

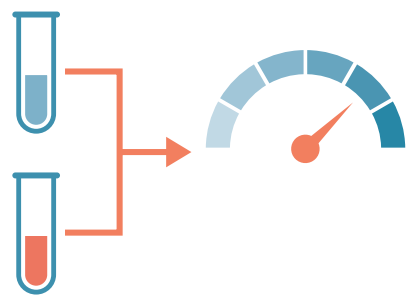
# Improving cancer diagnosis and assessment: The role of Multianalyte Assays with Algorithmic Analyses

## Biomarker testing and Multianalyte Assays with Algorithmic Analysis (MAAA)



**Biomarker testing**, via a blood or urine test, uses molecules, genes or other characteristics to identify cancer risk, determine prognosis, and monitor disease progression

There are rising numbers of tests that combine two or more biomarkers into an algorithm to generate a result. These are what we call **MAAAs**. This combination improves performance compared to single biomarkers<sup>1-5</sup>



**Adoption of MAAAs is more common in East Asia than in the Americas and Europe**

**MAAAs have been adopted in many Asian countries**



**MAAAs can improve the patient experience by reducing waiting times for appointments, scans, and biopsies.**

*Prof Tian Yang,  
Associate Professor of the Second  
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Biomarkers are much cheaper in China than in Western countries, making the technology more accessible and cost-efficient. Low price is one of the biggest enablers for the adoption of biomarkers in China



In most Western and Latin American countries, the number of MAAAs used clinically remains modest

## Looking ahead there's a need to:

- Improve the targeting of MAAAs through better guidance
- Promote MAAAs as a tool for primary care practitioners
- Evaluate the costs and benefits of MAAAs in clinical practice



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### References:

1. Dlamini Z, Francies FZ, Hull R, et al. Artificial intelligence (AI) and big data in cancer and precision oncology. *Computational and Structural Biotechnology Journal*. 2020;18:2300-11.
2. Turner KA, Algeciras-Schimmich A. Multianalyte Assays With Algorithmic Analysis in Women's Health. Available from: <https://www.aacc.org/clin/articles/2018/july/multianalyte-assays-with-algorithmic-analysis-in-womens-health>.
3. Wang H-Y, Chen C-H, Shi S, et al. Improving Multi-Tumor Biomarker Health Check-up Tests with Machine Learning Algorithms. *Cancers*. 2020;12(6):1442.
4. Colón-Franco JM, Bossuyt PMM, Algeciras-Schimmich A, et al. Current and Emerging Multianalyte Assays with Algorithmic Analyses—Are Laboratories Ready for Clinical Adoption? *Clinical Chemistry*. 2018;64(6):885-91.
5. Colón-Franco J. Mainstream Clinical Adoption of Multianalyte Assays with Algorithmic Analyses. Available from: <https://www.aacc.org/science-and-research/scientific-shorts/2019/mainstream-clinical-adoption-of-multianalyte-assays-with-algorithmic-analyses>.