

*La richiesta di competenza
neurologica nel prossimo futuro*

Sesta edizione

Fortuna Resort, Chianciano Terme (Siena)

13-15 maggio 2022

Accesso dei giovani neurologi alla EVT

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Study name	Trial period	Study design	Primary outcome	Secondary outcomes	sICH definition*	Stroke imaging	Total patients/ EVT-arm patients (n)	Received iv rtPA in EVT arm	Onset- groin time (min)	Successful reperfusion (TICI 2b-3)
MR CLEAN Berkhemer et al.	2010-2014	RCT	mRS ≤ 2 at 90 days	NIHSS score after 24 h and other	ECASS II	Non-contrast CT or MRI, CTA/MRA/DSA	500/233	87.1%	260	58.7%
ESCAPE Goyal et al.	2013-2014	RCT	mRS at 90 days	Mortality at 90 days, sICH and other	Any ICH with 2 NIHSS pt. increase	Non-contrast CT, CTA (multiphase)	315/165	72.7%	185	72.4%
EXTEND-IA Campbell et al.	2012-2014	RCT	Reperfusion at 24 h and early neurologic improvement	Mortality at 90 days and sICH	SITS-MOST	Non-contrast CT, CTA/MRA, perfusion CT or diffusion MRI	70/35	100%	210	86.2%
REVASCAT Jovin et al.	2012-2014	RCT	mRS at 90 days	Mortality at 90 days, sICH and other	Both	Non-contrast CT or MRI, CTA/MRA, angiogram	206/103	68%	269	65.7%
SWIFT-PRIME Saver et al.	2012-2014	RCT	mRS at 90 days	mRS ≤ 2 and mortality at 90 days, sICH and other	NA	Non-contrast CT or MRI, CTA/MRA	196/93	98%	224	88%
CARDIO-NEURO REGISTRY Widimsky et al.	2012-2014	Single-arm registry	mRS ≤ 2 at 90 days and successful recanalization	Mortality at 90 days and sICH	ECASS II	Non-contrast CT, CTA	84/84	0%	165	74% TICI 2a-3
BERNESE STROKE REGISTRY Gratz et al.	2010-2012	Single-arm registry	mRS ≤ 2 at 90 days and successful recanalization	Mortality at 90 days and sICH, device adv. events	ECASS II	Non-contrast CT or MRI, CTA	227/227	NA	363	72.5%
NASA REGISTRY Zaidat et al.	2012-2013	Single-arm registry	Successful recanalization	mRS ≤ 2 and mortality at 90 days, sICH	ECASS II	Non-contrast CT or MRI, CTA/MRA	354/354	NA	235	70.9%
STAR REGISTRY Pereira et al.	2010-2012	Single-arm registry	mRS ≤ 2 at 90 days and successful recanalization	Mortality at 90 days and sICH, device adv. events	ECASS II	Non-contrast CT or MRI, CTA	202/202	59%	238	88.1%

**STRONG EVIDENCE TO SUPPORT THE USE OF EVT FOR
ACHIEVING REPERFUSION IN STROKE DUE TO LARGE
VASSEL OCCLUSION**

STROKE
BEFORE
EVT



2015



STROKE
AFTER
EVT

THE NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Thrombectomy 6 to 24 Hours after Stroke with a Mismatch between Deficit and Infarct

R.G. Nogueira, A.P. Jadhav, D.C. Haussen, A. Bonafe, R.F. Budzik, P. Bhuva, D.R. Yavagal, M. Ribo, C. Cognard, R.A. Hanel, C.A. Sila, A.E. Hassan, M. Millan, E.I. Levy, P. Mitchell, M. Chen, J.D. English, Q.A. Shah, F.L. Silver, V.M. Pereira, B.P. Mehta, B.W. Baxter, M.G. Abraham, P. Cardona, E. Veznedaroglu, F.R. Hellinger, L. Feng, J.F. Kirmani, D.K. Lopes, B.T. Jankowitz, M.R. Frankel, V. Costalat, N.A. Vora, A.J. Yoo, A.M. Malik, A.J. Furlan, M. Rubiera, A. Aghaebrahim, J.-M. Olivot, W.G. Tekle, R. Shields, T. Graves, R.J. Lewis, W.S. Smith, D.S. Liebeskind, J.L. Saver, and T.G. Jovin, for the DAWN Trial Investigators*

THE NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Thrombectomy for Stroke at 6 to 16 Hours with Selection by Perfusion Imaging

G.W. Albers, M.P. Marks, S. Kemp, S. Christensen, J.P. Tsai, S. Ortega-Gutierrez, R.A. McTaggart, M.T. Torbey, M. Kim-Tenser, T. Leslie-Mazwi, A. Sarraj, S.E. Kasner, S.A. Ansari, S.D. Yeatts, S. Hamilton, M. Mlynash, J.J. Heit, G. Zaharchuk, S. Kim, J. Carrozzella, Y.Y. Palesch, A.M. Demchuk, R. Bammer, P.W. Lavori, J.P. Broderick, and M.G. Lansberg, for the DEFUSE 3 Investigators*

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ORIGINAL ARTICLE FREE PREVIEW

Endovascular Therapy for Acute Stroke with a Large Ischemic Region

Shinichi Yoshimura, M.D., Ph.D., Nobuyuki Sakai, M.D., Ph.D., Hiroshi Yamagami, M.D., Ph.D., Kazutaka Uchida, M.D., Ph.D., Mikiya Beppu, M.D., Ph.D., Kazunori Toyoda, M.D., Ph.D., Yuji Matsumaru, M.D., Ph.D., Yasushi Matsumoto, M.D., Kazumi Kimura, M.D., Ph.D., Masataka Takeuchi, M.D., Ph.D., Yukako Yazawa, M.D., Ph.D., Naoto Kimura, M.D., Ph.D., [et al.](#)



INCREASING INDICATIONS FOR THE USE OF EVT

**With great power comes
great responsibility
(even in the lawcourt)**

**modified from Ben Parker
(Spiderman's uncle)**



Italian Experience

Endovascular therapy for acute ischemic stroke:
which role for neurologists?

[Francesco Iodice](#), [Valerio Brunetti](#), [Ettore Nicolini](#), [Matteo Paolucci](#) & [Francesco Di Lorenzo](#) 

[Neurological Sciences](#) **40**, 1737–1739 (2019) | [Cite this article](#)

Question:

The new clinical trials have introduced mechanical thrombectomy as an effective tool in selected cases of ischemic stroke. Endovascular therapy requires radiological and interventional skills.

As a future neurologist, **would you be interested in a period of training in endovascular therapy in the course of residency, while knowing that this will take time for training in other neurological skills?**

Please check the box you are interested in:

I am not interested in a training period in endovascular therapy

yes ☐

not ☐

If you answered YES, please check one option below:

☐ I am interested in a training period during residency,
**because neurologists should be familiar with EVT, but this will
not be my future career**

☐ I am interested in a period of training during residency
because I would like endovascular therapy to be **part of my
future job**

	Respondants	Total of the interested people in a training period during residency	Interested in a training period during residency because neurologists should be familiar with EVT, but this will not be my future career	Interested and I wish a EVT career during residency because I would like endovascular therapy to be part of my future job
Catholic University of the Sacred Heart	33 (100%)	32 (97%)	16 (48%)	16 (48%)
Sapienza and San Andrea University	27 (67%)	21 (78%)	11 (41%)	10 (37%)
Tor Vergata University	24 (100%)	24 (100%)	5 (21%)	19 (79%)
Campus Biomedico University	14 (100%)	13 (93%)	4 (29%)	9 (64%)
	98 (88%)	90 (92%)	36 (37%)	54 (55%)

European Experience

european journal of neurology
the official journal of the european academy of neurology

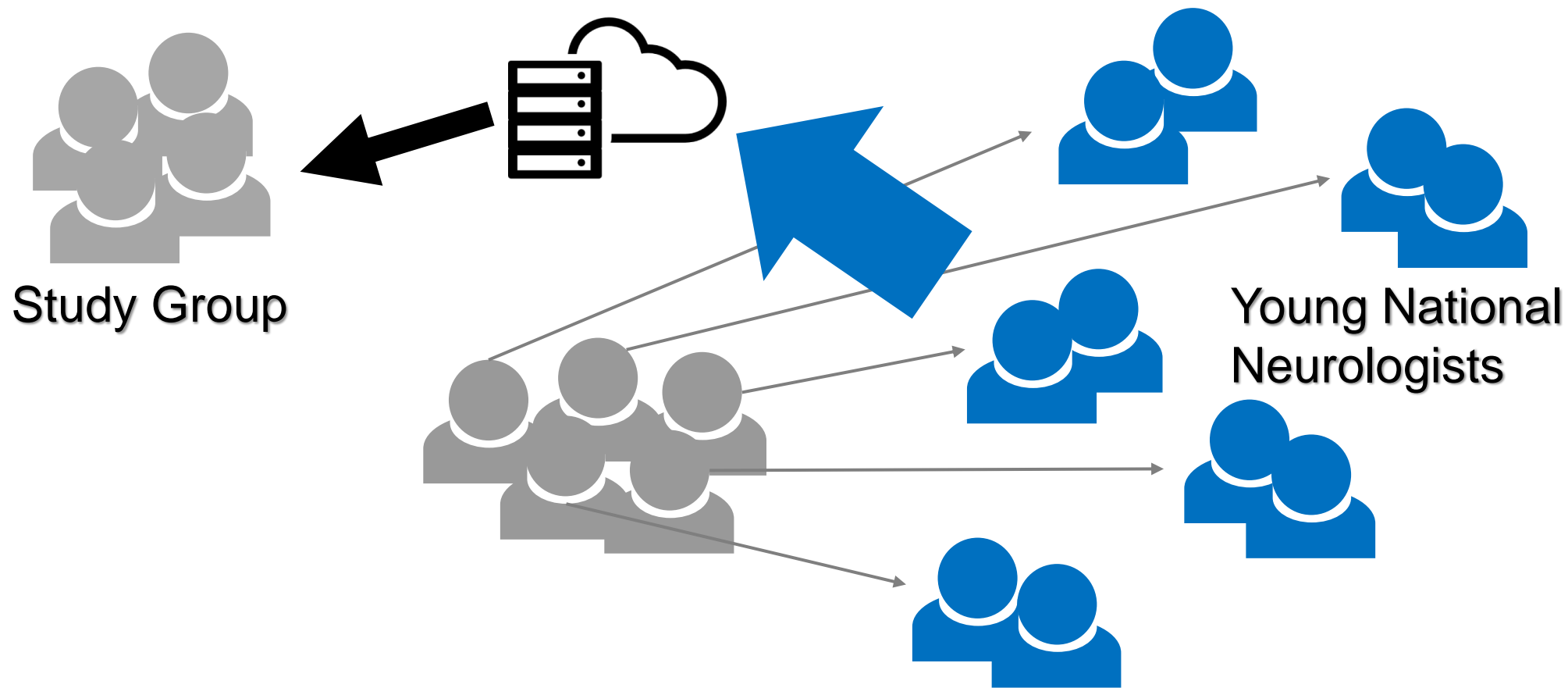


Short Communication

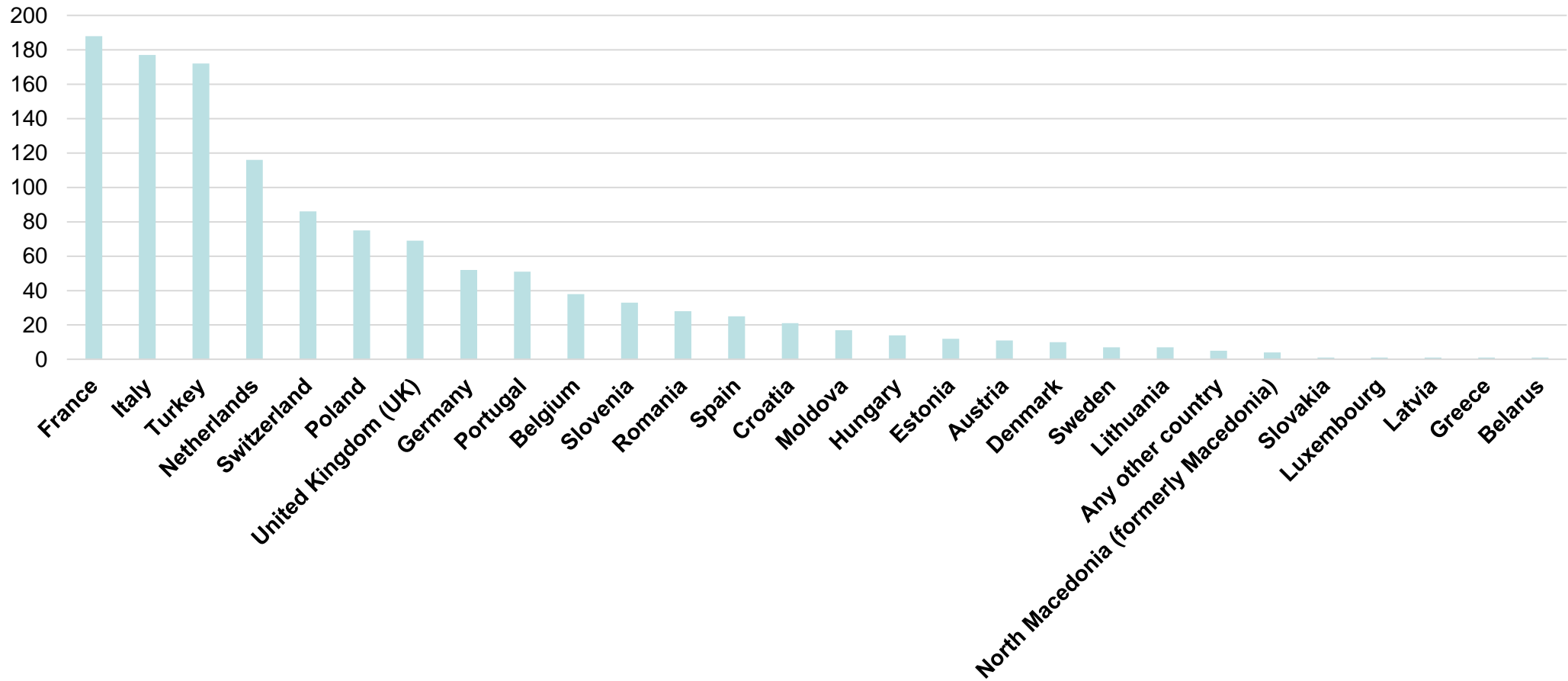
Do you want to perform endovascular therapy? Perspectives from neurology trainees across Europe

D. R. Schreier , F. Di Lorenzo, F. Iodice, S. Shribmanon behalf of ... [See all authors](#) ▾

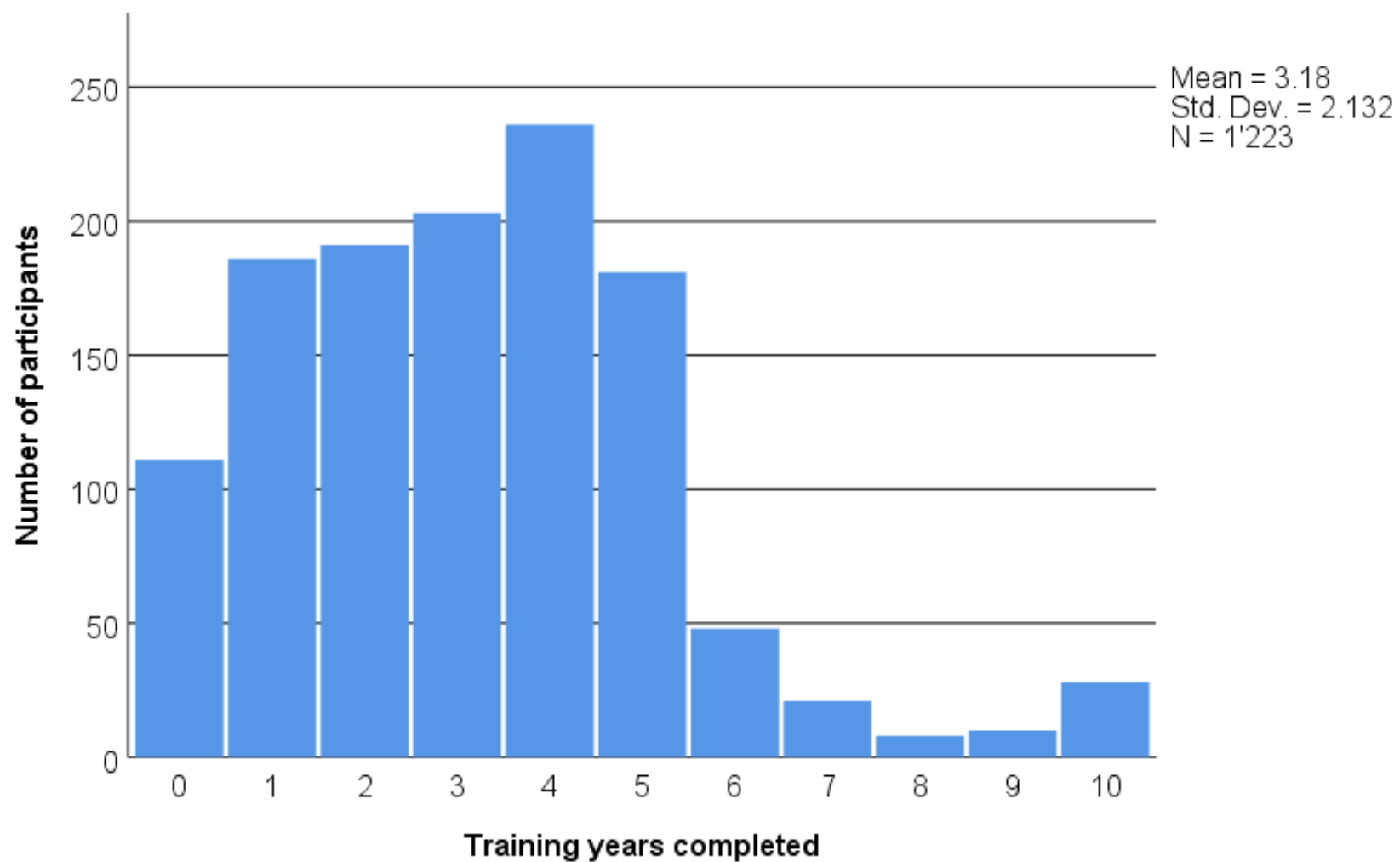
Data collection



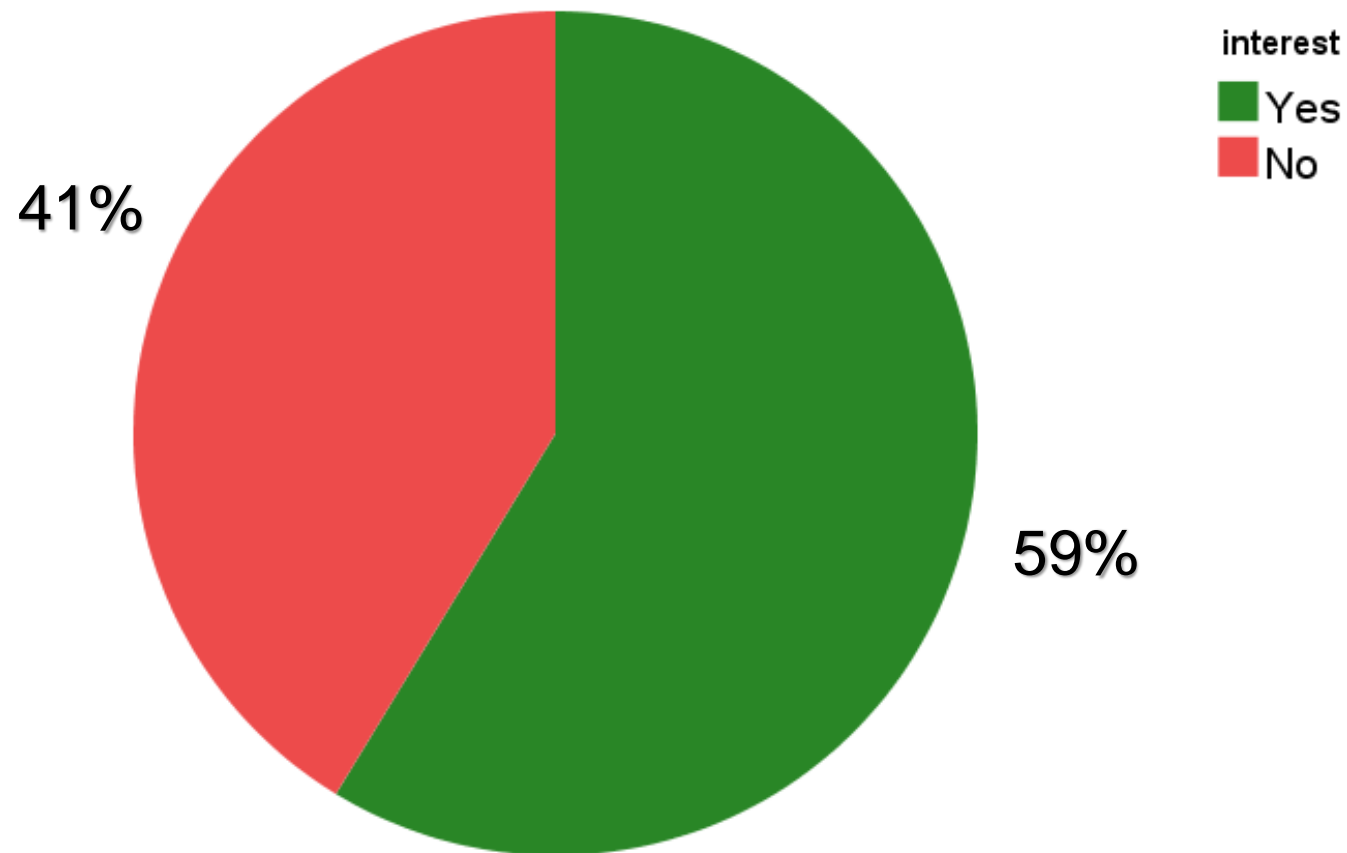
Surveys completed (n = 1,223) / Country participation

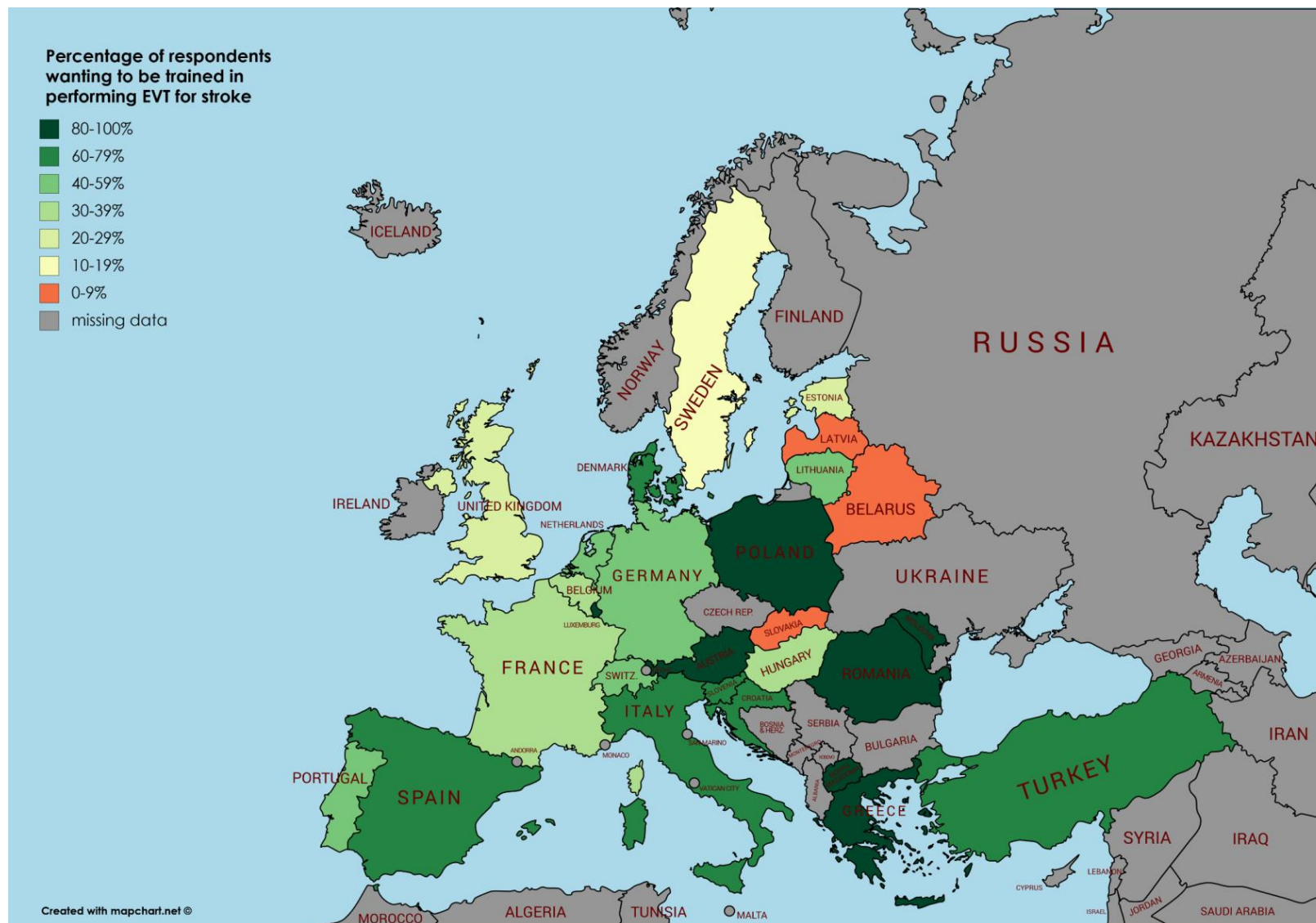


Stage within training

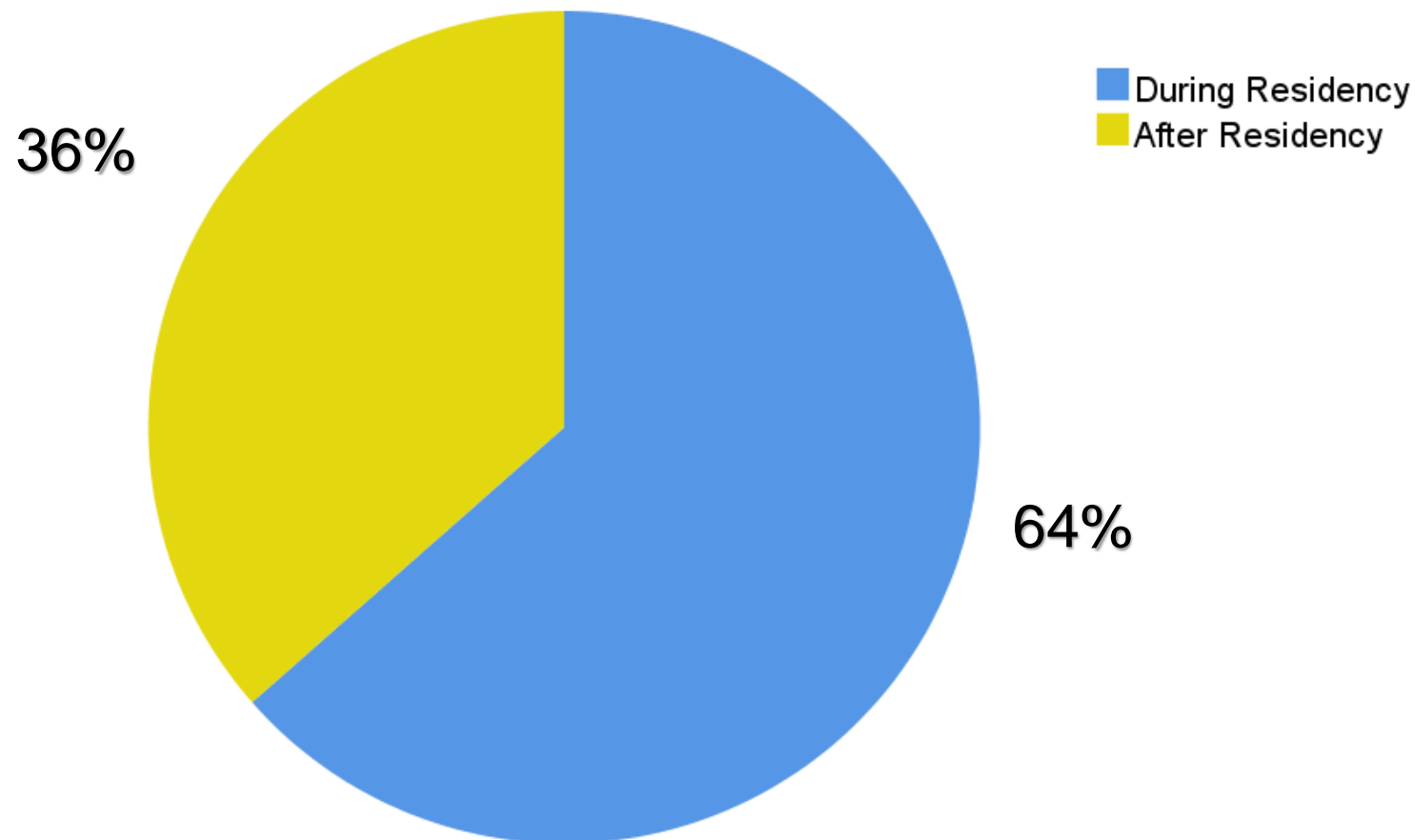


Do young European Neurologists want to be trained in EVT?

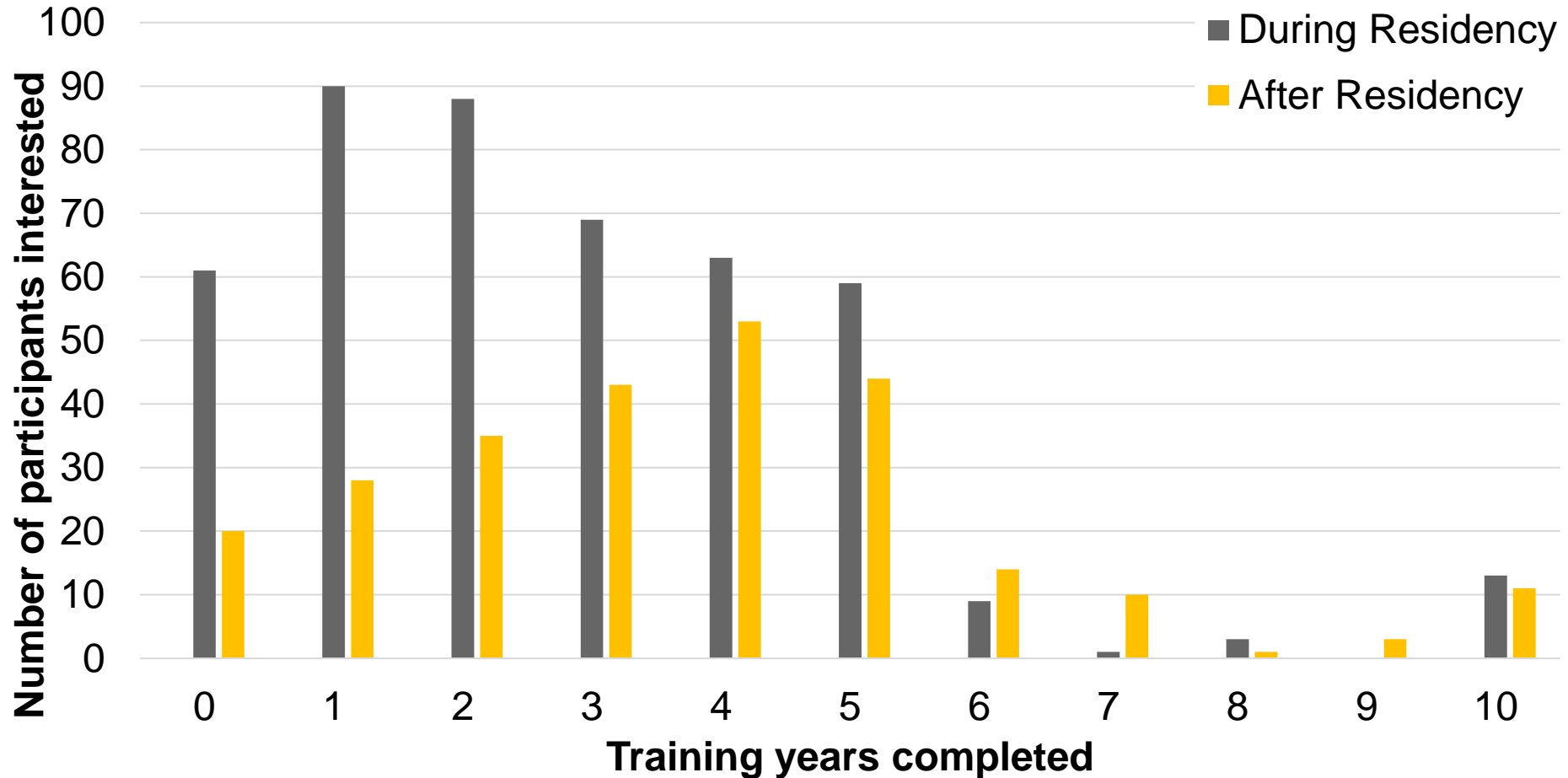




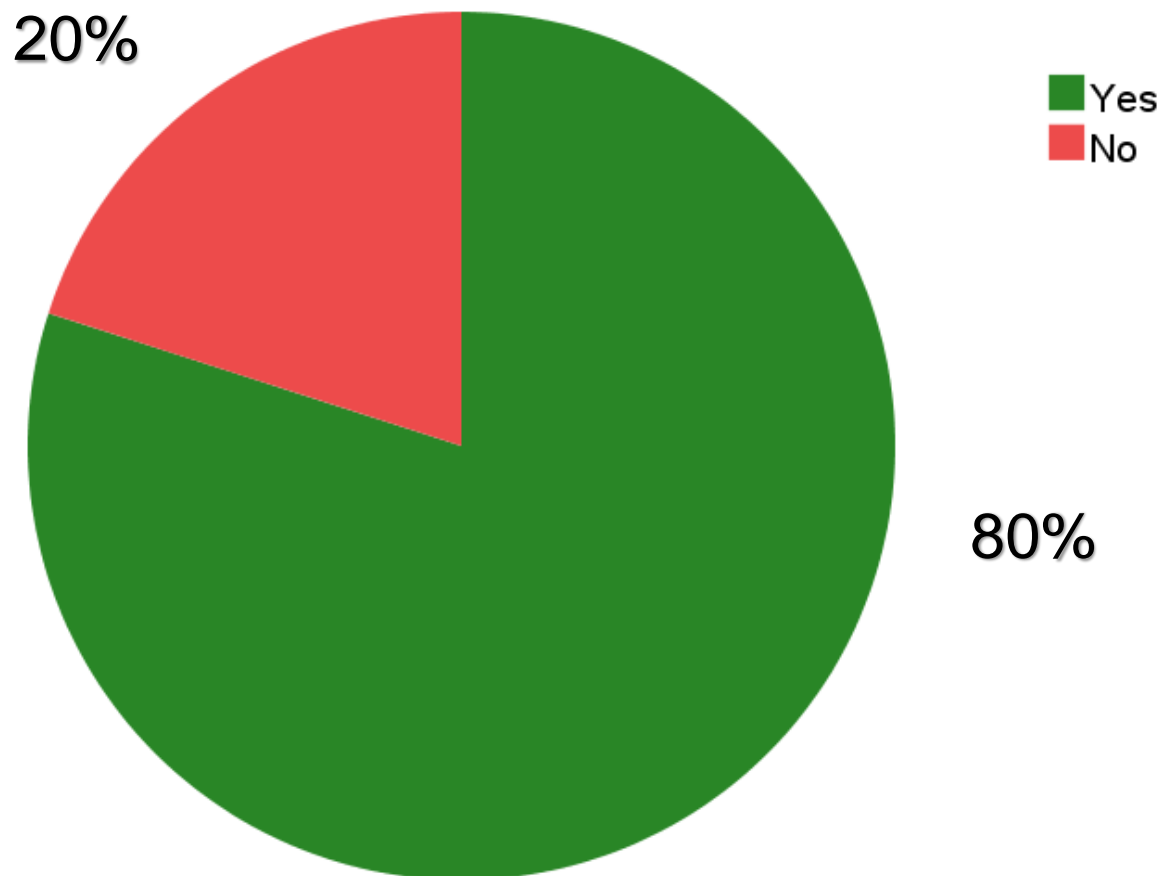
Interested Neurologists: EVT training during or after residency?



EVT training during/after is related to stage within training



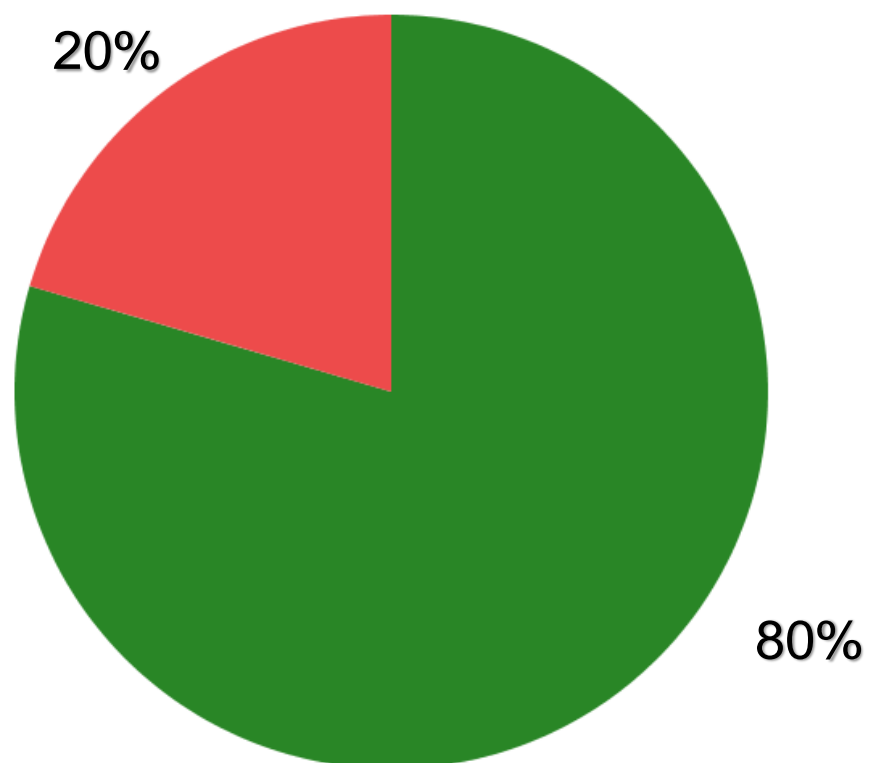
Interested Neurologists: would they go abroad for EVT training?



Do young European Neurologists want to be Neurointerventionalists?

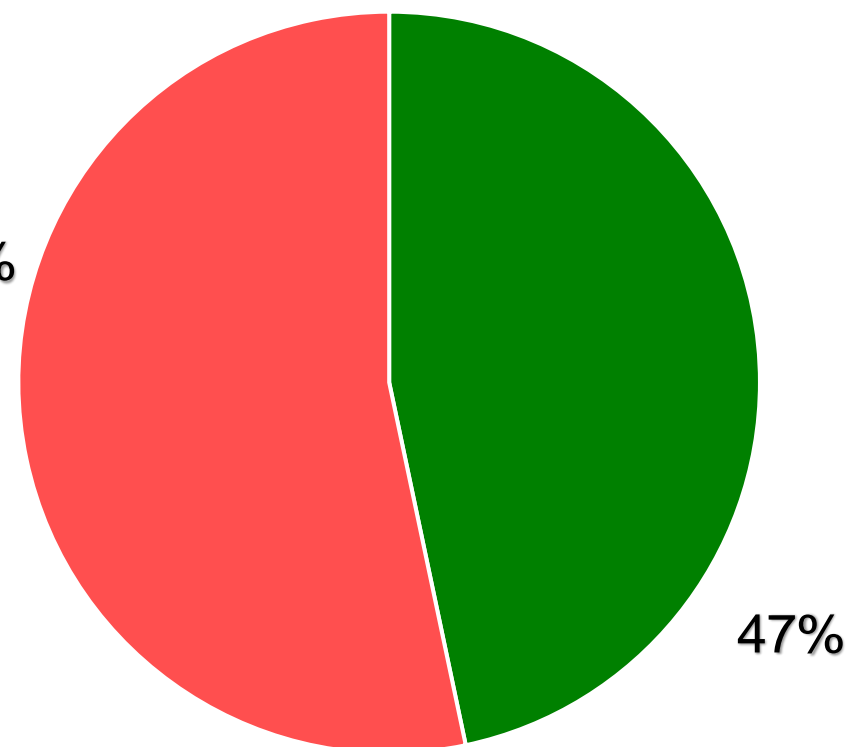
Among those who want EVT training

Overall



■ Yes
■ No

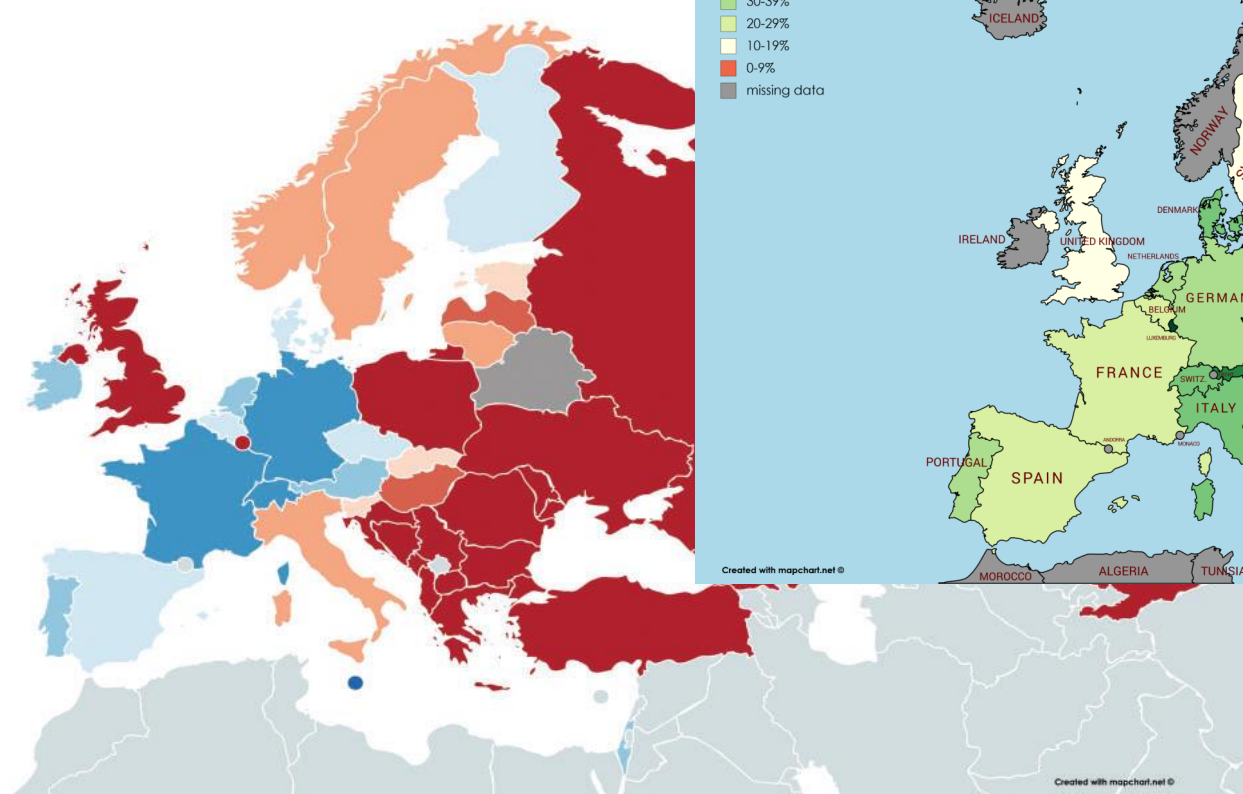
53%



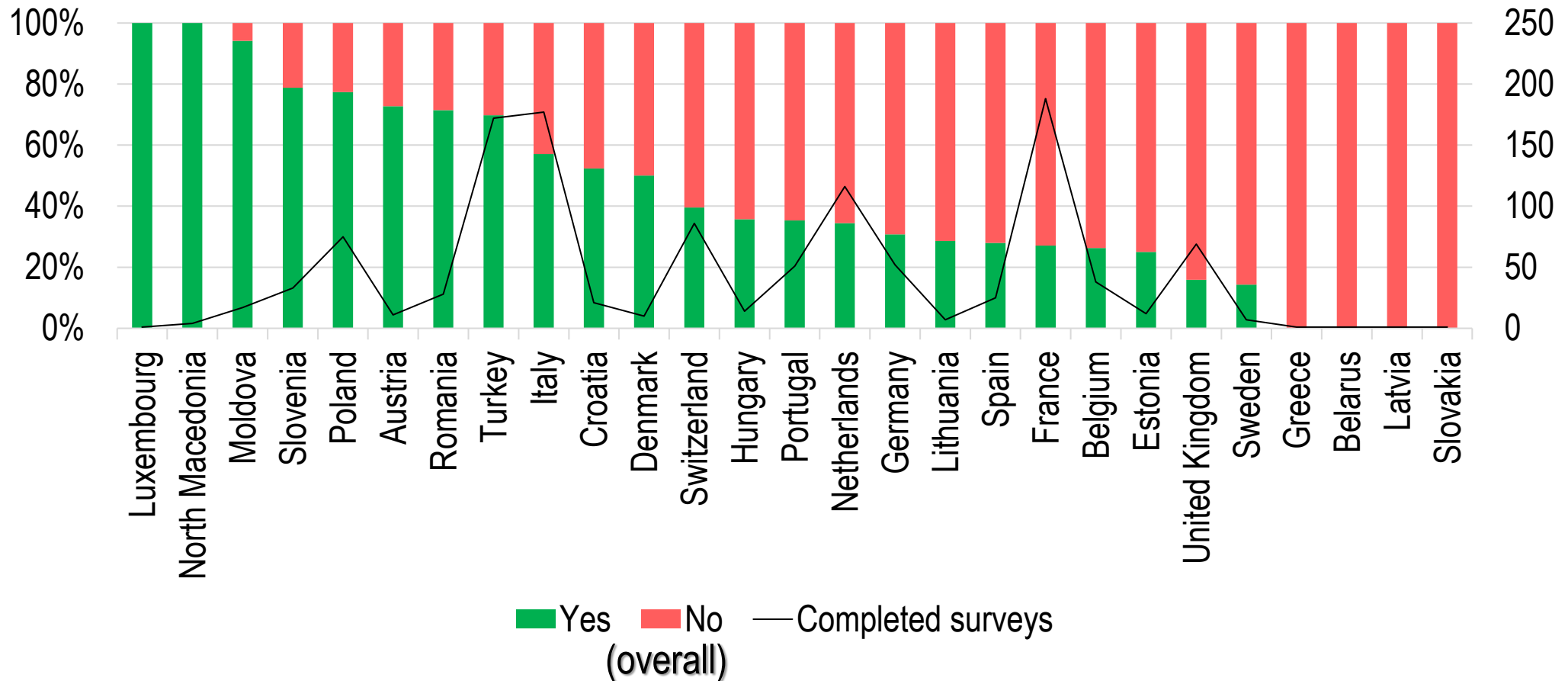




**Aguiar de Sousa et al. *Eur Stroke J.*
2019;4(1):13-28**



Bias due to response rate?



Open possibilities

- **Separated careers**
- **Post-residency education (master..)**
- **Renewal of the training path**

1. More than half (55%) of young Italian and European Neurologists want to be trained in EVT and 80% of them could continue working as an 'Interventional Neurologist'
2. In countries with a low proportion of patients with ischemic stroke receiving EVT, the interest of young Neurologists to become an 'Interventional Neurologist' tends to be higher.
3. EVT-training could be during or after residency (or both).
4. EVT-training could be abroad.
5. Both Young Italian and European Neurologists need the opportunity to be trained in EVT and to work as 'Interventional Neurologists'

Take home messages

- **The debate is still open**
- **Overall interest in endovascular therapy**
- **Many residents open to new educational scenarios (stroke physician...)**

THANKS