

# UCSF500 Cancer Gene Panel Test

genomics.ucsf.edu/UCSF500



UCSF Medical Center and UCSF Benioff Children's Hospitals are ranked best in Northern California for cancer care.

## UCSF500 GENE TEST

**5%-7%** of patients may see a change in diagnosis, particularly for rare or unusual tumors, based on UCSF500 findings.

In **15%-20%** of patients, we identify a genetic predisposition that may impact the family.

In **20%-30%** of cases, we identify a molecular finding that can lead to a change in treatment.



## WORLD-CLASS EXPERTISE FOR CLINICAL INTERPRETATION

The UCSF500 Cancer Gene Panel is a molecular diagnostic test appropriate for patients with advanced cancer, especially those who experience a poor response to standard therapy. In some cases, the UCSF500 is also appropriate for newly diagnosed cancer cases that are difficult to treat or diagnose with standard approaches.

The purpose of the UCSF500 test is to identify genetic changes in the DNA of a patient's cancer, which provides valuable information for clarifying the diagnosis of that cancer. Specifically, it can modify diagnosis, improve tumor classification, predict disease progression and help guide therapeutic options.

The UCSF500 test can improve treatment of a patient's cancer by identifying targeted therapies or appropriate clinical trials, or in some cases by clarifying the exact type of cancer in question. 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.

## WHY UCSF500?

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 gene panel is periodically updated to add novel genes that have been discovered to be important in cancer. To distinguish between somatic and germline mutations, the UCSF500 test has 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 sequences of the 500 or so genes and comparing the results from the tumor cells and 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.

[MORE →](#)

## INFORMATION / REFERRALS

■ PHONE (415) 502-3252 ■ FAX (415) 502-2773 ■ EMAIL [CCGL@ucsf.edu](mailto:CCGL@ucsf.edu)

**UCSF** Health

## WHY REFER TO UCSF?

- UCSF is one of the few hospitals in the nation that profile tumor DNA and compare it 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 7,000 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.

## ORDERING AND SHIPMENT INSTRUCTIONS FOR THE UCSF500 CANCER GENE PANEL

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

### IN-HOUSE / UCSF:

- **Place an order in APeX.** Options to order panels UC500 Solid Tumor Testing and UC500 Leukemia Testing have been created. APeX search terms include UC500, UCSF500 and UCSF 500.
- Tumor specimen ( $\geq 25\%$  neoplastic cells) requirements
  - Formalin-fixed tumor tissue:
    - 10 unstained slides at 10-micron thickness on uncharged slides, or
    - FFPE tissue block
    - Please include one adjacent H&E-stained slide.
    - Cytology smears may also be used for testing.
  - A source of lesional DNA from blood or bone marrow (4 cc collected in EDTA)
- Normal (non-lesional) specimen requirements
  - Blood collected in EDTA, 4 cc – APeX test code PBCGL (Patient can go to any UCSF ambulatory clinic for venipuncture); or
  - Buccal swab – APeX test code BUCCGL (kits available for shipment to the patient); or
  - Skin biopsy from non-lesional tissue
- If the specimen collection occurs in clinic, specimens can be either delivered by hand to 2340 Sutter Street, Room S151, or dropped off for placement in the pathology gross room cooler with the destination of Mount Zion. The pathology gross room is in Room M2379 at Mission Bay, phone (415) 514-3711, or Room M576 at Parnassus, phone (415) 353-1608.
- Specimens should be packaged in a biohazard bag and clearly labeled "Attention: Jessica Van Ziffle, CCGL Mount Zion; Phone: (415) 502-3252."
- Confirm drop-off in the pathology cooler by sending an email to [CCGL@ucsf.edu](mailto:CCGL@ucsf.edu).

### OUTSIDE UCSF:

- Tumor specimen ( $\geq 25\%$  neoplastic cells) requirements
  - Formalin-fixed tumor tissue:
    - 10 unstained slides at 10-micron thickness on uncharged slides, or
    - FFPE tissue block
    - Please include one adjacent H&E-stained slide.
    - Cytology smears may also be used for testing.
  - A source of lesional DNA from blood or bone marrow (4cc collected in EDTA)
- Normal (non-lesional) specimen requirements
  - Blood collected in EDTA, 4 cc; or
  - Buccal swab (Please contact [CCGL@ucsf.edu](mailto:CCGL@ucsf.edu) to have a kit shipped to the patient.); or
  - Skin biopsy from non-lesional tissue
- Send specimen(s) overnight at room temperature. In the event of a heat wave, specimen should be sent with a cool pack.
- Deliveries are accepted only Monday through Friday (excluding holidays), so samples ready for shipping on Friday should be held at appropriate temperature (blood at 4°C) for shipping on Monday.
- The shipping address is:  
UCSF, Mount Zion Cancer Research Building  
Attention: Jessica Van Ziffle  
2340 Sutter St., Room S151, Box 1389  
San Francisco, CA 94143  
Phone: (415) 502-3252