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MEDIA UPDATE

Novartis announces new interim analysis Phase II data for iptacopan in rare kidney disease C3 glomerulopathy (C3G)

- Data shows investigational iptacopan improved estimated glomerular filtration rate (eGFR) slope and stabilized kidney function in patients with C3G¹; Phase III clinical trial to start in 2021
- Results add to body of information on iptacopan, with previous interim analysis data from same trial showing significant reduction in proteinuria, improved plasma C3 levels, and favorable safety and tolerability profile over 12 weeks²
- There are no currently approved treatments for C3G a rare and often progressive disease that mainly affects adolescents and young adults and can progress to kidney failure³⁻⁶
- Iptacopan is in development for several complement-driven renal diseases (CDRDs), including C3Gand IgA nephropathy (IgAN), and the blood disorder paroxysmal nocturnal hemoglobinuria (PNH), targeting a key driver of these diseases

Basel, June 07, 2021 — Novartis today announced positive new interim Phase II data showing investigational iptacopan (LNP023) – a first-in-class, oral, targeted factor B inhibitor – improved estimated glomerular filtration rate (eGFR) slope and stabilized kidney function in patients with C3 glomerulopathy (C3G) treated with iptacopan¹. The data were presented at the 58th ERA-EDTA Congress held virtually from June 5–8, 2021.

The new interim analysis data from the open-label Phase II study (NCT03832114) in patients with C3G showed twice-daily 200mg iptacopan stabilized kidney function, as measured by change in eGFR slope¹: a key measure of kidney clearance function that estimates the rate of blood passing through and being filtered by the kidneys⁷. The kidney function of 12 patients treated with iptacopan for 12 weeks was compared with their historical kidney function data for the two-year period before they entered the study (or since diagnosis was made where this was less than two years)¹. Furthermore, seven C3G patients who received iptacopan for up to 25 weeks in a long-term extension study (NCT03955445) showed ongoing eGFR stabilization, suggesting extended iptacopan treatment may prolong the time to, or even potentially prevent, the development of kidney failure¹.

About the study

NCT03832114 is a Phase II, open-label, two cohort, non-randomized study evaluating the efficacy, safety and pharmacokinetics of iptacopan in patients with C3 glomerulopathy (C3G) (Cohort A) and patients who have undergone kidney transplantation and have subsequent

C3G recurrence in the transplanted organ (Cohort B)^{1,2,8}. The aim of the analysis presented at the 2021 ERA-EDTA Congress was to determine whether iptacopan treatment altered eGFR slope in Cohort A¹. On completion of the study, all patients had the option to receive ongoing iptacopan in a long-term extension study (NCT03955445)¹.

About iptacopan

Iptacopan is an investigational, first-in-class, orally administered factor B inhibitor of the alternative complement pathway, targeting one of the key drivers of these diseases⁹⁻¹¹. It has the potential to become the first targeted therapy to delay progression to dialysis in C3G. Discovered at the Novartis Institutes for BioMedical Research, iptacopan is currently in development for a number of CDRDs where significant unmet needs exist, including C3G, IgA nephropathy (IgAN), atypical hemolytic uremic syndrome (aHUS), and membranous nephropathy (MN), as well as the blood disorder PNH.

While Novartis has a 35-year history in kidney transplantation treatments, iptacopan is the first treatment in the nephrology pipeline addressing CDRDs. Our aim is to transform treatment by targeting one of the key drivers of these rare and often progressive diseases¹⁰ and, in doing so, potentially extend dialysis-free life for people with CDRDs.

About complement-driven renal diseases (CDRDs)

CDRDs, which include C3G, are thought to be partly caused by an overactivation of the alternative complement pathway – part of the immune system – creating an inflammatory response, which can lead to kidney damage^{10,12-15}. CDRDs mainly affect adolescents and young adults, and can often lead to kidney failure which requires dialysis or transplantation and can lead to premature death³⁻⁶.

Approximately 50% of C3G patients progress to kidney failure within 10 years of diagnosis^{4,5,16}. Among patients who have undergone kidney transplantation, disease recurrence is not uncommon, with one study seeing an estimated 30% and 70% risk of transplant loss at 5 and 10 years, respectively^{5,16}.

There is a need for effective and well-tolerated, targeted therapies C3G that can delay disease progression.

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About Novartis

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References

- 1. Wong E, Praga M, Nester C, et al. Iptacopan (LNP023): a novel oral complement alternative pathway factor B inhibitor safely and effectively stabilises eGFR in C3 glomerulopathy. Presented at the ERA-EDTA congress.
- Wong E, Praga M, Nester CM, et al. LNP023: a novel oral complement alternative pathway factor B inhibitor safely and effectively reduces proteinuria in C3 glomerulopathy. Abstract presented at the 2020 American Society of Nephrology Congress in October 22–25, 2020.
- 3. McGrogan A, Franssen CFM, de Vries CS. The incidence of primary glomerulonephritis worldwide: a systematic review of the literature. Nephrol Dial Transplant. 2011;26(2):414–430.
- Nester CM, Smith RJ. Treatment options for C3 glomerulopathy. Curr Opin Nephrol Hypertens. 2013;22(2):231– 237.
- Smith RJH, Appel GB, Blom AM, et al. C3 glomerulopathy understanding a rare complement-driven renal disease. Nat Rev Nephrol. 2019;15(3):129–143.
- 6. Abbasi MA, Chertow GM, Hall YN. End-stage renal disease. BMJ Clin Evid. 2010;2010.
- Lopez-Giacoman S, Madero M. Biomarkers in chronic kidney disease, from kidney function to kidney damage. World J Nephrol. 2015;4(1):57–73.
- 8. Clinicaltrials.gov. Study on Efficacy and Safety of LNP023 in C3 Glomerulopathy Patients Transplanted and Not Transplanted. Available at: https://clinicaltrials.gov/ct2/show/NCT03832114. Accessed May 2021.
- Merle NS, Church SE, Fremeaux-Bacchi V, Roumenina LT. Complement system part I molecular mechanisms of activation and regulation. Front Immunol. 2015;6:262.
- Schubart A, Anderson K, Mainolfi N, et al. Small-molecule factor B inhibitor for the treatment of complementmediated diseases. Proc Natl Acad Sci U S A. 2019;116(16):7926–7931.
- 11. Sarma JV, Ward PA. The complement system. Cell Tissue Res. 2011;343(1):227-235.
- 12. Willows J, Brown M, Sheerin NS. The role of complement in kidney disease. Clin Med. 2020;20(2):156-160.
- 13. Łukawska E, Polcyn-Adamczak M, Niemir ZI. The role of the alternative pathway of complement activation in glomerular diseases. Clin Exp Med. 2018;18(3):297–318.
- 14. Koscielska-Kasprzak K, Bartoszek D, Myszka M, Zabinska M, Klinger M. The complement cascade and renal disease. Arch Immunol Ther Exp (Warsz). 2014;62(1):47–57.
- 15. De Vriese AS, Sethi S, Van Praet J, Nath KA, Fervenza FC. Kidney disease caused by dysregulation of the complement alternative pathway: An etiologic approach. J Am Soc Nephrol. 2015;26(12):2917–2929.
- Medjeral-Thomas NR, O'Shaughnessy MM, O'Regan JA, et al. C3 glomerulopathy: clinicopathologic features and predictors of outcome. Clin J Am Soc Nephrol. 2014;9(1):46–53.

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