

**Help Patients Live Better.
Longer.**

ACT
against Afib

Help Patients Live Better. Longer.

Increasingly more data show that surgical ablation (SA) during heart surgery reduces mortality, risk of stroke, and other post-surgical complications. Patients who undergo concomitant treatment may have reduced hospital length of stay (LOS).⁵ One study showed that one year after coronary artery bypass graft (CABG) surgery with surgical ablation for atrial fibrillation (Afib), **survival improved by as much as 42%**.¹ As long as 10 years after CABG surgery, Afib patients who received concomitant treatment still show a **20% improvement in life expectancy**.¹¹

What's more, concomitant surgical ablation gives patients with non-paroxysmal Afib the highest chance at restoring normal sinus rhythm (NSR).¹⁵⁻¹⁷ Patients with a surgically restored NSR show improvement in quality of life and reduced mortality.^{18,9}

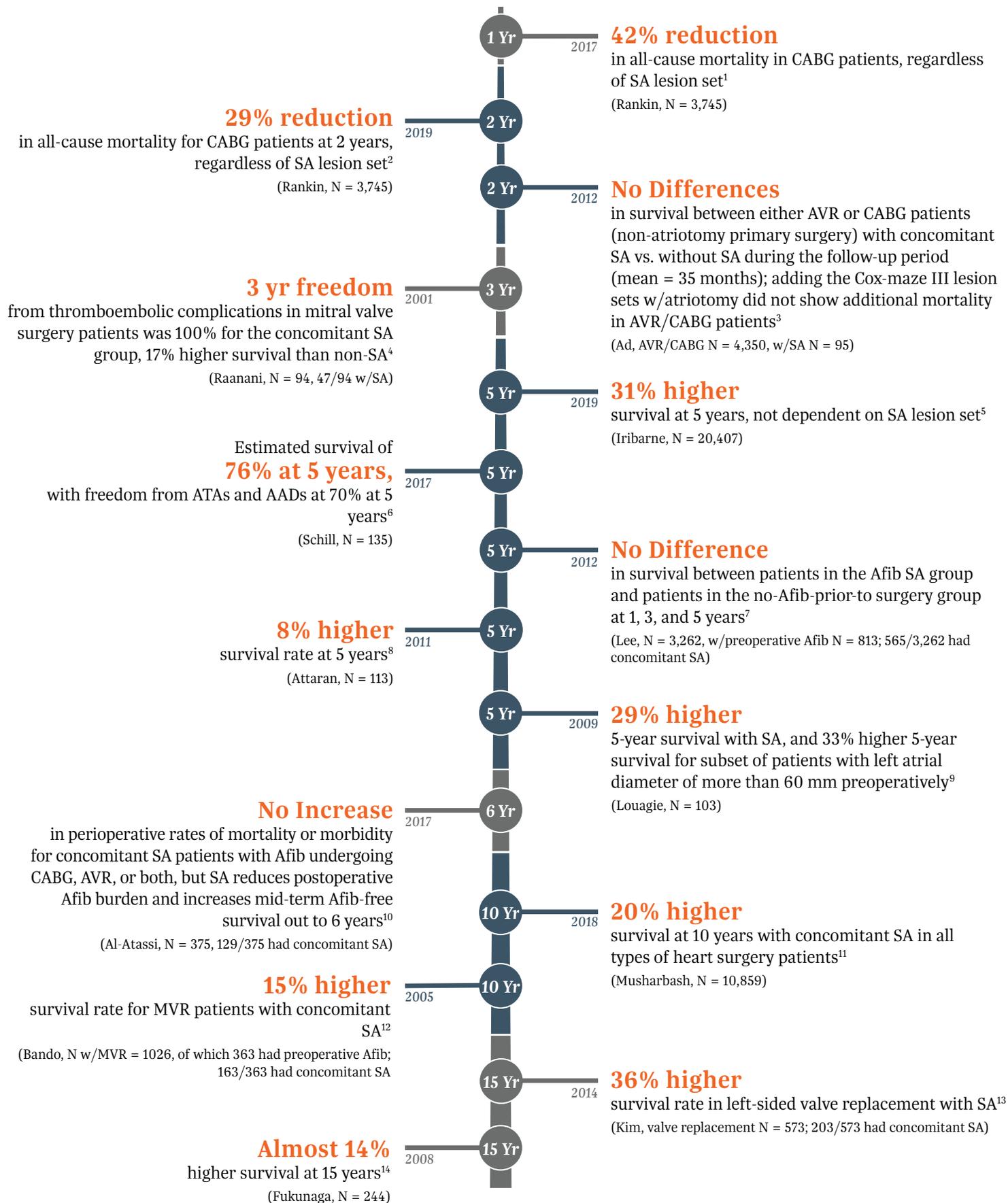
Patients with Restored NSR Live Better.

In the majority of studies, patients achieving sinus rhythm demonstrate improved symptoms, as well as quality of life.¹⁹

A wealth of data led the Surgical Thoracic and Heart Rhythm Societies to make a **Class I recommendation** that patients with Afib undergoing valve or coronary surgeries receive surgical Afib treatment.^{19,20}

14 articles, 48,000 patients show that SA patients live longer.

Published Follow-up Results



Help Patients Live Better. Longer.

References:

- ¹ Rankin, J.S., Lerner, D.J., Braid-Forbes, M.J., Ferguson, M.A., & Badhwar, V. (2017). One-year mortality and costs associated with surgical ablation for atrial fibrillation concomitant to coronary artery bypass grafting. *Eur J Cardiothorac Surg*, 52(3):471-7.
- ² Rankin, J.S., Lerner, D.J., Braid-Forbes, M.J., McCrea, M.L., & Badhwar, V. (2019). Surgical ablation of atrial fibrillation concomitant to coronary-artery bypass grafting provides cost-effective mortality reduction. *J Thorac Cardiovasc Surg*. In press.
- ³ Ad, N., Henry, L., Hunt, S., & Holmes, S.D. (2012). Do we increase the operative risk by adding the Cox Maze III procedure to aortic valve replacement and coronary artery bypass surgery? *J Thorac Cardiovasc Surg*, 19(4):438-42.
- ⁴ Raanani, E., Albage, A., David, T.E., Yau, T.M., & Armstrong, S. (2001). The efficacy of the Cox/maze procedure combined with mitral valve surgery: a matched control study. *Eur J Cardiothorac Surg*, 19(4):438-42.
- ⁵ Iribarne, A. et al. (2019). Surgical atrial fibrillation ablation improves long-term survival: a multicenter analysis. *Ann of Thorac Surg*, 107(1):135-42.
- ⁶ Schill, M.R. et al. (2017). Late results of the Cox-maze IV procedure in patients undergoing coronary artery bypass grafting. *J Thorac Cardiovasc Surg*, 153(5):1087-94.
- ⁷ Lee, R. et al. (2012). Midterm survival in patients treated for atrial fibrillation: a propensity-matched comparison to patients without a history of atrial fibrillation. *J Thorac Cardiovasc Surg*, 143(6):1341-51.
- ⁸ Attaran, S., Saleh, H.Z., Shaw, M., Ward, A., Pullan, M., & Fabri, B.M. (2011). Does the outcome improve after radiofrequency ablation for atrial fibrillation in patients undergoing cardiac surgery? A propensity-matched comparison. *Eur J Cardiothorac Surg*, 41(4):806-11.
- ⁹ Louagie, Y. et al. (2009). Improved patient survival with concomitant Cox Maze III procedure compared with heart surgery alone. *Ann of Thorac Surg*, 87(2):440-6.
- ¹⁰ Al-Atassi, T., Kimmaliardjuk, D.M., Dagenais, C., Bourke, M., Lam, B.K., & Rubens, F.D. (2017). Should we ablate atrial fibrillation during coronary artery bypass grafting and aortic valve replacement? *Ann of Thorac Surg*, 104(2), 515-22.
- ¹¹ Musharbash, F.N. et al. (2018). Performance of the Cox-maze IV procedure is associated with improved long-term survival in patients with atrial fibrillation undergoing cardiac surgery. *J Thorac Cardiovasc Surg*, 155(1):159-70.
- ¹² Bando, K. et al. (2005). Impact of preoperative and postoperative atrial fibrillation on outcome after mitral valvuloplasty for nonischemic mitral regurgitation. *J Thorac Cardiovasc Surg*, 129(5):1032-40.
- ¹³ Kim, H.J. et al. (2014). Valve replacement surgery for older individuals with preoperative atrial fibrillation: the effect of prosthetic valve choice and surgical ablation. *J Thorac Cardiovasc Surg*, 147(6):1907-17.
- ¹⁴ Fukunaga, S. et al. (2008) Effect of surgery for atrial fibrillation associated with mitral valve disease. *Ann of Thorac Surg*, 86(4):1212-7.
- ¹⁵ McCarthy, P. Submitted ABLATE PAS 3Y follow-up data to journal of cardiothoracic surgery. Jan 2019. Pending review. PMA P100046.
- ¹⁶ Gaynor, S.L. et al. (2015). Surgical treatment of atrial fibrillation: predictors of late recurrence. *J Thorac Cardiovasc Surg*, 129(1):104-11.
- ¹⁷ Weimar, T. et al. (2011). The Cox-maze IV procedure for lone atrial fibrillation: a single center experience in 100 consecutive patients. *J Interv Card Electrophysiol*. 31(1):47-54.
- ¹⁸ Forlani, S. et al. (2006). Conversion to sinus rhythm by ablation improves quality of life in patients submitted to mitral valve surgery. *Ann of Thorac Surg*, 81(3):863-7.
- ¹⁹ Badhwar, V. et al. (2017). The Society of Thoracic Surgeons 2017 clinical practice guidelines for the surgical treatment of atrial fibrillation. *Ann of Thorac Surg*, 103(1):329-41. NOTE: Level of evidence for concomitant mitral valve repair was A, and for aortic valve repair and/or coronary artery bypass was B.
- ²⁰ Calkins, H. et al. (2017). 2017 HRS/EHRA/ECAS/APHRS/SOLAECE expert consensus statement on catheter and surgical ablation of atrial fibrillation. *Heart Rhythm*, 14(10):e275-e444. NOTE: HRS issued a Class I recommendation for AVR/CABG concomitant ablation for symptomatic persistent and long-standing persistent "refractory or intolerant to at least one Class 1 or 3 antiarrhythmic medication." Level of evidence for concomitant mitral valve repair, aortic valve repair, and/or coronary artery bypass was B.

AAD: antiarrhythmic drugs

ATAs: atrial tachyarrhythmias

AADs: antiarrhythmic drugs

ACs: anticoagulants

MVR: mitral valve repair