Surgical ablation explained

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The addition of surgical ablation to an appropriate mitral operation with atrial fibrillation is a Class I recommendation.¹⁻³ Nevertheless, adoption rates lag because hesitancy or confusion persists with respect to how and why one does the lesions of the Cox-maze operation.⁴ Recent operative attempts at non-Maze lesion set modifications have come at the expense of clinical and electrophysiologic outcome.

In this important contribution by James Cox and co-authors,⁵ each lesion of the contemporary Cox-maze operation is explained in electrophysiologic terms. If the full biatrial lesion set is dutifully performed via sternotomy or minimally invasive open techniques, this article clearly outlines why consistent electrophysiologic success is readily achievable. This guide may further serve to assist both beginning and experienced arrhythmia surgeons on the importance of each lesion and how best to perform them. It may further aid our electrophysiology partners in the complete understanding of what is achievable and why.

Although many recent surgical ablation modifications and hybrid solutions have been introduced, few follow the electrophysiologic basis outlined by Cox and colleagues.⁵ This contribution may help guide atrial fibrillation heart teams in making patient-centered therapeutic decisions that target optimal longitudinal clinical and electrophysiologic outcomes.

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Central Message

As surgical ablation has become standard practice with clear mortality benefits, some may not fully appreciate the electrophysiologic basis for specific lesions. Dr James Cox attempts to outline each of these lesions and how they impact outcome.

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