

Study Published in Nature Communications Reinforces Predictive Power of PIRCHE Scores in Kidney Transplant Outcomes

New evidence from over 5,000 patients challenges the utility of HLA evolutionary divergence and spotlights PIRCHE's role in guiding transplant decision-making.

BERLIN, GERMANY, July 3, 2025

/EINPresswire.com/ -- [PIRCHE AG](#), a

global leader in transplant

bioinformatics solutions, today

announced the publication of a

significant study in Nature

Communications titled "Impact of HLA

evolutionary divergence and donor-

recipient molecular mismatches on

antibody-mediated rejection of kidney

allografts." The research provides

compelling evidence supporting the

critical role of PIRCHE-T2 (PIRCHE-II) scores in predicting antibody-mediated rejection (AMR) in kidney transplant recipients.



The large-scale, multicentric study, involving 5,159 kidney transplant recipients, rigorously

assessed various immunological parameters, including

HLA eplet mismatches, PIRCHE-T2 scores, and HLA

evolutionary divergence (HED). A key finding demonstrated

that HLA Class II eplet mismatches and HLA-DQB1 and

HLA-DRB1-derived PIRCHE-T2 scores were independently associated with antibody-mediated rejection (AMR).

Crucially, the study found no association between HED and AMR, suggesting its limited utility for immune-risk stratification at a population level.¹

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It is time to embrace this new approach and change the future for all transplant patients. Changes are difficult, not changing can be fatal.”

*Massimo Mangiola, NYU
Langone*

"The evidence published in Nature Communications by Dr.

Demir and colleagues further reinforces the tremendous role of PIRCHE as a biomarker to independently predict risk of AMR," stated Dr. Massimo Mangiola, Clinical Associate Professor and Immunogenetics Laboratory Director at the Transplant Institute of NYU Langone. "To confirm a stringent correlation in one of the largest, multicentric, and deeply phenotyped cohorts of kidney transplant recipients is not surprising, but deeply compelling. Moreover, the lack of correlation between HLA polymorphisms (HLA evolutionary divergence) and AMR gives no further excuse to continue denying the impactful predictive power of PIRCHE and molecular compatibility. It is time to embrace this new approach and change the future for all transplant patients. Changes are difficult, not changing can be fatal."

This publication further validates PIRCHE's TxPredictor Platform, which includes applications for outcomes prediction, donor selection, risk stratification and acceptable mismatch profiling as well as T-cell memory response. These tools leverage PIRCHE-T2 and PIRCHE-B scores to provide comprehensive immune profiling, enabling more personalized patient management and optimizing immunosuppression strategies. The findings underscore PIRCHE's commitment to advancing transplant medicine and improving long-term patient outcomes.

About PIRCHE AG

PIRCHE AG is a leading provider of digital molecular diagnostic solutions for transplant medicine. The company's mission is to improve the lives of transplant patients by providing innovative and accurate diagnostic tools. PIRCHE is headquartered in Grünwald, near Munich, and has offices in Boston, Berlin, and Utrecht. To learn more about PIRCHE's breakthrough technology and how it can support better patient outcomes, visit [PIRCHE.com](https://www.pirche.com).

1. Demir Z, Raynaud M, Divard G, Louis K, Truchot A, Niemann M, Ponsirenas R, Aubert O, Del Bello A, Hertig A, Anglicheau D, Dale B, Kamar N, Mangiola M, Zeevi A, Lefaucheur C, Loupy A. Impact of HLA evolutionary divergence and donor-recipient molecular mismatches on antibody-mediated rejection of kidney allografts. *Nat Commun*. 2025 Jul 1;16(1):5692. doi: 10.1038/s41467-025-60485-y. PMID: 40592858; PMCID: PMC12219110.

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