



A little about our physicians:

Serving
the **Heart**
Rhythm needs of
the greater Washington
DC Metropolitan Area



Washington Heart Rhythm Associates

Pirooz S. Mofrad, MD

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Welcome



Pirooz S. Mofrad, MD is a heart rhythm specialist who completed his cardiology fellowship at Georgetown University Hospital and his electrophysiology training at Stanford University Hospital, in California. His clinical interests include complex catheter ablation techniques for ischemic ventricular tachycardia and pulmonary vein isolation techniques for the treatment of atrial fibrillation.

We are proud to serve the population of the nation's capital and the greater Washington DC Metropolitan Area

For more information, please call 301-408-7890
www.washingtonhra.com

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Drs. Mofrad , along with our medical staff, would like to welcome you and your family to our practice, Washington Heart Rhythm Associates. We are looking forward to meeting you and serving your heart rhythm needs.

We are a group of specialized cardiologists trained in the field of cardiac electrophysiology, which focuses on cardiac arrhythmias, or heart rhythm disturbances. Our mission is to provide state-of-the-art consultative, diagnostic, and interventional electrophysiology services to our patients.

As cardiac electrophysiologists, we specialize in device therapy including permanent pacemakers, implantable cardiac defibrillators, and resynchronization therapy for congestive heart failure. In addition, we specialize in complex catheter ablation techniques for cardiac arrhythmias, including, but not limited to: atrial fibrillation, atrial flutter, Wolff-Parkinson -White Syndrome, and ventricular tachycardia. We look forward to meeting with you in person and being a part of your medical care.

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Common questions & answers

What is an Electrophysiologist?

A cardiac electrophysiologist is a specialized cardiologist dealing with the field of arrhythmias, or heart rhythm disturbances. Heart rhythm disturbances encompass a broad range of rhythm abnormalities, including supraventricular and ventricular arrhythmias. Your heart rhythm specialist is trained specifically to manage your cardiac arrhythmia with medication, or if needed, with device therapy or cardiac ablation to cure the arrhythmia.

What is an arrhythmia?

An arrhythmia is a heart rhythm disturbance that can originate from either the top (atria) or bottom (ventricular) chambers of the heart. Heart rhythm disturbances originating from the atria are termed supraventricular and those from the ventricles are termed ventricular arrhythmias.

Types of arrhythmias

Arrhythmias are further classified as either slow (bradyarrhythmias) or fast (tachyarrhythmias). Your physician will assess your symptoms and gain insight from your history and electrocardiograms in order to classify your heart rhythm disturbance. Bradyarrhythmias and tachyarrhythmias can originate from either the atria or the ventricles. Cardiac arrhythmias that your heart rhythm specialist treats include, but are not limited to, the following: sick sinus syndrome, atrioventricular block, atrial tachycardia, atrioventricular nodal reentrant tachycardia (AVNRT), the Wolff-Parkinson-White (WPW) syndrome, atrioventricular reentrant tachycardia (AVRT), atrial flutter, atrial fibrillation, ventricular tachycardia, the Long QT Syndrome, and sudden cardiac death. For further information on the types and mechanisms of arrhythmias, please refer to our website at www.washingtonhra.com.

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Who needs an Electrophysiologist?

Patients with arrhythmias that need specialized treatment are generally referred to a heart rhythm specialist. Heart rhythm specialists have the expertise to determine the optimal treatment regimen for your arrhythmia. If medications are not successful, your heart rhythm specialist may determine that you are a candidate for a catheter ablation procedure. In this procedure, specialized catheters are placed into the heart, typically via the veins in your groin, in order to measure the electrical activity and determine the origin of your arrhythmia. Using radiofrequency energy, or heat, the heart muscle tissue responsible for the initiation and perpetuation of your heart rhythm disturbance can be eliminated. This is typically a curative procedure, thus allowing you to discontinue your medications used to control your episodes of arrhythmias. Catheter ablation is not appropriate for all patients or arrhythmias, and a consultation with your heart rhythm specialist is needed to determine your treatment options.

The procedures we perform

Our electrophysiologists focus on the treatment of patients with heart rhythm disturbances. They are skilled in the placement of implantable cardiac defibrillators, pacemakers, and cardiac resynchronization therapy for the management of medically-refractory congestive heart failure. In addition, they perform catheter ablation for supraventricular tachycardias, including pulmonary vein isolation techniques for the treatment of atrial fibrillation, and ventricular tachycardias. We use the latest 3-dimensional mapping systems during catheter ablation procedures to help visualize the origin and circuit of your arrhythmia. For further specific information on the procedures we perform, please refer to our website at www.washingtonhra.com.

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What is Atrial Fibrillation?

Atrial fibrillation (AF) is the most common heart rhythm disturbance and affects nearly 1% of the general population. Its prevalence increases with age, with over 9% of the general population over the age of 80 yo experiencing an episode. During AF, the atria can beat, or “fibrillate”, anywhere from 400-600 beats per minute, in an irregular and chaotic fashion. This leads to an irregular heartbeat and pulse, and may cause symptoms including palpitations, shortness of breath, fatigue, lightheadedness, and chest discomfort. Atrial fibrillation can occur in patients without heart disease (termed “lone AF”), or in those with cardiac disorders including coronary artery disease, congestive heart failure, and valvular heart disease.

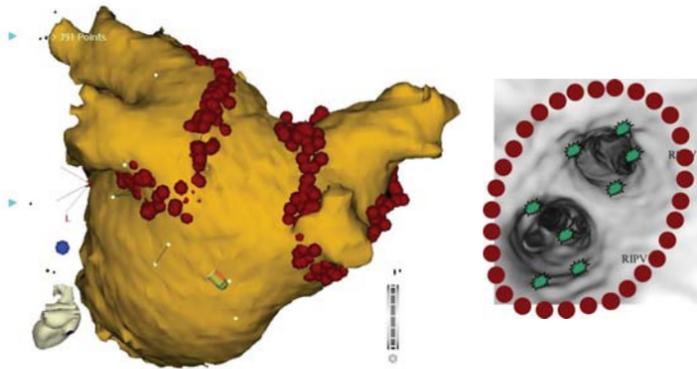


Figure 1. CARTOMERGE images created via CT-reconstructed views of the left atrium incorporated with a 3-D electroanatomical map during the ablation procedure. The red dots indicate sites of ablation with the inset showing right pulmonary vein trigger sites for atrial fibrillation en face, denoted by the green stars.

What is a catheter ablation for atrial fibrillation?

Atrial fibrillation can be caused or triggered by early (premature) beats arising from anywhere in the atria. Many of these premature atrial beats have been demonstrated to originate from “cuffs” of atrial tissue in the pulmonary veins that can subsequently enter the left atrium. During a catheter ablation for atrial fibrillation, these “triggers” of atrial fibrillation are electrically isolated from the remainder of the atria using special catheters capable of delivering radiofrequency, or heat, energy. This is performed in conjunction with the newest three-dimensional electroanatomical mapping technology. The published success rates of this procedure range from 60-90% in patients with atrial fibrillation.

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How is a catheter ablation for atrial fibrillation performed?

By using the veins of the groin and the neck, catheters are placed in the atria and the pulmonary veins using X-ray and ultrasound guidance. Using a computed tomographic (CT) scan of the heart obtained prior to the procedure, a three-dimensional image of the atria and pulmonary veins is reconstructed and integrated into the mapping and ablation system. Then, each pulmonary vein is electrically isolated using radiofrequency energy delivered from the tip of the ablation catheter, with constant monitoring of the catheter location to reduce procedural risk.

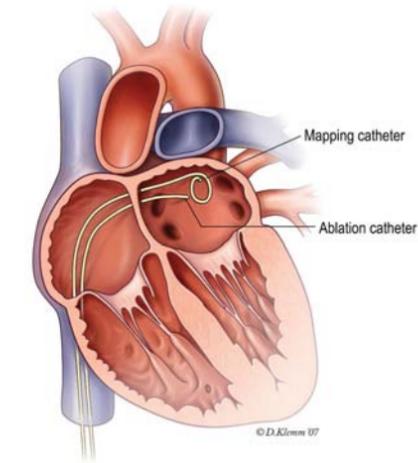


Illustration demonstrating the positions of the intracardiac ablation and mapping catheters in the left atrium during a pulmonary vein isolation ablation procedure for atrial fibrillation. Each of the four pulmonary veins are approached and electrically isolated, as discussed in the text, to prevent these pulmonary vein triggers from initiating episodes of atrial fibrillation.

Who is a candidate for catheter ablation of atrial fibrillation?

Some patients have recurrent atrial fibrillation and symptoms that significantly impact their quality of life despite being on medications. Also, patients with atrial fibrillation may be intolerant of the medications needed to either control their heart rates or maintain them in normal sinus rhythm. It is these patients that may be candidates for catheter ablation of atrial fibrillation. During consultation, your heart rhythm specialist will carefully review your medical history to determine if you are a candidate for this procedure.

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