

**A central registry dealing with
the implantation of
pacemakers to treated
patients**

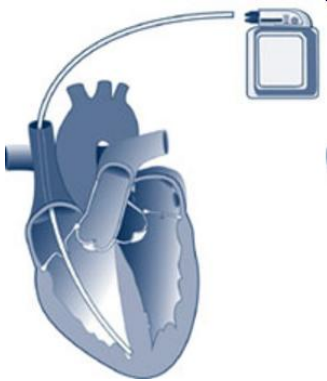
Analysis of year 2018

Export: 17/01/2019



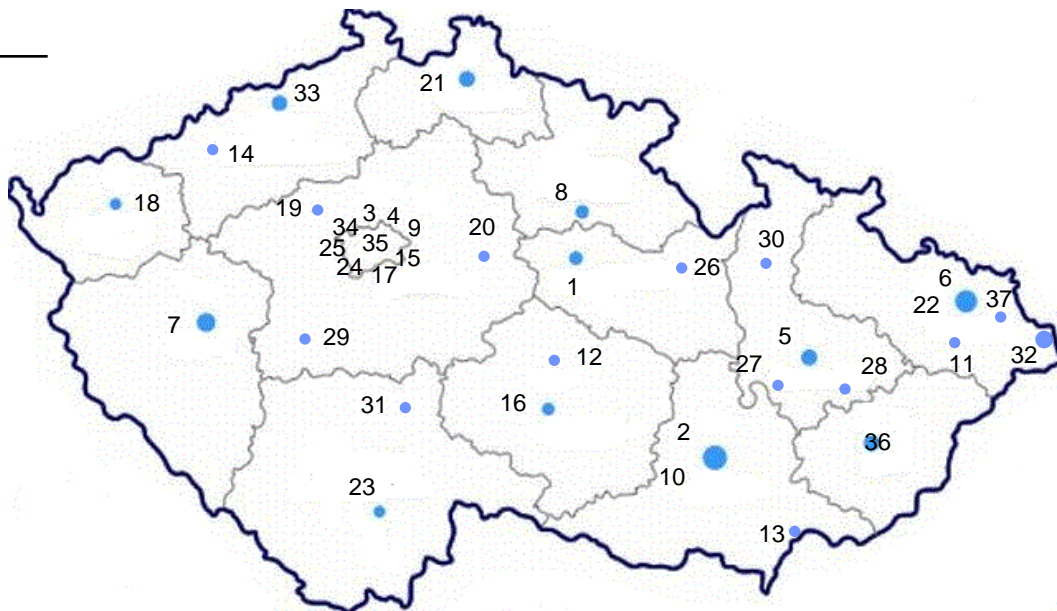
**Expert guarantor:
prof. Miloš Táborský, MD, PhD., FESC, MBA**

Project characteristics



Cooperated centres

- 1 Kardiologické centrum AGEL a.s.
- 2 The University Hospital Brno – Dep. of Cardiology
- 3 The University Hospital Motol – Children´ Cardiocentre
- 4 The University Hospital Motol – Dep. of Cardiology
- 5 The University Hospital Olomouc – 1st Dep. of Medicine
- 6 The University Hospital Ostrava – Dep. of Cardiovascular Medicine
- 7 The University Hospital Plzeň – Dep. of Cardiology, arytmology
- 8 The University Hospital Hradec Králové – 1st Dep. of Internal Medicine
- 9 The University Hospital Královské Vinohrady – 3rd Dep. of Internal Medicine – Cardiology
- 10 The St. Anne's University Hospital Brno – Dep. of Cardiology
- 11 Hospital in Frýdek-Místek – Dep. of Internal Medicine
- 12 Hospital in Havlíčkův Brod – Dep. of Internal Medicine
- 13 TGM Hospital Hodonín – Centre of Cardiorhythmology
- 14 Chomutov – Dep. of Internal Medicine
- 15 The Institute of Clinical and Experimental Medicine – Department of Cardiology
- 16 Jihlava – Dep. of Cardiology
- 17 The University Hospital Bulovka – Cardiology
- 18 Karlovy Vary – Kardiocentrum
- 19 Kladno – Dep. of Internal Medicine
- 20 Kolín – Dep. of Internal Medicine
- 21 Liberec – Cardio Centre
- 22 Ostrava City Hospital – Cardiology
- 23 Hospital in České Budějovice – Cardio Centre
- 24 Hospital of Merciful Sisters – Dep. of Internal Medicine
- 25 Hospital „Na Homolce“ – Dep. of Cardiology
- 26 Hospital in Ústí nad Orlicí – Dep. of Internal Medicine



- 27 Prostějov – Dep. of Internal Medicine
- 28 Přerov – Dep. of Internal Medicine
- 29 Příbram – Dep. of Internal Medicine
- 30 Šumperk – Dep. of Internal Medicine
- 31 Tábor – Dep. of Internal Medicine
- 32 Třinec – Cardio Centre
- 33 Ústí nad Labem – Dep. of Cardiology
- 34 ÚVN – Dep. of Cardiology
- 35 The General University Hospital in Prague – 2nd Dep. of Internal Cardiovascular Medicine
- 36 Zlín – Dep. of Internal Medicine
- 37 Havířov Hospital with Polyclinic – Dep. of Internal Medicine

Cooperated centres – number of records

Base: All records 2018 (N = 10 084)

REPACE

Procedure type/ Centre	Primo-implantation (N = 7 607)	Re-implantation (N = 2 209)	Upgrade (N = 150)	Explantation (N = 29)	Electrode surgery (N = 79)	Other surgery (N = 10)	Total (N=10 084)
Centre 1	466	158	–	8	3	–	635
Centre 2	446	129	2	–	–	–	577
Centre 3	426	133	1	–	1	1	562
Centre 4	334	123	24	6	6	–	493
Centre 5	371	84	7	3	4	–	469
Centre 6	329	130	5	–	–	–	464
Centre 7	322	93	20	–	–	1	436
Centre 8	347	76	4	–	3	–	430
Centre 9	371	48	10	–	1	–	430
Centre 10	299	91	16	–	3	–	409
Centre 11	280	65	9	–	1	–	355
Centre 12	249	96	1	3	3	–	352
Centre 13	282	54	9	–	–	–	345
Centre 14	200	119	8	1	4	–	332
Centre 15	253	51	8	–	4	–	316
Centre 16	279	27	–	–	–	–	306
Centre 17	205	69	–	–	7	–	281
Centre 18	198	41	3	2	1	–	245
Centre 19	189	42	7	1	5	–	244
Centre 20	172	53	7	1	2	2	237
Centre 21	169	64	–	–	3	–	236
Centre 22	168	37	2	3	8	–	218
Centre 23	121	81	3	–	5	–	210
Centre 24	141	52	–	–	4	–	197
Centre 25	142	48	2	–	3	–	195
Centre 26	122	34	–	–	–	4	160
Centre 27	117	33	–	–	2	–	152
Centre 28	126	23	–	–	–	–	149
Centre 29	103	29	–	1	3	–	136
Centre 30	88	33	1	–	–	–	122
Centre 31	98	15	–	–	3	–	116
Centre 32	103	11	–	–	–	–	114
Centre 33	37	25	1	–	–	2	65
Centre 34	38	21	–	–	–	–	59
Centre 35	16	21	–	–	–	–	37

Cooperated centres – number of records

Base: All records 2018 (N = 10 084)

REPACE

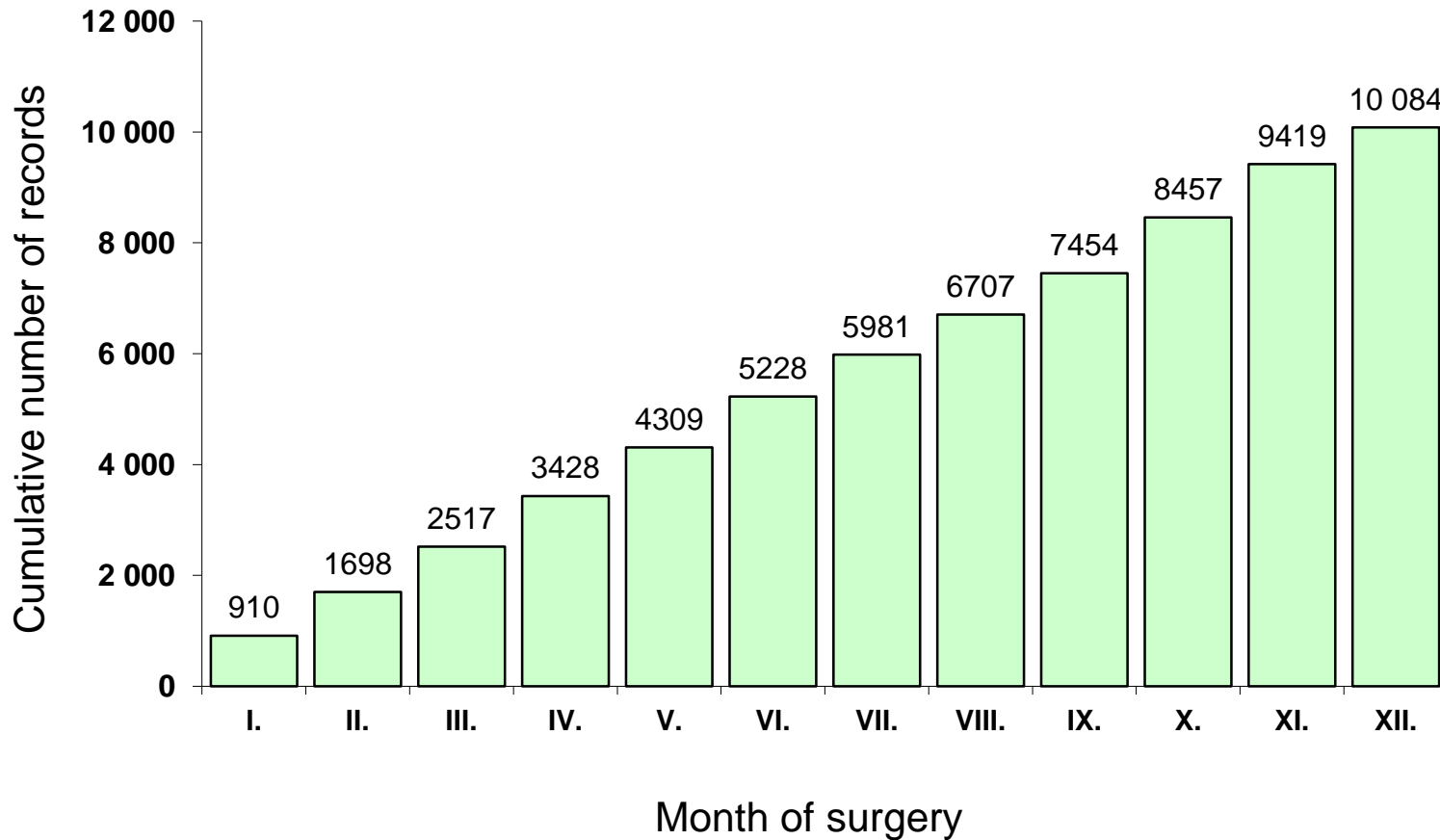
Procedure type/ Centre	Primo-implantation (N = 7 607)	Re-implantation (N = 2 209)	Upgrade (N = 150)	Explantation (N = 29)	Electrode surgery (N = 79)	Other surgery (N = 10)	Total (N=10 084)
Nemocnice Na Homolce - Kardiologické odd.	466	158	–	8	3	–	635
FN Brno - Kardiologická klinika	446	129	2	–	–	–	577
FNUSA Brno - Kardiologická klinika	426	133	1	–	1	1	562
IKEM Praha - Kardiologická klinika	334	123	24	6	6	–	493
Liberec - Kardiocentrum	371	84	7	3	4	–	469
FN Plzeň - Kardiologické odd.	329	130	5	–	–	–	464
FNHK - 1. IK	322	93	20	–	–	1	436
FN Ostrava - Kardiiovaskulární odd.	347	76	4	–	3	–	430
Třinec - Podlesí - kardiocentrum	371	48	10	–	1	–	430
FNKV Praha – III.interní - kardiologická klinika	299	91	16	–	3	–	409
Nemocnice České Budějovice - kardiocentrum	280	65	9	–	1	–	355
Kardiologické centrum AGEL a.s.	249	96	1	3	3	–	352
FN Olomouc - I. interní klinika - kardiologická	282	54	9	–	–	–	345
VFN Praha - II.IK - Kardiologická klinika	200	119	8	1	4	–	332
Zlín - Interní klinika	253	51	8	–	4	–	316
Orlickoústecká nemocnice - interní odd.	279	27	–	–	–	–	306
Kardiologie na Bulovce, s.r.o.	205	69	–	–	7	–	281
ÚnL - Kardiologické odd.	198	41	3	2	1	–	245
Městská nemocnice Ostrava - Kardiologie	189	42	7	1	5	–	244
FN Motol - Kardiologické oddělení	172	53	7	1	2	2	237
Tábor - Interní odd.	169	64	–	–	3	–	236
Karlovy Vary nemocnice - Kardiocentrum	168	37	2	3	8	–	218
ÚVN - Kardiologické odd.	121	81	3	–	5	–	210
Kolín - Interní odd.	141	52	–	–	4	–	197
Jihlava - Kardiologické odd.	142	48	2	–	3	–	195
Kladno - Interní odd.	122	34	–	–	–	4	160
Hodonín - Kardiostimul.centrum Nem. TGM p.o.	117	33	–	–	2	–	152
Přerov - Interní odd.	126	23	–	–	–	–	149
Frýdek Místek - Interní oddělení	103	29	–	1	3	–	136
Chomutov - Interní odd.	88	33	1	–	–	–	122
Prostějov - Interní odd.	98	15	–	–	3	–	116
Šumperk - Interní odd	103	11	–	–	–	–	114
Příbram - Interní oddělení	37	25	1	–	–	2	65
Havlíčkův Brod - Interní oddělení	38	21	–	–	–	–	59
FN Motol - Dětské kardiocentrum	16	21	–	–	–	–	37

Cumulative number of records in time

Base: All records 2018 (N = 10 084)

REPACE

There are **10 084** records for year 2018.

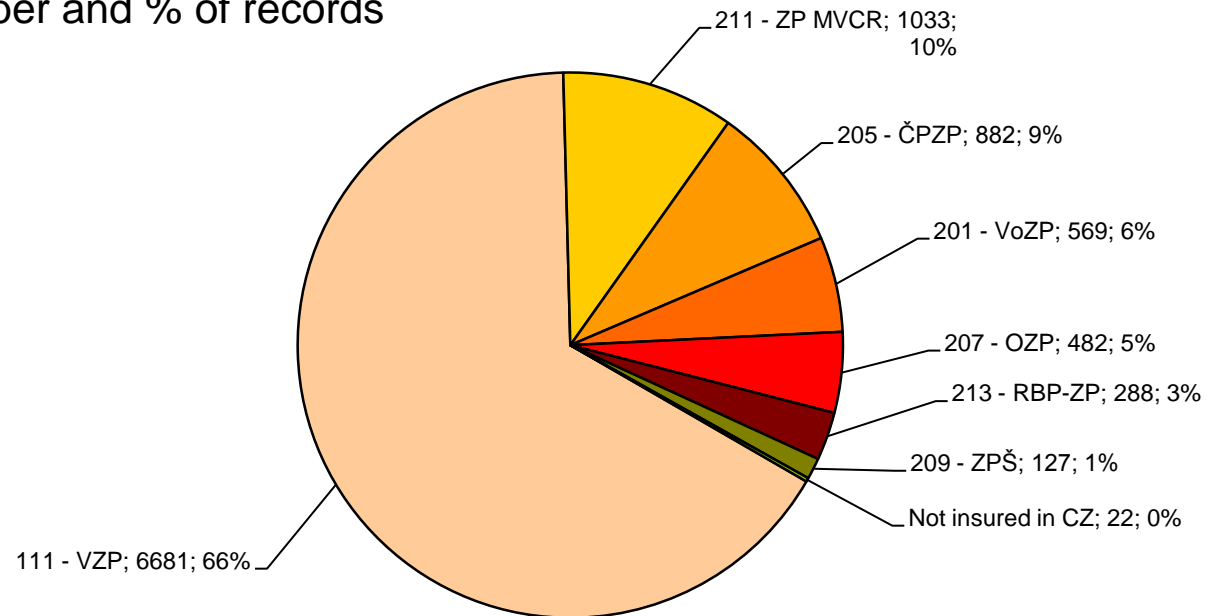


Number of records according to insurance company

Base: All records 2018 (N = 10 084)

REPACE

Number and % of records



Insurance	N	%
111 - Všeobecná zdravotní pojišťovna	6 681	66.3
211 - Zdravotní pojišťovna Ministerstva vnitra ČR	1 033	10.2
205 - Česká průmyslová zdravotní pojišťovna	878	8.7
201 - Vojenská zdravotní pojišťovna	569	5.6
207 - Oborová pojišťovna zaměstnanců bank, pojišťoven a stavebnictví	482	4.8
213 - Revírní bratrská pokladna	288	2.9
209 - Zaměstnanecká pojišťovna Škoda	127	1.3
Not insured in CZ	22	0.2

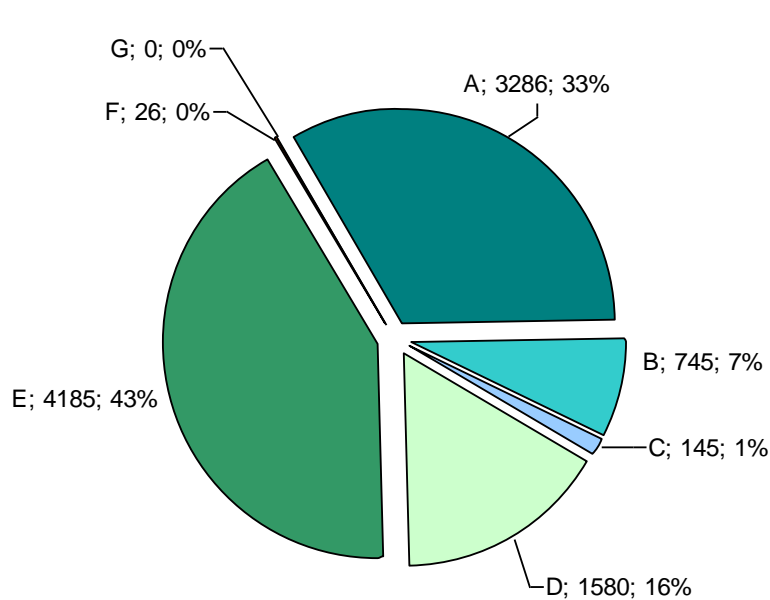
Manufacturers market share

Base: All records 2018 (N = 10 084)

REPACE

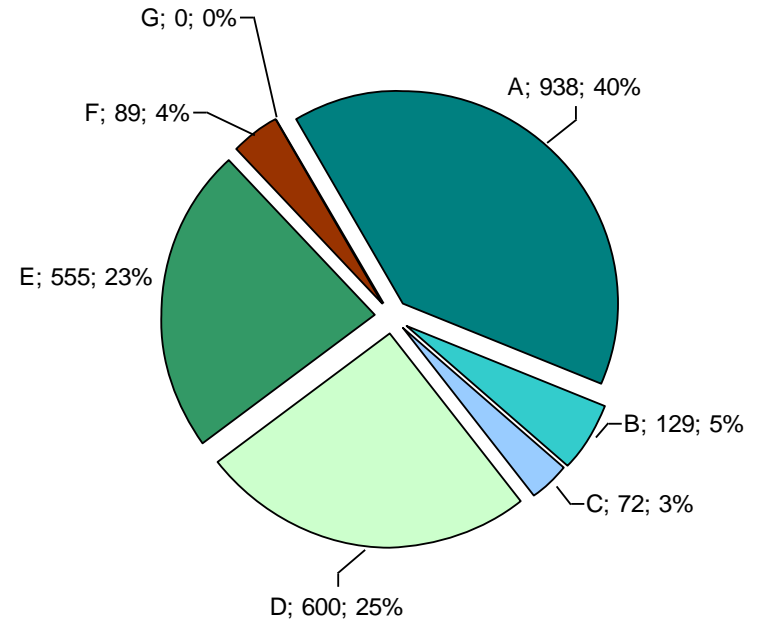
Implanted devices manufacturer

N = 9 967



Explanted devices manufacturer

N = 2 383



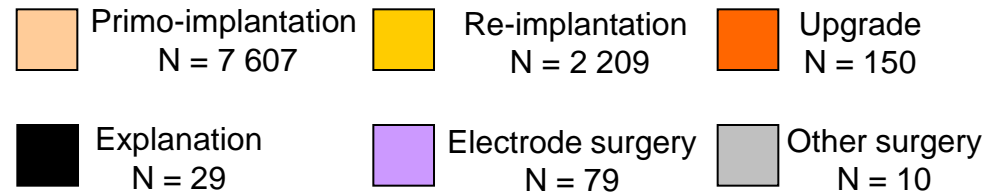
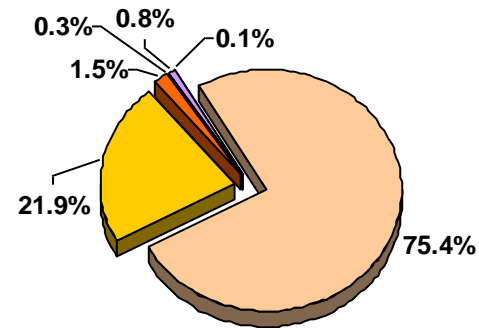
Number of records according to procedure type

Base: All records 2018 (N = 10 084)

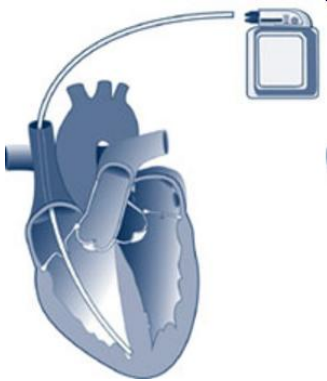
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Procedure type	N	%
<i>Primo-implantation</i>	7 607	75.4
<i>Re-implantation</i>	2 209	21.9
<i>Upgrade</i>	150	1.5
<i>Explantation</i>	29	0.3
<i>Electrode substitution</i>	49	0.5
<i>Electrode reposition</i>	24	0.2
<i>Electrode extraction</i>	6	0.1
<i>Other surgery</i>	10	0.1
Total	10 084	100.0

Procedure type aggregation



**Completed records:
Implanted devices and
surgery
N = 10 084**



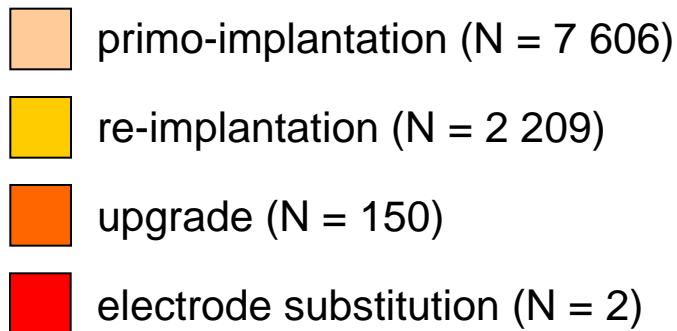
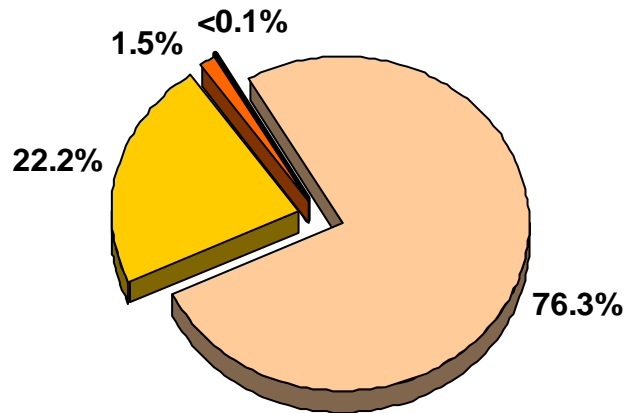
Implanted and explanted devices – surgery type

Base: All records 2018 (N = 10 084)

REPACE

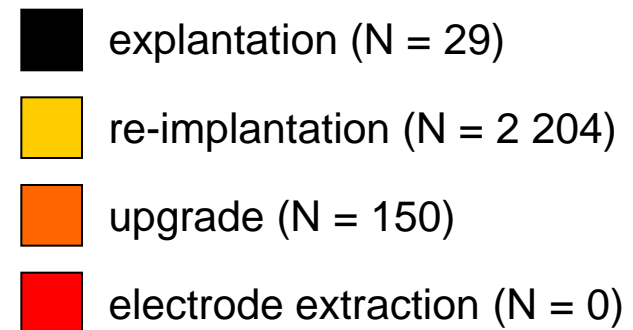
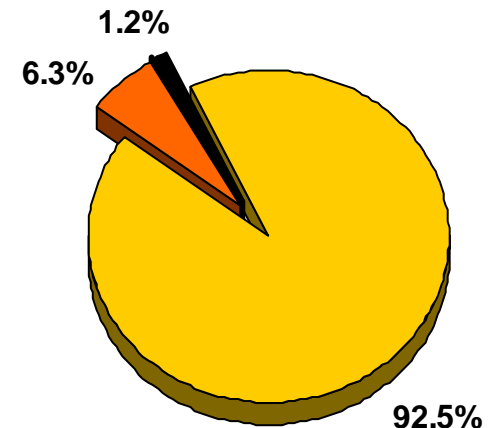
Implanted devices

N = 9 967



Explanted devices

N = 2 383



More than 2/3 of devices are implanted as primo-implantation. Minimal number of devices are just explanted.

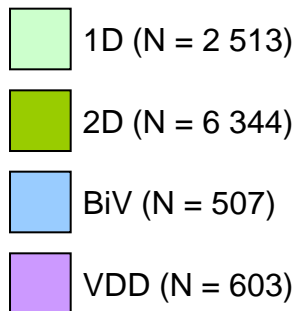
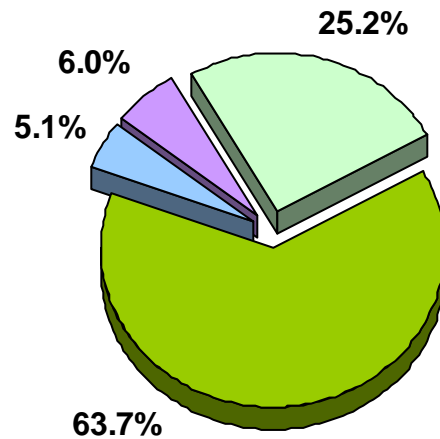
Implanted and explanted devices – device type

Base: All records 2018 (N = 10 084)

REPACE

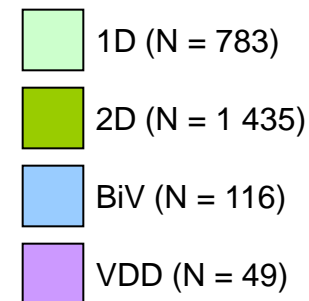
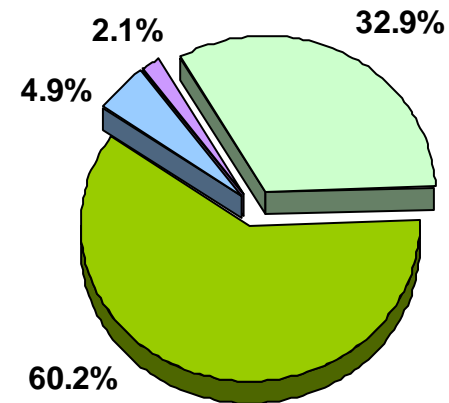
Implanted devices

N = 9 967



Explanted devices

N = 2 383



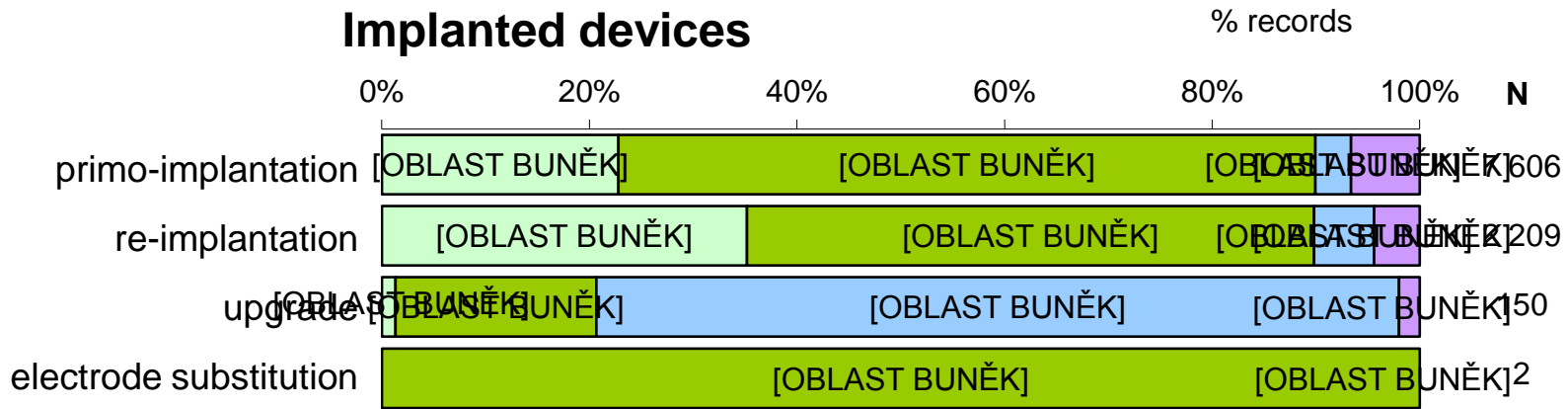
2D pacemaker is the most used device. It prevail among implanted also explanted devices.

Device type according to surgery

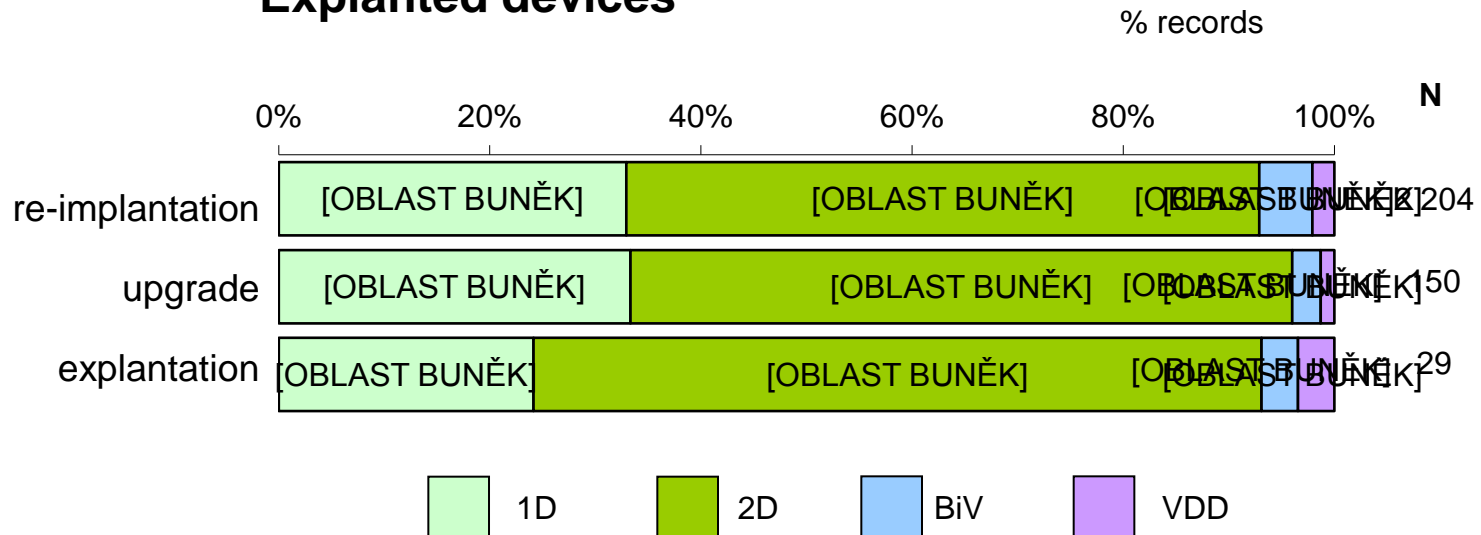
Base: All records 2018 (N = 10 084)

REPACE

Implanted devices



Explanted devices

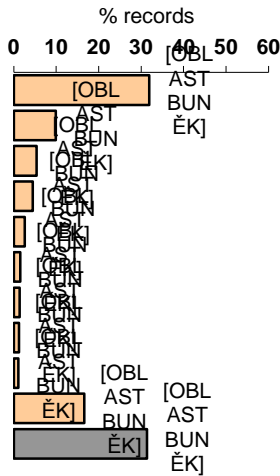


Etiology according to surgery type

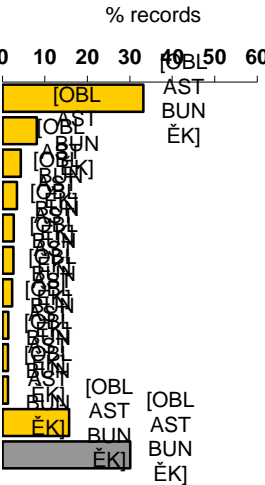
Base: All records 2018 (N = 10 084)

REPACE

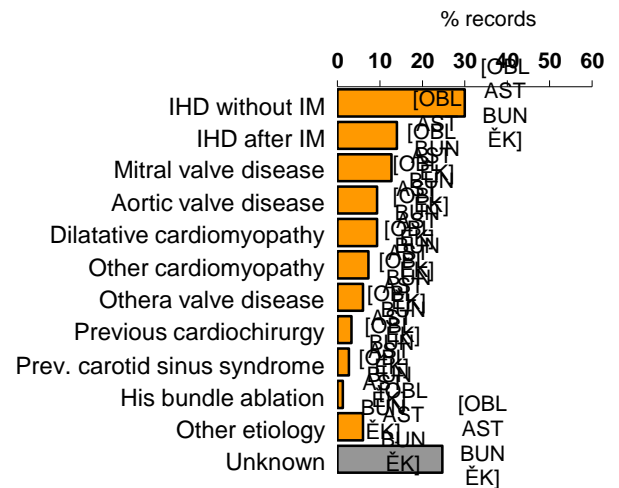
Primo-implantation
(N = 7 607)



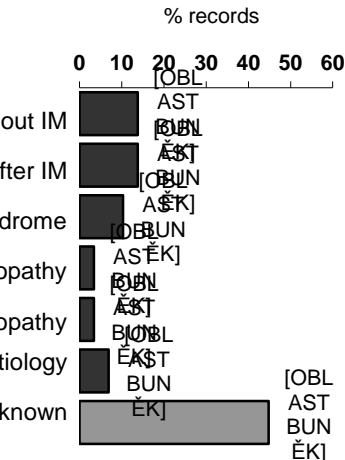
Re-implantation
(N = 2 209)



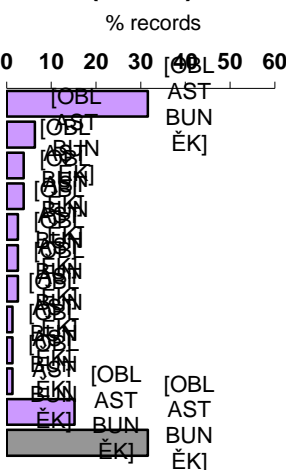
Upgrade
(N = 150)



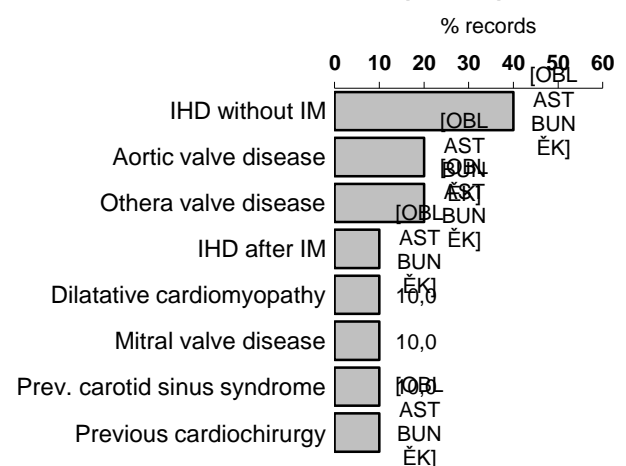
Explantation
(N = 29)



Electrode surgery
(N = 79)



Other surgery
(N = 10)



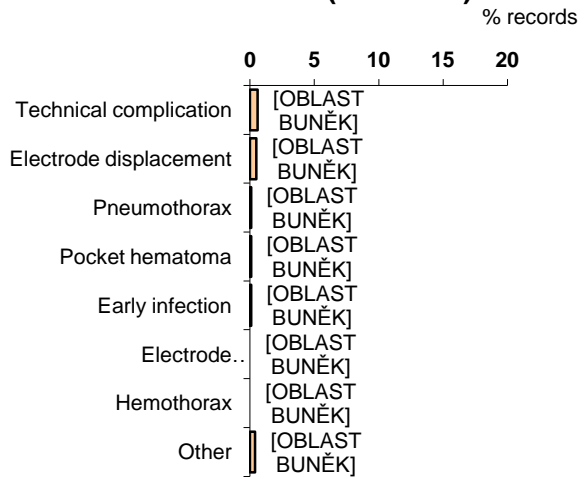
Only etiologies with incidence over 1% are visualized

Surgery complication – according to type of surgery

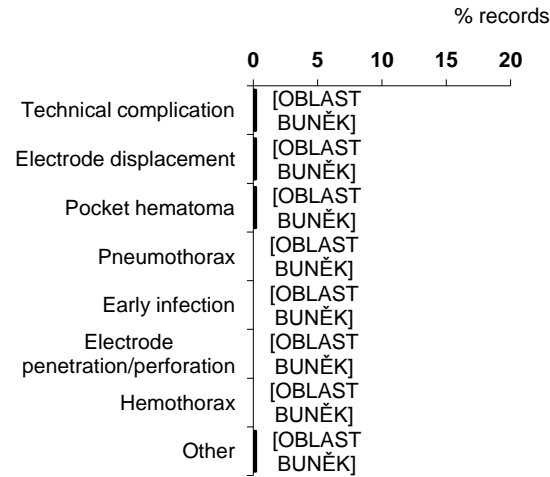
Base: All records 2018 (N = 10 084)

REPACE

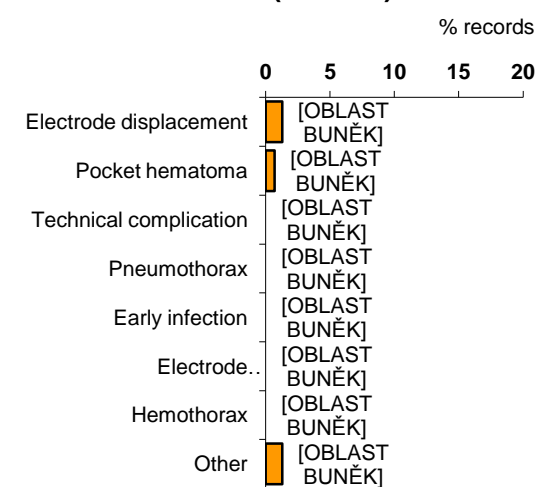
Primo-implantation
(N = 7 607)



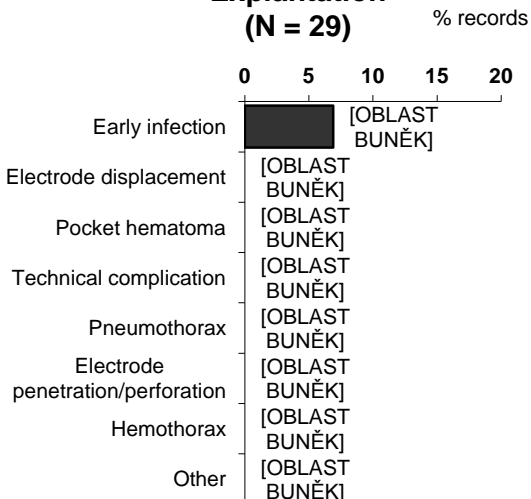
Re-implantation
(N = 2 209)



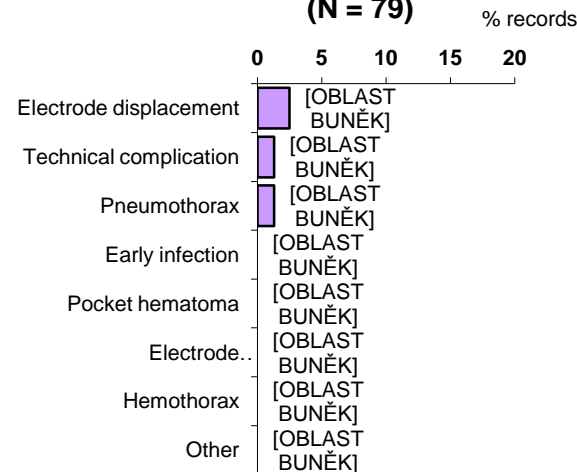
Upgrade
(N = 150)



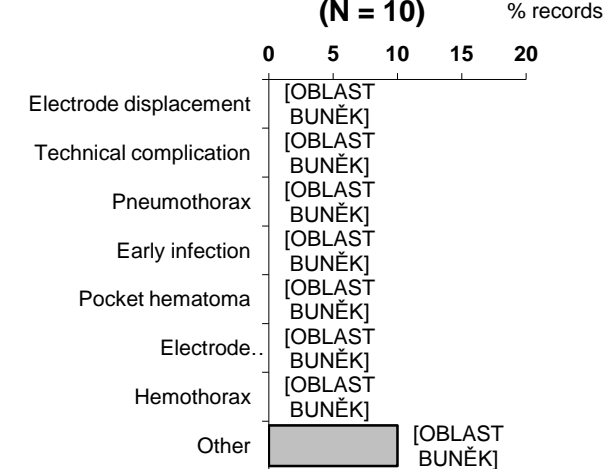
Explantation
(N = 29)



Electrode surgery
(N = 79)

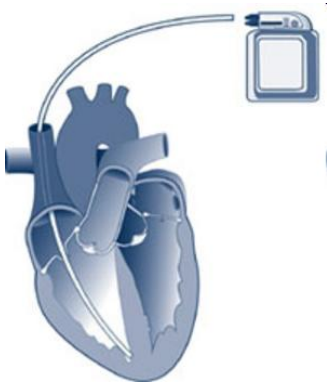


Other surgery
(N = 10)



Surgery complications are quite rare. There are almost no complications during primo- or re-implantation.

**Completed records:
enrollment characteristics
N = 10 084**

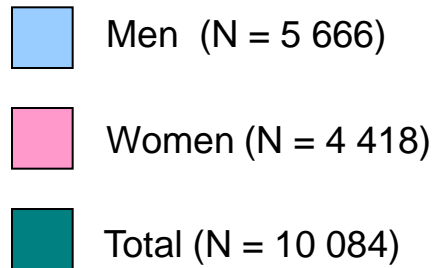
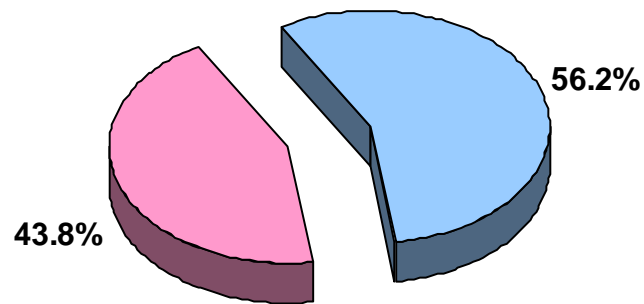


Patients sex and age in time of surgery

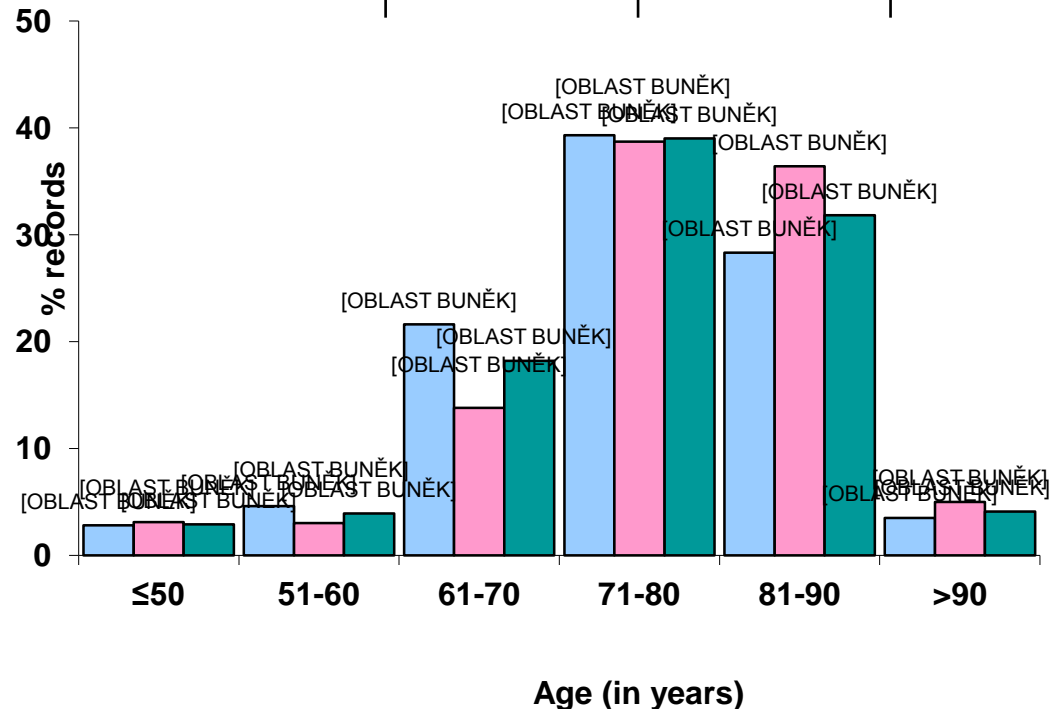
Base: All records 2018 (N = 10 084)

REPACE

Patients according to sex



Age in time of surgery	Total	Women	Men
Mean (95% CI)	75.7 (75.4–75.9)	76.8 (76.5–77.2)	74.7 (74.4–75.0)
Median (5–95% percentile)	77 (57–90)	78 (57–90)	76 (57–89)
Minimum	0	0	0
Maximum	101	101	100

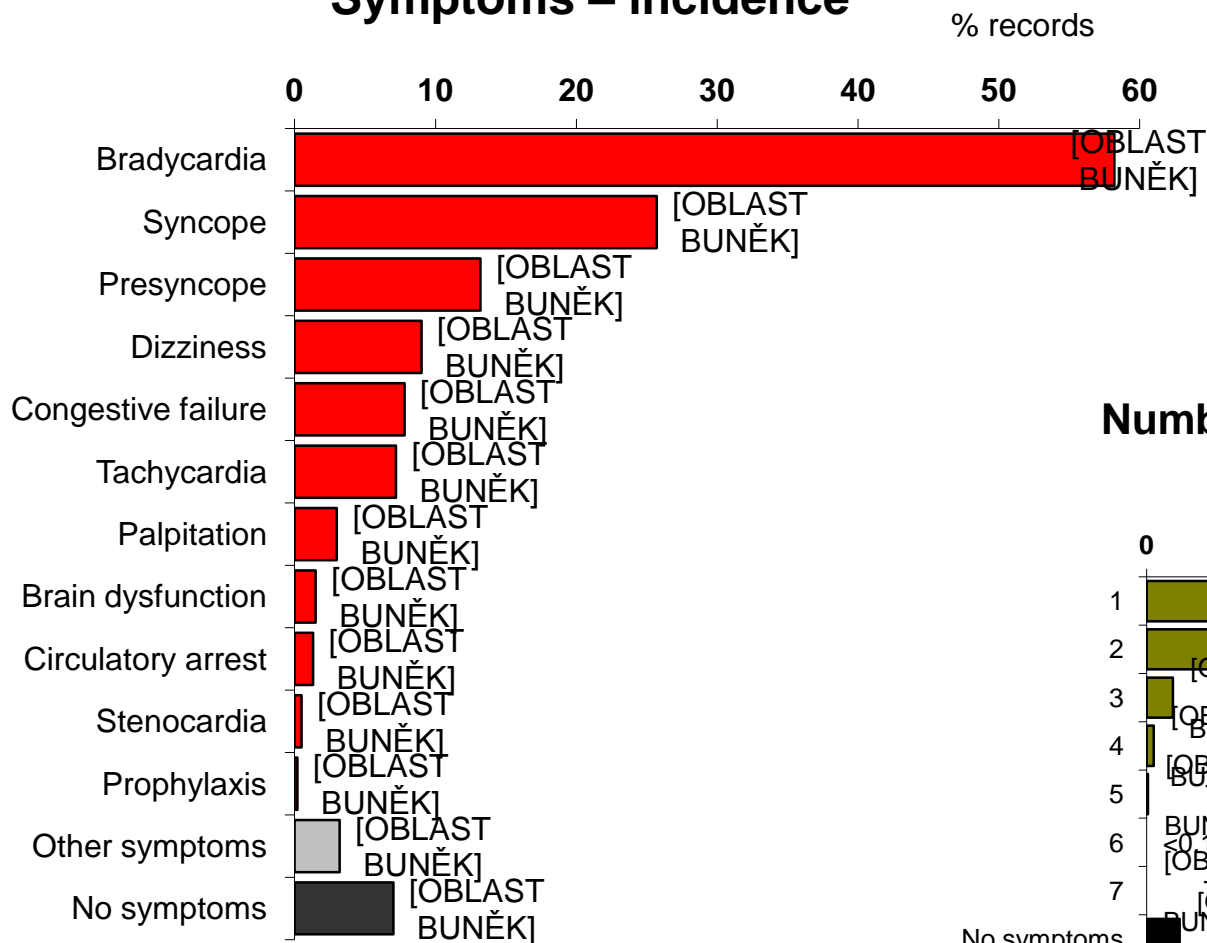


Indications for implantable PM – symptoms

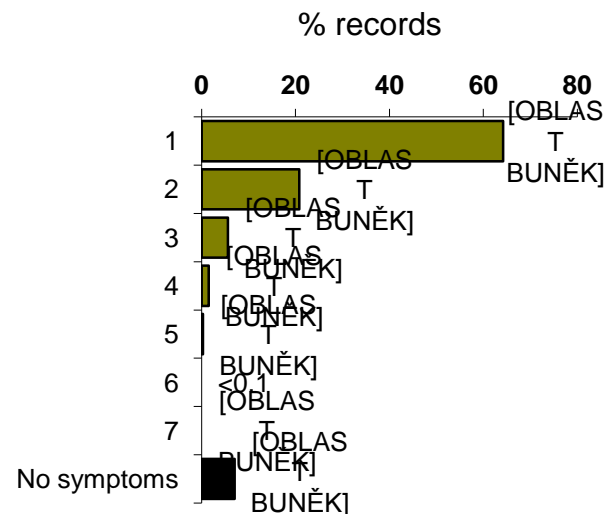
Base: All records 2018 (N = 10 084)

REPACE

Symptoms – incidence



Number of symptoms

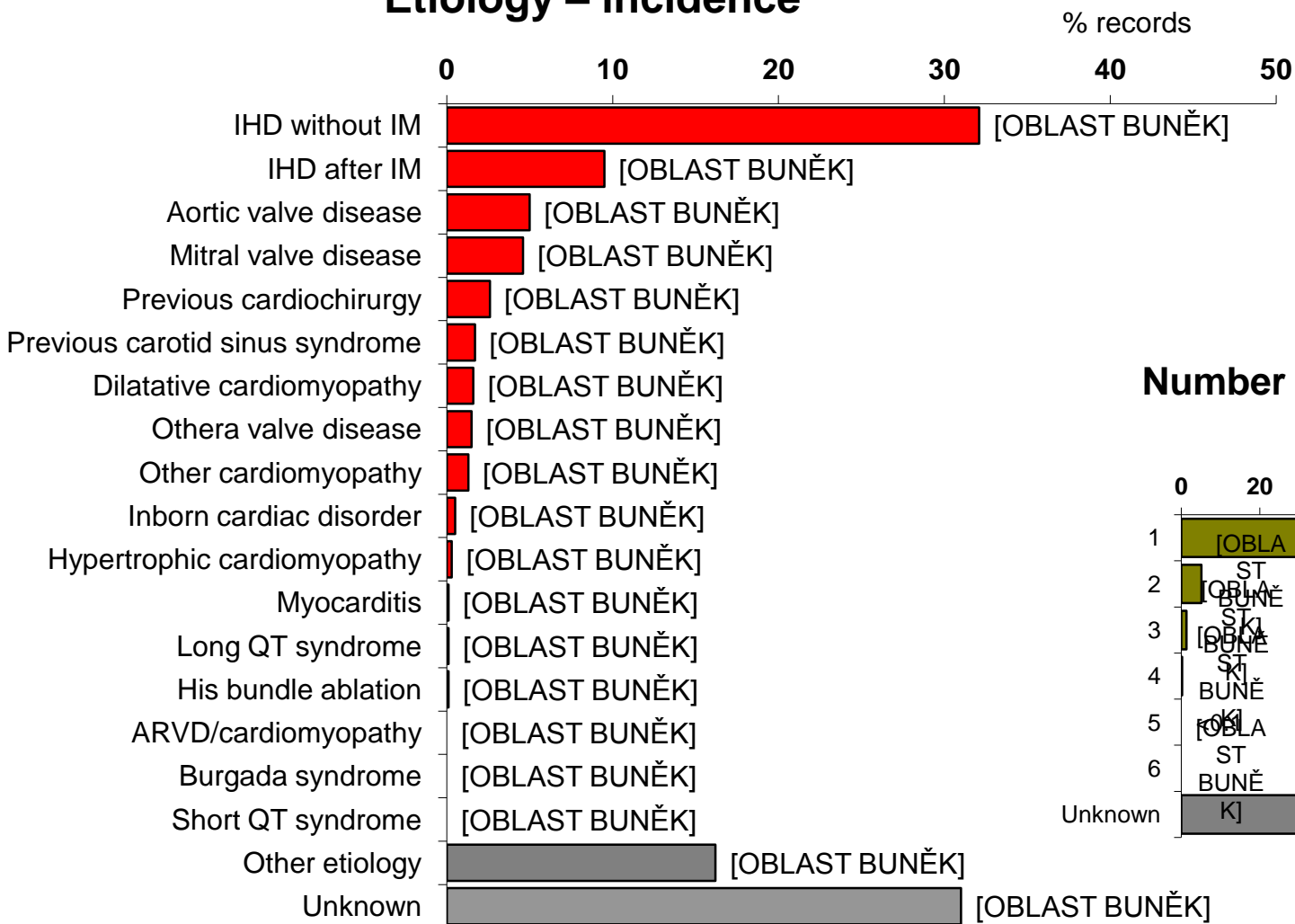


Indications for implantable PM – etiology

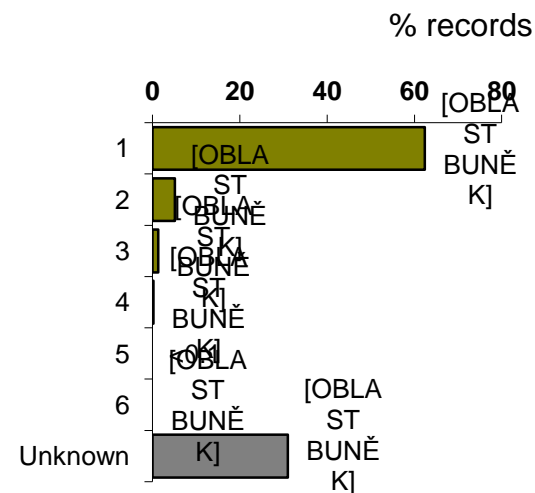
Base: All records 2018 (N = 10 084)

REPACE

Etiology – incidence



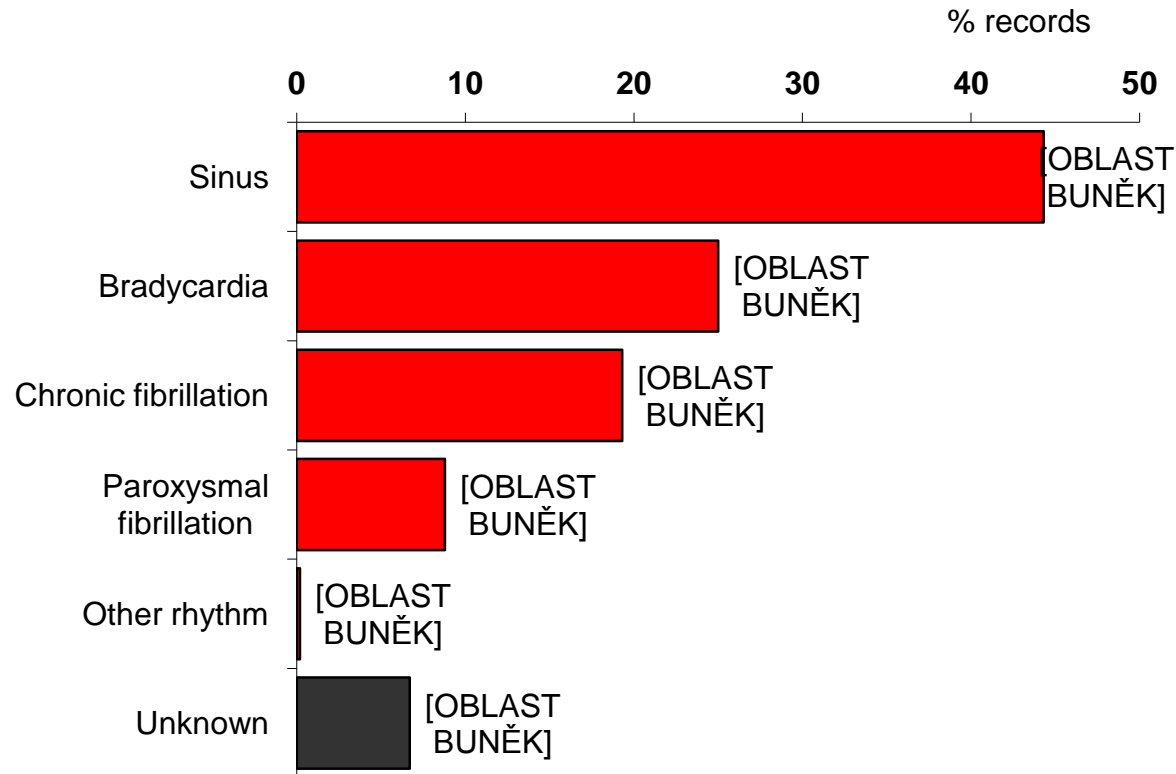
Number of etiologies



Indications for implantable PM – heart rhythm before surgery

Base: All records 2018 (N = 10 084)

REPACE



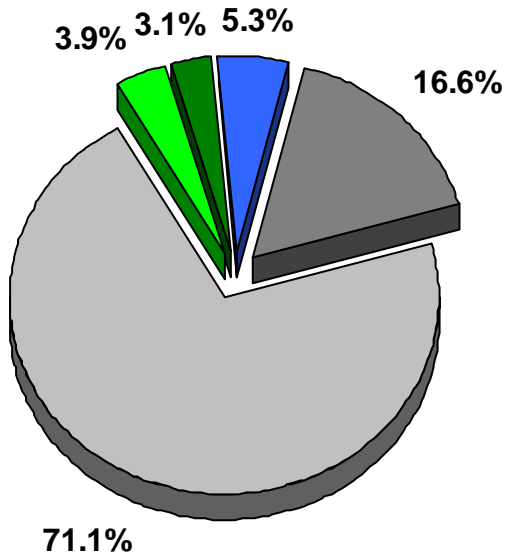
Vessel disease – number of obstructed vessels

Base: All records 2018 (N = 10 084)

REPACE

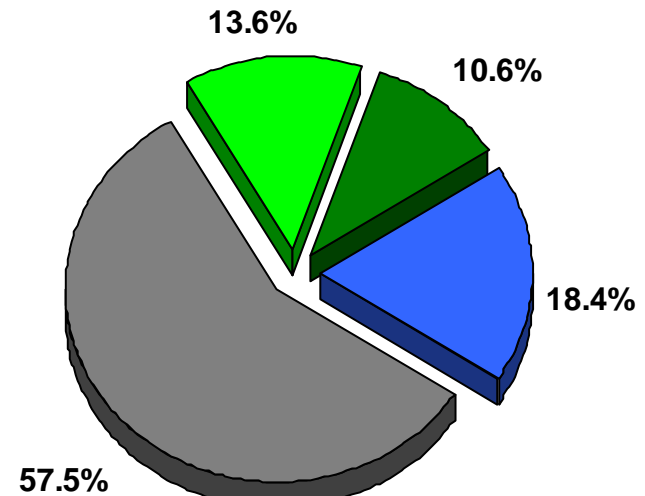
Vessel disease (with unknown)

N = 10 084



Vessel disease (without unknown)

N = 2 919



1VD

2VD

MVD

No vessel

Unknown

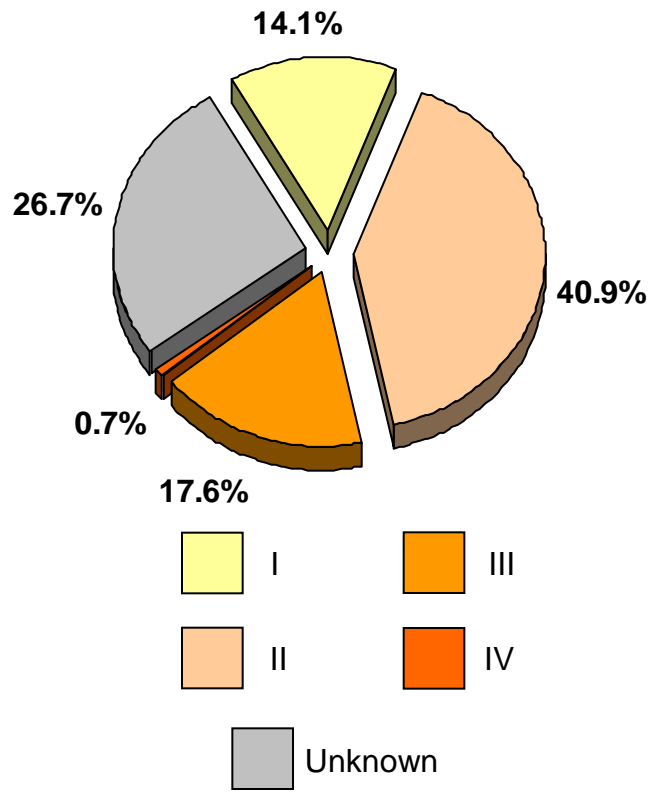
NYHA and Ejection fraction left ventricle

Base: All records 2018 (N = 10 084)

REPACE

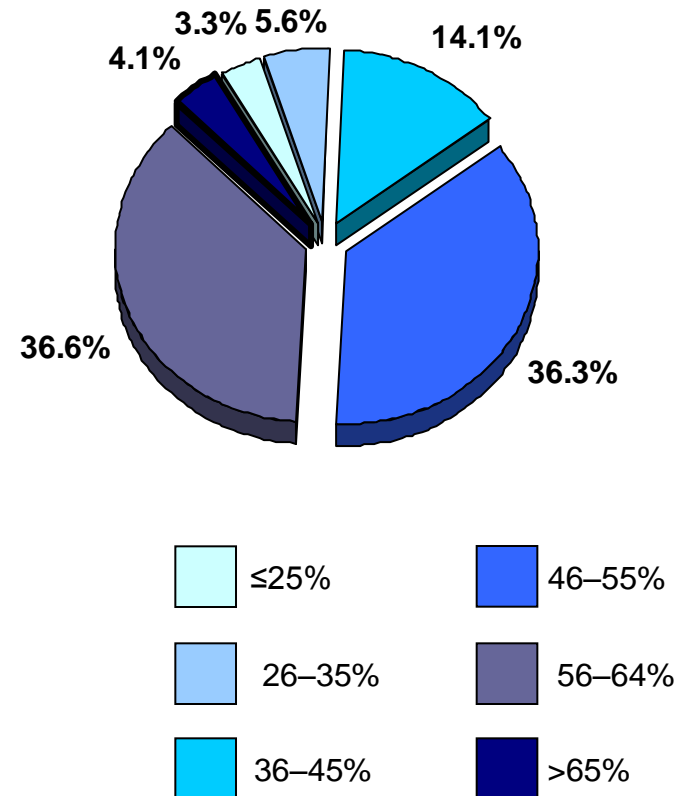
NYHA

N = 10 084



Ejection fraction (without unknown)

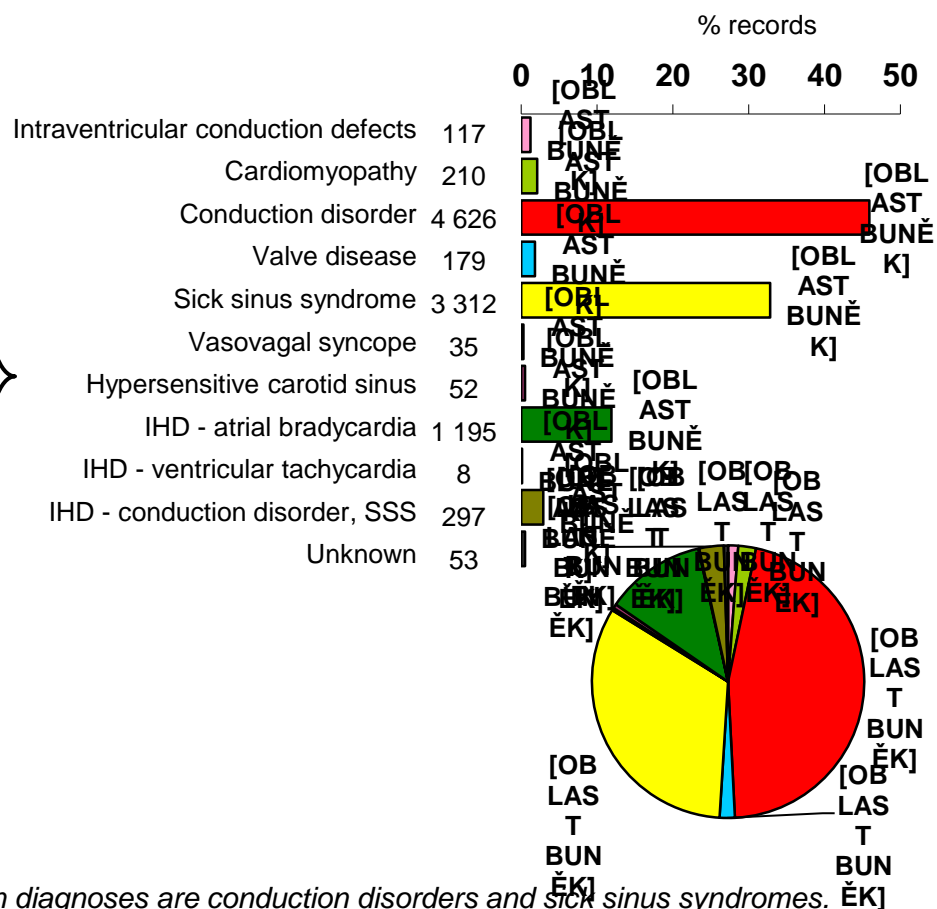
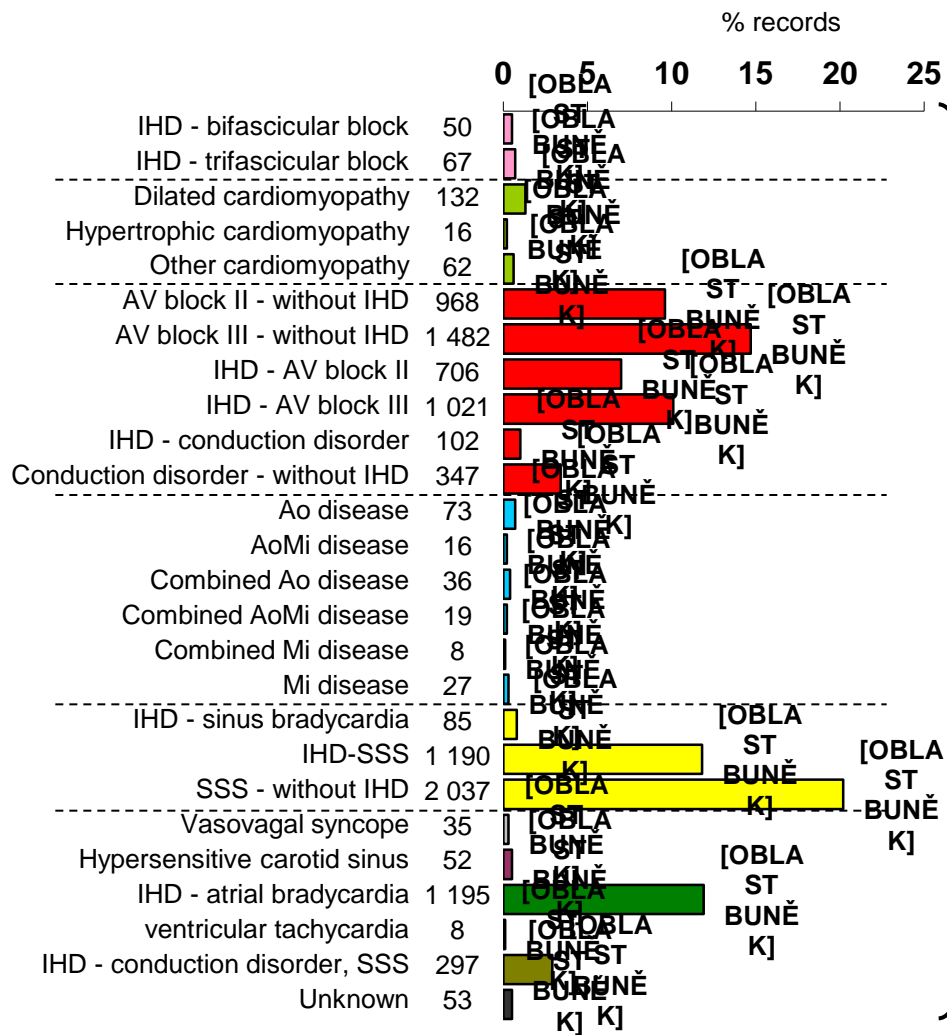
N = 2 870



Main diagnosis

Base: All records 2018 (N = 10 084)

REPACE



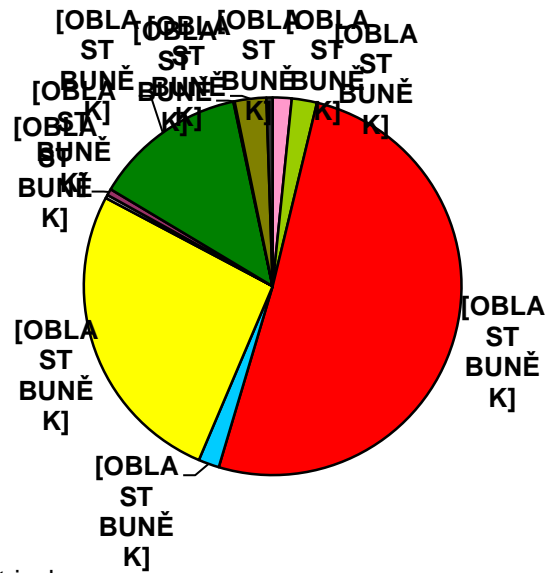
Main diagnosis according to sex of patient

Base: All records 2018 (N = 10 084)

REPACE

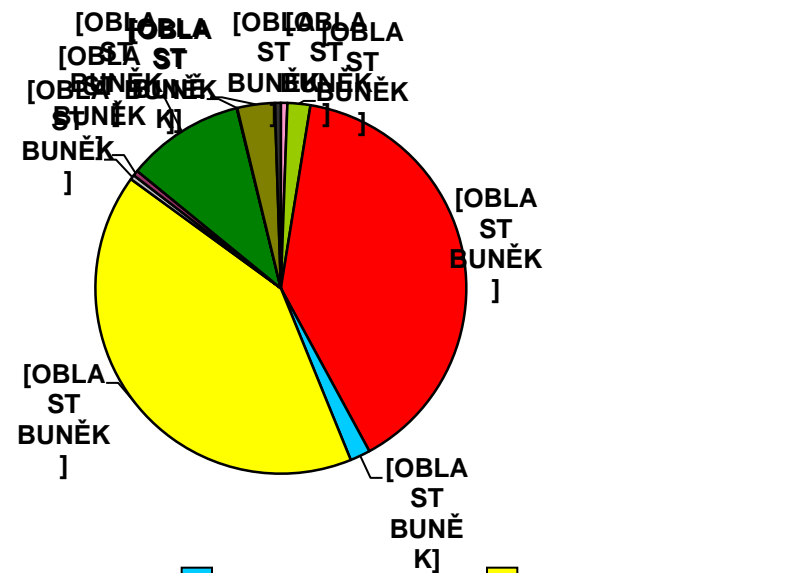
Men

N = 5 522



Women

N = 4 159



Intraventricular conduction defects

Cardiomyopathy

Conduction disorder

Valve disease

Sick sinus syndrome

Vasovagal syncope

Hypersensitive carotid sinus

IHD - atrial bradycardia

IHD - ventricular tachycardia

IHD - conduction disorder, SSS

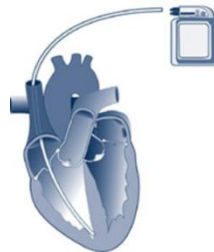
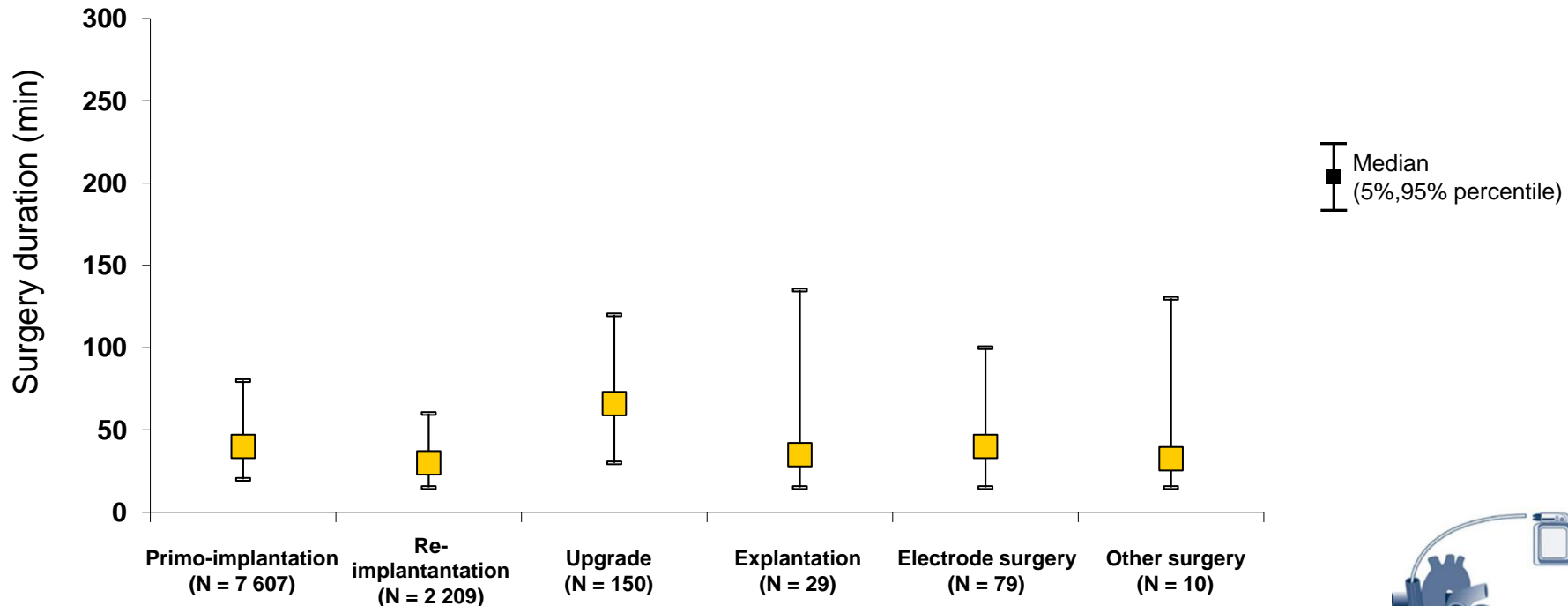
Unknown

Surgery duration – according to surgery type

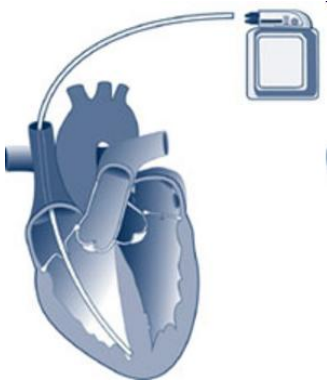
Base: All records 2018 (N = 10 084)

REPACE

Time (minutes)	Primo-implantation (N = 7 607)	Re-implantation (N = 2 209)	Upgrade (N = 150)	Explantation (N = 29)	Electrode surgery (N = 79)	Other surgery (N = 10)
5% percentile	20	15	30	15	15	15
Median	40	30	66	35	40	33
95% percentile	80	60	120	135	100	130



**Complete records:
Population characteristics
(without electrode surgery)
N = 10 005**



Number of records according to surgery type

N = 10 005 records of surgery on device (without electrode surgery)

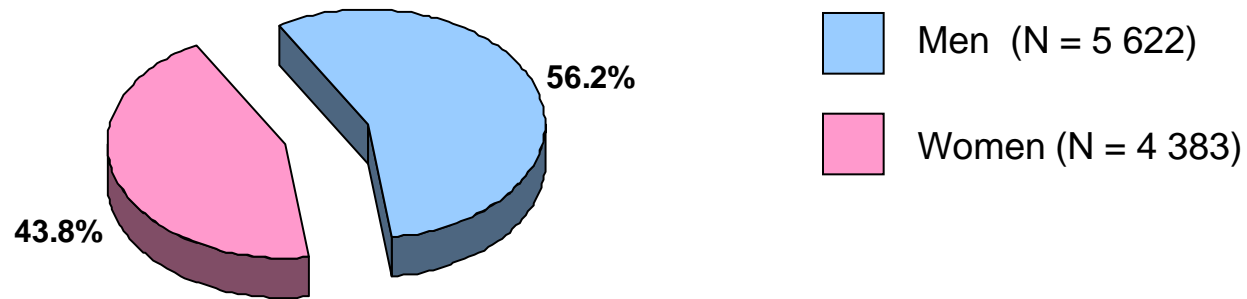
Surgery type	Complete records	
	N	%
<i>Primo-implantation</i>	7 607	75.4
<i>Re-implantation</i>	2 209	21.9
<i>Upgrade</i>	150	1.5
<i>Explantation</i>	29	0.3
<i>Electrode substitution</i>	49	0.5
<i>Electrode reposition</i>	24	0.2
<i>Electrode extraction</i>	6	0.1
<i>Other surgery</i>	10	0.1
Total	10 084	100.0

Patients according to sex

Base: Completed records 2018 without electrode surgery (N = 10 005)

REPACE

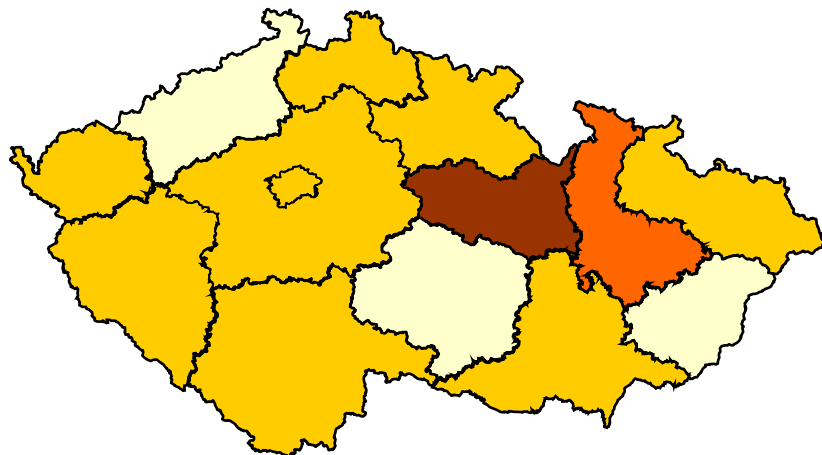
Patient sex



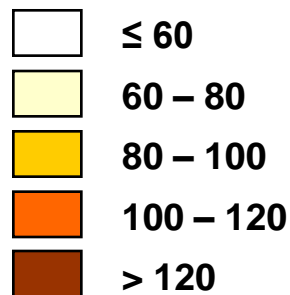
Incidence according to patients region

Base: Completed records 2018 without electrode surgery (N = 10 005)

REPACE



Incidence
(per 100 000 population per year):

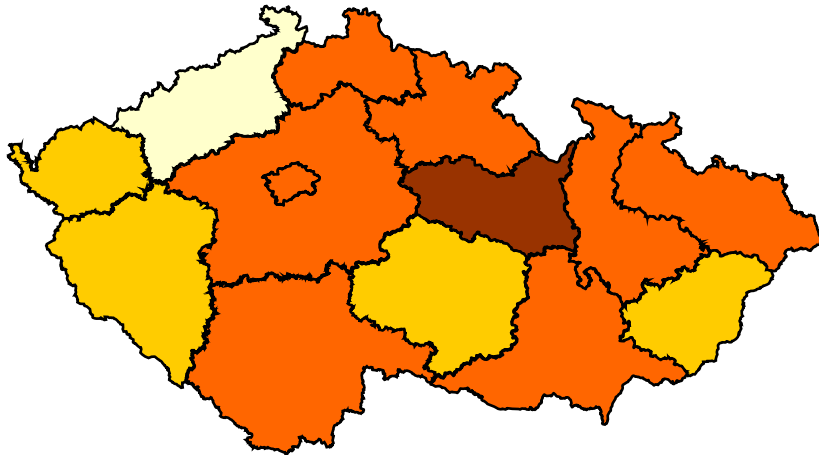


Region	Records		
	N	%	N/100 000 popul.
Pardubický	630	6.3	122
Olomoucký	640	6.4	101
Středočeský	1 344	13.4	99
Liberecký	436	4.4	99
Praha hl. m.	1 268	12.7	98
Jihomoravský	1 158	11.6	98
Moravskoslezský	1 137	11.4	94
Jihočeský	583	5.8	91
Karlovarský	260	2.6	88
Královehradecký	476	4.8	86
Plzeňský	486	4.9	84
Zlínský	467	4.7	80
Vysočina	407	4.1	80
Ústecký	551	5.5	67
Abroad / unknown	162	1.6	
Total	10 005	100.0	

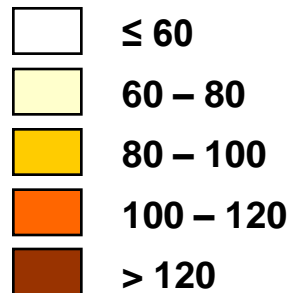
Incidence according to patients region - men

Base: Completed records 2018 without electrode surgery - men (N = 5 622)

REPACE



Incidence
(per 100 000 population per year):

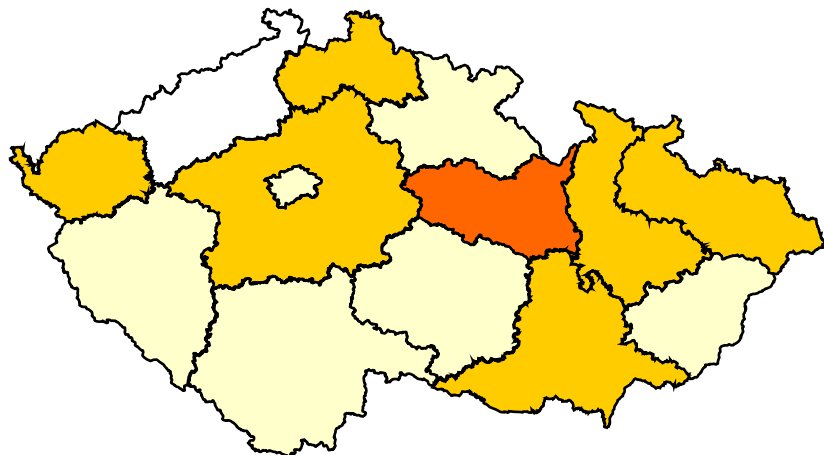


Region	Records		
	N	%	N/100 000 popul.
Pardubický	365	6.5	142
Praha hl. m.	744	13.2	118
Liberecký	245	4.4	113
Středočeský	744	13.2	111
Jihomoravský	643	11.4	111
Olomoucký	343	6.1	111
Moravskoslezský	638	11.3	108
Královehradecký	288	5.1	106
Jihočeský	333	5.9	105
Plzeňský	282	5.0	98
Karlovarský	138	2.5	95
Vysočina	220	3.9	87
Zlínský	248	4.4	87
Ústecký	307	5.5	75
Abroad / unknown	84	1.5	
Total	5 622	100	

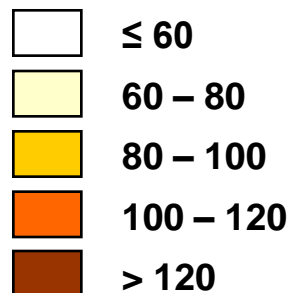
Incidence according to patients region - women

Base: Completed records 2018 without electrode surgery - women (N = 4 383)

REPACE



Incidence
(per 100 000 population per year):

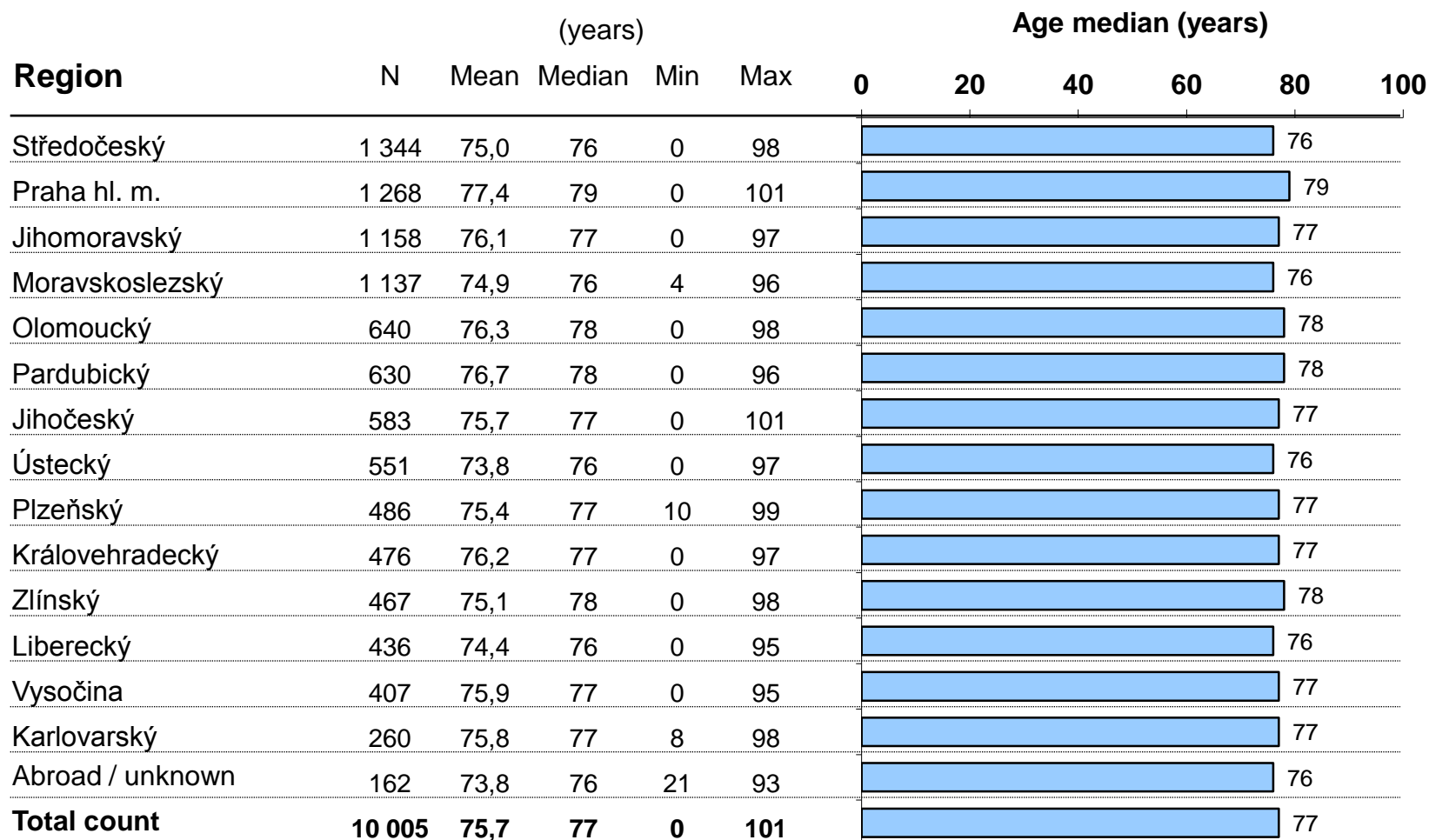


Kraj	Záznamy		
	N	%	N/100 000 obyv.
Pardubický	265	6.0	101
Olomoucký	297	6.8	92
Středočeský	600	13.7	88
Jihomoravský	515	11.7	85
Liberecký	191	4.4	85
Karlovarský	122	2.8	82
Moravskoslezský	499	11.4	81
Praha hl. m.	524	12.0	79
Jihočeský	250	5.7	77
Zlínský	219	5.0	74
Vysočina	187	4.3	73
Plzeňský	204	4.7	70
Královehradecký	188	4.3	67
Ústecký	244	5.6	59
Abroad / unknown	78	1.8	
Total	4 383	100	

Patients age in time of the surgery – according to region

Base: Completed records 2018 without electrode surgery (N = 10 005)

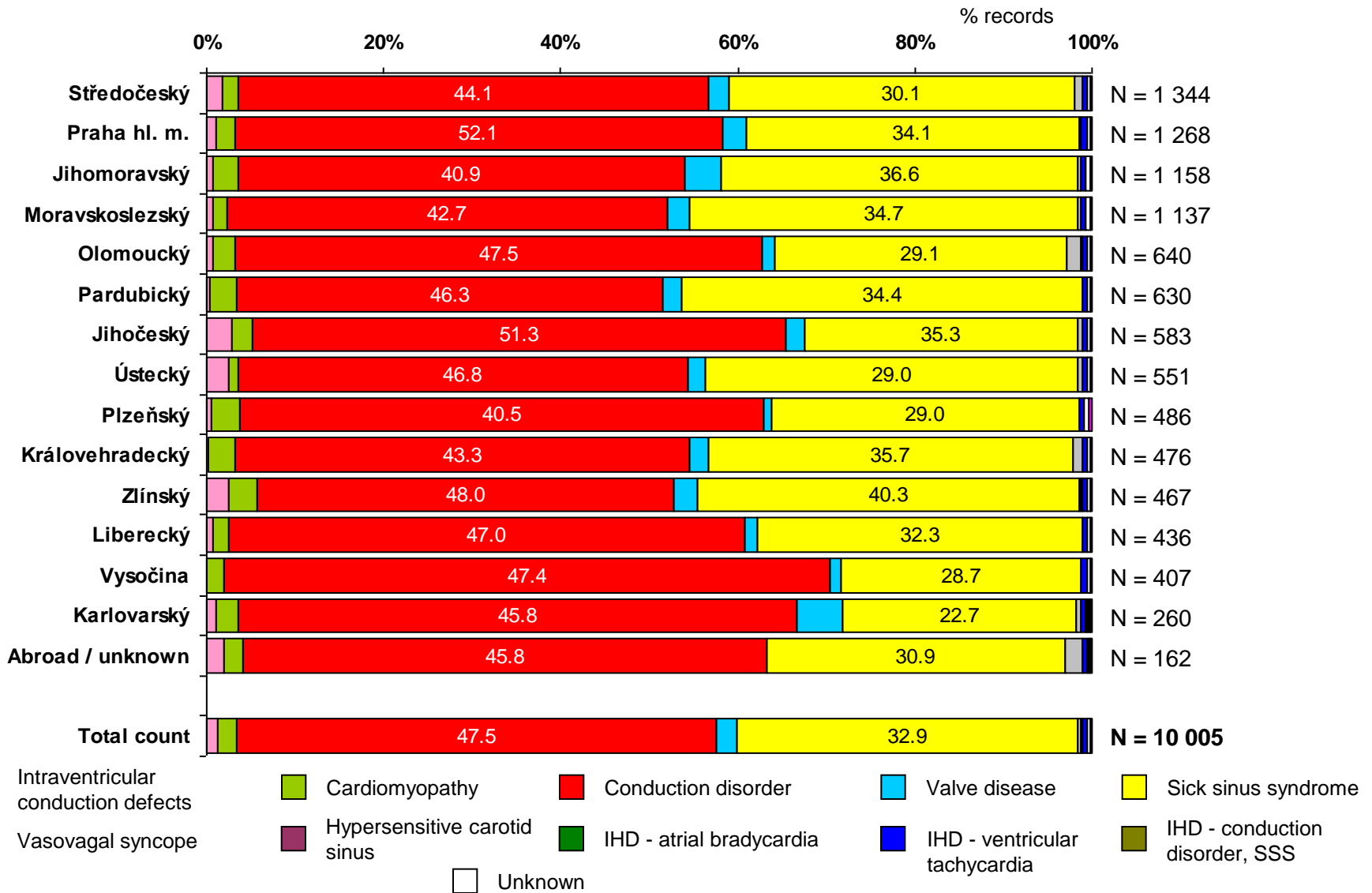
REPACE



Main diagnoses overview – according to region

Base: Completed records 2018 without electrode surgery (N = 10 005)

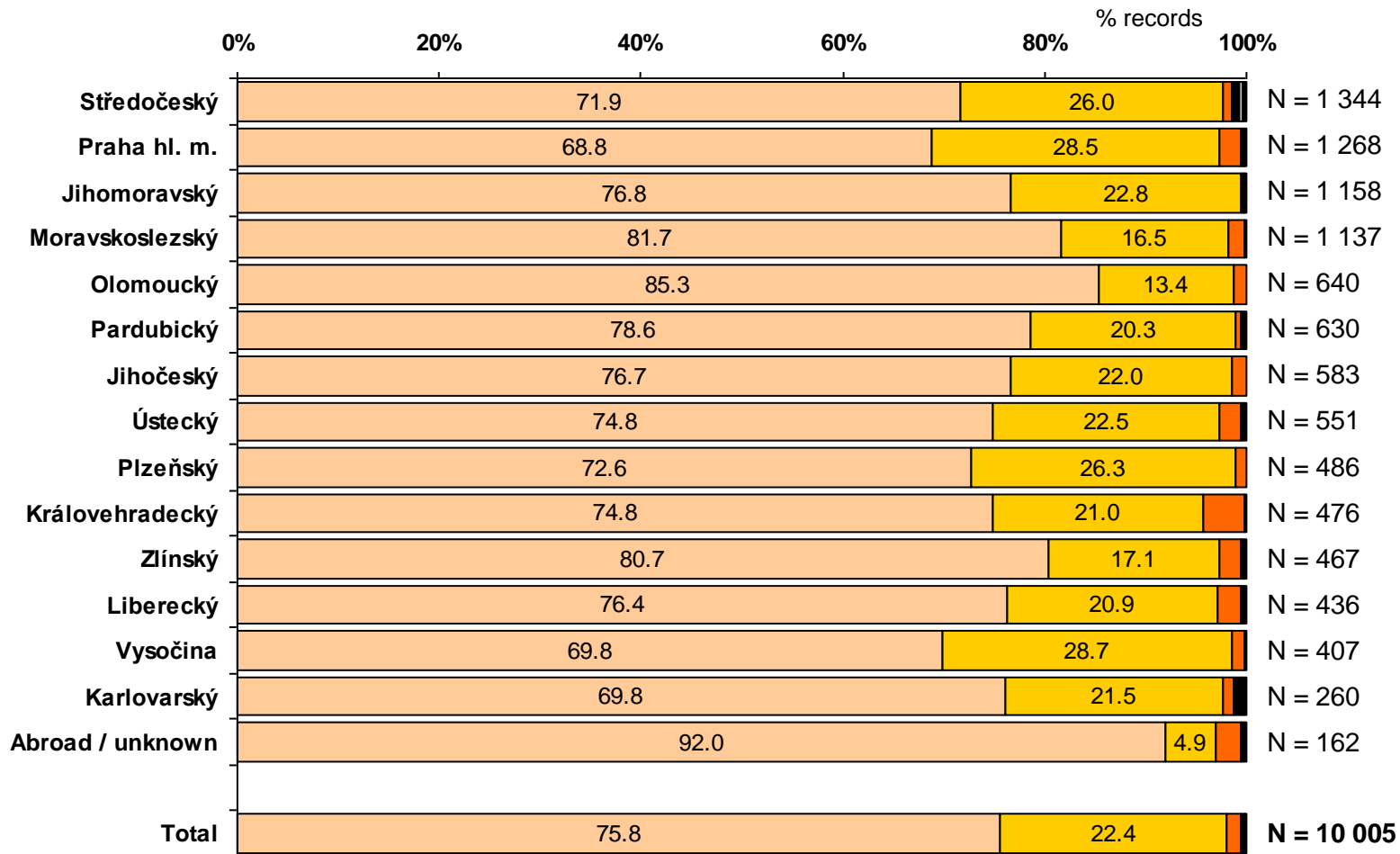
REPACE



Surgery type overview – according to region

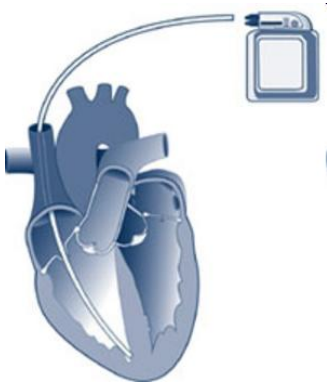
Base: Completed records 2018 without electrode surgery (N = 10 005)

REPACE



primo-implantation
 re-implantation
 upgrade
 explantation
 other surgery

**Complete records:
primo-implantation
N = 7 607**



Primo-implantation: Number of records according to surgery type

Primo-implantations with complete records N = 7 607

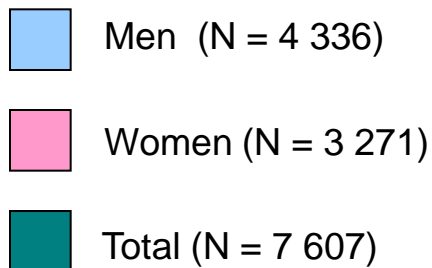
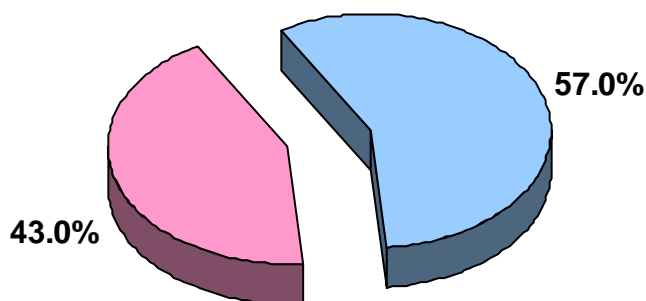
Surgery type	Complete records	
	N	%
<i>Primo-implantation</i>	<i>7 607</i>	<i>75.4</i>
<i>Re-implantation</i>	2 209	21.9
<i>Upgrade</i>	150	1.5
<i>Explantation</i>	29	0.3
<i>Electrode substitution</i>	49	0.5
<i>Electrode reposition</i>	24	0.2
<i>Electrode extraction</i>	6	0.1
<i>Other surgery</i>	10	0.1
Total	10 084	100.0

Primo-implantation: Patients sex and age in time of surgery

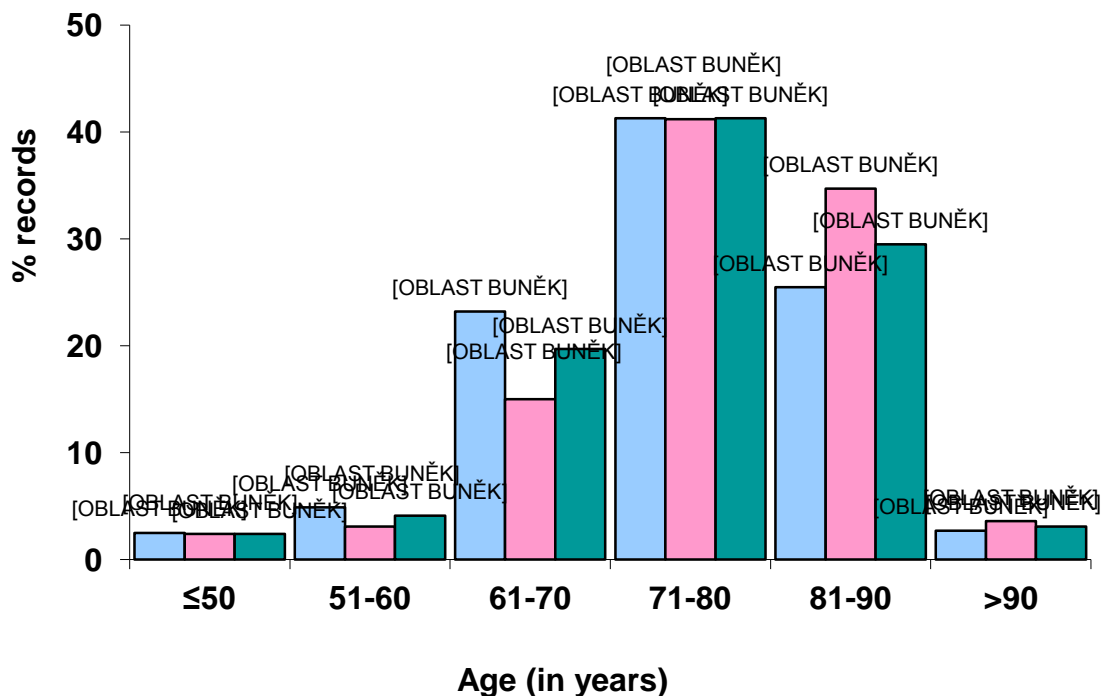
Base: Primo-implantations 2018 (N = 7 607)

REPACE

Patients according to sex



Age in time of surgery	Total	Women	Men
Mean (95% CI)	75.3 (75.0–75.5)	76.6 (76.2–77.0)	74.3 (73.9–74.6)
Median (5–95% percentile)	76 (58–89)	78 (59–90)	75 (57–88)
Minimum	0	0	0
Maximum	100	100	100

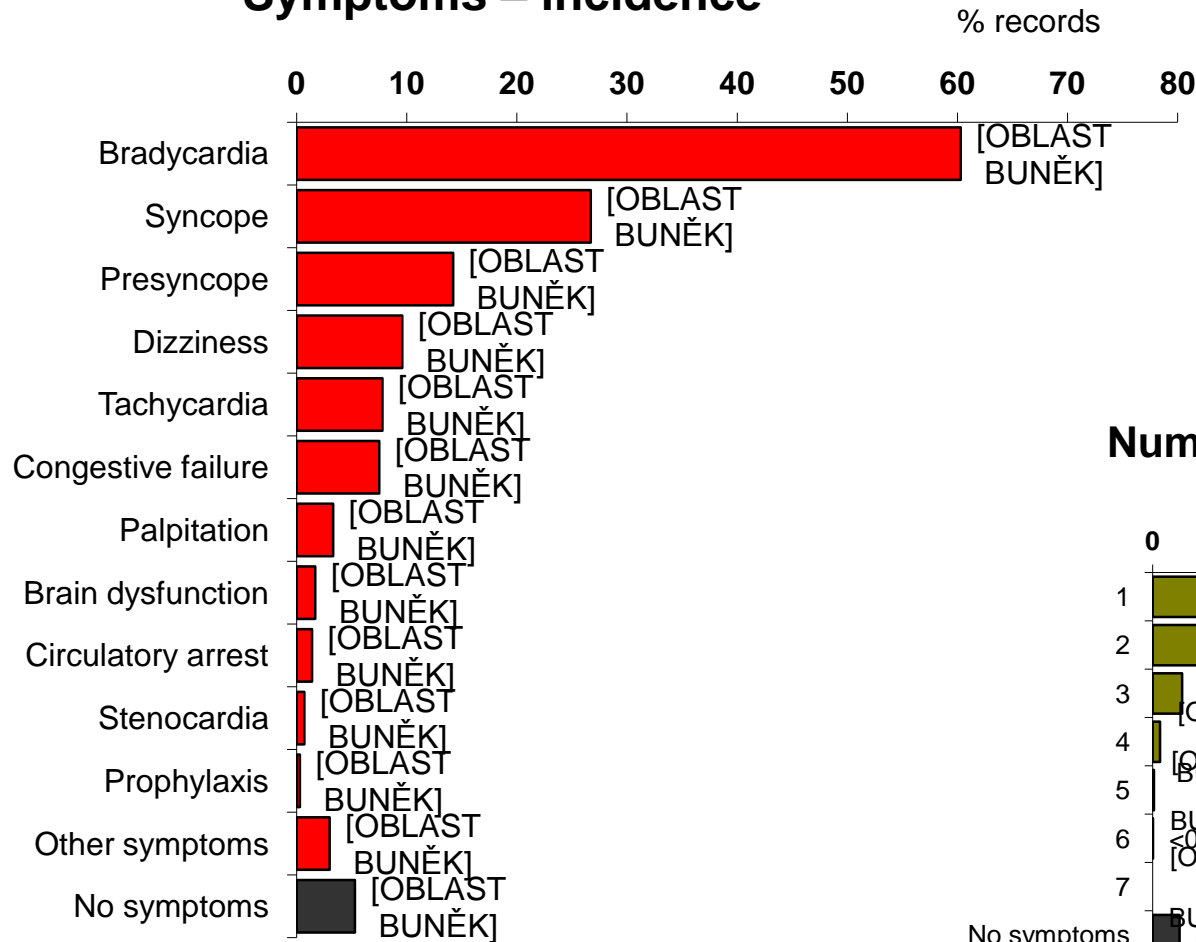


Primo-implantation: Indications for implantable PM – symptoms

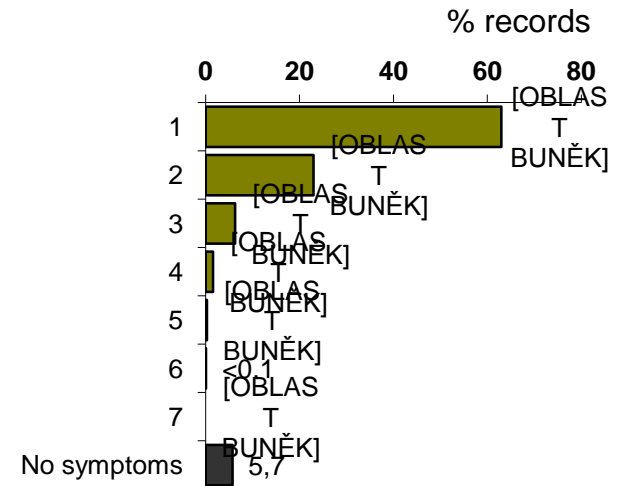
Base: *Primo-implantations 2018 (N = 7 607)*

REPACE

Symptoms – incidence



Number of symptoms

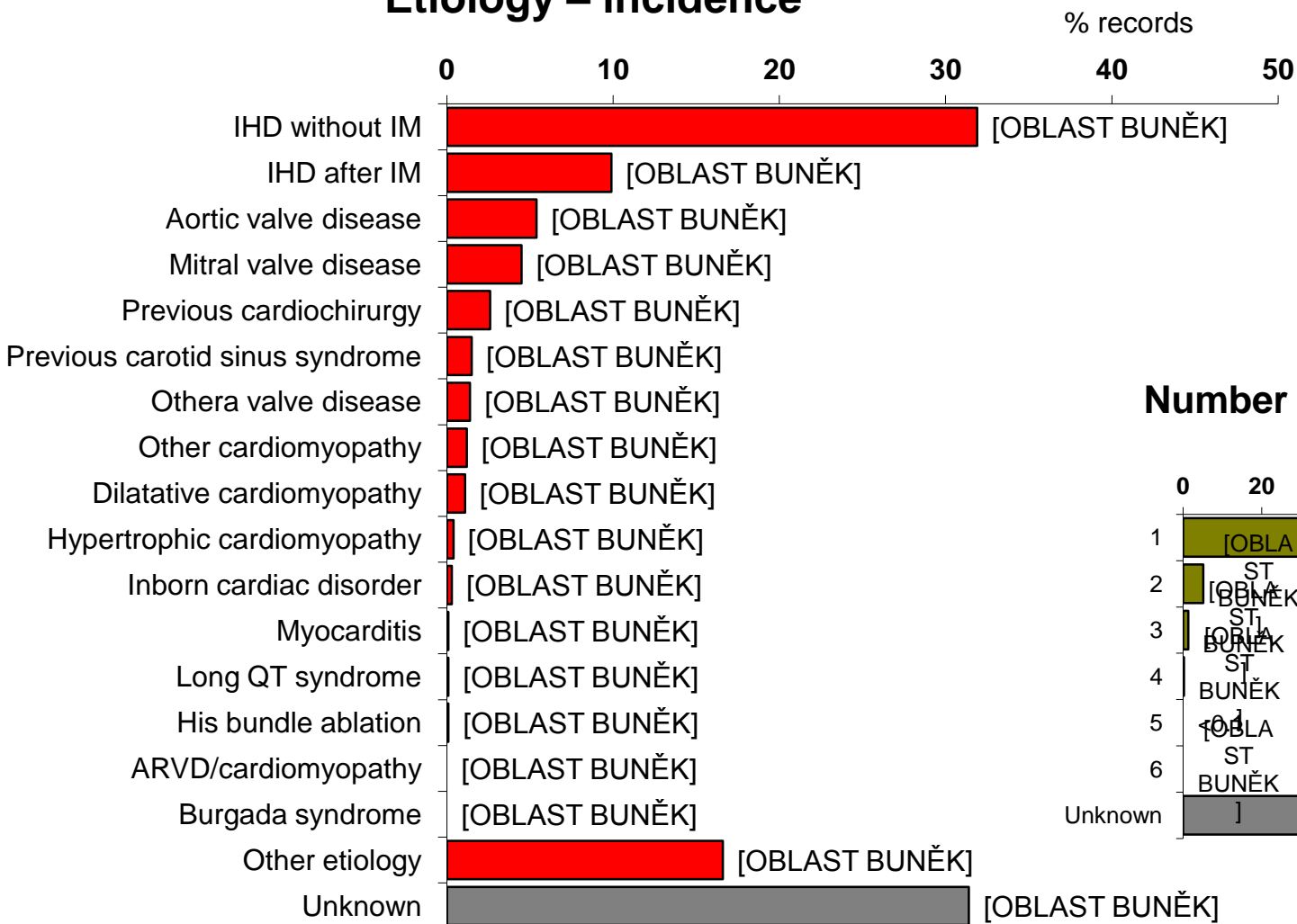


Primo-implantation: Indications for implantable PM – etiology

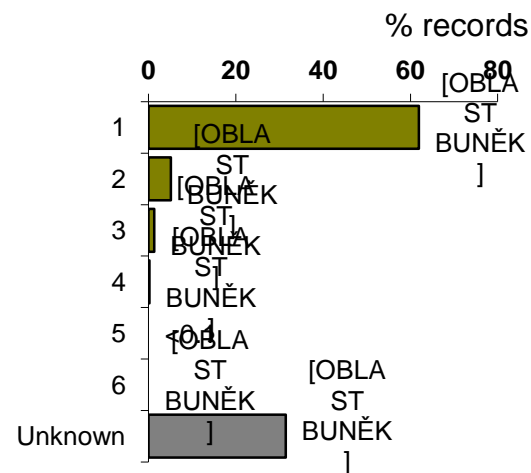
Base: *Primo-implantations 2018 (N = 7 607)*

REPACE

Etiology – incidence



Number of etiologies

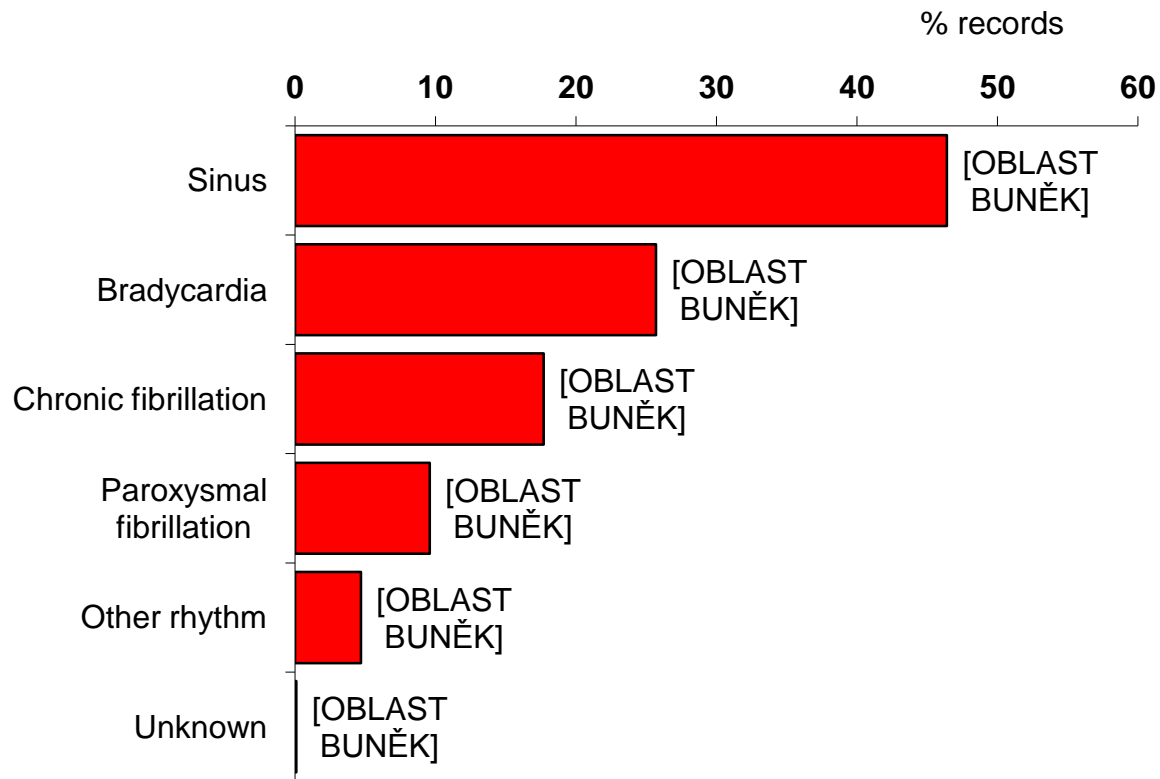


Primo-implantation:

Indications for implantable PM – heart rhythm before surgery

Base: *Primo-implantations 2018 (N = 7 607)*

REPACE



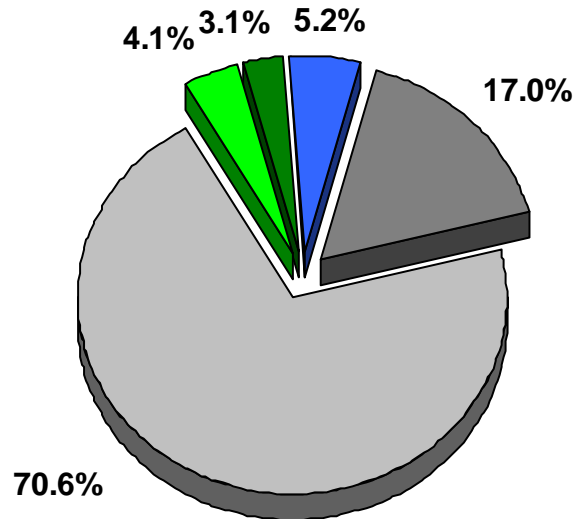
Primo-implantation: Vessel disease – number of obstructed vessels

Base: Primo-implantations 2018 (N = 7 607)

REPACE

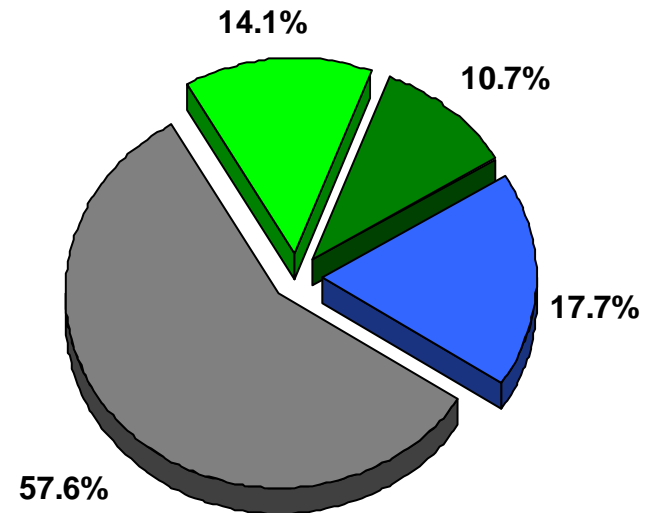
Vessel disease (with unknown)

N = 7 607



Vessel disease (without unknown)

N = 2 240



1VD

2VD

MVD

No vessel

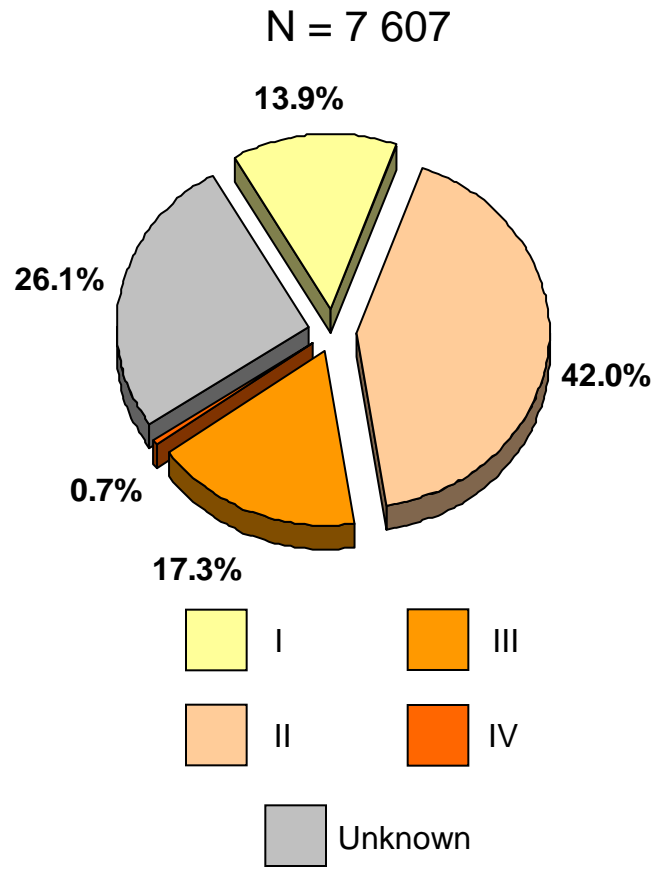
Unknown

Primo-implantation: NYHA and Ejection fraction left ventricle

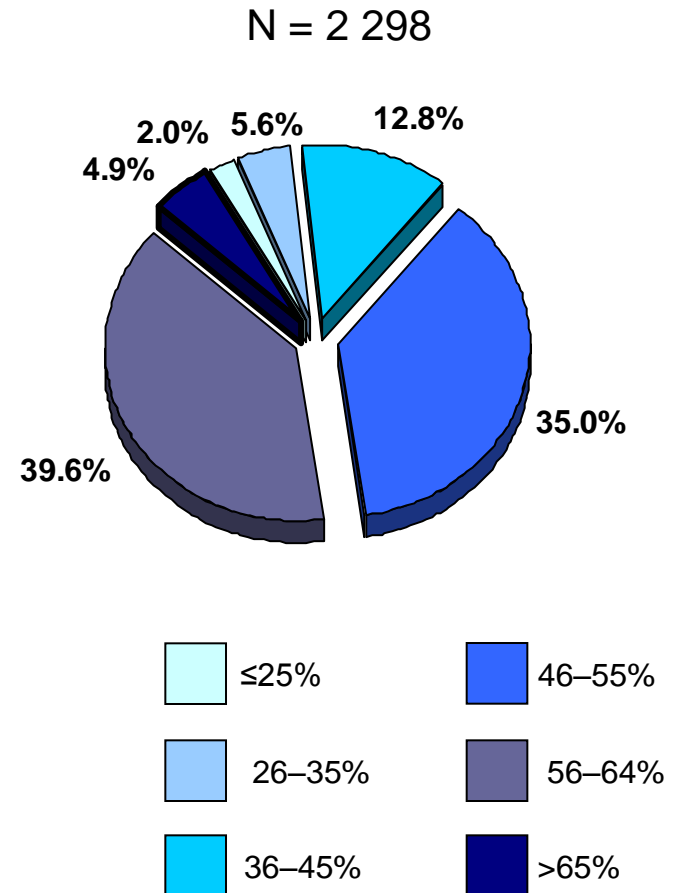
Base: Primo-implantations 2018 (N = 7 607)

REPACE

NYHA (with unknown)



Ejection fraction (without unknown)

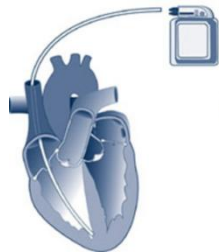
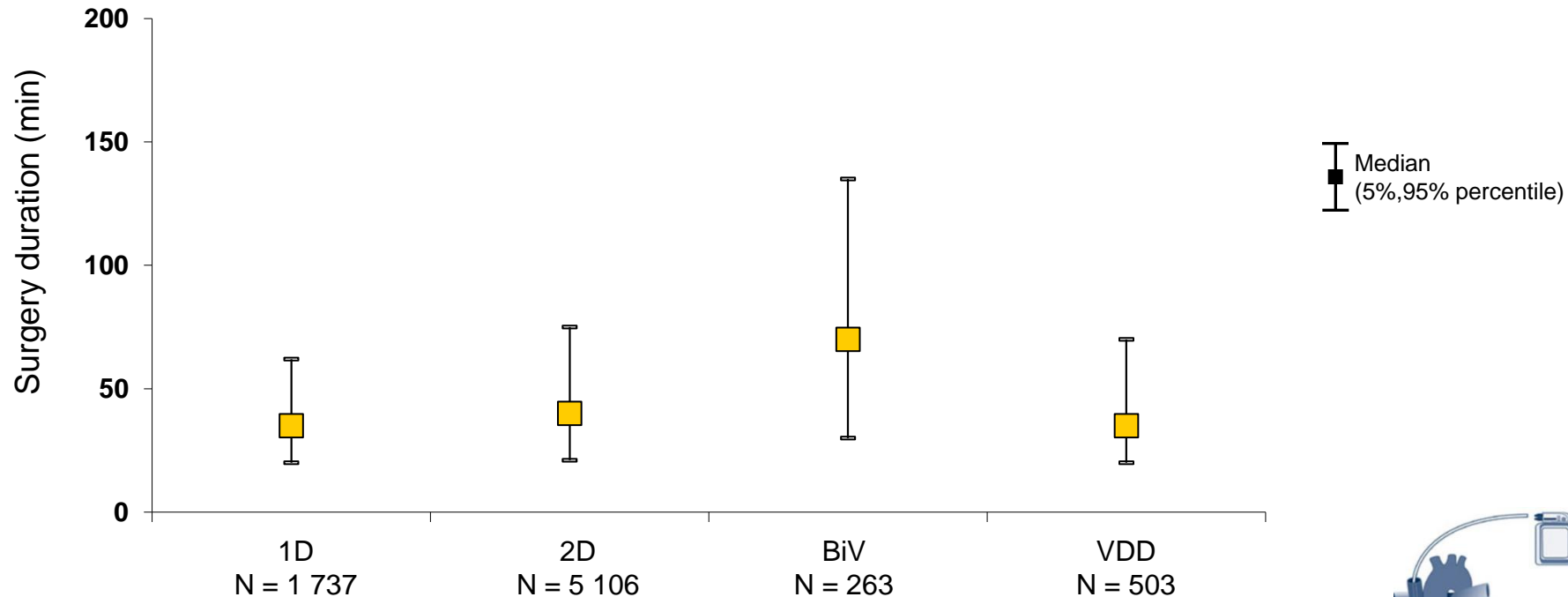


Primo-implantation: Surgery duration – according to device type

Base: *Primo-implantations 2018 (N = 7 607)*

REPACE

Time (minutes)	1D	2D	BiV	VDD
5% percentile	20	21	30	20
Median	35	40	70	35
95% percentile	62	75	135	70



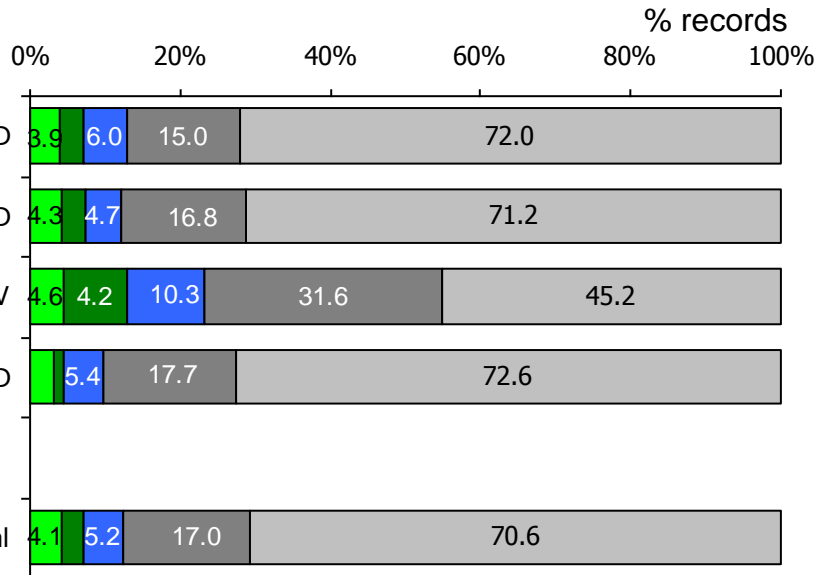
Primo-implantation: Vessel disease – according to device type

Base: Primo-implantations 2018 (N = 7 607)

REPACE

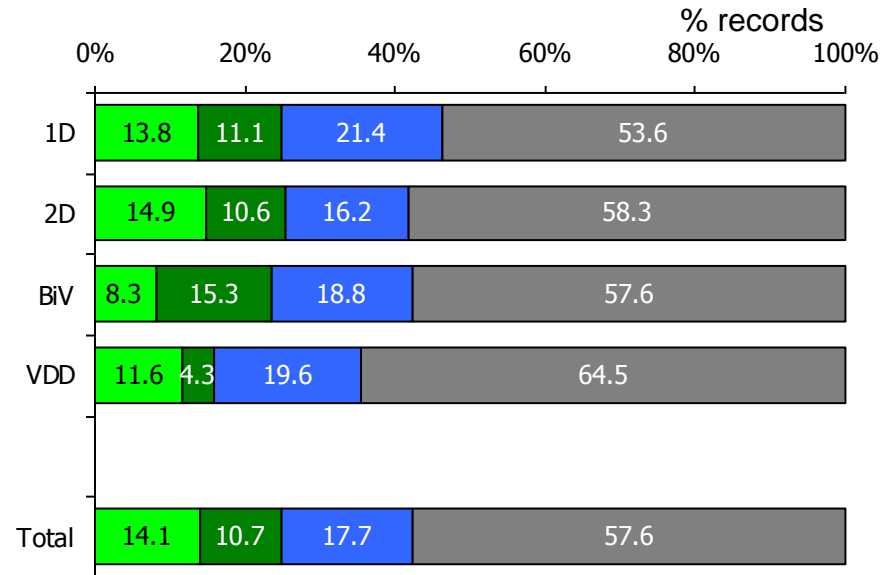
Vessel disease (with unknown)

N = 7 607



Vessel disease (without unknown)

N = 2 240



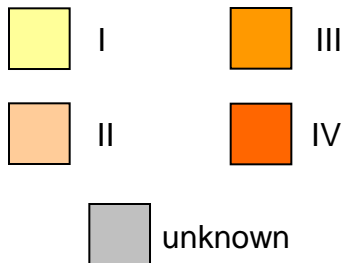
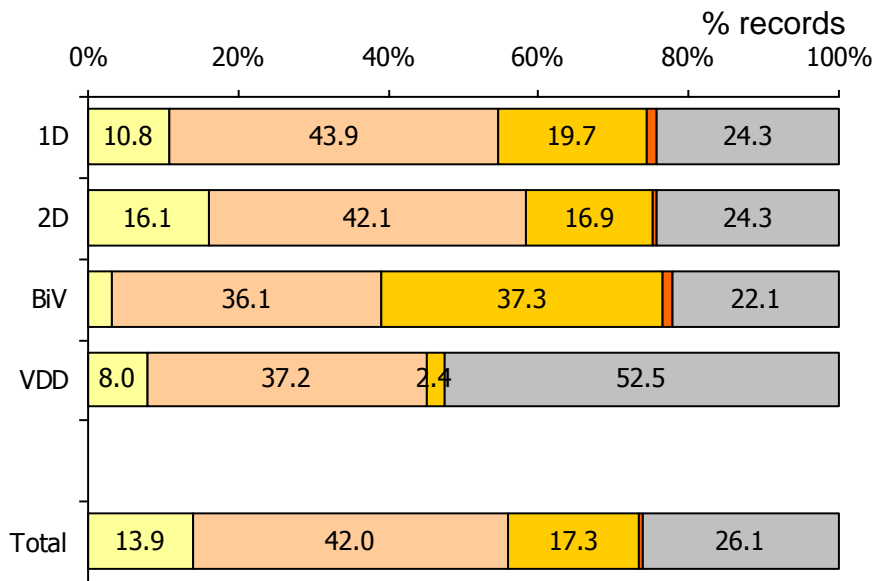
Primo-implantation: NYHA and EF LV according to device type

Base: Primo-implantations 2018 (N = 7 607)

REPACE

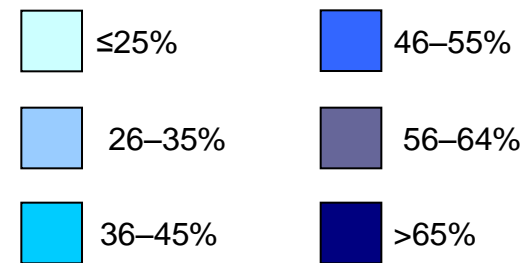
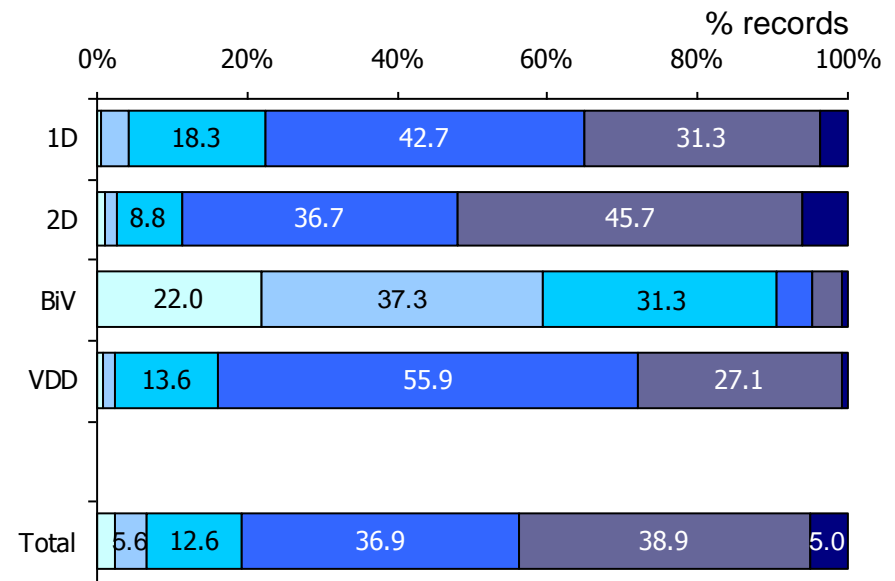
NYHA (with unknown)

N = 7 607



Ejection fraction (without unknown)

N = 2 298



Cooperated centres – number of implanted devices (trend)

Base: implanted devices 2018 (N = 9 970)

REPACE

	2017->2018 trend	2018	2017	2016	2015	2014	2013	2012	2011	2010
Centrum 1	4	464	460	518	481	427	424	303	432	467
Centrum 2	6	327	321	323	344	294	287	352	372	393
Centrum 3	-24	205	229	243	260	220	232	237	218	212
Centrum 4	-21	486	507	479	463	436	425	403	373	427
Centrum 5	12	232	220	210	195	171	180	157	199	204
Centrum 6	11	122	111	117	103	80	109	106	121	117
Centrum 7	15	113	98	113	123	103	100	101	93	111
Centrum 8	-9	132	141	141	155	135	139	145	137	126
Centrum 9	-36	237	273	251	218	198	211	175	187	132
Centrum 10	43	462	419	408	399	380	401	394	389	348
Centrum 11	0	150	150	143	147	135	151	149	147	148
Centrum 12	29	429	400	341	348	337	358	323	362	310
Centrum 13	-13	59	72	56	61	50	86	86	66	75
Centrum 14	-14	63	77	80	81	71	102	89	89	86
Centrum 15	5	427	422	454	439	429	501	411	422	311
Centrum 16	-4	149	153	135	137	130	108	109	105	115
Centrum 17	90	560	470	480	485	478	473	491	480	454
Centrum 18	16	37	21	32	24	24	19	25	35	26
Centrum 19	0	0	0	0	0	0	8	0	0	0
Centrum 20	-1	193	194	217	207	208	247	191	211	193
Centrum 21	0	0	0	0	1	3	7	16	9	42
Centrum 22	-6	346	352	291	305	310	246	270	260	272
Centrum 23	46	233	187	214	213	218	197	192	174	144
Centrum 24	11	354	343	424	407	413	409	429	428	383
Centrum 25	171	306	135	289	322	329	359	313	337	316
Centrum 26	10	242	232	251	244	253	222	233	200	182
Centrum 27	19	192	173	192	171	181	157	161	148	148
Centrum 28	29	435	406	291	405	429	396	472	453	404
Centrum 29	-21	312	333	277	268	294	237	243	249	236
Centrum 30	-7	274	281	259	253	280	256	153	152	278
Centrum 31	-43	345	388	344	403	432	309	325	237	180
Centrum 32	0	207	207	219	191	221	236	189	176	200
Centrum 33	8	114	106	94	75	106	90	92	98	111
Centrum 34	-53	156	209	178	217	249	271	268	256	235
Centrum 35	30	406	376	396	413	456	403	391	365	367
Centrum 36	76	624	548	613	541	667	642	695	679	693
Centrum 37	24	577	553	573	335	541	500	461	426	464

Cooperated centres – number of implanted devices (trend)

Base: implanted devices 2018 (N = 9 970)

REPACE

	2017->2018 trend	2018	2017	2016	2015	2014	2013	2012	2011	2010
FN Plzeň - Kardiologické odd., arytologie	4	464	460	518	481	427	424	303	432	467
VFN Praha - II.IK - Kardiologická klinika	6	327	321	323	344	294	287	352	372	393
ÚVN - Kardiologické odd.	-24	205	229	243	260	220	232	237	218	212
IKEM Praha - Kardiologická klinika	-21	486	507	479	463	436	425	403	373	427
FN Motol - Kardiologické oddělení	12	232	220	210	195	171	180	157	199	204
Chomutov - Interní odd.	11	122	111	117	103	80	109	106	121	117
Prostějov - Interní odd.	15	113	98	113	123	103	100	101	93	111
Frydek Místek - Interní oddělení	-9	132	141	141	155	135	139	145	137	126
Městská nemocnice Ostrava-kardiologie	-36	237	273	251	218	198	211	175	187	132
Liberec - Kardiocentrum	43	462	419	408	399	380	401	394	389	348
Hodonín - Kardiostimul.centrum Nem. TGM p.o.	0	150	150	143	147	135	151	149	147	148
Třinec - kardiocentrum	29	429	400	341	348	337	358	323	362	310
Havlíčkův Brod - Interní oddělení	-13	59	72	56	61	50	86	86	66	75
Příbram - Interní oddělení	-14	63	77	80	81	71	102	89	89	86
FN Ostrava - Kardiovaskulární odd.	5	427	422	454	439	429	501	411	422	311
Přerov - Interní odd.	-4	149	153	135	137	130	108	109	105	115
FNUSA Brno - Kardiologická klinika	90	560	470	480	485	478	473	491	480	454
FN Motol - Dětské kardiocentrum	16	37	21	32	24	24	19	25	35	26
NsP Havířov, p.o. - Interní oddělení	0	0	0	0	0	0	8	0	0	0
Kolín - Interní odd.	-1	193	194	217	207	208	247	191	211	193
Nemocnice Milosrdných sester - Interní odd.	0	0	0	0	1	3	7	16	9	42
Kardiologické centrum AGEL, s.r.o.	-6	346	352	291	305	310	246	270	260	272
Tábor - Interní odd.	46	233	187	214	213	218	197	192	174	144
Nemocnice České Budějovice - kardiocentrum	11	354	343	424	407	413	409	429	428	383
Orlickoústecká nemocnice - interní odd.	171	306	135	289	322	329	359	313	337	316
ÚnL - Kardiologické odd.	10	242	232	251	244	253	222	233	200	182
Jihlava - Kardiologické odd.	19	192	173	192	171	181	157	161	148	148
FNHK - 1. IK	29	435	406	291	405	429	396	472	453	404
Zlín - Interní klinika	-21	312	333	277	268	294	237	243	249	236
Kardiologie na Bulovce, s.r.o.	-7	274	281	259	253	280	256	153	152	278
FN Olomouc - I. interní klinika - kardiologická	-43	345	388	344	403	432	309	325	237	180
Karlovy Vary - Kardiocentrum	0	207	207	219	191	221	236	189	176	200
Šumperk - Interní odd	8	114	106	94	75	106	90	92	98	111
Kladno - Interní odd.	-53	156	209	178	217	249	271	268	256	235
FNKV Praha – III.interní - kardiologická klinika	30	406	376	396	413	456	403	391	365	367
Nemocnice Na Homolce - Kardiologické odd.	76	624	548	613	541	667	642	695	679	693
FN Brno - Kardiologická klinika	24	577	553	573	335	541	500	461	426	464