

RESEARCH SOFTWARE FOR BRAIN MONITORING IN NEUROLOGICAL INTENSIVE CARE

Dr Peter Smielewski and Dr Marek Czosnyka at the University of Cambridge have developed the intensive care multimodality monitoring software (ICM+) as a research tool to aid monitoring patients in neurological intensive care.

The software allows collation of the huge array of complex constantly changing data generated by bedside monitors, and presents them in a way that is quickly and easily comprehensible to medical staff.

Applications (research only)

- Monitoring of severe head injury & subarachnoid haemorrhage patients
- Diagnostics of subarachnoid haemorrhage, hydrocephalus, benign intracranial hypertension & stroke patients
- Intra-operative & non-invasive cerebral perfusion pressure (CPP) monitoring
- Experimental research

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Technology

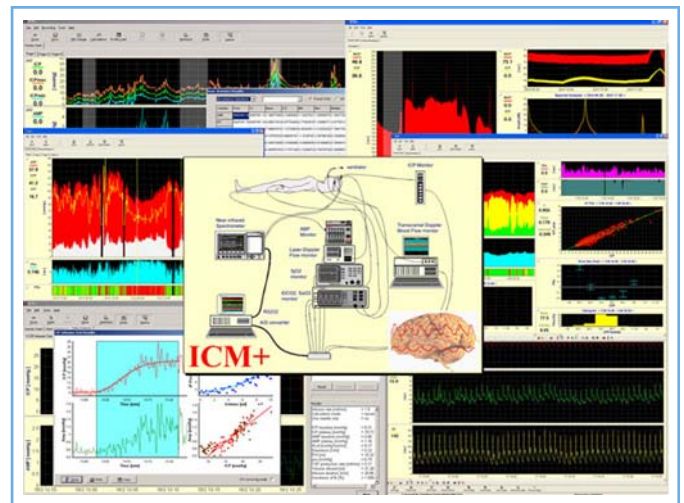
Dr Peter Smielewski and Dr Marek Czosnyka have developed the ICM+ software as a research tool to aid monitoring patients in neurological intensive care.

Key Features

- Monitors multiple variables through analogue and digital outputs
- Multimodal bedside monitoring e.g. intracranial pressure, arterial pressure, brain oxygenation, blood flow, neurotrending, brain temperature etc.
- Calculates on-line indices describing auto-regulation of cerebral blood flow, cerebrospinal compensation, vascular reactivity
- Incorporates various methods & tests used in diagnosis of hydrocephalus
- Supports testing of transient hyperaemic response, leg-cuff autoregulation, CO₂ reactivity & calculates non-invasive CPP
- Aids integration of physiological monitoring with clinical observations
- Provides various time period based chart tools & tools for off-line data analysis

Research Applications

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ICM+ software

Ordering

The ICM+ software may be configured according to each client's needs. It is provided on the basis of a site licence covering all members of a research group. The prices range from £6000 (full system) to £2500 & VAT for off-line analysis only.

If required, installation of the software and teaching in its use can be arranged under a separate consultancy agreement.

Should you wish to determine if your current equipment will be able to connect with the software as is or if further work may be required, please contact Dr Peter Smielewski [ps10011@cam.ac.uk] or Dr Marek Czosnyka [mc141@medschl.cam.ac.uk] so that they can advise.

For further information please visit www.neurosurg.cam.ac.uk/icmplus/about.html