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Diagnostic pathways in immunoglobulin A nephropathy in Japan: Results from a real-world survey

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Conclusions

- In Japan, immunoglobulin A nephropathy (IgAN) was diagnosed by nephrologists at early chronic kidney disease (CKD) stages (1–3a), where renal function was relatively preserved, regardless of the route taken to diagnosis. Patients with hematuria only were diagnosed with IgAN by kidney biopsy, despite the absence of proteinuria
- The median time taken from symptom onset to diagnosis tended to be shorter for patients who directly consulted with a nephrologist, rather than with a non-nephrologist
- Timely referral to a nephrologist may allow for earlier IgAN diagnosis and better disease management

Table 1. Physician and patient inclusion criteria

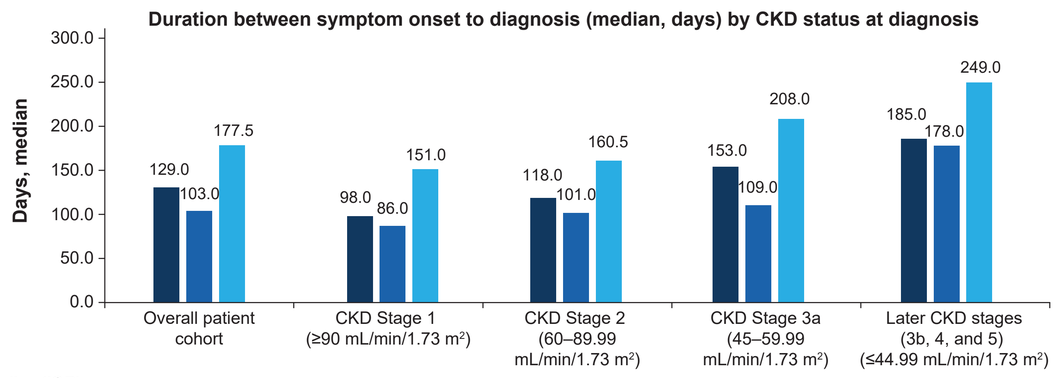
Physician	Patient
Nephrology identified as the primary specialty	Adult (≥18 years old)
Must see at least 1 eligible IgAN patient per month	Confirmed IgAN diagnosis
Must be responsible for treatment decisions on pharmacotherapy for patients with IgAN	
Must not be currently involved in a clinical trial	

Table 2. Timeframes at each step of the therapeutic pathway, stratified by whether the patient initially consulted with a nephrologist or a non-nephrologist*

Timeframe	From symptom onset to consultation		From consultation to diagnosis†		From diagnosis to treatment	
Measurement	At first visit		At diagnosis		At treatment	
Initial consultation	Nephrologist	Non-nephrologist	Nephrologist	Non-nephrologist	Nephrologist	Non-nephrologist
Days, median (IQR)	**n=81**	**n=106**	**n=110**	**n=125**	**n=115**	**n=120**
	33.0 (3.0–73.0)	61.0 (23.0–276.2)	36.5 (18.8–92.0)	62.0 (30.5–169.0)	23.0 (1.0–63.0)	24.0 (0.2–60.5)

*Non-nephrologist refers to a primary care physician, urologist, or other HCP. †If a nephrologist at first consultation referred a patient to another nephrologist for diagnosis (n=18), the median time (IQR) from first consultation to diagnosis was 32.5 days (16.2–81.8).
IgAN, immunoglobulin A nephropathy; IQR, interquartile range.

Figure 1. Duration from symptom onset to diagnosis by primary physician at initial consultation and CKD status at diagnosis



Median (IQR), (days)	CKD stage at diagnosis				
	N=165	**n=31**	**n=83**	**n=35**	**n=16**
Overall	129.0 (61.0–362.0)	98.0 (49.0–403.0)	118.0 (60.0–365.0)	153.0 (59.0–395.0)	185.0 (85.0–574.5)
	n=69	**n=14**	**n=35**	**n=13**	**n=7**
Nephrologist	103.0 (34.0–231.0)	86.0 (32.0–202.5)	101.0 (31.0–275.0)	109.0 (38.0–309.0)	178.0 (71.0–187.0)
	n=96	**n=17**	**n=48**	**n=22**	**n=9**
Non-nephrologist	177.5 (67.0–465.2)	151.0 (55.0–261.0)	160.5 (62.2–402.5)	208.0 (85.0–512.2)	249.0 (98.5–1299.5)

CKD, chronic kidney disease; IQR, interquartile range.

Background

- IgAN is the most prevalent form of primary glomerulonephritis globally, with the highest annual incidence occurring in Japan (45/million/year)[1–3]
- In most patients in Japan, potential cases of IgAN are first identified at a health check-up, followed by referral to a nephrologist for patient assessment[4]
- Real-world data on diagnostic pathways in Japan are limited
- This analysis aims to describe any differences in diagnostic pathways that may exist between patients with IgAN who initially consulted with either a nephrologist or a non-nephrologist in Japan, based on physician and patient perceptions

Methods

- The Adelphi Real World IgAN Disease Specific Programme (DSP)™ was a point-in-time survey of IgAN-treating nephrologists and their patients conducted in several countries, including Japan, from June to October 2021. The DSP methodology has been previously published and validated in detail[5–7]
- Eligible nephrologists from 23 prefectures in Japan completed structured patient record forms online
- Consenting patients with a corresponding nephrologist's patient record completed questionnaires on their current IgAN, including demographics, clinical data, and signs and symptoms, on a voluntary basis. Not all patients provided self-completed data
- The nephrologist and patient inclusion criteria are listed in **Table 1**
- The initial consultation with any healthcare professional was defined as the patient's first visit regarding the onset of IgAN signs or symptoms
- Ethics exemption was obtained from the Pearl Institutional Review Board

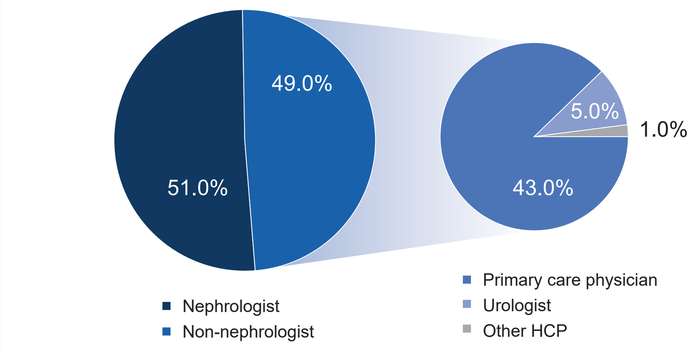
Limitations

- Consecutively consulting patients may have consulted with their physician more often, or less regularly. Therefore, the patient cohort may not represent an overall random patient population
- Patients completed their forms on a voluntary basis, and this may therefore reflect a more motivated sub-population
- The physicians' inclusion was likely to have been influenced by their willingness to take part and practical considerations of geographical location
- The quality of the data depends, to a large extent, on the accuracy of the information reported by the physicians and patients, which may be subject to recall bias

Results

- In total, 55 nephrologists completed records for 282 patients, of whom 125 completed self-reported questionnaires. Two patients whose primary consulting physician was not known were excluded from the analysis
- Nephrologists saw an average of 76.0% of the patients in a hospital setting, 21.0% in a clinic or office, and 4.0% in another setting
- Patients initially consulted either with a nephrologist or a non-nephrologist, needing onward referral for their IgAN symptoms (**Figure 2**)

Figure 2. Primary physician at initial consultation (N=280)



- The median timeframes between symptom onset and initial consultation, and from there to diagnosis, were shorter for patients who initially consulted with a nephrologist, rather than with a non-nephrologist (**Table 2**)
- A similar trend was observed for median durations between symptom onset and diagnosis between the two patient cohorts, regardless of CKD status at diagnosis (**Figure 1**)

At diagnosis:

- Physician-reported clinical characteristics, symptoms, and comorbidities at diagnosis are listed in **Table 3**
- **Hematuria** was reported as the most common symptom at diagnosis, in 66.1% of 280 patients overall; in 57.7% of the 142 patients who had initially consulted with a nephrologist and in 74.6% of the 138 patients who had initially consulted with a non-nephrologist (**Table 3**)
  - Hematuria only (with no proteinuria) was present in 14.6% of 280 patients overall; despite the absence of proteinuria, all patients were diagnosed by kidney biopsy
- The mean overall **proteinuria** and **estimated glomerular filtration rate** (eGFR) values at diagnosis were 1.1 g/day (N=212) and 66.8 mL/min/1.73 m² (N=213), respectively; 86.4% of 213 patients were at earlier CKD stages 1–3a and 13.7% were at stages 3b−5 (eGFR ≤45 mL/min/1.73 m²) (**Table 4**)
  - Of the 95 patients who initially consulted with a nephrologist, 57.9% had proteinuria ≥1 g/day; 87.4% had ≥0.5 g/day, and 11.8% of 93 patients were at CKD stages 3b–5 at diagnosis
  - Conversely, of the 117 patients who initially consulted with a non-nephrologist, 42.7% had proteinuria ≥1 g/day; 82.1% had ≥0.5 g/day, and 15.0% of 120 patients were at CKD stages 3b–5

Table 3. Clinical characteristics, symptom burden, and comorbidities of IgAN patients at diagnosis

Clinical characteristics	Overall patient cohort	Nephrologist	Non-nephrologist
	N=280	n=142	n=138
Age (years), mean (±SD)	47.0 (16.1)	46.6 (16.4)	47.4 (15.9)
Male, n (%)	140 (50.0)	78 (54.9)	62 (44.9)
Sign/symptom at diagnosis			
Hematuria, n (%)	185 (66.1)	82 (57.7)	103 (74.6)
Hematuria only (no proteinuria), n (%)	41 (14.6)	20 (14.1)	21 (15.2)
Proteinuria, n (%)	179 (63.9)	79 (55.6)	100 (72.5)
Proteinuria only (no hematuria), n (%)	35 (12.5)	17 (12.0)	18 (13.0)
Hematuria and proteinuria, n (%)	144 (51.4)	62 (43.7)	82 (59.4)
Comorbidities			
Hypertension (140/90 mmHg), n (%)	91 (32.5)	47 (33.1)	44 (31.9)
Dyslipidemia, n (%)	31 (11.1)	13 (9.2)	18 (13.0)
Type 2 diabetes, n (%)	10 (3.6)	3 (2.1)	7 (5.1)

Table 4. Clinical parameters at diagnosis, stratified by whether the patient initially consulted with a nephrologist or a non-nephrologist

Parameter at diagnosis	Overall patient cohort	Nephrologist	Non-nephrologist
Proteinuria (g/day), mean (±SD)	**N=212**	**n=95**	**n=117**
	1.1 (0.9)	1.2 (0.7)	1.1 (1.0)
≥1 g/day, n (%)	105 (49.5)	55 (57.9)	50 (42.7)
≥0.5 g/day, n (%)	179 (84.4)	83 (87.4)	96 (82.1)
<0.5 g/day, n (%)*	33 (15.6)	12 (12.6)	21 (17.9)
eGFR (mL/min/1.73 m²), mean (±SD)	**N=213**	**n=93**	**n=120**
	66.8 (21.4)	69.0 (22.4)	65.1 (20.5)
CKD stage†	**N=213**	**n=93**	**n=120**
CKD Stage 1, n (%)	34 (16.0)	17 (18.3)	17 (14.2)
CKD Stage 2, n (%)	99 (46.5)	46 (49.5)	53 (44.2)
CKD Stage 3a, n (%)	51 (23.9)	19 (20.4)	32 (26.7)
CKD Stage 3b, n (%)	21 (9.9)	7 (7.5)	14 (11.7)
CKD Stage 4, n (%)	7 (3.3)	3 (3.2)	4 (3.3)
CKD Stage 5, n (%)	1 (0.5)	1 (1.1)	0 (0.0)

*For 24 of 33 (72.7%) patients with proteinuria <0.5 g/day at diagnosis, responding nephrologists selected "hematuria" as a symptom that was present at diagnosis. All 24 of these patients were diagnosed with a biopsy. Of 33 patients, 4 had no symptoms. †Stages 3b−5 represent an eGFR of <45 mL/min/1.73 m²
Percentage values may be ±0.1 due to rounding.
CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; SD, standard deviation.

Disclosures

Data collection was undertaken by Adelphi Real World as part of an independent survey. Novartis is one of multiple subscribers to the DSP.

M Lee and **H Suzuki** have no COI to disclose. **M Kanda**, **S Eguchi**, and **K Iekushi** are employees of Novartis. **M Kroes** is an employee and shareholder of Novartis. **S. Mallik** and **S Smeets** are employees of Novartis. **J de Courcy**, and **J Garratt-Wheeldon** are employees of Adelphi Real World. **Y Suzuki** has no COI to disclose.

The authors had full editorial control of the poster and provided their final approval of all content.

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