

Robust Performance and Diverse Applications of the Clear Dx™ Fully Automated Genomics Solution



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INTRODUCTION

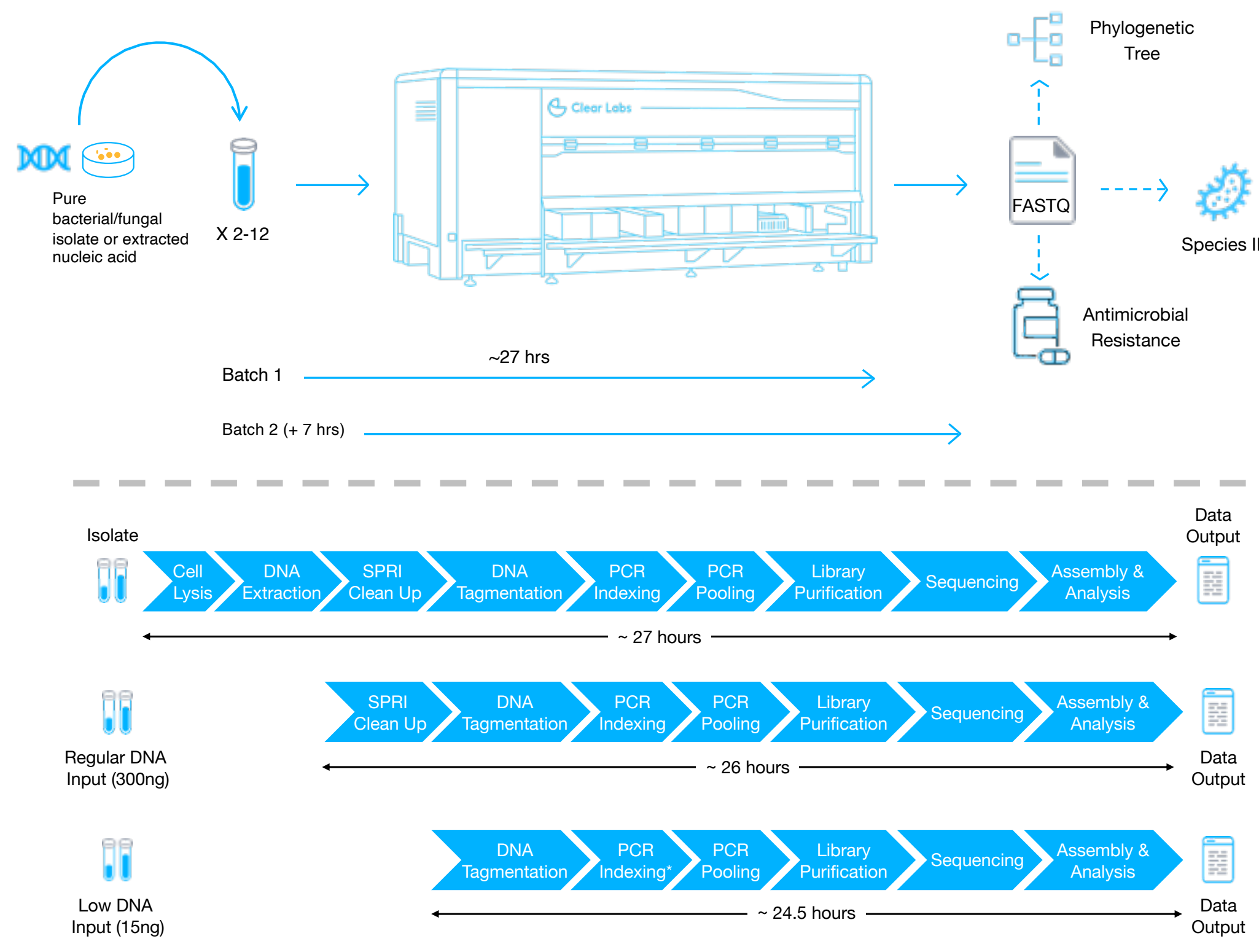
- Robustness and reproducibility of results generated using a fully automated NGS platform has always been at the top of laboratory directors' minds when it comes to adoption of and full transition into such solutions.
- Whole genome sequencing (WGS) is an unbiased approach to characterize the entire pathogen genome and has significant potential to replace traditional culture-based phenotypic diagnostic tests, which can typically take days to weeks.
- Integrating WGS with automation will enable laboratorians to perform complex workflows with minimal training and has been proven successful for application in the food safety and infectious diseases space^{1,2}.
- The Clear Dx™ fully automated, cloud-integrated next generation sequencing (NGS) solution has revolutionized the way clinical and public health laboratories approach genomic and pathogen surveillance.

The Clear Dx™ Automated Platform



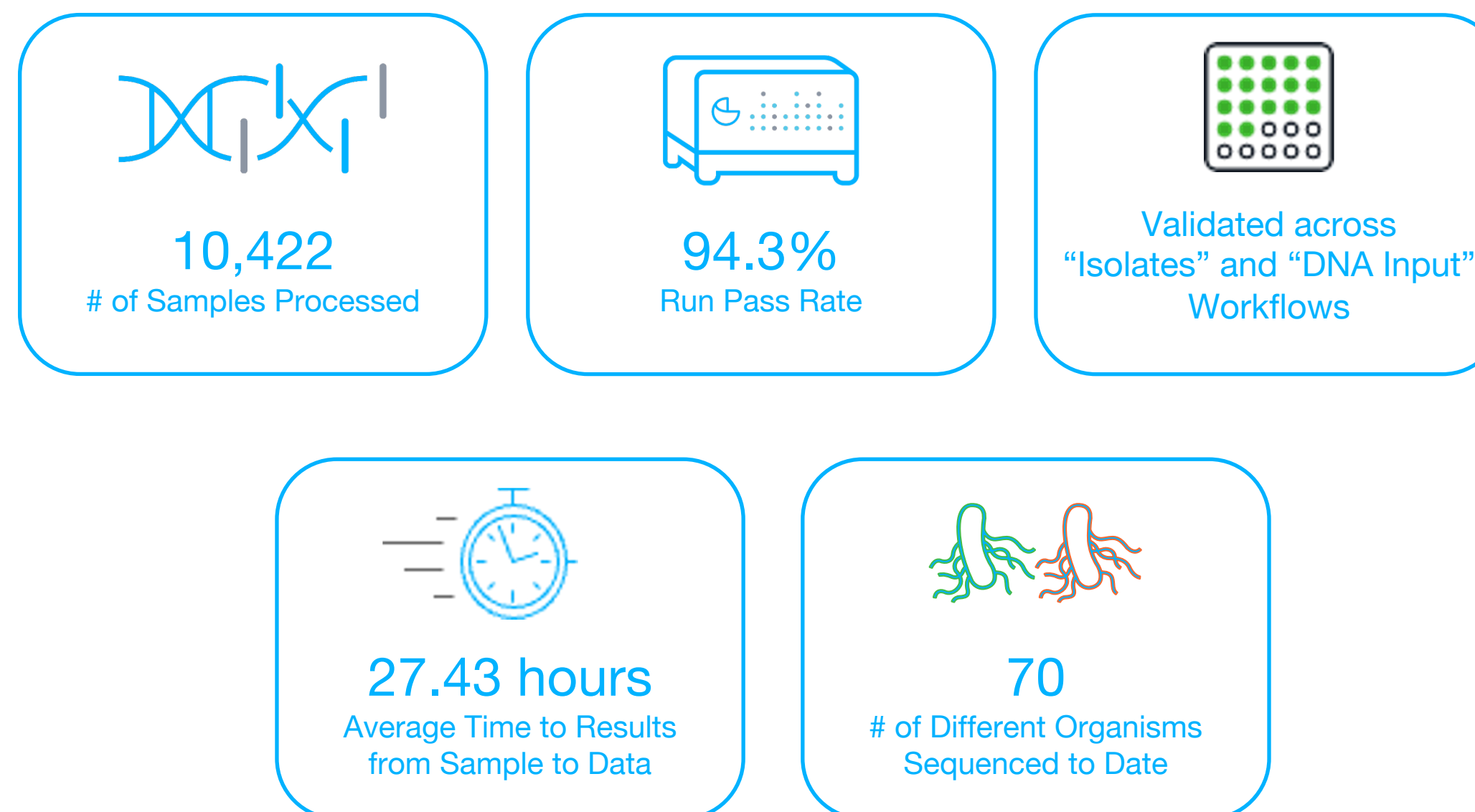
METHODS

Overview of the Microbial Surveillance WGS Workflow

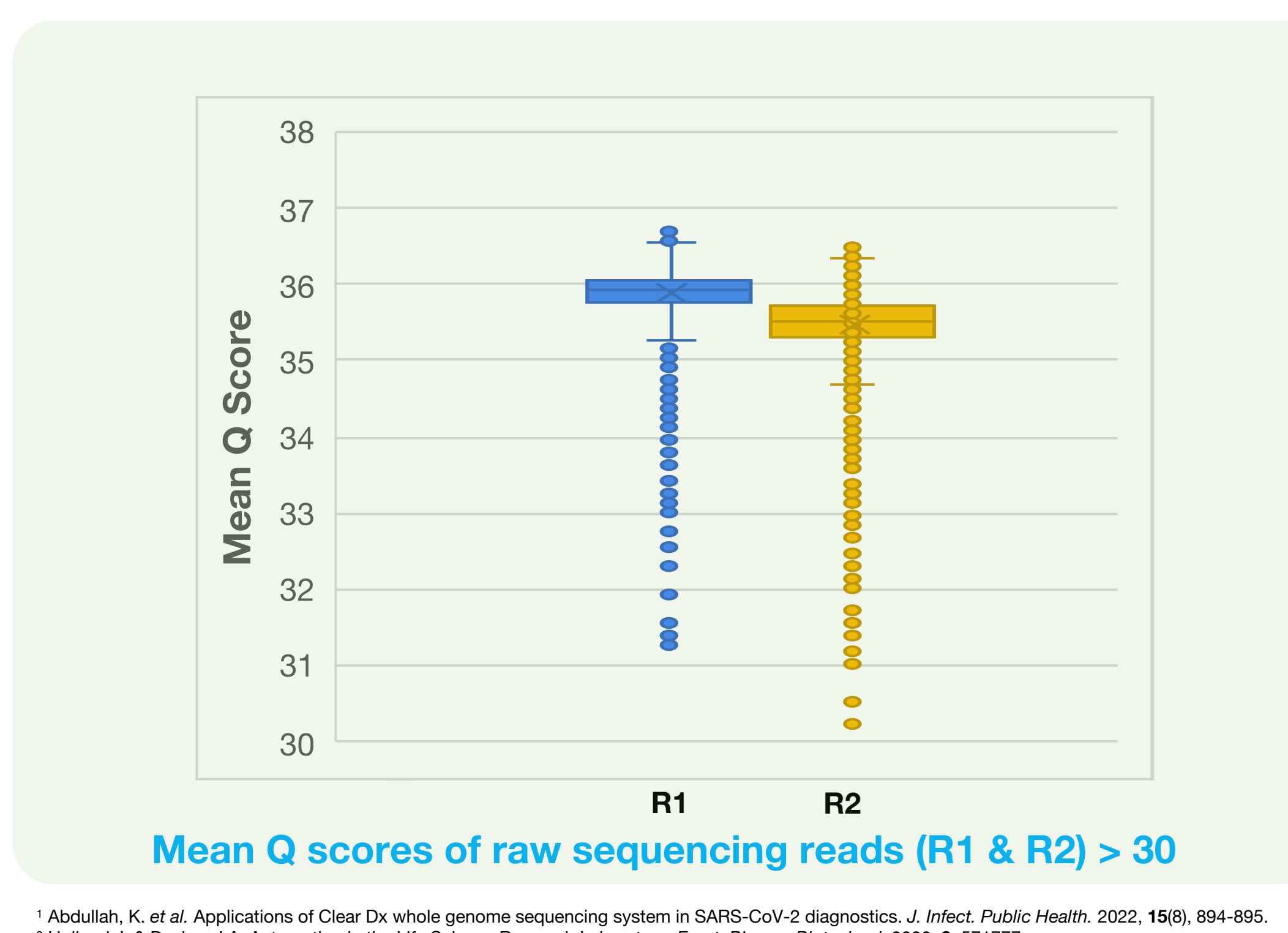
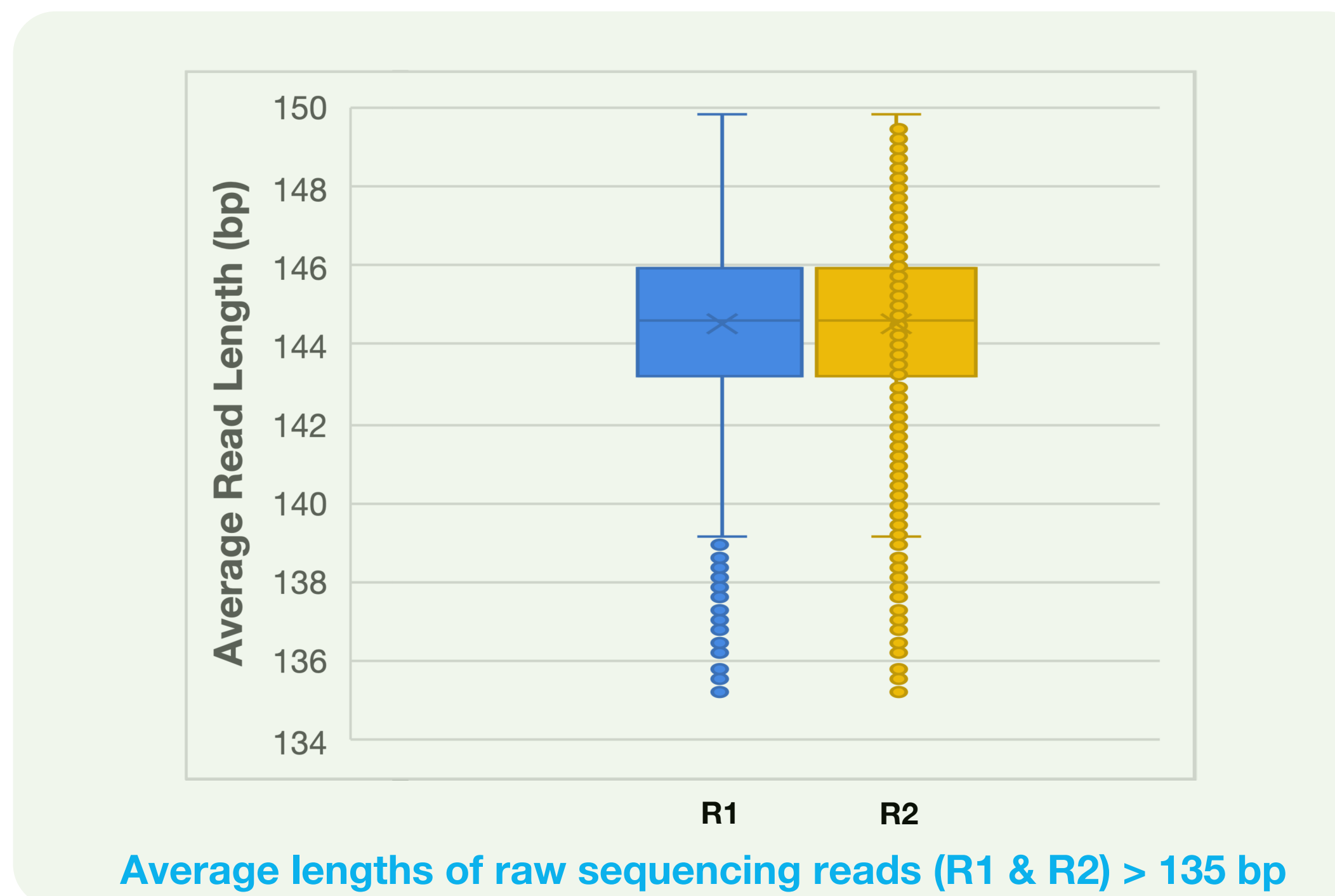


RESULTS

Overall Performance Statistics (May 2023 – Dec 2024)

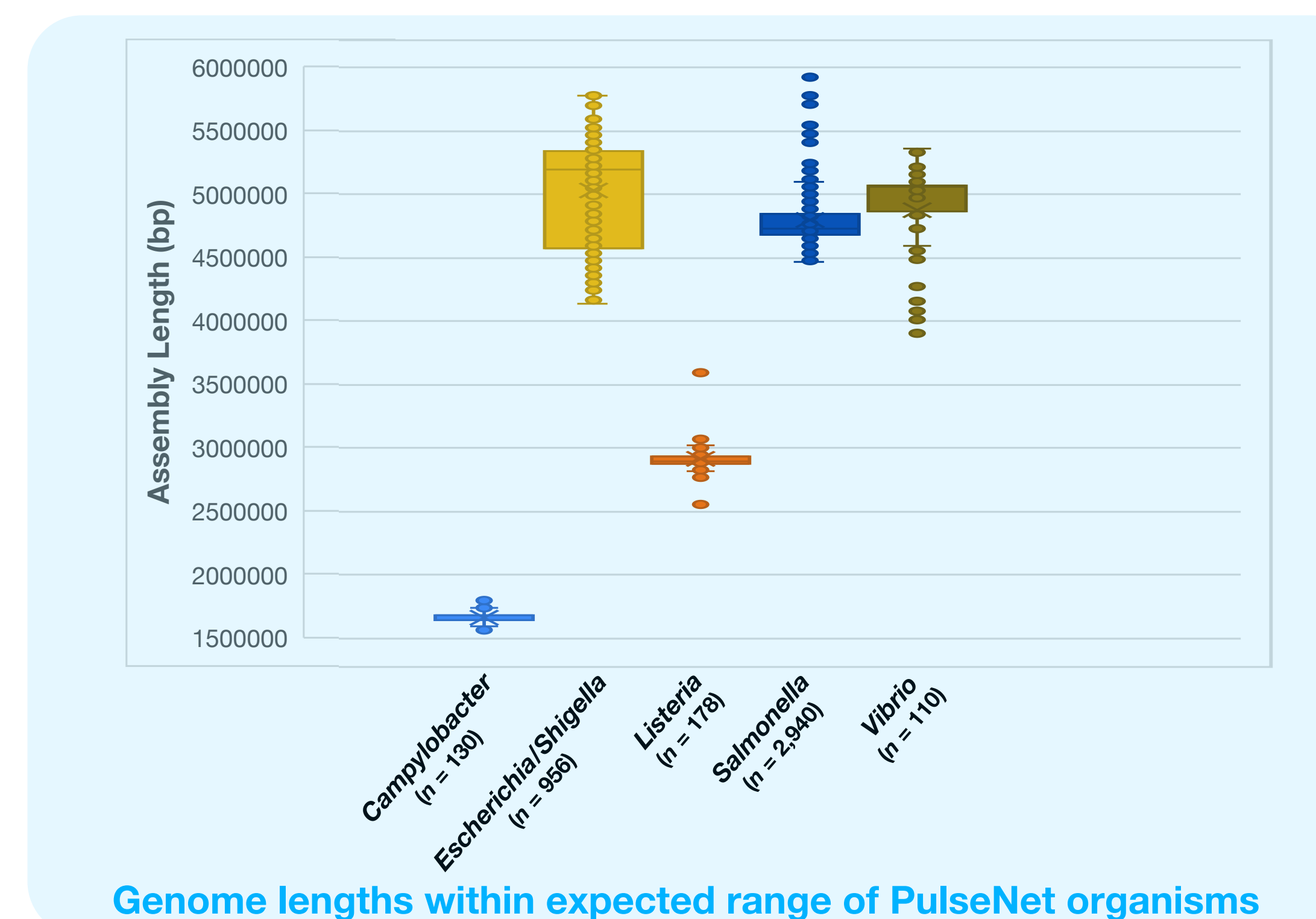
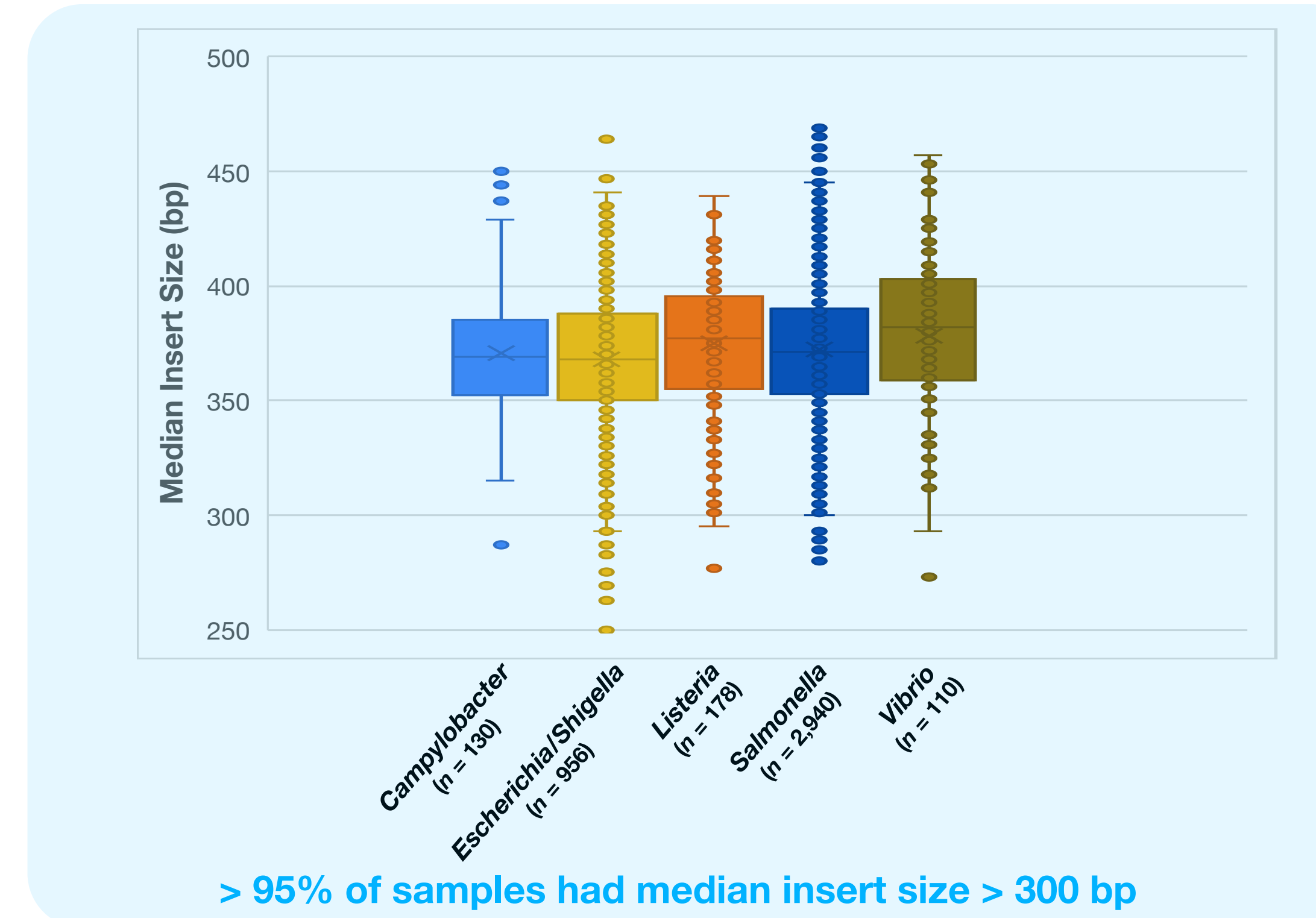
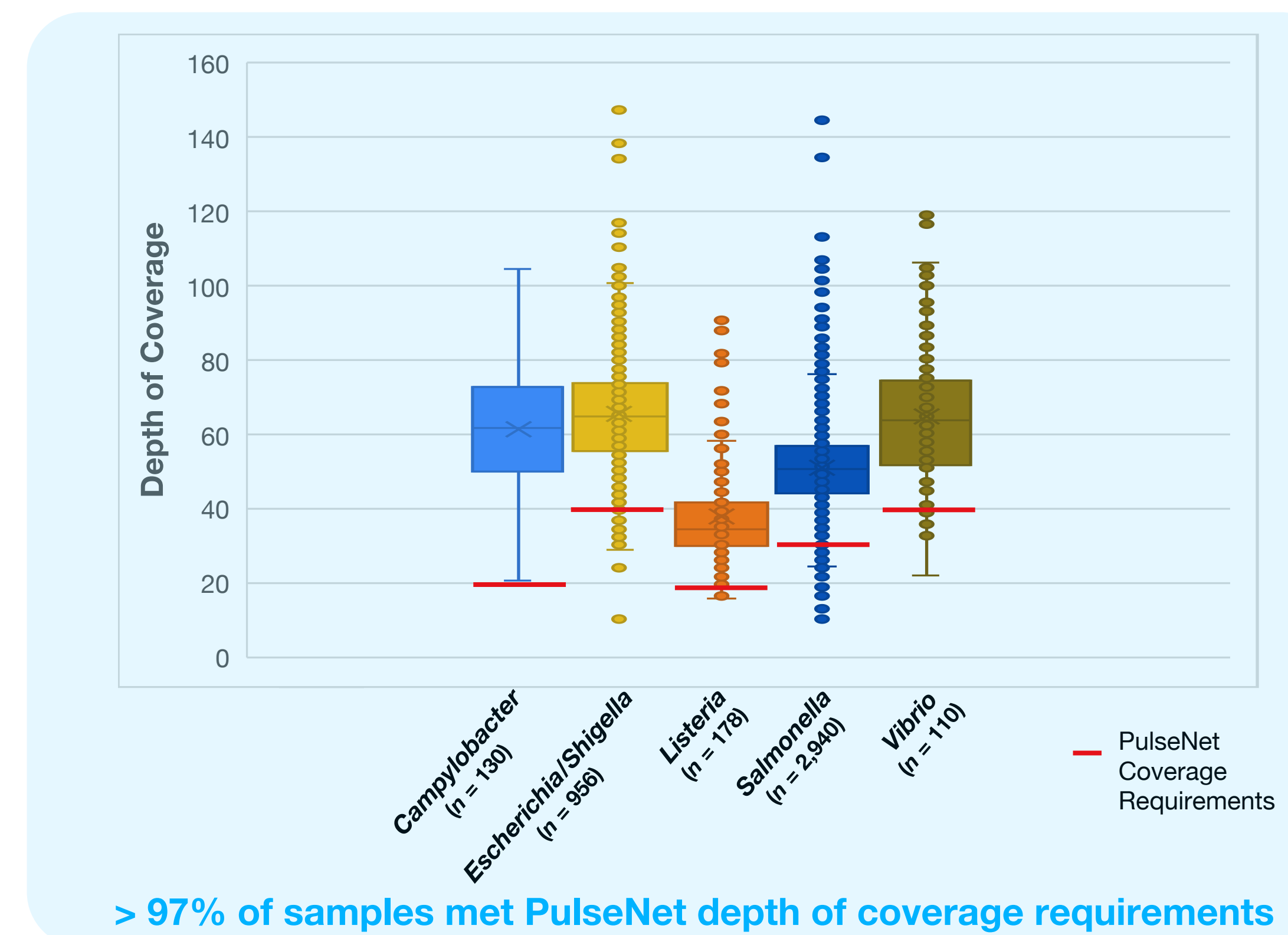


Overall Sample Performance Statistics (May 2023 – Dec 2024)

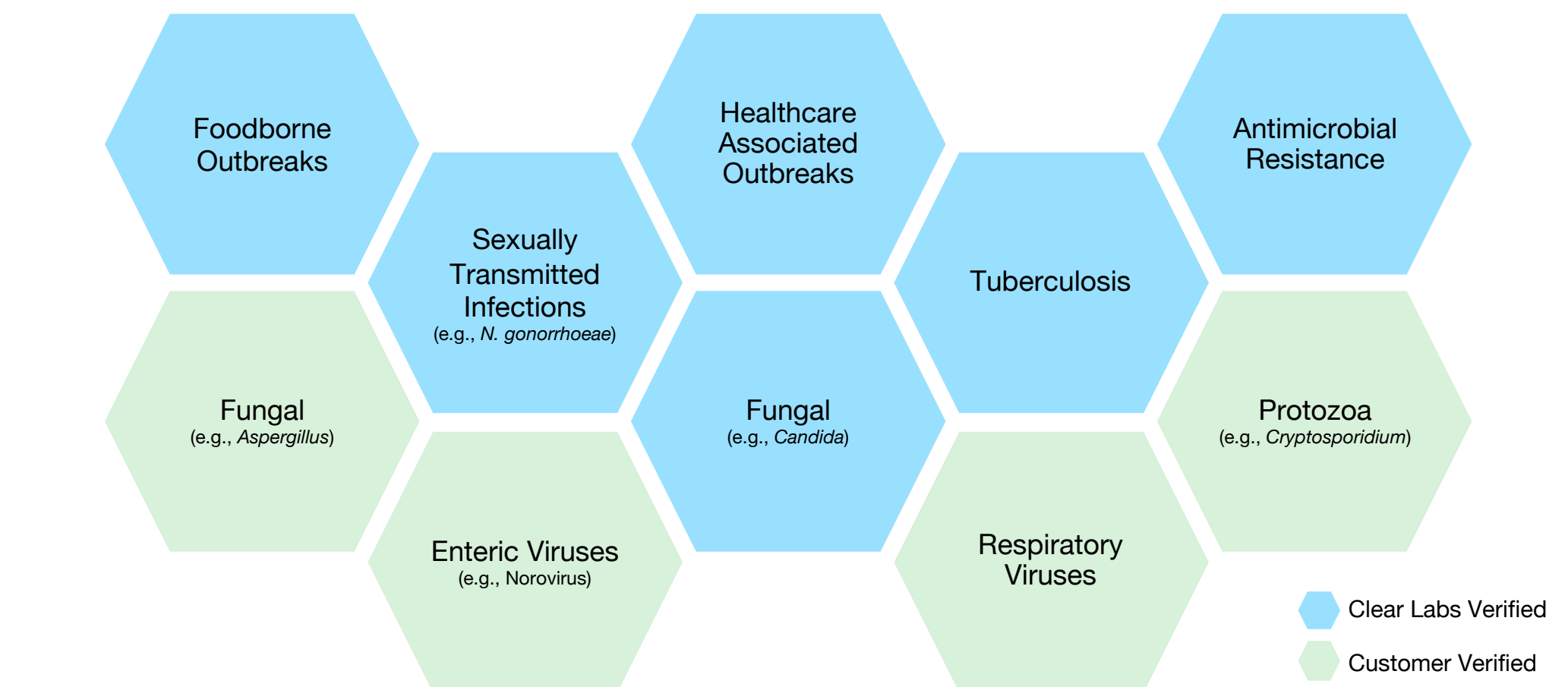
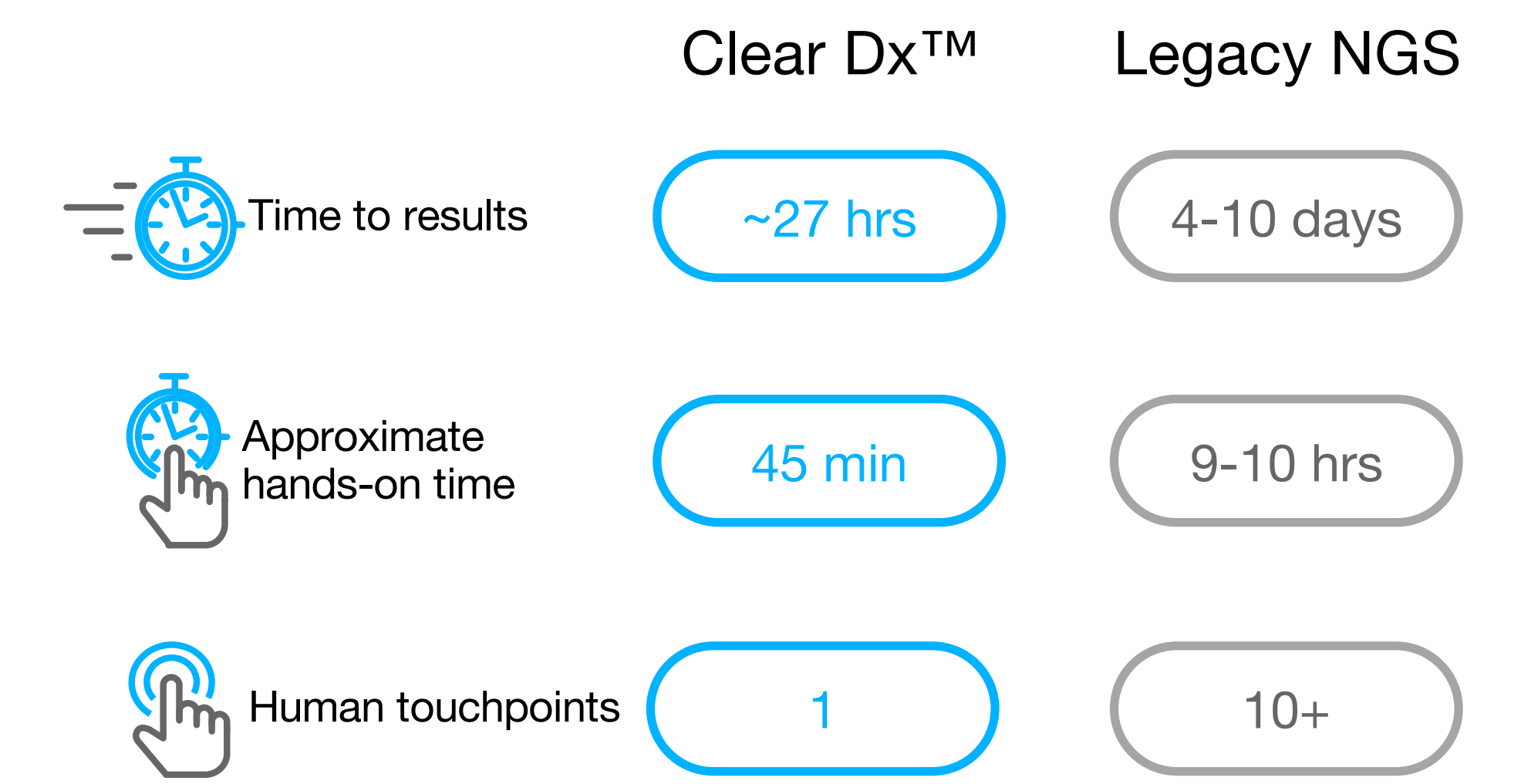


¹ Abdullah, K. et al. Applications of Clear Dx whole genome sequencing system in SARS-CoV-2 diagnostics. *J. Infect. Public Health*. 2022, 15(8), 894-895.
² Holland, I. & Davies, J.A. Automation in the Life Science Research Laboratory. *Front. Bioeng. Biotechnol.* 2020, 8, 571777.

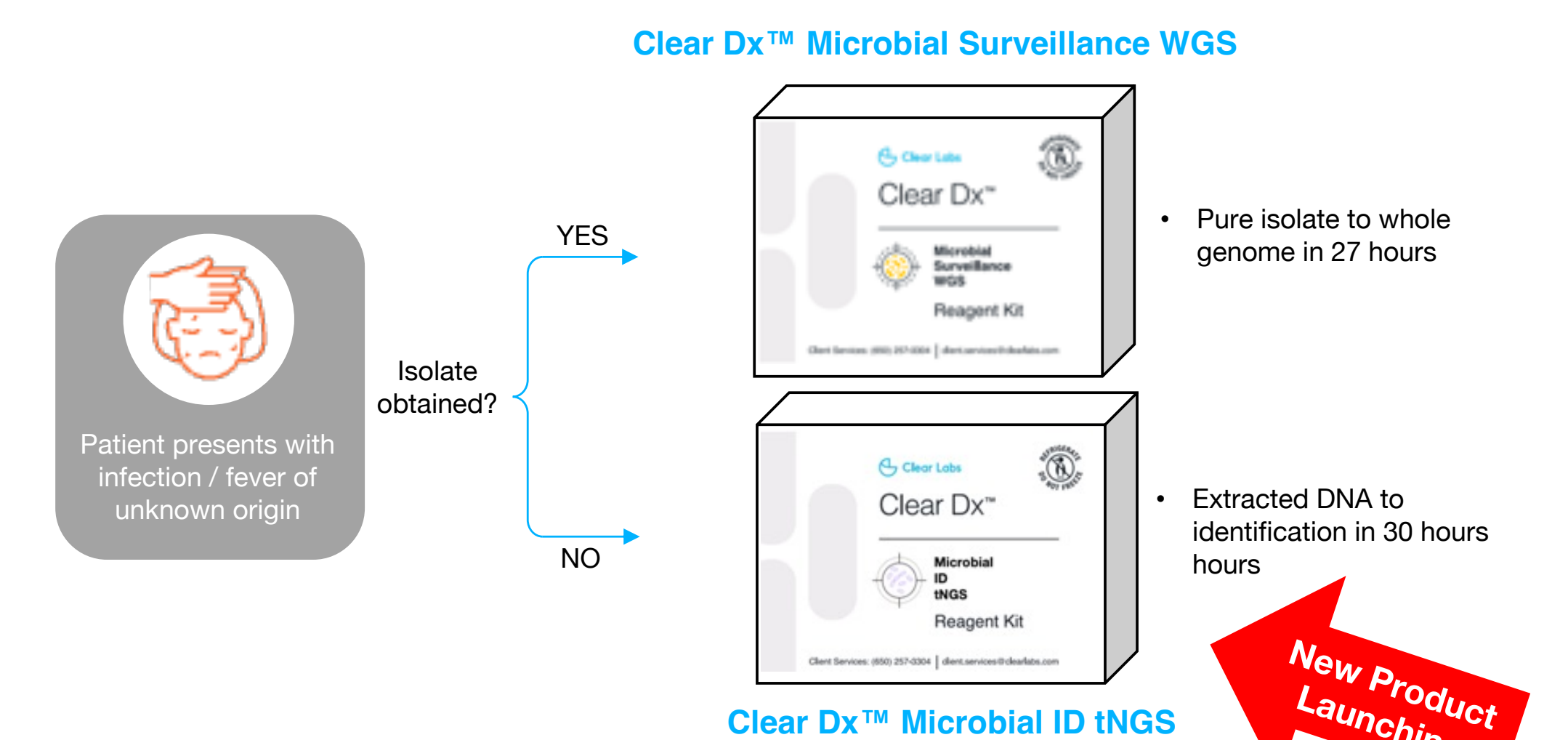
CDC PulseNet Organisms – Field Data (May 2023 – Dec 2024)



Time and Motion Study



One System, Multiple Solutions



CONCLUSION

- Clear Dx™ Microbial Surveillance WGS is a fully automated, end-to-end solution for bacterial and fungal characterization.
- Robust, field-tested and easy-to-use application.
- High quality and reproducible data meeting CDC PulseNet's stringent requirements.
- System accepts dsDNA and amplicons as input material.
- Empower public health laboratories to effectively characterize, monitor and survey pathogens of interest.
- Imminent launch of Clear Dx Microbial ID tNGS solution.

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