Exploring the Benefits and Risks of Expanding Criteria for Endovascular Thrombectomy (EVT)

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OTTAWA INTERVENTIONAL NEURORADIOLOGY

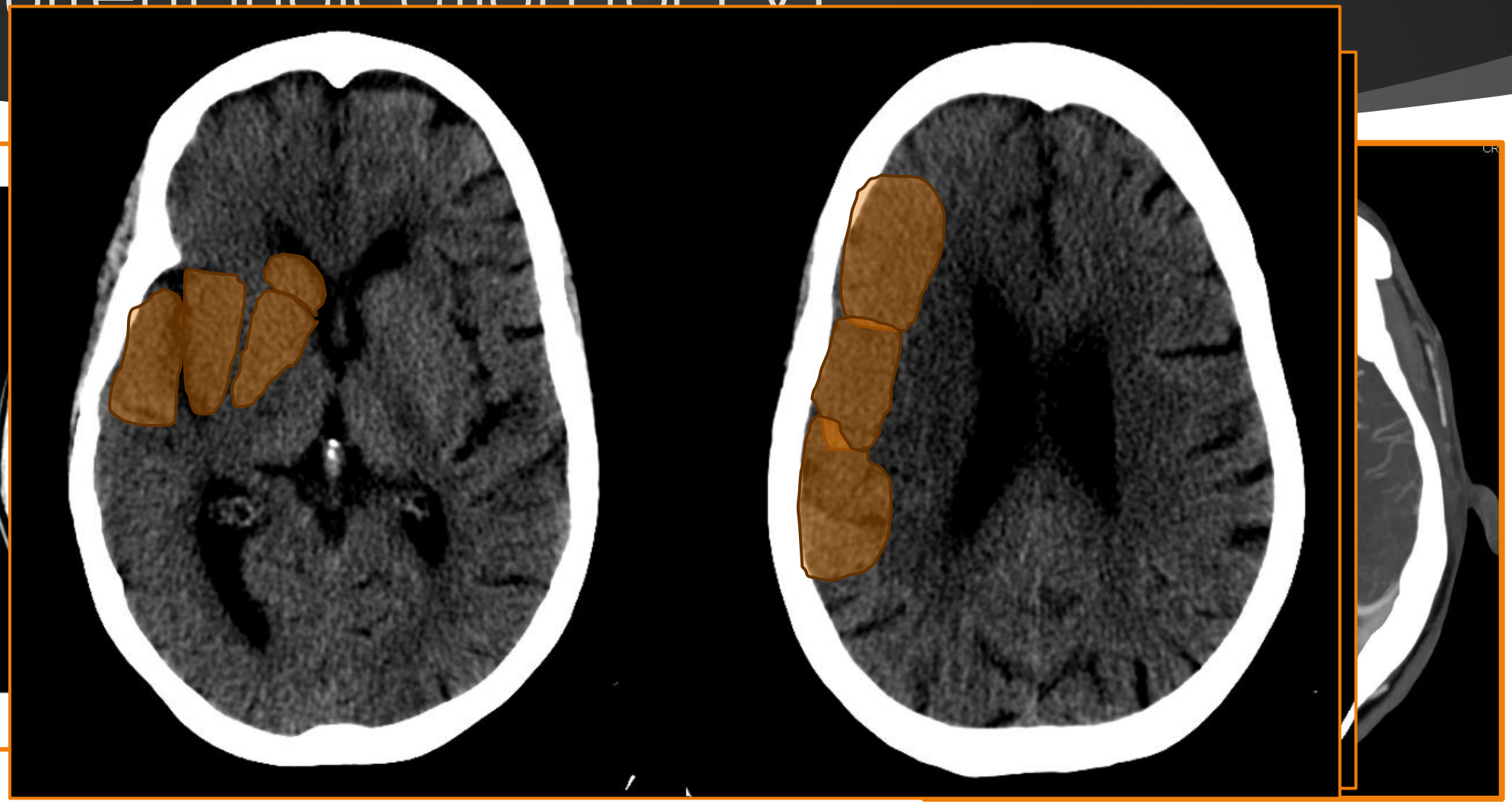
OTTAWA STROKE PROGRAM

Disclosures

- **Consultant for the following companies:**
  - **Stryker Neurovascular**
  - **Microvention**
  - **Cerenovus**
  - **Johnson & Johnson**
  - **Balt**
  - **Yocan Medical Systems**
  - **Medtronic**
  - **Vena Medical**

Current indication for EVT

1.
2.
3.



EVT in case of mild symptoms

- **Stroke with a Large Vessel Occlusion and Mild Symptoms** (NIHSS 0-5).
  - Risk of subsequent neurological deterioration (15-35% according to studies)
  - Mild symptoms inducing significant disability (isolated aphasia for example)
  - Associated with small core and large penumbra = highest chances of good evolution after a successful EVT
- **Current EVT techniques**
  - Successful recanalization>90%
  - High rates of first-pass successful recanalization (ie fast and safe procedures)
  - Cooperative patients (mild symptoms).

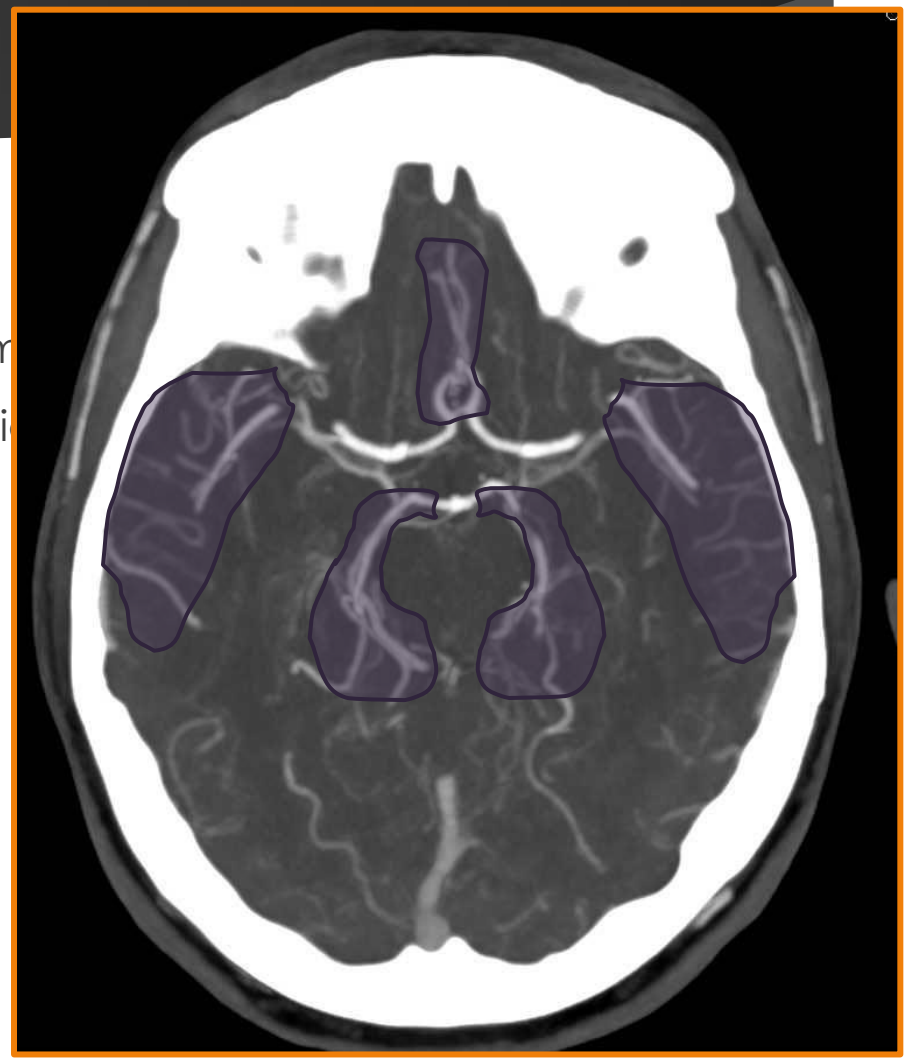
Trials about EVT + Mild Symptoms

- **Ongoing Randomized Controlled Trials**
  - MOSTE (French)
  - Endolow (North America)

- Expected results 2026-2027

EVT in case of distal occlusions

- **Stroke with a medium vessel occlusion (meVO)**
  - 25-40% of current acute ischemic strokes
  - High risk of poor neurological outcome (>35% of mRS>2 at 3 m
  - Associated with small core = highest chances of good evoluti
- **Current EVT techniques**
  - Successful recanalization>80%
  - Cooperative patients (mild symptoms).



Trials about EVT + MeVO

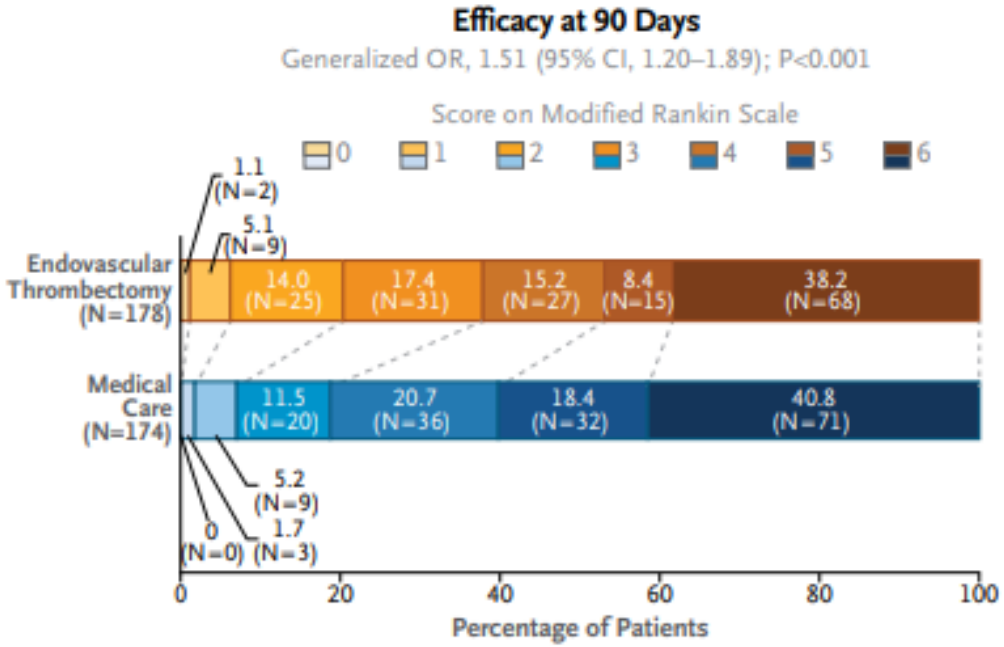
Trial name	DISCOUNT NCT05030142	DISTAL NCT05029414	DISTALS NCT05030142	ESCAPE-MeVO NCT05151172	FRONTIER-AP ACTRN 12621001746820p
Sample size	488	526	168	530	240
Primary outcome	90-d mRS, 0–2	90-d mRS (shift analysis)	Successful reperfusion on imaging without symptomatic ICH	90-d mRS (shift analysis)	90-d mRS
Included occlusion locations	Distal M2/M3 middle cerebral artery	Nondominant or codominant M2/M3/M4 middle cerebral artery	Any non-LVO with distal vessel diameter ≥1.5 mm	M2/M3 middle cerebral artery	M2/M3 middle cerebral artery
	A1/A2/A3 anterior cerebral artery	A1/A2/A3 anterior cerebral artery		A2/A3 anterior cerebral artery	A1/A2 anterior cerebral artery
	P1/P2/P3 posterior cerebral artery	P1/P2/P3 posterior cerebral artery		P2/P3 posterior cerebral artery	
Other imaging criteria	Absence of carotid tandem occlusion	0–6 h: no other criteria	Perfusion lesion volume ≥10 mL	ASPECTS ≥6	Under 4.5 h: hypodensity <50% of MCA or ACA territory
		6–24 h: hypoperfusion-hypodensity or FLAIR-DWI mismatch	Perfusion core volume ≤50% of the perfusion lesion volume. Absence of carotid tandem occlusion	Absence of salvageable brain tissue in the MeVO territory on any imaging modality	4.5–9 h: ischemic core <70 mL
Included NIHSS range	≥5	≥4 or disabling symptoms	4–24 or 2–3 with aphasia or hemianopsia	>5 or 3–5 with disabling symptoms	≥5 or disabling symptoms
Time frame (maximum time last known well to randomization)	≤6 h	≤24 h	≤24 h	≤12 h	≤ 9 h
Devices allowed	Trevor, Preset, Catchview mini, and aspiration catheters	Any CE-marked device	Tigertriever 13	Solitaire	Solitaire

EVT in case of large cores

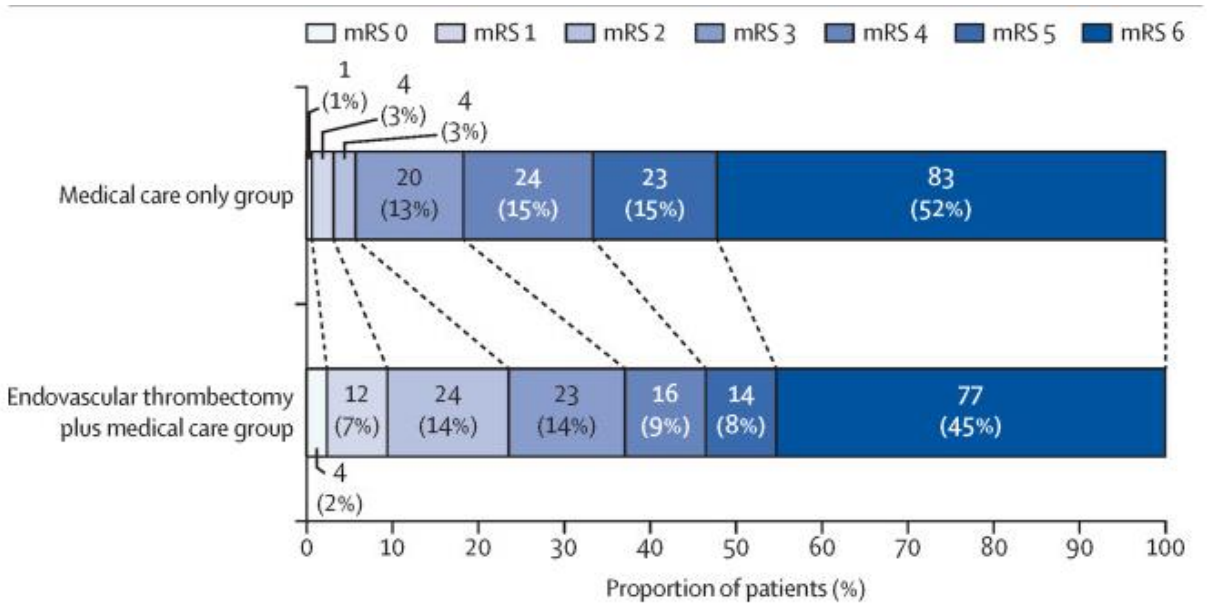
- **Stroke with a large core (ASPECTS<5).**
  - Little to no chances of good outcome in the absence of recanalization
  - High mortality
  - Usually not candidates for intravenous thrombolysis.

Trials about EVT + Large Cores

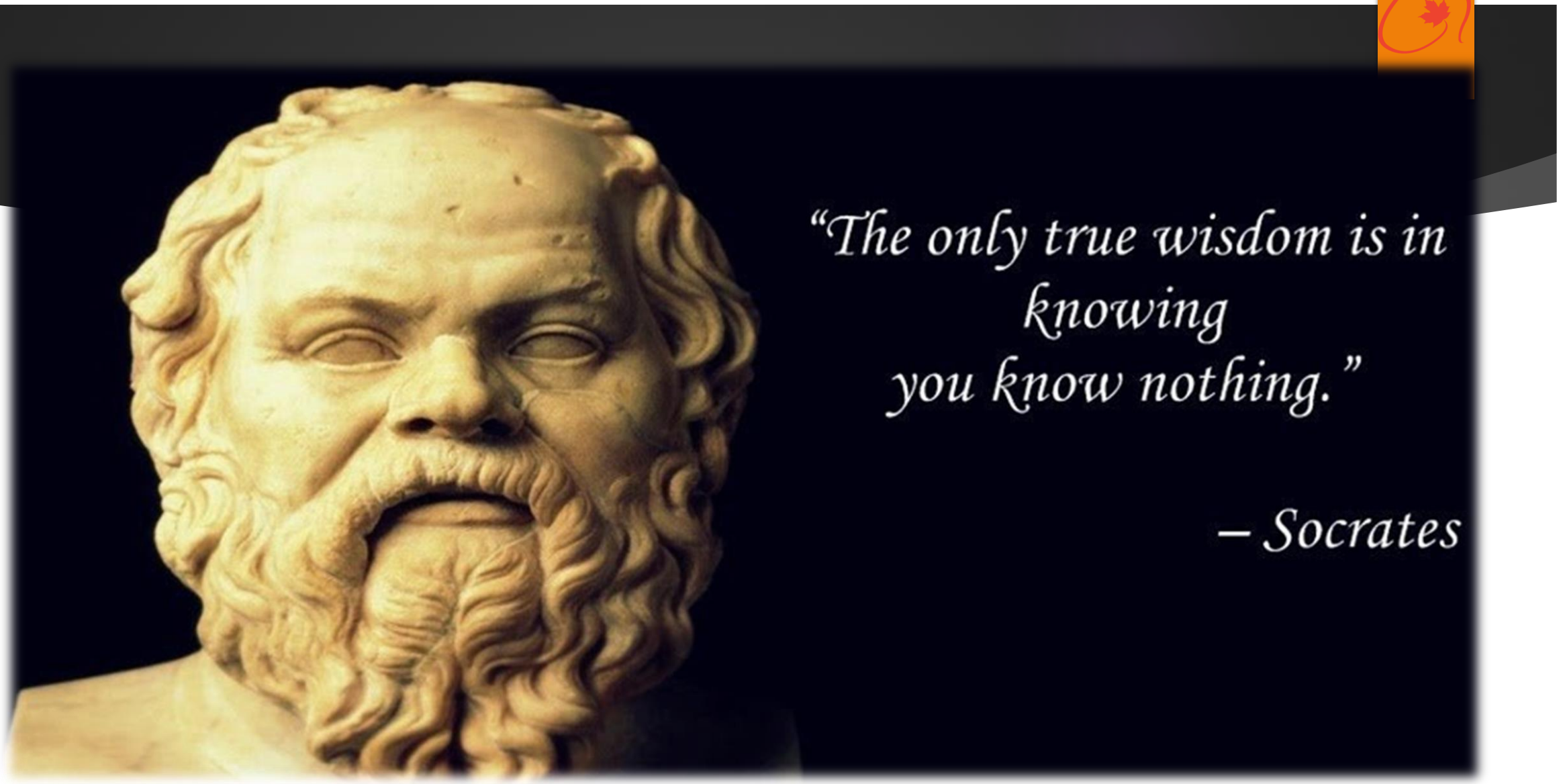
- **SIX (6) POSITIVE RANDOMIZED CONTROLLED TRIALS showing superiority of EVT over medical management alone**



3 months follow-up



12 months follow-up


"The only true wisdom is in knowing you know nothing."
– Socrates