

# **Vascular Access Procedures Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Procedure (Arteriovenous Fistulas, Arteriovenous Grafts, Central Venous Catheters, Others), By Application (Chemotherapy, Hemodialysis, Blood Transfusions, Intravenous Antibiotics Treatment, Others), By Region and Competition, 2020-2030F**

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## **Abstracts**

### **Market Overview**

Global Vascular Access Procedures Market was valued at USD 91.35 Billion in 2024 and is expected to reach USD 125.28 Billion by 2030 with a CAGR of 5.38%. The Global Vascular Access Procedures Market is witnessing substantial expansion as a result of increasing healthcare demands and the growing burden of chronic illnesses. Vascular access procedures, which include the insertion of devices such as central venous catheters, peripherally inserted central catheters (PICCs), and arteriovenous fistulas, are critical for administering medications, nutrition, dialysis, and for blood sampling. A rise in hospital admissions for chronic conditions like cancer, kidney disease, and cardiovascular ailments has led to a corresponding surge in the need for efficient and long-term vascular access solutions. The aging global population, which is more prone to comorbidities requiring regular medical interventions, is also contributing to higher procedure volumes. Rising surgical volumes, longer hospital stays, and increasing preferences for home-based care with portable infusion devices are accelerating the market demand for safe, reliable, and easy-to-insert vascular access devices.

The market is also shaped by notable technological innovations and trends. Advancements in catheter materials and designs, such as antimicrobial coatings and ultrasound-guided insertion techniques, are reducing complications such as infections and thrombosis. The integration of imaging and navigation technologies into vascular access procedures is making device placement more accurate and reducing the rate of failed insertions. A shift toward minimally invasive access techniques is gaining traction, particularly in outpatient and ambulatory settings, leading to improved patient comfort and reduced healthcare costs. Market participants are focusing on launching user-friendly and cost-effective devices that cater to both high-volume hospitals and low-resource settings. Increasing training and awareness among healthcare providers regarding device selection and insertion protocols is further improving procedural success rates and patient safety.

Despite the positive momentum, several challenges persist in the Global Vascular Access Procedures Market. High costs associated with advanced vascular access devices and procedures can limit their adoption in lower-income or resource-constrained settings. Device-related complications such as catheter-related bloodstream infections (CRBSIs), occlusions, and mechanical failures continue to pose significant clinical risks. Variability in clinician skill levels and lack of standardized insertion techniques across facilities often result in inconsistent patient outcomes. Stringent regulatory requirements for the approval of new vascular access devices may delay product launches and hinder innovation. Moreover, concerns over device durability, frequent replacements, and patient discomfort may discourage adoption in some patient populations. Addressing these challenges through improved training, patient-specific device design, and ongoing clinical studies will be crucial in ensuring sustainable market growth.

## **Key Market Drivers**

### **Growing Prevalence of Chronic Diseases Requiring Long-term Vascular Access**

The growing prevalence of chronic diseases that require long-term vascular access is one of the most significant drivers of the Global Vascular Access Procedures Market. Chronic kidney disease (CKD) alone affects more than 800 million people globally, accounting for over 10% of the world's population, and its prevalence continues to increase, especially in low- and middle-income countries due to rising rates of diabetes and hypertension. A large proportion of CKD patients depend on hemodialysis, which demands reliable vascular access methods such as arteriovenous fistulas, grafts, and

central venous catheters. These access points are critical for ensuring efficient dialysis sessions and improving patient survival outcomes.

Cancer incidence is another major factor contributing to market growth. In 2022, there were nearly 20 million new cancer cases and about 9.7 million deaths worldwide. Many cancer patients undergo chemotherapy, targeted therapy, and supportive treatments requiring long-term intravenous access through devices like implantable ports or peripherally inserted central catheters (PICCs). In parallel, the burden of severe infections and sepsis remains extremely high, with 48.9 million cases and 11 million related deaths annually, representing one in every five deaths globally. These cases frequently necessitate prolonged antibiotic administration via secure vascular access devices.

Technological advancements have further strengthened the role of vascular access procedures in chronic disease management. The introduction of antimicrobial-coated catheters, ultrasound-guided insertion techniques, and needle-free connectors has improved safety, reduced infection risks, and extended device longevity. Growing awareness among healthcare providers about early vascular access planning, especially for patients with progressive chronic illnesses, is improving treatment efficiency and patient quality of life. With aging populations and rising comorbidity rates, demand for dependable, long-term vascular access solutions is expected to accelerate, driving substantial market expansion in the years ahead.

## **Key Market Challenges**

### **High Risk of Complications Associated with Vascular Access Devices**

The Global Vascular Access Procedures Market faces a significant challenge due to the high risk of complications associated with vascular access devices, which can impact patient outcomes and limit procedural adoption. Complications such as catheter-related bloodstream infections (CRBSIs), thrombosis, stenosis, hematoma formation, and device malfunction are common concerns that can arise during or after the procedure. Infections remain one of the most critical risks, as they not only lead to increased morbidity but also escalate healthcare costs due to prolonged hospital stays, additional treatments, and the need for device replacement. Thrombosis and stenosis can compromise the efficiency of vascular access, requiring repeat interventions that increase the burden on both healthcare systems and patients. In certain cases, repeated procedures can lead to limited viable access sites, especially in patients undergoing long-term treatments like hemodialysis or chemotherapy.

The risk of complications is amplified in patients with multiple comorbidities, weakened immune systems, or poor vascular health, making device placement and maintenance more challenging. A lack of standardized training protocols for device insertion and maintenance in some regions contributes to procedural variability, which can further elevate complication rates. Concerns about these risks often lead to hesitancy among healthcare providers and patients, slowing adoption of advanced vascular access solutions despite their potential benefits. This challenge necessitates continuous innovation in device design, incorporation of antimicrobial coatings, and the implementation of strict infection control protocols. Without addressing these safety concerns effectively, market growth may be hindered due to the potential for adverse events that undermine trust in vascular access procedures.

## **Key Market Trends**

### **Rising Adoption of Image-Guided Vascular Access Techniques**

The Global Vascular Access Procedures Market is witnessing a notable trend with the rising adoption of image-guided vascular access techniques, driven by the growing demand for precision, safety, and efficiency in medical interventions. Image-guided procedures, using ultrasound, fluoroscopy, or other imaging modalities, allow clinicians to visualize the vascular anatomy in real time, significantly reducing the risk of complications such as arterial puncture, hematoma, or catheter misplacement. This approach is particularly valuable in complex patient cases, including those with challenging vascular anatomy, pediatric patients, and individuals requiring repeated access for treatments like dialysis or chemotherapy. The integration of imaging technologies into vascular access workflows is improving first-attempt success rates, minimizing patient discomfort, and reducing procedure time, which enhances both clinical outcomes and operational efficiency in healthcare settings.

Technological advancements in portable and handheld ultrasound devices are expanding the accessibility of image-guided procedures beyond specialized centers to community hospitals and outpatient clinics. This trend is also supported by growing clinical evidence demonstrating superior safety profiles and long-term patency rates when image guidance is employed. Training initiatives and skill development programs by medical societies and device manufacturers are equipping healthcare professionals with the expertise to adopt these techniques more widely. As healthcare systems prioritize patient safety, cost-effectiveness, and adherence to evidence-based practices, the shift toward image-guided vascular access is becoming a standard of care across

multiple therapeutic areas, positioning it as a critical driver of procedural evolution in the market.

### **Key Market Players**

Teleflex Incorporated

Becton, Dickinson and Company

B. Braun Melsungen AG

ICU Medical, Inc.

Cook Group Incorporated

AngioDynamics, Inc.

Medtronic plc

Medical Components, Inc.

Terumo Corporation

Access Vascular, Inc.

### **Report Scope:**

In this report, the Global Vascular Access Procedures Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Vascular Access Procedures Market, By Procedure:

Arteriovenous Fistulas

Arteriovenous Grafts

Central Venous Catheters

Others

Vascular Access Procedures Market, By Application:

Chemotherapy

Hemodialysis

Blood Transfusions

Intravenous Antibiotics Treatment

Others

Vascular Access Procedures Market, By Region:

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia-Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

## **Competitive Landscape**

Company Profiles: Detailed analysis of the major companies present in the Global Vascular Access Procedures Market.

## **Available Customizations:**

Global Vascular Access Procedures Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## **Company Information**

*Vascular Access Procedures Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented...*

Detailed analysis and profiling of additional market players (up to five).

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