Renal Biomarkers Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The renal biomarkers market was valued at USD 1,041.12 million in 2021, and it is expected to reach USD 1,662.54 million by 2027, registering a CAGR of 7.76% during the period of 2022-2027.

Due to the COVID-19 pandemic, the footfall in the hospitals and diagnostics centers decreased significantly initially, and many studies reported that people with comorbidity had higher chances of contracting severe COVID-19, which further led to a decrease in the tests and treatment procedures for kidney diseases. For instance, according to a research study published in January 2022, by Brogan M. et, al., patients with severe chronic kidney disease (CKD) had higher mortality than those without CKD, and approximately half survived after 28 days.

However, the emergence of COVID-19 led to new research in the area of biomarkers for the detection of the severity of COVID-19 in patients, which is further anticipated to augment the growth of the market as new investments will be made in the area for research and development of renal biomarkers. For instance, in May 2021, a study was published in the Scientific Reports journal volume 11 (2021) that demonstrated the role of urine biomarkers in the prediction of mortality in SARS-CoV-2 infected patients. These ongoing studies have spurred the research in this space for the discovery of novel biomarkers, which is expected to augment the market growth.

The key factors propelling the growth of this market are the rising prevalence of various kidney-related diseases, the high prevalence of diabetes and high blood pressure, which are the leading causes of renal diseases, and rapid technological advancements in the field of genetics. According to the Study 'Prevalence and risk factors of Chronic Kidney Disease among Type 2 diabetes patients' published in 2020, type 2 diabetes mellitus accounted for more than 90% of people with diabetes and prone to the risk of chronic kidney diseases. The same sources stated that in the United States, approximately 36% of patients with

diabetes develop diabetic kidney diseases. Additionally, the risk of diabetes-related chronic kidney diseases was much higher in Asian countries than in Western countries.

Advancements in the field of genetic technology during the last decade have enlightened people's knowledge regarding genetic regulatory pathways related to renal biomarkers. Due to rapid advances in genomic technologies, genetics analysis has become essential in clinical practice and research. Moreover, with the development of computer technology, renal biomarkers testing has become widely accessible and feasible to perform, even in small-sized laboratories. Recent advances in genetics have created opportunities to study kidney disease on a variety of platforms applied to human populations. Renal biomarkers can also be integrated into genetic-level technological advancements for the detection, diagnosis, and treatment of kidney diseases. These rapid advances in genetics led to the development of more advanced renal biomarkers for treating kidney diseases, which ultimately drives the market. Thus, due to the aforementioned factors, the renal biomarkers market is expected to grow at a significant rate during the forecast period.

Renal Biomarkers Market Trends

Serum Creatinine from Functional Biomarker is Expected to Hold a High Market Share

Serum creatinine is the most widely used laboratory test for kidney function and is used to derive the eGFR (estimated Glomerular Filtration Rate) as an indicator of kidney function. It is also used as an ideal indicator for the determination of chronic kidney diseases. The creatinine concentration in blood is inversely proportional to the glomerular filtration rate (GFR), which is an ideal marker of kidney function. Unfortunately, measuring GFR is time-consuming, and therefore, GFR is usually estimated from equations that take into account endogenous filtration markers, like serum creatinine (sCr).

The growing incidence of chronic kidney disease and the growing launches and advancements in serum creatinine tests are boosting the market growth. According to the National Kidney Foundation, 2021, 10% of the population worldwide is affected by chronic kidney disease (CKD). Furthermore, as per the University of California San Francisco, 2018, nearly 750,000 patients per year in the United States and an estimated 2 million patients worldwide are affected by kidney failure. The large patient population increases the use of serum creatinine for diagnosing and prognosing kidney diseases, boosting the segment growth.

According to Clinicaltrial.gov, there are 1,042 studies that are ongoing on serum creatinine as of August 3, 2021. The large number of studies increases the production and usage of the biomarker. Thus, in the present scenario, the diagnosis of CKD is made usually on the levels of serum creatinine (sCr). Hence, with the high prevalence rate of CKD and preference for serum creatinine test, the market is expected to grow over the forecast period.

North America Dominates the Market, and It is Expected to do the Same During the Forecast Period

North America currently dominates the market for renal biomarkers, and it is expected to continue its stronghold for a few more years. In the North American region, the United States holds the largest market share. In the past decade, there was a significant increase in the number of USFDA-approved drug labels containing information on molecular biomarkers. Almost every pharmaceutical company has been developing molecular biomarker programs, either through partnerships or through other ventures.

The rising prevalence of chronic kidney disorders among people in the United States is a major factor attributed to the increasing usage of renal biomarkers for effective diagnosis and to boost the market growth in this region. For example, the Centers for Disease Control and Prevention (CDC) published in 2021 that more than 1 in 7, nearly 37 million people in the United States are estimated to have chronic kidney disease (CKD). Additionally, the increasing vulnerable aging population that is prone to chronic kidney diseases in the United States is also contributing to the rising demand for the early-stage diagnosis and effective

treatment, thereby contributing to the growth of the market. For instance, in 2021, the Centers for Disease Control and Prevention (CDC) published that chronic kidney diseases were the most common in people aged 65 years or older and contributed to 38% of the affected population in the United States.

Furthermore, the strategic initiatives taken by market players, such as the launches of biomarker diagnostic tests for detecting kidney diseases and growing partnerships, mergers, and acquisitions in the country, are also expected to boost the market. For instance, in September 2020, Baxter International Inc. entered a distribution agreement with bioMerieux to distribute the NEPHROCLEARTM CCL14 diagnostic test in the United States. This test is used for assessing the risk of developing persistent severe acute kidney injury (AKI). Such agreements will boost the availability of biomarker diagnostic tests, thus driving the market.

In March 2022, Aravive Inc. demonstrated positive results from Phase 1b/2 trial of batiraxcept in clear cell renal cell cancer (ccRCC) and from a biomarker high subgroup. Therefore, such clinical trials will boost the development of biomarker tests in the country. This will subsequently drive the market growth. Thus, owing to the aforementioned factors, the studied market is expected to grow significantly during the forecast period.

Renal Biomarkers Market Competitor Analysis

The renal biomarkers market is highly competitive and consists of several major players, along with multiple smaller companies. However, with technological advancements and product innovations, mid-size to smaller companies are increasing their market presence by introducing new technologies at affordable prices. Companies like Thermofisher Scientific, Abbott Laboratories, Siemens Healthineers AG, F. Hoffmann-La Roche Ltd, and BioMerieux hold substantial shares in the market.

Additional Benefits:

  The market estimate (ME) sheet in Excel format
 3 months of analyst support

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