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Evolving Diagnostics Landscape in APAC

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Evolution of APAC diagnostics is likely to be influenced by multiple factors rather than a single technology or country



Having worked across the Asia-Pacific (APAC) region in molecular diagnostics, I am often asked which country is 'winning in this space.' From my perspective, this is not the most relevant question. Across APAC, what we observe is a diversity of strengths — with countries developing capabilities in distinct areas, shaped by the intersection of disease burden, infrastructure investment, and policy priorities.

Centralisation–decentralisation dynamic remains a defining factor

APAC includes both highly centralised diagnostic ecosystems and significant unmet needs in point-of-care access — often within the same country. Japan and Australia are frequently referenced as examples of more centralised models, where hospital-based laboratories and private providers are investing in areas such as genomic testing, digital pathology, and precision diagnostics. These developments are supported by policy initiatives focused on oncology, companion diagnostics, and advanced therapies.

Australia is also developing as a regional node for clinical next-generation sequencing (NGS) and bioinformatics. As part of broader industry investment in this space, QIAGEN established a data centre in Melbourne in 2025 to support in-country data hosting and alignment with local data privacy requirements.

At the same time, high-burden markets across South and Southeast Asia continue to highlight the importance of decentralised access. Large-scale infectious disease programmes, such as tuberculosis control initiatives in India, demonstrate how disease burden can accelerate adoption of molecular diagnostics at scale. Publicly reported data indicate substantial deployment of molecular testing platforms in such programmes, reflecting the need for rapid and accessible diagnostic solutions.

Country-level differentiation is becoming more pronounced

Countries across APAC are investing at different points along the diagnostics value chain.

- China is frequently associated with large-scale genomics initiatives and domestic manufacturing capacity.
- South Korea has been active in digital health and AI-related innovation.
- India represents a high-volume market for infectious disease diagnostics.
- Japan and Australia continue to invest in advanced laboratory and clinical infrastructure.

Singapore plays a distinct role as a regional hub for healthcare innovation and regulatory engagement, with initiatives such as regulatory sandboxes and public–private partnerships supporting the introduction and scaling of new technologies.

Infectious disease burden remains the most reliable market-formation signal

Infectious diseases remain a key driver of the in vitro diagnostics market in APAC. Public data indicate that this segment represents a substantial share of the regional IVD market, with tuberculosis (TB) continuing to be a major public health concern. According to the World Health Organization, the Western Pacific Region reported over 3.4 million new TB cases in 2023.

What’s next

Looking ahead, the evolution of APAC diagnostics is likely to be influenced by multiple factors rather than a single technology or country. A key broader trend is the increasing integration of diagnostics within connected healthcare systems, where data, workflows, and clinical decision-making are more closely linked. Three developments are expected to contribute to this shift.

Centralised automation and decentralised testing are expected to become increasingly integrated — through digital connectivity

The traditional distinction between centralised laboratory testing and decentralised or near-patient testing may become more integrated over time, supported by digital infrastructure.

Emerging approaches include networked diagnostic models, where data from multiple testing sites can be monitored and managed across a broader system. Digital connectivity tools — such as remote monitoring platforms — are being developed to provide visibility into instrument performance and workflow status across distributed sites.

Continued expansion of rapid molecular and syndromic testing

There is increasing focus on diagnostic approaches that provide timely and comprehensive pathogen identification, particularly in the context of infectious disease management and antimicrobial resistance (AMR).

Multiplex molecular assays, including syndromic panels, are designed to detect multiple pathogens from a single sample and may assist clinical teams in identifying potential etiologies.

Broader adoption of such technologies across APAC will depend on multiple factors, including clinical guidelines, reimbursement frameworks, cost considerations, and local healthcare priorities. While there is increasing interest in these technologies, adoption rates may vary across markets.

Gradual integration of AI-supported tools within diagnostic workflows

Artificial intelligence is an area of active development in healthcare and diagnostics, with increasing investment observed across APAC. Within diagnostics, AI-based approaches are being explored to support areas such as data interpretation, reporting, and workflow optimisation.

Closing perspective

Over the next five years, progress in diagnostics in APAC is likely to depend on how effectively technologies are integrated into healthcare systems and workflows, rather than on any single instrument or platform.

The countries likely to play a leading role in the region are those that combine:

- Clinical scale and data generation
- Regulatory maturity
- Integration of diagnostics into healthcare pathways

Analyses suggest that markets such as Australia, Singapore, South Korea, and Japan may continue to contribute to standards development and innovation, while countries such as China and India contribute to scale and implementation. Southeast Asia represents an area of continued growth, driven by healthcare infrastructure development and infectious disease burden.

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