News Release

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Hitachi Healthcare Launches Newest Version of its Optical Topography (fNIRS) System

The ETG-4100 provides speed, comfort and quality for diagnosing physicians

Twinsburg, OH October 8, 2018—
Hitachi Healthcare has released the latest version of its optical topography(fNIRS) system, the ETG-4100. The ETG-4100 measures and displays relative changes in oxy-hemoglobin, deoxy-hemoglobin and total hemoglobin in the cerebral cortex at multiple points on the head.

Optical Topography （fNIRS）
Optical Topography is a non-invasive tool used in the investigation of cerebral hemodynamics using near infrared spectroscopy. By measuring the different absorption spectra of oxygenated and deoxygenated hemoglobin physicians are able to investigate how the brain works. OT is useful in not only pure research but also clinical studies that include mental illness, child development and rehabilitation. Such conditions often do not represent themselves as visible lesions, but rather as complications in synaptic relays or neural circuit function, not visible on standard imaging modalities.[1]

The ETG 4100 provides a less restraining environment for the subject, reducing their discomfort and increasing their tolerance for the exam. The spring loaded fiber tips provide efficient contact between the fiber tip and the scalp providing high quality measurements.

Equipped with a highly sensitive avalanche photodiode allowing the use of relatively low light intensities, potential harm to the patient is reduced and extends the life of the laser diodes. The ETG-4100 can be operated under daylight conditions, thus further making the patient comfortable.

The ETG-4100 comes equipped with analysis tools to help separate overlaying signals or noise. Multi Data Analysis applies statistical analysis of up to five different groups which can then be further analyzed in relation to each other.

Available in two basic configurations, the ETG-4100 can be configured with 24 or 48 measurement channels that can be arranged in different configurations. For more details on Hitachi's Optical Topography system, contact Hitachi Healthcare info@hitachihealthcare.com

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[1] Optical Topography in Psychiatry: A Chip Off the Old Block or a New Look Beyond the Mind–Brain Frontiers?
Cyrus S. H. Ho, Melvyn W. B. Zhang, and Roger C. M. Ho

ABOUT HITACHI HEALTHCARE AMERICAS

Delivering best in class medical imaging technologies for healthcare providers, Hitachi's MRI, CT and Ultrasound and Agfa HealthCare's DR provide speed, comfort and quality for both physicians and patients, playing an important role in the diagnosis and treatment of disease while driving social innovation into healthcare. Hitachi's VidiStar image and reporting solution enables healthcare professionals to create value-based reports leveraging a cloud-based image management and analytics platform for improved communication across healthcare organizations. Our patient centric approach and customer first philosophy compels us to make customer support one of the most important things we do. Innovating Healthcare, Embracing the Future. www.hitachihealthcare.com

ABOUT HITACHI, LTD.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society's challenges, combining its operational technology, information technology, and products/systems. The company's consolidated revenues for fiscal 2017 (ended March 31, 2018) totaled 9,368.6 billion yen ($88.4 billion). The Hitachi Group is an innovation partner for the IoT era, and it has approximately 307,000 employees worldwide. Through collaborative creation with customers, Hitachi is deploying Social Innovation Business using digital technologies in a broad range of sectors, including Power/Energy, Industry/Distribution/Water, Urban Development, and Finance/Social Infrastructure/Healthcare. For more information on Hitachi, please visit the company's website at http://www.hitachi.com.

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