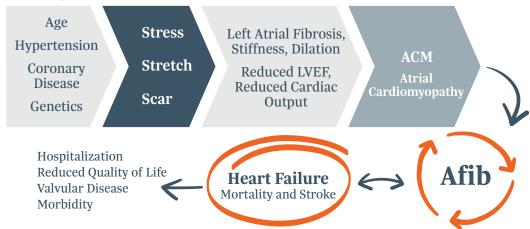
# AFIB AND HEART FAILURE TOGETHER

What Does It Mean?
And What You Can Do



# Structure and Rhythm Both Play a Role in Cardiac Output



### Afib can lead to decompensation or it can be the primary stimulus for the development of HF¹

Cardiac surgeons have the golden opportunity at the time of surgery for a valve problem or coronary artery blockage to halt the progression of heart failure symptoms and restore sinus rhythm.

Atrial fibrillation (Afib) can lead to heart failure (HF) or worsen it, which carries an increased risk of stroke and death<sup>1</sup> – and, HF happens to be the leading cause of death in Afib patients.<sup>2</sup> However, Afib is ignored almost 80% of the time in patients already undergoing surgery<sup>3, 4</sup> – even with a Class I guideline recommendation.

Evidence has proven that Afib and HF co-mingle, decreasing patients' longevity.<sup>5</sup> Treating Afib in the setting of large left atria and reduced ejection fraction can improve the quality of patients' lives after surgery and help them return to a normal life expectancy curve.<sup>4</sup>

HF is the leading cause of death in Afib patients.2



# The Imminent Epidemic of Afib and Its Concomitant Diseases

### A Cause for Concern

### After age 40:



1 in 4 people will develop Afib<sup>6</sup>



1 in 5 people will develop HF



HF prevalence is expected to increase by 46% and costs will double to \$70 billion by 2030

Afib and HF are two conditions that are likely to dominate the next 50 years of cardiovascular care.8



### Hiding in Plain Sight Shared Risk Factors

Incidence of Afib and HF has been related to classic cardiovascular risk factors, generating a pro-inflammatory environment and fibrosis – a common basis of both diseases.<sup>9</sup>

Afib can share many of the same risk factors as HF, making it difficult to detect, and promotes HF development through multiple mechanisms.<sup>1</sup>



Afib contributes to left ventricular dysfunction leading to HF.<sup>5</sup> A person with Afib is 5x more likely to develop HF.<sup>10</sup>



# The Vicious Cycle Ignoring Afib Can Lead to HF – Or Worsen It

Previous studies and surveys have shown that common underlying symptoms such as an enlarged left atrium and reduced ejection fraction are perceived barriers for the treatment of Afib in cardiac surgery patients.<sup>3</sup>

- · Loss of atrial systole
- · Decreased diastolic filling interval
- · Decreased cardiac output
- · Increased end-diastolic pressure
- RAAS/neurohormonal activation

- Left atrial stretch
- Increased atrial pressure
- · Increased atrial size
- Atrial fibrosis



Cycle of interdependence between Afib and HF



- Tachycardia
- · Irregular conduction



- · Increased focal triggers
- Conduction slowing
- Shortened atrial effective refractory period
- Increased action potential duration heterogeneity

What can seem like a short-term barrier to treating Afib can be a marker for long-term development or worsening of HF. Patients can still continue a negative progression following structural heart surgery.

29% of Afib patients die of HF within a decade of diagnosis.2



### **Benefits of Restoring Sinus Rhythm**

### Take advantage at the time of cardiac surgery to halt the progression of HF symptoms

Matched comparisons demonstrate that cardiac surgery patients with Afib who have surgical ablation have improved outcomes, without sacrificing perioperative safety.<sup>4, 11</sup>

Patients with Afib and HF who spend a higher proportion of time in sinus rhythm suffer less severe functional impairment.<sup>8</sup>

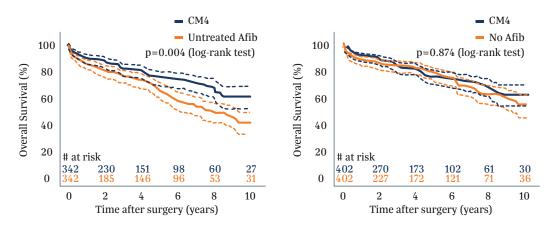


Figure: Kaplan-Meier curve showing the survival of the matched

Restoring sinus rhythm puts the patient back on the same life-expectancy curve as if they never had Afib.<sup>11</sup>



### Afib and HF Together:

### What Does It Mean?

### It means:



Afib will accelerate progressive damage to the heart, reducing cardiac output which can cause or worsen heart failure.



Reduced quality of life, more hospitalization, and increased risk of stroke and death.



It's time to treat Afib as a longterm risk, taking advantage of the opportunity at the time of surgery to restore cardiac output and improving quality of life and survival for patients.



# NOTES





## To find out more, visit **ACTagainstAfib.com**

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