



Topic of the Speech:

Laboratory Testing of SARS-Cov-2 and its Clinical Significance

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Dr. Na Shen is an assistant professor in Department of Laboratory Medicine of Tongji Hospital, affiliated to Tongji Medical College, Huazhong University of Science and Technology (HUST).

Her research interests include molecular epidemiology, molecular diagnosis, and cancer genetics. Dr. Shen graduated with her Bachelor's degree from HUST in Preventive Medicine in 2009, then got her Master's degree from Peking University in Cell Biology in 2012, and received her PhD degree from HUST in Epidemiology and Health Statistics in 2015.

She has 20 publications as the first author or corresponding author, and published her work at multiple international authoritative journals including JCI insight, Molecular Carcinogenesis, and Gene. She hosted one Youth Program of National Natural Science Foundation of China (NSFC), and participated in several research projects of national and provincial level.

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ABSTRACT (NO MORE THAN 500 WORDS:)

An ongoing outbreak of a novel viral pneumonia, formally named as Coronavirus Disease 2019 (COVID-19), has rapidly spread throughout the world and raised urgent global concerns. The causative pathogen of COVID-19 is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, also previously known as 2019-nCoV), which is a new virus with high infectiousness and without efficacious drug for treatment. Rapid and reliable laboratory testing of SARS-Cov-2 is crucial to win battle against the pandemic, including nucleic acid tests (NAT) and serological assays. NAT are considered as the golden diagnosis criterion of SARS-Cov-2 infection. Here we summarize several noteworthy issues on NAT, including the target genes, testing methods, specimens, and single/pooling testing. For serological assays, we delineate their features, methods, applications and clinical significance. Rapid antigen tests are also discussed. Appropriate quality assurance measures are required to maintain the accuracy and proficiency of laboratory testing. In summary, molecular and serological assays have their advantages and disadvantages, and a combination of these two assays is necessary to achieve a reliable capacity for SARS-Cov2 detection.