

ADVOCATING FOR GENETIC TESTING



By using DNA microarray assays to detect certain traits that a patient has, we can determine if patients are at risk for developing AF or VT.

We hope to partner with different organizations, like FORCE, to help push our initiative to make genetic testing more accessible for AF and VT.

Analyzing **L**inked and
Implicated **G**enes in
Arrhythmias **N**ow

REFERENCES:



THE A.L.I.G.N. APPROACH

ANALYZING LINKED
AND IMPLICATED GENES
IN ARRHYTHMIAS NOW

WHAT WILL WE DO

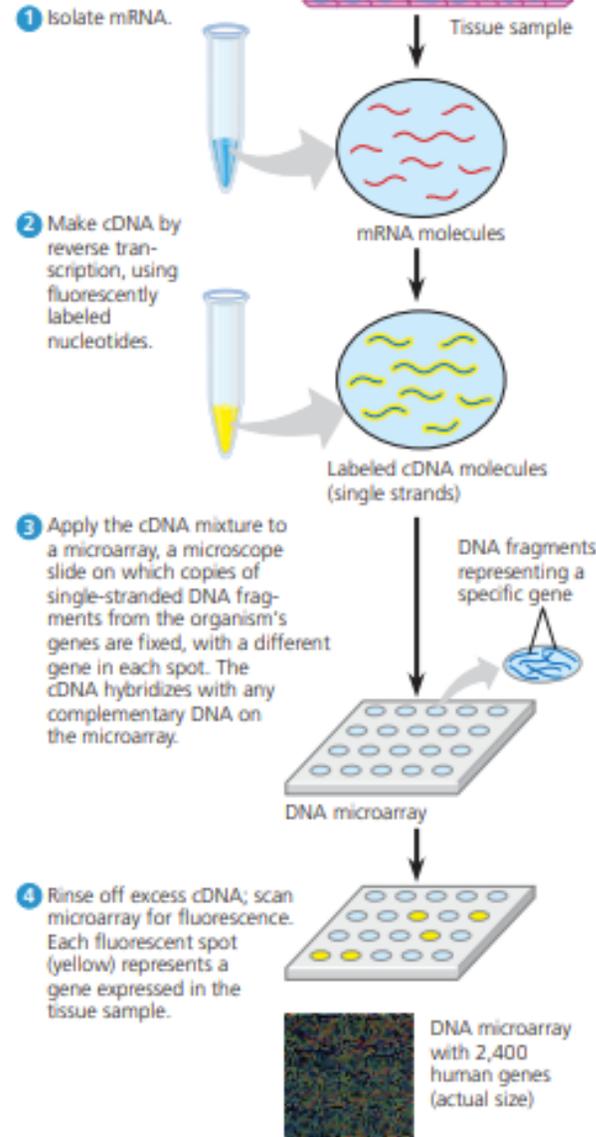
- Work with the government to lower the costs of genetic testing
- Educational campaigns for at-risk communities
- Raise awareness for the involvement of genetic counselors in cardiovascular care
- Innovative cascade testing for family members' of patients diagnosed with genetic arrhythmias



DNA Microarray Assay of Gene Expression Levels

APPLICATION With this method, researchers can test thousands of genes simultaneously to determine which ones are expressed in a particular tissue, under different environmental conditions, in various disease states, or at different developmental stages. They can also look for coordinated gene expression.

TECHNIQUE



RESULTS The intensity of fluorescence at each spot is a measure of the expression in the tissue sample of the gene represented by that spot. Most often, as in the actual microarray above, two different samples are tested together by labeling the cDNAs prepared from each sample with labels of different colors, often green and red. The resulting color at a spot reveals the relative levels of expression of a particular gene in the two samples: Green indicates expression in one sample, red in the other, yellow in both, and black in neither. (See Figure 20.1 for a larger view.)

OUR FOCUS

01

ATRIAL FIBRILLATION

The heart's upper chambers (atria) beat out of coordination with the lower chambers (ventricles).



02

VENTRICULAR TACHYCARDIA

A condition in which the lower chambers of the heart (ventricles) beat very quickly.

