Sténose de l'artère carotide interne asymptomatique à 60%:
Je traite médicalement

Pr MA Sevestre CHU Amiens

- Liens d’intérêt

- Leo Pharma, Bayer SA, Pfizer BMS, Aspen et Daichii

Que disent les recommandations ?

Organization	*Year*	*Guideline*
American Academy of Neurology	2005	Stenosis 60% to 99%. CEA can reduce future stroke rate if the perioperative complication rate is kept low.[16]
American Heart Association	1998	Stenosis 60% to 99%. CEA indicated when it can be performed with less than 3% stroke and death rate.[17]
European Society of Vascular Surgery	2009	CEA recommended in asymptomatic men with <75 years of age with 70% to 99% stenosis, if the perioperative stroke and death rate is <3%. CEA should be considered in younger, fit women.[18]
Society for Vascular Surgery	2008	Stenosis 60% to 99%, CEA plus BMT, if the perioperative risk is low.[19]

Il faut opérer toutes les sténoses asymptomatiques de l'artère carotide interne de plus de 60%

Who Benefits Most from Intervention for Asymptomatic Carotid Stenosis: Patients or Professionals?

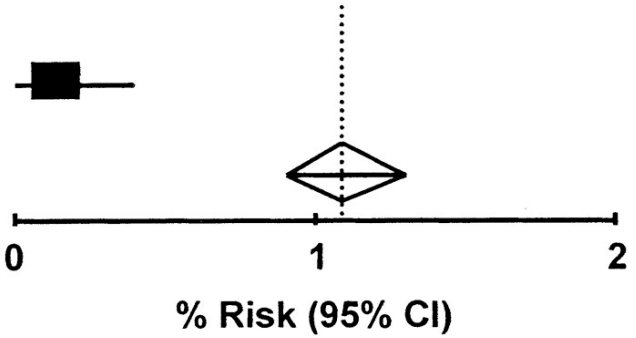
Table 2 Global variation in opinion on how a 67 year old non-smoking male with hypertension, hyperlipidaemia and a 70—80% asymptomatic stenosis should be managed (*)

Continent	Respondents	BMT (%)	CAS (%)	CEA (%)
North America	$n = 2227$	47	17	36
Europe	$n = 1161$	48	19	33
South America	$n = 545$	49	25	26
Asia & Russia	$n = 425$	56	24	20
Australia & Oceania	$n = 118$	56	14	30
Africa	$n = 39$	44	31	26

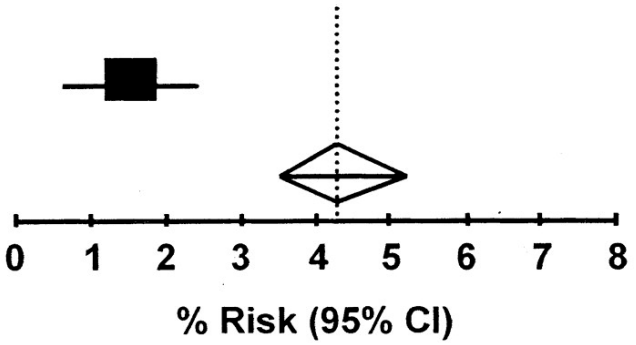
(*) based on data from an on-line vote run by the New England Journal of Medicine.[11] BMT = best medical therapy, CAS = carotid artery stenting, CEA = carotid endarterectomy.

Figure 1. The overall results of a meta-analysis of the operative risk of death (top) from all studies published between 1990 and 2000 inclusive that reported risks of CEA for asymptomatic stenosis15 and the operative risk of stroke and death in those studies in which out **10.**

	Events / Patients	Risk(%)	95% CI
Death			
ACAS	1 / 724	0.14	0.0-0.4
46 published series	127 / 11686	1.11	0.9-1.3



Stroke and Death			
ACAS	11 / 724	1.50	0.6-2.4
8 published series	92 / 2122	4.30	3.5-5.2



P.M. Rothwell, and L.B. Goldstein Stroke. 2004;35:2425-2427

American Heart Association.

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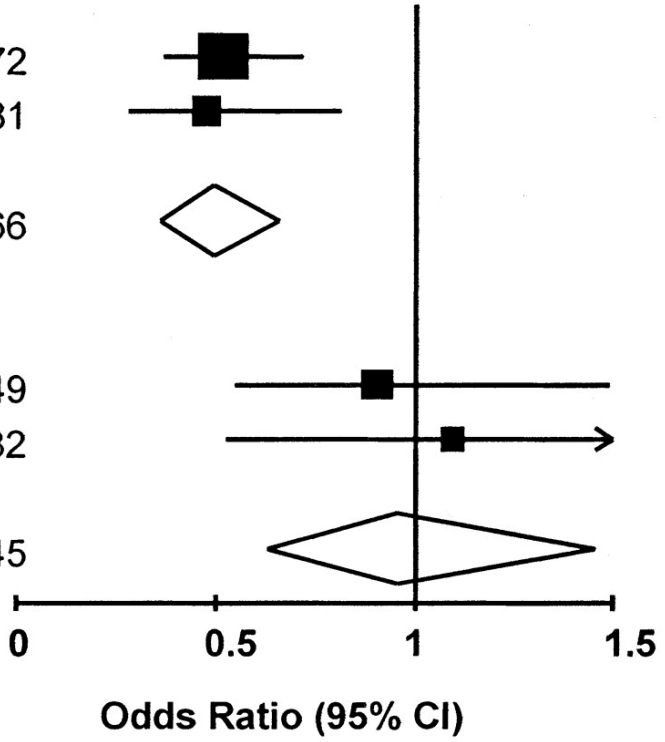
Figure 2. The effect of endarterectomy for asymptomatic carotid stenosis on the risk of any stroke and operative death by sex in ACST17 and ACAS.10.

Subgroup	Events/Patients Surgical	Medical	OR	95% CI
Males				
ACST	51 /1021	97 /1023	0.50	0.35-0.72
ACAS	18 /544	38 /547	0.46	0.26-0.81
TOTAL	69 /1565	135 /1570	0.49	0.36-0.66
Females				
ACST	31 /539	34 /537	0.90	0.55-1.49
ACAS	15 /281	14 /287	1.10	0.52-1.32
TOTAL	46 /820	48 /824	0.96	0.63-1.45



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Le risque d'AVC au cours du suivi a beaucoup chuté au cours des ans…comme la TEA réduit de moitié le risque, cela vaut il le coup?

Table 2 Annual risk of stroke in patients with asymptomatic carotid stenosis

Study	No. patients in medical arm	Stenosis range of patients enrolled	Stroke risk per year (follow-up duration)	Year published	Reference
ACAS	834	60%-99%	2.2% (mean 2.7 y)	1995	1
ACST	1,560	60%-99%	2.4% (mean 3.4 y)	1995	16
London, Ontario (without ME)	199 (pre-2003); 269 (after 2003)	60%-99%	4.4% pre-2003; 0.5% after 2003 (at least one 1 y)	2010	2
Oxford	101	50%-99%	0.34% (mean 3 y)	2010	31
SMART	193	70%-99%	0.5% (mean 6 y)	2013	32

Abbreviations: ACAS = Asymptomatic Carotid Atherosclerosis Study; ACST = Asymptomatic Carotid Surgery Trial; ME = microemboli; SMART = Second Manifestations of Arterial Disease.

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Table 3 Temporal changes in the 5 year risk of 'any' stroke and 'ipsilateral' stroke in ACAS and ACST

Trial	Years	Year published	'Any' stroke (%)	'Ipsilateral' stroke (%)
ACAS	1–5	1995	17.5	11.0
ACST	1–5	2004	11.8	5.3[a]
ACST	6–10	2009	7.2[a]	3.6[a]

- sténose 70%
- sexe masculin
- espérance de vie L 5 ans
- taux de complications du chirurgien 3%
- patient adhérent au traitement médical et souhaitant l'intervention.

Mieux caractériser les patients à risque

structure de la plaque ou des marqueurs sanguins étudiés pour définir des sous-groupes à risque accru d'AVC.

La présence de **micro-emboles asymptomatiques** mesurés par doppler transcrânien *Markus 2010*

1. Antithrombotic therapy
2. Aggressive treatment of hyperlipidemia
3. Control of hypertension
4. Control of diabetes to achieve A1C levels <7%
5. Tobacco smoking cessation
6. Lifestyle modification, including dietary modification and exercise

Table 1 Components of aggressive medical therapy in the SAMMPRIS study

Treatment	Details
Antiplatelet therapy	Aspirin + clopidogrel for first 90 days followed by aspirin alone
Statin	Goal LDL <70 mg/dL
Systolic BP lowering	Goal <140 mm Hg for nondiabetic participants, <130 mm Hg for diabetic participants
Hemoglobin A1c lowering in diabetic participants	Target <7%
INTERVENT coaching	Lifestyle risk factor control (tobacco avoidance, physical activity, dietary change, weight loss)

Abbreviations: BP = blood pressure; LDL = low-density lipoprotein; SAMMPRIS = Stenting and Aggressive Medical Management for Preventing Recurrent Stroke in Intracranial Stenosis.

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Table 4 Current carotid stenosis trials with a medical treatment arm

Study acronym	Design	Status (as of July 2016)
ECST 2	OMT vs OMT + carotid revascularization	Enrolling
	Asymptomatic or symptomatic low risk	
CREST 2	2 Parallel trials	Enrolling
	Asymptomatic average surgical risk	
	CEA + intensive medical management vs intensive medical management alone	
	CAS + intensive medical management vs intensive medical management alone	

Abbreviations: CAS = carotid artery stenting; CEA = carotid endarterectomy; CREST 2 = Carotid Revascularization and Aggressive Medical Management Trial; ECST = European Carotid Surgery Trial; OMT = optimal medical therapy.

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- 90% des patients traités médicalement n'auront pas d'AVC dans les 5 ans
- Pour les patients traités par TEA carotidienne avec un risque de 2,3%; on évite pas les 95% d'AVC du suivi qui proviennent d'autres causes que la chirurgie n'évite pas,
- Il y a aussi les patients avec AVC d'origine carotidienne sans sténose significative
- En admettant que le taux d'AVC a considérablement réduit pendant les 10 dernières années, cela fait faire beaucoup de TEA pour éviter un risque de 0.5%

Take Home message

- **Le bénéfice de la chirurgie carotidienne en cas de sténose asymptomatique doit prendre en compte la réduction des AVC spontanés dans cette population et n'est pas systématique**
- **Il est moins net chez les patients de plus de 75 ans et chez les femmes**
- **La prescription d'antiagrégants plaquettaires, de statine et d'IEC et la prise en compte des facteurs de risque est impérative**
- **La caractérisation des plaques à risque est l'enjeu des prochaines années**
- **La recherche de HITS, L'echostructure de la plaque sont des éléments importants**