



Shaping Tomorrow's Nephrology: **Insight-Driven Kidney Care**

KSN SEOUL, KOREA
2026

The 46th Annual Meeting of the Korean Society of Nephrology



Jun 11 (Thu) – 14 (Sun), 2026

COEX, Seoul, Korea

Lecture Code : JS11-S1

Session Name : KSN-ISRNM-KSCN Joint Symposium

Session Topic : Navigating the Balance: Body Composition and Dietary Quality in CKD

Date & Time, Place : June 13 (Sat) / 15:30-17:30 / Room 2 (GBR 102), 1F

Sarcopenic Obesity in CKD: From Pathophysiology to Clinical Outcomes

Csaba Kovesdy

The University of Tennessee, USA

Sarcopenic obesity—the coexistence of excess adiposity and reduced skeletal muscle mass or function—is increasingly recognized as a clinically important body composition phenotype in patients with chronic kidney disease (CKD). Traditional metrics such as body mass index (BMI) often fail to distinguish between fat and lean tissue, potentially masking the presence of muscle wasting in individuals with obesity. As a result, sarcopenic obesity may remain underdiagnosed despite its substantial implications for metabolic health and clinical outcomes in CKD.

The pathophysiology of sarcopenic obesity in CKD is multifactorial and reflects the interaction of metabolic, inflammatory, and hormonal disturbances. CKD-related factors—including chronic inflammation, metabolic acidosis, insulin resistance, physical inactivity, and hormonal alterations—promote accelerated muscle protein breakdown while simultaneously favoring adipose tissue accumulation and altered fat distribution. These processes contribute to impaired mitochondrial function, reduced muscle quality, and progressive declines in strength and physical performance. Aging, comorbid conditions such as diabetes, and exposure to certain medications may further exacerbate these abnormalities.

Emerging observational data indicate that sarcopenic obesity is associated with adverse outcomes across the CKD spectrum. Compared with individuals who have either obesity or sarcopenia alone, patients with combined sarcopenic obesity appear to have higher risks of frailty, reduced functional capacity, hospitalization, cardiovascular events, and mortality. In addition, this phenotype may influence trajectories of kidney function decline and complicate the interpretation of conventional anthropometric measures used in clinical practice.

Improved recognition of sarcopenic obesity in CKD requires greater emphasis on body composition assessment, including techniques such as dual-energy X-ray absorptiometry, bioelectrical impedance analysis, and functional measures of muscle strength and performance. From a therapeutic perspective, integrated approaches combining resistance exercise, optimized nutritional strategies, and targeted management of CKD-related metabolic abnormalities may help mitigate muscle loss while limiting excess adiposity.

This presentation reviews the current understanding of the biological mechanisms underlying sarcopenic obesity in CKD, summarizes emerging epidemiologic evidence linking this phenotype to adverse clinical outcomes, and discusses practical strategies for assessment and management in both research and clinical settings.