C3 Glomerulopathy Current Treatment Options and Real-world Management - Results from a Multi-Country Study

C. Proudfoot[1]; K. Pannagl[2]; B. Ndife[3]; S. Smeets[1]; K. Murphy[3]; J. de Courcy[4]; S. Libby[4]; R. Lafayette [5]

Affiliations: [1]Novartis Pharma AG, Basel, Switzerland; [2]Novartis Pharmaceuticals UK Ltd, London, UK; [3]Novartis Pharmaceuticals Corporation, East Hanover, New Jersey, United States; [4]Adelphi Real World, Bollington, UK [5]Stanford University Medical Center, United States

Conclusions

- Most patients at time of survey were prescribed treatment, with 70% of patients receiving RAASi. Conventional immunosuppressants (ISx) and biologics were used most commonly alongside RAASis.
- Satisfaction with current treatment options was reported among nephrologists. However over one-quarter of nephrologists believed better control could be achieved for C3G patients.
- Despite treatment, proteinuria remained high with over two-thirds of patients (70%) having a proteinuria ≥ 1g/24hr.
- These findings highlight a clear need for targeted therapies to treat the root cause of C3G.

Introduction and Objective

- Complement 3 Glomerulopathy (C3G) is a rare, fast progressing kidney disease, with approximately 50% of patients reaching kidney failure within 10 years of diagnosis[1].
- Approaches to treatment are not specific to C3G and include therapies to control blood pressure, reduce proteinuria and reduce inflammation or suppress the immune system[2].
- KDIGO guidelines recommend treating C3G patients with renin-angiotensin-aldosterone system inhibitors (RAASi), and in some cases, corticosteroids (CS), mycophenolate mofetil (MMF), or eculizumab[3].

The aim of this real-world analysis is to describe the current treatment patterns-of C3G patients in the US, Europe, and Asia.

Methods

- Data were drawn from the 2022 Adelphi C3G Disease Specific Programme™, a cross-sectional survey of C3G-treating nephrologists and their consulting patients in the US, France, Germany, Italy, Spain, UK (EU5), China and Japan between August 2022 and April 2023.
- The DSP methodology has been previously published and was conducted according to the relevant regulations[4].
- Physicians reported data on patient demographics, C3G treatment history and clinical information.

Results

Treatment status and patient characteristics

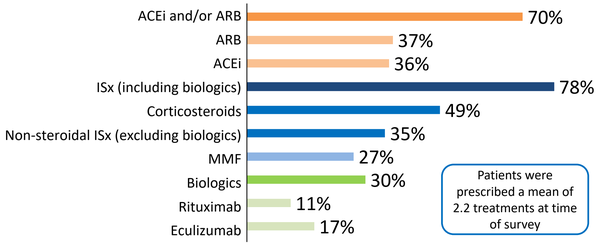
- In total 111 nephrologists completed records for 385 C3G patients (EU5 189; US 100; CN 60; JP 36). Of these, a total of 321 (83%) of patients were receiving treatment at time of survey **(Table 1)**.
- Median patient age at time of survey of patients currently receiving treatment was 39.0 (17.7) in the EU5, 39.0 (15.1) in the US, 40.0 (10.3) in China and 52.0 (10.6) in Japan **(Table 1).**

Table 1: Treatment status and demographics of patients receiving treatment at time of survey by geographical region

	EU5	US	China	Japan
Total number of patients, n	**189**	**100**	**60**	**36**
Currently treated for C3G; n (%)	161 (85)	79 (79)	53 (88)	28 (78)
Not currently treated for C3G, but they have been in the past; n (%)	15 (8)	11 (11)	2 (3)	6 (17)
Have never received treatment for their C3G; n (%)	13 (7)	10 (10)	5 (8)	2 (6)
Number of patients receiving treatment at time of survey, n	**161**	**79**	**53**	**28**
Age at time of survey; median years (SD)	39.0 (17.7)	39.0 (15.1)	40.0 (10.3)	52.0 (10.6)
Sex, male; n (%)	96 (60)	46 (58)	29 (55)	20 (71)
BMI; median Kg/m^2, (SD)	23.5 (4.1)	25.8 (3.7)	22.9 (2.5)	20.0 (3.1)
Working full or part time*; n (%)	77 (50)	48 (64)	32 (63)	23 (85)
C3G subtype*				
C3GN; n (%)	133 (83)	65 (83)	43 (81)	27 (96)
DDD; n (%)	27 (17)	13 (17)	10 (19)	1 (4)
Time since current treatment initiation; median months (SD)	10.0 (23.0)	8.3 (15.9)	11.4 (12.8)	17.9 (17.1)

SD, Standard Deviation. BMI, Body Max index
EU5 – France, Germany, Italy, Spain, and the United Kingdom
*Base size differences due to 'don't knows' being excluded

Figure 1: C3G treatment at time of survey (n=321)



Question was multiple choice; physicians were able to select multiple treatment options to represent what treatment(s) their patient was receiving. Treatments groups are as follows; ACEi and/or ARB includes all patients who were receiving either or both of these treatments; ISx includes Corticosteroids (Prednisone, Prednisolone, Methylprednisolone, Budesonide), Non-steroidal ISx (including Azathioprine, Cyclophosphamide, Cyclosporin, Hydroxychloroquine, Leflunomide, Tacrolimus and MMF), and Biologics; Biologics included Eculizumab, Ravulizumab and Rituximab.
ACEi, ACE inhibitors. ARB, Angiotensin receptor blockers. ISx, Immunosuppressants. MMF, Mycophenolate mofetil and/or mycophenolate sodium.

Figure 2: C3G treatment prescribed with RAASi at time of survey (n=226)

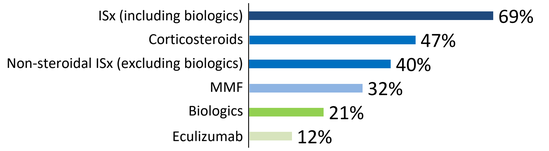


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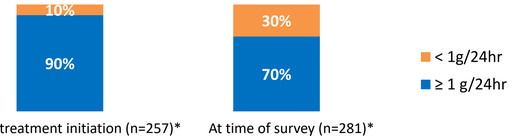
Figure 3: Nephrologist-reported satisfaction with current treatment options

Figure 4: Proteinuria </ ≥ 1g/24hr of patients receiving C3G treatment at initiation of treatment and time of survey



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C3G treatment at time of survey

- A total of 226 (70%) of patients received RAASi, with a somewhat equal split between ARBs and ACEi; 37% and 36%, respectively **(Figure 1)**.
- Over three-quarters (78%) of patients were currently prescribed conventional ISx.
- Nearly one-third of patients (30%) were receiving biologics at time of survey.
- At time of survey, patients were prescribed a mean of 2.2 treatments.

C3G treatment prescribed with RAASi at time of survey

- Most patients were prescribed ISx and biologics alongside RAASi, with 69% of patients prescribed both RAASi and ISx **(Figure 2)**.

Nephrologist reported satisfaction with current treatment options

- The proportion of nephrologists that were very satisfied or satisfied was greater that nephrologist that were very dissatisfied or dissatisfied: 70% and 8%, respectively **(Figure 3)**.
- For over one-quarter of patients, nephrologists believed better control could be achieved **(Figure 3**).

Proteinuria of patients receiving C3G treatment at time of survey

- Proteinuria decreased from treatment initiation to time of survey **(Figure 4)**.
- At initiation of treatment, median proteinuria was 3.0 g/24hr (3.3), with 90% of patients having proteinuria ≥1 g/24hr.
- At time of survey, median proteinuria was 1.4 g/24hr (2.5), with 70% of patients having a proteinuria ≥ 1g/24hr.

Limitations

- Patients included in the DSP sample are the next eligible patients who consult the physician; therefore, it may not truly represent the overall population of patients, as it is more likely to collect data on patients who consult more frequently.

References

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Disclosures

The authors had full editorial control of the poster and provided their final approval of all content. Data collections for the DSP was undertaken by Adelphi Real World as part of an independent survey and data is owned by Adelphi. Novartis is one of multiple subscribers to the DSP and supported this analysis. This study was funded by Novartis Pharma AG and several authors are employees/shareholders of Novartis Pharma AG.

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