



“Automated annular suture device versus conventional annular suture technique in endoscopic aortic valve replacement: A propensity score–matched analysis”

Study: 1,280 endoscopic isolated AVR surgical patients compares RAM® μAVR to propensity-matched conventional suturing / 7 years / 3 German cardiac centers

259 RAM® μAVR Patients

Mortality 0%
30 days
0/8/0.004

Dialysis 0%
Permanent
0/4/0.062

PVL 0%
Intra-/post-op
0/1/0.5

TIA 0%
No deficit
0/2/0.25

Afib 0%
Persistent
0/1/0.5

Wound 0%
Revision
0/1/0.5

CVA 0.4%
Stroke
1/8/0.021

MI 0.4%
Infarct
1/3/0.375

PPM 0.8%
For AVB
2/2/1

AKI 1.5%
Renal injury
4/7/0.388

Excellent Outcomes

Re-Op 2.3%
Bleeding
6/19/0.007

Pleural 2.3%
Effusion Tx
6/16/0.035

Resp. 2.7%
Insufficiency
7/17/0.043

Delirium 4.6%
Post-op
12/22/0.09



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S. Salamate, A. El-Sayed Ahmad, A. Bayram, S. Sirat, Ö. Akhavuz, M. Amer, J. Kruse, M. Silaschi, M. Doss, and F. Bakhtiary. *JTCVS Techniques*, December 2025. doi.org/10.1016/j.xjtc.2025.09.034



ukb universitäts
klinikumbonn

Faster Operations

Study CPB Time

Time Mean ± SD, p < 0.001

83.8 ± 23.3 min.

259 RAM® Patients

Study ACC Time

Mean ± SD, p < 0.001

54.7 ± 16.2 min.

CardioPulmonary Bypass

cpb = 8182 - 4.003*year R²: 0.046
F (1256) = 12.31, p value = 0.0005

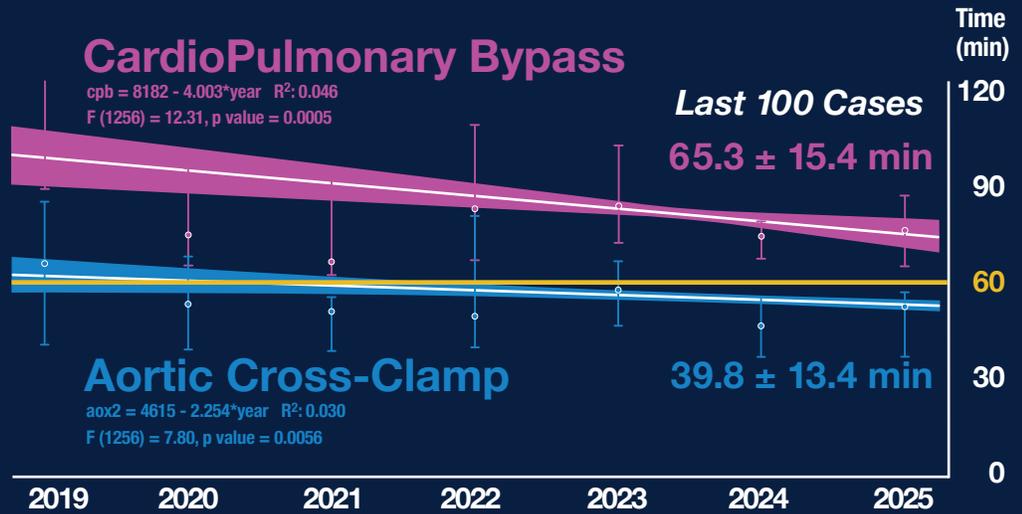
Last 100 Cases

65.3 ± 15.4 min

Aortic Cross-Clamp

aox2 = 4615 - 2.254*year R²: 0.030
F (1256) = 7.80, p value = 0.0056

39.8 ± 13.4 min



Faster Recovery

ICU median time

1.2 ± 0.6 days

Hospital median duration

5.6 ± 2.8 days

“Significantly shorter duration for patients in the RAM group, suggesting not only faster recovery but also a more consistent postoperative course.”



RAM® The 1st Decade > 4,400 cases

