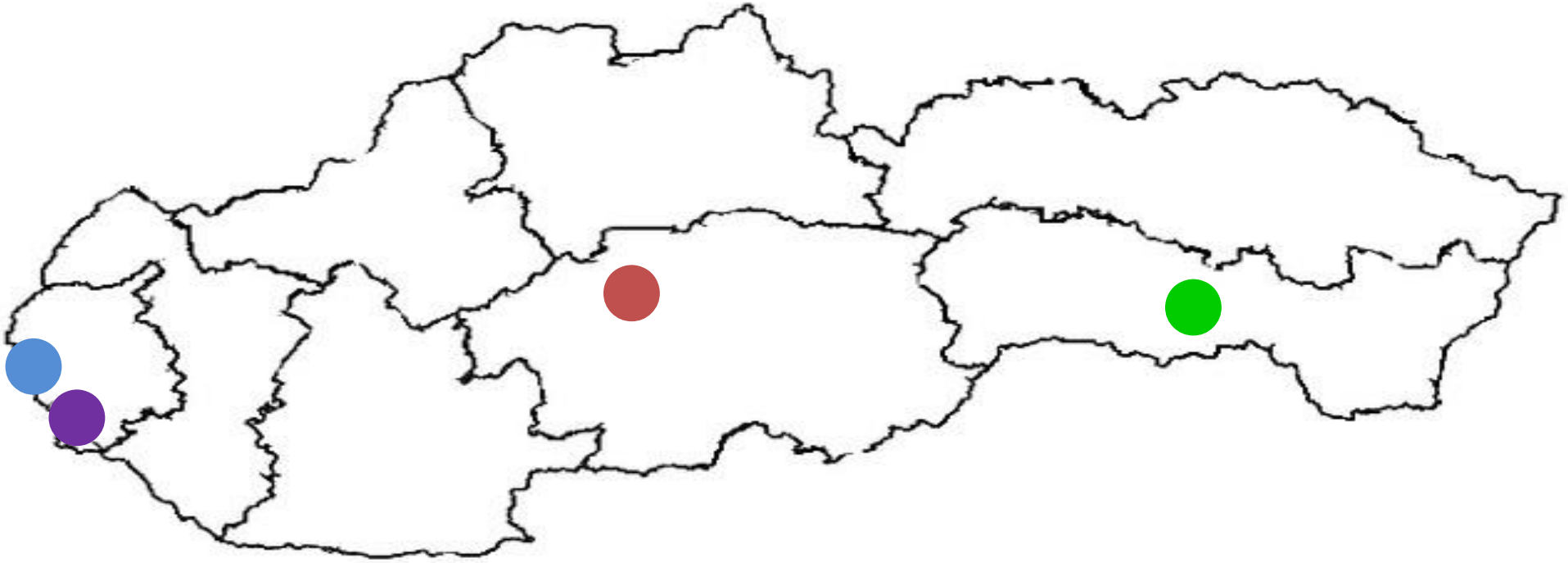
Register katétrových ablácií Slovenskej republiky

SLOVABLO

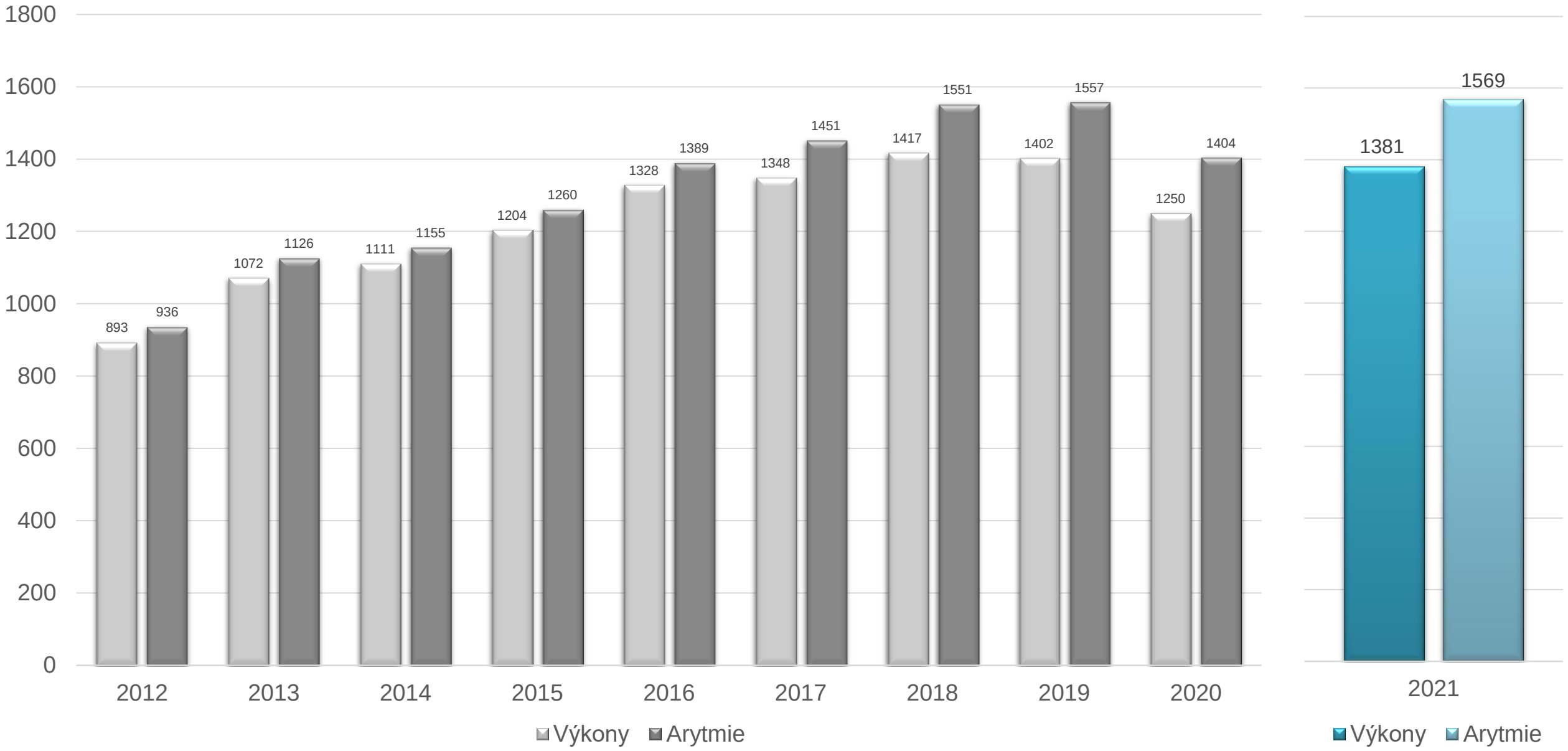
2021

Počet centier na Slovensku, ktoré sa prihlásili do registra

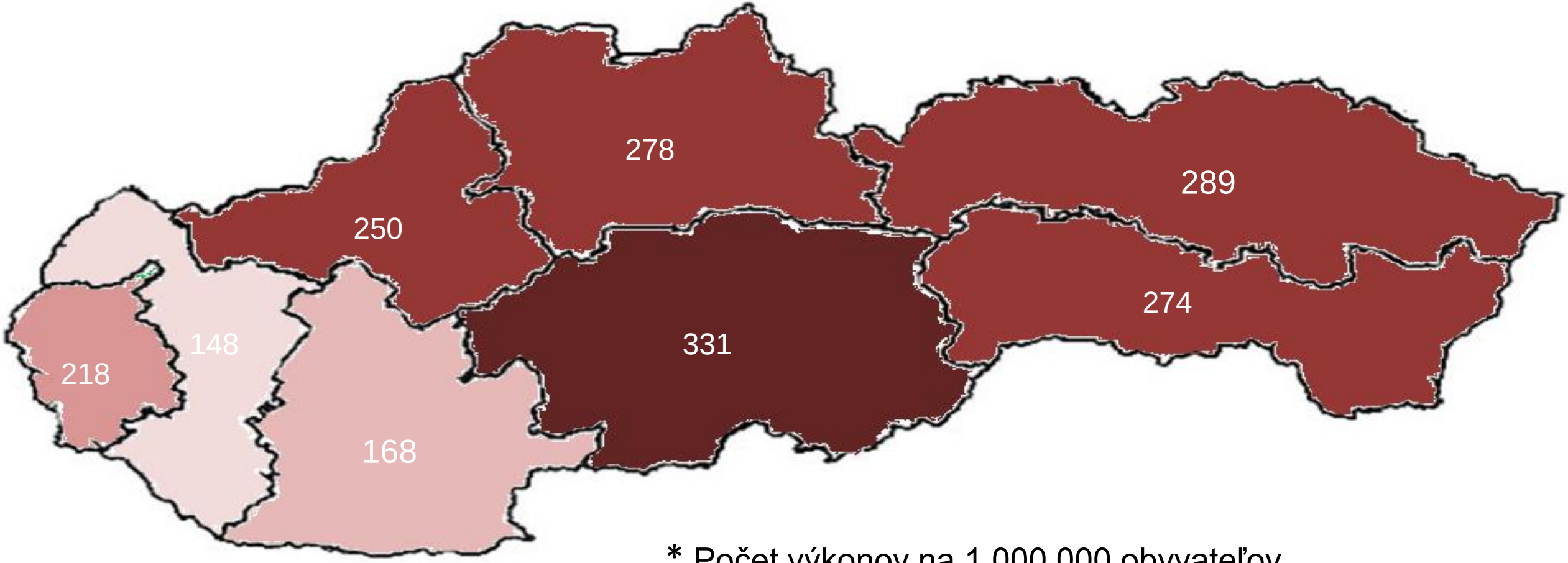
- Národný ústav srdcových a cievnych chorôb Bratislava, NÚSCH
- Stredoslovenský ústav srdcových a cievnych chorôb Banská Bystrica, SÚSCCH
- Východoslovenský ústav srdcových a cievnych chorôb Košice, VÚSCH
- Detské kardiocentrum, Bratislava



Počet výkonov a riešených arytmií



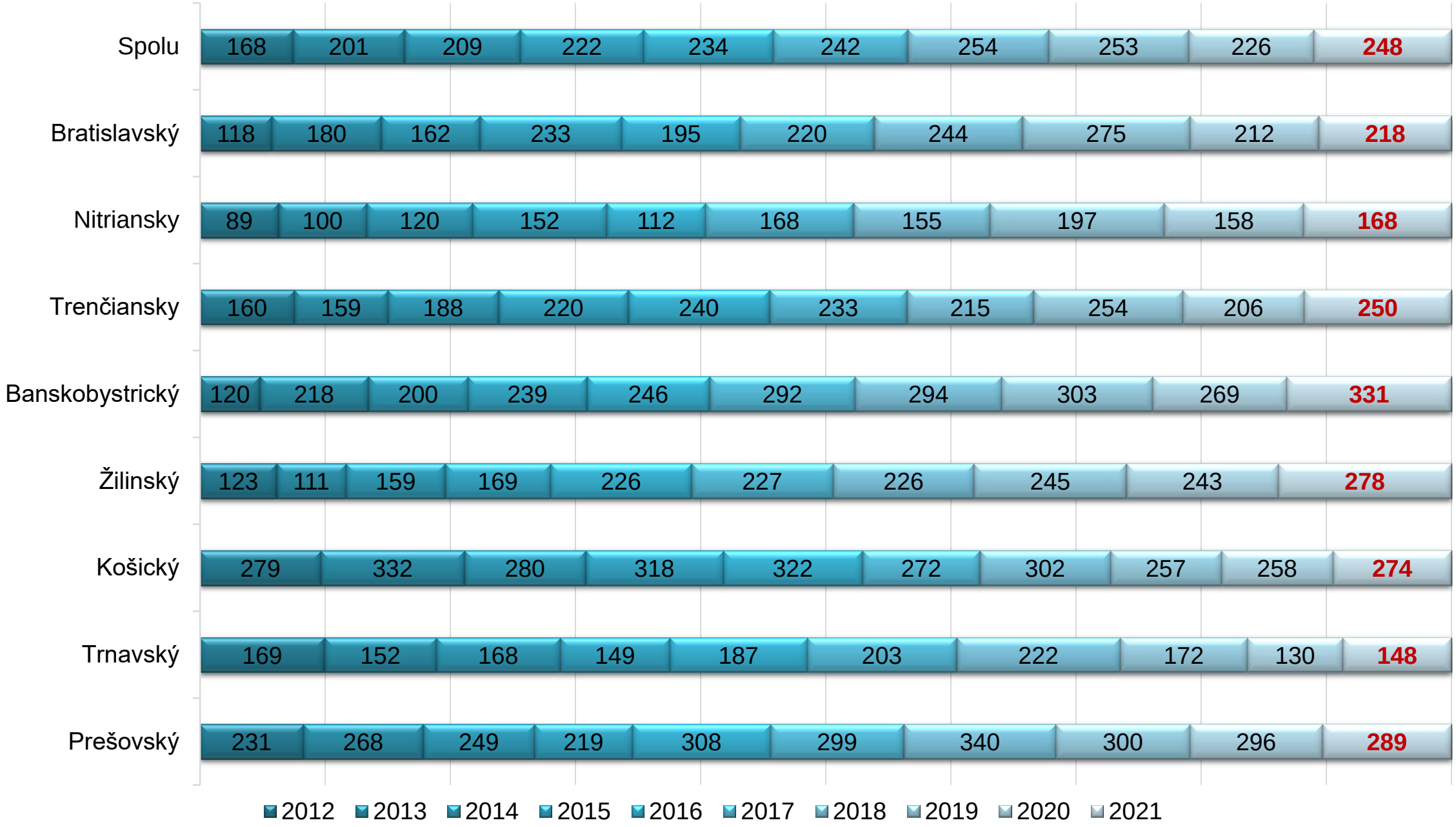
Počet výkonov podľa krajov



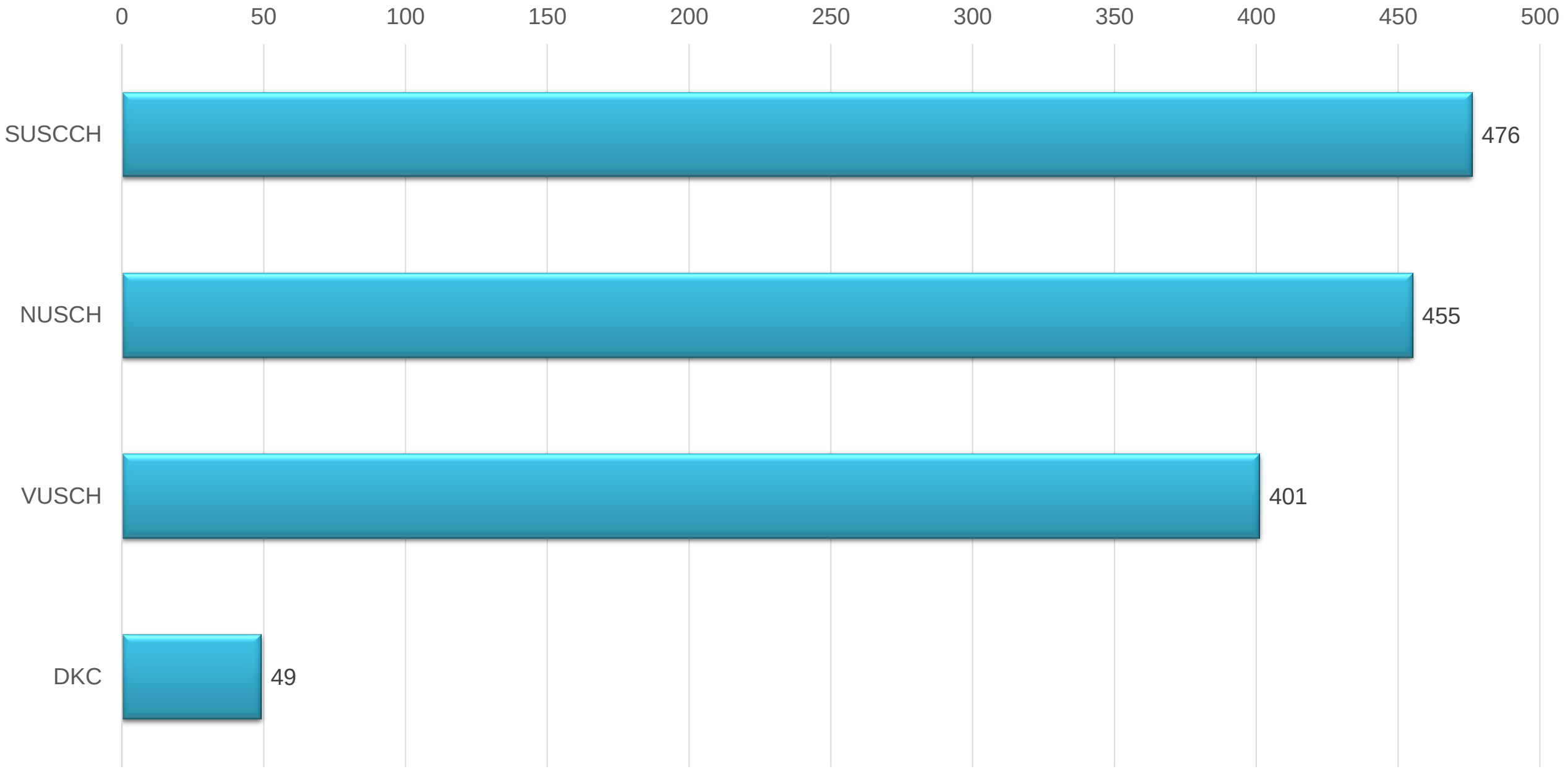
* Počet výkonov na 1 000 000 obyvateľov

100-150 150-200 200-250 250-300 300-350

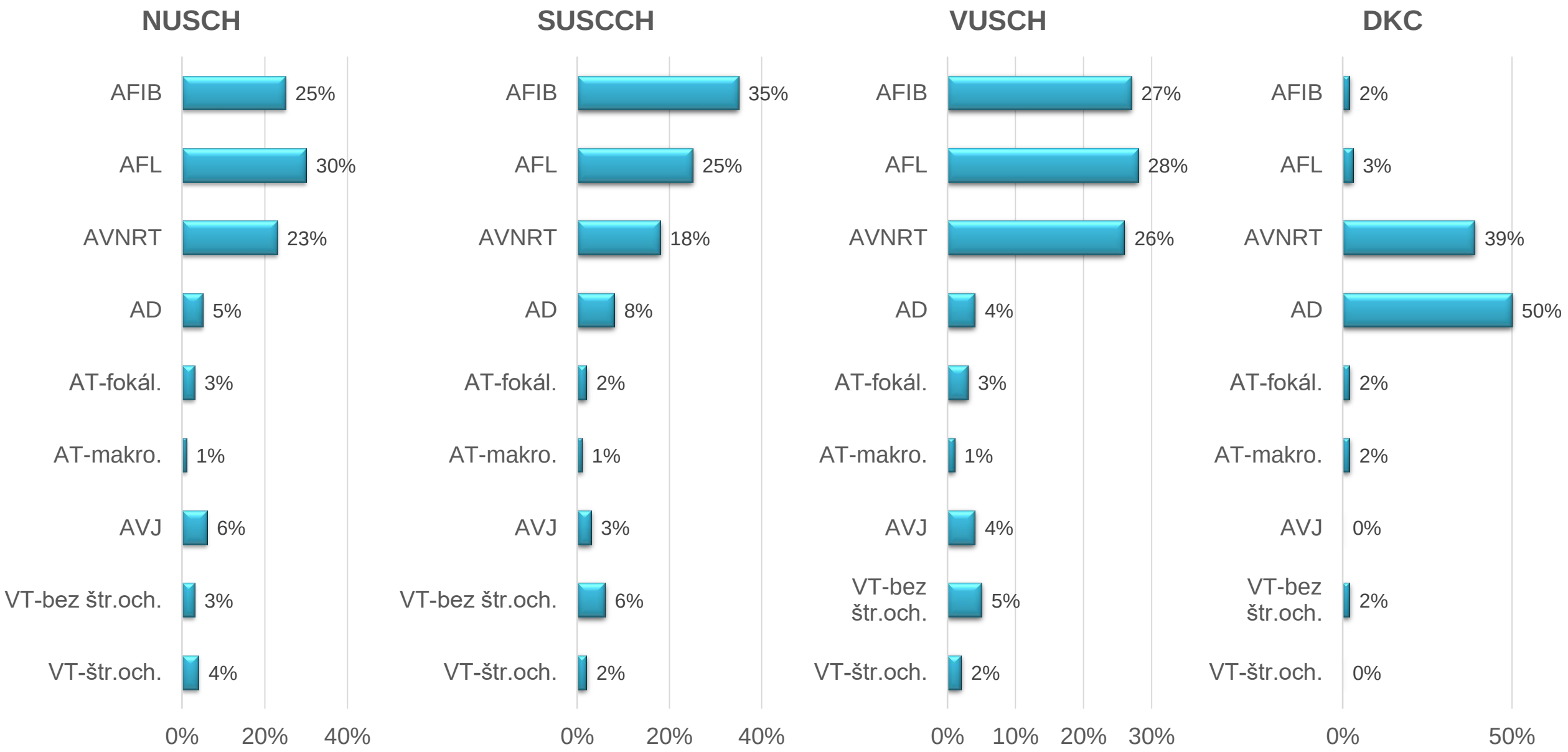
Počet ablačných výkonov na 1 000 000 obyvateľov



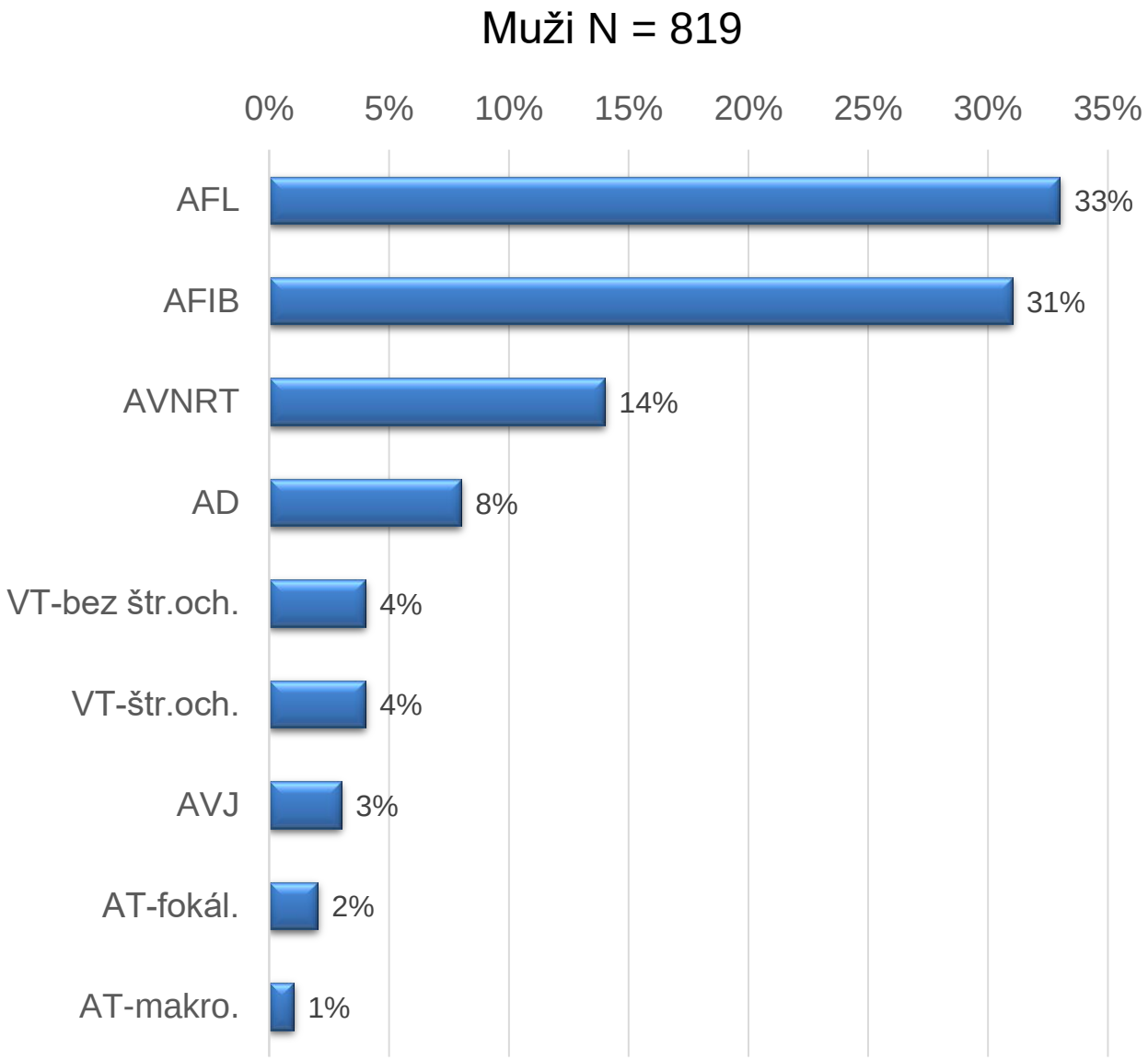
Počet výkonov v jednotlivých centrách

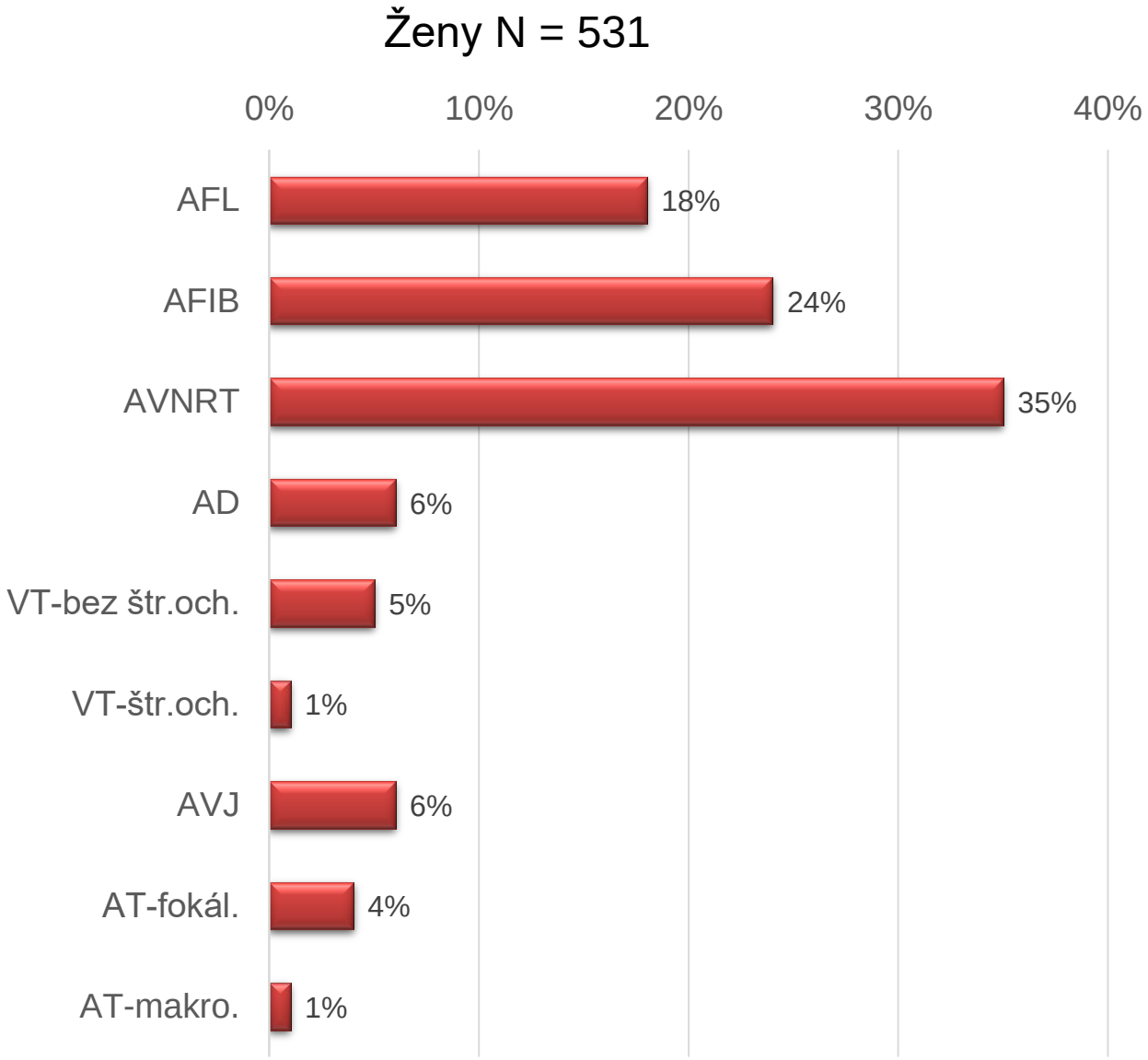


Zastúpenie katétrových ablácií podľa centier

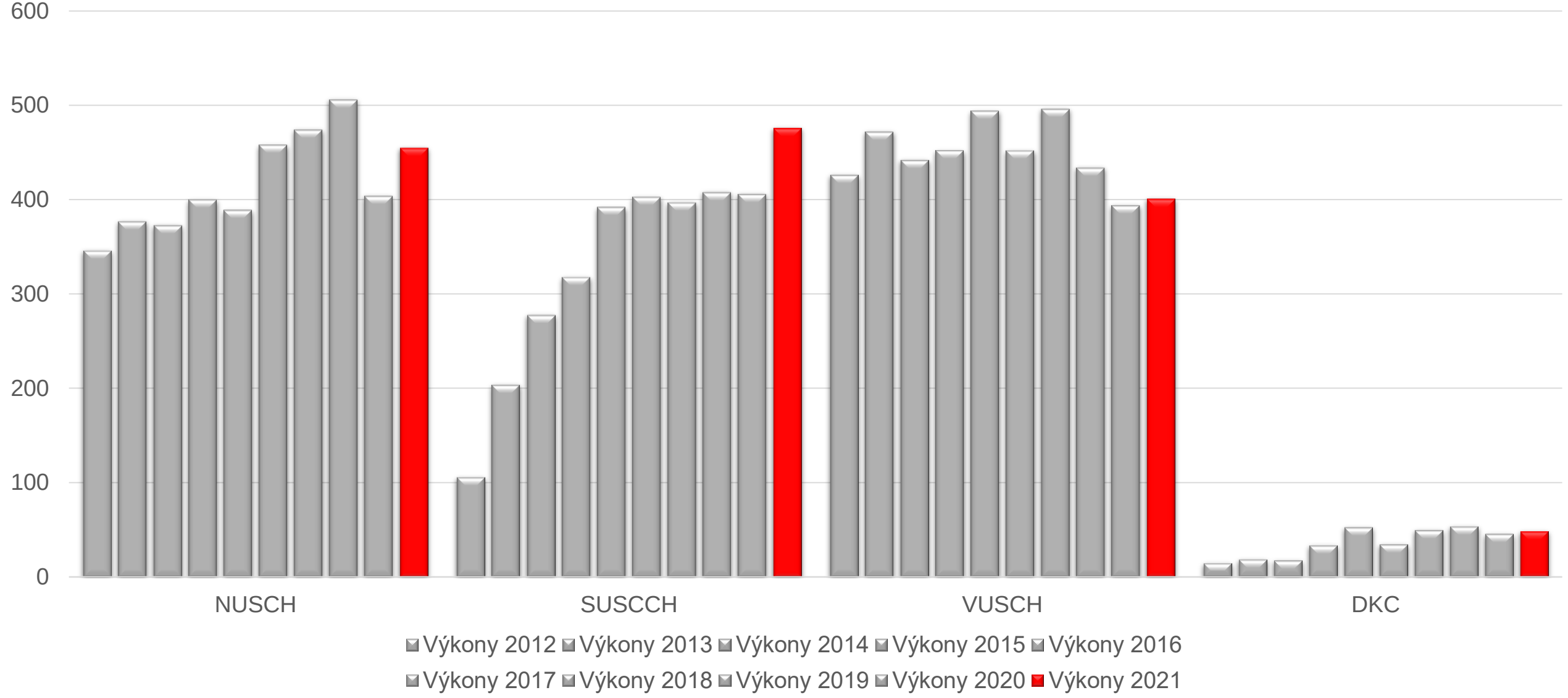


Spektrum arytmií – muži a ženy

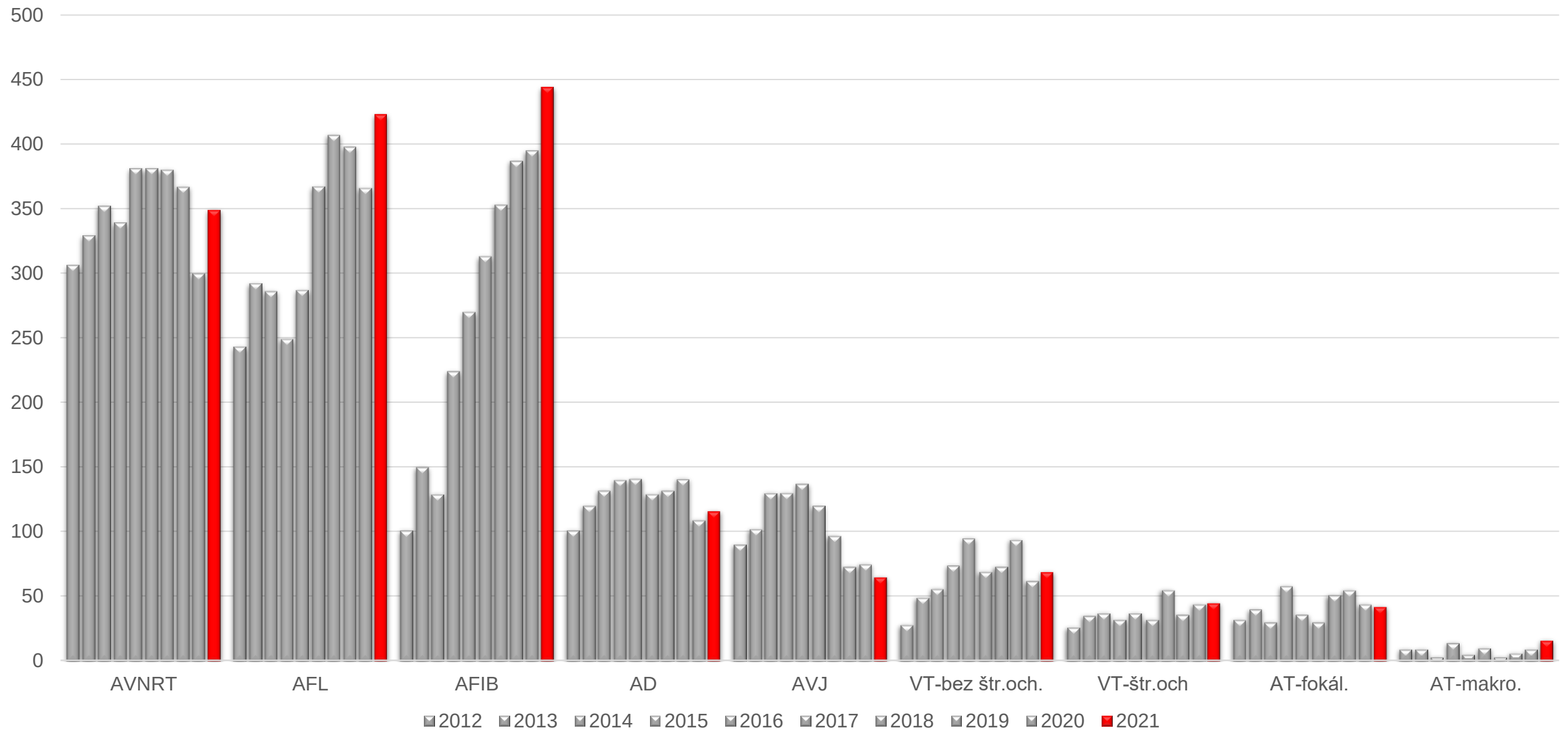




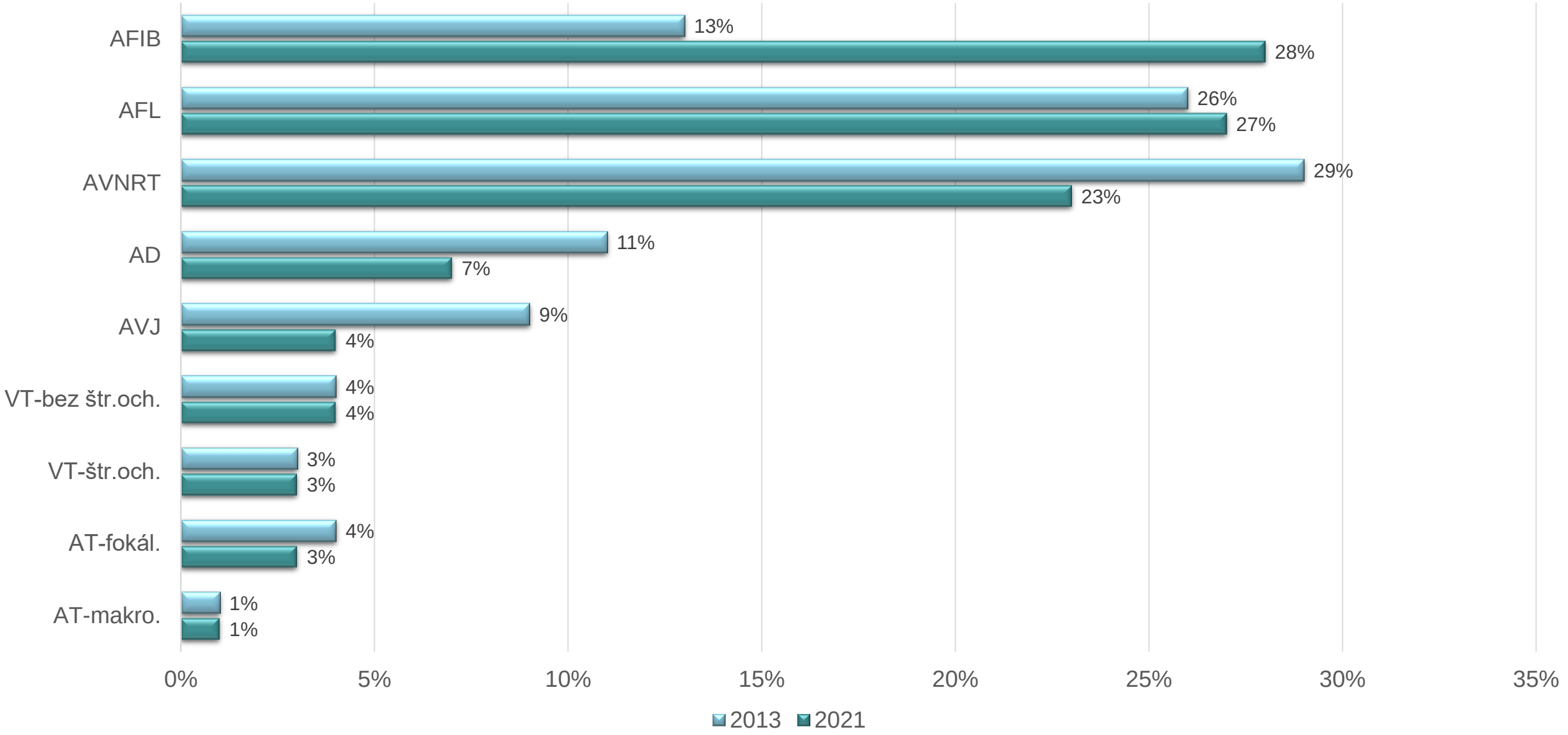
Počet výkonov v jednotlivých centrách 2012 - 2021



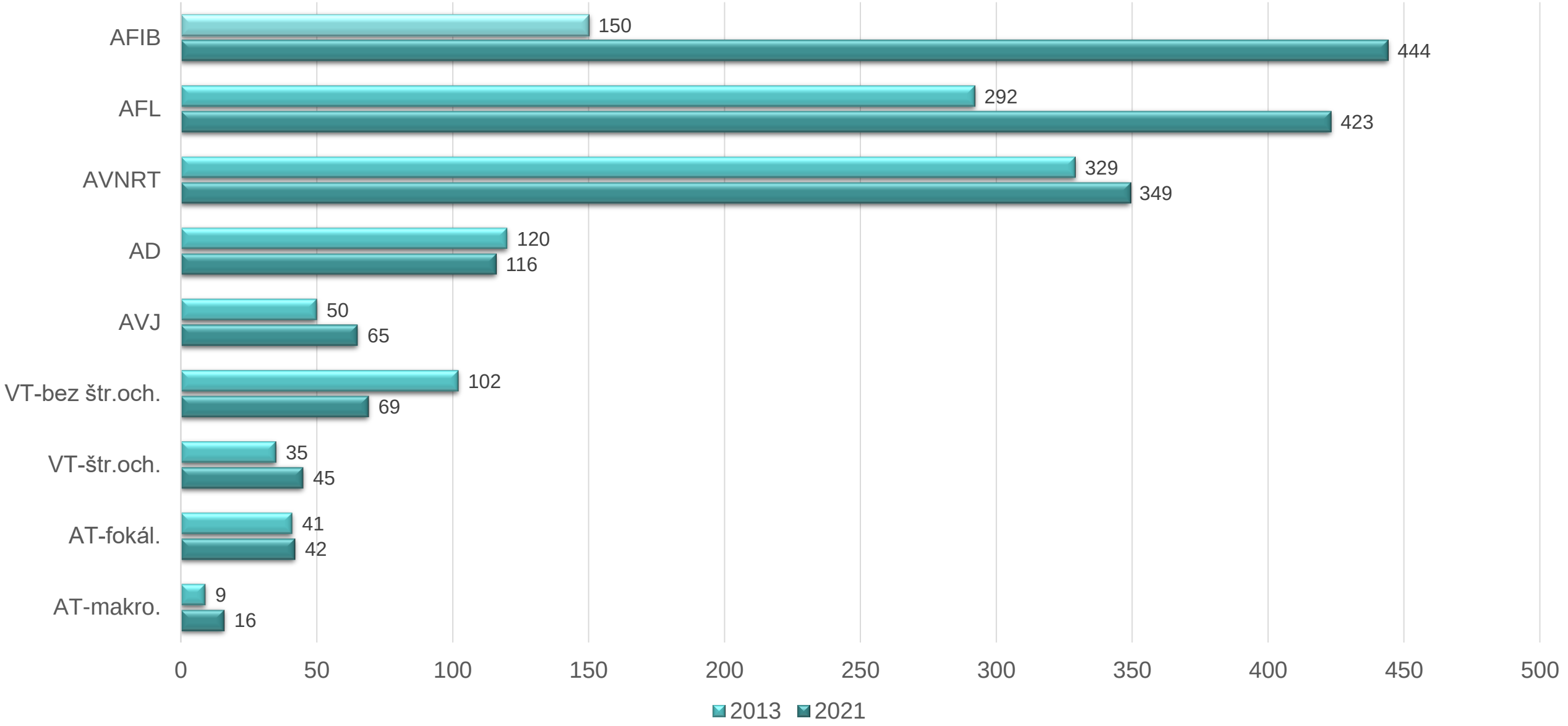
Vývoj zastúpenia jednotlivých typov katétrových ablácií



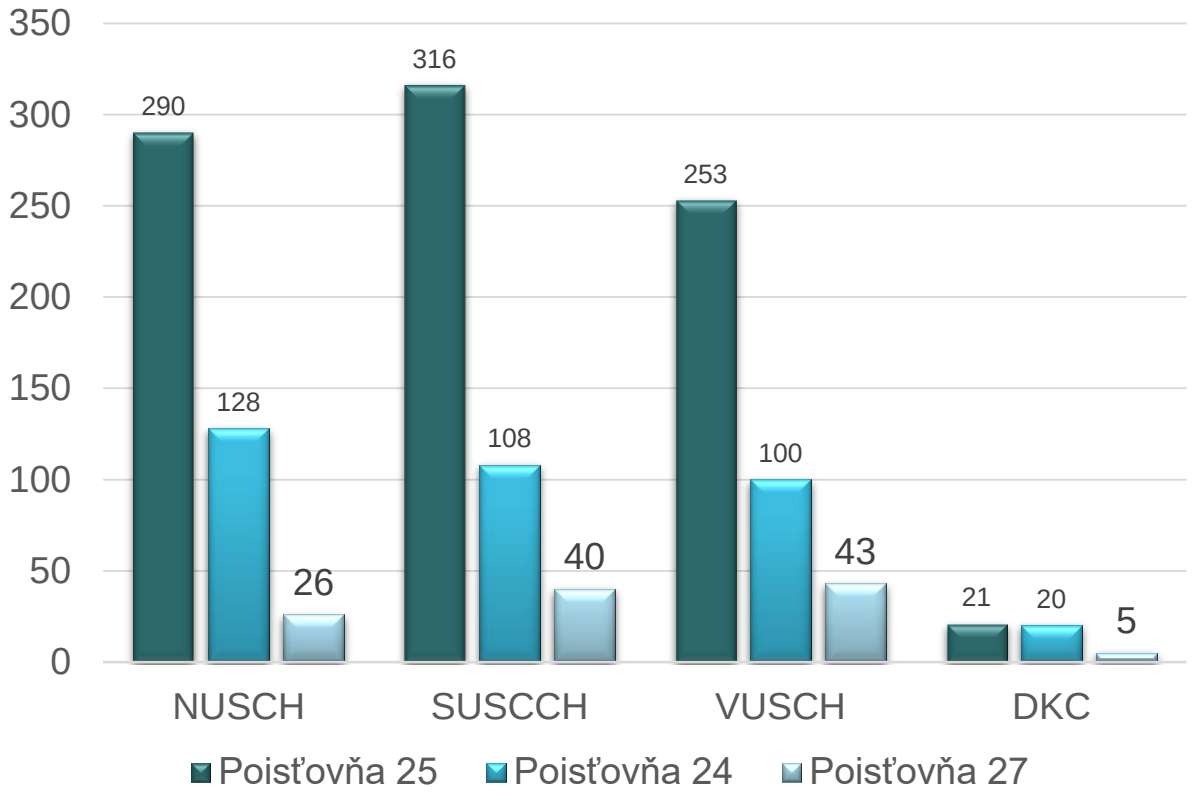
Porovnanie zastúpenia jednotlivých typov katétrových ablácií v percentách, rok 2013 a 2021

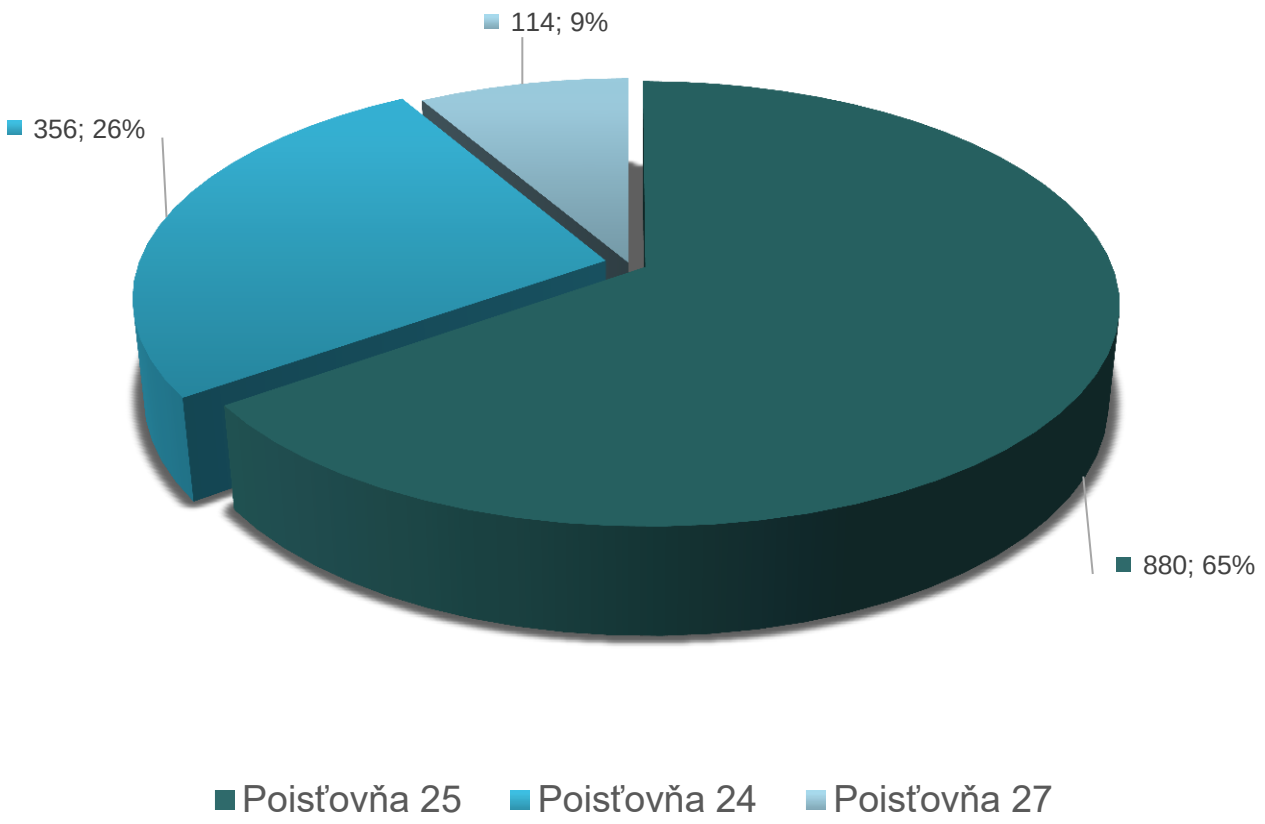


Porovnanie zastúpenia jednotlivých typov katétrových ablácií, numerické rok 2013 a 2021

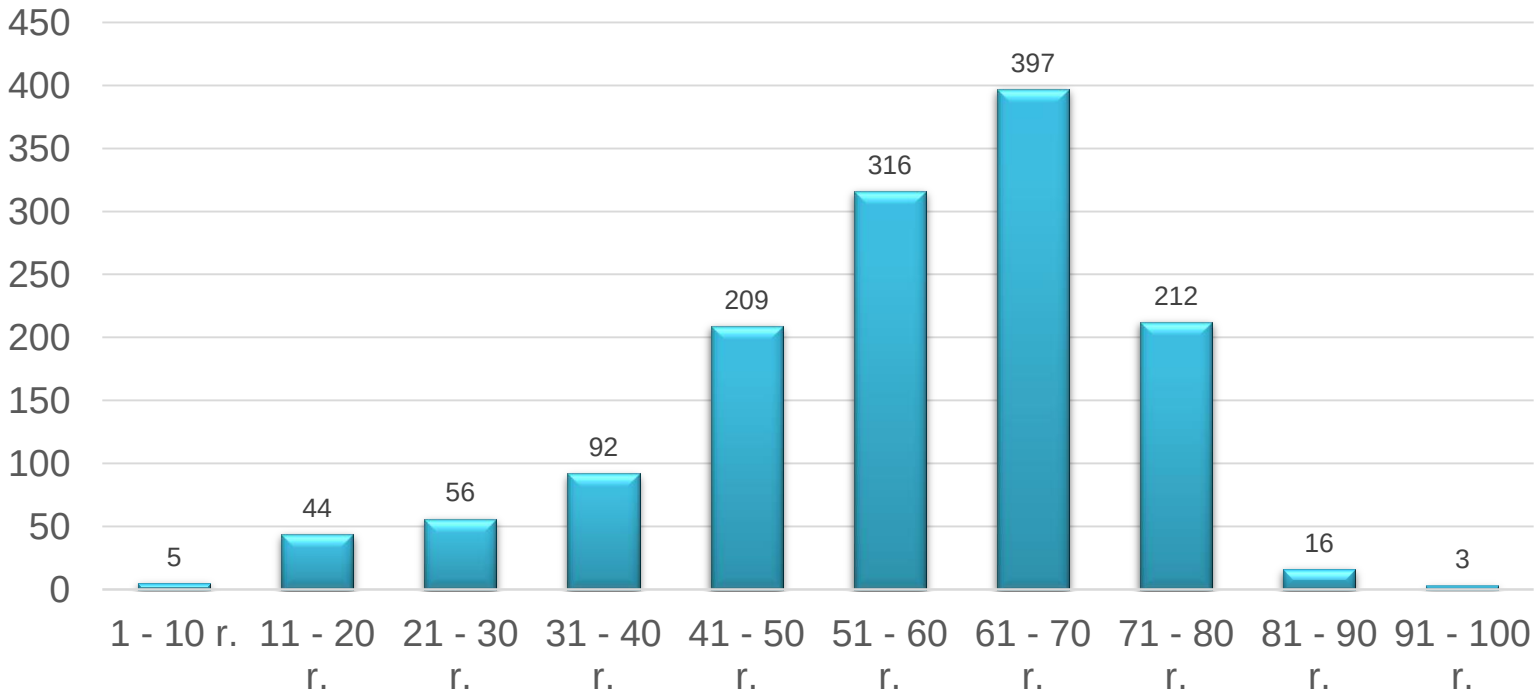


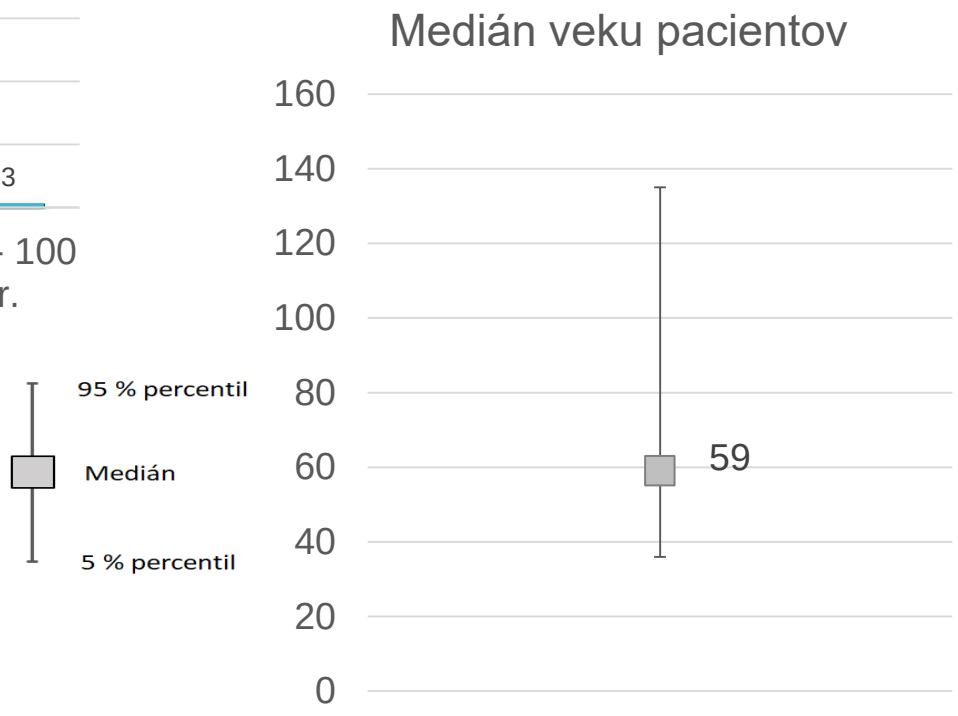
Rozdelenie pacientov podľa poisťovní





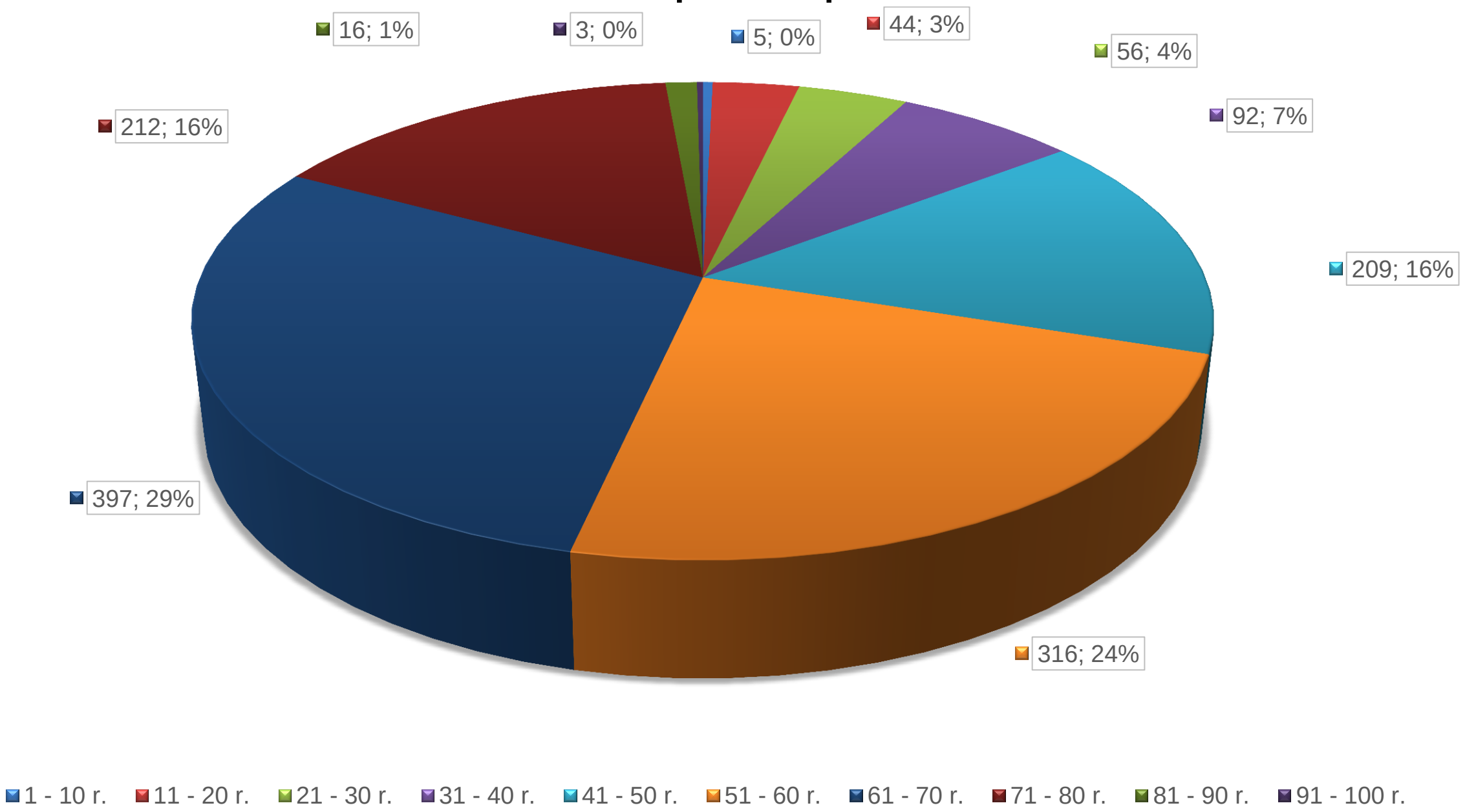
Vekové zastúpenie pacientov



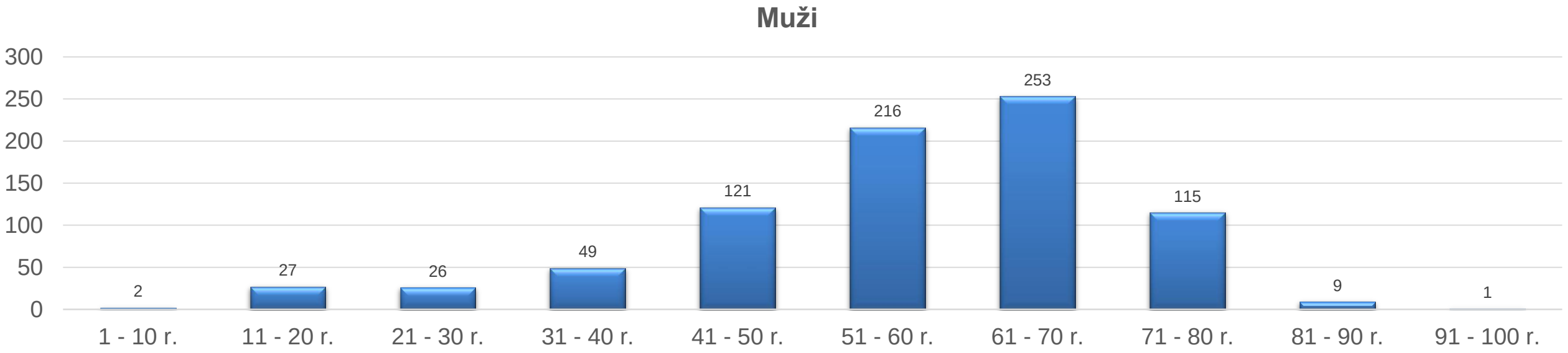


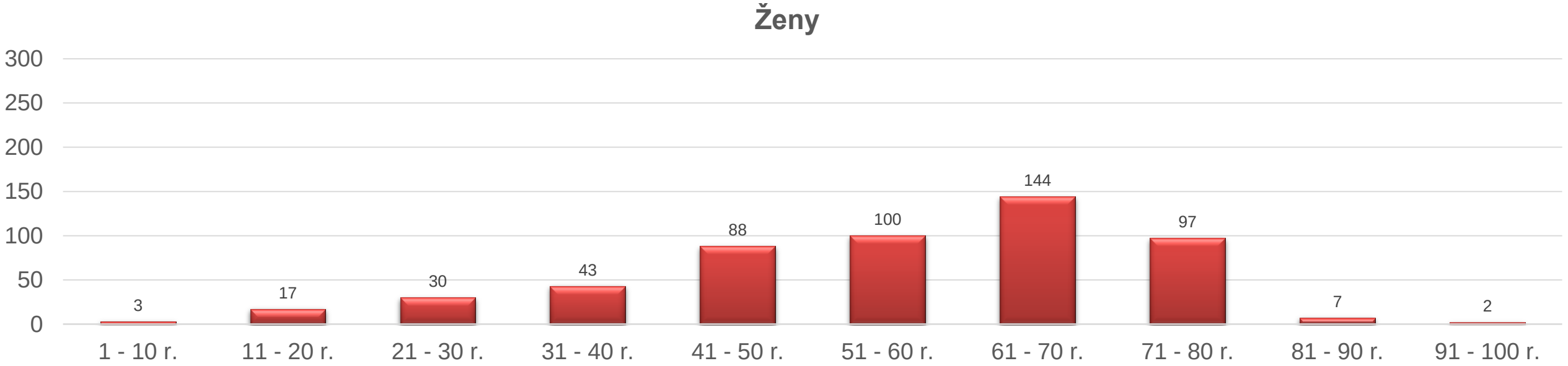
priemerný vek pacienta: 56,5 ± 15,46 rokov

Vekové zastúpenie pacientov

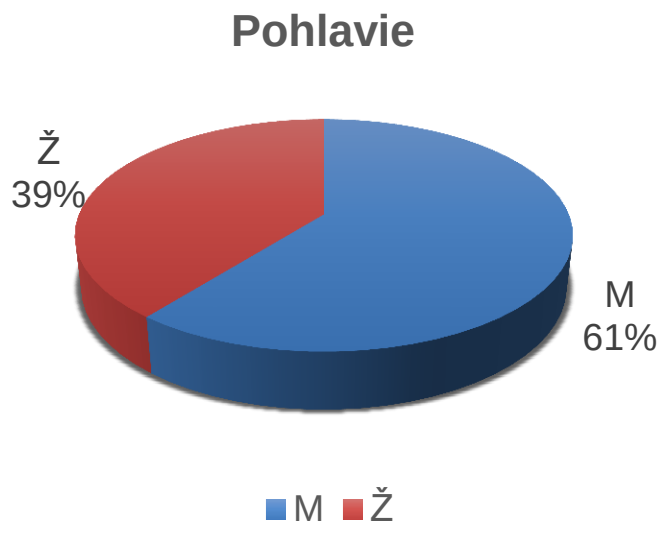


Vekové zastúpenie pacientov podľa pohlavia



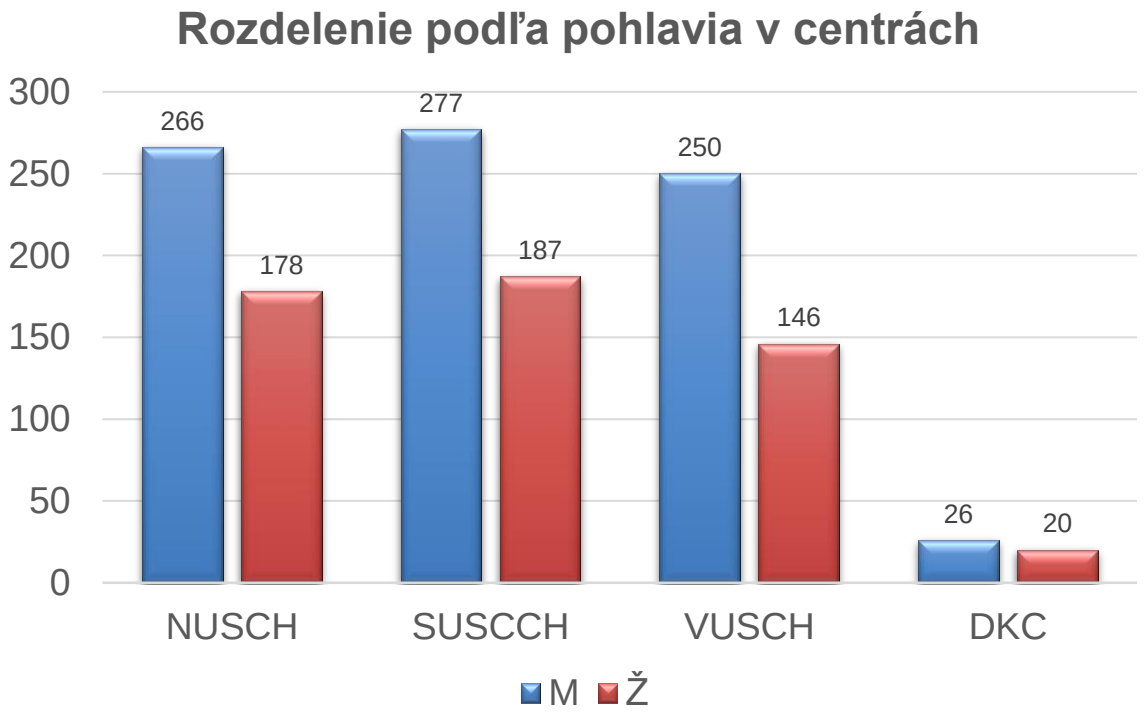


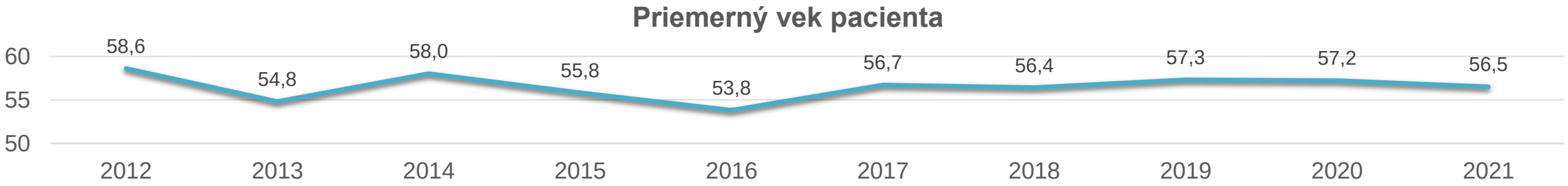
Rozdelenie podľa pohlavia, priemerný vek



Muži
N = 819

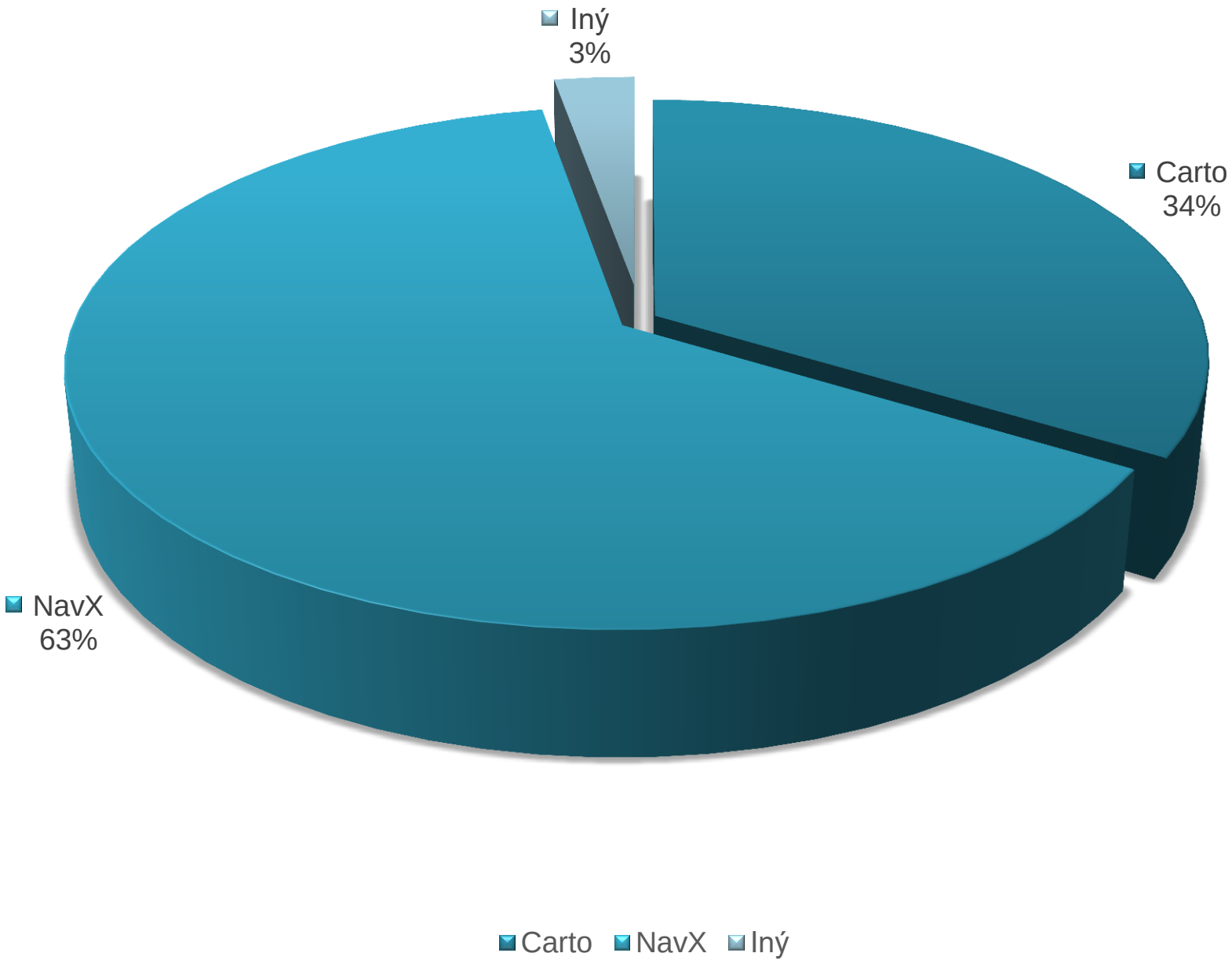
Ženy
N = 531



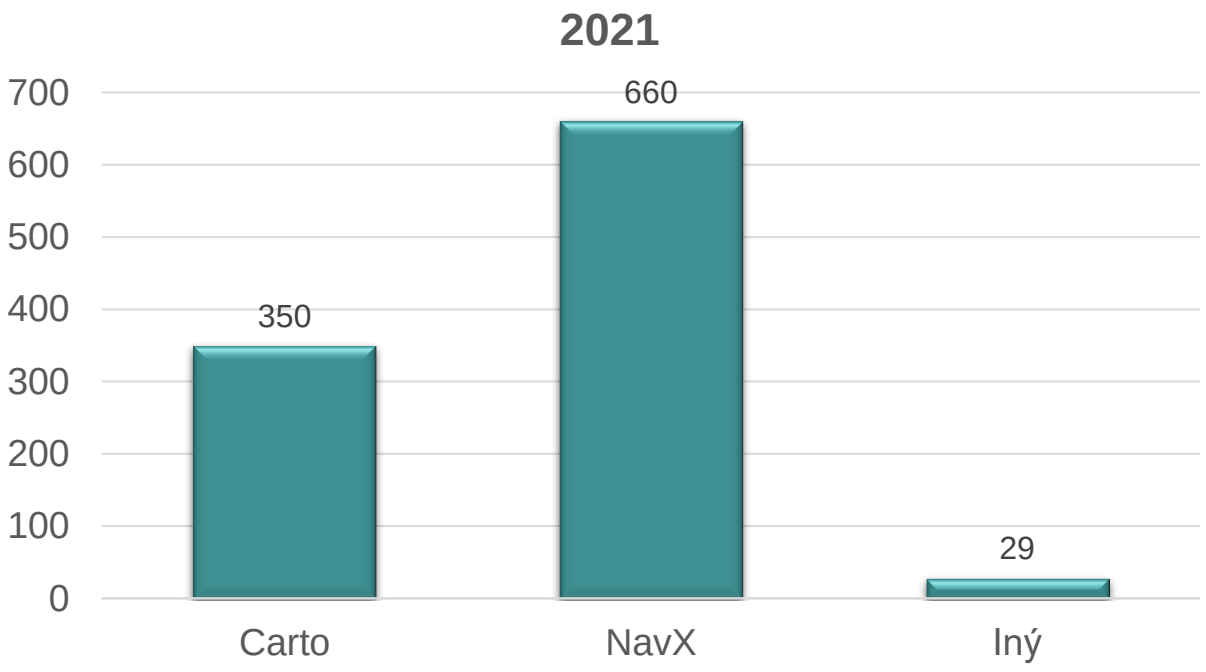


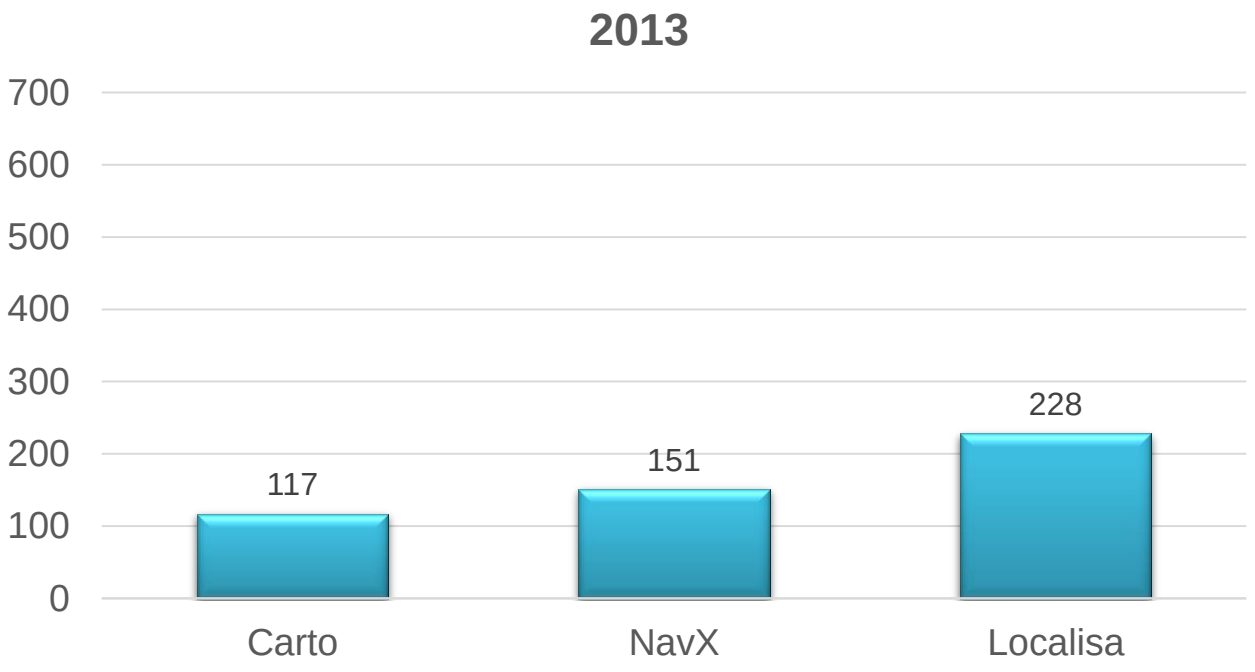
*bez DKC pacientov

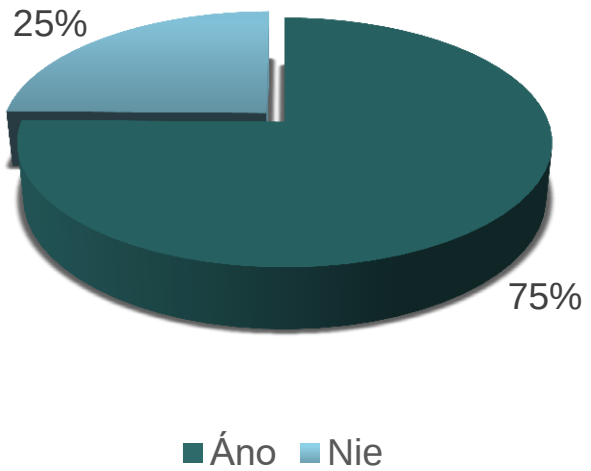
Použitie mapovacích systémov

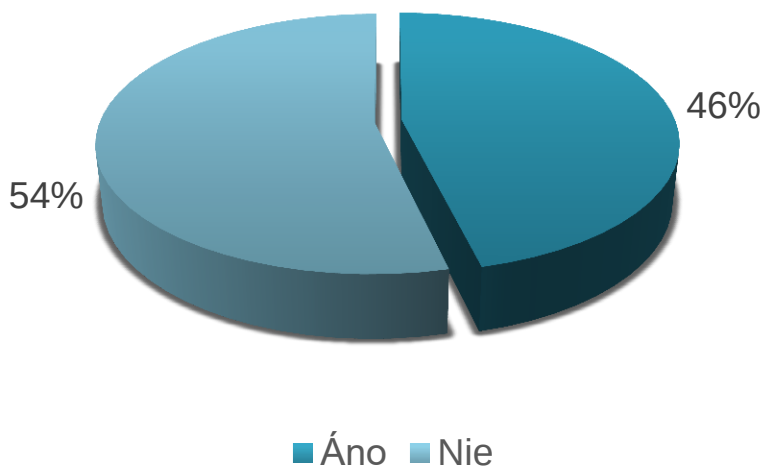


Porovnanie používania mapovacích systémov

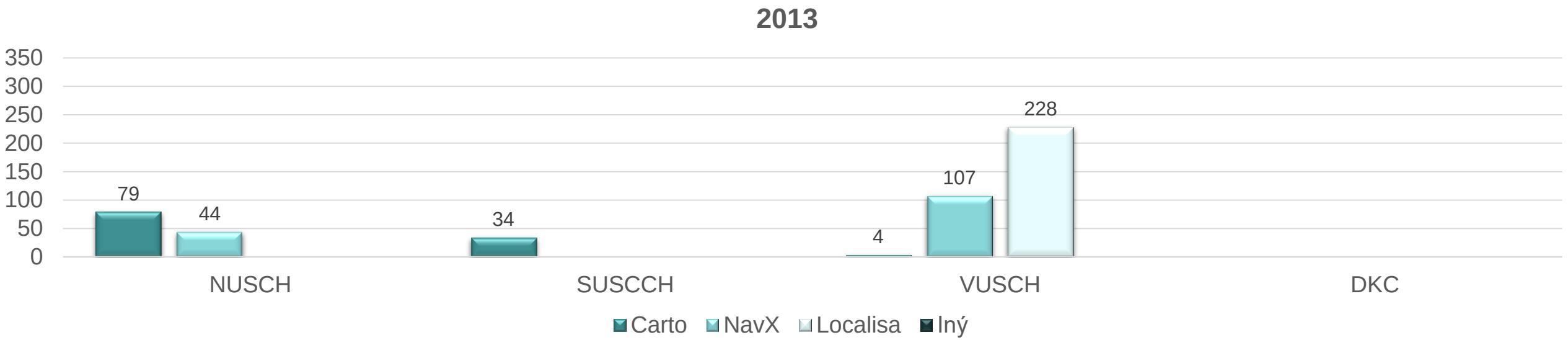


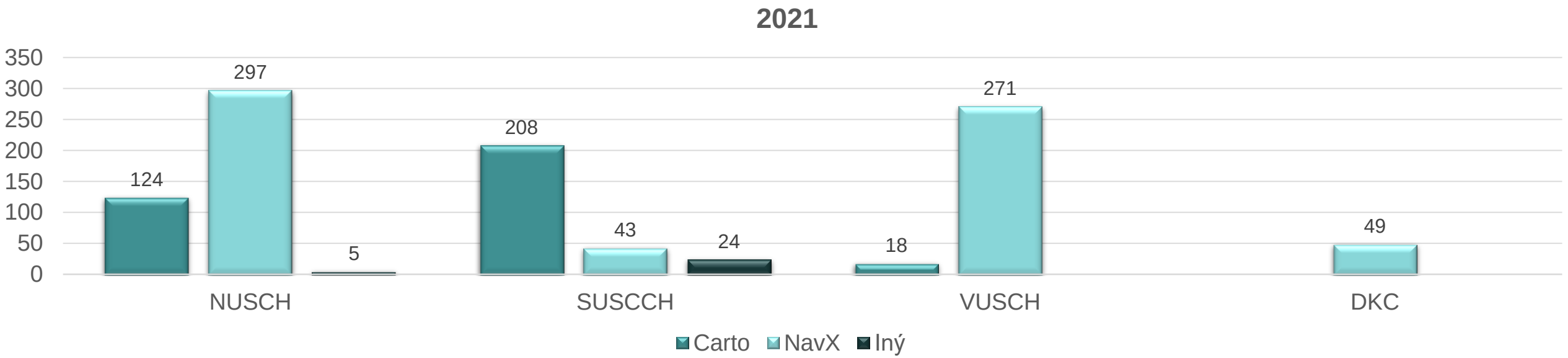




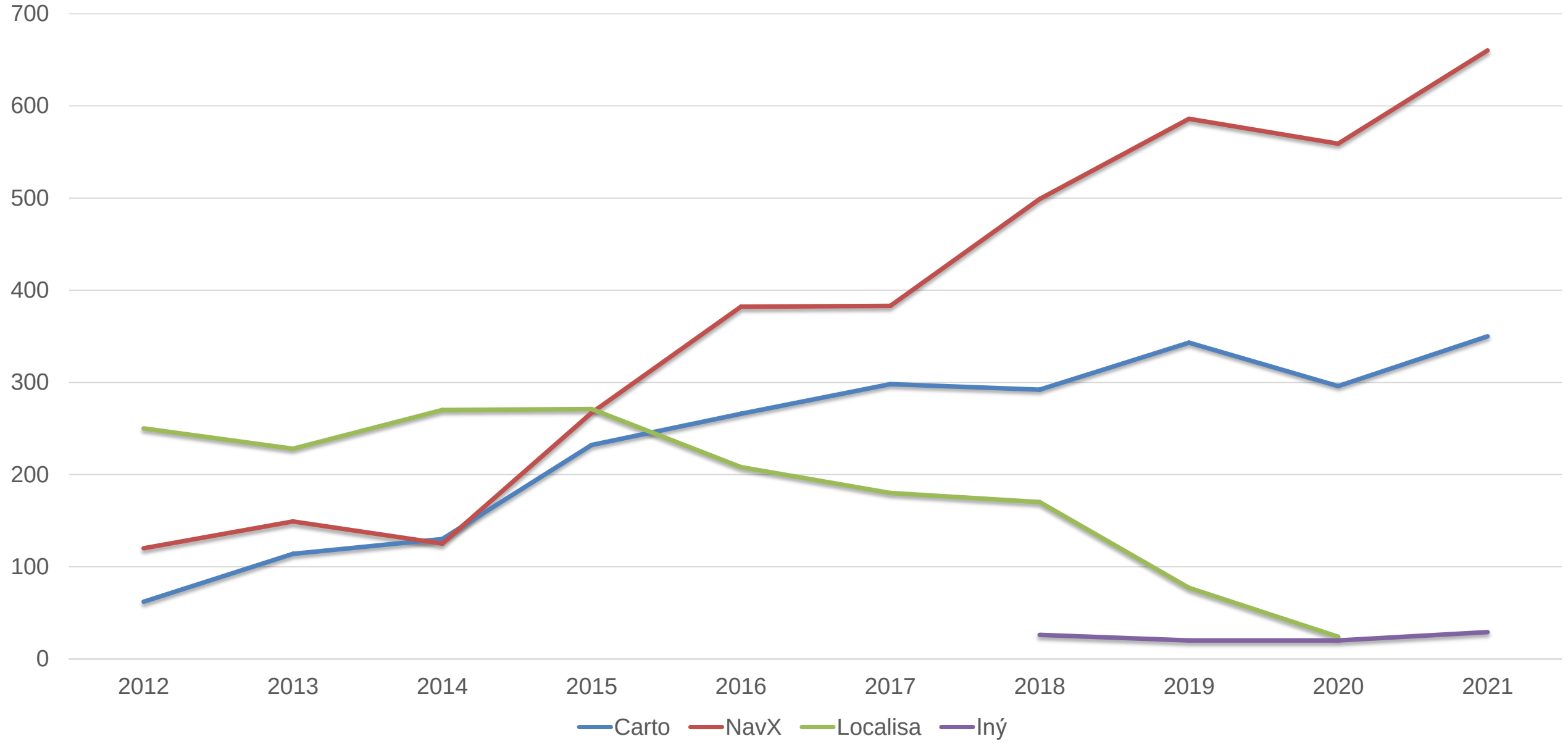


Porovnanie používania mapovacích systémov v jednotlivých centrách

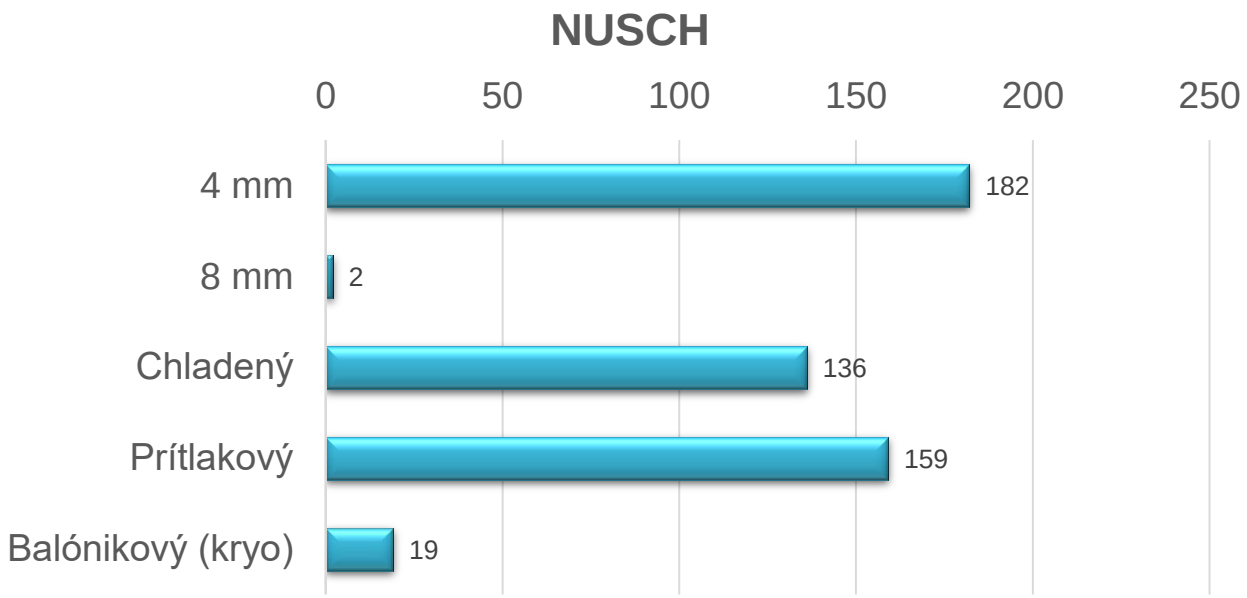


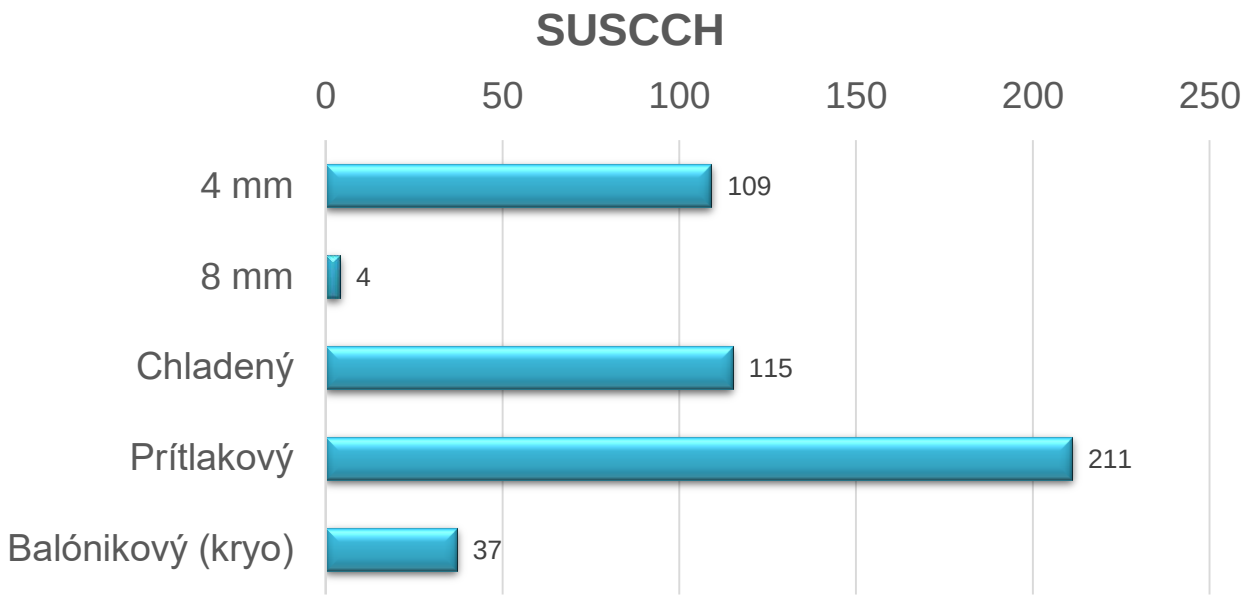


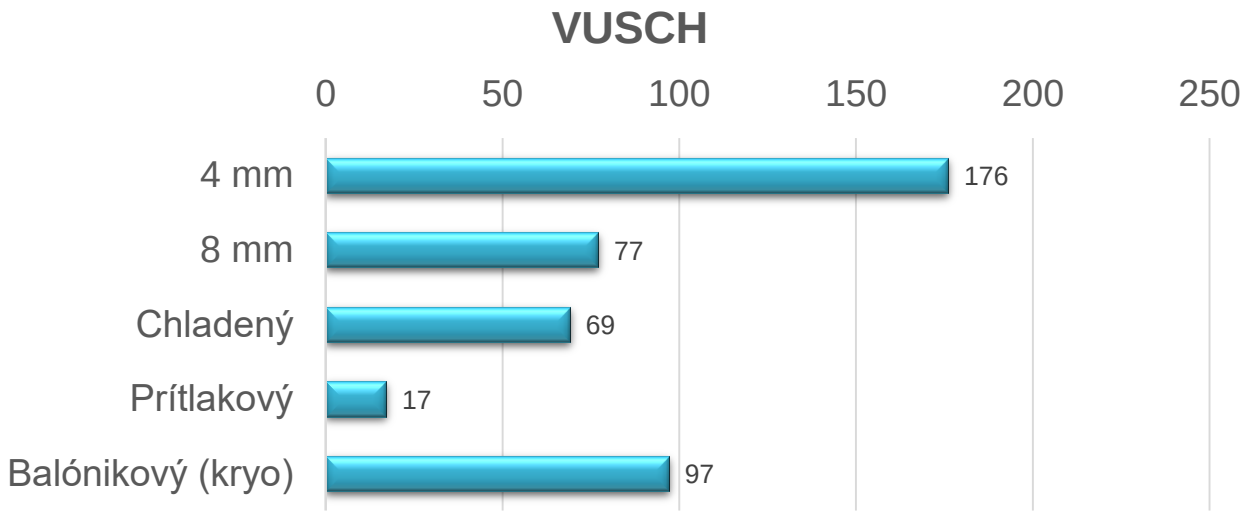
Porovnanie používania mapovacích systémov 2012- 2021

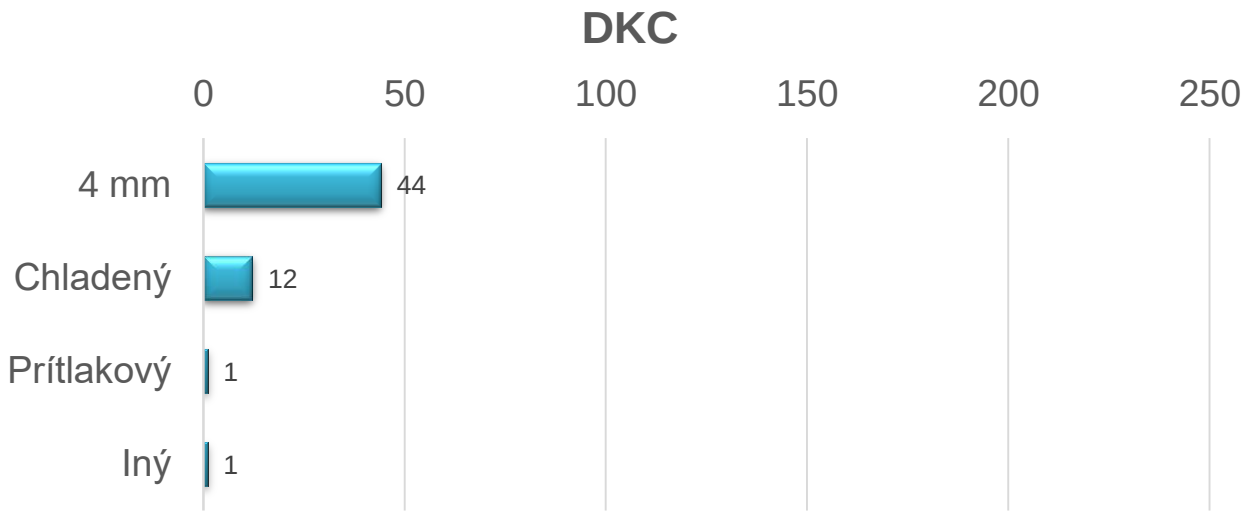


Katétre používané v jednotlivých centrách

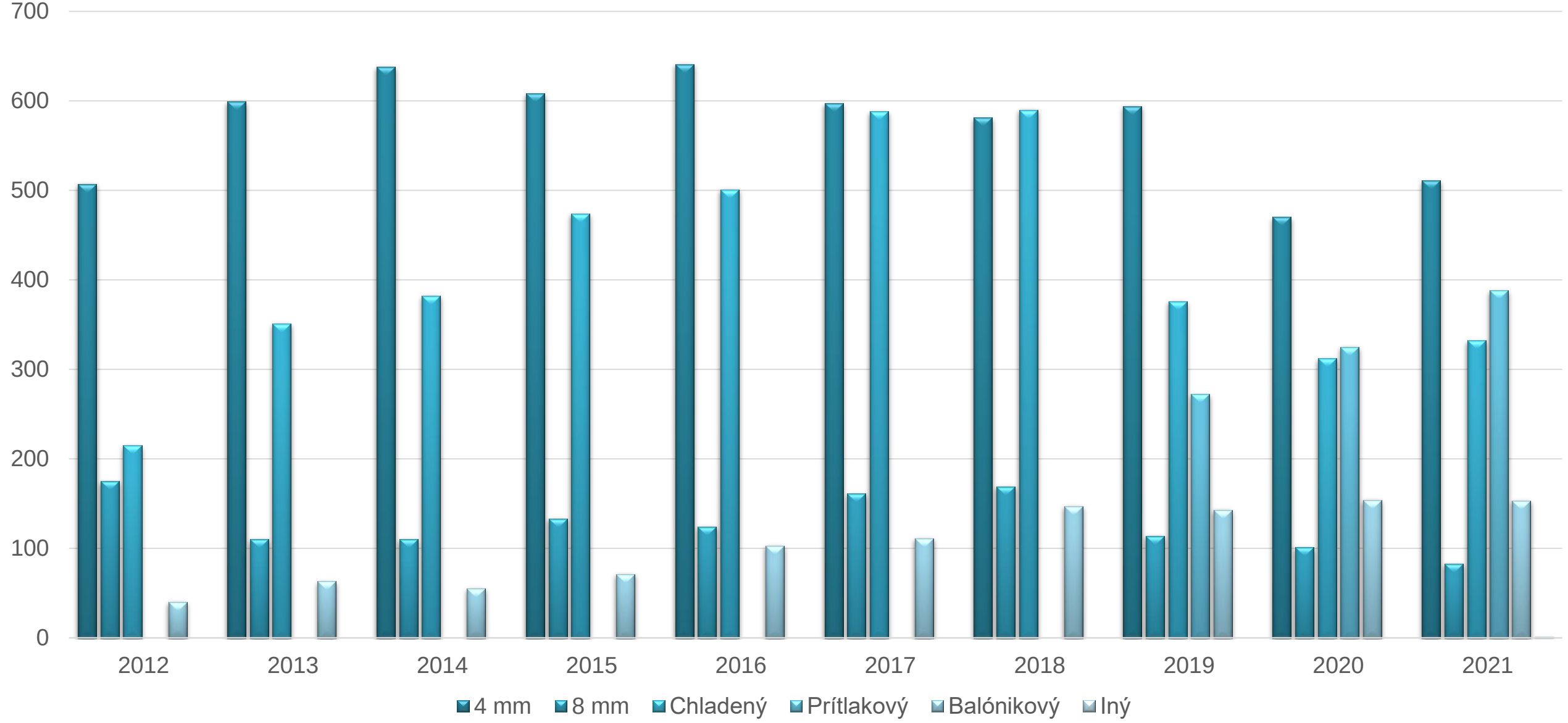




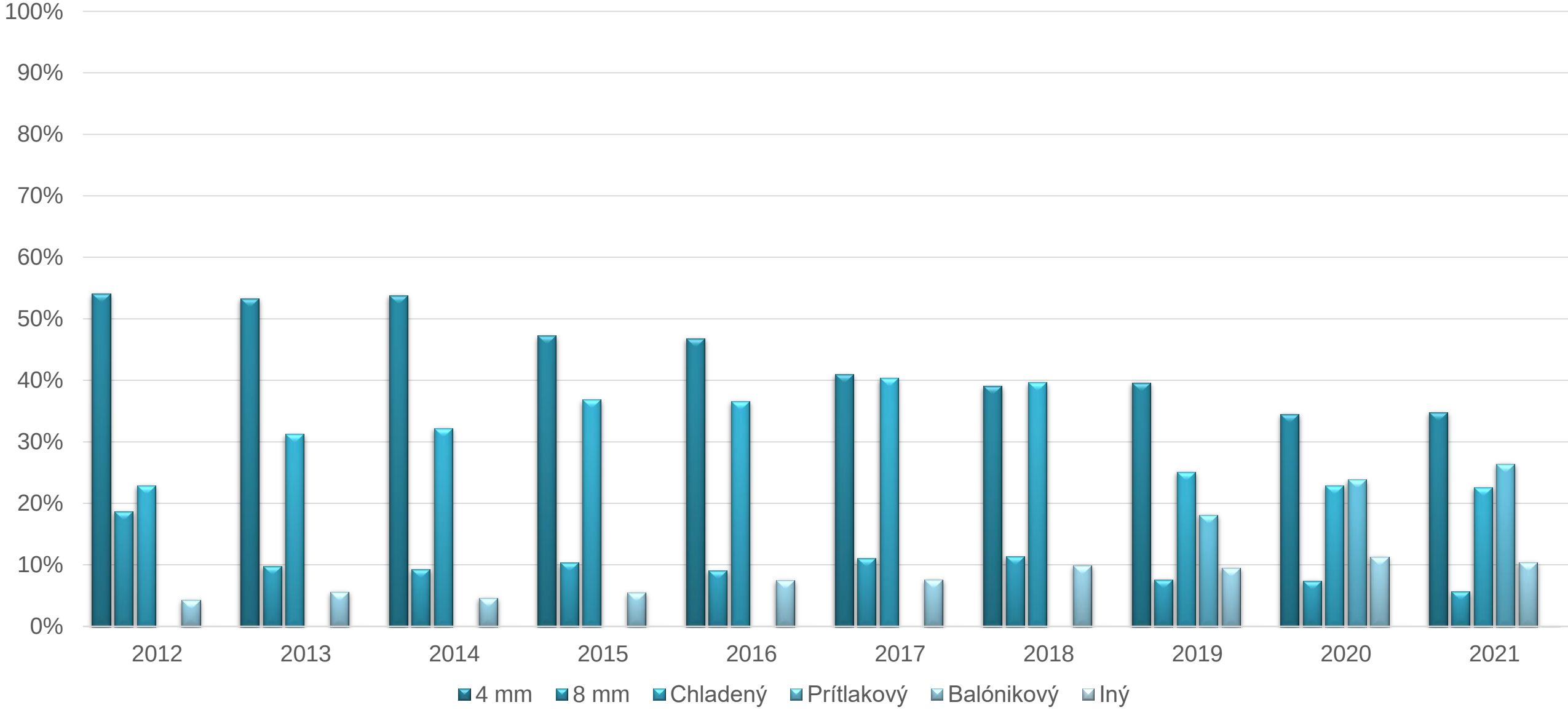




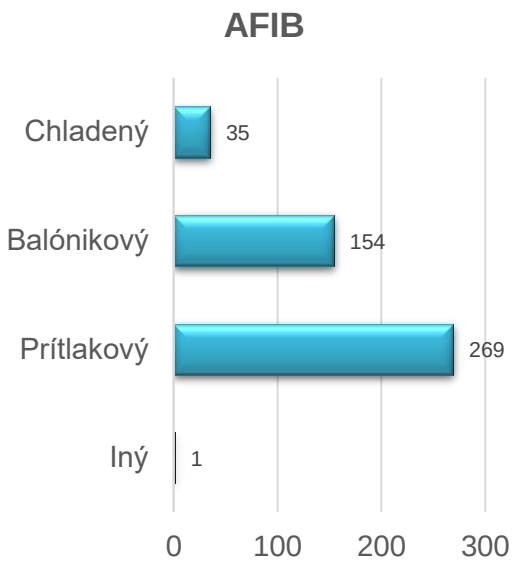
Numerické vyčíslenie použitých katétrov 2012 - 2021

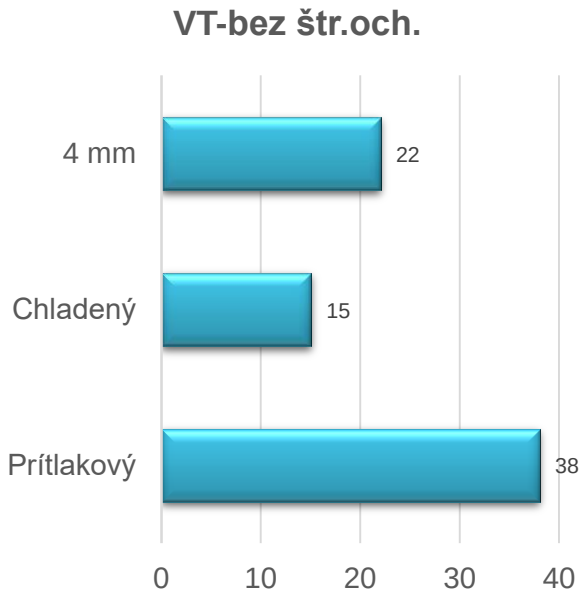


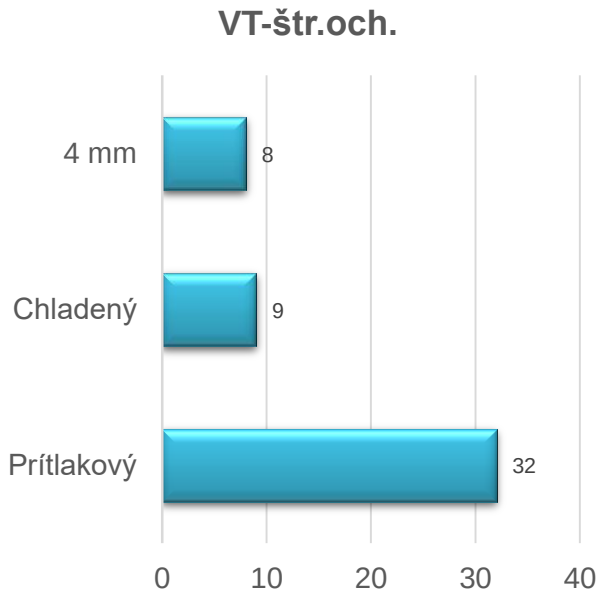
Percentuálne zastúpenie použitých katétrov 2012 - 2021

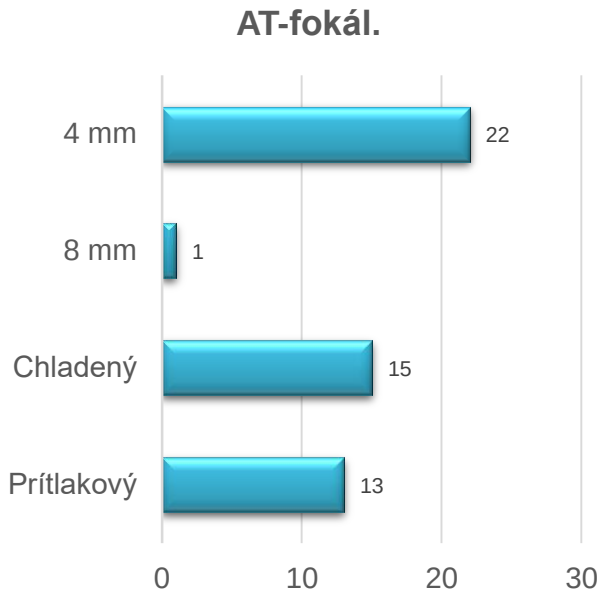


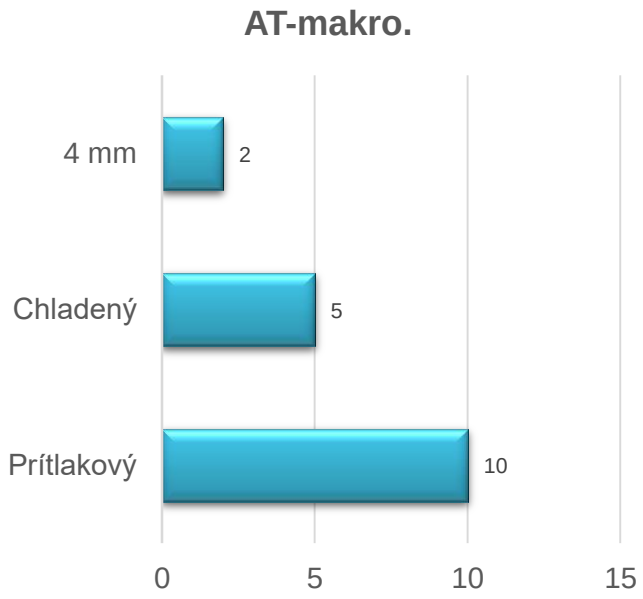
Typy použitých katétrov pri jednotlivých arytmiách



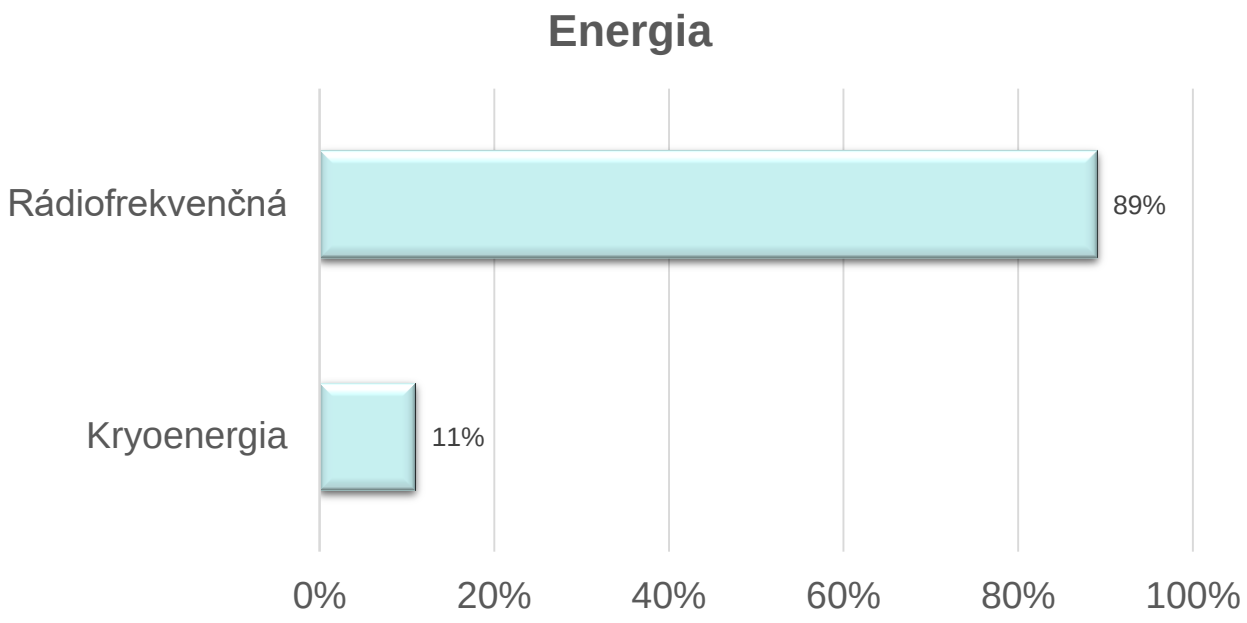


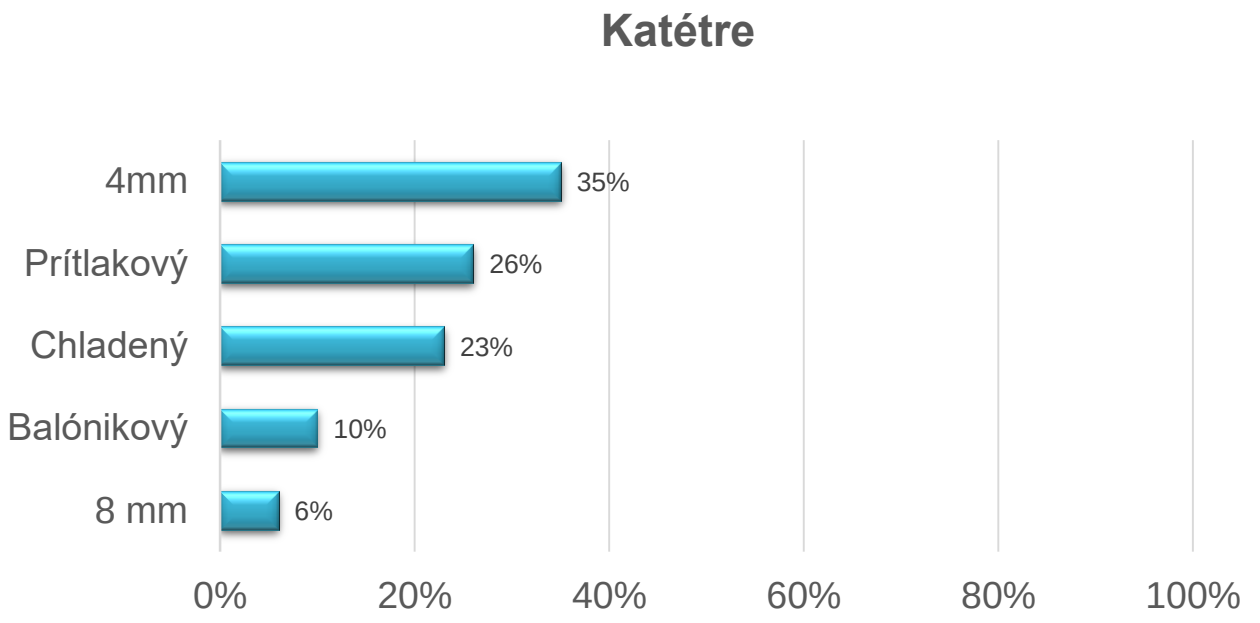


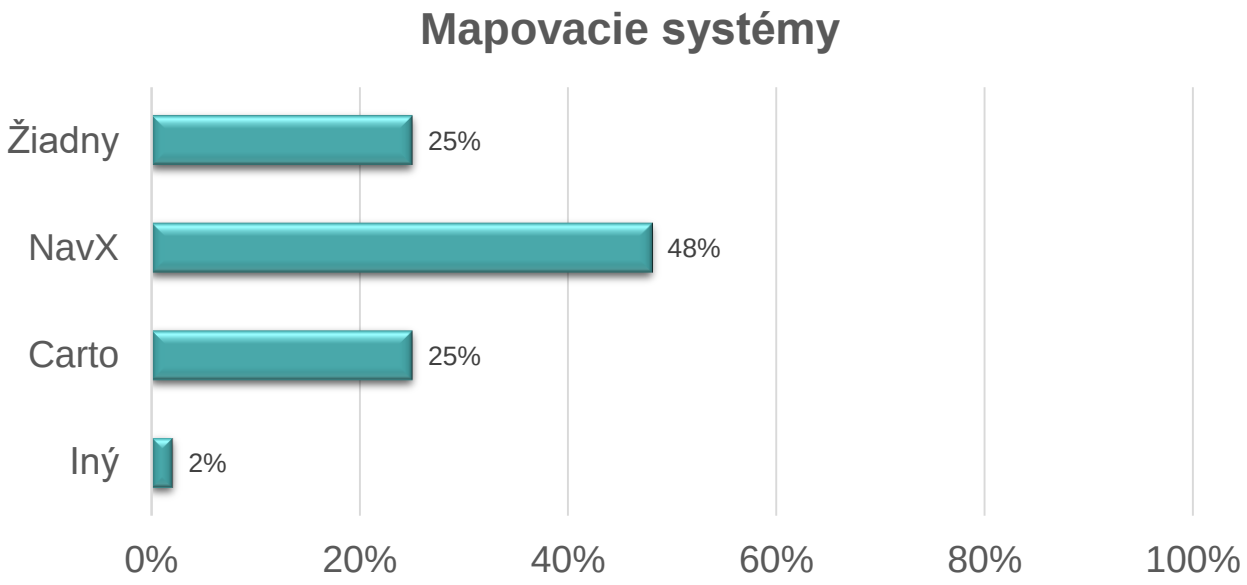


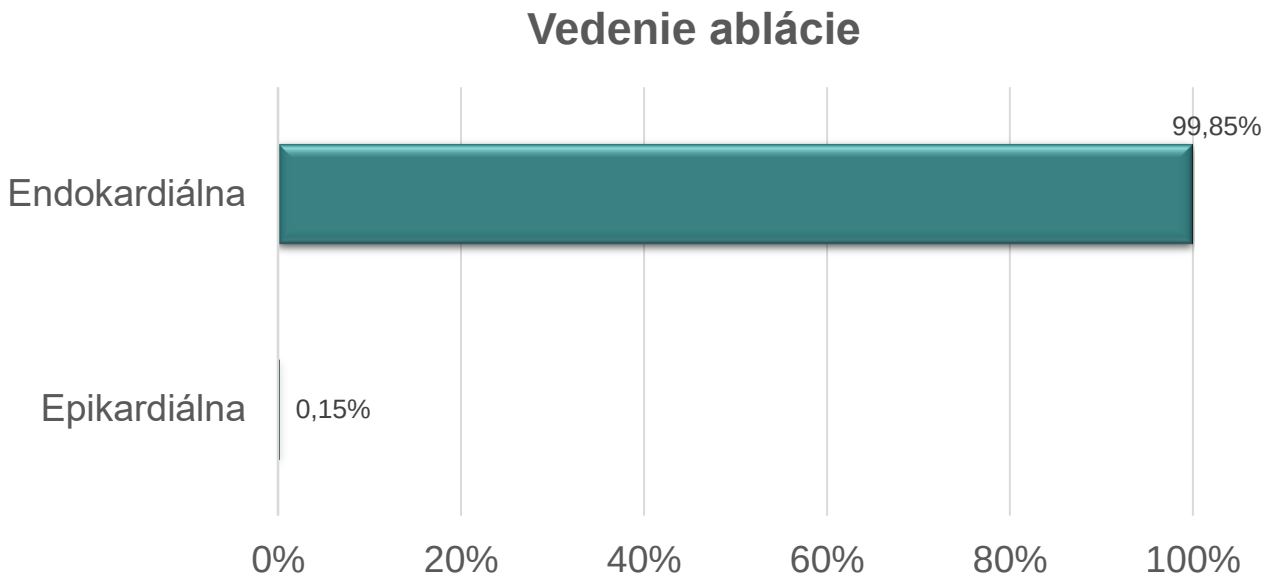


Použité technológie

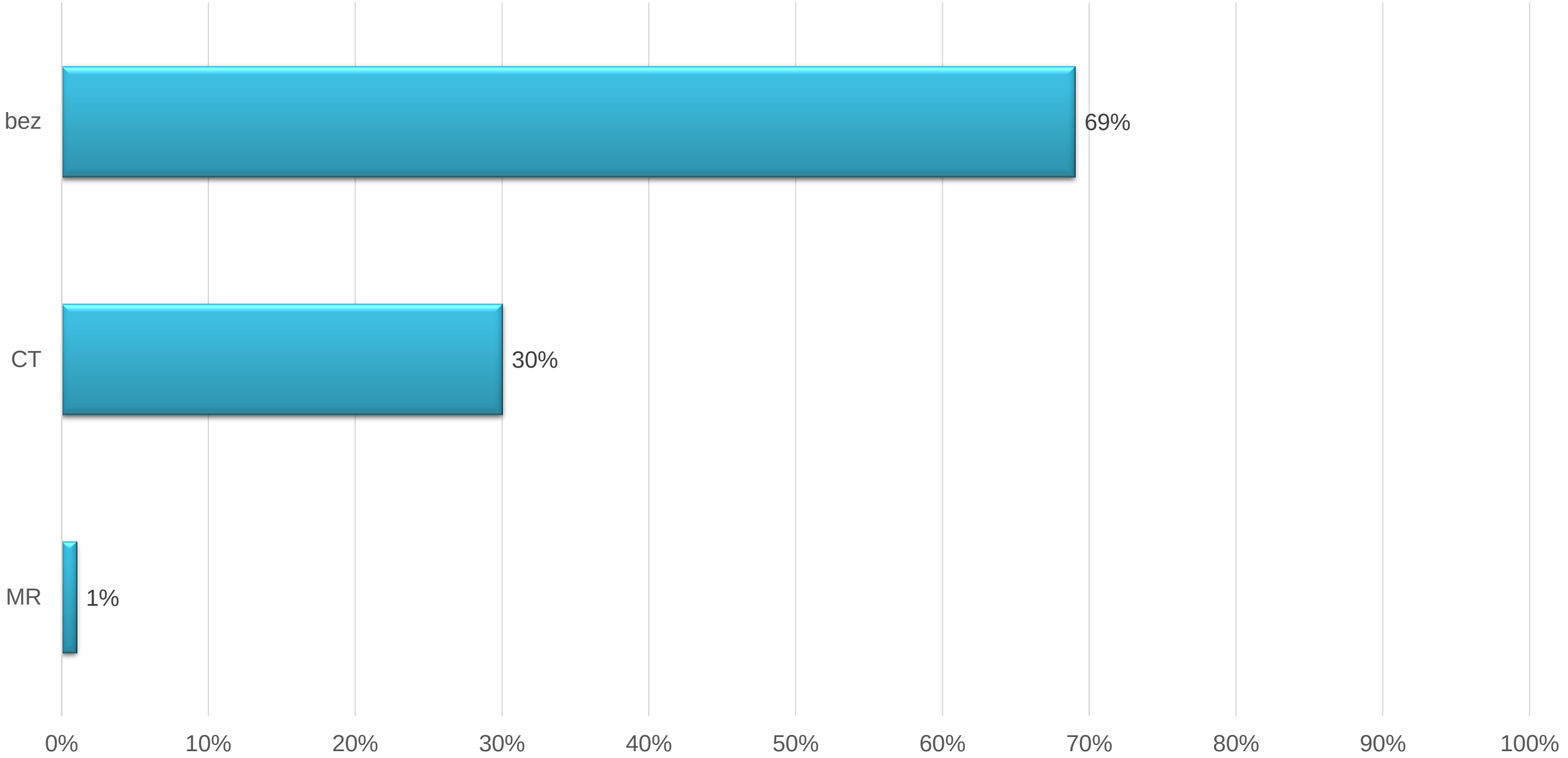




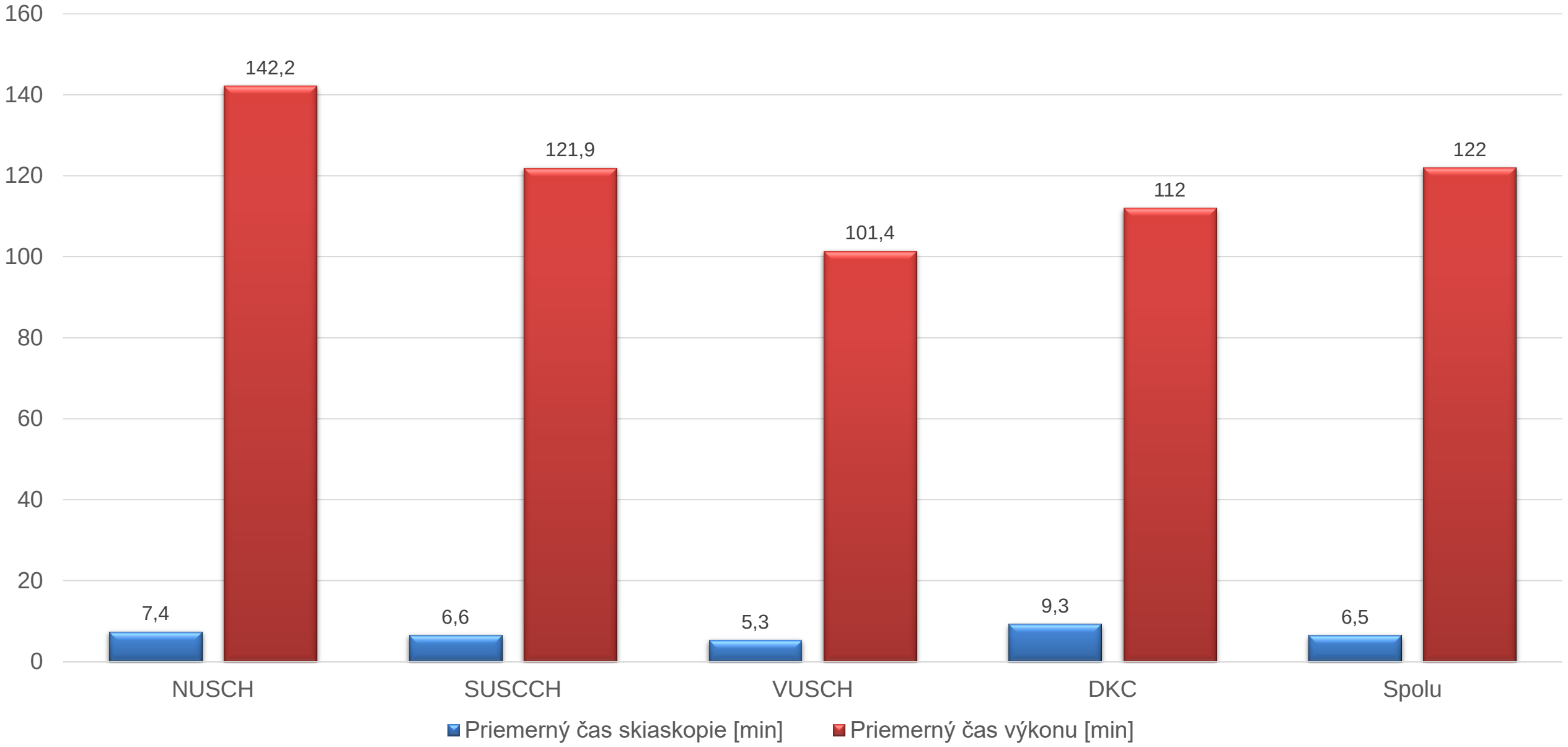




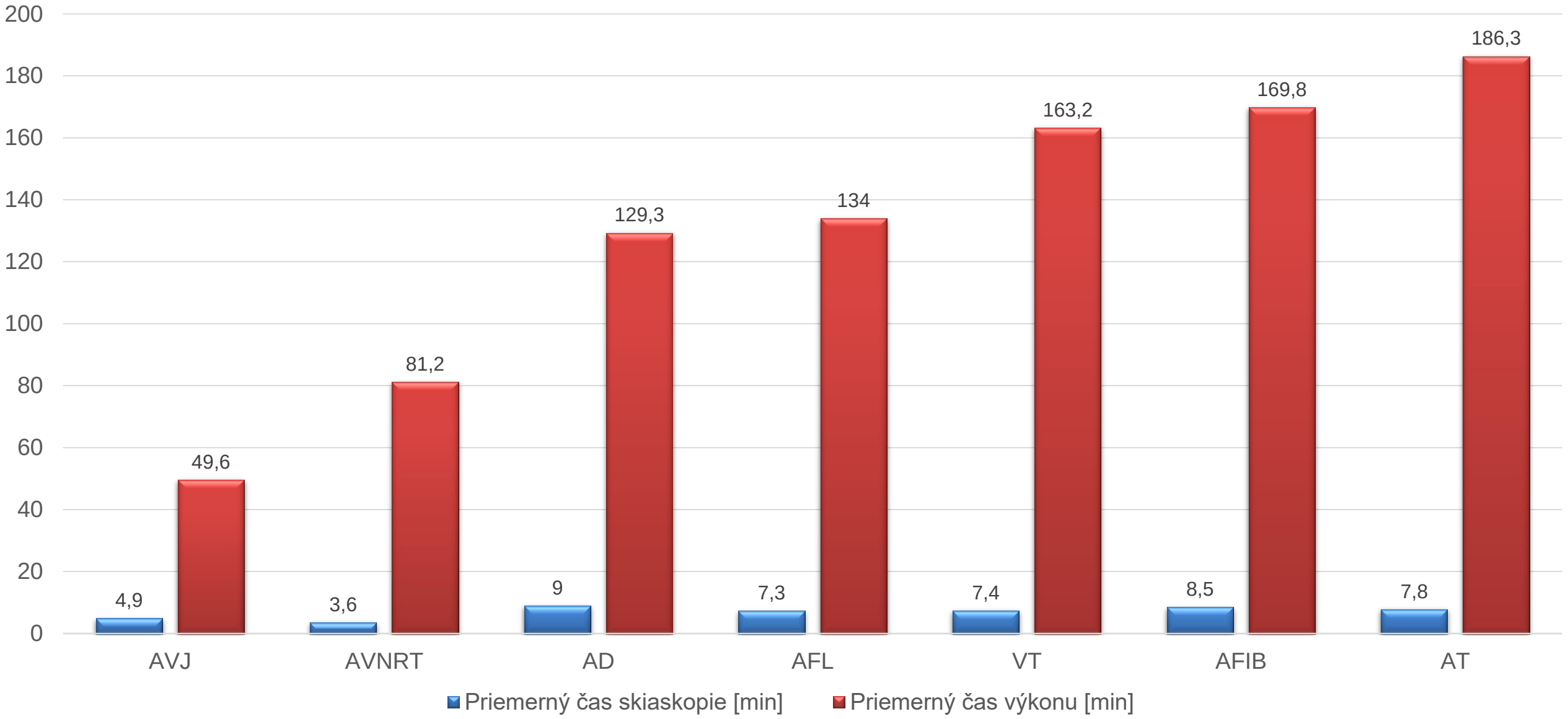
Predablačné vyšetrenia - CT a MR



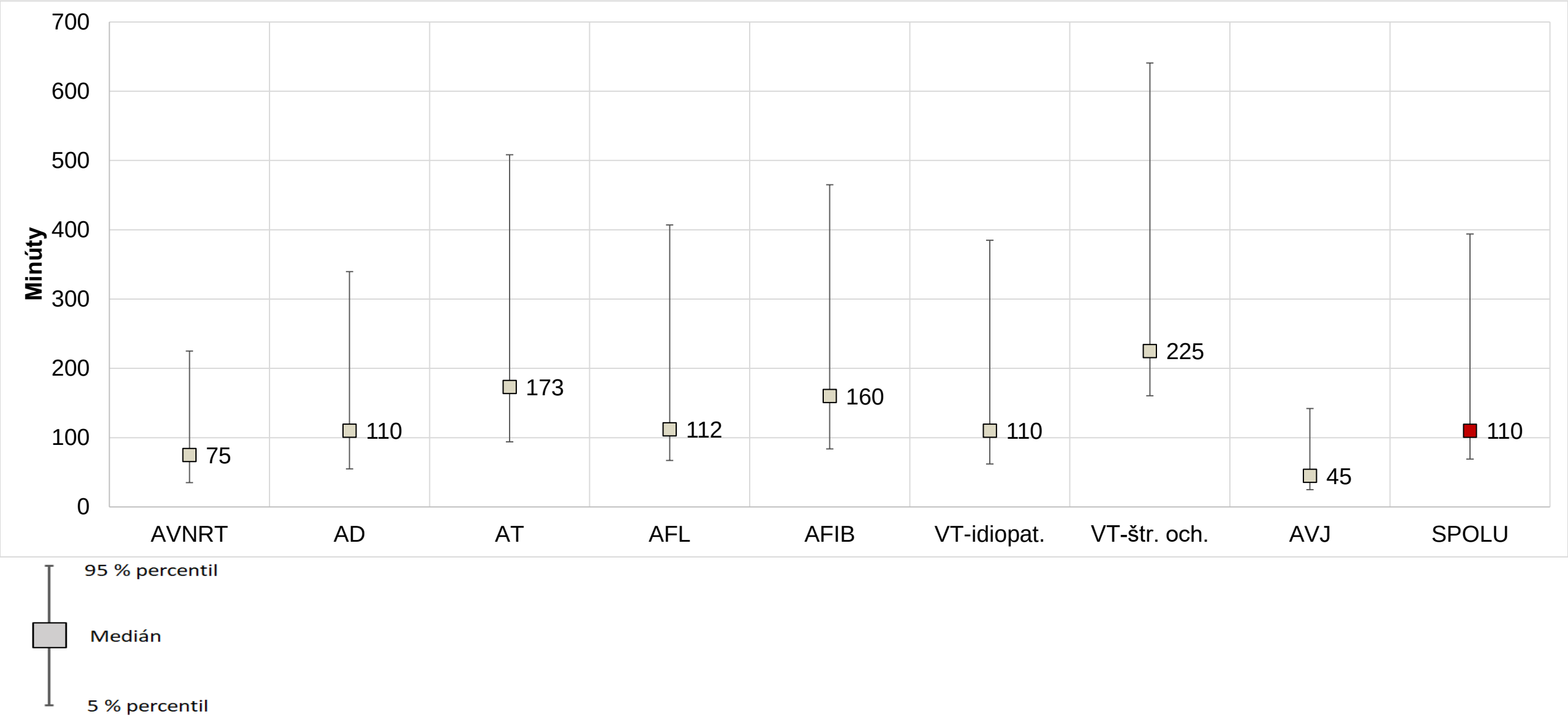
Procedurálny a skiaskopický čas v jednotlivých centrách



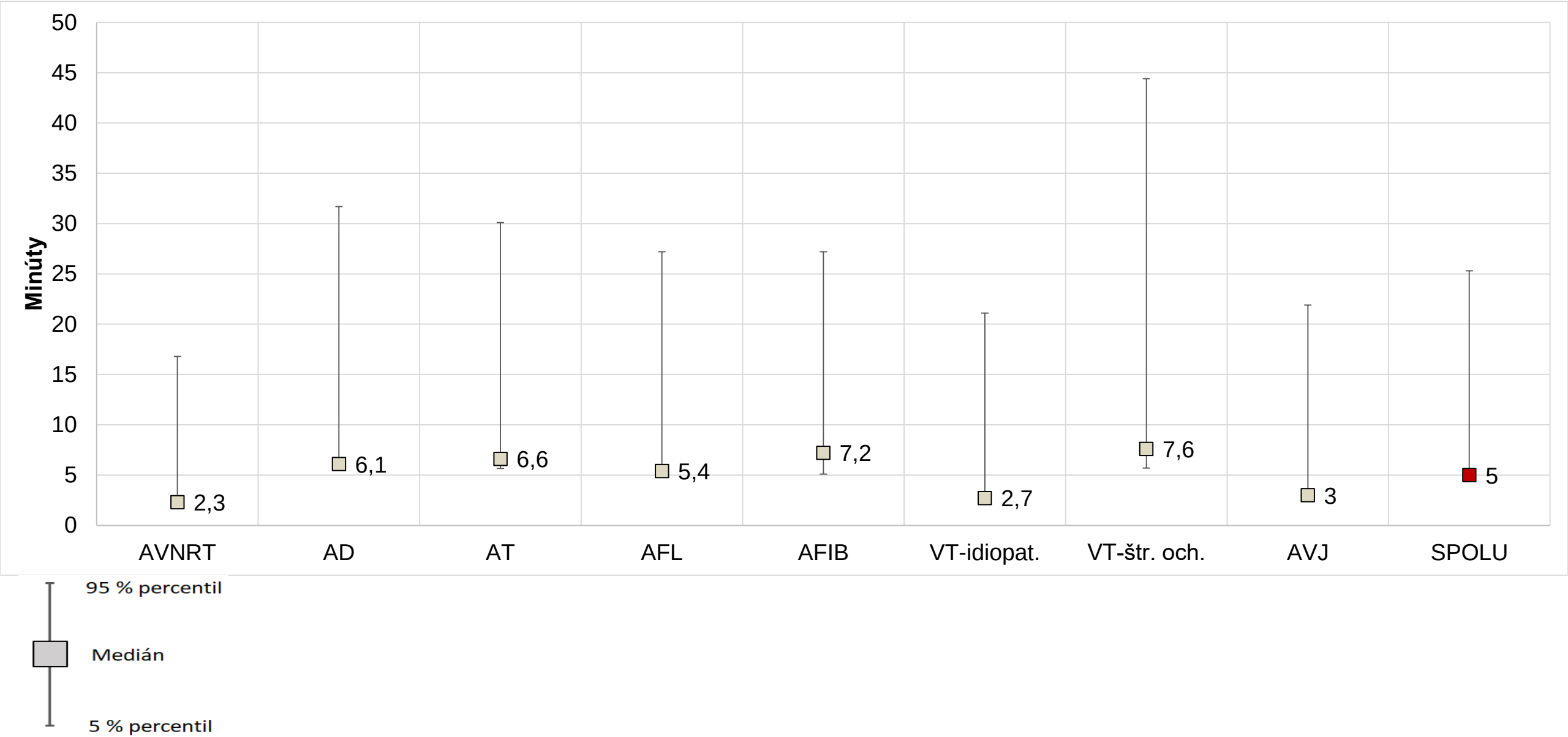
Procedurálny a skiaskopický čas podľa typov ablácií



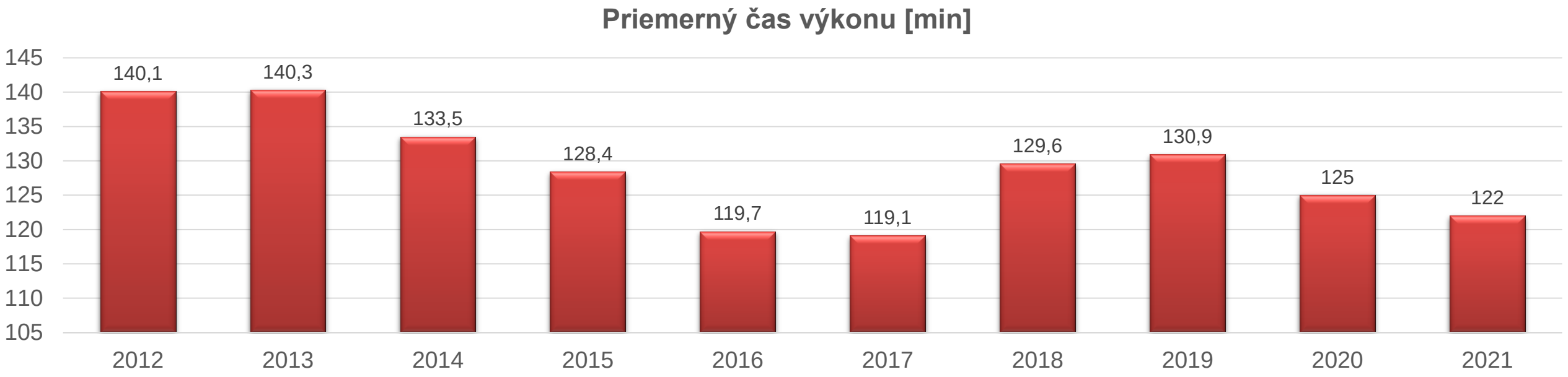
Medián procedurálneho času podľa typov ablácií 2021

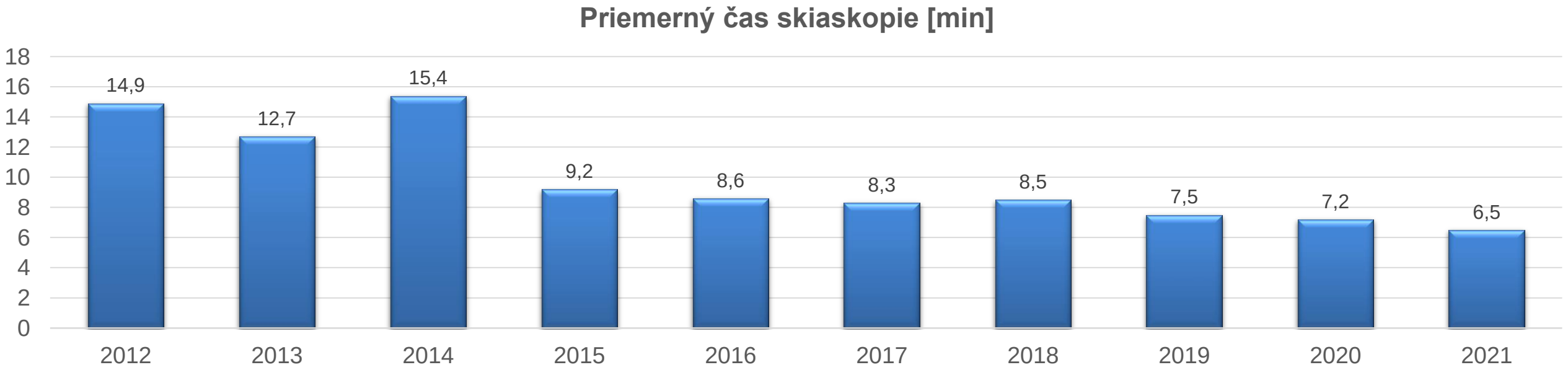


Medián skiaskopického času podľa typov ablácií 2021

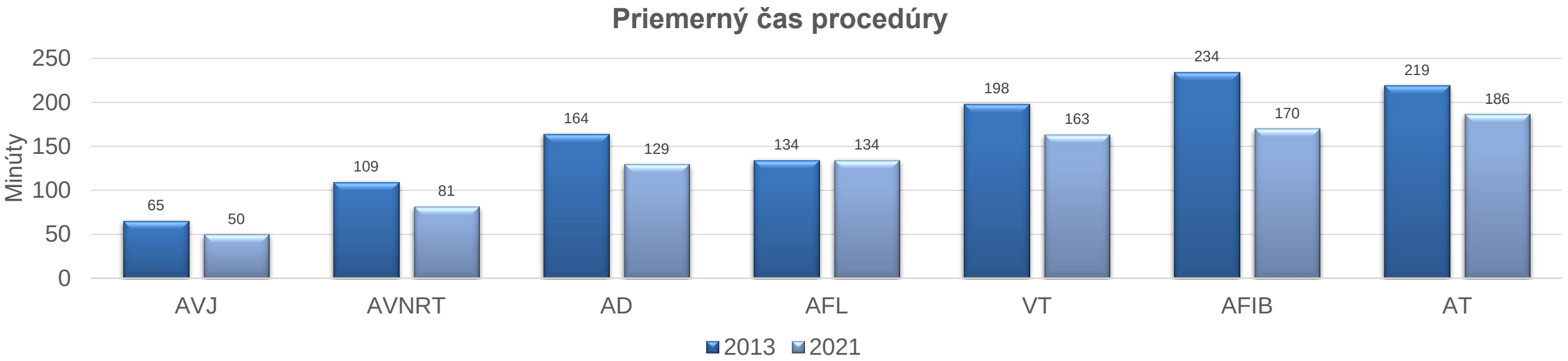


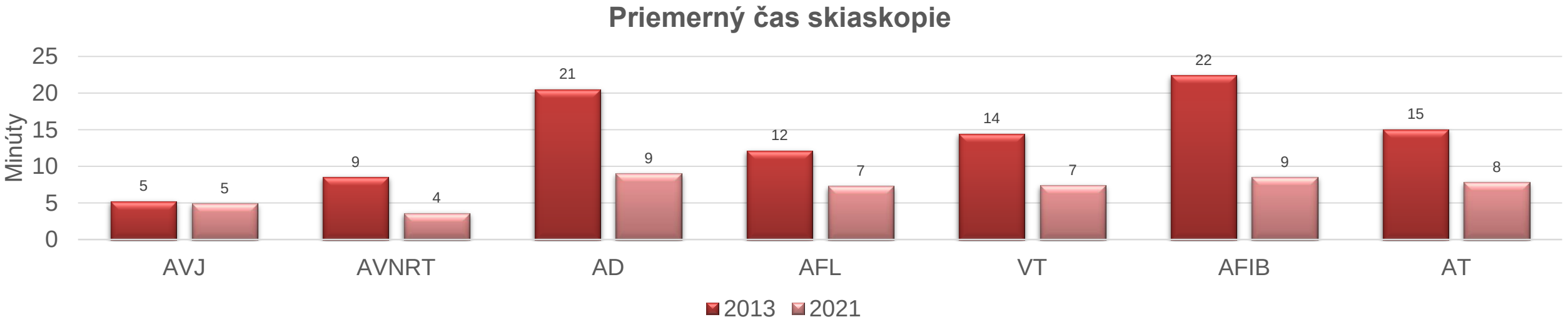
Procedurálny a skiaskopický čas 2012-2021



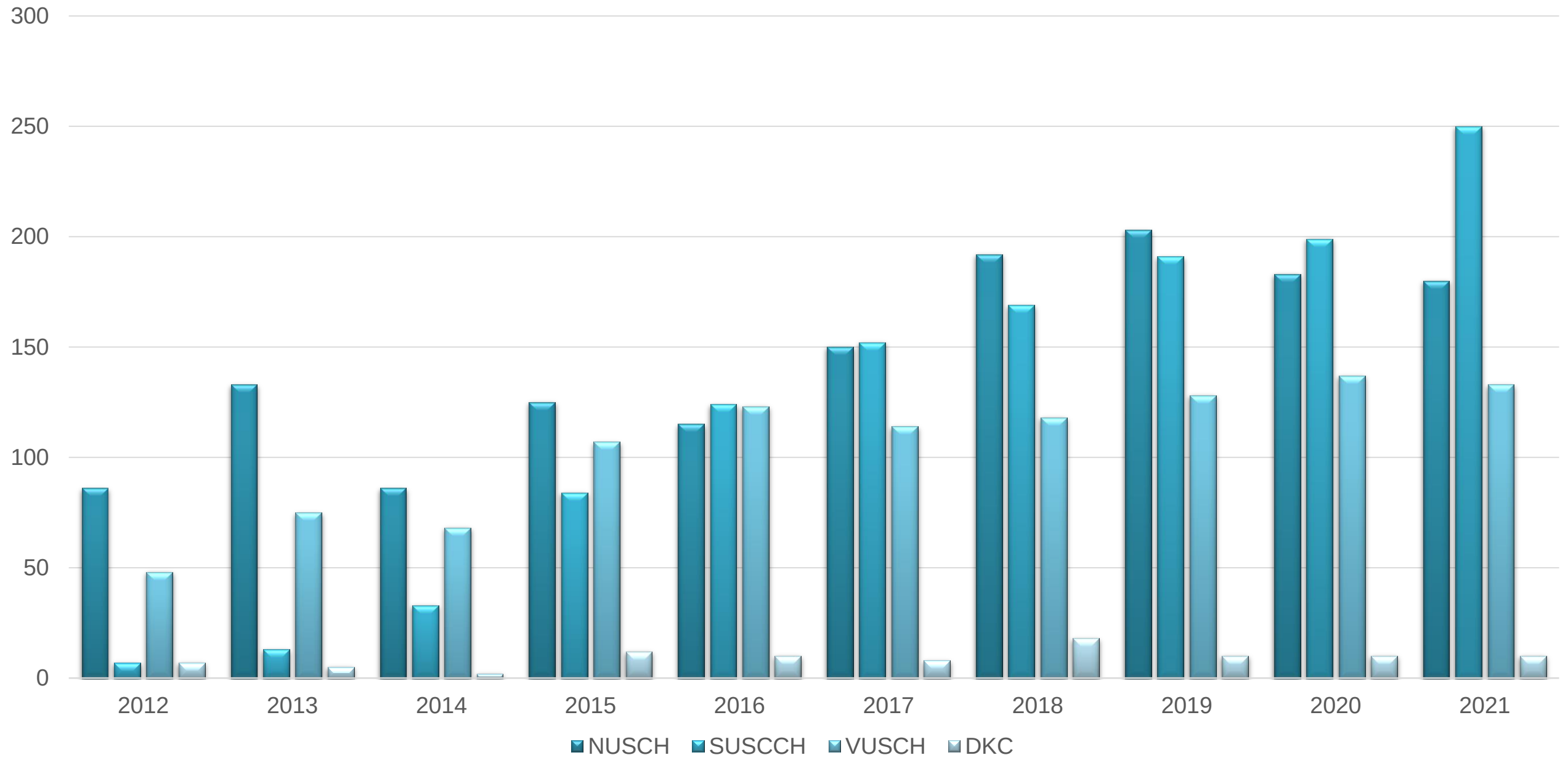


Procedurálny a skiaskopický čas podľa typov ablácií, rok 2013 a 2021

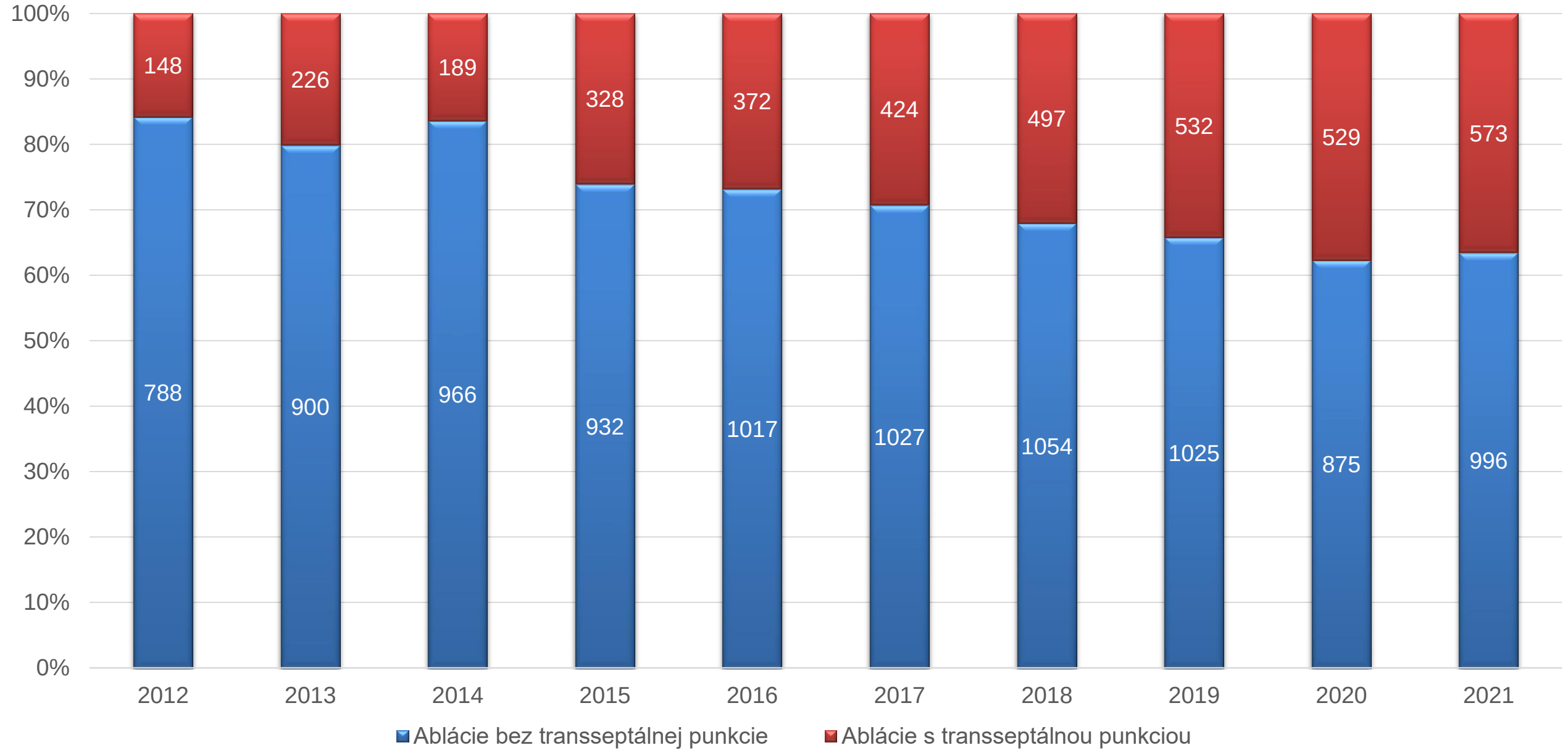




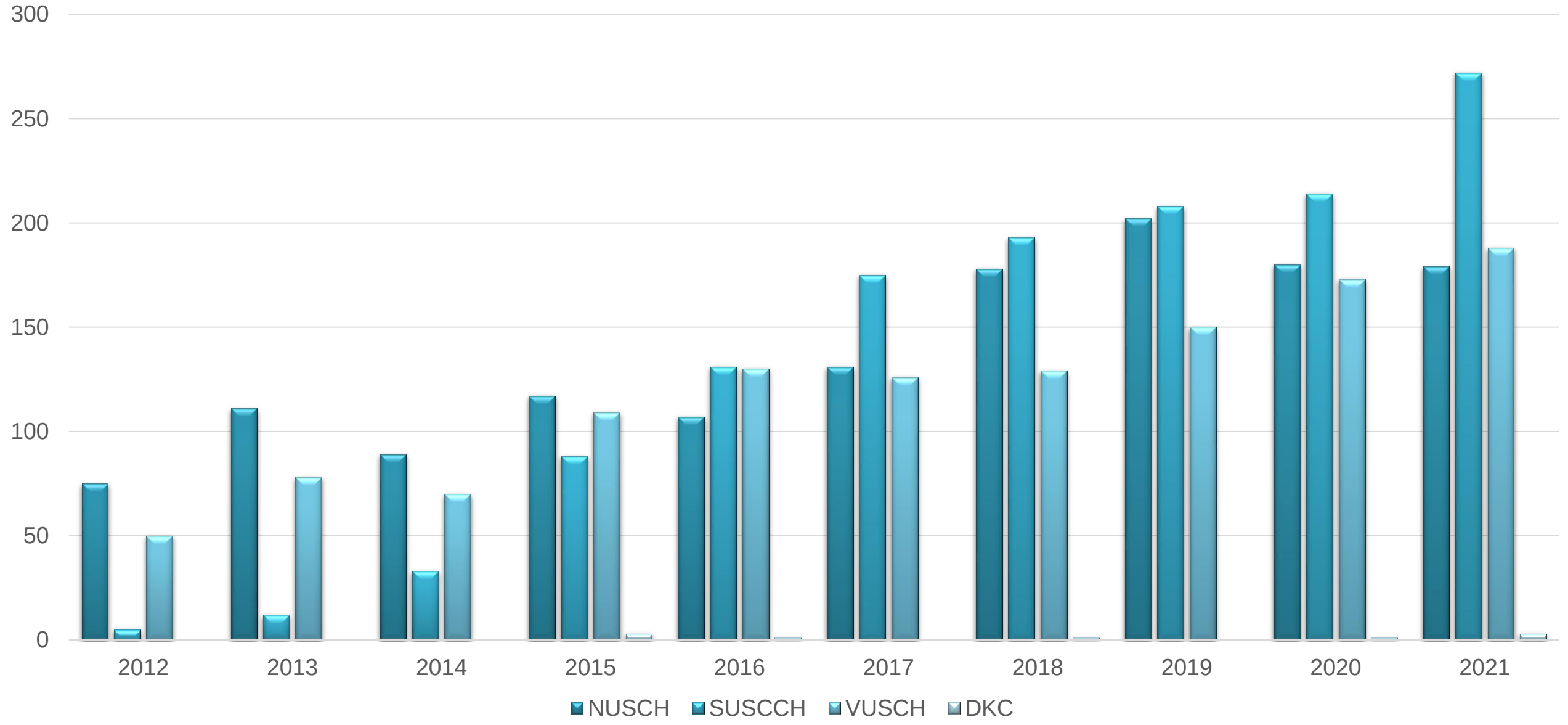
Počet transseptálnych punkcií v jednotlivých centrách 2012-2021



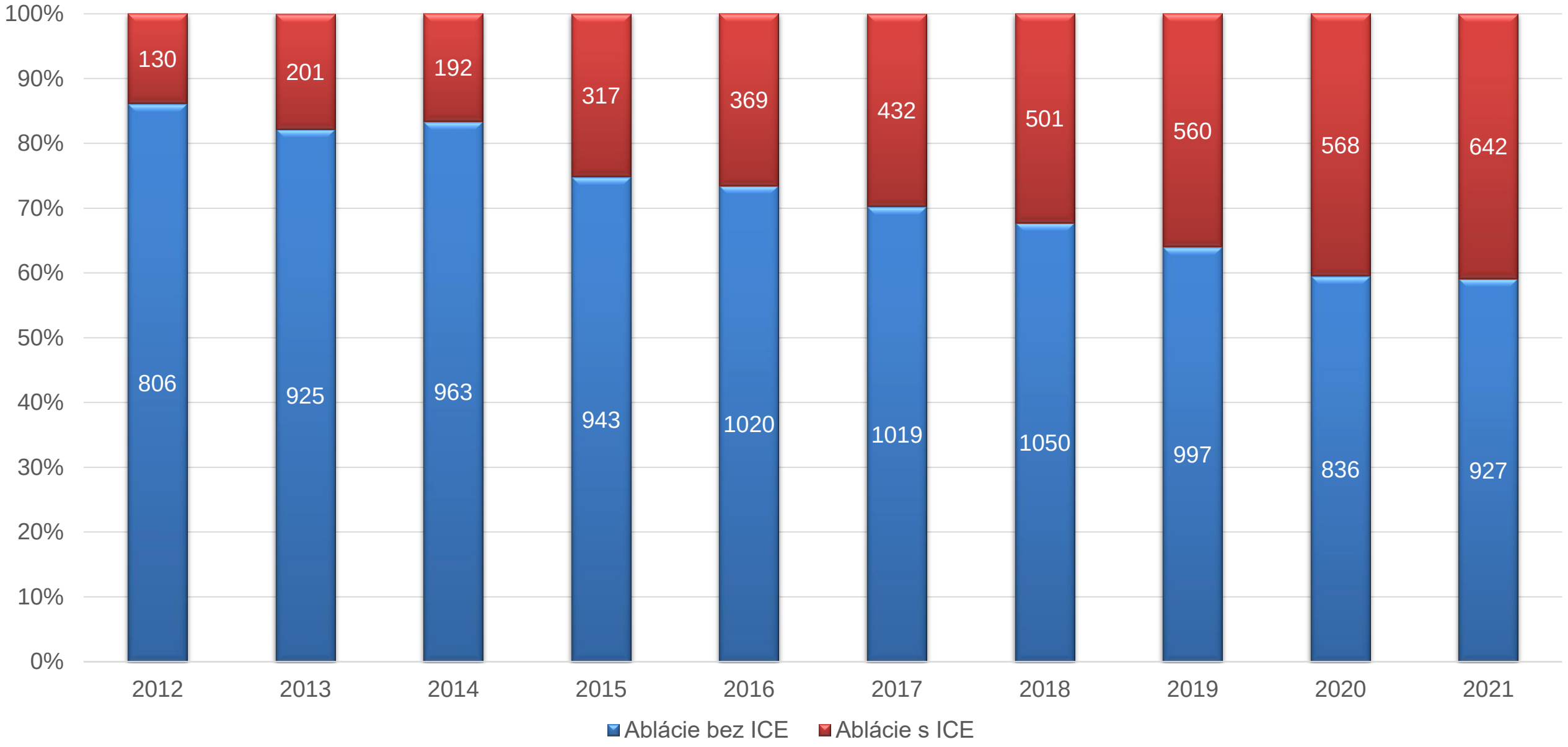
Pomer ablácií s a bez transseptálnej punkcie 2012-2021

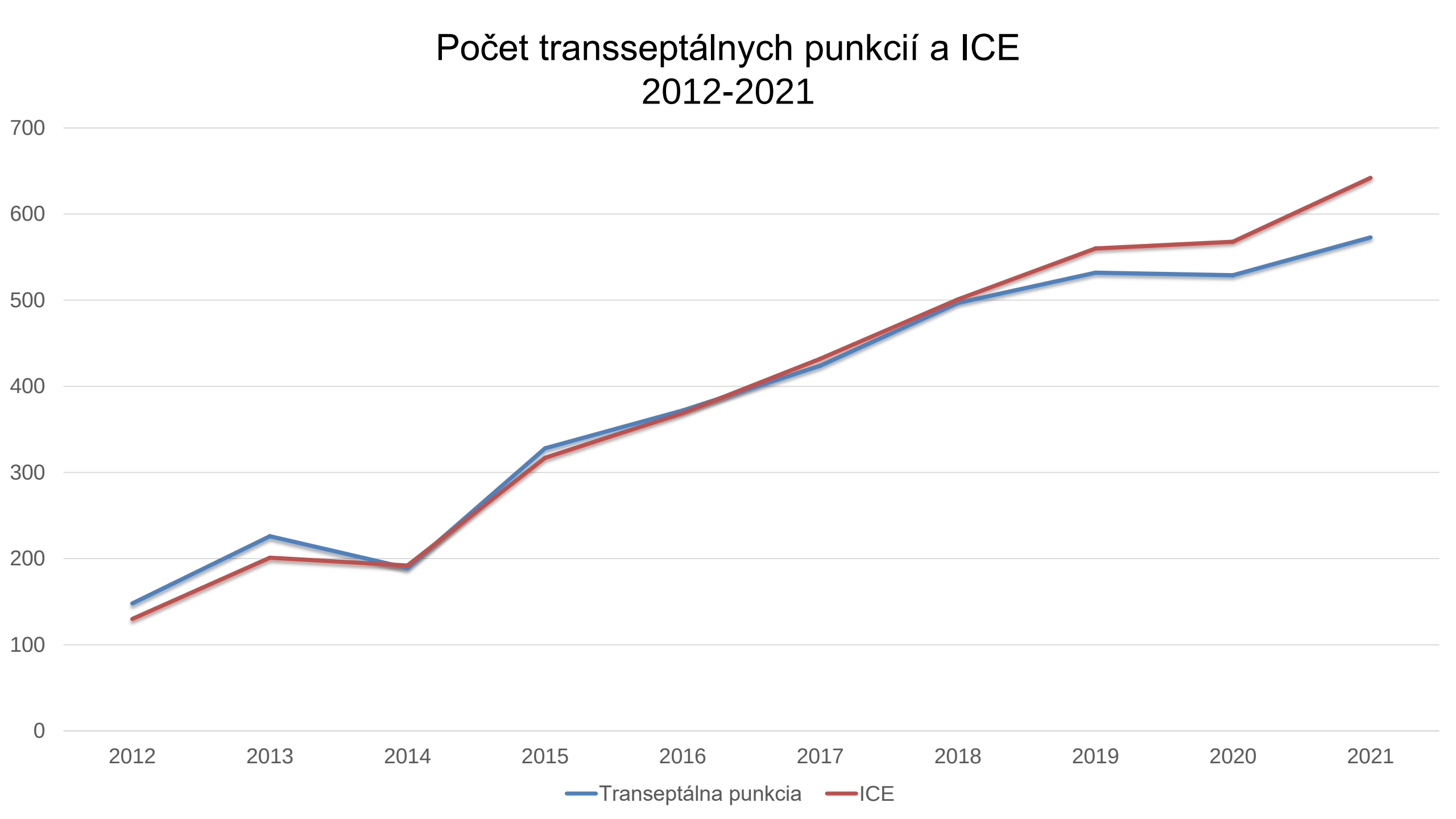


Využívanie ICE v jednotlivých centrách 2012-2021

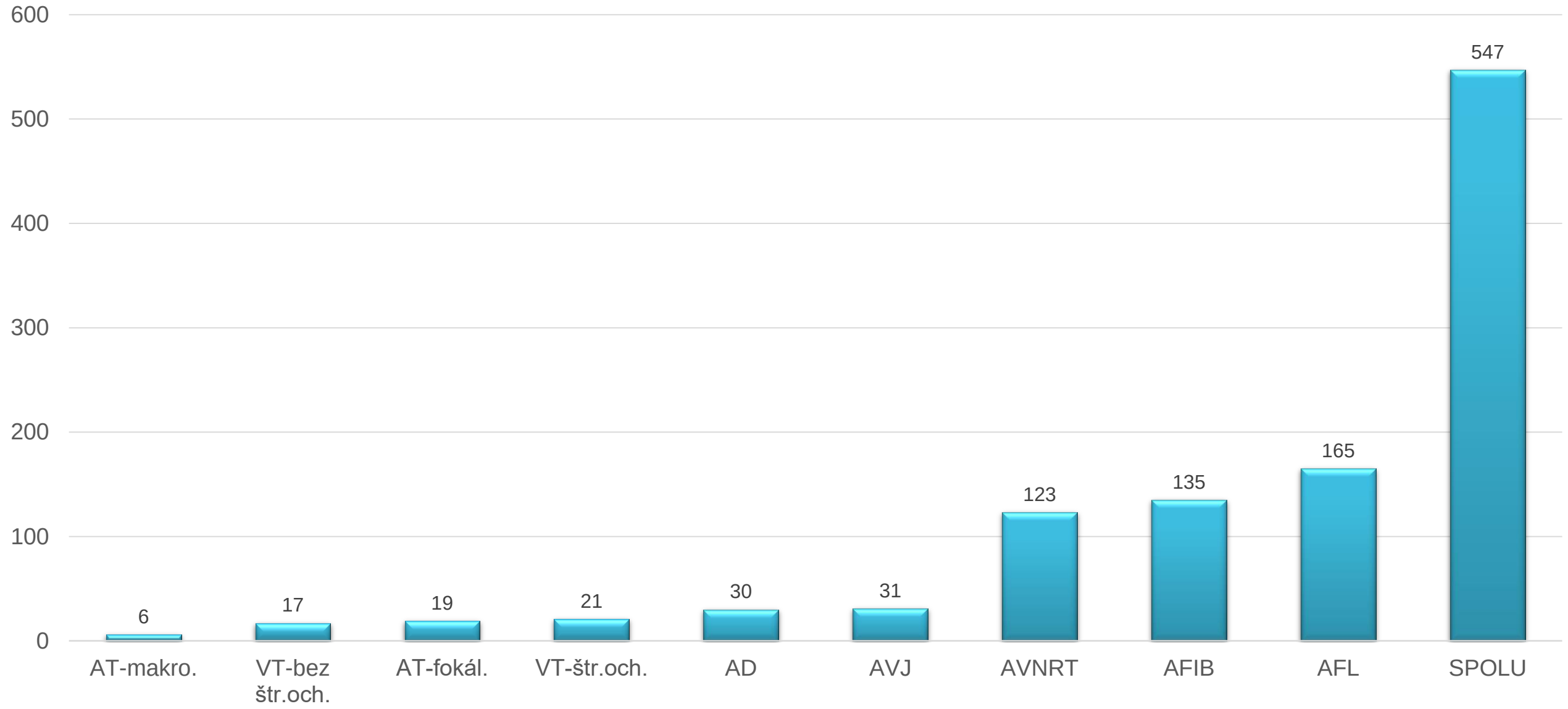


Pomer ablácií s a bez použitia ICE 2012-2021

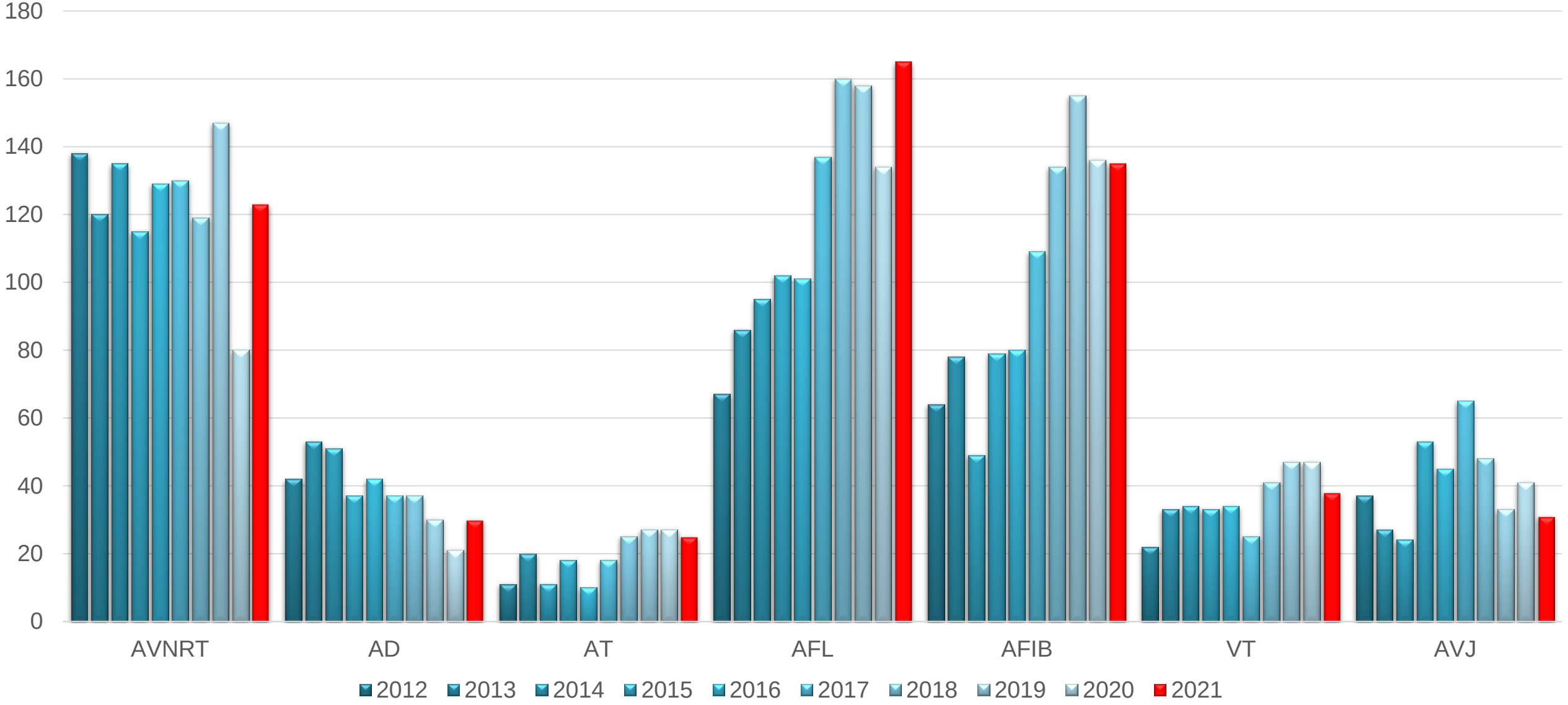



Počet transseptálnych punkcií a ICE
2012-2021
700
600
500
400
300
200
100
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Transeptálna punkcia
ICE

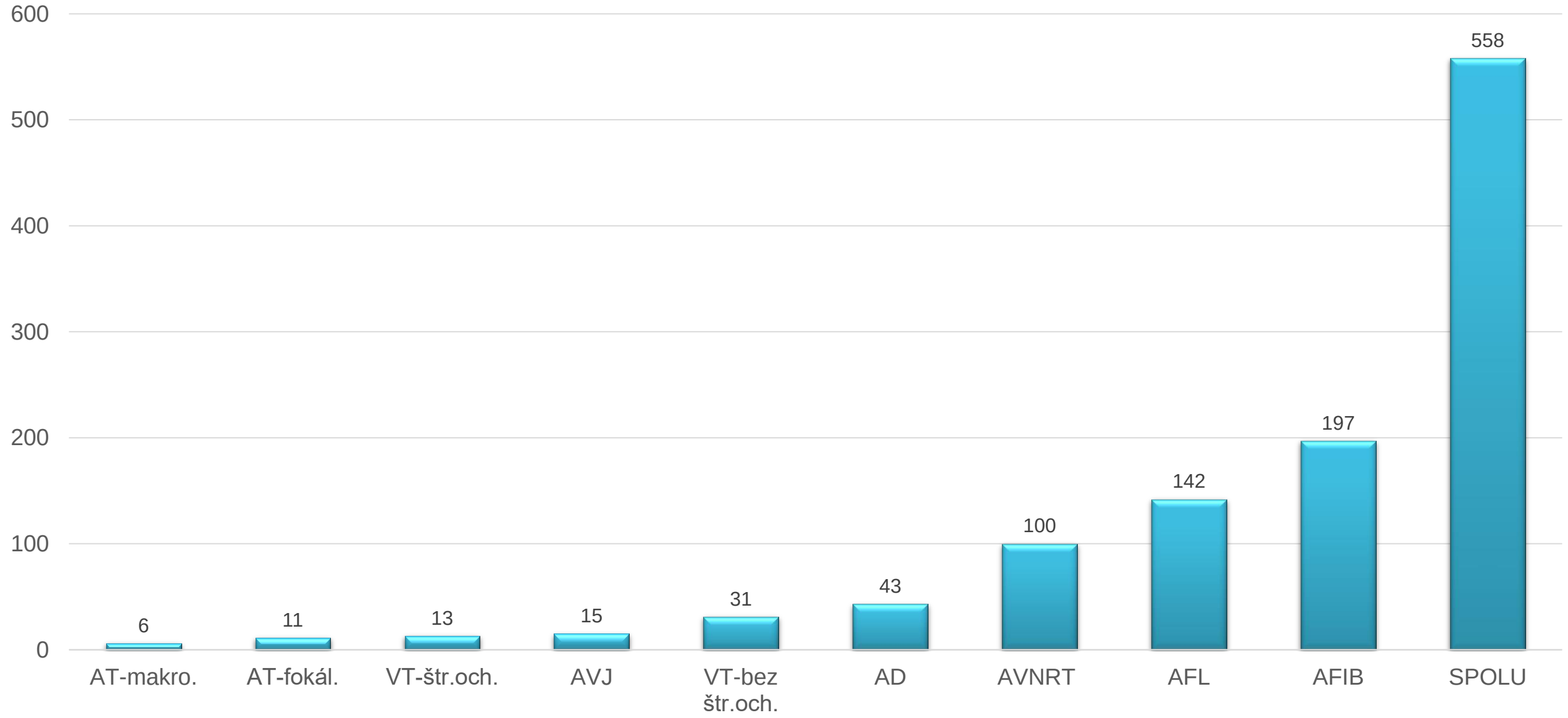
Katétrové ablácie NÚSCH 2021



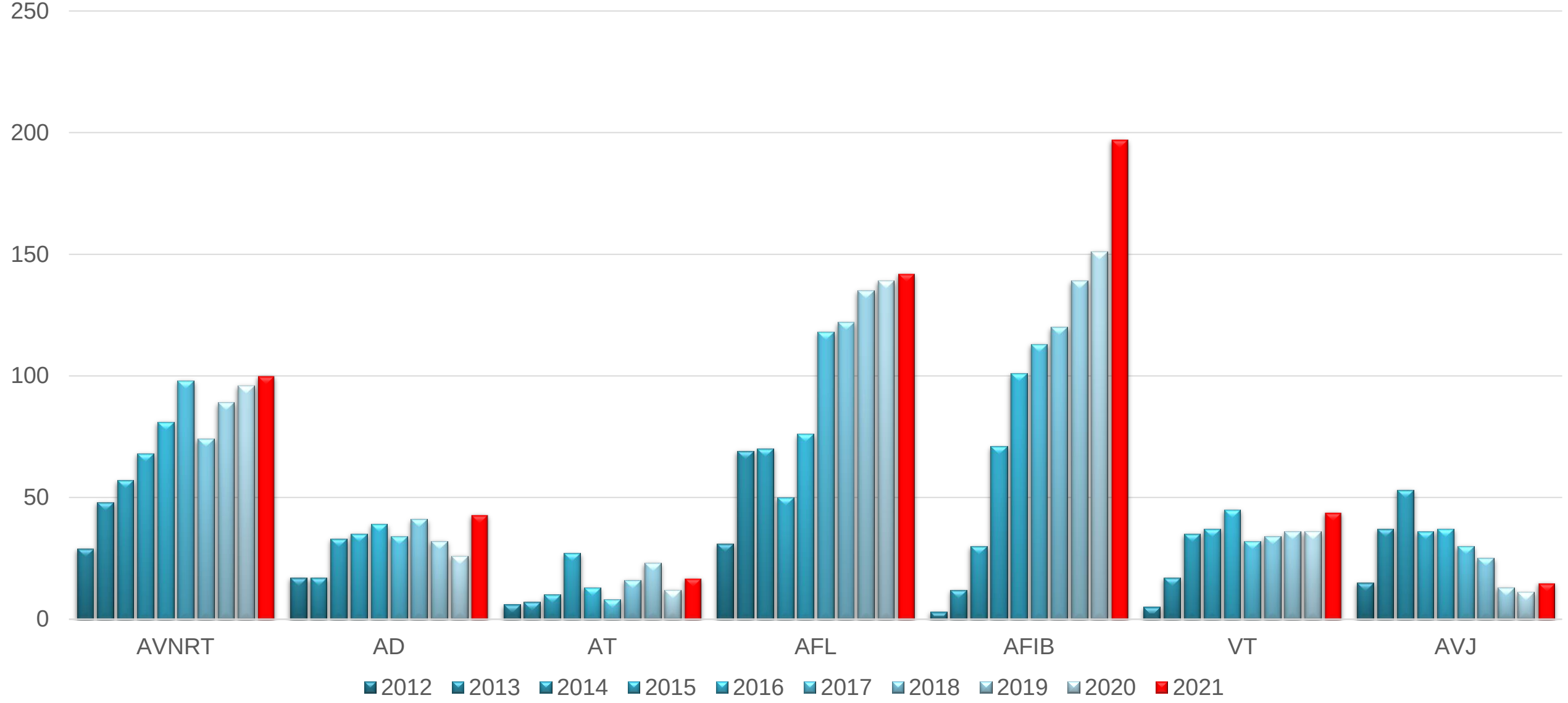
Katétrové ablácie NÚSCH 2012-2021



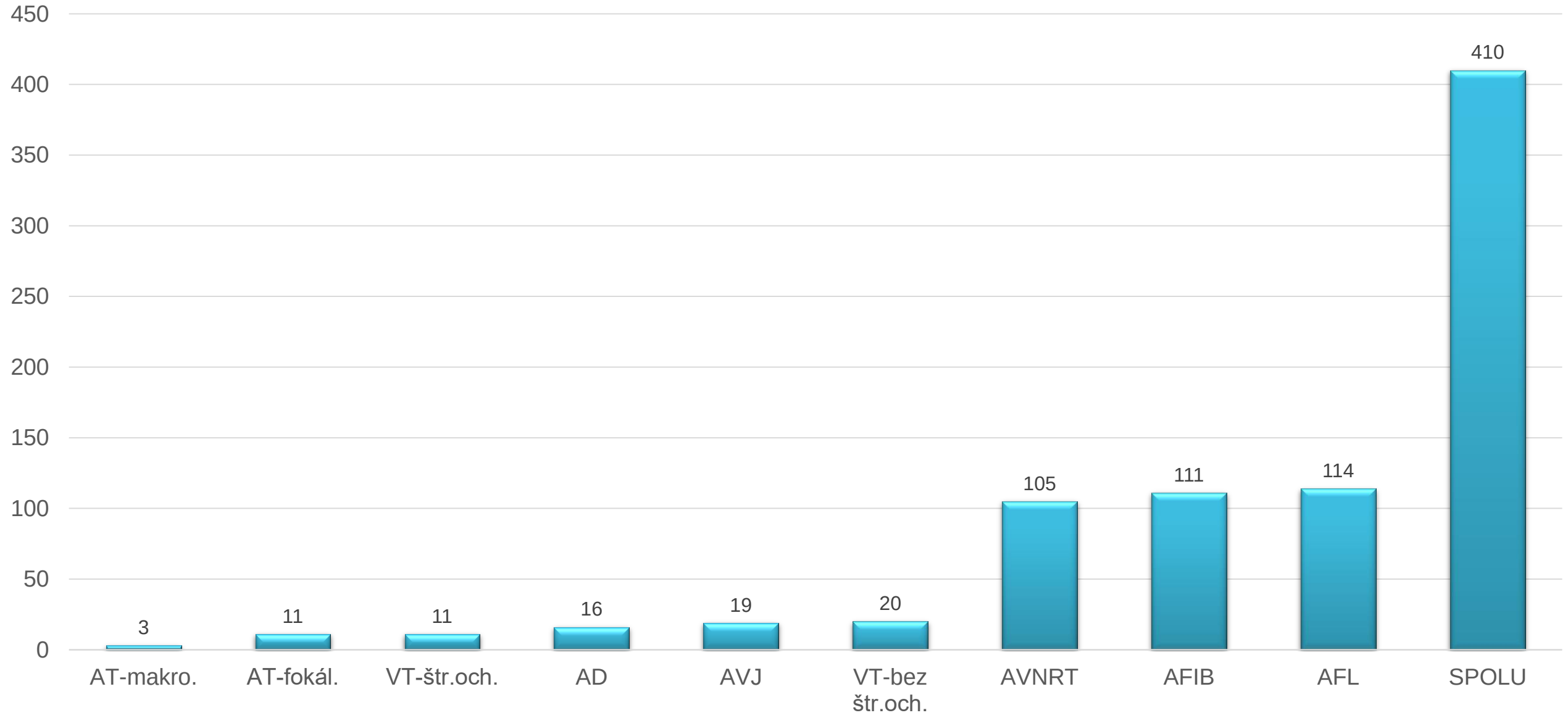
Katétrové ablácie SÚSCCH 2021



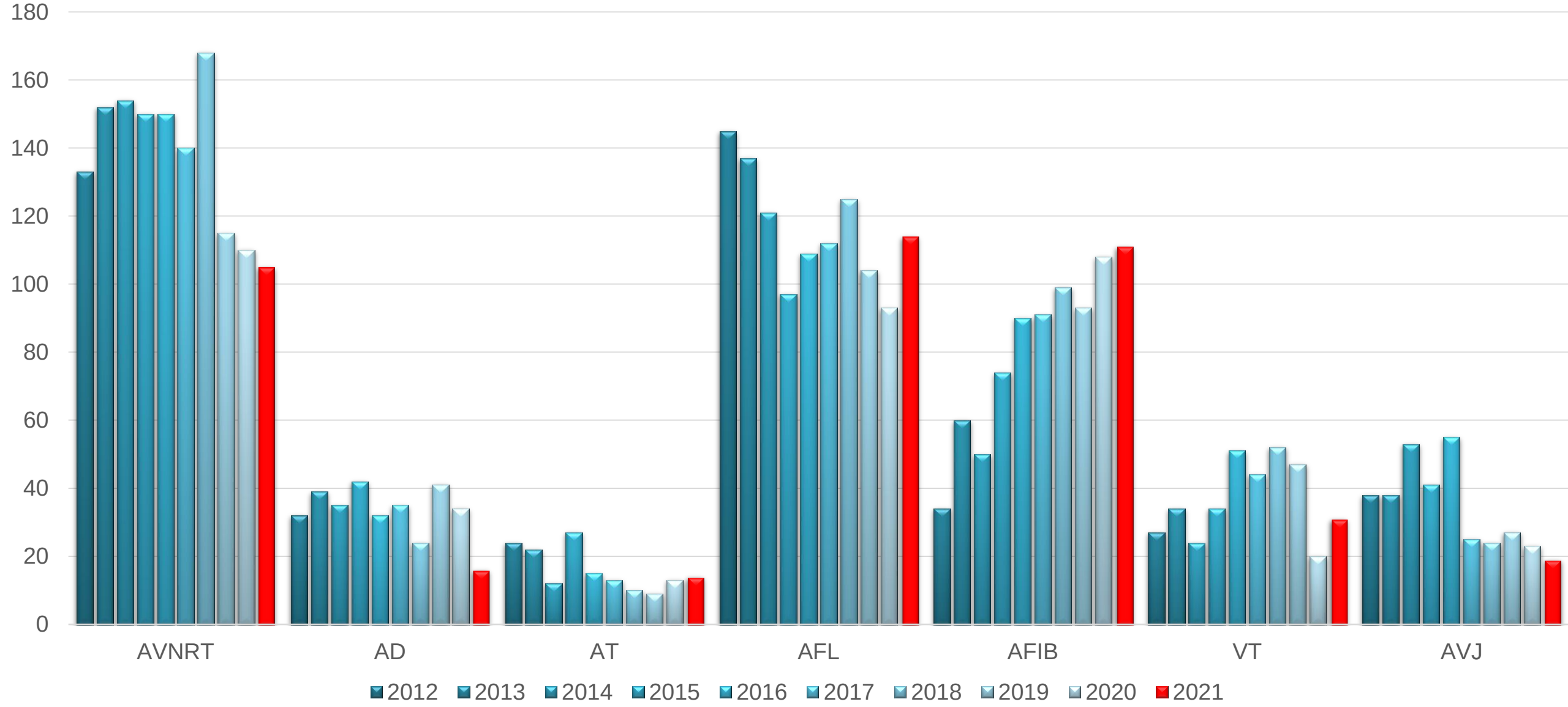
Katétrové ablácie SÚSCCH
2012 - 2021



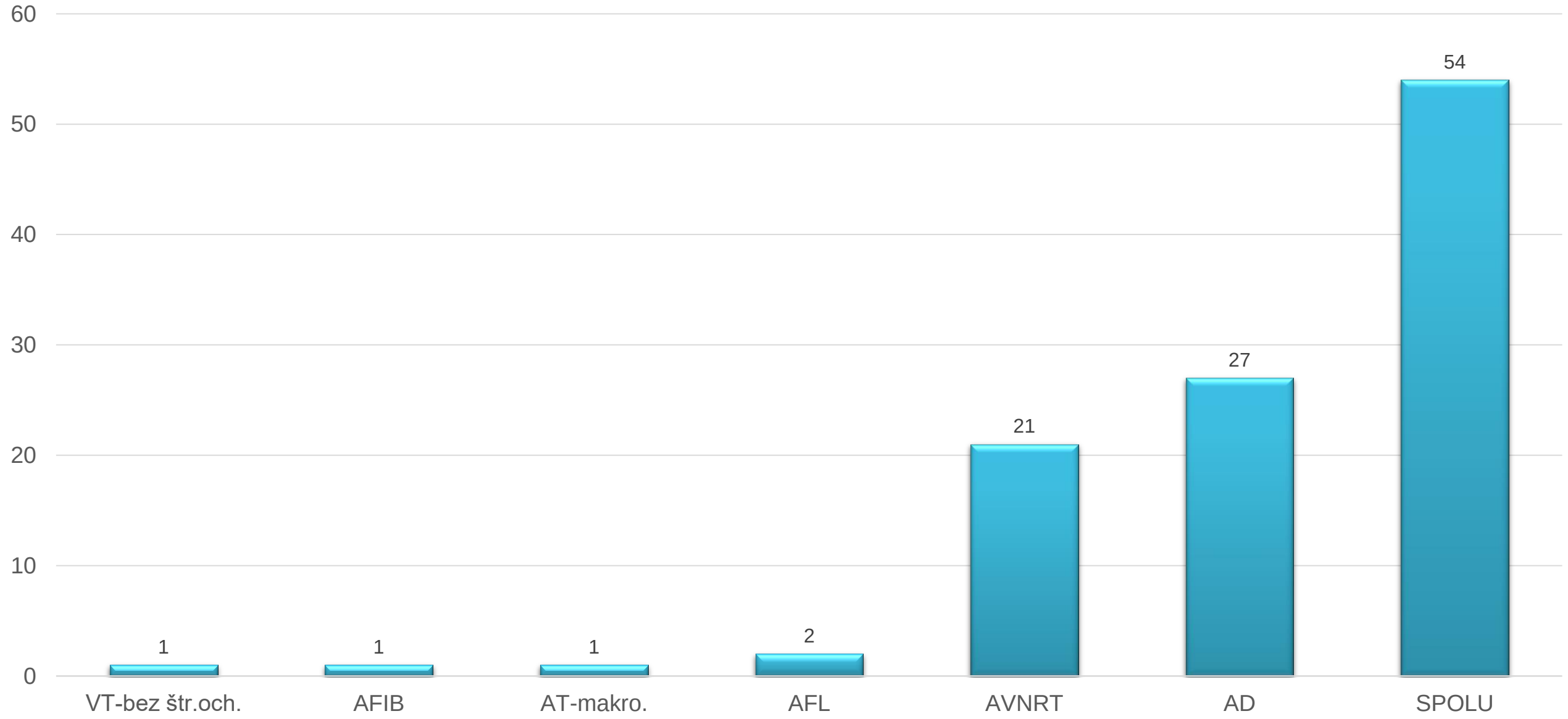
Katétrové ablácie VÚSCH 2021



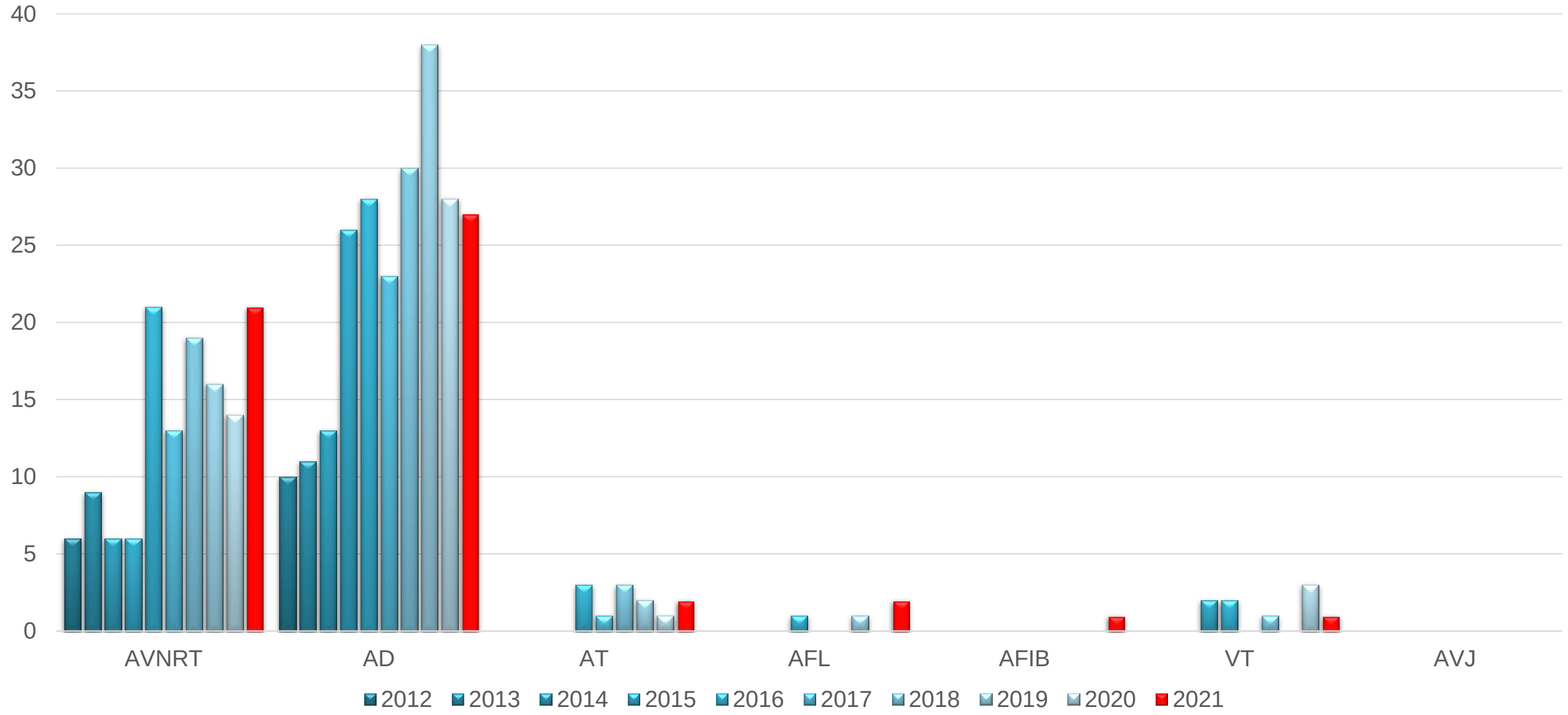
Katétrové ablácie VÚSCH
2012 - 2021



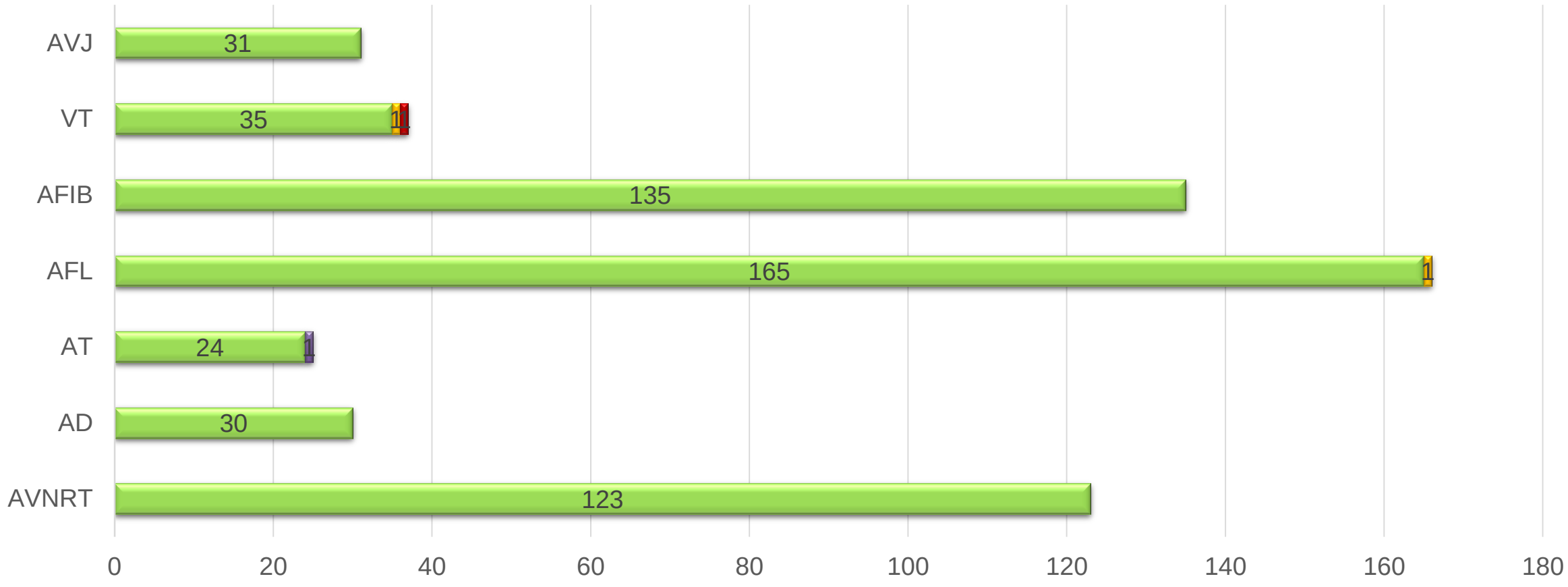
Katétrové ablácie DKC 2021



Katétrové ablácie DKC
2012 - 2021



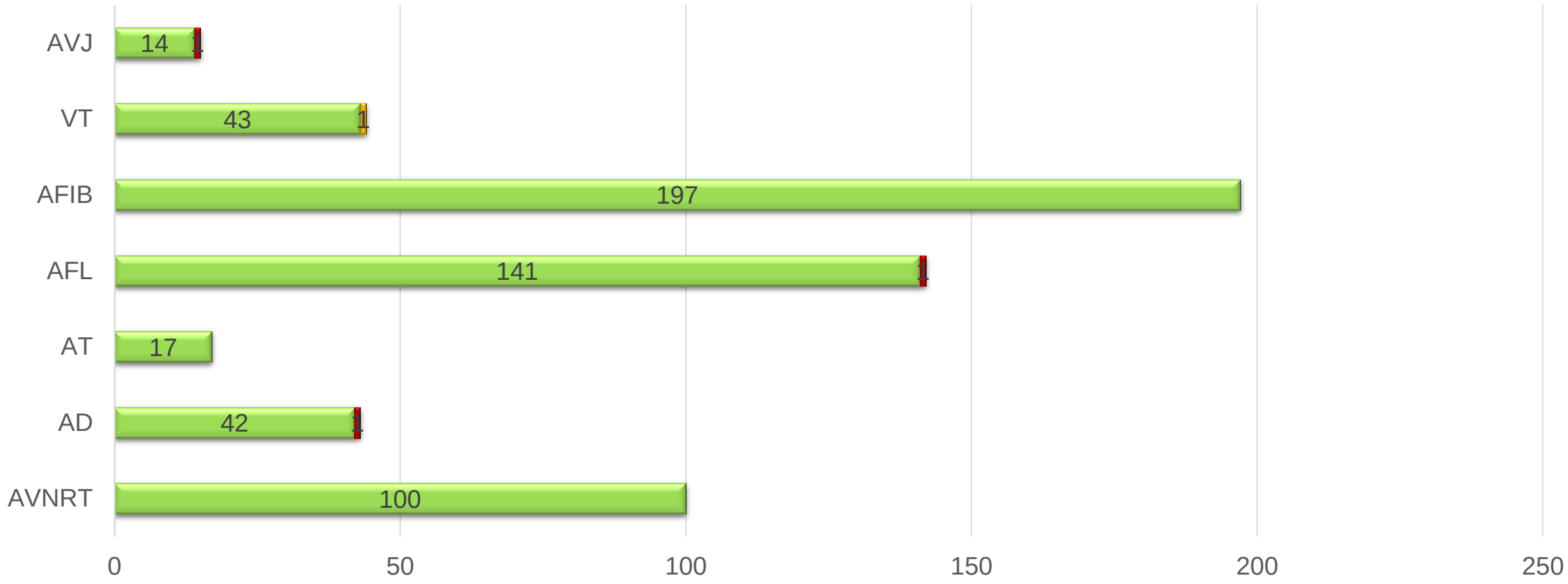
Akútna úspešnosť výkonov NÚSCH 2021



	AVNRT	AD	AT	AFL	AFIB	VT	AVJ
Úspešné	123	30	24	165	135	35	31
Parciálne úspešné				1		1	
Neúspešné						1	
Nedá sa zhodnodť			1				

Úspešné Parciálne úspešné Neúspešné Nedá sa zhodnodť

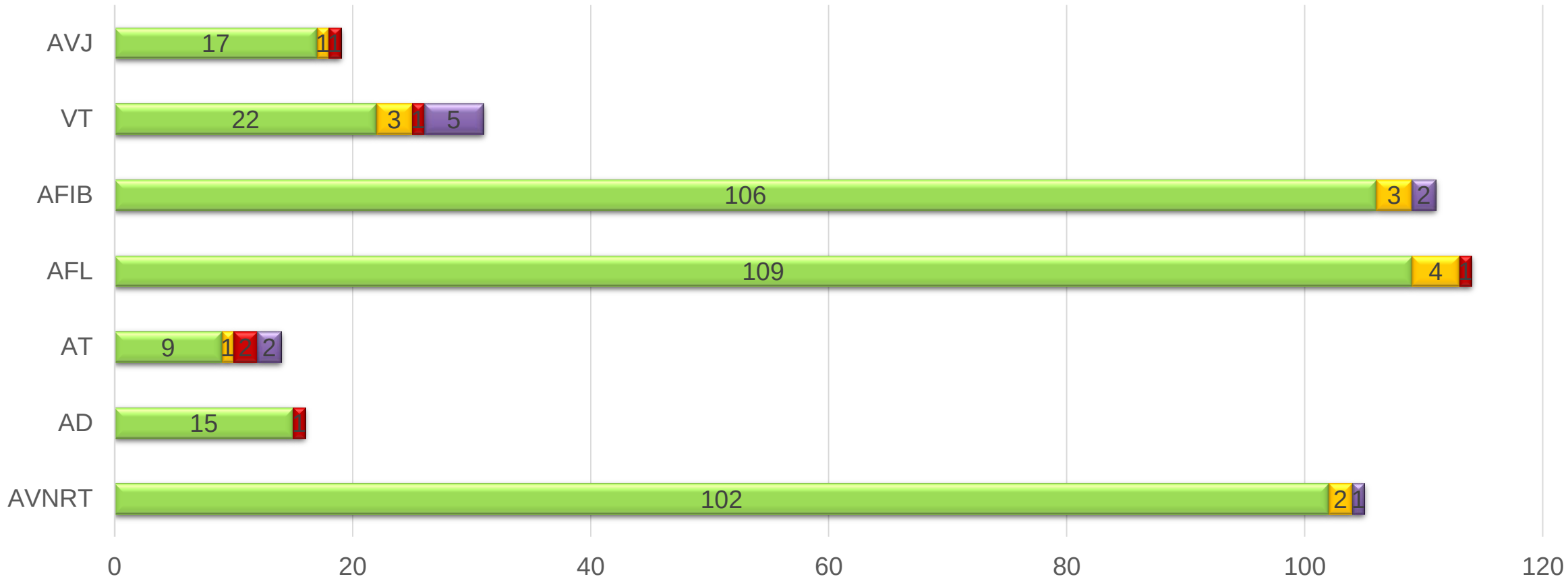
Akútna úspešnosť výkonov SÚSCCH 2021



	AVNRT	AD	AT	AFL	AFIB	VT	AVJ
Úspešné	100	42	17	141	197	43	14
Parciálne úspešné						1	
Neúspešné		1		1			1
Nedá sa zhodnodť							

Úspešné Parciálne úspešné Neúspešné Nedá sa zhodnodť

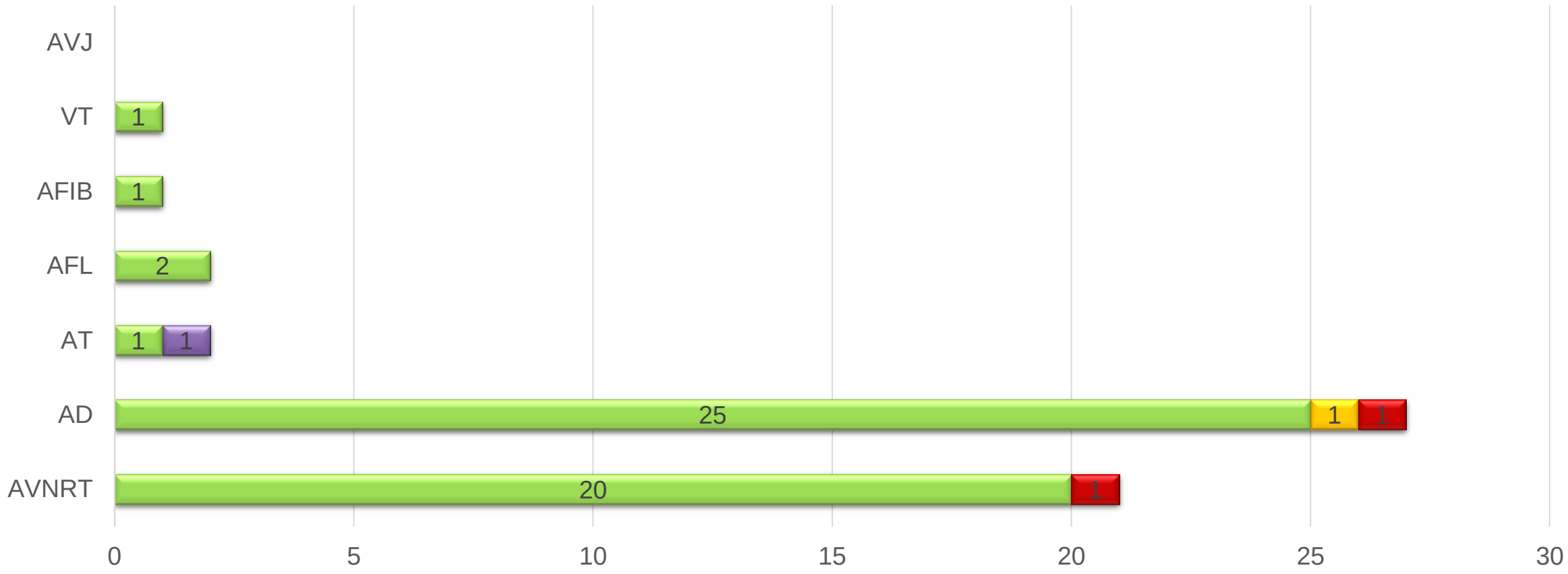
Akútna úspešnosť výkonov VÚSCH 2021



	AVNRT	AD	AT	AFL	AFIB	VT	AVJ
Úspešné	102	15	9	109	106	22	17
Parciálne úspešné	2		1	4	3	3	1
Neúspešné		1	2	1		1	1
Nedá sa zhodnodť	1		2		2	5	

Úspešné Parciálne úspešné Neúspešné Nedá sa zhodnodť

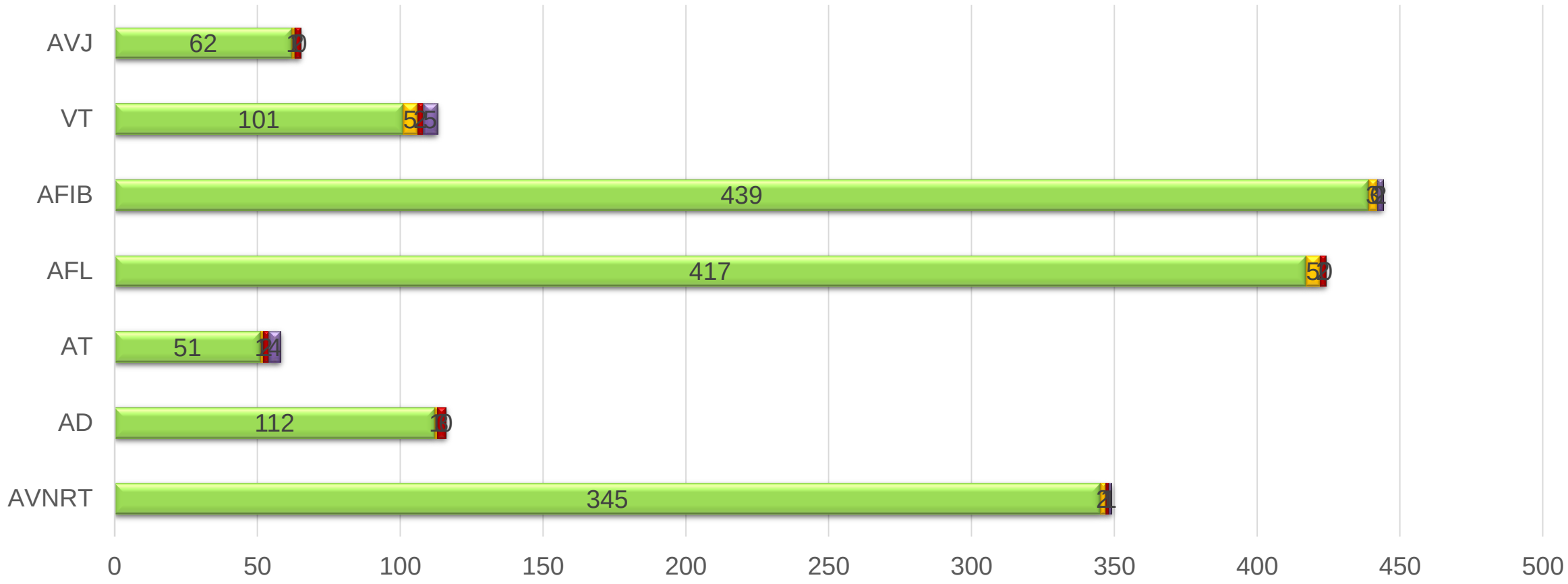
Akútna úspešnosť výkonov DKC 2021



	AVNRT	AD	AT	AFL	AFIB	VT	AVJ
Úspešné	20	25	1	2	1	1	
Parciálne úspešné		1					
Neúspešné	1	1					
Nedá sa zhodnodť			1				

Úspešné Parciálne úspešné Neúspešné Nedá sa zhodnodť

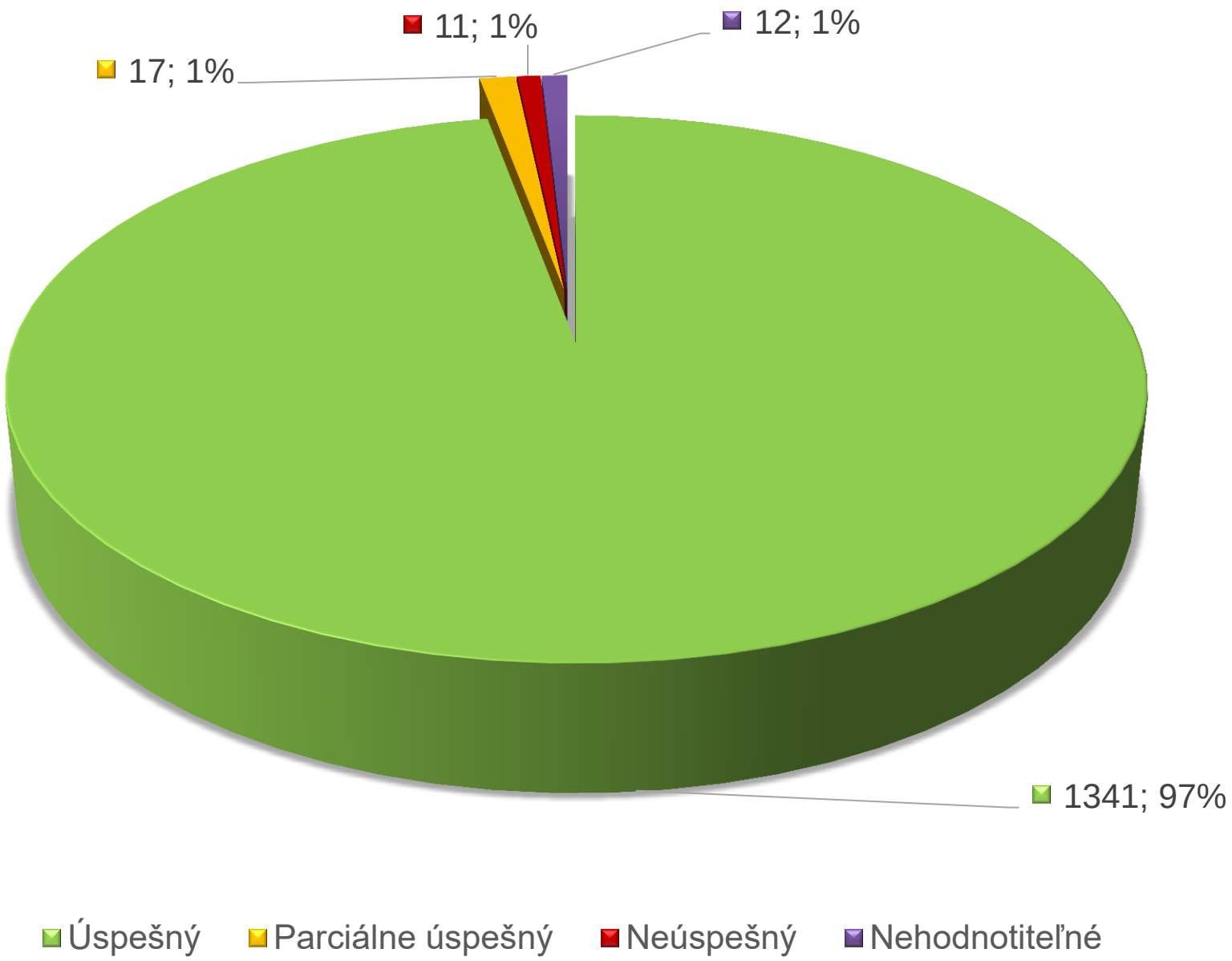
Akútna úspešnosť výkonov spolu, 2021



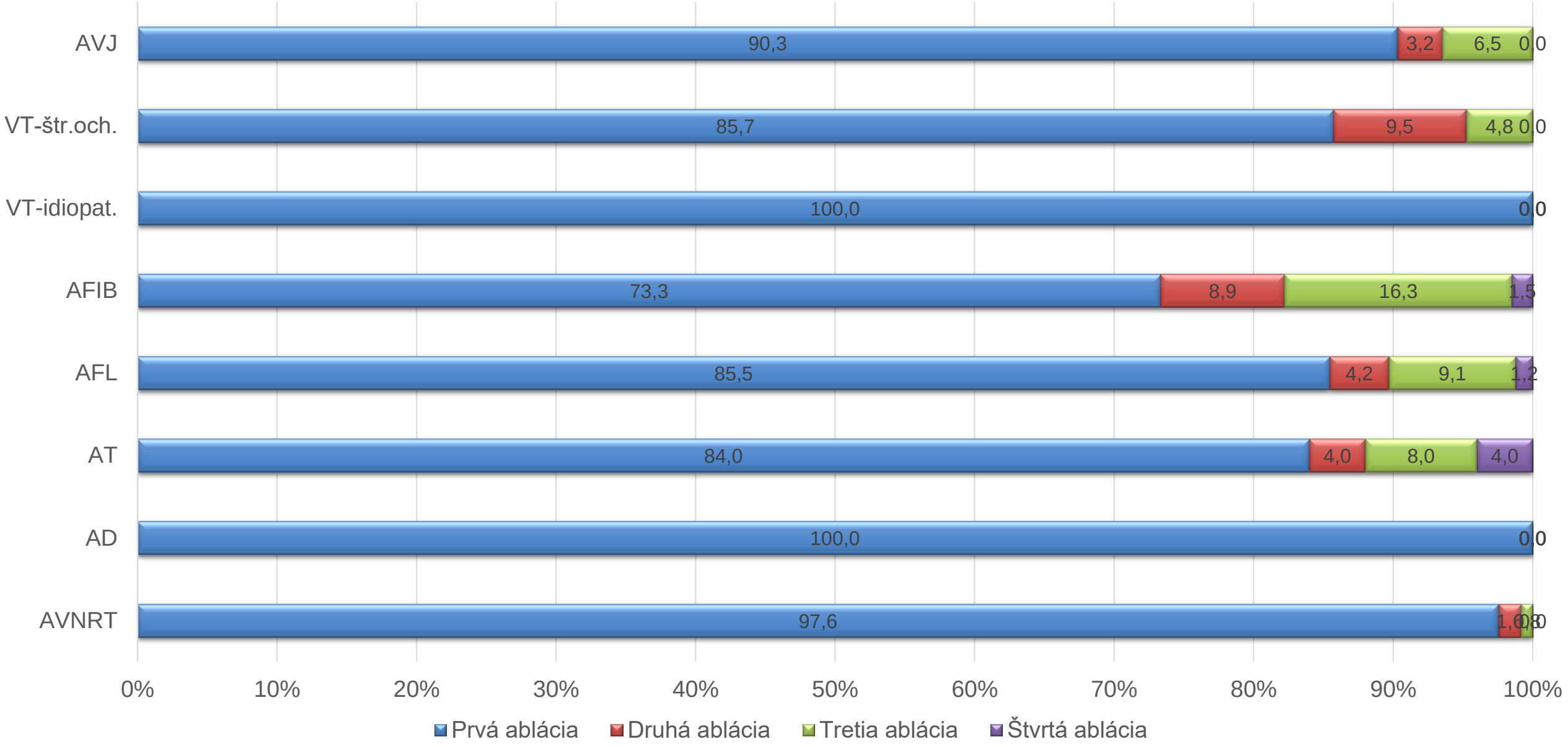
	AVNRT	AD	AT	AFL	AFIB	VT	AVJ
Úspešné	345	112	51	417	439	101	62
Parciálne úspešné	2	1	1	5	3	5	1
Neúspešné	1	3	2	2	0	2	2
Nedá sa zhodnodť	1	0	4	0	2	5	0

Úspešné Parciálne úspešné Neúspešné Nedá sa zhodnodť

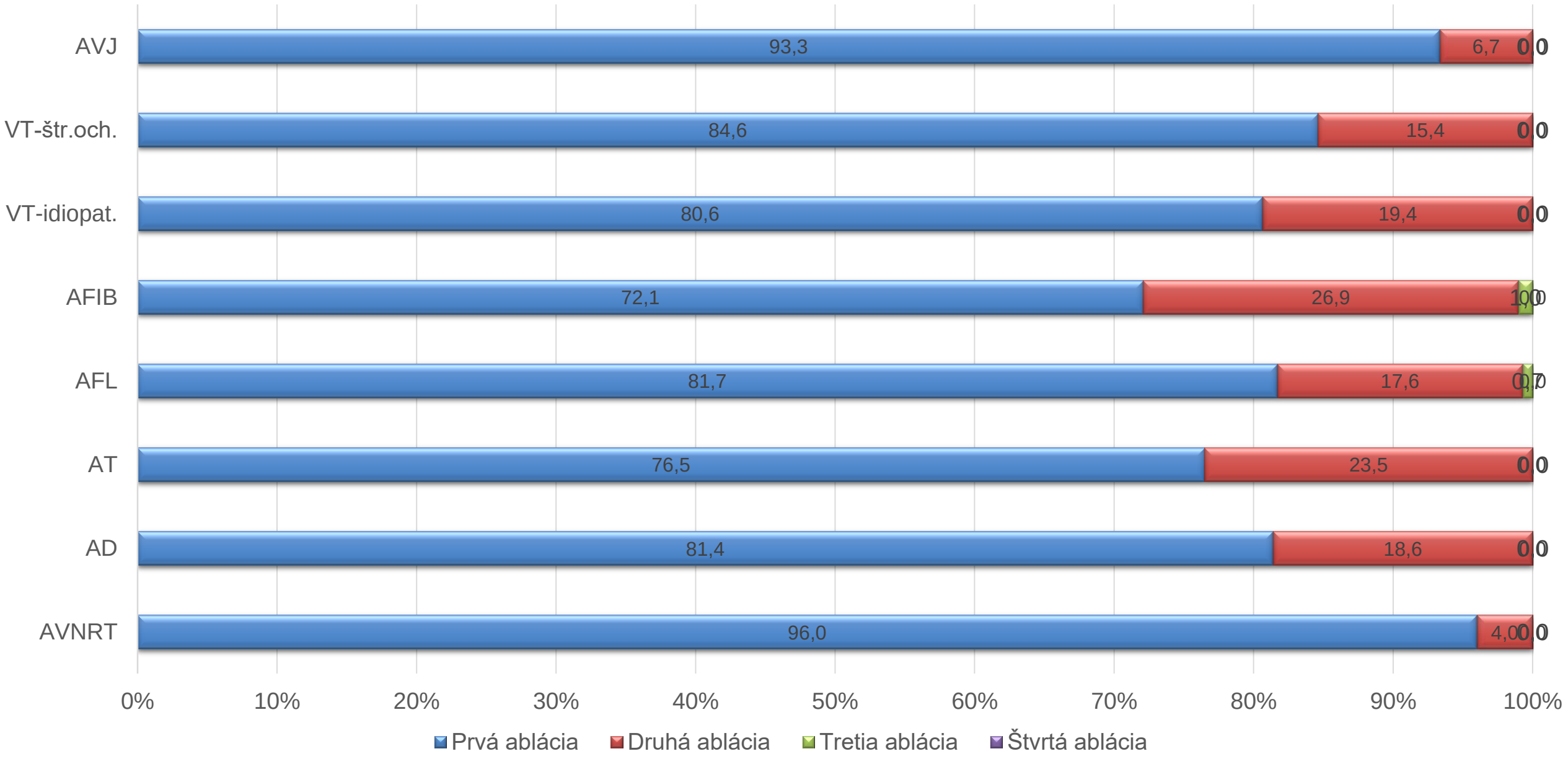
Akútna úspešnosť výkonov 2021



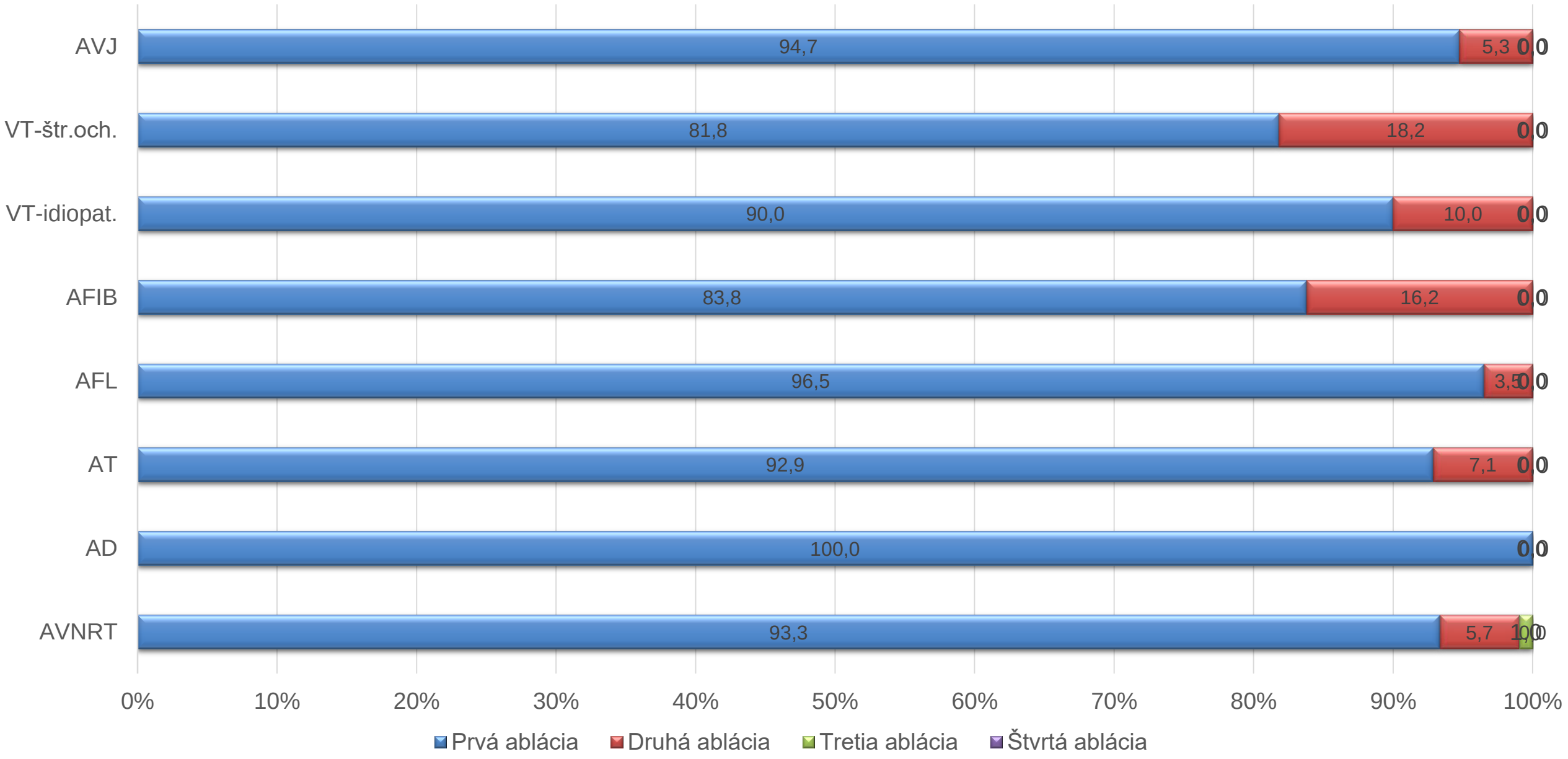
Opakované procedúry jednotlivých arytmií NÚSCH 2021



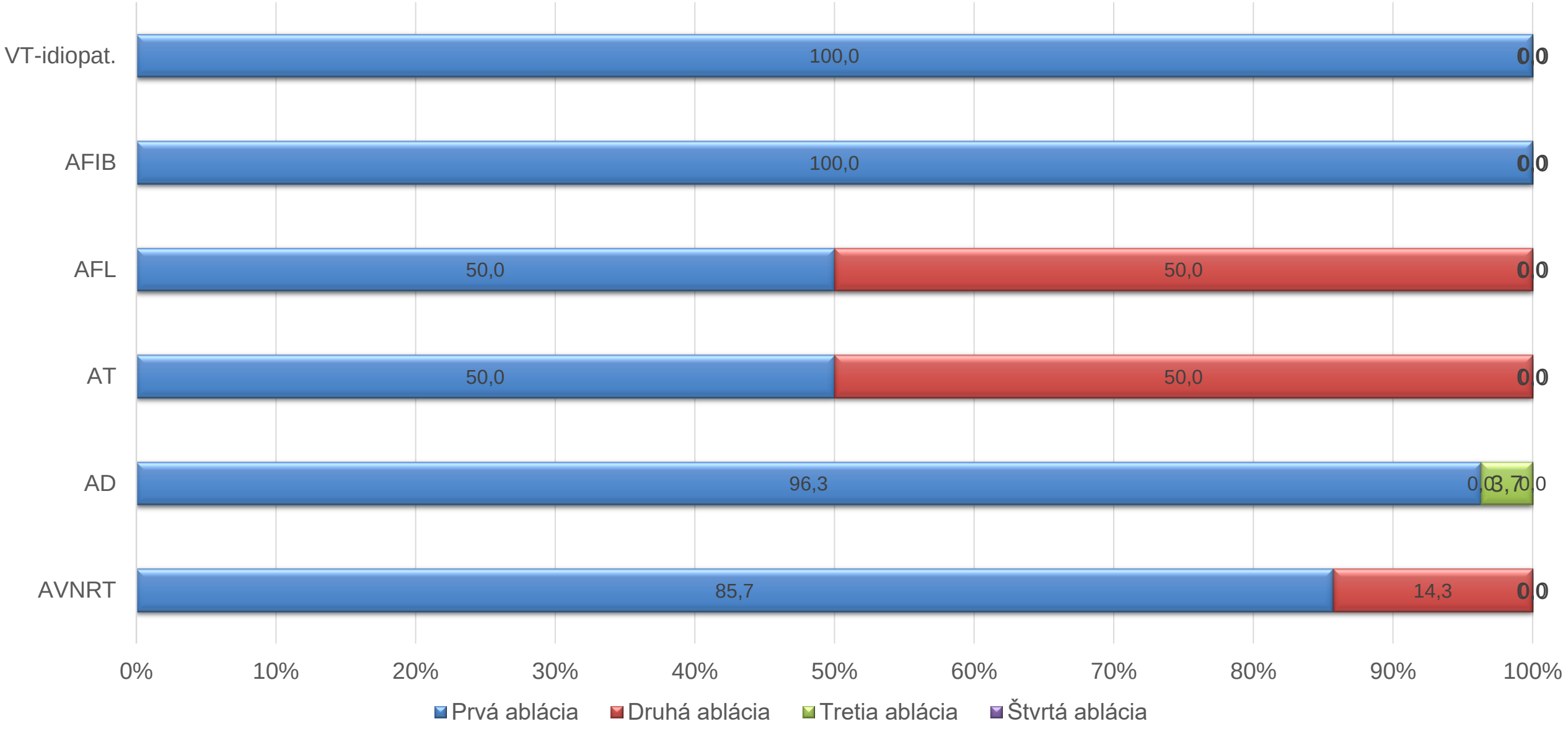
Opakované procedúry jednotlivých arytmií SÚSCCH 2021



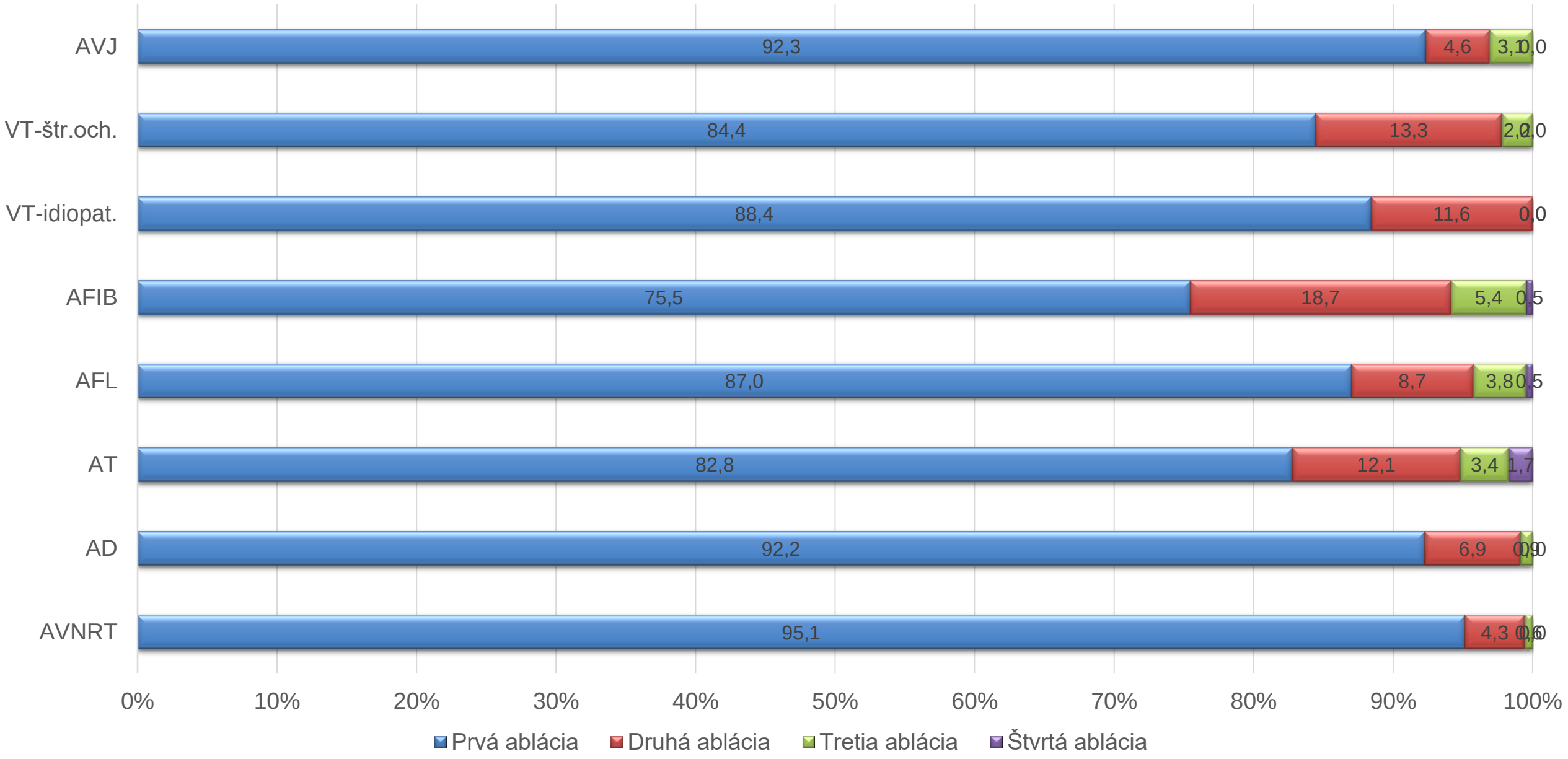
Opakované procedúry jednotlivých arytmií VÚSCH 2021



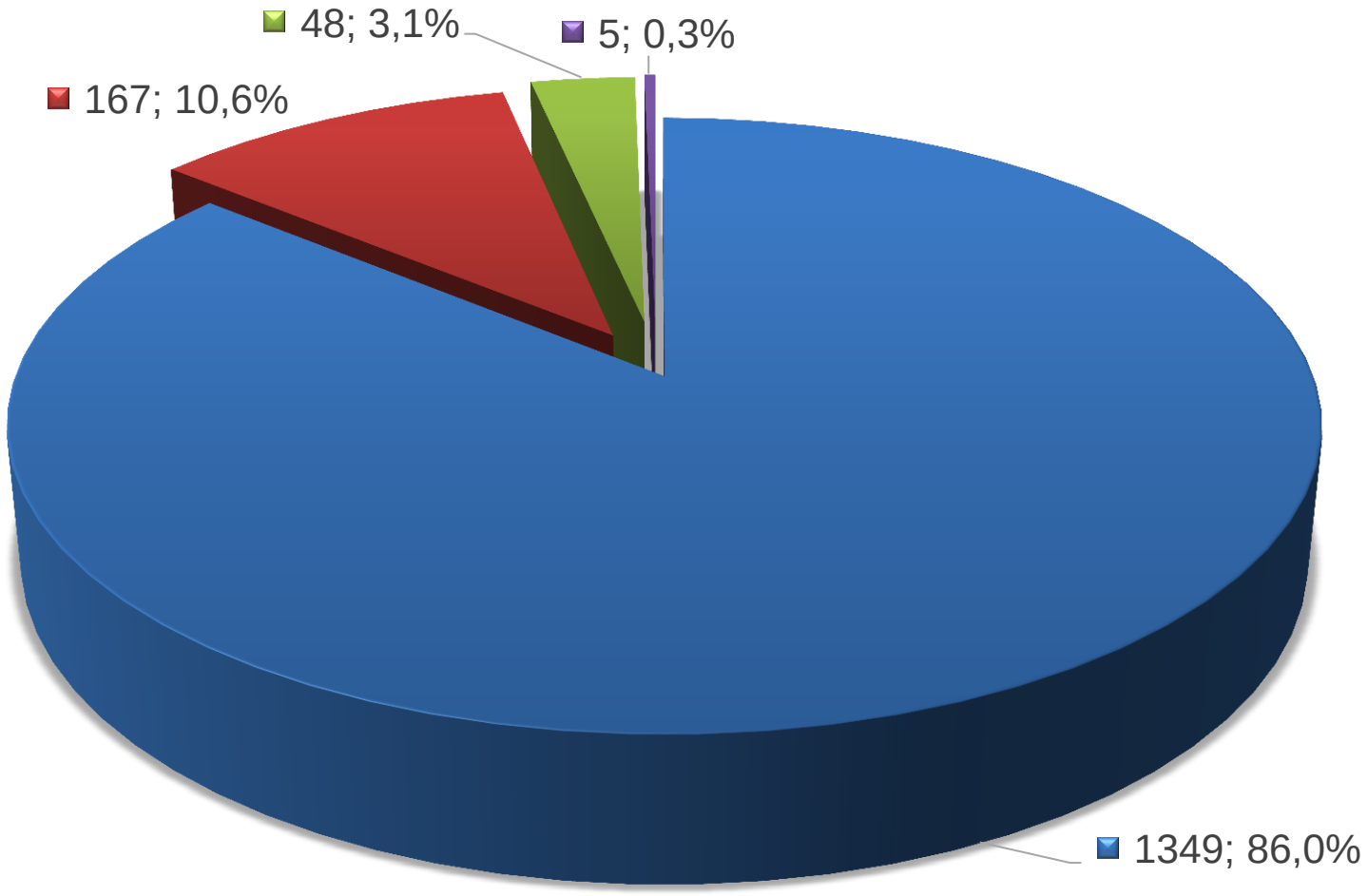
Opakované procedúry jednotlivých arytmií DKC 2021



Opakované procedúry jednotlivých arytmií spolu 2021

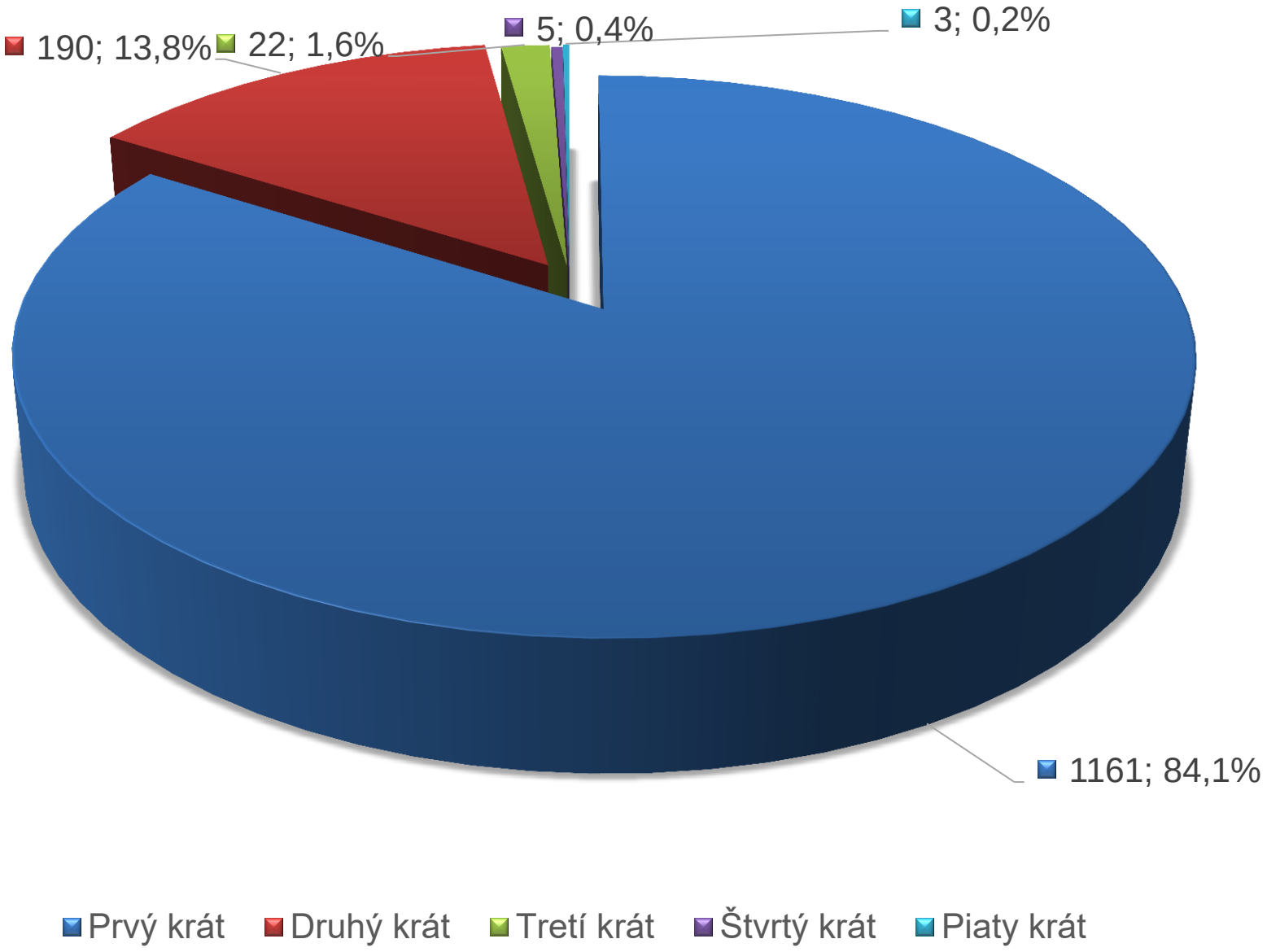


Opakované procedúry pri tej istej arytmii 2021



1. ablácia 2. ablácia 3. abláca 4. ablácia

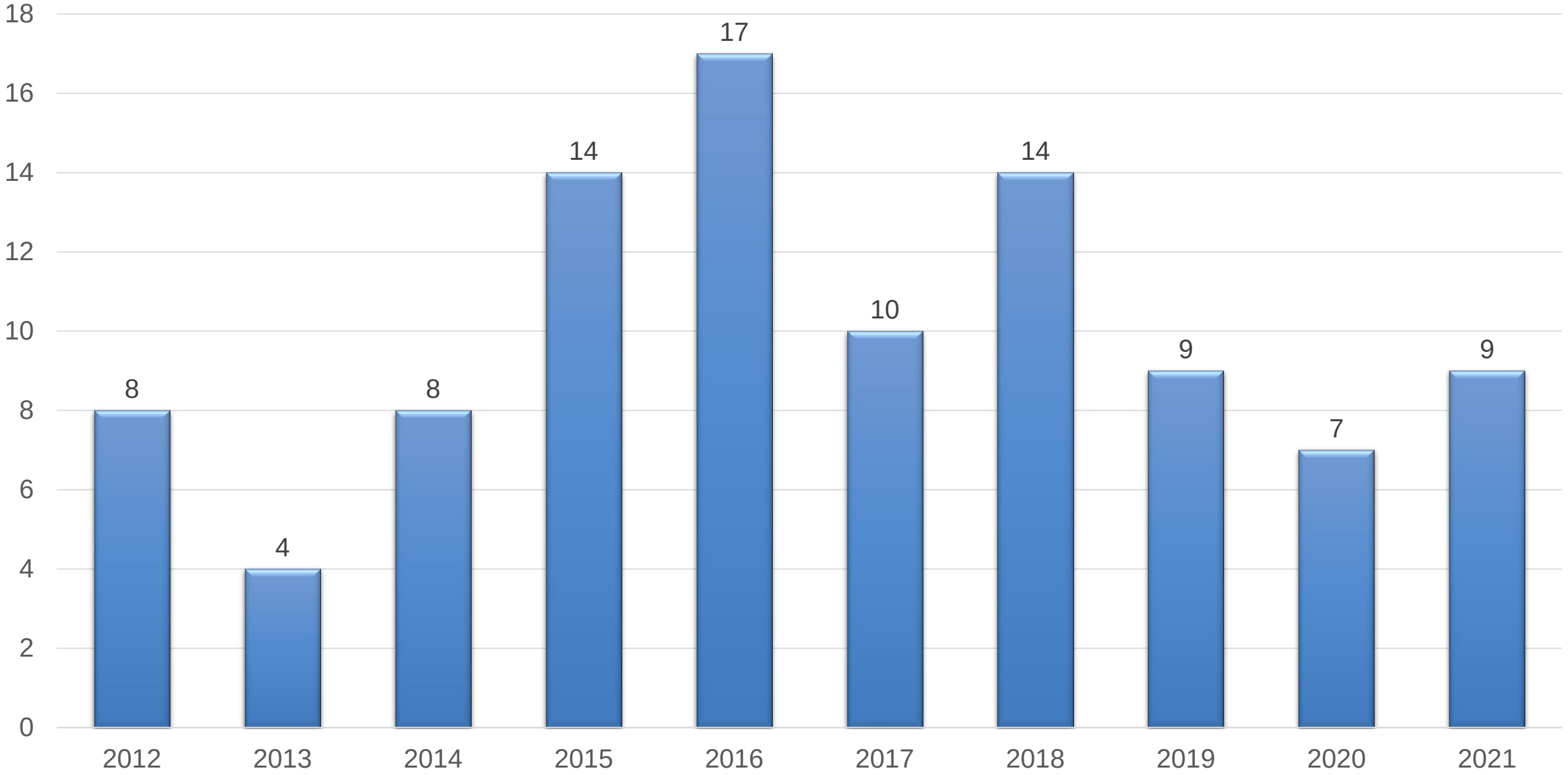
Počet výkonov u jedného pacienta 2021



Komplikácie 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Trombóza AV fistula			1	1	2	1				1
Pneumothorax		1			1					
Per. výpotok bez potreby drenáže	2	2	1	3	1	2	1	2		2
Per. Výpotok intervencia	3		3	1	3		2	3	2	
CMP		1				1	1			
AV blok			3	2	2	1	2	1	1	2
Paralýza bránice	3		1	2	1	2	5	1	1	
Výpotok fenestrácia						1	1			
Krvácanie – bez intervencie										1
Krvácanie - intervencia						1			1	1
Iné						1	2	2	2	2

Komplikácie 2012 - 2021



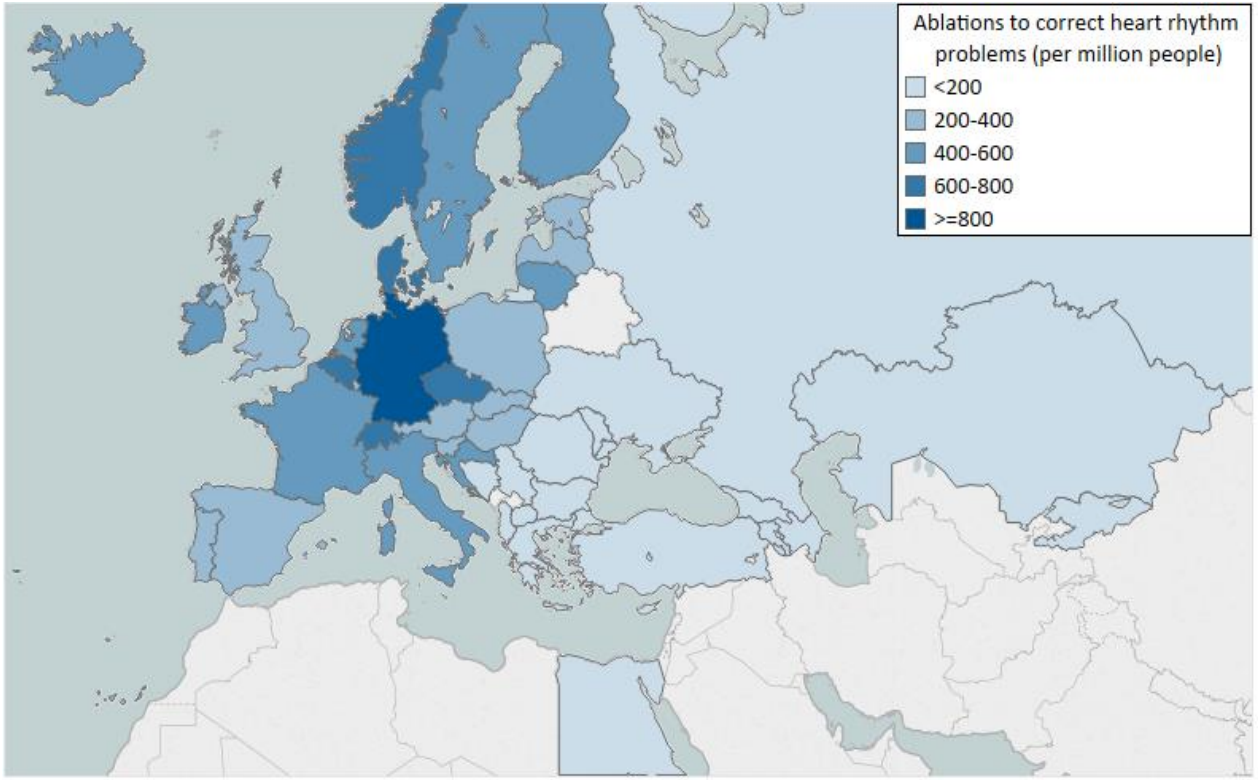
Porovnanie počtu lekárov a centier v SR s EU

na 1 mil. obyv.	**počet elektrofyziológov** priemer (median)	**počet nemocníc** priemer (median)
spolu EU	6,4 (4,4)	1,7 (1,5)
východ EU	2,0 (1,6)	0,7 (0,6)
západ EU	8,7 (5,0)	2,2 (1,8)
ČR	10,6	2,2
SR (2022)	**2,8**	**0,73**

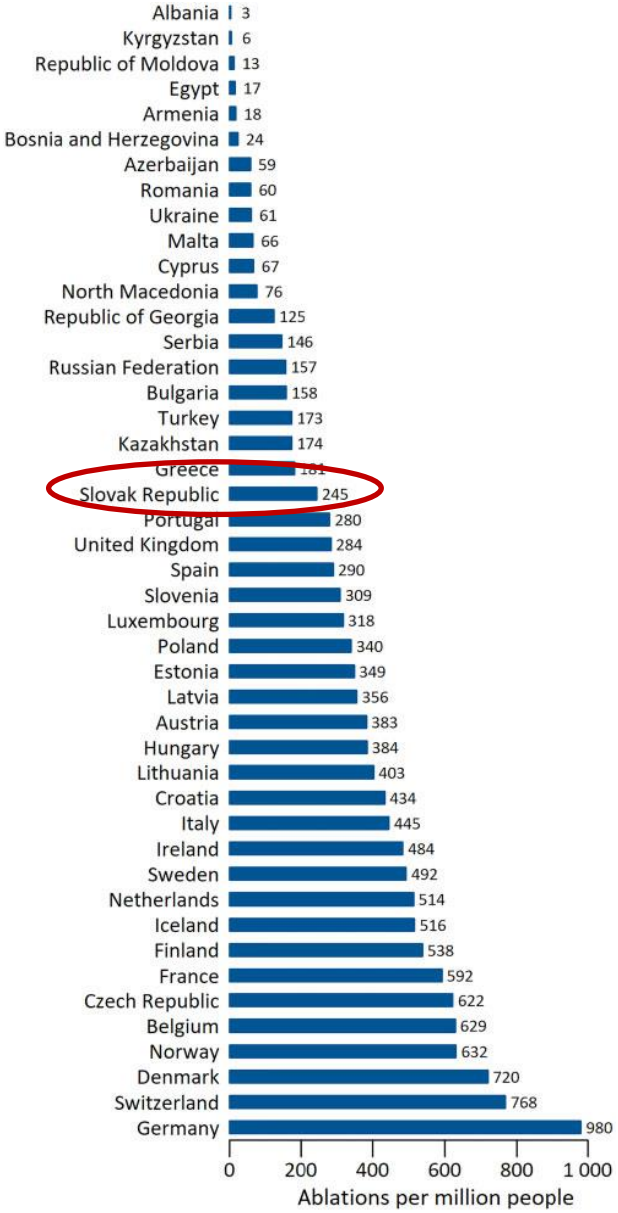
Timmis A, Townsend N, Gal CP et al. , Eur Heart J, 2020, 41, 1285, European society of Cardiology: Cardiovascular disease statistics 2019

Porovnanie počtu katétrových ablácií v SR a v EU

na 1 mil. obyv.	počet ablácií
spolu EU	287,1
východ EU	< 15
západ EU	> 600
ČR	> 600
SR (2021)	**248**



Počet katétrových ablácií



Timmis A, Townsend N, Gal CP et al. , Eur Heart J, 2020, 41, 1285

Záver

Zhodnotenie výsledkov

- zadávanie do registra je priebežné a nekomplikované
- pretrvávajú rezervy v správnom zadávaní úspešnosti výkonov a komplikáciách
- počet centier sa od vzniku ústavov nezmenil
- počet lekárov a ablácií pod európskym priemerom (minimálny nárast)
- **mení sa spektrum, zvyšuje sa počet ablácií fibrilácie predsiení**

Príčiny

- nedostatočné financovanie arytmológie
  - platba za katétrovú abláciu nezodpovedná reálnym nákladom
  - limity zo strany ZP
- nezáujem mladých lekárov o intervenčnú arytmológiu (dlhé štúdium, radiačná a psychická záťaž)
- nedostatok lekárov a sestier

Následky

- dlhodobá stagnácia arytmológie
- prehlbovanie zaostávania za priemerom EU