Cardiovascular, renal and metabolic

Transforming the treatment and healthcare system landscape using early interventions, pioneering treatments, and innovative partnerships to avoid preventable mortality from cardiovascular disease (CVD), the world's biggest killer, and ease the burden for people living with rare and progressive kidney disease by extending dialysis-free life.

Areas of focus

- Heart Failure
- Atherosclerotic cardiovascular disease
- High lipoprotein (a)
- · IgA nephropathy
- C3 glomerulopathy

Heart failure is a chronic condition where the heart muscle responsible for the pumping action weakens or stiffens over time, leaving people feeling fatigued, short of breath and at risk of sudden cardiac death¹. Without effective treatment, people with heart failure will get sicker every day¹. There is a need to work together to better serve people with the treatments they need to manage their heart failure and empower them to gain a sense of control over their health^{1,2}.

ASCVD is the most common form of cardiovascular disease (CVD) and includes cardiovascular events like heart attacks and strokes^{3,4}. High levels of low-density lipoprotein cholesterol (LDL-C), or "bad cholesterol", in the blood increase the risk of ASCVD in many people^{3,4}. Collaboration is vital to help solve the world's biggest disease burdens like ASCVD by promoting the benefits of early detection and effective preventive treatment⁵.

A genetic risk factor affecting 1 in 5 people worldwide causes high levels of a little-known type of low-density lipoprotein known as lipoprotein(a) or $Lp(a)^6$. People with high Lp(a) are at an increased risk of cardiovascular disease and every adult should be screened at least once in their lifetime through a simple blood test⁶. Understanding Lp(a) levels and associated risk can help patients and healthcare professionals have better conversations about improving heart health^{6,7}.

IgA nephropathy (IgAN) is a progressive complement-mediated kidney disease that mostly effects young adults and is a major cause of chronic kidney disease and kidney failure worldwide⁸. The early stages of IgAN are often asymptomatic, meaning many people are diagnosed when they have already experienced significant kidney damage^{9,10}. The symptoms and complications of IgAN can severely undermine people's physical and mental health, impair their ability to work and reduce their quality of life¹¹⁻¹⁶.

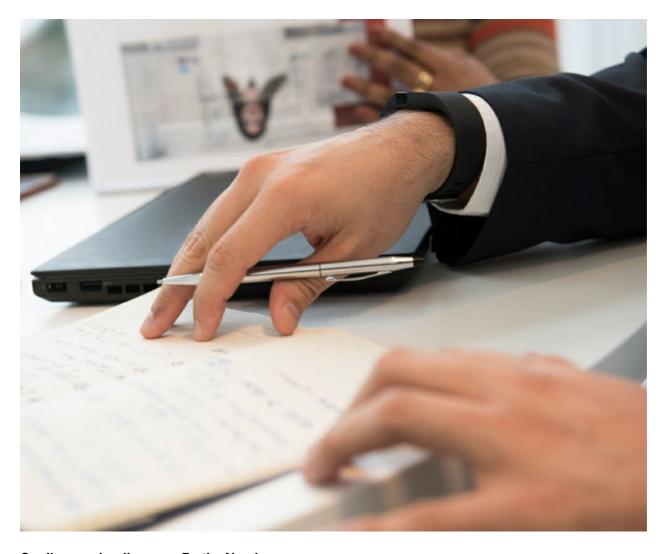
Learn more

C3G glomerulopathy (C3G) is a complex and progressive rare complement-mediated kidney disease that affects people of all ages, starting in childhood and young adulthood. ¹⁷⁻²⁰ Each year, approximately 1-2 new cases of C3G per million people are diagnosed worldwide. ¹⁷ Many people with complement-mediated kidney diseases may progress to kidney failure, requiring lifelong dialysis or a kidney transplant. ²¹ The emotional, physical, and social effects of C3G can have a considerable impact on patients' quality of life. ²² Unfortunately, kidney transplants have limited success, with C3G returning for over 55% of people. ²³⁻²⁶

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Latest news

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<u>Cardiovascular disease – By the Numbers</u>

Cardiovascular disease (CVD) is the leading cause of death worldwide. Investment in heart health has declined for decades.



Kidney disease

The kidneys play a vital role in keeping us healthy, and often it is only when something goes wrong that we realize just how important our kidneys are.



New hope for treating inflammatory diseases of the kidney

Novartis researchers aim to preserve kidney function – and quality of life – for patients.

Learn more

Resource links

Pipeline
Products
Clinical trials
Investigator Initiated Trials

Events and scientific meetings

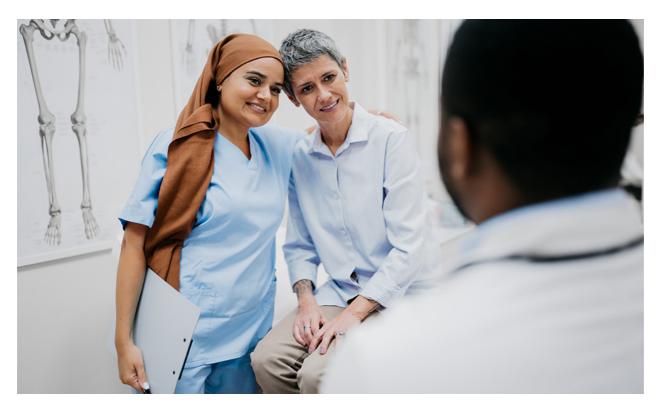
ACC	American College of Cardiology	https://www.acc.org/
AHA	American Heart Association	https://www.heart.org/
ESC	European Society of Cardiology	https://www.escardio.org/
ESC-HF	European Society of Cardiology – Heart Failure	https://www.escardio.org/Sub-specialty-communities/Heart-Failure-Association-of-the-ESC-(HFA)
WCC	World Congress of Cardiology	https://world-heart-federation.org/world-congress-of-cardiology/
EAS	European Atherosclerosis Society	https://eas-society.org/
WCN	World Congress of Nephrology	https://www.theisn.org/in-action/events/world-congress-of-nephrology/
ERA- EDTA	European Renal Association	https://www.era-online.org/
ASN	American Society of Nephrology	https://www.asn-online.org/

Other therapeutic areas



<u>Immunology</u>

Working to create a world where the millions of people with immunological conditions, and those who treat them, can live without compromise.



Neuroscience

<u>Creating a transformational impact for people living with severe neurological conditions and their caregivers by discovering, developing and delivering innovative medicines that change the course of disease progression.</u>



Oncology

Combining the power of science and empathy to unravel the inner workings of cancer and develop innovative therapies that restore hope to those with cancer and their loved ones.

References:

- 1. National Health Services (NHS). Heart failure. Last updated May 2022. Accessed September 2023. https://www.nhs.uk/conditions/heart-failure/
- 2. Wohlfahrt P, Stehlik J, Pan IZ, Ryan JJ. Empowering People Living with Heart Failure. Heart Fail Clin. 2020;16(4):409-420.
- 3. Pahwa R, Jialal I. Atherosclerosis. [Updated 2023 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK507799/

- 4. Heart Research Institute (HRI). Atherosclerosis: causes and risk factors. Accessed September 2023. https://hri.org.au/health/learn/cardiovascular-disease/atherosclerosis-causes-and-risk-factors
- 5. McClellan M, Brown N, Califf RM, Warner JJ. Call to Action: Urgent Challenges in Cardiovascular Disease: A Presidential Advisory From the American Heart Association. Circulation. 2019;139(9):e44-e54.
- 6. Wilson DP, Jacobson TA, Jones PH, et al. Use of Lipoprotein(a) in clinical practice: A biomarker whose time has come. A scientific statement from the National Lipid Association. J Clin Lipidol. 2019;13(3):374-392.
- 7. Marcovina, S. M., & Shapiro, M. D. (2022). Measurement of Lipoprotein(a): A Once in a Lifetime Opportunity. Journal of the American College of Cardiology, 79(7), 629–631. https://doi.org/10.1016/j.jacc.2021.11.053
- 8. Rovin BH, Adler SG, Barratt J, et al. KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases. Kidney Int. 2021;100(4):S1-S276. doi:10.1016/j.kint.2021.05.021.
- 9. National Institute of Diabetes and Digestive and Kidney Diseases. IgA nephropathy. Available at: https://www.niddk.nih.gov/healthinformation/kidney-disease/iga-nephropathy. Accessed September 2023.
- 10. Haider DG, Friedl A, Peric S, et al. BMC Nephrol. 2012;13:34.
- 11. Zhao Y, Chen YP, Wu YQ, Bao BY, Fan H. J Int Med Res. 2020;48(1):300060519898008.
- 12. Hallab A, Wish JB. Clin J Am Soc Nephrol. 2018;13(2):203-204.
- 13. Kutner NG, Zhang R, Huang Y, Johansen KL. Clin J Am Soc Nephrol. 2010;5(11):2040-2045.
- 14. Nie Y, Witten B, Schatell D, et al. Clin Kidney J. 2019;13(3):434-441.
- 15. Couser WG, Remuzzi G, Mendis S, Tonelli M. Kidney Int. 2011;80(12):1258-1270.
- 16. Pereira BDS, Fernandes NDS, de Melo NP, Abrita R, Grincenkov FRDS, Fernandes NMDS. Health Qual Life Outcomes. 2017;15(1):74.
- 17. Schena FP, Esposito P, Rossini M. Int J Mol Sci. 2020;21(2):525.
- 18. Smith RJ, Alexander J, Barlow PN, et al. J Am Soc Nephrol. 2007;18(9):2447-2456.
- 19. Martin B, Smith RJH. In: Adam MP, Ardinger HH, Pagon RA, et al. GeneReviews® [Internet]. Updated 2018. University of Washington, Seattle: 1993-2022.
- 20. Medjeral-Thomas NR, O'Shaughnessy MM, O'Regan JA, et al. Clin J Am Soc Nephrol. 2014;9(1):46-53.
- 21. National Kidney Foundation. Kidney Disease: The Basics. Available at: https://www.kidney.org/news/newsroom/fsindex. Accessed December 6, 2023.
- 22. National Kidney Foundation. The Voice of the Patient 2018
- 23. Servais A, Noël LH, Roumenina LT, et al. Kidney Int. 2012;82(4):454-464.
- 24. Zand L, Lorenz EC, Cosio FG, et al. J Am Soc Nephrol. 2014;25(5):1110-1117.
- 25. Regunathan-Shenk R, Avasare RS, Ahn W, et al. Am J Kidney Dis. 2019;73(3):316-323.
- 26. Caravaca-Fontán F, Polanco N, Villacorta B, et al. Nephrol Dial Transplant. 2023;38(1):222-235.

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- 34. https://www.kidney.org/news/newsroom/fsindex