

2nd Rationale and Design of the Vertebral Artery Ischaemia Stenting Trial (VIST-2)



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A collaboration between Oxford and Cambridge



Henry Barnett on Vertebral Artery Stenting (17 years ago!)

“Without large trials...these endovascular procedures will drift into the therapeutic fog that surrounded carotid endarterectomy before the major trials were conducted”



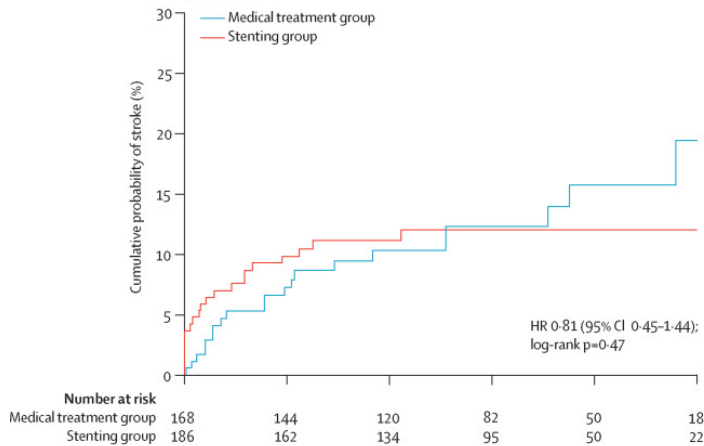
Barnett HJM. A modern approach to posterior circulation ischemic stroke. Arch Neurol 2002; 59: 359–60

Another trial on vertebral artery stenting?!*

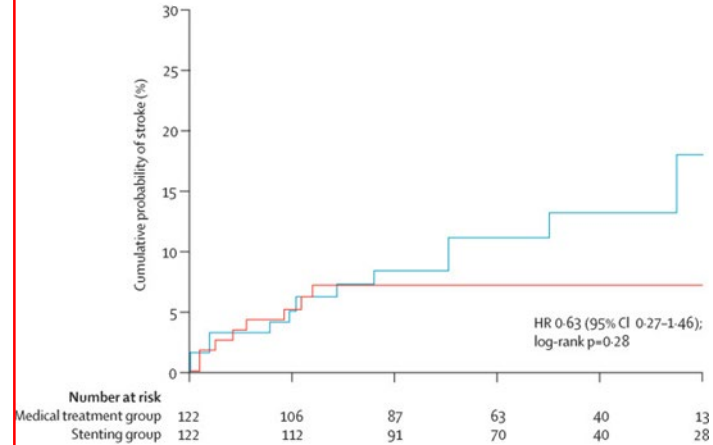
- 1. Uncertainty persists, so we should do an RCT**

Uncertainty Persists

Overall



Extra-cranial

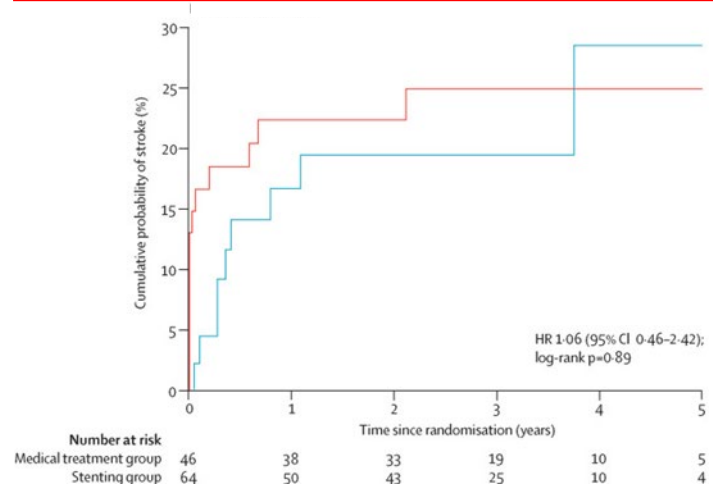


N=354, 1036 patient years follow-up

Overall: RR 0.81 (95% CI 0.45-1.44)

Extra-cranial: RR 0.63 (0.27-1.46)

Intra-cranial: RR1.06 (0.46-2.42)



Intra-cranial

Another trial on vertebral artery stenting?!*

1. Uncertainty persists, so we should do an RCT
2. **Acute stroke care has evolved, so we can do an RCT**

Centralisation

Neuro-vascular imaging widespread and improved

Focus on secondary prevention

VIST-2 Design

‘KISS’ principle (Keep it Simple, Stupid)

Population:

1000 patients from ~30 centres (Europe)

Tight extra-cranial vertebral stenosis

Randomised 1:1 to vertebral stenting v MT

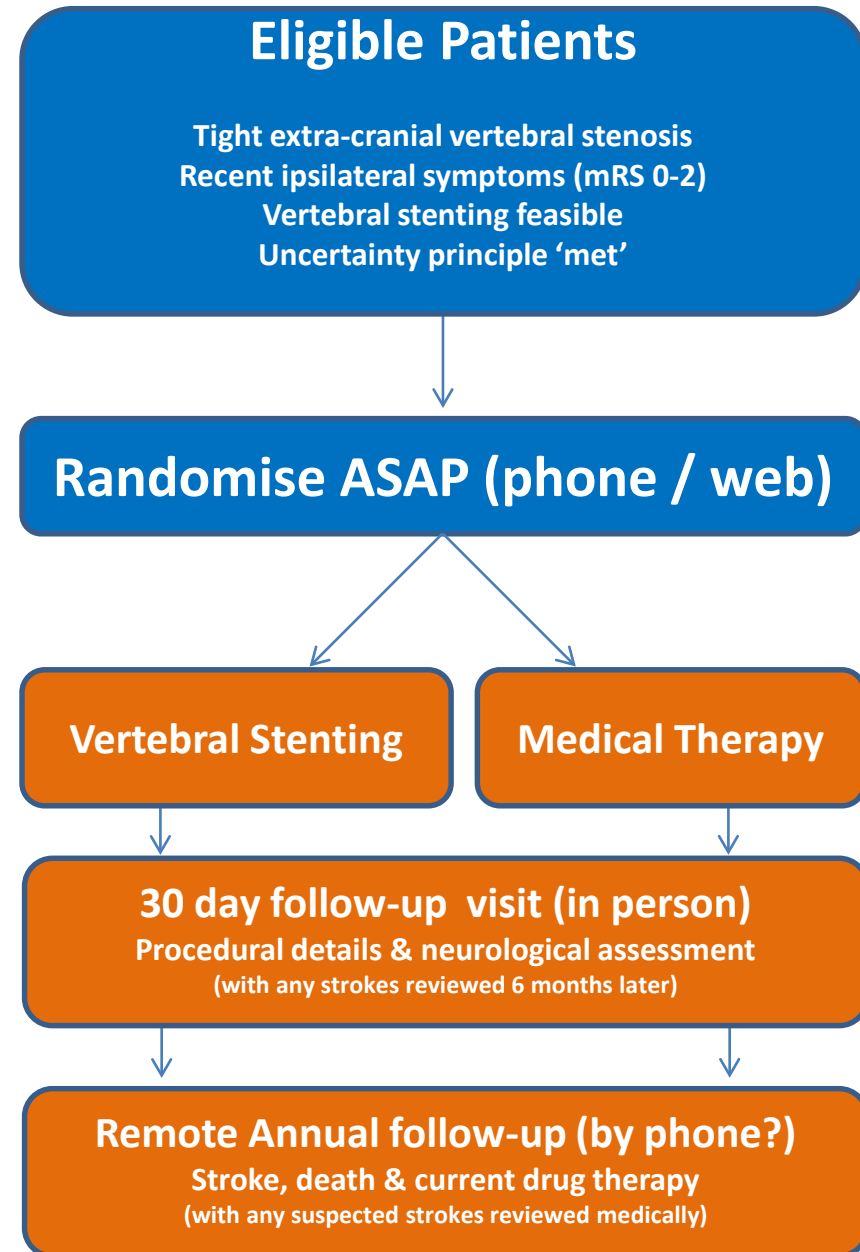
Outcomes:

Safety - Procedural Stroke / Death at 30 days

Efficacy – Long-term Stroke

Follow-up:

At least 5 years (and ideally 10 yrs)



Extra-cranial only

Procedural risks are low

1% (1/121) *extra-v* 16% (10/64) *intra-cranial*

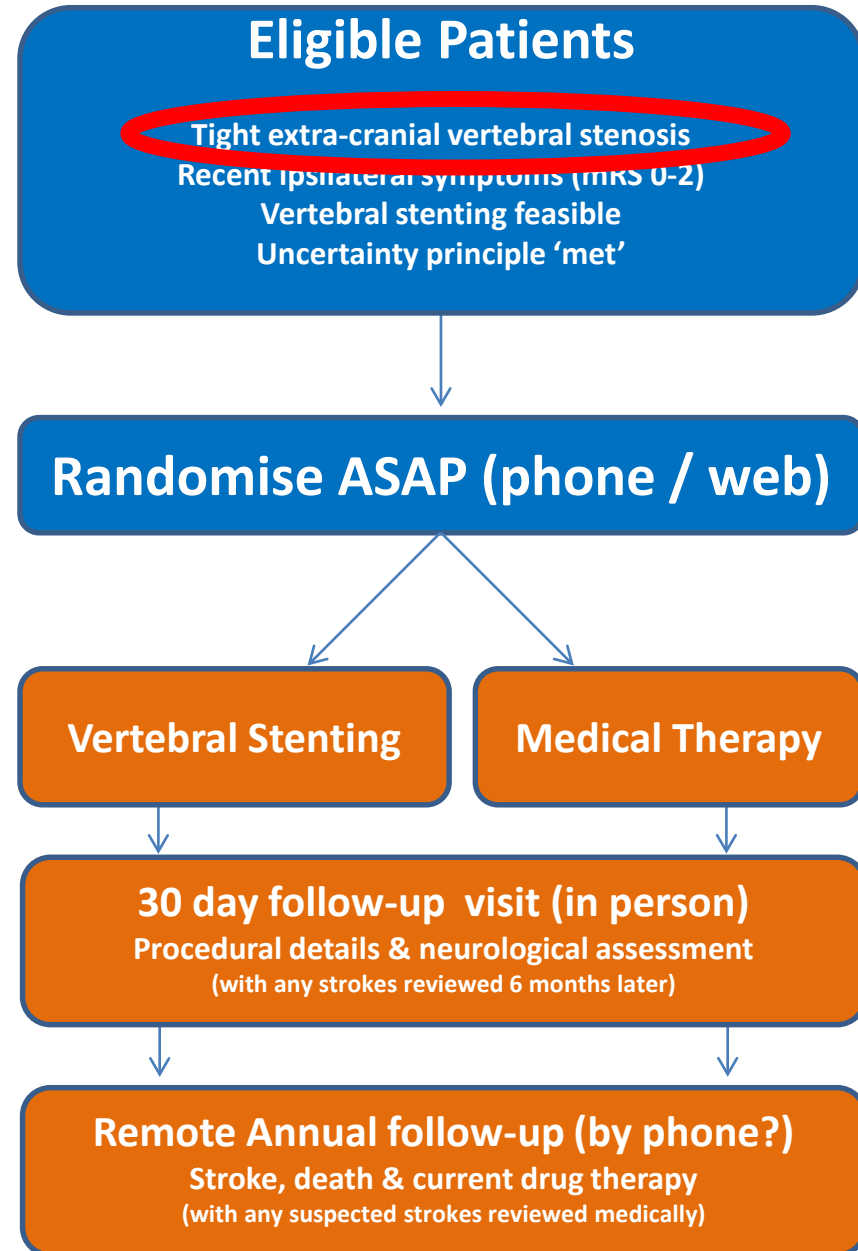
But natural history relatively benign

Vertebral stenosis = X4 increased risk of stroke

Intra-cranial twice as risky as extra-cranial

No enthusiasm for another intra-cranial stenting RCT

VIST-2 Flow Chart



Accurate diagnosis of vertebral stenosis

VIST: 23/91 (23%) of patients allocated stenting did not have a tight stenosis at invasive angiography

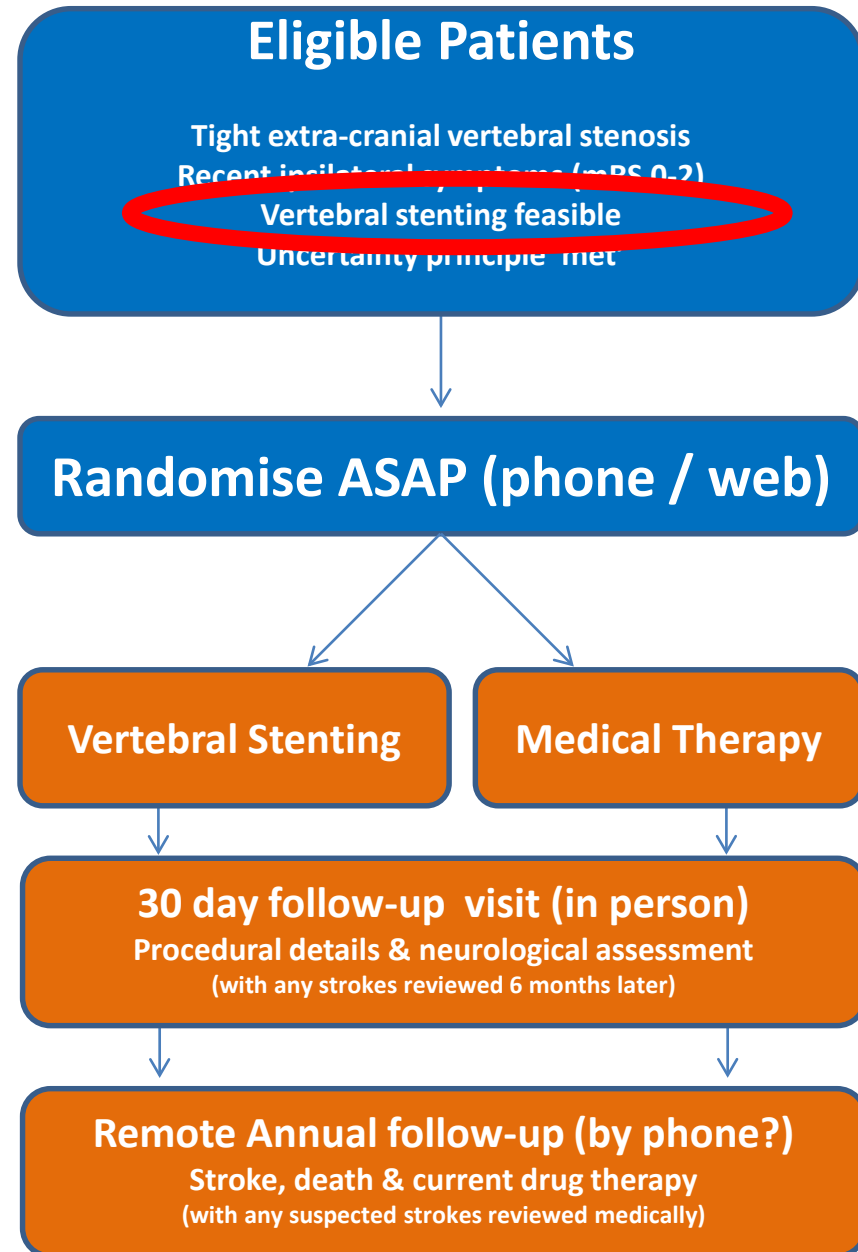
But...

Concentrated at a few centres

Better imaging / interpretation) might help

Specialist imaging review by VIST-2 Team

VIST-2 Flow Chart



Randomise and Intervene QUICKLY

Natural history of symptomatic vertebral stenosis = symptomatic carotid stenosis

Highest risk of recurrent stroke within 2-4 weeks of first event

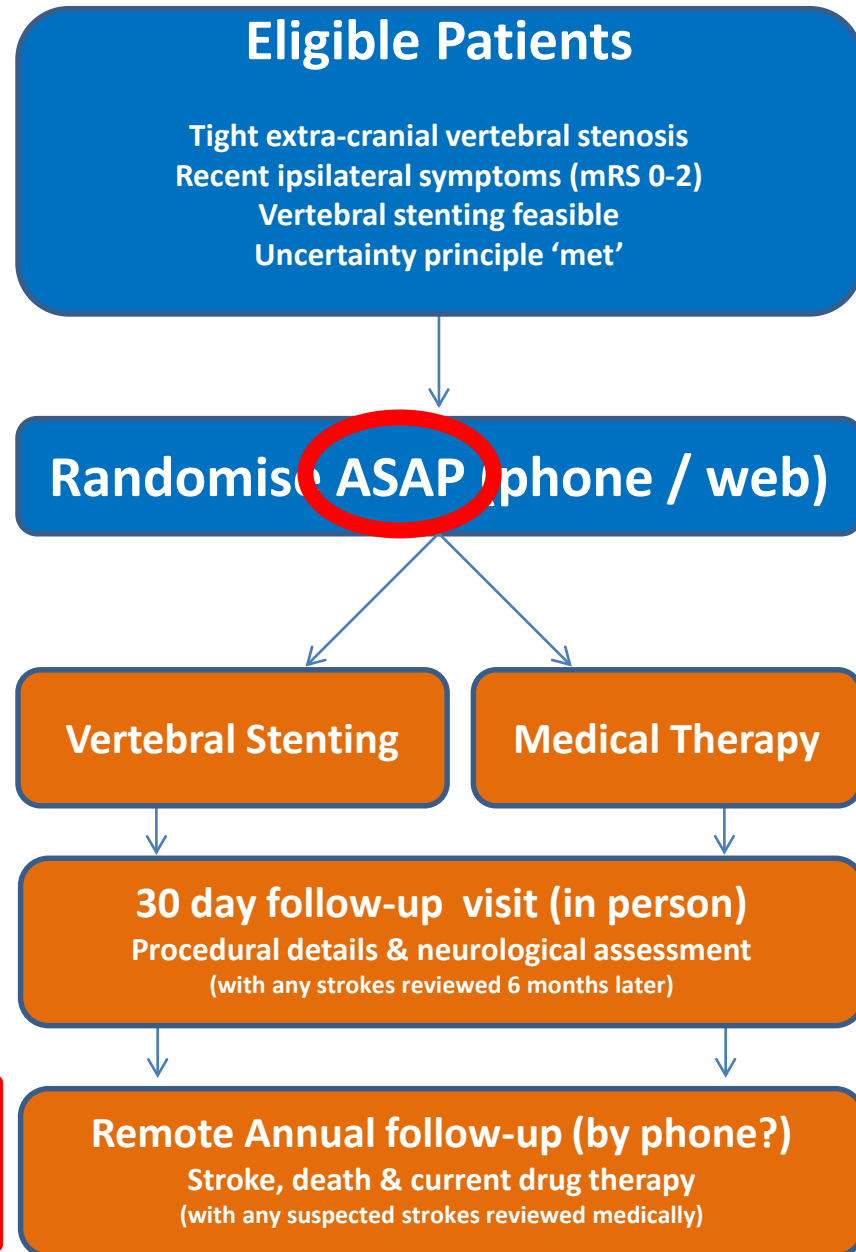


Symptom to randomisation	Days
SAMPRIS	9.6
VIST	36.0
VAST	36.4



Stent within 2 weeks of first symptoms (or sooner if possible)

VIST-2 Flow Chart



Good Medical Therapy in Both Study Arms

VIST-2 Flow Chart

Eligible Patients

Tight extra-cranial vertebral stenosis
Recent ipsilateral symptoms (mRS 0-2)
Vertebral stenting feasible
Uncertainty principle 'met'

Randomise ASAP (phone / web)

Vertebral Stenting

Medical Therapy

30 day follow-up visit (in person)

Procedural details & neurological assessment
(with any strokes reviewed 6 months later)

Remote Annual follow-up (by phone?)

Stroke, death & current drug therapy
(with any suspected strokes reviewed medically)

A valid criticism of VIST

@ 1 month (VIST)	Stenting + Medical Tx	Medical Tx alone
DAPT	57%	33%
Statins	94%	98%
BP-Lowering Tx	78%	80%

Encourage DAPT (aspirin and clopidogrel) in both groups for at least 1 month

Please join us!

Trials are hard work, but can be fun and do change practice

- **Acute stroke centre**
 - >1 patient/month X30 centres
 - = 1000 patients in 3 years
- **Endovascular skills**
- **Research enthusiastic**



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