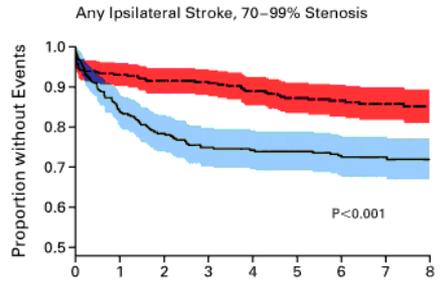


Pr H HOSSEINI  
Stroke Unit  
CHU Henri MONDOR  
CRETEIL

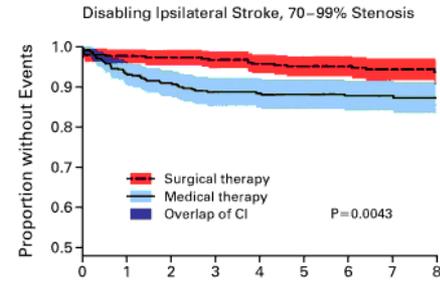


# Chirurgie de la carotide

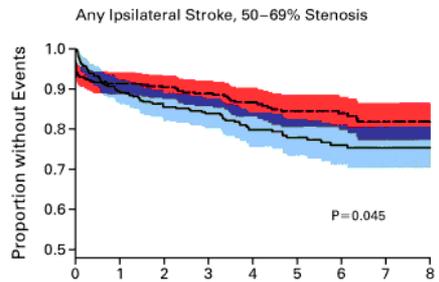
- bénéfique
- AIT
- AIC, Rankin <3
- degré de sténose (artériographie)
  - >70% : RRA de 16%  
p<0.001
  - 50-69% : RRA de 4.6%  
p=0.04
  - 30-49% : RRA de 3.2%  
p=0.6
  - <30% : RRA - 2.2% *Rothwell, Lancet 2003*



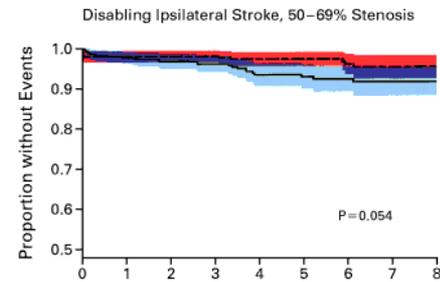
No. AT RISK		0	1	2	3	4	5	6	7	8
Surgical therapy		300	290	281	264	247	224	174	111	
Medical therapy		275	249	230	218	207	192	151	73	



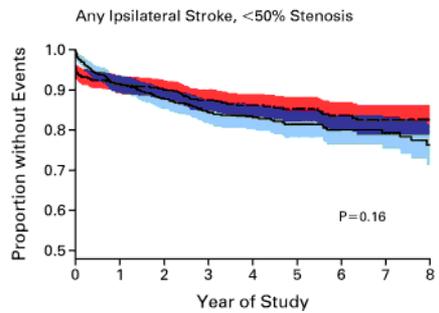
No. AT RISK		0	1	2	3	4	5	6	7	8
Surgical therapy		314	307	297	284	268	247	192	122	
Medical therapy		305	290	272	258	244	229	183	93	



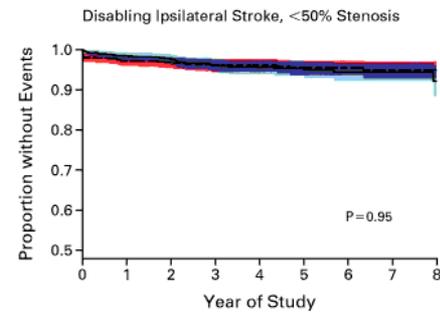
No. AT RISK		0	1	2	3	4	5	6	7	8
Surgical therapy		368	317	261	207	167	134	89	57	
Medical therapy		363	300	248	193	143	110	77	45	



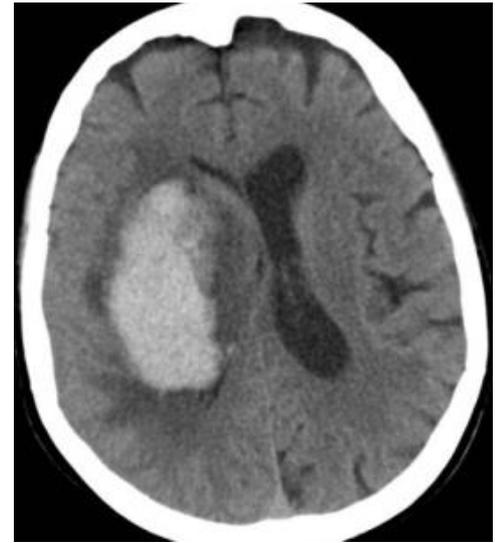
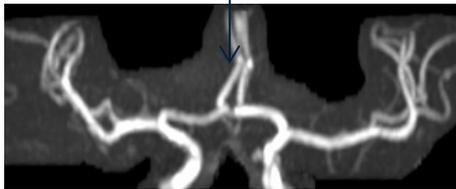
No. AT RISK		0	1	2	3	4	5	6	7	8
Surgical therapy		391	340	284	229	187	145	95	61	
Medical therapy		396	338	280	224	173	133	92	51	



No. AT RISK		0	1	2	3	4	5	6	7	8
Surgical therapy		601	510	407	316	250	168	121	67	
Medical therapy		614	502	406	300	207	142	101	65	



No. AT RISK		0	1	2	3	4	5	6	7	8
Surgical therapy		641	553	443	349	279	190	138	78	
Medical therapy		661	562	465	350	245	167	119	79	



- Removal of source of thromboembolic
- Restoring normal perfusion

- Ipsilateral stroke
- Hemorrhagic transformation
- Edema
- Hyperperfusion

# Quand opérer ?

- Débattu
- Tôt
  - risque d'hémorragie
    - ACM, HTA, taille de l'infarctus
  - extension de l'infarctus
- Tard
  - risque de récurrence d'AVC
  - risque d'occlusion de la carotide

# Quand opérer ? Consensus

- après AVC
  - stable sur le plan neurologique
  - Rankin < 3
  - Imagerie (TDM ou IRM) pas d'œdème ni edm
  - BHE cicatrisée
    - prise de pdc
- Plus rapidement si AIT
- Différé si thrombus flottant

Sbarigia *et al.*, Eur J Vasc Endovasc Surg 2006

- CEA, 100 patients
- 1.5 d after stroke
- NIHSS < 22
  
- Morbidity/Mortality 7.3 %
- Significant improvement
- No hemorrhagic transformation

# Ballotta *et al.*, J Vasc Surg 2008

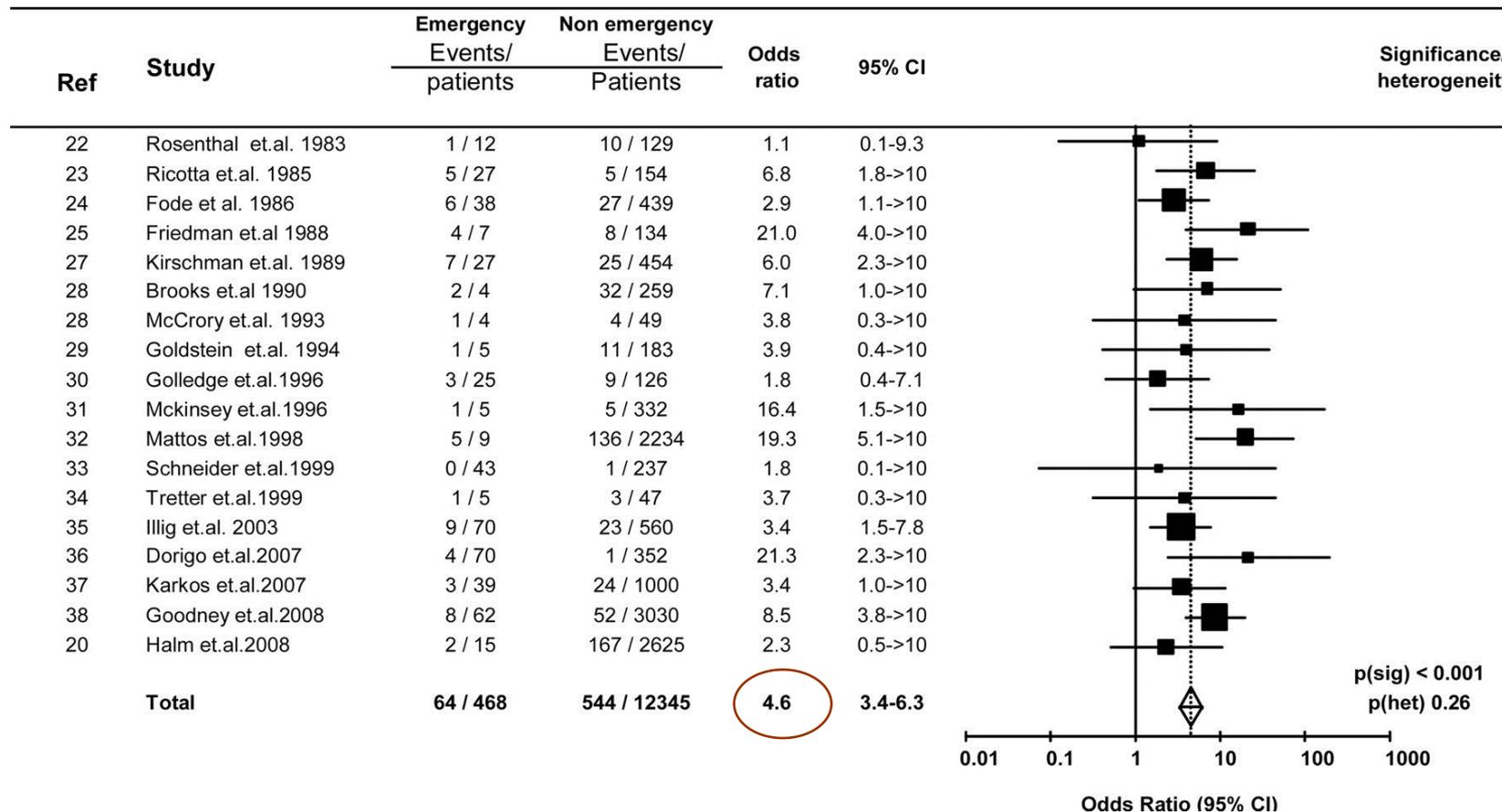
- 100 patients
- mRS < 2
- < 2 weeks after stroke
- Median time 8 d
  
- No New Stroke
- No Hemorrhagic transformation
- No edema

# **Systematic Review of the Operative Risks of Carotid Endarterectomy for Recently Symptomatic Stenosis in Relation to the Timing of Surgery**

*by Kittipan Rerkasem, and Peter M. Rothwell*

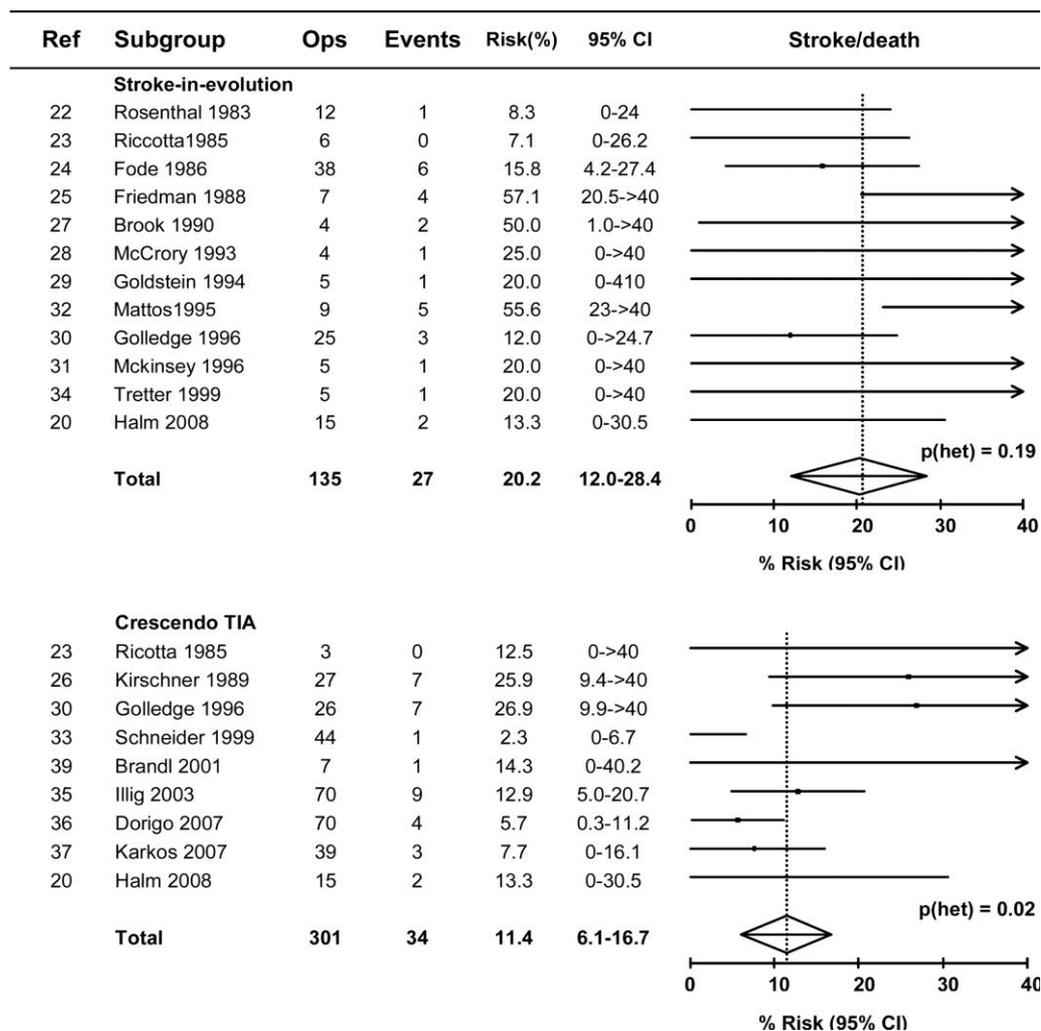
*Stroke*  
*Volume 40(10):e564-e572*  
*October 1, 2009*

**Figure 2. The odds of operative stroke and death after emergency carotid endarterectomy for unstable neurological deficit (crescendo TIA and stroke in evolution) vs nonemergency surgery.**



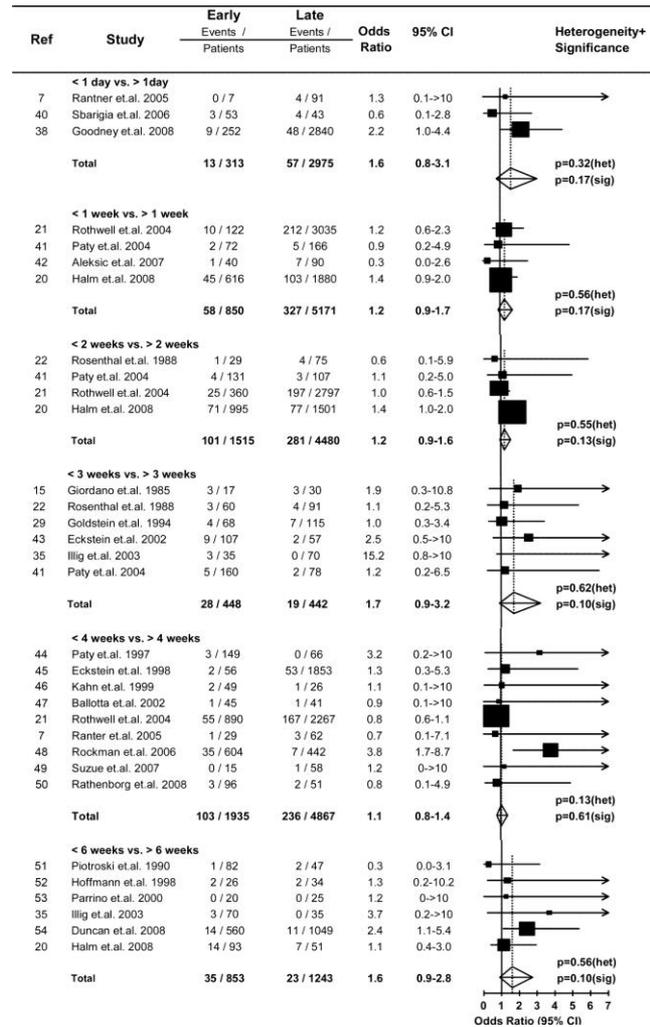
Rerkasem K, Rothwell P. Stroke 2009;40:e564-e572

**Figure 3. Meta-analysis of operative stroke and death rates after carotid endarterectomy in patients with stroke in evolution and crescendo TIA in studies.**



Rerkasem K, Rothwell P. Stroke 2009;40:e564-e572

**Figure 4. The odds of operative stroke and death after early carotid endarterectomy (<1 day to 6 weeks) for established cerebral TIA or stroke vs late surgery (>1 day to 6 weeks).**



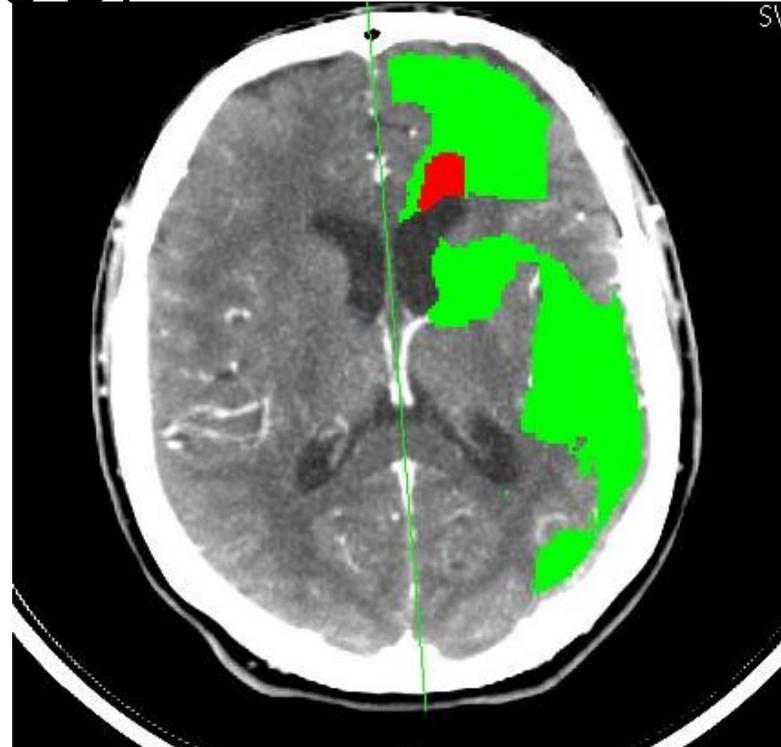
Rerkasem K, Rothwell P. Stroke 2009;40:e564-e572

# Rerkasem and Rothwell, 2009

- Emergency CEA >>> non emergent OR 4.6
- Stroke in evolution 20 %
- Crescendo TIA 11 %
  
- Early versus late surgery
- No difference

# Emergent CEA, 2014

- New deficit immediately after CEA
- Small infarct with large penumbra
  - (Class IIb, level of evidence B)
- Mismatch  $D < P$
- Precaution if
  - Stroke in evolution
  - Crescendo TIA





“Don’t damage my brain  
it is my second favorite organ” W.A.