

# Cardiac and Vascular Company

Together with our customers, we strive to create the next standard of patient care and drive the evolution of medicine on the front lines.

**Fumihisa Hirose**  
Group Managing Executive Officer  
President, Cardiac and Vascular Company



## External environment (opportunities and risks)

External environment	
Opportunities	Risks
<p><b>Vascular intervention*1</b></p> <ul style="list-style-type: none"> <li>Increasing needs for same-day discharge and shorter hospital stays</li> <li>Growing demand for minimally invasive treatments due to the aging population</li> <li>Steady market growth of vascular interventions in new disease areas</li> <li>Wider adoption of vascular interventions as therapeutic options for neurovascular diseases in the treatment guidelines</li> <li>Improved device performance and clinical outcomes with stent graft implantation technology for aortic aneurysms</li> </ul>	<p><b>Vascular intervention*1</b></p> <ul style="list-style-type: none"> <li>Compliance with stricter regulations, including the EU Medical Device Regulation (MDR)</li> <li>Chinese Government's preferential treatment for domestic manufacturers and changes in procurement policy</li> <li>Contraction of existing markets due to the development of new treatment methods</li> <li>Intensified competition due to clinical evidence for therapies established by competitors</li> </ul>
<p><b>Surgical treatment*2</b></p> <ul style="list-style-type: none"> <li>Steady market growth of extracorporeal life support (ECLS) system and extracorporeal membrane oxygenation (ECMO) system</li> <li>Growth in emerging markets due to advancements in medical technologies and an increase in Western-type diseases resulting from changes in lifestyle</li> <li>Spread of hybrid surgeries*3</li> </ul>	<p><b>Surgical treatment*2</b></p> <ul style="list-style-type: none"> <li>Compliance with stricter regulations, including the EU Medical Device Regulation (MDR)</li> <li>Ongoing trend toward minimally invasive treatment due to a transition from surgical treatment to vascular intervention (market contraction)</li> </ul>

\*1 Vascular intervention: TIS Division, Neurovascular Division, and Vascular Graft Division (stent grafts)

\*2 Surgical treatment: Cardiovascular Division, Vascular Graft Division (surgical grafts)

\*3 Procedures involving the implantation of a combined surgical graft and stent graft



## Strengths

- Training for healthcare professionals that promotes the proper use of our products and disseminates procedures using these products
  - Strong partnership with KOL\*4
  - Product development expertise that integrates proprietary technologies with those acquired through M&As for unique, high-quality products
  - Globally standardized organizational structure of sales and marketing, clinical development, and regulatory affairs
  - Production network capable of delivering a stable product supply worldwide
- Vascular intervention\*1**
- Leading market share and competitiveness in vascular access products
  - Strong brand presence in minimally invasive treatments and radial access procedures\*5
  - Solution capabilities leveraging our extensive range of product portfolio
- Surgical treatment\*2**
- Leading market share and competitiveness in oxygenators and surgical grafts
  - Development and production technologies that made us the world's only company capable of independently developing and mass-producing hollow fibers\*6 for oxygenators
  - Development and supply capabilities for essential life-saving medical products, including ECMO

\*4 Key opinion leaders

\*5 A solution where a catheter is inserted through the radial artery

\*6 One of the materials used in oxygenators

### Strengths of the Cardiac and Vascular Company

At the Cardiac and Vascular Company, we offer a range of products and solutions for vascular interventions and surgical treatments. In the vascular intervention field, we operate globally through our TIS Division, Neurovascular Division, and Vascular Grafts Division (stent grafts). We are also expanding our global presence in the surgical treatment field through our Cardiovascular Division and Vascular Graft Division (surgical grafts).

Our strength in the vascular intervention field lies in our competitive position and strong brand presence, backed by our leading market share in access products, devices which establish pathways from insertion sites to lesions within the blood vessels. In the surgical treatment field, our strength is highlighted by our leading market share in oxygenators and surgical grafts, as well as our proprietary technology that positions us as the world's only company capable of independently developing and mass-producing hollow fibers for oxygenators. In recent years, the demand for minimally invasive treatments, especially vascular interventions, has been expanding in both developed and emerging countries. In developed countries, this trend is primarily driven by the need to shorten hospital stays in response to rising medical costs. Meanwhile, in emerging countries, the demand is influenced mainly by the increasing prevalence of lifestyle-related diseases and advancements in medical technology.

Since the launch of the angiographic catheter in 1985, we have achieved the top global market share in access devices for vascular interventions through the development of high-quality products, and training to promote the use of radial access procedures (vascular intervention performed via an artery in the wrist). We also entered the therapeutic field by acquiring medical devices for neurovascular treatment and aortic repair through mergers and acquisitions, which enabled us to achieve further revenue and profit growth.

We anticipate continued growth in our businesses, driven by the increasing demand for treating complex cases in vascular interventions, including peripheral, visceral, and neurovascular intervention procedures. In addition, the growing adoption of radial access procedures in the U.S., the largest market, is expected to drive this expansion further. Supporting this growth

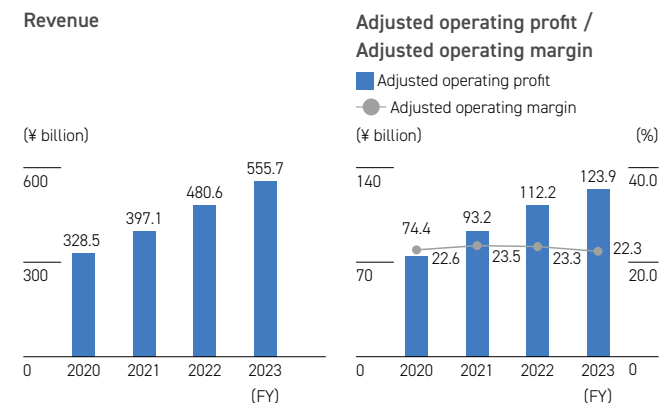
are our operations where the positive effects of cost reduction and enhanced stable supply capabilities, achieved through the automation and efficiency improvements at the Ashitaka Factory and the transfer of production to Costa Rica, are already starting to show. In the medium to long term, we aim to expand our businesses by entering the high-growth venous thromboembolism market and providing digital solutions to create synergies with our existing products.

### Progress of GS26

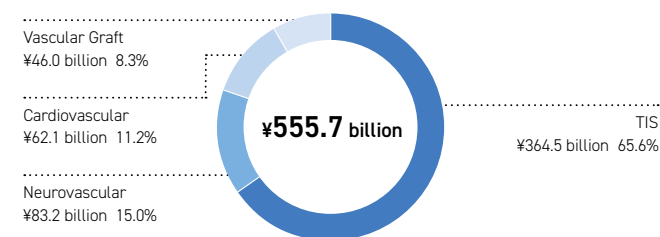
With regard to the progress of our five-year GS26 growth strategy, we have achieved mid-to-high single-digit growth in revenue for two consecutive years, excluding the effects of exchange rate fluctuations. This growth was primarily driven by the steady increase in the number of vascular intervention procedures worldwide. Despite challenges such as inflation and supply chain disruptions, we secured profit growth through effective cost-reduction measures and pricing strategies.

Moving forward, we will continue to expand our range of therapeutic devices and drive sales growth in the TIS, Neurovascular, and Vascular Graft Divisions. In addition, we aim to further increase market awareness of our access product line through the "Radial First" campaign, which promotes the widespread adoption of radial procedures. In response to prolonged inflation, we will continue to review our product pricing globally. Furthermore, we will reduce costs and improve operations through automation and enhanced efficiency at the Ashitaka Factory, and expand production at the Costa Rica Factory.

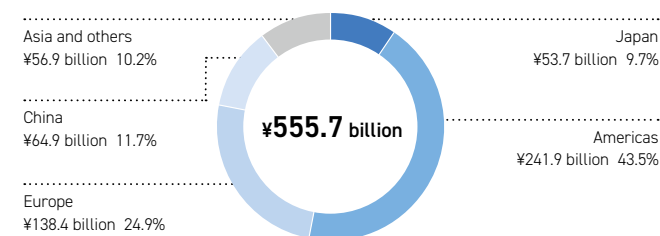
Through these initiatives, we aim to achieve our financial targets of GS26 (a high-single-digit five-year CAGR in revenue and an improvement in adjusted operating margin by two percentage points) and prepare for the next five-year growth strategy.



### Revenue by business (FY2023)



### Revenue by region (FY2023)



Note: Revenue composition ratios by business and region are rounded to the first decimal place, and the total may not equal 100%.

TOPICS

**Aiming to further improve patient quality of life and reduce healthcare costs in vascular interventions**  
**Initiatives to expand the use of radial access procedures across a broader range of diseases**

Percutaneous coronary intervention is widely used as a treatment for ischemic heart diseases, such as myocardial infarction and angina pectoris. In this procedure, a catheter is inserted into a blood vessel, and the lesion (a narrowed or blocked blood vessel) is dilated with a balloon or stent to restore blood flow.

In the past, catheters were typically inserted through the femoral artery. However, radial access procedures, which utilize the radial artery at the wrist, are now widely performed. Compared to insertion in the femoral artery, the radial access procedure has a shorter hemostasis time, allows patients to walk immediately after treatment, and has a lower risk of complications, thereby contributing to a better quality of life for patients. Furthermore, early patient recovery and discharge from hospitals (same-day discharge in some countries) leads to lower medical costs and improved hospital operational efficiencies.

At Terumo, we have focused on developing access devices, products which establish pathways from the insertion site to the lesion in blood vessels during vascular interventions. To date, we have successfully developed access devices in-house, including guidewires coated with a hydrophilic polymer to improve lubricity within blood vessels, and sheaths that facilitate catheter entry into the blood vessels. As a result, we now hold the leading market share in this area\*1.

Early on, we began developing products optimized for radial access procedures. Our offerings include sheaths\*2 with a small outer diameter that can be inserted into the narrow radial artery while maintaining an adequate inner diameter to pass standard catheters. We also produce a hemostasis device\*2 specifically designed for the radial artery, which helps reduce patients' pain while ensuring adequate hemostasis. These products are widely used in vascular interventions.

In addition, collaborating with highly skilled physicians, we have developed educational programs and training models for radial access procedures, actively creating opportunities for skill transfer from physician to physician. We have conducted and sponsored training sessions at hospitals and major academic conferences, distributed videos of experienced physicians providing practical advice, and introduced academic papers on radial access procedures to promote understanding and increase the use of the technique. As a result of these efforts, approximately 70% of coronary artery interventions performed globally are now conducted via the radial artery.

Since fiscal 2022, a key initiative in our five-year growth strategy GS26 has been the promotion of radial access procedures for various diseases, with our focus on expanding this procedure beyond coronary artery diseases, where it is well established, to other areas, including peripheral, visceral, and neurovascular diseases. We aim to achieve this by developing products tailored to each specific condition and providing training opportunities.

While the radial approach can be expanded to more areas, each treatment area requires unique device specifications for treatment and diagnosis, along with specific procedural techniques. It is also essential to fully assess the lesion conditions, access pathways, and patient-specific background to determine appropriate cases for radial access procedures and ensure safe, effective treatment.

For example, when treating peripheral artery diseases in the lower limbs, radial access requires a longer catheter compared to femoral access. We have developed devices designed to enhance pushability, trackability, and crossability, allowing physicians to access and treat lesions smoothly, even with long catheters. In addition, we offer training programs tailored to different diseases and anatomical sites, including online resources such

as instructional videos, academic papers, and case studies that cover the necessary information.

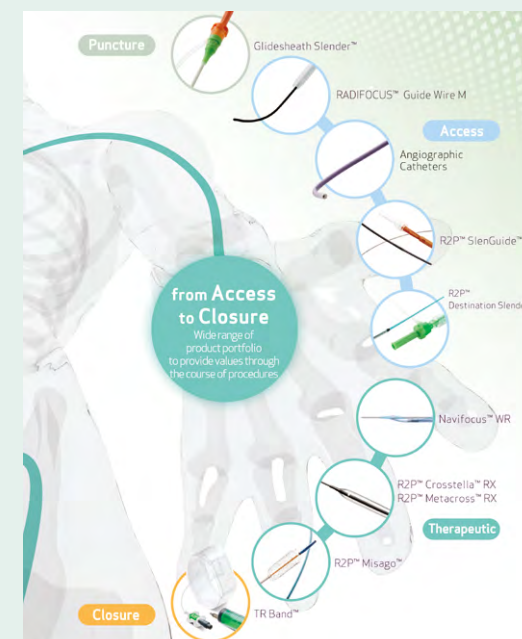
Leveraging our expertise and product development capabilities in coronary intervention, we will continue to promote radial access procedures, which provide less invasive treatment. These efforts will help improve patients' quality of life, improve medical cost efficiency, and drive further growth in access procedures.

\*1 Total sheaths, angiographic catheters, angiographic guidewires (polymer jacket type), and hemostatic devices for the radial artery. Created from Terumo data

\*2 To learn more about our products, visit the following website.  
 Intervention through the Wrist: Thirty Years of Evolution; More to Come  
<https://www.terumo.com/technology/stories/01>



Training for visceral intervention with radial access



Offering a comprehensive range of products for peripheral intervention via the radial approach, from puncture to hemostasis