PicnicHealth

EPH234

Real-World Clinical Characteristics and Disease Management of Immunoglobulin A Nephropathy Patients across the United States

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Background + Purpose

Background

- Immunoglobulin A nephropathy (IgAN) is the most common primary glomerulonephritis worldwide
- With the development and approval of new therapies for IgAN there is a need to understand disease management among this patient population
- Characterization of IgAN diagnoses, comorbidities, and disease management in real-world clinical practice is limited

Purpose

- This study aims to describe demographics, clinical characteristics, and disease management among IgAN patients across the United States (US) in the PicnicHealth cohort

Methods

Data Source

- This study analyzed data from the PicnicHealth IgAN Cohort
- IgAN patient recruitment began in August 2022 and is ongoing
- Participants consent to have PicnicHealth collect their medical records, both retrospectively and prospectively, from all care-sites and providers in US health facilities
- IgAN and general health data were abstracted from structured and unstructured portions of patient records using human-in-the-loop machine learning

Inclusion Criteria

- Patients who met the following criteria were included in the study:
  - A confirmed IgAN diagnosis in their medical records
  - At least one nephrology visit
  - Enrolled in the IgAN cohort from August 2022 to November 2023

Analytical Methods

- Descriptive statistics for patient and clinical characteristics, healthcare resource utilization (HCRU), and drug class use were reported

Disclosures

- The authors of this study would like to acknowledge the participants who made this study possible.
- The authors are employees of PicnicHealth.

Table 1: Demographics and clinical characteristics of patients with IgAN

Characteristic	N = 165*
Age at Enrollment (years)	45 (38, 55)
Age at Diagnosis (years)	37 (29, 48)
Sex	
Female	92 (56%)
Male	73 (44%)
Race	
White	122 (74%)
Asian	14 (8.5%)
Black or African American	11 (6.7%)
American Indian or Alaska Native	2 (1.2%)
More than one race	6 (3.6%)
Unknown**	10 (6.1%)
Ethnicity	
Hispanic or Latino	21 (13%)
Not Hispanic or Latino	139 (84%)
Unknown**	5 (3.0%)
Geography	
Northeast	25 (15%)
Midwest	30 (18%)
South	75 (45%)
West	33 (20%)
Unknown	2 (1.2%)

* continuous variables are reported as median (Q1, Q3); categorical variables are reported as N (%)
** Unknown includes missing data and "Prefer not to say"

Table 2: HCRU Among Patients with IgAN

Category*	
Total Years of Visits	7.2 (4.7, 11.0)
Number of Care Sites	3 (2, 5)
Number of Providers	8 (3, 20)
Number of Hospitalizations	1 (0, 4)
Visit Utilization	
Outpatient visit	164 (99%)
Number of Outpatient Visits per year	3.4 (2.1, 5.6)
Number of Nephrology Visits per year	2.0 (0.9, 3.7)
Inpatient Visit	66 (40%)
Number of Inpatient Visits per year	0.2 (0.1, 0.4)
Specialist Utilizations	
Primary Care	117 (71%)

* continuous variables are reported as median (Q1, Q3); categorical variables are reported as N (%)

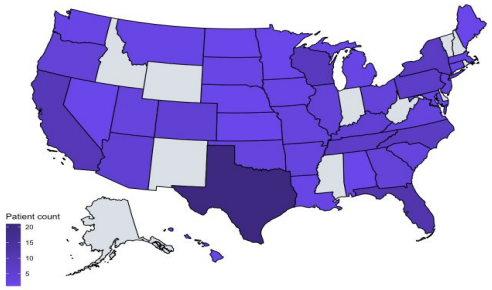

Figure 1: Geography of Care Sites among IgAN Patients included in this study

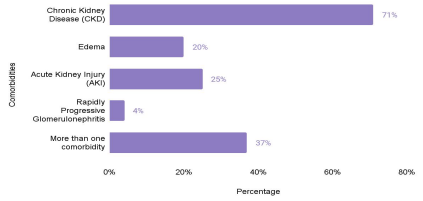

Figure 2: Comorbidities Among IgAN Patients

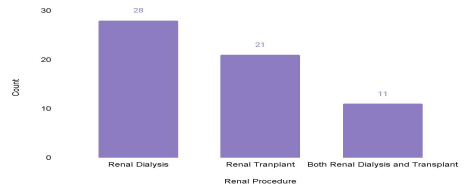

Figure 3: Renal Procedures Among IgAN Patients

Table 3: Medication Use among IgAN patients

Medication	N = 165*
At least one drug	131 (79%)
Two or more drugs	131 (79%)
Immunosuppressant	
Methylprednisolone	9 (5.5%)
Prednisone	49 (50%)
Mycophenolate mofetil	20 (12%)
Tacrolimus	19 (12%)
Cyclophosphamide	7 (4%)
Rituximab	2 (1%)
Budesonide	10 (6%)
Mineralocorticoid Receptor Antagonist	
Spironolactone	14 (9%)
Finerenone	2 (1%)
Sodium-glucose co-transporter- 2 Inhibitor (SGLT2)	
Empagliflozin	7 (4%)
Canagliflozin	1 (1%)
Dapagliflozin	13 (8%)
Renin-angiotensin-aldosterone-system Inhibitor (RAAS)	
Lisinopril	71 (43%)
Losartan	51 (31%)

* Categorical variables are reported as N (%).
Ertugliflozin, bexagliflozin, eplerenone, and sparsentan were not present in the current dataset.

Table 4: Protein Urine Labs Among IgAN Patients

Urine Protein Lab*	At least one lab
Overall	147 (89%)
Urinalysis (Protein presence)	134 (81%)
Protein Creatinine Ratio	126 (76%)
Albumin Creatinine Ratio	83 (50%)
Microalbumin Creatinine Ratio	21 (13%)

* Categorical variables are reported as N (%)

Table 5: Protein Urine Labs Among IgAN Patients by

Characteristic*	At least one lab
Overall	147/165 (89%)
White	110/112 (90%)
Asian	14/14 (100%)
Black or African American	7/11 (64%)
American Indian or Alaskan Native	2/2 (100%)
More than one race	5/6 (83%)
Unknown**	9/10 (90%)

* Categorical variables are reported as N (%)
** Unknown includes missing data and "Prefer not to say"

Results

- 165 IgAN patients met inclusion criteria **(Table 1)**
- Median age at diagnosis was 37 (29, 48) years old **(Table 1)**
- Patients with IgAN were mostly female, White, and non-Hispanic/Latino; A total of 8.5% of the PicnicHealth IgAN cohort were Asian **(Table 1)**
- Patients had a median 8 (3, 20) providers in total and 2 (0.9, 3.7) nephrology visits per year **(Table 2)**
- 40 US states are represented in this study **(Figure 1)**
- Among IgAN patients, 37% of patients had more than one comorbidity; 71% had CKD **(Figure 2)**
- 28 (17%) patients received dialysis; 21 (13%) patients received a renal transplant; 11 (7%) received both renal dialysis and transplant **(Figure 3)**
- 79% of IgAN patients were prescribed one medication; the most common medication was prednisone (50%); 43% had been prescribed lisinopril; 6% had been prescribed budesonide; the most common SGLT2 was dapagliflozin (8%) **(Table 3)**
- Evidence of albumin creatinine ratio, protein creatinine ratio, and urinalysis laboratory testing was observed in 89% of patients **(Table 4)**; 100% among Asian patients (n = 14), and 90% among White patients (n =112) **(Table 5)**

Conclusions

- This study aligns with expectations and highlights PicnicHealth methodology in understanding IgAN's clinical landscape in the US.
- Our research shows that although 79% of patients are prescribed a current standard of care medication for IgAN, their disease still progresses (37% had at least one comorbidity), thus describing an unmet need among these patients.
- This insight is crucial for health economics and outcomes research aimed at optimizing care delivery and resource allocation.
- These findings guide a focused approach to address IgAN patient needs and highlight key areas for healthcare policy and practice improvement.

References

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2. Kidney Disease: Improving Global Outcomes (KDIGO) Glomerular Diseases Work Group. KDIGO 2021 clinical practice guideline for the management of glomerular diseases. *Kidney International*. 2021;100(4S):S1–S276. doi: 10.1016/j.kint.2021.05.021.