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JAST Starts Research Project Using Medical Big Data with Itoigawa General Hospital

Japan System Techniques Co., Ltd. (JAST) has started a joint research project with Itoigawa General Hospital, which is in the city of Itoigawa in Niigata prefecture. The research involves the use of medical big data for determining the relationship between headaches and pharmaceuticals. The details are as per attached.

The earnings forecast announced on May 13, 2022 already incorporates the effect of this matter on the results of operations for the fiscal year ending March 2023. An announcement will be made promptly if there is any additional information that should be disclosed.

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■ Summary

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 of analgesics and triptans (see note 1) for acute treatment have produced headaches (headaches due to overuse of drugs) and other problems.

With the cooperation of Dr. Masahito Katsuki of Itoigawa General Hospital, JAST has started a joint research project with this hospital that 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.

■ The Joint Research Program

JAST has medical big data derived from the anonymous health insurance invoice data (see note 2) of approximately 8 million people. Information about treatments and prescribed drugs for headaches and migraines in this invoice data will be used for this joint research. Insurance companies and organizations have given their consent for the use of data they have provided.

Information about the issues of patients will be analyzed to determine the severity of headaches in order to study any relationship between the use of drugs and the worsening of headaches. Results of this research will be examined to learn more about the effects of the excessive use of migraine drugs and outcomes when drugs are used properly.

The information obtained from this research will be provided to healthcare professionals and to insurance companies and organizations for incorporation in their services for policyholders. At some point, pharmaceutical companies too may start participating in this research project. In the following fiscal year, which ends in March 2024, results of this project are to be announced at an academic conference and a research paper is to be released.

■ Profile of Masahito Katsuki



Masahito Katsuki (Chief of Department Neurosurgery, Itoigawa General Hospital)

Background:

Dr. Katsuki received his M.D. degree at Tohoku University in 2016 and was appointed chief of Department of Neurosurgery at Itoigawa General Hospital in 2021.

He 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.

■ 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 (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.



1. Triptans

Triptans are a family of tryptamine-based drugs for the treatment of migraines and cluster headaches. Compared with other headache medications, triptans are a more effective treatment for migraines and are sometimes called a wonder drug.

2. 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

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