

How Precision Medicine Is Reshaping Cancer Care

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Despite major advances in cancer detection and treatment, high recurrence rates and progression to advanced disease continue to challenge outcomes across Asia—making precision medicine a critical catalyst for shifting cancer care from disease management toward treat-to-cure. By leveraging molecular insights, biomarker testing and collaborative healthcare ecosystems, precision medicine offers the potential to deliver more effective, personalised and sustainable cancer care for patients across the region.



Significant strides have been made in the detection and treatment of cancer in the last two decades. However, while survival outcomes have improved, curative treatments are mainly limited to early-stage disease, driven largely by screening programmes that enable earlier diagnosis.

Even among patients treated with curative intent, recurrence remains a major challenge. Depending on cancer type and stage, recurrence rates have been reported to range from approximately 8.5 per cent to as high as 85 per cent. Many patients eventually progress to advanced or metastatic disease, necessitating a transition from curative treatment to disease control and symptom management. This places a growing burden not only on patients and caregivers, but also on healthcare systems across Asia.

A catalyst for change

Precision medicine offers distinct advantages for patients in Asia, whose genetic, ethnic and environmental diversity differs from Western populations.

Instead of a one-size-fits-all approach, it recognises each patient's unique genetic, biological, environmental and lifestyle characteristics and uses this understanding to tailor diagnosis, monitoring and treatment plans.

Advances in biomarker testing, genomic profiling, and molecular diagnostics now allow clinicians to better understand tumour biology and select therapies that are more likely to be effective for individual patients. Physicians are able to rely on data, not just protocols, when prescribing treatments, enabling them to personalise care, while offering patients more options.

When patients and physicians have access to molecular information, treatment decisions become shared, data-driven discussions. This helps reduce unnecessary treatment burden, preserves dignity, and promotes confidence in the patient, caregiver and medical team in a period typically defined by uncertainty.

The advances in precision medicine are particularly important in cancers with high heterogeneity, such as lung cancer and multiple myeloma, where targeted and immune-based approaches are increasingly redefining long-term outcomes. Johnson & Johnson supports advanced biomarker testing and companion diagnostics, which can help identify disease subtypes, genetic mutations or biological markers that can help determine whether one therapy is more likely to benefit a patient over another. These include next-generation sequencing (NGS) and non-invasive methods such as liquid biopsy, which can detect genetic changes or tumour-derived DNA from a simple blood sample.

Moving towards treat-to-cure

If pharmaceutical companies want precision medicine to translate into meaningful outcomes for patients, we must go beyond innovation and collaborate with stakeholders across the healthcare ecosystem. At Johnson & Johnson, our overall goal in oncology is not only to bring new, high-quality therapies to market but also to ensure that patients can access them through collaboration, data-driven advocacy and shared commitment with our partners in the healthcare ecosystem.

Partnerships between drug manufacturers, pharmaceuticals, healthcare professionals, patient advocates, and policymakers are essential to ensuring that innovation is accessible to patients.

By making precision medicine more accessible and sustainable, various aspects of cancer management, from diagnostics to therapeutics, data and patient care can be integrated into the healthcare ecosystem, maximising real-world impact. This will ultimately accelerate the shift in the treatment paradigm, from managing progression to treat-to-cure.

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