

News Release Dated December 7, 2023

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**Report on Joint Research with Itoigawa General Hospital
at the 51st Assembly of the Japanese Headache Society
Results of analysis using the REZULT medical big data platform**

Japan System Techniques Co., Ltd. (JAST) has been performing research jointly with Itoigawa General Hospital concerning the relationships among migraines, migraine drugs and headaches caused by the overuse of these drugs. The results of this joint research were announced at the 51st Assembly of the Japanese Headache Society. The details are as per attached.

The earnings forecast to be announced on May 12, 2023 incorporates the effect of this matter on the results of operations for the fiscal year ending March 2024. An announcement will be made promptly if there is any additional information that should be disclosed.

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Japan System Techniques Co., Ltd.

**Report on Joint Research with Itoigawa General Hospital
at the 51st Assembly of the Japanese Headache Society
Results of analysis using the REZULT medical big data platform**

Japan System Techniques Co., Ltd. (JAST) has been performing research jointly with Dr. Masahito Katsuki concerning the relationships among migraines, migraine drugs and headaches caused by the overuse of these drugs. Dr. Katsuki is a neurosurgeon and provides outpatient headache care at Itoigawa General Hospital and Japanese Red Cross Suwa Hospital. The results of this joint research were announced at the 51st Assembly of the Japanese Headache Society.



■ **Background**

Approximately one in four people in Japan have problems with headaches. Substantial expenses are needed for treating this problem, which can often continue for many years. Furthermore, 8.4% of people in Japan suffer from migraines. In recent years, there has been progress with the development of migraine acute treatment and preventive drugs. However, there have been instances where excessive dosages for acute treatment have produced headaches (headaches due to overuse of drugs) and other problems.

With the cooperation of Dr. Katsuki, JAST started a joint research project in October 2022 with this hospital. The project uses medical big data with the goal of learning more about the relationships among migraines, migraine drugs and headaches caused by the overuse of these drugs.

(For more information: https://www.jast.jp/cms/wp-content/uploads/2022/10/ir_notice20221018.pdf)

■ Outline of the Conference

Name: The 51st Assembly of the Japanese Headache Society
Theme: Caring for Patients with the Latest Headache Treatments Resulting from Revolutionary Progress
Date: December 1 and 2, 2023
Location: Conference Center, PACIFICO Yokohama (1-1-1, Minato Mirai, Nishi-ku, Yokohama, Kanagawa)
Program: <http://jhs51.umin.jp/program.html>

■ Presentation

Title: Use of the REZULT medical invoice data platform for analysis of headaches caused by overuse of iatrogenic drugs
Time: December 2, 2023 2:20PM – 3:20PM General themes 25 – Headaches 2

■ Summary of the Research Project

This research project consists of two elements involving treatment patterns for individuals with headaches. One is cross-sectional research. The other is longitudinal studies for the observation of changes over time. Two iatrogenic drugs appear to be used excessively: Triptans and combined analgesics (30 tablets/90 days or more) and analgesics alone (45 tablets/90 days or more).

Cross-sectional research used medical invoice data in 2020 to examine the level of excessive use of iatrogenic drugs during the 90-day period when the amount of drugs prescribed is greatest for the acute phase of treatment. The study revealed that 1,992 individuals (12.8% of the total) of the 15,524 who were prescribed acute care treatment drugs received an excessive amount of drugs.

Longitudinal research used medical invoice data between 2010 and 2022 to determine patterns for prescribing drugs during the first two years following an initial diagnosis. The study covered 545,021 individuals during this two-year period and revealed that 40,082 individuals (10.1% of the total) had experienced excessive drug prescriptions.

■ Upcoming Activities

This research project showed that 12.8% of individuals who received prescriptions for headaches were given an excessive amount of drugs. In addition, 10.1% of individuals were given an excessive prescription within two years of the diagnosis of the cause of their headaches. Both patients and healthcare providers need to understand the risks associated with the excessive use of headache drugs in order to use drugs for treating acute headaches properly. To provide more knowledge about the excessive use of iatrogenic drugs, the members of this project plan to study activities for educating health insurers, patients and healthcare facilities.

■ Use this URL for more information about The Japanese Headache Society.

<https://www.jhsnet.net/>

■ Use this URL for more information about the REZULT medical big data platform.

https://www.jastlab.jast.jp/rezult_data/

■ The Future Co-Creation Laboratory of JAST

The Future Co-Creation Laboratory of JAST is a medical big data business with the mission of using the digital transformation of health care backed by medical big data (health insurance invoice data*, health check-up data and other data) to solve issues at healthcare facilities and insurance companies and organizations. This laboratory will continue to analyze information obtained from research activities in order to raise the value of JAST's data and create more ways to solve the issues of customers.

Operations of The Future Co-Creation Laboratory also contribute to accomplishing Sustainable Development Goals number three, good health and well-being, and nine, industry, innovation and infrastructure. These activities include the use of medical big data to enable people to stay healthy and the use of alliances with the academic sector for joint research and the development of products.



■ Profile of Masahito Katsuki

Masahito Katsuki (Department of Neurosurgery, Itoigawa General Hospital, Department of Neurosurgery, Headache Outpatient, Japanese Red Cross Suwa Hospital)

Background:

2016: M.D. degree at Tohoku University

2021: Chief of Department of Neurosurgery at Itoigawa General Hospital

2023: Department of Neurosurgery, Headache Outpatient, Japanese Red Cross Suwa Hospital

Dr. Katsuki is a member of The Japanese Headache Society, The Japan Neurosurgical Society, Japanese Association for Medical Artificial Intelligence, and other organizations. In addition to treating patients with strokes, headaches and other problems, Dr. Katsuki is involved with public health activities and medical AI research for the purpose of helping solve problems concerning the need to invigorate Japan's economy and provide medical care in remote areas of Japan.

* Health insurance invoices

When an individual receives a medical treatment covered by insurance, the healthcare institution sends an invoice listing the procedures and amounts due to the insurance company or organization. For medical and dental care, an invoice listing the procedures and amounts due is sent. For pharmacies, an invoice listing the drugs supplied and amounts due is sent. For nurses visiting individuals at home, an invoice listing home nursing care services and amounts due is sent. One invoice for each patient and individual healthcare institution is prepared every month. Invoices contain information about the reasons that individuals received medical care, the cost of the care and other items. JAST converts this information into a database for subsequent utilization.

■ Inquiries

Japan System Techniques Co., Ltd.

The Future Co-Creation Laboratory

Contact for more information (redirected to an external website): <https://www.jastlab.jast.jp/contact/>

Website of The Future Co-Creation Laboratory: <https://www.jastlab.jast.jp/>