



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

Abstract Type : Poster exhibition

Abstract Submission No.: A-0453

Abstract Topic : Non-dialysis CKD

Spherical Adsorptive Carbon Use and Risks of Dialysis Initiation and Mortality in Advanced Chronic Kidney Disease: A Real-world Cohort Study

Hyo Jin Kim¹, Chan Mi Park², Dae Ryong Cha⁴, Young Sun Kang⁴, Jin Joo Cha⁴, Sang Kyung Jo³, Se Won Oh³, Myung-Gyu Kim³, Gang-Jee Ko¹

¹Department of Internal Medicine-Nephrology, Korea University Guro Hospital, Korea, Republic of

²Department of Biomedical Research Center, Korea University Guro Hospital, Korea, Republic of

³Department of Internal Medicine-Nephrology, Korea University Ansan Hospital, Korea, Republic of

⁴Department of Internal Medicine-Nephrology, Korea University Anam Hospital, Korea, Republic of

Objectives : The benefits of spherical adsorptive carbon for individuals with chronic kidney disease remain uncertain. This study investigated the association between spherical adsorptive carbon use, dialysis initiation, and all-cause mortality in patients with advanced chronic kidney disease using large-scale, real-world data.

Methods : This multicenter, retrospective cohort study analyzed electronic health record data standardized through the Observational Medical Outcomes Partnership Common Data Model across three tertiary hospitals. Patients with chronic kidney disease and serum creatinine levels ≥ 2.0 mg/dL who received spherical adsorptive carbon at ≥ 4 g/day for ≥ 90 days were included, along with non-users. Risks of dialysis initiation and all-cause mortality were estimated using inverse probability of treatment weighting-weighted Cox proportional hazards models adjusted for relevant clinical variables.

Results : Among 15,324 patients, 3,989 received spherical adsorptive carbon. Over a mean follow-up of 5.31 years, non-use of spherical adsorptive carbon was associated with a higher risk of dialysis initiation (hazard ratio, 1.13; 95% confidence interval, 1.02–1.24; $P = 0.020$). Non-users also demonstrated a higher risk across multiple subgroups, including patients aged < 65 years, females, individuals with diabetes mellitus or hypertension, and those with estimated glomerular filtration rate values ≥ 30 mL/min/1.73 m². Additionally, spherical adsorptive carbon non-use was associated with increased all-cause mortality (hazard ratio, 1.66; 95% confidence interval, 1.49–1.85; $P < 0.001$).

Conclusions : The use of spherical adsorptive carbon was associated with a lower risk of dialysis initiation and all-cause mortality in patients with advanced chronic kidney disease, suggesting a potential role for its use as an adjunctive therapy to slow disease progression.