

SWISS STATISTICS OF CATHETER ABLATIONS 2020



Schweizerische Stiftung für Rhythmologie
Fondation Suisse de Rythmologie
Fondazione Svizzera di Ritmologia

Overview

Ablation centers	31
Included in this statistic	29
Number of patients	6934
Number of interventions*	7301
thereof number of EPS	417
Number of ablations	8053

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

Ablation Centers

Clinic No.	Center	Interventions/ thereof incomplete	thereof aborted	Ablations*
101	Universitätsspital Basel	788 / 0 (0%)	1	796
102	Inselspital Bern	950 / 0 (0%)	9	1053
103	Hôpital Cantonal Universitaire de Genève	270 / 0 (0%)	1	307
104	Centre Hospitalier Universitaire Vaudois (CHUV)	349 / 0 (0%)	1	376
105	Universitätsspital Zürich	537 / 0 (0%)	3	530
106	Universitäts-Kinderkliniken Zürich	41 / 0 (0%)	1	37
201	Kantonsspital Aarau	134 / 0 (0%)	7	118
209	Kantonsspital Graubünden, Chur	45 / 0 (0%)	0	50
211	Hôpital Fribourgeois	79 / 0 (0%)	0	78
216	Cardiocentro Ticino, Lugano	174 / 0 (0%)	0	186
217	Kantonsspital Luzern, Sursee und Wolhusen	590 / 0 (0%)	0	711
218	Klinik St. Anna, Luzern	35 / 0 (0%)	0	35
220	Hôpital de la Tour	232 / 0 (0%)	2	265
228	Hôpital de Sion	59 / 0 (0%)	2	54
230	Solothurner Spitäler AG	224 / 0 (0%)	0	223
231	Kantonsspital St. Gallen	299 / 0 (0%)	0	296
233	GZO Spital Wetzikon	182 / 0 (0%)	0	176
234	Kantonsspital Winterthur	160 / 0 (0%)	0	187
236	Stadtspital Triemli, Zürich	337 / 0 (0%)	0	385
239	Klinik Beau-Site Bern	337 / 0 (0%)	1	351
241	HerzKlinik Hirslanden, Zürich	243 / 0 (0%)	2	365
246	HirslandenKlinik Aarau	213 / 0 (0%)	1	229
250	Klinik Im Park, Zürich	541 / 0 (0%)	4	693
267	Clinique Cécil	353 / 0 (0%)	0	386
268	Clinique des Grangettes	37 / 0 (0%)	0	39
278	Centre de Cardiologie du Valais	42 / 0 (0%)	1	42
284	Clinique de Genolier	66 / 0 (0%)	0	62
287	HerzGefässKlinik Bethanien	4 / 0 (0%)	0	6
288	Herz&Rhythmus Zentrum	16 / 0 (0%)	0	17
Total	29	7337 / 0 (0%)	36	8053

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

Omissions

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

No.	Center
214	HerzZentrum & Rhythmologie Hirslanden, Zürich
251	Herzzentrum Bodensee, Kreuzlingen
Total	2

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	950	9	1053
101	Universitätsspital Basel	788	1	796
217	Kantonsspital Luzern, Sursee und Wolhusen	590	0	711
250	Klinik Im Park, Zürich	541	4	693
105	Universitätsspital Zürich	537	3	530
267	Clinique Cécil	353	0	386
104	Centre Hospitalier Universitaire Vaudois (CHUV)	349	1	376
236	Stadtspital Triemli, Zürich	337	0	385
239	Klinik Beau-Site Bern	337	1	351
231	Kantonsspital St. Gallen	299	0	296
103	Hôpital Cantonal Universitaire de Genève	270	1	307
Total	11	5351	20	5884

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
102	Inselspital Bern	440	250	36	37	31	100	52	52	18	37	0
101	Universitätsspital Basel	357	163	8	34	17	94	41	29	12	41	0
217	Kantonsspital Luzern, Sursee und Wolhusen	243	193	6	35	14	99	33	42	18	27	1
250	Klinik Im Park, Zürich	308	168	30	42	13	80	11	14	0	25	2
105	Universitätsspital Zürich	177	99	13	21	25	108	30	37	5	14	1
267	Clinique Cécil	156	70	5	20	11	51	7	18	11	36	1
104	Centre Hospitalier Universitaire Vaudois (CHUV)	103	88	22	9	20	29	45	34	1	25	0
236	Stadtspital Triemli, Zürich	165	87	15	31	12	53	2	2	1	17	0
239	Klinik Beau-Site Bern	193	68	10	19	8	23	4	16	2	8	0
231	Kantonsspital St. Gallen	134	43	0	20	14	58	4	9	0	13	1
103	Hôpital Cantonal Universitaire de Genève	87	71	30	14	14	36	6	12	12	25	0
Total	11	2363	1300	175	282	179	731	235	265	80	268	6

Ablation centers

8 centers with 100 to 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
241	HerzKlinik Hirslanden, Zürich	243	2	365
220	Hôpital de la Tour	232	2	265
230	Solothurner Spitäler AG	224	0	223
246	Hirslandenklinik Aarau	213	1	229
233	GZO Spital Wetzikon	182	0	176
216	Cardiocentro Ticino, Lugano	174	0	186
234	Kantonsspital Winterthur	160	0	187
201	Kantonsspital Aarau	134	7	118
Total	8	1562	12	1749

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
241	HerzKlinik Hirslanden, Zürich	135	121	11	15	16	38	4	10	0	12	3
220	Hôpital de la Tour	87	72	13	9	10	44	8	5	13	4	0
230	Solothurner Spitäler AG	92	43	2	16	3	30	9	14	2	12	0
246	Hirslandenklinik Aarau	128	30	5	14	5	31	1	5	2	8	0
233	GZO Spital Wetzikon	69	43	3	9	1	40	0	0	0	11	0
216	Cardiocentro Ticino, Lugano	73	31	1	4	8	30	9	7	2	20	1
234	Kantonsspital Winterthur	88	43	7	3	6	26	0	3	5	6	0
201	Kantonsspital Aarau	42	33	4	4	3	20	1	1	3	7	0
Total	8	714	416	46	74	52	259	32	45	27	80	4

Ablation centers

10 centers with less than 100 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
211	Hôpital Fribourgeois	79	0	78
284	Clinique de Genolier	66	0	62
228	Hôpital de Sion	59	2	54
209	Kantonsspital Graubünden, Chur	45	0	50
278	Centre de Cardiologie du Valais	42	1	42
106	Universitäts-Kinderkliniken Zürich	41	1	37
268	Clinique des Grangettes	37	0	39
218	Klinik St. Anna, Luzern	35	0	35
288	Herz&Rhythmus Zentrum	16	0	17
287	HerzGefässKlinik Bethanien	4	0	6
Total	10	424	4	420

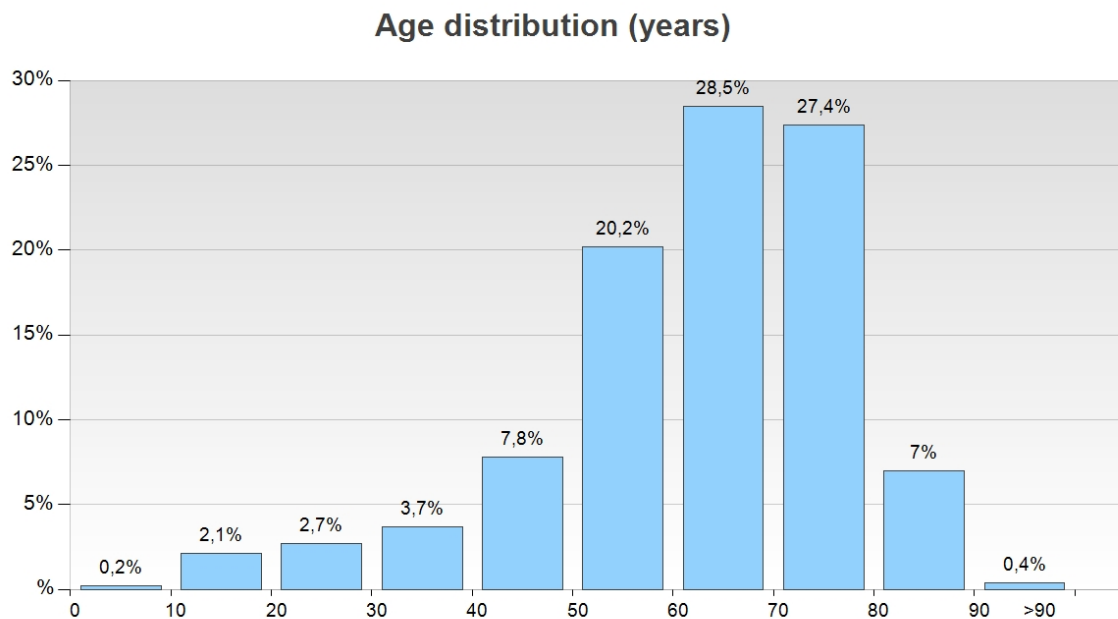
Ablation procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
211	Hôpital Fribourgeois	18	18	0	1	6	13	3	2	2	15	0
284	Clinique de Genolier	22	25	0	0	3	7	0	0	2	3	0
228	Hôpital de Sion	0	20	0	0	5	24	0	2	1	2	0
209	Kantonsspital Graubünden, Chur	23	13	1	1	3	8	0	0	1	0	0
278	Centre de Cardiologie du Valais	21	7	0	2	1	7	0	1	1	2	0
106	Universitäts-Kinderkliniken Zürich	0	0	0	3	17	17	0	0	0	0	0
268	Clinique des Grangettes	11	10	0	0	2	8	0	0	2	4	2
218	Klinik St. Anna, Luzern	7	7	0	0	2	15	0	0	0	4	0
288	Herz&Rhythmus Zentrum	11	0	0	4	0	0	1	0	0	1	0
287	HerzGefässKlinik Bethanien	2	2	0	0	0	0	0	0	0	2	0
Total	10	115	102	1	11	39	99	4	5	9	33	2

All ablation types

Number of ablations, not aborted: 8053



Age (years)	min.	Ø	max.
Female	1	63	94
Male	7	63	97
All	1	63	97

Number of patients	n	%
Females	2580	37,21
Males	4354	62,79
Total	6934	

Anesthesia	n	%
Local	5542	75,91
General	1759	24,09
Total	7301	

Combinations of ablations performed during one intervention

Number of interventions		6884
AF		2279
	AVNRT	981
	RAFlu	977
AF	RAFlu	671
		363
	AVN(R)	292
	PVC	260
	AP	255
	VT	222
	AT	96
	AVN	86
	LAFIu	72
AF	LAFIu	47
AF		34
AF	RAFlu	28
AF	LAFIu	26
	RAFlu	24
AF		23
	RAFlu	20
	AT	19
AF	RAFlu	14
		13
	AVN	9
	AVN(R)	8
	Other	7
	AVNRT	5
	PVC	5
	VT	4
AF	LAFIu	3
	AT	3
	AP	3
	AVNRT	3
	RAFlu	3
	AT	3
	AVN	3
AF		3
	PVC	3
	LAFIu	3
	AT	2
	AVNRT	2
AF	RAFlu	2
	PVC	2
	AVNRT	2
	VT	2
AF		2
	AVN(R)	2
AF		2
	VT	2
	RAFlu	2
	AVN(R)	1
	RAFlu	1
	VT	1
	AVN	1
	LAFIu	1
	AVNRT	1
	RAFlu	1
	AP	1
AF	RAFlu	1
	Other	1
	LAFIu	1
	RAFlu	1
	AVNRT	1
	AT	1
	VT	1
	PVC	1
AF	LAFIu	1
	AVNRT	1
AF		1
	AT	1
	AVNRT	1
	RAFlu	1
	Other	1
AF	RAFlu	1
	AP	1
AF		1
	Other	1
AF	LAFIu	1
	RAFlu	1
	AT	1
AF		1
	AP	1
	VT	1
AF	RAFlu	1
	AP	1
AF	LAFIu	1
	RAFlu	1
	PVC	1
	RAFlu	1
	VT	1
	VT	1
	AVN(R)	1
	RAFlu	1
	AVNRT	1
	PVC	1
	AT	1
	AVN	1

Only completely documented and non-aborted interventions are counted.

Ablation procedures or EPS

Atrial Fibrillation	3192
Paroxysmal	2100
Persistent	996
Long-standing Persistent	96

Left Atrial Flutter	222
Roof-dependent	87
Perimitral	101
Peri-Incisional	6
Peri Ostial Pulm. Vein	22
Other	75

Accessory Pathway	270
Concealed	83
WPW	165
Asymptomatic Preexcitation	23
Atrio-Fascicular	1
PJRT	1
Mahaim	0
Other	3

AVN (to Resync.)	116
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AVN (Rate Control)	381
Paroxysmal	100
Persistent	157
Long-standing Persistent	124

Other Arrhythmia	12
PAC	2
JET	5
SNT	2
Other	3

Right Atrial Flutter	1818
Cavotricuspid	1783
Scar Related	42
Other	14

Atrial Tachycardia	367
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AVNRT	1089
Slow-Fast	1029
Fast-Slow	40
Slow-Slow	34

VT	271
Monomorphic	247
Polymorphic	32
RVOT / Cusp / PA	60
Tricuspid Annulus	9
Right Pap Muscle	3
Parahisian	4
BB Reentry	6
LVOT / Cusp	45
Mitral Annulus	41
Fascicular	20
Left Pap Muscle	10
Epicardial LV / RV	27
Other	112

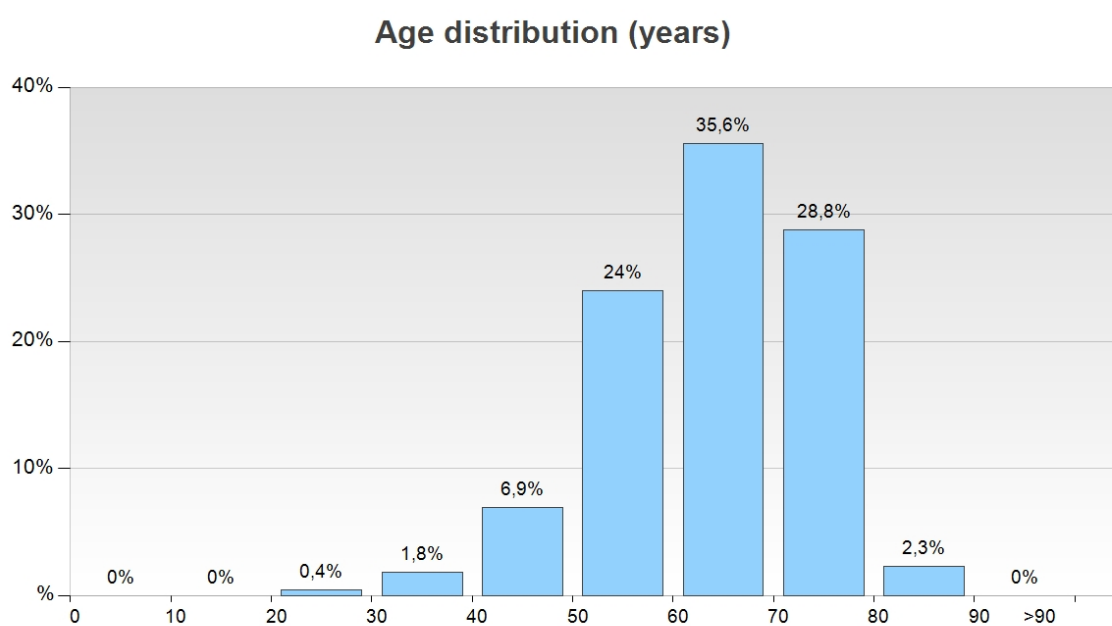
PVC	315
Monomorphic	273
Polymorphic	42
Ischemic	4
RVOT	125
LVOT / Aortic Cusp	117
Left Fascicular VT	5
HP System	23
Other	76

EPS only	417
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Atrial Fibrillation

Ablation of Atrial Fibrillation (AF)	n
All interventions	3192
AF combined with others	913
AF combined with RAFLa	671
AF only	2279

The following statistics include AF only procedures



Age (years)	min.	Ø	max.
Female	16	67	87
Male	21	63	86
All	16	64	87

Number of patients	n	%
Females	737	33,44
Males	1467	66,56
Total	2204	

Atrial Fibrillation

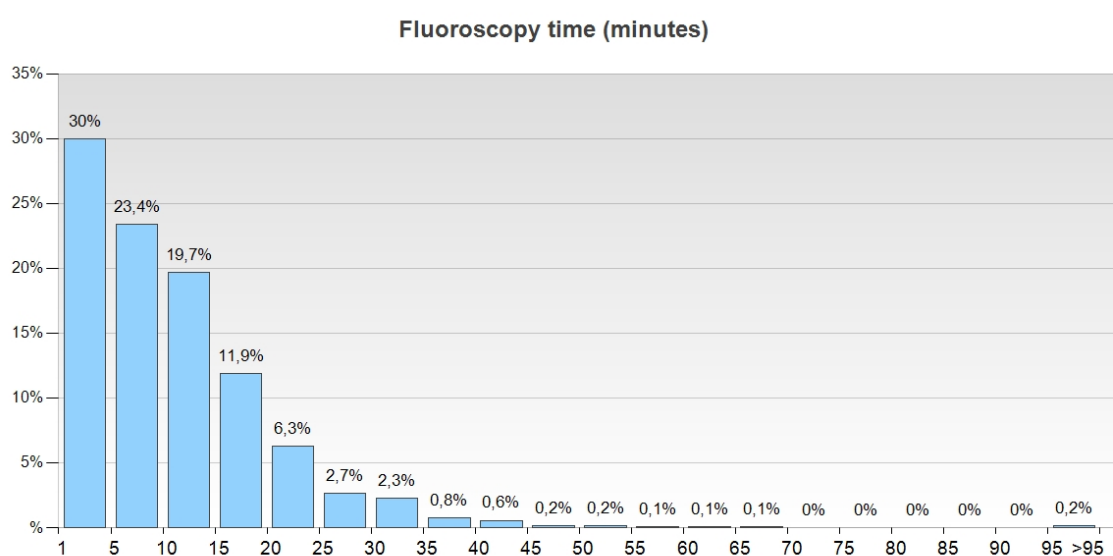
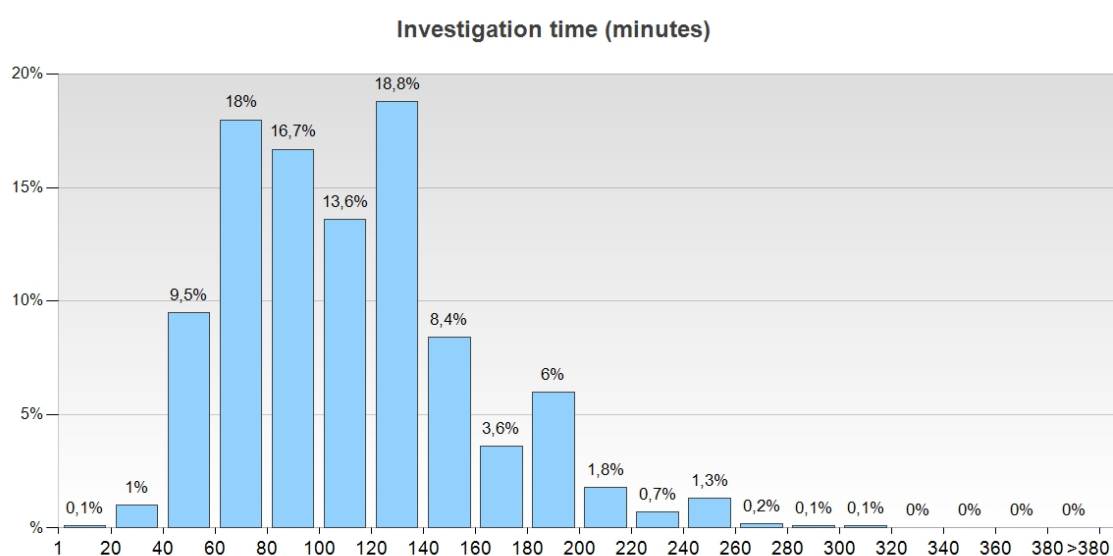
Cardiopathy (Underlying heart disease)	n	%
None	1344	58,97
Hypertensive Cardiomyopathy	368	16,15
Tachycardiomyopathy	183	8,03
Ischemic	147	6,45
Dilated	64	2,81
Valvular	58	2,54
H(O)CM	43	1,89
Other	35	1,54
Congenital	12	0,53
Post Valvular Surgery	8	0,35
Angioplasty	8	0,35
Infiltrative	3	0,13
CABG	2	0,09
Channelopathy long QT	1	0,04
Post Congenital Surgery	1	0,04
RV Cardiomyopathy	1	0,04
Brugada Syndrome	1	0,04
Channelopathy short QT	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
Total	2279	

Symptoms	n
Palpitations	1920
Dyspnea	747
Fatigue	535
Dizziness	301
Other	74
Angina Pectoris	73
None	63
Syncope	41
SCD	2

Atrial Fibrillation

Anesthesia	n	%
Local	1405	61,65
General	874	38,35
Total	2279	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	16	108,8	356	2279	0
Fluoroscopy time	1	10,9	196	2249	30



Atrial Fibrillation

Type of AF	n	%
Paroxysmal	1497	65,69
Persistent	708	31,07
Long-standing Persistent (>1 Year)	74	3,25

EHRA-Score	n	%
Score I	247	10,84
Score II	1092	47,92
Score III	906	39,75
Score IV	34	1,49

Type of Intervention	n	%
Percutaneous	2275	99,82
Hybrid (Epicardial + Endovascular)	0	0
Surgical Ablation	4	0,18

Intervention	n	%
Primary Intervention	1718	75,38
Redo	561	24,62

Antiarrhythmic Drugs	n
Beta Blocker	1509
Amiodarone	450
None	391
Flecainide	204
Sotalol	82
Calcium Antagonist	78
Other	24
Dronedarone	20
Digitalis	18
Propafenone	9

Thromboembolic Risk Factors	n
Hypertension	1020
Diabetes	157
Congestive Heart Failure, LV dysfunction	137
Prior MI, Per. Artery Disease, Aortic Plaque	116
Stroke, TIA, Other Embolic Event	102

Atrial Fibrillation

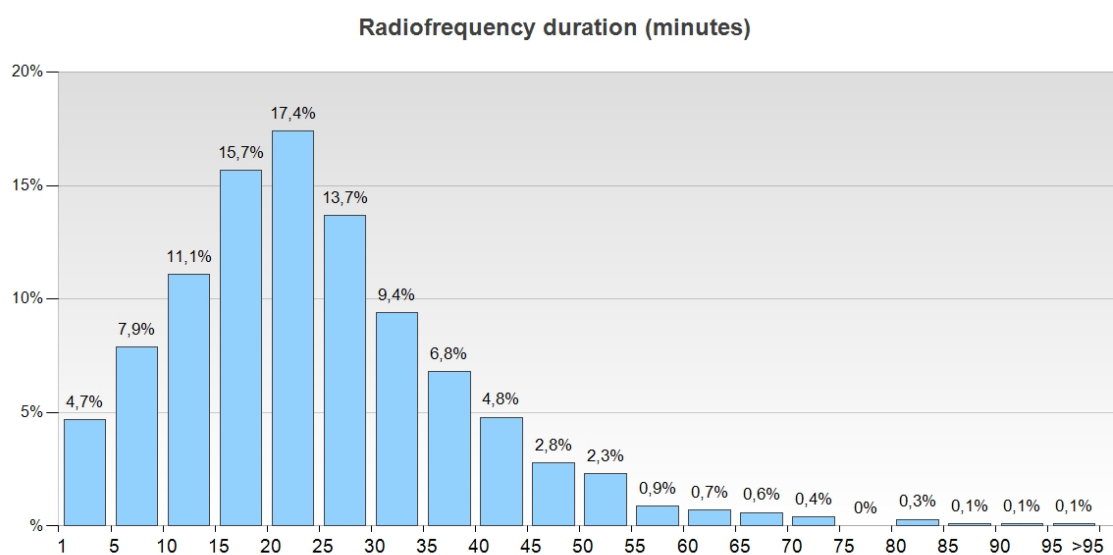
Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	1951
None	136
Vitamin K-Antagonist	96
Direct Thrombin Inhibitor	60
Other	21
Aspirin	18
Clopidogrel	13
Prasugrel	1
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	462
Score = 1	643
Score = 2	581
Score = 3	364
Score = 4	179
Score = 5	33
Score = 6	14
Score = 7	3
Average Score	1,70

Site of Ablation	n
RSPV	2059
RIPV	2059
LSPV	2050
LIPV	2019
CFAE	86
Roof Line	68
SVC	54
Other Lines	44
Non-PV Focus	38
Mitral Isthmus Line	33
RMPV	23
Other Veins	9
Vein of Marshall	5
Septal Line	4

Atrial Fibrillation

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	24	124	1577	2
Irrigated Technology				1485	
RF Duty Cycled				142	



Atrial Fibrillation

Cryoablation	min.	Ø	max.	n	n₀*
Total Duration (minutes)	4	19,9	145	563	0

	n
Additional RF or Cryo Cath Needed	4

	n
Laser Balloon	0

	n
Contact Force	758

	n
Irrigated Multielectrode Ablation	3

Access	n	%
Trans-septal, Puncture	2050	89,95
Trans-septal, PFO	213	9,35
Other	15	0,66
Epicardial, Sub-xiphoid	1	0,04
Venous	0	0
Arterial	0	0
Epicardial, Coronary Sinus	0	0
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Trans-septal Puncture+arterial	0	0
Total	2279	

Mapping	n	%
3D Mapping	1546	67,84
Conventional	397	17,42
Lasso	293	12,86
Basket	15	0,66
Other	12	0,53
Non Contact	12	0,53
HD Mesh	4	0,18
Total	2279	

Atrial Fibrillation

Catheter Steering	n	%
Conventional	2268	99,52
Stereotaxis	6	0,26
Other	5	0,22
Hansen	0	0
Total	2279	

Results	n
All Veins Isolated	2252
Roof Line Block Confirmed	35
Not All Veins Isolated	23
Mitral Isthmus Line Block Confirmed	15
Mitral Isthmus Line Block Not Confirmed	3
Roof Line Block Not Confirmed	2

Sinus Rhythm	n
Spontaneous	1257
With Electrical Cardioversion / Stimulation	630
By Ablation	406
Not Achieved	24
AAD	4

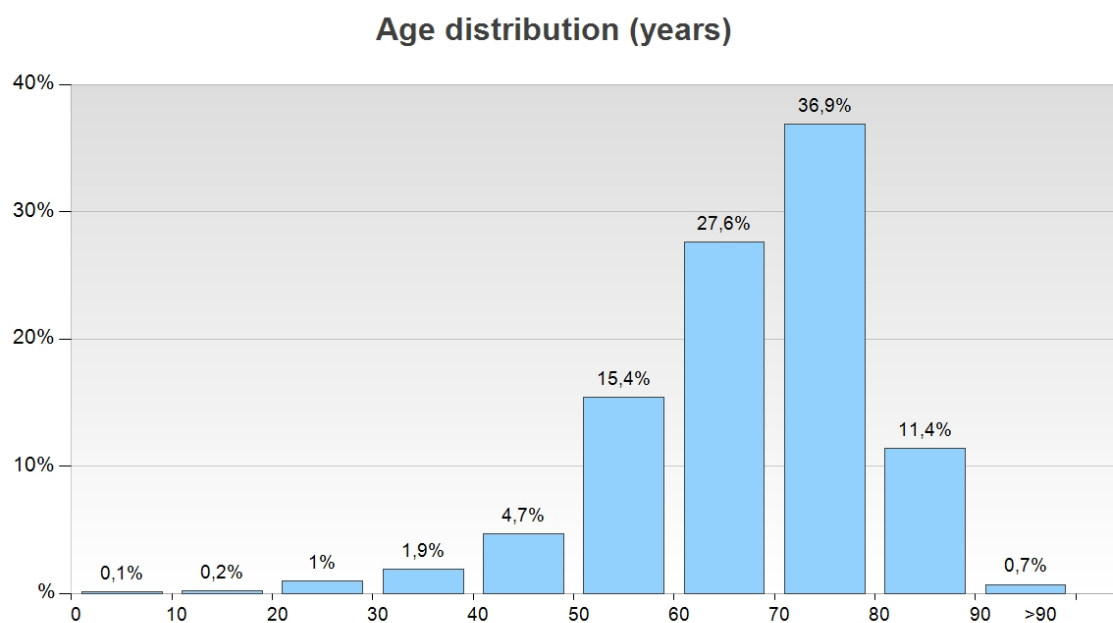
Atrial Fibrillation

Periprocedural Complications	n
No complications	2236
Inguinal Hematoma	9
Other	9
Tamponade	8
Phrenic Nerve Paralysis	8
Pericardial Effusion	4
AV Fistula	3
Pseudoaneurysm	3
Valvular Lesion	3
TIA	1
Hemothorax	1
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
Stroke	0
Myocardial Infarction	0
Pneumothorax	0
Transient AV Block	0
High Degree or Complete AV Block	0
Infection	0
PV Stenosis	0
Pulmonary Oedema	0
Death	0

Right Atrial Flutter

Ablation of Right Atrial Flutter (RAFlu)	n
All interventions	1818
RAFlu combined with others	841
RAFlu only	977

The following statistics include RAFlu only procedures



Age (years)	min.	Ø	max.
Female	19	71	92
Male	9	67	94
All	9	68	94

Number of patients	n	%
Females	209	21,93
Males	744	78,07
Total	953	

Right Atrial Flutter

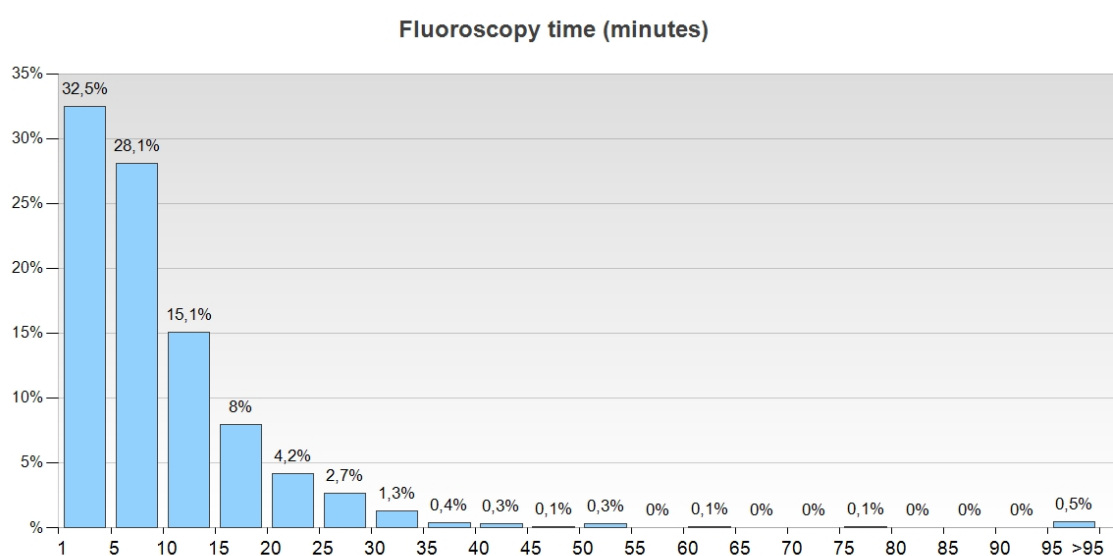
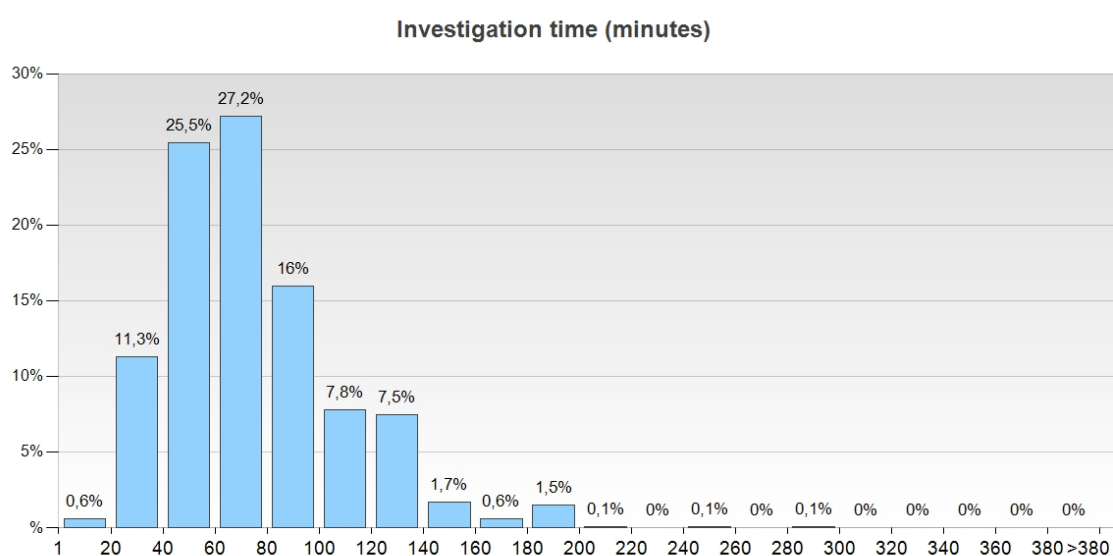
Cardiopathy (Underlying heart disease)	n	%
None	476	48,72
Hypertensive Cardiomyopathy	136	13,92
Ischemic	98	10,03
Tachycardiomyopathy	75	7,68
Valvular	72	7,37
Dilated	36	3,68
Congenital	24	2,46
Other	23	2,35
H(O)CM	10	1,02
CABG	9	0,92
Post Valvular Surgery	8	0,82
Post Congenital Surgery	3	0,31
Infiltrative	2	0,2
Angioplasty	2	0,2
RV Cardiomyopathy	2	0,2
Channelopathy long QT	1	0,1
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
Total	977	

Symptoms	n
Palpitations	695
Dyspnea	350
Fatigue	214
Dizziness	92
None	71
Other	38
Angina Pectoris	34
Syncope	33
SCD	4

Right Atrial Flutter

Anesthesia	n	%
Local	905	92,63
General	72	7,37
Total	977	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	7	71,5	280	977	0
Fluoroscopy time	1	10,4	423	917	60



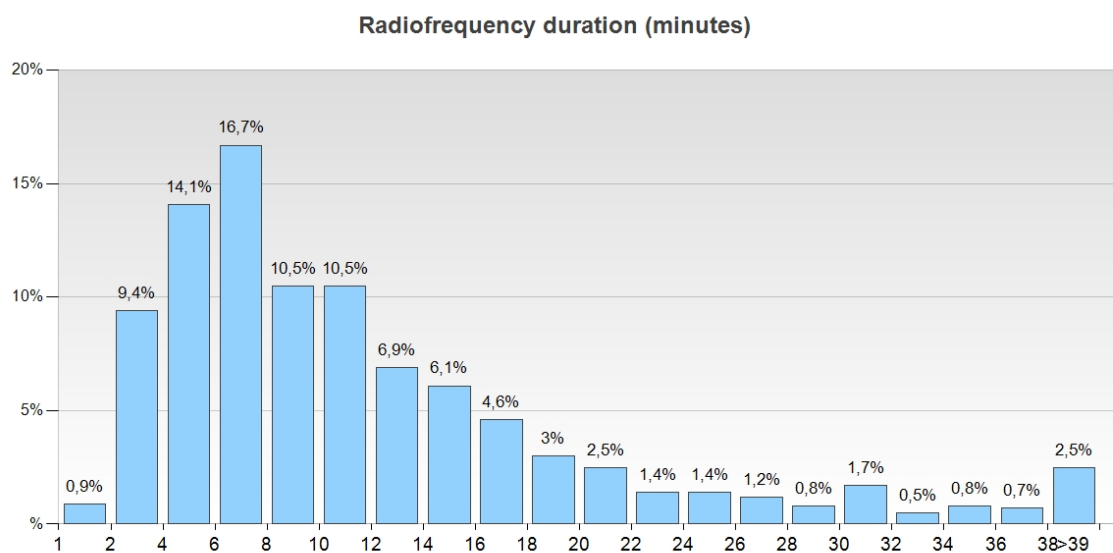
Right Atrial Flutter

Type of Flutter	n
Cavotricuspid	953
Scar related	27
Other	10

Intervention	n	%
Primary Intervention	884	90,48
Redo	93	9,52

Right Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	12	90	944	33
Irrigated Technology				755	



Right Atrial Flutter

Cryoablation	min.	Ø	max.	n	n₀*
Total Duration (minutes)	0	0	0	0	0

	n
Additional RF or Cryo Cath Needed	1

Access	n	%
Venous	975	99,8
Other	1	0,1
Epicardial, Thoracotomy	1	0,1
Arterial	0	0
Trans-septal, Puncture	0	0
Trans-septal, PFO	0	0
Epicardial, Coronary Sinus	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Sub-xiphoid	0	0
Trans-septal Puncture+arterial	0	0
Total	977	

Mapping	n	%
Conventional	529	54,15
3D Mapping	441	45,14
Basket	4	0,41
Non Contact	1	0,1
HD Mesh	1	0,1
Other	1	0,1
Lasso	0	0
Total	977	

Catheter Steering	n	%
Conventional	974	99,69
Other	2	0,2
Stereotaxis	1	0,1
Hansen	0	0
Total	977	

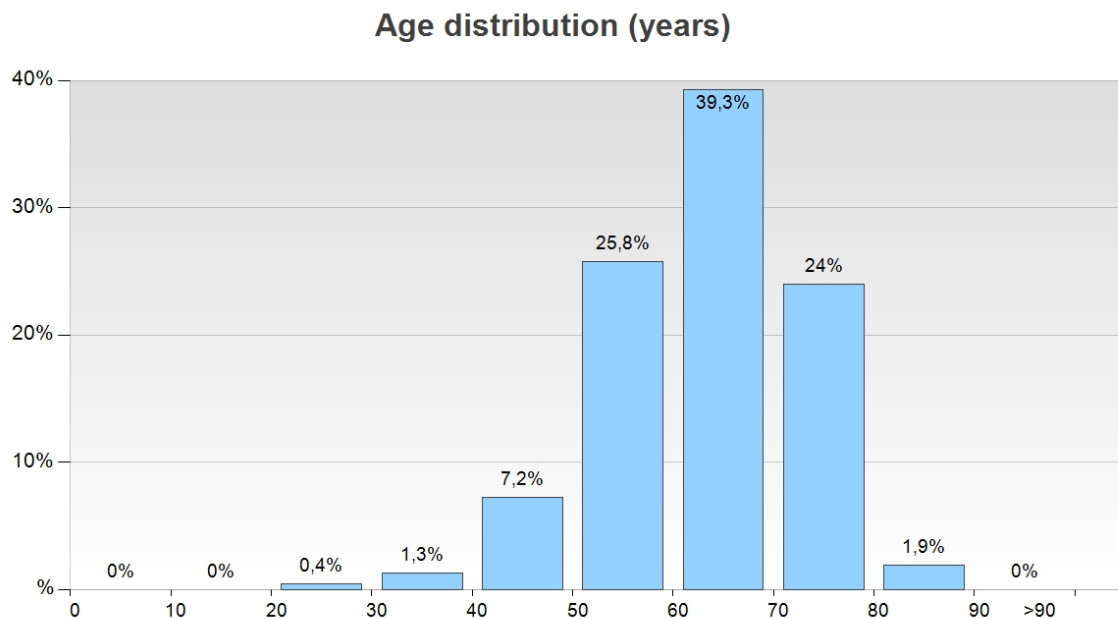
Results	n	%
Block confirmed	950	97,24
Block not confirmed	27	2,76

Right Atrial Flutter

Periprocedural Complications	n
No complications	972
Pericardial Effusion	2
Transient AV Block	1
High Degree or Complete AV Block	1
Other	1
Inguinal Hematoma	0
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0

Atrial Fibrillation combined with Right Atrial Flutter

Number of interventions (AF with RAFlu): 671



Age (years)	min.	Ø	max.
Female	41	67	85
Male	25	63	84
All	25	64	85

Number of patients	n	%
Females	183	27,6
Males	480	72,4
Total	663	

Atrial Fibrillation combined with Right Atrial Flutter

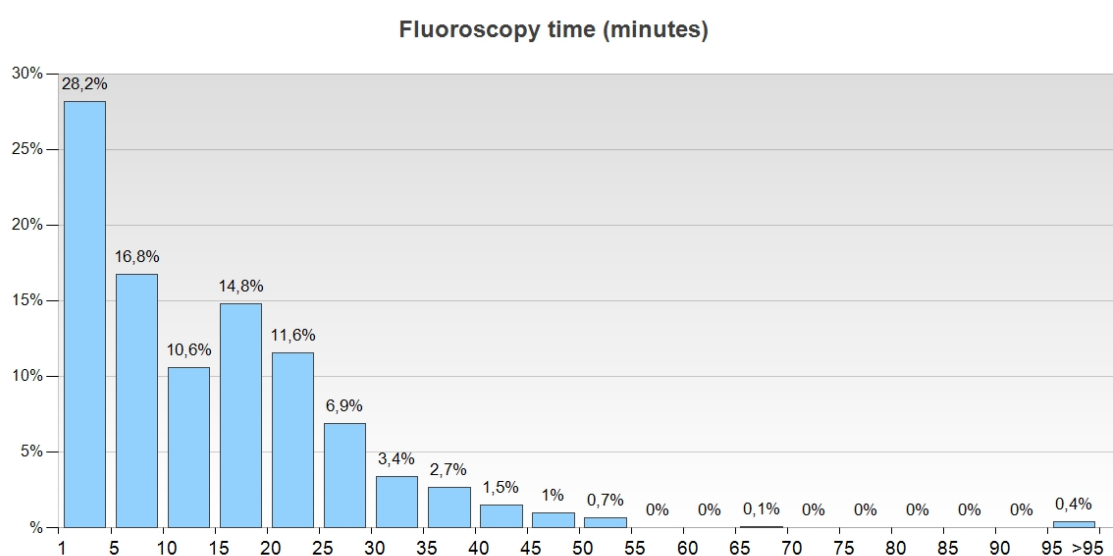
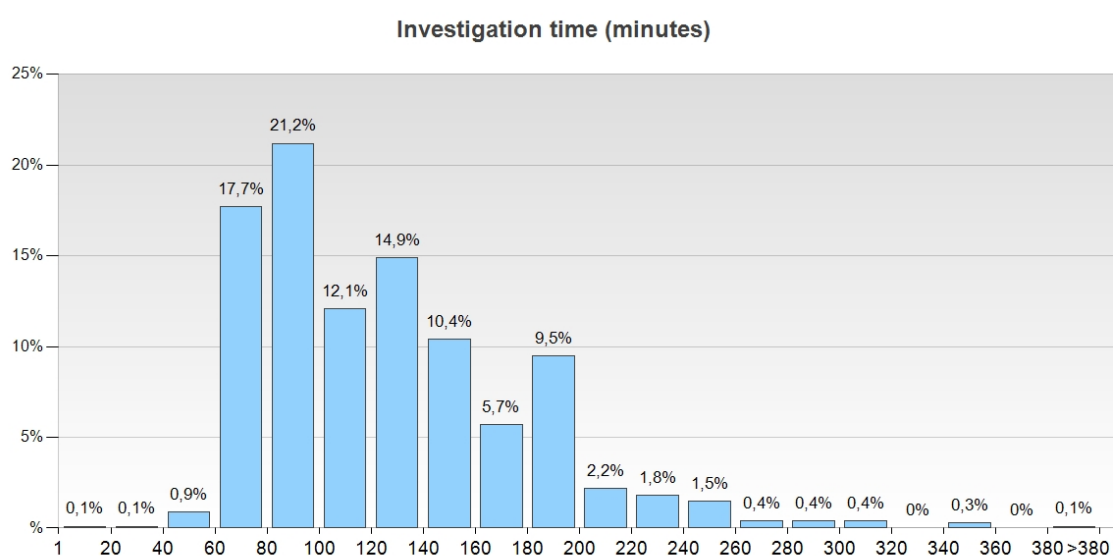
Cardiopathy (Underlying heart disease)	n	%
None	409	60,95
Hypertensive Cardiomyopathy	63	9,39
Tachycardiomyopathy	51	7,6
Valvular	34	5,07
Ischemic	33	4,92
Angioplasty	24	3,58
Other	20	2,98
Dilated	19	2,83
Congenital	8	1,19
Post Valvular Surgery	4	0,6
H(O)CM	3	0,45
RV Cardiomyopathy	1	0,15
Post Congenital Surgery	1	0,15
CABG	1	0,15
Infiltrative	0	0
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
Total	671	

Symptoms	n
Palpitations	605
Fatigue	273
Dyspnea	162
Dizziness	50
Other	30
Angina Pectoris	17
None	14
Syncope	10
SCD	1

Atrial Fibrillation combined with Right Atrial Flutter

Anesthesia	n	%
Local	291	43,37
General	380	56,63
Total	671	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	3	122,7	420	671	0
Fluoroscopy time	1	14,7	234	663	8



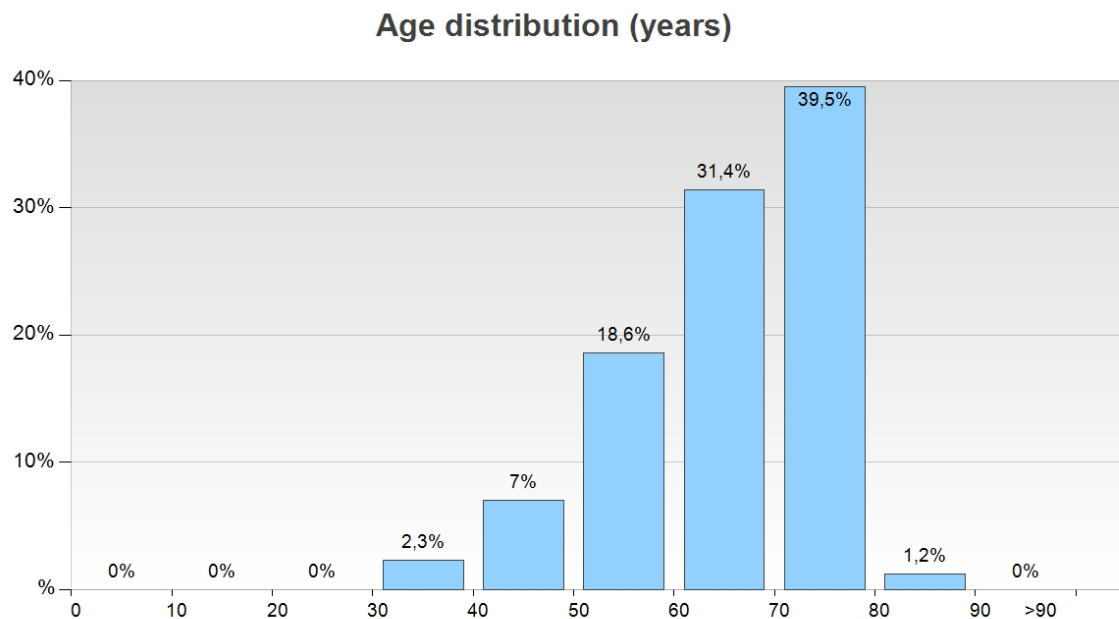
Atrial Fibrillation combined with Right Atrial Flutter

Periprocedural Complications	n
No complications	666
Other	2
Inguinal Hematoma	1
Phrenic Nerve Paralysis	1
Pulmonary Oedema	1
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
High Degree or Complete AV Block	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Death	0

Left Atrial Flutter

Ablation of Left Atrial Flutter (LAFlu)	n
All interventions	222
LAFlu combined with others	136
LAFlu only	86

The following statistics include LAFlu only procedures



Age (years)	min.	Ø	max.
Female	37	69	83
Male	33	65	79
All	33	66	83

Number of patients	n	%
Females	24	29,27
Males	58	70,73
Total	82	

Left Atrial Flutter

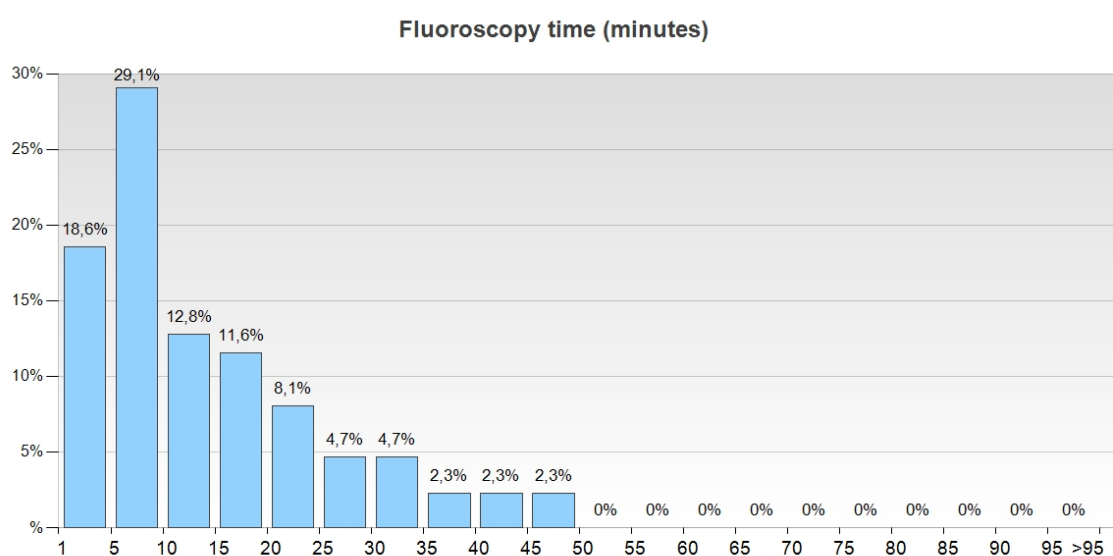
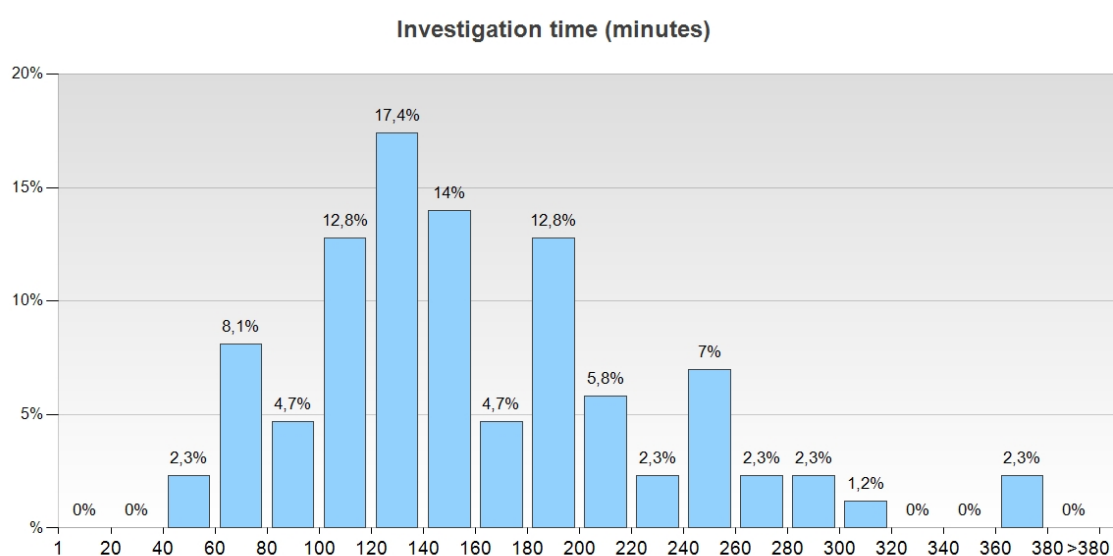
Cardiopathy (Underlying heart disease)	n	%
None	32	37,21
Tachycardiomyopathy	14	16,28
Valvular	9	10,47
Hypertensive Cardiomyopathy	8	9,3
Other	7	8,14
Ischemic	5	5,81
H(O)CM	5	5,81
Dilated	2	2,33
Congenital	2	2,33
Post Valvular Surgery	1	1,16
Infiltrative	1	1,16
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
RV Cardiomyopathy	0	0
CABG	0	0
Angioplasty	0	0
Post Congenital Surgery	0	0
Total	86	

Symptoms	n
Palpitations	71
Dyspnea	32
Fatigue	25
Dizziness	4
Syncope	2
Other	2
None	1
Angina Pectoris	1
SCD	0

Left Atrial Flutter

Anesthesia	n	%
Local	49	56,98
General	37	43,02
Total	86	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	42	157,5	364	86	0
Fluoroscopy time	1	14	46	83	3



Left Atrial Flutter

Type of Flutter	n
Perimitral	43
Other	32
Roof-dependent	27
Peri Ostial Pulmonary Vein	10
Peri-Incisional	0

EHRA-Score	n	%
Score I	5	5,81
Score II	45	52,33
Score III	35	40,7
Score IV	1	1,16

Type of Intervention	n	%
Percutaneous	85	98,84
Hybrid (Epicardial + Endovascular)	1	1,16
Surgical Ablation	0	0

Intervention	n	%
Primary Intervention	36	41,86
Redo	50	58,14

Antiarrhythmic Drugs	n
Beta Blocker	61
Amiodarone	15
None	11
Calcium Antagonist	4
Sotalol	4
Other	4
Flecainide	3
Dronedarone	1
Propafenone	0
Digitalis	0

Left Atrial Flutter

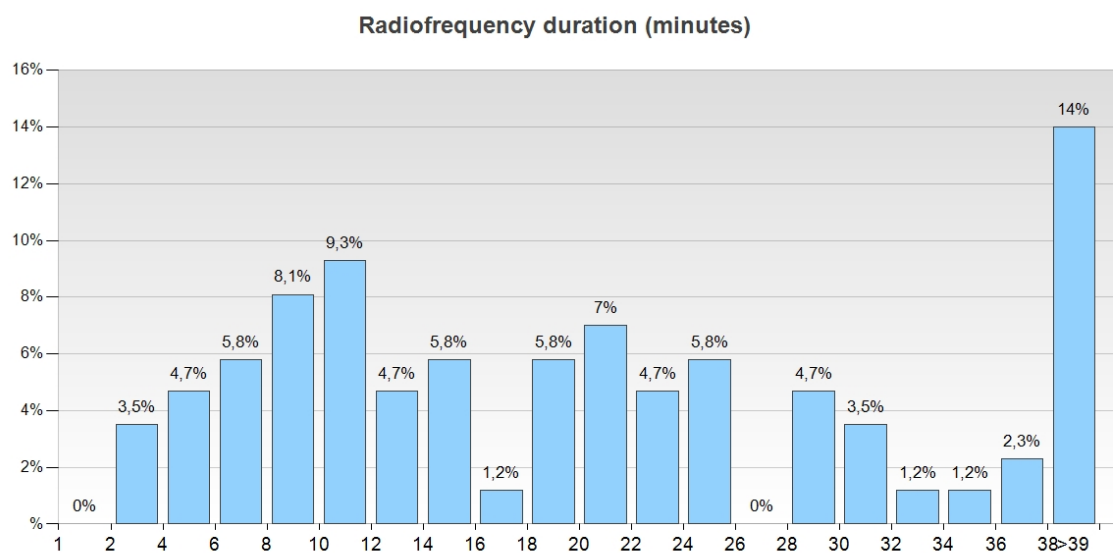
Thromboembolic Risk Factors	n
Hypertension	32
Congestive Heart Failure, LV dysfunction	14
Prior MI, Per. Artery Disease, Aortic Plaque	8
Stroke, TIA, Other Embolic Event	5
Diabetes	3

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	60
Vitamin K-Antagonist	12
None	8
Other	4
Aspirin	1
Direct Thrombin Inhibitor	1
Clopidogrel	0
Prasugrel	0
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	14
Score = 1	27
Score = 2	21
Score = 3	13
Score = 4	7
Score = 5	2
Score = 6	0
Score = 7	2
Average Score	1,86

Left Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	2	23	250	80	6
Irrigated Technology				71	
RF Duty Cycled				0	



Left Atrial Flutter

Access	n	%
Trans-septal, Puncture	80	93,02
Trans-septal, PFO	4	4,65
Arterial	2	2,33
Venous	0	0
Epicardial, Coronary Sinus	0	0
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Sub-xiphoid	0	0
Trans-septal Puncture+arterial	0	0
Other	0	0
Total	86	

Mapping	n	%
3D Mapping	76	88,37
Conventional	5	5,81
Other	2	2,33
Non Contact	2	2,33
Basket	1	1,16
Lasso	0	0
HD Mesh	0	0
Total	86	

Catheter Steering	n	%
Conventional	85	98,84
Stereotaxis	1	1,16
Hansen	0	0
Other	0	0
Total	86	

Results	n	%
Block confirmed	78	90,7
Block not confirmed	8	9,3

Left Atrial Flutter

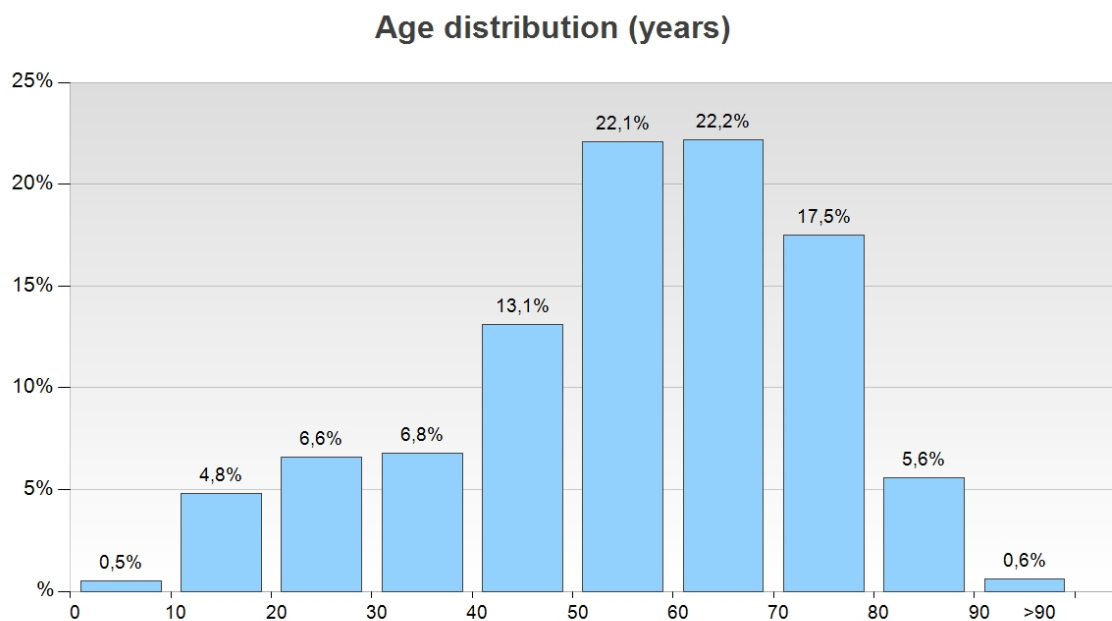
Periprocedural Complications	n
No complications	84
Tamponade	1
Other	1
Inguinal Hematoma	0
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
High Degree or Complete AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Ablation of AVNRT

	n
All interventions	1089
AVNRT combined with others	108
AVNRT only	981

The following statistics include AVNRT only procedures



Age (years)	min.	Ø	max.
Female	6	55	94
Male	9	58	97
All	6	56	97

Number of patients	n	%
Females	559	57,39
Males	415	42,61
Total	974	

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

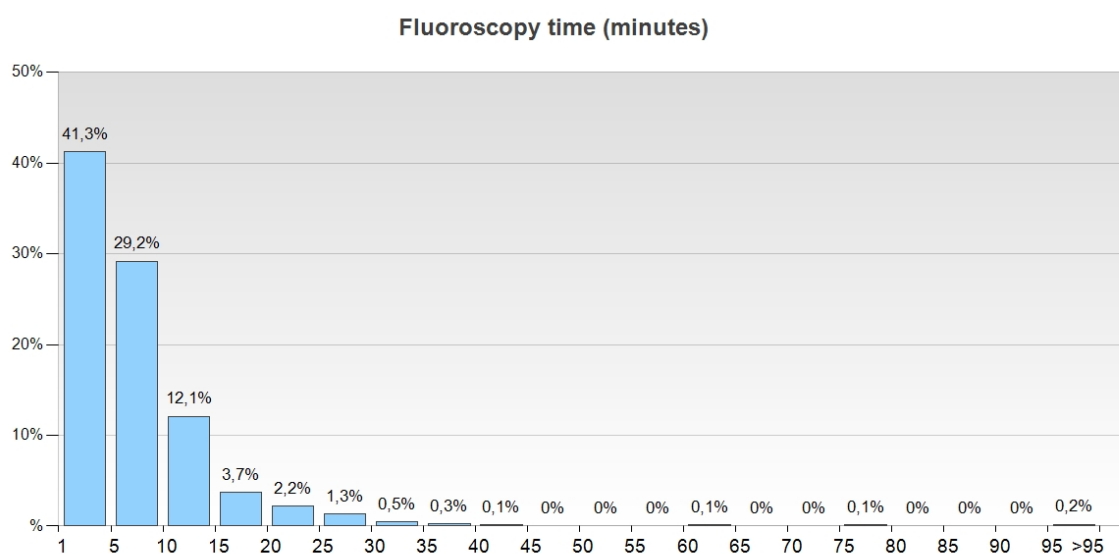
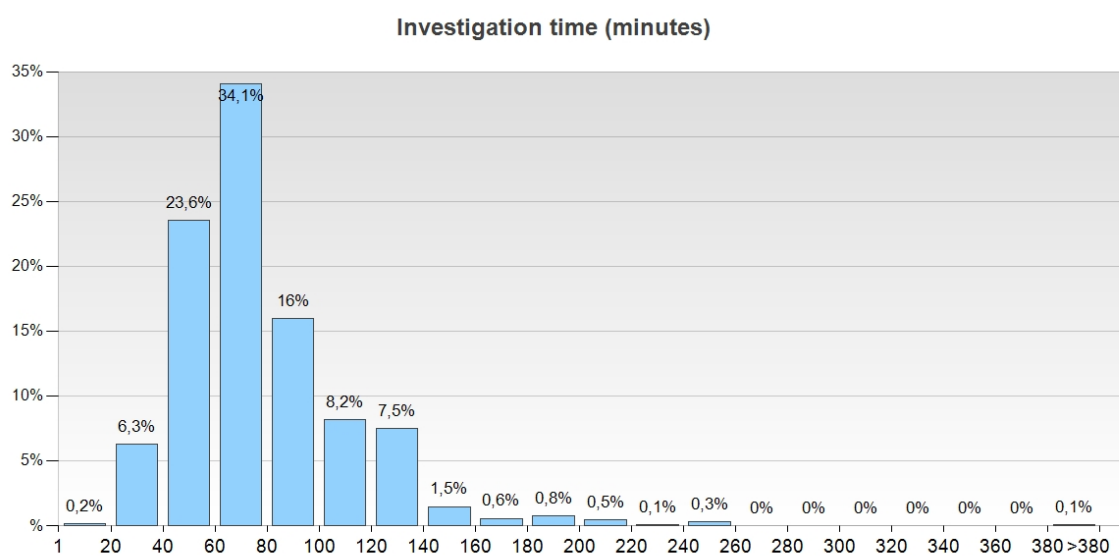
Cardiopathy (Underlying heart disease)	n	%
None	827	84,3
Ischemic	59	6,01
Hypertensive Cardiomyopathy	36	3,67
Valvular	17	1,73
H(O)CM	11	1,12
Other	11	1,12
Dilated	10	1,02
Angioplasty	4	0,41
Tachycardiomyopathy	3	0,31
Congenital	2	0,2
CABG	1	0,1
Infiltrative	0	0
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
RV Cardiomyopathy	0	0
Post Congenital Surgery	0	0
Post Valvular Surgery	0	0
Total	981	

Symptoms	n
Palpitations	926
Dizziness	144
Dyspnea	118
Fatigue	88
Syncope	64
Angina Pectoris	38
Other	16
None	12
SCD	1

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

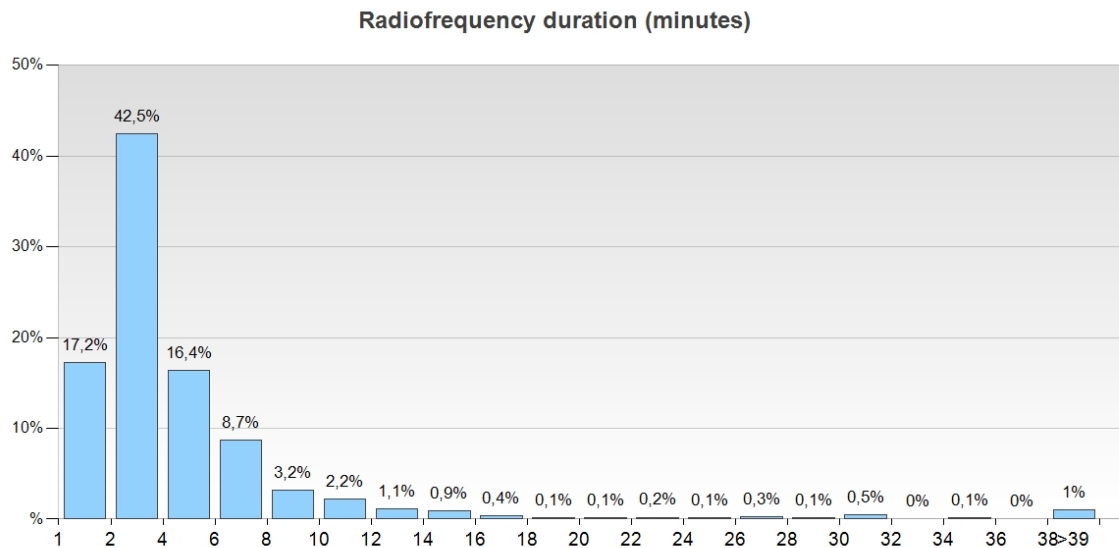
Anesthesia	n	%
Local	937	95,51
General	44	4,49
Total	981	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	12	74,6	400	981	0
Fluoroscopy time	1	7,4	294	894	87



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	6	642	931	47
Irrigated Technology				100	



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Type	n
Slow-Fast	930
Fast-Slow	35
Slow-Slow	26

Intervention	n	%
Primary Intervention	929	94,7
Redo	52	5,3

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	1	4	5	3	0

Mapping	n	%
Conventional	522	53,21
3D Mapping	455	46,38
Basket	3	0,31
Other	1	0,1
Lasso	0	0
Non Contact	0	0
HD Mesh	0	0
Total	981	

Catheter Steering	n	%
Conventional	981	100
Stereotaxis	0	0
Hansen	0	0
Other	0	0
Total	981	

Results	n	%
Success	969	98,78
No success	12	1,22

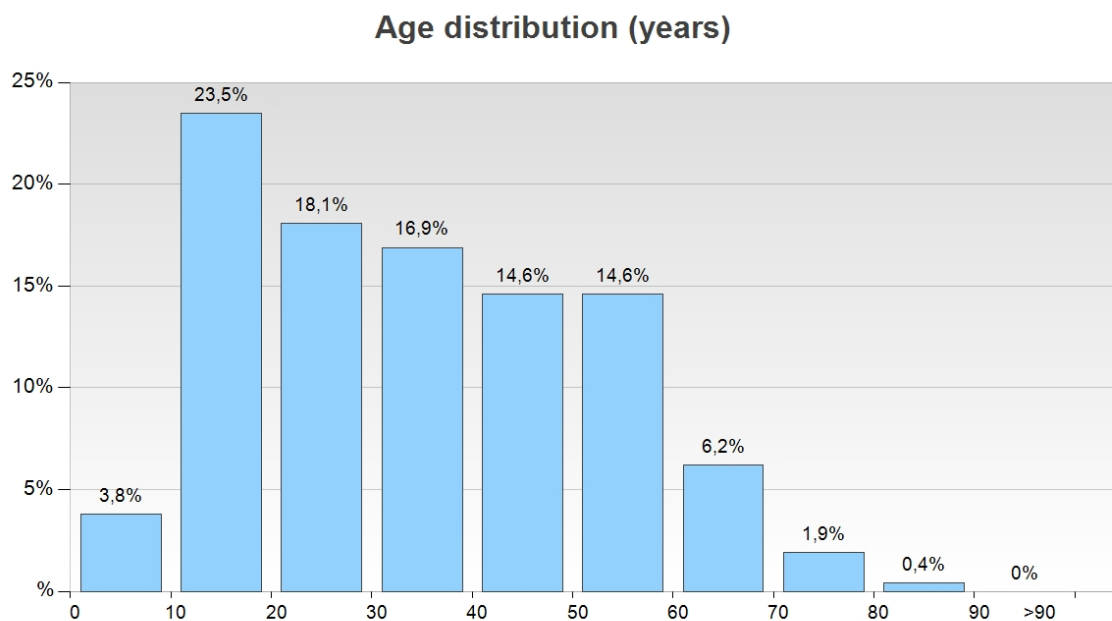
Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Periprocedural Complications	n
No complications	976
Transient AV Block	3
AV Fistula	1
Pericardial Effusion	1
Inguinal Hematoma	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
High Degree or Complete AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0
Other	0

Accessory Pathway

Ablation of Accessory Pathway (AP)	n
All interventions	270
AP combined with others	10
AP only	260

The following statistics include AP only procedures



Age (years)	min.	Ø	max.
Female	7	36	75
Male	7	35	81
All	7	35	81

Number of patients	n	%
Females	107	42,46
Males	145	57,54
Total	252	

Accessory Pathway

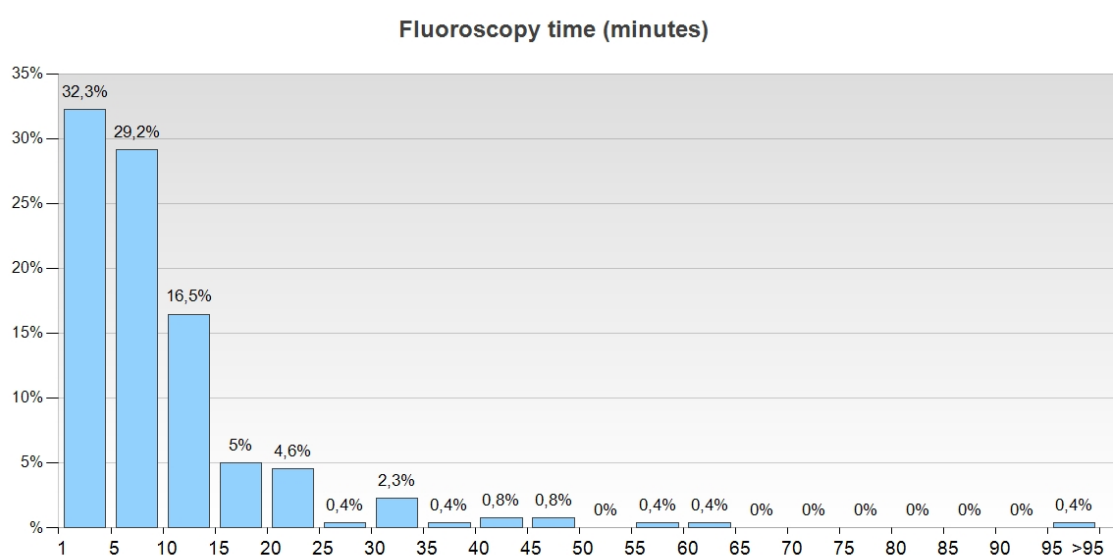
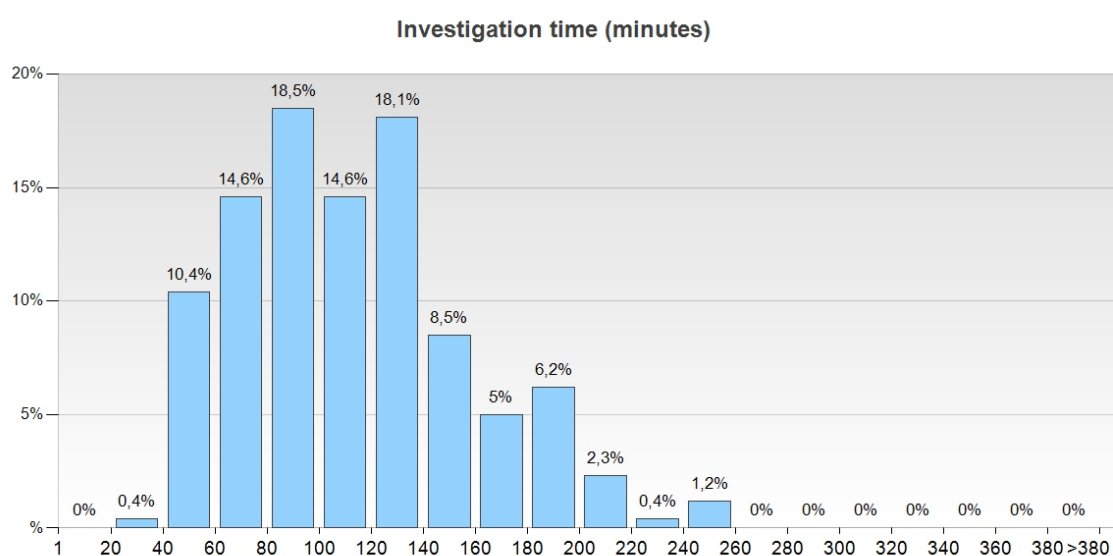
Cardiopathy (Underlying heart disease)	n	%
None	248	95,38
Ischemic	3	1,15
Congenital	3	1,15
Valvular	2	0,77
Other	1	0,38
H(O)CM	1	0,38
Infiltrative	1	0,38
Hypertensive Cardiomyopathy	1	0,38
Dilated	0	0
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
RV Cardiomyopathy	0	0
CABG	0	0
Angioplasty	0	0
Post Congenital Surgery	0	0
Post Valvular Surgery	0	0
Tachycardiomyopathy	0	0
Total	260	

Symptoms	n
Palpitations	215
Dizziness	27
None	26
Dyspnea	21
Fatigue	16
Other	14
Syncope	10
Angina Pectoris	5
SCD	1

Accessory Pathway

Anesthesia	n	%
Local	215	82,69
General	45	17,31
Total	260	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	35	110	247	260	0
Fluoroscopy time	1	9,8	115	243	17



Accessory Pathway

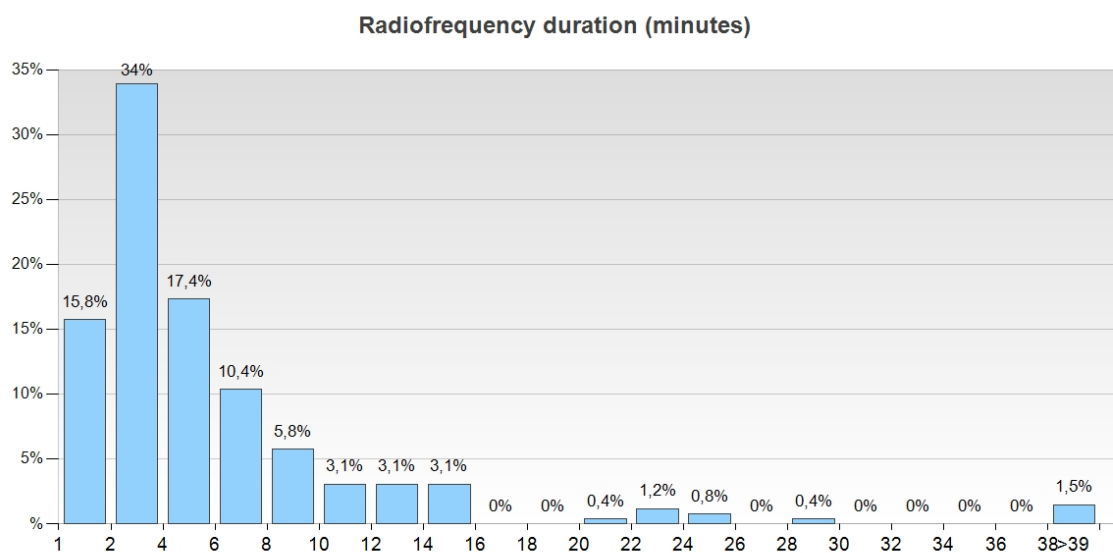
Type	n
WPW	159
Concealed	79
Asymptomatic Preexcitation	23
Other	3
Atrio-Fascicular	1
PJRT	1
Mahaim	0

Intervention	n	%
Primary Intervention	216	83,08
Redo	44	16,92

Site of Ablation	n
left	159
right	108
left: Free Wall	88
left: Posteroseptal	48
right: Posteroseptal	41
left: Posterior	25
right: Free Wall	18
right: Anteroseptal	17
right: Midseptal	12
right: Parahisian	11
right: Coronary Sinus Aneurysm	7
right: Posterior	7

Accessory Pathway

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	7	189	251	8
Irrigated Technology				181	



Accessory Pathway

Cryoablation	min.	Ø	max.	n	n₀*
Total Duration (minutes)	22	22	22	1	0

Access	n	%
Venous	128	49,23
Trans-septal, Puncture	105	40,38
Arterial	14	5,38
Trans-septal, PFO	13	5
Epicardial, Coronary Sinus	0	0
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Sub-xiphoid	0	0
Trans-septal Puncture+arterial	0	0
Other	0	0
Total	260	

Mapping	n	%
3D Mapping	167	64,23
Conventional	88	33,85
Basket	4	1,54
Lasso	1	0,38
Non Contact	0	0
HD Mesh	0	0
Other	0	0
Total	260	

Catheter Steering	n	%
Conventional	259	99,62
Stereotaxis	1	0,38
Hansen	0	0
Other	0	0
Total	260	

Results	n	%
Success	246	94,62
No success	14	5,38

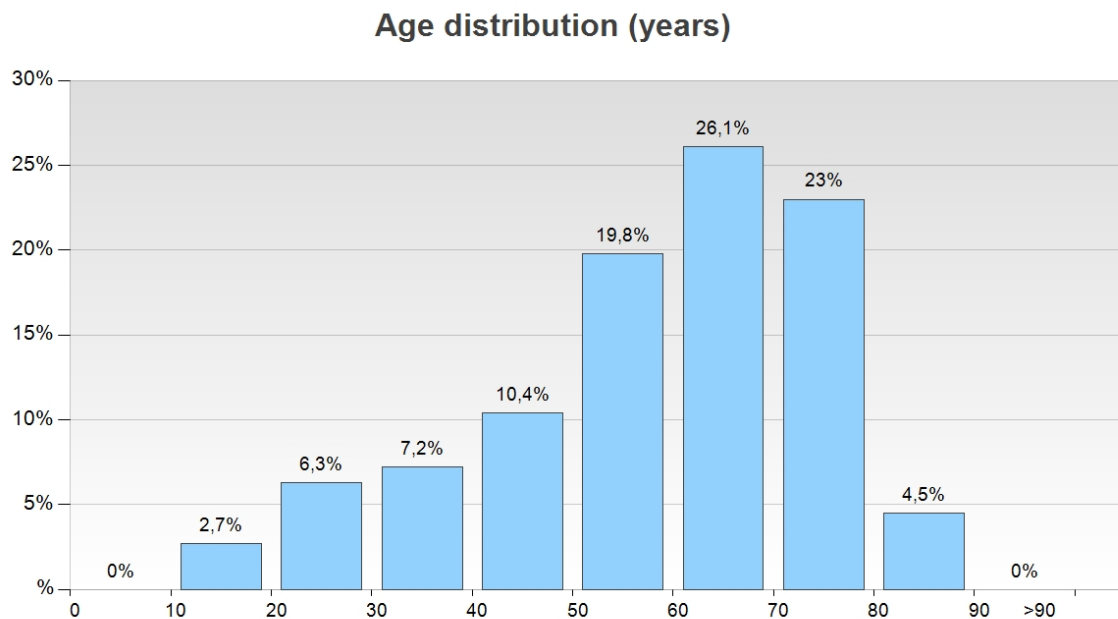
Accessory Pathway

Periprocedural Complications	n
No complications	257
Inguinal Hematoma	1
Transient AV Block	1
Other	1
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
High Degree or Complete AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0

Atrial Tachycardia

Ablation of Atrial Tachycardia (AT)	n
All interventions	367
AT combined with others	145
AT only	222

The following statistics include AT only procedures



Age (years)	min.	Ø	max.
Female	25	61	86
Male	12	56	89
All	12	59	89

Number of patients	n	%
Females	115	53,49
Males	100	46,51
Total	215	

Atrial Tachycardia

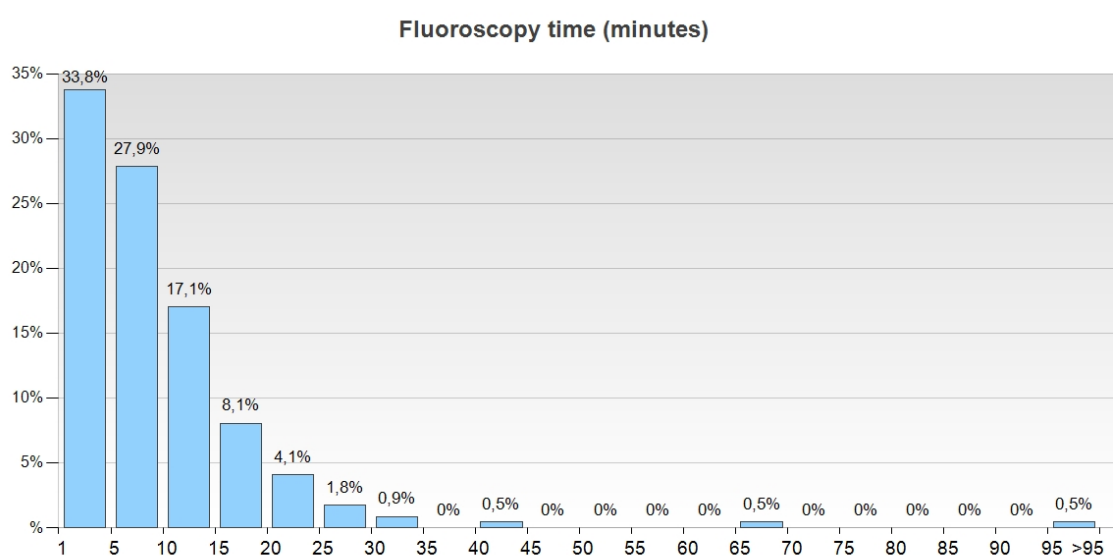
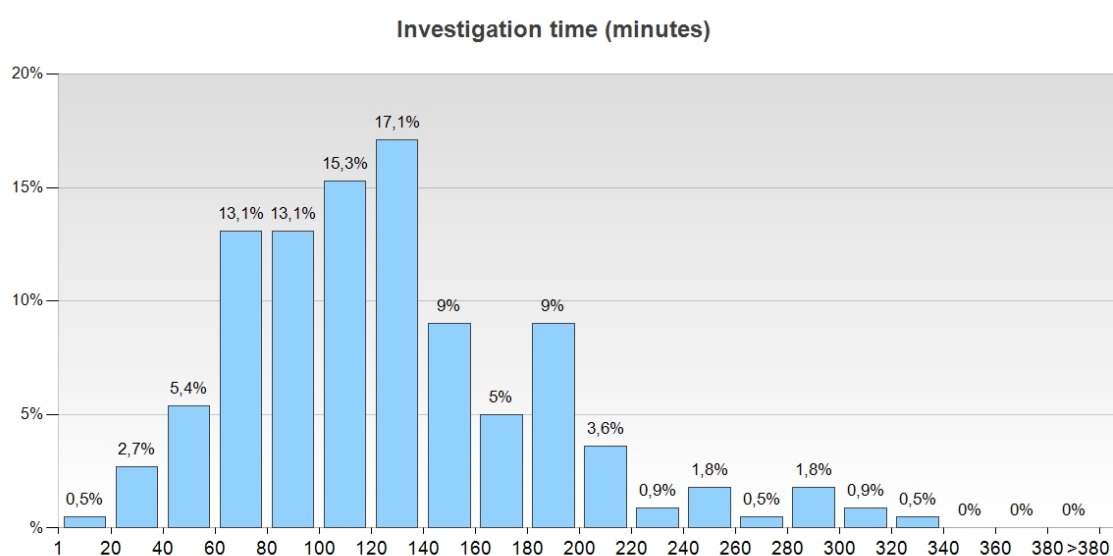
Cardiopathy (Underlying heart disease)	n	%
None	156	70,27
Hypertensive Cardiomyopathy	17	7,66
Ischemic	13	5,86
Tachycardiomyopathy	9	4,05
Valvular	7	3,15
Other	7	3,15
Dilated	6	2,7
Congenital	4	1,8
H(O)CM	1	0,45
Post Congenital Surgery	1	0,45
CABG	1	0,45
Infiltrative	0	0
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
RV Cardiomyopathy	0	0
Angioplasty	0	0
Post Valvular Surgery	0	0
Total	222	

Symptoms	n
Palpitations	205
Dyspnea	40
Fatigue	36
Dizziness	18
Angina Pectoris	6
Other	6
None	4
Syncope	3
SCD	1

Atrial Tachycardia

Anesthesia	n	%
Local	199	89,64
General	23	10,36
Total	222	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	12	124	330	222	0
Fluoroscopy time	1	9,8	235	211	11



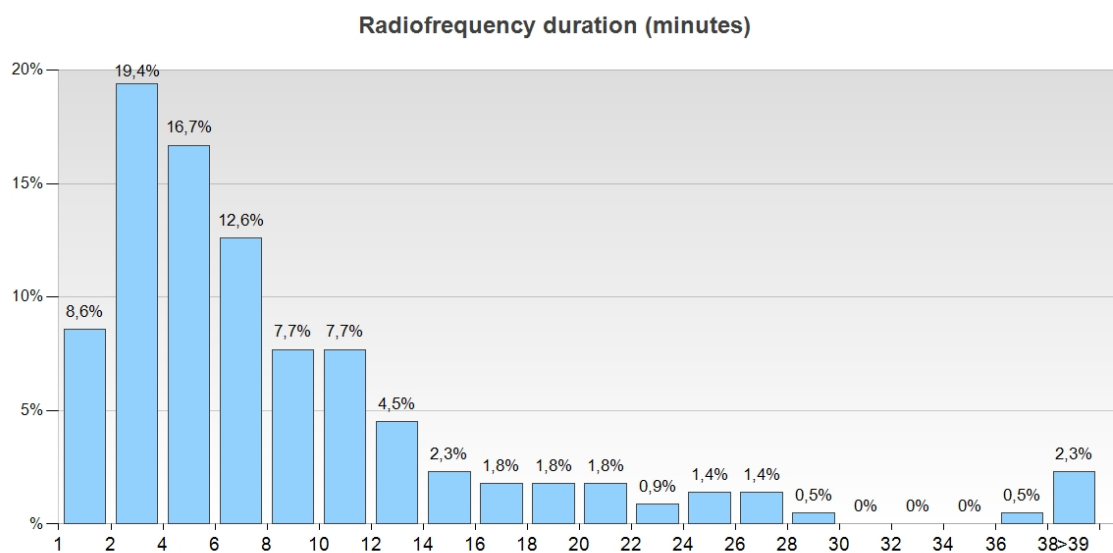
Atrial Tachycardia

Intervention	n	%
Primary Intervention	183	82,43
Redo	39	17,57

Site of Ablation	n
right	174
left	61
right: Crista Terminalis	50
right: Other Right	50
right: Septal Right	46
right: Peritricuspid	39
left: Other Left	18
left: Periostial PV	16
left: Perimitral	16
left: Septal Left	15
right: Right Appendage	5
left: Left Atrial Appendage	0

Atrial Tachycardia

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	9	80	203	19
Irrigated Technology				170	



Atrial Tachycardia

Access	n	%
Venous	171	77,03
Trans-septal, Puncture	38	17,12
Trans-septal, PFO	10	4,5
Arterial	3	1,35
Epicardial, Coronary Sinus	0	0
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Sub-xiphoid	0	0
Trans-septal Puncture+arterial	0	0
Other	0	0
Total	222	

Mapping	n	%
3D Mapping	182	81,98
Conventional	35	15,77
Other	2	0,9
Basket	1	0,45
Lasso	1	0,45
Non Contact	1	0,45
HD Mesh	0	0
Total	222	

Catheter Steering	n	%
Conventional	220	99,1
Other	2	0,9
Stereotaxis	0	0
Hansen	0	0
Total	222	

Results	n	%
Success	199	89,64
No success	23	10,36

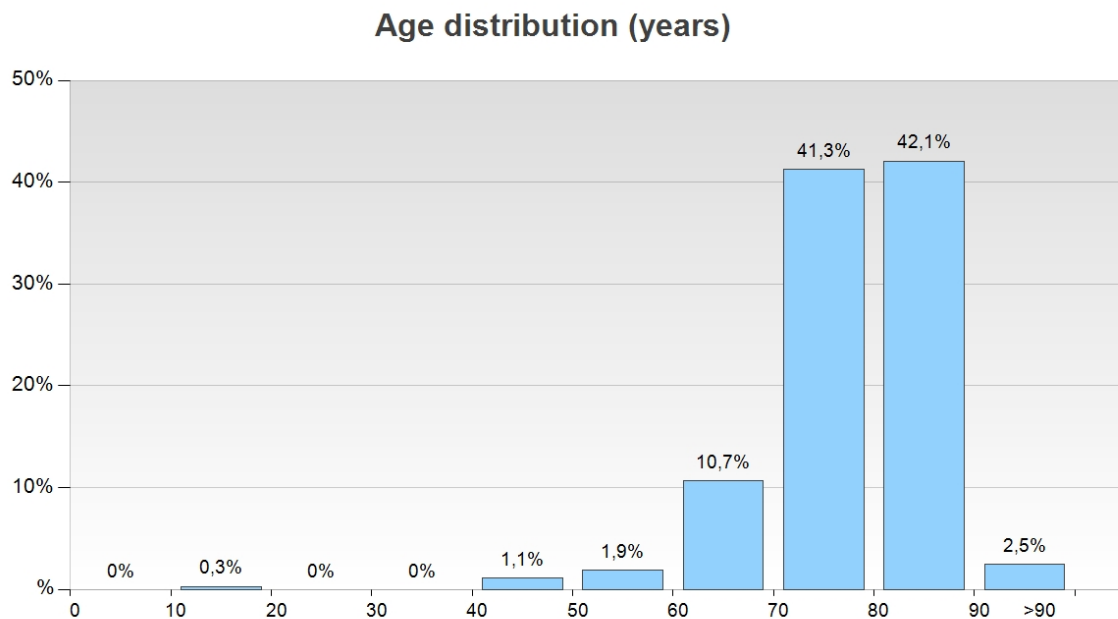
Atrial Tachycardia

Periprocedural Complications	n
No complications	219
High Degree or Complete AV Block	1
Phrenic Nerve Paralysis	1
Other	1
Inguinal Hematoma	0
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Ablation of AVN(R)	n
All interventions	381
AVN(R) combined with others	18
AVN(R) only	363

The following statistics include AVN(R) only procedures



Age (years)	min.	Ø	max.
Female	20	80	92
Male	47	76	95
All	20	78	95

Number of patients	n	%
Females	197	55,18
Males	160	44,82
Total	357	

Atrioventricular Node (Rate Control in Atr. Fibrillation)

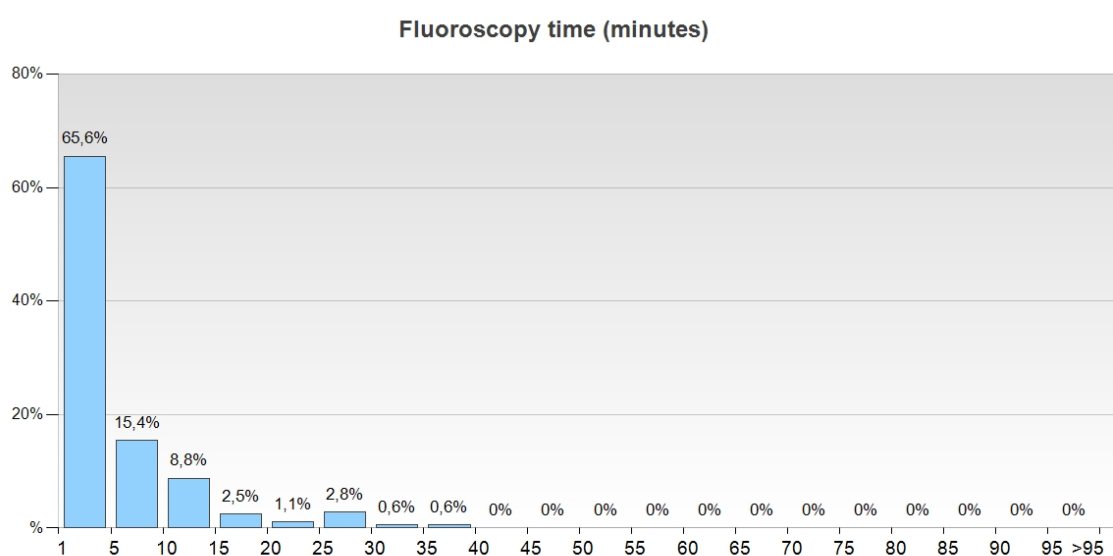
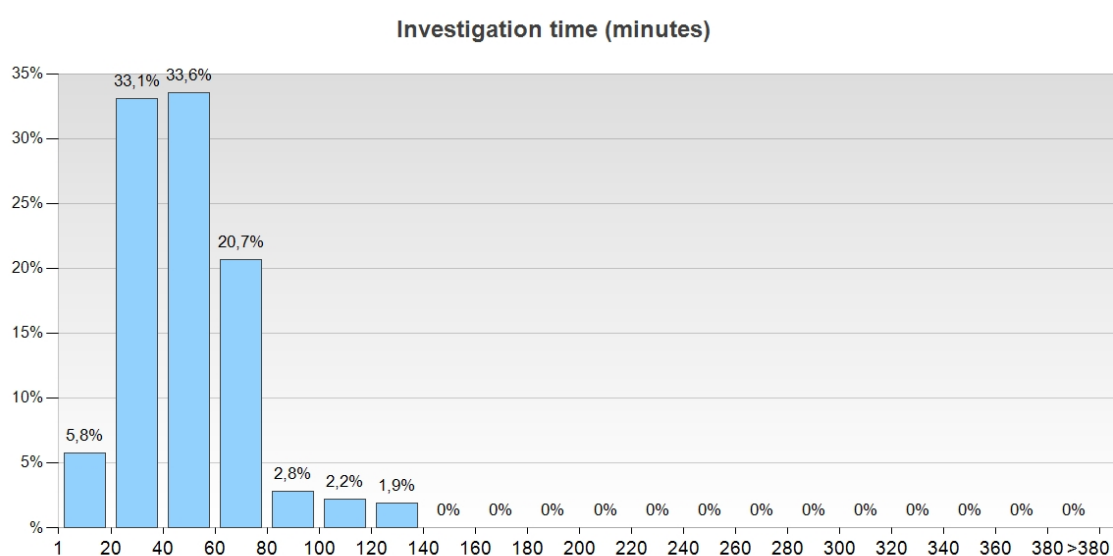
Cardiopathy (Underlying heart disease)	n	%
None	112	30,85
Tachycardiomyopathy	60	16,53
Hypertensive Cardiomyopathy	55	15,15
Ischemic	46	12,67
Valvular	38	10,47
Dilated	24	6,61
Other	16	4,41
Post Valvular Surgery	4	1,1
Angioplasty	3	0,83
H(O)CM	2	0,55
CABG	1	0,28
Congenital	1	0,28
Infiltrative	1	0,28
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
RV Cardiomyopathy	0	0
Post Congenital Surgery	0	0
Total	363	

Symptoms	n
Palpitations	269
Dyspnea	159
Fatigue	115
Dizziness	31
Other	14
None	13
Angina Pectoris	8
Syncope	5
SCD	1

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Anesthesia	n	%
Local	359	98,9
General	4	1,1
Total	363	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	2	46	123	363	0
Fluoroscopy time	1	5,3	37	353	10



Atrioventricular Node (Rate Control in Atr. Fibrillation)

Type of Fibrillation	n	%
Paroxysmal	96	26,45
Persistent	148	40,77
Long-standing Persistent (>1 Year)	119	32,78

EHRA-Score	n	%
Score I	24	6,61
Score II	123	33,88
Score III	189	52,07
Score IV	27	7,44

Intervention	n	%
Primary Intervention	336	92,56
Redo	19	5,23
Previous AF Abl. Procedure	8	2,2

Antiarrhythmic Drugs	n
Beta Blocker	263
Amiodarone	92
None	43
Calcium Antagonist	32
Digitalis	21
Flecainide	14
Sotalol	12
Other	11
Dronedarone	2
Propafenone	0

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Thromboembolic Risk Factors	n
Hypertension	177
Congestive Heart Failure, LV dysfunction	60
Diabetes	31
Prior MI, Per. Artery Disease, Aortic Plaque	31
Stroke, TIA, Pther Embolic Event	20

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	259
Vitamin K-Antagonist	58
Other	14
Direct Thrombin Inhibitor	12
Clopidogrel	11
None	10
Aspirin	5
Prasugrel	0
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	5
Score = 1	29
Score = 2	63
Score = 3	140
Score = 4	82
Score = 5	33
Score = 6	8
Score = 7	2
Average Score	3,11

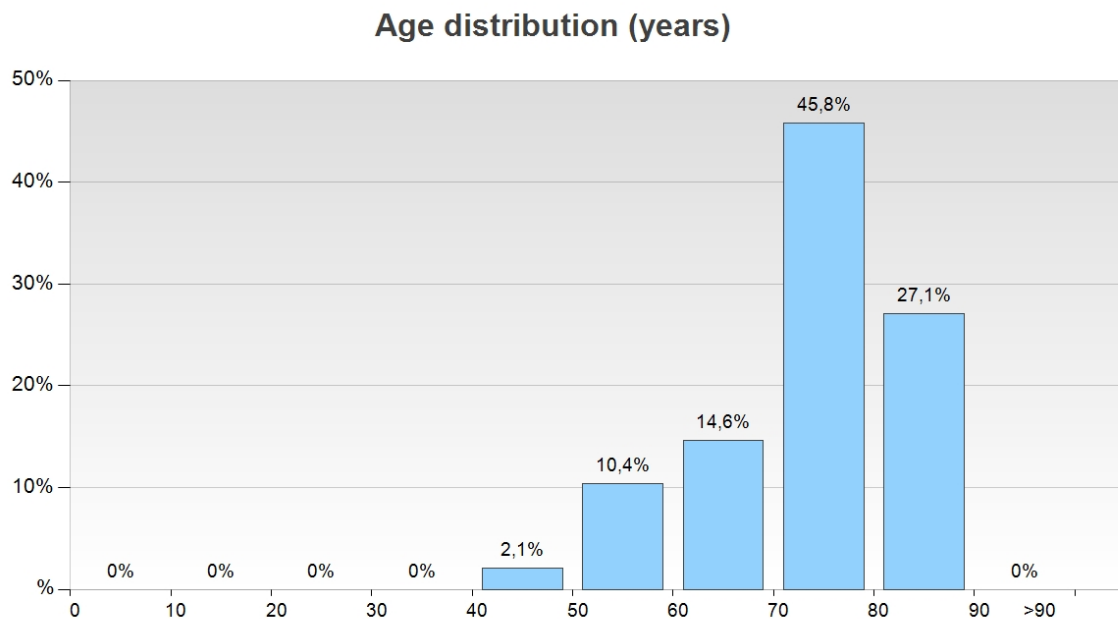
Atrioventricular Node (Rate Control in Atr. Fibrillation)

Periprocedural Complications	n
No complications	363
Inguinal Hematoma	0
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
High Degree or Complete AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0
Other	0

Atrioventricular Node (to resynchronisation)

Ablation of AVN	n
All interventions	116
AVN combined with others	20
AVN only	96

The following statistics include AVN only procedures



Age (years)	min.	Ø	max.
Female	54	76	88
Male	43	73	87
All	43	74	88

Number of patients	n	%
Females	33	34,74
Males	62	65,26
Total	95	

Atrioventricular Node (to resynchronisation)

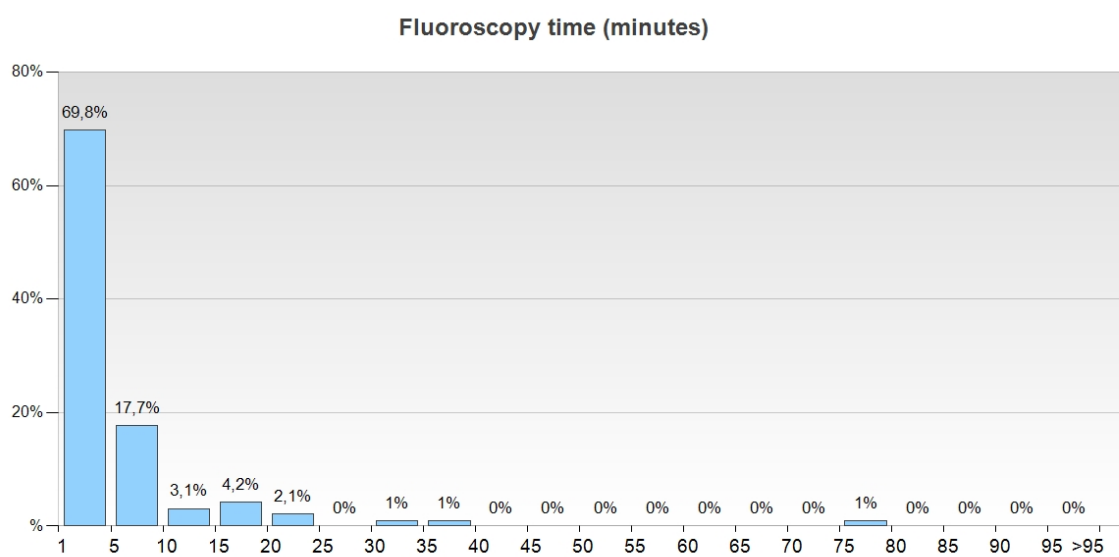
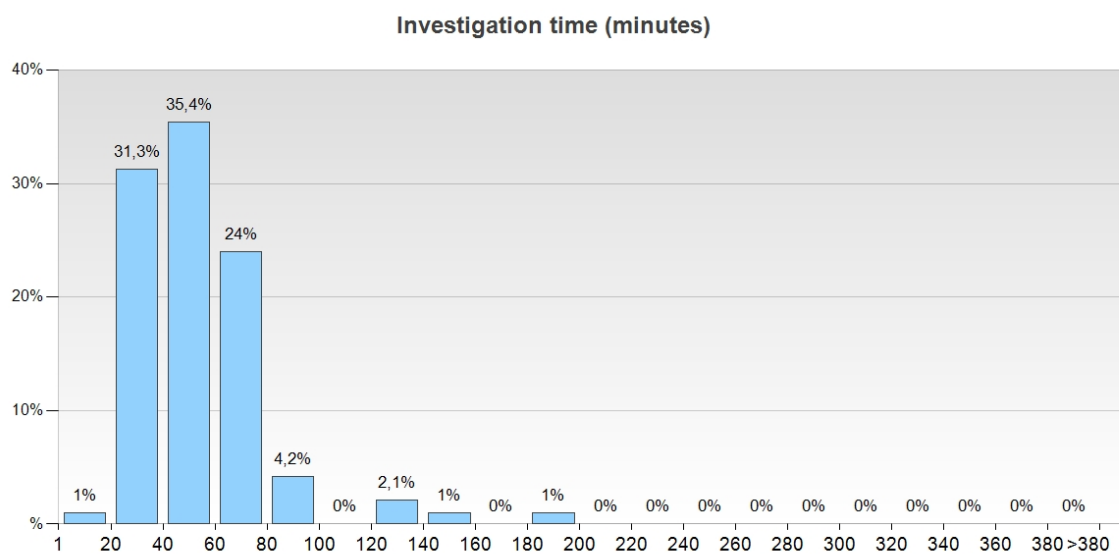
Cardiopathy (Underlying heart disease)	n	%
Tachycardiomyopathy	25	26,04
None	25	26,04
Dilated	18	18,75
Ischemic	14	14,58
Valvular	6	6,25
Hypertensive Cardiomyopathy	5	5,21
H(O)CM	2	2,08
Congenital	1	1,04
Infiltrative	0	0
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
RV Cardiomyopathy	0	0
CABG	0	0
Angioplasty	0	0
Post Congenital Surgery	0	0
Post Valvular Surgery	0	0
Other	0	0
Total	96	

Symptoms	n
Palpitations	59
Dyspnea	58
Fatigue	40
Dizziness	6
None	5
Other	5
Syncope	1
Angina Pectoris	1
SCD	0

Atrioventricular Node (to resynchronisation)

Anesthesia	n	%
Local	94	97,92
General	2	2,08
Total	96	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	12	50,1	180	96	0
Fluoroscopy time	1	5,6	77	96	0



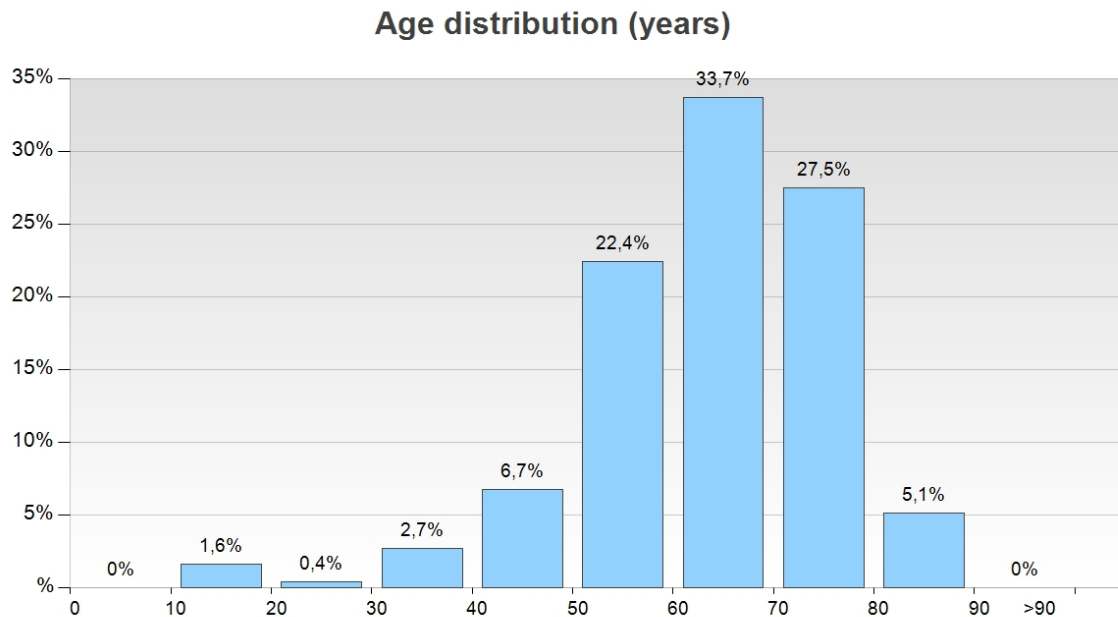
Atrioventricular Node (to resynchronisation)

Periprocedural Complications	n
No complications	95
Inguinal Hematoma	1
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Tamponade	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
High Degree or Complete AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0
Other	0

Ventricular Tachycardia

Ablation of Ventricular Tachycardia (VT)	n
All interventions	271
VT combined with others	16
VT only	255

The following statistics include VT only procedures



Age (years)	min.	Ø	max.
Female	27	59	88
Male	17	65	90
All	17	64	90

Number of patients	n	%
Females	43	18,53
Males	189	81,47
Total	232	

Ventricular Tachycardia

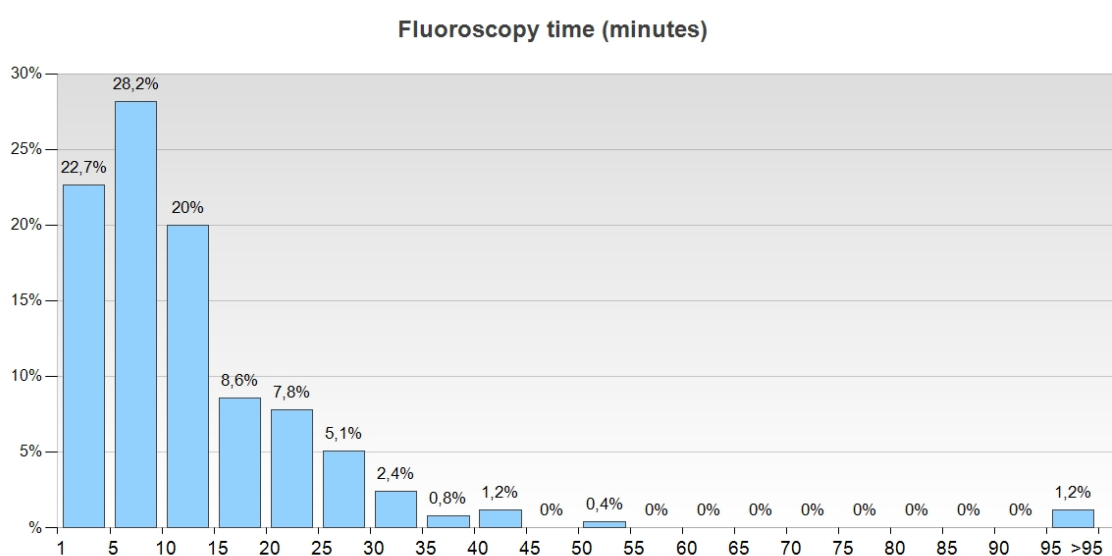
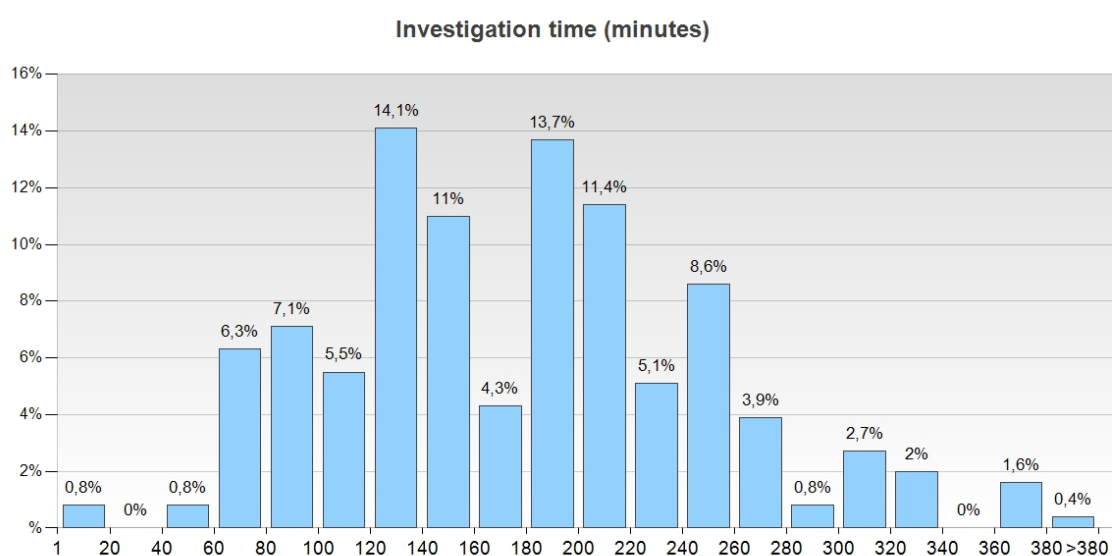
Cardiopathy (Underlying heart disease)	n	%
Ischemic	106	41,57
None	72	28,24
Dilated	27	10,59
Other	9	3,53
Valvular	7	2,75
Hypertensive Cardiomyopathy	7	2,75
RV Cardiomyopathy	5	1,96
Tachycardiomyopathy	4	1,57
Infiltrative	4	1,57
Congenital	4	1,57
H(O)CM	3	1,18
Angioplasty	3	1,18
Post Valvular Surgery	2	0,78
Post Congenital Surgery	1	0,39
CABG	1	0,39
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
Total	255	

Symptoms	n
Palpitations	191
Dyspnea	54
Syncope	46
Fatigue	34
Dizziness	32
SCD	22
Other	20
Angina Pectoris	14
None	7

Ventricular Tachycardia

Anesthesia	n	%
Local	158	61,96
General	97	38,04
Total	255	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	8	174,6	449	255	0
Fluoroscopy time	1	13,2	237	251	4



Ventricular Tachycardia

Type	n
Monomorphic	231
Polymorphic	32

Location	n
Other	105
RVOT / Cusp / PA	56
LVOT / Cusp	43
Mitral Annulus	38
Epicardial LV / RV	26
Fascicular	20
Left Pap Muscle	10
Tricuspid Annulus	8
BB Reentry	5
Right Pap Muscle	3
Parahisian	3

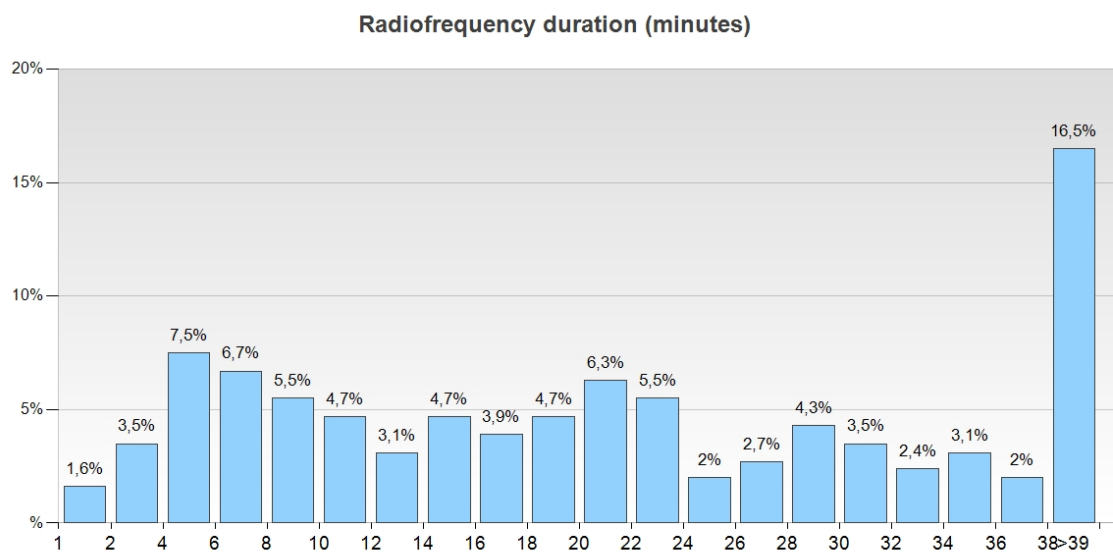
Intervention	n	%
Primary Intervention	188	73,73
Redo	67	26,27

Antiarrhythmic Drugs	n
Beta Blocker	172
Amiodarone	115
None	31
Calcium Antagonist	14
Flecainide	8
Sotalol	8
Other	6
Propafenone	0

Ventricular Tachycardia

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	24	223	243	12
Irrigated Technology				231	

Number of Induced VT: 347



Ventricular Tachycardia

Access	n	%
Trans-septal, Puncture	104	40,78
Venous	72	28,24
Arterial	50	19,61
Epicardial, Sub-xiphoid	18	7,06
Trans-septal, PFO	7	2,75
Epicardial, Thoracotomy	2	0,78
Trans-septal Puncture+arterial	1	0,39
Other	1	0,39
Epicardial, Coronary Sinus	0	0
Epicardial, Thoracoscopy	0	0
Total	255	

Mapping	n	%
3D Mapping	246	96,47
Conventional	7	2,75
Basket	1	0,39
Non Contact	1	0,39
Lasso	0	0
HD Mesh	0	0
Other	0	0
Total	255	

Catheter Steering	n	%
Conventional	255	100
Stereotaxis	0	0
Hansen	0	0
Other	0	0
Total	255	

Results	n	%
All Induces VT Ablated	159	62,35
Target VT Ablated	73	28,63
Failure	23	9,02

Ventricular Tachycardia

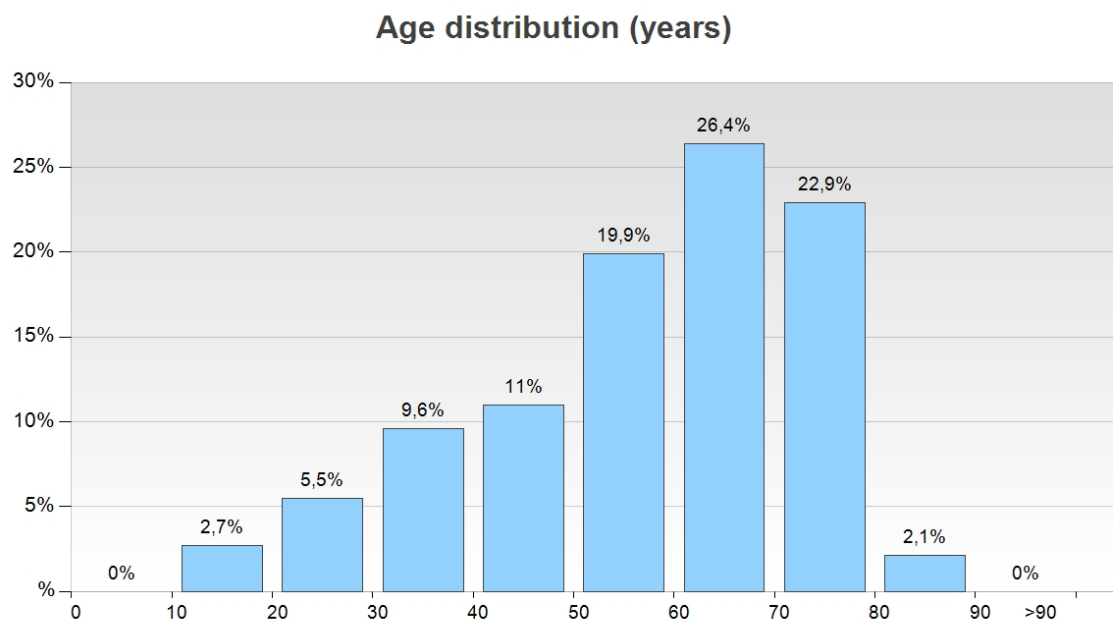
Periprocedural Complications	n
No complications	250
Tamponade	2
Other	2
Inguinal Hematoma	1
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pericardial Effusion	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
High Degree or Complete AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0

Premature Ventricular Contraction

Ablation of PVC

	n
All interventions	315
PVC combined with others	23
PVC only	292

The following statistics include PVC only procedures



Age (years)	min.	Ø	max.
Female	16	55	83
Male	14	59	84
All	14	57	84

Number of patients	n	%
Females	124	44,44
Males	155	55,56
Total	279	

Premature Ventricular Contraction

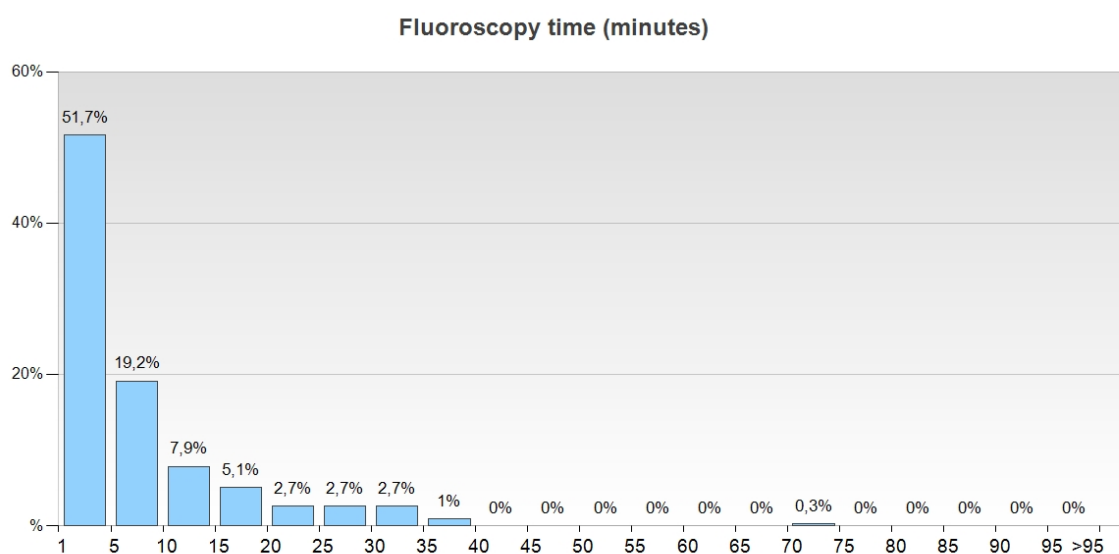
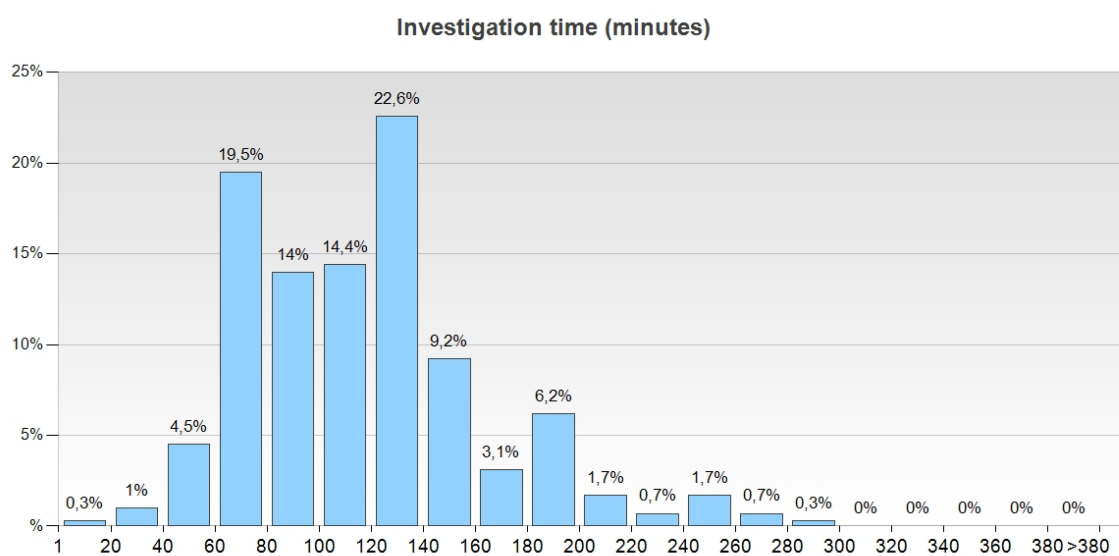
Cardiopathy (Underlying heart disease)	n	%
None	182	62,33
Dilated	23	7,88
Ischemic	16	5,48
Tachycardiomyopathy	16	5,48
Hypertensive Cardiomyopathy	16	5,48
Other	15	5,14
Valvular	12	4,11
H(O)CM	4	1,37
Angioplasty	3	1,03
Congenital	1	0,34
Post Valvular Surgery	1	0,34
Post Congenital Surgery	1	0,34
RV Cardiomyopathy	1	0,34
Infiltrative	1	0,34
Channelopathy long QT	0	0
Channelopathy short QT	0	0
Brugada Syndrome	0	0
Early Repolarization Syndrome	0	0
Catecholaminergic Polymorphic VT	0	0
CABG	0	0
Total	292	

Symptoms	n
Palpitations	237
Dyspnea	55
Fatigue	48
Dizziness	17
None	14
Syncope	9
Angina Pectoris	9
Other	8
SCD	0

Premature Ventricular Contraction

Anesthesia	n	%
Local	275	94,18
General	17	5,82
Total	292	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	10	112,9	280	292	0
Fluoroscopy time	1	7,5	71	273	19



Premature Ventricular Contraction

Type	n
Monomorphic	251
Polymorphic	41
Ischemic	4

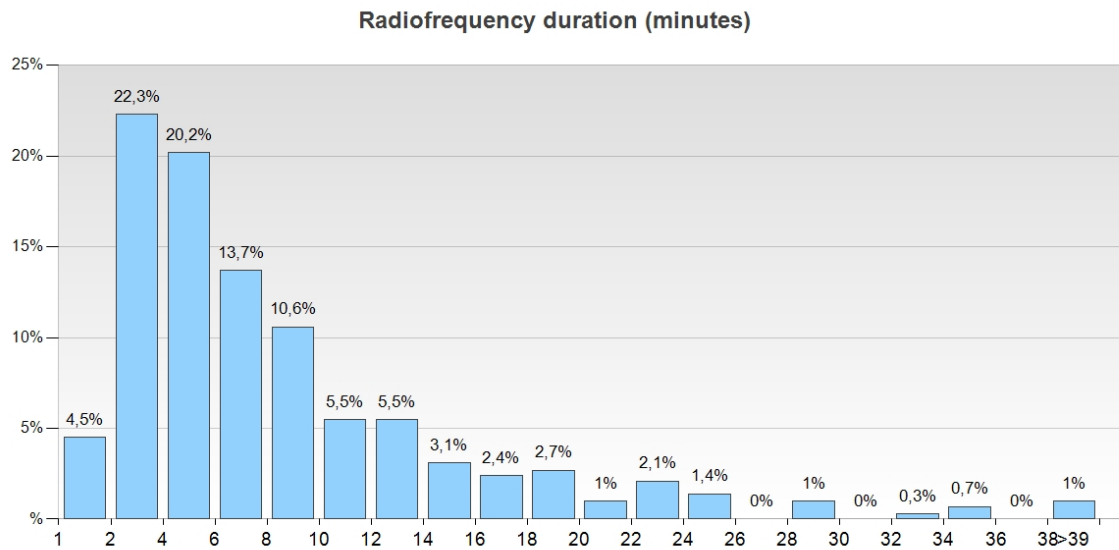
Location	n
LVOT / Aortic Cusp	114
RVOT	112
Other	70
HP System	22
Left Fascicular PVC	5

Site of Ablation	n
Left Ventricle	165
Right Ventricle	151

Intervention	n	%
Primary Intervention	244	83,56
Redo	48	16,44

Premature Ventricular Contraction

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	10	488	286	6
Irrigated Technology				263	



Premature Ventricular Contraction

Access	n	%
Venous	147	50,34
Arterial	98	33,56
Trans-septal, Puncture	41	14,04
Trans-septal, PFO	3	1,03
Epicardial, Coronary Sinus	2	0,68
Epicardial, Sub-xiphoid	1	0,34
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Trans-septal Puncture+arterial	0	0
Other	0	0
Total	292	

Mapping	n	%
3D Mapping	283	96,92
Conventional	6	2,05
Other	2	0,68
Basket	1	0,34
Lasso	0	0
Non Contact	0	0
HD Mesh	0	0
Total	292	

Catheter Steering	n	%
Conventional	292	100
Stereotaxis	0	0
Hansen	0	0
Other	0	0
Total	292	

Results	n	%
Success	250	85,62
No Success	42	14,38

Premature Ventricular Contraction

Periprocedural Complications	n
No complications	287
Pericardial Effusion	2
Tamponade	2
High Degree or Complete AV Block	1
Inguinal Hematoma	0
AV Fistula	0
Pseudoaneurysm	0
Aortic Dissection	0
Arterial Thrombosis	0
Arterial Occlusion	0
Pulmonary Embolism	0
TIA	0
Stroke	0
Myocardial Infarction	0
Pneumothorax	0
Hemothorax	0
Transient AV Block	0
Phrenic Nerve Paralysis	0
Infection	0
PV Stenosis	0
Valvular Lesions	0
Pulmonary Oedema	0
Death	0
Other	0

Completion

Completion



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

The statistics are based on the data from CHPACE WEB from 01.01.2020 to 31.12.2020. 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.

n₀*: Investigations were reported with 0 minutes and are not included in these statistics.

Ø 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