Not So Fast! ACST 2 – Like CREST – Has Flaws That Invalidate Their Conclusions: Invasive Therapies May NOT Be Better Than BMT

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Interpretation

"Serious complications are similarly uncommon after competent CAS and CEA, and the long-term effects of these two carotid artery procedures on fatal or disabling stroke are comparable."

Conclusion drawn from ACST 2

- CEA and CAS are equally good
- So they are both good for patients with asymptomatic carotid stenosis

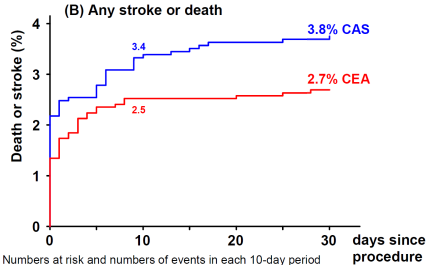
Is that true?

ACST 2

- 1% had disabling procedural stroke or death (15 CAS and 18 CEA)
- 2% had non-disabling procedural stroke (48 CAS and 29 CEA).
- Kaplan-Meier estimates of 5-year non-procedural stroke were
- 2·5% in each group with fatal or disabling stroke
- With any stroke, 5·3% with CAS versus 4·5% with CEA
- RR 1·16, 95% CI 0·86–1·57; p=0·33

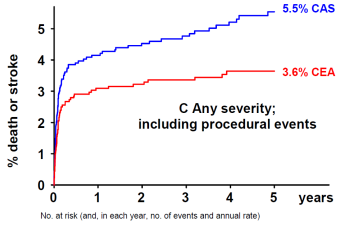
Halliday A, et al. Lancet. 2021;18 (398):1065-73.

Periprocedural risk higher with CAS



Halliday A, et al. Lancet. 2021;18 (398):1065-73. (Supplement)

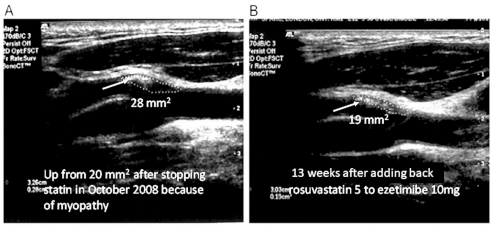
Long-term outcomes worse with CAS



Halliday A, et al. Lancet. 2021;18 (398):1065-73. (Supplement)

Intensive medical therapy is better than either CEA or CAS

Lipid lowering reduces plaque size and plaque risk within weeks



Spence JD. Atherosclerosis. 2019;287:179-80.

Paradigm change:
Treating arteries, not risk factors

Instead of treating risk factors to target, since 2003 we **treat patients more intensively if their plaque is progressing ,** regardless of their level of LDL or other risk factors

i.e. – since 2003
our **target is now plaque regression**

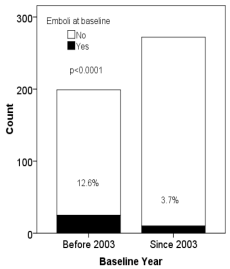
"Treating arteries instead of risk factors"

What happened in patients with asymptomatic carotid stenosis?

- n = 468 Asymptomatic Carotid Stenosis patients
- 199 enrolled Jan 2000-Dec 2002
- 269 enrolled Jan 2003-July 2007

Spence JD, et al. Arch Neurol. 2010;67(2):180-6.

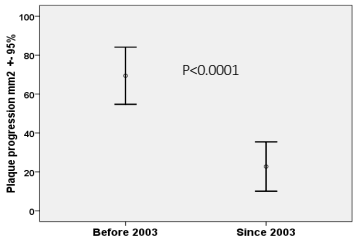
Decline of microemboli with more intensive medical therapy



< 10% of ACS patients can now benefit from carotid endarterectomy or stenting

Spence JD et al. Arch Neurol. 2010;67:180-6

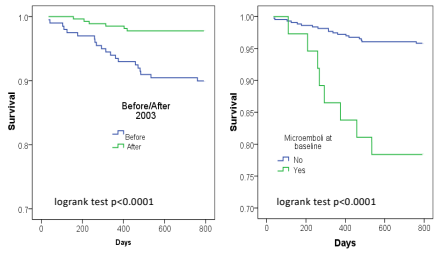
Annual rate of plaque progression in ACS patients before and since 2003



n= 346

Spence JD et al. Arch Neurol. 2010;67:180-6

Kaplan-Meier Survival free of stroke, death, MI



Spence JD et al. Arch Neurol. 2010;67:180-6

Effect of "Treating Arteries" in asymptomatic carotid stenosis

2-year risk	Before 2003 n = 199	After 2003 n = 269	p
Stroke	8.8%	1%	0.005
MI	7.6%	1%	0.005

Annual risk of stroke 0.5%
Modern therapy would be even more effective

Spence JD et al. Arch Neurol. 2010;67:180-6

Real conclusions should be:

- CEA is safer than CAS
- Most patients with asymptomatic carotid stenosis are better treated with intensive medical therapy that with either CAS or CEA
- Only highly selected patients with asymptomatic stenosis should be subjected to CAS or CEA
  - e.g. patients with microemboli on TCD, intraplaque hemorrhage, etc.

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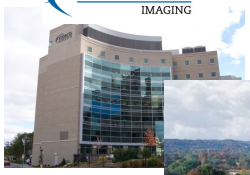
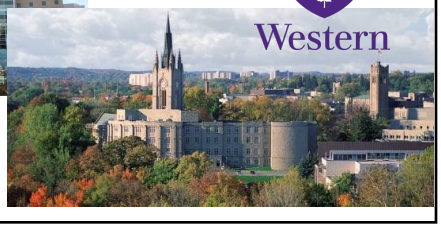


Western



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