ARUP LABORATORIES

A nonprofit enterprise of the University of Utah and its Department of Pathology

500 Chipeta Way
Salt Lake City, UT 84108-1221
phone: 801-583-2787 | toll free: 800-242-2787
fax: 801-584-5249 | aruplab.com

CEREBRAL AUTOSOMAL DOMINANT ARTERIOPATHY WITH SUBCORTICAL INFARCTS AND LEUKOENCEPHALOPATHY (CADASIL) DNA TESTING INFORMED CONSENT FORM

Patient Name: _____ **Date of Birth:** _____ **Sex:** ☐ **Female** ☐ **Male**

Ordering Provider: _____ **Provider's Phone:** _____

Practice Specialty: _____ **Provider's Fax:** _____

Genetic Counselor: _____ **Counselor's Phone:** _____

Does the patient have symptoms of CADASIL? ☐ No ☐ Yes

If yes, describe: _____

_____

Who is the patient's closest relative with CADASIL? _____

Age the relative's symptoms began: _____ **Was this relative's diagnosis confirmed by DNA testing?** ☐ No ☐ Yes

- Participation in genetic testing is completely voluntary. Genetic counseling is highly recommended prior to and following genetic testing for CADASIL. See nsgc.org to find a medical genetics professional. The ordering healthcare provider or genetic counselor should explain the test results in person and be available for follow-up genetic counseling. Patients undergoing presymptomatic testing should be accompanied by a support person, who is not at risk for CADASIL, when receiving results.
- CADASIL is an inherited condition that typically presents with transient ischemic attacks (TIAs) and strokes. Symptoms may include problems with thinking, dementia, migraines, psychiatric and mood disorders, and epilepsy. There is currently no cure or effective treatment for CADASIL. This blood test involves extracting DNA and sequencing the *NOTCH3 4* gene. It is able to detect disease-causing DNA variants in 95% of affected individuals. A causative variant cannot be identified in 5% of affected individuals. The accuracy of an affected DNA test result is 99%. Possible sources of error include sample mislabeling or contamination, transfusion, bone marrow transplantation, and maternal cell contamination of prenatal or cord blood samples.
- There are three possible test results:
  1. Negative: No pathogenic variants were identified in the *NOTCH3 4* gene. This result greatly reduces the risk for developing CADASIL.
  2. Uncertain: A variant of uncertain significance was identified in the *NOTCH3 4* gene. This individual may or may not be affected with CADASIL depending on whether the variant is disease causing or benign.
  3. Positive: One disease-causing variant was identified in the *NOTCH3 4* gene; therefore, this individual is expected to develop symptoms of CADASIL within a normal lifespan. Offspring of this individual have a 50% risk for developing CADASIL. The age of symptom onset and disease progression is highly variable.
- Test results may reveal nonpaternity or that other family members may be affected with, or at risk for developing, CADASIL.
- There are psychological risks associated with CADASIL testing. A result that indicates an individual will be unaffected can produce feelings of guilt as well as joy. An uncertain test result, indicating the patient may or may not develop symptoms, can be frustrating. A result that indicates an individual will be affected could lead to serious psychological consequences, including feelings of depression, futility, and severe stress.
- If a disease-causing *NOTCH3 4* gene variant is identified, insurance rates, the ability to obtain disability and life insurance, and employability could be affected. The Genetic Information Nondiscrimination Act of 2008 extends some protections against genetic discrimination (genome.gov/10002328). All test results are released to the ordering healthcare provider and those parties entitled to them by federal, state, and local laws.
- Because ARUP is not a storage facility, most samples are discarded after testing is completed. Some samples may be stored indefinitely for test validation or education purposes after personal identifiers are removed. All New York samples are discarded 60 days following test completion. You may request disposal of your sample by calling ARUP Laboratories at 800-242-2787 ext. 3301.

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- In cooperation with the National Institutes of Health's effort to improve understanding of specific genetic variants, ARUP submits HIPAA-compliant, deidentified (cannot be traced back to the patient) genetic test results and health information to public databases. The confidentiality of each sample is maintained. If you prefer that your test result not be shared, call ARUP at 800-242-2787 ext. 3301. Your deidentified information will not be disclosed to public databases after your request is received, but a separate request is required for each genetic test. Additionally, patients have the opportunity to participate in patient registries and research. To learn more, visit ARUP's Genetics Resources website at aruplab.com/genetics/resources.

Patient, Legal Guardian, Power of Attorney (POA): I have the legal authority to request ARUP Laboratories to test this samplefor CADASIL. I am the patient, his/her legal guardian, or POA. I have been counseled regarding the risks, benefits, and limitations of this test and carefully considered the psychological impact the results may have on the patient and his/her family.

Patient/Legal Guardian/POA Printed Name	Signature	Date

Ordering Healthcare Provider or Genetic Counselor: I have explained CADASIL genetic testing, its risks, benefits, limitations, and alternatives to the patient or legal guardian and addressed all their questions.

Healthcare Provider Printed Name	Signature	Date