**WEBPAGE KIT: HYBRID AF THERAPY TO TREAT ATRIAL FIBRILLATION**

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**Why Treating Your Atrial Fibrillation Is So Important**

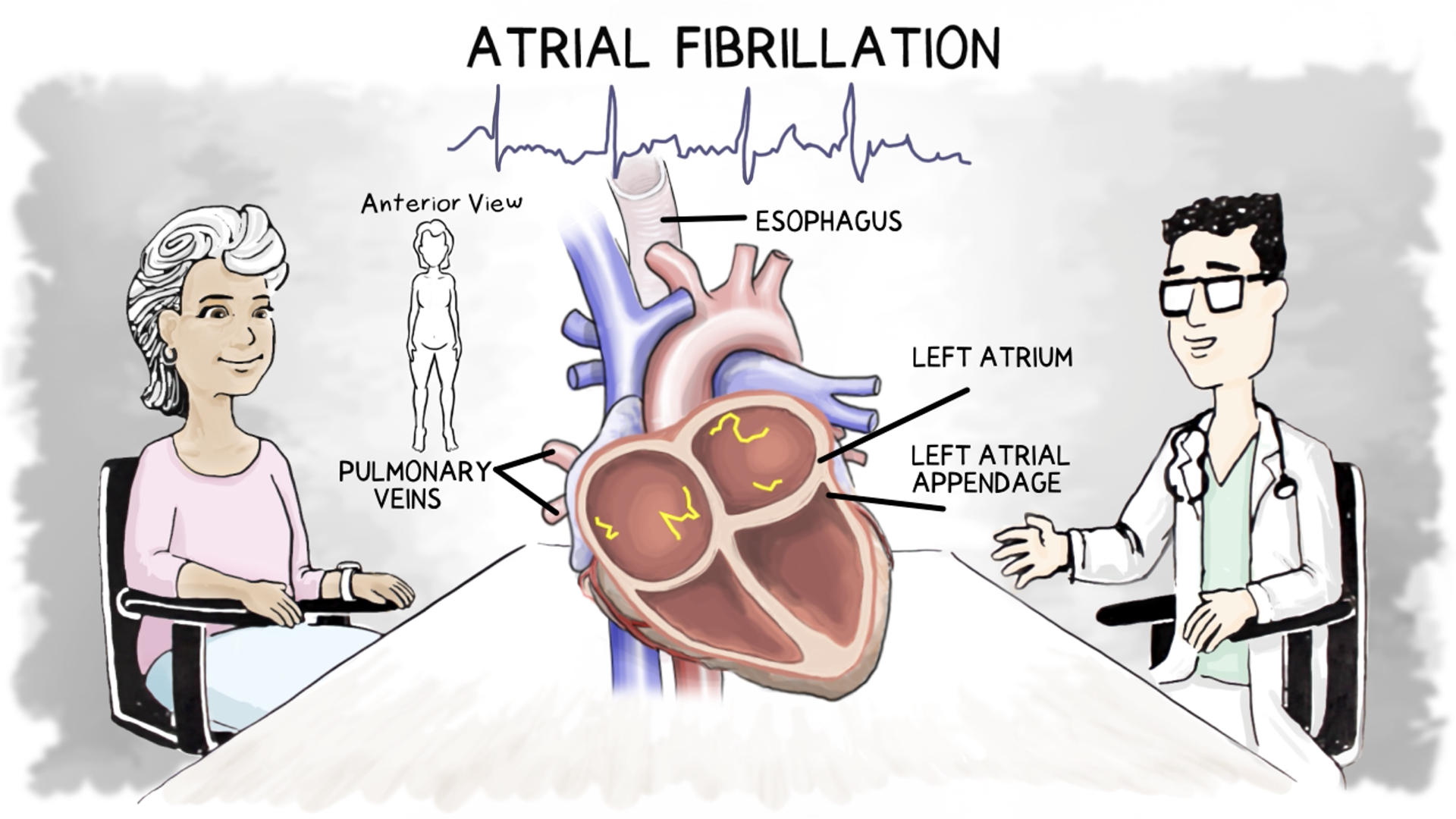
[Body Copy]

Atrial fibrillation (AF) is the most commonly cardiac arrythmia and shows as an abnormal and irregular heartbeat1

* Approximately **10 million** people in Europe have AF2
* Every year **between 100,000 and 200,000 new people** develop AF2
* **By 2030,** the number of patients with AF in Europe is estimated to be between **14 and 17 million**2
* It is also estimated that **up to 2.6% of total annual health care expenditure is associated with AF** in European countries3

Atrial fibrillation is an abnormal heart rhythm caused by erratic electrical signals in the heart. A normal heart rhythm creates regular electrical signals that travel through the heart. The signals are essential for the heart to beat in a steady, rhythmic way. This allows blood to be pumped to all parts of the body. Sometimes the electrical signals become irregular, and the heart beats abnormally.

What Is Atrial Fibrillation



**Image File Name:** PM-GL-1224C-0625-G What is Atrial Fibrillation

**Image Alt Text:** Electrical signals in the heart control the heartbeat. When signals in the atria become irregular and fast, it is called atrial fibrillation.

VIDEO

Atrial fibrillation is also called Afib or AF. If not properly treated, it can grow worse over time and possibly damage your heart. Atrial fibrillation can also lead to health problems:

**5x** increase in stroke risk4

**5x** increase in heart failure development5

Atrial fibrillation also leads to a higher risk of:6

* Chronic fatigue
* Decreased activity level
* Decline in quality of life

It's best to have atrial fibrillation treated **before** it progresses and causes other health problems.7

Even after people develop other heart problems, there is hope. When atrial fibrillation is successfully treated it can:

* Reverse the stretching of the left atrium7
* Improve heart function overall7
* Improve your symptoms8
* Reduce the number of heart medications you need7

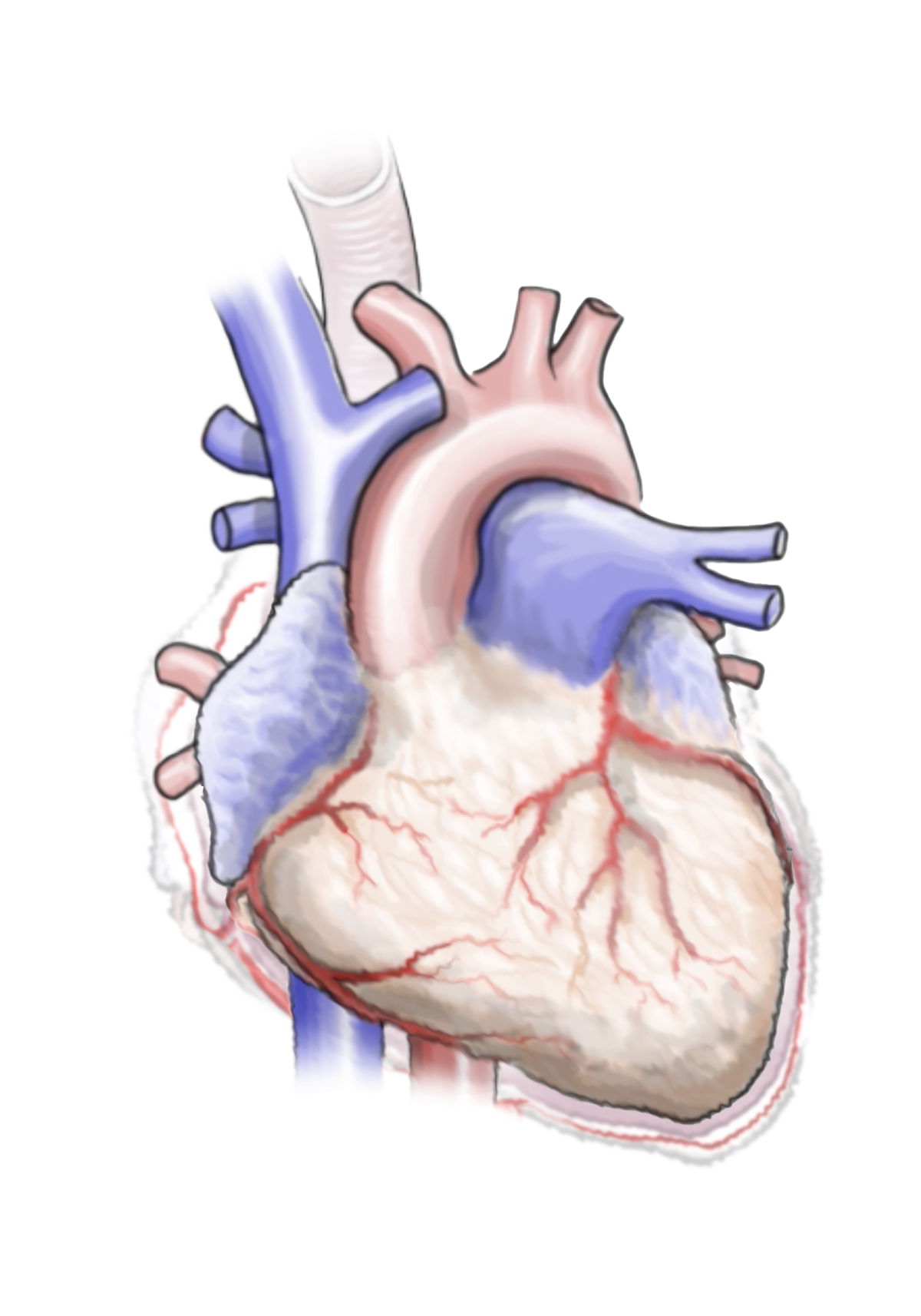
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**Causes of Atrial Fibrillation**

[Body Copy]

Several medical conditions and risk factors might affect the normal function of the heart, leading to an irregular heart rhythm.

VISUAL



**File Name:** *Heart alone-palpitationV2.psd*

**Image Alt Text:** If not properly treated, AF progresses to more severe stages and can cause damage to the heart.

[Subhead]

**Medical Conditions**

[Body Copy]

Conditions that may cause people to develop atrial fibrillation include:9

* **Diabetes**—The glucose (blood sugar) imbalance that occurs with diabetes can directly affect the tissues of the heart.
* **Obesity**—This puts a person at higher risk for atrial fibrillation.
* **Sleep apnea**—When a person is awakened by lack of oxygen from sleep apnea, it stresses the heart. It can also cause chemical changes inside the heart.
* **Overactive thyroid gland**—When the thyroid is too active, it increases the heart rate.

**Risk Factors**

Doctors have also identified risk factors that can lead to atrial fibrillation:9

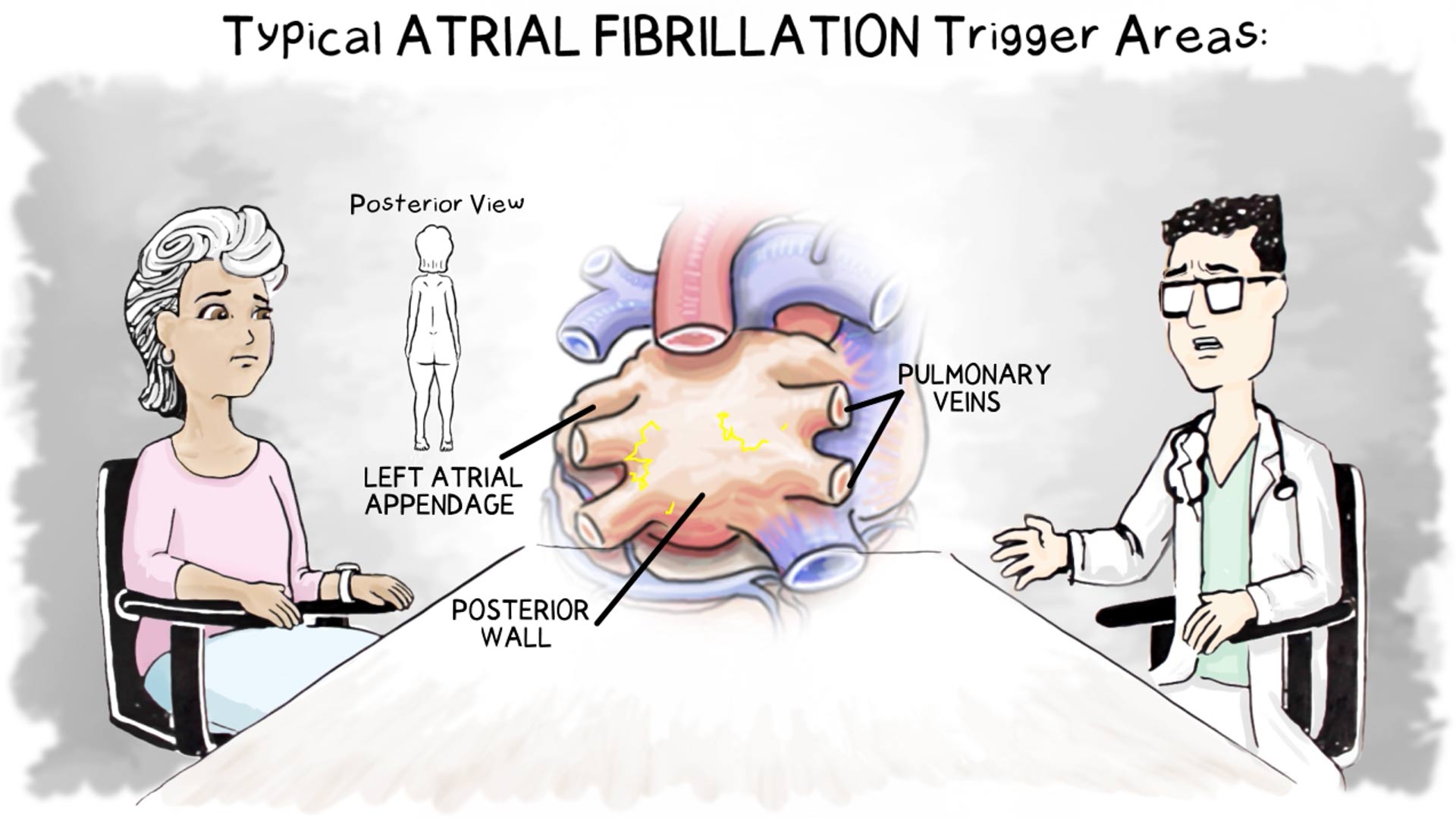
* Heart attacks
* Heart failure
* Heart valve disease
* Coronary artery disease
* High blood pressure
* Aging
* Family history of atrial fibrillation

Many other factors that can lead to atrial fibrillation, listed below,9 are within your control. Talk to your health care provider about how to lead a healthy lifestyle.

* **Smoking**—The risk seems to increase for long-term smokers. But the risk lowers if you quit.
* **Stress**—Emotional stress, including panic disorders, can also put someone at higher risk of atrial fibrillation.
* **Alcohol**—Alcohol consumption, and especially binge drinking, raises a person’s risk.
* **Caffeine**—Caffeine increases the heart rate, which can trigger atrial fibrillation.10

**Trigger Areas for Atrial Fibrillation**

Atrial Fibrillation Origin and Trigger Points – 0:43 – 0:58



**Video File Name:** PM-GL-1427C-0625-G AF Origin and Trigger Points

**Video Alt Text:** AF usually begins in certain areas of the heart.

VIDEO

There are 3 areas of the heart where atrial fibrillation normally starts. The trigger points are:

* The base of the pulmonary veins (PV)
* The posterior (back) wall
* The left atrial appendage (LAA)

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**The Stages of Atrial Fibrillation—And How It Affects Your Health**



**Image File Name:** *AF-Progression-web-V2-04.png*

**Image Alt Text:** If not properly treated, AF progresses to more severe stages and can cause damage to the heart.

VISUAL

**Early Stage of Atrial Fibrillation**

Paroxysmal AF symptoms include:

* Palpitations
* Fluttering feeling in the chest
* Rapid or irregular heartbeat

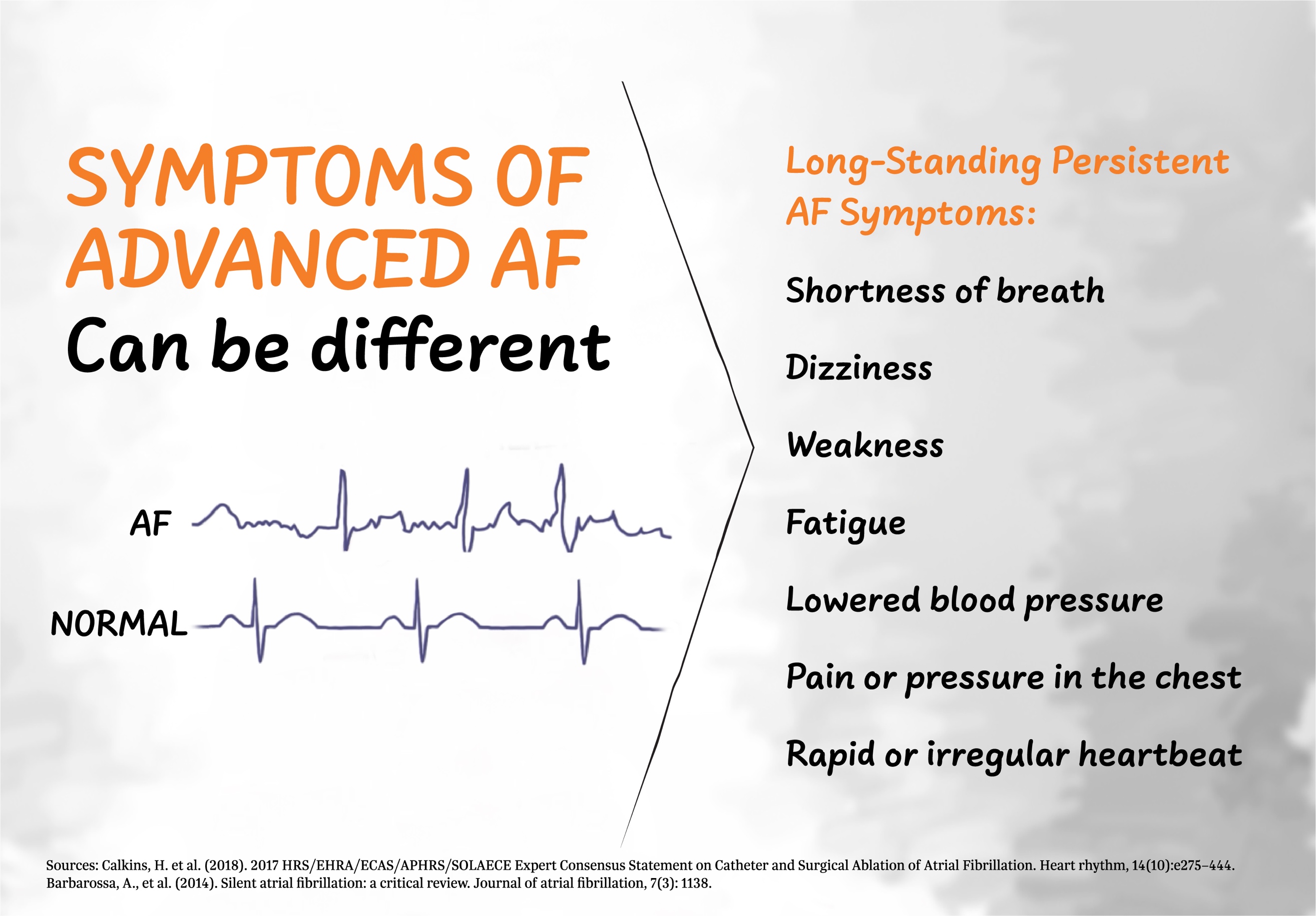
If not effectively treated, paroxysmal AF may progress to more advanced stages.

**Advanced Stages of Atrial Fibrillation**

* Persistent AF
* Long-standing persistent AF

The symptoms for these stages are listed below.

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**File Name:** *Hybrid AF Benefits-V10\_Advanced Symptoms-inlineRefs.jpg*

**Image Alt Text:** Symptoms of AF can impact quality of life

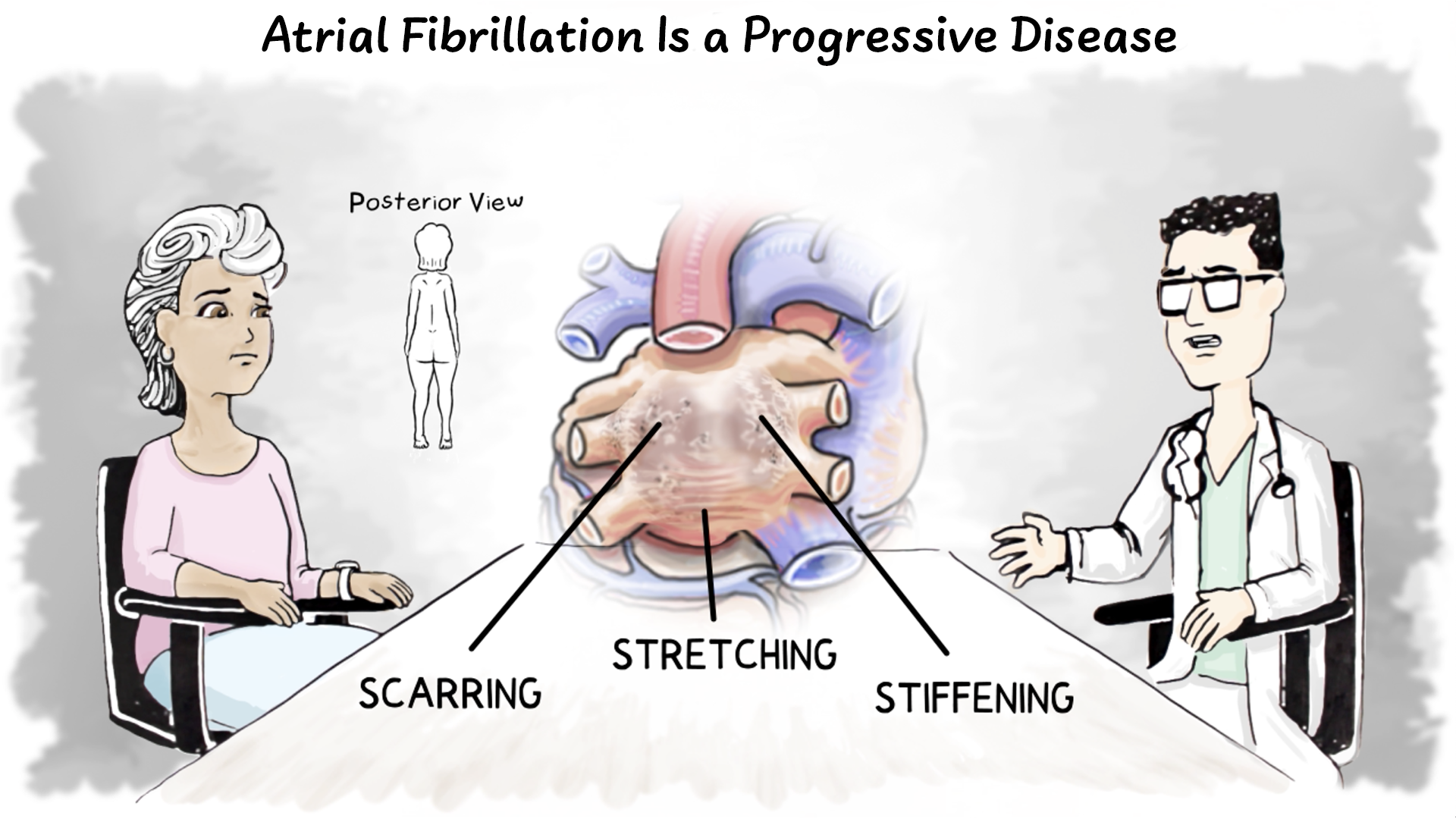
Persistent and long-standing persistent forms of AF affect approximately **50%** of all AF patients2

Some people may not know that these symptoms result from atrial fibrillation. They are only diagnosed when they go to their physician.

**How Atrial Fibrillation Impacts Your Health**

Atrial fibrillation causes physical changes to the structure and shape of the heart.

VISUAL



**Image File Name:** *How-AF-Affects-Your-Heart.jpg*

**Image Alt Text:** If not treated, more severe AF can cause scarring, stretching, and stiffening of the heart tissue.

**Scarring:** Atrial fibrillation can lead to scarring of the atrial tissue.

**Stretching:** Eventually the heart tissue becomes stretched, too. As the walls of the heart are stretched, the heart muscle becomes weaker.

**Stiffening:** The heart muscle gets stiffer, so that it’s harder for the heart to pump properly.

Atrial fibrillation also leads to a higher risk of:6

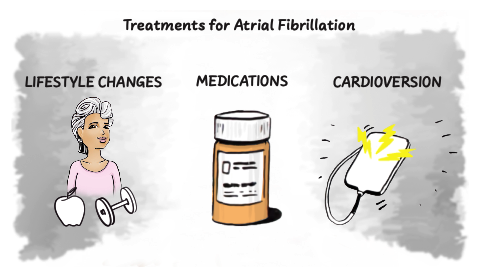
* Stroke
* Heart failure
* Dementia
* Chronic fatigue
* Decreased activity level
* Decline in quality of life
* Sudden death

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**Treatments for Atrial Fibrillation**

Treatments vary, depending on the stage of atrial fibrillation. Because undertreated atrial fibrillation can progress to more advanced stages, it is very important to talk with your healthcare provider about proper treatment.

VISUAL



**Image File Name:** *Treatments for AF-V3.pdf*

**Image Alt Text:** Initially, AF treatments may include lifestyle changes, medications, and/or cardioversion.

**Lifestyle Changes**

* Make exercise and healthy food choices a part of your daily life.
* If needed, get a sleep study to find out if you have sleep apnea and need CPAP therapy.

**Medications**

Medications can help a person in different ways:

* Medications can treat blood pressure, diabetes, or an overactive thyroid.
* Blood thinners can reduce the risk of stroke.
* Rate control medications slow the heartbeat.
* Rhythm control medications help control the heart rhythm.

**Cardioversion**

Cardioversion is done at a hospital or clinic. This therapy delivers a controlled electric shock to the outside of the chest to restore a normal heart rhythm.

If your symptoms continue and are not controlled by medications, your doctor may consider ablation therapy.

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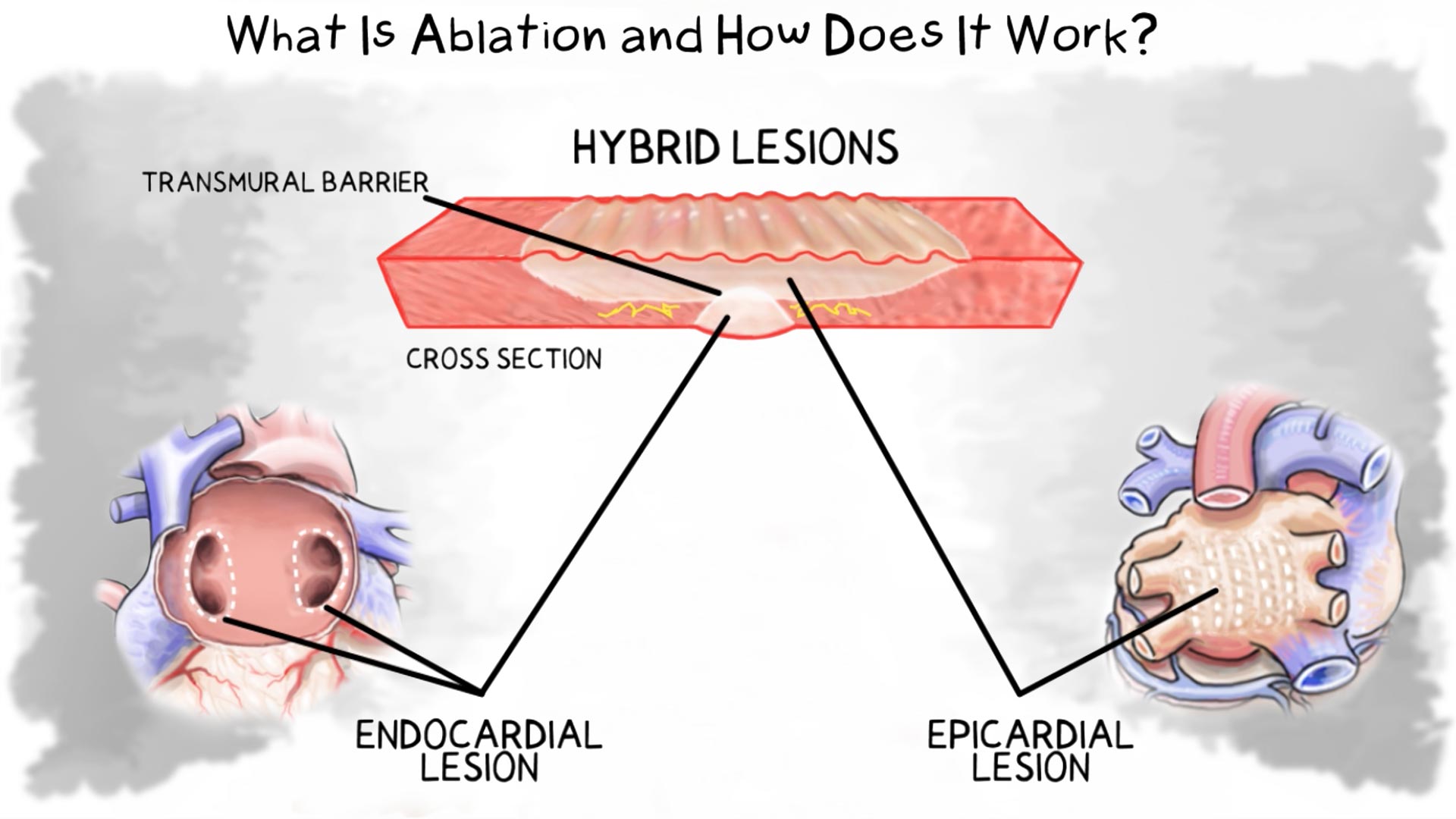
**Different Types of Ablation**

Ablation creates lesions, or barriers, on the heart tissue in an effort to stop the erratic electrical signals that cause atrial fibrillation. There are 2 types of ablation:

* **Endocardial ablation:** Treats the inside the heart—it is most often used to treat paroxysmal atrial fibrillation, an earlier stage of AF.
* **Epicardial ablation:** Treats the outside the heart

**Hybrid AF™ Therapy** combines both types of ablation. It creates lesions inside (endocardial RF) and outside (epicardial) of the heart. Hybrid AF Therapy is used to treat persistent and long-standing persistent atrial fibrillation.

How is a lesion a barrier?



**Image File Name:** PM-GL-1431C-0625-GHow is a lesion a barrier

**Image Alt Text:** When a lesion extends all the way through heart tissue, it is a more effective barrier.

VIDEO

The goal of an ablation is to stop the atrial fibrillation, or to make the episodes shorter and less frequent.

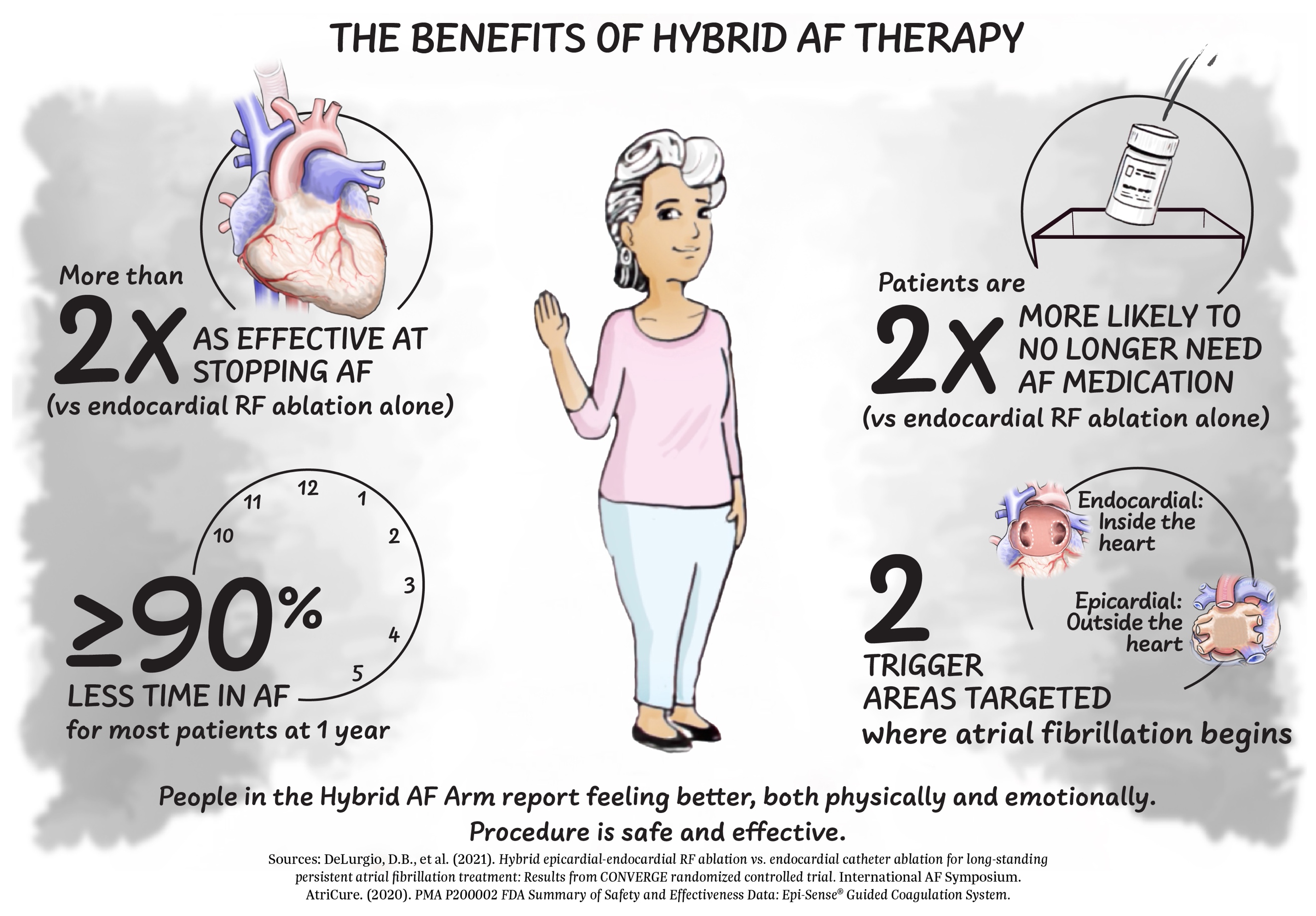
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**Details About Hybrid AF Therapy**

If you have persistent or long-standing persistent atrial fibrillation, your doctor might recommend Hybrid AF Therapy.

**Benefits of Hybrid AF Therapy**

Consider the benefits of Hybrid AF Therapy.8,12



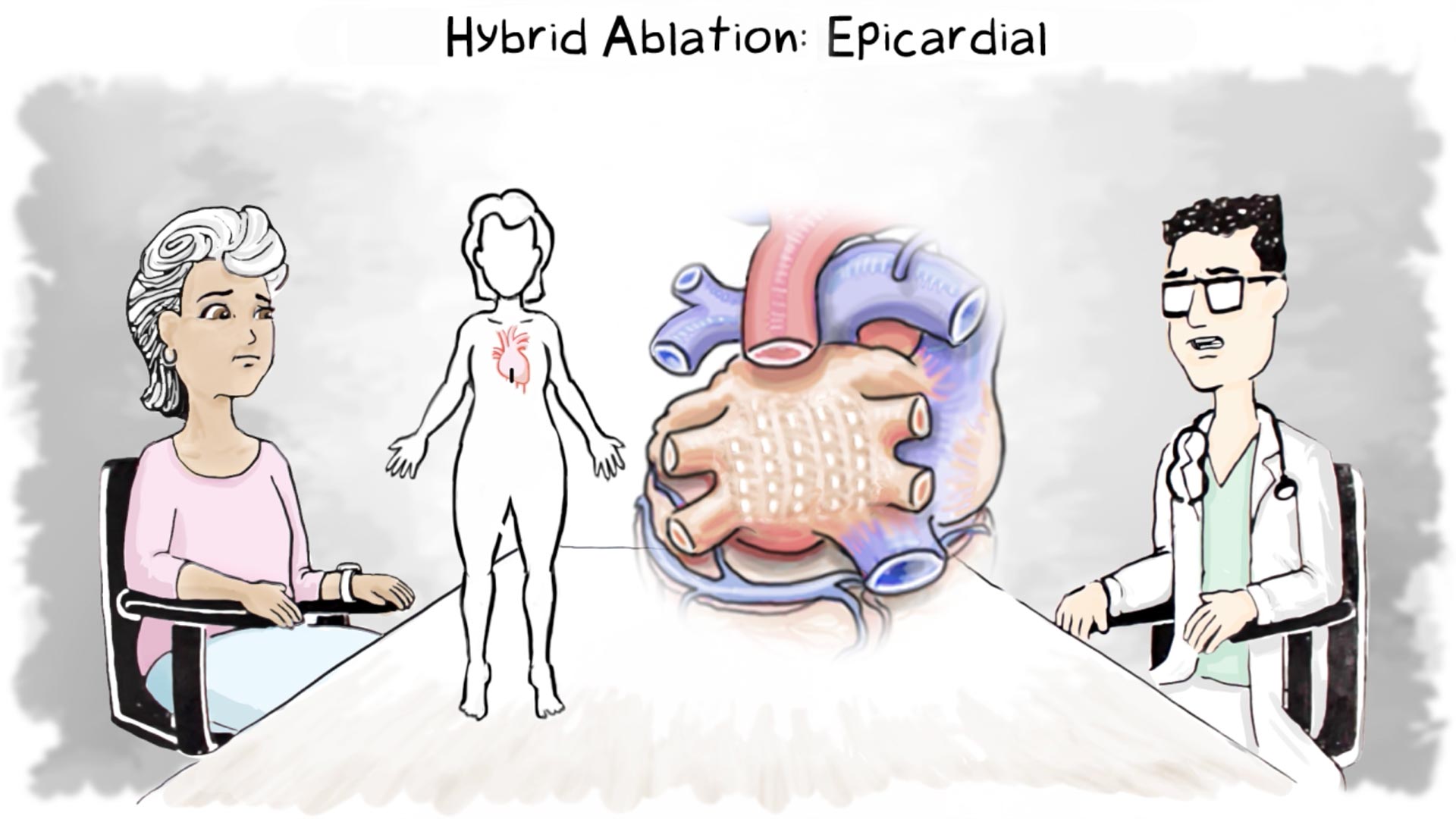
**Image File Name:** *Hybrid AF Benefits-V10\_Full Infographic-InlineRefs.jpg*

**Image Alt Text:** Initially, AF treatments may include lifestyle changes, medications, and/or cardioversion.

VISUAL

**Step 1 of Hybrid AF Therapy: Lesions on the Outside of the Heart**

Hybrid Atrial Fibrillation part 1 Epicardial



**Image File Name:** PM-GL-1432C-0625-GTypes of Ablation Treatment

**Image Alt Text:** Hybrid AF Therapy creates lesions on the outside back of the heart.

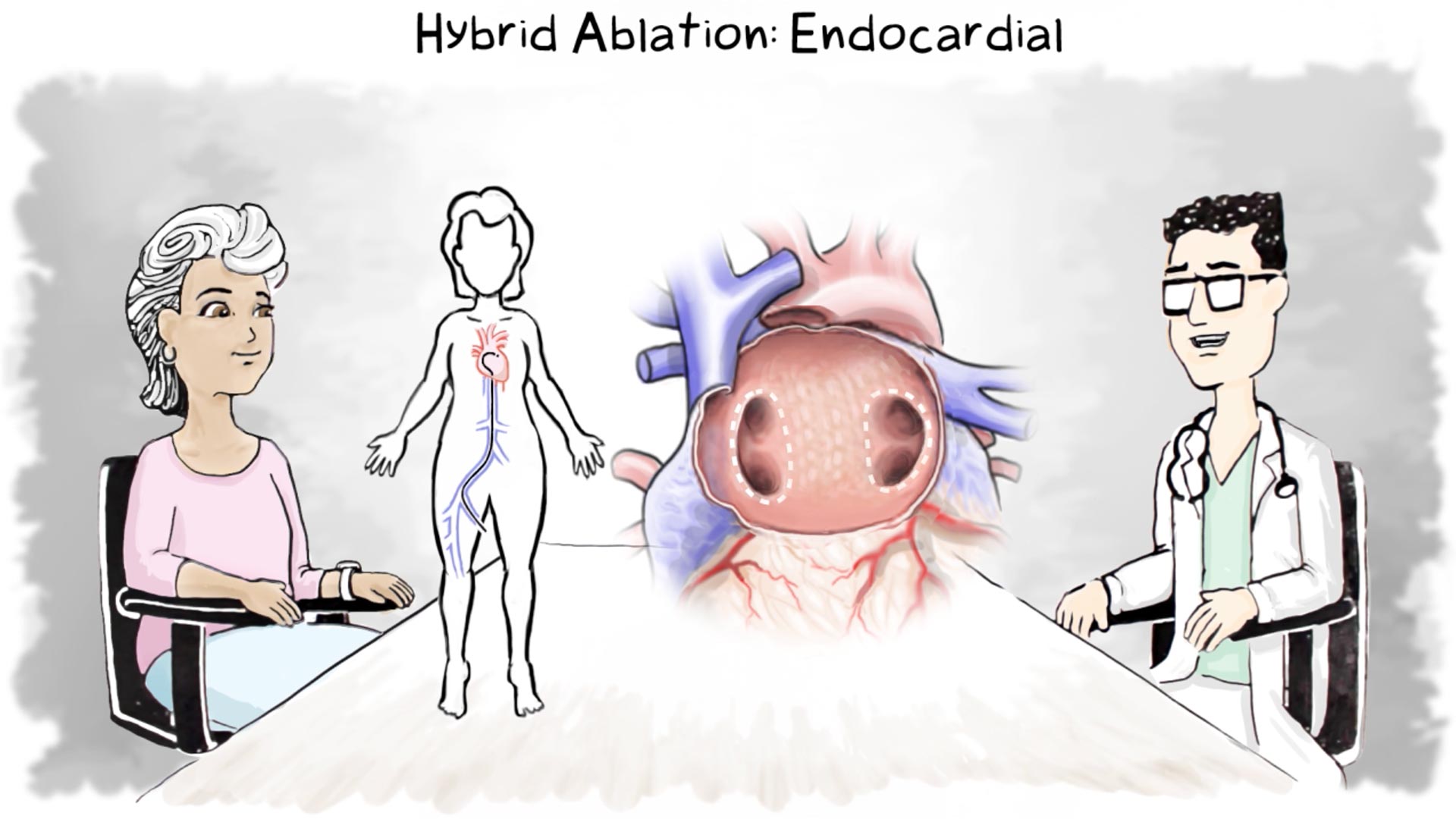
VIDEO

Epicardial (outside of the heart) lesions target areas of the heart that cannot be reached from the inside of the heart.

* The doctor makes a small 2–3 cm incision under the breastbone.
* Once the doctor has access to the heart, lesions are created across the posterior (back) wall.
* These epicardial lesions overlap to create a barrier to the erratic electrical signals that cause atrial fibrillation.

**Step 2 of Hybrid AF Therapy: Lesions on the Inside of the Heart**

Hybrid Atrial Fibrillation part 2 Endocardial



**Image File Name:** PM-GL-1432C-0625-GTypes of Ablation Treatment

**Image Alt Text:** Hybrid AF Therapy also creates lesions on the inside of the heart where the abnormal heart rhythms originate.

VIDEO

Endocardial (inside of the heart) lesions target areas of the heart that are difficult to reach from the outside.

* A second doctor makes a small incision in the femoral vein in the upper thigh. 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 at any areas that still have abnormal electrical activity.

Depending on your hospital policies and doctor preferences, epicardial and endocardial lesion might be performed during a single hospital stay, or planned sequentially. Your doctor will:

* Prescribe medication to prevent inflammation soon after the procedure
* Tell you when you can resume taking needed heart medications
* Tell you if you may be able to stop taking certain heart medications

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

The goal of ablation treatment for atrial fibrillation is to stop the irregular heart rhythm or reduce AF 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.7

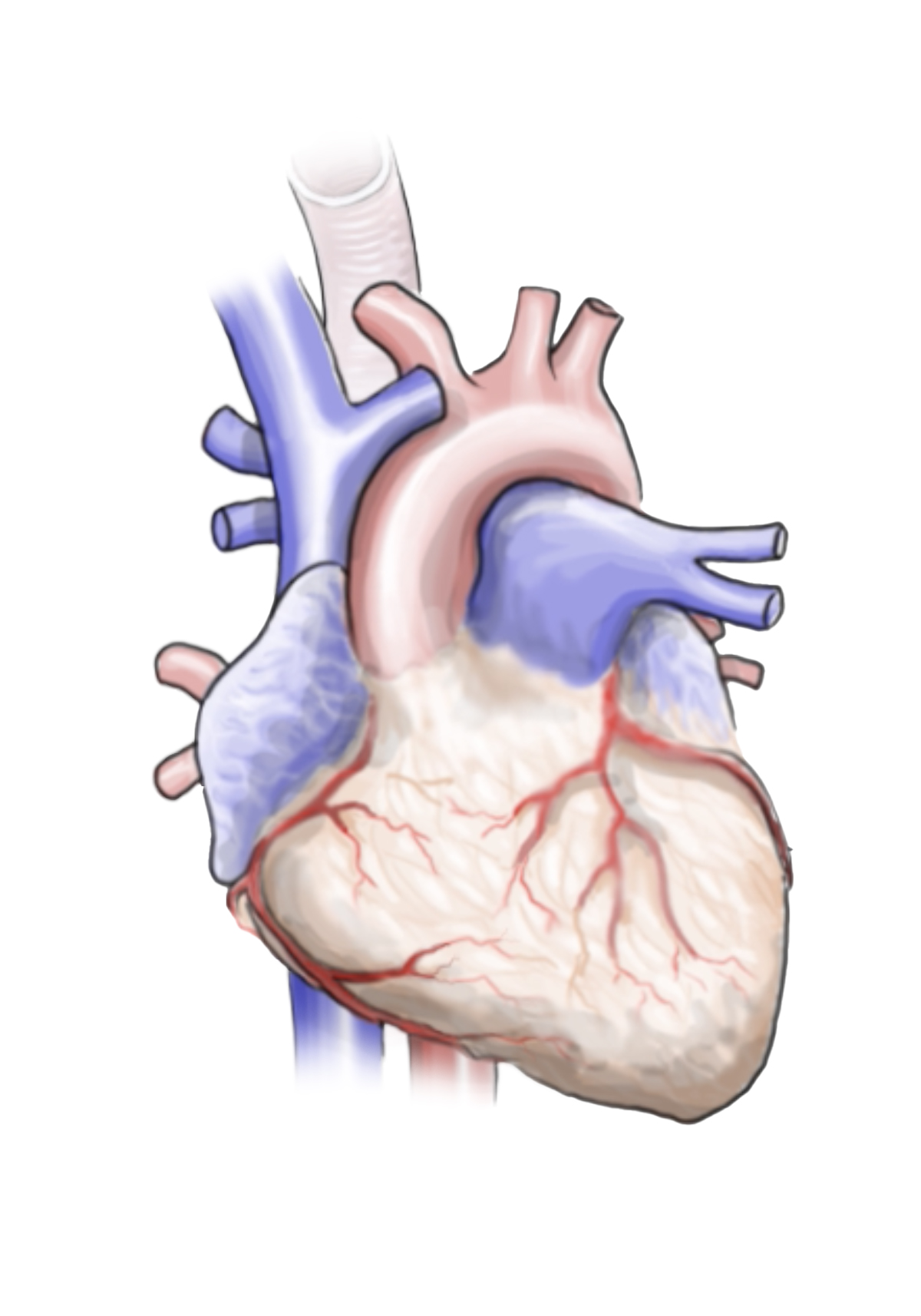
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**Is Hybrid AF Therapy Right for You?**

It may be, but only a health care provider can determine the best treatment for you.

When Hybrid AF Therapy effectively stops atrial fibrillation, there can be other important benefits to the heart:

VISUAL



**Image File Name:** *heart alone.jpg*

**Image Alt Text:** When you find an effective treatment for AF, there are important benefits to your heart—and your health overall.

* Reverse the stretching of the left atrium7
* Improve heart function overall7
* Improve your symptoms8
* Reduce the number of heart medications you need to take7

Talk to your doctor about how to find the right treatment for your stage of atrial fibrillation.

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**Hear from a Patient Who Had Hybrid AF Therapy**

VIDEO – Hospital Created Content

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**Hear from a Doctor Who Performs Hybrid AF Therapy**

VIDEO – Hospital Created Content

**Sources**

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Hybrid AF Therapy is for the treatment of atrial fibrillation.

**Risk Information**

Contraindications include 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. Reported adverse events associated with epicardial ablation procedure may include, but are not limited to, the following: pericardial effusion, excessive bleeding, Pericarditis, phrenic nerve injury, stroke/TIA/neurologic complication.

Please review the Instructions for Use for a complete listing of contraindications, warnings, precautions and potential adverse events located at the following AtriCure web address: <https://europe.atricure.com/healthcare-professionals/product-labeling>

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