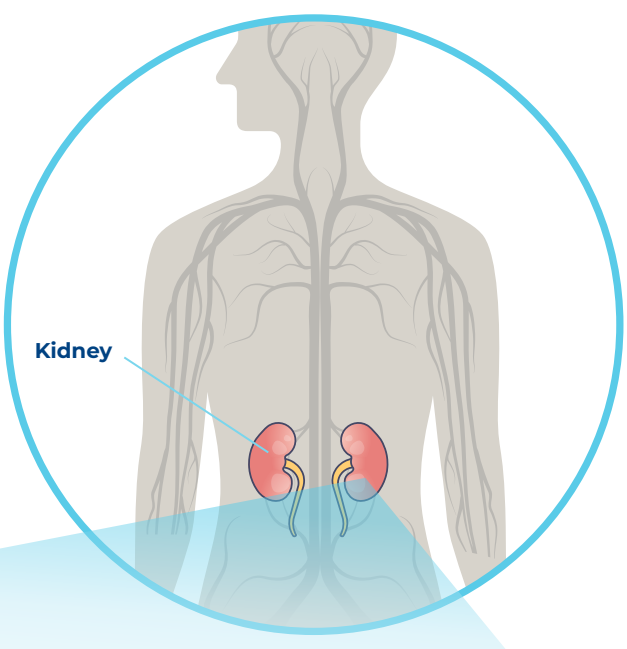
Immunoglobulin A (IgA) Nephropathy

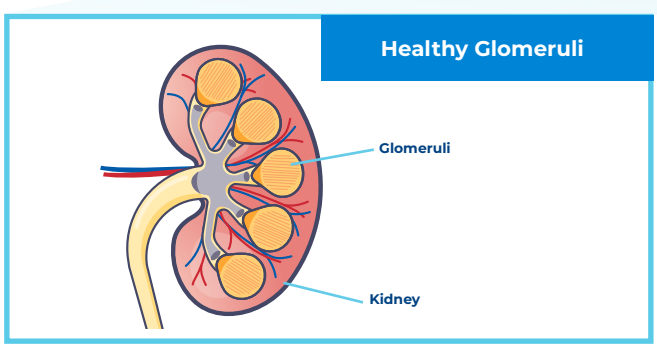
ALEXION
AstraZeneca Rare Disease

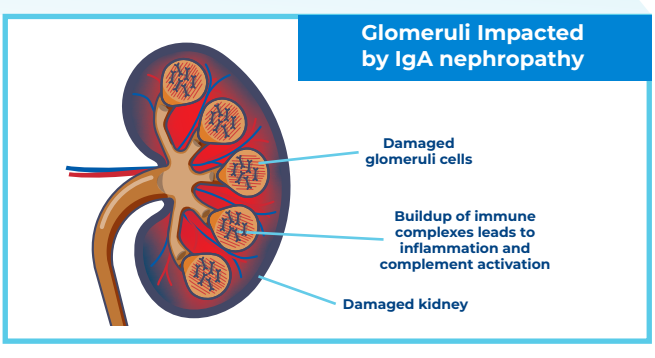
WHAT IS IMMUNOGLOBULIN A (IGA) NEPHROPATHY?

Immunoglobulin A (IgA) nephropathy is a rare, **chronic kidney disease** that begins when the body develops abnormal IgA proteins that then result in immune complexes that build up in the kidneys causing damage.[1]

The buildup of these complexes activates the complement system, **leading to damage to the cells in the glomeruli,**[1] the part of the kidneys that filters and cleans the blood. This can impact the ability of the kidneys to function properly, **resulting in chronic kidney disease (CKD)** that can progress to **end-stage kidney disease (ESKD).**[2]







Each year, IgA nephropathy is estimated to affect approximately 100-1,000 people per million worldwide.[3]

~108K[4] ~109K[4] ~41K[4] ~297K[4]

IgA nephropathy **most commonly affects people of East Asian and European descent;**[2] it is most often diagnosed in a person's **20s or 30s**.[5,6]

People with advanced IgA nephropathy may experience signs and/or symptoms, including:[2]

- **Red or cola-colored urine (hematuria)**
- **Foamy urine (proteinuria)**
- **High blood pressure (hypertension)**
- **Swelling in hands and feet (edema)**

HOW IS IGA NEPHROPATHY DIAGNOSED AND MANAGED?

Since IgA nephropathy **often goes undetected until it has progressed,** most people do not notice symptoms until irreversible kidney damage may have already occurred. The average time from initial symptoms to diagnosis is approximately 17 months.[7]

Once IgA nephropathy is suspected, preliminary blood and urine tests are done to determine if a kidney biopsy is needed. **IgA nephropathy is diagnosed based on biopsy results.**[2,8]

Approximately **25-30% of people with IgA nephropathy will progress to end-stage kidney disease,** or kidney failure, requiring long-term dialysis – a process that removes waste from the blood when the kidneys are unable to do so — or a kidney transplant.[9]

25-50% IgA nephropathy recurrence

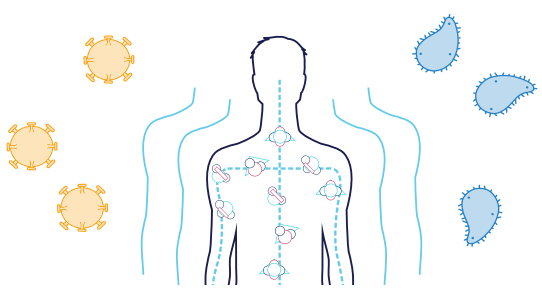
However, a transplant does not cure the disease and, **for an estimated 25-50% of people, IgA nephropathy may return post-transplant.**[10]

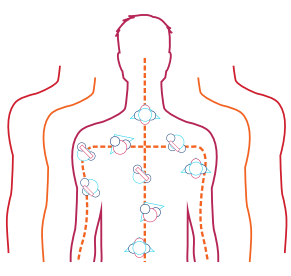
Most current treatments, including those that treat high blood pressure and, in some cases steroids, focus on providing supportive care but do not address the underlying cause of the disease.[2,8]

48% experience substantial disease worsening

Nearly half of people living with IgA nephropathy experience substantial disease worsening despite being on treatment,[9,11] reinforcing the need for new options that can prevent disease progression and improve quality of life.

THE COMPLEMENT SYSTEM





The complement system is a part of the immune system and is **essential to the body's defense against infection.**[12]

When the system is **thrown out of balance**, or dysregulated, these proteins can **trigger a dangerous, uncontrolled cascade of reactions** that attack cells and tissues resulting in **harmful inflammation** and the **destruction of healthy cells.**[13]

WHAT ROLE MAY COMPLEMENT INHIBITION PLAY IN TREATING IGA NEPHROPATHY?

There is strong evidence suggesting that the complement system may play a role in kidney diseases, including IgA nephropathy, and Alexion is **investigating complement inhibition as a potential treatment for this disease.** Through this research, Alexion hopes to **improve the journey to diagnosis and treatment for patients and their caregivers.**

Alexion's leadership in complement inhibition has set the course for the continued study and development of innovative treatments for rare complement-mediated diseases, including IgA nephropathy.

WHAT TREATMENT APPROACH IS BEING STUDIED BY ALEXION?

Alexion is **conducting multiple clinical trials investigating the safety and efficacy of inhibiting various parts of the complement system in adults with IgA nephropathy.** These clinical trial programs are evaluating the potential of inhibiting terminal complement (by blocking the C5 protein) or Factor D, another complement system protein.

Alexion has demonstrated an **unyielding commitment to unlocking the potential of the complement system** and continues to pioneer innovations for people living with rare diseases.

Content created by Alexion, AstraZeneca Rare Disease.

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