

SWISS STATISTICS OF CATHETER ABLATIONS 2017



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

Overview

Ablation centers	27
Included in this statistic	25
Number of interventions*	6749
thereof number of EPS	446
Number of ablations	6996

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

Ablation Centers

Clinic No.	Center	Interventions/ thereof incomplete	thereof Aborted	Ablations*
101	Universitätsspital Basel	729 / 0 (0%)	4	741
102	Inselspital Bern	582 / 0 (0%)	2	622
103	Hôpital Cantonal Universitaire de Genève	305 / 0 (0%)	0	345
104	Centre Hospitalier Universitaire Vaudois (CHUV)	374 / 0 (0%)	5	388
105	Universitätsspital Zürich	567 / 0 (0%)	2	525
106	Universitäts-Kinderkliniken Zürich	49 / 0 (0%)	1	42
214	Herzzentrum & Rhythmologie Hirslanden, Zürich	276 / 1 (0%)	0	290
216	Cardiocentro Ticino, Lugano	142 / 0 (0%)	0	144
217	Kantonsspital Luzern, Sursee und Wolhusen	421 / 0 (0%)	0	435
218	Klinik St. Anna, Luzern	59 / 0 (0%)	0	62
220	Hôpital de la Tour	147 / 0 (0%)	0	157
228	Hôpital de Sion	76 / 0 (0%)	1	64
230	Solothurner Spitäler AG	53 / 0 (0%)	0	53
231	Kantonsspital St. Gallen	340 / 0 (0%)	1	317
233	GZO Spital Wetzikon	226 / 0 (0%)	0	210
234	Kantonsspital Winterthur	144 / 0 (0%)	0	160
236	Stadtspital Triemli, Zürich	289 / 0 (0%)	0	296
239	Klinik Beau-Site Bern	358 / 0 (0%)	0	360
246	Hirslandenklinik Aarau	194 / 0 (0%)	0	213
250	Klinik Im Park, Zürich	720 / 0 (0%)	2	846
251	Herzzentrum Bodensee, Kreuzlingen	77 / 0 (0%)	3	78
267	Clinique Cécil	429 / 0 (0%)	0	440
268	Clinique des Grangettes	25 / 7 (28%)	0	18
278	Clinique de Valère	80 / 0 (0%)	3	77
284	Clinique de Genolier	95 / 0 (0%)	0	91
Total	25	6757 / 8 (0%)	24	6974

* 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
211	Hôpital Fribourgeois
283	Spital Schiers
Total	2

1 center with more than 10% incomplete data reporting

No.	Center	interventions	thereof incomplete	incomplete (%)
268	Clinique des Grangettes	25	7	28
Total	1			

Ablation centers

12 centers with more than 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
101	Universitätsspital Basel	729	4	741
250	Klinik Im Park, Zürich	720	2	846
102	Inselspital Bern	582	2	622
105	Universitätsspital Zürich	567	2	525
267	Clinique Cécil	429	0	440
217	Kantonsspital Luzern, Sursee und Wolhusen	421	0	435
104	Centre Hospitalier Universitaire Vaudois (CHUV)	374	5	388
239	Klinik Beau-Site Bern	358	0	360
231	Kantonsspital St. Gallen	340	1	317
103	Hôpital Cantonal Universitaire de Genève	305	0	345
236	Stadtspital Triemli, Zürich	289	0	296
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	275	0	290
Total	12	5389	16	5605

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
101	Universitätsspital Basel	317	133	9	28	40	105	41	31	5	32	0
250	Klinik Im Park, Zürich	344	208	23	39	21	128	24	17	10	31	1
102	Inselspital Bern	189	205	14	15	28	65	48	17	7	34	0
105	Universitätsspital Zürich	191	89	6	34	46	87	28	30	1	13	0
267	Clinique Cécil	134	97	12	20	22	73	7	15	16	44	0
217	Kantonsspital Luzern, Sursee und Wolhusen	150	81	6	23	22	79	29	24	12	7	2
104	Centre Hospitalier Universitaire Vaudois (CHUV)	99	84	7	14	28	56	36	31	6	27	0
239	Klinik Beau-Site Bern	154	78	4	24	17	41	6	19	2	15	0
231	Kantonsspital St. Gallen	136	64	1	8	12	70	4	12	3	7	0
103	Hôpital Cantonal Universitaire de Genève	88	88	37	14	19	38	23	13	11	14	0
236	Stadtspital Triemli, Zürich	116	71	13	14	14	52	0	5	1	10	0
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	191	31	6	8	8	21	1	8	0	16	0
Total	12	2109	1229	138	241	277	815	247	222	74	250	3

Ablation centers

5 centers with 100 to 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
233	GZO Spital Wetzikon	226	0	210
246	Hirslandenklinik Aarau	194	0	213
220	Hôpital de la Tour	147	0	157
234	Kantonsspital Winterthur	144	0	160
216	Cardiocentro Ticino, Lugano	142	0	144
Total	5	853	0	884

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
233	GZO Spital Wetzikon	89	33	3	7	2	51	1	3	3	17	1
246	Hirslandenklinik Aarau	81	33	5	23	7	37	1	14	2	10	0
220	Hôpital de la Tour	52	46	3	5	14	23	2	4	1	7	0
234	Kantonsspital Winterthur	82	27	4	8	1	19	2	13	2	2	0
216	Cardiocentro Ticino, Lugano	41	35	5	8	8	17	9	3	0	18	0
Total	5	345	174	20	51	32	147	15	37	8	54	1

Ablation centers

8 centers with less than 100 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
284	Clinique de Genolier	95	0	91
278	Clinique de Valère	77	0	77
228	Hôpital de Sion	75	0	64
251	Herzzentrum Bodensee, Kreuzlingen	74	0	78
218	Klinik St. Anna, Luzern	59	0	62
230	Solothurner Spitäler AG	53	0	53
106	Universitäts-Kinderkliniken Zürich	48	0	42
268	Clinique des Grangettes	18	0	18
Total	8	499	0	485

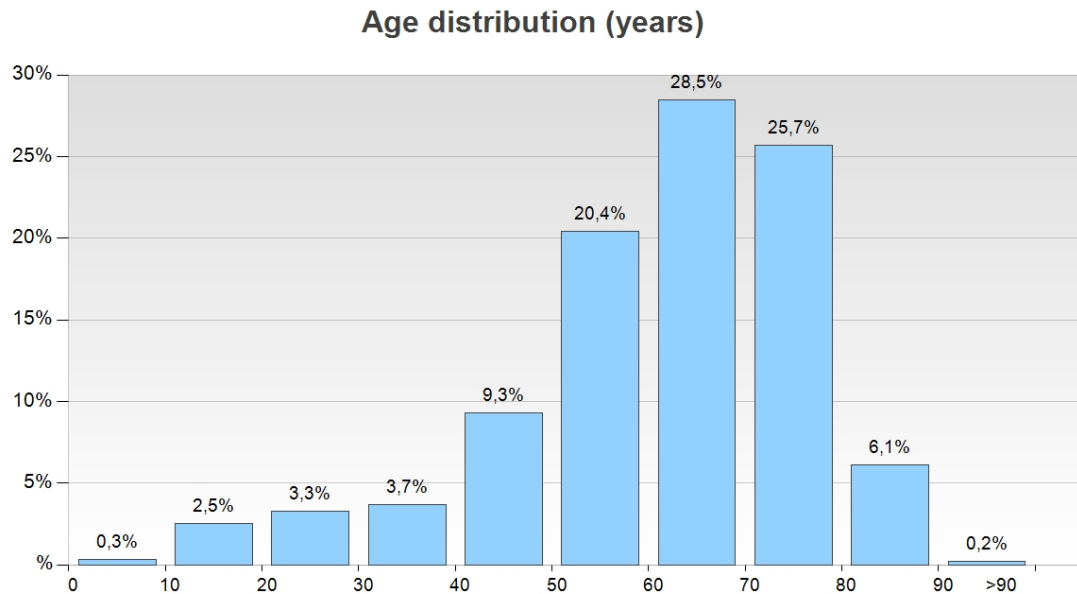
Ablation procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
284	Clinique de Genolier	29	36	1	3	4	13	0	2	0	2	1
278	Clinique de Valère	26	19	1	2	0	20	0	1	0	9	0
251	Herzzentrum Bodensee, Kreuzlingen	35	10	0	4	4	10	9	6	0	3	0
228	Hôpital de Sion	0	26	0	1	8	19	1	1	6	3	0
218	Klinik St. Anna, Luzern	19	12	0	4	3	21	0	0	0	3	0
230	Solothurner Spitäler AG	0	10	0	0	4	12	0	0	1	26	0
106	Universitäts-Kinderkliniken Zürich	0	1	0	1	24	17	0	0	0	0	0
268	Clinique des Grangettes	6	4	0	0	1	5	0	0	1	1	0
Total	8	115	118	2	15	48	117	10	10	8	47	1

All ablation types

Number of ablations, not aborted: 6974



Age (years)	min.	Ø	max.
Female	6	61	97
Male	0	62	96
All	0	62	97

Number of patients	n	%
Females	2437	36,24
Males	4288	63,76
Total	6725	

Anesthesia	n	%
Local	5300	78,81
General	1425	21,19
Total	6725	

Combinations of ablations performed during one intervention

Number of interventions	6281
AF	2026
RAFlu	1027
AVNRT	1001
AF RAFlu	410
AVN(R)	340
AP	336
VT	262
PVC	251
AT	224
AVN	79
LAFIu	78
AF LAFIu	46
AF AT	25
AT AVNRT	21
RAFlu AT	19
AF AVNRT	17
RAFlu AVNRT	15
AF LAFIu RAFlu	14
AP AVNRT	11
LAFIu RAFlu	10
AVN AVN(R)	9
AVNRT PVC	7
AF RAFlu AT	7
LAFIu AT	5
VT PVC	4
RAFlu VT	4
AF AP	4
Other	3
AF RAFlu PVC	3
AF RAFlu AVNRT	3
AF LAFIu AT	3
AF RAFlu AP	2
AF LAFIu RAFlu AT	2
AVNRT VT	1
AP PVC	1
RAFlu AVN(R)	1
RAFlu AP	1
LAFIu AVN	1
AF AVN	1
PVC Other	1
AT Other	1
RAFlu AVNRT PVC	1
RAFlu AP AVNRT	1
LAFIu RAFlu AVNRT	1
AF AVN(R)	1
AF VT	1

Only completely documented and non-aborted interventions are counted.

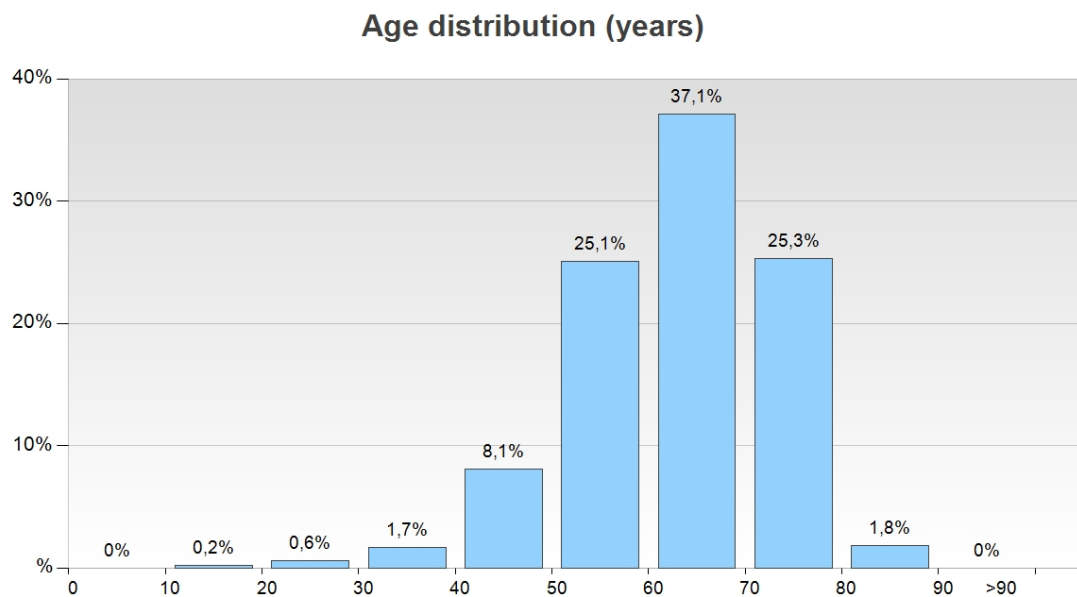
Ablation procedures or EPS

Atrial Fibrillation	2565	Right Atrial Flutter	1521
Paroxysmal	1777	Cavotricuspid	1495
Persistent	750	Scar Related	35
Long-standing Persistent	38	Other	6
Left Atrial Flutter	160	Atrial Tachycardia	307
Roof-dependent	49	AVNRT	1079
Perimitral	65	Slow-Fast	1027
Peri-Incisional	6	Fast-Slow	33
Peri Ostial Pulm. Vein	20	Slow-Slow	28
Other	62	VT	272
Accessory Pathway	356	Monomorphic	214
Concealed	112	Polymorphic	36
WPW	226	Ischemic	91
Asymptomatic Preexcitation	18	RVOT	53
Atrio-Fascicular	3	LVOT / Aortic Cusp	33
PJRT	5	Left Fascicular VT	20
Mahaim	0	BB Reentry	9
Other	5	Epicardial	23
AVN (to Resync.)	90	Other	151
AVN (Rate Control)	351	PVC	268
Paroxysmal	72	Monomorphic	238
Persistent	153	Polymorphic	30
Long-standing Persistent	126	Ischemic	2
Other Arrhythmia	5	RVOT	136
PAC	3	LVOT / Aortic Cusp	66
JET	0	Left Fascicular VT	6
SNT	1	HP System	16
Other	1	Other	57
		EPS only	444

Atrial Fibrillation

Ablation of Atrial Fibrillation (AF)	n
All interventions	2565
AF combined with others	539
AF combined with RAFLa	410
AF only	2026

The following statistics include AF only procedures



Age (years)	min.	Ø	max.
Female	20	67	84
Male	0	62	86
All	0	63	86

Number of patients	n	%
Females	645	31,84
Males	1381	68,16
Total	2026	

Atrial Fibrillation

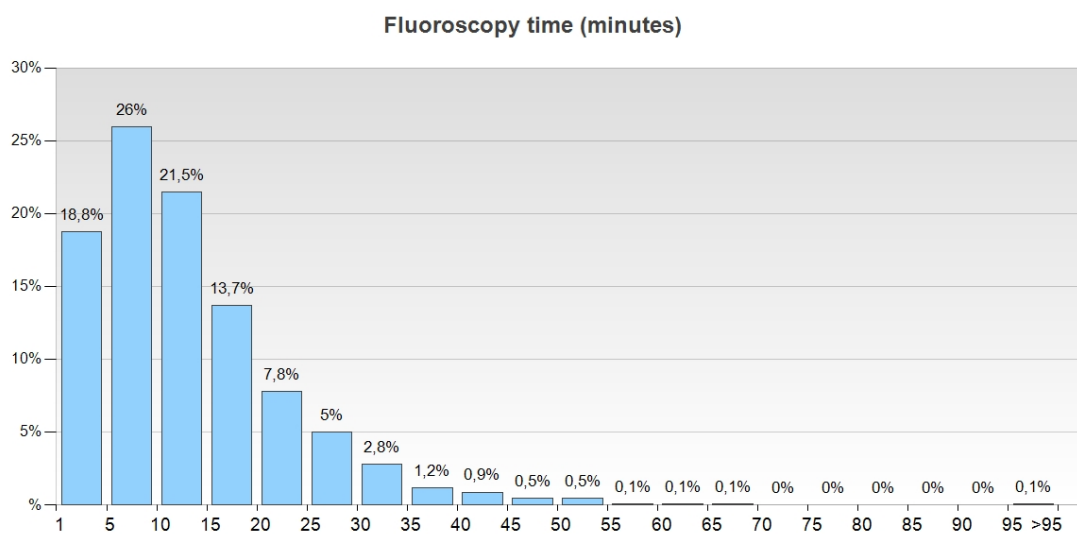
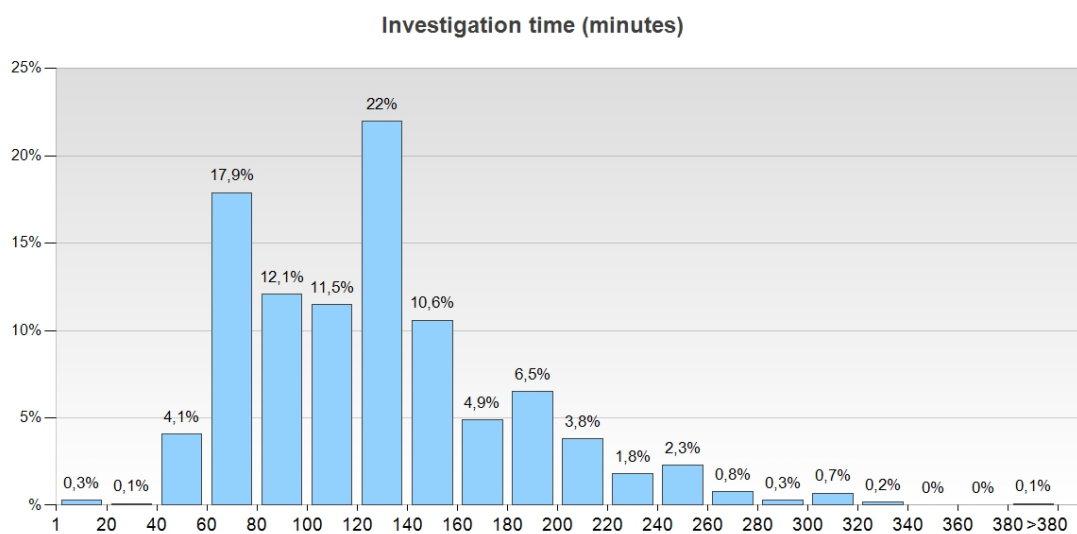
Cardiopathy (Underlying heart disease)	n	%
None	1298	64,07
Hypertensive Cardiomyopathy	272	13,43
Ischemic	148	7,31
Tachycardiomyopathy	115	5,68
H(O)CM	63	3,11
Valvular	60	2,96
Dilated	32	1,58
Other	23	1,14
Congenital	5	0,25
Post Valvular Surgery	2	0,1
Infiltrative	1	0,05
CABG	1	0,05
Brugada Syndrome	1	0,05
Channelopathy long QT	1	0,05
Angioplasty	1	0,05
RV Cardiomyopathy	1	0,05
Early Repolarization Syndrome	1	0,05
Post Congenital Surgery	1	0,05
Catecholaminergic Polymorphic VT	0	0
Channelopathy short QT	0	0
Total	2026	

Symptoms	n
Palpitations	1788
Dyspnea	559
Fatigue	508
Dizziness	243
Other	70
Angina Pectoris	44
Syncope	36
None	35
SCD	4

Atrial Fibrillation

Anesthesia	n	%
Local	1239	61,15
General	787	38,85
Total	2026	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	2	123,7	415	2026	0
Fluoroscopy time	1	13	229	2014	12



Atrial Fibrillation

Type of AF	n	%
Paroxysmal	1399	69,05
Persistent	592	29,22
Long-standing Persistent (>1 Year)	35	1,73

EHRA-Score	n	%
Score I	261	12,88
Score II	916	45,21
Score III	815	40,23
Score IV	34	1,68

Type of Intervention	n	%
Percutaneous	2023	99,85
Hybrid (Epicardial + Endovascular)	0	0
Surgical Ablation	3	0,15

Intervention	n	%
Primary Intervention	1523	75,17
Redo	503	24,83

Antiarrhythmic Drugs	n
Beta Blocker	1268
Amiodarone	533
None	334
Flecainide	207
Sotalol	101
Calcium Antagonist	82
Dronedarone	52
Other	20
Propafenone	19
Digitalis	14

Thromboembolic Risk Factors	n
Hypertension	830
Prior MI, Per. Artery Disease, Aortic Plaque	163
Congestive Heart Failure, LV dysfunction	132
Diabetes	109
Stroke, TIA, Other Embolic Event	87

Atrial Fibrillation

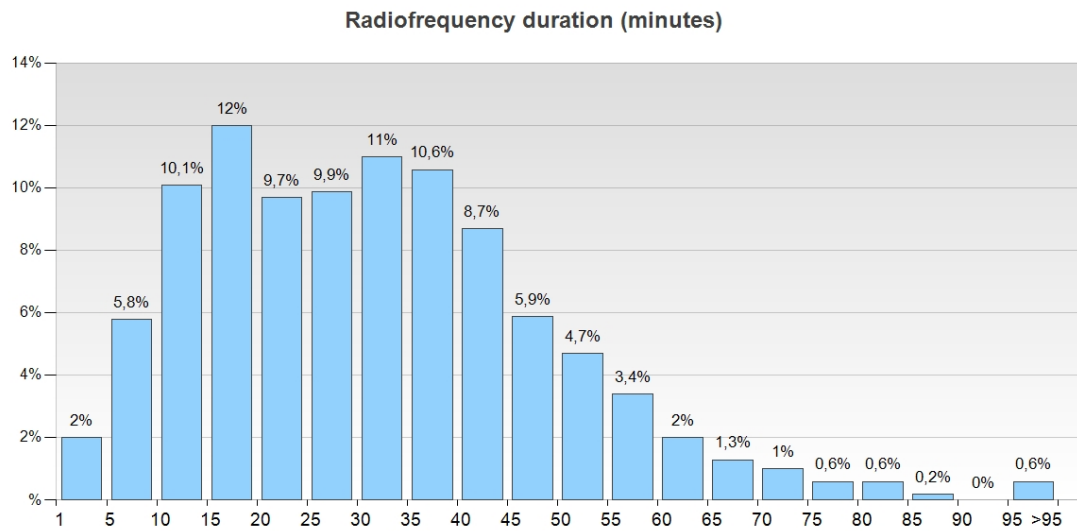
Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	1534
Vitamin K-Antagonist	171
None	160
Direct Thrombin Inhibitor	93
Other	46
Aspirin	37
Clopidogrel	17
Prasugrel	0
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	484
Score = 1	555
Score = 2	498
Score = 3	317
Score = 4	129
Score = 5	25
Score = 6	15
Score = 7	3
Average Score	1,61

Site of Ablation	n
RIPV	1872
LSPV	1843
RSPV	1836
LIPV	1828
CFAE	90
Other Lines	56
SVC	36
Roof Line	33
Non-PV Focus	29
RMPV	29
Mitral Isthmus Line	18
Other Veins	16
Septal Line	5
Vein of Marshall	1

Atrial Fibrillation

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	2	31	140	1529	3
Irrigated Technology				1466	
RF Duty Cycled				168	



Atrial Fibrillation

Cryoablation	min.	Ø	max.	n	n₀*
Total Duration (minutes)	4	23,6	206	331	0

	n
Additional RF or Cryo Cath Needed	1

	n
Laser Balloon	2

	n
Contact Force	496

	n
Irrigated Multielectrode Ablation	1

Access	n	%
Trans-septal, Puncture	1838	90,72
Trans-septal, PFO	172	8,49
Other	16	0,79
Venous	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	2026	

Mapping	n	%
3D Mapping	1398	69
Conventional	316	15,6
Lasso	261	12,88
Other	42	2,07
Non Contact	5	0,25
Basket	4	0,2
HD Mesh	0	0
Total	2026	

Atrial Fibrillation

Catheter Steering	n	%
Conventional	2006	99,01
Other	12	0,59
Stereotaxis	6	0,3
Hansen	2	0,1
Total	2026	

Results	n
All Veins Isolated	2008
Not All Veins Isolated	16
Mitral Isthmus Line Block Confirmed	14
Roof Line Block Confirmed	12
Roof Line Block Not Confirmed	6
Mitral Isthmus Line Block Not Confirmed	2

Sinus Rhythm	n
Spontaneous	1057
With Electrical Cardioversion / Stimulation	490
By Ablation	468
Not Achieved	23
AAD	4

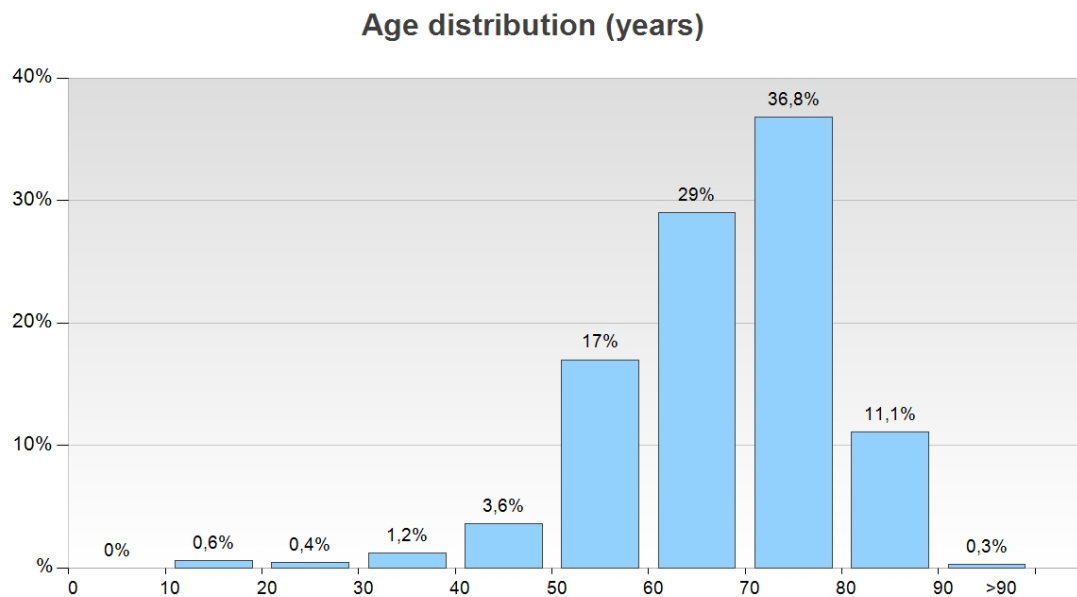
Atrial Fibrillation

Periprocedural Complications	n
No complications	1997
Tamponade	7
Inguinal Hematoma	6
Pericardial Effusion	5
Other	4
Phrenic Nerve Paralysis	4
Stroke	2
Transient AV Block	1
AV Fistula	0
Infection	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesion	0

Right Atrial Flutter

Ablation of Right Atrial Flutter (RAFlu)	n
All interventions	1521
RAFlu combined with others	494
RAFlu only	1027

The following statistics include RAFlu only procedures



Age (years)	min.	Ø	max.
Female	17	67	92
Male	18	68	96
All	17	68	96

Number of patients	n	%
Females	228	22,2
Males	799	77,8
Total	1027	

Right Atrial Flutter

Cardiopathy (Underlying heart disease)	n	%
None	470	45,76
Ischemic	142	13,83
Hypertensive Cardiomyopathy	141	13,73
Valvular	77	7,5
Tachycardiomyopathy	63	6,13
Dilated	34	3,31
Congenital	21	2,04
Other	21	2,04
H(O)CM	16	1,56
Post Valvular Surgery	13	1,27
Post Congenital Surgery	7	0,68
Infiltrative	7	0,68
CABG	6	0,58
RV Cardiomyopathy	5	0,49
Angioplasty	3	0,29
Brugada Syndrome	1	0,1
Channelopathy long QT	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Catecholaminergic Polymorphic VT	0	0
Total	1027	

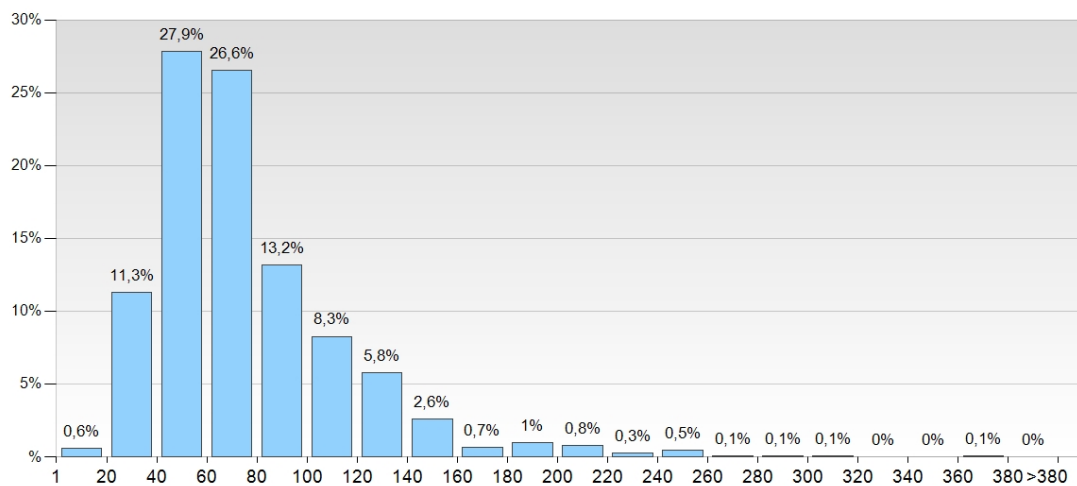
Symptoms	n
Palpitations	784
Dyspnea	345
Fatigue	258
Dizziness	106
None	50
Other	30
Syncope	27
Angina Pectoris	13
SCD	3

Right Atrial Flutter

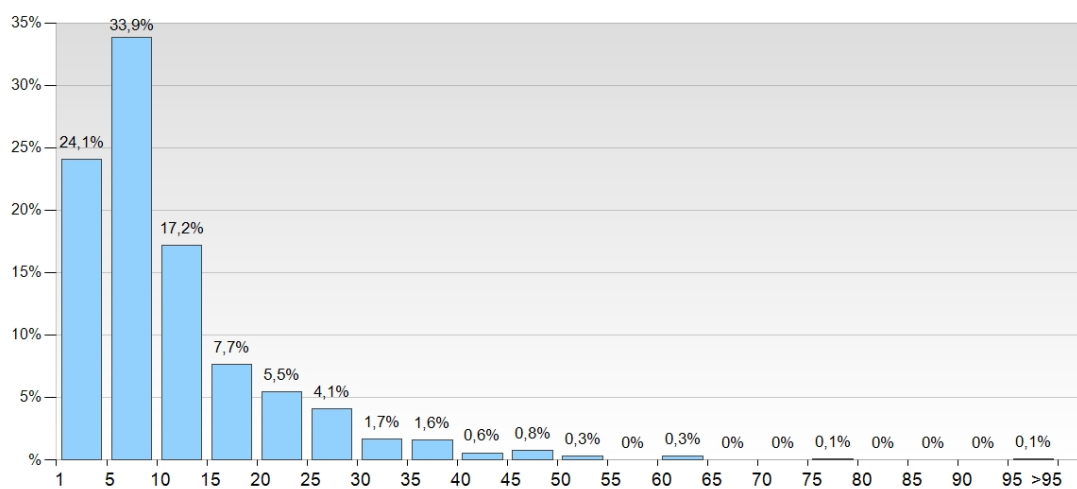
Anesthesia	n	%
Local	981	95,52
General	46	4,48
Total	1027	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	7	72,8	360	1027	0
Fluoroscopy time	1	11	122	1004	23

Investigation time (minutes)



Fluoroscopy time (minutes)



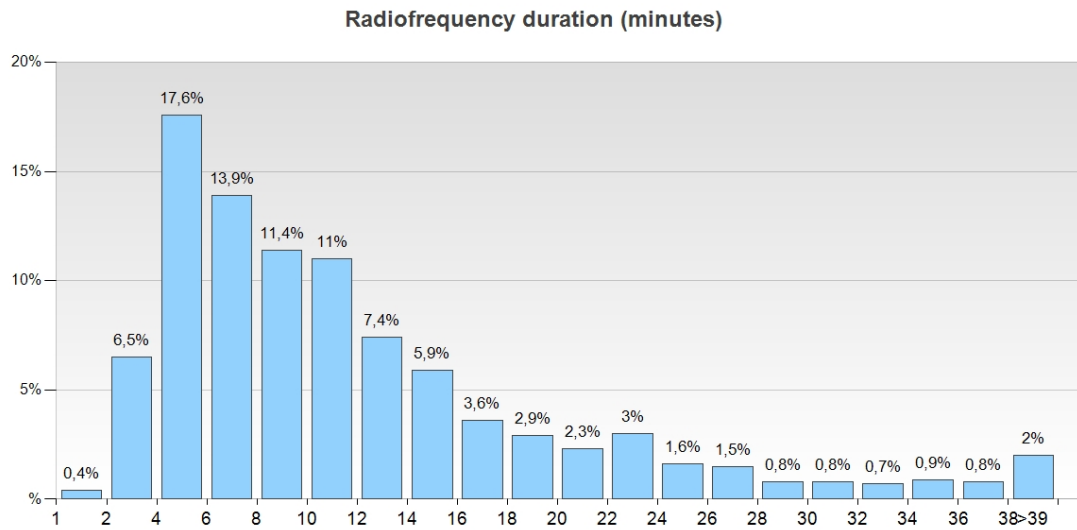
Right Atrial Flutter

Type of Flutter	n
Cavotricuspid	1003
Scar related	32
Other	5

Intervention	n	%
Primary Intervention	946	92,11
Redo	81	7,89

Right Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	12	513	971	51
Irrigated Technology				620	



Right Atrial Flutter

Cryoablation	min.	Ø	max.	n	n₀*
Total Duration (minutes)	16	23,4	28	5	0

	n
Additional RF or Cryo Cath Needed	1

Access	n	%
Venous	1025	99,81
Other	1	0,1
Epicardial, Thoracotomy	1	0,1
Arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Trans-septal, Puncture	0	0
Epicardial, Sub-xiphoid	0	0
Trans-septal, PFO	0	0
Total	1027	

Mapping	n	%
Conventional	721	70,2
3D Mapping	301	29,31
HD Mesh	4	0,39
Basket	1	0,1
Lasso	0	0
Other	0	0
Non Contact	0	0
Total	1027	

Catheter Steering	n	%
Conventional	1022	99,51
Stereotaxis	3	0,29
Other	2	0,19
Hansen	0	0
Total	1027	

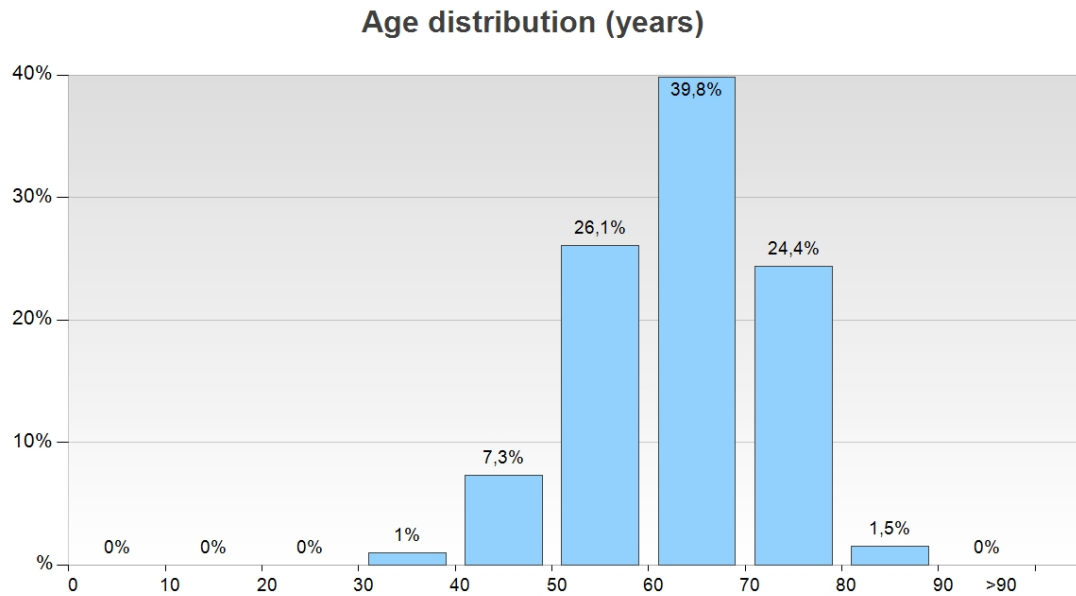
Results	n	%
Block confirmed	1004	97,76
Block not confirmed	23	2,24

Right Atrial Flutter

Periprocedural Complications	n
No complications	1020
Other	4
Pericardial Effusion	1
High Degree or Complete AV Block	1
Inguinal Hematoma	1
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
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0

Atrial Fibrillation combined with Right Atrial Flutter

Number of interventions (AF with RAFlu): 410



Age (years)	min.	Ø	max.
Female	42	66	80
Male	35	63	88
All	35	64	88

Number of patients	n	%
Females	110	26,83
Males	300	73,17
Total	410	

Atrial Fibrillation combined with Right Atrial Flutter

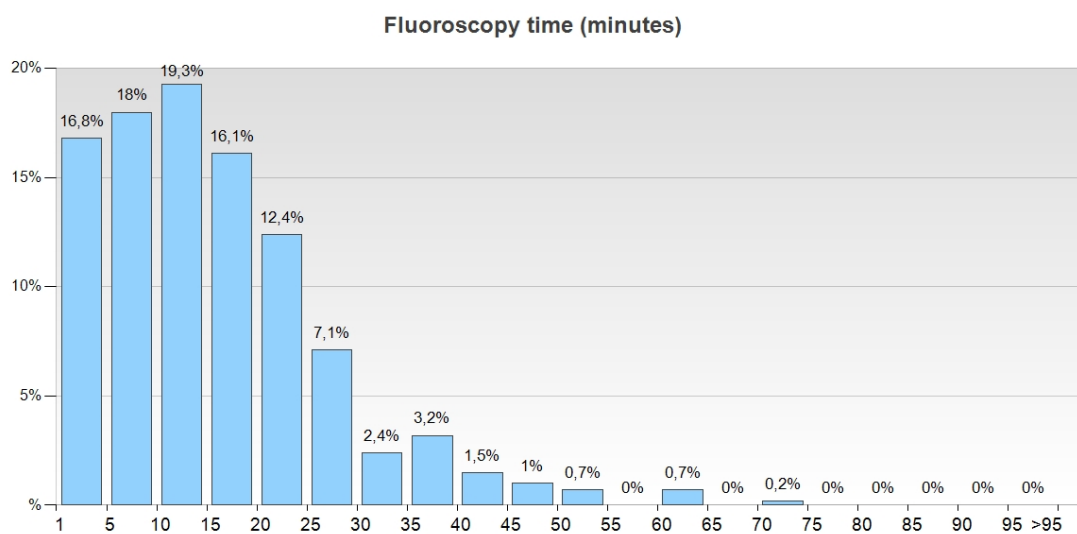
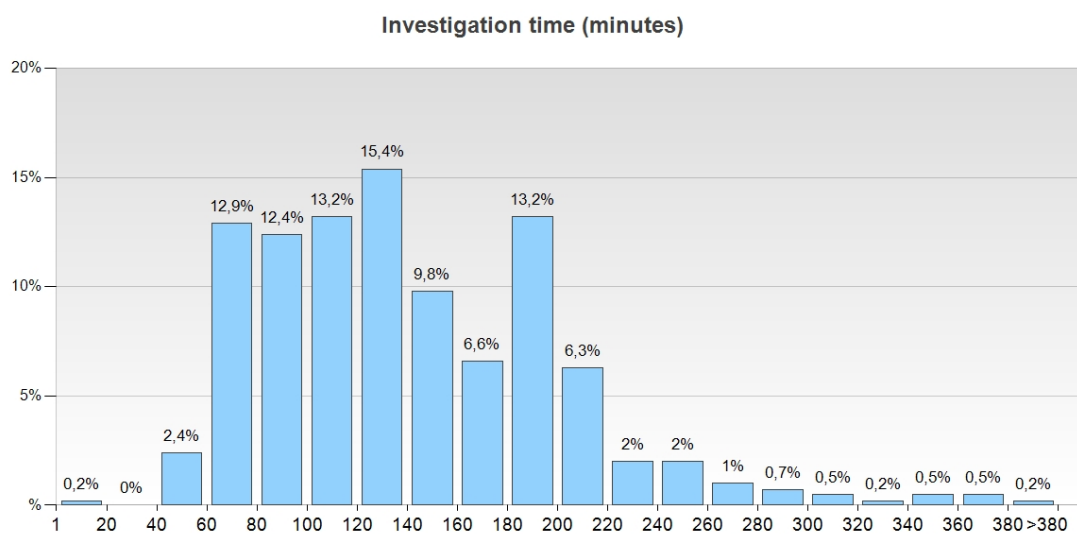
Cardiopathy (Underlying heart disease)	n	%
None	266	64,88
Hypertensive Cardiomyopathy	38	9,27
Tachycardiomyopathy	32	7,8
Valvular	21	5,12
Other	17	4,15
Ischemic	16	3,9
Dilated	6	1,46
Angioplasty	5	1,22
Congenital	4	0,98
H(O)CM	3	0,73
Post Congenital Surgery	1	0,24
CABG	1	0,24
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Infiltrative	0	0
Total	410	

Symptoms	n
Palpitations	340
Fatigue	139
Dyspnea	95
Other	60
Dizziness	35
None	11
Angina Pectoris	6
Syncope	6
SCD	0

Atrial Fibrillation combined with Right Atrial Flutter

Anesthesia	n	%
Local	163	39,76
General	247	60,24
Total	410	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	10	137,2	420	410	0
Fluoroscopy time	1	15,3	72	408	2



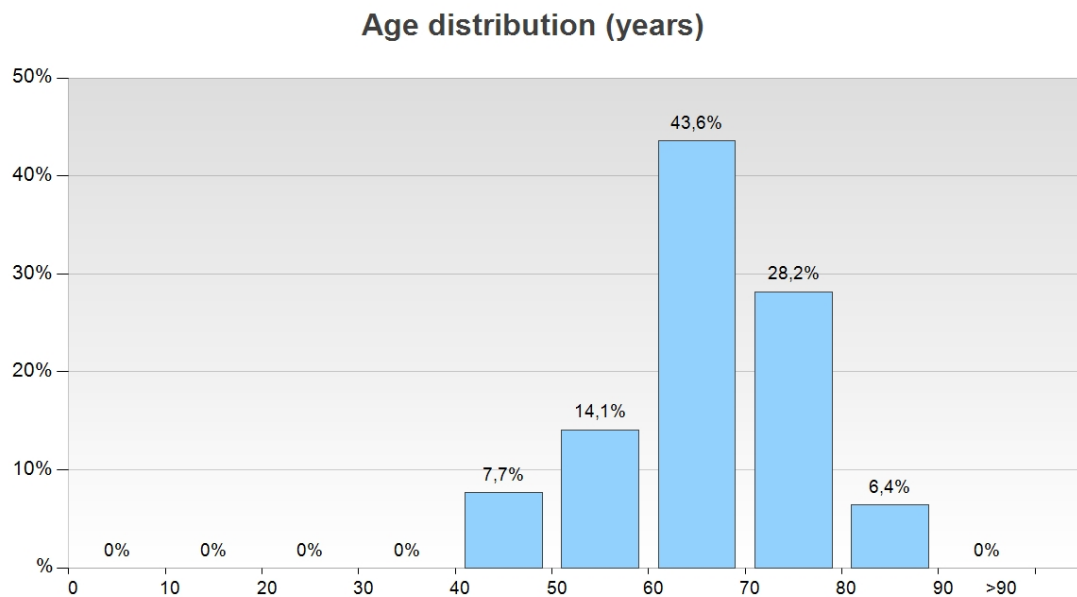
Atrial Fibrillation combined with Right Atrial Flutter

Periprocedural Complications	n
No complications	408
Tamponade	1
Transient AV Block	1
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
Pulmonary Oedema	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0

Left Atrial Flutter

Ablation of Left Atrial Flutter (LAFlu)	n
All interventions	160
LAFlu combined with others	82
LAFlu only	78

The following statistics include LAFlu only procedures



Age (years)	min.	Ø	max.
Female	42	69	88
Male	42	66	89
All	42	67	89

Number of patients	n	%
Females	25	32,05
Males	53	67,95
Total	78	

Left Atrial Flutter

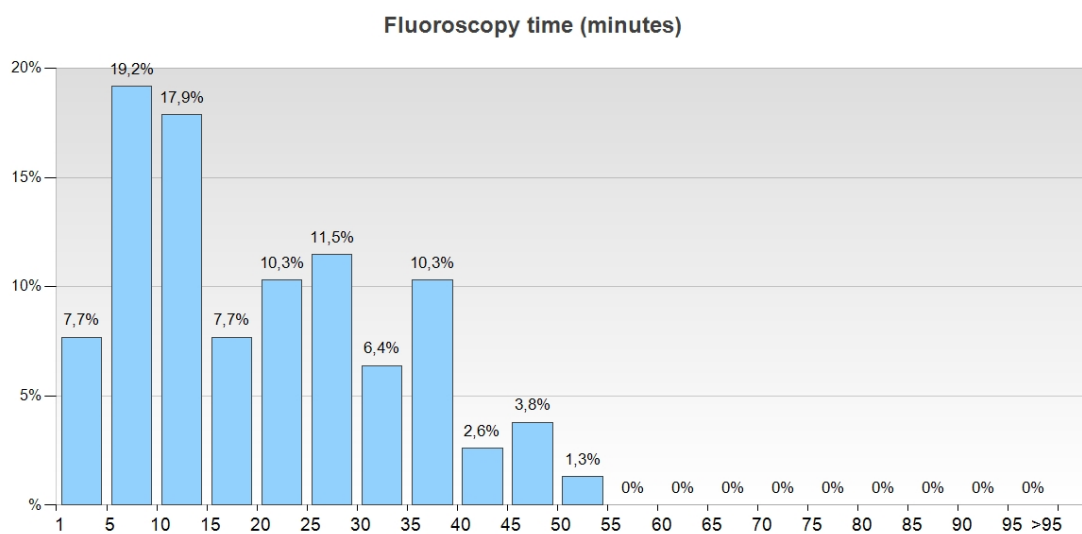
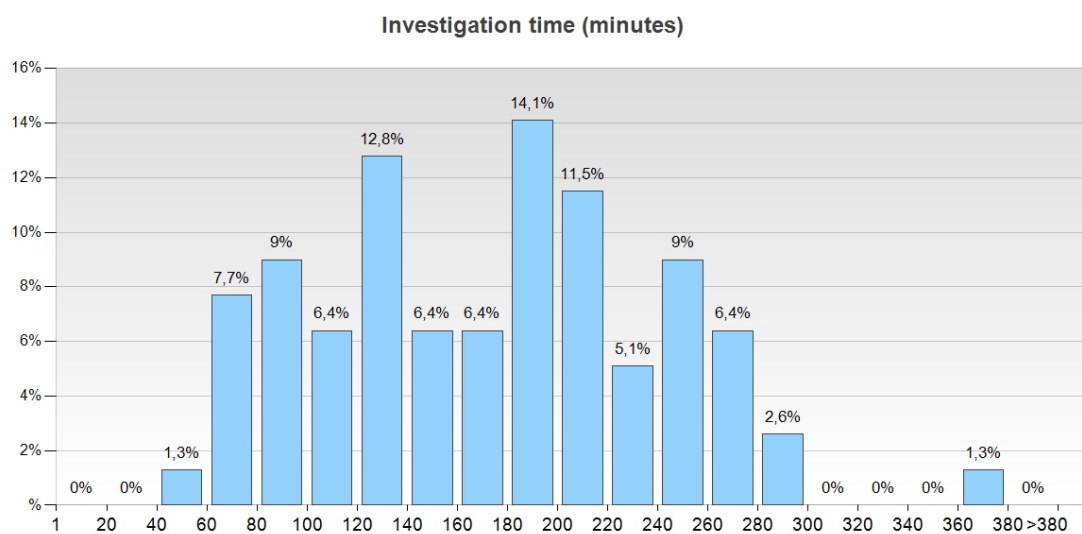
Cardiopathy (Underlying heart disease)	n	%
None	34	43,59
Hypertensive Cardiomyopathy	10	12,82
Tachycardiomyopathy	8	10,26
Other	6	7,69
Valvular	5	6,41
Ischemic	5	6,41
Post Valvular Surgery	3	3,85
H(O)CM	2	2,56
Congenital	1	1,28
Post Congenital Surgery	1	1,28
Infiltrative	1	1,28
CABG	1	1,28
Dilated	1	1,28
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Total	78	

Symptoms	n
Palpitations	61
Dyspnea	26
Fatigue	21
Other	9
Dizziness	5
None	3
Syncope	1
Angina Pectoris	0
SCD	0

Left Atrial Flutter

Anesthesia	n	%
Local	33	42,31
General	45	57,69
Total	78	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	40	169	364	78	0
Fluoroscopy time	2	19,8	52	77	1



Left Atrial Flutter

Type of Flutter	n
Other	30
Perimitral	29
Roof-dependent	26
Peri Ostial Pulmonary Vein	11
Peri-Incisional	3

EHRA-Score	n	%
Score I	6	7,69
Score II	48	61,54
Score III	23	29,49
Score IV	1	1,28

Type of Intervention	n	%
Percutaneous	78	100
Hybrid (Epicardial + Endovascular)	0	0
Surgical Ablation	0	0

Intervention	n	%
Primary Intervention	31	39,74
Redo	47	60,26

Antiarrhythmic Drugs	n
Beta Blocker	56
Amiodarone	22
Other	8
Calcium Antagonist	7
None	3
Sotalol	2
Flecainide	2
Digitalis	2
Propafenone	1
Dronedarone	1

Left Atrial Flutter

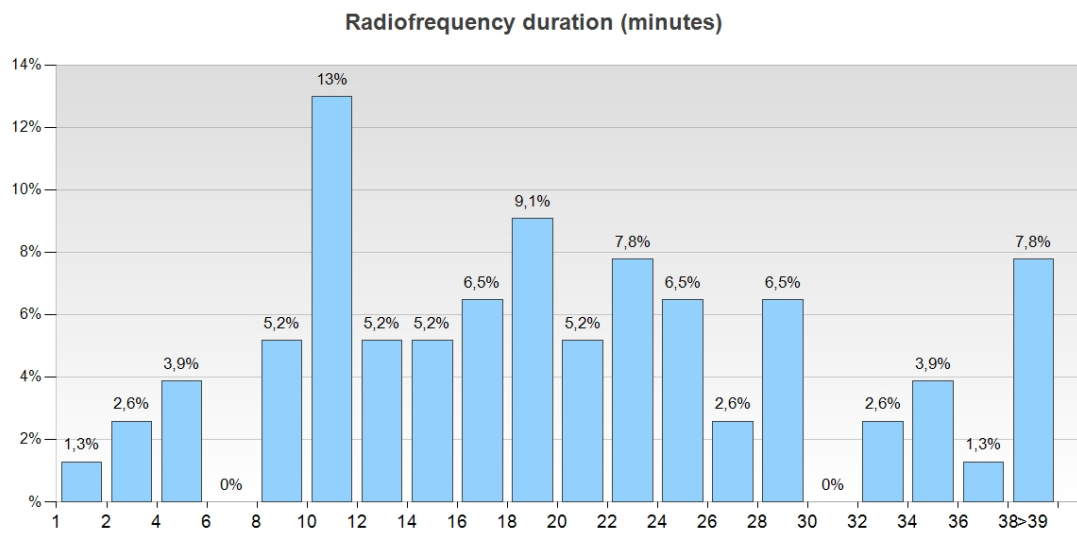
Thromboembolic Risk Factors	n
Hypertension	30
Congestive Heart Failure, LV dysfunction	9
Diabetes	3
Prior MI, Per. Artery Disease, Aortic Plaque	3
Stroke, TIA, Other Embolic Event	2

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	50
Vitamin K-Antagonist	13
Other	8
Direct Thrombin Inhibitor	4
None	3
Prasugrel	0
Ticagrelor	0
Clopidogrel	0
Aspirin	0

CHA₂DS₂-VASc Score	n
Score = 0	15
Score = 1	21
Score = 2	21
Score = 3	14
Score = 4	5
Score = 5	1
Score = 6	1
Score = 7	0
Average Score	1,74

Left Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	21	66	76	1
Irrigated Technology				69	
RF Duty Cycled				1	



Left Atrial Flutter

Access	n	%
Trans-septal, Puncture	62	79,49
Trans-septal, PFO	11	14,1
Other	4	5,13
Arterial	1	1,28
Venous	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	78	

Mapping	n	%
3D Mapping	67	85,9
Non Contact	5	6,41
Conventional	3	3,85
HD Mesh	2	2,56
Lasso	1	1,28
Other	0	0
Basket	0	0
Total	78	

Catheter Steering	n	%
Conventional	77	98,72
Stereotaxis	1	1,28
Hansen	0	0
Other	0	0
Total	78	

Results	n	%
Block confirmed	70	89,74
Block not confirmed	8	10,26

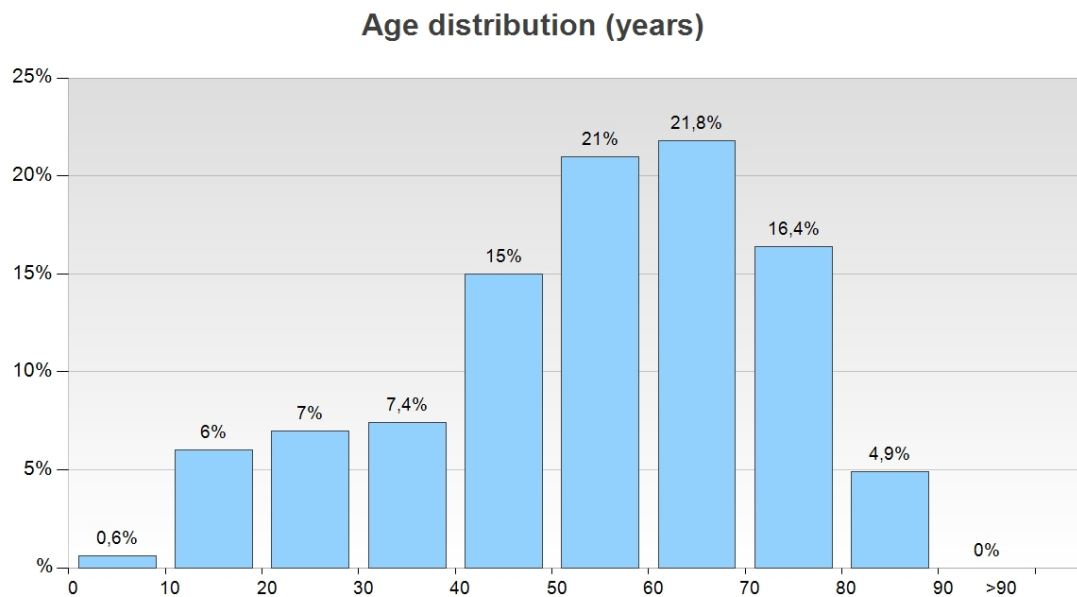
Left Atrial Flutter

Periprocedural Complications	n
No complications	77
TIA	1
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
Pulmonary Oedema	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Ablation of AVNRT	n
All interventions	1079
AVNRT combined with others	78
AVNRT only	1001

The following statistics include AVNRT only procedures



Age (years)	min.	Ø	max.
Female	6	54	89
Male	6	55	90
All	6	55	90

Number of patients	n	%
Females	535	53,45
Males	466	46,55
Total	1001	

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Cardiopathy (Underlying heart disease)	n	%
None	858	85,71
Hypertensive Cardiomyopathy	44	4,4
Ischemic	41	4,1
Tachycardiomyopathy	15	1,5
Valvular	13	1,3
Other	9	0,9
H(O)CM	7	0,7
Congenital	6	0,6
Dilated	4	0,4
Infiltrative	1	0,1
Brugada Syndrome	1	0,1
Post Valvular Surgery	1	0,1
Angioplasty	1	0,1
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Channelopathy long QT	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Total	1001	

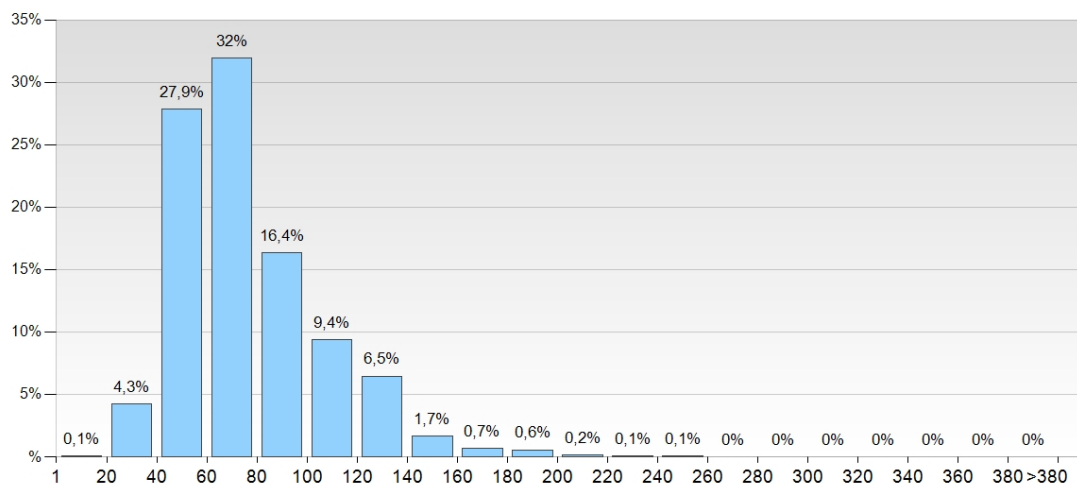
Symptoms	n
Palpitations	951
Dizziness	110
Dyspnea	84
Fatigue	69
Syncope	41
Angina Pectoris	18
Other	16
None	16
SCD	1

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

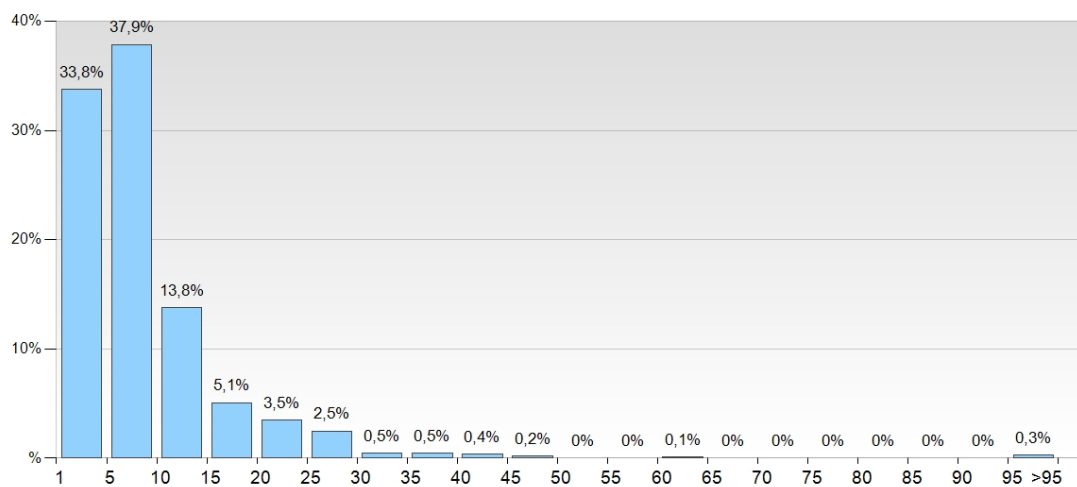
Anesthesia	n	%
Local	968	96,7
General	33	3,3
Total	1001	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	15	73	257	1000	1
Fluoroscopy time	1	8,4	180	986	15

Investigation time (minutes)

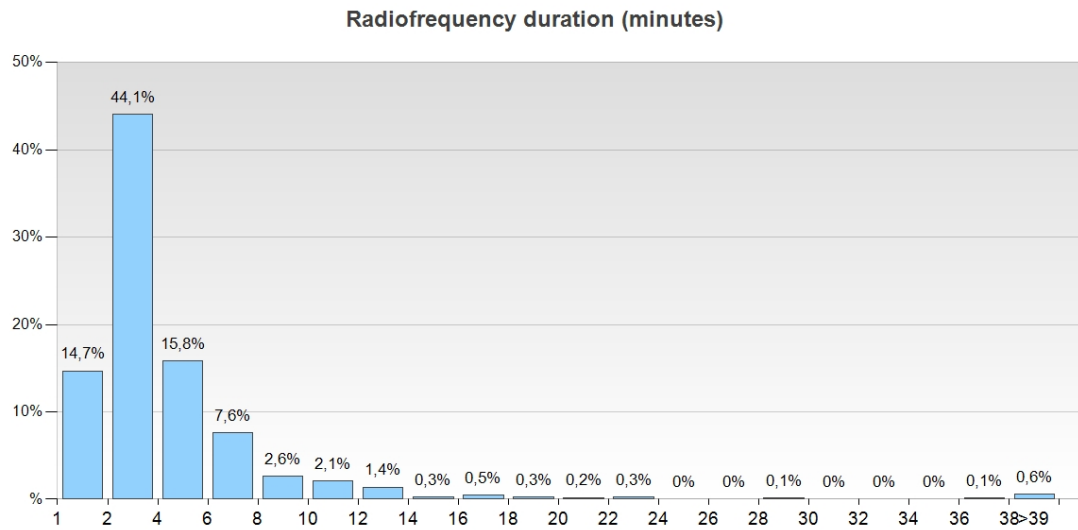


Fluoroscopy time (minutes)



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	4	106	906	91
Irrigated Technology				68	



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Type	n
Slow-Fast	957
Fast-Slow	30
Slow-Slow	22

Intervention	n	%
Primary Intervention	932	93,11
Redo	69	6,89

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	8	12	17	4	0

Mapping	n	%
Conventional	810	80,92
3D Mapping	190	18,98
Non Contact	1	0,1
Other	0	0
Basket	0	0
HD Mesh	0	0
Lasso	0	0
Total	1001	

Catheter Steering	n	%
Conventional	998	99,7
Stereotaxis	2	0,2
Other	1	0,1
Hansen	0	0
Total	1001	

Results	n	%
Success	991	99
No success	10	1

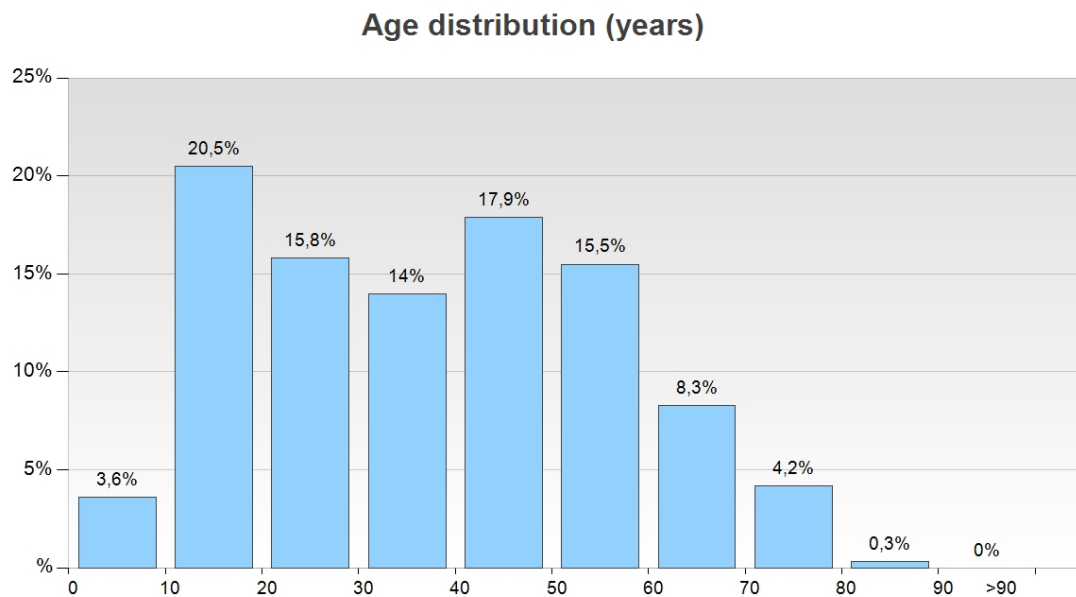
Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Periprocedural Complications	n
No complications	989
Transient AV Block	4
Inguinal Hematoma	3
High Degree or Complete AV Block	3
Other	1
Pseudoaneurysm	1
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
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
PV Stenosis	0

Accessory Pathway

Ablation of Accessory Pathway (AP)	n
All interventions	356
AP combined with others	20
AP only	336

The following statistics include AP only procedures



Age (years)	min.	Ø	max.
Female	6	40	77
Male	1	36	82
All	1	38	82

Number of patients	n	%
Females	145	43,15
Males	191	56,85
Total	336	

Accessory Pathway

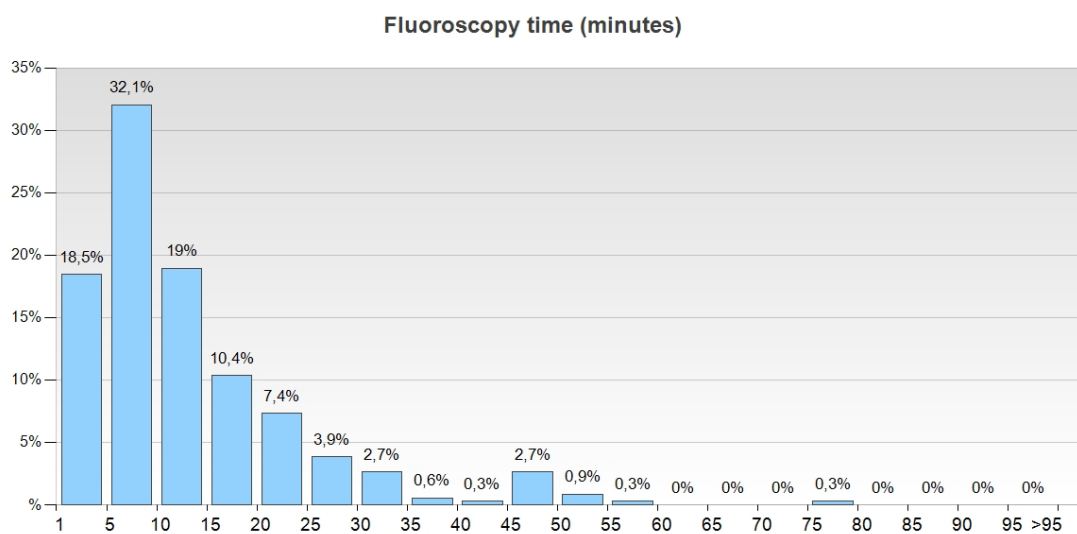
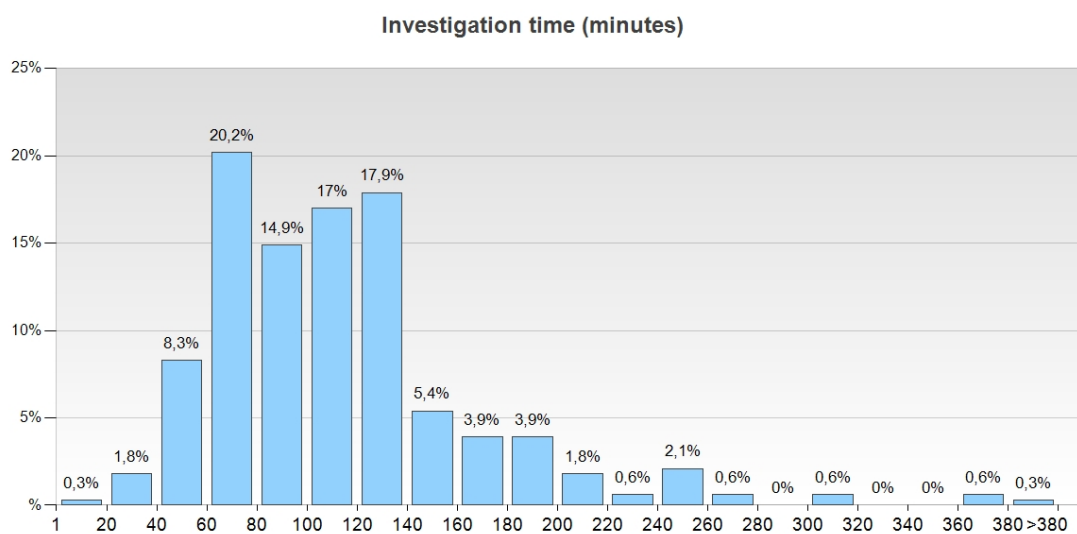
Cardiopathy (Underlying heart disease)	n	%
None	312	92,86
Ischemic	6	1,79
Congenital	5	1,49
Tachycardiomyopathy	5	1,49
Valvular	4	1,19
Hypertensive Cardiomyopathy	2	0,6
RV Cardiomyopathy	1	0,3
Other	1	0,3
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
H(O)CM	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Dilated	0	0
Total	336	

Symptoms	n
Palpitations	291
None	32
Dizziness	28
Dyspnea	18
Syncope	17
Fatigue	13
Angina Pectoris	3
SCD	3
Other	3

Accessory Pathway

Anesthesia	n	%
Local	281	83,63
General	55	16,37
Total	336	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	13	109,2	490	336	0
Fluoroscopy time	1	12,7	75	333	3



Accessory Pathway

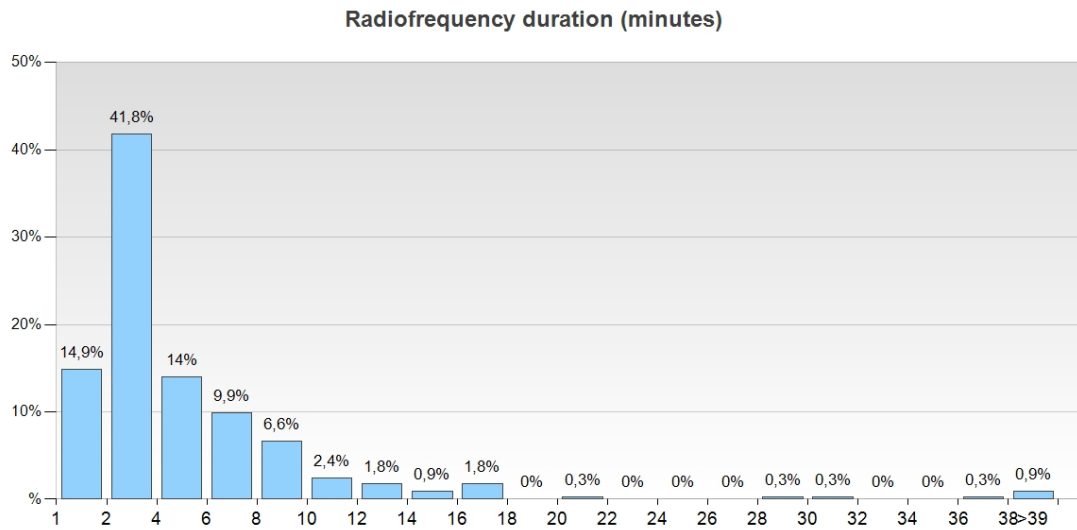
Type	n
WPW	218
Concealed	102
Asymptomatic Preexcitation	17
PJRT	5
Other	4
Atrio-Fascicular	3
Mahaim	0

Intervention	n	%
Primary Intervention	296	88,1
Redo	40	11,9

Site of Ablation	n
left	235
left: Free Wall	128
right	105
left: Posteroseptal	60
left: Posterior	58
right: Posteroseptal	56
right: Parahisian	14
right: Anteroseptal	11
right: Free Wall	9
right: Coronary Sinus Aneurysm	9
right: Midseptal	7
right: Posterior	4

Accessory Pathway

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	5	60	322	13
Irrigated Technology				185	



Accessory Pathway

Cryoablation	min.	Ø	max.	n	n₀[*]
Total Duration (minutes)	2	3	4	2	1

Access	n	%
Trans-septal, Puncture	160	47,62
Venous	124	36,9
Arterial	38	11,31
Trans-septal, PFO	13	3,87
Epicardial, Coronary Sinus	1	0,3
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Other	0	0
Epicardial, Thoracoscopy	0	0
Total	336	

Mapping	n	%
Conventional	217	64,58
3D Mapping	117	34,82
Basket	1	0,3
HD Mesh	1	0,3
Lasso	0	0
Other	0	0
Non Contact	0	0
Total	336	

Catheter Steering	n	%
Conventional	335	99,7
Hansen	1	0,3
Other	0	0
Stereotaxis	0	0
Total	336	

Results	n	%
Success	312	92,86
No success	24	7,14

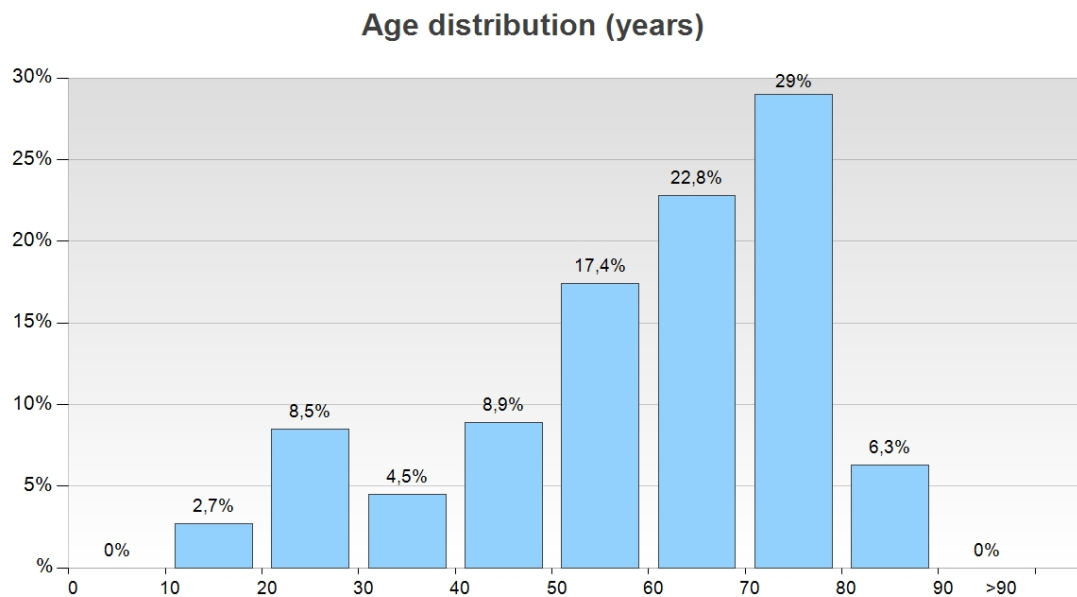
Accessory Pathway

Periprocedural Complications	n
No complications	333
Pericardial Effusion	1
Other	1
Transient AV Block	1
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
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0

Atrial Tachycardia

Ablation of Atrial Tachycardia (AT)	n
All interventions	307
AT combined with others	83
AT only	224

The following statistics include AT only procedures



Age (years)	min.	Ø	max.
Female	12	58	84
Male	23	62	87
All	12	60	87

Number of patients	n	%
Females	119	53,12
Males	105	46,88
Total	224	

Atrial Tachycardia

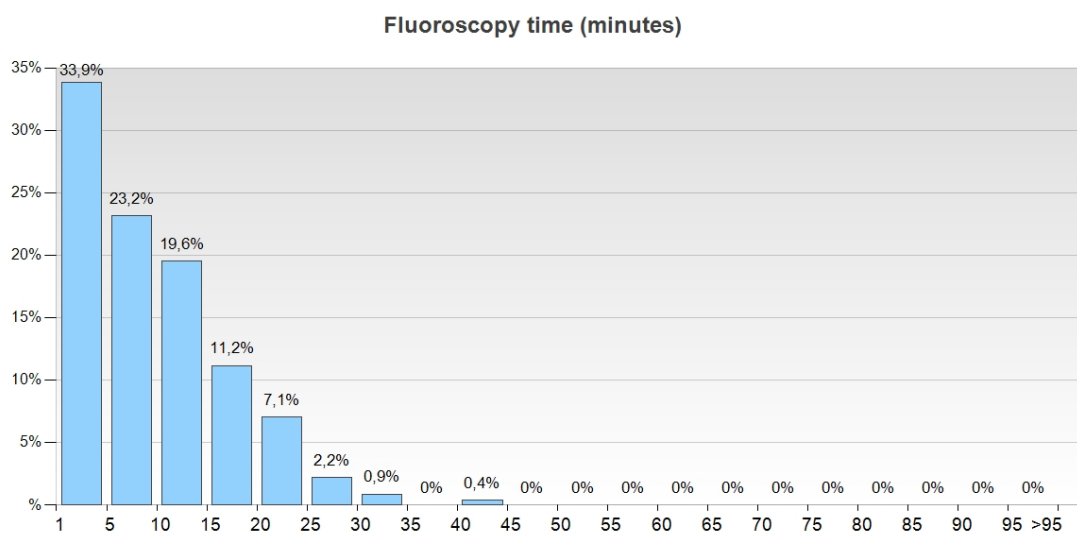
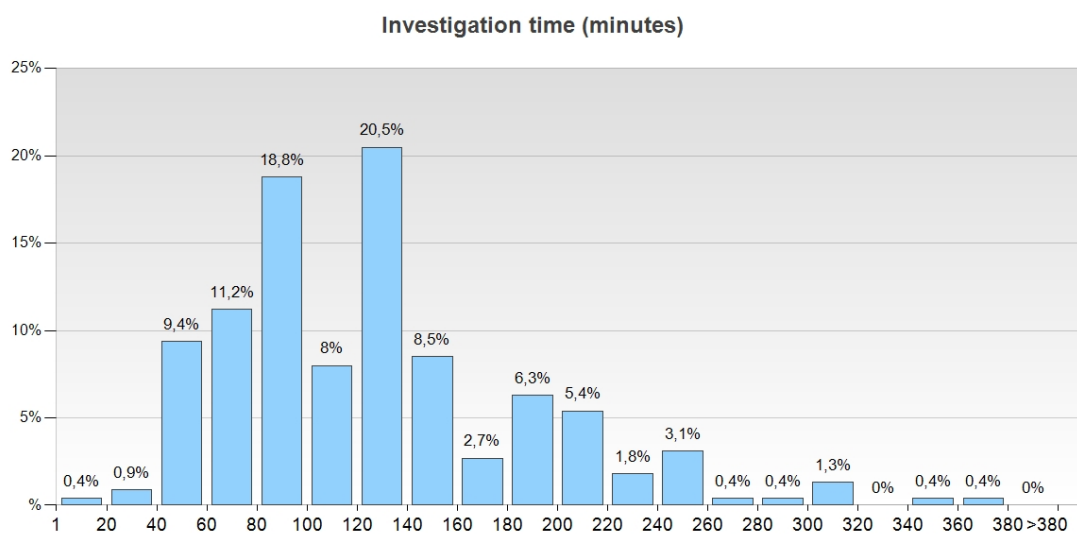
Cardiopathy (Underlying heart disease)	n	%
None	149	66,52
Hypertensive Cardiomyopathy	20	8,93
Ischemic	15	6,7
Other	10	4,46
Congenital	9	4,02
Valvular	8	3,57
Tachycardiomyopathy	4	1,79
Dilated	3	1,34
Post Valvular Surgery	2	0,89
H(O)CM	2	0,89
Angioplasty	1	0,45
Infiltrative	1	0,45
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
CABG	0	0
Total	224	

Symptoms	n
Palpitations	203
Dyspnea	29
Fatigue	29
Dizziness	22
Other	11
Syncope	6
Angina Pectoris	3
None	2
SCD	0

Atrial Tachycardia

Anesthesia	n	%
Local	197	87,95
General	27	12,05
Total	224	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	14	123	360	224	0
Fluoroscopy time	1	9,2	43	221	3



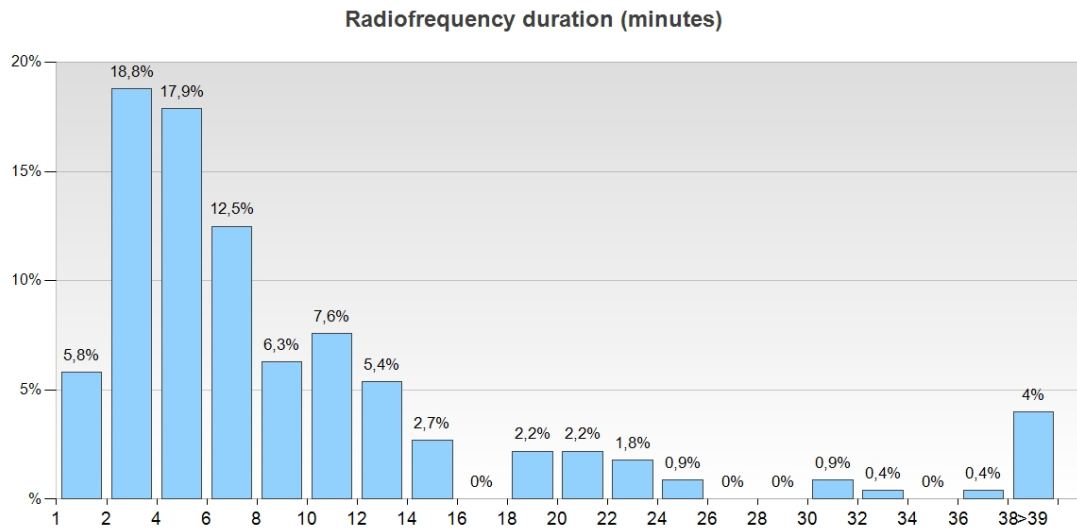
Atrial Tachycardia

Intervention	n	%
Primary Intervention	181	80,8
Redo	43	19,2

Site of Ablation	n
right	184
right: Crista Terminalis	57
left	56
right: Other Right	49
right: Peritricuspid	46
right: Septal Right	45
left: Other Left	20
left: Septal Left	15
left: Perimitral	13
left: Periostial PV	10
left: Left Atrial Appendage	5
right: Right Appendage	4

Atrial Tachycardia

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	11	213	201	23
Irrigated Technology				163	



Atrial Tachycardia

Access	n	%
Venous	176	78,57
Trans-septal, Puncture	43	19,2
Arterial	4	1,79
Trans-septal, PFO	1	0,45
Other	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Total	224	

Mapping	n	%
3D Mapping	164	73,21
Conventional	50	22,32
Non Contact	5	2,23
HD Mesh	4	1,79
Lasso	1	0,45
Other	0	0
Basket	0	0
Total	224	

Catheter Steering	n	%
Conventional	223	99,55
Stereotaxis	1	0,45
Other	0	0
Hansen	0	0
Total	224	

Results	n	%
Success	202	90,18
No success	22	9,82

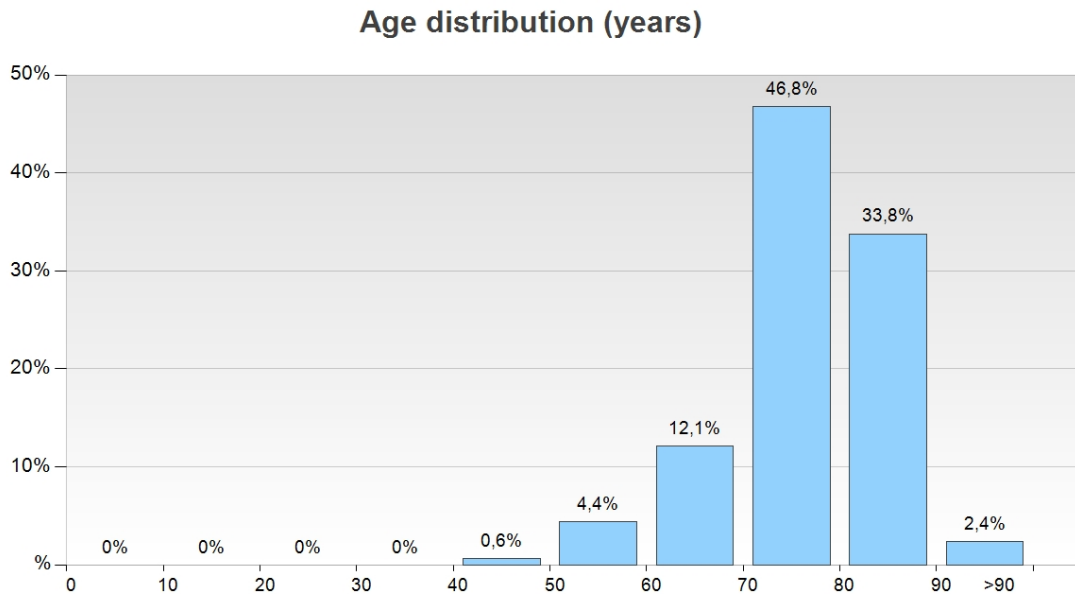
Atrial Tachycardia

Periprocedural Complications	n
No complications	222
Phrenic Nerve Paralysis	1
Pericardial Effusion	1
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Other	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	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	351
AVN(R) combined with others	11
AVN(R) only	340

The following statistics include AVN(R) only procedures



Age (years)	min.	Ø	max.
Female	45	78	97
Male	50	76	94
All	45	77	97

Number of patients	n	%
Females	203	59,71
Males	137	40,29
Total	340	

Atrioventricular Node (Rate Control in Atr. Fibrillation)

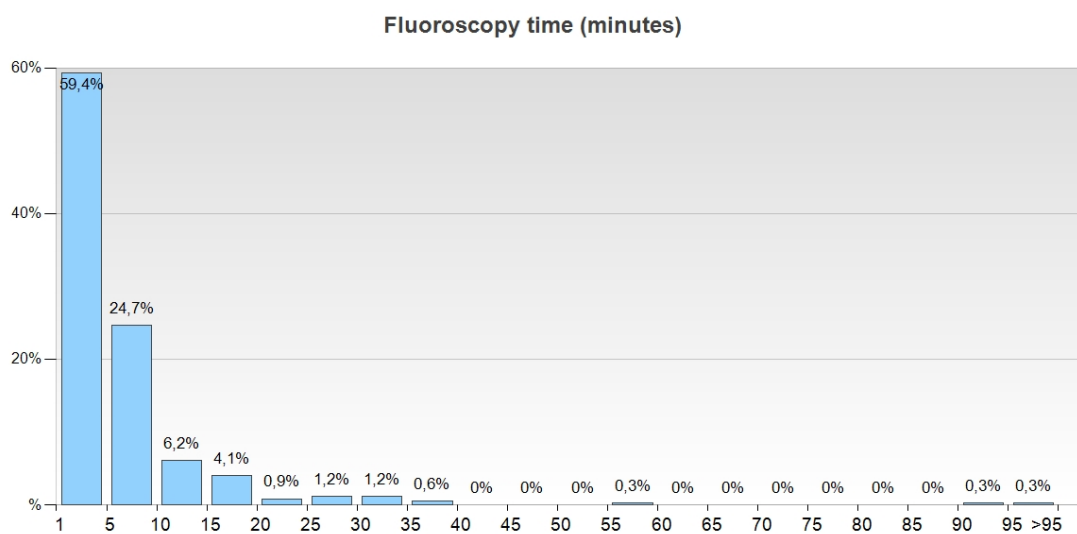
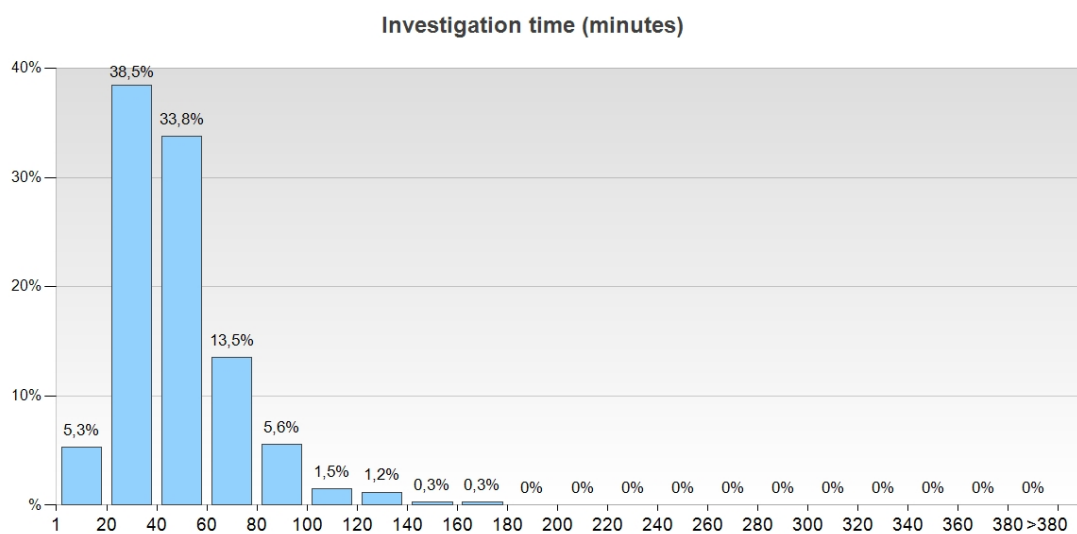
Cardiopathy (Underlying heart disease)	n	%
None	92	27,06
Tachycardiomyopathy	63	18,53
Ischemic	56	16,47
Hypertensive Cardiomyopathy	49	14,41
Valvular	27	7,94
Dilated	19	5,59
Other	17	5
H(O)CM	8	2,35
Post Valvular Surgery	3	0,88
Congenital	3	0,88
Angioplasty	1	0,29
Infiltrative	1	0,29
CABG	1	0,29
Brugada Syndrome	0	0
Channelopathy long QT	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Catecholaminergic Polymorphic VT	0	0
Total	340	

Symptoms	n
Palpitations	251
Dyspnea	149
Fatigue	127
Dizziness	33
Other	22
Syncope	9
Angina Pectoris	7
None	2
SCD	0

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Anesthesia	n	%
Local	334	98,24
General	6	1,76
Total	340	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	2	44,2	165	340	0
Fluoroscopy time	1	6,3	146	337	3



Atrioventricular Node (Rate Control in Atr. Fibrillation)

Type of Fibrillation	n	%
Paroxysmal	68	20
Persistent	148	43,53
Long-standing Persistent (>1 Year)	124	36,47

EHRA-Score	n	%
Score I	22	6,47
Score II	104	30,59
Score III	177	52,06
Score IV	37	10,88

Intervention	n	%
Primary Intervention	300	88,24
Redo	21	6,18
Previous AF Abl. Procedure	19	5,59

Antiarrhythmic Drugs	n
Beta Blocker	261
Amiodarone	94
Calcium Antagonist	64
Digitalis	33
None	29
Other	13
Sotalol	12
Flecainide	7
Dronedarone	3
Propafenone	2

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Thromboembolic Risk Factors	n
Hypertension	183
Congestive Heart Failure, LV dysfunction	71
Prior MI, Per. Artery Disease, Aortic Plaque	48
Diabetes	26
Stroke, TIA, Pther Embolic Event	25

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	165
Vitamin K-Antagonist	112
Direct Thrombin Inhibitor	22
None	18
Other	17
Aspirin	10
Clopidogrel	4
Prasugrel	0
Ticagrelor	0

CHA₂DS₂-VASc Score	n
Score = 0	4
Score = 1	24
Score = 2	61
Score = 3	116
Score = 4	74
Score = 5	44
Score = 6	11
Score = 7	3
Average Score	3,23

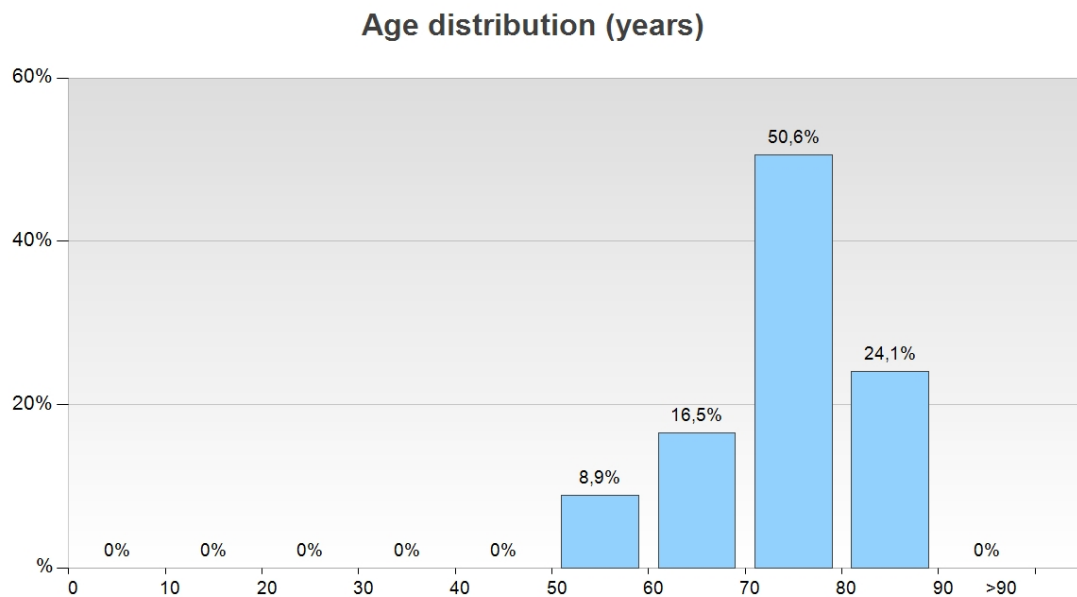
Atrioventricular Node (Rate Control in Atr. Fibrillation)

Periprocedural Complications	n
No complications	339
Pulmonary Oedema	1
Stroke	0
High Degree or Complete AV Block	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
Pericardial Effusion	0
AV Fistula	0
Infection	0

Atrioventricular Node (to resynchronisation)

Ablation of AVN	n
All interventions	90
AVN combined with others	11
AVN only	79

The following statistics include AVN only procedures



Age (years)	min.	Ø	max.
Female	60	76	88
Male	56	75	89
All	56	75	89

Number of patients	n	%
Females	26	32,91
Males	53	67,09
Total	79	

Atrioventricular Node (to resynchronisation)

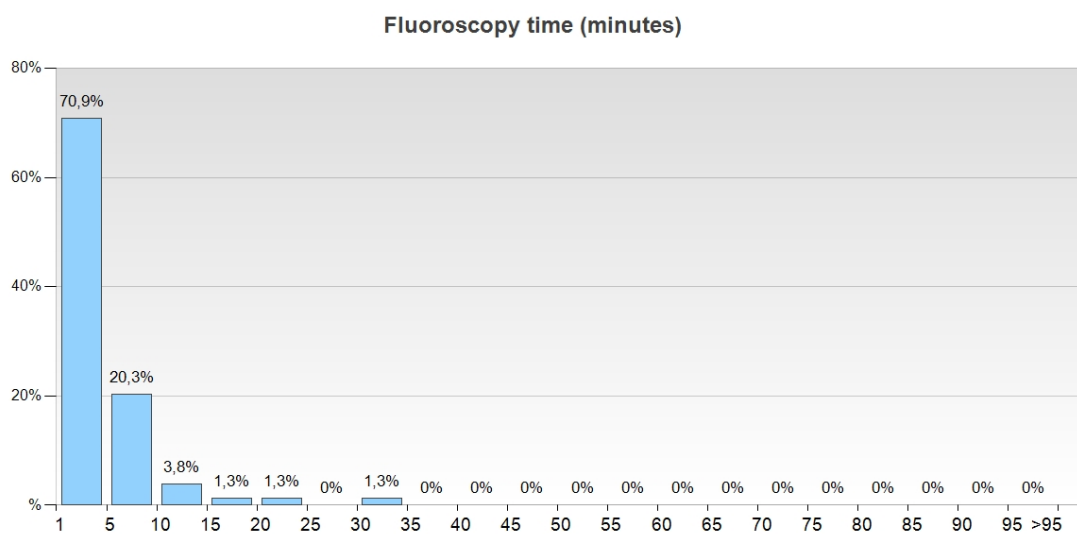
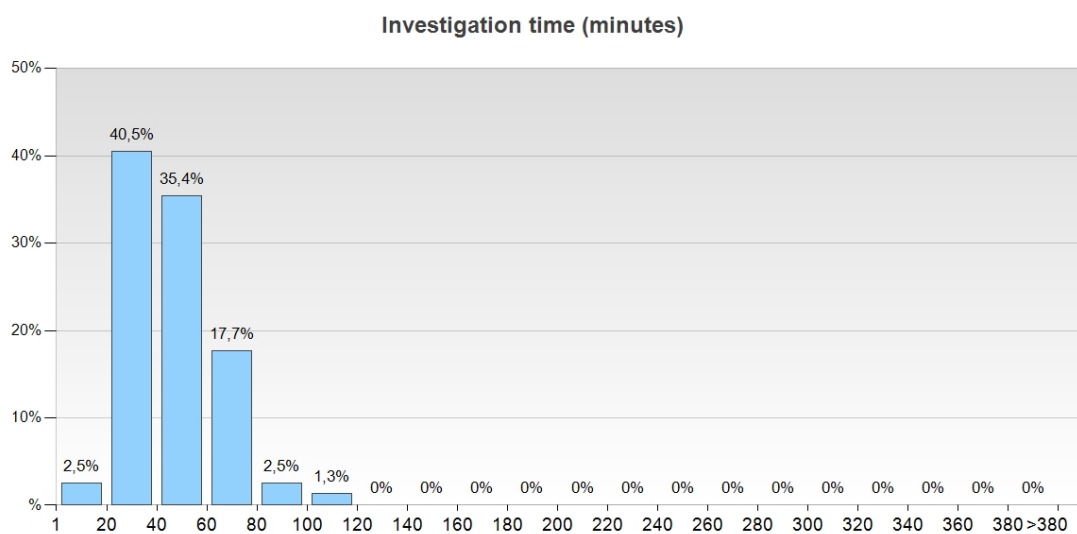
Cardiopathy (Underlying heart disease)	n	%
Dilated	24	30,38
Ischemic	15	18,99
Tachycardiomyopathy	14	17,72
None	8	10,13
Hypertensive Cardiomyopathy	6	7,59
Valvular	4	5,06
Other	4	5,06
Post Valvular Surgery	3	3,8
Angioplasty	1	1,27
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Brugada Syndrome	0	0
Channelopathy long QT	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
Total	79	

Symptoms	n
Palpitations	53
Dyspnea	41
Fatigue	35
Dizziness	8
Syncope	3
Other	3
Angina Pectoris	1
SCD	1
None	0

Atrioventricular Node (to resynchronisation)

Anesthesia	n	%
Local	74	93,67
General	5	6,33
Total	79	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	11	42,6	110	79	0
Fluoroscopy time	1	4,3	30	78	1



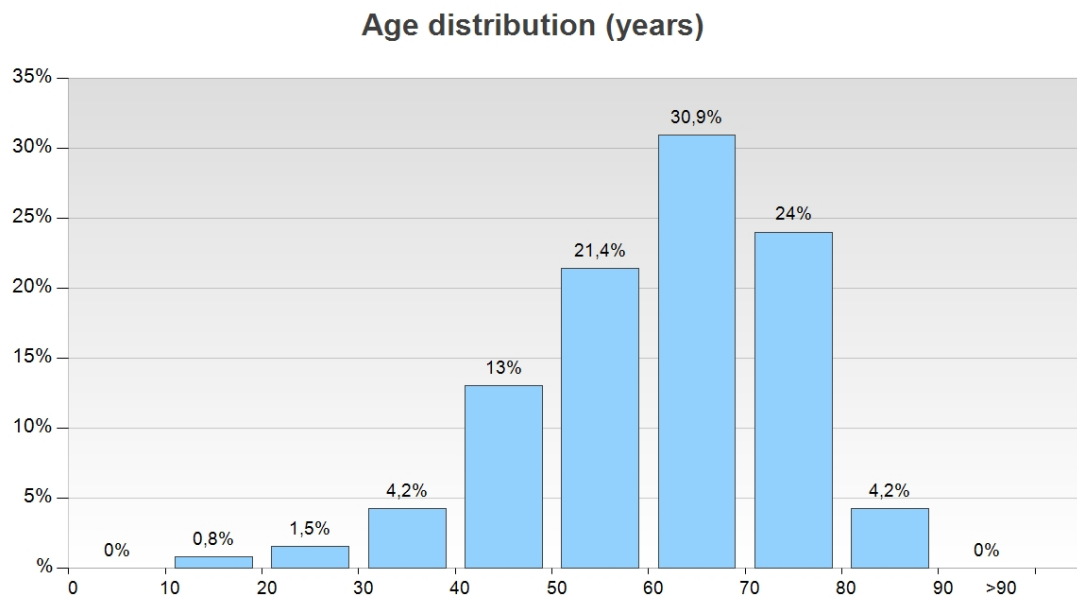
Atrioventricular Node (to resynchronisation)

Periprocedural Complications	n
No complications	79
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
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

Ventricular Tachycardia

Ablation of Ventricular Tachycardia (VT)	n
All interventions	272
VT combined with others	10
VT only	262

The following statistics include VT only procedures



Age (years)	min.	Ø	max.
Female	17	56	87
Male	13	63	87
All	13	62	87

Number of patients	n	%
Females	45	17,18
Males	217	82,82
Total	262	

Ventricular Tachycardia

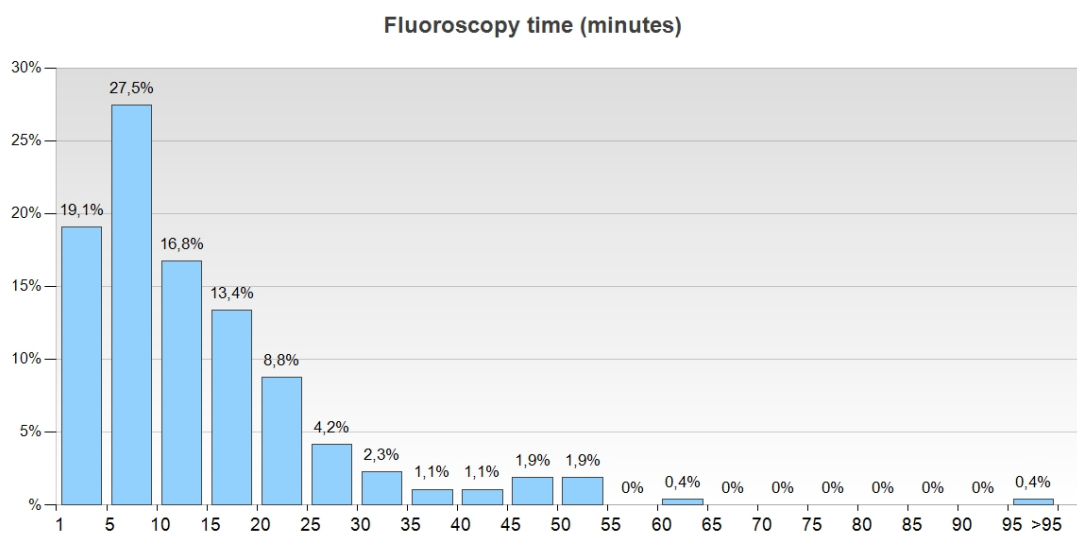
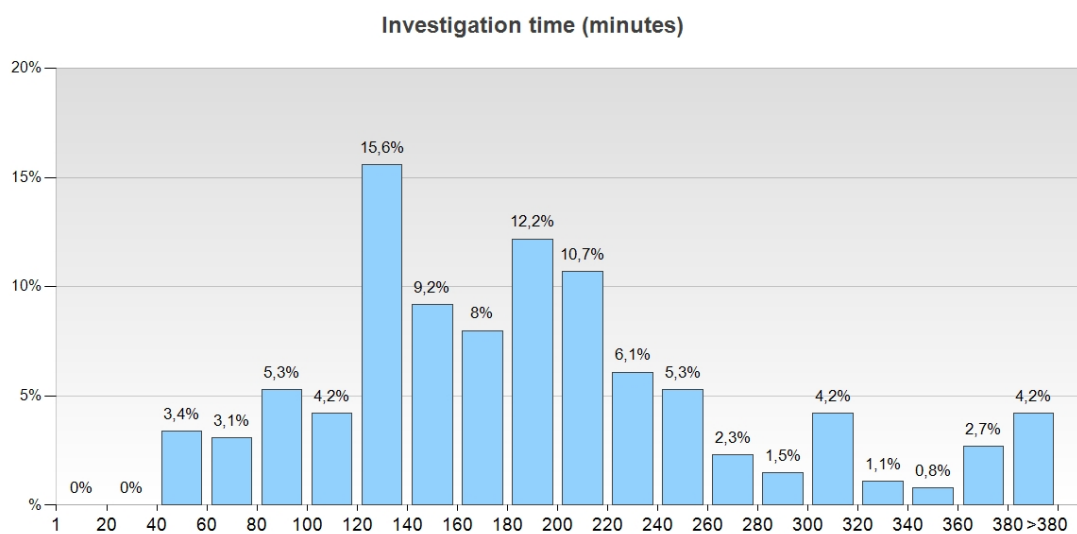
Cardiopathy (Underlying heart disease)	n	%
Ischemic	124	47,33
None	54	20,61
Dilated	23	8,78
RV Cardiomyopathy	11	4,2
Other	11	4,2
Congenital	8	3,05
Hypertensive Cardiomyopathy	7	2,67
Angioplasty	5	1,91
Valvular	4	1,53
Tachycardiomyopathy	4	1,53
Infiltrative	3	1,15
H(O)CM	3	1,15
CABG	1	0,38
Catecholaminergic Polymorphic VT	1	0,38
Brugada Syndrome	1	0,38
Post Valvular Surgery	1	0,38
Post Congenital Surgery	1	0,38
Channelopathy long QT	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Total	262	

Symptoms	n
Palpitations	204
Dyspnea	50
Dizziness	50
Syncope	38
Fatigue	32
Other	24
SCD	21
Angina Pectoris	9
None	4

Ventricular Tachycardia

Anesthesia	n	%
Local	181	69,08
General	81	30,92
Total	262	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	40	187,5	500	262	0
Fluoroscopy time	1	14,8	353	259	3



Ventricular Tachycardia

Type	n
Monomorphic	206
Ischemic	88
Polymorphic	36

Location	n
Other	145
RVOT	50
LVOT / Aortic Cusp	33
Epicardial	23
Left Fascicular VT	19
BB Reentry	9

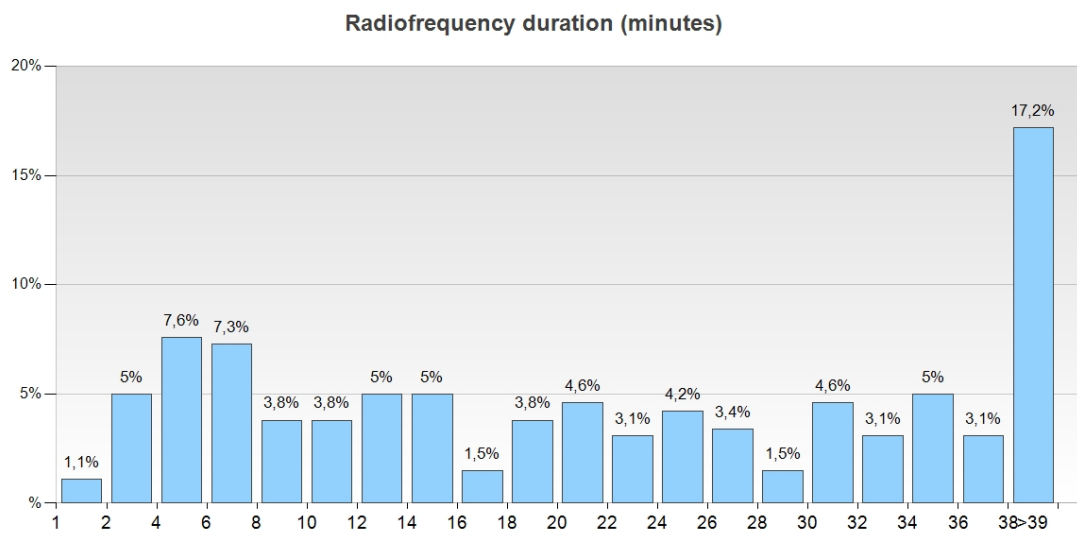
Intervention	n	%
Primary Intervention	202	77,1
Redo	60	22,9

Antiarrhythmic Drugs	n
Beta Blocker	181
Amiodarone	118
None	32
Sotalol	22
Calcium Antagonist	16
Other	14
Flecainide	7
Propafenone	2

Ventricular Tachycardia

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	25	347	248	14
Irrigated Technology				238	

Number of Induced VT: 276



Ventricular Tachycardia

Access	n	%
Trans-septal, Puncture	88	33,59
Venous	84	32,06
Arterial	60	22,9
Epicardial, Sub-xiphoid	15	5,73
Trans-septal, PFO	8	3,05
Epicardial, Thoracotomy	3	1,15
Epicardial, Thoracoscopy	2	0,76
Other	1	0,38
Epicardial, Coronary Sinus	1	0,38
Total	262	

Mapping	n	%
3D Mapping	242	92,37
Conventional	15	5,73
HD Mesh	3	1,15
Lasso	1	0,38
Non Contact	1	0,38
Basket	0	0
Other	0	0
Total	262	

Catheter Steering	n	%
Conventional	247	94,27
Stereotaxis	13	4,96
Other	2	0,76
Hansen	0	0
Total	262	

Results	n	%
All Induces VT Ablated	145	55,34
Target VT Ablated	98	37,4
Failure	19	7,25

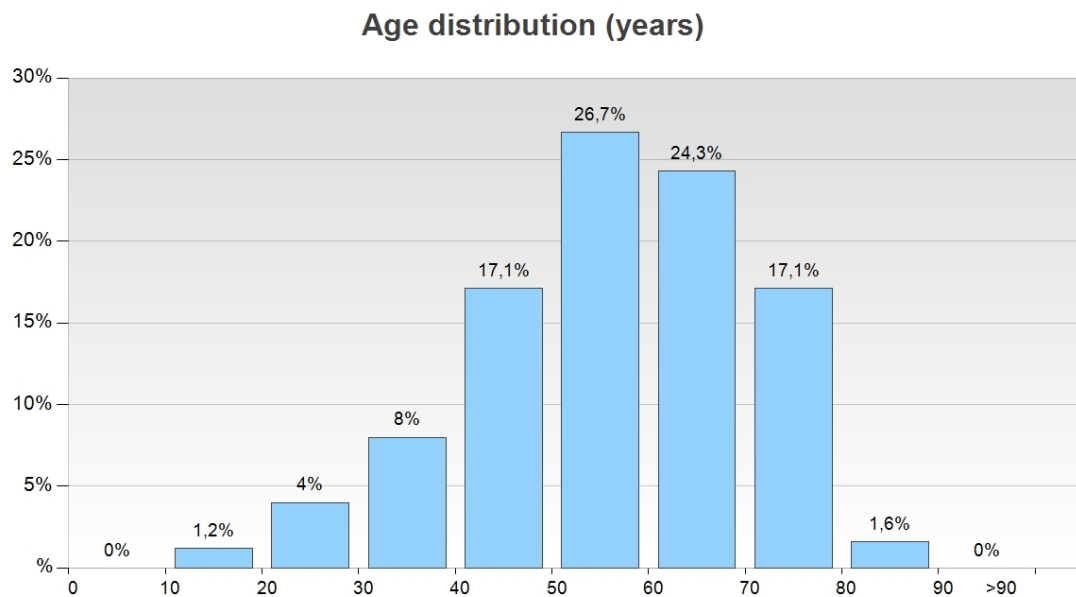
Ventricular Tachycardia

Periprocedural Complications	n
No complications	250
High Degree or Complete AV Block	3
Other	3
Transient AV Block	2
Tamponade	2
Inguinal Hematoma	2
Death	1
Pericardial Effusion	1
TIA	0
Arterial Occlusion	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
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0

Premature Ventricular Contraction

Ablation of PVC	n
All interventions	268
PVC combined with others	17
PVC only	251

The following statistics include PVC only procedures



Age (years)	min.	Ø	max.
Female	21	52	82
Male	14	59	87
All	14	57	87

Number of patients	n	%
Females	98	39,04
Males	153	60,96
Total	251	

Premature Ventricular Contraction

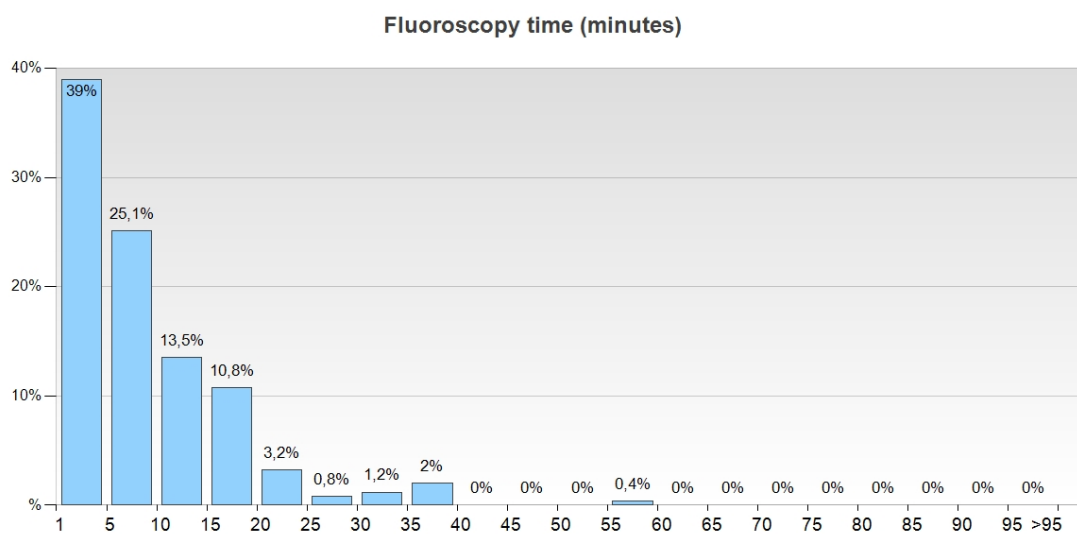
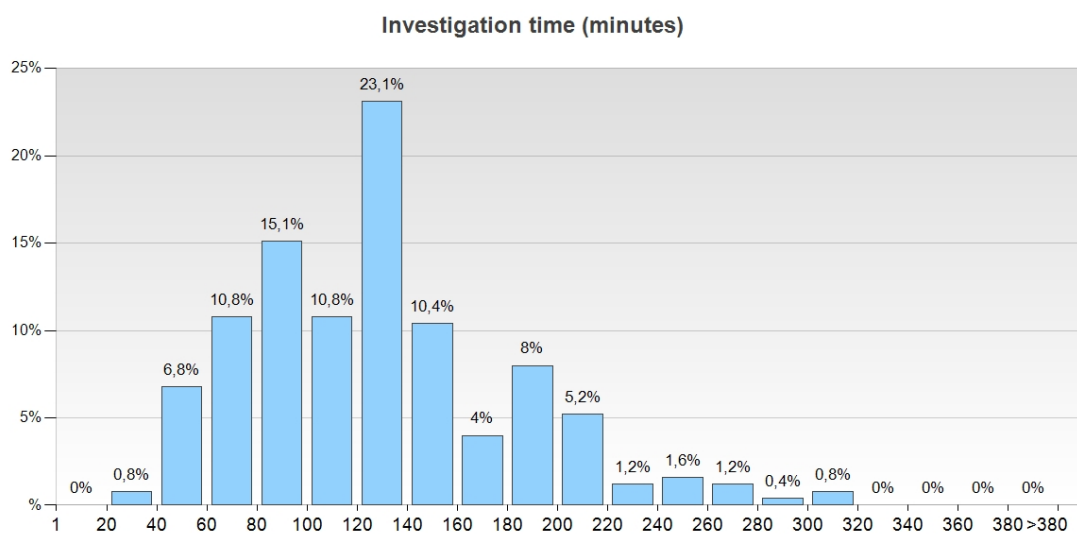
Cardiopathy (Underlying heart disease)	n	%
None	146	58,17
Dilated	28	11,16
Ischemic	26	10,36
Hypertensive Cardiomyopathy	13	5,18
Valvular	11	4,38
Other	8	3,19
Tachycardiomyopathy	8	3,19
RV Cardiomyopathy	4	1,59
Channelopathy long QT	2	0,8
H(O)CM	2	0,8
Post Valvular Surgery	1	0,4
Congenital	1	0,4
Infiltrative	1	0,4
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
Brugada Syndrome	0	0
Total	251	

Symptoms	n
Palpitations	197
Fatigue	57
Dyspnea	55
Dizziness	31
Syncope	12
None	10
Other	9
Angina Pectoris	3
SCD	2

Premature Ventricular Contraction

Anesthesia	n	%
Local	247	98,41
General	4	1,59
Total	251	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	35	124,7	300	251	0
Fluoroscopy time	1	8,5	59	241	10



Premature Ventricular Contraction

Type	n
Monomorphic	222
Polymorphic	29
Ischemic	2

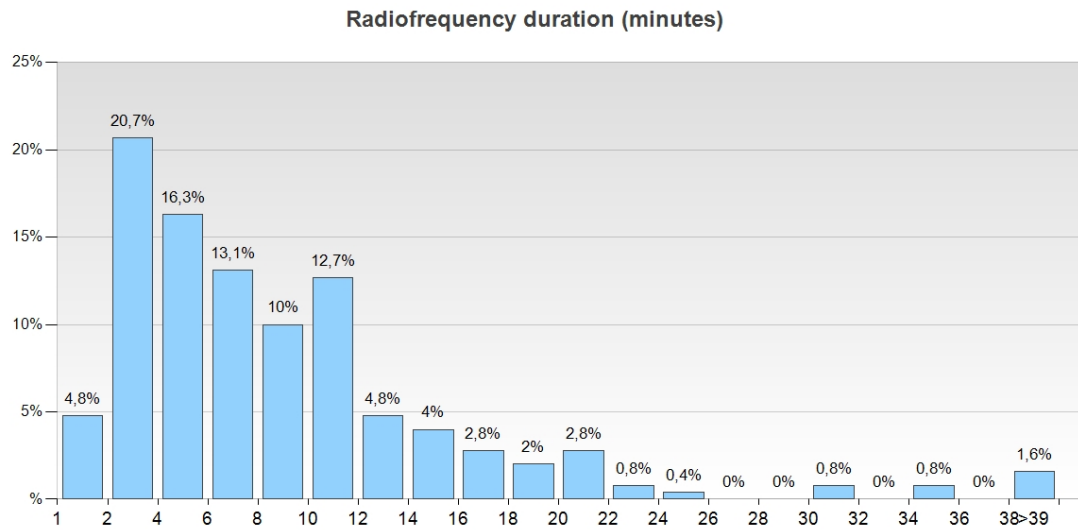
Location	n
RVOT	122
LVOT / Aortic Cusp	64
Other	56
HP System	16
Left Fascicular PVC	6

Site of Ablation	n
Right Ventricle	151
Left Ventricle	111

Intervention	n	%
Primary Intervention	221	88,05
Redo	30	11,95

Premature Ventricular Contraction

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	9	112	247	4
Irrigated Technology				229	



Premature Ventricular Contraction

Access	n	%
Venous	153	60,96
Arterial	72	28,69
Trans-septal, Puncture	23	9,16
Epicardial, Coronary Sinus	2	0,8
Trans-septal, PFO	1	0,4
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Other	0	0
Epicardial, Thoracoscopy	0	0
Total	251	

Mapping	n	%
3D Mapping	241	96,02
Conventional	10	3,98
HD Mesh	0	0
Lasso	0	0
Other	0	0
Non Contact	0	0
Basket	0	0
Total	251	

Catheter Steering	n	%
Conventional	247	98,41
Stereotaxis	4	1,59
Other	0	0
Hansen	0	0
Total	251	

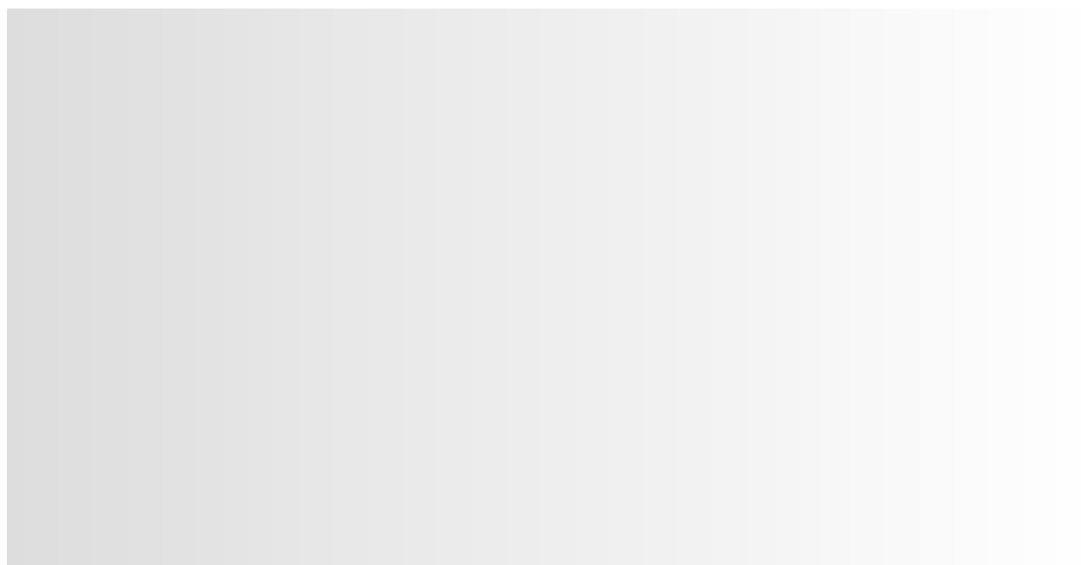
Results	n	%
Success	217	86,45
No Success	34	13,55

Premature Ventricular Contraction

Periprocedural Complications	n
No complications	242
Tamponade	3
Inguinal Hematoma	3
High Degree or Complete AV Block	1
Other	1
Pericardial Effusion	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
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	%
Change from Rhythm Control to Rate Control	0	0
Lost to Follow-Up	0	0
Not codified	0	0
Death	0	0
Regular End of Follow-Up	0	0
Total	0	

The statistics are based on the data from CHPACE WEB from 01.01.2017 to 31.12.2017. Its completeness and correctness depends on the complete and correct data entry in the respective hospital. EPS are counted as interventions.

0,1% 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