13th International Symposium on Endovascular Therapeutics

CREST-2 trial. How is it designed and what for?

Víctor Obach
Stroke Neurologist. Hospital Clínic. Barcelona

Aggressive medical treatment with or without stenting in high-risk patients with intracranial artery stenosis (SAMMPRIS): the final results of a randomised trial

Lancet 2014; 383: 333–41

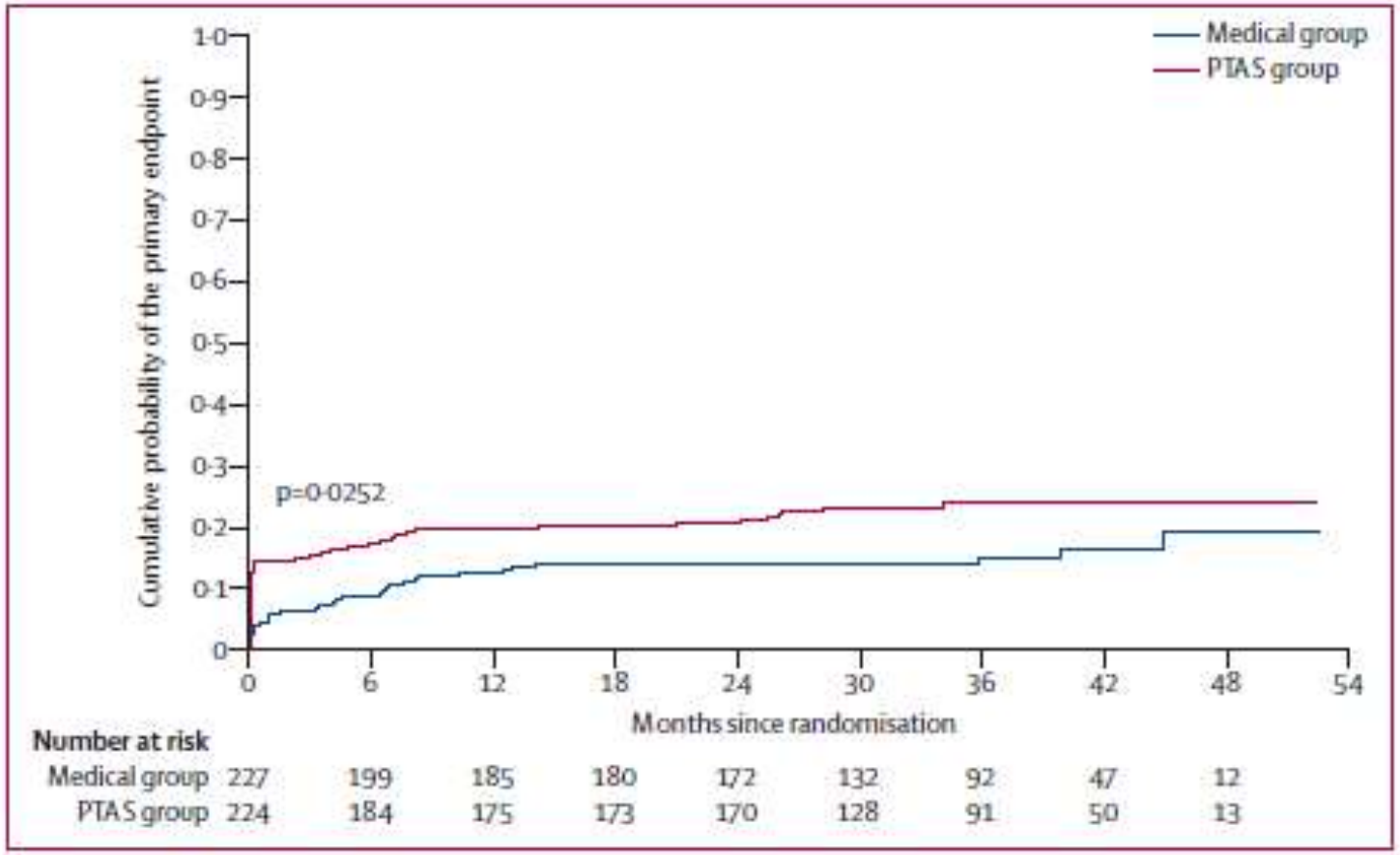


Figure 3: **Cumulative probability of a primary endpoint by treatment**
PTAS=percutaneous transluminal angioplasty and stenting.

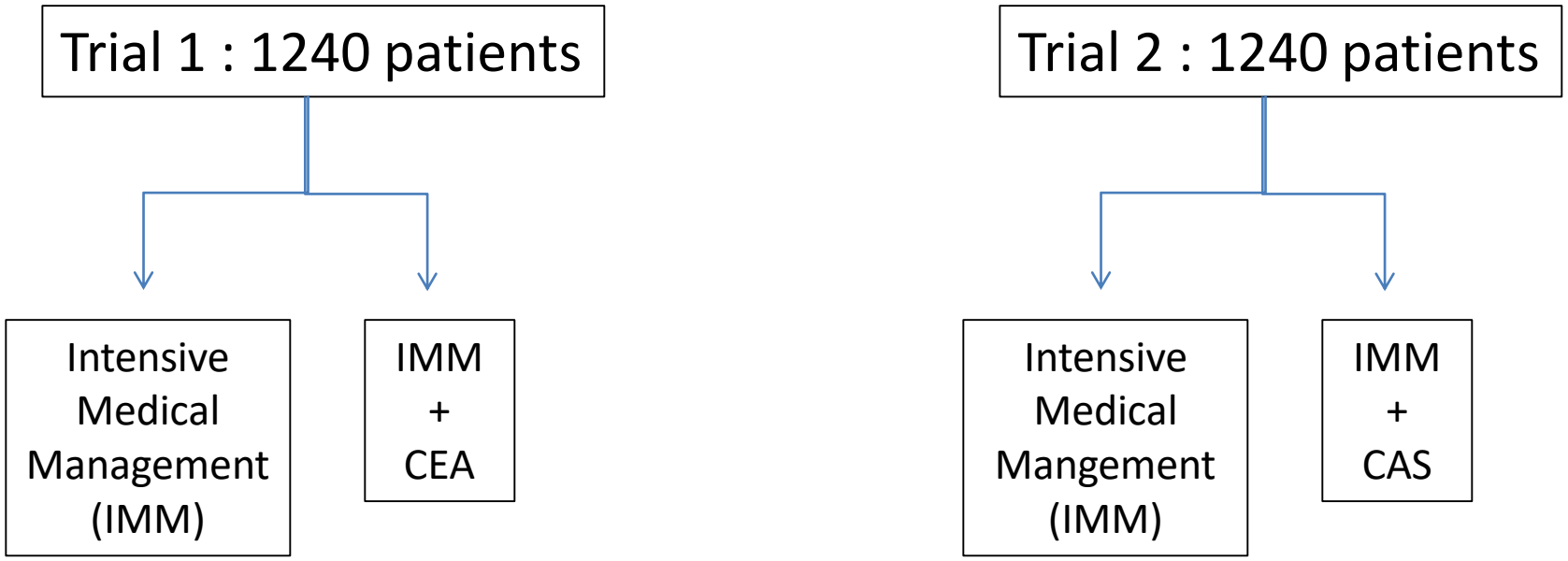
"Medical arm" did better than pre-planned

CAROTID REVASCULARIZATION AND MEDICAL MANAGEMENT FOR ASYMPTOMATIC CAROTID STENOSIS TRIAL (CREST-2)

128 CREST-2 Centers

CREST-2 Trial:

Asymtomatic >70% carotid stenosis



Decision of allocation to Trial 1 or 2 : according to the treating team

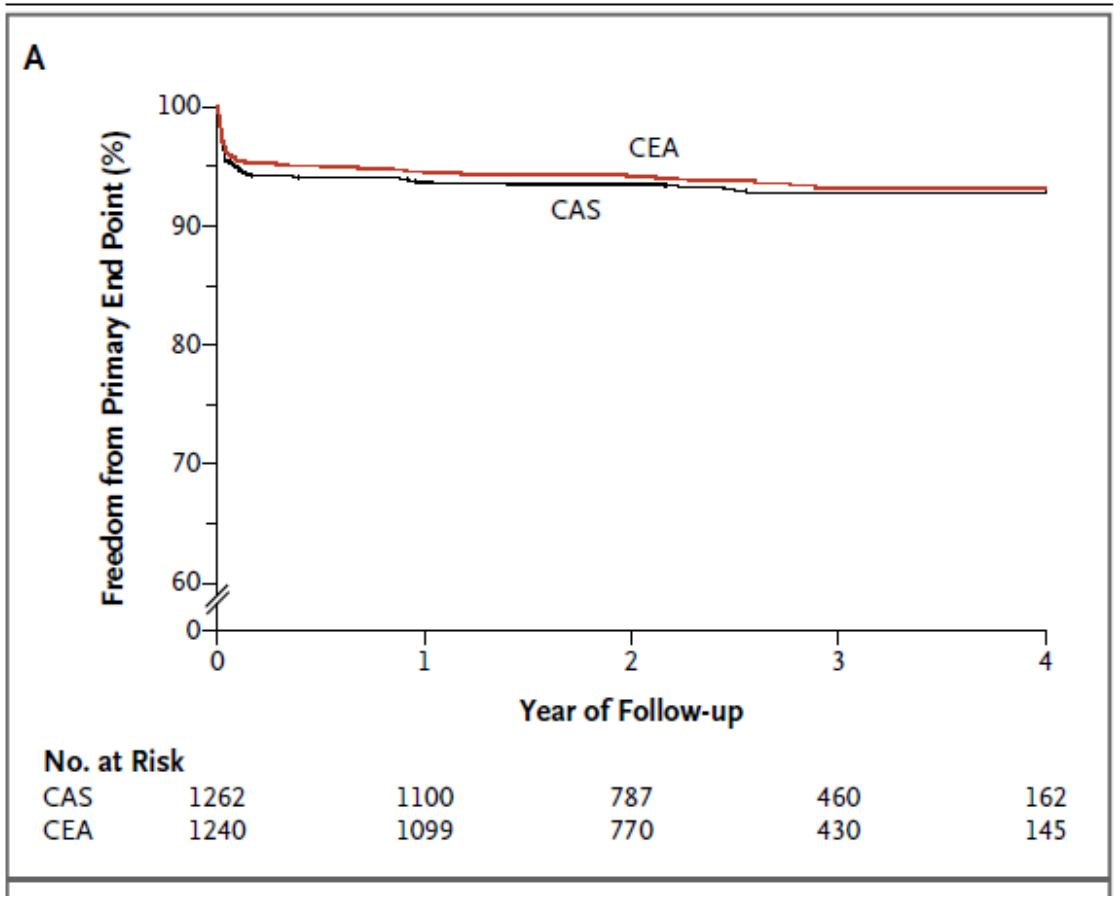
The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JULY 1, 2010 VOL. 363 NO. 1

Stenting versus Endarterectomy for Treatment of Carotid-Artery Stenosis

Thomas G. Brott, M.D., Robert W. Hobson, II, M.D.,* George Howard, Dr.P.H., Gary S. Roubin, M.D., Ph.D., Wayne M. Clark, M.D., William Brooks, M.D., Ariane Mackey, M.D., Michael D. Hill, M.D., Pierre P. Leimgruber, M.D., Alice J. Sheffet, Ph.D., Virginia J. Howard, Ph.D., Wesley S. Moore, M.D., Jenifer H. Voeks, Ph.D., L. Nelson Hopkins, M.D., Donald E. Cutlip, M.D., David J. Cohen, M.D., Jeffrey J. Popma, M.D., Robert D. Ferguson, M.D., Stanley N. Cohen, M.D., Joseph L. Blackshear, M.D., Frank L. Silver, M.D., J.P. Mohr, M.D., Brajesh K. Lal, M.D., and James F. Meschia, M.D., for the CREST Investigators†

CREST TRIAL



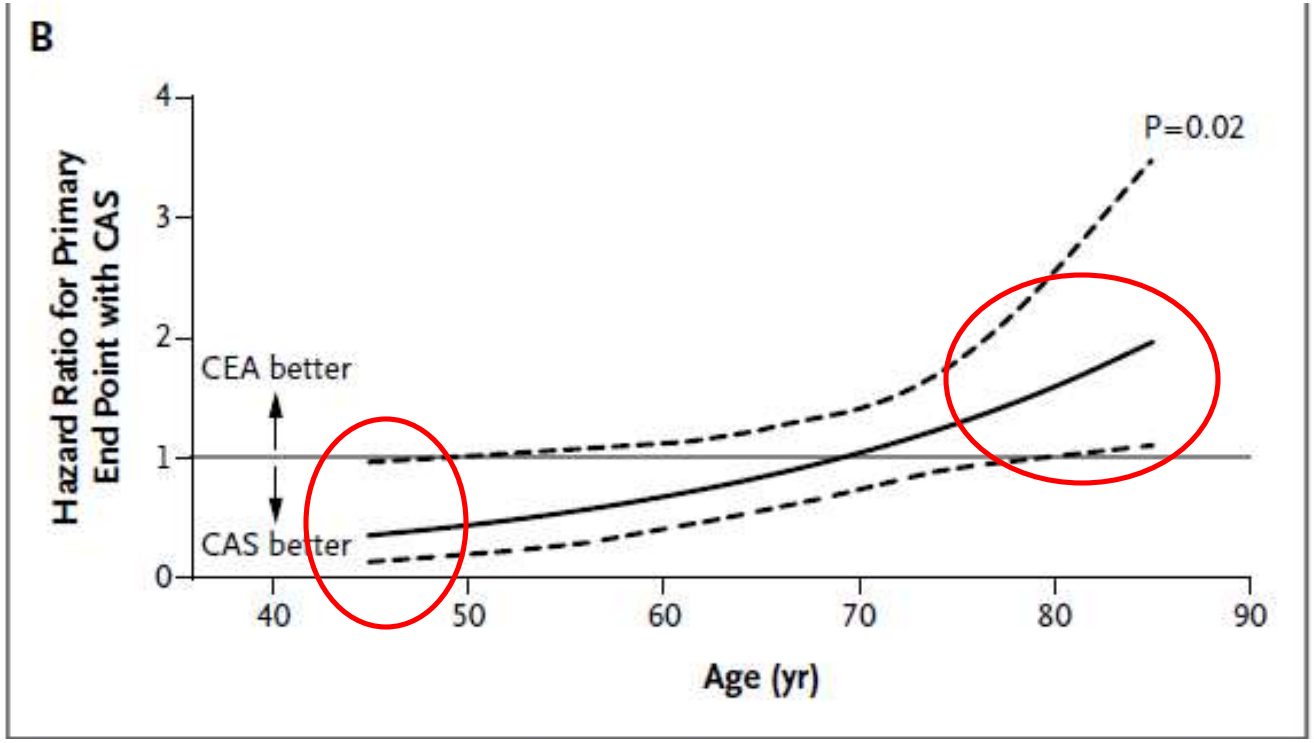
The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JULY 1, 2010 VOL. 363 NO. 1

Stenting versus Endarterectomy for Treatment of Carotid-Artery Stenosis

Thomas G. Brott, M.D., Robert W. Hobson, II, M.D.,* George Howard, Dr.P.H., Gary S. Roubin, M.D., Ph.D
Wayne M. Clark, M.D., William Brooks, M.D., Ariane Mackey, M.D., Michael D. Hill, M.D., Pierre P. Leimgruber, M
Alice J. Sheffet, Ph.D., Virginia J. Howard, Ph.D., Wesley S. Moore, M.D., Jenifer H. Voeks, Ph.D.,
L. Nelson Hopkins, M.D., Donald E. Cutlip, M.D., David J. Cohen, M.D., Jeffrey J. Popma, M.D.,
Robert D. Ferguson, M.D., Stanley N. Cohen, M.D., Joseph L. Blackshear, M.D., Frank L. Silver, M.D.,
J.P. Mohr, M.D., Brajesh K. Lal, M.D., and James F. Meschia, M.D., for the CREST Investigators†

CREST TRIAL



Trial 1 : IMM vs CEA

- >75 years old
- Anatomical concern for CAS

Trial 2 : IMM vs CAS

- <50 years old

Allocation to Trial 1 or 2 : Decision according to treating team

Primary end point

Event rate : any stroke or death within 44 days + ipsilateral stroke up to 4 years

- Statistics
  - CEA or CAS : 3.6% (2% periprocedural + 0.4%/y)
  - IMM : significant diferences if <0.8% or >8,4%

Intensive Medical Management

- Blood pressure < 140/90
  - Baseline, 30 days and every 4 months (1st year), every 6 months
  - Is not achieved in control visits, reschedule in 30 days until achivement

Intensive Medical Management

- LDL Cholesterol < 70 mg/dl (1.81 mmol/L)
  - Is not achieved in control visits, reschedule in 30 days

Intensive Medical Management

- Body weight. Strict diet.
  - For initial BMI:
    - 25 to 27 kg/m2, target <25 kg/m2
    - >27 kg/m2, target 10% weight loss BMI
  - Is not achieved 10% reduction of BMI in control visits, re-schedule in 30 days until achivement

Intensive Medical Management

- Diabetes: HgA1c < 7%

- Exercise

  ≥30 min moderate exercise 3 x /w

- Stop smoking

Conclusion

- CREST-2 will test if Intensive medical management (IMM) differs from the combination of CEA and IMM OR CAS and IMM in preventing the primary endpoint in patients with high-grade asymptomatic carotid stenosis.

Results in 2024?

Thank You