

Business Strategy



Koichiro Sato

PHC Holdings Corporation
Senior Executive Vice President,
Representative Director,
Chief Operating Officer (COO)

In 2022, PHC Group announced our Mid-Term Plan, or Value Creation Plan. In the plan, we categorize each business into Foundation Areas and Growth Areas. The Foundation Areas are our main businesses with highly competitive core technologies and solid customer assets. These are the pillars of our earnings, and we will continue to focus on them.

On the other hand, many markets in the Foundation Areas are already mature. We recognize that securing greater market growth is an important priority for the growth of PHC Group. Therefore, we have defined Growth Areas as adjacent areas where we can leverage synergies among our businesses while capitalizing on our strengths in Foundation Areas. Specifically, we aim to provide value unique to PHC Group through the three Growth Areas: Personalized Testing and Diagnostics Solutions, Digital Health Solutions, and Advanced Therapy Development Solutions.

In Personalized Testing and Diagnostics Solutions, we offer a unique solution to people with diabetes in the United States and some countries in Europe, through expanding sales of an implantable CGM, which can be used continuously for up to 180 days. Until recently, the development of POCT had been separately led by PHC Corporation and LSI Medience. We integrated these businesses and combined PHC Group's strengths in order to develop and sell products unique to the group.

For Digital Health Solutions, we will vigorously promote digital transformation in healthcare by leveraging our customer base with the top market share among clinics for medical-receipt computers and electronic medical record systems for clinics.

In Advanced Therapy Development Solutions, we will leverage PHC Group's technological strengths to provide unique value, such as cell metabolism analyzers utilizing sensor technology developed alongside our BGM technology.

Additionally, in digital pathology and AI diagnostic support, we will provide new value to existing customers through collaborations with our partners.

These are the businesses that will drive PHC Group into the future. We will contribute to realizing Value-Based Healthcare while expanding our businesses with intensive investment.



As a global leader in diabetes technology, we have been helping people with diabetes improve their health and quality of life for over 80 years.



Robert Schumm

Corporate Officer, PHC Holdings Corporation
President, Ascensia Diabetes Care Holdings AG

Message

Over 500 million people globally live with diabetes^{*1}, and this figure is predicted to rise to over 600 million by 2030. At Ascensia, we are committed to improving the health and quality of life for people with diabetes.

Our sole focus on diabetes means that we deeply understand people's needs, enabling us to develop, manufacture, and deliver innovative products that help make life with diabetes more manageable. From our high-precision glucose monitoring systems to our digital diabetes management solutions, we empower people to better manage their diabetes and help make their daily lives more comfortable.

Overview

In our diabetes management business, we offer high-quality blood glucose monitoring (BGM) systems, continuous glucose monitoring (CGM) systems, and digital diabetes management solutions that meet the diverse needs of people living with diabetes.

Our BGM products are developed and manufactured by PHC Corporation, and brought to people across the globe by Ascensia Diabetes Care, a PHC Group company. These BGM systems collect a small blood drop from a fingertip and measure the blood glucose level to give people with diabetes the information they need to make treatment or lifestyle decisions. Since launching the industry's first personal BGM in 1981, we have continued to improve our products through our innovation and manufacturing excellence, and we are proud to offer the highest level of accuracy^{*3} in the industry, at a competitive cost.

The CGM systems we provide are developed and manufactured by our business partner Senseonics, and brought to people with diabetes by Ascensia. As the exclusive global distributor of the Eversense[®] E3 Continuous Glucose Monitoring System as well as any future Eversense[®] products, Ascensia is able to leverage its commercial capabilities and network in BGM to offer a highly-differentiated CGM option.

The Eversense[®] CGM System is the industry's first and only fully implantable CGM system, and allows continuous measurement of glucose levels, with data automatically sent every five minutes to a mobile app on the user's smartphone. Unlike any other CGM on the market, the Eversense[®] sensor can be used continuously for up to six months. Sensors of other available CGM systems are short-term and need to be

replaced every seven to fourteen days.

This business and its people have been committed to supporting people with diabetes for more than 80 years. Looking ahead, we will continue to simplify and improve lives through our advanced diabetes management solutions.

Strengths

- **Global business operations and expertise**
Our products are sold in more than 100 countries and regions, and are used by an estimated 10 million people. We respond to customer needs around the world through our experienced global sales network.
- **High-quality, high-precision, cost-competitive products**
Our BGM products are manufactured in facilities using fully automated equipment. Optimized product technology and production processes enable us to achieve the industry's highest standards of precision and reliability, whilst maintaining low-cost manufacturing.
- **Innovative products/advanced technology**
We support more effective self-management of diabetes through innovative products and digital solutions. The Eversense[®] E3 CGM System provides users with unparalleled reliability and flexibility and up to six months of real-time glucose readings with two sensor changes per year, a removable^{*2} transmitter and on-body vibratory alerts, including for high and low glucose values. Our BGM products are considered among the most accurate available, enabling people to identify blood glucose fluctuations with precision, and empowering them to make confident treatment and lifestyle decisions.

FY2022 Snapshot

Revenue: JPY **111.8** billion*

*Includes revenue of PHC IVD

Main Products/Services

Our highly accurate glucose monitoring systems^{*3}, designed for ease of use by people with diabetes, are used by an estimated 10 million people around the world. Through our integrated diabetes management technology platform, we provide solutions that help people use data to effectively manage diabetes.

Main Customers

- People with diabetes
- Dispensing pharmacies
- Hospitals/clinics

Blood glucose monitoring (BGM) systems

People with diabetes can easily and accurately measure their blood glucose levels at home. Systems allow users to sync data with smartphones and other devices.



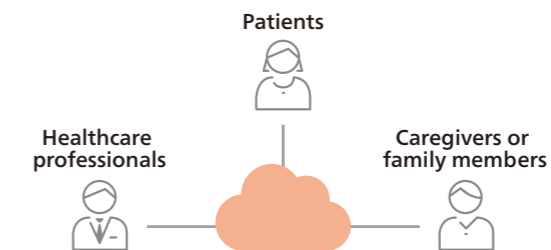
Continuous glucose monitoring (CGM) systems

Continuously measures glucose levels using the world's first fully implantable subcutaneous sensor that can be worn for up to six months. Able to notify users of rises and falls in glucose levels, with a removable^{*2} transmitter and the ability to provide unique on-body vibratory alerts.



Digital diabetes management solutions

Integrated diabetes management solutions that support more effective self-management and data sharing.



*1 IDF <https://diabetesatlas.org/> *2 There is no glucose data generated when the transmitter is removed PHC GROUP Integrated Report 2023

*3 Klaff LJ, Brazg R, Hughes K, Tideman AM, Schachner HC, Stenger P, Pardo S, Dunne N, Parkes JL. Accuracy evaluation of contour next compared with five blood glucose monitoring systems across a wide range of blood glucose concentrations occurring in a clinical research setting. Diabetes Technol Ther. 2015 Jan;17(1):8-15. doi: 10.1089/dia.2014.0069. PMID: 25260047.



The IVD Division contributes to the advancement of medical care by providing high-precision medical equipment and diagnostic reagents.

Hiroyuki Tokunaga

Director and Member of Board,
Director of In Vitro Diagnostics Division,
PHC Corporation



Message

The IVD Division of PHC Corporation developed Japan's first clinical diagnostic reagents in 1962 and the industry's first electrochemical blood glucose monitoring (BGM) system in 1991.

Currently, we offer various products such as blood glucose monitoring systems, POCT devices, biochemical analyzers, diagnostic reagents, and motorized drug injection devices.

Based on the mission of PHC Group, we have defined the mission of our division as "We contribute to the advancement of medical care as one of the leading global healthcare companies by providing high-precision, highly reliable, high-value-added medical equipment, and diagnostic reagents."

We will accelerate further growth of our IVD business centered on point-of-care testing (POCT), which is defined as one of the Growth Areas in PHC Group's Mid-Term Plan, "Value Creation Plan FY2022-2025."

Overview

The IVD Division was formerly the healthcare business of Matsushita Kotobuki Electronics, established in 1969.

Since launching the industry's first electrochemical blood glucose monitoring (BGM) system in 1991, we have developed and manufactured a variety of healthcare products, including motorized drug injection devices and POCT (point-of-care testing) devices. Leveraging our strength in manufacturing excellence, we provide a variety of medical devices that support the early detection and effective treatment of disease.

Through a business restructuring within PHC Group, the IVD Division integrated the Diagnostic Reagents and Instrument Division of LSI Medience Corporation on November 1, 2023.

We will continue to maximize our manufacturing capabilities to promote further improvement of the quality and cost of our products while addressing the unmet needs of our customers in the development of diagnostic equipment and reagents.

Strengths

- **Product design that reflects market needs**
After thoroughly researching user pain points and requests, we carefully consider how to improve products and reflect the results in the product design. Even with OEM products, we provide unique value, such as ease of use and precision of diagnosis and treatment.
- **Efficient product development process**
We seek to improve the efficiency of the product development process by adopting two concepts: concurrent engineering, in which multiple processes proceed simultaneously, and front-loading, in which items and processes normally evaluated at a later stage are brought forward as far as possible, so that any issues can be identified and addressed as early as possible.
- **Our Japanese heritage of manufacturing excellence**
Our manufacturing expertise and culture of continuous improvements, which have continued since the days of Matsushita Kotobuki Electronics, are the foundation of our high-quality, high-precision manufacturing technology. For instance, the disk rotation technology we developed when the company manufactured computer hard disks is now applied to centrifugation technology for specimens in our healthcare products.

FY2022 Snapshot

Revenue: JPY **20** billion

*Combined revenues of PHC IVD's business and LSI Medience's diagnostic reagents and instruments business.

Main Products/Services

We develop diabetes care products centered on blood glucose monitoring systems, continuous glucose monitoring systems, equipment used for real-time testing in medical settings, and motorized drug injection devices.

Main Customers

- Hospitals/clinics
- Medical device manufacturers
- Pharmaceutical companies

Blood Glucose Monitoring (BGM) Systems

Supplied to: ARKRAY Co., Ltd.



POC biochemical analyzer (measures HbA1c, lipids and CRP)

Supplied to: Roche Diagnostics



Blood Glucose Monitoring systems for Hospitals/Clinics

Supplied to: SANWA KAGAKU KENKYUSHO CO., LTD.



Motorized Drug Injection Devices

Supplied to: JCR Pharmaceuticals Co., Ltd.



Blood Sampling Device/ Dedicated Blood Sampling Needle

Supplied to: Sanwa Kagaku Kenkyusho Co., Ltd.



Exhaled Nitric Oxide Measuring Devices*

Supplied to: NIOX Group PLC

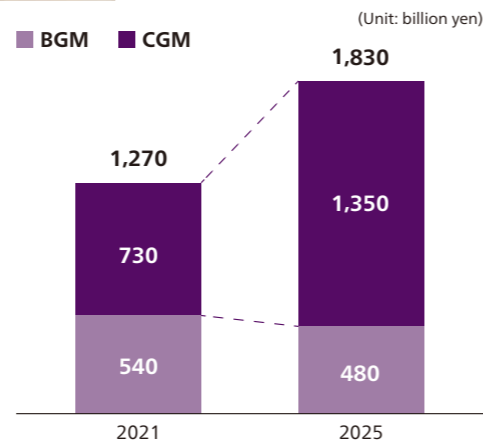


**Exhaled nitric oxide measuring device" has been approved by the U.S. FDA

Diabetes Management



The glucose monitoring market for diabetes is expanding, but a shift from Blood Glucose Monitoring (BGM) to Continuous Glucose Monitoring (CGM) is in progress, particularly in Europe and the United States. The BGM segment is expected to shrink 3% by 2025, while CGM is expected to grow substantially.



Source: In-house analysis

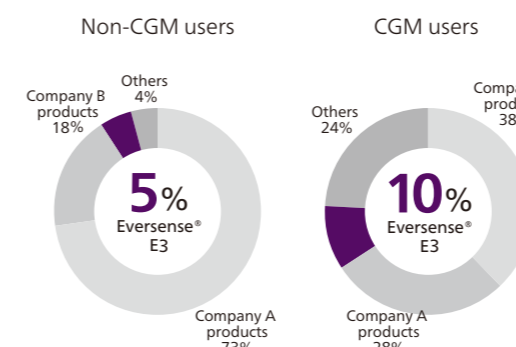
While continuing to enhance focused segments within BGM, we are investing heavily in Growth Areas centered on CGM. Specifically, for BGM, we seek to maintain profitability by increasing sales in growth segments such as the over-the-counter drug sales channel in the United States, and by introducing low-priced products mainly in emerging markets, while expanding our market share in mature markets.

We have defined CGM as one of our Growth Areas and are focused on strengthening this business. We will accelerate growth by increasing sales of the Senseonics Eversense® E3 CGM System, which provides users with unparalleled reliability and flexibility with a unique sensor providing up to six months of real-time glucose readings, the need for only two sensor changes per year, and a removable^{*2} transmitter with on-body vibratory alerts.

The Eversense® CGM System, which we exclusively distribute, is the industry's first and only fully implantable CGM system, and allows continuous measurement of glucose levels, with data automatically sent every five minutes to a mobile app on the user's smartphone. Unlike any other CGM on the market, the Eversense® E3 sensor can be used continuously for up to six months. Sensors of other available CGM systems are short-term and need to be replaced every seven to fourteen days. In addition, our partner Senseonics announced on January 2, 2024 that it would soon be seeking approval for a 365-day Eversense® system*.

Potential needs for implantable CGM Eversense®

Research on CGM product preferred for use



Source: In-house analysis

Eversense® E3 subcutaneous implantable sensor and removable transmitter



*Senseonics Holdings, Inc. Announces Business Updates – Senseonics <https://www.senseonics.com/investor-relations/news-releases/2024/01-02-2024-210523872> *2 There is no glucose data generated when the transmitter is removed

IVD Division



The IVD Division is focusing on the POCT market. POCT is expected to grow in the mid- to high-single digit range due to factors such as the increasing demand for comprehensive medical care (or primary care), which provides consultation services for all kinds of medical needs, and demand for faster testing and diagnosis. By region, high growth rates are expected particularly in the United States and other markets outside Japan.

Currently, our primary focus is on motorized drug delivery devices, mobile immunoanalyzers, and diagnostic reagents.

Motorized drug injection devices are designed to automatically administer the correct amount of drug, allow users to check the administration history, and support treatment at home. Since they are electronically operated, they can be used with high-viscosity formulations and have a wider range of applications than spring-type products.

The immunoanalyzer uses an all-in-one reagent cartridge, can examine multiple items in parallel, and has features such as a compact immunochemiluminescence system, contributing to rapid sample analyses in hospitals and clinics.

By combining the technology we have cultivated to date with the technologies of PHC and LSI Medience, the IVD Division strives to develop next-generation cardiac biomarker measurement devices as well as devices and reagents that meet unmet needs, and seeks to achieve significant growth in this field.





LSI Medience contributes to creating a healthy and safe society through medical science.



Haruo Watanabe

Corporate Officer, PHC Holdings Corporation
President and Representative Director, LSI Medience Corporation

Message

LSI Medience's mission is "We are the Good Health Creator, contributing to the creation of a healthy and safe society through Medical Science (MEDlcal+sciENCE)." Through this mission, we seek to deliver accurate clinical test results to medical facilities promptly, based on the analytical technology we have cultivated over 45 years of providing clinical testing services.

In addition to clinical tests for disease diagnosis and health checkups, we actively leverage new technologies and strive to provide even better services. Recently, we have introduced cutting-edge next-generation sequencers and have begun offering cancer genome profiling tests, which are essential for new cancer treatments.

We will contribute to advancing healthcare while ensuring high quality and speed of testing and utilizing new technologies.

Overview

Established in 1975, LSI Medience has operated various clinical testing and diagnostic reagents and instruments businesses.

In our clinical testing business, we offer contract clinical testing services, in which patient samples are collected from clinics and hospitals and transferred to our clinical testing centers for a variety of tests. Our testing spans a wide range of categories, including hematology, biochemical, microbiological, and gene-related testing, and we reliably deliver accurate test results quickly.

In addition, we are one of 30 laboratories in the world that conduct doping testing, and the only sample analysis laboratory in Japan certified by the World Anti-Doping Agency (WADA).

We aim to create new solutions by combining our core analytical capabilities accumulated over a long period of time in these diverse testing fields with our expertise in analyzing test results.

In the diagnostic reagents and instruments business, since developing Japan's first clinical test reagents, we have supported the advancement of medical care by providing world-class, high-speed, high-precision in vitro diagnostic test equipment and reagents, such as POCT and latex reagents. LSI Medience's diagnostic reagents and instruments business has been integrated with PHC Corporation's IVD Division

through a PHC Group business restructuring on November 1, 2023. In the future, we will pursue synergies within the group and respond to customers' unmet needs by providing in vitro diagnostic testing equipment and reagents.

Strengths

● **One of the top clinical testing platforms in Japan**

In the clinical testing business, we have a nationwide network in Japan, covering a wide variety of more than 4,000 types of tests. Additionally, we have built strong relationships and trust with our customers, including medical associations, based on our many years of experience.

● **Thorough quality management**

We have obtained international certification and carry out thorough quality control in all business areas.

● **Advanced initiatives**

Over the years, we have advanced technological capabilities in genetic analysis and mass spectrometry in testing and have promoted a variety of advanced initiatives, including the first industry-academia collaboration in Japan.

FY2022 Snapshot

Revenue: JPY **95.6** billion

*Revenues from clinical business, Mediford Corporation (11 billion yen), and diagnostic reagents and instruments business

Main Products/Services

We develop clinical tests such as cancer diagnosis and genetic testing based on innovative technology. Furthermore, we will promote global anti-doping activities and contribute to the healthy development of sports.

Main Customers

- Hospitals/clinics
- Pharmaceutical companies
- Food manufacturers

Clinical testing services

Respond to advanced and diverse clinical testing needs with laboratory automation systems



Diagnostic reagents and instruments

Achieve quick and accurate testing with a wide range of product lineups

Immunoanalyzer



Mycoplasma antigen kit



On November 1, 2023, the diagnostic reagents and instruments business was integrated under PHC Corporation.

Doping testing service

Promoting global anti-doping activities as the only WADA^{*2} certified laboratory in Japan



*1 In-house research *2 World Anti-Doping Agency

Industry's first product

World's first latex agglutination chemiluminescent immunoassay analyzer (LPIA-1) (1982)



On November 1, 2023, the diagnostic reagents and instruments business was integrated under PHC Corporation.



As a healthcare solutions company that seeks to help transform the medical industry, we address issues faced by healthcare professionals and contribute to the well-being of society.

Takayuki Otsuka

Corporate Officer, PHC Holdings Corporation
President and Representative Director, WEMEX Corporation

Message

Current social issues such as population decline, an aging population, and financial constraints are becoming major areas of focus in the medical industry. The challenges of overworked physicians, imbalances in the number of physicians by region, and medical disparities in less populated areas are expected to become more pressing in the future, as will the shortages of healthcare professionals and the challenges they face in the working environment. To help address these issues, we will respond to the Japanese government's medical policies and leverage our digital technology to improve the efficiency of medical operations and support preventive healthcare.

We at Wemex have been supporting the digitalization of the healthcare industry in Japan for more than 50 years. In the future, we will further strengthen our efforts in this area.

In the long term, we will continue to focus on medical institutions and consumers, seeking to contribute to improved overall well-being.

Overview

Wemex provides medical-receipt computers and electronic medical record systems for clinics and hospitals, as well as medical-receipt computers and electronic medication history systems for dispensing pharmacies.

Since the launch of Japan's first medical-receipt computer in 1972, we have led the way in IT solutions to improve the efficiency of management and operations at medical institutions and pharmacies. Currently, we hold the number-one market share in Japan for medical-receipt computers and electronic medical record systems in clinics and pharmacies.

On April 1, 2023, Wemex was established by integrating PHC Corporation's Medicom Division and its sales companies, PHC Medicom Corporation, and the health checkup support businesses of LSI Medience. Additionally, on October 1, 2023, we acquired the electronic medical record and medical-receipt systems-related business from FUJIFILM Healthcare Systems corporation. In addition to further expanding existing products such as medical-receipt computers and electronic medical record systems, we will also advance efforts in telemedicine and medical data to further promote the ongoing digital transformation of healthcare in Japan.

Our mission is to continue creating value essential to society with our purpose of "Exploring the mind and body and creating a society where everyone can seek personal happiness."

Strengths

- **Abundant knowledge and experience**
We have introduced a variety of innovations since the launch of Japan's first medical-receipt computer in 1972. We have accumulated extensive knowledge and experience assessing what our customers need and reflecting it in our products and services.
- **Robust customer base**
We have the largest market share in Japan for medical-receipt computers and electronic medical record system in clinics and pharmacies. While some policy-related demands in Japan are expected, such as the online eligibility verification system for insurance card usage with the My Number Card and support for electronic prescriptions, our robust customer base with deep relationships and trust is our major strength.
- **Prompt support service**
We provide user support through a network of 140 locations nationwide. We respond to medical fee and legal revisions in a timely manner and hold product seminars. We lead the industry in support quality, as the first in the healthcare industry to receive KCS awards and HDI ratings.

FY2022 Snapshot

Revenue: JPY **37.9**billion

Main Products/Services

We develop solutions to promote the digital transformation of healthcare in Japan. Our electronic medical record and electronic medication history systems can be linked with the online eligibility verification systems and electronic prescriptions, as well as API linkage with other companies' services.

Healthcare Business Operation Support Systems

Medical receipt computers

Market share for clinics/hospitals in Japan:



Medicom-HRf core

Automatically import insurance card information. Facilitate accounting work.

Electronic medical record systems

Market share for clinics in Japan:



Medicom-HRf Hybrid Cloud

Improve the operational efficiency of the medical frontline by reducing the workload required to input medical records.

Electronic medication history systems



Support pharmacists' work with medication history lists on screen and other functions.

Electronic medical records for dental clinics



Replicate the flexibility and usability of handwritten medical records. Reduce work stress.

Receipt checking support solution



Combine high-speed digital processing with easy-to-read analog interface.

Preventive Health Solutions

Health management solution



Provide detailed and efficient support for health guidance to health insurance association members (i.e., corporate employees) and seek to help improve the health of lifestyle habits for approximately 100,000 people each year.

Digital Health Solutions

Telemedicine solution



Teladoc HEALTH, a virtual care device that supports team medical care.

* In-house research



Mediford supports all stages of its customers' research and development, contributing to the development of new therapies.



Kei Shimizu

Mediford Corporation
Representative Director and President

Message

Mediford seeks to present new possibilities for society. This new company is based on the combination of our advanced analytical skills and deep knowledge of disease states, our abundant experience in developing methods to accomplish our goals, the wide range of services we provide, and trusted relationships with our stakeholders. We believe that delivering new value and options to society will contribute to the evolution of medical care and drug discovery and lead to more diverse and flexible approaches to treatment. We envision a world where each person can choose for themselves how to achieve their mental and physical health, peace of mind, and fulfillment in life. This is what we are aiming for.

Overview

Mediford Corporation was established on November 1, 2023, through the integration of the clinical trial business of LSI Medience Corporation and LSIM Safety Institute Corporation, which was responsible for our non-clinical business.

In our non-clinical business, we provide contract services for non-clinical safety trials, such as safety and efficacy for candidate substances for pharmaceuticals and regenerative medicine products before they proceed to clinical trials. We conduct testing at contract testing facilities that comply with the Good Laboratory Practice (GLP) Standards, a sign of quality and reliable data.

In our clinical trial business, we provide clinical trial testing services required to develop new drugs and treatments for pharmaceutical companies and drug discovery ventures. In particular, we offer bioanalysis services with advanced analysis technology and a series of processes related to testing in clinical trials as central laboratory services.

Through the integration, Mediford has combined the knowledge and technology in pharmaceutical research and development that both businesses have accumulated, strengthening its analytical technology in both the non-clinical and clinical trial fields for diversifying new treatments and expanding its services to pharmaceutical companies and analytical laboratories within and outside Japan. We will seek to enhance our partnerships with pharmaceutical companies and venture academia in the field of advanced analysis, aiming for further growth.

Strengths

- **High quality and reliable trial services**
Each testing site is a GLP compliant facility and conducts high-quality and reliable trials. We also conduct animal trials and have obtained certification from the International Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC International). This Association is an international non-governmental organization promoting the humane treatment of animals in scientific research, and at Mediford, we are committed to world-class standards in the care and use of our animals.
- **Cutting-edge analytical equipment and technology that also supports personalized medicine**
We maintain and manage a PDX library in which patient tumor tissues are transplanted into mice, allowing us to conduct cutting-edge tests such as anti-cancer drug screening tests using PDX. We also have the latest equipment such as imaging mass spectrometry.
- **Providing solutions that meet customer needs**
For clinical trial testing, we design the tests required by our customers and provide optimized solutions. We also provide consulting services in the field of non-clinical trials, from planning to implementation of trial strategies, allowing us to provide custom solutions for each customer.

FY2022 Snapshot

Revenue: JPY **11** billion

*Combined revenues of LSIM's clinical trial business and LSIM Safety Institute

Main Customers

- Pharmaceutical companies
- Manufacturers
- Research institutions/universities
- Drug discovery venture companies

Main Products/Services

We provide research and development support services in a wide range of fields, from basic research including the discovery phase of drug development to clinical trials, by combining the reliability of tests cultivated through our clinical trials and non-clinical trials businesses with the high analytical capabilities gained from our years of experience.

Nonclinical Contract Research Service

Utilizing facilities that meet state-of-the-art GLP standards, we conduct a wide variety of activities from tests for pharmaceutical approval applications to exploratory studies in the early stages of research and development and consulting.



Bioanalysis Service

Development of analytical methods for drugs, such as their metabolites and biomarkers, in biological samples, validation of analytical methods, and measurement of actual samples.



Central Laboratory Services

We support a series of processes from specimen collection to bulk testing for clinical research (clinical studies) conducted at medical institutions across Japan, responding to the globalization of drug development.



LSIM Division



The overall clinical testing market in Japan continued to be driven by demand for COVID-19 related tests from 2020 to 2022, but the medium-term growth rate is around 1%. Genetic and genomic tests are expected to grow by double digits compared to general hematology and biochemical tests.

Samples are collected from clinics and hospitals and tested centrally, mainly at the Central Laboratory in Tokyo, but a common issue in the industry is how to streamline these operations.

Our company, which is responsible for the clinical testing contract business and boasts one of the largest business scales in Japan, covers a wide variety of more than 4,000 types of tests and conducts thorough accuracy and quality control in all of these testing business areas. We report highly reliable test results using advanced technology, strict accuracy control, and a mature information processing platform based on our extensive experience.

In addition, we support a variety of large-scale industry-academia collaboration projects, including the Tsukuba i-Laboratory, which is Japan's first example of industry-academia collaboration.

The Growth Areas that LSI Medience is focusing on are cancer gene testing used at the start of anti-cancer drug treatment, cancer genome/genetic testing such as cancer panel testing that can examine multiple genes simultaneously, and medical treatment for healthy people. We aim to expand the contracts for uninsured testing for healthy people, a new market that is not limited to medical care. In addition, we will promote strategic partnerships with regional hospitals and academic institutions, and utilize the laboratory capabilities of regional partners to reduce investment and efficiently undertake clinical testing to develop regional strategies.

Healthcare IT Solutions Division



The healthcare IT market in Japan is expected to grow steadily at 2% annually. The penetration rate of electronic medical records is still less than 50%. Traditionally, on-premises products have been the mainstream, but demand for cloud-based products and services is expected to increase in the future.

In addition, the government of Japan is currently promoting policies to drive the digital transformation of healthcare, such as the introduction of the online eligibility verification system using the My Number card insurance card system and the introduction of electronic prescriptions. Wemex has already introduced an online eligibility verification system for more than 35,000 facilities, which is approximately 27%* of the facilities that have started operation.

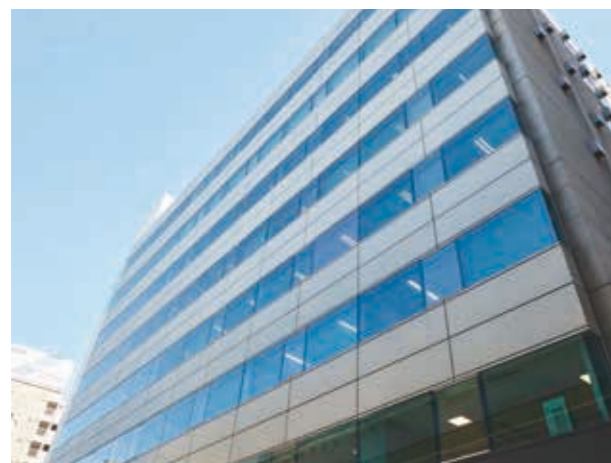
Additionally, the market that utilizes medical data is expanding, with double-digit annual growth expected in areas such as health management and data analysis.

We offer a variety of products and services that contribute to operational efficiency and digitalization in clinics, hospitals, and pharmacies in Japan, leveraging our strengths in responding quickly to policies and advancing related product development. We have a strong foundation of responding to medical policy trends in Japan, such as the introduction of the online eligibility verification system in fiscal 2022, the introduction of electronic prescriptions from fiscal 2023 onward, and efforts to achieve a 100% electronic medical record penetration rate by 2030 with the standardization of electronic medical records. Additionally, in April 2023, we acquired the electronic medical record and medical receipt related business from FUJIFILM Healthcare Systems. With an eye toward inorganic growth, we will continue to accelerate business growth by expanding our high-value-added product lineup and customer base.

We will continue to enhance our cloud services. By connecting AirWAIT®, an online order reception system, with Wemex's medical-receipt computer, users can streamline waiting time management at clinics, and use a cloud service called "digicare analytics" to visualize and analyze pharmacy management, such as daily sales and visitors. We will continue to connect medical-receipt computers and electronic medication history systems with various cloud services to provide solutions for streamlining the management and operation of clinics and pharmacies.

We also approach our medical data business from a range of perspectives. In addition to promoting health management for corporate employees through analysis of medical examination data and specific health guidance, we are also working to address issues in the healthcare industry, such as improving the cost-effectiveness of medical expenses by analyzing medical data. Additionally, we will use the power of digital technology to create new value by providing an online telemedicine system that connects doctors with patients in remote locations.

Mediford



The non-clinical and clinical trial market in Japan is worth more than 200 billion yen, and is expected to grow by 4% annually due to increased government support for drug discovery ventures and academia, as well as an increase in international joint clinical trials.

By disease state, the focus has traditionally been on lifestyle-related diseases, but in the future there may be conditions such as dementia where the target molecules are not fully understood, and diseases such as cancer where the effects may vary between individuals even if the target is known. We expect the proportion of some diseases to increase. In drug development, due to changes in treatment methods, non-clinical and clinical trials of new drugs and treatments are expected to increase, from small molecule drugs to antibody/nucleic acid drugs and cell- or gene-related drugs.

With the launch of Mediford on November 1, 2023, we aim to achieve even greater growth by combining the knowledge and technology in pharmaceutical research and development that previously existed in our separate non-clinical and clinical trial businesses.

We will further advance our analysis technologies such as image mass spectrometry and anti-cancer drug testing using PDX models, and further strengthen the analysis technologies required for new drugs and treatments such as cell and gene therapies.

In addition, by leveraging the advanced analysis technology mentioned above, we will pursue testing for clinical trials in Japan from pharmaceutical companies in other countries, as well as tests for international joint clinical trials from global contract research organizations (CROs) with which we are already collaborating.

*Wemex provided support for 35,000 installations out of 126,771 hospitals, medical clinics and pharmacies excluding dental facilities.

*Airweight and AirWAIT are trademarks or registered trademarks of Recruit Co., Ltd.



Contributing to improved medical outcomes for patients through groundbreaking technology



Steven Lynum

Corporate Officer, PHC Holdings Corporation
President, Epredia Holdings Ltd.

Message

Epredia's name comes from our mission: to improve lives by "enhancing precision cancer diagnostics." We provide solutions for anatomical pathology testing related to cancer diagnostics. We have a strategic vision to be the best provider of end-to-end precision diagnostics solutions, and our work will seek to reduce the burden of disease and the environmental impact of medical care. We are committed to serving our customers, and ultimately the patients they serve, with the highest quality products and services in laboratories around the world.

Overview

Epredia is a global leader in the field of anatomical pathology, providing comprehensive solutions for precision cancer diagnostics with the goal of ultimately contributing to better outcomes for patients.

Anatomical pathology involves observing organs and tissues and diagnosing whether they are benign or malignant, and is essential for cancer diagnostics and treatment. A collected tissue specimen goes through many processing steps in a pathology lab before being placed on a glass slide for observation and diagnosis, and Epredia offers a wide range of products to make the laboratory workflow more efficient and effective. Known for product brands such as Shandon, Richard-Allan Scientific, Microm, and Menzel Glaser, the company has been providing solutions for precision cancer diagnostics since its founding in 1937.

Currently, 44 Epredia products are used every second in medical institutions and research facilities around the world. We will continue to drive innovation to help improve the lives of cancer patients worldwide.

Strengths

- **Comprehensive, state-of-the-art technology for laboratories**
Epredia provides high-quality instrumentation and consumables necessary for pathology laboratories working with tissue samples. Key products include glass microscope slides that are recognized for their excellent adhesion quality and exceptional clarity. Each piece of equipment is designed with pathologists' needs in mind such as ergonomics and ease of use, with the goal of contributing to efficient and accurate cancer diagnosis for the patient.
- **Innovative products powered by digital technology**
Typically, specimens prepared on glass slides are observed by pathologists using a microscope, but in recent years digital pathology technology has emerged in which tissue specimens can be scanned as digital images and viewed on a computer screen. Technology may soon be developed to use AI image recognition to analyze these digital images to support cancer diagnostics. Epredia is offering AI solutions to our customers through our partnership with page and aiforia.
- **Strong customer base and high market share**
Epredia has trusted relationships with customers and a high market share that has been cultivated over the last 85 years. In particular, we are often viewed as the worldwide leader for slide glasses and tissue processors.

FY2022 Snapshot

Revenue: JPY **49.5** billion

Main Customers

- Hospitals/clinics
- Research institutions/universities
- Pharmaceutical companies

Main Products/Services

- **Slide glass**
High-quality pathological diagnosis requires high-quality microscope slides. Our unique glass manufacturing technology enables smooth surfaces and uniform thickness, supporting high-quality specimen analysis and highly accurate diagnosis.
- **Pathology reagents**
Cytology staining, which provides clear contrast between cytoplasm and nuclear chromatin, is an important component in cancer diagnostics. Epredia's staining equipment is designed to stain tissue samples with high transparency and sharpness, and can be used in combination with a variety of staining solutions.
- **Pathology equipment**
Tissue processing is critical to obtaining reliable results in the histology laboratory. Laboratories are under pressure to speed up processes, reduce costs, and prevent operational errors. Epredia's tissue processing solutions are designed to efficiently produce high-quality paraffin blocks to enable pathologists to make an accurate diagnosis.
- **Labeling and management solutions**
To prevent operational errors in the histology laboratory, cassettes and slide glasses must be labeled, properly recorded, and tracked. Epredia's cassette printers and slide printers with laser technology and on-demand printing capabilities provide an automated way of labeling and tracking laboratory samples and slides, to increase accuracy while streamlining workflow.

Slide Glass

Achieve more accurate diagnosis with the highest level of optical clarity



Global market share: **1**

Pathology Reagent

Streamline microscopic observation of cytoplasm and chromatin with a highly transparent and cost-effective staining solution



Pathology Instruments

Streamline the work of applying reagents to samples and reduce reagent costs



Labeling solutions

Automate printing of samples and slides to streamline workflow



Digital Pathology

Contributing to the future of digital pathology solutions through partnership with 3DHISTECH.



* In-house research



Contributing to the evolution of new treatments



Nobuaki Nakamura

Corporate Officer, PHC Holdings Corporation
President and Representative Director, Director of Biomedical Division, PHC Corporation

Message

The Biomedical Division of PHC Corporation entered the life science field in 1966 with the sale of medical refrigerators designed and developed for the purpose of storing pharmaceuticals.

By providing high-quality and highly reliable products and services, we are working to realize the division's mission of "creating new value in life sciences and medicine and contributing to the creation of a healthy and prosperous society."

In the future, in the growing cell culture field, PHC Group will strengthen its in-house development by leveraging the target compound detection technology cultivated in blood glucose monitoring (BGM) systems. We will expand the areas in which we contribute to the therapeutic manufacturing process of cell and gene therapy (CGT) and contribute to the evolution of new treatment options.

Overview

The Biomedical Division primarily provides products and services to medical institutions, universities, and pharmaceutical companies, from solutions for sample storage to cell culture, maintaining a sterile research environment, and research and development of cell and gene therapy. We provide innovative equipment and services needed for scientific research around the world.

The predecessor of this business was Sanyo Electric's Biomedical Division, which joined PHC Group in 2012 when Sanyo Electric was integrated into Panasonic. The manufacturing strengths of both companies have since fused and become even stronger together.

Our products, which are based on sophisticated designs that pursue efficiency and ease of use, feature advanced technology, high quality and reliability, and excellent performance and energy efficiency.

We will continue to be a research partner in the life science field with our cutting-edge products and services.

Strengths

● Products with industry-leading quality and energy-saving performance

Ultra-low temperature freezers have the industry's highest level of temperature accuracy, and their energy efficiency is also world-class. Our CO₂ incubator features a unique contamination prevention function, and its quality, energy saving, and ease of use are highly rated.

● Manufacturing power that supports high-quality products

In the welding process, which requires concentration and precision craftsmanship, we strive to minimize the impact of the welder's condition on the day's performance. Our operations team has the deep knowledge necessary to support high-quality manufacturing, enhanced by an on-site training system within the factory that enables us to further build our expertise.

● High market share and customer reach

Our mainstay ultra-low temperature freezers and CO₂ incubators have the number-one market share in Japan and the number-two market share globally. Leveraging this position and the trusted relationships we have built with customers, we will continue to develop new products and services in new areas.

FY2022 Snapshot

Revenue: JPY **59.3** billion

Main Customers

- Hospitals/clinics
- Pharmaceutical companies
- Research institutions/universities
- Dispensing pharmacies

Main Products/Services

● Ultra-low temperature freezer

This product uses highly efficient refrigerant and heat exchangers and insulation technology to achieve world-class energy-saving performance, and is equipped with two independent refrigeration circuits that maintain the temperature at -70°C even if one breaks down. The ULT freezer provides safe and secure storage.

● CO₂ incubator

Industry-leading products featuring hydrogen peroxide technology that significantly shortens decontamination time, copper alloy stainless steel that prevents contamination while culturing without interrupting customer research, and UV sterilization technology.

● Pharmacy solutions

Equipment that meticulously supports operations from dispensing to administration in pharmacies and hospitals, using automation technology that enables high-speed, accurate, and stable operation and human error prevention.

● Food catering

The Delicart, which contributes to the proper temperature of meals at medical facilities, supports safe and efficient meal delivery with advanced functions such as power assist.

Ultra-Low Temperature Freezer

Long-term stable storage of specimens with highly accurate temperature control.



Japan market share:



Global market share:



CO₂ Incubator

Provides an optimal culture environment to improve cell culture productivity.



Japan market share:



Global market share:



Medicinal Cold Storage

Equipped with natural refrigerant and inverter-controlled compressor, providing significant energy savings.



Japan market share:



Global market share:



Wireless Monitoring System

Stores internal temperature data on the cloud and centrally manages operating status in real time.



Automatic Tablet Packaging Machine

Automates the counting, dispensing, and packaging of prescription drugs. Contributes to improving pharmacist work efficiency and reducing dispensing errors.



Delicart

Heat and cold insulation function and power assist driving function. Reduces the burden of serving hospital food.



*1, 2 In-house research

Pathology Division



The number of cancer diagnoses is increasing worldwide, and as a result, cancer-related drug development activities are expanding, especially among pharmaceutical companies. In this environment, the market for pathology testing equipment and consumables is expected to grow at a mid-single-digit rate.

We are also focusing on the areas of digital pathology and immunohistochemical staining. Digital pathology supports cancer diagnostics using digital images rather than a microscope. Additionally, when it is necessary to confirm what kind of proteins are distributed in cells and tissues, a technique called immunohistochemical staining is used. These technologies are attracting attention for their potential to greatly improve the efficiency of cancer diagnostics and pharmaceutical research and development, and are expected to grow by double digits annually.

Pathology is an area where high quality and stability are especially critical, and we will continue to develop new high-quality products and increase our market share.

Additionally, in the growing field of digital pathology, we offer digital pathology products made by our partner 3DHISTECH. As a partner in immunohistochemical staining with 3DHISTECH, we jointly operate a research and development laboratory, the Pathology Innovation Incubator, and we will also invest heavily in the growth of digital pathology and immunohistochemical staining.

The flagship PANNORAMIC 1000, developed through the experience and knowledge of doctors, can load up to 1,000 slides at once and automatically scan them in about half a day.

This enables, for example, slides to be scanned overnight and shared with multiple pathologists, allowing large amounts of data to be viewed quickly regardless of the location of the pathologists. This contributes to making the diagnostics process more efficient.



Biomedical Division



In the life sciences field, though economic activity has been affected by inflation among private companies, government investment continues to be strong, especially in new treatment options and cutting-edge technologies such as cell and gene therapy (CGT), mRNA medicine, and nucleic acid medicine.

In particular, research and development in the field of CGT involves processes such as cell culture, analysis, and preservation, and with considerable room for market growth in all of these, the overall market is expected to grow by double digits annually.

On the other hand, even in a global inflationary environment, price competition is progressing in some commodity equipment due to the rise of Chinese manufacturers.

For high-value-added products such as ULT freezers and CO₂ incubators, we will advance the development of new products to differentiate us from our competitors. As for general-purpose products, we will promote cost reductions by improving manufacturing operations, including leveraging our plant in Indonesia.

We will also focus on the field of cell and gene therapy, which is expected to see significant market growth. In cell culture, cell metabolites are important indicators in determining the health of cells. Previously, it was difficult to constantly monitor the state of the cells due to manual, intermittent measurement of metabolites. Our cell metabolism analyzer, which uses technology for quantifying specific compounds that we have cultivated through our blood glucose monitoring systems, can continuously measure cell metabolites and visualize the state of cells in real time. This technology allows us to gain new knowledge never obtainable by conventional methods, and through this knowledge, we can contribute to the reliable and stable production of therapeutic cells.



Based on our mission, PHC Group conducts business activities with an eye on realizing materiality. By addressing materiality throughout the value chain in the Foundation Areas of our three business domains, Diabetes Management, Healthcare Solutions, and Diagnostics & Life Sciences, we will create synergies among businesses and expand each business. By doing so, we will expand our

range of products, services, and customer base, and further accelerate our efforts toward our goal of advancing Value-Based Healthcare.

*Excerpt only of materiality topic related to supply chain

Our Value Chain Initiatives

Research and Development



- Develop products that are friendly to the global environment and resources, such as products with the world's highest level of energy-saving performance and high durability.
- Proactive investment in areas that require different capabilities from conventional ones, such as digital health initiatives.
- Innovation initiatives that do not rely on proprietary technologies, such as the establishment of our joint R&D center with 3DHISTECH and joint research with universities.



Procurement



- Build a robust supply chain through meetings and other communication with suppliers.
- Promote sustainability initiatives throughout the supply chain.



Manufacturing



- Promote development and improvement of production technologies that significantly reduce carbon dioxide emissions and waste, as well as water and packaging material consumption.
- Reduce waste, improve efficiency, and lower costs by optimizing manufacturing footprint and operations.



Sales



- Further sales expansion in emerging markets and developing countries and regions where healthcare is needed.
- Respond to recalls in good faith, including appropriate recalls and disclosure of necessary information.



Develop business activities with a focus on realizing materiality*

