

MEET 2015
MULTIDISCIPLINARY EUROPEAN
ENDOVASCULAR THERAPY

**What is the optimal approach to asymptomatic carotid stenosis?
Intervention or not? We cannot all be correct!**

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Disclosure

Speaker's name:

Alison Halliday.....

I do not have any potential conflict of interest



Intervention or not for Carotid Stenosis

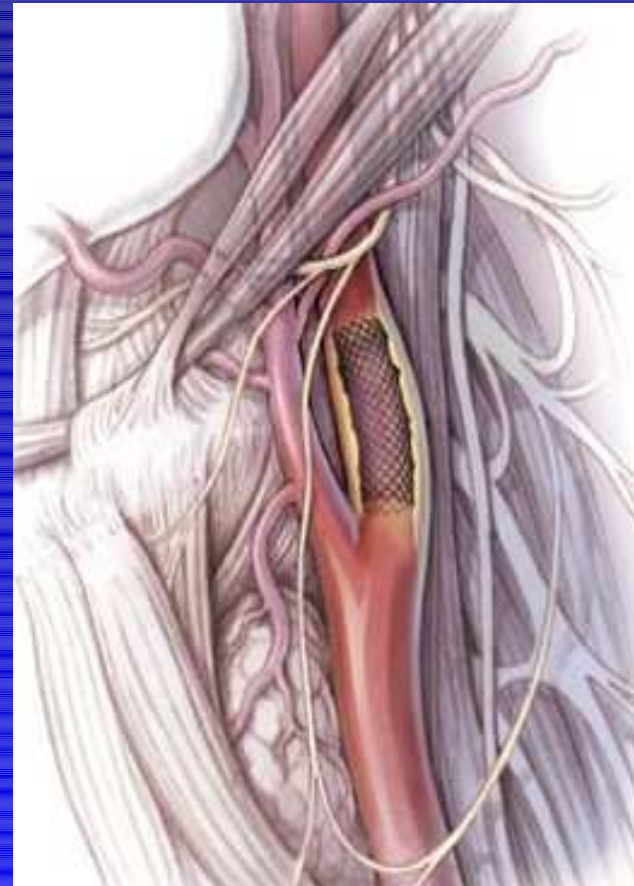
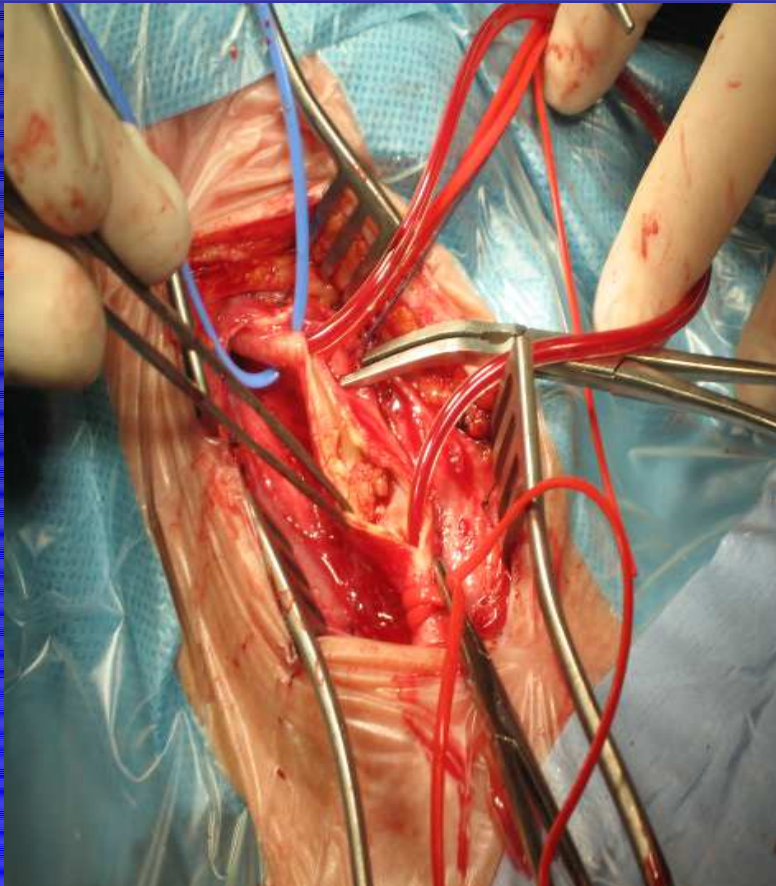
- Long-term randomised evidence
Is very important



ICSS - long-term evidence ...changing the future for CAS



ICSS - why operate for symptoms if stenting works as well or better?



ICSS Early results

In favour of CEA, >minor strokes after CAS

CAS operators much less experienced than CEA

Many centres stopped stenting

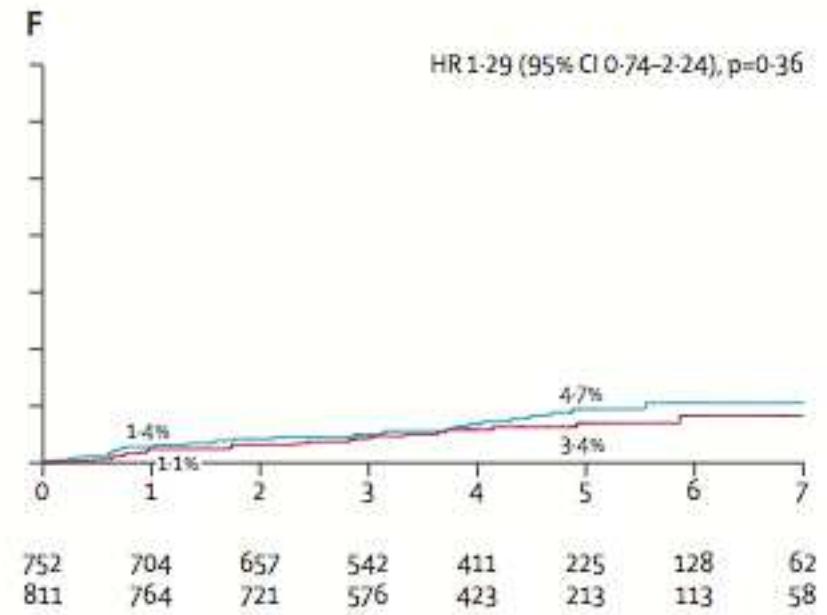
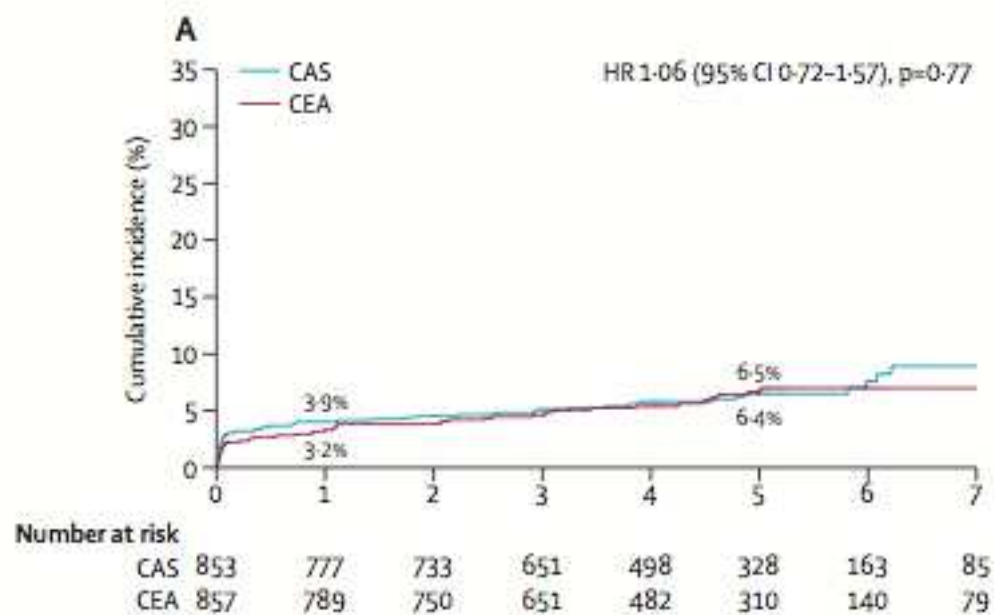
Others carried on, results improved, devices changed....

ICSS long-term results published in 2014

.....*a clearer picture*

ICSS 4 year follow up

**post-procedure
fatal/ disabling stroke ipsilateral stroke**



ICSS - 4 year follow up in 1700 patients (*Lancet, Oct 2014*)

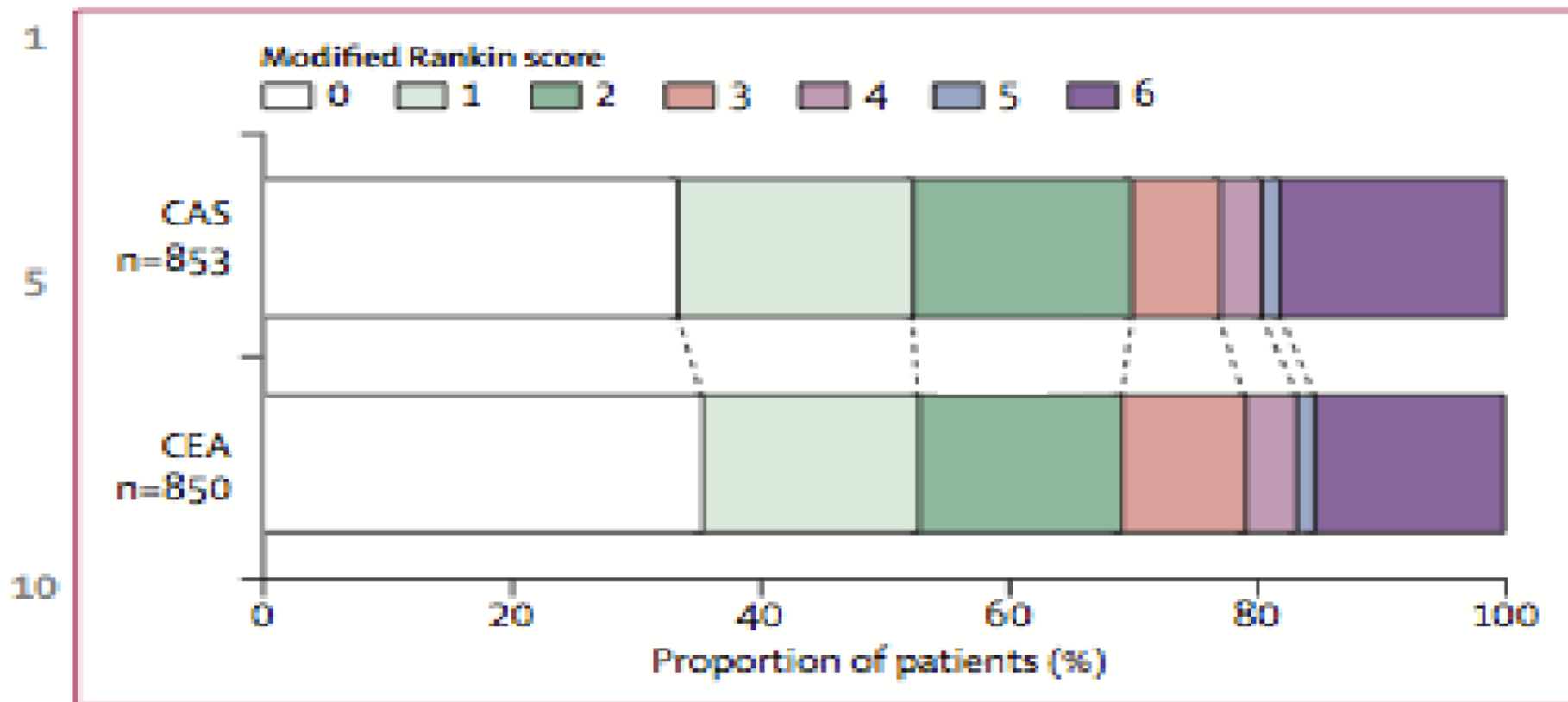


Figure 3: Functional ability measured by the modified Rankin Scale at the end of follow-up*

ICSS 4 yr follow up, symptomatic patients : *Lancet (Oct 2014)*

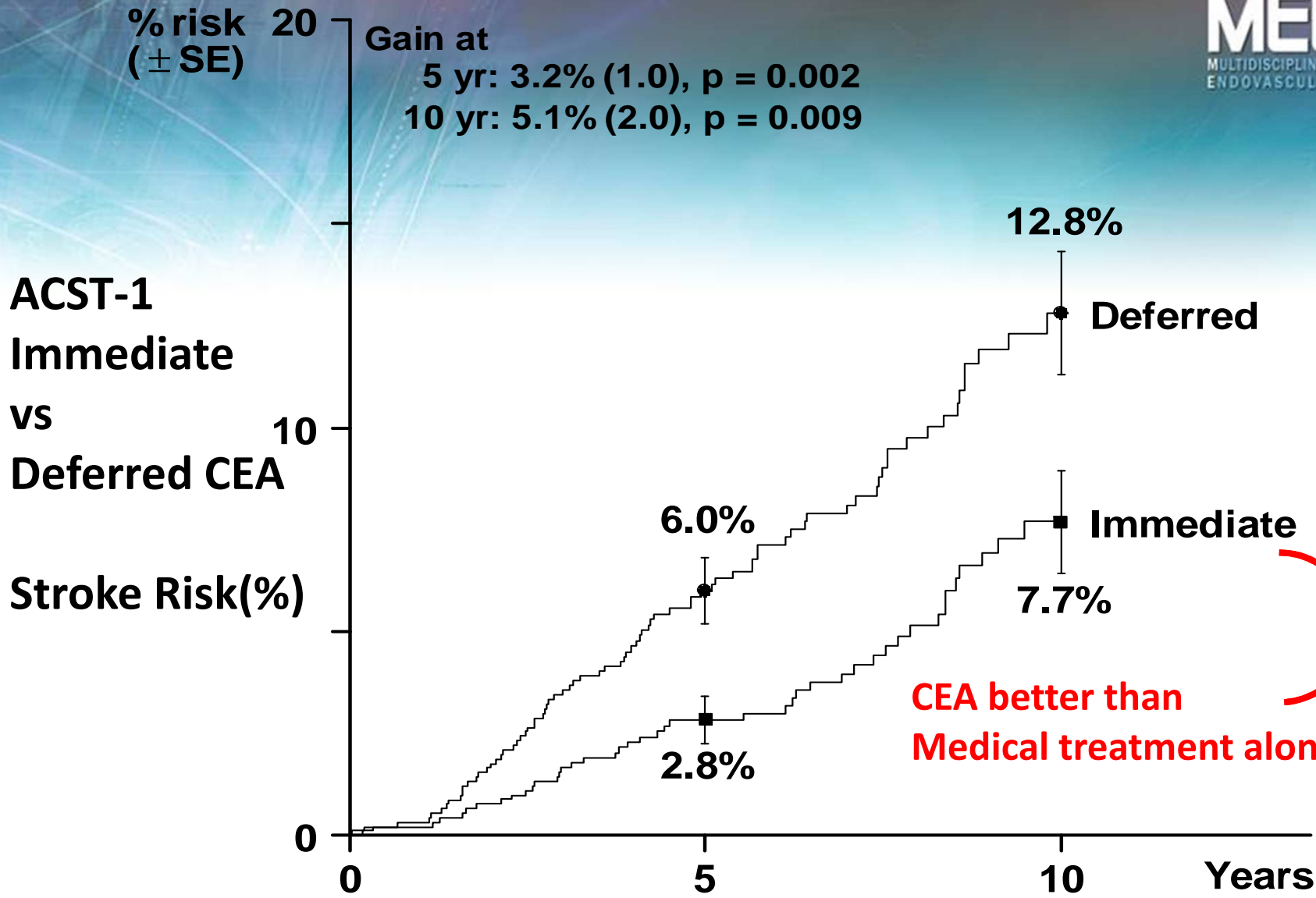
CEA vs CAS...

- ‘equivalent long-term disability’
- ‘quality of life is similar (after CAS) compared with endarterectomy’



CEA vs CAS Interventions for Carotid Stenosis Or Medical Treatment alone?

**- Long-term evidence
is of most importance**



Events/person-years		
Years 0-5	Years 5-10	
24/4212 (0.6% pa)	19/2042 (0.9% pa)	Immediate
51/4181 (1.2% pa)	28/1930 (1.5% pa)	Deferred

Guidelines – really uncertain about the optimal approach

AHA Carotid Disease Management Guidelines (2011)

It is reasonable to perform CEA in asymptomatic patients who have > 70% stenosis (Evidence Level: A)

Prophylactic CAS might be considered in highly selected patients with asymptomatic carotid stenosis (Evidence Level: B)

Society for Vascular Surgery Carotid Guidelines (2011)

Asymptomatic > 60% stenosis should be considered for CEA (Evidence Level: A)

CAS should not be performed except as part of an on-going clinical trial (Evidence Level: B)

RCP Stroke Guidelines (2012)

Surgery or stenting (CEA or CAS) for asymptomatic carotid artery stenosis should not routinely be performed unless as part of a randomised trial.

The CREST-2/ECST2/SPACE-2 Research question

For asymptomatic patients with stenosis which *might require* intervention:

Which is generally better
(in addition to good medical treatment)? :

Intervention or
Medical treatment alone

the ACST-2 research question..

For asymptomatic patients with tight stenosis
requiring intervention:

Which procedure is generally better
(in addition to good medical treatment)? :

carotid surgery (CEA)
or
carotid stenting (CAS)?

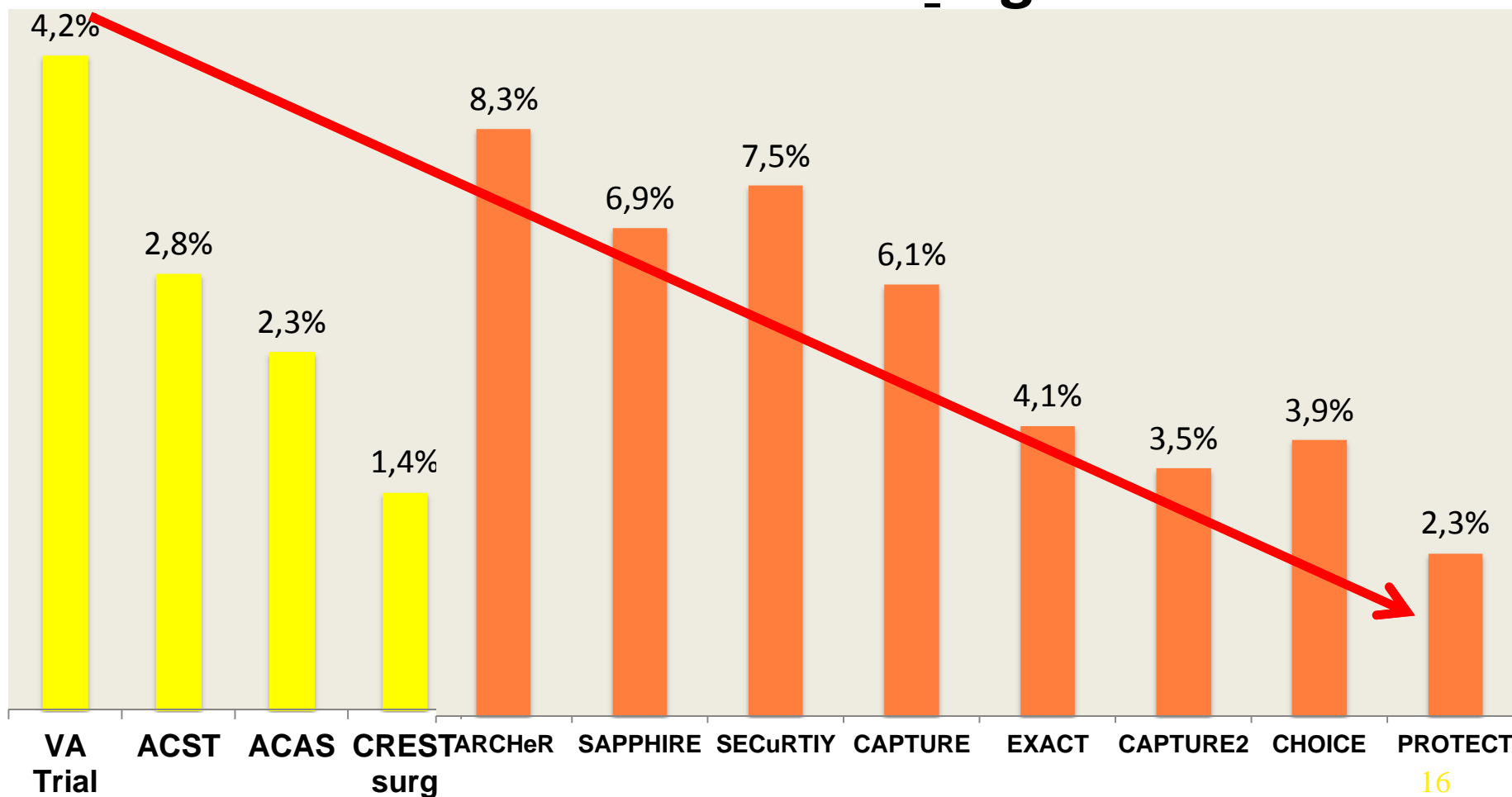


Better procedural outcomes for CEA and CAS since 1990's

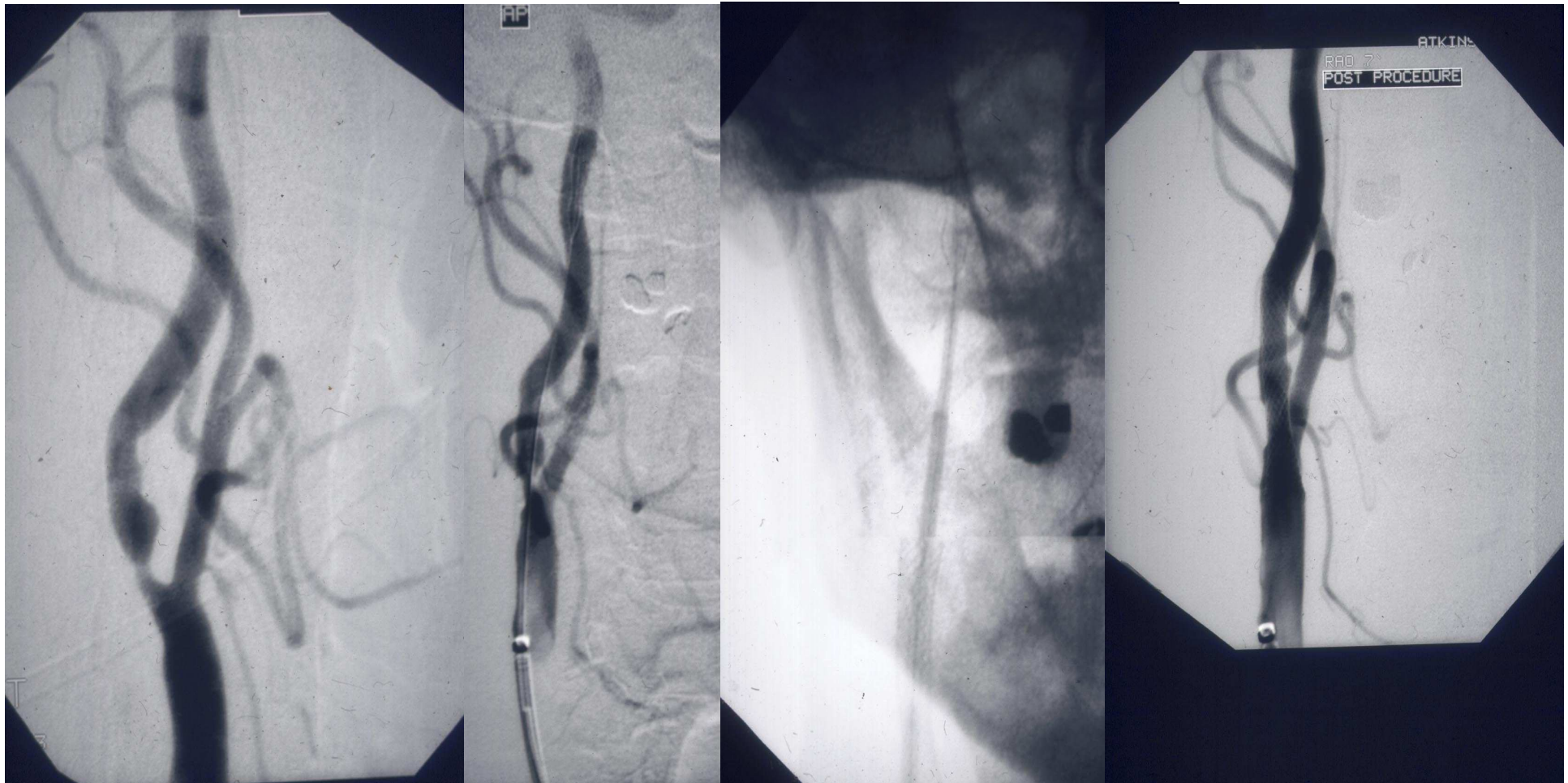


Can we all be correct?

Procedural hazards of CEA and CAS are falling in recent trials and registries

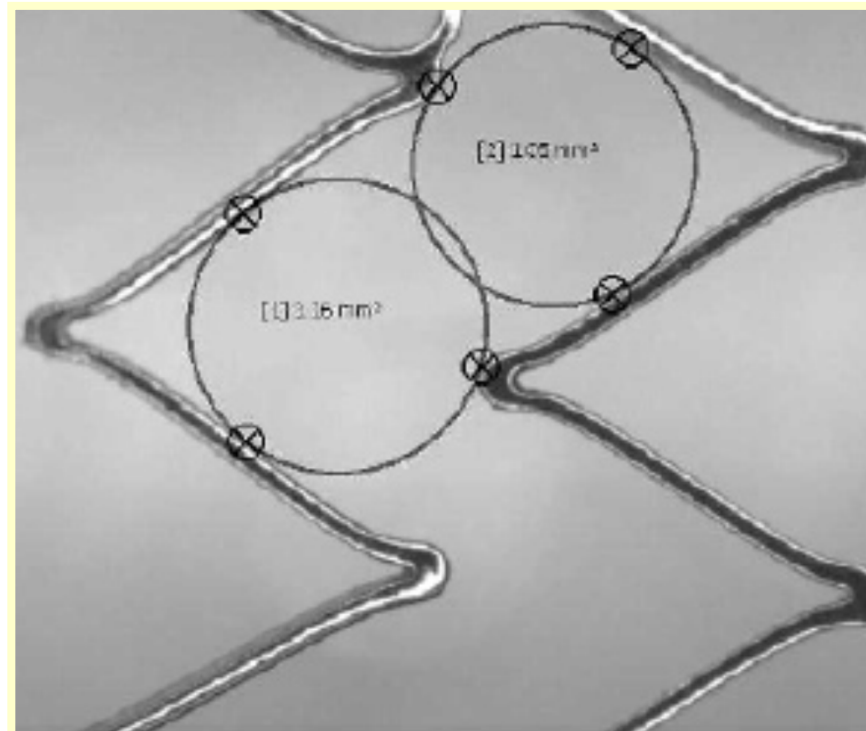


**Techniques, devices, experience have all
changed since the symptomatic trials...**

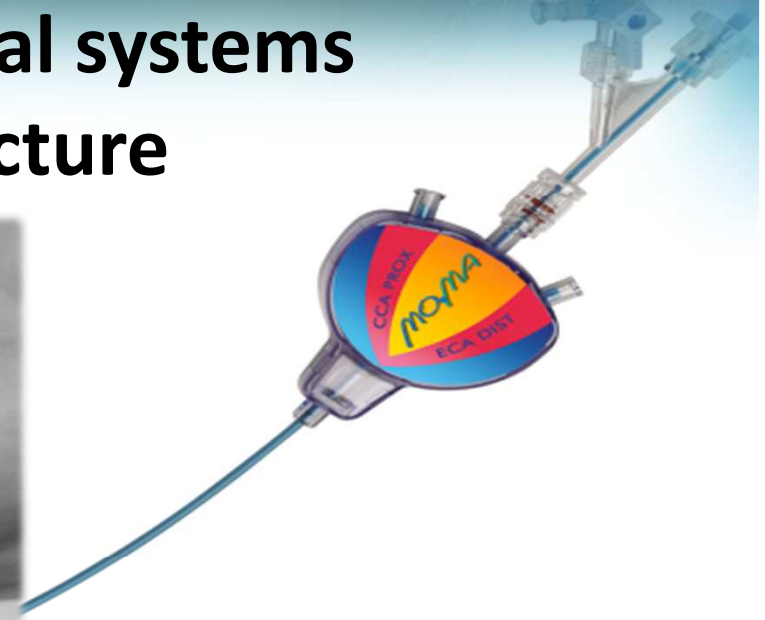


Open cell vs closed-cell stent design

Closed-cell safer?



Newer FLOW-reversal systems and direct puncture



**Reduce emboli,
early results
now
comparable to
CEA**

the ACST-2 research question..

For asymptomatic patients with tight stenosis
requiring intervention:

Which procedure is generally better
(in addition to good medical treatment)? :

carotid surgery (CEA)
or
carotid stenting (CAS)?

ACST-2

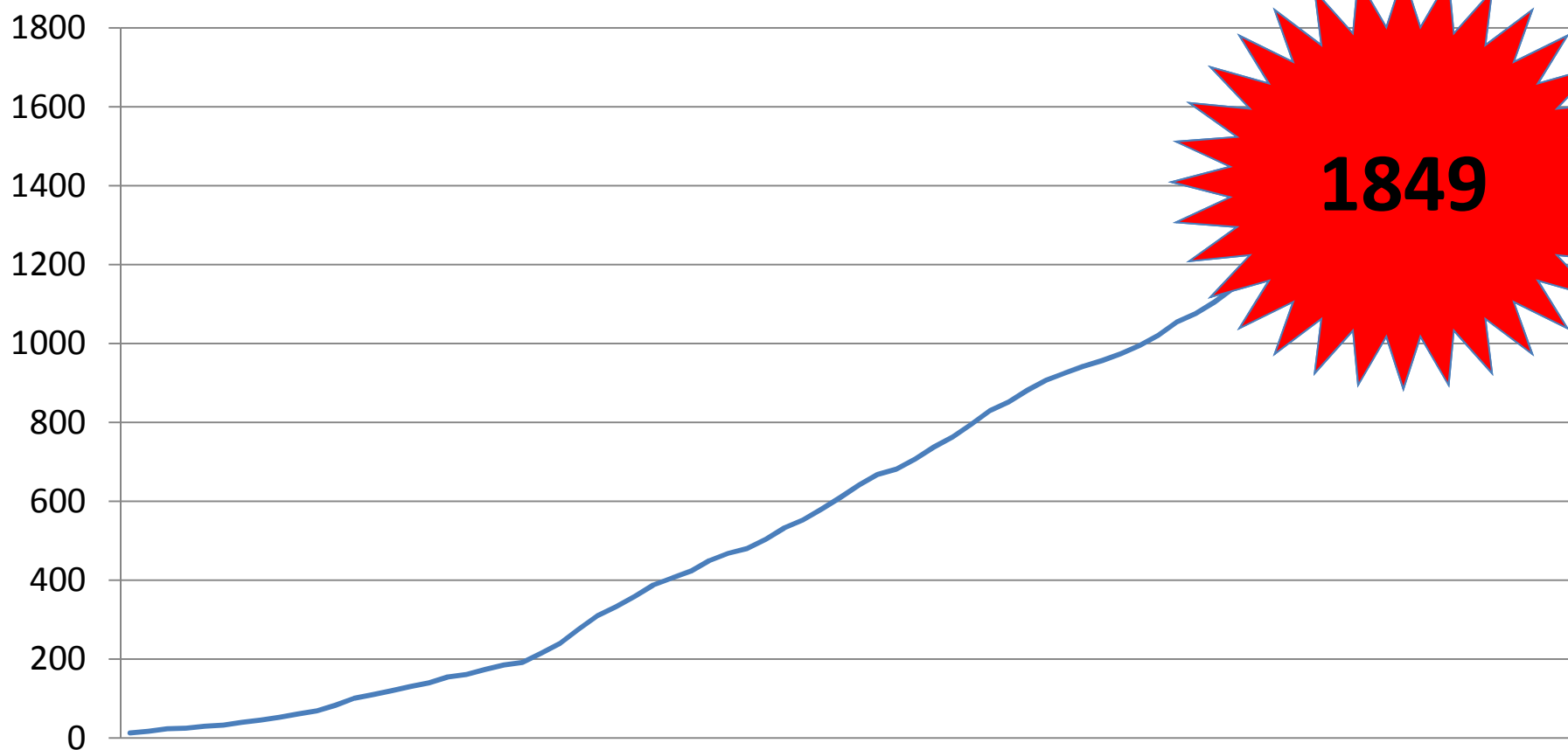
A very European Trial



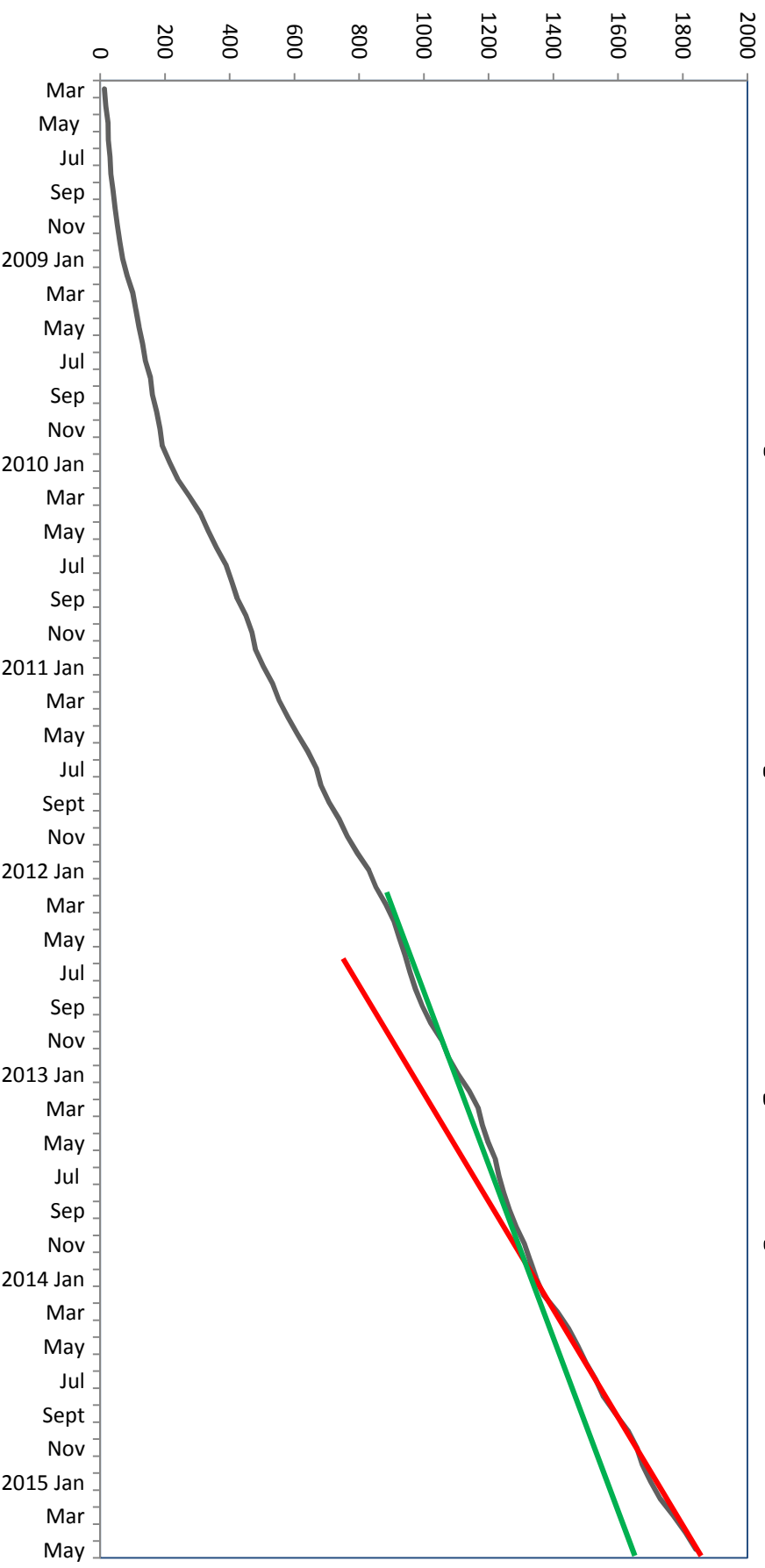
www.acst.org.uk

ACST-2 Recruitment – now >1800 patients

Target 3600 by end of 2019

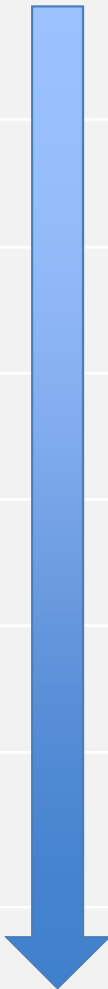


ACST-2 Recruitment increasing (350-400 patients/year)



ACST-2 – inclusive, practice-driven (all CE-marked)

<u>Stent</u>	<u>CP Device</u>	<u>Type</u>
Boston Wallstent	Emboshield	Filter
Cordis Precise	Filterwire	Filter
Ev3 Protégé® RX	Mo.Ma	Prox occ
Cristallo Ideale	Spider	Filter
Abbott RX Acculink	AngioGuard	Filter
Abbott Xact	Accunet	Filter
Boston Adapt	Gore Flow Reversal	Prox occ
Optimed Sinus Carotid RX	Twin One	Dist balloon



ACST-2: Open vs Endovascular treatment

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OF
CARDIOVASCULAR
INTERVENTY

Sex, Age, Co-morbidities:

Men	70%
Mean age	72 years
Ischaemic heart disease	36%
Diabetic	30%
Renal impairment	6%

ACST-2: Open vs Endovascular treatment

Stroke risk factors:

Atrial Fibrillation	6%
Age >75 yrs	26%
Previous stroke symptoms or infarct	43%

Medical Treatments:

BP drugs	85%
Lipid-lowering	86%
Anti-thrombotic	99%

ACST-2: Open vs Endovascular treatment

Blinded procedural outcomes (2015, 1600 patients)

Disabling/fatal stroke, fatal MI **1.0%**

ACST-2 - Making trials easier

Congratulations to **San Giovanni Di Dio**, Florence; they have recruited their first patient within **5 days of being active:**

“We were in the period of final approval for ACST-2, when a patient was considered. We presented the trial to him; he accepted, signed the patient consent and was randomised to CEA. We thought that the randomisation process was simple and we were pleased to hear that we were the fastest randomisers to date in the ACST-2 study.”

⇒ **Dr Emiliano Chisci**



Dr Emiliano Chisci & Professor Stefano Michelagnoli

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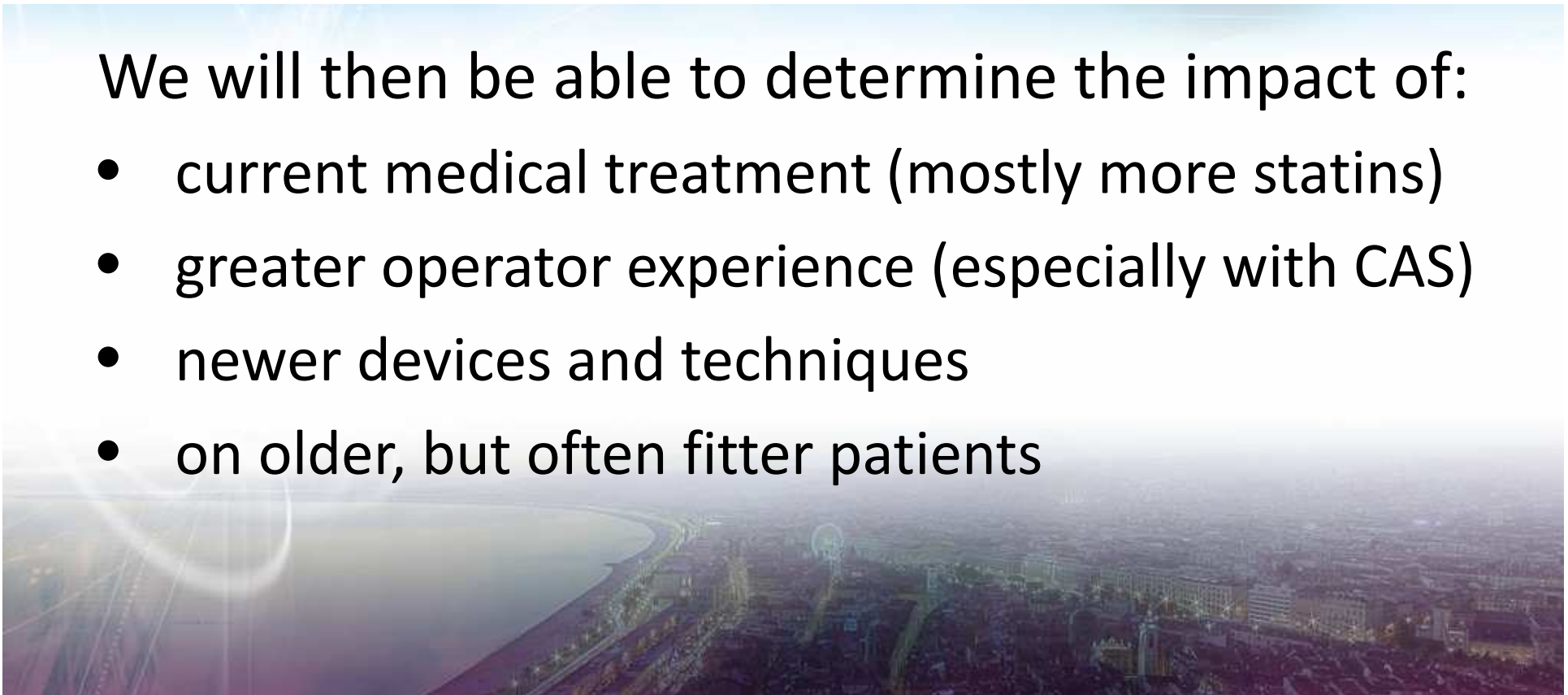




**Future evidence comes from Trial collaborations
....ACST-2 (3600 patients) will provide much of the
planned evidence, CREST-2, ECST-2, SPACE-2,ACT-1
will enable 5000+ patient analysis**

We will then be able to determine the impact of:

- current medical treatment (mostly more statins)
- greater operator experience (especially with CAS)
- newer devices and techniques
- on older, but often fitter patients



The optimal approach to asymptomatic carotid stenosis? Intervention or not? We cannot all be correct!

- ✓ Medical treatment for all
Tight stenosis, maybe intervene?
Consider **CREST-2 or ECST-2 (now recruiting)**
- ✓ Stenosis, expected to live 5+ years?
Stroke considered likely? Definitely intervene...
CTA/MRA
 - suitable for CEA only?
 - hostile neck, recurrent stenosis? CAS
 - suitable for CEA or CAS? **ACST-2**

Help form future Guidelines!