Sténoses carotides asymptomatiques

Chirurgie ou traitement médical seul?

Pr. JL Mas

Hôpital Sainte-Anne, Université Paris Descartes, INSERM 894

Sténose carotide asymptomatique

Chirurgie carotide vs. Traitement médical seul

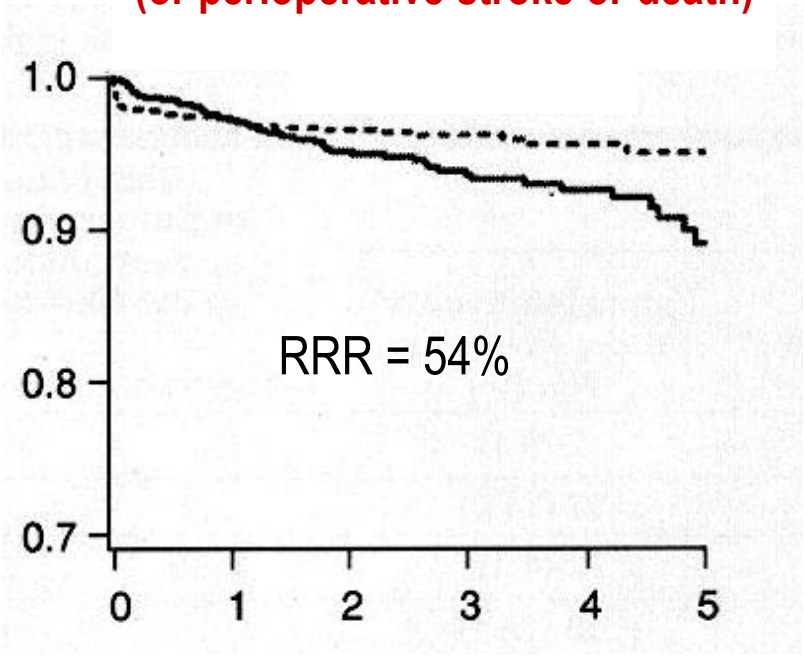
Asymptomatic Carotid Atherosclerosis Study JAMA 1995

- 1662 patients, 40-79 years, ACS > 60%
- Operative risk = 2.3%

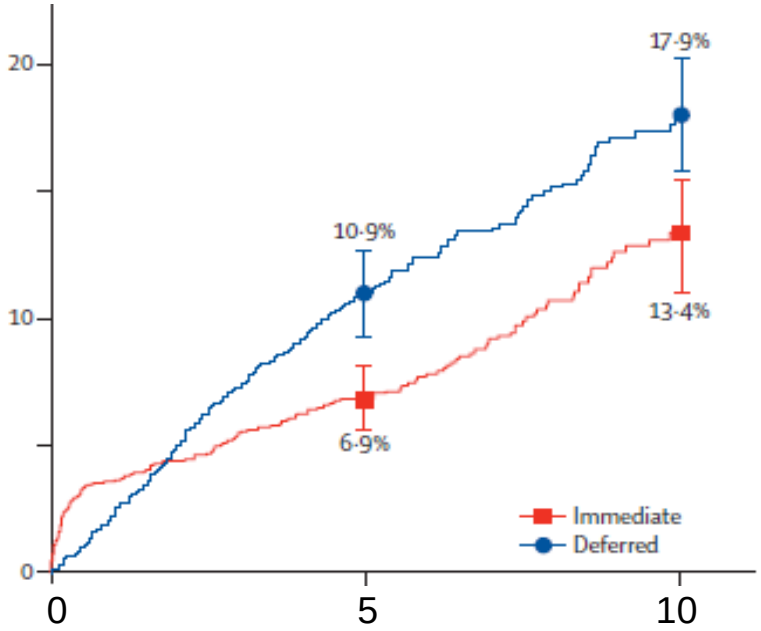
Asymptomatic Carotid Surgery Trial
Lancet 2004, 2010

- 3120 patients, ACS > 60%
- Operative risk = 2.8%

Ipsilateral stroke
(or perioperative stroke or death)



Any stroke
(or perioperative stroke or death)

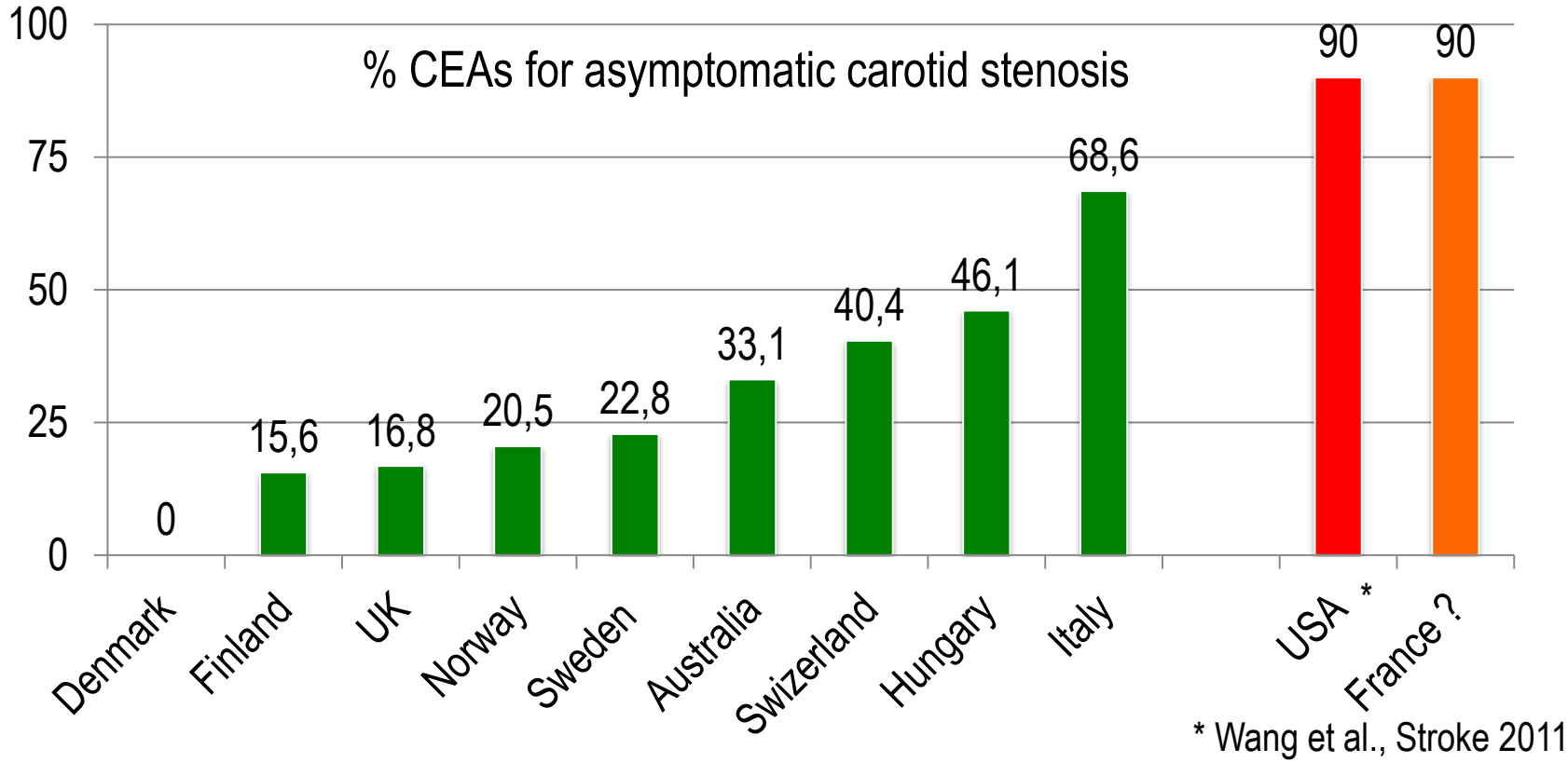


Sténose carotide asymptomatique

Des indications très variables

Vikatmaa et al, EJVES 2012

- VASCUNET: vascular registries from Europe and Australasia,
- 48,185 CEAs, 4602 CAS



* Wang et al., Stroke 2011

Sténose carotide asymptomatique

Chirurgie carotide vs. Traitement médical seul

5-year outcomes

Trial	n	Operative risk (%)	Risk of stroke with MT (%)	Risk of stroke with CEA (%)	RRR with CEA (%)	ARR with CEA (%)
ACAS	1,662	2.3	11.0*	5.1*	54	5.9
ACST	3,120	2.8	11.8	6.4	46	5.4

* ipsilateral stroke

Risque d'infarctus cérébral ipsilatéral sous traitement médical seul ≈ 2% /an

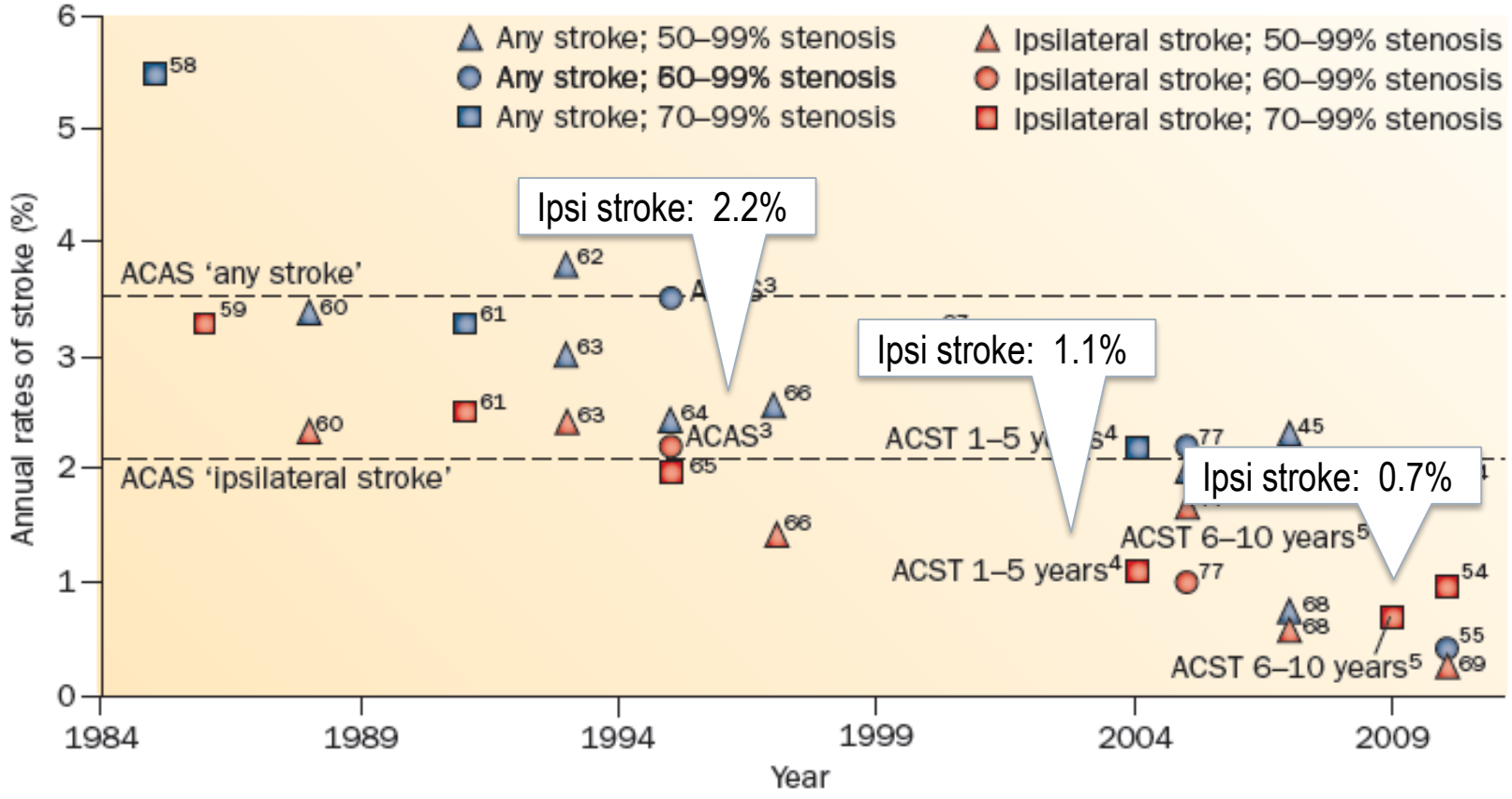
Réduction absolue du risque d'infarctus cérébral ipsilatéral ≈ 1% /an

≈ 5 AVC évités à 5 ans pour 100 endartérectomies

Sténose carotide asymptomatique

Risque d'AVC sous traitement médical

Naylor, Stroke 2011



Sténose carotide asymptomatique

Risque d'AVC sous traitement médical

Rothwell, Lancet 2010

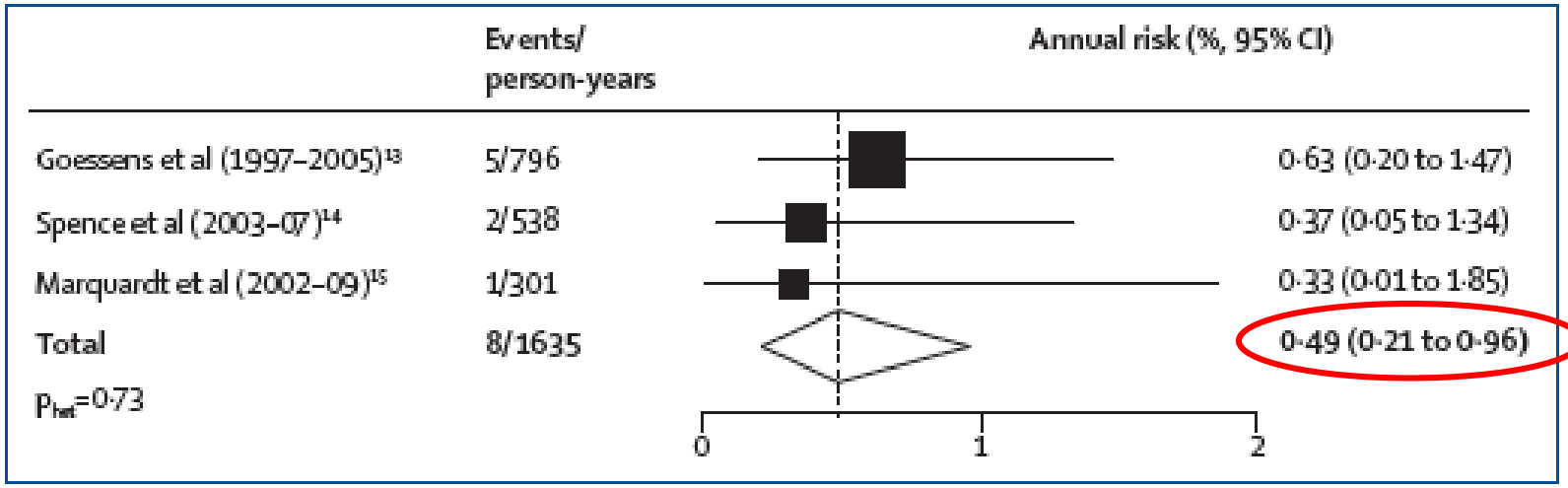
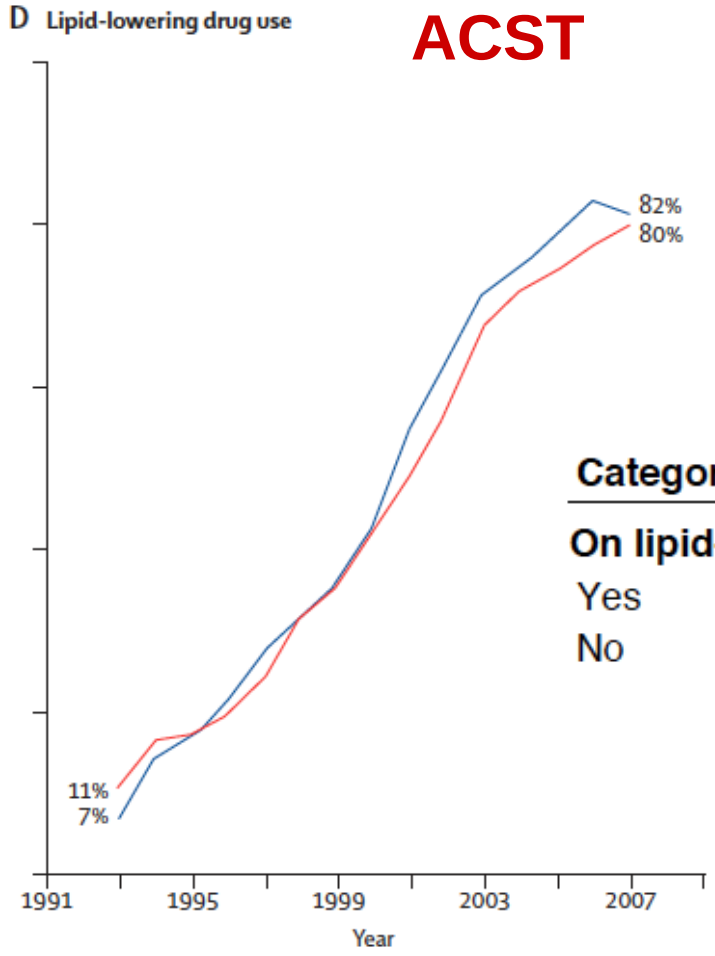


Figure 2: Meta-analysis of mean annual risk of ipsilateral carotid territory ischaemic stroke distal to asymptomatic 50–99% carotid stenosis in the three most recently published studies in patients on reasonably current best medical treatment

Sténose carotide asymptomatique

Traitement hypolémiant

Halliday et al, Lancet 2010

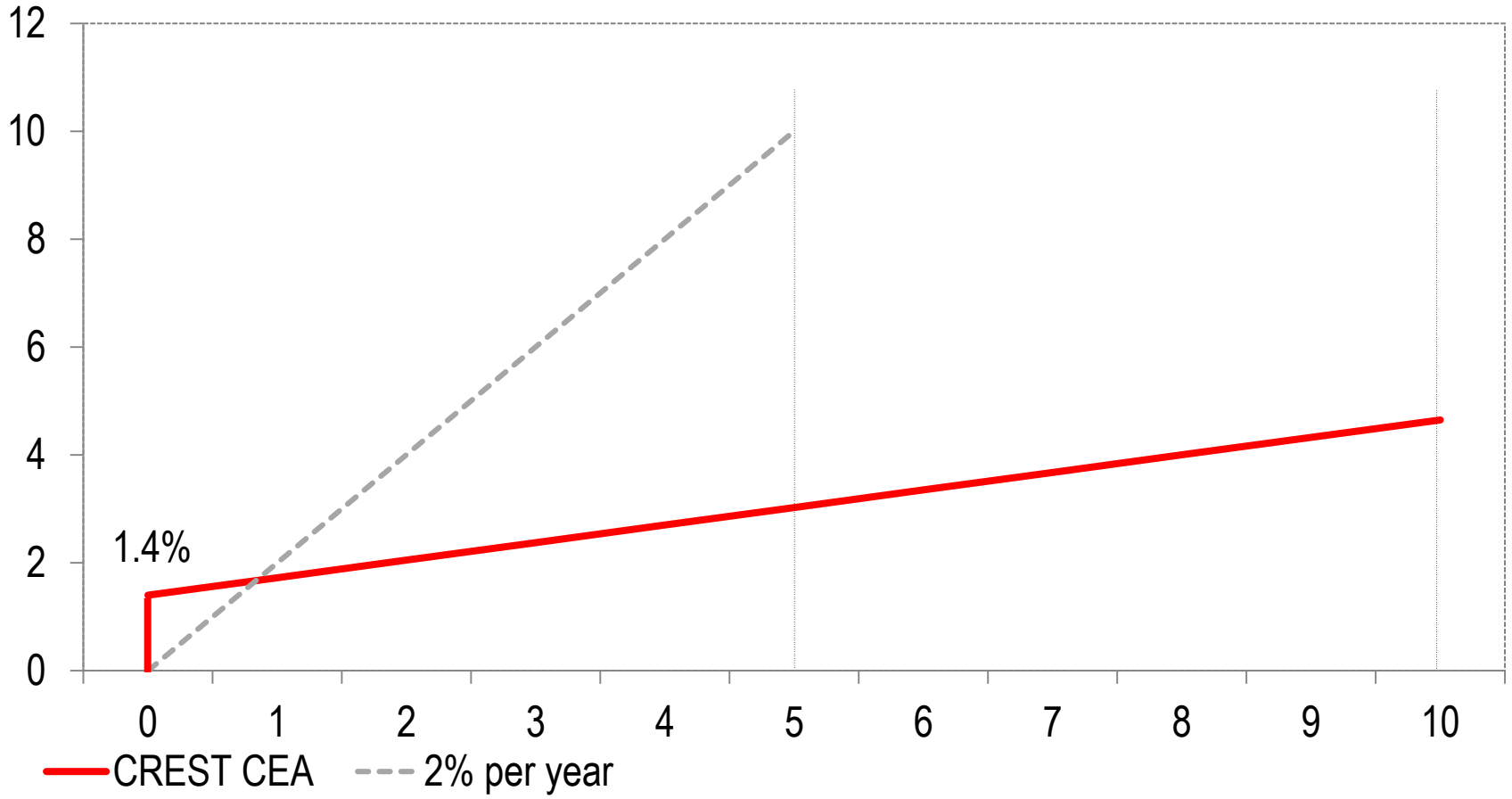


ACST

Category	Events/person-years and annual event rate (%)	
	Immediate CEA	Deferral
On lipid-lowering therapy before any stroke?		
Yes	45/6623 (0.7%)	88/6568 (1.3%)
No	54/2959 (1.8%)	100/2988 (3.3%)

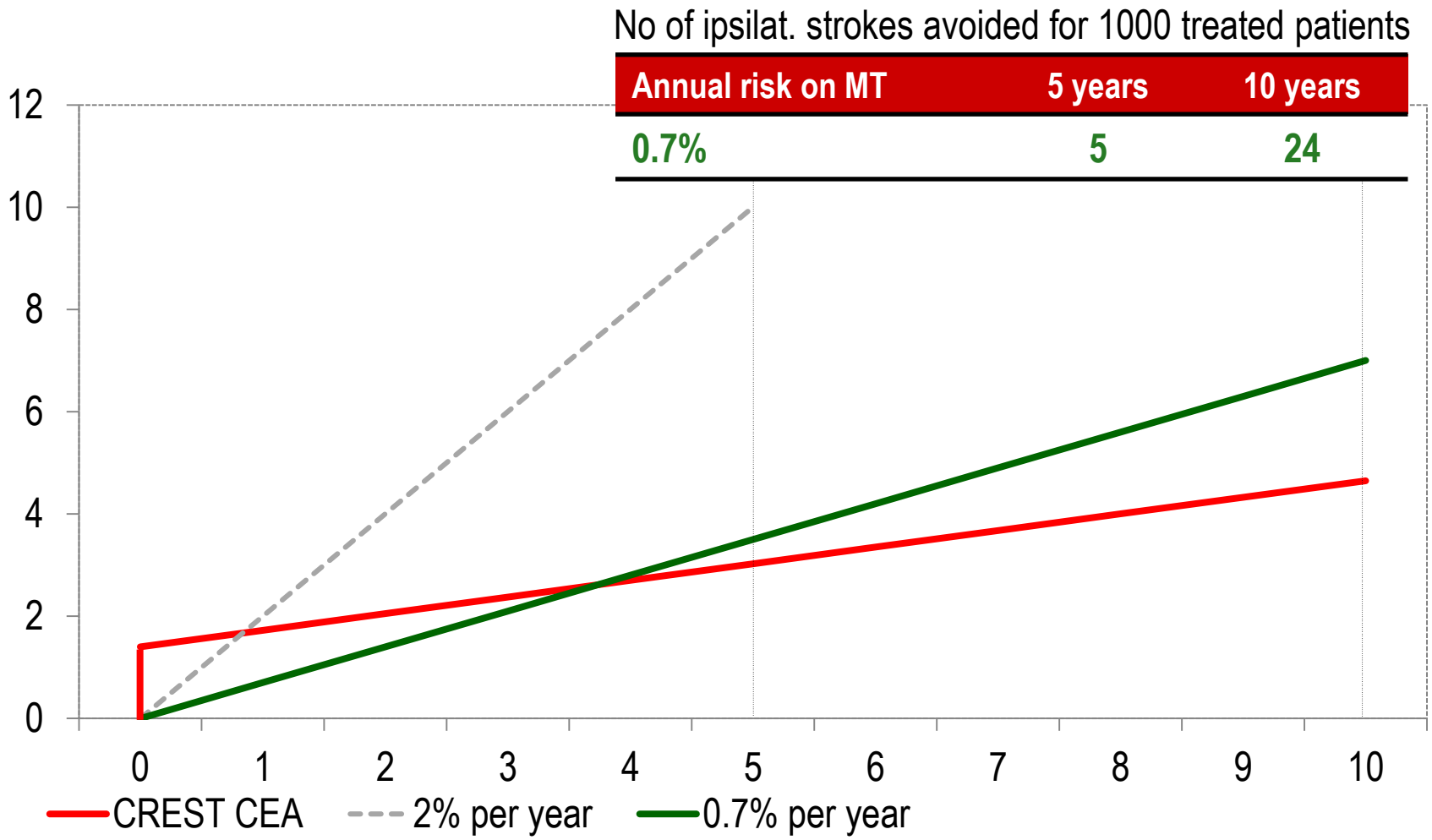
Sténose carotide asymptomatique

Chirurgie vs. Traitement médical seul



Sténose carotide asymptomatique

Chirurgie vs. Traitement médical seul

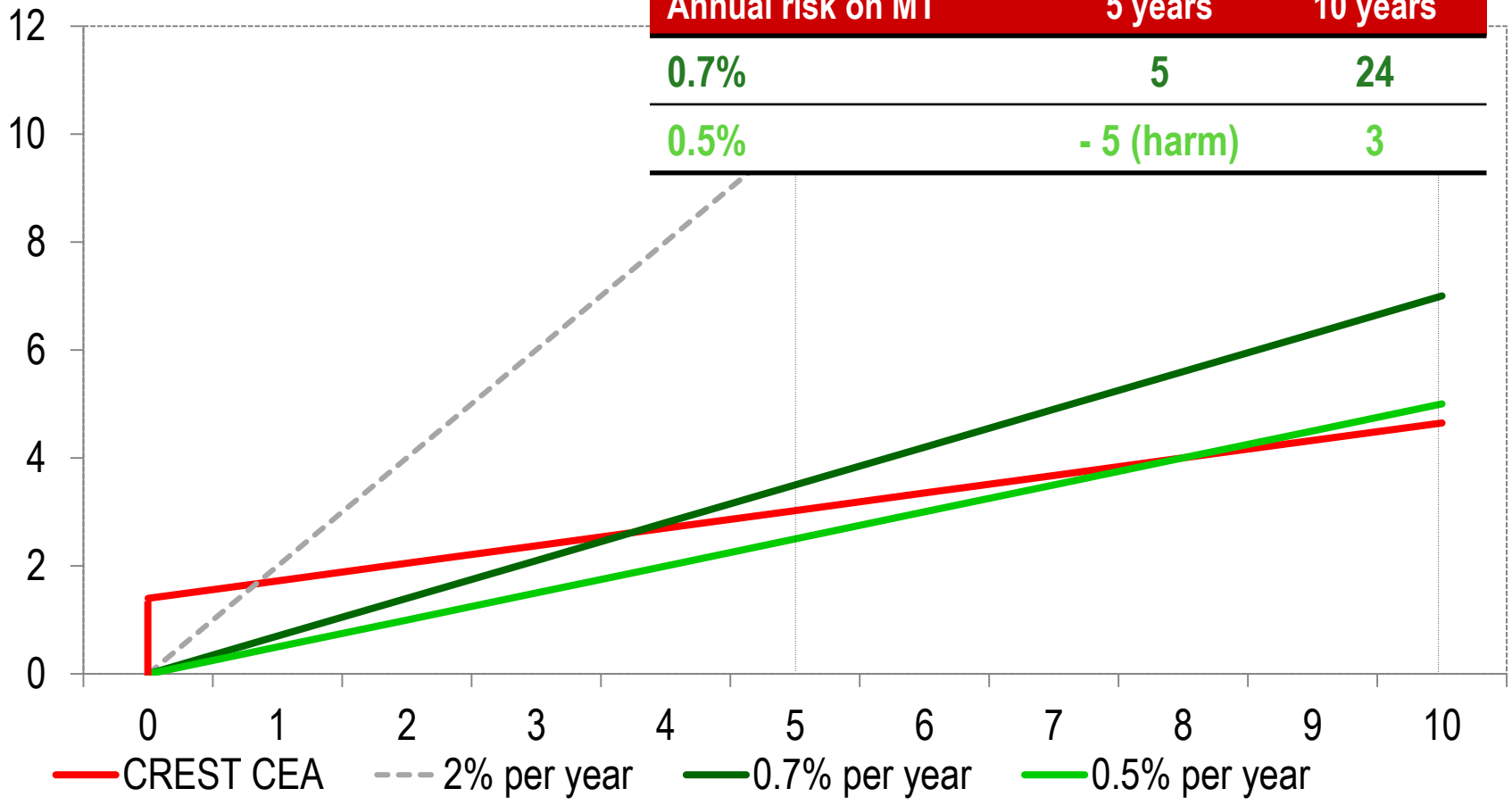


Sténose carotide asymptomatique

Chirurgie vs. Traitement médical seul

No of ipsilat. strokes avoided for 1000 treated patients

Annual risk on MT	5 years	10 years
0.7%	5	24
0.5%	- 5 (harm)	3



Sténose carotide asymptomatique

Quels patients pourraient bénéficier de la chirurgie?

- < 75 ans, **espérance de vie > 5 ans**
- Homme > Femme
- Infarctus cérébral ipsilatéral silencieux (type embolique)
- **Diminution de la réserve circulatoire cérébrale**
- **Progression de la sténose**
- **Signaux micro-emboliques au DTC**
- **Structure de la plaque : IRM**, ultrasons, PET, …
- Biomarqueurs circulants

Recommandations

- **AHA/ASA 2014**
  - It is reasonable to consider performing carotid endarterectomy in asymptomatic patients who have > 70% stenosis of the internal carotid artery if the risk of perioperative stroke, myocardial infarction, and death is low (<3%). **However, its effectiveness compared with contemporary best medical management alone is not well established *(Class IIa; Level of Evidence A).***

- **ESO 2008**
  - Carotid surgery is not recommended for asymptomatic individuals with significant carotid stenosis (NASCET 60-99%), except in those at high risk of stroke (Class 1, Level C)

Sténoses carotides asymptomatiques

Essais randomisés en cours

Calvet et Mas, IJS (in press)

Study	Design	Eligibility	Primary outcome	N
CREST-2	2 two-arm trials CAS+OMT vs. OMT CEA+OMT vs. OMT	≥ 70% asymptomatic carotid stenosis (NASCET)	Stroke and death within 44 days after randomization and ipsilateral stroke thereafter (up to 4 years)	2480
ECST-2	OMT vs. OMT+CEA or CAS, pre-specified before randomization	≥50% symptomatic (at low or intermediate risk of stroke) or asymptomatic carotid stenosis (NASCET)	Any stroke at any time, plus non-stroke death occurring within 30 days or revascularization	2000
AMTEC	CEA vs. OMT	70%-79% asymptomatic carotid stenosis on ultrasound and 60-79% on CTA /MRA	Nonfatal stroke, nonfatal myocardial infarction and death up to 5-year	400
SPACE-2	*2 two-arm trials* *CEA+OMT vs. OMT* *CAS+OMT vs. OMT*	*≥ 70% asymptomatic carotid stenosis (NASCET)*	*Any stroke or death within 30 days of treatment and ipsilateral ischemic stroke within 5 years*	*3272*

ACTRIS

ENDARTERECTOMY COMBINED WITH OPTIMAL MEDICAL THERAPY VERSUS OPTIMAL MEDICAL THERAPY ALONE IN PATIENTS WITH **A**SYMPTOMATIC SEVERE ATHEROSCLEROTIC **C**AROTID ARTERY S**T**ENOSIS AT HIGH **R**ISK OF **I**PSILATERAL **S**TROKE

Avec le parrainage de la Société Française de Cardiologie

Société francophone du diabète

HTA Société Française d'HyperTension Artérielle

SFMV

sfnv Société Française Neuro-Vasculaire

SFNR SOCIETE FRANCAISE DE NEURORADIOLOGIE

ACTRIS
Objectives

- **Primary objective**
  - To assess whether carotid endarterectomy combined with optimal medical therapy improves long-term survival free of ipsilateral stroke (or periprocedural stroke or death) when compared with optimal medical therapy alone.
- **Secondary objectives**
  - To assess differences between groups with regard to risks of any stroke (or periprocedural death), any disabling or fatal stroke (or periprocedural death), any stroke or death, myocardial infarction, cardiovascular death, symptomatic and asymptomatic lesions on brain MRI at 2 years, disability, cognitive impairment, health-related quality of life and depression.
  - To assess to what extent medical treatment objectives can be achieved and identify factors associated with goals achievement.

ACTRIS

Main inclusion criteria

- Age 50 years or over
- No ipsilateral stroke or TIA within 180 days of randomisation
- Atherosclerotic carotid stenosis between 60 and 99% (NASCET method)
- At least one of the following:
  - TCD-detected microembolic signals
  - Impairment of TCD-measured cerebral vasomotor reserve
  - Intraplaque haemorrhage on magnetic resonance imaging
  - Rapid stenosis progression
- High probability to live at least 5 years

Sténose carotide asymptomatique
Conclusions

- Le risque d'infarctus cérébral chez les patients ayant une sténose carotide asymptomatique traitée médicalement a diminué au cours des 20 dernières années. Il est actuellement beaucoup plus faible que celui observé dans les essais cliniques randomisés.
- La question de la valeur ajoutée d'une revascularisation carotide chez les patients recevant un traitement médical optimal doit être résolue par de nouveaux essais randomisés comparant les patients recevant un traitement optimal seul à ceux ayant en plus une revascularisation carotide.
- En attendant les résultats de ces essais, la décision d'une revascularisation carotide doit être individualisé et prendre en compte la présence de facteurs de risque d'infarctus cérébral ipsilatéral, l'espérance de vie du patient, le risque d'AVC périprocédural et les préférences du patient.