



Intraoperative non-invasive monitoring of cerebral perfusion

Luzius A. Steiner, MD, PhD
Department of Anaesthesiology
University Hospital Center and University of Lausanne
Switzerland

**Is there a difference in
intra-operative cerebral
perfusion between
younger and older
Patients?**



Monitoring

- EGC
- MAP (invasive or Finapres)
- FiO_2
- ETO_2
- SpO_2
- $ETCO_2$
- TCD
- NIRS (TOI)
- ET Sevoflurane
- Temperature
- Mx
- TOx



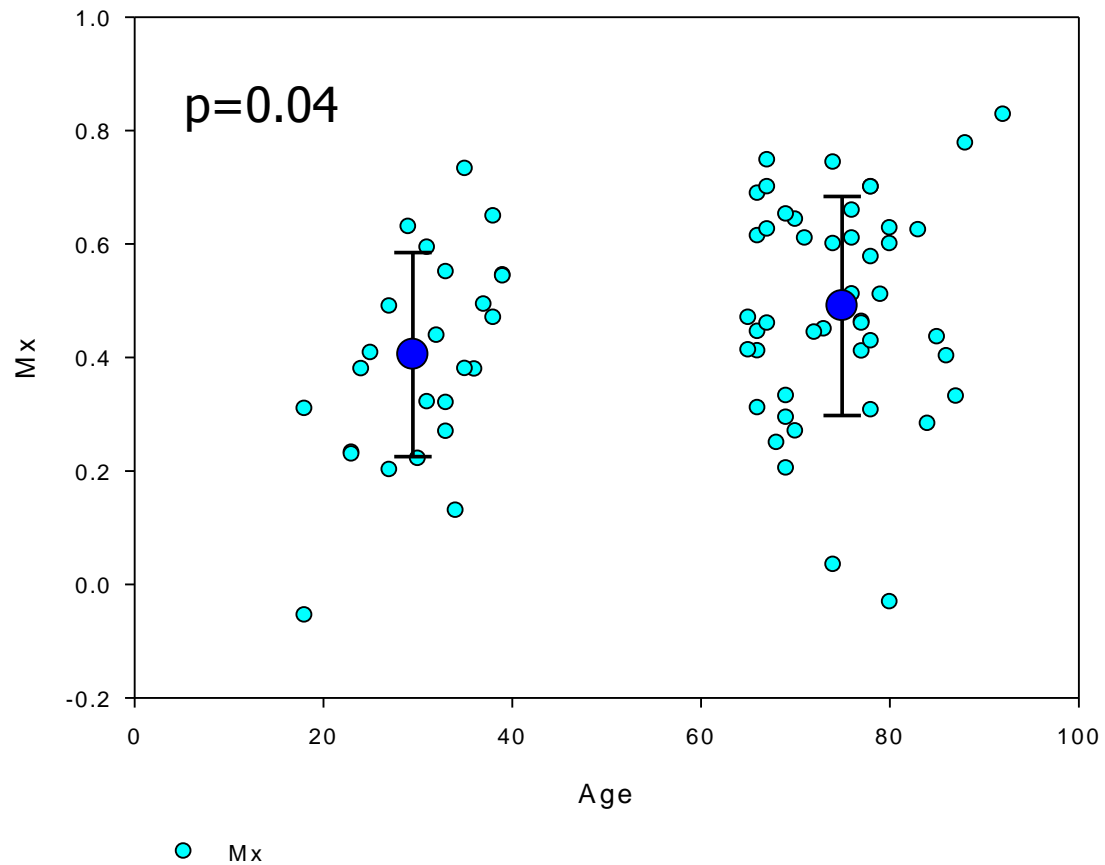
Anesthesia

- Standardized
 - Thiopenthal for induction
 - Sevoflurane
 - Fentanyl
 - Atracurium
- Patients
 - Group « young » 20 – 40 yrs old
 - Group « old » > 65 yrs old

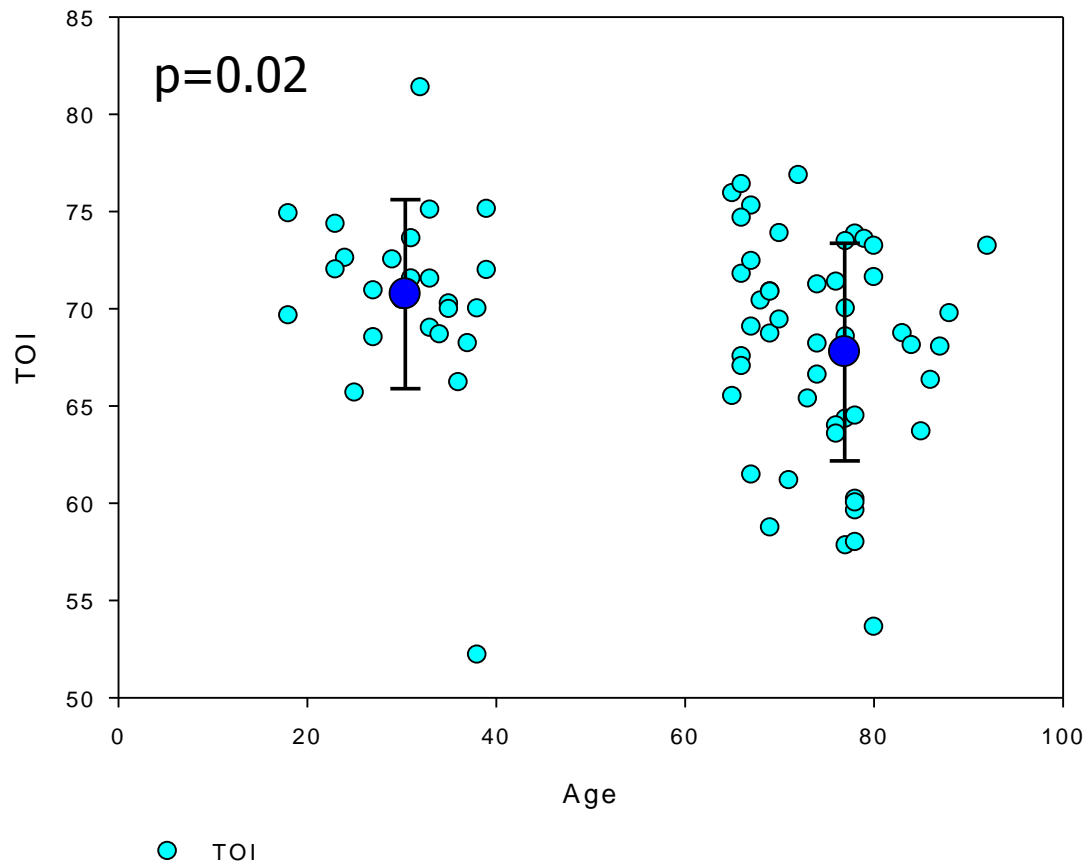
Results

	Group 18-40y (n=25)	Group >65y (n=49)	p
ABP (mmHg)	83±11	78±11	0.04
Temp (°C)	36.1±0.4	35.7±0.4	0.002
ETCO₂ (kPa)	4.7±0.3	4.6±0.3	0.1

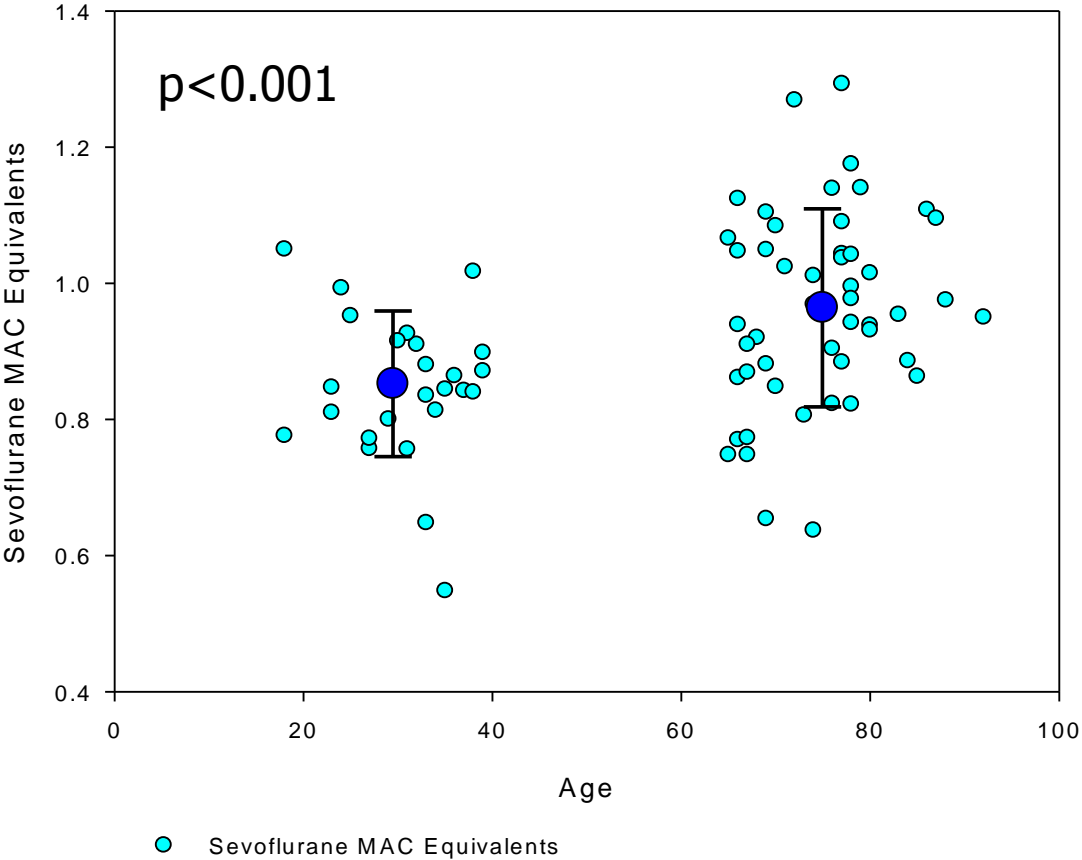
Autoregulation - Mx



Tissue Oxygenation Index



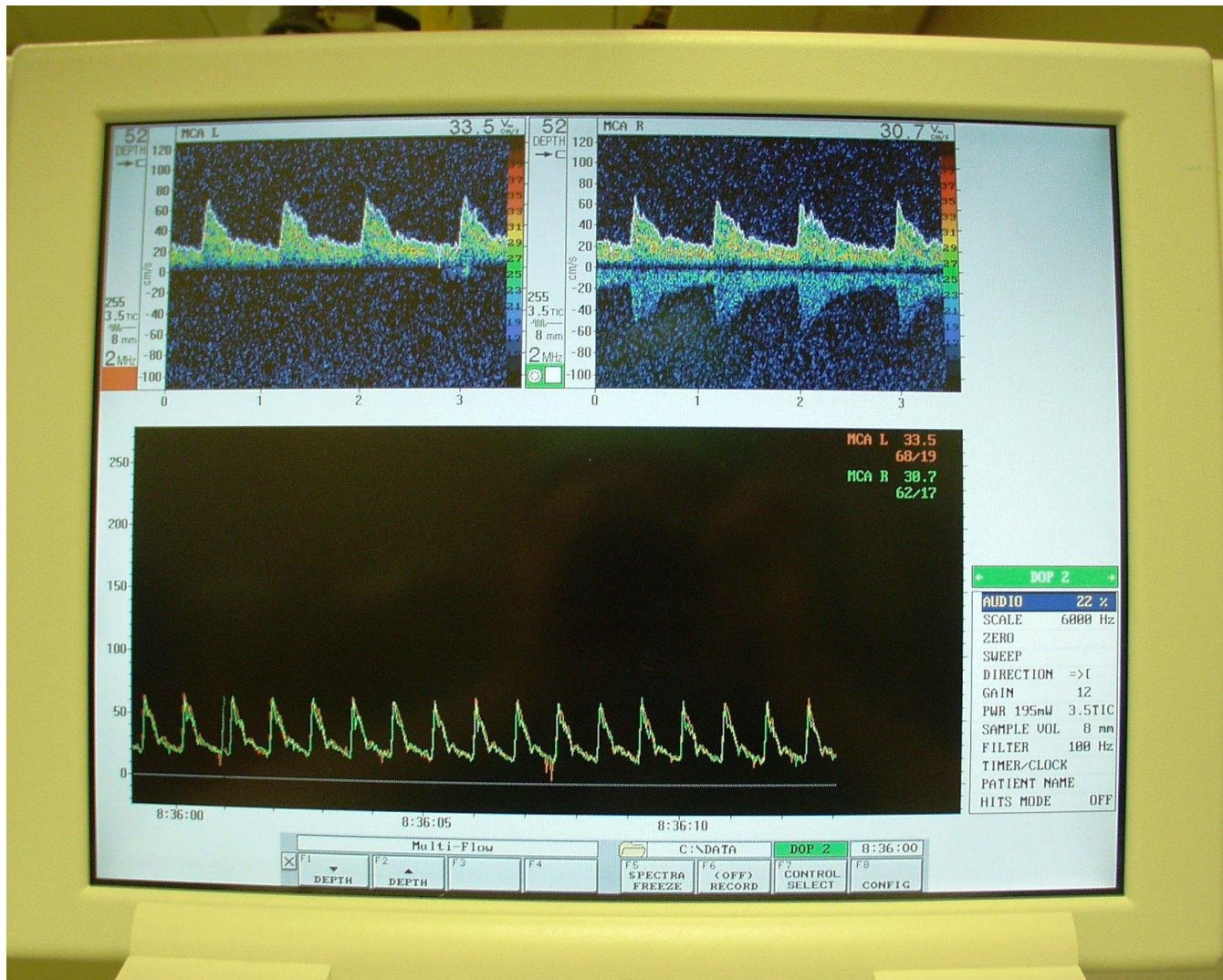
Pitfalls?



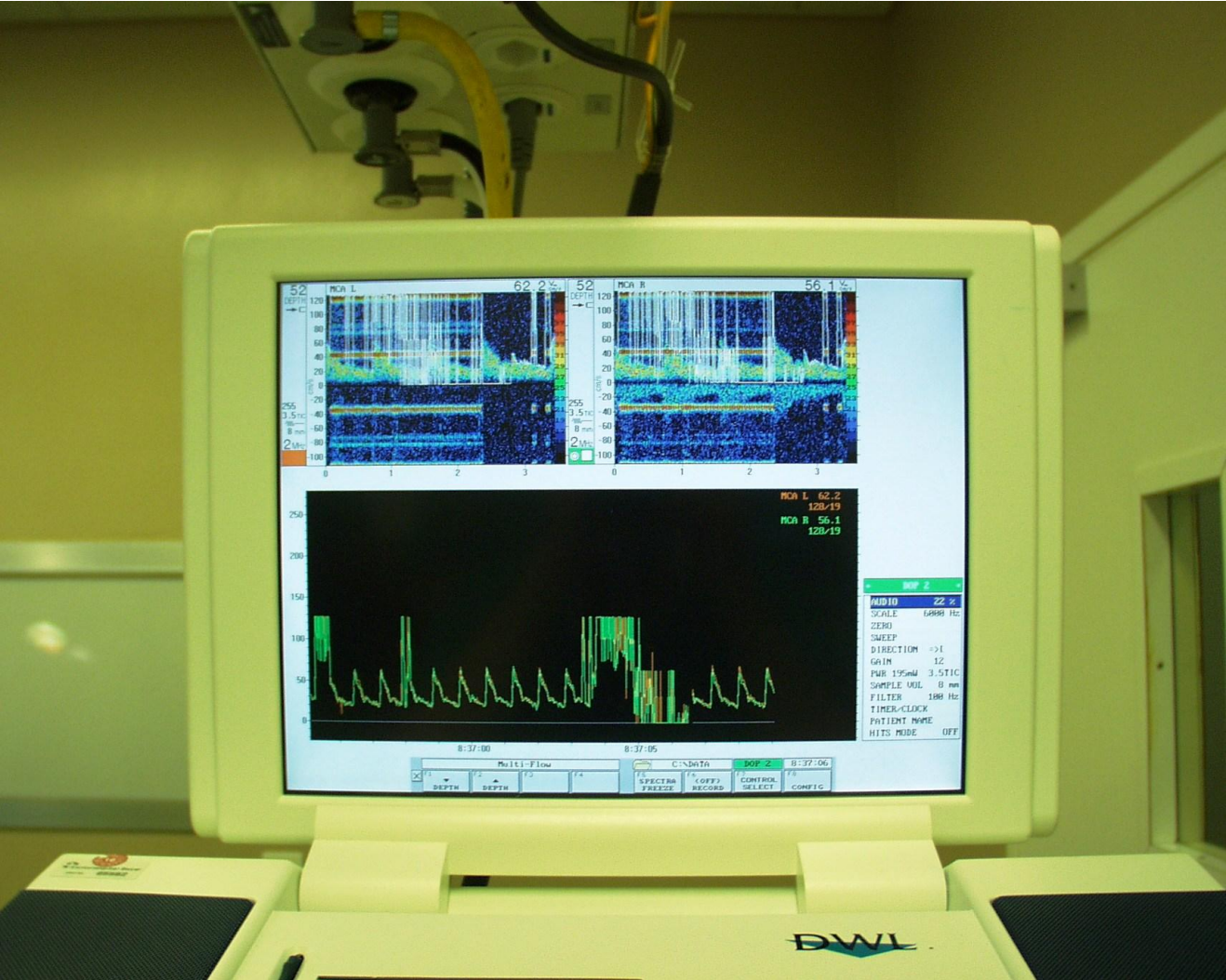
Pitfalls?

- Clinical relevance?
- Increase in Mx:
 - Change in autoregulation?
 - Arousal?

Problems



Problems



Thanks!!!!

- **Peter Smielewski**
- **Melanie Gamberini**
- **Christoph Burkhart**
- **Ariane Rossi**

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