

The role of APRIL in IgA nephropathy

Immunoglobulin A nephropathy: (IgA nephropathy, or IgAN)

is a progressive, autoimmune, chronic kidney disease^{1,2}



Most common primary glomerulonephritis
2.5 out of **100,000** adults per year³

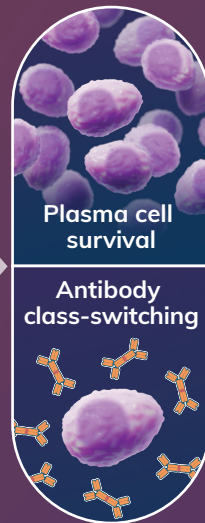
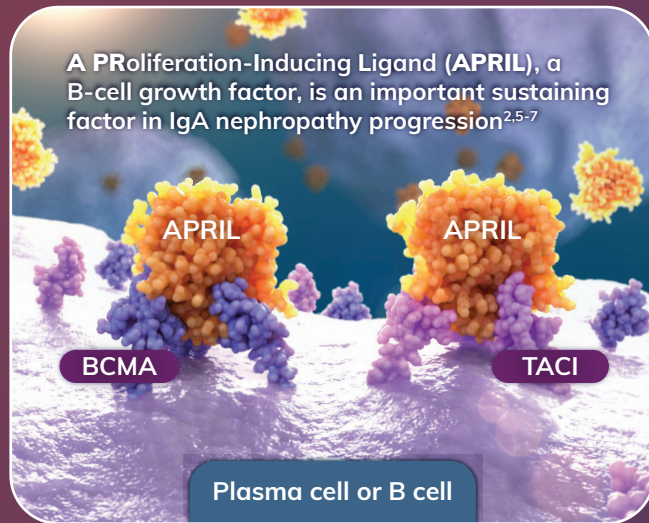


Typically diagnosed
20-40 yrs old⁴

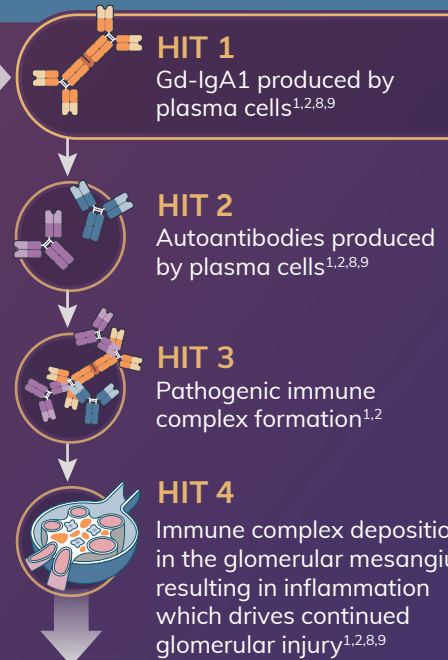


Often leads to **ESKD**
10-15 years after diagnosis⁴

APRIL plays a key role in the 4-HIT pathogenic cascade of IgA nephropathy^{2,3,5}

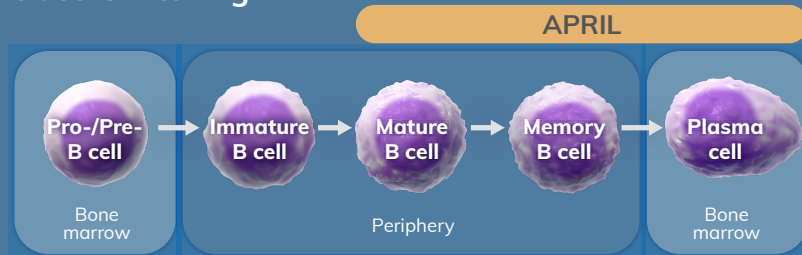


APRIL mediates the production of pathogenic Gd-IgA1 and immune complex formation^{2,6}



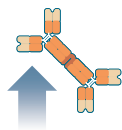
Progressive loss of kidney function and may result in ESKD^{4,9}

APRIL promotes plasma cell survival and antibody class-switching⁷



APRIL regulates later stages of B-cell development^{2,6}

Higher serum APRIL levels are associated with



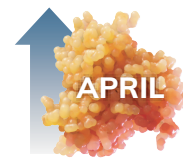
Higher Gd-IgA1 levels^{3,10}



More rapid progression to kidney failure^{5,11}



Post-kidney transplant recurrence^{3,*}



Patients with highest serum APRIL levels have **10x** higher risk of progressing to ESKD^{11,*}

*Elevated pre-transplant serum APRIL levels are linked to IgA nephropathy recurrence in patients post-kidney transplantation.

[†]Compared with patients with IgA nephropathy who have undetectable levels of APRIL.

BCMA=B-cell maturation antigen; ESKD=end-stage kidney disease; Gd-IgA1=galactose-deficient immunoglobulin A1; TACI=transmembrane activator calcium modulator and cyclophilin ligand interactor.

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References 1. Knoppova B, et al. Front Immunol. 2016;7:117. 2. Mathur M, et al. J Clin Med. 2023;12(21):6927. 3. Yeo SC, et al. Clin Kidney J. 2023;16(2):ii9-ii18. 4. Pitcher D, et al. Clin J Am Soc Nephrol. 2023;18(6):727-738. 5. Myette JR, et al. Kidney International. 2019;96(1):104-116. 6. Chacko B, et al. ASN Kidney News. 2024;11-12. 7. Cheung CK, et al. Front Nephrol. 2024;3:1346769. 8. Gutiérrez E, et al. Nephron. 2020;144(11):551-571. 9. Mestecky J, et al. Annu Rev Pathol. 2013;8:217-240. 10. Zhai YL, et al. Medicine. 2016;95(11):e3099. 11. Han SS, et al. J Am Soc Nephrol. 2016;27:3430-3439.

Watch the video to learn about APRIL ▶

