Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy: Deletion/Duplication Panel

Test Code: MD096  
Turnaround time: 2 weeks  
CPT Codes: 81228 x1, 81479 x1

**Condition Description**

Arrhythmogenic right ventricular dysplasia/cardio-myopathy (ARVD/C) is an autosomal dominant condition characterized by abnormalities in cardiac structure and rhythm. The fibrofatty replacement of myocardium can predispose affected individuals to ventricular tachycardia and sudden death in young individuals and athletes. Common presenting features include heart palpitation, syncope, and death. Other diagnostic criteria include right ventricular dilation and reduction of right ventricular function, and right ventricular aneurysms. The phenotype of ARVD/C is highly variable and while it primarily affects the right ventricle, it may involve the left ventricle as well.

Reference:
- GeneReviews

**Genes**

DSC2, DSG2, DSP, JUP, PKP2, RYR2, TMEM43

**Indications**

This test is indicated for:
- Confirmation of a clinical diagnosis of arrhythmogenic right ventricular dysplasia/cardio-myopathy (ARVD/C).
- Carrier testing in adults with a family history of arrhythmogenic right ventricular dysplasia/cardio-myopathy (ARVD/C).

**Methodology**

Deletion/Duplication Analysis: DNA isolated from peripheral blood is hybridized to a gene-targeted CGH array to detect deletions and duplications. The targeted CGH array has overlapping probes that cover the entire genomic region. Please note that a "backbone" of probes across the entire genome are included on the array for analytical and quality control purposes. Rarely, off-target copy number variants causative of disease may be identified that may or may not be related to the patient’s phenotype. Only known pathogenic off-target copy number variants will be reported. Off-target copy number variants of unknown clinical significance will not be reported.

**Detection**

Deletion/Duplication Analysis: Detection is limited to duplications and deletions. The CGH array will not detect point or intronic mutations. Results of molecular analysis must be interpreted in the context of the patient's clinical and/or biochemical phenotype.

**Specimen Requirements**

Submit only 1 of the following specimen types

**Type: Whole Blood**

Specimen Requirements:
- In EDTA (purple top) tube:
  - Infants (2 years): 3-5 ml
  - Older Children & Adults: 5-10 ml.
- Specimen Collection and Shipping: Ship sample at room temperature with overnight delivery.

**Type: Isolated DNA**

Specimen Requirements:
- In microtainer: 10 ug
- Isolation using the Qiagen™ Puregene kit for DNA extraction is recommended.
- Specimen Collection and Shipping: Refrigerate until time of shipment in 100 ng/ul of TE buffer. Ship sample at room temperature with overnight delivery.

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Related Tests

- Comprehensive Cardiomyopathy Panel.
- Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy: Sequencing Panel.