Catheter thrombectomy for acute ischemic stroke in cardiology cath lab: 10 years results

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Catheter thrombectomy in stroke

Class I AHA/ASA recommendation 2019

- Large vessel occlusion
- Time of onset ≤ 6h
- NIHSS ≥ 6
- ASPECT ≥ 6 (extent of early ischemic changes)
- Prestroke mRS 0-1
- Age ≥ 18yrs.

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- Cath-lab available in 1h after neuroimaging
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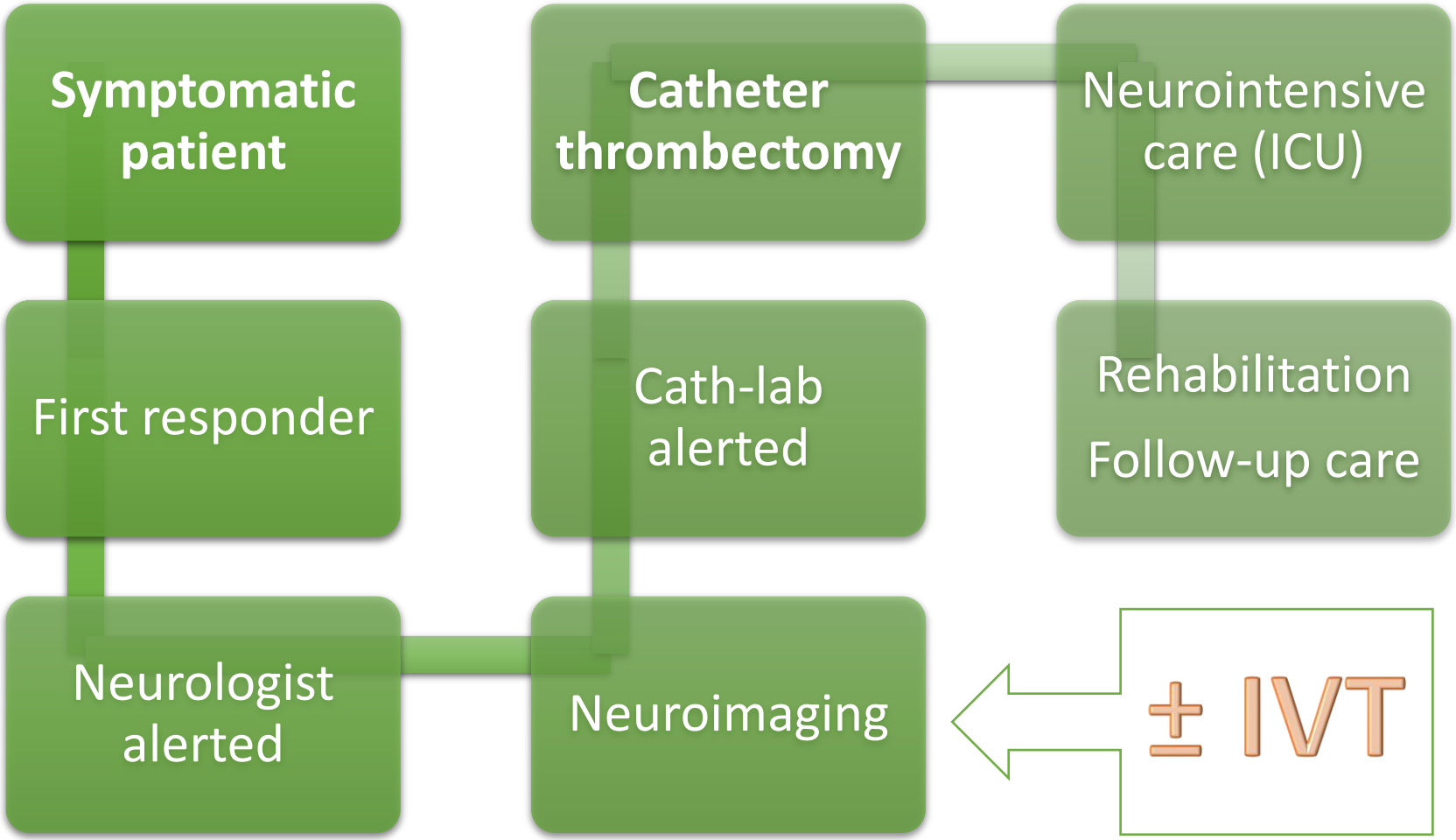
Exclusion criteria

- Prestroke mRS > 2
- Intracranial bleeding
- Prognosis limiting illness
- Severe hypoglycemia
- Pregnancy

Patient pathway in FNKV



Patients characteristics

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10/2022	Total
No. of procedures	4	15	28	37	44	57	66	82	66	79	76	**554**
Age (yrs ± SD)	60±15	64±14	65±9	67±12	68±10	69±13	70±13	72±14	71±10	72±12	67±16	**69±13**
Women, No. (%)	3 (75)	7 (47)	12 (43)	14 (38)	21 (48)	27 (47)	28 (43)	48 (59)	24 (36)	37 (47)	40 (53)	**261 (47)**
NIHSS score												
Median	15	16	18	18	15	12	15	15	16	15	16	**15**
IQR	11–18	14–20	15–19	15–21	10–19.5	9–18	8–19	10–20	12-20	11-20	10-19	**10–20**

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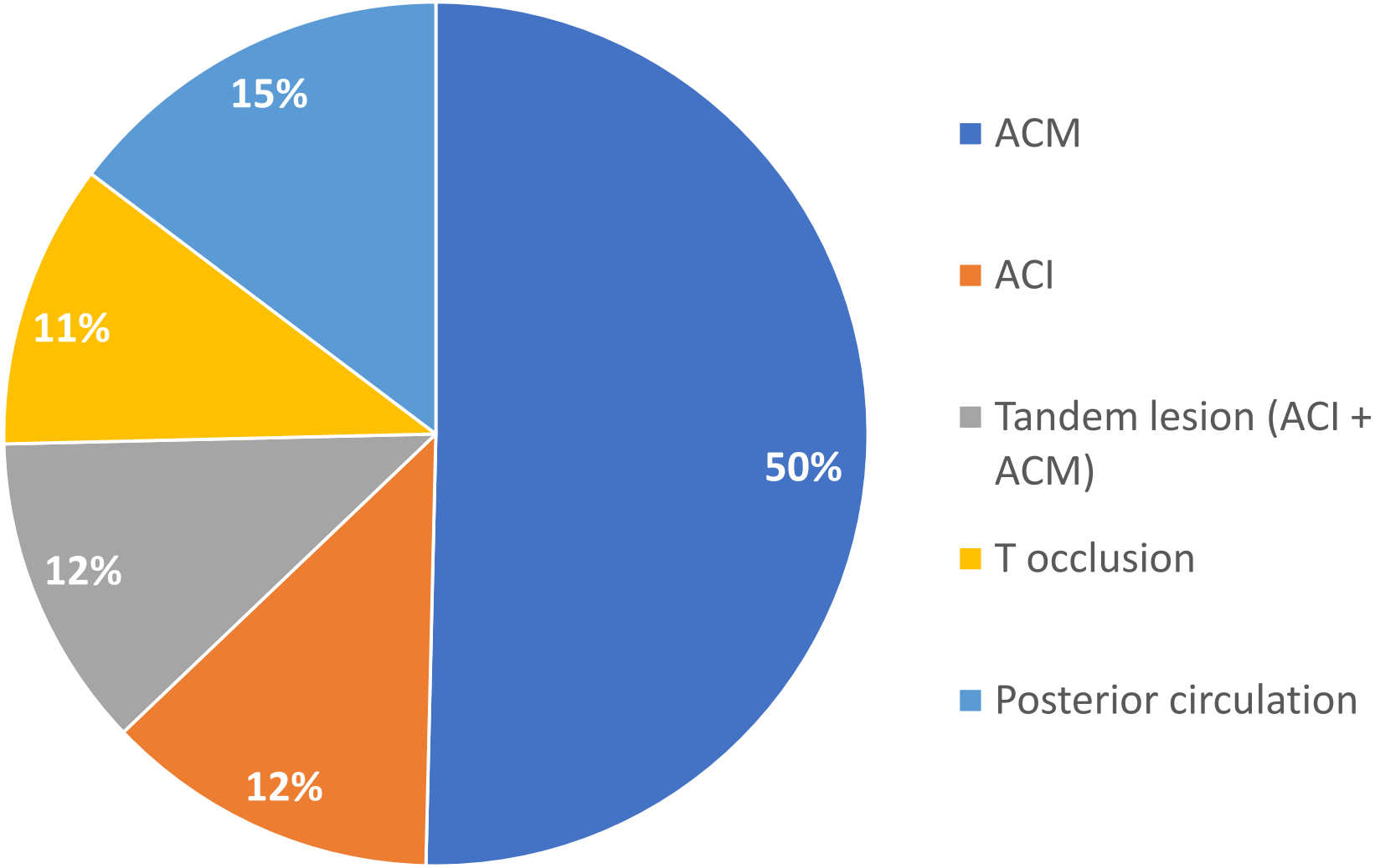
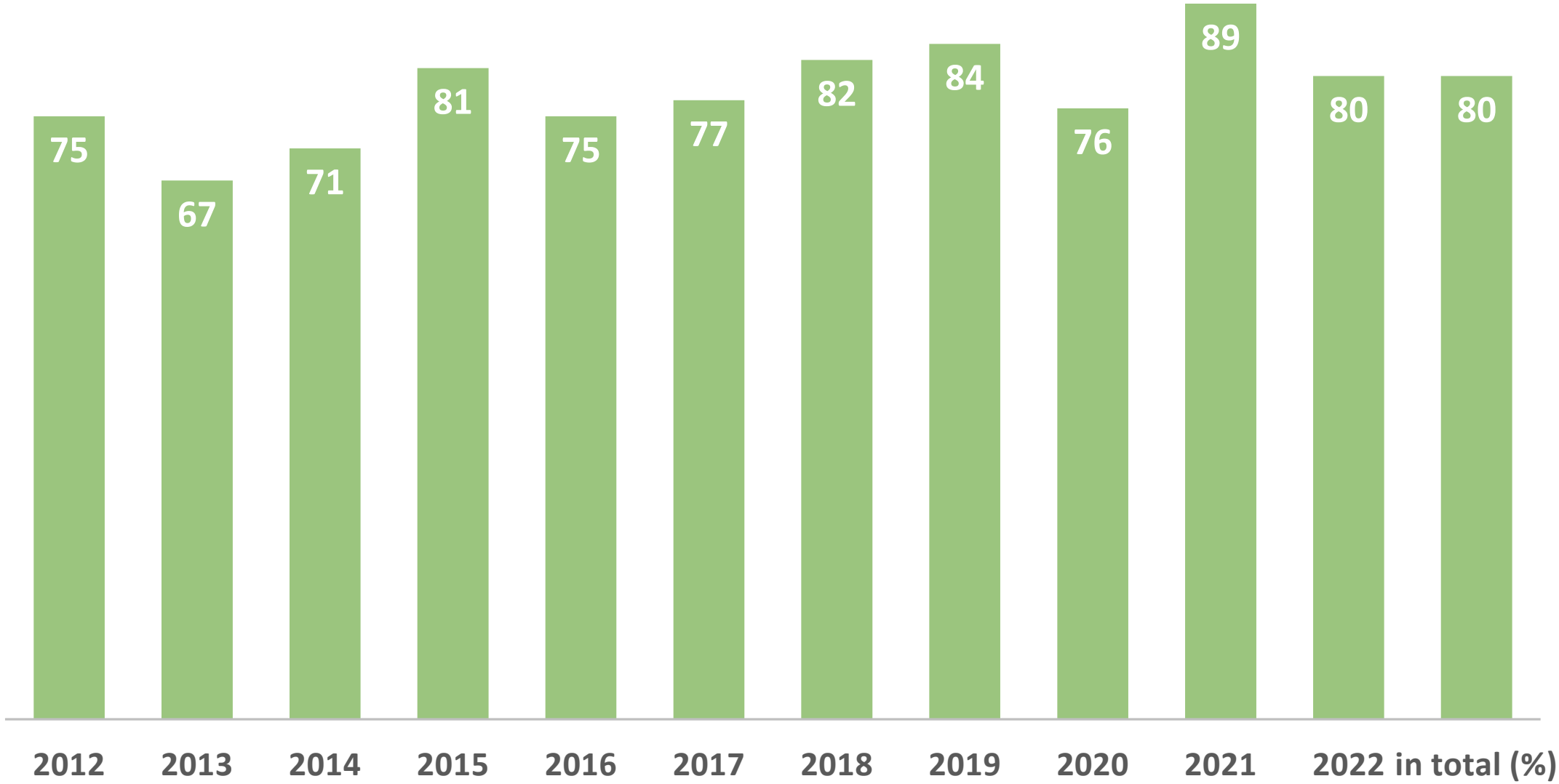
A-fib., No. (%)	1 (25)	5 (33)	17 (61)	16 (43)	18 (41)	22 (39)	33 (51)	23 (28)	22 (33)	43 (54)	23 (30)	**223 (40)**
Diabetes mellitus, nr. (%)	1 (25)	6 (40)	7 (25)	6 (16)	11 (25)	18 (32)	19 (29)	21 (26)	16 (24)	22 (28)	15 (20)	**142 (26)**
Hypertension, No. (%)	1 (25)	8 (53)	24 (86)	26 (70)	37 (84)	35 (61)	48 (74)	61 (74)	49 (74)	62 (78)	52 (68)	**403 (73)**
Dyslipidemia, No. (%)	0 (0)	0 (0)	2 (7)	14 (38)	19 (43)	25 (44)	34 (52)	57 (70)	38 (57)	43 (54)	37 (49)	**269 (49)**
Previous TIA/CMP, No. (%)	0 (0)	1 (7)	1 (4)	9 (24)	8 (18)	12 (21)	20 (31)	20 (24)	13 (20)	9 (11)	8 (11)	**101 (18)**

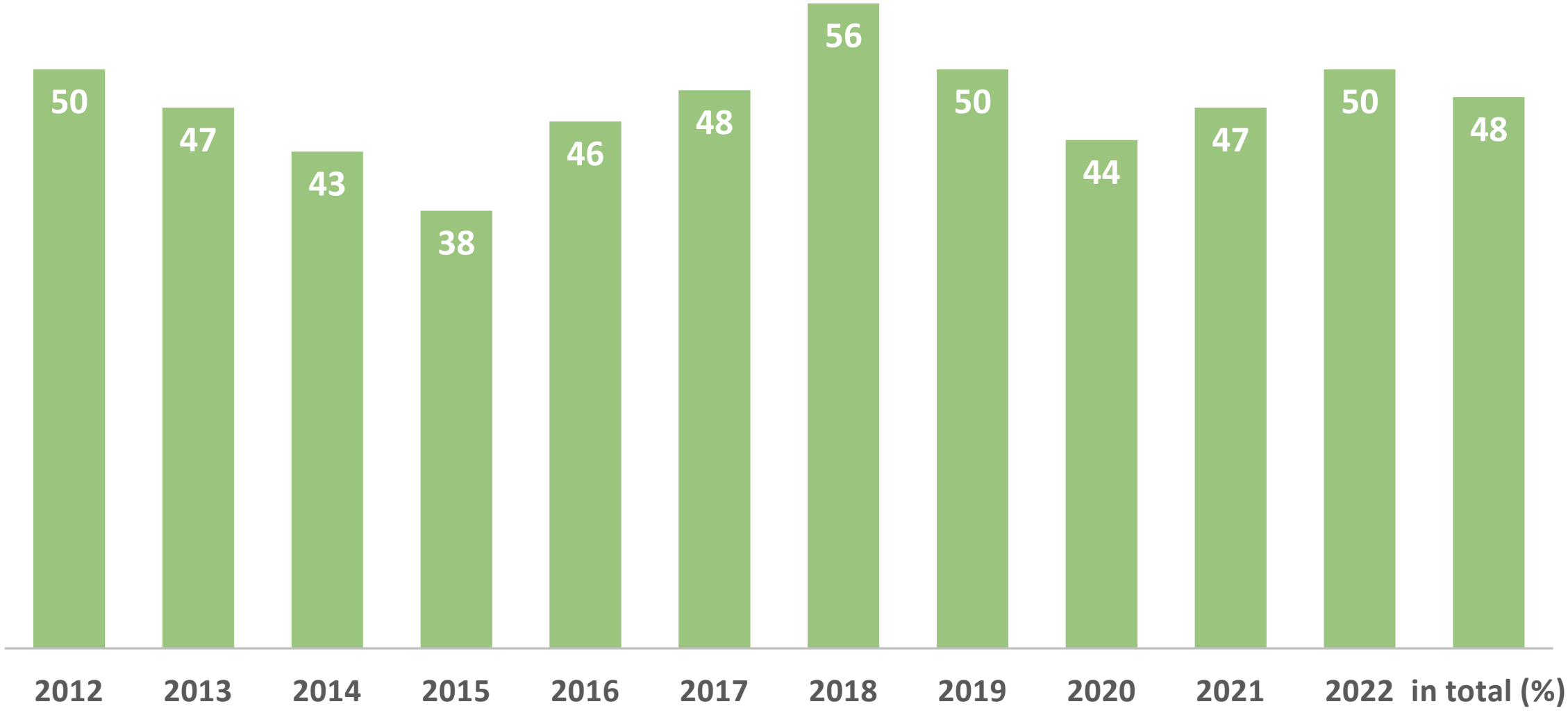
Stroke anatomy (n=554)



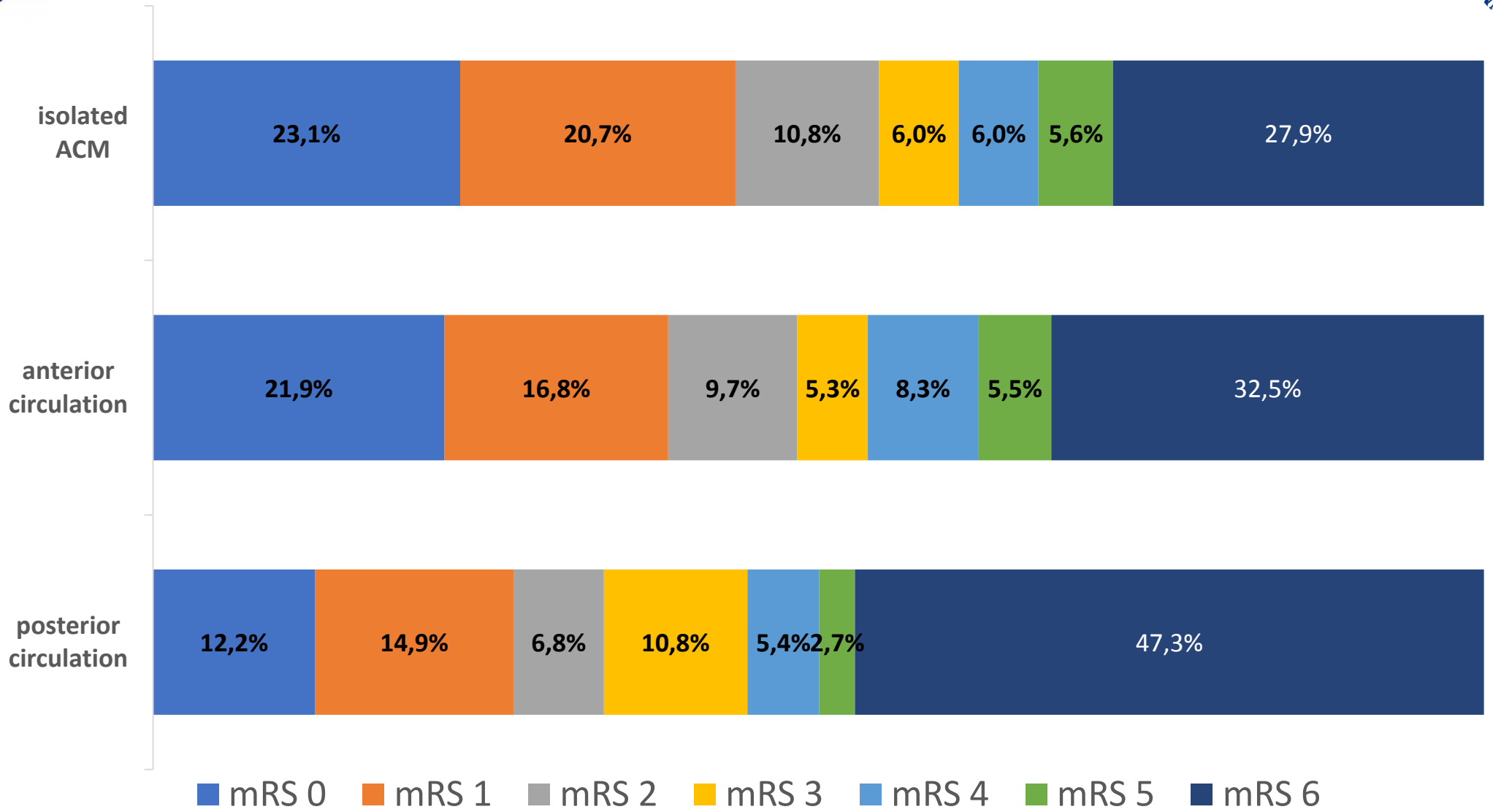
TICI 2b/3 (%)


75
67
71
81
75
77
82
84
76
89
80
80
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022 in total (%)

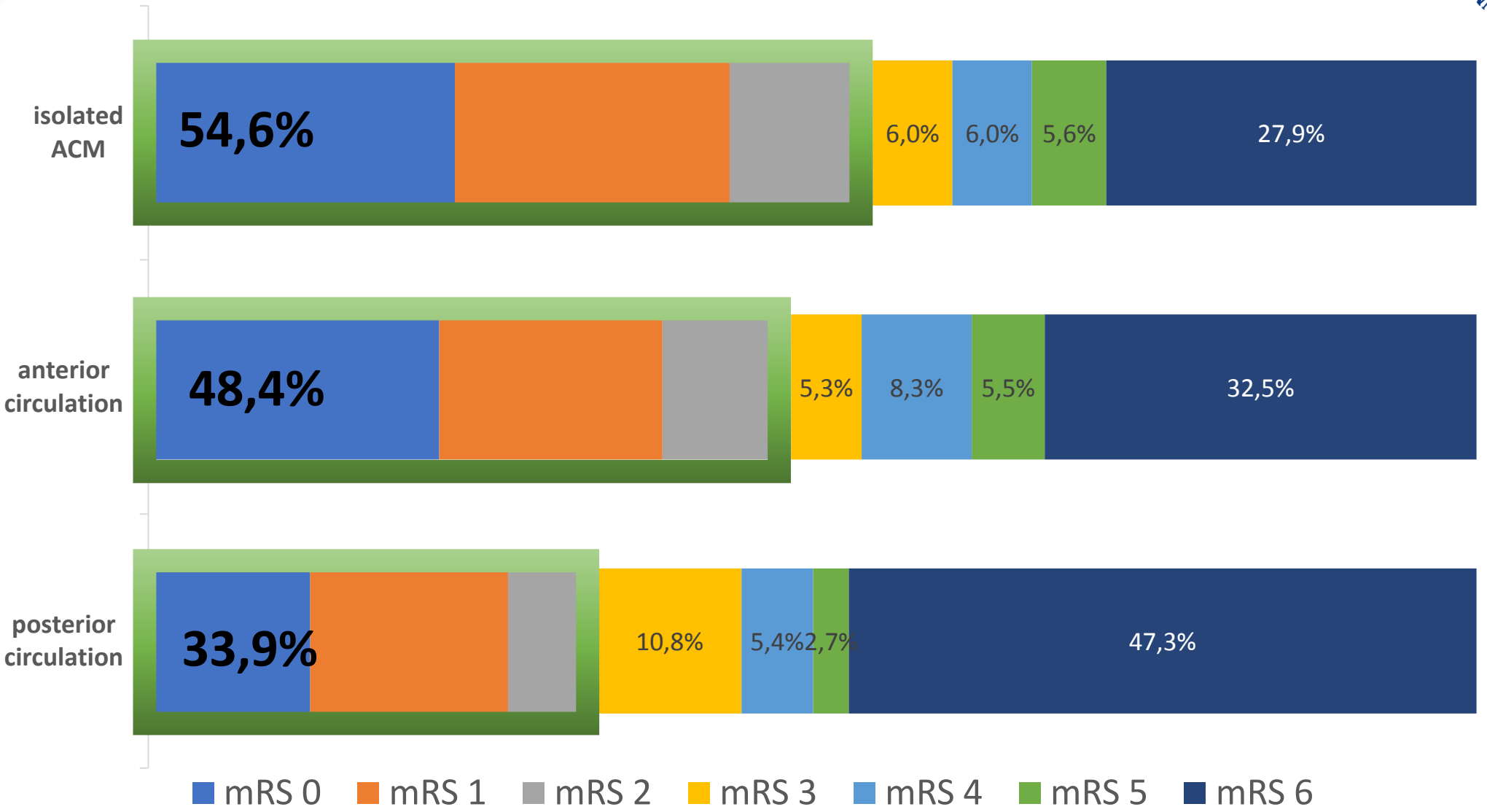
Functional independence % (mRS 0-2)



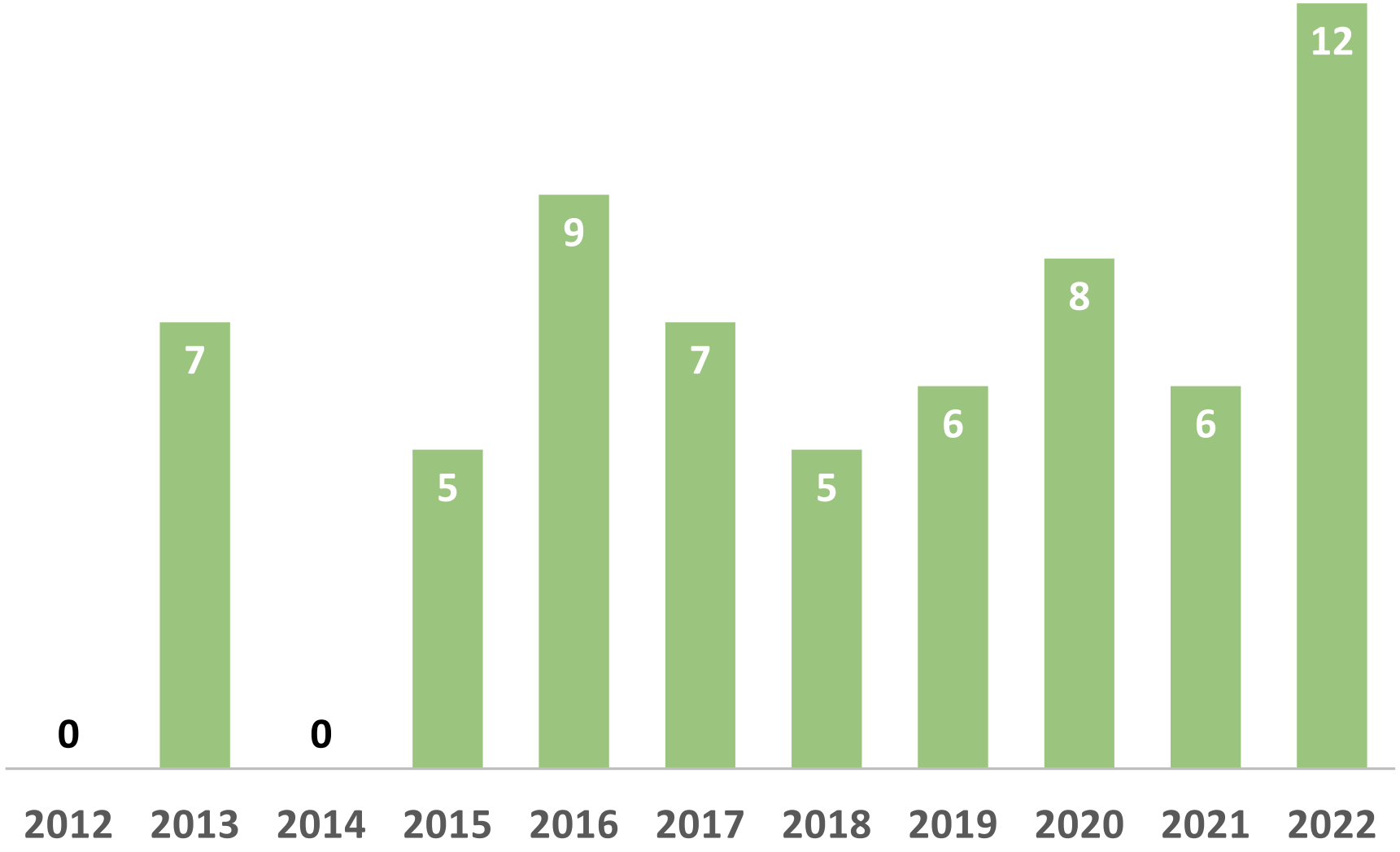
90day mRS by anatomy (%)



mRS (0-2) by anatomy (%)



Major complications (%)



Defined as:

- Artery puncture, dissection
- sICH
- Periprocedural death or neurological worsening

Data comparison

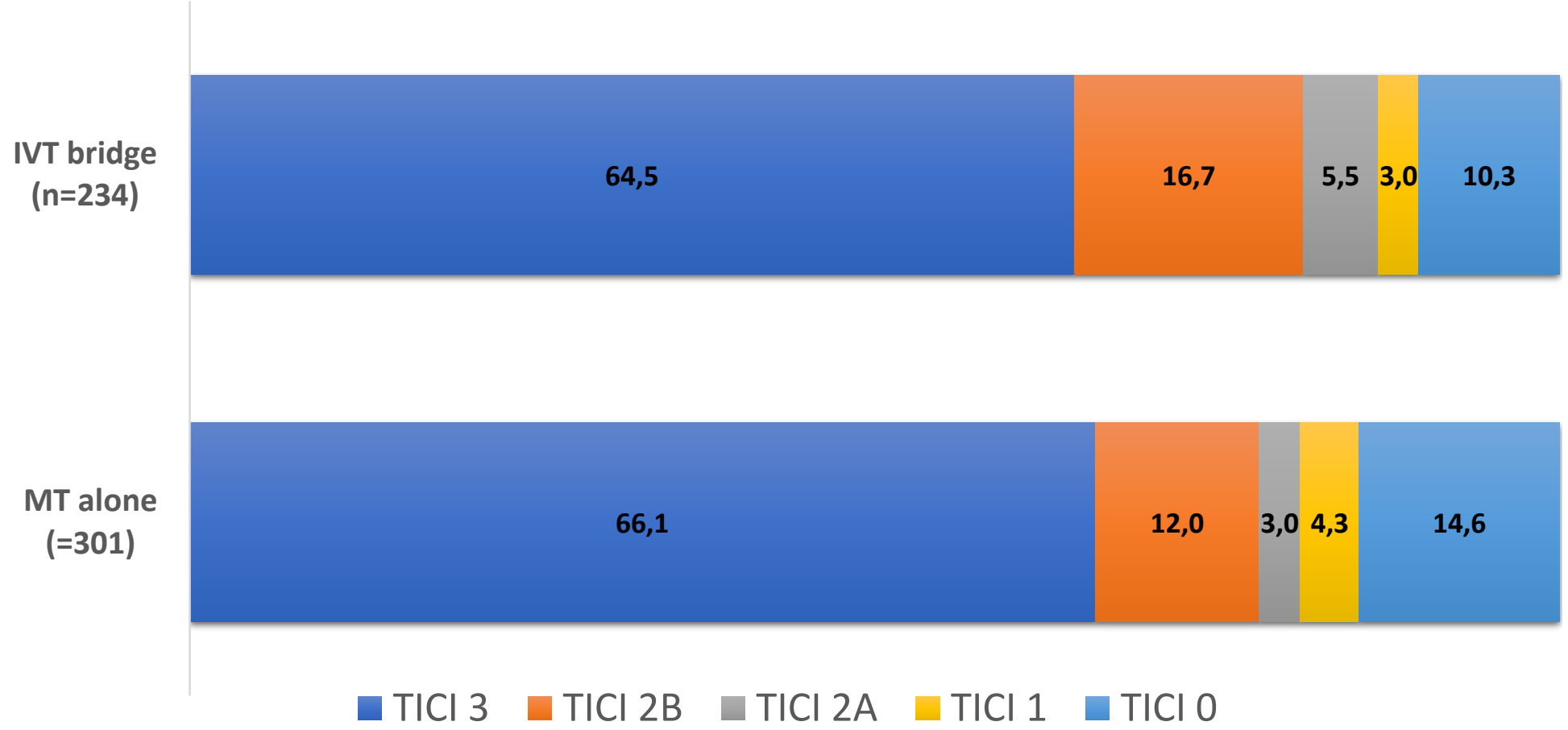
Anterior circulation	FNKV (n=467)	HERMES (n=634)
90day mRS 0-2	48,40%	46%
NIHSS baseline (median)	15	17
ASPECT (median)	8	9
sICH	7,49%	4,40%

HERMES meta-analysis: data from MR CLEAN, ESCAPE, REVASCAT, SWIFT PRIME, and EXTEND IA

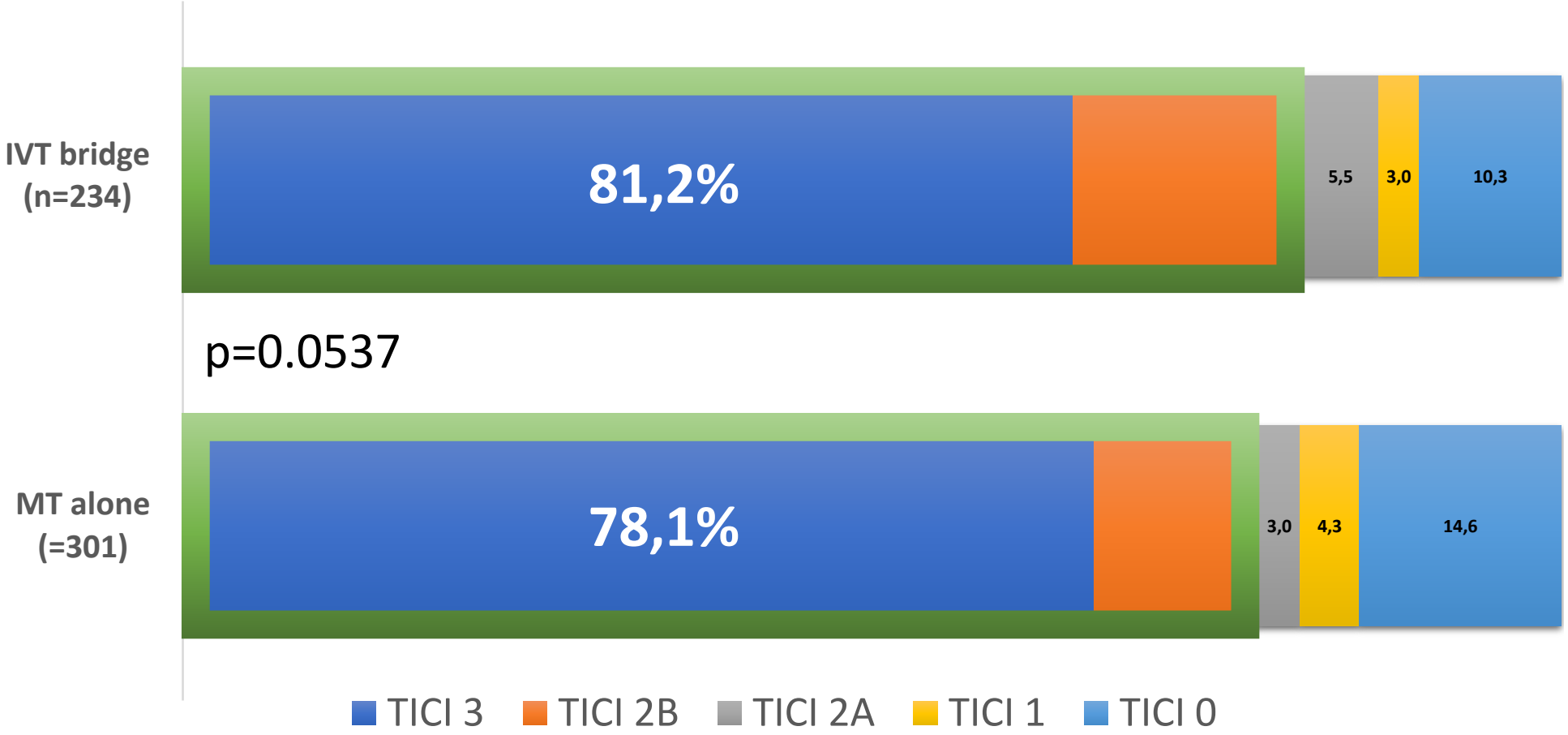
IVT bridging

- MT alone or bridging IVT?
- Inconclusive evidence (DIRECT-MT, SKIP, DEVT, MR CLEAN – NO IV)

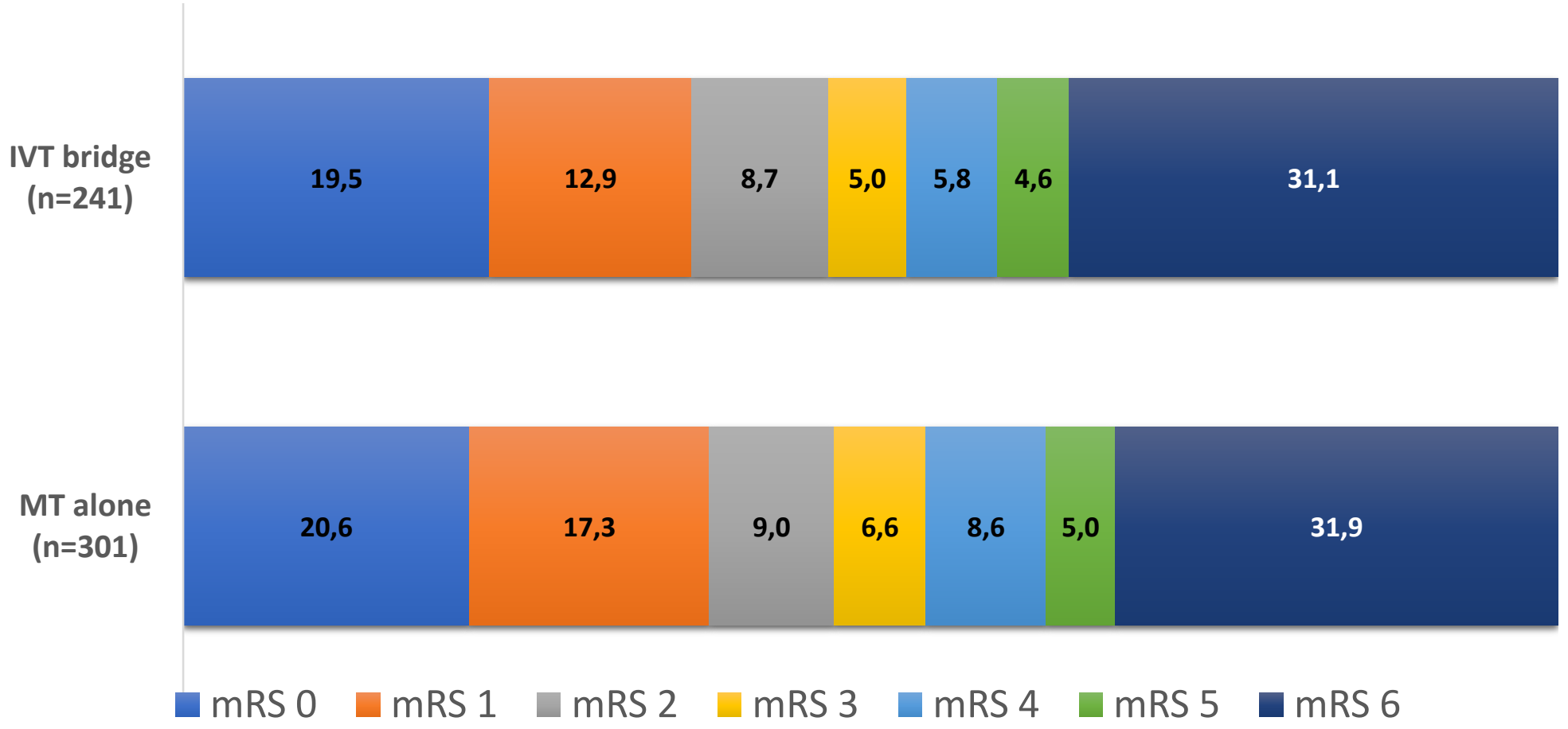
IVT bridging – TICI (%)



IVT bridging – TICI 2b/3 (%)



IVT bridging – 90day mRS (%)



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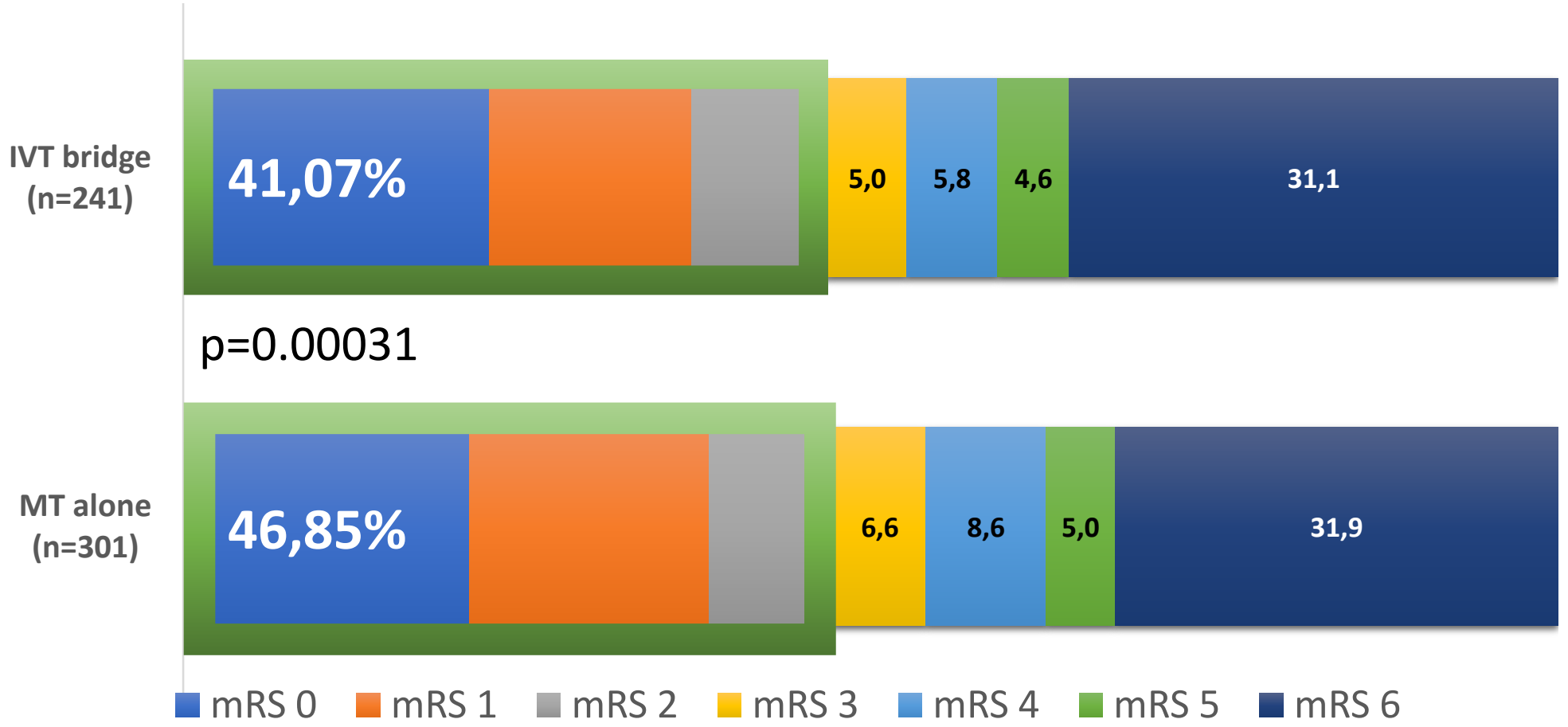


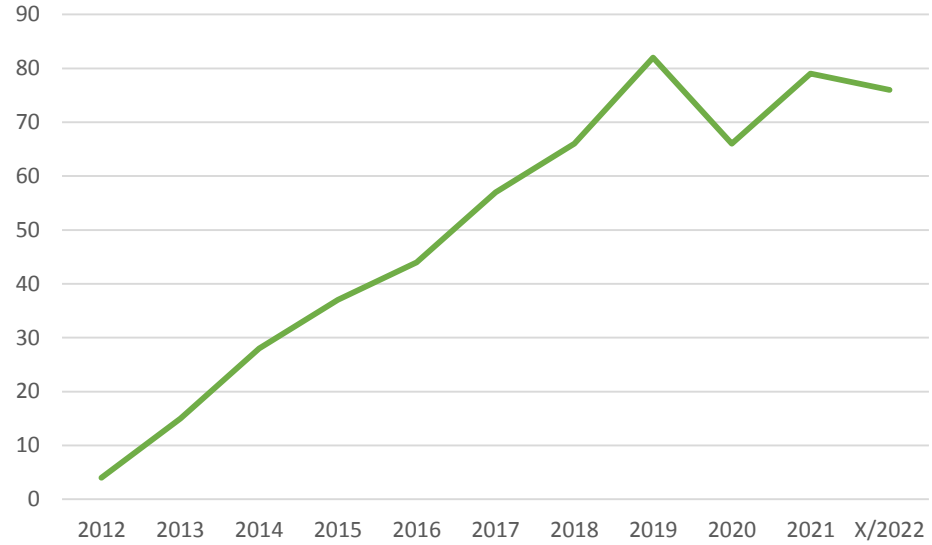
IVT bridging – complications (%)

	Embolization in new territory	Embolization to distal territory
IVT bridge (n=224)	5,8%	9,37%
MT alone (n=301)	2,3%	10,63%

	Symptomatic intracranial hemorrhage
IVT bridge (n=235)	7,23 %
MT alone (n=301)	7,30 %

Conclusion

- 10 years of experience
- Multidisciplinary cooperation
- Sufficient volume of procedures
- Comparable results to large RCTs



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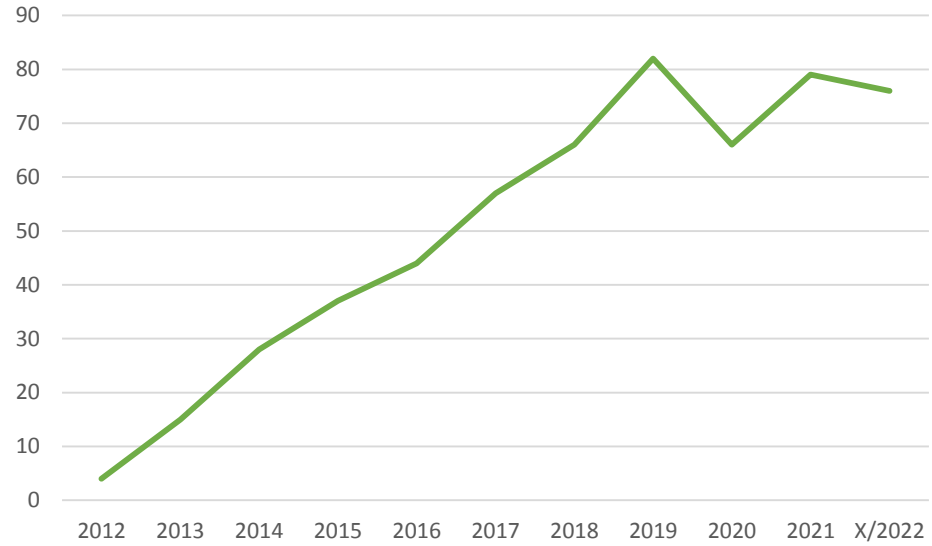

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Thank you for your attention!