

# Refer Patients with Afib for Heart Surgery?

**ACT**  
against Afib

# Help Patients Live Better. Longer.

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Increasingly more data show that surgical ablation during heart surgery reduces mortality, risk of stroke, and other post-surgical complications. **Concomitant Surgical Ablation (SA) has a Class I Recommendation from both The Society of Thoracic Surgeons (STS) and Heart Rhythm Society (HRS).**<sup>1,2</sup>

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- Patients who undergo SA treatment may actually have reduced hospital LOS.<sup>3</sup>
- One year after CABG with SA for Afib, survival improves by 42%.<sup>4</sup>
- Ten years after CABG surgery with SA survival improves by 20%.<sup>5</sup>
- Concomitant SA gives patients with non-paroxysmal Afib the highest chance of restored sinus rhythm.<sup>6,7</sup>
- Patients with a surgically restored NSR have improved quality of life.<sup>8</sup>

Restoring sinus rhythm with surgical ablation in patients with advanced heart failure can dramatically improve heart function by reducing the burden of Afib.<sup>9,11</sup>

**During surgical ablation, the surgeon also has the ability to *fully exclude* and *electrically isolate* the *left atrial appendage* as a part of the ablation procedure.**

# Lesion Set Options.

Cox Maze IV yields the highest efficacy for Afib treatment, but literature shows progressive efficacy for each additive lesion set of the Cox Maze IV.

| Approach                       | Reported Experiences w/ Surgical Ablation | Ablation Duration      |
|--------------------------------|---|------------------------|
| Pulmonary Vein Isolation (PVI) | PAF<br>~50-90% <sup>1,12,13</sup>         | Note:<br>+ = Time<br>+ |
|                                | nPAF<br>~60% <sup>1,14</sup>              |                        |
| Box Set Lesion (Box)           | nPAF<br>~55-70% <sup>15,16</sup>          | ++                     |
| Left Atrial Lesion Set (LAL)   | nPAF<br>~73-86% <sup>17-19</sup>          | +++                    |
| Bi-Atrial Lesion Set (Maze)    | nPAF<br>~80-90% <sup>20-22</sup>          | ++++                   |

LAL and Maze Lesion Sets Include Left Atrial Appendage Management (LAAM)

| Left Atrial Appendage Management (LAAM)            | Effectiveness of LAAM Modalities   |
|--|--|
| LAAM is often part of surgical ablation procedures | Epicardial Clip Exclusion: 97% (93-100%) <sup>23-33</sup><br>Excision: 74% (45-100%) successful closure <sup>33-36</sup><br>Staple Ligation: 56% (0-71%) successful closure <sup>34,35,37</sup><br>Suture Ligation: 36% (23-49%) successful closure <sup>34,35,37,38</sup> |

Reported Experiences: 1-5 year retro and prospective peer-reviewed publications both on and off AADs

A meta-analysis for endocardial PVI outcomes for paroxysmal Afib show about 70% success in restoring sinus rhythm.<sup>39</sup> For persistent and long-standing persistent Afib, the success rates per a meta-analysis drop to about 50% and may require multiple ablation procedures.<sup>39</sup>

Less than **10%** of CABG patients with Afib get concomitant surgical ablation.<sup>40,41</sup>

Less than **1/3** of all heart surgery patients with Afib receive the Class I recommended concomitant surgical ablation.<sup>40,42</sup>

Collaborate with the surgeon upon referral for heart surgery to determine if the patient has Afib. Ask if surgical ablation, including LAAM, can be included during the primary heart surgery.

The success of various procedures may be influenced by several factors, which may predict the outcome, such as duration of pre-procedural Afib, type of Afib, lesion set performed, left atrial size, patient's age, atrial fibrillation wave <1.0mm, experience of the operator, left atrial reduction, and device used.

# Post–Ablation Considerations:

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- Not all surgical ablation is a full Maze lesion set (bi–atrial lesion set), the patient may instead have:
  - PVI lesions
  - Box lesions
  - LA lesion set
- Each may vary in efficacy, with the full Maze being the most efficacious.
- Afib that occurs after the blanking period may not resolve, and those patients need further management and/or intervention.
- There is currently a lack of evidence for or against the merits of anticoagulation following surgical ablation. HRS recommends making this decision based on the patients overall stroke risk, regardless of the presence of sinus rhythm.
- Electrophysiologists have consensus on monitoring protocols, management, and follow up for post-ablation patients, which can include those concomitant surgical ablation patients.

**The “blinking period”:  
The first 90 days post-op  
where recurrence of atrial  
tachyarrhythmias could  
occur due to temporary  
inflammatory and  
proarrhythmic changes.**

**“The most successful programs in the future might be those that employ an interdisciplinary, collaborative team approach to the treatment of AF, resulting in higher success rates for patients. Many of these patients are well read and mobile and will seek out such centers, thus increasing both catheter and surgical volumes.”<sup>2</sup>**

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