

# Utility of AlloSure in Pediatric Kidney Transplant Patients

**1st Publication** on Donor-Derived Cell Free DNA in Pediatric Kidney Recipients



Natalie M.,  
Kidney Transplant Recipient

## Donor-Derived Cell Free DNA (dd-cf-DNA) for Detection of Allograft Rejection in Pediatric Kidney Transplants

A study published in *Pediatric Transplantation*, November 2020<sup>†</sup>

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### Background:

- Acute rejection is a major factor of graft failure in pediatric kidney transplant patients
- There is a need for non-invasive diagnostics to provide signals on graft injury; biopsy is associated with potential complications
- AlloSure (donor-derived cell-free DNA) has been clinically validated in adult kidney transplant patients, and may offer utility in identifying graft rejection in pediatric patients

### Study Overview:

- Prospective, Observational Study
- 67 patients
- 2 centers (Cedars Sinai Medical Center & UTHealth)

### Results:

- **AlloSure >1% signaled graft injury** in pediatric kidney transplant patients with a sensitivity of 86% and specificity of 100%
- **AlloSure Outperformed** serum creatinine in identifying patients with rejection
- **Patients with HLA DSAs** had higher AlloSure levels compared to either those who were either DSA negative or only positive for AT1R
- **AlloSure signaled subclinical rejection**, even when other clinical/laboratory parameters remained normal, in patients undergoing routine surveillance

#### Affiliations

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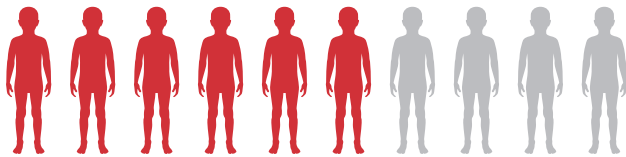
† Puliyananda, Dechu P., et al. "Donor-Derived Cell-Free DNA (Dd-CfDNA) for Detection of Allograft Rejection in Pediatric Kidney Transplants." *Pediatric Transplantation*, 2021, doi:10.1111/ptr.13850.

# AlloSure: Supporting Surveillance for Pediatric Kidney Transplant Patients



## Likelihood of Long-Term Kidney Graft Failure For Pediatric Kidney Transplant Patients Remains High

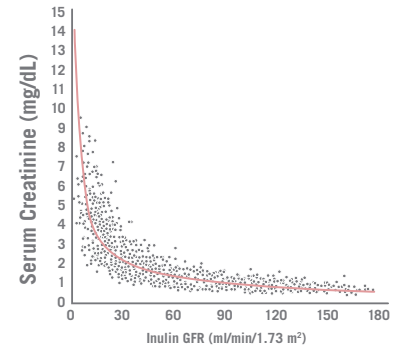
10-year graft survival rates for pediatric kidney transplant patients are ~60%<sup>1</sup>



1. Van Arendonk KJ, Boyarsky BJ, Orandi BJ, et al. National trends over 25 years in pediatric kidney transplant outcomes. *Pediatrics*. 2014;133(4):594-601.
2. Botev R et al. *Clin J Am Soc Nephrol* 2009; 4:899-906

Current surveillance options have limitations

Creatinine is a late marker of injury — GFR declines significantly before creatinine rises<sup>2</sup>



## AlloSure is a Simple Blood Test for Monitoring Pediatric Kidney Transplant Organ Health

### What is AlloSure?

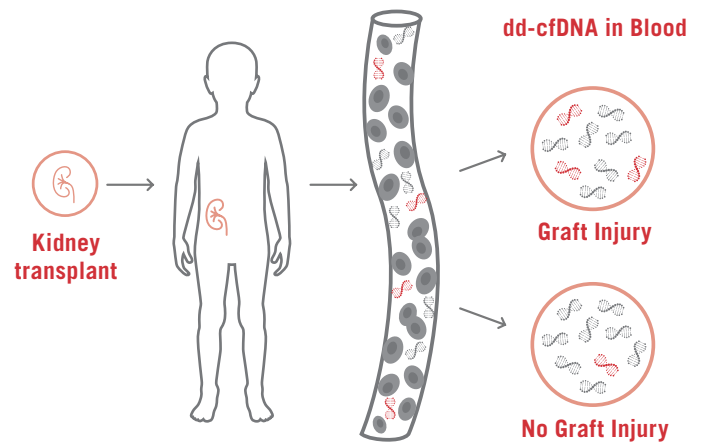
AlloSure is a donor-derived cell-free DNA (dd-cfDNA) test for noninvasive transplant surveillance, providing a direct measure of organ injury.

AlloSure is more accurate than serum creatinine or DSA testing<sup>3</sup> and noninvasive.

3. Bloom RD et al. *J Am Soc Nephrol* 28, 2017.ut

### What is cell-free DNA?

Cell-free DNA is fragmented DNA originating from cells and continuously released into the bloodstream.



**Better Care for Pediatric Patients**  
**Only 1 Tube of Blood Needed**



Order AlloSure for your pediatric kidney transplant patients today — contact your local CareDx representative or email [info@CareDx.com](mailto:info@CareDx.com)

