

SWISS STATISTICS OF CATHETER ABLATIONS 2016



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

Overview

Ablation centers	25
Included in this statistic	25
Number of interventions*	6284
thereof number of EPS	445
Number of ablations	6431

* All completely recorded and aborted interventions are evaluated.

Ablation Centers

Clinic No.	Center	Interventions/ thereof incomplete	thereof Aborted	Ablations*
101	Universitätsspital Basel	687 / 0 (0%)	0	720
102	Inselspital Bern	542 / 0 (0%)	3	571
103	Hôpital Cantonal Universitaire de Genève	290 / 1 (0%)	1	305
104	Centre Hospitalier Universitaire Vaudois (CHUV)	301 / 0 (0%)	2	312
105	Universitätsspital Zürich	596 / 0 (0%)	0	498
106	Universitäts-Kinderkliniken Zürich	44 / 0 (0%)	1	33
211	Hôpital Fribourgeois	36 / 0 (0%)	0	33
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	243 / 0 (0%)	0	283
216	Cardiocentro Ticino, Lugano	139 / 1 (1%)	1	140
217	Kantonsspital Luzern, Sursee und Wolhusen	401 / 0 (0%)	0	384
218	Klinik St. Anna, Luzern	51 / 0 (0%)	0	48
220	Hôpital de la Tour	141 / 1 (1%)	0	150
228	Hôpital de Sion	65 / 0 (0%)	3	52
230	Solothurner Spitäler AG	52 / 0 (0%)	0	52
231	Kantonsspital St. Gallen	290 / 0 (0%)	1	275
233	GZO Spital Wetzikon	186 / 0 (0%)	1	165
234	Kantonsspital Winterthur	114 / 0 (0%)	0	129
236	Stadtspital Triemli, Zürich	250 / 0 (0%)	0	270
239	Klinik Beau-Site Bern	345 / 0 (0%)	0	350
246	Hirslandenklinik Aarau	233 / 0 (0%)	2	231
250	Klinik Im Park, Zürich	734 / 1 (0%)	5	849
251	Herzzentrum Bodensee, Kreuzlingen	67 / 0 (0%)	0	66
267	Clinique Cécil	407 / 0 (0%)	0	426
268	Clinique des Grangettes	23 / 12 (52%)	0	10
278	Clinique de Valère	63 / 0 (0%)	7	56
Total	25	6300 / 16 (0%)	27	6408

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

Omissions

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

1 center with more than 10% incomplete data reporting

No.	Center	interventions	thereof incomplete	incomplete (%)
268	Clinique des Grangettes	23	12	52
Total	1			

Ablation centers

10 centers with more than 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
250	Klinik Im Park, Zürich	728	5	849
101	Universitätsspital Basel	687	0	720
105	Universitätsspital Zürich	596	0	498
102	Inselspital Bern	539	3	571
267	Clinique Cécil	407	0	426
217	Kantonsspital Luzern, Sursee und Wolhusen	401	0	384
239	Klinik Beau-Site Bern	345	0	350
104	Centre Hospitalier Universitaire Vaudois (CHUV)	299	2	312
231	Kantonsspital St. Gallen	289	1	275
103	Hôpital Cantonal Universitaire de Genève	288	1	305
Total	10	4579	12	4690

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
250	Klinik Im Park, Zürich	351	188	14	52	27	145	18	30	1	28	1
101	Universitätsspital Basel	275	132	2	33	28	113	65	29	7	35	1
105	Universitätsspital Zürich	177	89	4	31	34	99	38	14	2	9	1
102	Inselspital Bern	149	187	14	19	29	81	36	11	6	42	0
267	Clinique Cécil	126	86	8	17	28	82	6	17	11	45	0
217	Kantonsspital Luzern, Sursee und Wolhusen	157	66	1	10	21	89	7	14	9	10	0
239	Klinik Beau-Site Bern	159	91	12	15	8	48	3	6	2	5	1
104	Centre Hospitalier Universitaire Vaudois (CHUV)	75	65	7	14	19	40	39	24	6	25	0
231	Kantonsspital St. Gallen	105	45	1	10	19	81	4	3	1	7	0
103	Hôpital Cantonal Universitaire de Genève	99	69	20	13	10	43	13	8	12	19	0
Total	10	1673	1018	83	214	223	821	229	156	57	225	4

Ablation centers

7 centers with 100 to 250 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
236	Stadtspital Triemli, Zürich	250	0	270
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	243	0	283
246	Hirslandenklinik Aarau	231	2	231
233	GZO Spital Wetzikon	185	1	165
220	Hôpital de la Tour	140	0	150
216	Cardiocentro Ticino, Lugano	137	1	140
234	Kantonsspital Winterthur	114	0	129
Total	7	1300	4	1368

Ablation Procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
236	Stadtspital Triemli, Zürich	97	70	13	20	11	46	0	2	0	11	0
214	HerzZentrum & Rhythmologie Hirslanden, Zürich	139	47	12	9	8	39	5	12	1	11	0
246	Hirslandenklinik Aarau	91	45	2	11	6	44	1	9	12	10	2
233	GZO Spital Wetzikon	61	34	0	6	5	45	0	2	3	10	0
220	Hôpital de la Tour	56	44	0	4	8	26	1	4	0	7	0
216	Cardiocentro Ticino, Lugano	35	33	2	7	7	24	9	6	6	11	0
234	Kantonsspital Winterthur	67	26	3	4	5	15	0	3	2	4	0
Total	7	546	299	32	61	50	239	16	38	24	64	2

Ablation centers

8 centers with less than 100 interventions

Interventions and Ablations

according to number of interventions

No.	Center	Interventions	thereof aborted	Ablations
251	Herzzentrum Bodensee, Kreuzlingen	67	0	66
228	Hôpital de Sion	62	3	52
278	Clinique de Valère	56	7	56
230	Solothurner Spitäler AG	52	0	52
218	Klinik St. Anna, Luzern	51	0	48
106	Universitäts-Kinderkliniken Zürich	43	1	33
211	Hôpital Fribourgeois	36	0	33
268	Clinique des Grangettes	11	0	10
Total	8	378	11	350

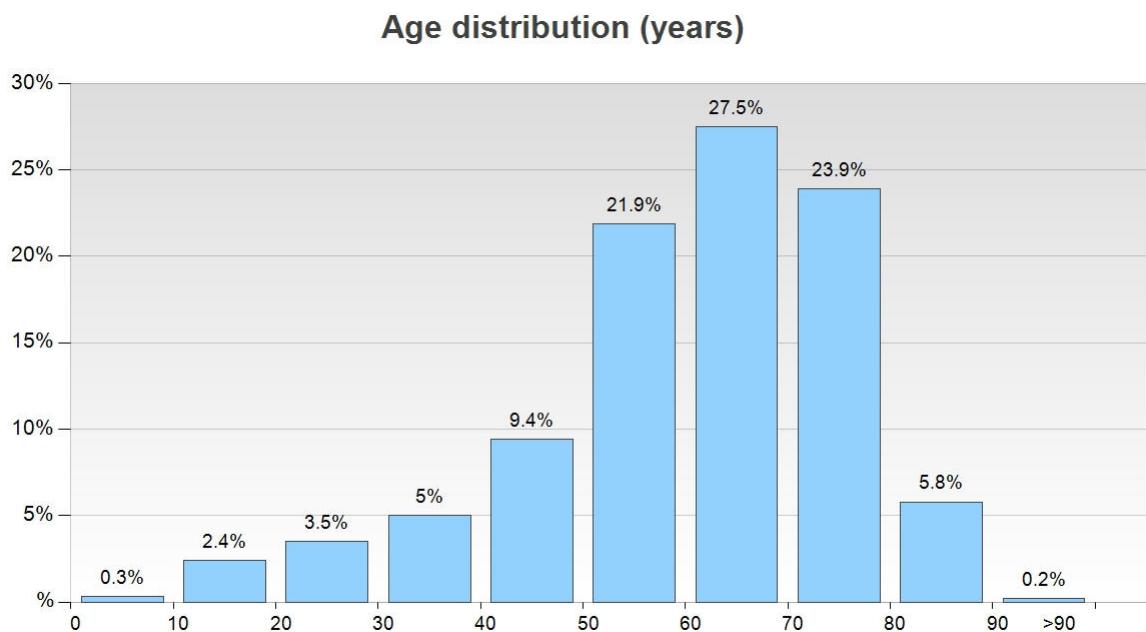
Ablation procedures

according to number of interventions

No.	Center	AF	RAFlu	LAFlu	AT	AP	AVNRT	VT	PVC	AVN	AVN(R)	Other
278	Clinique de Valère	19	14	1	2	2	16	0	2	0	3	0
228	Hôpital de Sion	0	17	0	4	2	21	0	2	4	5	0
251	Herzzentrum Bodensee, Kreuzlingen	29	12	1	5	3	11	1	2	0	2	0
230	Solothurner Spitäler AG	0	12	0	0	8	17	0	0	2	13	0
218	Klinik St. Anna, Luzern	16	6	0	3	3	17	0	0	1	2	0
106	Universitäts-Kinderkliniken Zürich	0	0	0	3	21	10	0	0	0	0	0
211	Hôpital Fribourgeois	6	9	0	0	3	8	1	2	0	4	0
268	Clinique des Grangettes	0	5	0	1	0	3	0	0	1	0	0
Total	8	70	75	2	18	42	103	2	8	8	29	0

All ablation types

Number of ablations, not aborted: 6408



Age (years)	min.	Ø	max.
Female	7	61	102
Male	0	61	95
All	0	61	102

Number of patients	n	%
Females	2238	35.77
Males	4019	64.23
Total	6257	

Anesthesia	n	%
Local	5001	79.93
General	1256	20.07
Total	6257	

Combinations of ablations performed during one intervention

Number of interventions	5817
AF	1836
AVNRT	1095
RAFlu	948
AF RAFlu	343
AVN(R)	306
AP	300
VT	240
AT	203
PVC	190
AVN	81
LAFIu	61
RAFlu AT	27
AF AT	25
RAFlu AVNRT	22
AF LAFIu	21
AF AVNRT	16
AF LAFIu RAFlu	13
AT AVNRT	12
LAFIu RAFlu	12
AF RAFlu AT	12
AVN AVN(R)	8
LAFIu AT	7
AP AVNRT	6
AF RAFlu AVNRT	5
Other	4
VT PVC	4
AVNRT PVC	3
RAFlu AVN(R)	2
RAFlu AP	2
AF VT	2
AVNRT VT	1
AT AVN(R)	1
AT AP AVNRT	1
RAFlu AT AVNRT	1
LAFIu RAFlu AT	1
AF Other	1
AF RAFlu PVC	1
AF RAFlu AVNRT PVC	1
AF LAFIu RAFlu AT	1
PVC Other	1
AF AP	1

Only completely documented and non-aborted interventions are counted.

Ablation procedures or EPS

Atrial Fibrillation	2278
Paroxysmal	1604
Persistent	640
Long-standing Persistent	34

Left Atrial Flutter	116
Roof-dependent	29
Perimitral	45
Peri-Incisional	3
Peri Ostial Pulm. Vein	17
Other	45

Accessory Pathway	310
Concealed	102
WPW	178
Asymptomatic Preexcitation	25
Atrio-Fascicular	3
PJRT	2
Mahaim	4
Other	4

AVN (to Resync.)	89
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AVN (Rate Control)	317
Paroxysmal	89
Persistent	122
Long-standing Persistent	106

Other Arrhythmia	6
PAC	2
JET	1
SNT	0
Other	4

Right Atrial Flutter	1391
Cavotricuspid	1355
Scar Related	44
Other	20

Atrial Tachycardia	291
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AVNRT	1163
Slow-Fast	1095
Fast-Slow	40
Slow-Slow	48

VT	247
Monomorphic	202
Polymorphic	21
Ischemic	94
RVOT	60
LVOT / Aortic Cusp	30
Left Fascicular VT	23
BB Reentry	5
Epicardial	23
Other	123

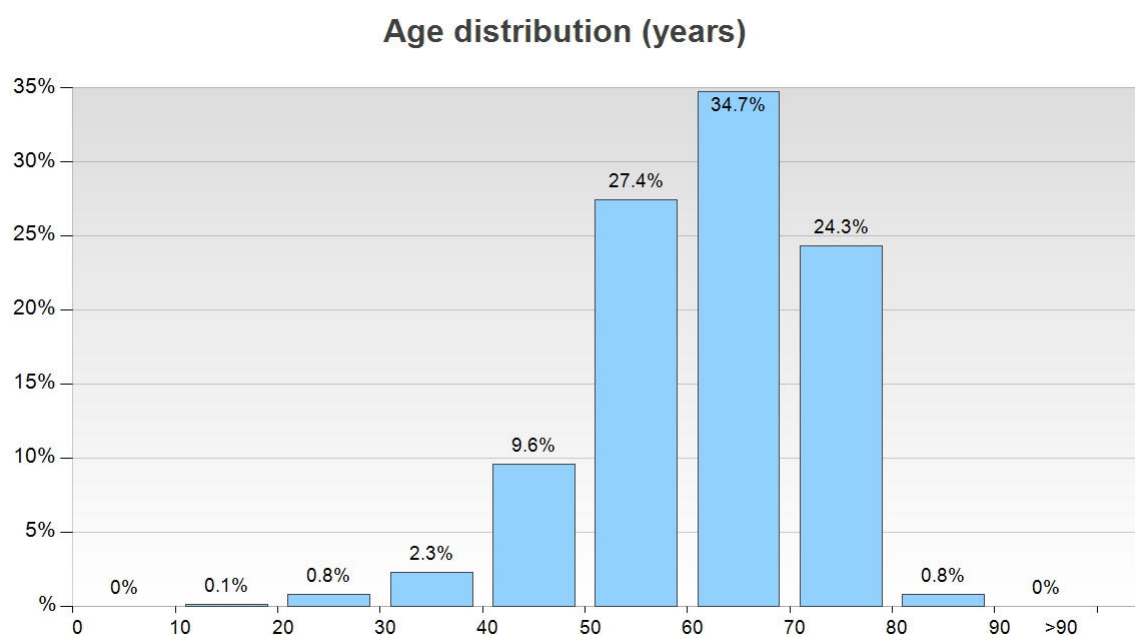
PVC	200
Monomorphic	184
Polymorphic	18
Ischemic	1
RVOT	103
LVOT / Aortic Cusp	55
Left Fascicular VT	3
HP System	2
Other	47

EPS only	440
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Atrial Fibrillation

Ablation of Atrial Fibrillation (AF)	n
All interventions	2278
AF combined with others	442
AF combined with RAFLa	343
AF only	1836

The following statistics include AF only procedures



Age (years)	min.	Ø	max.
Female	24	66	85
Male	17	61	82
All	17	62	85

Number of patients	n	%
Females	547	29.79
Males	1289	70.21
Total	1836	

Atrial Fibrillation

Cardiopathy (Underlying heart disease)	n	%
None	1169	63.67
Hypertensive Cardiomyopathy	255	13.89
Ischemic	131	7.14
Tachycardiomyopathy	100	5.45
Other	44	2.4
Valvular	43	2.34
Dilated	38	2.07
H(O)CM	27	1.47
Angioplasty	7	0.38
Congenital	7	0.38
Post Valvular Surgery	6	0.33
Post Congenital Surgery	4	0.22
Brugada Syndrome	2	0.11
RV Cardiomyopathy	2	0.11
Infiltrative	1	0.05
Channelopathy long QT	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	1836	

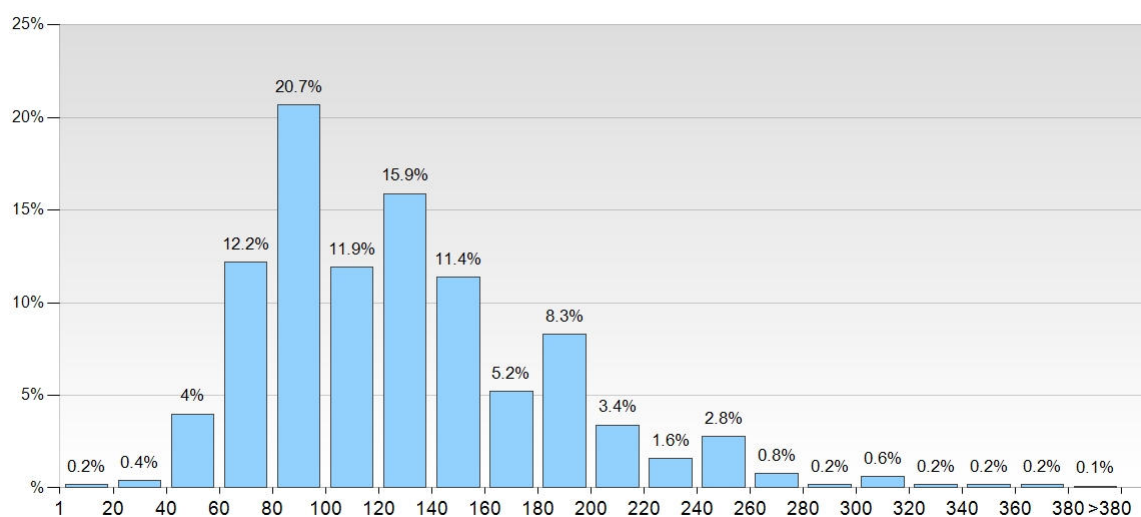
Symptoms	n
Palpitations	1586
Dyspnea	491
Fatigue	372
Dizziness	219
Other	100
None	41
Syncope	33
Angina Pectoris	23
SCD	0

Atrial Fibrillation

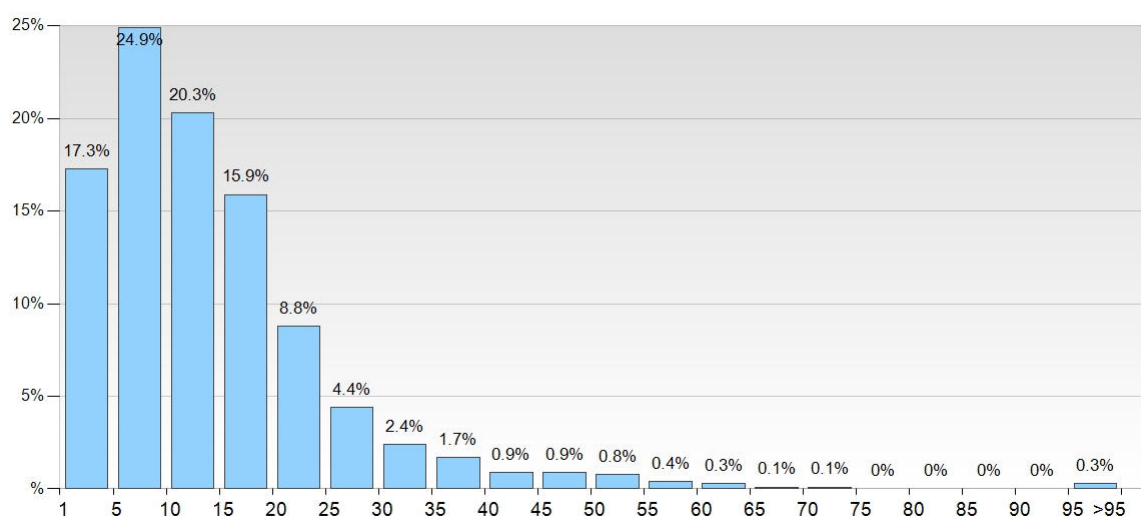
Anesthesia	n	%
Local	1084	59.04
General	752	40.96
Total	1836	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	5	125.9	392	1836	0
Fluoroscopy time	1	13.9	187	1826	10

Investigation time (minutes)



Fluoroscopy time (minutes)



Atrial Fibrillation

Type of AF	n	%
Paroxysmal	1291	70.32
Persistent	515	28.05
Long-standing Persistent (>1 Year)	30	1.63

EHRA-Score	n	%
Score I	248	13.51
Score II	900	49.02
Score III	671	36.55
Score IV	17	0.93

Type of Intervention	n	%
Percutaneous	1834	99.89
Hybrid (Epicardial + Endovascular)	0	0
Surgical Ablation	2	0.11

Intervention	n	%
Primary Intervention	1381	75.22
Redo	455	24.78

Antiarrhythmic Drugs

	n
Beta Blocker	1148
Amiodarone	485
None	257
Flecainide	211
Sotalol	99
Calcium Antagonist	61
Dronedarone	41
Other	36
Propafenone	19
Digitalis	18

Thromboembolic Risk Factors

	n
Hypertension	704
Prior MI, Per. Artery Disease, Aortic Plaque	90
Diabetes	86
Stroke, TIA, Other Embolic Event	85
Congestive Heart Failure, LV dysfunction	83

Atrial Fibrillation

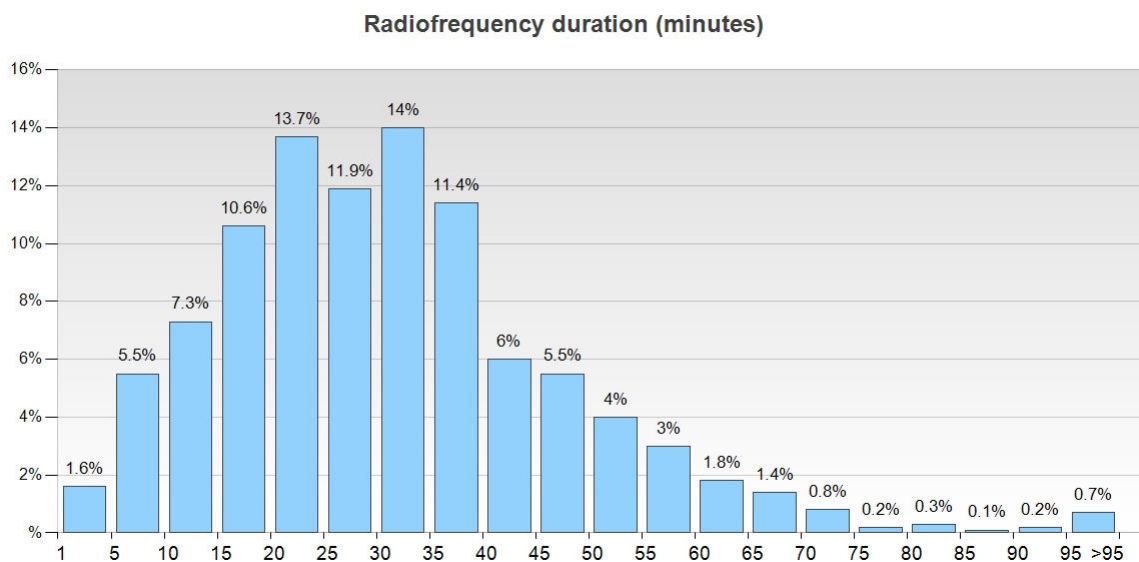
Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	1308
Vitamin K-Antagonist	225
None	124
Direct Thrombin Inhibitor	98
Other	70
Aspirin	34
Clopidogrel	11
Ticagrelor	1
Prasugrel	0

CHA ₂ DS ₂ -VASc Score	n
Score = 0	483
Score = 1	533
Score = 2	463
Score = 3	244
Score = 4	88
Score = 5	17
Score = 6	8
Score = 7	0
Average Score	1.46

Site of Ablation	n
LSPV	1703
RIPV	1702
RSPV	1680
LIPV	1676
CFAE	84
Non-PV Focus	49
Roof Line	40
Other Lines	17
Mitral Isthmus Line	16
RMPV	15
SVC	14
Septal Line	7
Other Veins	4
Vein of Marshall	0

Atrial Fibrillation

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	31.3	610	1467	0
Irrigated Technology				1360	
RF Duty Cycled				177	



Atrial Fibrillation

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	4	24.8	791	210	0

	n
Additional RF or Cryo Cath Needed	0

	n
Laser Balloon	2

	n
Contact Force	469

	n
Irrigated Multielectrode Ablation	2

Access	n	%
Trans-septal, Puncture	1607	87.53
Trans-septal, PFO	197	10.73
Other	32	1.74
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	1836	

Mapping	n	%
3D Mapping	1296	70.59
Conventional	275	14.98
Lasso	238	12.96
Other	14	0.76
Basket	7	0.38
Non Contact	6	0.33
HD Mesh	0	0
Total	1836	

Atrial Fibrillation

Catheter Steering	n	%
Conventional	1824	99.35
Stereotaxis	6	0.33
Other	5	0.27
Hansen	1	0.05
Total	1836	

Results	n
All Veins Isolated	1822
Roof Line Block Confirmed	21
Mitral Isthmus Line Block Confirmed	13
Not All Veins Isolated	12
Mitral Isthmus Line Block Not Confirmed	4
Roof Line Block Not Confirmed	2

Sinus Rhythm	n
Spontaneous	1032
With Electrical Cardioversion / Stimulation	434
By Ablation	355
Not Achieved	20
AAD	6

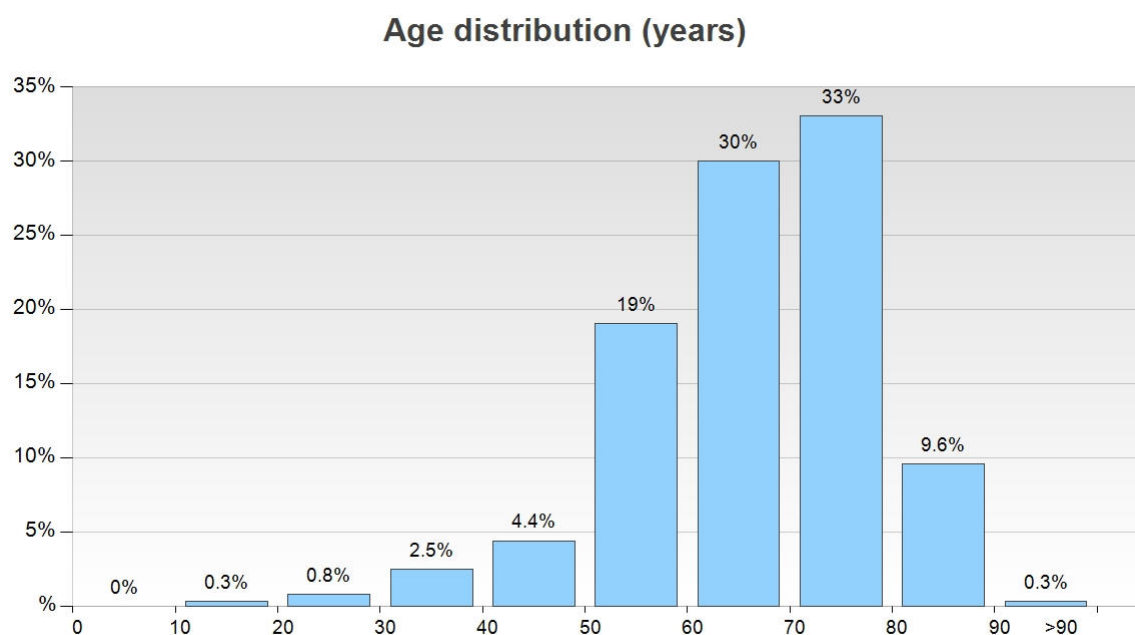
Atrial Fibrillation

Periprocedural Complications	n
No complications	1806
Tamponade	7
Inguinal Hematoma	7
Other	5
Phrenic Nerve Paralysis	5
Stroke	2
Pulmonary Oedema	2
Pericardial Effusion	1
AV Fistula	1
High Degree or Complete AV Block	1
Myocardial Infarction	1
TIA	1
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesion	0
Infection	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pseudoaneurysm	0
PV Stenosis	0
Transient AV Block	0

Right Atrial Flutter

Ablation of Right Atrial Flutter (RAFlu)	n
All interventions	1391
RAFlu combined with others	443
RAFlu only	948

The following statistics include RAFlu only procedures



Age (years)	min.	Ø	max.
Female	23	69	91
Male	15	66	91
All	15	67	91

Number of patients	n	%
Females	194	20.46
Males	754	79.54
Total	948	

Right Atrial Flutter

Cardiopathy (Underlying heart disease)	n	%
None	438	46.2
Ischemic	134	14.14
Hypertensive Cardiomyopathy	122	12.87
Valvular	67	7.07
Tachycardiomyopathy	52	5.49
Dilated	33	3.48
Congenital	28	2.95
Other	28	2.95
Post Valvular Surgery	15	1.58
H(O)CM	9	0.95
CABG	9	0.95
Post Congenital Surgery	7	0.74
RV Cardiomyopathy	3	0.32
Angioplasty	2	0.21
Infiltrative	1	0.11
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Catecholaminergic Polymorphic VT	0	0
Total	948	

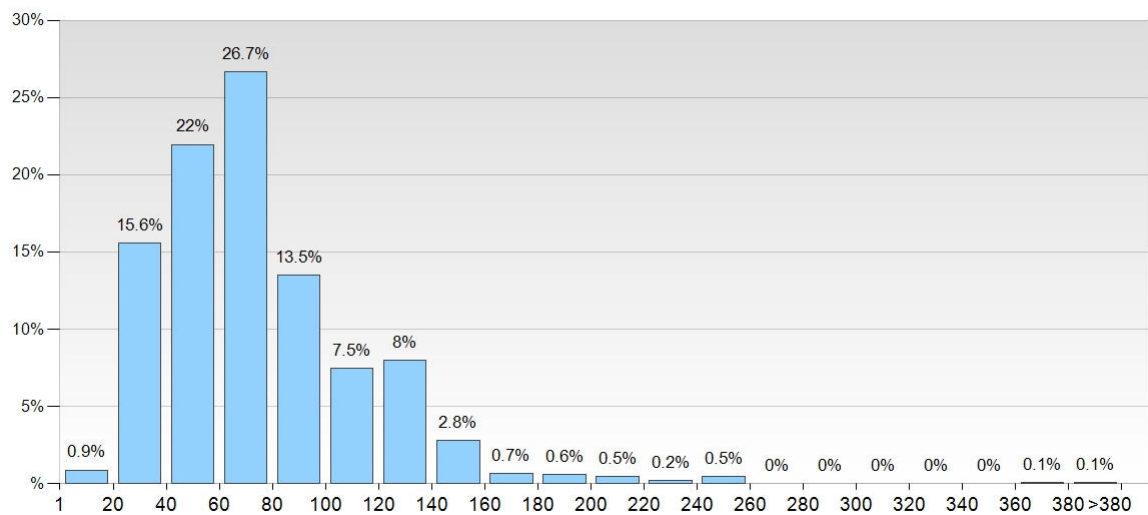
Symptoms	n
Palpitations	695
Dyspnea	347
Fatigue	253
Dizziness	104
None	38
Other	29
Angina Pectoris	23
Syncope	20
SCD	5

Right Atrial Flutter

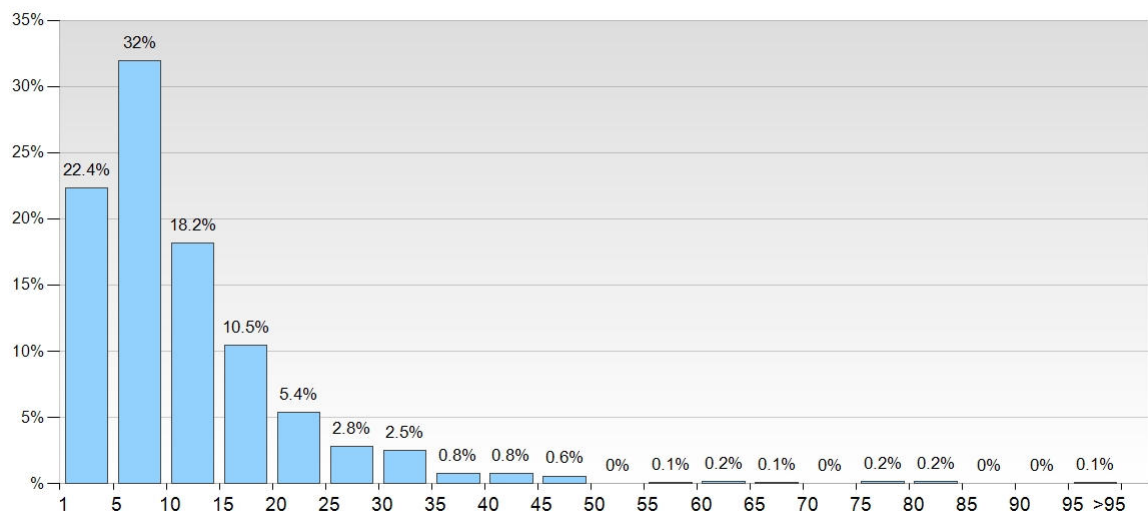
Anesthesia	n	%
Local	924	97.47
General	24	2.53
Total	948	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	7	72.2	500	948	0
Fluoroscopy time	1	11.8	470	921	27

Investigation time (minutes)



Fluoroscopy time (minutes)



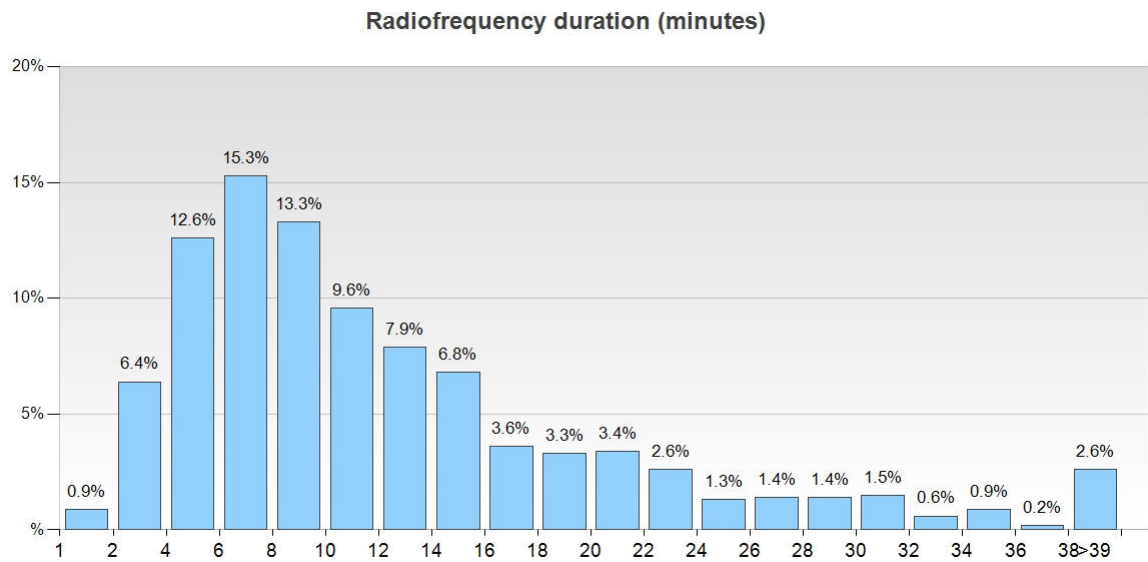
Right Atrial Flutter

Type of Flutter	n
Cavotricuspid	923
Scar related	34
Other	12

Intervention	n	%
Primary Intervention	873	92.09
Redo	75	7.91

Right Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n ₀ [*]
Duration (minutes)	1	12.2	61	901	40
Irrigated Technology				558	



Right Atrial Flutter

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	6	18.3	40	10	0

	n
Additional RF or Cryo Cath Needed	0

Access	n	%
Venous	937	98.84
Other	10	1.05
Epicardial, Thoracotomy	1	0.11
Epicardial, Sub-xiphoid	0	0
Trans-septal, PFO	0	0
Arterial	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Trans-septal, Puncture	0	0
Total	948	

Mapping	n	%
Conventional	712	75.11
3D Mapping	231	24.37
Lasso	3	0.32
Other	2	0.21
HD Mesh	0	0
Non Contact	0	0
Basket	0	0
Total	948	

Catheter Steering	n	%
Conventional	936	98.73
Stereotaxis	11	1.16
Hansen	1	0.11
Other	0	0
Total	948	

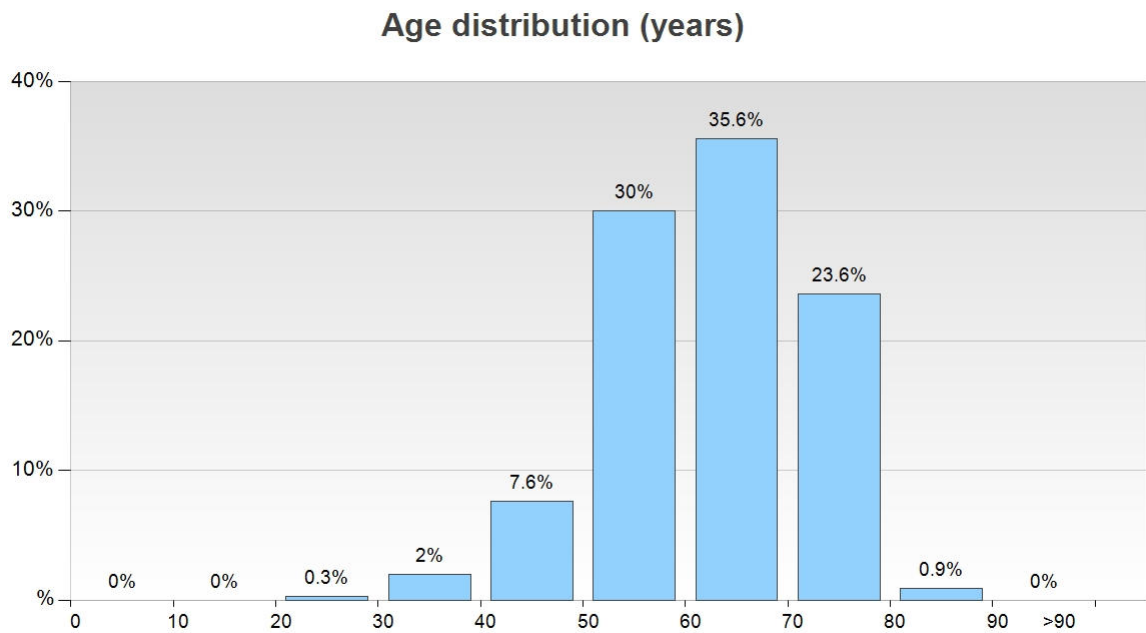
Results	n	%
Block confirmed	916	96.62
Block not confirmed	32	3.38

Right Atrial Flutter

Periprocedural Complications	n
No complications	941
Other	4
Inguinal Hematoma	2
Pericardial Effusion	1
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
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): 344



Age (years)	min.	Ø	max.
Female	39	66	82
Male	24	62	85
All	24	63	85

Number of patients	n	%
Females	91	26.53
Males	252	73.47
Total	343	

Atrial Fibrillation combined with Right Atrial Flutter

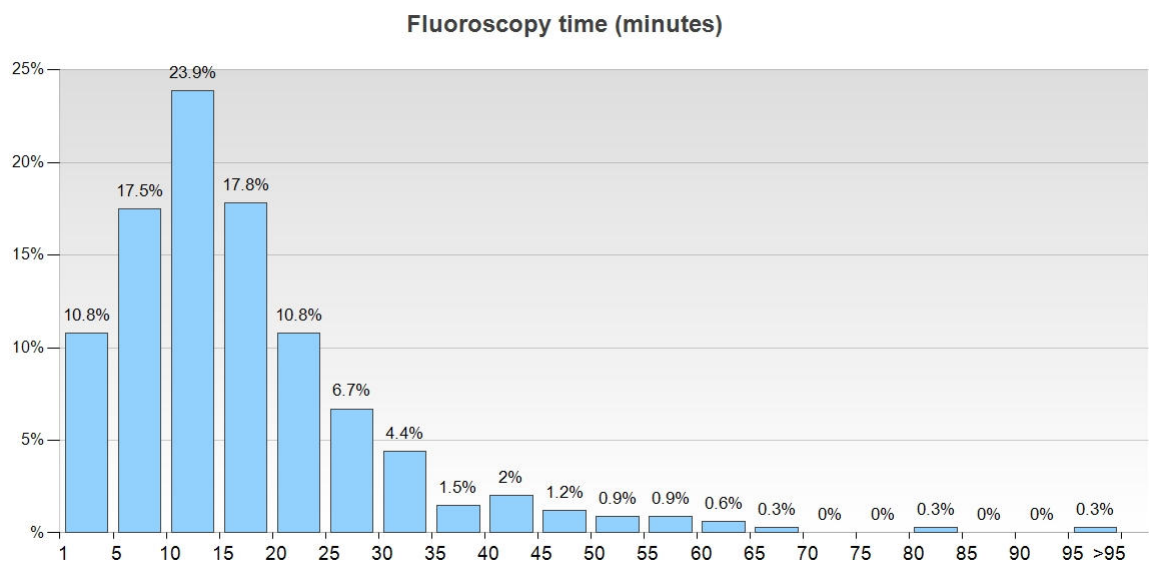
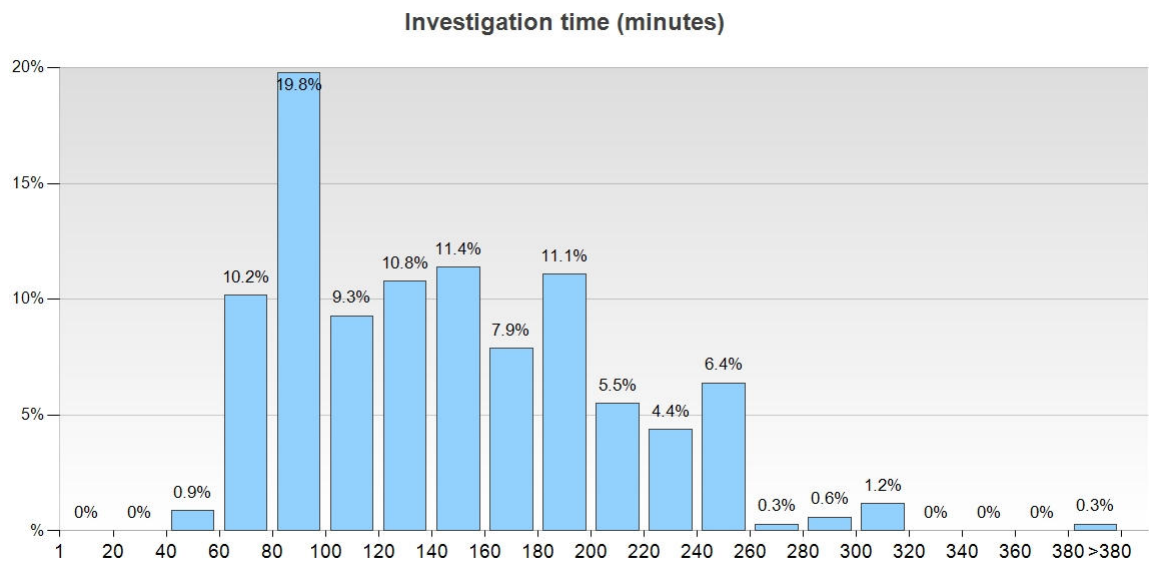
Cardiopathy (Underlying heart disease)	n	%
None	227	66.18
Hypertensive Cardiomyopathy	33	9.62
Other	19	5.54
Ischemic	19	5.54
Tachycardiomyopathy	16	4.66
Angioplasty	9	2.62
Valvular	8	2.33
H(O)CM	6	1.75
Dilated	4	1.17
Post Valvular Surgery	1	0.29
Post Congenital Surgery	1	0.29
Brugada Syndrome	0	0
Channelopathy long QT	0	0
RV Cardiomyopathy	0	0
Congenital	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	343	

Symptoms	n
Palpitations	277
Fatigue	107
Dyspnea	86
Other	47
Dizziness	26
Syncope	10
None	8
Angina Pectoris	4
SCD	0

Atrial Fibrillation combined with Right Atrial Flutter

Anesthesia	n	%
Local	156	45.48
General	187	54.52
Total	343	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	45	143.1	476	343	0
Fluoroscopy time	2	17	121	342	1



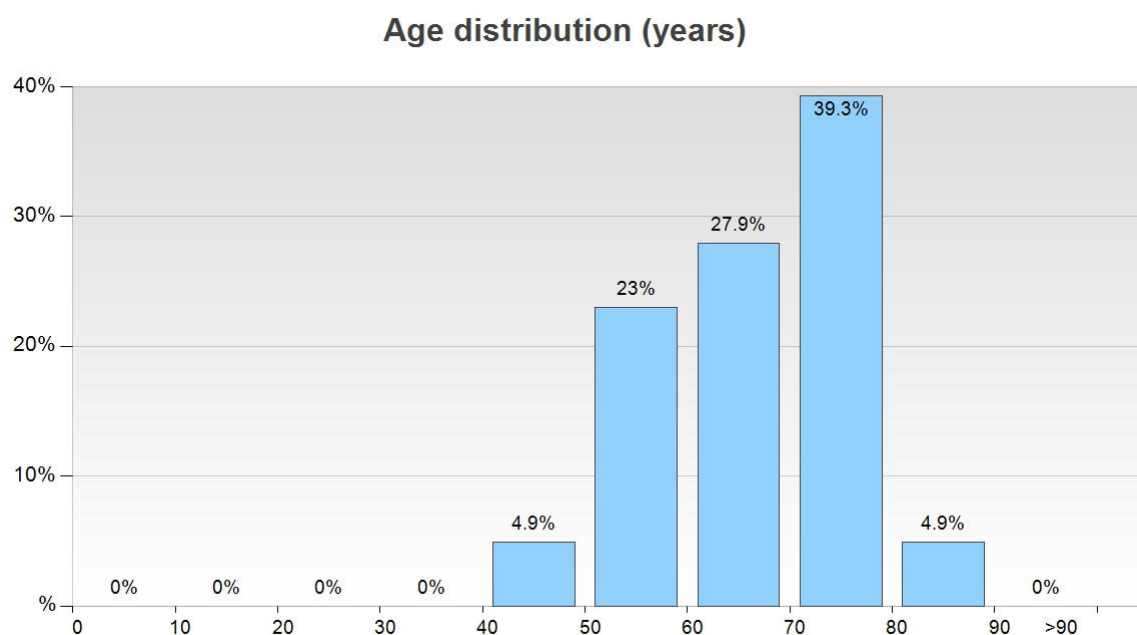
Atrial Fibrillation combined with Right Atrial Flutter

Periprocedural Complications	n
No complications	343
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
TIA	0
Transient AV Block	0

Left Atrial Flutter

Ablation of Left Atrial Flutter (LAFlu)	n
All interventions	116
LAFlu combined with others	55
LAFlu only	61

The following statistics include LAFlu only procedures



Age (years)	min.	Ø	max.
Female	52	69	87
Male	41	67	83
All	41	68	87

Number of patients	n	%
Females	21	34.43
Males	40	65.57
Total	61	

Left Atrial Flutter

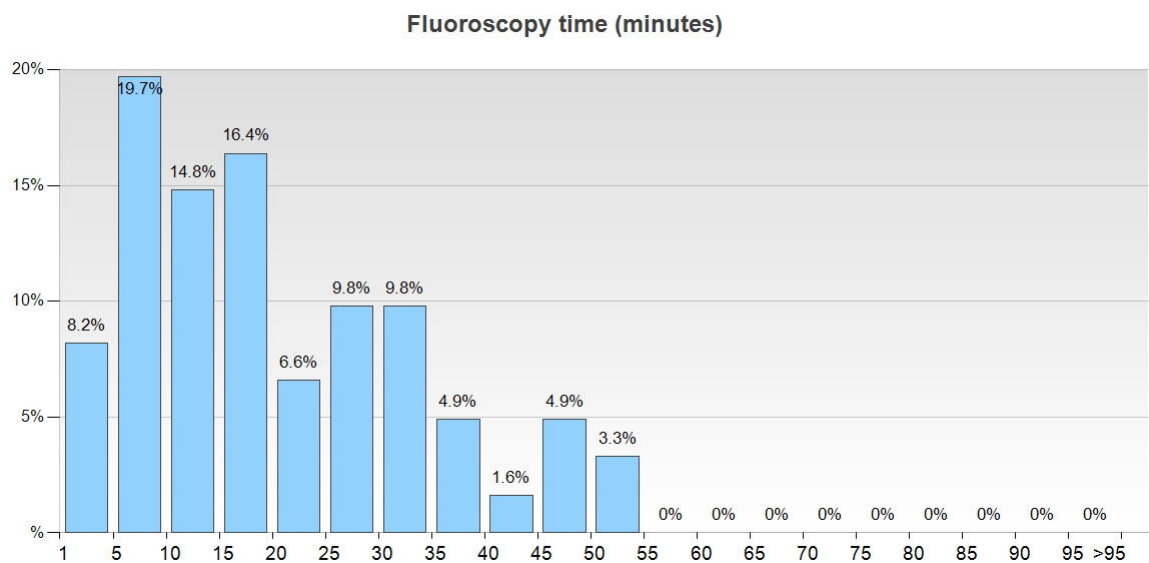
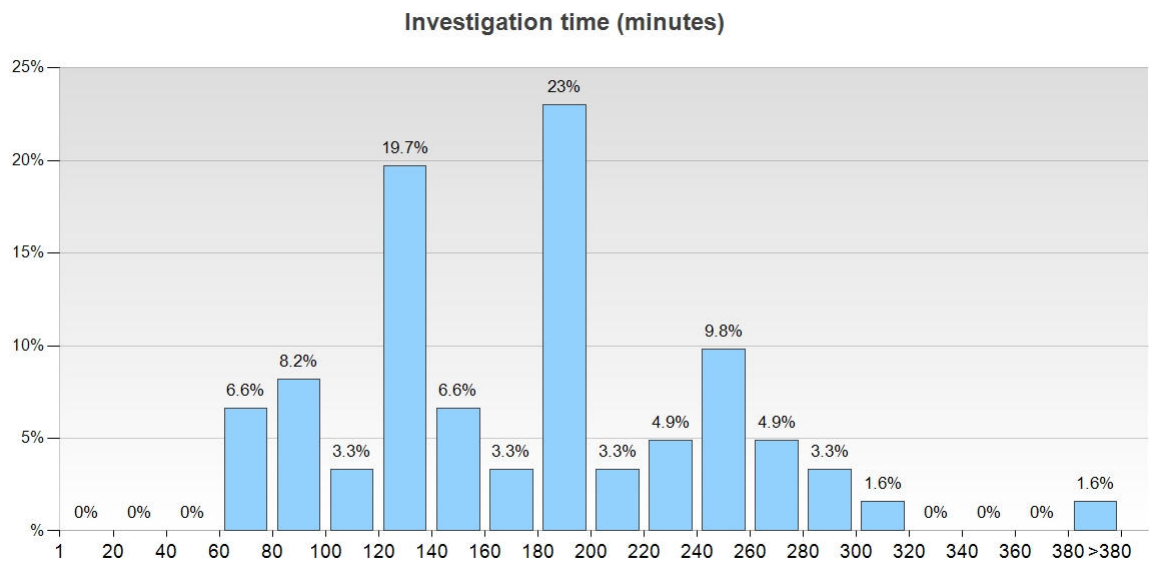
Cardiopathy (Underlying heart disease)	n	%
None	34	55.74
Tachycardiomyopathy	6	9.84
Valvular	5	8.2
Hypertensive Cardiomyopathy	4	6.56
H(O)CM	3	4.92
Ischemic	3	4.92
Dilated	3	4.92
Other	2	3.28
Post Valvular Surgery	1	1.64
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
RV Cardiomyopathy	0	0
Congenital	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	61	

Symptoms	n
Palpitations	53
Fatigue	25
Dyspnea	22
Dizziness	7
Other	4
Syncope	1
None	1
SCD	0
Angina Pectoris	0

Left Atrial Flutter

Anesthesia	n	%
Local	42	68.85
General	19	31.15
Total	61	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	60	173.5	481	61	0
Fluoroscopy time	3	20	51	61	0



Left Atrial Flutter

Type of Flutter	n
Perimitral	24
Other	21
Roof-dependent	17
Peri Ostial Pulmonary Vein	11
Peri-Incisional	1

EHRA-Score	n	%
Score I	5	8.2
Score II	35	57.38
Score III	20	32.79
Score IV	1	1.64

Type of Intervention	n	%
Percutaneous	61	100
Hybrid (Epicardial + Endovascular)	0	0
Surgical Ablation	0	0

Intervention	n	%
Primary Intervention	24	39.34
Redo	37	60.66

Antiarrhythmic Drugs	n
Beta Blocker	39
Amiodarone	19
Calcium Antagonist	6
Sotalol	5
None	5
Digitalis	2
Other	2
Flecainide	2
Propafenone	1
Dronedarone	1

Left Atrial Flutter

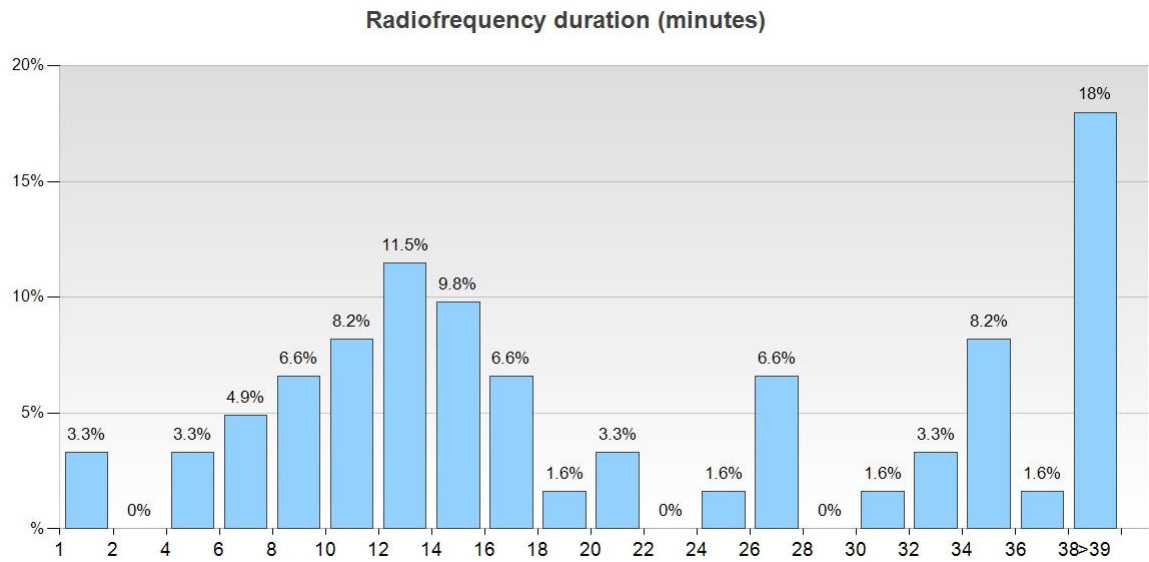
Thromboembolic Risk Factors	n
Hypertension	23
Stroke, TIA, Other Embolic Event	8
Diabetes	7
Congestive Heart Failure, LV dysfunction	5
Prior MI, Per. Artery Disease, Aortic Plaque	3

Anticoagulation, Antiaggregation	n
Factor Xa-Antagonist	42
Vitamin K-Antagonist	19
Other	2
Prasugrel	0
Ticagrelor	0
Direct Thrombin Inhibitor	0
None	0
Clopidogrel	0
Aspirin	0

CHA ₂ DS ₂ -VASc Score	n
Score = 0	10
Score = 1	11
Score = 2	15
Score = 3	16
Score = 4	7
Score = 5	2
Score = 6	0
Score = 7	0
Average Score	2.08

Left Atrial Flutter

Radiofrequency	min.	Ø	max.	n	n ₀ *
Duration (minutes)	1	25.9	133	61	0
Irrigated Technology				54	
RF Duty Cycled				0	



Left Atrial Flutter

Access	n	%
Trans-septal, Puncture	49	80.33
Trans-septal, PFO	7	11.48
Arterial	5	8.2
Venous	0	0
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Other	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	61	

Mapping	n	%
3D Mapping	58	95.08
Conventional	2	3.28
Lasso	1	1.64
HD Mesh	0	0
Other	0	0
Non Contact	0	0
Basket	0	0
Total	61	

Catheter Steering	n	%
Conventional	60	98.36
Stereotaxis	1	1.64
Other	0	0
Hansen	0	0
Total	61	

Results	n	%
Block confirmed	49	80.33
Block not confirmed	12	19.67

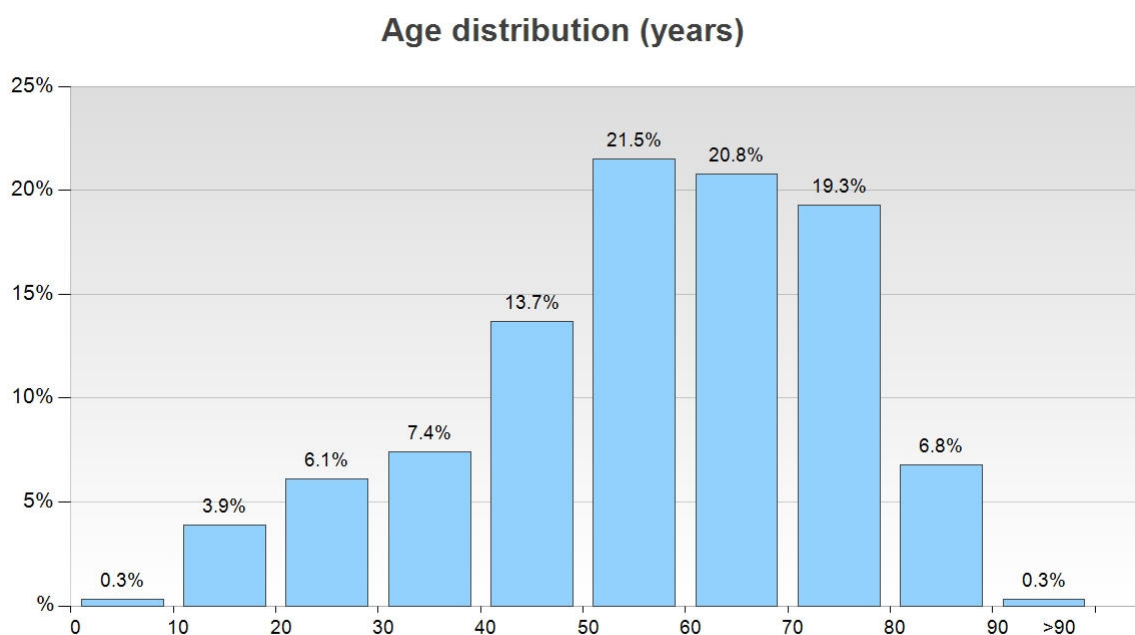
Left Atrial Flutter

Periprocedural Complications	n
No complications	61
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
TIA	0
Transient AV Block	0

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Ablation of AVNRT	n
All interventions	1163
AVNRT combined with others	68
AVNRT only	1095

The following statistics include AVNRT only procedures



Age (years)	min.	Ø	max.
Female	10	55	90
Male	10	59	95
All	10	57	95

Number of patients	n	%
Females	574	52.42
Males	521	47.58
Total	1095	

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Cardiopathy (Underlying heart disease)	n	%
None	917	83.74
Ischemic	55	5.02
Hypertensive Cardiomyopathy	52	4.75
Other	18	1.64
Valvular	16	1.46
Tachycardiomyopathy	14	1.28
H(O)CM	9	0.82
Congenital	6	0.55
Dilated	4	0.37
Post Valvular Surgery	3	0.27
CABG	1	0.09
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
Post Congenital Surgery	0	0
Infiltrative	0	0
Catecholaminergic Polymorphic VT	0	0
Total	1095	

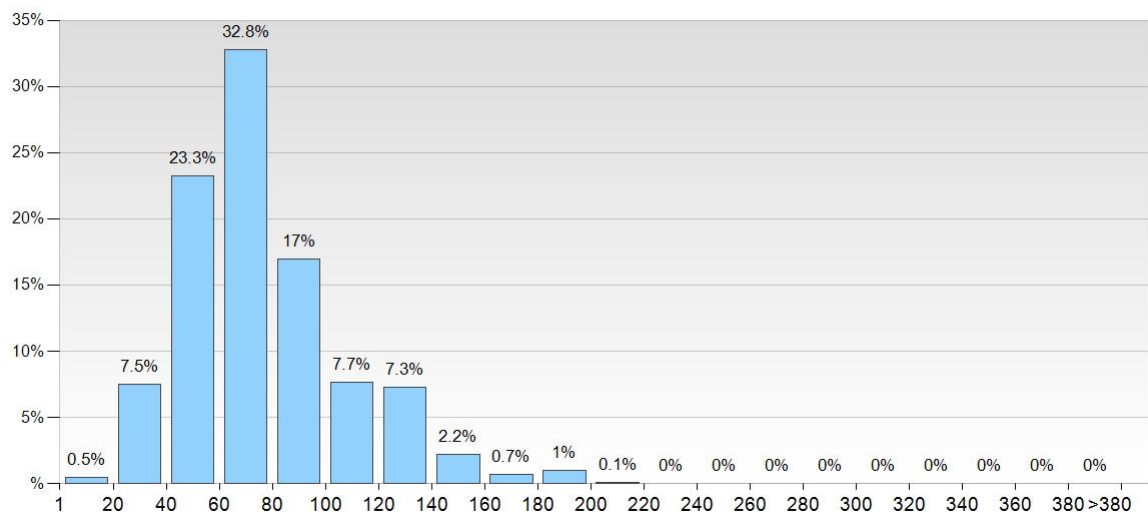
Symptoms	n
Palpitations	1054
Dizziness	122
Dyspnea	97
Fatigue	76
Syncope	51
Other	20
Angina Pectoris	15
None	6
SCD	0

Atrioventricular Nodal Reentry Tachycardia (AVNRT)

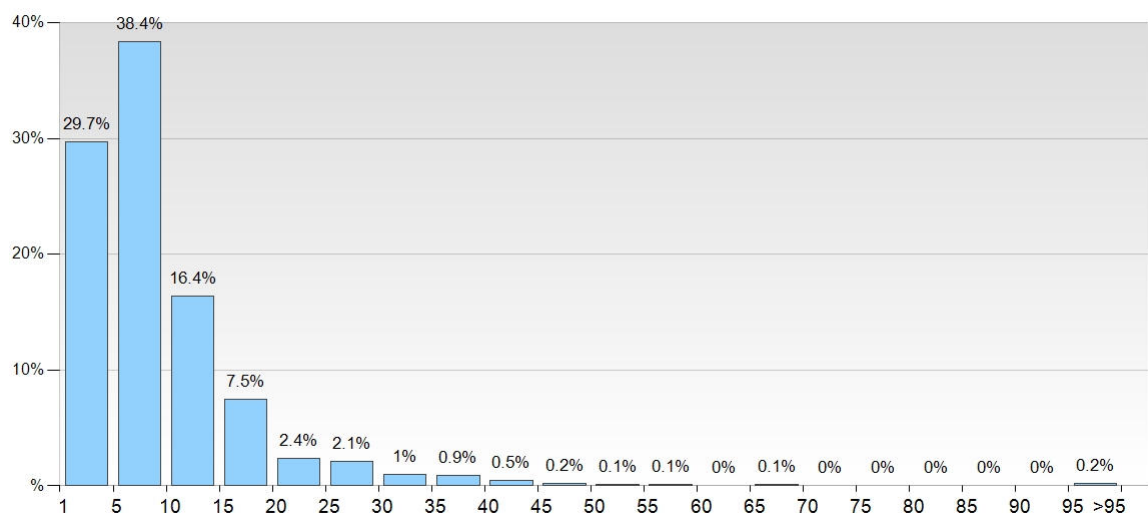
Anesthesia	n	%
Local	1064	97.17
General	31	2.83
Total	1095	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	2	72.8	200	1095	0
Fluoroscopy time	1	9.1	212	1090	5

Investigation time (minutes)

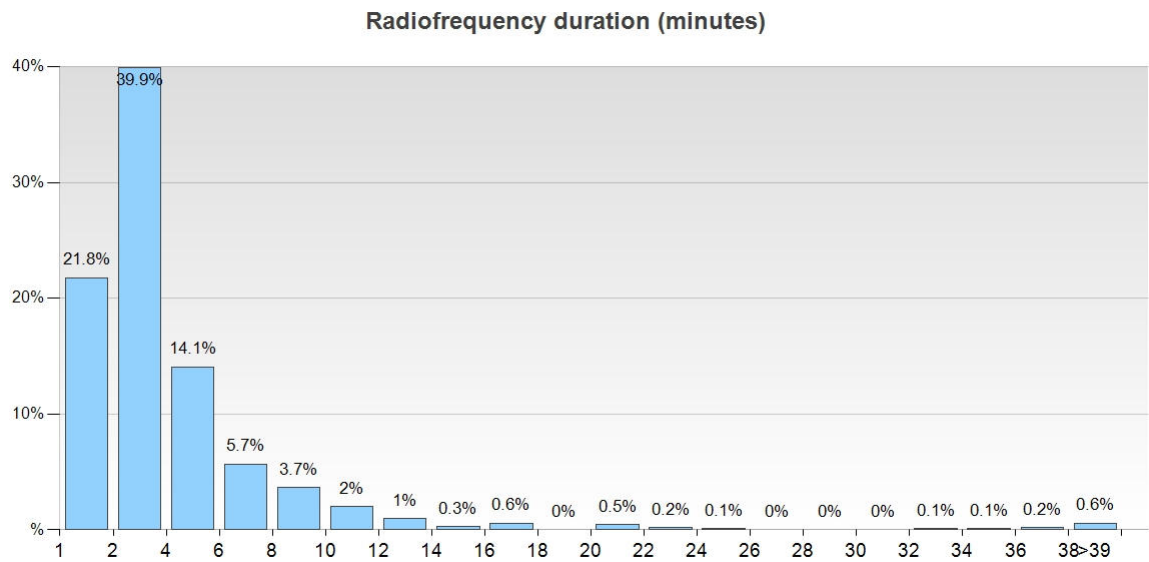


Fluoroscopy time (minutes)



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Radiofrequency	min.	Ø	max.	n	n ₀ [*]
Duration (minutes)	1	4	122	995	100
Irrigated Technology				50	



Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Type	n
Slow-Fast	1035
Slow-Slow	45
Fast-Slow	35

Intervention	n	%
Primary Intervention	1042	95.16
Redo	53	4.84

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

Mapping	n	%
Conventional	1011	92.33
3D Mapping	82	7.49
HD Mesh	1	0.09
Other	1	0.09
Lasso	0	0
Non Contact	0	0
Basket	0	0
Total	1095	

Catheter Steering	n	%
Conventional	1091	99.63
Stereotaxis	3	0.27
Other	1	0.09
Hansen	0	0
Total	1095	

Results	n	%
Success	1088	99.36
No success	7	0.64

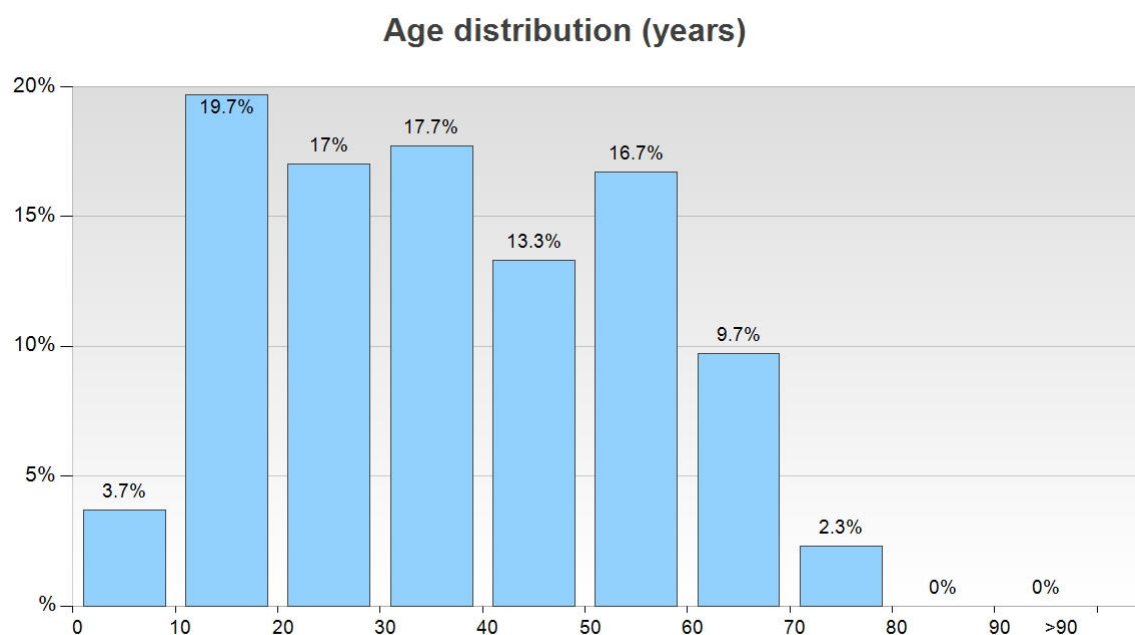
Atrioventricular Nodal Reentry Tachycardia (AVNRT)

Periprocedural Complications	n
No complications	1087
High Degree or Complete AV Block	3
Transient AV Block	3
Other	2
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
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0

Accessory Pathway

Ablation of Accessory Pathway (AP)	n
All interventions	310
AP combined with others	10
AP only	300

The following statistics include AP only procedures



Age (years)	min.	Ø	max.
Female	8	41	77
Male	0	35	72
All	0	37	77

Number of patients	n	%
Females	110	36.67
Males	190	63.33
Total	300	

Accessory Pathway

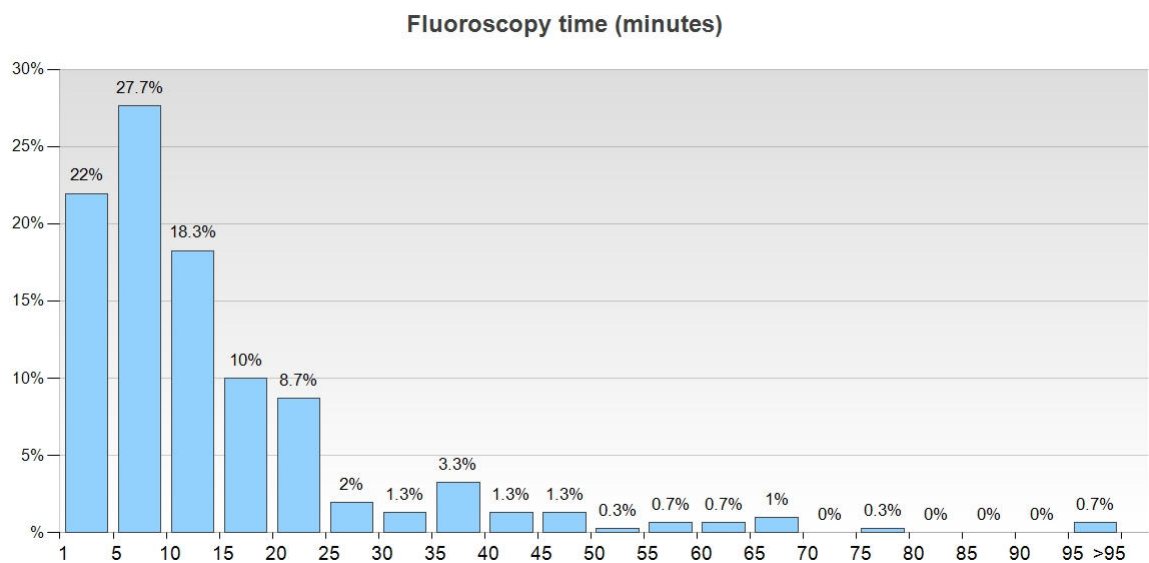
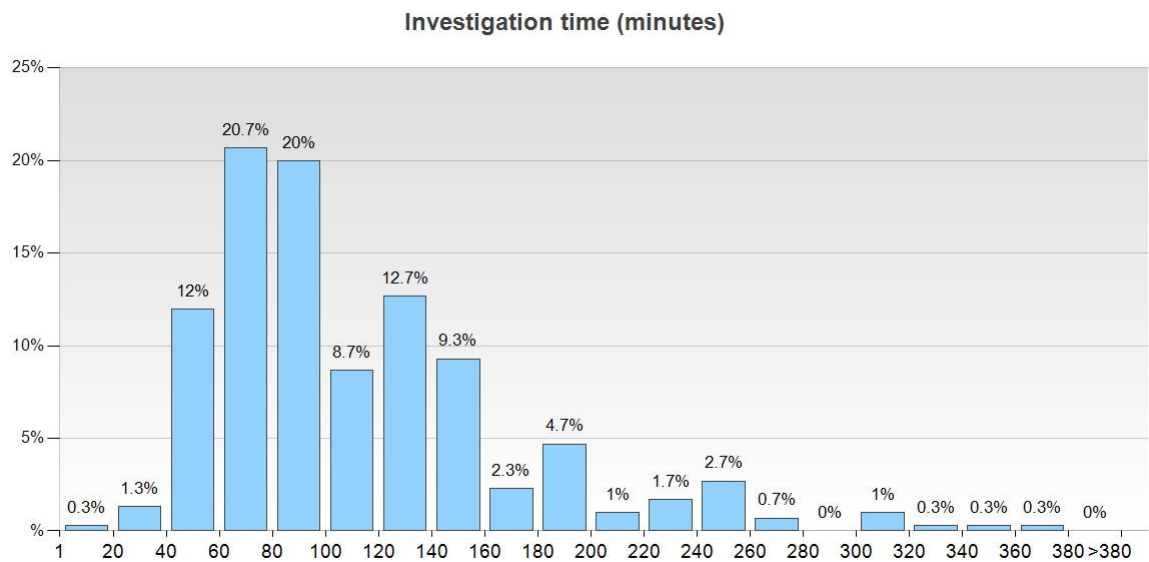
Cardiopathy (Underlying heart disease)	n	%
None	282	94
Ischemic	5	1.67
Congenital	4	1.33
Hypertensive Cardiomyopathy	4	1.33
Other	3	1
Dilated	1	0.33
Valvular	1	0.33
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
H(O)CM	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Tachycardiomyopathy	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	300	

Symptoms	n
Palpitations	258
Dizziness	30
None	29
Syncope	13
Dyspnea	13
Fatigue	12
Other	2
SCD	0
Angina Pectoris	0

Accessory Pathway

Anesthesia	n	%
Local	260	86.67
General	40	13.33
Total	300	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	17	109.5	360	300	0
Fluoroscopy time	1	14.2	105	299	1



Accessory Pathway

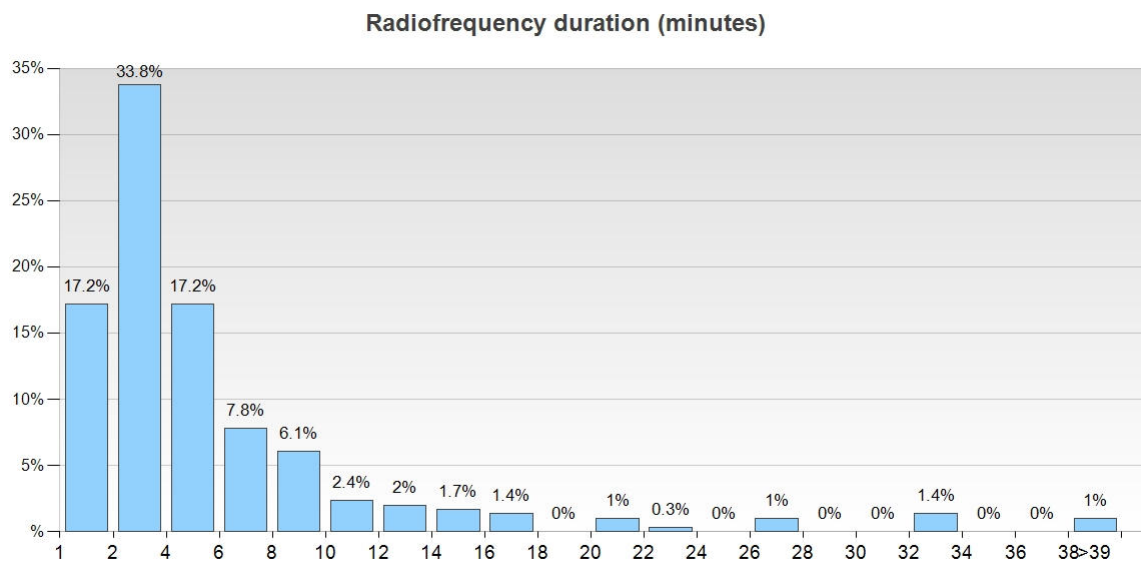
Type	n
WPW	173
Concealed	96
Asymptomatic Preexcitation	25
Other	4
Mahaim	4
Atrio-Fascicular	3
PJRT	2

Intervention	n	%
Primary Intervention	253	84.33
Redo	47	15.67

Site of Ablation	n
left	197
right	107
left: Free Wall	107
left: Posteroseptal	53
right: Posteroseptal	45
left: Posterior	43
right: Anteroseptal	22
right: Free Wall	15
right: Parahisian	11
right: Midseptal	10
right: Coronary Sinus Aneurysm	6
right: Posterior	3

Accessory Pathway

Radiofrequency	min.	Ø	max.	n	n ₀ [*]
Duration (minutes)	1	5.9	140	279	17
Irrigated Technology				150	



Accessory Pathway

Cryoablation	min.	Ø	max.	n	n ₀ *
Total Duration (minutes)	1	11.8	38	5	0

Access	n	%
Venous	140	46.67
Trans-septal, Puncture	103	34.33
Arterial	39	13
Trans-septal, PFO	18	6
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Other	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	300	

Mapping	n	%
Conventional	206	68.67
3D Mapping	93	31
Basket	1	0.33
HD Mesh	0	0
Lasso	0	0
Other	0	0
Non Contact	0	0
Total	300	

Catheter Steering	n	%
Conventional	298	99.33
Other	1	0.33
Stereotaxis	1	0.33
Hansen	0	0
Total	300	

Results	n	%
Success	287	95.67
No success	13	4.33

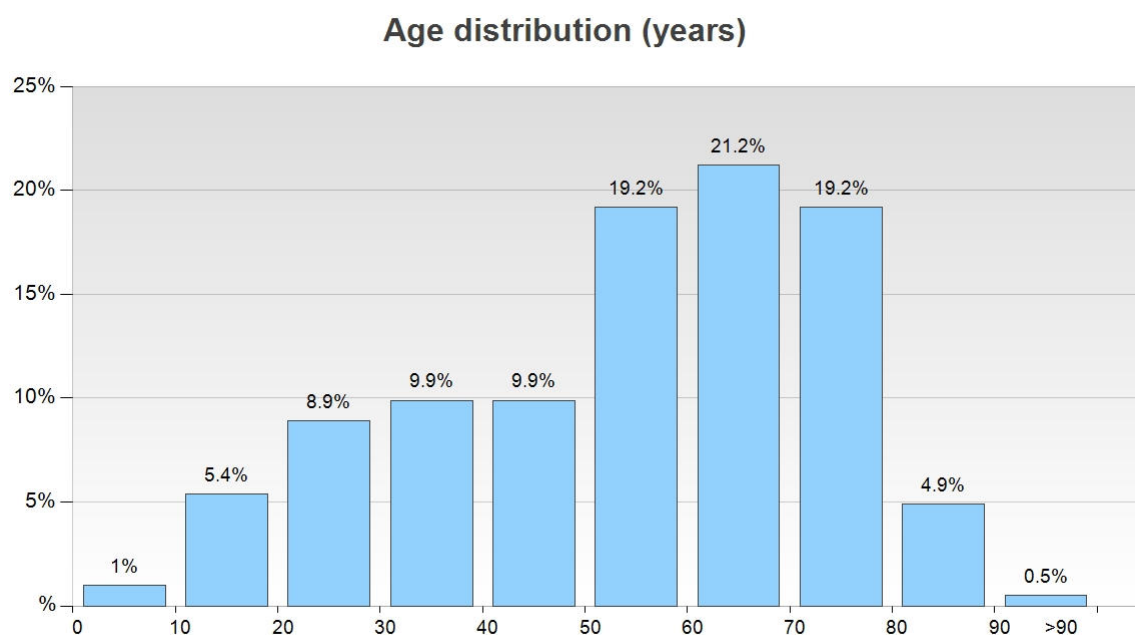
Accessory Pathway

Periprocedural Complications	n
No complications	298
Arterial Occlusion	1
Other	1
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0

Atrial Tachycardia

Ablation of Atrial Tachycardia (AT)	n
All interventions	291
AT combined with others	88
AT only	203

The following statistics include AT only procedures



Age (years)	min.	Ø	max.
Female	9	53	91
Male	4	57	90
All	4	55	91

Number of patients	n	%
Females	119	58.62
Males	84	41.38
Total	203	

Atrial Tachycardia

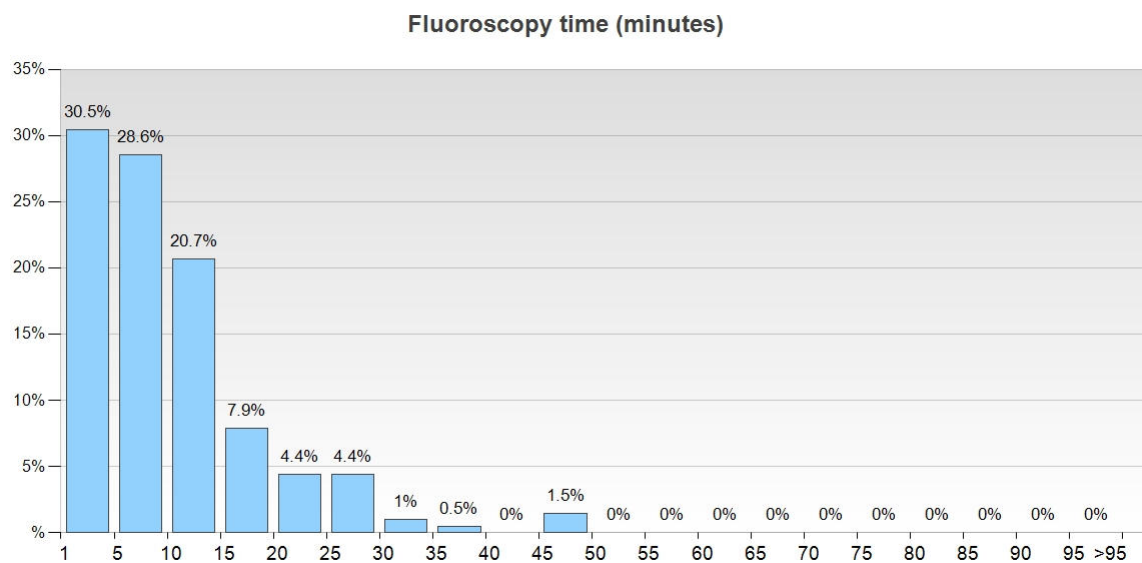
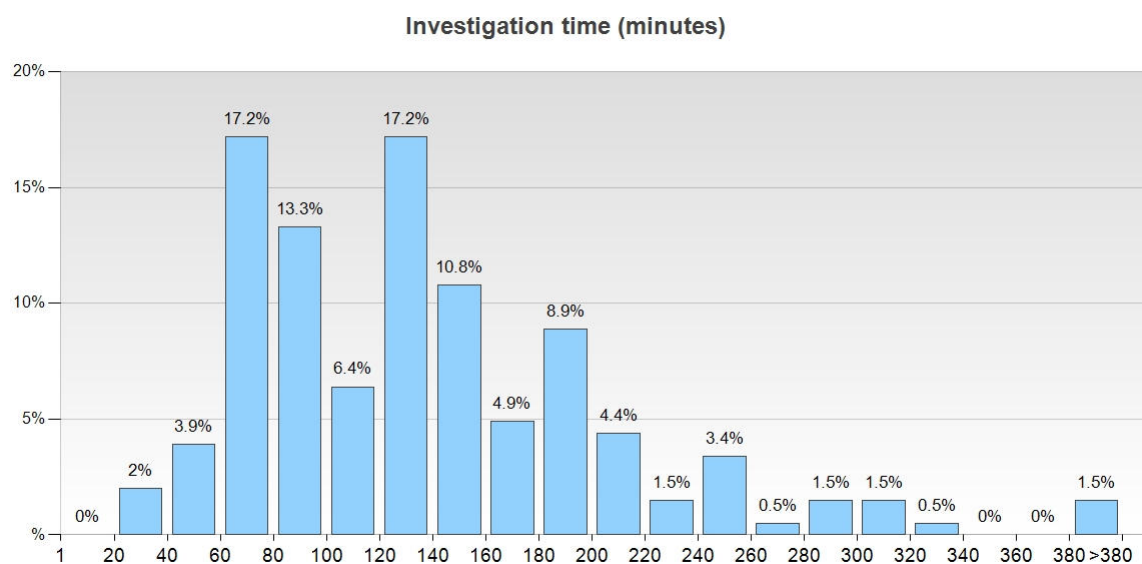
Cardiopathy (Underlying heart disease)	n	%
None	133	65.52
Congenital	15	7.39
Valvular	12	5.91
Ischemic	11	5.42
Other	10	4.93
Hypertensive Cardiomyopathy	8	3.94
Tachycardiomyopathy	4	1.97
Post Congenital Surgery	4	1.97
H(O)CM	3	1.48
Dilated	3	1.48
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	203	

Symptoms	n
Palpitations	181
Dizziness	26
Dyspnea	20
Fatigue	17
Other	9
Angina Pectoris	8
Syncope	7
SCD	3
None	2

Atrial Tachycardia

Anesthesia	n	%
Local	177	87.19
General	26	12.81
Total	203	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	24	133.6	480	202	1
Fluoroscopy time	1	9.8	48	202	1



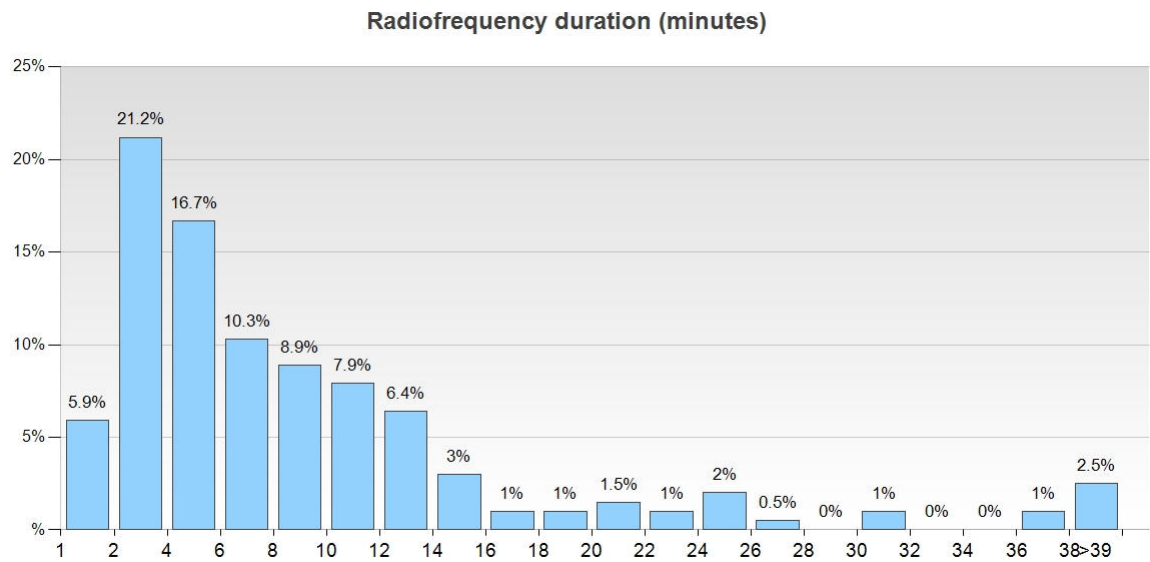
Atrial Tachycardia

Intervention	n	%
Primary Intervention	169	83.25
Redo	34	16.75

Site of Ablation	n
right	153
left	61
right: Other Right	50
right: Septal Right	45
right: Crista Terminalis	35
right: Peritricuspid	31
left: Other Left	22
left: Septal Left	17
left: Perimitral	12
left: Periostial PV	11
left: Left Atrial Appendage	8
right: Right Appendage	6

Atrial Tachycardia

Radiofrequency	min.	Ø	max.	n	n ₀ [*]
Duration (minutes)	1	9.2	64	187	16
Irrigated Technology				138	



Atrial Tachycardia

Access	n	%
Venous	152	74.88
Trans-septal, Puncture	40	19.7
Arterial	7	3.45
Trans-septal, PFO	4	1.97
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Other	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	203	

Mapping	n	%
3D Mapping	140	68.97
Conventional	53	26.11
Lasso	6	2.96
Non Contact	2	0.99
Other	1	0.49
Basket	1	0.49
HD Mesh	0	0
Total	203	

Catheter Steering	n	%
Conventional	200	98.52
Stereotaxis	2	0.99
Other	1	0.49
Hansen	0	0
Total	203	

Results	n	%
Success	178	87.68
No success	25	12.32

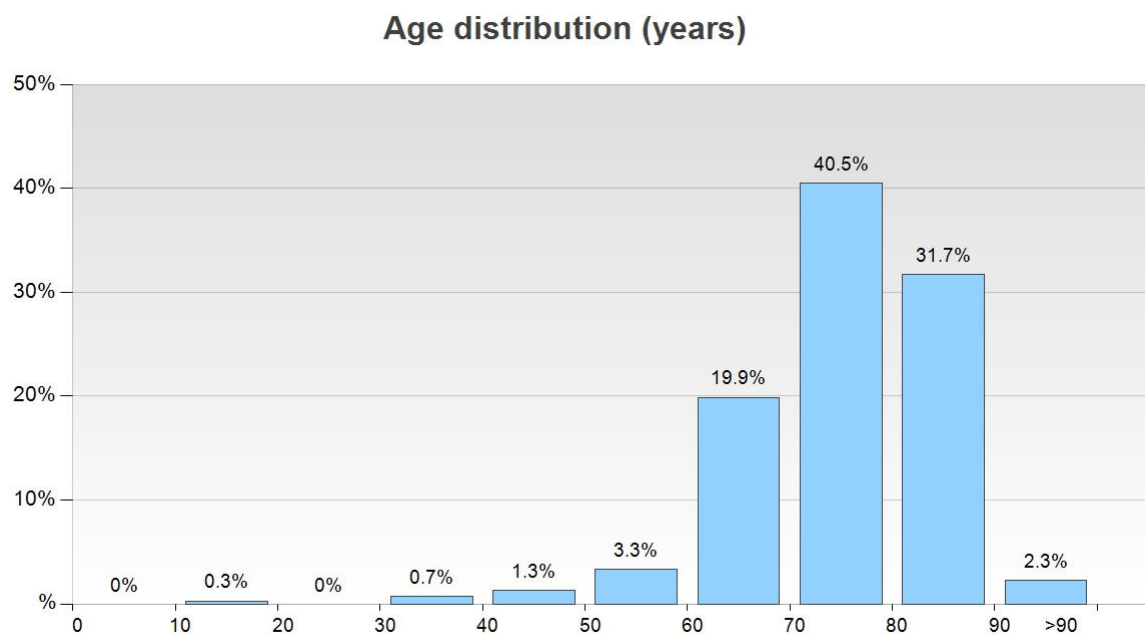
Atrial Tachycardia

Periprocedural Complications	n
No complications	202
Inguinal Hematoma	1
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
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Ablation of AVN(R)	n
All interventions	317
AVN(R) combined with others	11
AVN(R) only	306

The following statistics include AVN(R) only procedures



Age (years)	min.	Ø	max.
Female	17	77	102
Male	39	74	93
All	17	76	102

Number of patients	n	%
Females	165	53.92
Males	141	46.08
Total	306	

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Cardiopathy (Underlying heart disease)	n	%
None	95	31.05
Tachycardiomyopathy	57	18.63
Hypertensive Cardiomyopathy	55	17.97
Ischemic	36	11.76
Valvular	25	8.17
Dilated	18	5.88
H(O)CM	8	2.61
Post Valvular Surgery	6	1.96
Other	5	1.63
Congenital	1	0.33
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
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	306	

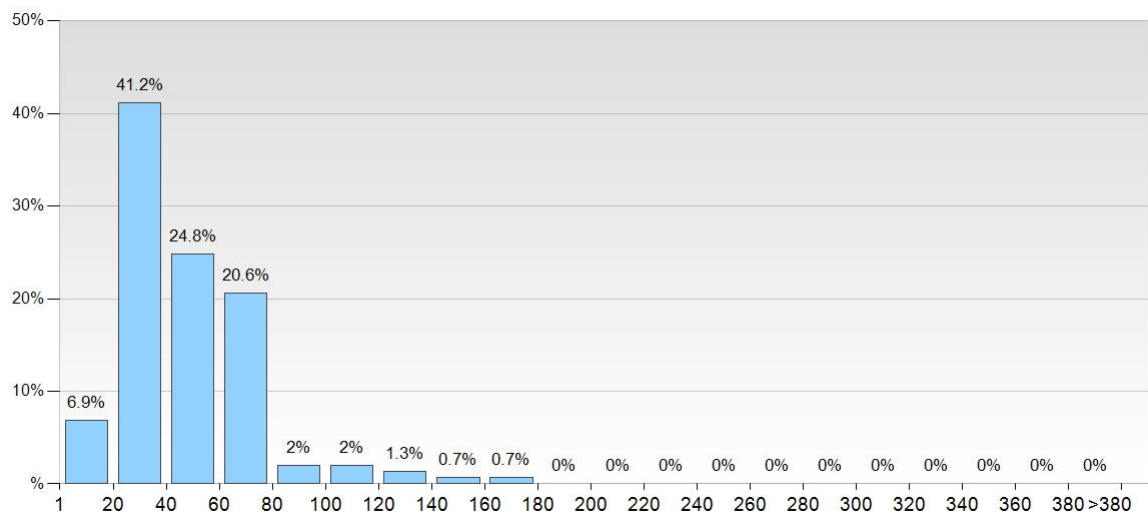
Symptoms	n
Palpitations	244
Dyspnea	138
Fatigue	95
Dizziness	31
Other	10
Syncope	8
None	4
Angina Pectoris	3
SCD	1

Atrioventricular Node (Rate Control in Atr. Fibrillation)

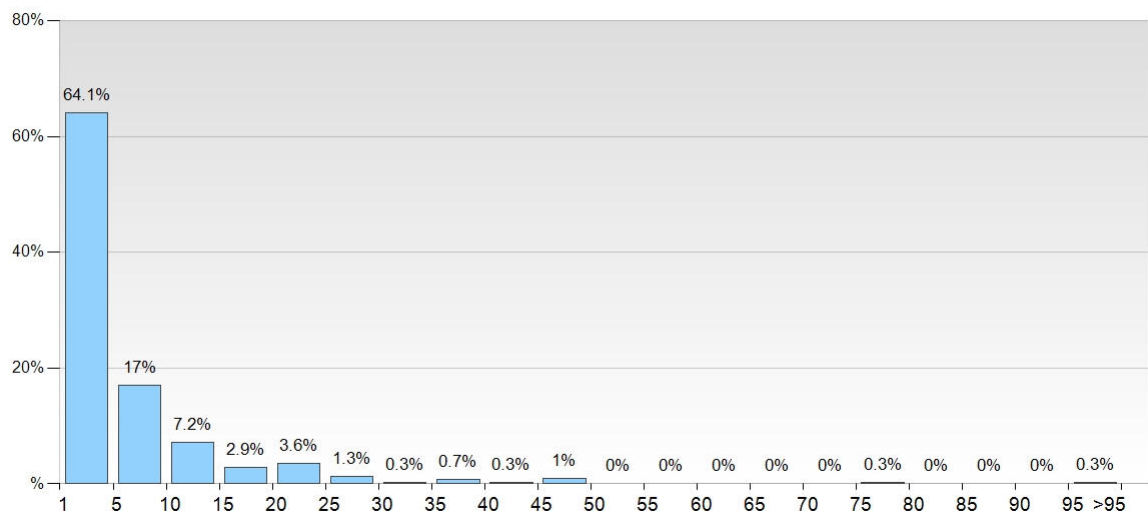
Anesthesia	n	%
Local	301	98.37
General	5	1.63
Total	306	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	10	44.3	170	306	0
Fluoroscopy time	1	7	256	303	3

Investigation time (minutes)



Fluoroscopy time (minutes)



Atrioventricular Node (Rate Control in Atr. Fibrillation)

Type of Fibrillation	n	%
Paroxysmal	85	27.78
Persistent	118	38.56
Long-standing Persistent (>1 Year)	103	33.66

EHRA-Score	n	%
Score I	27	8.82
Score II	66	21.57
Score III	185	60.46
Score IV	28	9.15

Intervention	n	%
Primary Intervention	275	89.87
Redo	18	5.88
Previous AF Abl. Procedure	13	4.25

Antiarrhythmic Drugs	n
Beta Blocker	237
Amiodarone	90
Calcium Antagonist	48
Digitalis	38
None	27
Sotalol	15
Flecainide	9
Dronedarone	4
Other	3
Propafenone	2

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Thromboembolic Risk Factors	n
Hypertension	162
Congestive Heart Failure, LV dysfunction	58
Diabetes	39
Prior MI, Per. Artery Disease, Aortic Plaque	34
Stroke, TIA, Pther Embolic Event	21

Anticoagulation, Antiaggregation	n
Vitamin K-Antagonist	132
Factor Xa-Antagonist	129
Aspirin	17
Direct Thrombin Inhibitor	12
None	12
Other	7
Clopidogrel	6
Prasugrel	0
Ticagrelor	0

CHA ₂ DS ₂ -VASc Score	n
Score = 0	7
Score = 1	36
Score = 2	51
Score = 3	100
Score = 4	64
Score = 5	35
Score = 6	10
Score = 7	3
Average Score	3.10

Atrioventricular Node (Rate Control in Atr. Fibrillation)

Periprocedural Complications	n
No complications	306
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
TIA	0
Transient AV Block	0

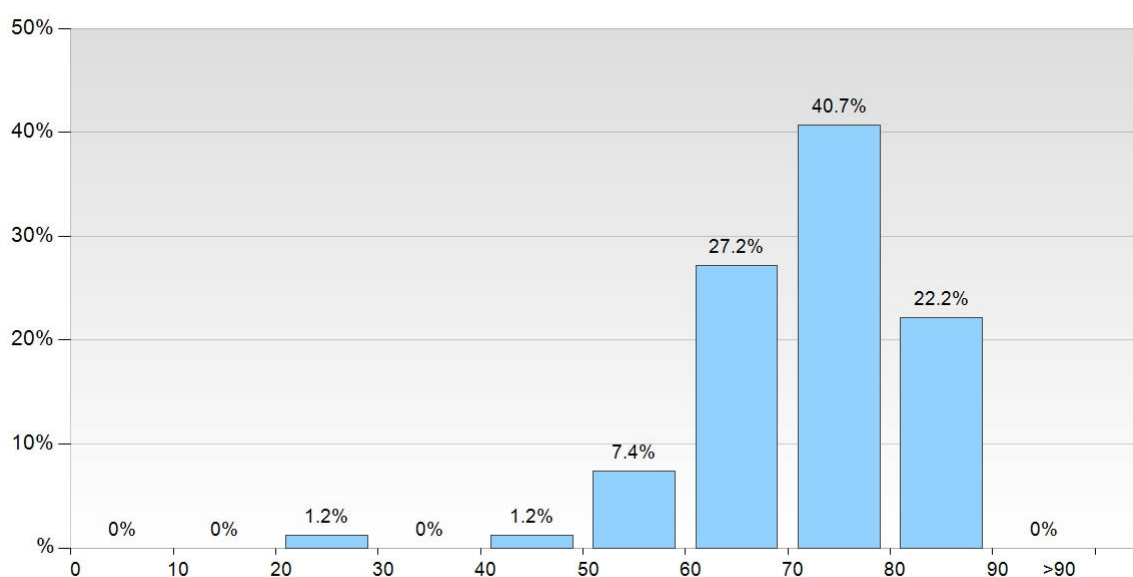
Atrioventricular Node (to resynchronisation)

Ablation of AVN

	n
All interventions	89
AVN combined with others	8
AVN only	81

The following statistics include AVN only procedures

Age distribution (years)



Age (years)	min.	Ø	max.
Female	59	77	90
Male	28	71	86
All	28	73	90

Number of patients	n	%
Females	28	34.57
Males	53	65.43
Total	81	

Atrioventricular Node (to resynchronisation)

Cardiopathy (Underlying heart disease)	n	%
Dilated	28	34.57
Ischemic	22	27.16
None	9	11.11
Valvular	8	9.88
Tachycardiomyopathy	7	8.64
Other	4	4.94
Post Valvular Surgery	2	2.47
Hypertensive Cardiomyopathy	1	1.23
Brugada Syndrome	0	0
Channelopathy long QT	0	0
Angioplasty	0	0
H(O)CM	0	0
RV Cardiomyopathy	0	0
Congenital	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
CABG	0	0
Catecholaminergic Polymorphic VT	0	0
Total	81	

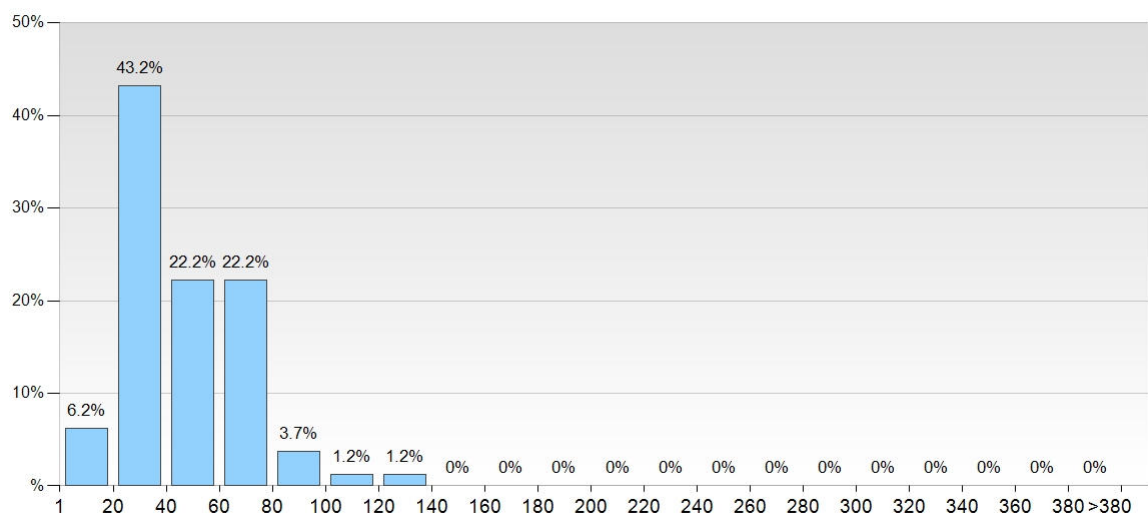
Symptoms	n
Dyspnea	58
Fatigue	37
Palpitations	37
Dizziness	5
Syncope	2
Other	2
Angina Pectoris	1
SCD	0
None	0

Atrioventricular Node (to resynchronisation)

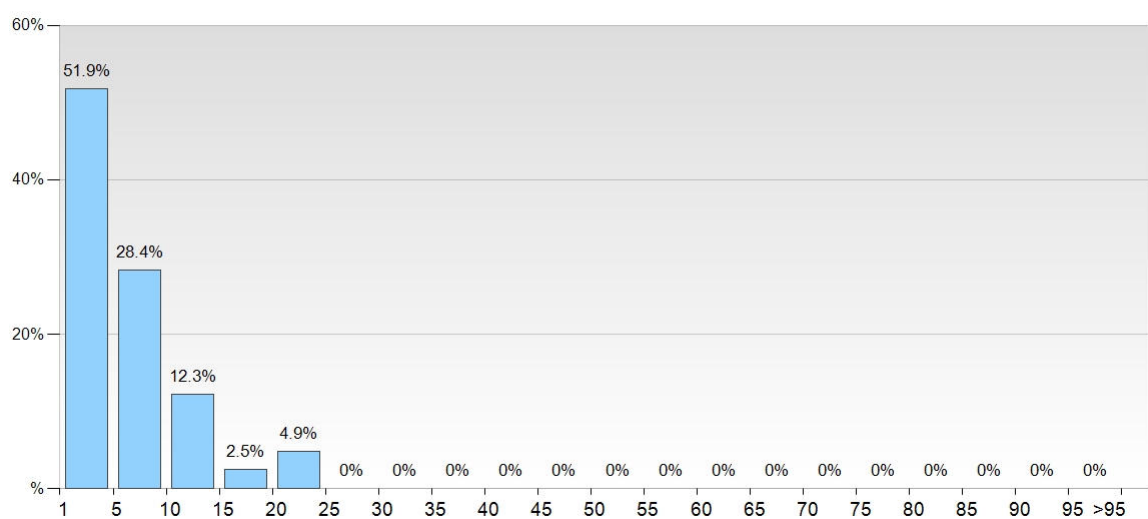
Anesthesia	n	%
Local	81	100
General	0	0
Total	81	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	14	42.5	120	81	0
Fluoroscopy time	1	5.8	24	81	0

Investigation time (minutes)



Fluoroscopy time (minutes)



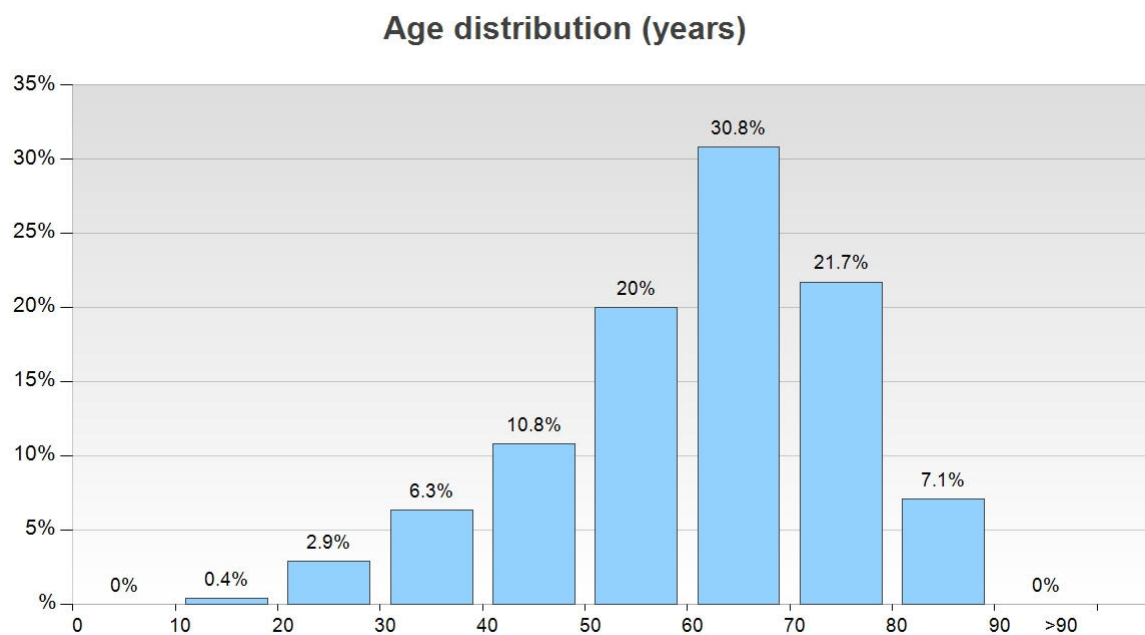
Atrioventricular Node (to resynchronisation)

Periprocedural Complications	n
No complications	80
Pulmonary Oedema	1
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Other	0
Hemothorax	0
Arterial Thrombosis	0
Tamponade	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0

Ventricular Tachycardia

Ablation of Ventricular Tachycardia (VT)	n
All interventions	247
VT combined with others	7
VT only	240

The following statistics include VT only procedures



Age (years)	min.	Ø	max.
Female	26	57	86
Male	18	63	89
All	18	62	89

Number of patients	n	%
Females	53	22.08
Males	187	77.92
Total	240	

Ventricular Tachycardia

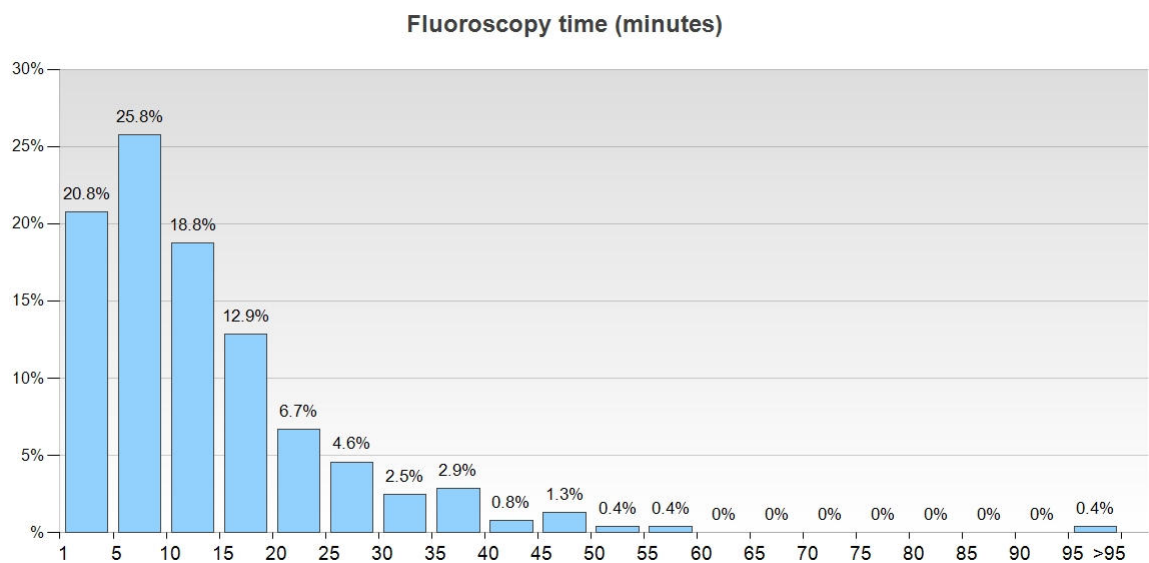
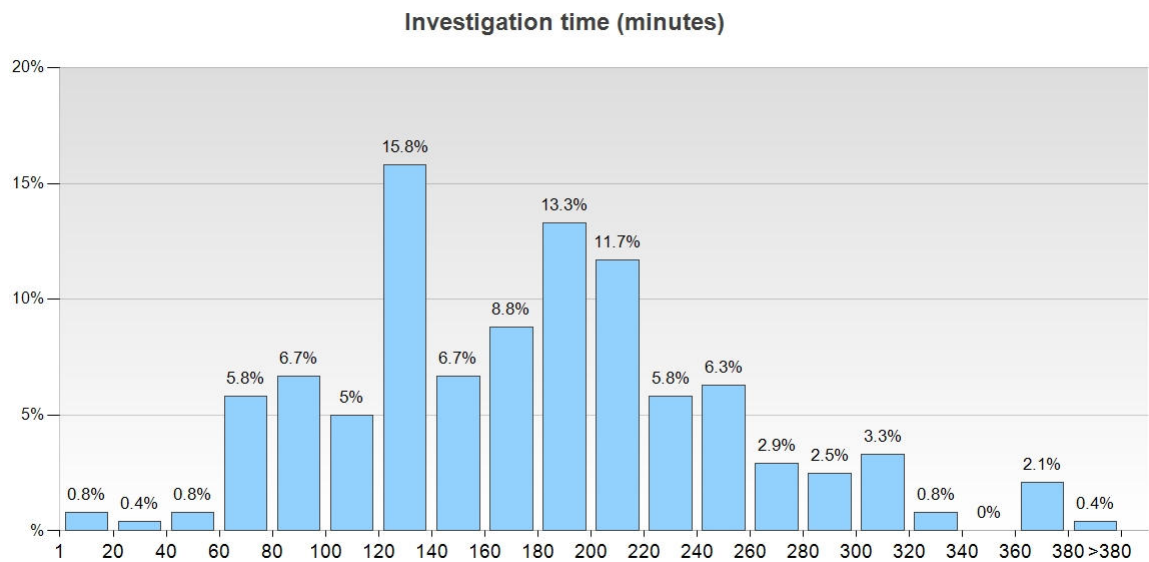
Cardiopathy (Underlying heart disease)	n	%
Ischemic	104	43.33
None	65	27.08
Dilated	24	10
Other	14	5.83
RV Cardiomyopathy	9	3.75
H(O)CM	7	2.92
Angioplasty	4	1.67
Hypertensive Cardiomyopathy	4	1.67
Tachycardiomyopathy	3	1.25
Congenital	2	0.83
Infiltrative	2	0.83
Catecholaminergic Polymorphic VT	1	0.42
Valvular	1	0.42
Brugada Syndrome	0	0
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
CABG	0	0
Total	240	

Symptoms	n
Palpitations	178
Syncope	46
Dyspnea	40
Other	34
Dizziness	33
Fatigue	27
SCD	14
Angina Pectoris	7
None	6

Ventricular Tachycardia

Anesthesia	n	%
Local	173	72.08
General	67	27.92
Total	240	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	2	174.2	432	240	0
Fluoroscopy time	1	13.1	99	236	4



Ventricular Tachycardia

Type	n
Monomorphic	197
Ischemic	94
Polymorphic	19

Location	n
Other	120
RVOT	57
LVOT / Aortic Cusp	28
Epicardial	23
Left Fascicular VT	22
BB Reentry	5

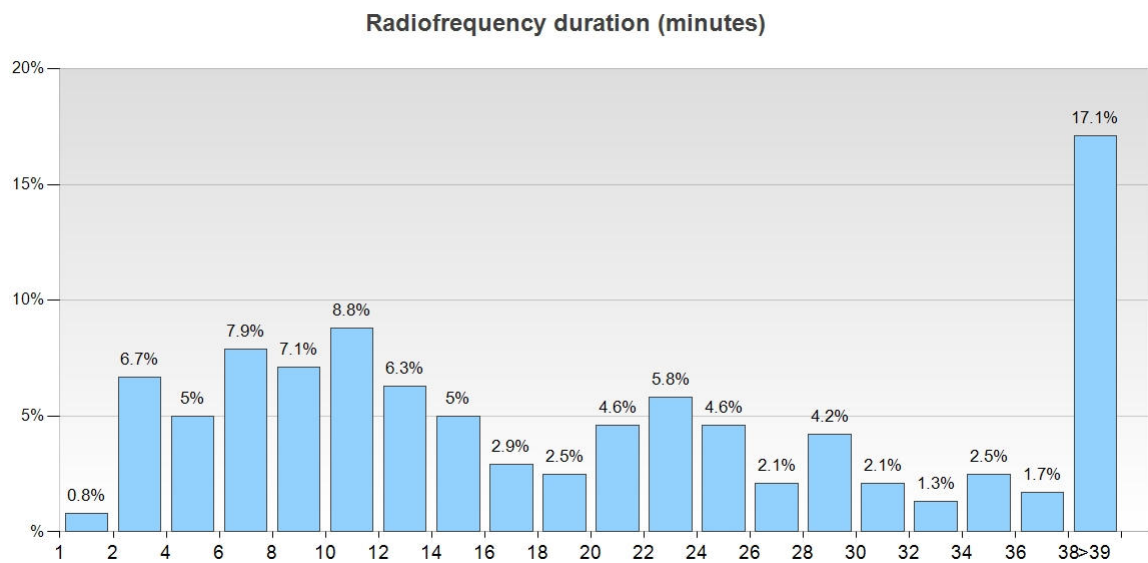
Intervention	n	%
Primary Intervention	183	76.25
Redo	57	23.75

Antiarrhythmic Drugs	n
Beta Blocker	156
Amiodarone	93
None	37
Sotalol	16
Calcium Antagonist	15
Other	14
Flecainide	8
Propafenone	1

Ventricular Tachycardia

Radiofrequency	min.	Ø	max.	n	n ₀ [*]
Duration (minutes)	1	21.9	109	237	3
Irrigated Technology				211	

Number of Induced VT: 352



Ventricular Tachycardia

Access	n	%
Venous	81	33.75
Trans-septal, Puncture	78	32.5
Arterial	58	24.17
Epicardial, Sub-xiphoid	19	7.92
Epicardial, Thoracotomy	1	0.42
Other	1	0.42
Epicardial, Thoracoscopy	1	0.42
Epicardial, Coronary Sinus	1	0.42
Trans-septal, PFO	0	0
Total	240	

Mapping	n	%
3D Mapping	223	92.92
Conventional	12	5
Lasso	2	0.83
Other	1	0.42
Non Contact	1	0.42
Basket	1	0.42
HD Mesh	0	0
Total	240	

Catheter Steering	n	%
Conventional	217	90.42
Stereotaxis	22	9.17
Hansen	1	0.42
Other	0	0
Total	240	

Results	n	%
All Induces VT Ablated	115	47.92
Target VT Ablated	105	43.75
Failure	20	8.33

Ventricular Tachycardia

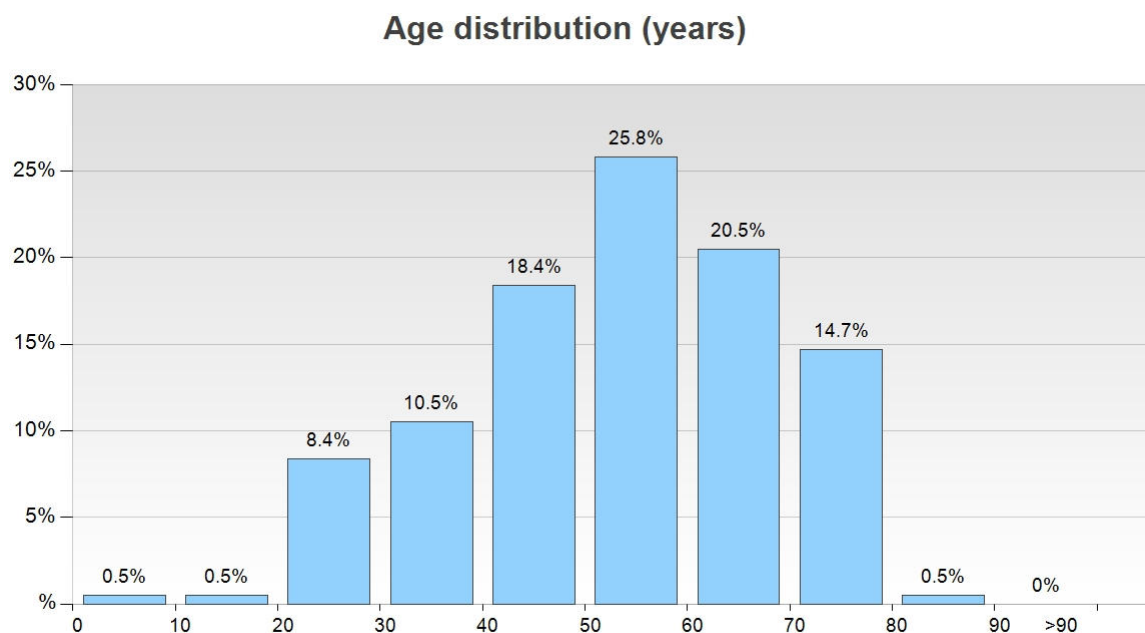
Periprocedural Complications	n
No complications	231
Tamponade	4
Pericardial Effusion	1
High Degree or Complete AV Block	1
Other	1
Pulmonary Oedema	1
Inguinal Hematoma	1
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
AV Fistula	0
Infection	0
Stroke	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pseudoaneurysm	0
PV Stenosis	0
Myocardial Infarction	0
Phrenic Nerve Paralysis	0
TIA	0
Transient AV Block	0

Premature Ventricular Contraction

Ablation of PVC

	n
All interventions	200
PVC combined with others	10
PVC only	190

The following statistics include PVC only procedures



Age (years)	min.	Ø	max.
Female	10	47	80
Male	27	58	82
All	10	54	82

Number of patients	n	%
Females	71	37.37
Males	119	62.63
Total	190	

Premature Ventricular Contraction

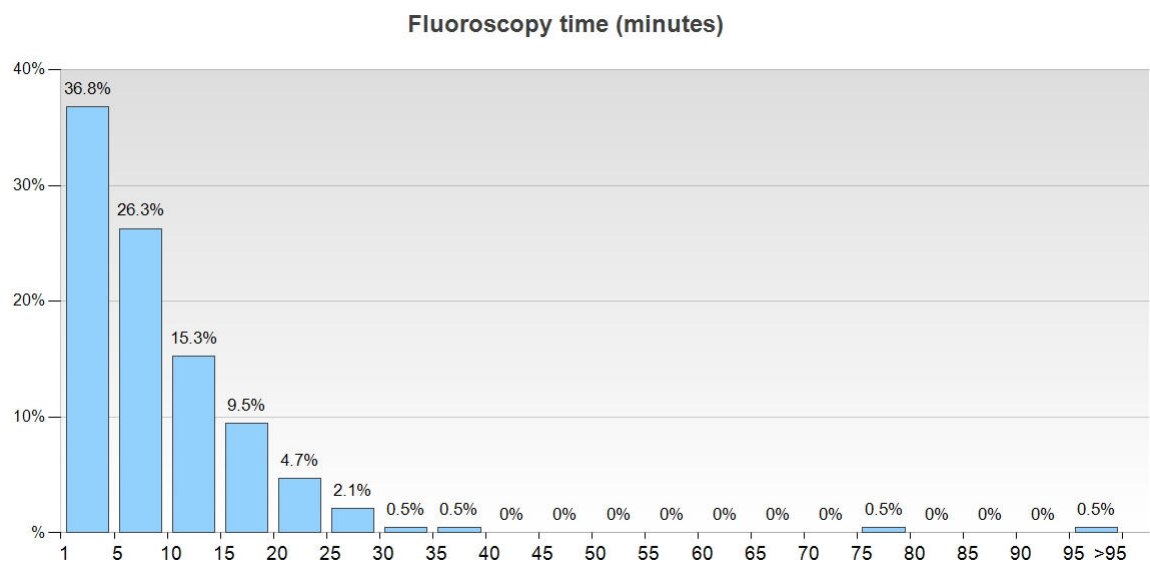
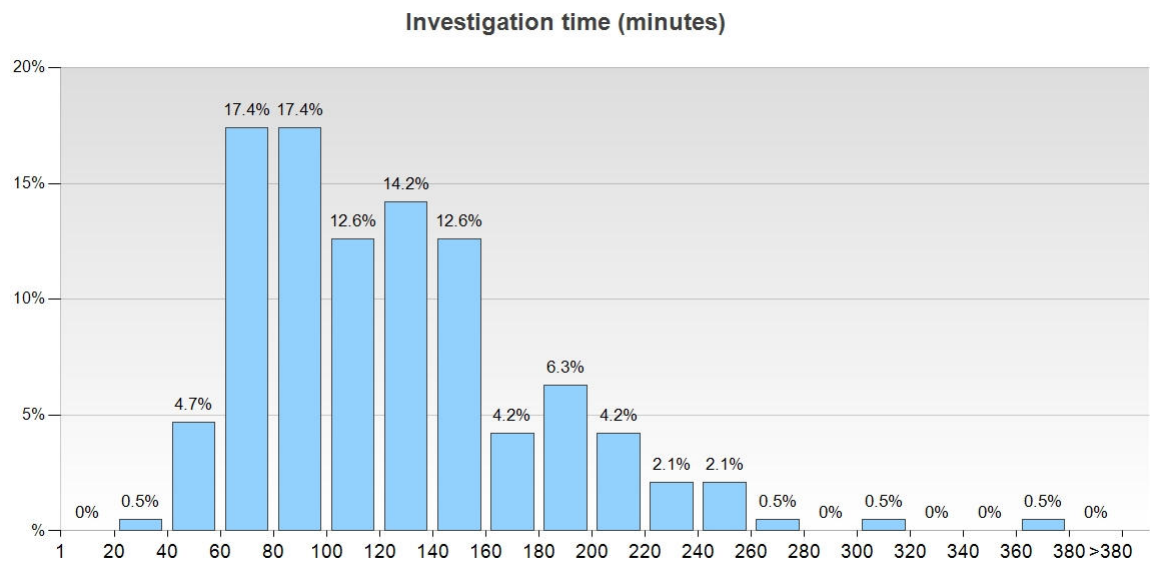
Cardiopathy (Underlying heart disease)	n	%
None	112	58.95
Ischemic	25	13.16
Dilated	16	8.42
Other	14	7.37
Tachycardiomyopathy	7	3.68
Hypertensive Cardiomyopathy	6	3.16
Valvular	5	2.63
Brugada Syndrome	1	0.53
Angioplasty	1	0.53
Congenital	1	0.53
CABG	1	0.53
Catecholaminergic Polymorphic VT	1	0.53
Post Valvular Surgery	0	0
Channelopathy long QT	0	0
H(O)CM	0	0
RV Cardiomyopathy	0	0
Early Repolarization Syndrome	0	0
Channelopathy short QT	0	0
Post Congenital Surgery	0	0
Infiltrative	0	0
Total	190	

Symptoms	n
Palpitations	140
Dyspnea	34
Fatigue	32
Dizziness	20
Other	16
None	9
Syncope	7
SCD	1
Angina Pectoris	1

Premature Ventricular Contraction

Anesthesia	n	%
Local	185	97.37
General	5	2.63
Total	190	

Minutes	min.	Ø	max.	n	n ₀ *
Investigation time	30	120.6	360	190	0
Fluoroscopy time	1	9.8	225	184	6



Premature Ventricular Contraction

Type	n
Monomorphic	174
Polymorphic	18
Ischemic	1

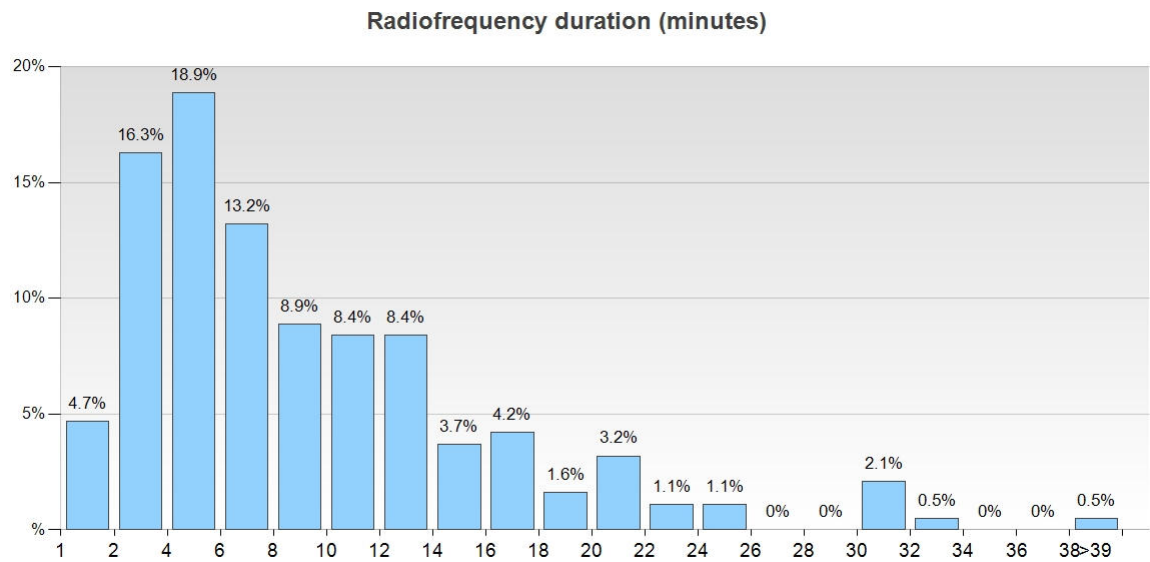
Location	n
RVOT	99
LVOT / Aortic Cusp	51
Other	45
Left Fascicular PVC	3
HP System	2

Site of Ablation	n
Right Ventricle	117
Left Ventricle	84

Intervention	n	%
Primary Intervention	168	88.42
Redo	22	11.58

Premature Ventricular Contraction

Radiofrequency	min.	Ø	max.	n	n ₀ [*]
Duration (minutes)	1	8.8	40	184	6
Irrigated Technology				159	



Premature Ventricular Contraction

Access	n	%
Venous	116	61.05
Arterial	53	27.89
Trans-septal, Puncture	19	10
Trans-septal, PFO	1	0.53
Other	1	0.53
Epicardial, Sub-xiphoid	0	0
Epicardial, Thoracotomy	0	0
Epicardial, Thoracoscopy	0	0
Epicardial, Coronary Sinus	0	0
Total	190	

Mapping	n	%
3D Mapping	160	84.21
Conventional	29	15.26
Lasso	1	0.53
HD Mesh	0	0
Other	0	0
Non Contact	0	0
Basket	0	0
Total	190	

Catheter Steering	n	%
Conventional	185	97.37
Stereotaxis	4	2.11
Hansen	1	0.53
Other	0	0
Total	190	

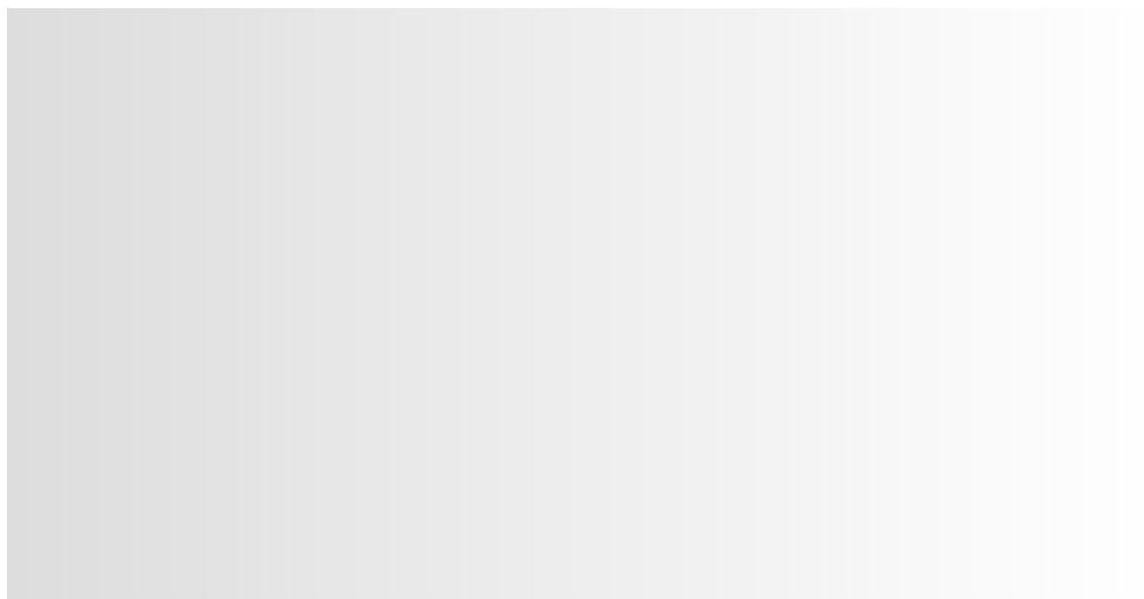
Results	n	%
Success	166	87.37
No Success	24	12.63

Premature Ventricular Contraction

Periprocedural Complications	n
No complications	185
Other	1
Pseudoaneurysm	1
Myocardial Infarction	1
TIA	1
Transient AV Block	1
Arterial Occlusion	0
Death	0
Pneumothorax	0
Aortic Dissection	0
Valvular Lesions	0
Pericardial Effusion	0
AV Fistula	0
Infection	0
Stroke	0
High Degree or Complete AV Block	0
Pulmonary Embolism	0
Hemothorax	0
Arterial Thrombosis	0
Pulmonary Oedema	0
Tamponade	0
PV Stenosis	0
Inguinal Hematoma	0
Phrenic Nerve Paralysis	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 01.01.2016 to 31.12.2016. Its completeness and correctness depends on the complete and correct data entry in the respective hospital. EPS are counted as interventions.

0.3% 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