

## Abstract Title:-

### Challenges in Diagnosis of Autism Spectrum Disorder with emerging technologies.

#### Keynote Speaker – Dr. Saleh M Alsalehi, MD

##### Abstract:



Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disorder manifested by persistent difficulties in social interaction, communication, and restricted repetitive behaviours. It is very common disabling condition, and despite advancements in research and awareness, the accurate and timely diagnosis of ASD remains challenging. These challenges arise from the heterogeneity of symptom presentation in different ages, overlap with other neurodevelopmental and psychiatric disorders, and variability in diagnostic facilities including trained staff and standardized assessment tools across settings. Cultural and socioeconomic disparities further complicate the diagnostic process, often leading to delayed or missed diagnoses, particularly among underrepresented populations, wasting a golden chance for early intervention and eventually favoured outcomes. Many clinical and technology initiatives were introduced aiming to identify behavioural, neurophysiological or genetic biomarkers. Artificial Intelligence (AI), eye tracking, brain-computer interface, and automated video analysis are widely investigated with some varying degrees of diagnostic accuracy and reliability, when properly used in conjunction with specialized clinical set-up remote screening and early diagnosis can be more cost-effective and access to care can be secured to communities improving clinical outcomes and compensating for resource scantiness. This talk highlights the multifaceted challenges to ASD diagnosis with emerging technologies and the need for standardized, culturally sensitive, and accessible diagnostic resources services for people with ASD.

##### Short Professional Biography:

**Dr. Saleh M. AlSaleh, MD** is a healthcare leader and consultant with extensive experience in health systems strategy, operations, and hospital transformation across Saudi Arabia. He currently serves as a Health Management Consultant at the Transformation Management Office of the Ministry of Defense and as a part-time Consultant in Developmental and Behavioral Pediatrics at King Abdullah bin Abdulaziz University Hospital.

Dr. AlSaleh is best known for founding and leading the Child Health Excellence Center at KAAUH, where he established a benchmark program in autism screening, diagnosis, and intervention that became a regional referral hub for care, training, and research. Under his leadership, the center launched the Kingdom's first structured fellowship in child development and behavior under Saudi Commission for Health

Specialties and initiated the Saudi Autism Research Conference, contributing to national policy influence and community impact.

He plays a prominent national role in quality and governance, serving as a hospital surveyor and specialty leader with CBAHI, chairing multiple accreditation and autism services initiatives, and leading national scientific and registry committees under the Saudi Health Council. His work reflects a strong commitment to outcome-driven practice, system improvement, and advancing developmental and behavioral pediatric services Kingdom-wide.