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Molecular Diagnostics may offer Hope for Cancer Drug Shortages in Asia

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"Molecular precision profiling can precisely analyzes biomarkers, revealing the molecular blueprint for evidence-based selection of the most appropriate cancer therapy" explains Raman Singh, CEO Juniper Biologics

Projections by the International Agency for Research on Cancer estimate 15.1 million new cases per year, until 2040. This concerning statistic is even more distressing when there is a problem of cancer drug shortages. In fact, the lack of availability of medicines in the treatment of breast cancer, colorectal cancer and lung cancer, responsible formore than one-third of cancer deaths in the Asian region, has undeniable negative effects on patient outcomes.

There exists a critical need to evaluate accessibility of cancer care and diagnostics in the region. Research also shows that early diagnostics and molecular testing are essential in the diagnosis and management of cancer to optimize clinical outcomes as cancer mortality continues to rise in Southeast Asia.

Singapore headquartered Juniper Biologics' Caris Molecular Profiling serves to fill in this gap and make personalized therapies more readily available for patients, giving them a better chance in life. Raman Singh, Chief Executive Officer, Juniper Biologics shares furthur insights.

- **What are the pressing concerns in cancer care in Asia?**

Many Asian countries lack early cancer detection programs, resulting in late-stage diagnoses and limited treatment options. This is especially problematic for cancers with high prevalence in the region, such as lung, liver, and gastric cancers. In the case of lung cancer, the mortality rate is the highest in Asia compared to other parts of the world.In East Asia where the rate of mortality is approximately 81.7%, early diagnosis has played a large role in improving patients' chances of survival and reducing death cases.

The cost of cancer treatment is increasing due to global economic challenges and advancements in medical technology. This rise in expenses creates a barrier to proper care for patients in many Asian countries, prompting healthcare institutions to

reconsider affordability for better accessibility.

Accessibility of novel drugs create obvious disparities between developing and developed areas in the region. A number of essential cancer medicines listed by the World Health Organization (WHO) are not readily available in the low- to middle-income Asian countries. Therapies and diagnostics have also been found inaccessible in countries like the Philippines, where molecular diagnostics is limitedly available only in its capital city, Manila. For a better chance in life, patients from rural areas have to travel to other countries, like Singapore and Thailand, to seek treatment options.

- **How is cancer drug shortage and inaccessibility to novel therapies in Asia posing a problem for patients and medical professionals, and how prevalent are these problems now?**

Perhaps the most important, yet neglected area of concern is the availability of comprehensive tumor profiling tests, the latest and the most innovative cancer drug available, and cancer supportive care services that impact the quality of life of patients and their caregivers.

For patients, they experience heightened emotional distress and anxiety when they are informed that the medications they need are in short supply. This can negatively impact their mental and emotional well-being during an already challenging time.

Medical professionals, including oncologists and nurses, face increased stress and ethical dilemmas when they must make difficult decisions about which patients receive the limited drug supply and how to manage treatment interruptions.

This is where the need for collaboration between policymakers, healthcare providers, and related stakeholders comes into play, to help the affected overcome obstacles of improving their quality of life. Even more so because this is a highly prevalent issue due to global cancer drug shortage and increasing cancer cases worldwide, and not just in Asia. As a primary contributor to global mortality, the Asia Pacific region itself saw approximately 8.9 million newly diagnosed cancer cases in 2020.

Shortages of essential cancer drugs often lead to delays in treatment initiation or interruptions in ongoing treatment regimens. This delay can be detrimental, as timely treatment is often crucial for achieving the best outcomes in cancer care.

- **What are some of the recent findings and solutions in oncology and oncology supportive care that exist in the Asian market? Is personalized therapeutics possible in cancer care?**

Medical research and advancements in oncology are constantly evolving. The current market for cancer supportive care products is projected to experience growth between 2021 and 2028, showing a steady Compound Annual Growth Rate (CAGR) of 6.0%. The increasing prevalence of cancer and a rising need for improved cancer supportive care products are the primary factors propelling the market's growth.

Alongside, personalized therapeutics are indeed possible in cancer care, and has become a significant and rapidly evolving approach. Personalized cancer therapy, also known as precision medicine, tailors each treatment to an individual patient’s characteristics and medical needs in the specific cancer being diagnosed. This approach takes into account factors such as the patient's genetic makeup and the genetic profile of their tumor, allowing for more targeted and effective treatments.

Last year, Juniper Biologics secured the distribution rights for Caris Life Sciences (Caris) molecular profiling services in Southeast Asia, to bring this advancing cutting-edge therapy to the market, where molecular testing was previously absent. In fact, disparities are found in Southeast Asian nations, where this testing is limited to specific subnational labs.

On top of making it available in the market, it is worth exploring innovative pricing models and reimbursement strategies to make personalized therapeutics more affordable for patients. This, again, includes fostering collaborations between healthcare institutions and regulatory bodies to create an ecosystem where expertise is shared, and government policies and incentives are in place to encourage research and development in the field.

- **What is Caris molecular profiling and how will it address accessibility to cancer diagnostics, aid drug shortages, and improve patients' quality of life?**

Caris molecular profiling precisely analyzes DNA, RNA, and protein biomarkers, revealing the highest quality molecular blueprint for evidence-based selection of the most appropriate cancer therapy.

In addition to comprehensive molecular profiling, Caris has artificial intelligence algorithms that predict patient responses to standard treatments, such as immunotherapy or chemotherapy, based on their personalized molecular profile.

This collaboration with Caris allows us to share access to resources, expertise, and funding for improving cancer care infrastructure.

Especially for emerging markets in Asia, obtaining novel therapies, like Caris, is a crucial aspect to ensure healthcare needs are met. Markets with varying development levels and drug regulatory capabilities that struggle to conduct comprehensive assessments of new pharmaceuticals can soon reduce the delays experienced in accessing innovative drugs.

With the aforementioned strategies to ensure affordability and fostering of a supportive ecosystem between different stakeholders, existing therapy supply gaps can be filled. Therefore, this allows more timely and better diagnostics and treatment of patients overall, on the back of increasing cancer-related deaths in the region, and thereby improving quality of life.

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