



BCM
Baylor College of Medicine

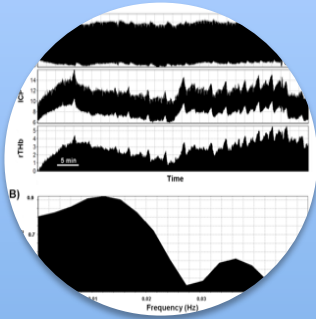
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September 24, 2010

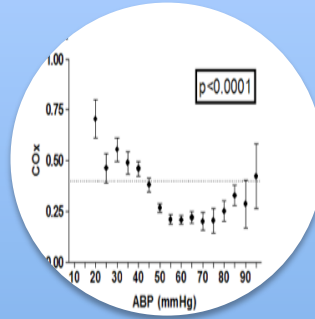


LABORATORY AND CLINICAL APPLICATIONS OF ICM+

ICM+ as a translational tool



Laboratory
Exploration



Clinical
Evaluation



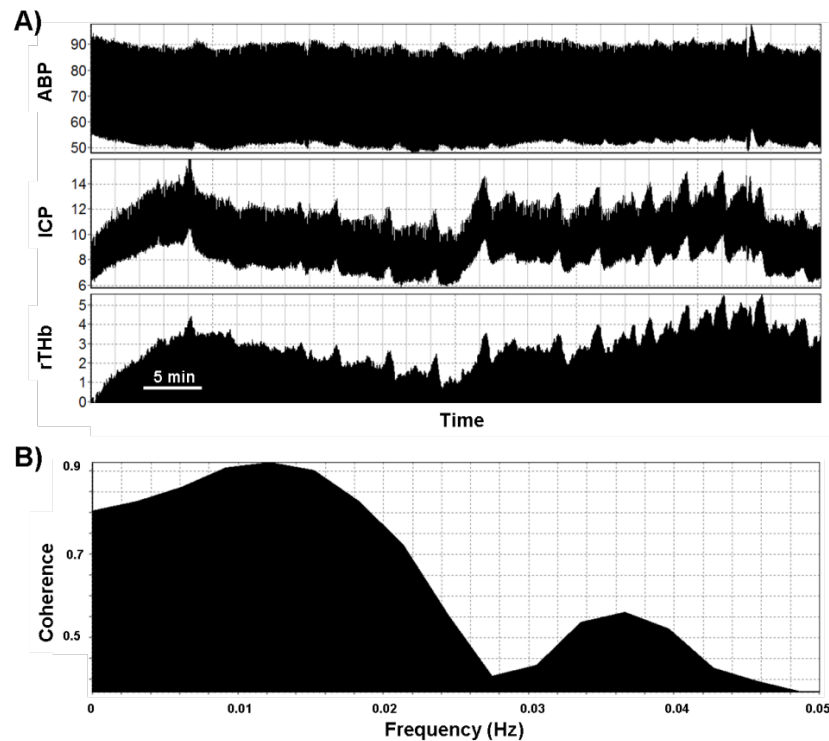
Clinical
Practice

ICM+

Laboratory Exploration

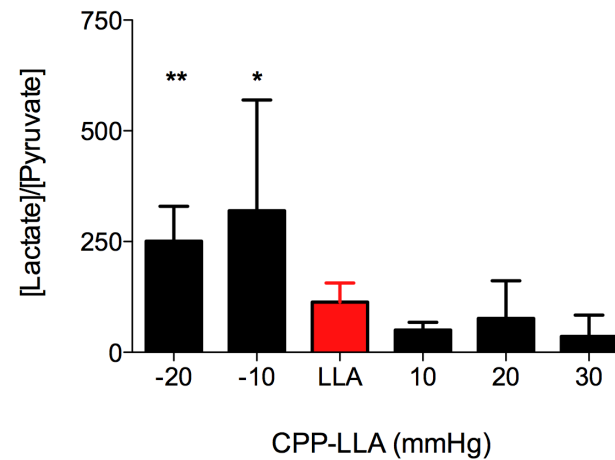
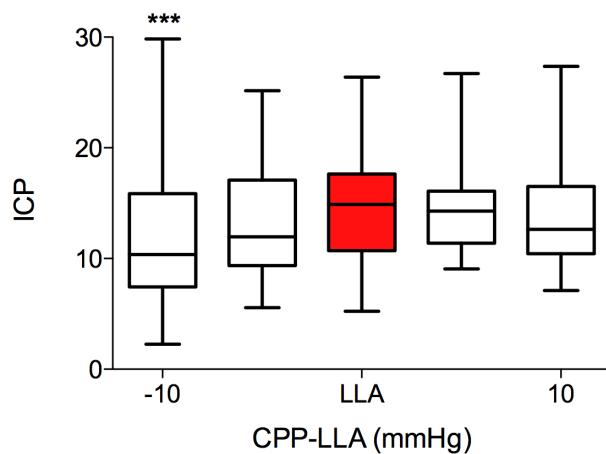
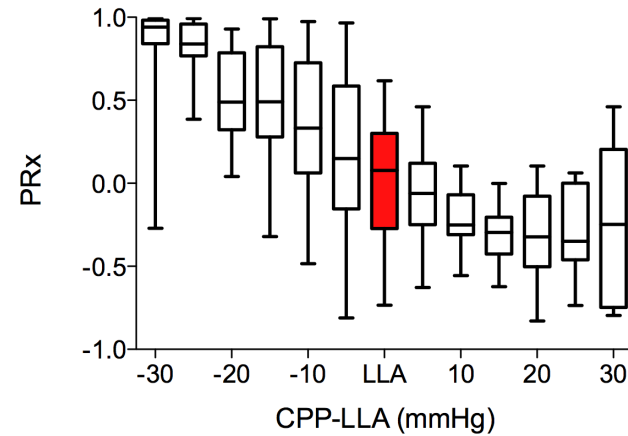
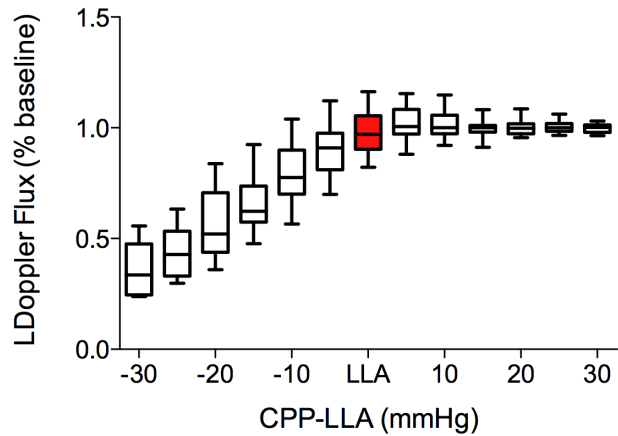
- Cerebral Oximetry Index
- Hemoglobin Volume Index
- Rheoencephalography Index
- Hypotension
- Controlled Cortical Impact
- Cardiopulmonary Bypass
- Hydrocephalus

Laboratory Exploration: HVx

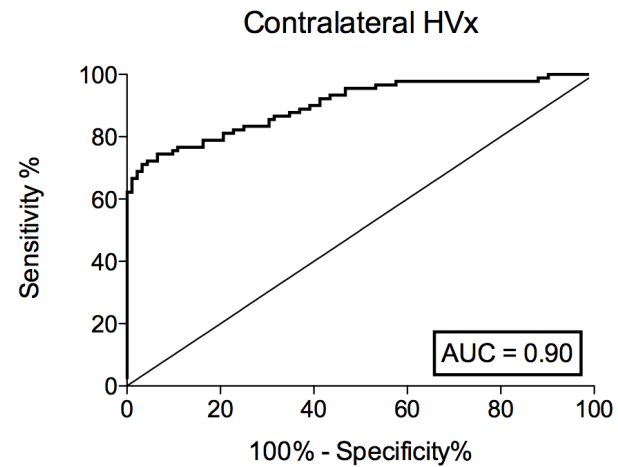
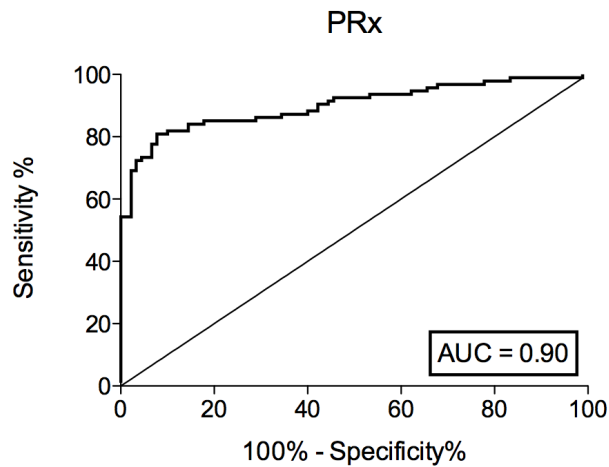
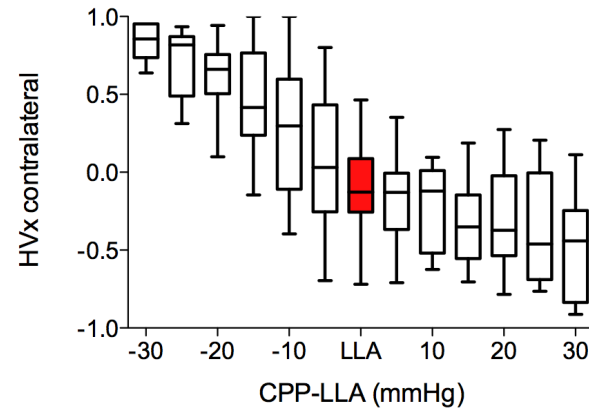
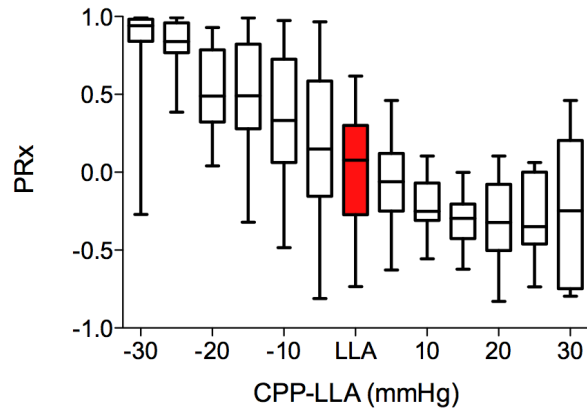


- ICP slow waves replicated with NIRS-based measurements of blood volume
- Coherence between blood volume and ICP is high at “slow wave” frequency

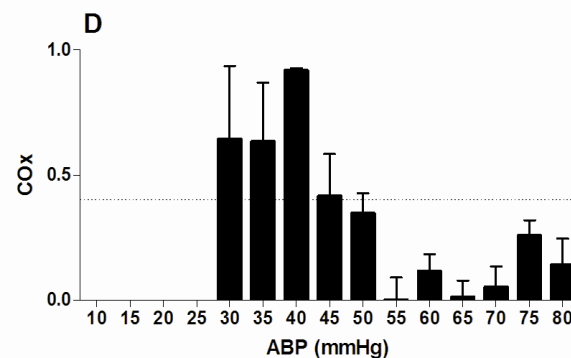
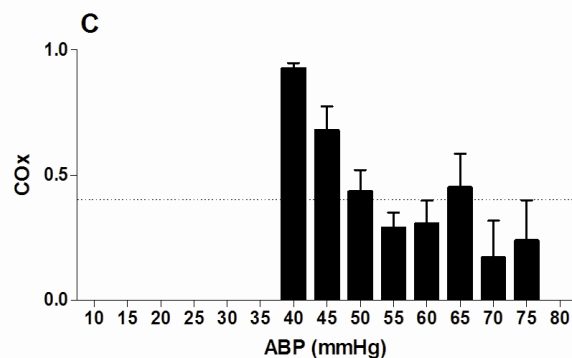
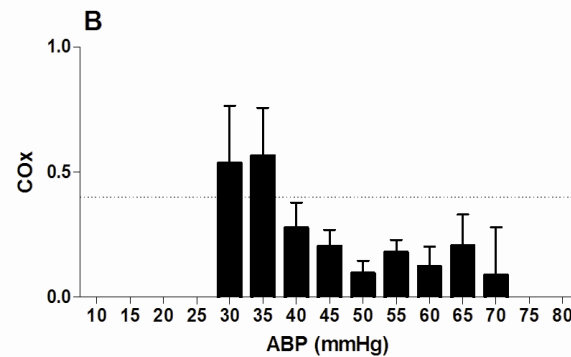
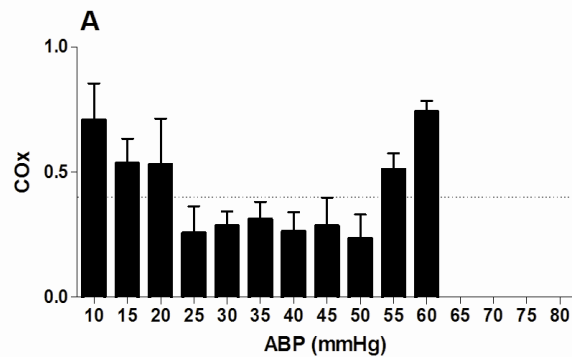
Laboratory Validation: HVx



Laboratory Validation: HVx



Clinical Evaluation: COx



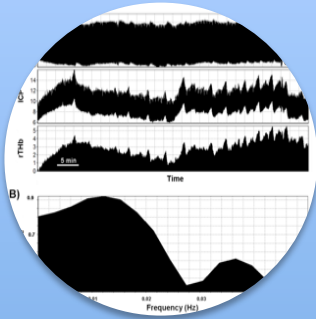
A. 6-day-old: IAA
(LLA 20 mmHg)

B. 7-month-old: VSD
(LLA 40 mmHg)

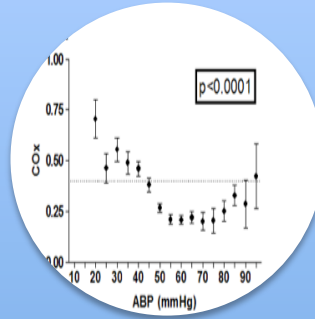
C. 2-year-old: VSD
(LLA at 50 mmHg)

D. 7-year-old: anomalous
coronary artery,
(LLA at 45 mmHg)

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Clinical
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ICM+

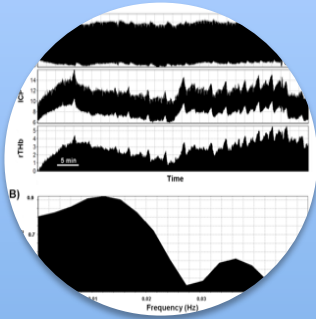
Imagine ICM+ clinical deployment

- Smarter clinical practice
- The monitor *is* the data collection
 - Accurate and unbiased
 - Data sharing
 - Comprehensive, uniform data registry
 - Testing new algorithms and filters against outcome

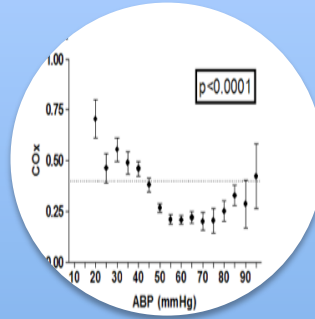


Clinical
Practice

What is stopping the use of ICM+ in clinical practice?



Laboratory
Exploration



Clinical
Evaluation



Clinical
Practice

