Overall, the authors have presented data that address a gap in the literature. All other variables being equal, redo ARR is not riskier than first-time ARR in the postoperative and midterm follow-up periods. However, thoughtful patient selection and meticulous surgical technique may still be the best defense against poor outcomes. Long-term results of these patients with ARR in the reoperative setting are of interest.

References

Commentary: Redo of aortic root surgery: Tackling the nightmare successfully
Andrea Biondi, MD, and Mauro Lo Rito, MD

Brown and colleagues1 investigate the outcome of reoperative aortic root replacement (ARR) in patients having undergone previous cardiac operations. They included all patients who underwent ARR (ie, aortic valve and aortic root) and divided them into the first sternotomy and redo sternotomy. Within the redo sternotomy population, they performed a subgroup analysis to look at the difference between the ARR in patients who were resternotomy for any other surgery and ARR redo of previous aortic root surgery. They found that redo ARR can be safely done with similar results to first-time ARR and previous sternotomy. In particular, mortality for such surgery reported by Brown and colleagues1 is comparable to other studies, especially for the first-time ARR.2,3 The authors have to be congratulated for those brilliant results in such complex reoperative surgery. However, looking at the details of the numbers, some questions rise and remain unanswered. Among the significant findings of this study is that there is no difference in survival among redo ARR to redo-sternotomy to first ARR, with 12% mortality in both groups after propensity matching. This is a favorable result, but the lack of differences among the 2 matched groups is not due to the low redo ARR mortality, which is a remarkable achievement, but to the slightly higher mortality in redo first ARR than in other reports.2,3 We could not tease out the reasons for such incremental mortality after matching. Conceptually, despite being a resternotomy, a first-time ARR should not have such a mortality rate considering that the aortic root
was not previously replaced. A possible explanation may be the increment of endocarditis indication before and after matching. In particular, the percentage of infective endocarditis in the redo sternotomy first ARR rose from 39.7% before matching to 51.5% after matching and this is a well-known risk factor for mortality.²

Brown and colleagues'¹ results are excellent for such complex operations; it remains unexplained why they experienced such increased mortality. The take-home message is not to be afraid of such nightmare cases and perform redo ARR. Although we have to be aware of hidden risks and remember that center experience and surgeon ability are fundamental for a successful treatment.

References