Client: ARUP Example Report Only
500 Chipeta Way
Salt Lake City, UT 84108
UNITED STATES

Physician: arup, arup

Patient: LDS NGS, Negative Report

DOB	8/10/1994
Gender:	Unknown
Patient Identifiers:	32204
Visit Number (FIN):	32513
Collection Date:	8/17/2021 11:43

Loeys-Dietz Syndrome Core Panel, Sequencing

ARUP test code 3003947

Spcm LDS	Whole Blood
LDS Interp	Negative

INDICATION FOR TESTING
Not provided.

RESULT
No pathogenic variants were detected in the TGFBR1 or TGFBR2 genes.

INTERPRETATION
No pathogenic variants were identified by massively parallel sequencing of the coding regions and exon-intron boundaries of the TGFBR1 or TGFBR2 genes. This result decreases the likelihood of, but does not exclude, a diagnosis of Loeys-Dietz syndrome. Please refer to the background information included in this report for the clinical sensitivity and limitations of this test.

RECOMMENDATIONS
Medical screening and management should rely on clinical findings and family history. Genetic consultation is recommended. Consideration should be given to ordering the Aortopathy Panel, Sequencing and Deletion/Duplication (ARUP test code 2006540) if the risk for a genetic aortopathy remains high.

COMMENTS
Likely benign and benign variants are not included in this report.

This result has been reviewed and approved by [redacted]

BACKGROUND INFORMATION: Loeys-Dietz Syndrome Core Panel, Sequencing

CHARACTERISTICS: Cardiovascular findings (aortic dissection, arterial aneurysms, arterial tortuosity, MVP), skeletal abnormalities (arachnodactyly, talipes equinovarus, joint laxity, cervical spine malformations and instability, pectus excavatum and carinatum), craniofacial features (hypertelorism, retrognathia, craniosynostosis, and bifid uvula), cutaneous findings (translucent velvety skin, visible veins in chest, widened poorly-formed scars, and easy bruising), allergy and gastrointestinal disease (asthma, allergic rhinitis, food allergy, eosinophilic gastrointestinal disease) and spontaneous rupture of spleen, bowel, and uterus during pregnancy).

H=High, L=Low, *=Abnormal, C=Critical

EPIDEMIOLOGY: Unknown.

CAUSE: Pathogenic germline variants in SMAD2, SMAD3, TGFB2, TGFB3, TGFBR1, and TGFBR2.

INHERITANCE: Autosomal dominant; 75 percent of cases are caused by a de novo variant.

PENETRANCE: High

CLINICAL SENSITIVITY: Approximately 75-85 percent.

GENES TESTED: TGFBR1, TGFBR2.

METHODOLOGY: Capture of all coding exons and exon-intron junctions of the targeted genes, followed by massively parallel sequencing. Sanger sequencing was performed as necessary to fill in regions of low coverage and confirm reported variants.

ANALYTICAL SENSITIVITY/SPECIFICITY: The analytical sensitivity of this test is approximately 99 percent for single nucleotide variants (SNVs) and greater than 93 percent for insertions/duplications/deletions from 1-10 base pairs in size. Variants greater than 10 base pairs may be detected, but the analytical sensitivity may be reduced.

LIMITATIONS: A negative result does not exclude a diagnosis of Loeys-Dietz syndrome. This test only detects variants within the coding regions and intron-exon boundaries of the TGFBR1 and TGFBR2 genes. Variants in other genes, causing LDS (SMAD2, SMAD3, TGFB2, TGFB3) are not analyzed by this core panel. Regulatory region variants and deep intronic variants will not be identified. Deletions/duplications/insertions of any size may not be detected by massively parallel sequencing. Diagnostic errors can occur due to rare sequence variations. In some cases, variants may not be identified due to technical limitations in the presence of pseudogenes, repetitive, or homologous regions. This assay may not detect low-level mosaic or somatic variants associated with disease. Interpretation of this test result may be impacted if this patient has had an allogeneic stem cell transplantation. Noncoding transcripts were not analyzed.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Spcm LDS	21-229-108481	8/17/2021 11:43:00 AM	8/17/2021 11:43:56 AM	8/17/2021 11:47 00 AM
LDS Interp	21-229-108481	8/17/2021 11:43:00 AM	8/17/2021 11:43:56 AM	8/17/2021 11:47 00 AM

END OF CHART

H=High, L=Low, *=Abnormal, C=Critical