MEET 2008
MULTIDISCIPLINARY EUROPEAN ENDOVASCULAR THERAPY
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Why do I think we need 50 or more procedures for training?

Cannes, French Riviera
June 26-29

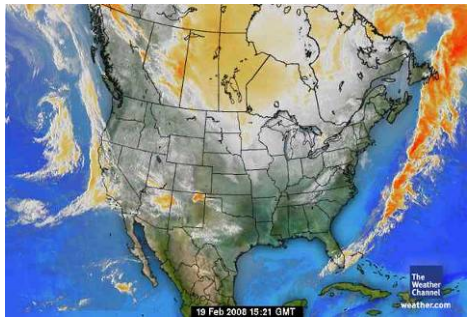
What should we do?

CREST trial: learning curve

operators <15
CAS:stroke/death rate 7.1%

Journal of Vascular Surgery

operators >15
CAS:stroke/death rate 3.7%



EVA-3S: learning curve

stroke/death rate: 9.6%

12 CAS or 35 stenting procedures in the supra aortic trunks, 5 of which had to be CAS

The NEW ENGLAND JOURNAL of MEDICINE

SPACE: learning curve

stroke/death rate: 6.84%

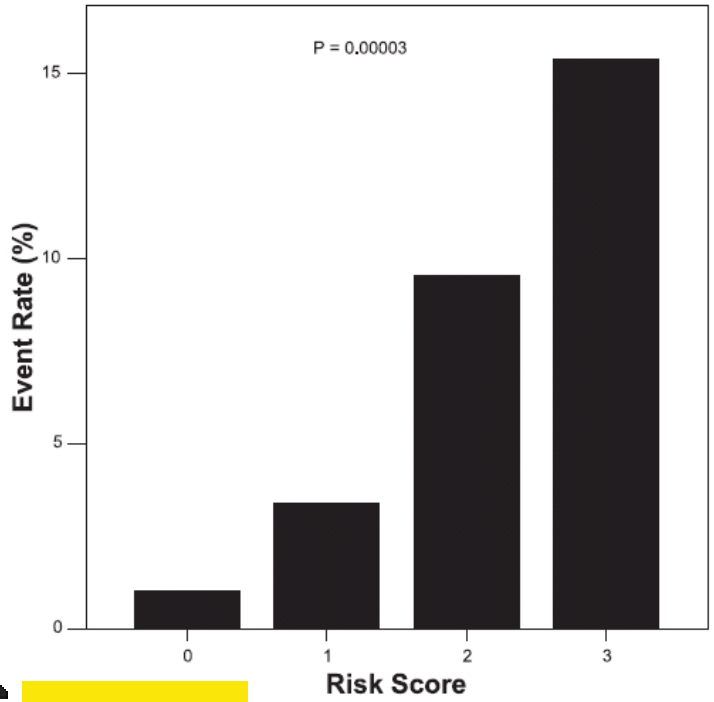
25 successful percutaneous transluminal angioplasties or stent procedures

THE LANCET

Stroke. 2006;37:2557-2561

Risk Score for Peri-Interventional Complications of Carotid Artery Stenting

Robert Hofmann, MD; Alexander Niessner, MD; Alexander Kypta, MD; Clemens Steinwender, MD; Jürgen Kammler, MD; Klaus Kerschner, MD; Michael Grund, MD; Franz Leisch, MD; Kurt Huber, MD



Stroke

Risk score for adverse events within 30days CAS

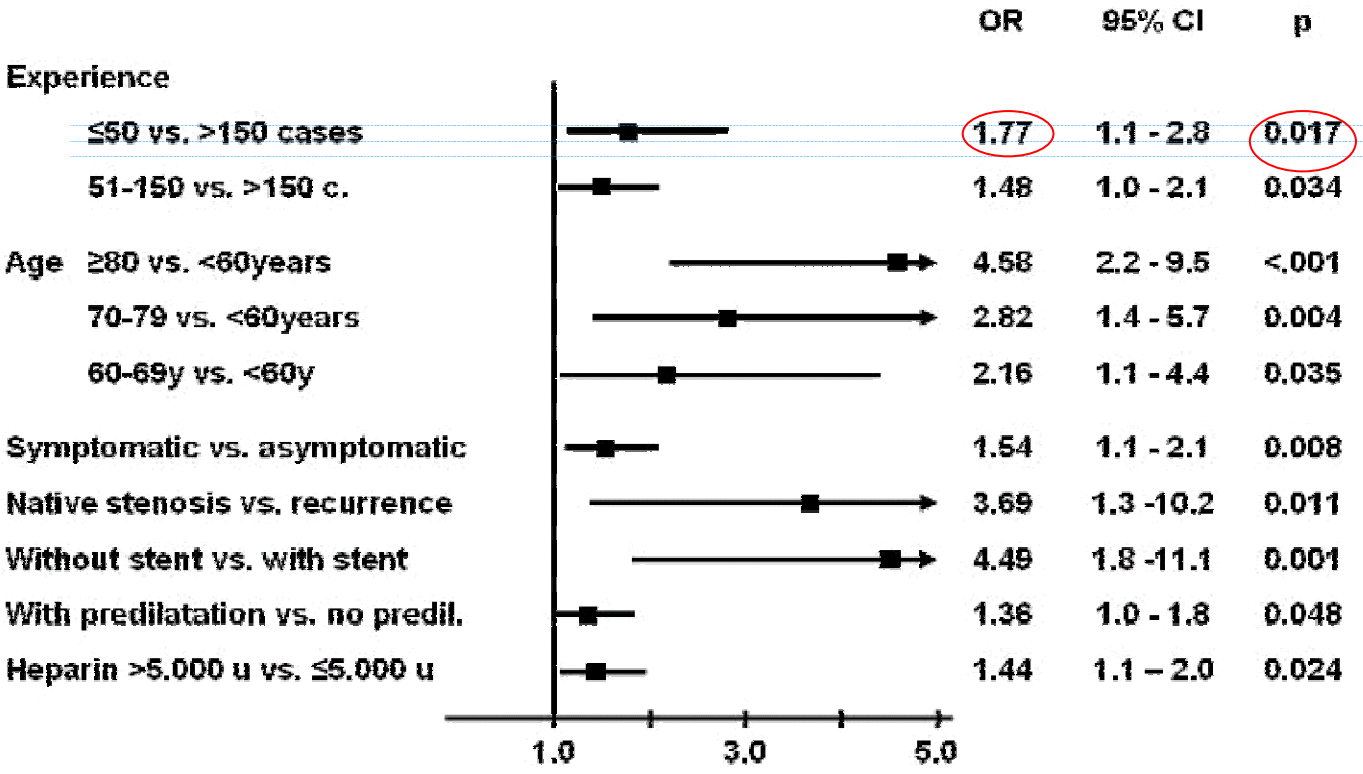
- *Age >80 years,*
- *DM with* HbA1c >7%,
- *Plaque Ulceration,*
- *Contralateral stenosis > 50%*

Stroke. 2008; in press

Predictors of death and stroke after carotid angioplasty and stenting. A subgroup analysis of the Pro-CAS data

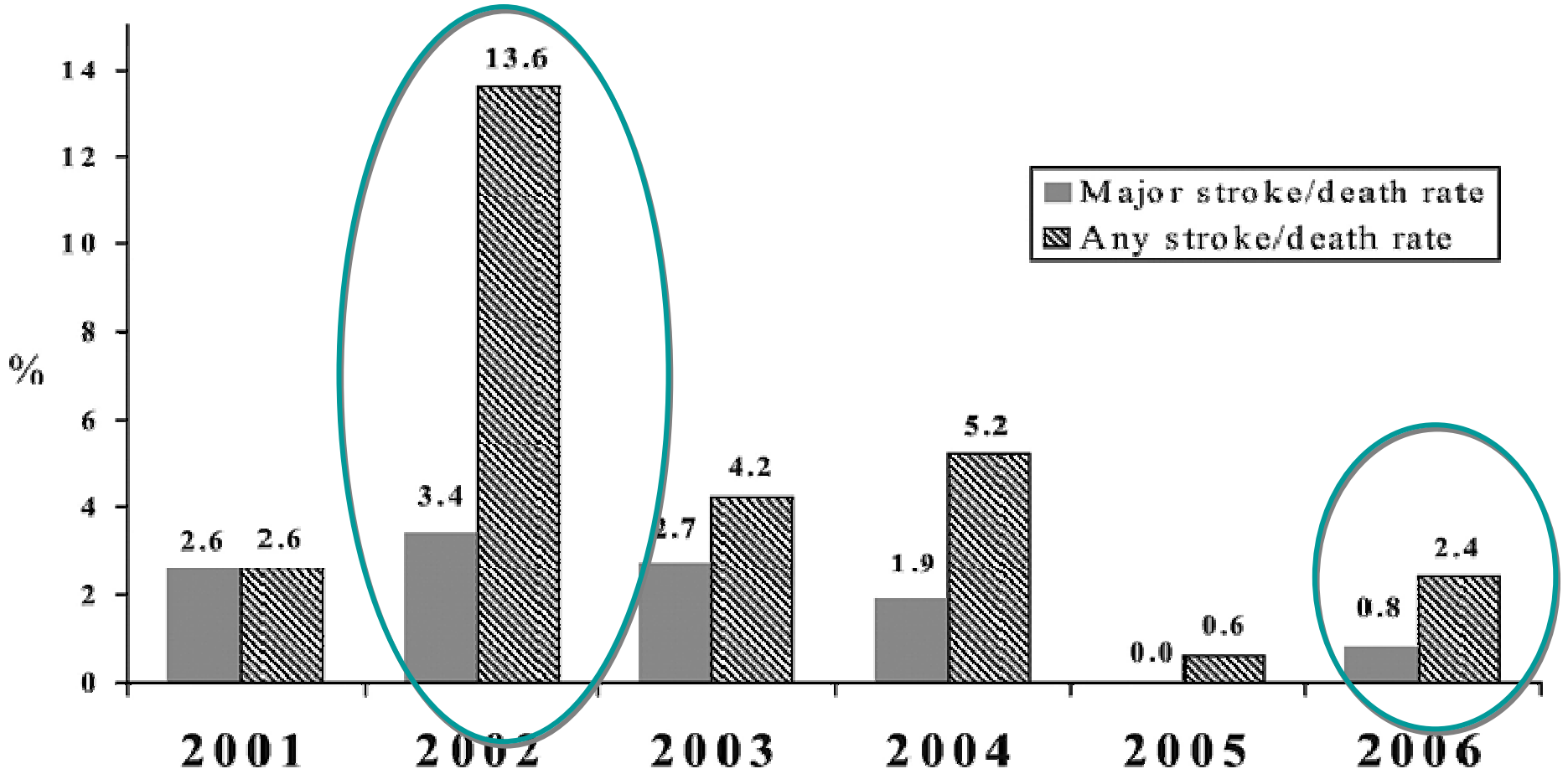
Wolfram Theiss, Peter Hermanek, Klaus Mathias, Hartmut Brückmann, Jürgen Dembski, Franz-Josef Hoffmann, Rüdiger Kerner, Franz Leisch, Harald Mudra, Karl-Ludwig Schulte, and Horst Sievert

Stroke



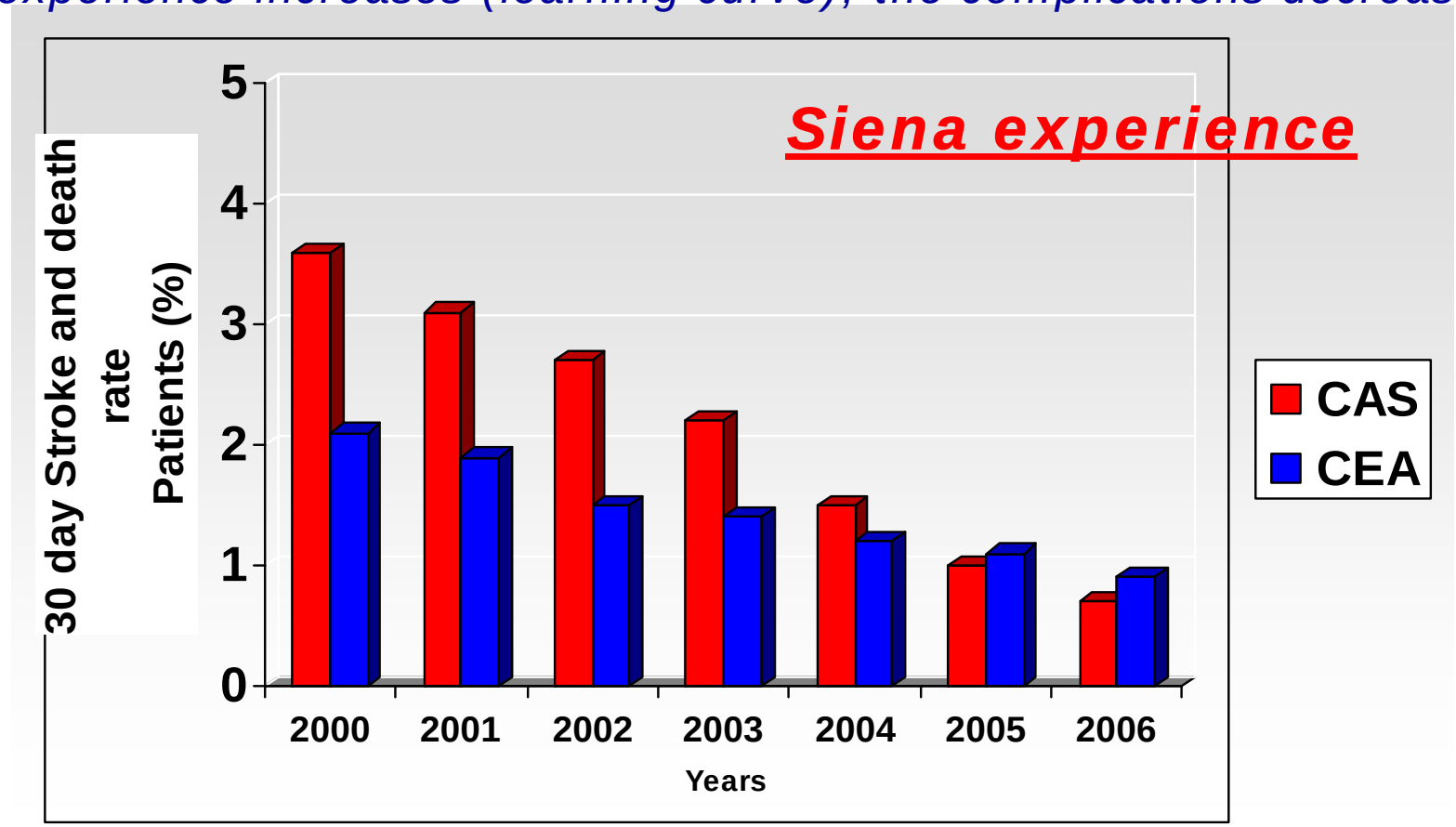
Learning curve: Perugia experience

Appropriateness of learning curve for carotid artery stenting: An analysis of periprocedural complications. Verzini F, J Vasc Surg 2006



Stroke and death rate at 30 days, from 2000 to 2006 for CAS and CEA

As the experience increases (learning curve), the complications decrease….



. Setacci C, Chisci E, de Donato G, Setacci F, Sirignano P, Galzerano G. Carotid artery stenting in a single center: are six years of experience enough to achieve the standard of care? Eur J Vasc Endovasc Surg. 2007 Dec;34(6):655-62

Invited Commentary

European Journal of
Vascular and Endovascular Surgery

SPACE and EVA 3S trials : the need of standards for Carotid Stenting

Carlo Setacci, MD; Alberto Cremonesi, MD.

EJVES 2007; 33: 47-8

Invited Commentary

"As difficult as it is to say, we must admit that both EVA 3S and SPACE didn't match an *acceptable level of physician training* and *credentialing.*
The consequences of this technical bias on the reported CAS results are left to the scientific community's evaluation."

Setacci C, Cremonesi A. **SPACE and EVA 3S trials : the need of standards for Carotid Stenting.** ***EJVES 2007; 33: 47-8***

Carotid Artery Stenting: First Consensus Document of the ICCS-SPREAD Joint Committee

Alberto Cremonesi, MD; Carlo Setacci, MD; Angelo Bignamini, MD; Leonardo Bolognese, MD; Francesco Briganti, MD; Germano Di Sciascio, MD; Domenico Inzitari, MD; Gaetano Lanza, MD; Luciano Lupattelli, MD; Salvatore Mangiafico, MD; Carlo Pratesi, MD; Bernard Reimers, MD; Stefano Ricci, MD; Gianmarco de Donato, MD; Ugo Ugolotti, MD; Augusto Zaninelli, MD Gian Franco Gensini, MD

Stroke

Stroke.2006; 37: 2400-2409

CAS: Training and Expertise

Recommendation 10: Grade GPP [C]

Once the basic skill for catheter-based intervention has been achieved by the already-active interventionist, the minimum reccomended training to achieve competence is as follows:

1. At least 150 procedures of supra-aortic vessel engagement (during diagnostic as well as interventional procedures) within 2 years, of which at least 100 as the primary operator.
2. At least 75 carotid stenting procedures, of which at least 50 as the primary operator , within a 2-year fellowship.

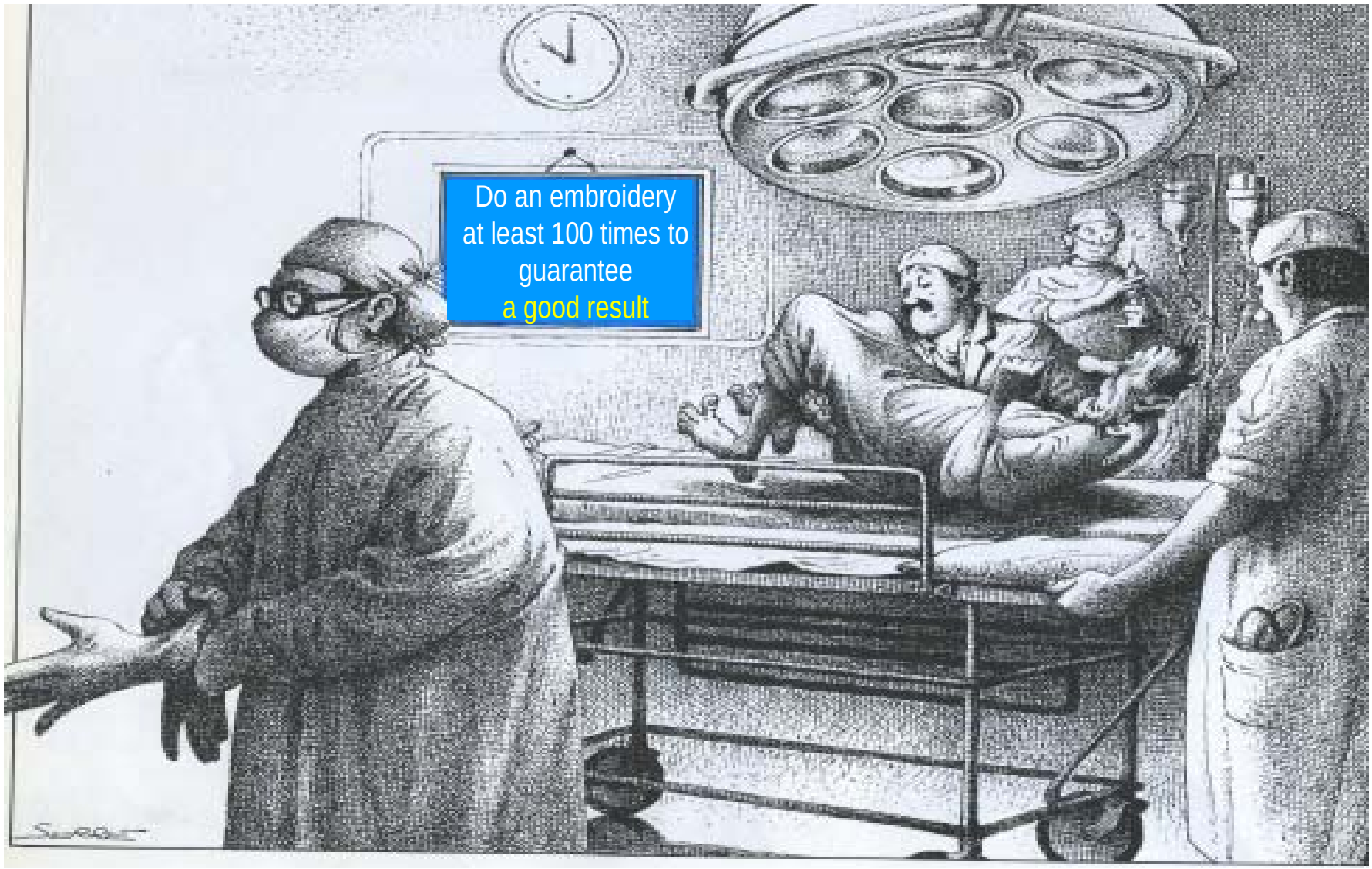
Recommendation 11: Grade GPP [C]

The minimum requirement to maintain technical skill (competence) is the number of 50 carotid stenting procedures performed and documented by each primary operator per year.

Stroke

Stroke.2006; 37: 2400-2409

Learning –curve: what I think



Cannes, French Riviera
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VASCULAR
ANNUAL MEETING
SAN DIEGO, CA 2008

Nicholas Cheshire

Why simulators are a good training model ?

Isabelle Van Herzeele

Nicholas Cheshire

APTITUTE PREDICTS ENDOVASCULAR PERFORMANCE OF INEXEPRIENCED INDIVIDUALS BEFORE AND AFTER VIRTUAL REALITY TRAINING

CONCLUSIONS

Simulator-based training in endovascular skills improved performance in naive individuals. A plateau in the learning process occurred but remained inferior to the performance of experienced interventionalists.

Conclusion

- **The Carotid Artery Stenting is a process of tailoring the endovascular procedure to a specific patient and a specific kind of carotid lesion.**

- **We need to have a *deep knowledge* of patient clinical status, vascular anatomy,carotid plaque findings and technical features of the materials (guiding catheters and sheaths, wires, balloon, stents, etc.).**

- **Only a *correct learning curve* could guarantee all those points**

Thank you for your attention