Long-Term Results of a RCT Analyzing the Results of Systematic Coronary Angiography before Elective Carotid Endarterectomy in Patients with Asymptomatic Coronary Artery Disease

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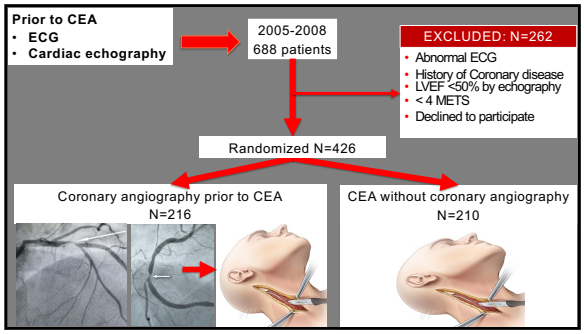
CONFLICTS OF INTEREST STUDY REGISTRATION

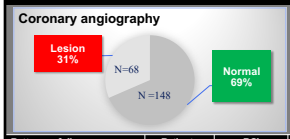
- No conflicts of interest to declare
- Trial Approved by the Institutional Review Board and supported by a grant from the University of Rome
- **ClinicalTrials.gov** number: NCT02260453

GOAL OF THE STUDY

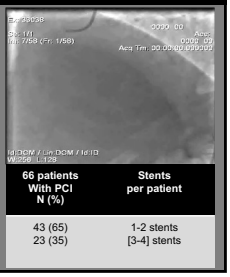
Evaluate the long-term results of systematic coronary angiography prior to elective carotid endarterectomy on survival and occurrence of myocardial infarction in patients with **asymptomatic coronary artery disease**



RESULTS OF CORONARY ANGIOGRAPHY GROUP CORO+ (216 PATIENTS)



Patterns of disease	Patients N (%)	PCI N (%)	CABG N (%)
Single-vessel Disease	43 (64)	43 (64)	-
Two-vessel Disease	19 (28)	19 (28)	-
Three-vessel Disease	3 (4)	2 (2.5)	1 (1.5)
Left main Disease	3 (4)	2 (2.5)	1 (1.5)
Total	**68 (100)**	**66 (97)**	**2 (3)**



66 patients With PCI N (%)	Stents per patient
43 (65)	1-2 stents
23 (35)	[3-4] stents

OUTCOMES

30-Day	• ANY DEATH, STROKE OR MYOCARDIAL INFARCTION (MI)
Kaplan-Meier Univariate analysis	• SURVIVAL • STROKE-FREE SURVIVAL • CUMULATIVE RISK OF MYOCARDIAL INFARCTION
Multivariable analysis	• COX PROPORTIONAL HAZARDS SURVIVAL Independent variable: MI-free survival Explanatory variables: Coronary angiography, diabetes, hypertension, age

INDICATION FOR CAROTID SURGERY

INDICATION	ALL N= 426	CORO + N= 216	CORO- N= 210	*p*
ASYMPTOMATIC STENOSIS >75% (NASCET)	308 (72.3)	157 (72.7)	151 (71.9)	.911
STROKE / TIA	118 (27.6)	59 (27.3)	59 (28.1)	.981

CAROTID ENDARTERECTOMY - TECHNIQUE

TECHNIQUE	ALL N (%)	CORO + N (%)	CORO - N (%)	*p*
CEA	426	216	210	
CEA + Patch	353 (83)	177 (82)	176 (84)	.699
CEA Eversion	73 (17)	39 (18)	34 (16)	
Shunt	45 (11)	26 (12)	19 (9)	.347

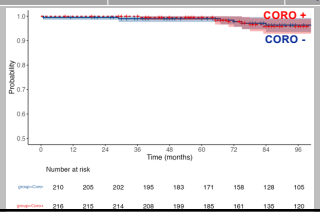
30-DAY PERIOD

EVENT	ALL N=426	CORO – N= 210	CORO + N= 216	*p*
COMBINED DEATH AND STROKE RATE	1.1%	1.8%	0.5%	.373
STROKE	0.7%	1.0%	0.5%	.546
MYOCARDIAL INFARCTION	2.1%	4.3% 9 patients with MI (one death)	0%	**.002**

STROKE-FREE SURVIVAL

STROKE-FREE SURVIVAL	CORO –	CORO +	*p*
At 8 years	96% [93-99]	95% [92-98]	Logrank *p*=.39

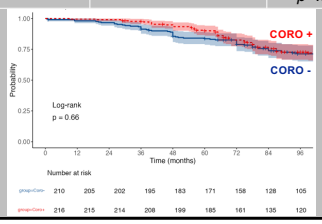
Stroke-free survival was comparable between the groups with or without coronary angiography



SURVIVAL

SURVIVAL	CORO –	CORO +	*p*
At 8 years	71% [65-78]	72% [66-79]	Logrank *p*=.66

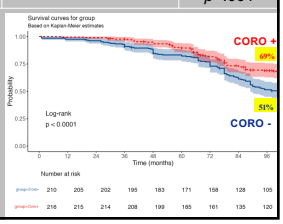
Survival was not improved by systematic coronary angiography prior to CEA



SURVIVAL WITHOUT MYOCARDIAL INFARCTION

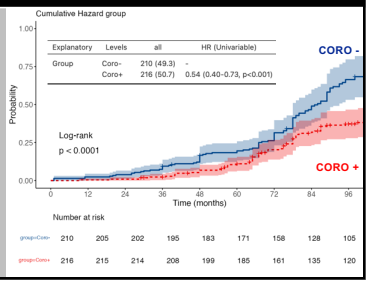
MI-FREE SURVIVAL	CORO –	CORO +	*p*
At 8 years	51% [45-58]	69% [63-75]	Logrank *p*=.001

MI-free survival was significantly improved by systematic coronary angiography prior to CEA



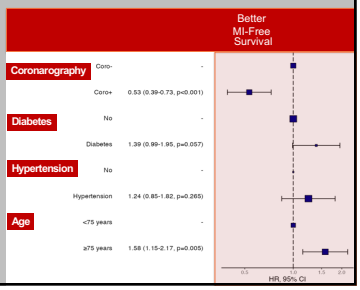
CUMULATIVE HAZARDS OF MYOCARDIAL INFARCTION OR DEATH

The cumulative risks of myocardial infarction or death were halved in the group that had routine coronary angiography before CEA



COX PROPORTIONAL HAZARDS SURVIVAL MODEL

The combined risk of death or MI during a follow-up of 8 years was reduced by half for patients randomized to coronary angiography prior to CEA and increased by half after 75 years



CONCLUSIONS

In asymptomatic coronary-artery patients, Systematic coronary angiography prior to CEA followed by selective PCI or CABG significantly reduces the incidence of late myocardial infarction, but did not increase long-term survival after CEA.