

# Is ICP all you need to know?



**Codman**<sup>®</sup>  
SPECIALTY SURGICAL

A DIVISION OF INTEGRA LIFESCIENCES

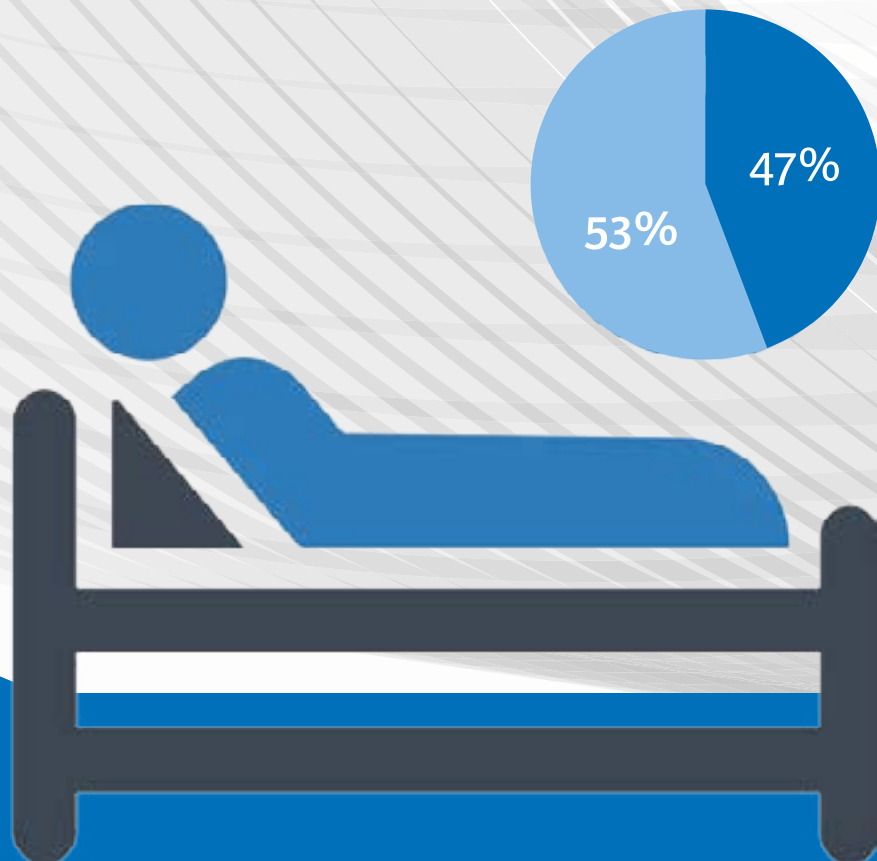
**Licox**<sup>®</sup> Brain Tissue Oxygen  
Monitoring Solution



## Missing clinically significant events

# 47%

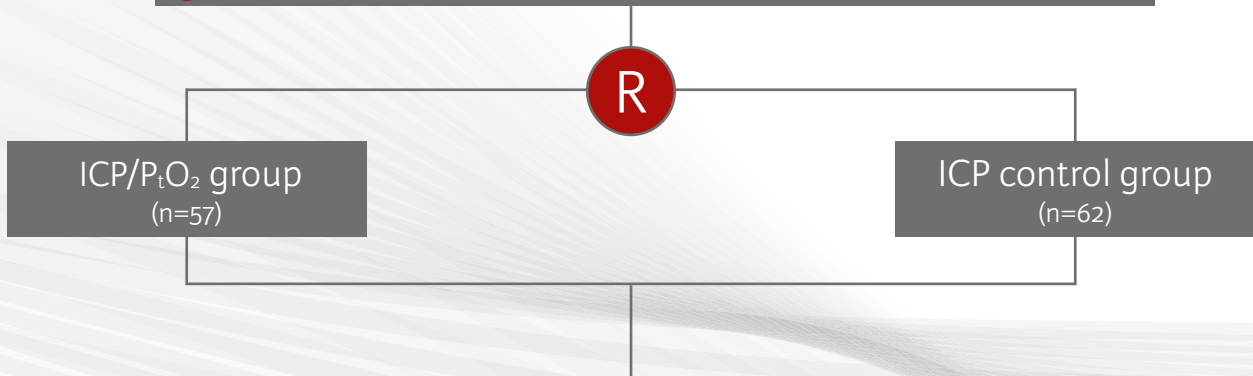
of severe TBI patients with normal CPP & ICP may have cerebral hypoxia<sup>1</sup>



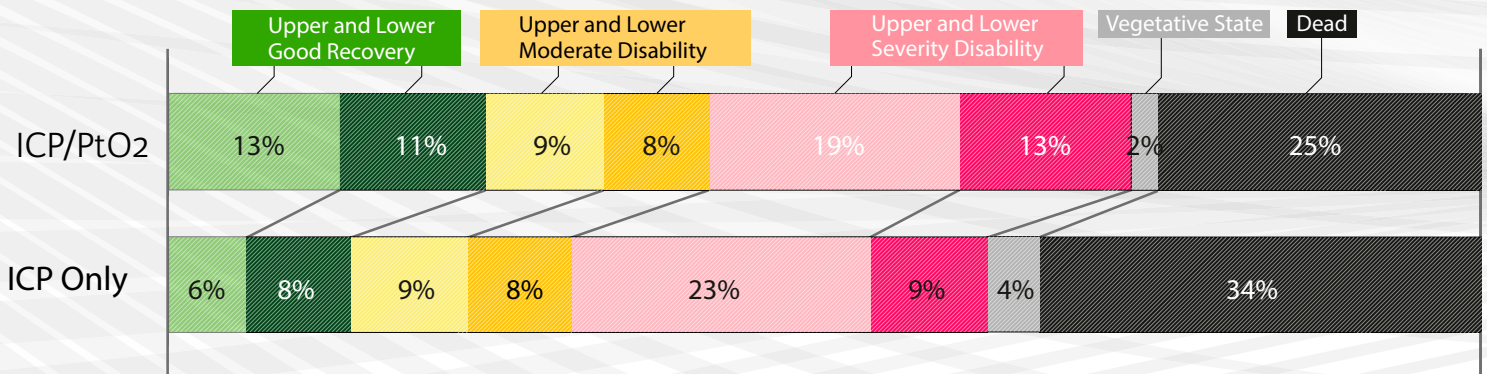


# Only ICP Monitoring = 3X more time experiencing Hypoxia\* & trend towards higher mortality\*\*

BOOST II<sup>2</sup> is a multicentre, single-blind, prospective, **R**andomized, controlled trial in severe TBI neuromonitoring.



## Results - Glasgow Outcome Scale extended at 6 months



**Patients may suffer from irreversible secondary brain injury.**

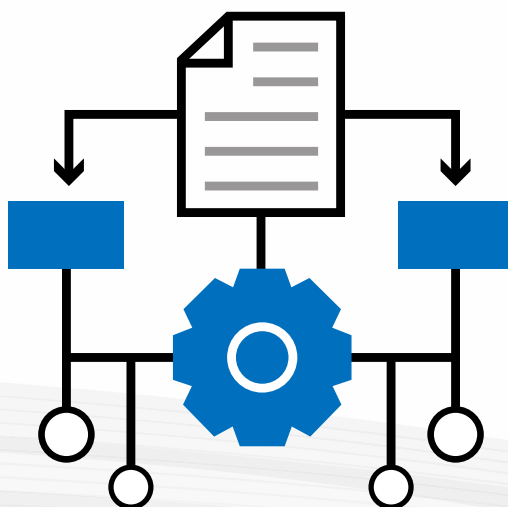
\*This number is derived from Proportion of time below 20 mmHg results from page 1912 of the BOOST II publication. ICP- group mean was 44% and for ICP/PtO<sub>2</sub>-group was 15% -> 44%/15% = 2.9 times more ~3, highly significant with p=0.0000147

\*\* Results are based on 6 months GOS-E - Glasgow Outcome Scale extended

# Licox® Brain Tissue Oxygen Monitoring Solution



Introducing  $P_tO_2$ -monitoring in TBI treatment protocols may reduce mortality by up to 57%<sup>3</sup>



Manage hypoxic events effectively using Licox®  $P_tO_2$  monitoring and a tailored education program.

MULTIMODALITY  
NEUROMONITORING  
CENTRE OF EXCELLENCE



# Licox® Brain Tissue Oxygen Monitoring Solution

ICP monitoring is currently the standard practice for managing severe TBI patients.

However, **47%** of patients suffer from hypoxia while ICP and CPP are unsuspecting.<sup>1</sup>

## Changing your TBI protocol to include Licox® P<sub>t</sub>O<sub>2</sub> monitoring will help manage hypoxic events effectively and avoid unnecessary brain injuries.

Availability of these products might vary from a given country or region to another, as a result of specific local regulatory approval or clearance requirements for sale in such country or region.

- Non contractual document. The manufacturer reserves the right, without prior notice, to modify the products in order to improve their quality.
- Warning: Applicable laws restrict these products to sale by or on the order of a physician.
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
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**INTEGRA**  
LIMIT UNCERTAINTY



# Licor<sup>®</sup> Brain Tissue Oxygen Monitoring Solution

## Ordering Information:

Product Code	Description	Picture
LCXo2	Licor <sup>®</sup> P <sub>t</sub> O <sub>2</sub> Monitor	
IM2SEU	Double Lumen Brain Probe Kit with P <sub>t</sub> O <sub>2</sub> probe,	
IM3STEU	Triple Lumen Brain Probe Kit	
IT2EU	LICOR <sup>®</sup> Complete Brain Tunneling Probe Kit	

### Licor<sup>®</sup> P<sub>t</sub>O<sub>2</sub> Monitor Technical specifications<sup>4</sup>

Size: H 165 mm x W 240 mm x D 185 mm	Screen Diagonale: 18 cm TFT LCD
Weight: 3 Kg	Battery Autonomy: 1,5 h

### ICP sensor for multimodal monitoring

626631 Codman Microsensor<sup>®</sup> Basic Kit compatible with IM3STEU or IM2SEU



#### Indications For Use the Integra Licor<sup>®</sup> P<sub>t</sub>O<sub>2</sub> Monitor:

The Integra Licor<sup>®</sup> P<sub>t</sub>O<sub>2</sub> Monitor measures oxygen partial pressure (P<sub>t</sub>O<sub>2</sub>) and temperature in brain tissue and these parameters are used together as an aid in the determination of the perfusion status of cerebral tissue local to sensor placement. Monitor values are relative within an individual, and should not be used as the sole basis for determining a diagnosis or therapy. It is intended to provide data additional to that obtained by current clinical practice in cases where hypoxia or ischemia are a concern.

#### Contraindications the Integra Licor<sup>®</sup> P<sub>t</sub>O<sub>2</sub> Monitor:

The Integra Licor<sup>®</sup> P<sub>t</sub>O<sub>2</sub> Monitor and its accessories are contraindicated for use in a Magnetic Resonance (MR) environment.

#### Indications For Use - the Licor Brain Oxygen Monitoring System (IM3STEU, IM2SEU, IP1P):

The Licor Brain Oxygen Monitoring System measures intracranial oxygen and temperature and is intended as an adjunct monitor of trends of these parameters, indicating the perfusion status of cerebral tissue local to sensor placement. Licor System values are relative within an individual, and should not be used as the sole basis for decisions as to diagnosis or therapy. It is intended to provide data additional to that obtained by current clinical practice in cases where hypoxia or ischemia are a concern.

#### Contraindications - the Licor Brain Oxygen Monitoring System (IM3STEU, IM2SEU, IP1P):

Licor products are not intended for any use other than that indicated. Contraindications for device insertion into the body apply, e.g. coagulopathy and/or susceptibility to infections or infected tissue. A platelet count of less than 50 000 per µl is considered a contraindication. This value may differ according to different hospital Protocols.

#### Indications - Codman Microsensor<sup>®</sup> basic kit (626631):

Use of the CODMAN MICROSENSOR Basic Kit is indicated when direct ICP monitoring is required. The kit is indicated for use in both subdural and intraparenchymal pressure monitoring applications only. The technical performance characteristics of the CODMAN MICROSENSOR have been evaluated for a maximum monitoring period of up to 30 days. Use clinical judgment to determine the implantation time of this product based on experience and consideration of any other relevant clinical factors.

#### Contraindications - Codman Microsensor<sup>®</sup> basic kit (626631):

This kit is not designed, sold, or intended for any use except as indicated. This kit is not designed, sold, or intended for use as a therapeutic device.

1. Stiefel et al, Conventional neurocritical care and cerebral oxygenation after traumatic brain injury. J Neurosurg 105:568–575, 2006
2. Okonkwo et al. ; Brain Oxygen Optimization in Severe Traumatic Brain Injury Phase-II: A Phase II Randomized Trial; Critical Care Medicine. November 2017 • Volume 45 • Number 11
3. Stiefel, M. F., Spiotta, A., Gracias, V. H., Garuffe, A. M., Guillaumondegui, O., Maloney-Wilensky, E., Bloom, S., Grady, M., & LeRoux, P. D. (2005). Reduced mortality rate in patients with severe traumatic brain injury treated with brain tissue oxygen monitoring. Journal of Neurosurgery, 103(5), 805-811. Retrieved Mar 24, 2020, from <https://thejns.org/view/journals/j-neurosurg/103/5/article-p805.xml>
4. IFU Integra<sup>®</sup> Licor<sup>®</sup> P<sub>t</sub>O<sub>2</sub> Monitor, 60904052 Rev. A