MEET 2015
MULTIDISCIPLINARY EUROPEAN
ENDOVASCULAR THERAPY

Neurocognitive Functioning After Carotid Endarterectomy and Carotid Stenting With Filter Protection or Flow Reversal

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Disclosure

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I have the following potential conflicts of interest to report:

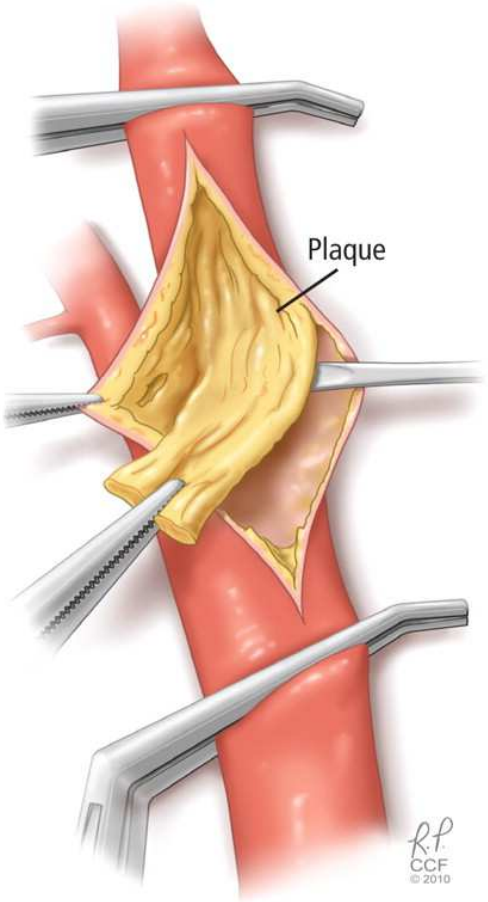
- ☐ Consulting
- ☐ Employment in industry
- ☐ Shareholder in a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)

- ■ I do not have any potential conflict of interest

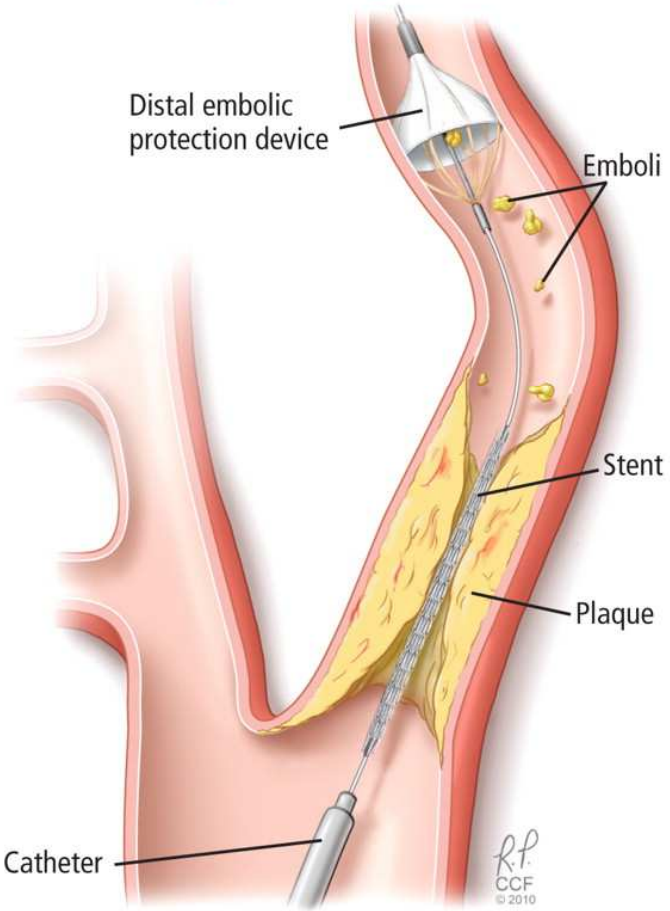
Cognitive effects?

Carotid stenting vs surgery

Carotid endarterectomy



Carotid artery stenting



FAST-CAS

Flow **A**ltered **S**hort **T**ranscervical **CAS**
With MICHI™ Neuroprotection System

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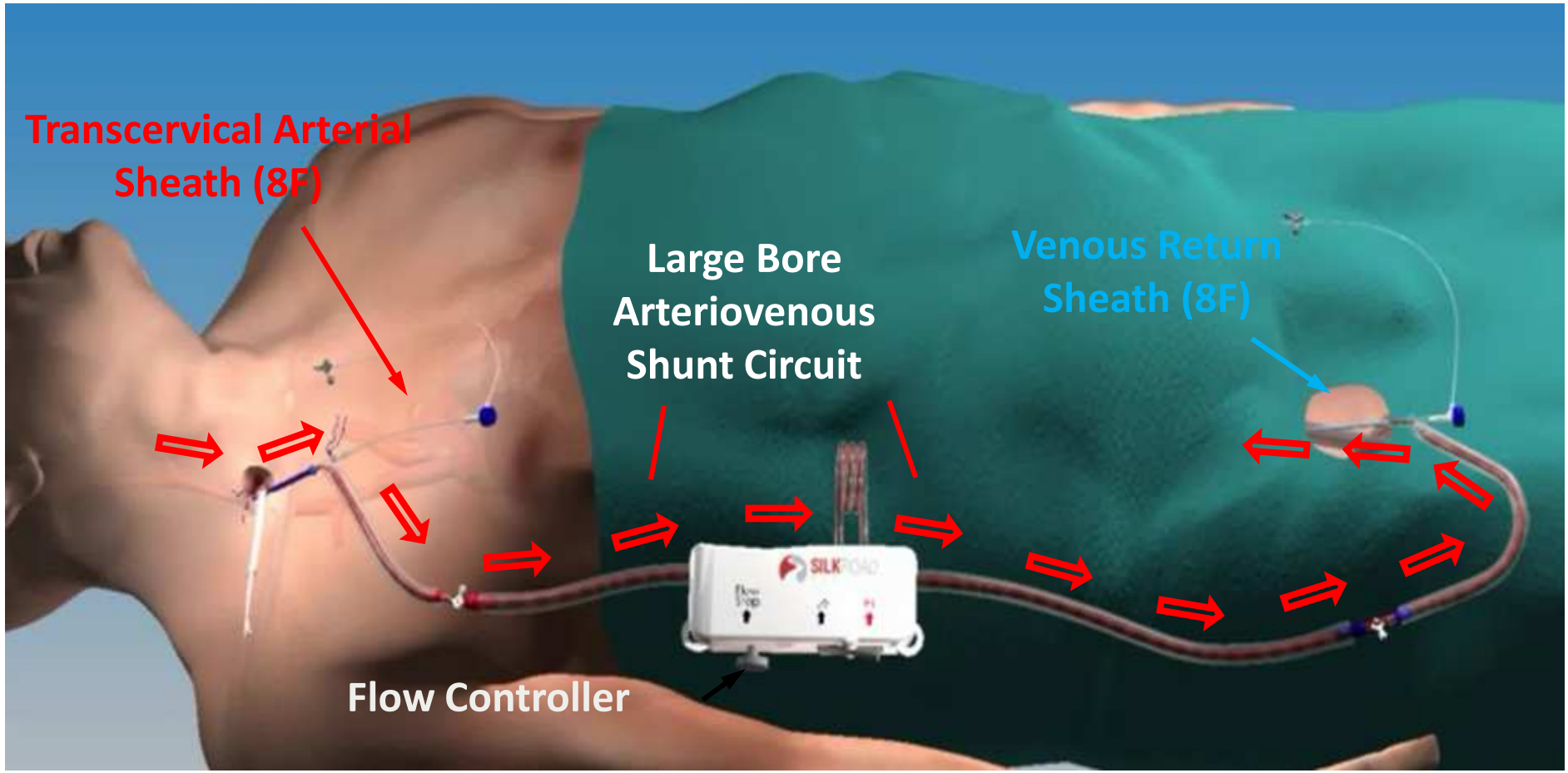


Current Research

- Asymptomatic high grade carotid stenosis on BMT or symptomatic TIA
  - 26 CEA
  - 20 CAS
    - 10 Transfemoral distal protection
    - 10 Transcervical flow reversal

- 26 Matched controls, patients with PAD
  - carotid stenosis < 50%
  - matched for age, sex, SES

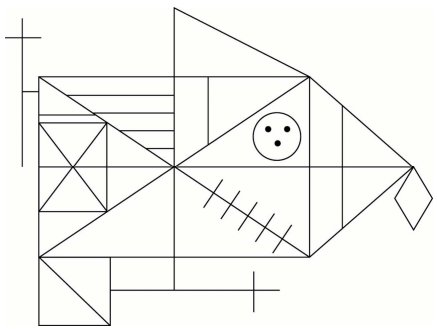
- *Exclusion criteria*
  - *Age > 80j*
  - *Ethyl*
  - *Symptomatic stroke*
  - *CEA / CAS < 2j*
  - *CABG < 1j*
  - *MMSE ≤ 24*

Research protocol

	Pre-operative	1 Month	6 Months	12 Months
Neurocognitive testing	✔	✔	✔	✔

- Mini Mental State Examination
- Adult Reading Test
- Complex Figure Test
- Audio Verbal Learning Test
- Trail Making Test
- Digit span (repeat numbers)
- Spatial span (Corsi block-tapping test)

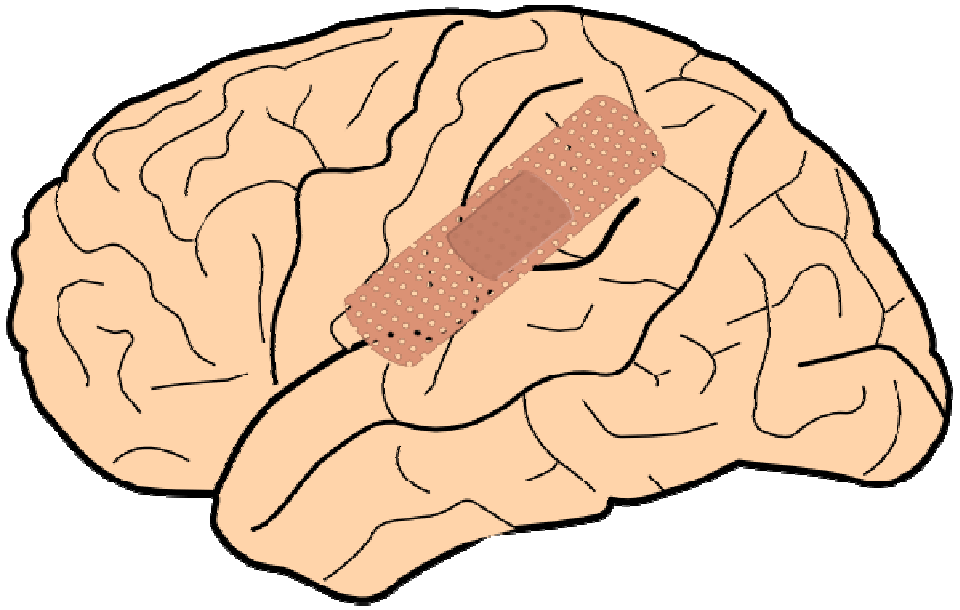
•Stroop
•Line bissection
•Symbol Substition Coding Task
•Grooved pegboard
•D-2 concentration endurance test
•Verbal fluency



Preoperative Cognition

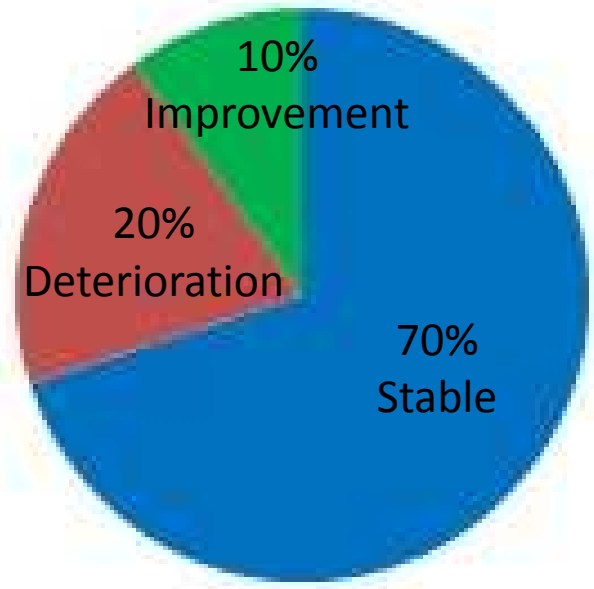
(compared with normative data)

- Cognitive impairment
  - 54 % of carotid patients
  - 46 % of vascular controls



Outcome after revascularization

- No group differences
- No interactions
- Large effects of timing for 13 out of 18 variables



Conclusions

- Similar cognitive effects for each intervention
  - Limitation: statistical power
- Large practice effects
- Control group is important