STS2026

January 29 – February 1, 2026 | New Orleans, LA

Teaching for Tomorrow Together

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Off-pump versus on-pump CABG: Preliminary unadjusted individual patient data meta-analysis findings

A. Laurie Shroyer, PhD*, Mario Gaudino, MD*, Daniel Wolbrom, MD, Samuel Greenberg, MD, Lichun He, MS, G. Hossein Almassi, MD, Wilko Reents, MD, and **Andre Lamy, MD** on behalf of the CABG-IPD-MA study team

Disclosures

Dr. Andre Lamy (primary presenter):

Alexion Pharmaceutical, Renibus Pharmaceutical, and Chugai Pharmaceutical as consultant in cardiac surgery associated AKI (CSA-AKI) for a phase 2 and 3 trials.

All other co-authors:

No disclosures

Background

Three large multi-center, randomized trials off-pump vs. on-pump have published 5-year results:

- GOPCABE
- CORONARY
- ROOBY

- Individual patient data meta-analysis (IPDMA) of 9325 pts

Demographics

	Off-pump (N=4658)	On-pump (N=4667)
Age (Mean ± SD)	69.3 ±8.7	69.1 ±8.8
Male sex	81.9%	82.3%
Urgent status	24.4%	23.4%
CCS Class 3 and 4	46.7%	46.2%
History CHF	26.0%	24.7%
History MI	35.6%	37.0%
History PCI	13.4%	13.1%
Cerebrovascular disease	12.8%	13.1%
EuroScore	4.6±4.6	4.6±4.4

Outcomes at 30 days

	Off-pump	On-pump	Relative Risk (95% CI)	P-Value
Composite (death, MI, revasc, stroke)	8.4 %	8.0 %	1.03 (0.96,1.11)	0.41
Death	2.4 %	2.3 %	1.02 (0.89, 1.17)	0.78
Myocardial Infarction	5.2 %	4.8 %	1.04 (0.94, 1.14)	0.45
Stroke	1.2 %	1.4 %	0.94 (0.79, 1.11)	0.52
Revascularization	0.9 %	0.3 %	1.82 (1.20, 2.76)	<0.001

Outcomes at 1 year

	Off-pump	On-pump	Relative Risk (95% CI)	P-Value
Composite (death, MI, revasc,)	12.0 %	11.0 %	1.05 (0.98,1.12)	0.16
Death	5.4 %	5.3 %	1.01 (0.93, 1.11)	0.78
Myocardial Infarction	5.7 %	5.5 %	1.02 (0.93, 1.12)	0.69
Stroke	NA	NA		
Revascularization	2.6 %	1.7 %	1.27 (1.07, 1.51)	0.003

Outcomes at 5 years

	Off-pump	On-pump	Relative Risk (95% CI)	P-Value
Composite (death, MI, revasc,)	27.4 %	26.0 %	1.04 (0.99,1.09)	0.13
Death	18.8 %	17.3 %	1.05 (1.00, 1.11)	0.06
Myocardial Infarction	7.6 %	7.3 %	1.02 (0.95, 1.11)	0.58
Stroke	NA	NA		
Revascularization	6.1 %	5.2 %	1.10 (1.00, 1.21)	0.05

Outcomes at 30 days non-converted patients

	Off-pump (N=4224)	On-pump (N=4412)	Relative Risk (95% CI)	P-Value
Composite (death, MI, revasc, stroke)	7.7 %	7.9%	0.99 (0.91, 1.06)	0.72
Death	2.0 %	2.2%	0.96 (0.84, 1.10)	0.60
Myocardial Infarction	4.7 %	4.8 %	0.99 (0.90, 1.09)	0.88
Stroke	1.1 %	1.5 %	0.87 (0.74, 1.02)	0.12
Revascularization	1.0 %	0.3 %	2.01 (1.28, 3.17)	<0.001

Outcomes at 30 days converted patients

	Off-pump to ON (N=434)	On-pump to OFF (N=255)	Relative Risk (95% CI)	P-Value
Composite (death, MI, revasc, stroke)	15.7 %	8.6%	1.59 [1.09, 2.32]	0.01
Death	5.5 %	3.1%	1.50 [0.82, 2.76]	0.19
Myocardial Infarction	9.4 %	5.1 %	1.58 [0.98, 2.57]	0.04
Stroke	2.8 %	0.4 %	4.88 [0.74, 32.19]	0.04
Revascularization	0.2 %	0.8 %	0.55 [0.25, 1.24]	0.56

Findings

- Repeat revascularization was worse with off-pump
- Converted patients bring new insights about choice of techniques

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Conclusions

Both techniques are effective and safe

Selection of technique is key to optimize benefits for our patients