

KSUM 2026

THE 57TH ANNUAL CONGRESS OF
THE KOREAN SOCIETY OF ULTRASOUND IN MEDICINE

MAY 7 (THU) - 8 (FRI), 2026 | COEX, SEOUL, KOREA



Speaker : June Park

Affiliation : Severance Hospital, Department of Radiology

Specialty : Abdomen

Lecture Title : Basic Ultrasound Physics and Common Artifacts in Abdominal Examination

PT_No. : EC03-S1

This lecture provides a practical review of the fundamental physics principles underlying B-mode abdominal ultrasonography, including sound propagation, beam formation, attenuation, and spatial resolution. Common artifacts encountered in routine abdominal examinations—such as posterior shadowing and enhancement, reverberation, mirror image, side lobe, beam-width, section-thickness, and refraction artifacts—will be discussed with emphasis on their physical basis, imaging appearance, and clinical significance. Special attention will be given to differentiating true lesions from artifact-related pseudolesions and to recognizing diagnostically useful artifacts. Practical optimization strategies, including focal zone placement, frequency selection, gain adjustment, tissue harmonic imaging, and compound imaging control, will also be introduced. By integrating basic physics with representative abdominal cases, this lecture aims to improve troubleshooting skills and diagnostic confidence in daily abdominal ultrasound practice.