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Nuclear magnetic resonance spectroscopy as a new approach for improvement of early diagnosis and risk stratification of prostate cancer

Key words: **Prostate cancer, Metabolomics, Nuclear magnetic resonance (NMR), Biomarker**

Research Summary

This review focuses on NMR-based metabolomic biomarkers for the diagnosis, risk stratification and monitoring of prostate cancer (PCa).

Background

- The needs and challenges for development of new PCa-biomarkers are discussed with respect to Chinese pecularities.

Methods

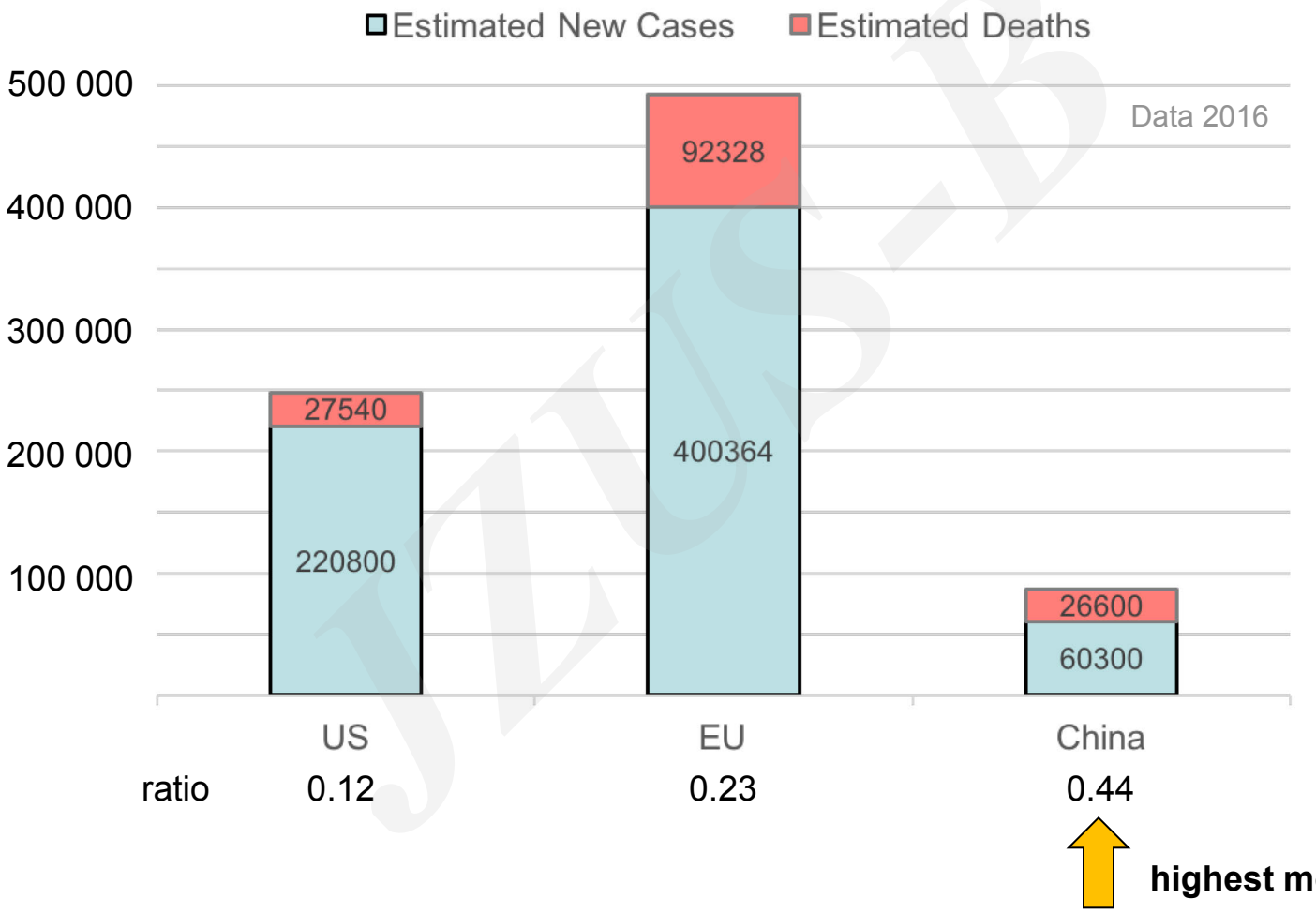
- Pubmed literature searches identified 154 relevant publications, of which the original studies on urine (27) and serum (38) metabolomics are discussed.

Results and Conclusions

- Fluid biopsies are promising sources for oncologic metabolite-biomarkers.
- Non-destructive NMR-spectroscopy is a highly reliable and cost-efficient upcoming method in biomarker research.

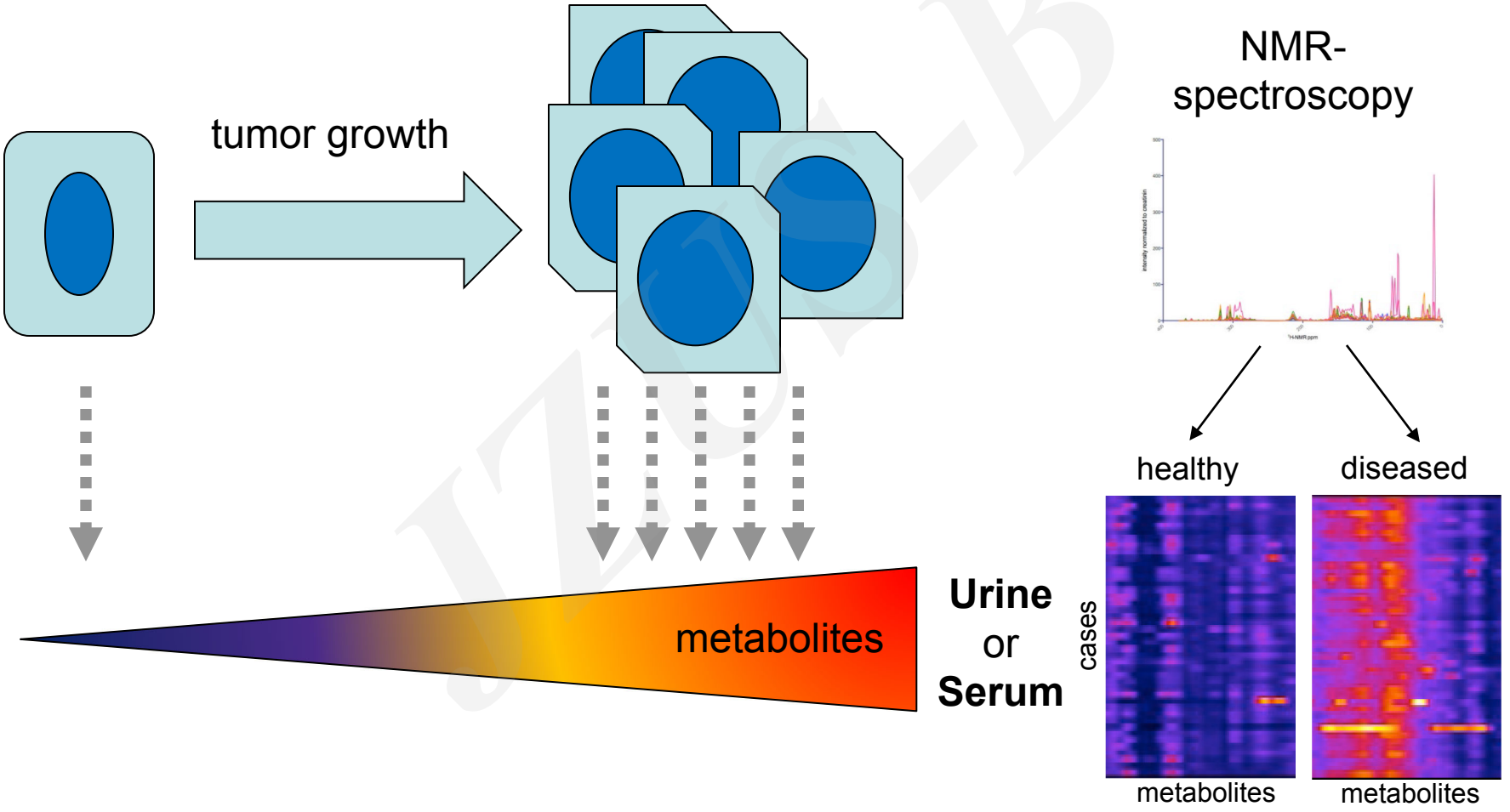
JZUSB

Prostate Cancer in China, the EU and the US



population adapted studies required

Metabolomics
A Window Into Tumor Pathology



How to implement NMR-Metabolomics

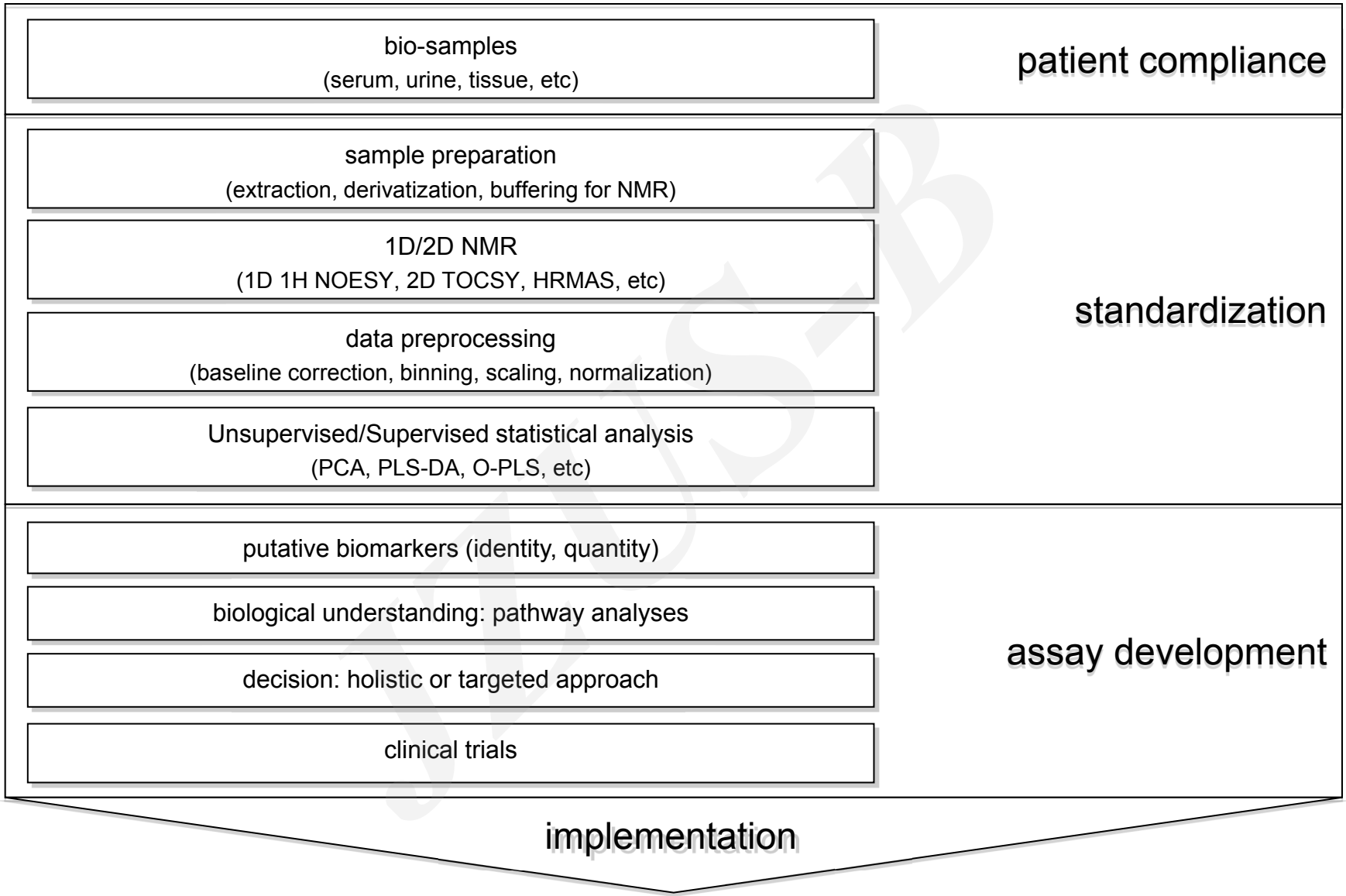


Fig. 1