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Test helps predict which children with kidney disease will respond to standard therapy

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A genetic screening test may help predict which patients with one of the most common childhood kidney diseases will respond to standard therapies. The test is described in a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology*. Using this test could help guide clinicians as they counsel and treat patients.

Sporadic nephrotic syndrome is one of the most common kidney diseases in children, and it can have a genetic cause. Paola Romagnani, MD, PhD, Sabrina Giglio, MD, PhD (University of Florence and Meyer Children's Hospital, in Florence, Italy), and their colleagues designed an innovative diagnostic approach that allows for a fast analysis of all genes involved in the disease. Using this method, the team analyzed 46 different genes at the same time in 69 children with the disease, and they found that genetic mutations in the kidney's filtration barrier were frequently linked with a lack of response to immunosuppressive treatments in patients. The genetic test was even more predictive than a kidney biopsy for identifying children who would not benefit from immunosuppressive therapies.

"Thus, this type of genetic analysis can improve the clinical approach to children with nephrotic syndrome by promoting better genetic counseling for the risk of recurrence of the disease in the family, and a better management of treatment and clinical follow up," said Professor Romagnani.

The application of this new diagnostic approach also improved the speed

of clinical diagnoses of the disease and reduced costs. "With a single test, we can help build a truly personalized therapy," said Professor Giglio.

Provided by American Society of Nephrology