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US researchers use DNA sequencing for diagnosing kidney diseases

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The researchers found that DNA sequencing could identify the genetic cause of kidney disease.

According to a new study by the Columbia University Medical Center, DNA sequencing could soon become part of the routine diagnostic workup for patients with chronic kidney disease.

Diagnosis typically relies on clinical, rather than genetic, evidence. Even with a kidney biopsy, it can be difficult to identify different subtypes of the disease. As a result, the precise cause of kidney failure often remains unknown.

The researchers found that DNA sequencing could identify the genetic cause of the disease and influence treatment for many patients with chronic kidney disease.

The researchers also identified three patients who harbored a mutation in a gene not previously associated with kidney failure, thereby defining a new genetic cause of kidney disease.

The study demonstrated that whole exome sequencing may offer real clinical value in diagnosing and managing patients with kidney disease, especially those with a family history of kidney problems or those with an unknown cause of disease.

Additional studies, in larger and more diverse patient populations, could help better define which categories of patients would benefit most from genomic sequencing in their clinical workup for kidney disease.