

SWISS STATISTICS OF CATHETER ABLATIONS

2018



Stiftung für Herzschrittmacher und Elektrophysiologie
Fondation pour la stimulation cardiaque et électrophysiologie
Fondazione per la stimolazione cardiaca ed elettrofisiologia

Overview

Ablation centers	29
Included in this statistic	29
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Number of patients	6345
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Number of interventions*	6688
thereof number of EPS	409
Number of ablations	7041

* All completely recorded and non-aborted interventions are evaluated.

Ablation Centers

Clinic No.	Center	Interventions/ thereof incomplete	thereof aborted	Ablations*
101	Universitätsspital Basel	691 / 0 (0%)	3	681
102	Inselspital Bern	727 / 0 (0%)	2	784
103	Hôpital Cantonal Universitaire de Genève	291 / 0 (0%)	0	320
104	Centre Hospitalier Universitaire Vaudois (CHUV)	395 / 0 (0%)	8	418
105	Universitätsspital Zürich	549 / 0 (0%)	1	510
106	Universitäts-Kinderkliniken Zürich	41 / 0 (0%)	0	34
201	Kantonsspital Aarau	121 / 0 (0%)	1	113
211	Hôpital Fribourgeois	4 / 0 (0%)	0	4
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	212 / 1 (0%)	0	243
216	Cardiocentro Ticino, Lugano	184 / 0 (0%)	1	198
217	Kantonsspital Luzern, Sursee und Wolhusen	426 / 0 (0%)	0	446
218	Klinik St. Anna, Luzern	44 / 0 (0%)	0	44
220	Hôpital de la Tour	170 / 0 (0%)	0	194
228	Hôpital de Sion	54 / 0 (0%)	2	51
230	Solothurner Spitäler AG	43 / 0 (0%)	0	43
231	Kantonsspital St. Gallen	307 / 0 (0%)	0	296
233	GZO Spital Wetzikon	166 / 0 (0%)	0	169
234	Kantonsspital Winterthur	141 / 0 (0%)	0	144
236	Stadtspital Triemli, Zürich	261 / 0 (0%)	0	269
239	Klinik Beau-Site Bern	352 / 0 (0%)	1	357
241	HerzKlinik Hirslanden, Zürich	25 / 0 (0%)	0	32
246	Hirslandenklinik Aarau	207 / 0 (0%)	1	214
250	Klinik Im Park, Zürich	701 / 0 (0%)	3	866
251	Herzzentrum Bodensee, Kreuzlingen	80 / 0 (0%)	4	72
267	Clinique Cécil	391 / 0 (0%)	1	411
268	Clinique des Grangettes	12 / 0 (0%)	0	13
278	Clinique de Valère	19 / 0 (0%)	2	16
283	Spital Schiers	5 / 0 (0%)	0	3
284	Clinique de Genolier	100 / 0 (0%)	0	96
Total	29	6719 / 1 (0%)	30	7041

* Only ablations of completely recorded and non-aborted interventions are evaluated.

Omissions

0 centers that did not report data to CHPACE WEB and are therefore not included in the statistics

Ablation centers

11 centers with more than 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
102	Inselspital Bern	727	2	784
250	Klinik Im Park, Zürich	701	3	866
101	Universitätsspital Basel	691	3	681
105	Universitätsspital Zürich	549	1	510
217	Kantonsspital Luzern, Sursee und Wolhusen	426	0	446
104	Centre Hospitalier Universitaire Vaudois (CHUV)	395	8	418
267	Clinique Cécil	391	1	411
239	Klinik Beau-Site Bern	352	1	357
231	Kantonsspital St. Gallen	307	0	296
103	Hôpital Cantonal Universitaire de Genève	291	0	320
236	Stadtspital Triemli, Zürich	261	0	269
Total	11	5091	19	5358

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
102	Inselspital Bern	251	240	16	16	33	107	52	31	14	24	0
250	Klinik Im Park, Zürich	368	216	13	48	10	138	16	23	2	29	3
101	Universitätsspital Basel	304	125	3	31	22	83	38	28	9	38	0
105	Universitätsspital Zürich	172	83	3	25	36	104	35	31	3	18	0
217	Kantonsspital Luzern, Sursee und Wolhusen	174	82	5	17	21	73	33	11	13	16	1
267	Clinique Cécil	151	72	7	16	29	63	9	15	9	39	1
104	Centre Hospitalier Universitaire Vaudois (CHUV)	110	73	9	21	33	52	38	30	12	38	2
239	Klinik Beau-Site Bern	167	82	8	24	15	31	4	10	4	11	1
231	Kantonsspital St. Gallen	136	51	3	14	15	59	4	4	0	9	1
103	Hôpital Cantonal Universitaire de Genève	94	82	21	13	14	37	18	13	9	19	0
236	Stadtspital Triemli, Zürich	114	64	11	12	10	41	1	6	3	7	0
Total	11	2041	1170	99	237	238	788	248	202	78	248	9

Ablation centers

8 centers with 100 to 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	211	0	243
246	Hirslandenklinik Aarau	207	1	214
216	Cardiocentro Ticino, Lugano	184	1	198
220	Hôpital de la Tour	170	0	194
233	GZO Spital Wetzikon	166	0	169
234	Kantonsspital Winterthur	141	0	144
201	Kantonsspital Aarau	121	1	113
284	Clinique de Genolier	100	0	96
Total	8	1300	3	1371

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	137	33	8	5	7	36	2	4	0	11	0
246	Hirslandenklinik Aarau	108	29	4	14	4	33	0	8	2	12	0
216	Cardiocentro Ticino, Lugano	83	42	5	5	3	26	10	3	1	20	0
220	Hôpital de la Tour	75	60	3	9	5	24	2	5	3	8	0
233	GZO Spital Wetzikon	72	27	1	9	7	38	1	4	1	9	0
234	Kantonsspital Winterthur	72	27	3	5	4	24	1	4	3	1	0
201	Kantonsspital Aarau	43	21	4	4	1	25	2	4	0	9	0
284	Clinique de Genolier	30	42	0	0	3	11	0	0	3	7	0
Total	8	620	281	28	51	34	217	18	32	13	77	0

Ablation centers

10 centers with less than 100 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
251	Herzzentrum Bodensee, Kreuzlingen	80	4	72
228	Hôpital de Sion	54	2	51
218	Klinik St. Anna, Luzern	44	0	44
230	Solothurner Spitäler AG	43	0	43
106	Universitäts-Kinderkliniken Zürich	41	0	34
241	HerzKlinik Hirslanden, Zürich	25	0	32
278	Clinique de Valère	19	2	16
268	Clinique des Grangettes	12	0	13
283	Spital Schiers	5	0	3
211	Hôpital Fribourgeois	4	0	4
Total	10	327	8	312

Ablation procedures

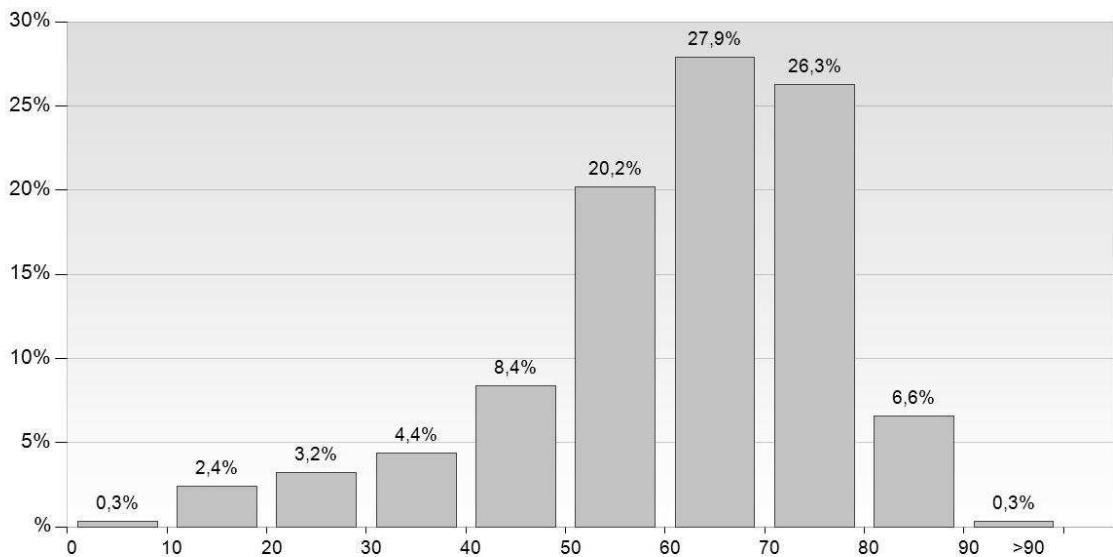
according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
251	Herzzentrum Bodensee, Kreuzlingen	42	7	2	2	2	4	5	0	1	7	0
228	Hôpital de Sion	0	21	0	1	4	16	0	0	4	4	1
218	Klinik St. Anna, Luzern	11	7	0	2	2	17	0	0	0	5	0
230	Solothurner Spitäler AG	0	6	0	0	2	19	0	0	0	16	0
106	Universitäts-Kinderkliniken Zürich	0	0	0	0	20	14	0	0	0	0	0
241	HerzKlinik Hirslanden, Zürich	8	10	0	1	0	8	1	0	0	4	0
278	Clinique de Valère	10	1	0	0	0	1	1	0	0	3	0
268	Clinique des Grangettes	7	5	0	0	0	0	0	0	0	1	0
283	Spital Schiers	2	0	0	0	0	1	0	0	0	0	0
211	Hôpital Fribourgeois	0	1	0	0	0	1	0	0	0	2	0
Total	10	80	58	2	6	30	81	7	0	5	42	1

All ablation types

Number of ablations, not aborted: 7041

Age distribution (years)



Age (years)	min.	Ø	max.
Female	0	62	97
Male	0	62	99
All	0	62	99

Number of patients	n	%
Females	2351	37,05
Males	3994	62,95
Total	6345	

Anesthesia	n	%
Local	5045	75,43
General	1643	24,57
Total	6688	

Combinations of ablations performed during one intervention

Number of interventions		6279	
AF		2145	
	AVNRT	1012	
	RAFlu	950	
AF	RAFlu	458	
		AVN(R)	348
	AP	290	
		VT	256
		PVC	218
	AT	201	
		AVN	78
	LAFlu	64	
AF	LAFlu	35	
AF		AT	29
	RAFlu	AT	23
AF		AVNRT	22
AF	LAFlu	RAFlu	18
		AVN AVN(R)	14
	RAFlu	AVNRT	13
	AT	AVNRT	13
AF	RAFlu	AT	12
		Other	9
AF	RAFlu	AVNRT	9
		VT PVC	8
	AP	AVNRT	7
	RAFlu	AVN(R)	5
LAFlu	RAFlu		5
AF	RAFlu	PVC	4
	RAFlu	VT	4
LAFlu	AT		3
AF	LAFlu	AT	3
		AVNRT PVC	2
	AT AP		2
	RAFlu	PVC	2
	RAFlu AT	AVNRT	2
AF		AP	2
		AVNRT VT	2
		VT AVN	1
	AT	AVN	1
AF	AT	AVNRT	1
		AVNRT AVN	1
	AT		1
	RAFlu	AVN	1
	RAFlu AT AP		1
LAFlu	RAFlu AT		1
AF		VT	1
AF		AVNRT VT	1
AF	RAFlu AT AVNRT		1

Only completely documented and non-aborted interventions are counted.

Ablation procedures or EPS

Atrial Fibrillation	2741
Paroxysmal	1822
Persistent	834
Long-standing Persistent	85

Right Atrial Flutter	1509
Cavotricuspid	1470
Scar Related	38
Other	22

Left Atrial Flutter	129
Roof-dependent	43
Perimitral	49
Peri-Incisional	3
Peri Ostial Pulm. Vein	15
Other	45

Atrial Tachycardia	294
AVNRT	1086
Slow-Fast	1013
Fast-Slow	41
Slow-Slow	51

Accessory Pathway	302
Concealed	97
WPW	186
Asymptomatic Preexcitation	25
Atrio-Fascicular	2
PJRT	5
Mahaim	3
Other	1

VT	273
Monomorphic	249
Polymorphic	30
RVOT / Cusp / PA	51
Tricuspid Annulus	9
Right Pap Muscle	1
Parahisian	0
BB Reentry	4
LVOT / Cusp	35
Mitral Annulus	28
Fascicular	17
Left Pap Muscle	15
Epicardial LV / RV	20
Other	133

AVN (Rate Control)	367
Paroxysmal	80
Persistent	166
Long-standing Persistent	121

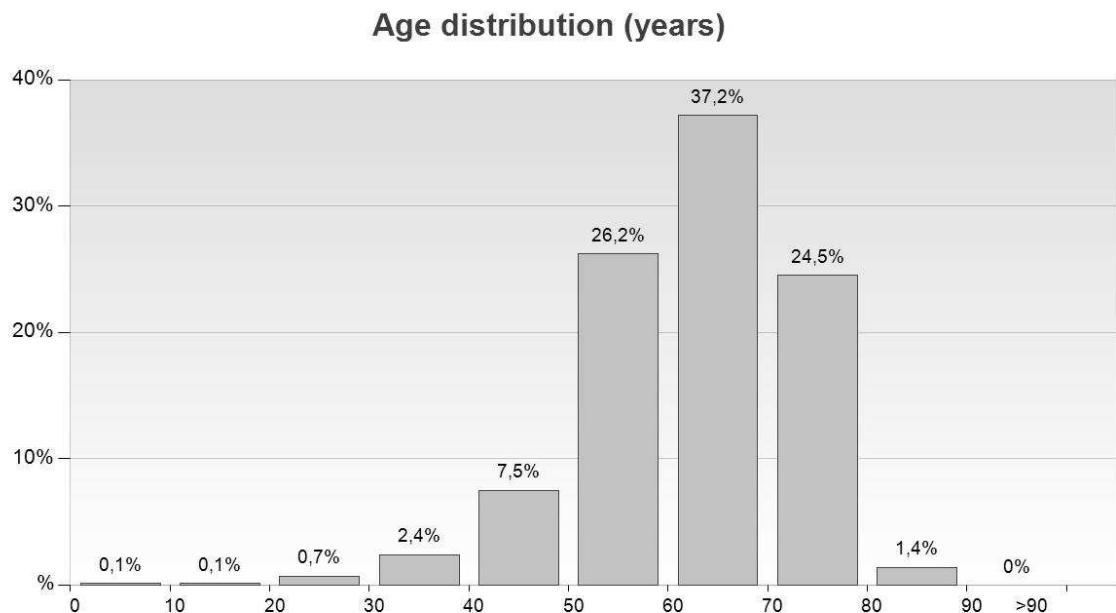
PVC	234
Monomorphic	213
Polymorphic	22
Ischemic	2
RVOT	110
LVOT / Aortic Cusp	64
Left Fascicular VT	5
HP System	9
Other	60

EPS only	409
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Atrial Fibrillation

Ablation of Atrial Fibrillation (AF)	n
All interventions	2741
AF combined with others	596
AF combined with RAFla	458
AF only	2145

The following statistics include AF only procedures



Age (years)	min.	Ø	max.
Female	0	66	85
Male	20	61	99
All	0	63	99

Number of patients	n	%
Females	661	31,81
Males	1417	68,19
Total	2078	

Atrial Fibrillation

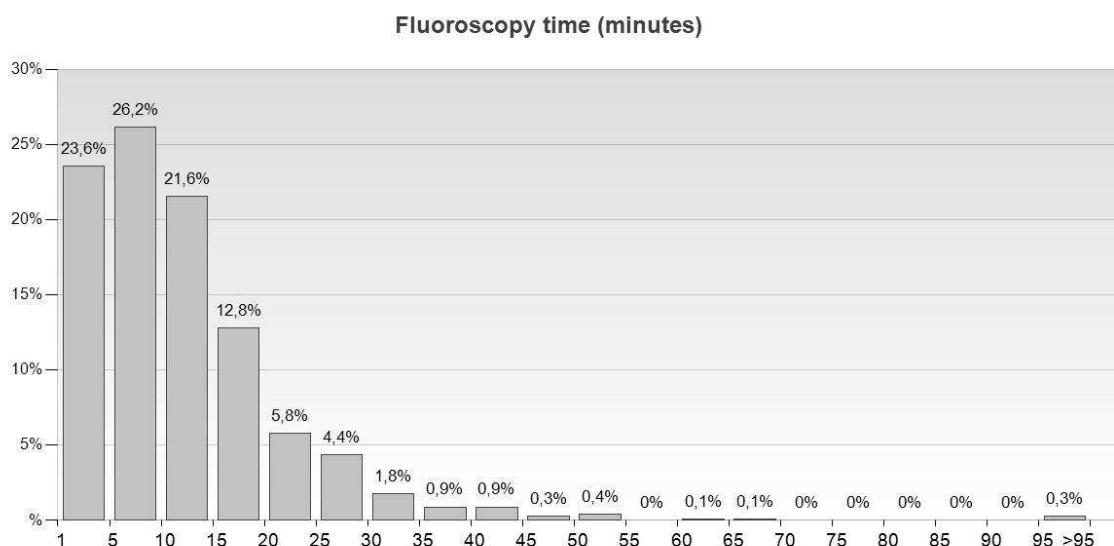
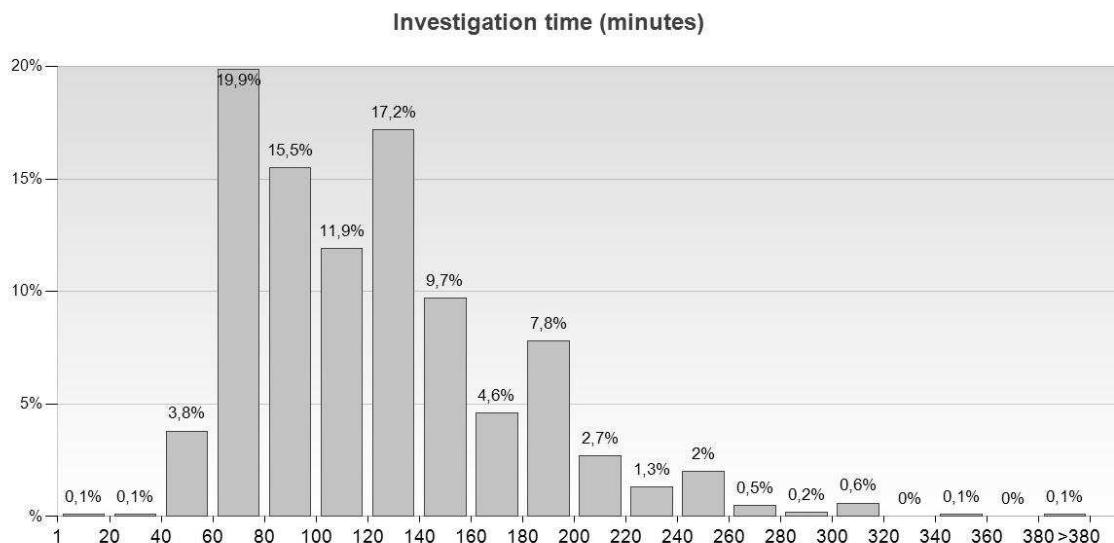
Cardiopathy (Underlying heart disease)	n	%
None	1329	61,96
Hypertensive Cardiomyopathy	262	12,21
Tachycardiomyopathy	168	7,83
Ischemic	163	7,6
Valvular	73	3,4
H(O)CM	54	2,52
Dilated	43	2
Other	23	1,07
Congenital	12	0,56
Angioplasty	7	0,33
Post Valvular Surgery	6	0,28
Infiltrative	2	0,09
RV Cardiomyopathy	1	0,05
Post Congenital Surgery	1	0,05
Brugada Syndrome	1	0,05
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Channelopathy long QT	0	0
Total	2145	

Symptoms	n
Palpitations	1832
Dyspnea	627
Fatigue	571
Dizziness	244
Other	61
None	44
Angina Pectoris	27
Syncope	25
SCD	2

Atrial Fibrillation

Anesthesia	n	%
Local	1219	56,83
General	926	43,17
Total	2145	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	12	119,4	490	2105	40
Fluoroscopy time	1	12,1	357	2131	14



Atrial Fibrillation

Type of AF	n	%
Paroxysmal	1418	66,11
Persistent	656	30,58
Long-standing Persistent (>1 Year)	71	3,31

EHRA-Score	n	%
Score I	207	9,65
Score II	1064	49,6
Score III	848	39,53
Score IV	26	1,21

Type of Intervention	n	%
Percutaneous	2140	99,77
Hybrid (Epicardial + Endovascular)	1	0,05
Surgical Ablation	4	0,19

Intervention	n	%
Primary Intervention	1599	74,55
Redo	546	25,45

Antiarrhythmic Drugs	n
Beta Blocker	1337
Amiodarone	529
None	349
Flecainide	224
Sotalol	103
Calcium Antagonist	66
Dronedarone	30
Other	18
Digitalis	17
Propafenone	16

Thromboembolic Risk Factors	n
Hypertension	899
Congestive Heart Failure, LV dysfunction	138
Prior MI, Per. Artery Disease, Aortic Plaque	127
Diabetes	118
Stroke, TIA, Other Embolic Event	85

Atrial Fibrillation

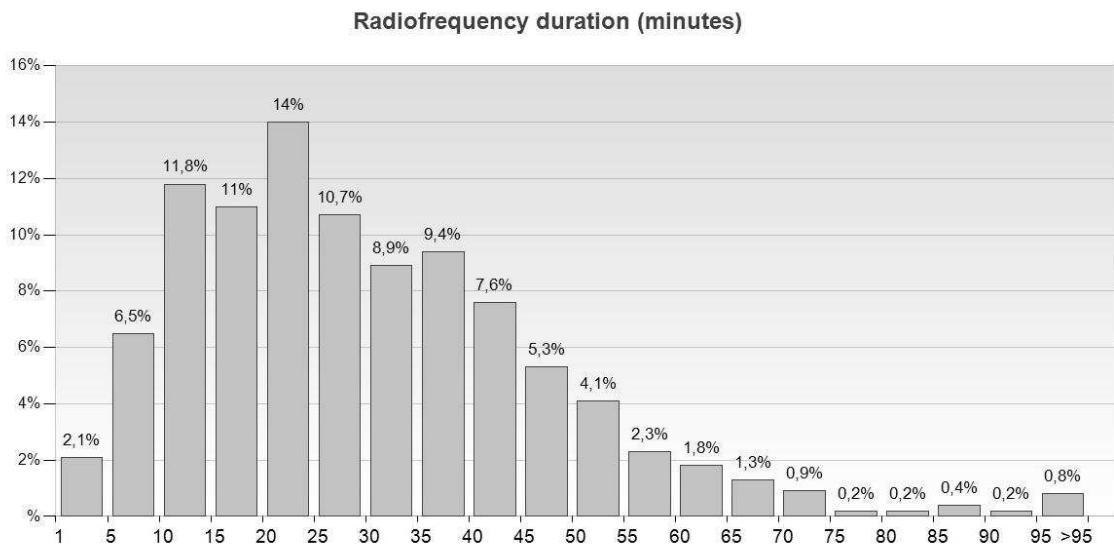
Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	1703
Vitamin K-Antagonist	166
None	141
Direct Thrombin Inhibitor	96
Aspirin	30
Other	29
Clopidogrel	10
Ticagrelor	1
Prasugrel	0

CHA₂DS₂-VASc Score	n
Score = 0	506
Score = 1	625
Score = 2	528
Score = 3	325
Score = 4	115
Score = 5	38
Score = 6	6
Score = 7	1
Average Score	1,56

Site of Ablation	n
RIPV	1947
LSPV	1941
RSPV	1935
LIPV	1924
CFAE	90
Other Lines	57
Roof Line	52
SVC	48
RMPV	38
Non-PV Focus	32
Other Veins	19
Mitral Isthmus Line	15
Septal Line	11
Vein of Marshall	4

Atrial Fibrillation

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	31	903	1625	7
Irrigated Technology				1511	
RF Duty Cycled				163	



Atrial Fibrillation

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	2	18,9	216	351	0

	n
Additional RF or Cryo Cath Needed	1

	n
Laser Balloon	0

	n
Contact Force	669

	n
Irrigated Multielectrode Ablation	1

Access	n	%
Trans-septal, Puncture	1930	89,98
Trans-septal, PFO	206	9,6
Other	7	0,33
Epicardial, Thoracoscopy	1	0,05
Epicardial, Coronary Sinus	1	0,05
Venous	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Arterial	0	0
Trans-septal Puncture+arterial	0	0
Total	2145	

Mapping	n	%
3D Mapping	1573	73,33
Conventional	295	13,75
Lasso	251	11,7
Basket	11	0,51
Non Contact	6	0,28
Other	5	0,23
HD Mesh	4	0,19
Total	2145	

Atrial Fibrillation

Catheter Steering	n	%
Conventional	2131	99,35
Stereotaxis	9	0,42
Other	3	0,14
Hansen	2	0,09
Total	2145	

Results	n
All Veins Isolated	2127
Mitral Isthmus Line Block Confirmed	18
Not All Veins Isolated	16
Roof Line Block Confirmed	14
Roof Line Block Not Confirmed	7
Mitral Isthmus Line Block Not Confirmed	2

Sinus Rhythm	n
Spontaneous	1101
By Ablation	539
With Electrical Cardioversion / Stimulation	528
Not Achieved	16
AAD	13

Atrial Fibrillation

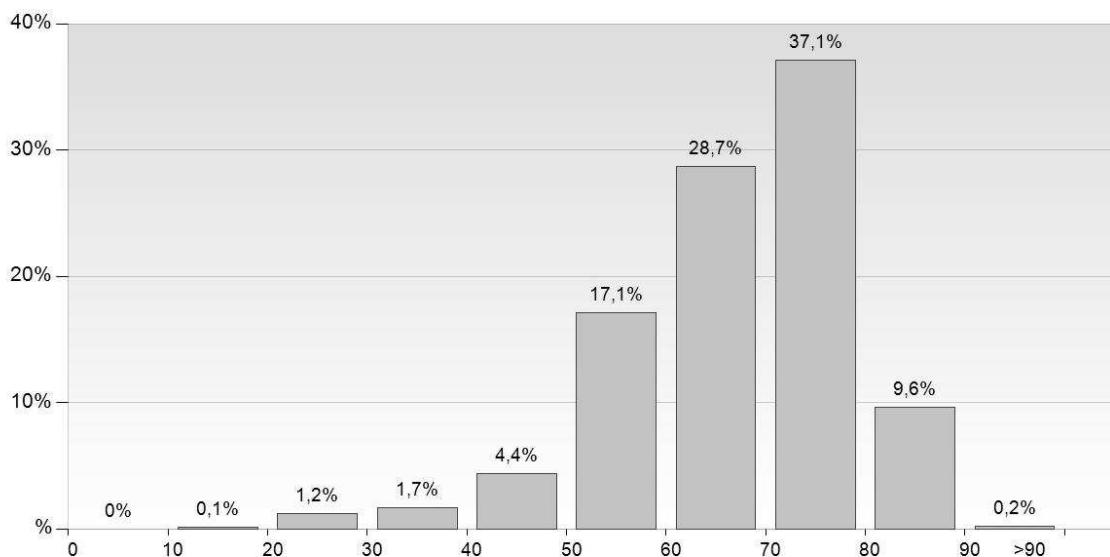
Periprocedural Complications	n
No complications	2106
Phrenic Nerve Paralysis	10
Other	8
Tamponade	7
Inguinal Hematoma	7
Pseudoaneurysm	3
AV Fistula	2
TIA	2
Arterial Occlusion	1
Stroke	1
Transient AV Block	1
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesion	0
Pericardial Effusion	0
Infection	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
PV Stenosis	0
Myocardial Infarction	0

Right Atrial Flutter

Ablation of Right Atrial Flutter (RAFlu)	n
All interventions	1509
RAFlu combined with others	559
RAFlu only	950

The following statistics include RAFlu only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	28	69	93
Male	16	67	92
All	16	67	93

Number of patients	n	%
Females	193	20,62
Males	743	79,38
Total	936	

Right Atrial Flutter

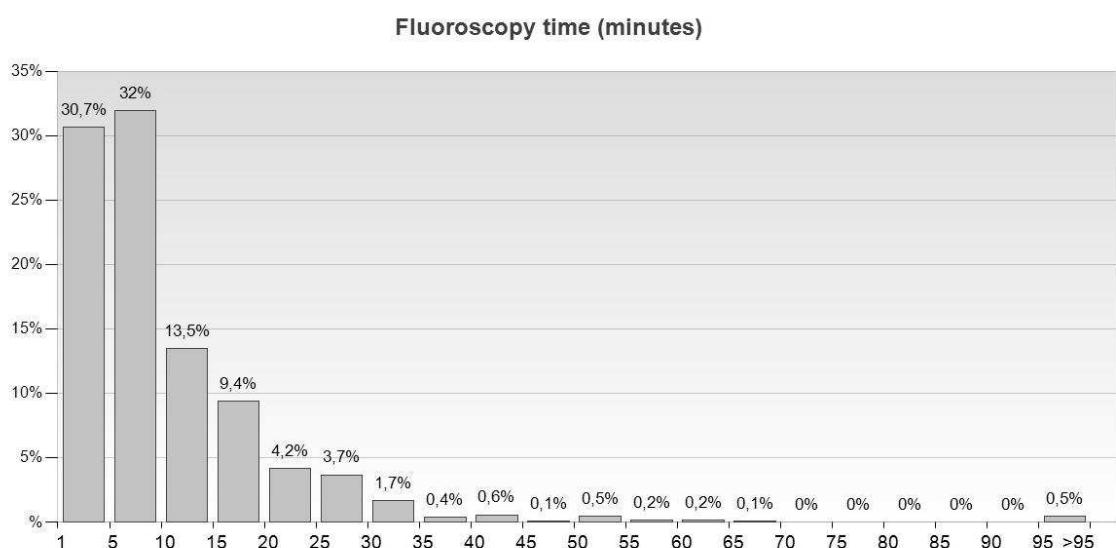
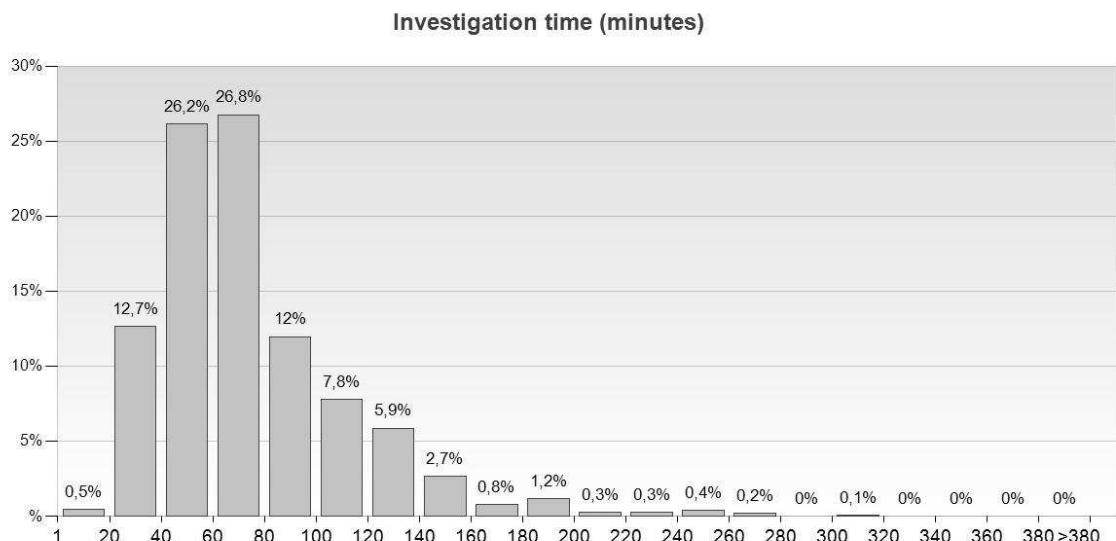
Cardiopathy (Underlying heart disease)	n	%
None	430	45,26
Hypertensive Cardiomyopathy	136	14,32
Ischemic	120	12,63
Tachycardiomyopathy	75	7,89
Valvular	72	7,58
Other	27	2,84
Congenital	22	2,32
Post Valvular Surgery	19	2
Dilated	18	1,89
H(O)CM	9	0,95
Post Congenital Surgery	8	0,84
CABG	6	0,63
Infiltrative	3	0,32
Angioplasty	2	0,21
Brugada Syndrome	1	0,11
RV Cardiomyopathy	1	0,11
Early Repolarization Syndrome	1	0,11
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Catecholaminergic Polymorphic VT	0	0
Total	950	

Symptoms	n
Palpitations	695
Dyspnea	320
Fatigue	254
Dizziness	85
None	64
Syncope	29
Other	24
Angina Pectoris	24
SCD	2

Right Atrial Flutter

Anesthesia	n	%
Local	858	90,32
General	92	9,68
Total	950	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	5	71,7	314	932	18
Fluoroscopy time	1	11	357	930	20



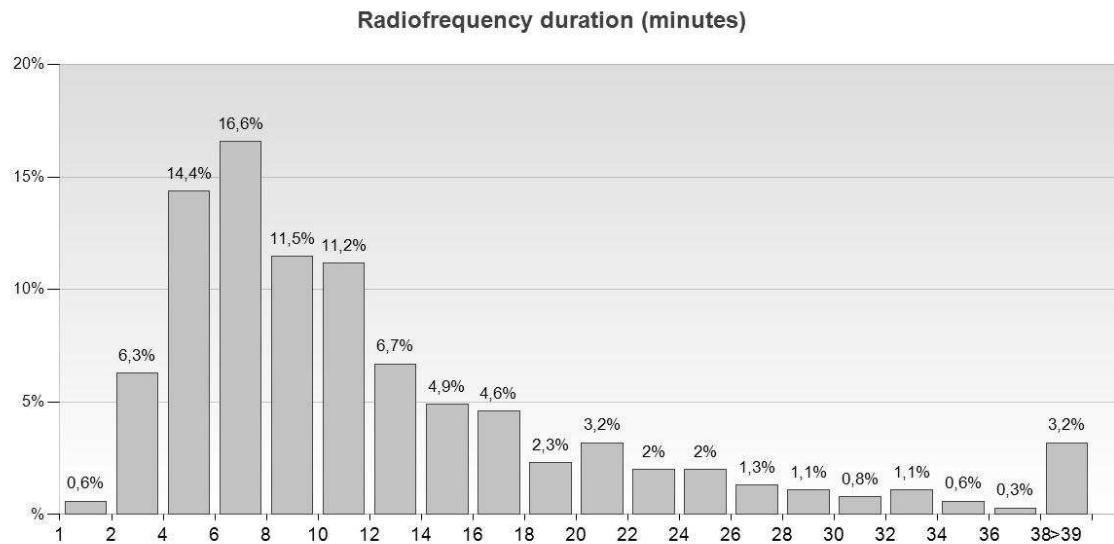
Right Atrial Flutter

Type of Flutter	n
Cavotricuspid	919
Scar related	31
Other	15

Intervention	n	%
Primary Intervention	872	91,79
Redo	78	8,21

Right Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	13	514	902	48
Irrigated Technology				586	



Right Atrial Flutter

Cryoablation	min.	Ø	max.	n	n_0^*
Total Duration (minutes)	0	0	0	0	0

	n
Additional RF or Cryo Cath Needed	0

Access	n	%
Venous	948	99,79
Other	1	0,11
Epicardial, Thoracotomy	1	0,11
Trans-septal, PFO	0	0
Arterial	0	0
Trans-septal Puncture+arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Trans-septal, Puncture	0	0
Epicardial, Sub-xiphoid	0	0
Total	950	

Mapping	n	%
Conventional	597	62,84
3D Mapping	350	36,84
Basket	2	0,21
Lasso	1	0,11
HD Mesh	0	0
Other	0	0
Non Contact	0	0
Total	950	

Catheter Steering	n	%
Conventional	949	99,89
Stereotaxis	1	0,11
Hansen	0	0
Other	0	0
Total	950	

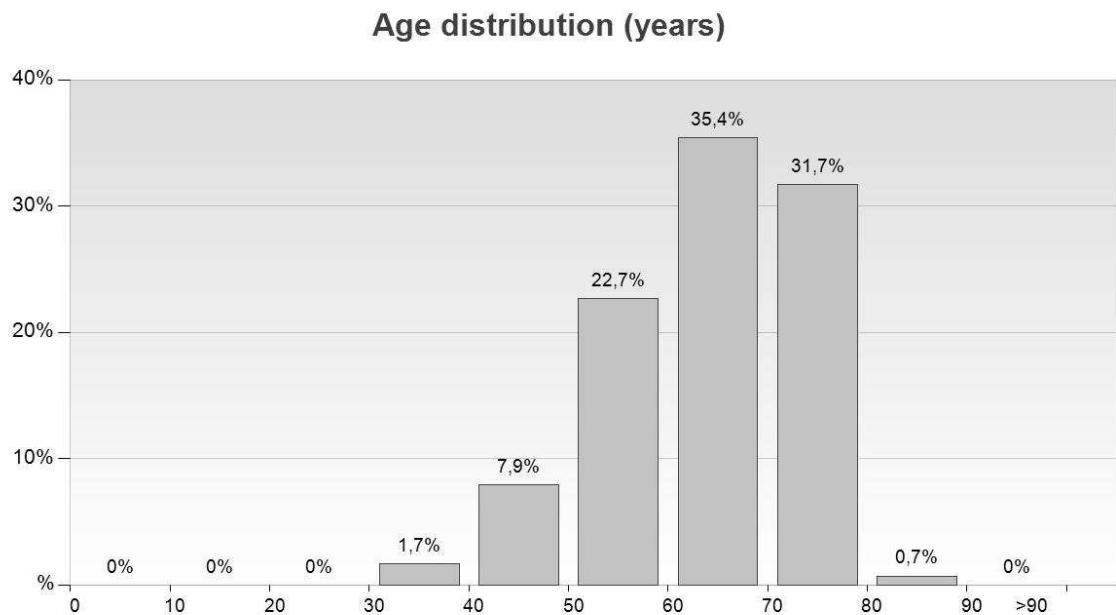
Results	n	%
Block confirmed	923	97,16
Block not confirmed	27	2,84

Right Atrial Flutter

Periprocedural Complications	n
No complications	942
Other	4
Inguinal Hematoma	2
Transient AV Block	2
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0

Atrial Fibrillation combined with Right Atrial Flutter

Number of interventions (AF with RAFlu): 458



Age (years)	min.	Ø	max.
Female	41	68	82
Male	32	63	81
All	32	64	82

Number of patients	n	%
Females	117	25,77
Males	337	74,23
Total	454	

Atrial Fibrillation combined with Right Atrial Flutter

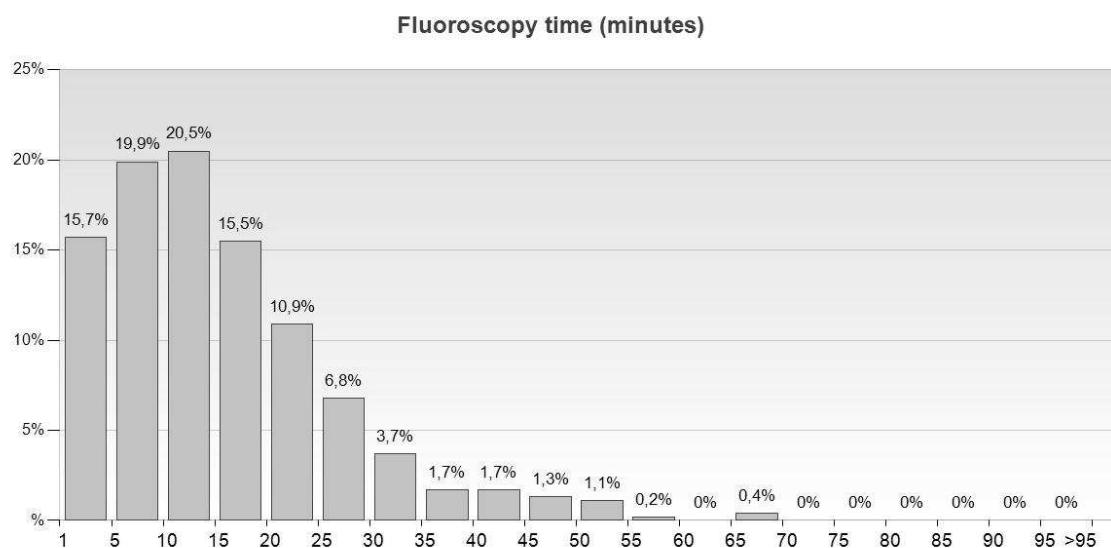
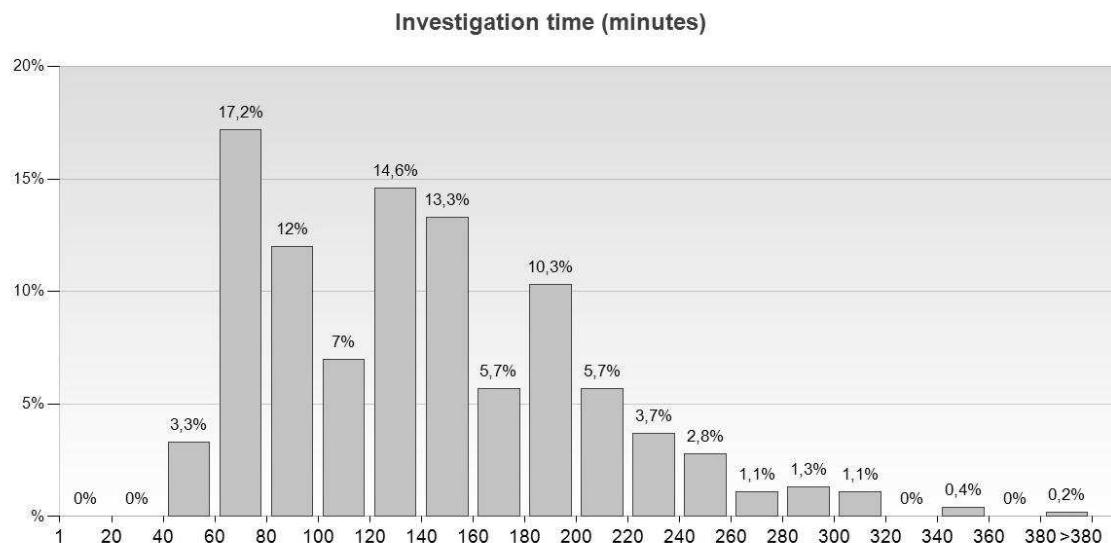
Cardiopathy (Underlying heart disease)	n	%
None	275	60,04
Hypertensive Cardiomyopathy	40	8,73
Tachycardiomyopathy	37	8,08
Ischemic	32	6,99
Valvular	23	5,02
Angioplasty	15	3,28
Other	14	3,06
H(O)CM	13	2,84
Dilated	5	1,09
CABG	2	0,44
Post Valvular Surgery	2	0,44
Infiltrative	0	0
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
RV Cardiomyopathy	0	0
Congenital	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Total	458	

Symptoms	n
Palpitations	363
Fatigue	162
Dyspnea	121
Other	63
Dizziness	30
None	13
Angina Pectoris	7
Syncope	4
SCD	0

Atrial Fibrillation combined with Right Atrial Flutter

Anesthesia	n	%
Local	172	37,55
General	286	62,45
Total	458	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	45	136,7	420	457	1
Fluoroscopy time	1	15,3	67	456	2



Atrial Fibrillation combined with Right Atrial Flutter

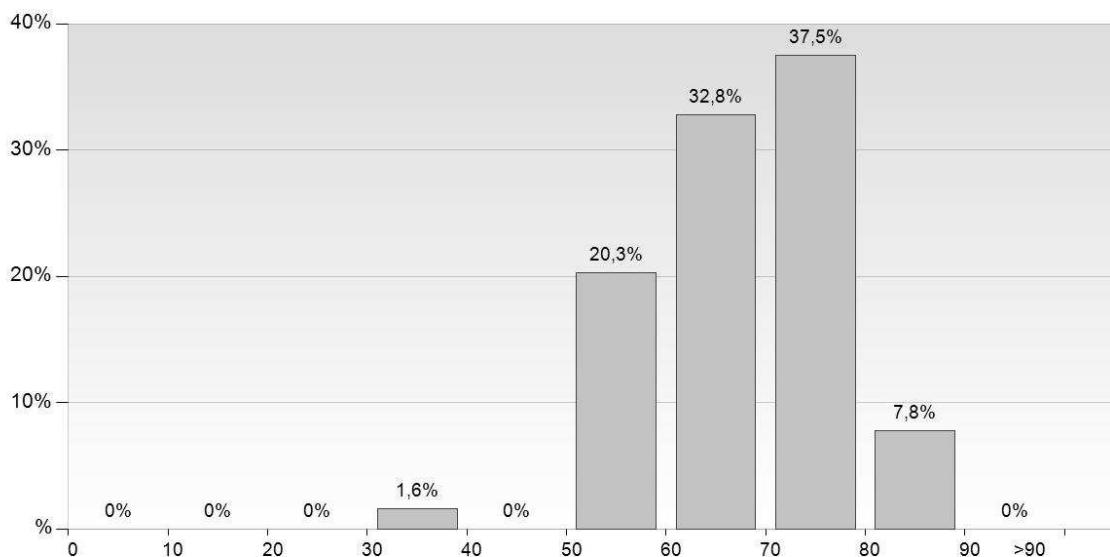
Periprocedural Complications	n
No complications	450
Tamponade	2
Pericardial Effusion	2
High Degree or Complete AV Block	1
Other	1
Inguinal Hematoma	1
AV Fistula	1
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Infection	0
Stroke	0

Left Atrial Flutter

Ablation of Left Atrial Flutter (LAFlu)	n
All interventions	129
LAFlu combined with others	65
LAFlu only	64

The following statistics include LAFlu only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	59	73	85
Male	40	66	81
All	40	68	85

Number of patients	n	%
Females	18	29,03
Males	44	70,97
Total	62	

Left Atrial Flutter

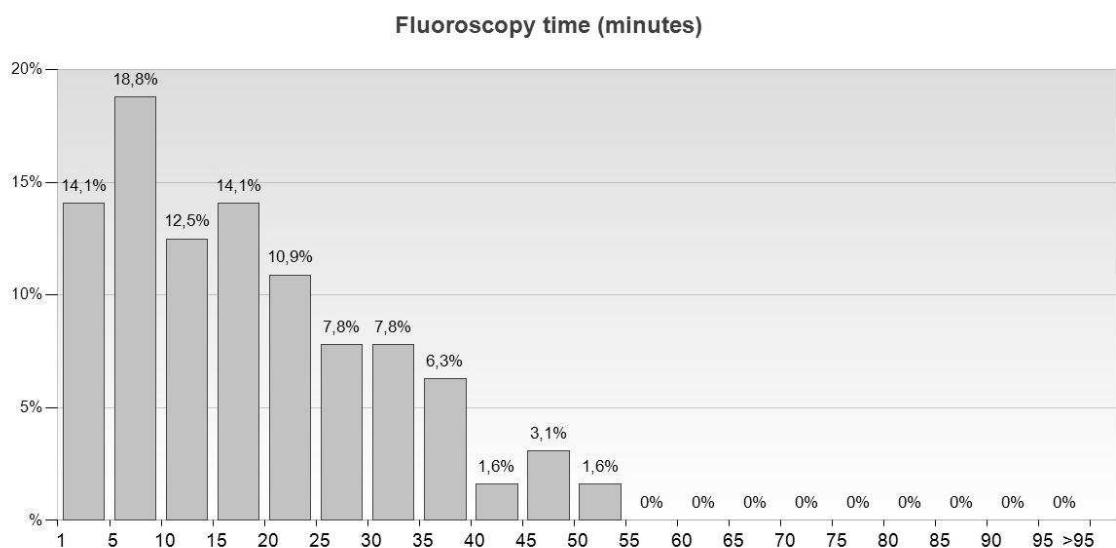
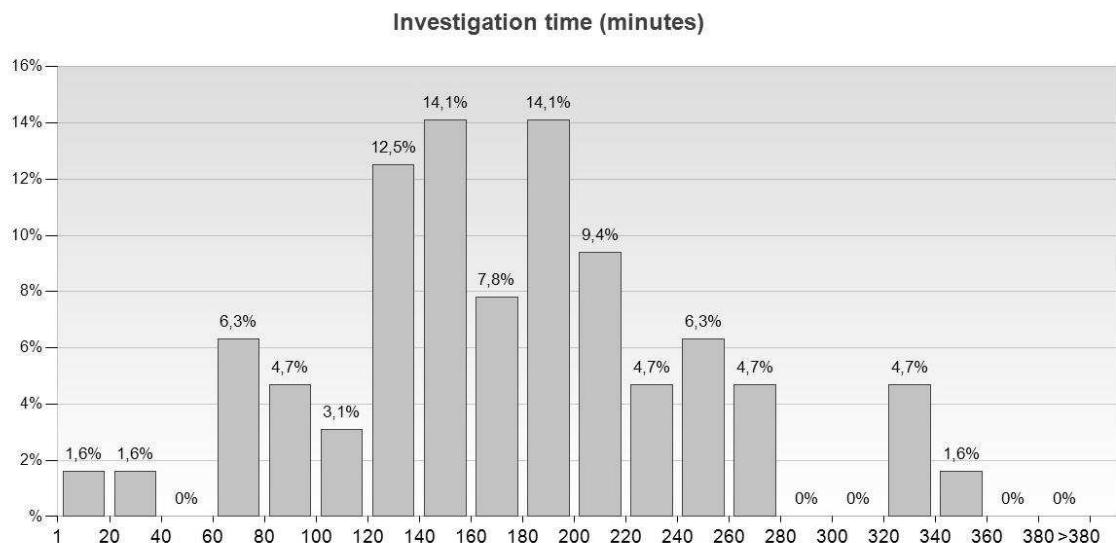
Cardiopathy (Underlying heart disease)	n	%
None	21	32,81
Hypertensive Cardiomyopathy	12	18,75
Valvular	8	12,5
Ischemic	7	10,94
Tachycardiomyopathy	6	9,38
Other	3	4,69
Congenital	2	3,13
Dilated	2	3,13
Post Valvular Surgery	2	3,13
H(O)CM	1	1,56
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
RV Cardiomyopathy	0	0
Total	64	

Symptoms	n
Palpitations	44
Dyspnea	21
Fatigue	20
Dizziness	8
None	7
Angina Pectoris	3
Other	2
Syncope	1
SCD	0

Left Atrial Flutter

Anesthesia	n	%
Local	43	67,19
General	21	32,81
Total	64	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	4	172,9	357	62	2
Fluoroscopy time	2	18,1	50	63	1



Left Atrial Flutter

Type of Flutter	n
Other	26
Perimitral	22
Roof-dependent	19
Peri Ostial Pulmonary Vein	4
Peri-Incisional	1

EHRA-Score	n	%
Score I	5	7,81
Score II	28	43,75
Score III	28	43,75
Score IV	3	4,69

Type of Intervention	n	%
Percutaneous	64	100
Hybrid (Epicardial + Endovascular)	0	0
Surgical Ablation	0	0

Intervention	n	%
Primary Intervention	29	45,31
Redo	35	54,69

Antiarrhythmic Drugs	n
Beta Blocker	45
Amiodarone	14
None	7
Sotalol	5
Other	3
Digitalis	2
Calcium Antagonist	2
Flecainide	0
Propafenone	0
Dronedarone	0

Left Atrial Flutter

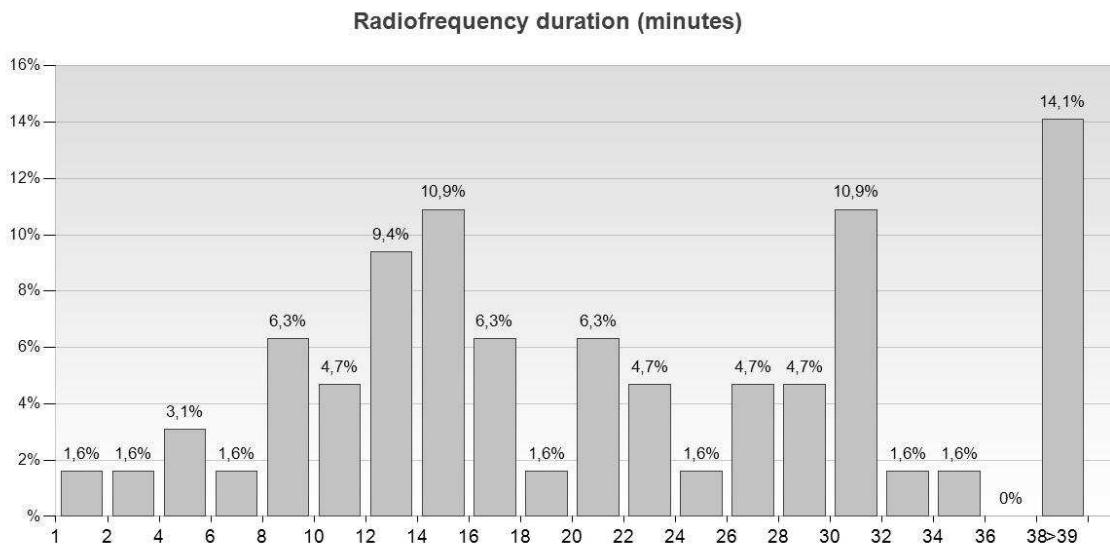
Thromboembolic Risk Factors	n
Hypertension	32
Congestive Heart Failure, LV dysfunction	11
Diabetes	7
Stroke, TIA, Other Embolic Event	5
Prior MI, Per. Artery Disease, Aortic Plaque	3

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	45
Vitamin K-Antagonist	14
Aspirin	4
Clopidogrel	2
Other	2
None	2
Direct Thrombin Inhibitor	1
Prasugrel	0
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	7
Score = 1	21
Score = 2	11
Score = 3	14
Score = 4	6
Score = 5	3
Score = 6	2
Score = 7	0
Average Score	2,13

Left Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	24	83	62	2
Irrigated Technology				56	
RF Duty Cycled				0	



Left Atrial Flutter

Access	n	%
Trans-septal, Puncture	59	92,19
Trans-septal, PFO	4	6,25
Other	1	1,56
Venous	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Arterial	0	0
Trans-septal Puncture+arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	64	

Mapping	n	%
3D Mapping	61	95,31
HD Mesh	3	4,69
Lasso	0	0
Other	0	0
Non Contact	0	0
Basket	0	0
Conventional	0	0
Total	64	

Catheter Steering	n	%
Conventional	63	98,44
Other	1	1,56
Stereotaxis	0	0
Hansen	0	0
Total	64	

Results	n	%
Block confirmed	51	79,69
Block not confirmed	13	20,31

Left Atrial Flutter

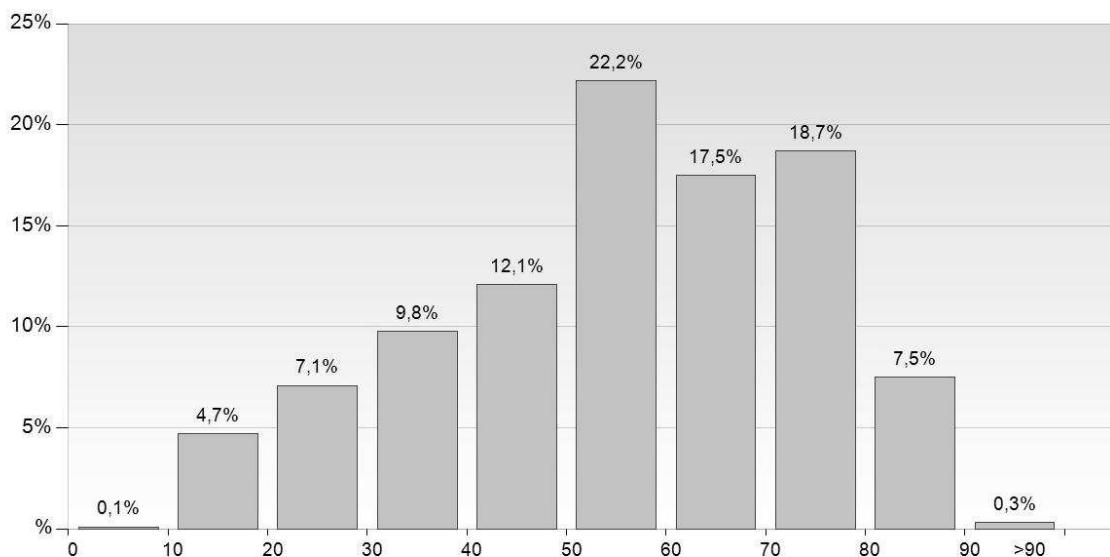
Periprocedural Complications	n
No complications	62
Inguinal Hematoma	1
Other	1
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
Infection	0
AV Fistula	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Ablation of AVNRT	n
All interventions	1086
AVNRT combined with others	74
AVNRT only	1012

The following statistics include AVNRT only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	12	54	93
Male	9	59	97
All	9	56	97

Number of patients	n	%
Females	585	59,09
Males	405	40,91
Total	990	

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

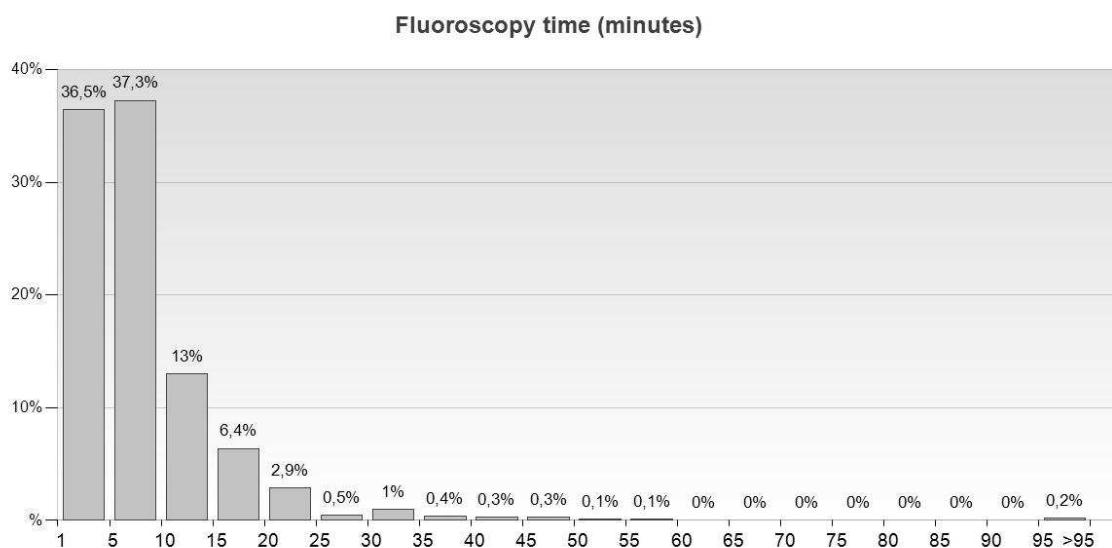
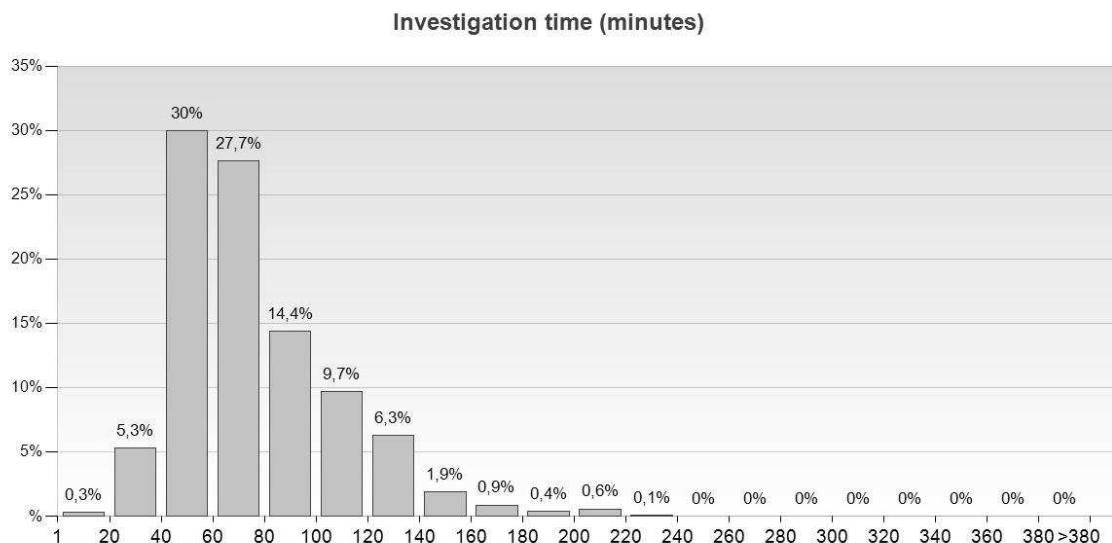
Cardiopathy (Underlying heart disease)	n	%
None	871	86,07
Hypertensive Cardiomyopathy	44	4,35
Ischemic	43	4,25
Tachycardiomyopathy	18	1,78
Valvular	11	1,09
Other	7	0,69
Congenital	5	0,49
H(O)CM	4	0,4
RV Cardiomyopathy	3	0,3
Post Valvular Surgery	2	0,2
Dilated	2	0,2
Brugada Syndrome	1	0,1
Infiltrative	1	0,1
Channelopathy long QT	0	0
Angioplasty	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	1012	

Symptoms	n
Palpitations	956
Dizziness	131
Dyspnea	90
Fatigue	71
Syncope	39
Angina Pectoris	26
Other	24
None	17
SCD	1

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

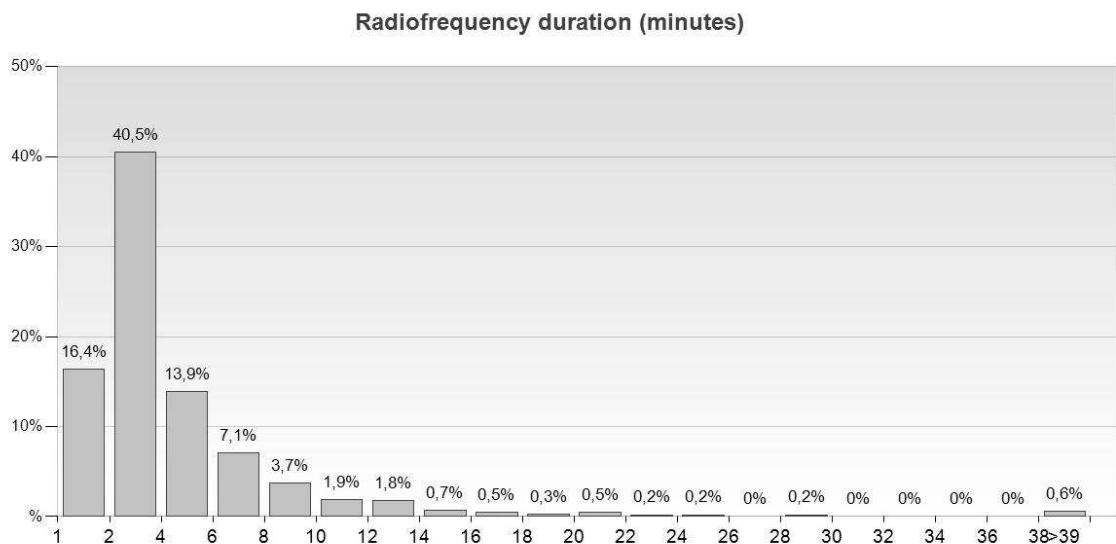
Anesthesia	n	%
Local	978	96,64
General	34	3,36
Total	1012	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	1	72,3	220	988	24
Fluoroscopy time	1	7,9	119	1001	11



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	4	131	893	117
Irrigated Technology				61	



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Type	n
Slow-Fast	945
Slow-Slow	48
Fast-Slow	37

Intervention	n	%
Primary Intervention	931	92
Redo	81	8

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	5	12	18	2	0

Mapping	n	%
Conventional	708	69,96
3D Mapping	303	29,94
Other	1	0,1
Basket	0	0
HD Mesh	0	0
Lasso	0	0
Non Contact	0	0
Total	1012	

Catheter Steering	n	%
Conventional	1011	99,9
Stereotaxis	1	0,1
Hansen	0	0
Other	0	0
Total	1012	

Results	n	%
Success	1001	98,91
No success	11	1,09

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

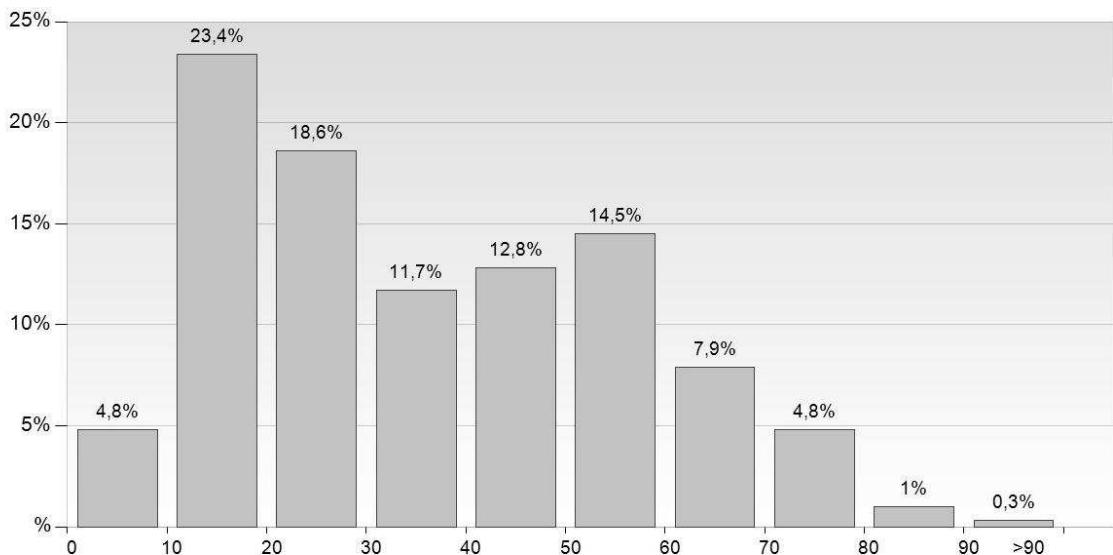
Periprocedural Complications	n
No complications	1002
Transient AV Block	4
Other	2
Inguinal Hematoma	2
High Degree or Complete AV Block	1
AV Fistula	1
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
Infection	0
Stroke	0

Accessory Pathway

Ablation of Accessory Pathway (AP)	n
All interventions	302
AP combined with others	12
AP only	290

The following statistics include AP only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	1	38	94
Male	3	36	87
All	1	37	94

Number of patients	n	%
Females	102	37,5
Males	170	62,5
Total	272	

Accessory Pathway

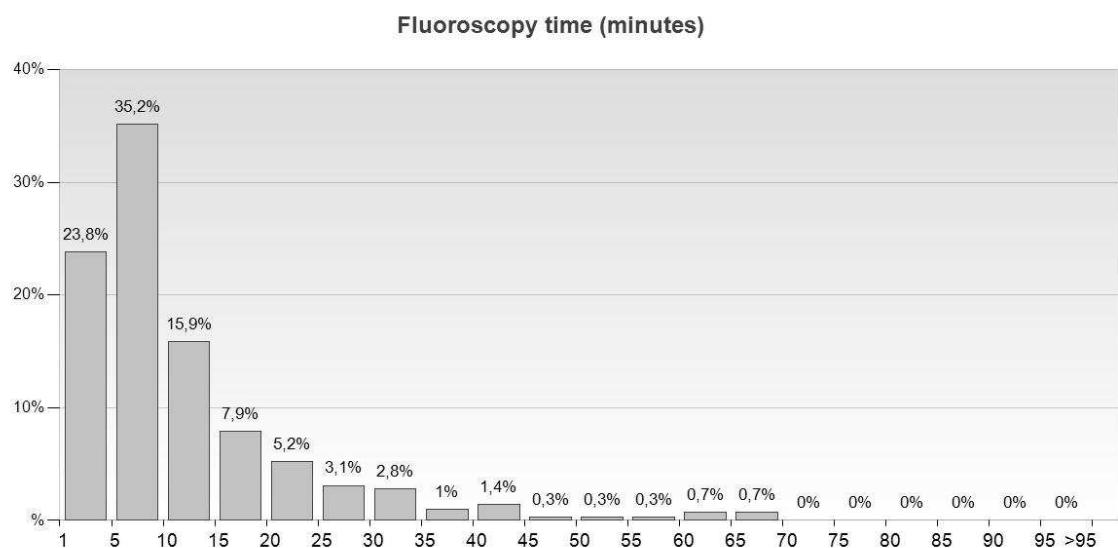
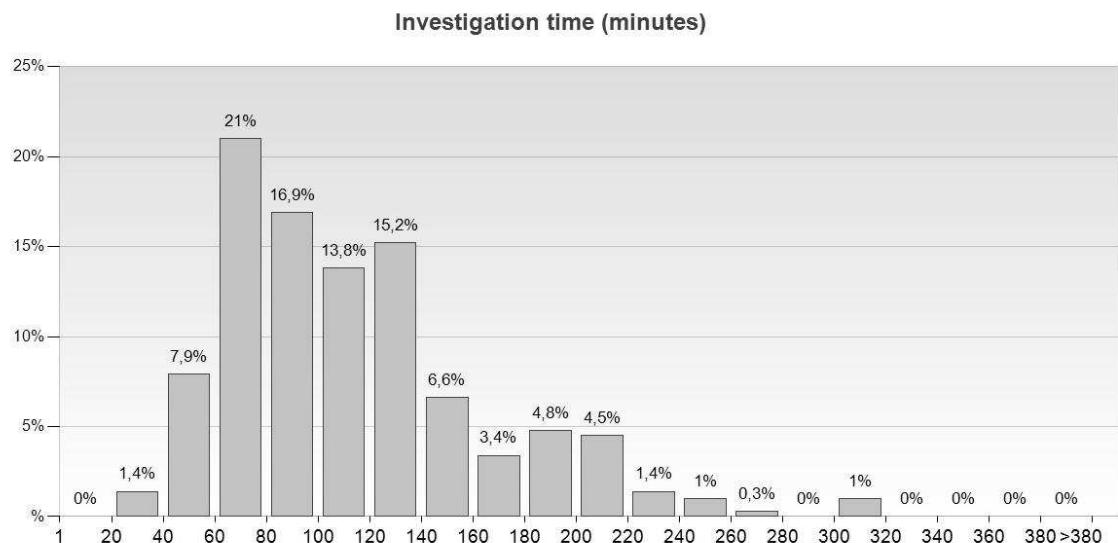
Cardiopathy (Underlying heart disease)	n	%
None	267	92,07
Congenital	6	2,07
Other	4	1,38
Ischemic	4	1,38
Hypertensive Cardiomyopathy	4	1,38
Valvular	3	1,03
Dilated	2	0,69
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
H(O)CM	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Tachycardiomyopathy	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	290	

Symptoms	n
Palpitations	246
None	33
Dizziness	28
Dyspnea	19
Fatigue	17
Syncope	10
Angina Pectoris	5
Other	5
SCD	1

Accessory Pathway

Anesthesia	n	%
Local	247	85,17
General	43	14,83
Total	290	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	28	109,7	310	288	2
Fluoroscopy time	1	11,7	68	286	4



Accessory Pathway

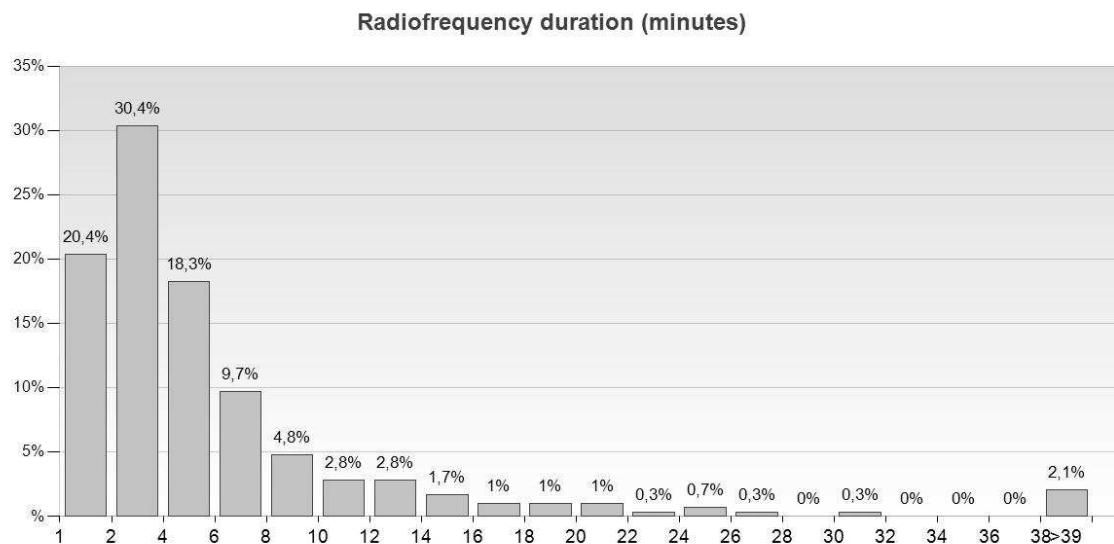
Type	n
WPW	180
Concealed	92
Asymptomatic Preexcitation	23
PJRT	5
Mahaim	3
Atrio-Fascicular	2
Other	1

Intervention	n	%
Primary Intervention	255	87,93
Redo	35	12,07

Site of Ablation	n
left	173
right	121
left: Free Wall	89
right: Posteroseptal	64
left: Posteroseptal	45
left: Posterior	44
right: Parahisian	17
right: Coronary Sinus Aneurysm	12
right: Anteroseptal	12
right: Free Wall	9
right: Midseptal	7
right: Posterior	6

Accessory Pathway

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	8	305	283	6
Irrigated Technology				181	



Accessory Pathway

Cryoablation	min.	Ø	max.	n	n_0^*
Total Duration (minutes)	3	15,6	32	5	0

Access	n	%
Venous	142	48,97
Trans-septal, Puncture	122	42,07
Arterial	20	6,9
Trans-septal, PFO	5	1,72
Epicardial, Coronary Sinus	1	0,34
Trans-septal Puncture+arterial	0	0
Epicardial, Thoracoscopy	0	0
Other	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Total	290	

Mapping	n	%
3D Mapping	153	52,76
Conventional	136	46,9
Basket	1	0,34
HD Mesh	0	0
Lasso	0	0
Other	0	0
Non Contact	0	0
Total	290	

Catheter Steering	n	%
Conventional	290	100
Hansen	0	0
Other	0	0
Stereotaxis	0	0
Total	290	

Results	n	%
Success	267	92,07
No success	23	7,93

Accessory Pathway

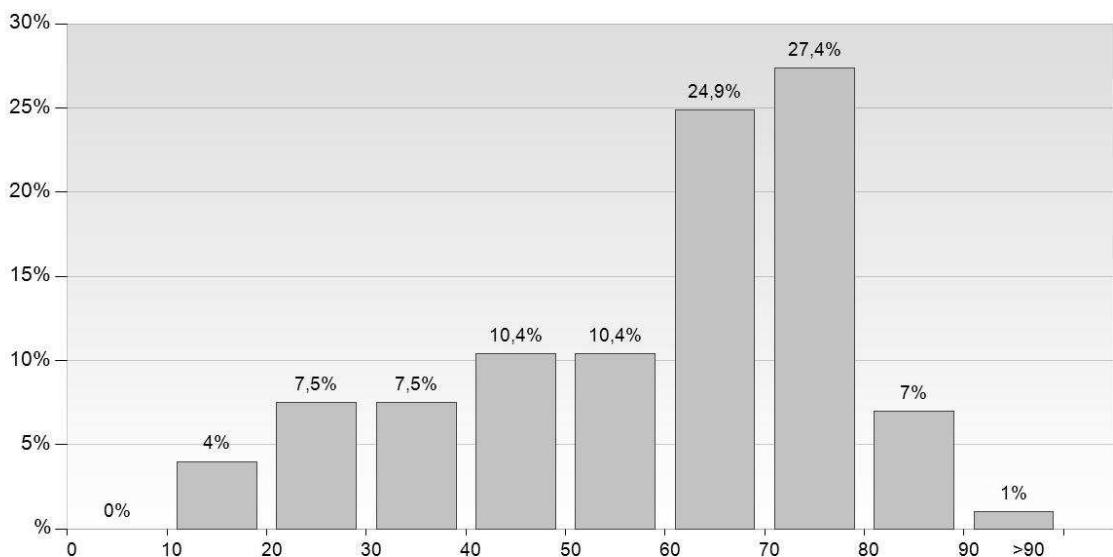
Periprocedural Complications	n
No complications	284
Transient AV Block	2
Pericardial Effusion	2
High Degree or Complete AV Block	1
Other	1
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
AV Fistula	0
Infection	0
Stroke	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0

Atrial Tachycardia

Ablation of Atrial Tachycardia (AT)	n
All interventions	294
AT combined with others	93
AT only	201

The following statistics include AT only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	15	59	86
Male	12	60	92
All	12	59	92

Number of patients	n	%
Females	99	51,03
Males	95	48,97
Total	194	

Atrial Tachycardia

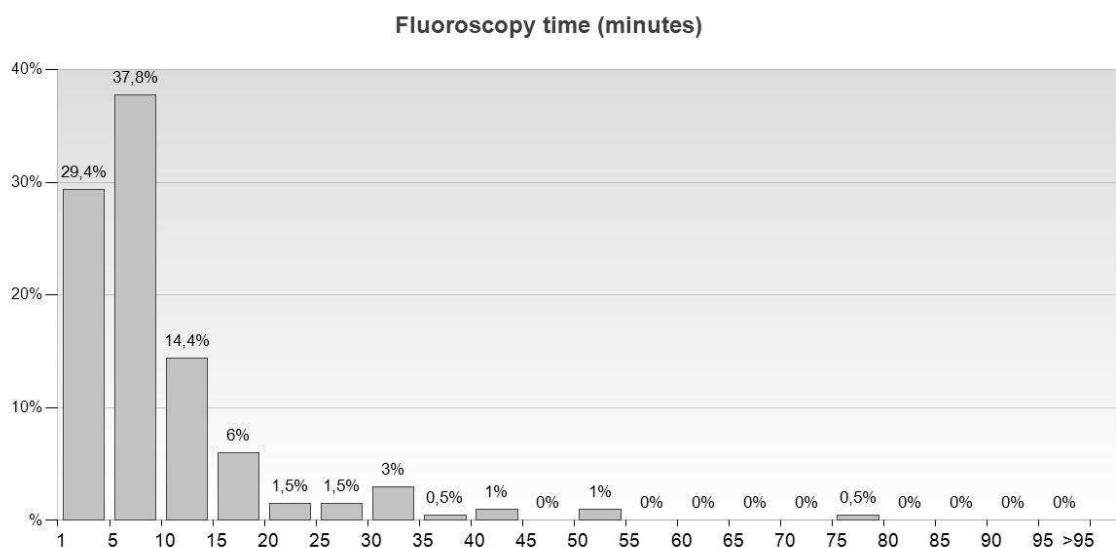
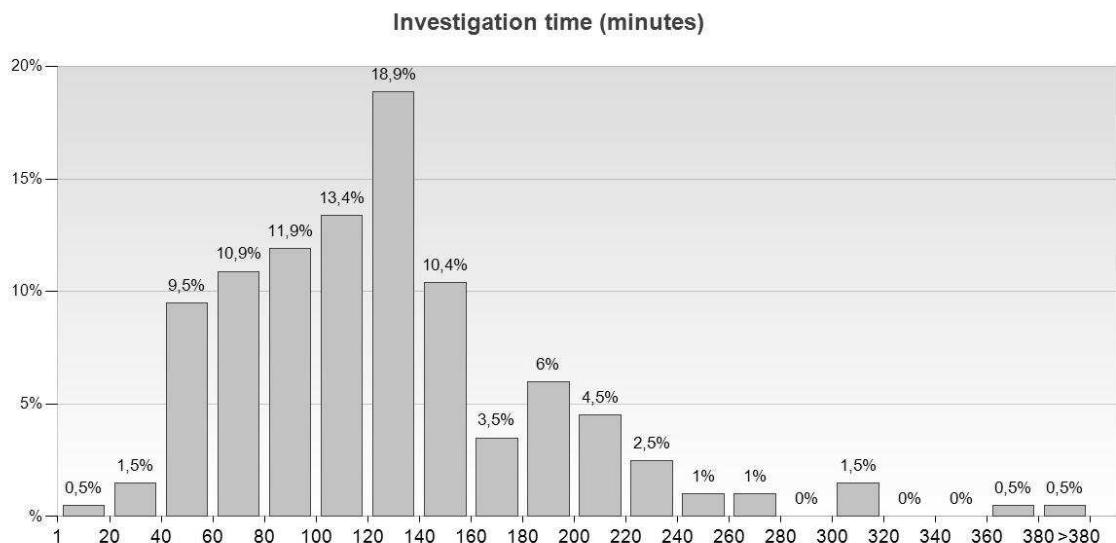
Cardiopathy (Underlying heart disease)	n	%
None	130	64,68
Other	16	7,96
Hypertensive Cardiomyopathy	15	7,46
Tachycardiomyopathy	13	6,47
Congenital	11	5,47
Valvular	5	2,49
Ischemic	3	1,49
Dilated	3	1,49
H(O)CM	2	1
Infiltrative	2	1
Post Congenital Surgery	1	0,5
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	201	

Symptoms	n
Palpitations	175
Fatigue	43
Dyspnea	41
Dizziness	19
Other	9
None	5
Angina Pectoris	4
Syncope	3
SCD	0

Atrial Tachycardia

Anesthesia	n	%
Local	173	86,07
General	28	13,93
Total	201	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	18	123,4	460	197	4
Fluoroscopy time	1	9,4	78	194	7



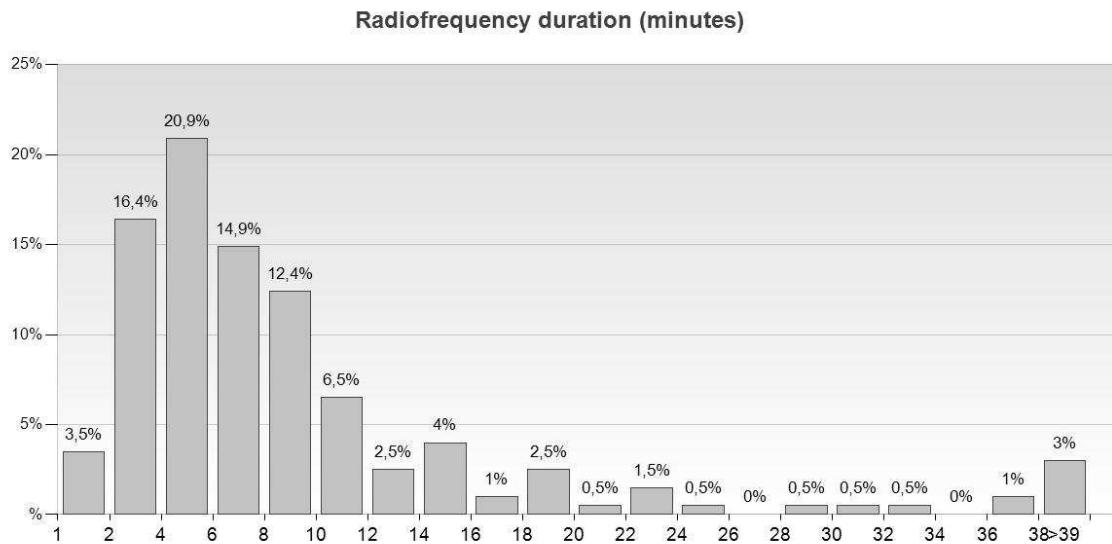
Atrial Tachycardia

Intervention	n	%
Primary Intervention	168	83,58
Redo	33	16,42

Site of Ablation	n
right	143
left	67
right: Other Right	57
right: Septal Right	36
left: Other Left	31
right: Peritricuspid	29
right: Crista Terminalis	28
left: Septal Left	16
left: Periostial PV	15
left: Perimitral	8
right: Right Appendage	4
left: Left Atrial Appendage	3

Atrial Tachycardia

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	14	517	186	15
Irrigated Technology				145	



Atrial Tachycardia

Access	n	%
Venous	142	70,65
Trans-septal, Puncture	45	22,39
Trans-septal, PFO	9	4,48
Arterial	5	2,49
Other	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Trans-septal Puncture+arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	201	

Mapping	n	%
3D Mapping	155	77,11
Conventional	38	18,91
Non Contact	6	2,99
Lasso	1	0,5
Other	1	0,5
HD Mesh	0	0
Basket	0	0
Total	201	

Catheter Steering	n	%
Conventional	201	100
Other	0	0
Stereotaxis	0	0
Hansen	0	0
Total	201	

Results	n	%
Success	167	83,08
No success	34	16,92

Atrial Tachycardia

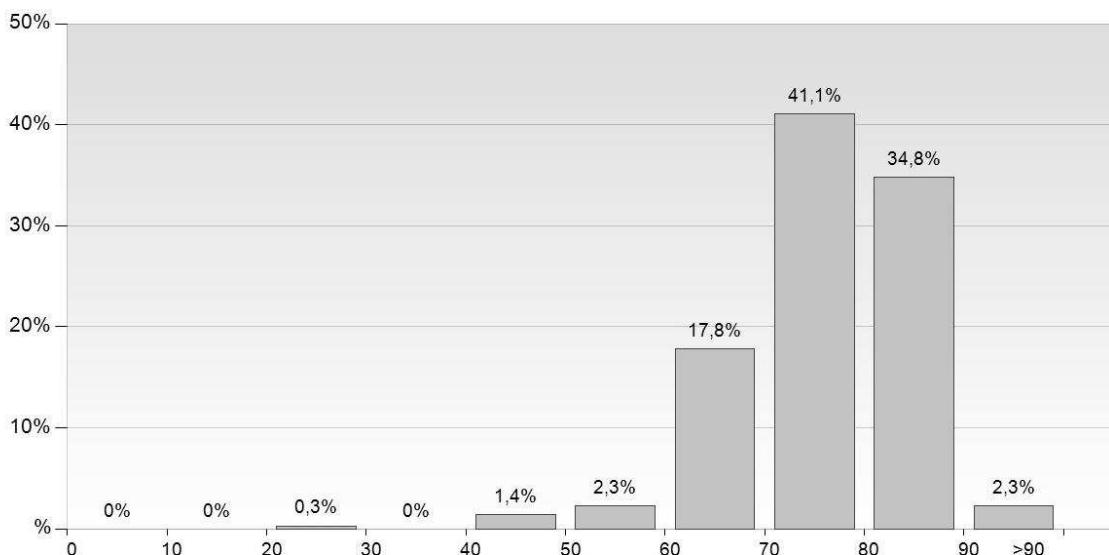
Periprocedural Complications	n
No complications	199
High Degree or Complete AV Block	1
Pulmonary Oedema	1
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
Pulmonary Embolism	0
Other	0
Hemothorax	0
Arterial Thrombosis	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Ablation of AVN(R)	n
All interventions	367
AVN(R) combined with others	19
AVN(R) only	348

The following statistics include AVN(R) only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	48	78	97
Male	24	74	92
All	24	76	97

Number of patients	n	%
Females	206	60,23
Males	136	39,77
Total	342	

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Cardiopathy (Underlying heart disease)	n	%
None	102	29,31
Tachycardiomyopathy	83	23,85
Valvular	43	12,36
Ischemic	41	11,78
Hypertensive Cardiomyopathy	36	10,34
Dilated	13	3,74
H(O)CM	13	3,74
Other	13	3,74
Infiltrative	2	0,57
CABG	1	0,29
Post Valvular Surgery	1	0,29
Post Congenital Surgery	0	0
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
RV Cardiomyopathy	0	0
Congenital	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Total	348	

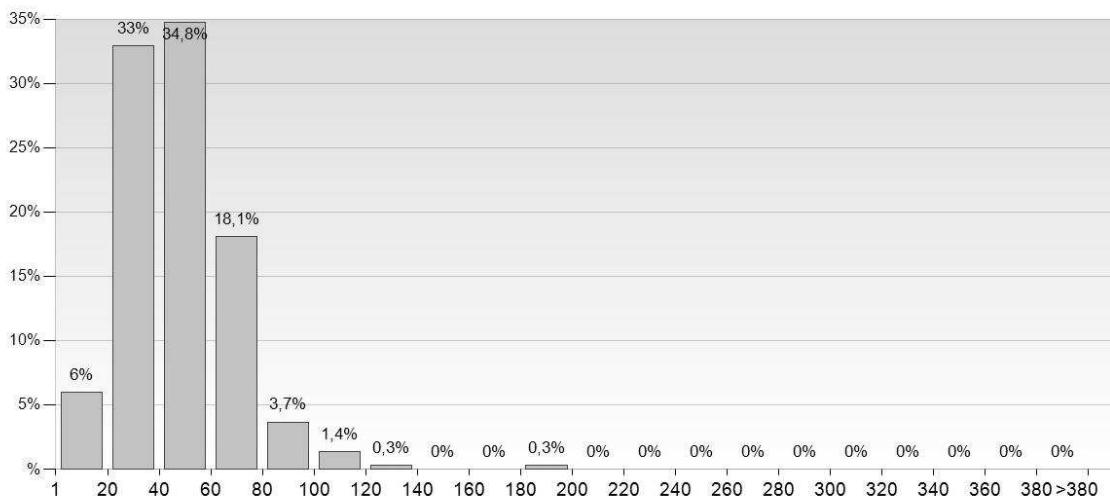
Symptoms	n
Palpitations	272
Dyspnea	152
Fatigue	125
Dizziness	33
Syncope	6
Other	6
Angina Pectoris	4
None	3
SCD	1

Atrioventricular Node (Rate Control in Atr. Fibrillation)

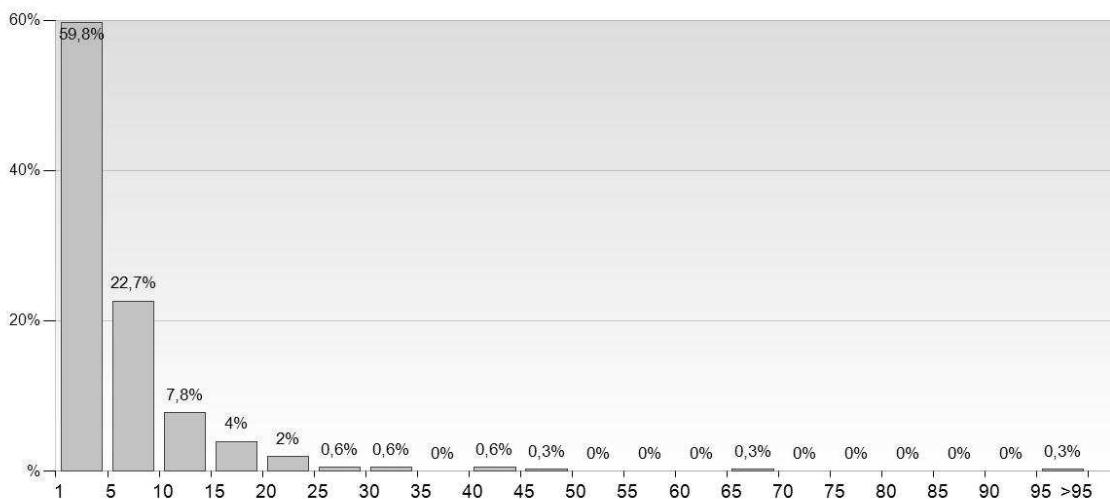
Anesthesia	n	%
Local	341	97,99
General	7	2,01
Total	348	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	7	44	180	340	8
Fluoroscopy time	1	7	441	344	4

Investigation time (minutes)



Fluoroscopy time (minutes)



Atrioventricular Node (Rate Control in Atr. Fibrillation)

Type of Fibrillation	n	%
Paroxysmal	77	22,13
Persistent	156	44,83
Long-standing Persistent (>1 Year)	115	33,05

EHRA-Score	n	%
Score I	20	5,75
Score II	106	30,46
Score III	183	52,59
Score IV	39	11,21

Intervention	n	%
Primary Intervention	310	89,08
Redo	25	7,18
Previous AF Abl. Procedure	13	3,74

Antiarrhythmic Drugs	n
Beta Blocker	267
Amiodarone	112
Calcium Antagonist	45
Digitalis	35
None	31
Sotalol	10
Other	9
Flecainide	6
Dronedarone	1
Propafenone	0

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Thromboembolic Risk Factors	n
Hypertension	177
Congestive Heart Failure, LV dysfunction	63
Diabetes	39
Prior MI, Per. Artery Disease, Aortic Plaque	27
Stroke, TIA, Pther Embolic Event	18

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	193
Vitamin K-Antagonist	83
None	28
Direct Thrombin Inhibitor	26
Other	14
Aspirin	10
Clopidogrel	2
Prasugrel	0
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	6
Score = 1	33
Score = 2	70
Score = 3	118
Score = 4	69
Score = 5	32
Score = 6	16
Score = 7	3
Average Score	3,10

Atrioventricular Node (Rate Control in Atr. Fibrillation)

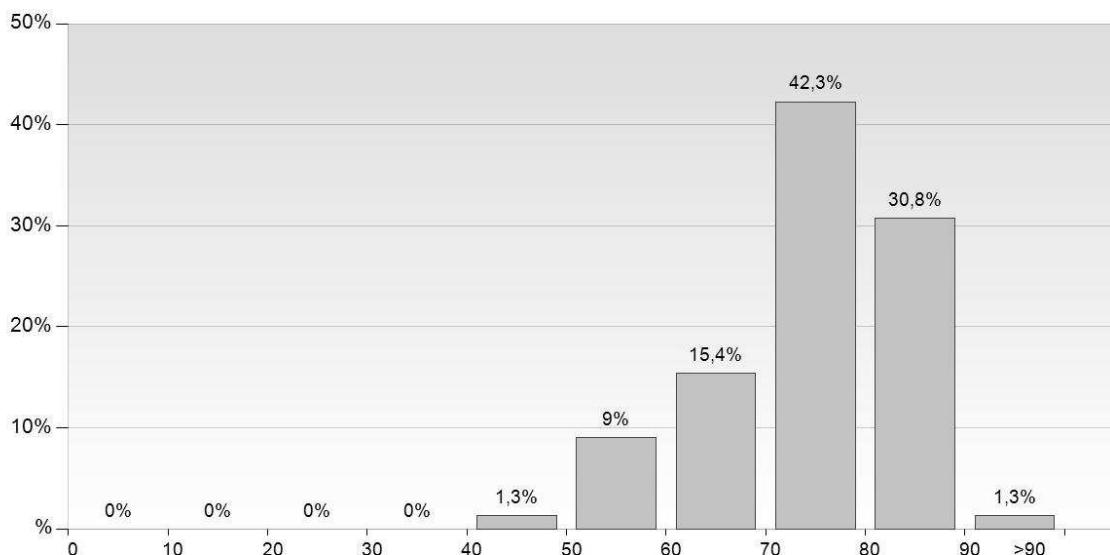
Periprocedural Complications	n
No complications	348
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Other	0

Atrioventricular Node (to resynchronisation)

Ablation of AVN	n
All interventions	96
AVN combined with others	18
AVN only	78

The following statistics include AVN only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	51	77	91
Male	44	73	90
All	44	74	91

Number of patients	n	%
Females	22	28,95
Males	54	71,05
Total	76	

Atrioventricular Node (to resynchronisation)

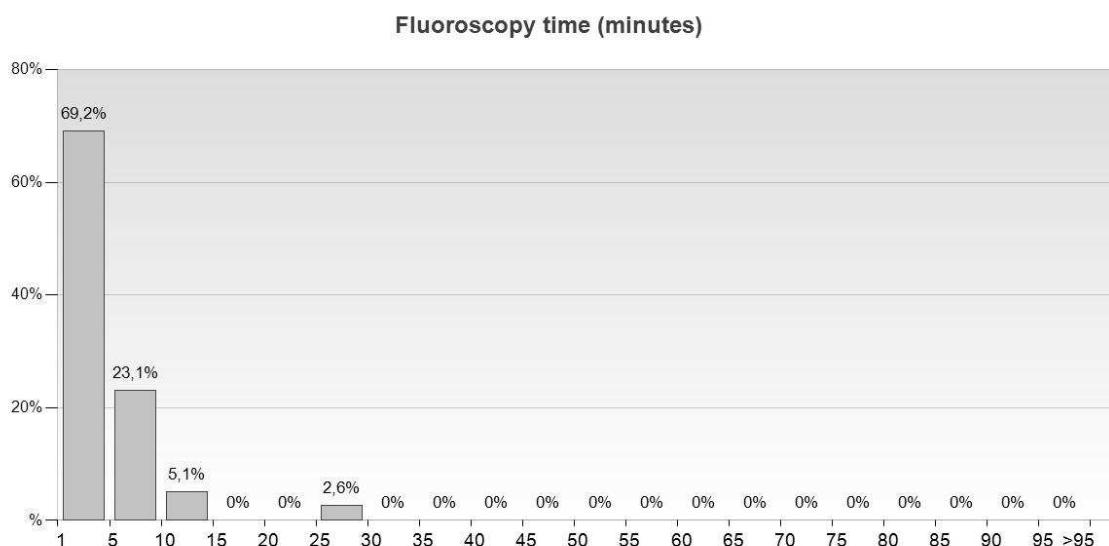
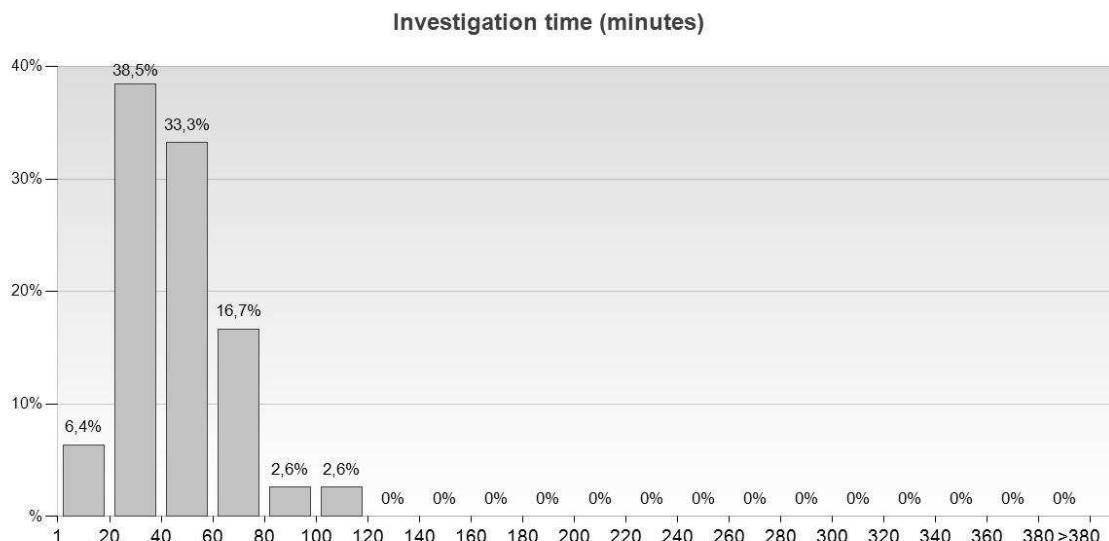
Cardiopathy (Underlying heart disease)	n	%
Dilated	21	26,92
Ischemic	19	24,36
None	16	20,51
Tachycardiomyopathy	12	15,38
Valvular	5	6,41
Hypertensive Cardiomyopathy	3	3,85
Post Valvular Surgery	1	1,28
Other	1	1,28
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
H(O)CM	0	0
RV Cardiomyopathy	0	0
Congenital	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Total	78	

Symptoms	n
Palpitations	43
Dyspnea	42
Fatigue	31
Dizziness	9
Syncope	3
Angina Pectoris	2
Other	1
None	1
SCD	0

Atrioventricular Node (to resynchronisation)

Anesthesia	n	%
Local	76	97,44
General	2	2,56
Total	78	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	10	42	105	78	0
Fluoroscopy time	1	4,2	27	78	0



Atrioventricular Node (to resynchronisation)

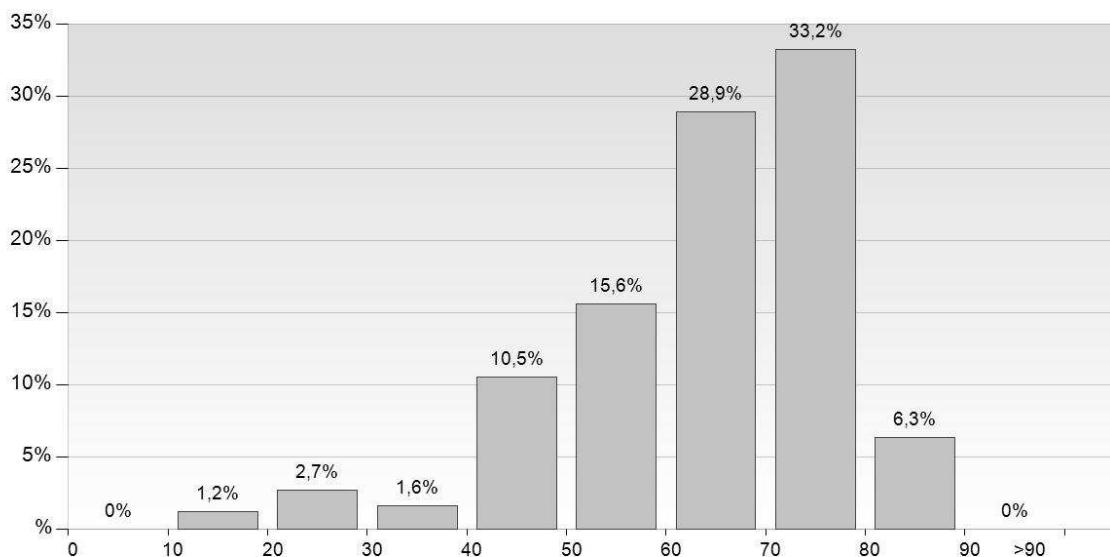
Periprocedural Complications	n
No complications	77
Pulmonary Oedema	1
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Other	0
Hemothorax	0
Arterial Thrombosis	0
Tamponade	0

Ventricular Tachycardia

Ablation of Ventricular Tachycardia (VT)	n
All interventions	273
VT combined with others	17
VT only	256

The following statistics include VT only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	18	59	82
Male	14	66	89
All	14	64	89

Number of patients	n	%
Females	47	19,75
Males	191	80,25
Total	238	

Ventricular Tachycardia

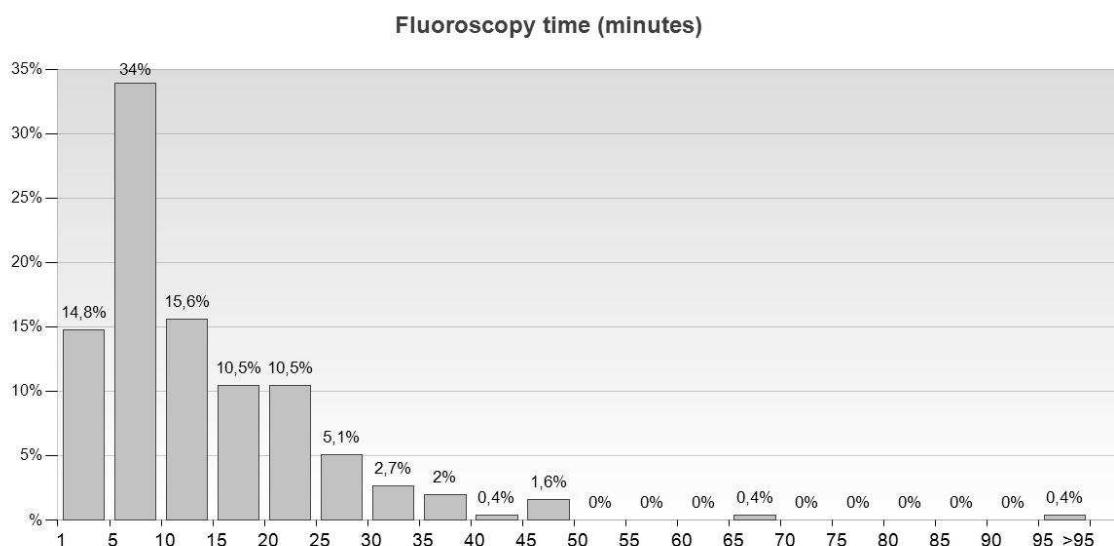
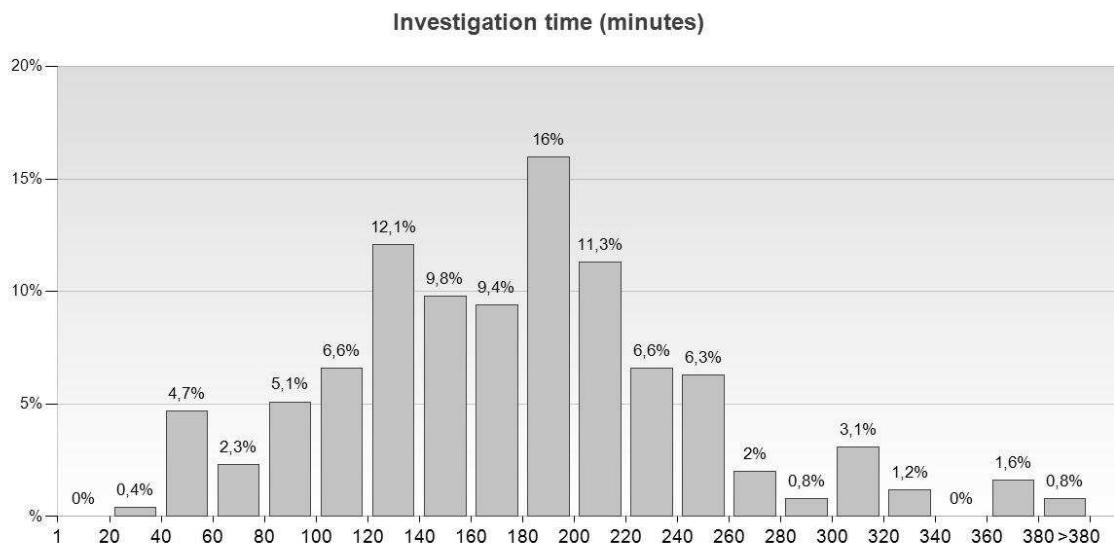
Cardiopathy (Underlying heart disease)	n	%
Ischemic	118	46,09
None	67	26,17
Dilated	30	11,72
Other	13	5,08
RV Cardiomyopathy	8	3,13
Congenital	5	1,95
Valvular	4	1,56
Angioplasty	3	1,17
H(O)CM	3	1,17
Post Valvular Surgery	2	0,78
Early Repolarization Syndrome	1	0,39
Tachycardiomyopathy	1	0,39
Infiltrative	1	0,39
Catecholaminergic Polymorphic VT	0	0
Hypertensive Cardiomyopathy	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
CABG	0	0
Total	256	

Symptoms	n
Palpitations	191
Dyspnea	51
Fatigue	38
Dizziness	33
Syncope	31
SCD	23
Other	17
Angina Pectoris	13
None	8

Ventricular Tachycardia

Anesthesia	n	%
Local	182	71,09
General	74	28,91
Total	256	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	30	173,3	480	256	0
Fluoroscopy time	1	13,9	206	251	5



Ventricular Tachycardia

Type	n
Monomorphic	234
Polymorphic	28

Location	n
Other	129
RVOT / Cusp / PA	46
LVOT / Cusp	30
Mitral Annulus	28
Epicardial LV / RV	19
Fascicular	15
Left Pap Muscle	15
Tricuspid Annulus	9
BB Reentry	3
Right Pap Muscle	1
Parahisian	0

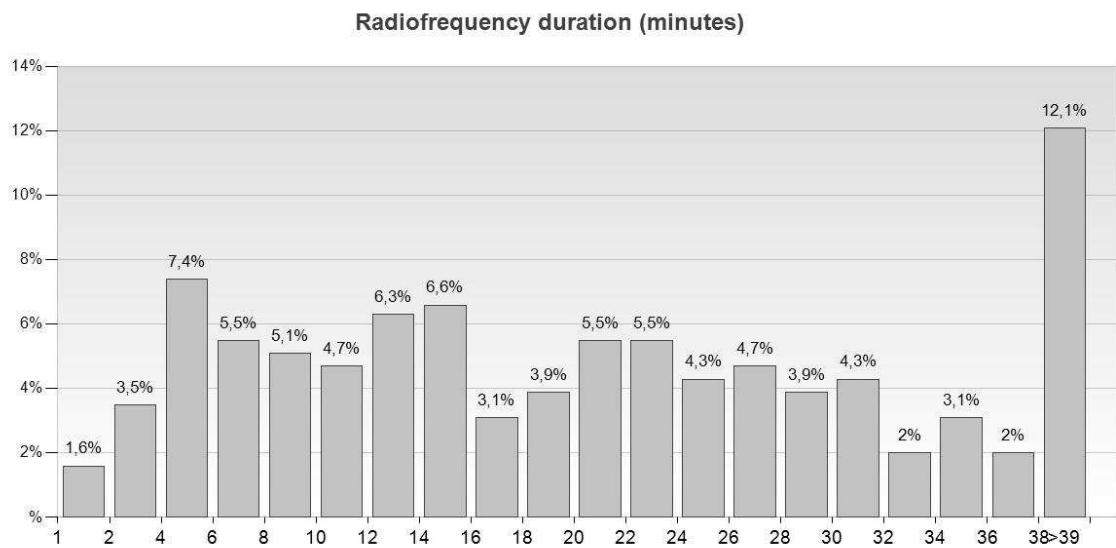
Intervention	n	%
Primary Intervention	186	72,66
Redo	70	27,34

Antiarrhythmic Drugs	n
Beta Blocker	171
Amiodarone	114
None	21
Sotalol	16
Other	14
Flecainide	10
Calcium Antagonist	10
Propafenone	0

Ventricular Tachycardia

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	23	340	245	11
Irrigated Technology				225	

Number of Induced VT: 294



Ventricular Tachycardia

Access	n	%
Trans-septal, Puncture	112	43,75
Venous	74	28,91
Arterial	53	20,7
Epicardial, Sub-xiphoid	9	3,52
Trans-septal, PFO	3	1,17
Trans-septal Puncture+arterial	2	0,78
Epicardial, Thoracoscopy	1	0,39
Epicardial, Coronary Sinus	1	0,39
Epicardial, Thoracotomy	1	0,39
Other	0	0
Total	256	

Mapping	n	%
3D Mapping	246	96,09
Conventional	8	3,13
Other	1	0,39
HD Mesh	1	0,39
Lasso	0	0
Non Contact	0	0
Basket	0	0
Total	256	

Catheter Steering	n	%
Conventional	246	96,09
Stereotaxis	8	3,13
Hansen	2	0,78
Other	0	0
Total	256	

Results	n	%
All Induces VT Ablated	140	54,69
Target VT Ablated	93	36,33
Failure	23	8,98

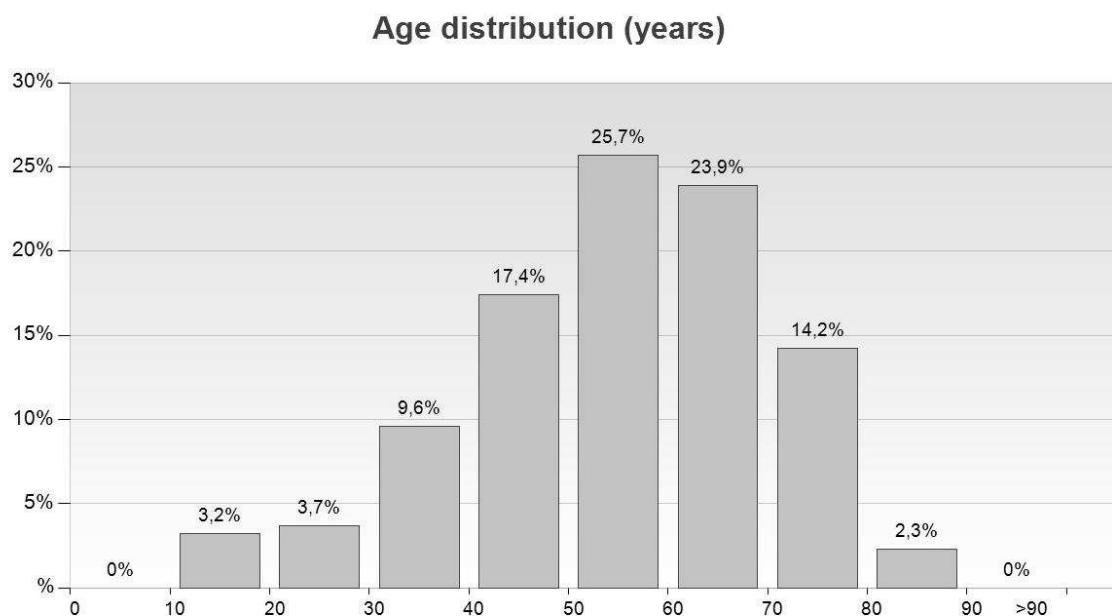
Ventricular Tachycardia

Periprocedural Complications	n
No complications	249
High Degree or Complete AV Block	2
Tamponade	2
Pericardial Effusion	1
Inguinal Hematoma	1
Transient AV Block	1
AV Fistula	0
Infection	0
Stroke	0
Pulmonary Embolism	0
Other	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0

Premature Ventricular Contraction

Ablation of PVC	n
All interventions	234
PVC combined with others	16
PVC only	218

The following statistics include PVC only procedures



Age (years)	min.	Ø	max.
Female	18	51	77
Male	19	59	87
All	18	55	87

Number of patients	n	%
Females	92	44,66
Males	114	55,34
Total	206	

Premature Ventricular Contraction

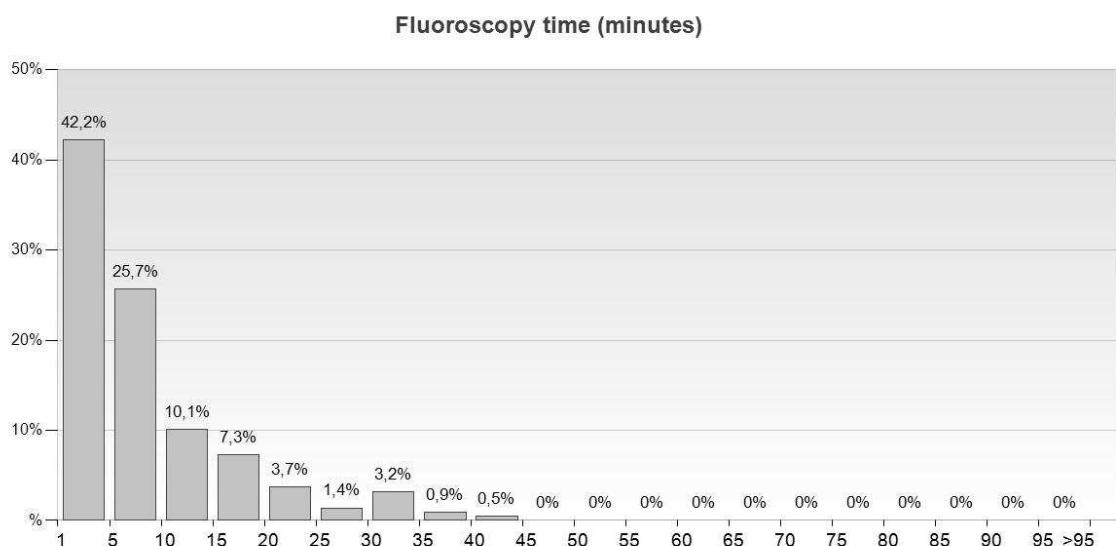
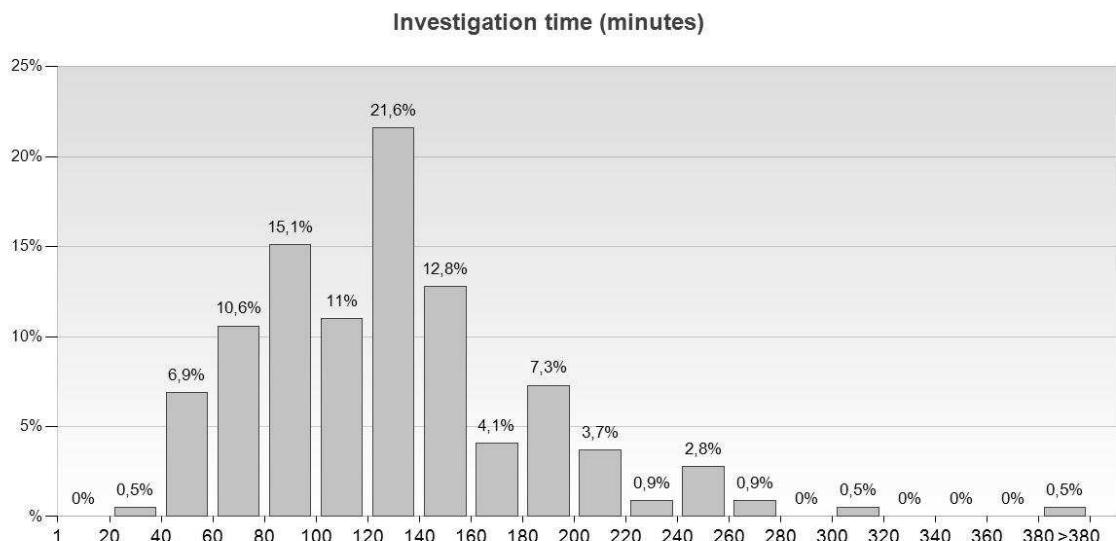
Cardiopathy (Underlying heart disease)	n	%
None	125	57,34
Ischemic	29	13,3
Dilated	28	12,84
Tachycardiomyopathy	7	3,21
Other	6	2,75
Valvular	6	2,75
H(O)CM	4	1,83
Angioplasty	3	1,38
Congenital	3	1,38
Hypertensive Cardiomyopathy	2	0,92
RV Cardiomyopathy	1	0,46
Post Congenital Surgery	1	0,46
Infiltrative	1	0,46
CABG	1	0,46
Catecholaminergic Polymorphic VT	1	0,46
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Total	218	

Symptoms	n
Palpitations	163
Dyspnea	42
Fatigue	37
Other	17
Dizziness	13
None	11
Syncope	11
Angina Pectoris	8
SCD	4

Premature Ventricular Contraction

Anesthesia	n	%
Local	207	94,95
General	11	5,05
Total	218	

Minutes	min.	Ø	max.	n	n_0^*
Investigation time	37	125,3	480	216	2
Fluoroscopy time	1	8,1	40	207	11



Premature Ventricular Contraction

Type	n
Monomorphic	198
Polymorphic	21
Ischemic	2

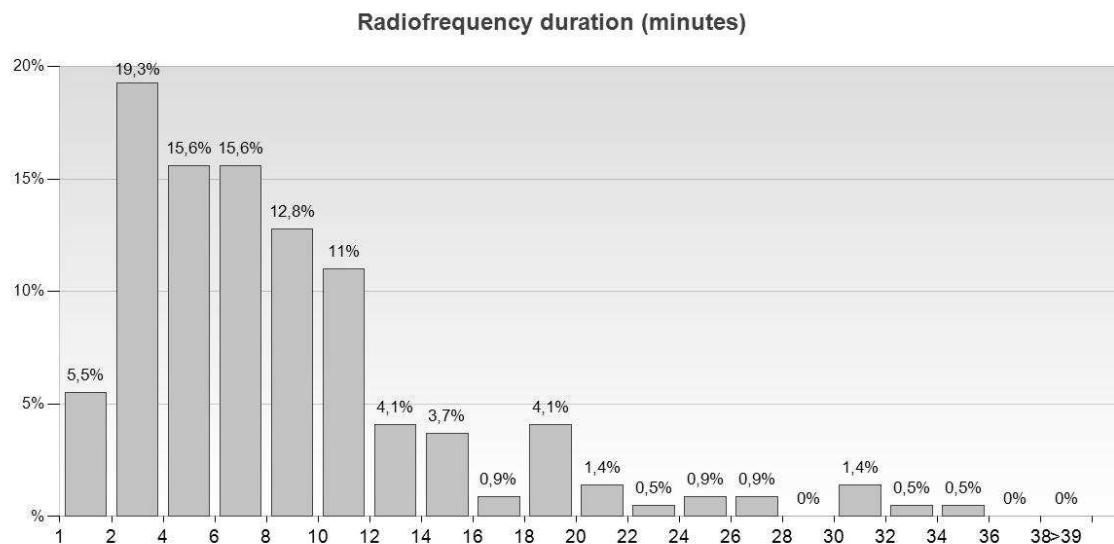
Location	n
RVOT	101
LVOT / Aortic Cusp	60
Other	57
HP System	9
Left Fascicular PVC	5

Site of Ablation	n
Right Ventricle	140
Left Ventricle	98

Intervention	n	%
Primary Intervention	183	83,94
Redo	35	16,06

Premature Ventricular Contraction

Radiofrequency	min.	Ø	max.	n	n_0^*
Duration (minutes)	1	8	35	215	3
Irrigated Technology				194	



Premature Ventricular Contraction

Access	n	%
Venous	128	58,72
Arterial	69	31,65
Trans-septal, Puncture	20	9,17
Other	1	0,46
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Trans-septal, PFO	0	0
Trans-septal Puncture+arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	218	

Mapping	n	%
3D Mapping	203	93,12
Conventional	13	5,96
Basket	2	0,92
HD Mesh	0	0
Lasso	0	0
Other	0	0
Non Contact	0	0
Total	218	

Catheter Steering	n	%
Conventional	216	99,08
Stereotaxis	2	0,92
Hansen	0	0
Other	0	0
Total	218	

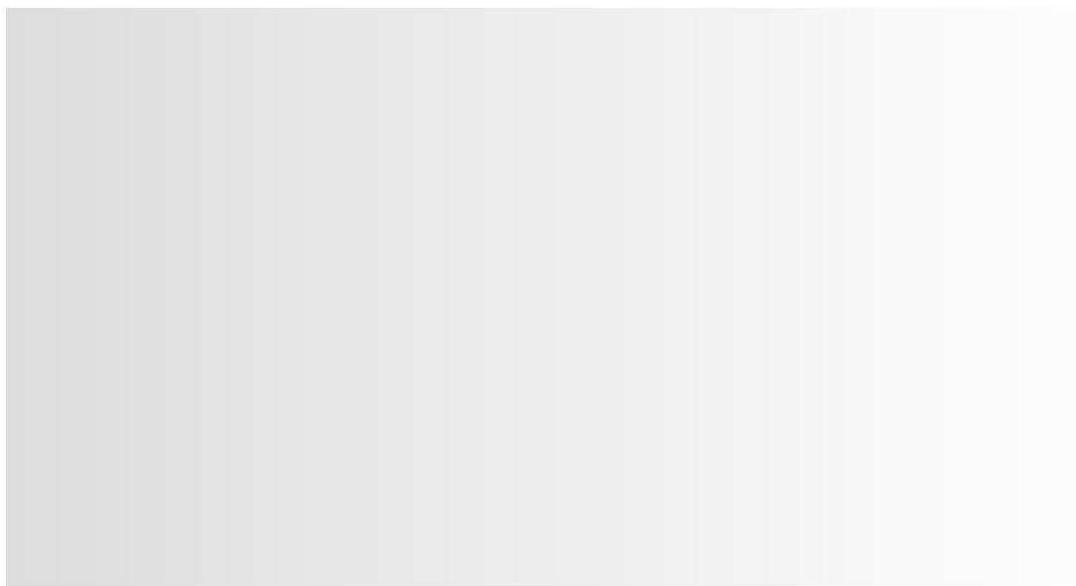
Results	n	%
Success	180	82,57
No Success	38	17,43

Premature Ventricular Contraction

Periprocedural Complications	n
No complications	211
High Degree or Complete AV Block	3
Tamponade	2
Pericardial Effusion	1
Other	1
AV Fistula	0
Infection	0
Stroke	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0

Completion

Completion



Cause of completion	n	%
Regular End of Follow-Up	0	0
Change from Rhythm Control to Rate Control	0	0
Lost to Follow-Up	0	0
Not codified	0	0
Death	0	0
Total	0	

The statistics are based on the data from CHPACE WEB from 01.01.2018 to 31.12.2018. Its completeness and correctness depends on the complete and correct data entry in the respective hospital. EPS are counted as interventions.

0,0% incomplete records are not included in these statistics.

n_0^* : Investigations were reported with 0 minutes and are not included in these statistics.

\emptyset depicts the arithmetic mean.

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Abbreviations

AF = Atrial Fibrillation
RAFlu = Right Atrial Flutter
LAFlu = Left Atrial Flutter
AT = Atrial Tachycardia
AP = Accessory Pathway
AVNRT = Atrioventricular Nodal Reentry Tachycardia
VT = Ventricular Tachycardia
PVC = Premature Ventricular Contraction
AVN = Atrioventricular Node (to resynchronisation)
AVN(R) = Atrioventricular Node (Rate Control in Atr. Fibrillation)
Other = Other Arrhythmia

The cover picture shows a steerable ablation catheter from the late 90s