expertise for advanced cancer cases. Designed by our leading cancer specialists, the UCSF500 offers unparalleled depth and precision in genetic analysis. This molecular diagnostic tool goes beyond identifying mutations to provide insightful interpretations, empowering our oncologists to tailor therapies specifically to patients' unique cancer, even when standard approaches fall short. From newly diagnosed challenges to navigating treatment resistance, the UCSF500, backed by world-class expertise, can lead the way to more personalized and effective treatment plans.

IMPROVING DIAGNOSIS AND TREATMENT

The UCSF500 test identifies genetic changes in the DNA or RNA of a patient's cancer and provides valuable information for clarifying or modifying that cancer's diagnosis. It also helps to improve tumor classification, predict disease progression and guide therapeutic options. The test can also improve treatment of a patient's cancer by identifying targeted therapies, appropriate clinical trials or by clarifying the exact type of cancer when the type is ambiguous. UCSF500 test results might also provide information on inherited genetic changes that increase the risk of cancer for the patient or the patient's family.

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HOW IT WORKS

The human genome encodes for more than 20,000 genes, but only a small number of them are known to be involved in cancer. The UCSF500 test analyzes more than 500 different genes for mutations, including the majority of known cancer genes. The UCSF500 assay employs RNA evaluation, offering enhanced sensitivity in detecting gene fusions and other critical alterations relevant to certain cancers. To distinguish between somatic and germline mutations, the UCSF500 test is composed of two parts:

- 1. Testing of a tumor sample from a surgery or biopsy
- 2. Testing of non-tumor (normal) cells from a blood or saliva sample

The test works by obtaining the DNA and RNA of tumor cells and comparing them to what is found in normal cells. Only mutations that are present in the tumor cells can help guide treatment. Mutations present in both samples are germline mutations and may indicate certain cancer risks in the patient and any family members who also inherited the mutation.

WHY REFER TO UCSF?

- UCSF is one of the few hospitals in the nation that profiles tumor DNA and RNA and compares them with the patient's normal tissue, identifying mutations that may drive tumor growth and matching those mutations with targeted therapies.
- Armed with new insights into the molecular basis of cancer, UCSF scientists are pursuing some of the most innovative and exciting research happening today.
- UCSF experts have sequenced more than 9,000 cases using the UCSF500 assay. This information on prior patients, which includes outcome data, is available for review by UCSF scientists and clinicians to inform the care of new patients.
- The UCSF Helen Diller Family Comprehensive Cancer Center was the first center in the Bay Area to receive the prestigious "comprehensive" designation from the National Cancer Institute.
- The UCSF500 test is performed by an expert team composed of laboratory geneticists, molecular pathologists, bioinformaticians, oncologists and genetic counselors. These specialists work together and collaborate with referring physicians to evaluate the best possible treatment options for each patient.

HOW TO ORDER THE UCSF500 CANCER GENE PANEL

Additional information about the UCSF500 test and a requisition form can be found at **genomics.ucsf.edu/UCSF500**. In most cases, the UCSF500 Cancer Gene Panel is covered by Medicare.

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