

CACI at TCT

Left Main and Multivessel Stenting with 2nd Generation DES

The Florence – LM Registry

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Disclosure Statement of Financial Interest

I, David Antonucci DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

The Florence ULMD Registry

- **DESIGN:** Prospective, single center registry including consecutive patients treated with DES.
- **OBJECTIVE:** To evaluate the acute and long-term efficacy and safety of ULMD PCI in a “real world” population.
- **PRINCIPAL INVESTIGATORS**
 - Angela Migliorini
 - Renato Valenti
 - Ruben Vergara
 - David Antoniucci

786 patients enrolled between
2004 and 2016



All patients received DES

Clinical follow-up at
6 months, 1 year,
and yearly
thereafter

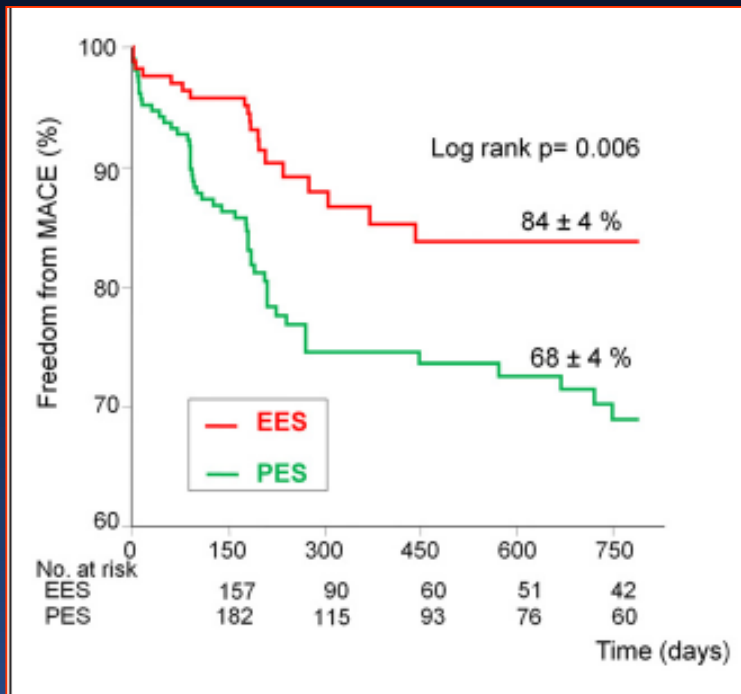
Clinical follow-up
rate at 1 year
100%

Angiographic
follow-up at 6-9
months in 95%

What Have We Learned from the Registry?

- “Real world” ULMD patients are not comparable with RCT patients (SYNTAX, EXCEL, NOBLE).
- Median EuroSCORE 6.1
- Half of patients (51%) have an EuroSCORE ≥ 6
- **The large majority of patients (85%) have a SYNTAX score > 32 .**
- Data from RCTs apply in the minority of patients (low-risk patients, low coronary anatomy complexity).

EES is largely superior to 1st generation DES



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CLINICAL RESEARCH

Interventional Cardiology

Clinical and Angiographic Outcomes of Patients Treated With Everolimus-Eluting Stents or First-Generation Paclitaxel-Eluting Stents for Unprotected Left Main Disease

Renato Valenti, MD, Angela Migliorini, MD, Guido Parodi, MD, Nazario Carrabba, MD, Ruben Vergara, MD, Emilio V. Dovellini, MD, David Antoniucci, MD

Florence, Italy

Restenosis rate
PES 15.6%
EES 5.2% p = 0.002

Predictors of 3-Year Cardiac Death

Completeness of Revascularization

HR 0.31, 95% CI 0.15-0.64, p = 0.001

EuroSCORE

HR 1.03, 95% CI 1.02-1.05, p < 0.001

PCI and SYNTAX score ≥ 33

BASELINE CLINICAL AND ANGIOGRAPHIC CHARACTERISTICS

	Overall n=393	SYNTAX < 33 n=212 (54%)	SYNTAX ≥ 33 n=181 (46%)	p value
✓ Age (yrs), mean \pm SD	72 \pm 11	70 \pm 11	72 \pm 11	.082
✓ Diabetes	96 (24)	48 (23)	48 (26)	.372
✓ ACS	200 (51)	103 (49)	97 (54)	.322
✓ STEMI	30 (10)	13 (6)	26 (14)	.007
✓ LVEF \leq 30%	64 (16)	25 (12)	39 (21)	.007
✓ Creatinine > 150 μ mol/L	48 (12)	15 (7)	33 (18)	<.001
✓ EUROSCORE, median ([IQR])	12.7 [2.8-14.6]	4.6 [2.4-9.7]	13.6 [3.6-20.2]	<.001
✓ EUROSCORE > 6	208 (53)	90 (42)	118 (65)	<.001
✓ LM plus 3 vessel disease	132 (34)	40 (19)	92 (51)	<.001
✓ Distal LM location	368 (94)	196 (93)	172 (95)	.297
✓ RCA total occlusion	83 (21)	17(8)	66 (36)	<.001

PCI and SYNTAX score ≥ 33

PROCEDURAL CHARACTERISTICS

	Overall n=393	SYNTAX < 33 n=212	SYNTAX ≥ 33 n=181	p value
✓ Distal LM	368 (94)	196 (93)	172 (95)	.297
✓ Stenting of both branches	163 (44)	78 (40)	85 (49)	.063
Crush stenting	109	52	57	
T-stenting	54	26	28	
✓ Rotational atherectomy	15 (4)	4 (2)	11 (6)	.031
✓ IVUS guidance	267 (68)	154 (73)	113 (62)	.031
✓ IABP	32 (8)	6 (3)	26 (14)	.001
✓ Maximum pressure inflation, atm	21 \pm 3	21 \pm 2	21 \pm 2	.715
✓ Stent length ≥ 24 mm	179 (46)	86 (41)	93 (51)	.032
✓ RVD pre-PCI, mm	3.83 \pm 0.33	3.83 \pm 0.31	3.82 \pm 0.35	.795
✓ MDL post-PCI, mm	3.81 \pm 0.42	3.86 \pm 0.28	3.84 \pm 0.38	.386
✓ Multivessel PCI	248 (63)	108 (51)	140 (77)	.001
✓ Complete revascularization	319 (81)	194 (91)	125 (70)	.001
✓ CTO vessel	130 (33)	27 (13)	103 (56)	<.001
✓ Successful CTO PCI	78/89 (87)	18/21(86)	60/69 (87)	.883

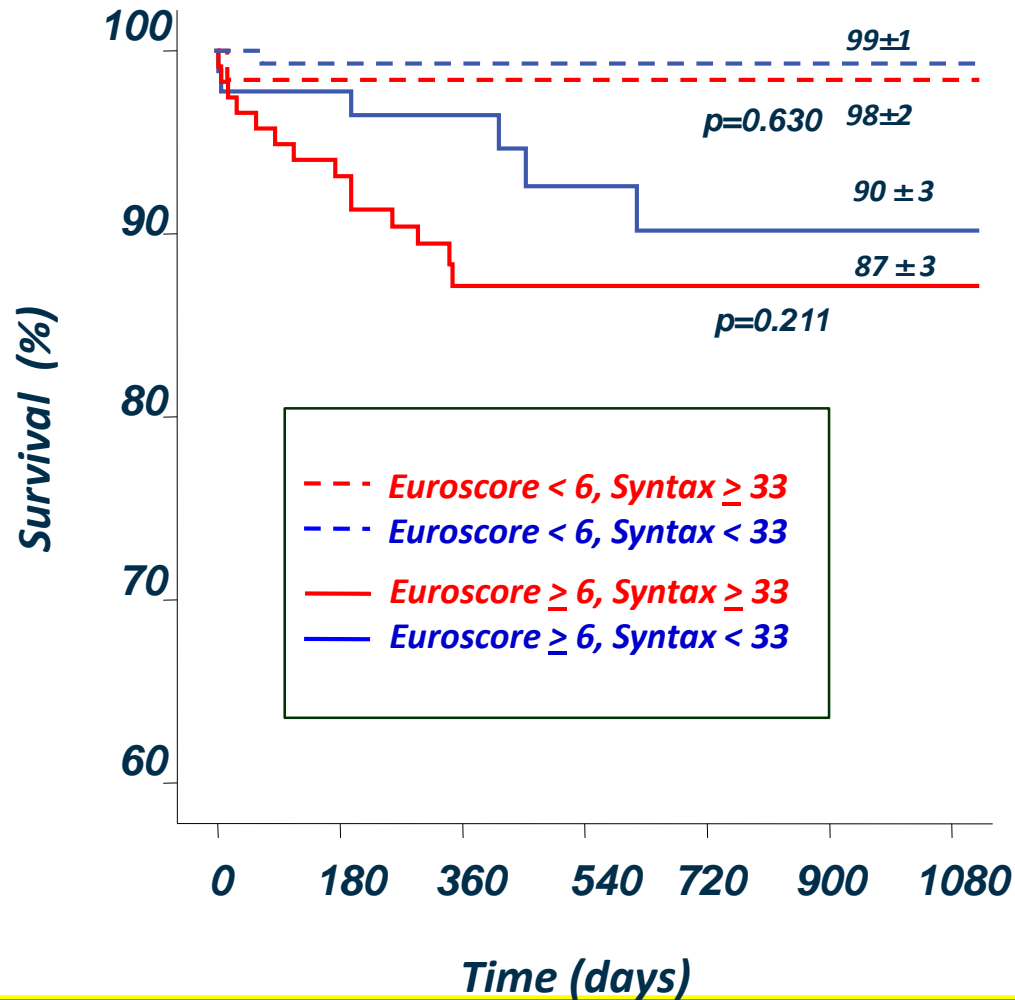
PCI and SYNTAX score ≥ 33

ONE-YEAR CLINICAL OUTCOME

	EuroSCORE < 6 EuroSCORE ≥ 6		p value
<u>SYNTAX score < 33</u>	n=122	n=90	
✓ All.cause death	1 (0.8)	7 (7.8)	.009
✓ Cardiac death	1 (0.8)	4 (4.4)	.086
✓ Myocardial infarction	1 (0.8)	2 (2.2)	.399
✓ TVR	5 (4.1)	3 (3.3)	.773
✓ Stroke	0	1 (1.1)	.243
✓ MACCE	7 (5.7)	10 (11)	.154
<u>SYNTAX score > 33</u>	n=63	n=118	
✓ All.cause death	1 (1.6)	23 (19.5)	.001
✓ Cardiac death	1 (1.6)	12 (10.2)	.003
✓ Myocardial infarction	0	4 (3.4)	.139
✓ TVR	1 (1.6)	11 (9.3)	.046
✓ Stroke	1 (1.6)	2 (1.7)	.958
✓ MACCE	3 (4.8)	29 (25)	<.001

PCI and SYNTAX score ≥ 33

LONG-TERM CARDIAC SURVIVAL



PCI and SYNTAX score ≥ 33

MULTIVARIABLE ANALYSES FOR 4-YEAR CARDIAC MORTALITY

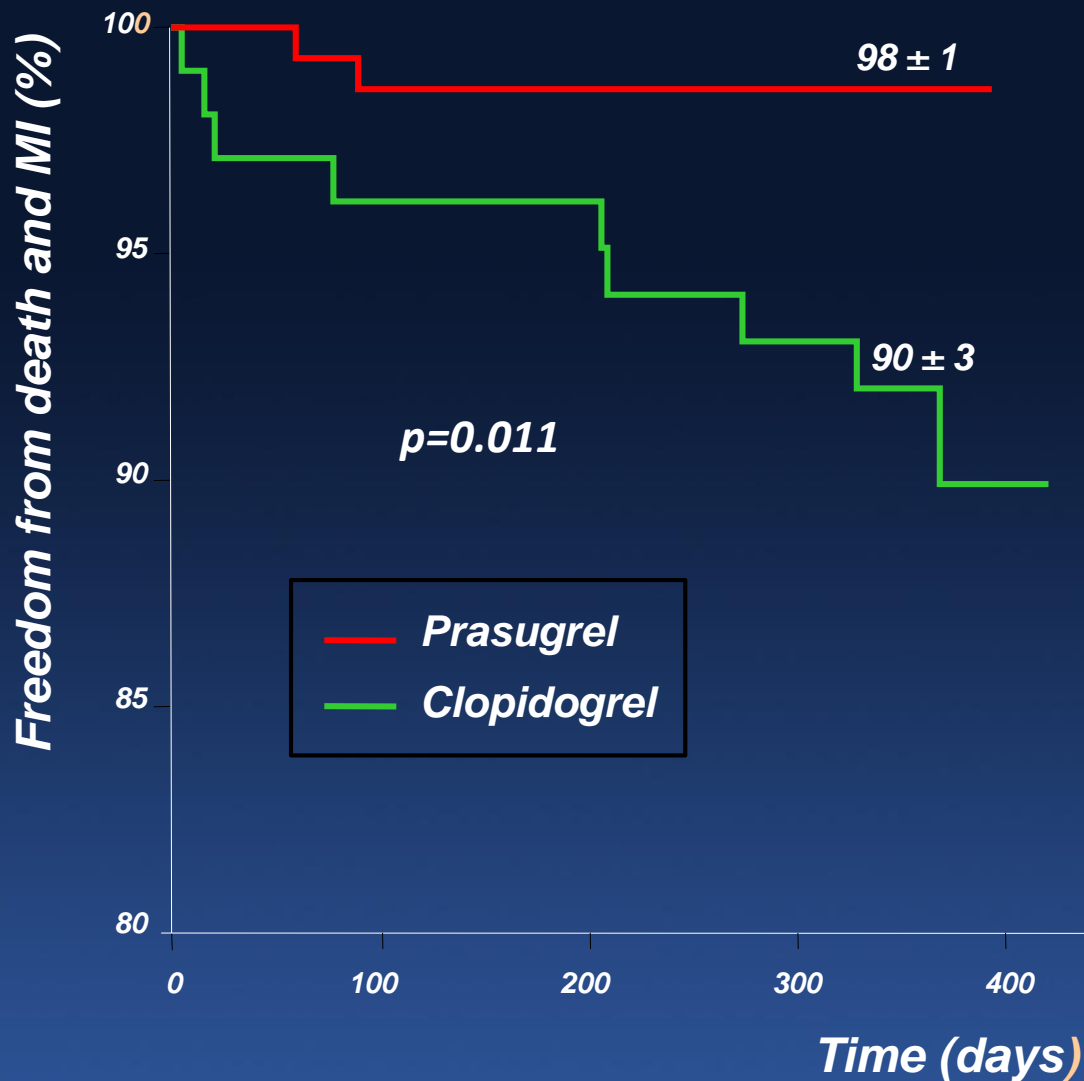
	<i>HR</i>	<i>95%CI</i>	<i>p value</i>
<i>SYNTAX score ≥ 33</i>	1.81	0.73-4.48	0.198
<i>EuroSCORE ≥ 6</i>	8.46	1.95-36.72	0.004
<i>Complete revascularization</i>	0.63	0.253-1.57	0.323
<i>SYNTAX score* EuroSCORE interaction</i>	0.91	0.05-17.3	0.951
	<i>HR</i>	<i>95%CI</i>	<i>p value</i>
<i>EuroSCORE < 6 subgroup (n=185)</i>			
<i>SYNTAX score ≥ 33</i>	1.95	0.12-31.2	0.636
<i>EuroSCORE ≥ 6 subgroup (n=208)</i>			
<i>SYNTAX score ≥ 33</i>	1.80	0.69-4.67	0.230

PCI and SYNTAX score ≥ 33

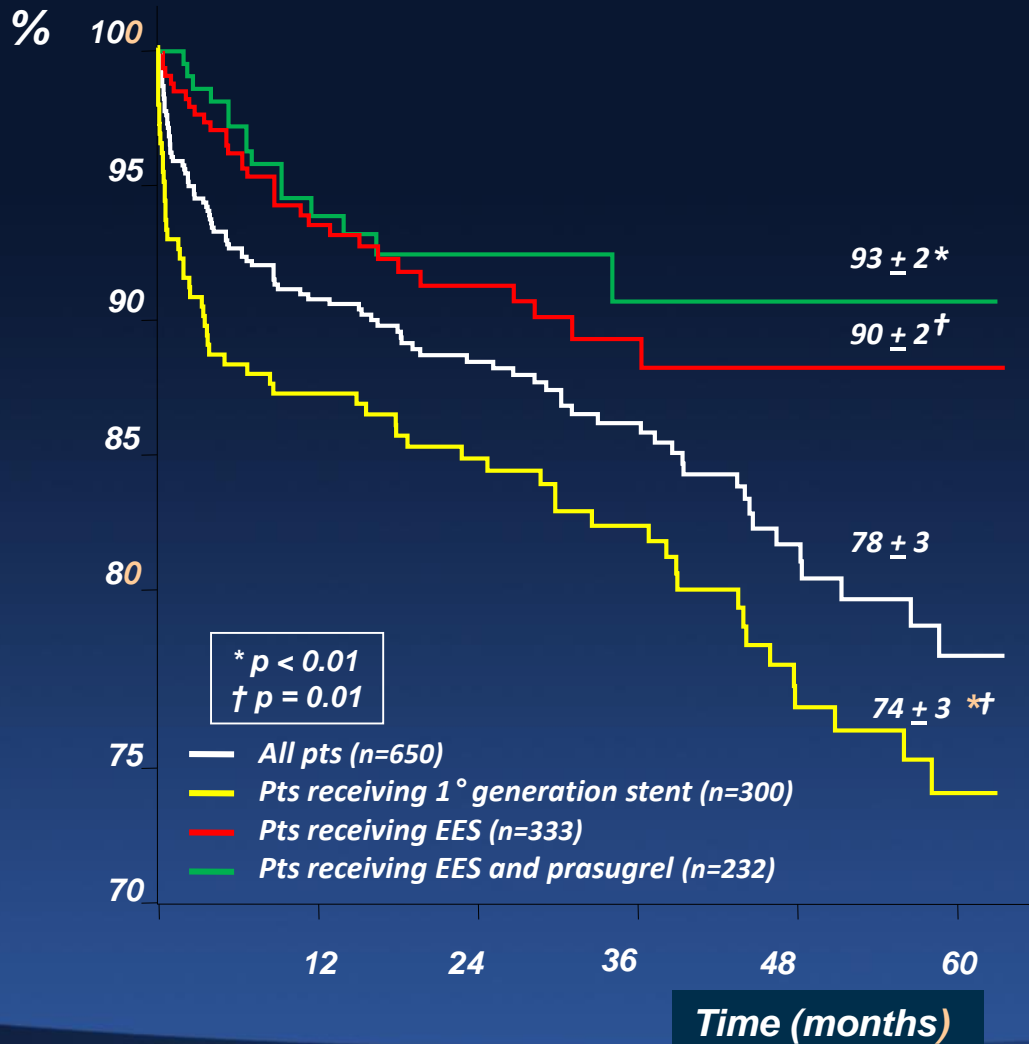
SYNTAX score called into question (at long last !!!).

➤ The high procedural success rate of complex lesions reduces or even cancel the prognostic impact of coronary anatomy complexity and calls the SYNTAX score into question. For left main disease patients, a SYNTAX score ≥ 33 should be no more considered to determine the optimal revascularization modality agreed that a complete revascularization can be achieved by PCI in the majority of cases.

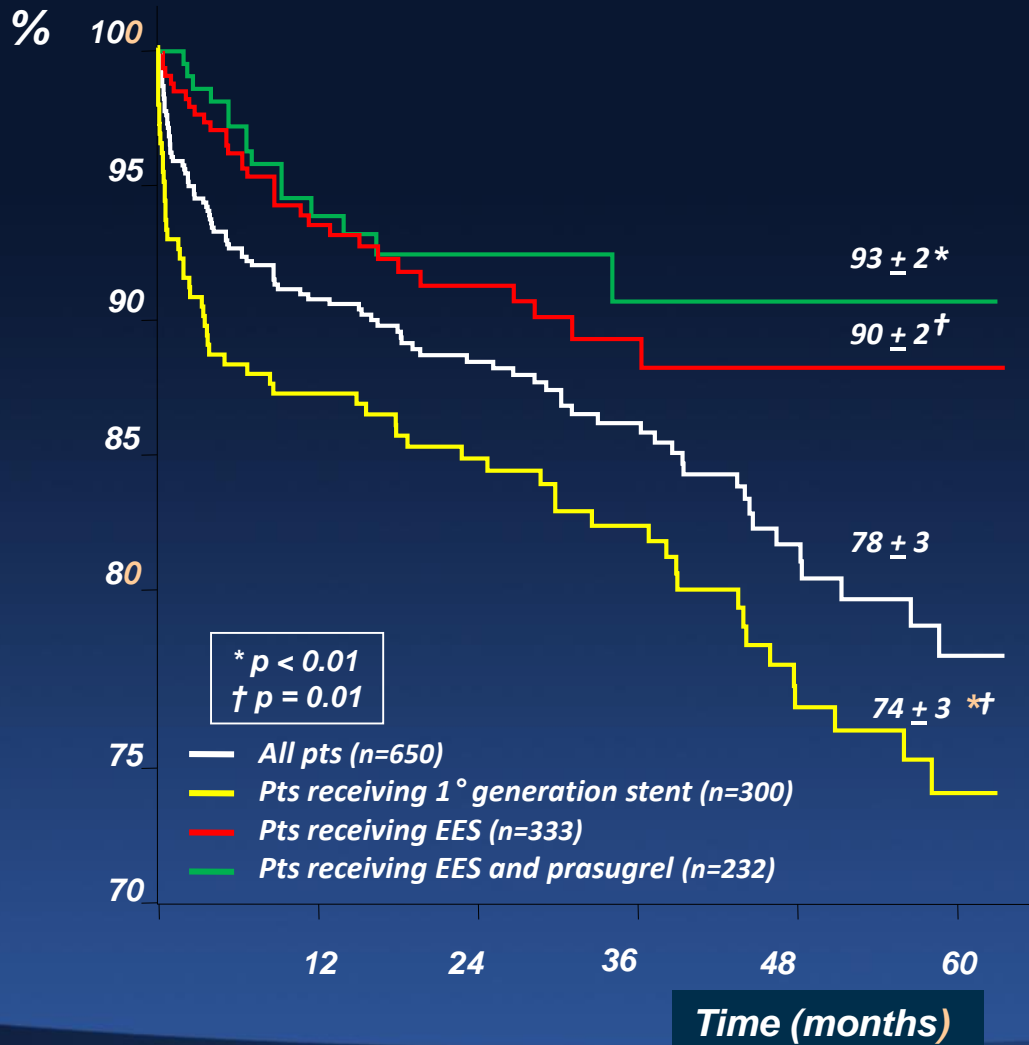
Impact of Prasugrel on Clinical Outcome



Long-Term Survival (all deaths, STEMI included)



Long-Term Survival (all deaths, STEMI included)



Completeness of Revascularization and Survival

