

# The benefits of standardizing clinical mass spectrometry

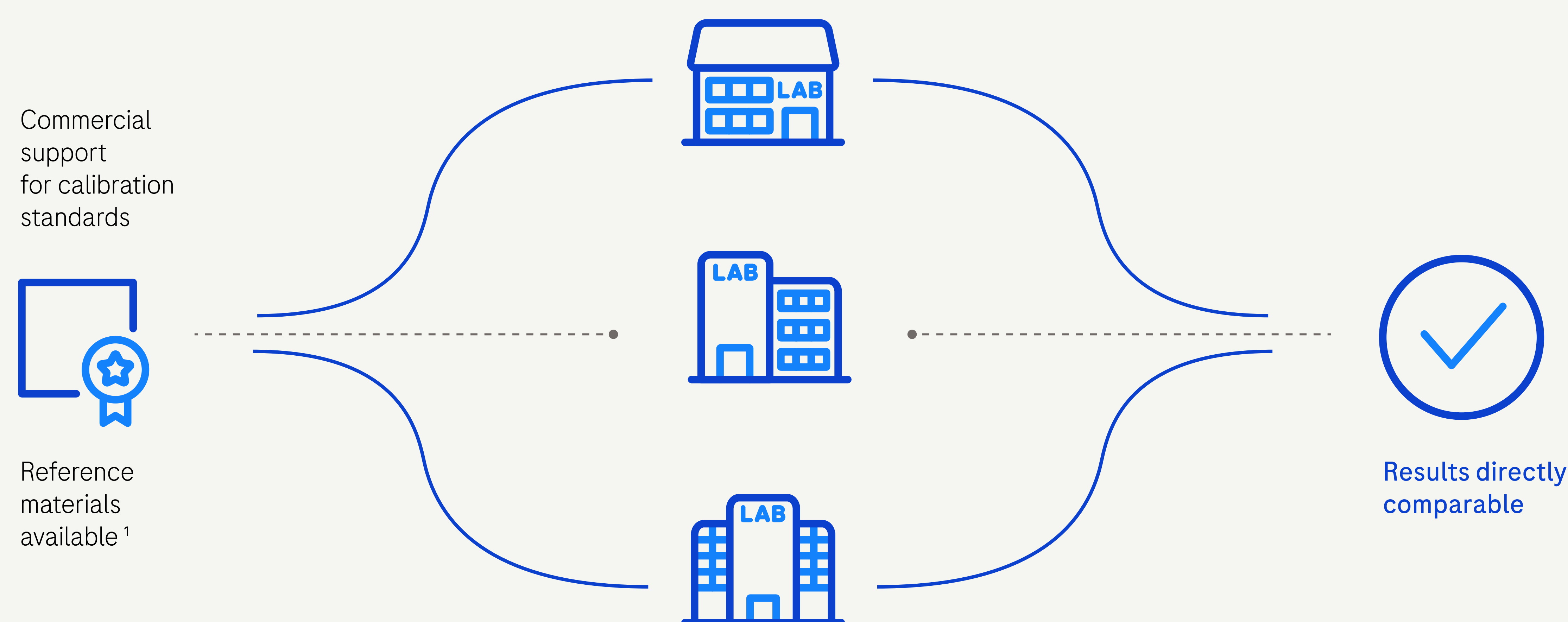
Due to its analytical benefits, mass spectrometry is becoming more popular in routine medical laboratories. With its high sensitivity and specificity, mass spec offers accurate measurement of bioactive compounds, precursors, and metabolites as an aid in clinical diagnosis in endocrinology, as well as a valuable tool in therapeutic drug monitoring and toxicology.

Standardizing mass spectrometry to reference method procedures ensures true, reliable and consistent patient results. While standardization will help broaden the adoption of clinical mass spectrometry and at the same time improve patient care, it still faces challenges and has not yet been achieved.



## Benefits of standardizing clinical mass spectrometry:

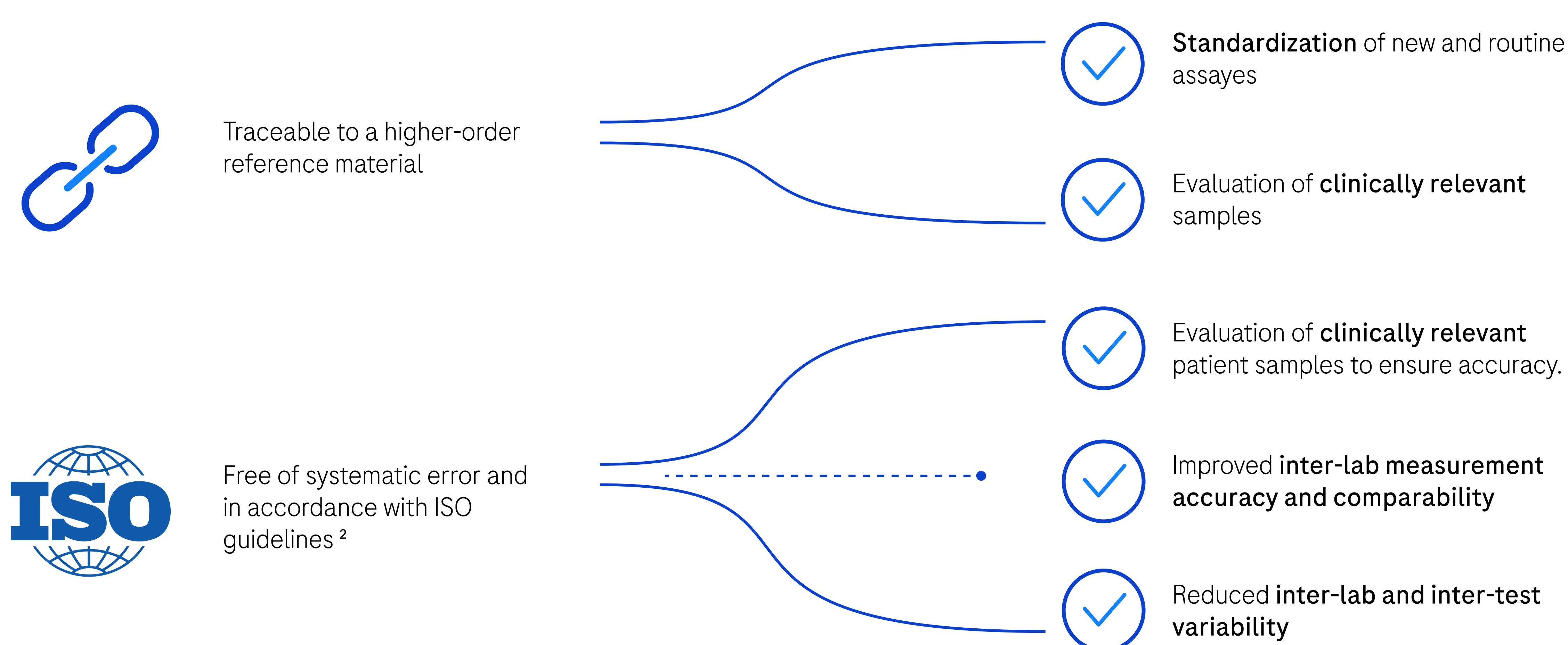
- Enhance the accuracy and reliability of analyte measurements
- Reduce inter-laboratory variability and improve comparability
- Provide consistency of patient results, independent of time and place



Improving standardization in mass spectrometry can be achieved by ensuring availability and traceability to reference materials, reference method procedures, and commercial support for calibration standards. Ultimately this will result in consistent patient results across lab sites.

## Benefits of traceability:

By implementing the standardization process the results generated for patient samples are linked to the highest available reference system in accordance with ISO 17511.<sup>2</sup>



### References:

1. Benton SC, et al. (2020). Clin Chem Lab Med 58, 1010-1017. Paper available from <https://pubmed.ncbi.nlm.nih.gov/31851610/> [Accessed April 2024]
2. International Organization for Standardization. (2020). ISO 17511:2020. Report available from <https://www.iso.org/standard/69984.html> [Accessed April 2024]