



# Hybrid AF<sup>TM</sup> Therapy

**Advanced Atrial Fibrillation  
Ablation Treatment Options**

**AtriCure**

# What is Atrial Fibrillation?

Atrial fibrillation (Afib) is the most commonly diagnosed arrhythmia in the U.S. Afib is an abnormal heart rhythm caused by erratic electrical signals in the heart. A normal heart rhythm creates regular electrical signals that are essential for the heart to beat in a steady, rhythmic way and pump blood to all parts of the body. But sometimes the electrical signals get irregular, and the heart beats abnormally.



**8 million**  
people are estimated  
to have Afib<sup>1</sup>

## Afib Changes Over Time

### Early Stages of Afib

**Paroxysmal Afib** starts with irregular, rapid heartbeats that occur occasionally and can last up to 7 days.

**Symptoms:** palpitations, fluttering feeling in the chest, or a rapid, irregular heartbeat.

If not effectively treated, Afib may progress to more advanced stages.

### Advanced Stages of Afib

**Persistent Afib** lasts beyond 7 days and as long as one year. If not treated the heart may advance to the long-standing persistent stage.

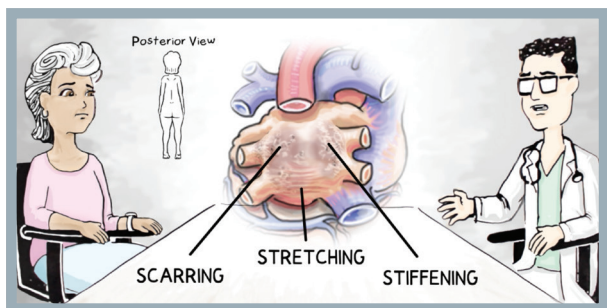
**Long-standing persistent Afib** symptoms continue beyond one year without stopping.

**Symptoms:** shortness of breath, weakness, fatigue, pain or pressure in the chest, lowered blood pressure, dizziness, rapid or irregular heartbeat.

Some people with Afib may not be aware of their symptoms and are only diagnosed through an assessment by their physician.

# Afib Can Damage Your Heart

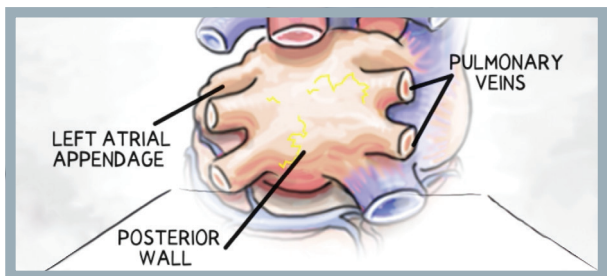
Afib causes physical changes to the structure and shape of the heart. It can scar and stretch as well as stiffen your heart muscle.



These changes can cause more Afib.

## Trigger Areas

Afib commonly starts in the pulmonary veins.



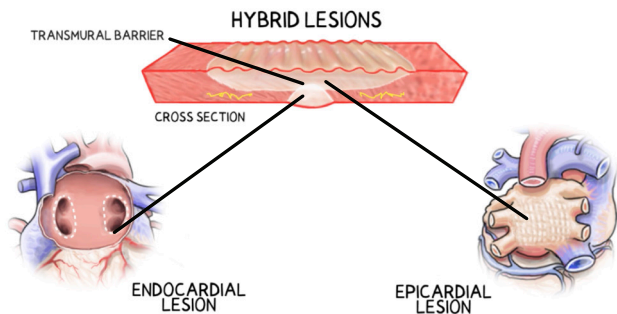
As Afib progresses, trigger areas could include:

- The base of the pulmonary veins
- The posterior (back) wall
- The left atrial appendage
- Ligament of Marshall

The goal of ablation treatment for Afib is to stop the irregular heart rhythm or reduce Afib episodes, so that they are shorter and less frequent. **This helps the heart return to a more normal size, pump better and improve its function overall.**<sup>1</sup>

# How Does Ablation Treat Long-Standing Persistent Afib?

If you have long-standing persistent Afib, your doctor might recommend Hybrid AF Therapy. It is a two-part procedure that creates lesions inside (endocardial) and outside (epicardial) the heart to stop the erratic electrical signals that cause Afib.



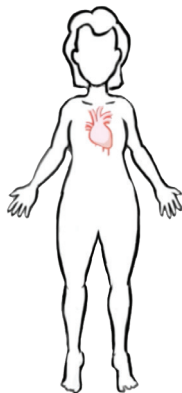
Lesions form barriers on the heart tissue. A transmural lesion (all the way through the tissue) creates a barrier to stop the erratic electrical signals.

Hybrid AF Therapy can provide a long-lasting solution to persistent and long-standing persistent Afib. It targets two key trigger areas for Afib the pulmonary veins and the posterior (back) wall of the heart.<sup>2</sup>

# What Can I Expect During My Hybrid AF Procedure?

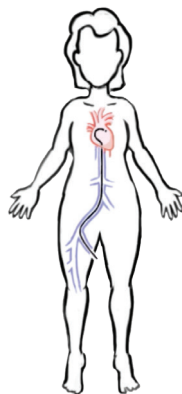
## Part One of the Hybrid AF Procedure is Epicardial Ablation:

- The doctor makes a small 2–3 cm incision under the breastbone.
- Once the doctor has access to the heart, they create lesions across the posterior (back) wall.
- These epicardial lesions overlap to create a barrier to the erratic electrical signals that cause Afib.
- Epicardial lesions target areas of the heart that cannot be reached from the inside of the heart.



## Part Two of the Hybrid AF Procedure is Endocardial Ablation:

- A second doctor accesses the femoral vein. This allows access to your heart through the vein.
- The doctor looks at an electrical map of your heart. It can show any remaining abnormal electrical signals after your first procedure.
- The doctor then creates lesions at the pulmonary veins and any areas that still have abnormal electrical activity.
- Endocardial lesions target areas of the heart that are difficult to reach epicardially.



# What is the Recovery Like After the Hybrid AF Therapy Procedures?

- The hospital stay will be typically two to three days. Your doctor will prescribe medication to prevent inflammation.
- You can resume taking needed heart medications after the procedure as directed by your doctor.



Your healthcare team will let you know when you can return to your daily activities.

## Frequently Asked Questions

**Q:** Why is getting Afib treatment so important?

**A:** Afib is a progressive disease. If not properly treated, it can damage your heart and lead to health problems such as heart failure, dementia, and increased risk of stroke by five times.

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**Q:** If my Afib is treated, how does that affect my health?

**A:** Here are possible benefits when treatment is effective:

- The left atrium returns to normal size
  - The left atrium can pump better, sending blood to the left ventricle
  - The left ventricle can pump better, sending oxygen-rich blood to the body
  - Heart function may improve overall
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**Q:** I already had an endocardial ablation, why do I still have Afib?

**A:** After having an endocardial ablation, it is possible for Afib to reoccur. If your Afib reoccurs, your doctor may recommend Hybrid AF Therapy.

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**Q:** Could a Hybrid AF Therapy ablation help me when other treatments did not?

**A:** Yes, because a hybrid ablation can target Afib trigger areas that are hard to reach with endocardial ablation alone. Hybrid AF Therapy combines the benefits of both epicardial (outside) and endocardial (inside) types of ablation.

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**Q:** Can I stop taking my medications after my procedure?

**A:** Your doctor will let you know what medications you need to continue taking after your procedure.



Find a heart team to talk about  
your Afib treatment option.

[www.HybridAFTherapy.com](http://www.HybridAFTherapy.com)

## References

<sup>1</sup> Benussi, S., & de Maat, G.E. (2018). Atrial remodelling and function: implications for atrial fibrillation surgery, *European Journal of Cardio-Thoracic Surgery*, 53(i1):i2-i8, <https://doi.org/10.1093/ejcts/ezx340>.

<sup>2</sup> Zembala, M. et al. (2012). Minimally invasive hybrid ablation procedure for the treatment of persistent atrial fibrillation: one year results, 70(8):819-28.

Hybrid AF Therapy is for the treatment of long-standing persistent atrial fibrillation.

**Risk Information:** This procedure is not recommended for patients with Barrett's Esophagitis, presence of left atrial thrombus (clot), a systemic infection, or an active infection local to the surgical site at the time of surgery (i.e. active endocarditis).

Potential procedural complications include, but are not limited to: Pericardial effusion, pericarditis, infection, cardiac tamponade, pulmonary vein stenosis, vessel injury, tissue perforation, excessive bleeding, phrenic nerve injury, left atrial rupture, esophageal fistula, heart attack, new arrhythmias, thromboembolic complication, stroke/TIA/neurologic complication, complete heart block requiring permanent pacemaker implantation, serious skin burn, a buildup of fluid around your lungs, or death.

**EPI-Sense® Guided Coagulation System Indications for Use:** The system is intended to treat advanced atrial fibrillation (AF) defined as continuous AF that has lasted more than 12 months when accompanied by treatment with a catheter used during a hybrid procedure. Eligible patients should be either nonresponsive or intolerant of certain antiarrhythmic medications as well as the expected benefits of rhythm control outweigh the procedural risks.

**Contraindications** This system is not intended to treat patients with Barrett's Esophagitis, left atrial thrombus, a systemic infection, active endocarditis, or a localized infection at the surgical site at the time of surgery. **Risks** Ask your doctor or Health Care Provider to review the known and possible risks associated with your treatment. Examples of possible risks include (but are not limited to) excessive bleeding, stroke, infection, and phrenic nerve injury.

For more information about Hybrid Therapy, visit <https://www.HybridAFTherapy.com>.

This information is not comprehensive. Talk to your health care provider to obtain the FDA-approved product labeling or visit [www.AtriCure.com](http://www.AtriCure.com).

Rx Only.

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