

Cath Lab and Interventional Survey (CLICS) 2024 - Shamir report

Table 1: Patients characteristics

	Overall	Shamir, n (%)
n	3226	174
Age (mean (SD))	67.59 (12.45)	67.74 (11.56)
Age group (%)		
50 <= Age < 70	1454 (45.2)	83 (48.0)
Age < 50	246 (7.6)	9 (5.2)
Age >= 70	1520 (47.2)	81 (46.8)
Gender = Male (%)	2299 (71.3)	131 (75.7)
Diabetes = Yes (%)	1131 (41.3)	78 (46.2)
COPD = Yes (%)	203 (7.4)	12 (7.1)
Chronic renal failure = Yes (%)	293 (10.7)	26 (15.4)
Chronic dialysis = Unknown (%)	293 (100.0)	26 (100.0)
Prior stroke or TIA = Yes (%)	199 (7.3)	19 (11.2)
Prior PCI = Yes (%)	1018 (37.2)	71 (42.0)
Prior CABG or valve surgery = Yes (%)	226 (8.3)	10 (5.9)
Heart failure (%)		
Yes	429 (15.7)	46 (27.2)
No	1925 (70.4)	37 (21.9)
Unknown	380 (13.9)	86 (50.9)
% LV ejection fraction (mean (SD))	50.58 (11.77)	47.34 (11.06)
Atrial fibrillation = Yes (%)	239 (8.7)	25 (14.8)

Table 2: Procedure type distribution

	Overall n (%)	Shamir,n (%)
N	3226	174
Coronary	2765 (85.7)	169 (97.1)
Structural - Valvular	209 (6.5)	0 (0.0)
Structural - non valvular	38 (1.2)	3 (1.7)
Peripheral	18 (0.6)	0 (0.0)
Other	244 (7.6)	3 (1.7)

Table 3: Procedure type distribution among coronary procedure patients

Patient admission type	Overall	Shamir
Elective (from home)	40% (1,110)	20% (33)
Hospitalized (including urgent admission from emergency department - primary PCI, unstable NSTEMI etc.)	60% (1,650)	80% (136)
NA	0% (5)	0% (0)
Total	100% (2,765)	100% (169)

Table 4: Time of procedure distribution

	Overall	Shamir
Regular working hours	86.29% (2,386)	89.94% (152)
Off-working hours / weekend	13.38% (370)	10.06% (17)
Missing	0.33% (9)	0.00% (0)
Total	100.00% (2,765)	100.00% (169)

Table 5: Indication for coronary procedure distribution

Indication for procedure	Overall	Shamir
Diagnostic cath before cardiac surgery	2% (52)	1% (1)
Diagnostic cath before structural percutaneous intervention (e.g. TAVI)	3% (95)	0% (0)
Heart failure symptoms	4% (101)	5% (8)
LBBB of unknown age	0% (1)	0% (0)
Non STEMI	24% (666)	34% (57)
Other	8% (218)	4% (7)
Out of hospital sudden death	0% (8)	1% (2)
Planned PCI (Staged PCI, after Heart-team discussion etc.)	6% (169)	11% (19)
Pre / Post organ transplant	1% (21)	0% (0)
Stable angina	20% (548)	3% (5)
STEMI	11% (317)	18% (30)
STEMI - Late arrival (>12 hrs)	1% (32)	1% (1)
Unstable angina (troponin negative ACS)	18% (511)	23% (39)
NA	1% (26)	0% (0)
Total	100% (2,765)	100% (169)

Table 6: Arterial access distribution among coronary procedure patient

	Overall	Shamir
n	2765	169
Right radial artery	81.4% (2250)	79.9% (135)
Left radial artery	10.6% (292)	9.5% (16)
Femoral artery	7.8% (217)	14.8% (25)
Brachial artery	0.2% (6)	0.0% (0)
Planned dual arterial access	0.1% (3)	1.8% (3)
Other	1.0% (27)	0.0% (0)

Table 7: Type of coronary procedure

Type of coronary procedure	Overall	Shamir
Diagnostic angiography only (no PCI done)	46.26% (1,279)	31.95% (54)
Percutaneous coronary intervention (PCI)	53.42% (1,477)	68.05% (115)
Coronary fistulae closure	0.11% (3)	0.00% (0)
NA	0.22% (6)	0.00% (0)
Total	100.00% (2,765)	100.00% (169)

Table 8: Clinical recommendation among stable angina patient

clinical recommendation	Overall	Shamir
Cardiac surgery	7% (38)	20% (1)
Conservative/medical treatment	47% (257)	20% (1)
Heart team discussion	1% (6)	0% (0)
Immediate PCI	39% (214)	60% (3)
Immediate PCI with staged PCI procedure (Partial revascularization with planned additional PCI)	5% (25)	0% (0)
Other structural heart intervention	0% (0)	0% (0)
Planned PCI at future time	1% (4)	0% (0)
TAVI	1% (3)	0% (0)
NA	0% (1)	0% (0)
Total	100% (548)	100% (5)

Table 9: Clinical recommendation among *urgent patient

clinical recommendation	Overall	Shamir
Cardiac surgery	7% (108)	3% (4)
Conservative/medical treatment	25% (385)	24% (31)
Heart team discussion	2% (30)	2% (3)
Immediate PCI	57% (881)	58% (75)
Immediate PCI with staged PCI procedure (Partial revascularization with planned additional PCI)	6% (99)	10% (13)
Other structural heart intervention	0% (4)	0% (0)
Planned PCI at future time	1% (17)	2% (3)
TAVI	0% (3)	0% (0)
NA	1% (8)	0% (0)
Total	100% (1,535)	100% (129)

Note:

*patients with one of the following indication: Unstable angina (troponin negative ACS)/ Non STEMI/ STEMI/ STEMI - Late arrival (>12 hrs)/ LBBB of unknown age/ Out of hospital sudden death

Table 10: Ischemia evaluation among patients with stable angina who underwent PCI

	Overall	Shamir
N	245	3
Non invasive test ischemia = Yes (%)	178 (72.7)	3 (100.0)
Functional (e.g. Ergometry, stress echo, SPECT) = Yes (%)	156 (63.7)	3 (100.0)
Anatomical - Coronary CT angiography	30 (12.2)	0 (0.0)
FFR / IFR used = Yes (%)	12 (4.9)	0 (0.0)
IVUS used = Yes (%)	8 (3.3)	1 (33.3)
OCT used = Yes (%)	245 (100.0)	3 (100.0)

Table 11: Patients with stable angina who underwent PCI characteristics

	Overall, n (%)	Shamir, n (%)
N	245	3
Multivessel pci = Yes	41 (16.7)	1 (33.3)
Number of lesions treated		
0	11 (4.5)	1 (33.3)
1	159 (64.9)	0 (0.0)
2	55 (22.4)	1 (33.3)
3	20 (8.2)	1 (33.3)
Native coronary = Yes	243 (99.2)	3 (100.0)
SVG = Yes	2 (0.8)	0 (0.0)
LIMA/RIMA = Yes	245 (100.0)	3 (100.0)
Other arterial conduit = Yes	1 (0.4)	0 (0.0)

Table 12: Device types used among patients with stable angina who underwent PCI

	Overall, n (%)	Shamir, n (%)
N	1241	91
Drug eluting stent	1097 (88.4)	75 (82.4)
Bare metal stent	0 (0.0)	0 (0.0)
Biodergradable scaffold	0 (0.0)	0 (0.0)
Covered stent (stent graft)	1 (0.1)	0 (0.0)
Drug coated balloon	97 (7.8)	26 (28.6)
Cutting balloon	24 (1.9)	13 (14.3)
Scoring balloon	15 (1.2)	0 (0.0)
POBA	70 (5.6)	5 (5.5)
None	36 (2.9)	1 (1.1)

Note:

*it is possible to have more then one stend per patient

Table 13: Procedural complications

	All coronary procedurers		Diagnostic procedures		PCI procedures	
	Overall	Shamir	Overall	Shamir	Overall	Shamir
n	2756	169	1279	54	1477	115
Coronary artery dissection (%)	17 (0.6)	3 (1.8)	3 (0.2)	0 (0.0)	14 (0.9)	3 (2.6)
Coronary artery perforation (%)	3 (0.1)	1 (0.6)	0 (0.0)	0 (0.0)	3 (0.2)	1 (0.9)
No reflow / distal embolization (%)	18 (0.7)	2 (1.2)	0 (0.0)	0 (0.0)	18 (1.2)	2 (1.7)
Significant (>1.5 mm) side branch occlusion (%)	4 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	4 (0.3)	0 (0.0)
Tamponade (%)	2 (0.1)	1 (0.6)	0 (0.0)	0 (0.0)	2 (0.1)	1 (0.9)
Ventricular arrhythmia (%)	6 (0.2)	1 (0.6)	0 (0.0)	0 (0.0)	6 (0.4)	1 (0.9)
Significant conduction abnormality requiriung pacing (%)	2 (0.1)	2 (1.2)	0 (0.0)	0 (0.0)	2 (0.1)	2 (1.7)
CPR (%)	6 (0.2)	1 (0.6)	0 (0.0)	0 (0.0)	6 (0.4)	1 (0.9)
Urgent cardiac surgery (%)	2 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.1)	0 (0.0)