



Shaping Tomorrow's Nephrology: Insight-Driven Kidney Care

KSN SEOUL, KOREA
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The 46th Annual Meeting of the Korean Society of Nephrology



Jun 11 (Thu) – 14 (Sun), 2026

COEX, Seoul, Korea

Abstract Type : Poster exhibition

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Abstract Topic : Pediatric Nephrology + Inherited Kidney Disease

Long-Term Renal and Cardiovascular Outcomes in Children with Congenital Anomalies of the Kidney and Urinary Tract (CAKUT): A Real-World Cohort Study

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Objectives : To evaluate long-term Renal and Cardiovascular outcomes in patients with CAKUT using TriNetX database.

Methods : A retrospective cohort study was conducted using the TriNetX Research Network. Children aged ≤ 18 years with CAKUT (ICD-10 codes Q60-Q64) were compared with pediatric controls undergoing routine health examinations without congenital urinary anomalies. The index event was the first qualifying diagnosis. Outcomes were assessed from 1 day after the index event. Outcomes analysis was done using risks, risk ratios (RR), odds ratios (OR), hazard ratios (HR), and Kaplan–Meier survival analyses.

Results : After propensity score matching, 176,557 children were included in each cohort. Compared with matched controls, children with CAKUT had significantly higher risks of CKD stages 1–5 (8.7% vs 0.4%; RR 24.12; HR 29.25; $p < 0.001$), end-stage renal disease (1.8% vs 0.1%; RR 17.83; HR 20.36; $p < 0.001$), acute kidney injury (3.3% vs 0.7%; RR 4.92; HR 5.78; $p < 0.001$), and dialysis dependence (1.1% vs 0.1%; RR 11.24; HR 12.86; $p < 0.001$). Cardiovascular outcomes were also significantly increased, including hypertension (7.0% vs 2.1%; RR 3.31; HR 3.66; $p < 0.001$), myocardial infarction (0.12% vs 0.04%; RR 2.82; HR 2.74; $p < 0.001$), heart failure (0.34% vs 0.13%; RR 2.71; HR 2.89; $p < 0.001$), cerebral infarction (0.38% vs 0.27%; RR 1.40; HR 1.44; $p < 0.001$), and atherosclerosis (0.19% vs 0.04%; RR 4.91; HR 5.22; $p < 0.001$), while peripheral vascular disease did not differ significantly between cohorts.

Conclusions : CAKUT is associated with poor long-term renal and cardiovascular outcomes emphasizing the needs of long-term cardiorenal surveillance.

Figure 1_page-0001.jpg



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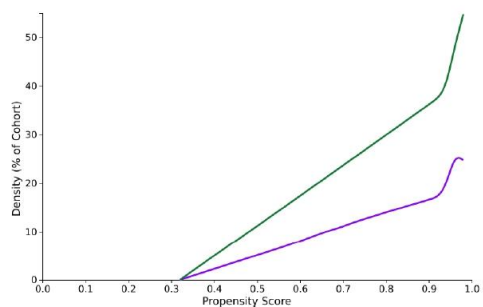
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Purple: CAKUT

Green: Control Group

Figure 1: Propensity score density function before matching.



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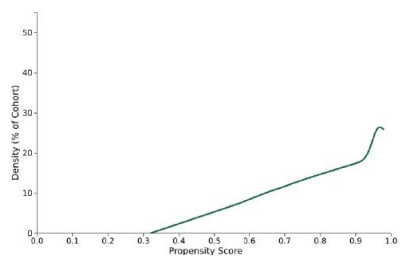
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Figure 2: Propensity score density function after matching.