# PARALLEL SESSION 6:
# POCUS

## TIME: 13:45 - 17:15

16:30 - 16:45

## POCUS: Update Later

**Dr. Azam Danish (India)**
Sr. Consultant Anaesthesiologist & Critical care Specialist, Bhagwan Mahaveer Jain Hospital

## Abstract:

Point-of-care ultrasound (POCUS) has become an integral tool in various medical specialties, providing real-time, bedside imaging that enhances diagnostic accuracy and patient care. This abstract offers a comprehensive update on the latest advancements, applications, and future directions of POCUS.

Introduction: POCUS is a dynamic and evolving technology that has significantly impacted clinical practice by offering immediate diagnostic capabilities. Its portability and user-friendliness have made it essential in emergency, critical care, and primary care settings.

**Advancements**: Recent advancements in POCUS technology include improved image resolution and enhanced software algorithms. The integration of artificial intelligence (AI) into POCUS systems has further refined image interpretation, making diagnostics faster and more reliable. These innovations have broadened the scope of POCUS applications, allowing for more detailed and accurate assessments.

**Applications**: The applications of POCUS are diverse and continually expanding. Key areas include:

- Cardiology: Rapid assessment of cardiac function, detection of pericardial effusion, and guidance during resuscitation.
- Pulmonology: Identification of pneumothorax, pleural effusions, and pulmonary edema.
- Abdominal Imaging: Evaluation of abdominal organs, detection of free fluid, and procedural guidance.
- Vascular Access: Assistance with vascular cannulation, identification of deep vein thrombosis, and evaluation of vascular anatomy.
- Musculoskeletal: Assessment of soft tissue injuries, joint effusions, and guidance for therapeutic injections.

**Training and Education**: Effective implementation of POCUS requires rigorous training and continuous education. Simulation-based training programs and standardized protocols are crucial for developing proficiency and ensuring consistent, high-quality use across various clinical settings.

**Challenges and Future Directions**: Challenges such as operator dependency, variability in image interpretation, and the need for ongoing training remain. Future directions include further integration of AI, development of more portable and affordable devices, and expanding POCUS use in remote and underserved areas.

**Conclusion**: POCUS continues to revolutionize bedside diagnostics, significantly improving patient outcomes. Continued advancements and focused training are essential to fully realize its potential and address current challenges, ensuring POCUS remains a cornerstone of modern medical practice.