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## **Characteristics of patients with complement 3 glomerulopathy (C3G) in a US multi-center assessment**

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### **Background**

C3G is characterized by C3 deposition in the glomeruli caused by abnormal activation of the alternative complement pathway. There are no approved therapies for C3G. Despite supportive care, C3G remains a progressive form of kidney disease, with novel treatments needed to improve outcomes.

Contemporary datasets on the clinical burden of patients with C3G are limited. Using real-world evidence from electronic medical records, this study describes the characteristics of patients diagnosed with C3G in the US.

### **Methods**

This was a retrospective cohort study of patients included in the US Optum Life Science clinical electronic health record database who were aged  $\geq 12$  years at C3G diagnosis (per ICD-10 or SNOMED; index date) between 01/2015 and 06/2022. Patients had continuous clinical activity  $\geq 12$  months before (baseline) and  $\geq 6$  months after (follow-up) index date, and were followed until death or data end. Patient and clinical characteristics at index date were evaluated using descriptive statistics.

### **Results**

Of 284 patients in the final sample, 78% were White, 11% African American, 2% Asian, and 10% other/unknown. Mean age  $\pm$  SD was  $49 \pm 21$  years, 50% were male, and 136/228 (60%) had stage  $\geq 3$  CKD at index.

At baseline, mean Charlson Comorbidity Index (CCI) score  $\pm$  SD was  $2.3 \pm 2.7$ . Of comorbidities included in the CCI, the most common included chronic pulmonary disease (25%) and diabetes without chronic complication (20%). At baseline, hypertension (65%) was the most common C3G-related comorbidity; 10% of patients had undergone dialysis and 12% kidney transplant. Obesity (BMI  $\geq 30$ ) was recorded in 100/249 patients (40%). Common C3G-related treatments at

baseline included corticosteroids (54%), ACE inhibitors (41%), ARBs (26%) and immunosuppressants (21%). At baseline, proteinuria was assessed in 126 patients (44%); mean protein/creatinine ratio  $\pm$  SD was  $2.9 \pm 3.9$  g/g. Of 100 patients (35%) with available data, 34% had complement C3 level  $<77$  mg/dl.

## **Conclusion**

This contemporary assessment of patients with C3G from a national US cohort identified a population that presented with multiple comorbidities and advanced kidney disease around the time of diagnosis.

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## **Category**

1402: glomerular diseases: clinical, outcomes and trials

## **Key words (3 maximum)**

complement, chronic kidney disease, glomerulopathy

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