

***Austrian National CathLab Registry (ANCLAR):
CARDIAC CATHETERIZATION,
CORONARY ANGIOGRAPHY (CA) AND PCI IN AUSTRIA
DURING THE YEAR 2011
(Registry Data with AUDIT including 2012)***

Concerning international comparison for the year 2011, Austria (A) is situated under the top nations with

- 6383 diagnostic Coronary Angiographies (CA)
- 2.407 percutaneous coronary interventions (PCI)
- 47 transarterial aortic valve implantation (TAVI)

per one million inhabitants in the Europe. While the number of TAVI increases rapidly since its first introduction in 2007, the data for CA and PCI remained constant during the last years.

The rates of stents (91%) and drug-eluting stents (DES)-implantations (78% of stents), also remained constant. Little fluctuation is also reflected in the complication data (including mortality evaluation). An increase of mortality takes place especially by patients with so called ST-segment elevation myocardial infarction (STEMI) and consecutive shock (19 – 35% in the last years).

The application of certain special products increased (Clot catcher) or decreased (Glycoprotein IIb/IIIa receptor antagonist) in 2011 or were finally unused (laser).

Interestingly, it was observed several times that scientific knowledge, recommended as class I indications in the guidelines, takes several years to establish itself nationwide.

Our independent, purely academic activity is located in the area of health services research, and has also the option to generate benchmarks for individual centres. Participation in our surveys is voluntary. Since 1992, every year, without interruption (no missing center!) 90 – 100 parameters are applicable. The questionnaire will be optimized and adapted to current conditions. This is done in cooperation with the participating centres. To provide comparability we make only minimal and absolutely most necessary modifications.

The data are collected and summarized at the end of the year by each center itself. During the year the center are visited to keep personal contact to them.

The data for 2011 were presented in Linz (November 23rd 2012) at the autumn meeting of the working group “Interventional Cardiology of the Austrian Society of Cardiology” (ÖKG), as a basis for discussion. The presentation can be view by using private access code to the ÖKG video presentation page (<http://oekg.medroom.at/>), the publication will be placed as usual in the Journal of Cardiology and under the website <http://iik.i-med.ac.at>.

Table 1)

Cardiac catheterization structure in Austria (2008 till 2011). Extended questionnaire of the „European Society of Cardiology“ (ESC). The main differences are highlighted in „yellow“. The number of active doctors may be over- or under represented by the optional multiple choice.

Years	2008	2009	2010	2011
Centres (Numbers, n= ..)	37	38	37	36
audit desired	29	26	26	26
audit done	4	2	1	2
tables	49	51	50	49
Internet presence	27	29	25	25
database	35	37	35	31
surgical back up under one roof	9	9	9	9
back up in 90 minutes	37	37	37	36
On-Call with others	14	15	14	10
On-Call alone, around the clock	13	13	14	15
Team presence throughout	2	1	3	4
Radiation protection compliance	-	31	36	35
Angiography Doctors	277	283	267	243
PCI Doctors	220	264	214	214

Interpretation:

- less audits desired
- On-Call rather alone
- less database
- less internet presence

Table 2)

PCI in Austria (2008 – 2011). If some parameters are missing, the absolute figures have been corrected. If a parameter reported by a center was missing, the center has not been included in the calculation (see column „Missing (F)“, n = number of centres with missing parameters). As a result there were changes in the number of calculated parameters (eg. Non-femoral puncture site). The p-values of 2009 till 2011 show a comparison of the prior year. The base for the last p-value (total) was the total period. Unless otherwise indicated, the %-values are corresponding to PCI.

	Year:	2008	2009	2010	2011	Total	F.
	Proportion of	%	%	%	%		n=
total PCI	KAG	38,61	38,17 n. s.	36,81 p<0,001	37,72 p<0,01	p<0,001	0
PCI in acute situation	PCI	33,94	34,20 n. s.	31,86 p<0,001	34,23 p<0,001	p<0,001	0
➤ PCI in STEMI	PCI Infarct	58,76	56,07 p<0,01	56,77 n. s.	52,27 p<0,001	p<0,001	5
multi vessel PCI in one session	PCI	15,97	14,63 p<0,001	16,22 p<0,001	13,80 p<0,001	p<0,001	3
ad hoc (=one time)	PCI	81,46	83,65 p<0,001	84,88 p<0,01	81,42 p<0,001	p<0,001	2
non femoral Puncture site	PCI	7,66	13,26 p<0,001	17,32 p<0,001	18,16 p<0,05	p<0,001	1
puncture Closure Device	PCI	71,98	71,20 n. s.	74,83 p<0,001	70,84 p<0,001	p<0,001	5
myocardial infarct after	PCI	1,22	1,19 n. s.	0,95 p<0,05	0,68 p<0,01	p<0,001	5
iatrogenic dissection of left main stem	PCI	0,08	0,06 n. s.	0,08 n. s.	0,10 n. s.	n. s.	6
emergency surgery	PCI	0,08	0,06 n. s.	0,13 p<0,05	0,08 n. s.	n. s.	4
PCI mortality	PCI	1,04	1,00 n. s.	0,92 n. s.	0,80 n. s.	n. s.	0
STENT	PCI	87,88	89,42 p<0,001	91,46 p<0,001	90,80 p<0,05	p<0,001	0
➤ drug-eluting stents	Stents	66,86	68,88 p<0,001	74,60 p<0,001	76,88 p<0,001	p<0,001	0
➤ left main stem stents	Stents	2,13	2,04 n. s.	2,28 n. s.	2,15 n. s.	n. s.	1
➤ multiple stents	Stents	32,66	35,32 p<0,001	34,31 n. s.	30,33 p<0,001	p<0,001	5
PCI for in-stent restenosis	PCI	7,39	5,37 p<0,001	4,87 p<0,05	5,23 n. s.	p<0,001	5
➤ PCI because of chron. hyperplasia	PCI-restenosis	85,63	86,96 n. s.	86,44 n. s.	88,06 n. s.	n. s.	16
➤ PCI for stent thrombosis	PCI-restenosis	14,37	13,04 n. s.	13,56 n. s.	11,94 n. s.	n. s.	16
rotablator	PCI	1,52	1,58 n. s.	1,39 n. s.	1,75 p<0,01	p<0,05	1
clot-trapping remover	PCI	5,50	7,25 p<0,001	8,17 p<0,001	9,59 p<0,001	p<0,001	2
Intracoronary pressure measurement	PCI	7,21	7,78 p<0,05	8,62 p<0,01	9,92 p<0,001	p<0,001	1
IVUS (=diagn. Ultrasound)	PCI	5,57	5,23 n. s.	4,74 p<0,05	4,48 n. s.	p<0,001	0
intraaortic balloon pump in PCI	PCI	0,69	0,89 p<0,05	0,95 n. s.	0,77 n. s.	p<0,05	3
other new devices	PCI	0,90	0,93 n. s.	0,45 p<0,001	0,42 n. s.	p<0,001	5
glycoprotein-IIb/IIIa-receptor antagonist	PCI	17,17	15,10 p<0,001	11,82 p<0,001	11,83 n. s.	p<0,001	4
thrombin inhibitor	PCI	4,10	3,27 p<0,001	3,99 p<0,01	5,30 p<0,001	p<0,001	6
"Optical coherence tomography"(OCT)	PCI	0,65	0,78 n. s.	1,43 p<0,001	1,49 n. s.	p<0,001	2