

Enhanced Recovery After Cardiac Surgery Guidelines Published in JAMA Surgery

Rigid sternal fixation can be useful to improve/accelerate sternal healing and reduce mediastinal wound complications.¹

Main Points

The Enhanced Recovery After Cardiac Surgery (ERAS Cardiac) Society is dedicated to enhancing perioperative care through researching best practices and helping implement these procedures in facilities all over the world to improve patient outcomes. The goal is to provide hospitals with better guidance for developing local protocols that are part of a continuous quality improvement process for better patient care, and reduce postoperative complications and costs after heart surgery.²

At the 2018 American Association for Thoracic Surgery (AATS) the Society published findings of a literature review on best practices for perioperative care by categorizing certain practices within Class of Recommendation and Level of Evidence. These guidelines are now published in the May 2019 edition of JAMA Surgery.

Rigid Sternal Fixation = Class IIa Level B-R

Class (Strength) of Recommendation	Class IIa (Moderate)
Level (Quality) of Evidence	Level B-R (Randomized)

Key points regarding rigid sternal fixation included in their publication include:¹

- Most surgical disciplines managing fractures/osteotomies adhere to the principles of approximation, compression, and stabilization of the bone using rigid fixation.
- The majority of cardiac surgeons continue to use wire cerclage for sternotomy closure because of the perceived low rate of sternal wound complications and the low cost of wires.
- Concern of inadequate bone healing lead to most cardiac surgery patients recovering under “sternal precautions”, which limits their ability to mobilize.
- In a randomized multicenter trial, sternotomy closure with rigid plate fixation vs. wire cerclage resulted in significantly better sternal healing, fewer sternal complications, improved patient reported outcomes, and no additional cost at 6 months after surgery.

In certain studies, SternaLock Blu research has shown that patients heal faster and have a reduction in pain when their sternum is rigidly fixated compared to wires.^{3,4}



For additional information on ERAS and the organization’s research please visit their website at www.erascardiac.org

References

1. https://cms.erascardiac.org/downloads/Recommendation_Summary_Page_Sternal_closure_190510_042031.pdf
2. <https://www.erascardiac.org/about/eras-cardiac-society>
3. Allen, K, et al. Randomized, Multicenter Trial Comparing Sternotomy Closure with Rigid Plate Fixation to Wire Cerclage. The Journal of Thoracic Surgery. Vol 153, Number 4. Pg 888-896. April 2017
4. Raman, J, et al. Sternal Closure with Rigid Plate Fixation versus Wire Closure: A Randomized Controlled Multicenter Trial. Annals of Thoracic Surgery. Vol 94, Pg 1854-61. 2012.