

Asian genotypes mean regional-specific medical research is required

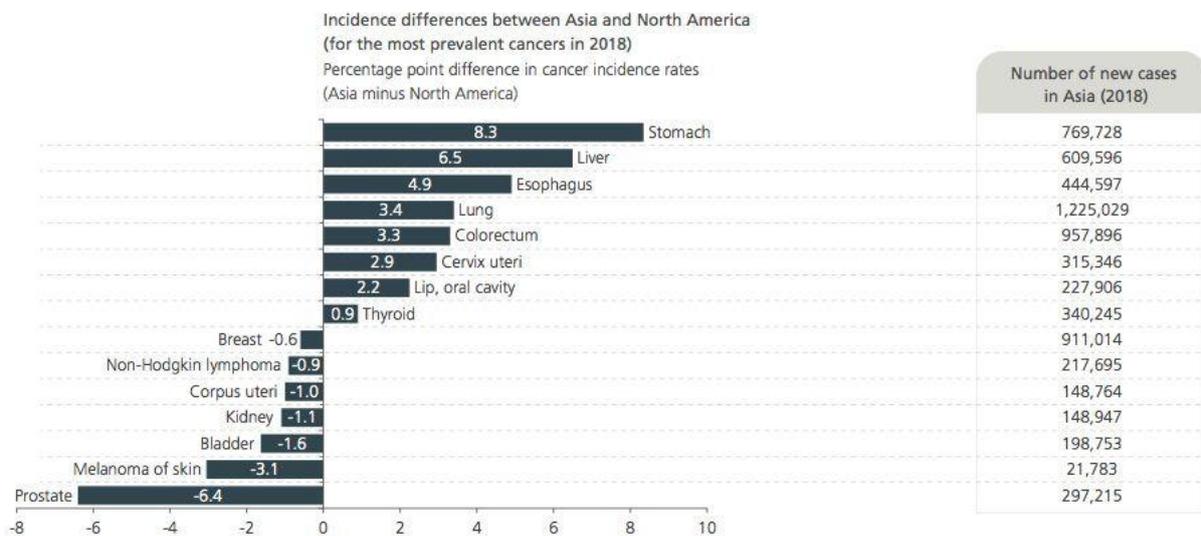
05 September 2019 Consultancy.asia

The specialist healthcare practice of global management consultancy L.E.K. Consulting has called attention to the need for APAC-specific research into precision medicine.

Global management consultancy [L.E.K. Consulting](#) has highlighted the need for regional-specific research in the development of precision medicine – that is, clinical therapeutics which are more targeted in their action and effective in their outcome. While precision medicine research gathers pace across the globe, the firm notes that the field by its very nature – a focus on specific genotypes, which fundamentally differ across geographies – requires localised attention.

Released by L.E.K.’s Singapore-based APAC Life Sciences Centre of Excellence (which was launched [toward the end of last year](#) with support from the Singapore Economic Development Board), the ‘Precision Medicine: Accelerating “Asia for Asia” Therapeutic Solution Market Growth’ report speaks of the critical need to accelerate APAC-focused efforts to meet the region’s rising healthcare demand, with the majority of the current research focused on the US.

Percentage point difference in disease incidence for the most prevalent cancers in Asian and North American populations



Taking oncology as an example of the unique requirements for clinical therapeutics in APAC, the report notes the greater prevalence of certain types of cancers in Asia (such as stomach, liver and esophageal) along with the Asian-specific mutations of more globally common types (e.g. lung, breast and colorectal) which influence how these diseases manifest in Asian patients and how these patients respond to treatments – indicating the clear need for locally-focused research.

Meanwhile, though, the report further exposes the substantial gap that exists in terms of pharmaceutical R&D spend between the US and APAC, with the US accounting for nearly 80 percent of the global outlay and APAC making up just 3 percent in 2017. The result, as might be expected, is a research agenda tilted toward a Western population base with far less of a focus on a wide range of cancer biomarkers more specific to patients of an Asian background.

There has however been some local progress – led by China, Japan and Korea (80 percent of the innovative clinical therapeutics to enter the drug registration phase over the next three to five years are expected to derive from these countries). Singapore is also seeing some movement, with a nine-fold increase in biotech R&D investments between 2011 and 2016, from \$15 million to \$136 million. The health ministry has also announced a ten-year targeted medicine initiative.

Top 12 most commonly studied biomarkers in the U.S. vs. APAC for early drug developments

Ranking	U.S.	APAC
1	HER2	EGFR
2	PSA	HER2
3	EGFR	PD-1
4	MTOR	PD-L1
5	BRAF	TOP2A
6	PD-L1	KDR
7	CD4	TOP1
8	CD8	PIK3CA
9	ALK	CD19
10	Cytokine	ESR1
11	KRAS	FLT3
12	MRD	MET

 Biomarkers that are more relevant to Asian-prevalent cancers

This increased spending power, the firm says, coupled with the expanding healthcare needs of the APAC region (a report from local consultancy [Solidiance](#) last year projected [a \\$320 billion black-hole](#) in ASEAN healthcare funding by 2025), represents a ‘tremendous’ opportunity. Hurdles, however, remain, not least of them according to L.E.K.; the ongoing investment shortfall, a suitably strong talent-pool, and a local ecosystem and infrastructure which can support innovation.

“For APAC R&D to flourish, a closely integrated knowledge and technology exchange network that nurtures early phase drug development – involving public-private partnership research centers, biotech companies and academia – is essential,” state the authors of the report, led by L.E.K.’s Life Sciences CoE Executive Director Fabio La Mola, who further notes that progress in developing ecosystems is already underway in some APAC countries, including in Singapore.

From a business perspective, the report also forwards the potential role for multinationals in accelerating regional innovation, in areas such as venture capital into locally-targeted research and establishing accelerators, incubators and labs. “Opportunities are abundant within the

APAC landscape, where clinical therapeutics targeted to the APAC population represent not just an underlying need, but also a significant untapped commercial opportunity,” the report concludes.