



IRRAS Provides US Launch Update, Product Portfolio Progress and Objectives for 2020

Stockholm, January 7, 2020 – IRRAS, a global healthcare company with a comprehensive portfolio of innovative solutions for neurocritical care, today provides an update on the launch of its products in the United States (US) and product portfolio objectives for 2020.

"We are excited to report on the growth and expansion of IRRAS' IRRAflow® and Hummingbird ICP monitoring product lines," said Kleanthis G. Xanthopoulos, Ph.D., President & CEO of IRRAS. "The CE Mark recertification of IRRAflow and the US launches of IRRAflow and Hummingbird provide IRRAS with good opportunities to meet our 2020 goals and accelerate our progress toward becoming a global leader in neurocritical care."

IRRAflow Updates and 2020 Goals

IRRAflow, a commercially available medical device system for the treatment of intracranial bleeding, is the world's first "irrigating ventricular drain," and its unique mechanism of action addresses the complications associated with the current methods of managing intracranial fluid by using a dual lumen catheter that combines active irrigation with ongoing fluid drainage. Additionally, IRRAflow incorporates ICP monitoring and uses a proprietary software to regulate treatment based on desired pressure levels.

- In the US, the launch of IRRAflow continues to progress as planned, and IRRAS has now generated physician support at approximately 70 stroke centers in the US. Of these 70, more than 15 have purchased IRRAflow components or are actively evaluating the system, including locations in the high-volume neurocritical care markets of Illinois, New York, and California. Training is underway to introduce IRRAflow at approximately 10 additional hospitals early in 2020. As the IRRAS commercial team expands during 2020, resources will be in place to train the remaining 45+ US hospitals that have expressed interest in IRRAflow.
- During the 4th quarter of 2019, four new centers in the US placed orders for the company's IRRAflow system. Of these four new purchasing customers, three of the hospitals represent IRRAS' first customers to successfully complete an IRRAflow product evaluation and stock the system's capital equipment moving forward. Additionally, three of these new US customers added have received certification as comprehensive stroke centers and treat the most complex stroke patients.
- Currently in the US, IRRAS has deployed seven direct sales professionals focused on building brand awareness and physician support and training new customers. They have generated physician support to evaluate IRRAflow at approximately 25 of the top 100 neurosurgical centers in the US, and, as the size of the company's US team grows in 2020, the ability to train and generate revenue from a larger customer base is expected to increase.

- In December 2019, IRRAS received CE Mark approval for its *IRRAflow* catheter, enabling IRRAS to commercially market the system in the European Union. With this CE Mark back in place and additional regulatory approvals, IRRAS now markets *IRRAflow* in the United States, the European Union, Costa Rica, Argentina, Israel, Kuwait, and Hong Kong. To date, patient treatments have been completed in the United States, Germany, Finland, Austria, Hong Kong, Israel, and Kuwait.
- In the second half of 2019, IRRAS introduced the *IRRAflow* Laser Level, the *IRRAflow* Drainage Collection System, a software usability upgrade for the *IRRAflow* Control Unit, and the IRRAS Cranial Access Kit to enhance the user's experience with the *IRRAflow* system.
- In 2020, IRRAS' target is to commercially introduce *IRRAflow* in at least 4 additional markets globally.
- In 2020, IRRAS' target is to introduce at least three additional line extensions to the *IRRAflow* family of products. These expected introductions include usability improvements to the *IRRAflow* Tube Set and performance enhancements to expand the line of *IRRAflow* catheters.

Hummingbird Product Updates and 2020 Goals

- IRRAS' Hummingbird® ICP Monitoring product family is now commercially available in the US and includes a proprietary zero-drift Intracranial Pressure (ICP) monitoring system and both single and multi-lumen cranial access bolts and catheters to provide the most accurate parenchymal ICP monitoring on the market.
- With the US launch of Hummingbird accelerating in 2020, IRRAS' target is to expand its customer base for the Hummingbird products to more than 25 customers during the year.
- With the CE Mark for *IRRAflow* back in place, in 2020, IRRAS plans to work closely with global regulatory agencies to expand the Hummingbird regulatory approval to additional markets outside the US.

“With our CE Mark in place again, our international sales team is excited to bring *IRRAflow* to customers globally in 2020,” said Will Martin, IRRAS' Chief Commercial Officer. “We are beginning to execute upon our product relaunch strategies, and we look forward to reintroducing *IRRAflow* initially to customers in Germany and initiating training in additional countries in the near future. The global introduction of *IRRAflow*, combined with the continued US launch of *IRRAflow* and the US product introduction of Hummingbird ICP Monitoring, sets the stage for an exciting 2020 for IRRAS.”

IRRAS Bringing Needed Innovation to Neurocritical Care



Product family portfolio

IRRASflow Dual-Lumen Catheter  Irrigation Drainage World's First Irrigating Intracranial Drainage System	IRRASflow Intelligent Digital Pump  Enables interaction between control unit and catheter	IRRASflow Control Unit  Controlled management of ICP and drainage via touchscreen console
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Product family portfolio

Hummingbird Bolt-Based ICP Monitoring  Combines brain access and parenchymal ICP measurement	Hummingbird Multimodal Monitoring with Drainage  Combines brain access, ICP measurement, drainage, and two additional lumens	Hummingbird ICP Control Module  Connects Hummingbird disposables to ~10 different Hospital Monitors	Hummingbird Cranial Access Kit  Essential tools for cranial access, used in almost every neurosurgical operation
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Parenchyma = Brain tissue

About IRRAS

IRRAS AB is a global healthcare company focused on delivering innovative medical technologies to our customers and their patients. IRRAS designs, develops and commercializes products that improve patient outcomes and decrease the overall cost of care by addressing complications associated with current treatment methods in neurocritical care. IRRAS markets and sells its products to hospitals worldwide through its direct sales organizations in the U.S. and select European countries and a network of distribution partners in other markets.

IRRAS maintains its headquarters in Stockholm, Sweden, with corporate offices in Munich, Germany, and San Diego, California, USA. For more information, please visit www.irras.com.

IRRAS AB (publ) is listed on Nasdaq First North Premier Growth Market (ticker: IRRAS). Redeye AB is certified adviser of the company with email certifiedadviser@redeye.se or phone +46 8 121 576 90.

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The information was released for public disclosure, through the agency of the contact person above, on January 7, 2020 at 08:00 a.m. (CET).