natera™ | Prospera™ Transplant assessment

Meet John

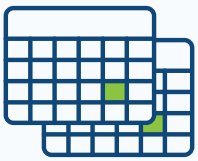
Regular Prospera testing helps minimize the risk of John's unique clinical factors leading to transplant rejection

Clinical Factors that May Indicate Risk for Transplant Rejection	Donor-specific alloantibody (DSA) detected	History of rejection	Non-adherence to anti-rejection medication	High Calculated Panel Reactive Antibody (cPRA)	Delayed Graft Function (DGF) occurrence	Decreased immune suppression due to infection and/or adverse effects	Geographic distance or access to transplant center
Factors Covered in John's Case Example	✓	✓				✓	

John's Patient Profile

AGE	37
RACE	Hispanic
LOCATION	Lansing, Michigan, close to a large transplant center
CLINICAL NOTES	• Glomerulonephritis (GN) since early teens caused End-stage renal disease (ESRD) • Received first transplant from mother (one haplotype match related donor) with good initial function • Multiple rejections and recurrent GN caused graft loss after two years • Received **second transplant** from a deceased donor in 2015 • October 2016 - biopsy indicated **antibody-mediated acute rejection (ABMR)**, with **serum creatinine (sCR) of 1.8 mg/dL** and **positive for DSA**. Treated with IVIG plasmapheresis and rituximab. • June 2017 - biopsy showed **tubulitis with tubular atrophy** and indicated **Banf 1A T-cell mediated rejection (TCMR)**. Treated with pulse steroids. • February 2020 - developed **cytomegalovirus (CMV)** and **DSAs remained detectable**. His mycophenolate mofetil (MMF) was reduced from 1000 mg twice daily to 500mg twice daily.
RECENT VISIT	• June 2020 - **Prospera result was 1.7%**. John's MMF was increased up to 1000mg twice daily. John's physician continued to monitor his Prospera levels. • November 2020 - **Prospera result decreased to 1.1%**. **Cr was 1.6 mg/dL** • January 2021 - **Prospera was 0.9%**. **Cr was 2 mg/dL**, which prompted a biopsy that showed moderate tubulointerstitial inflammation with no acute rejection as per Banff criteria. The biopsy resulted in no changes in clinical management.

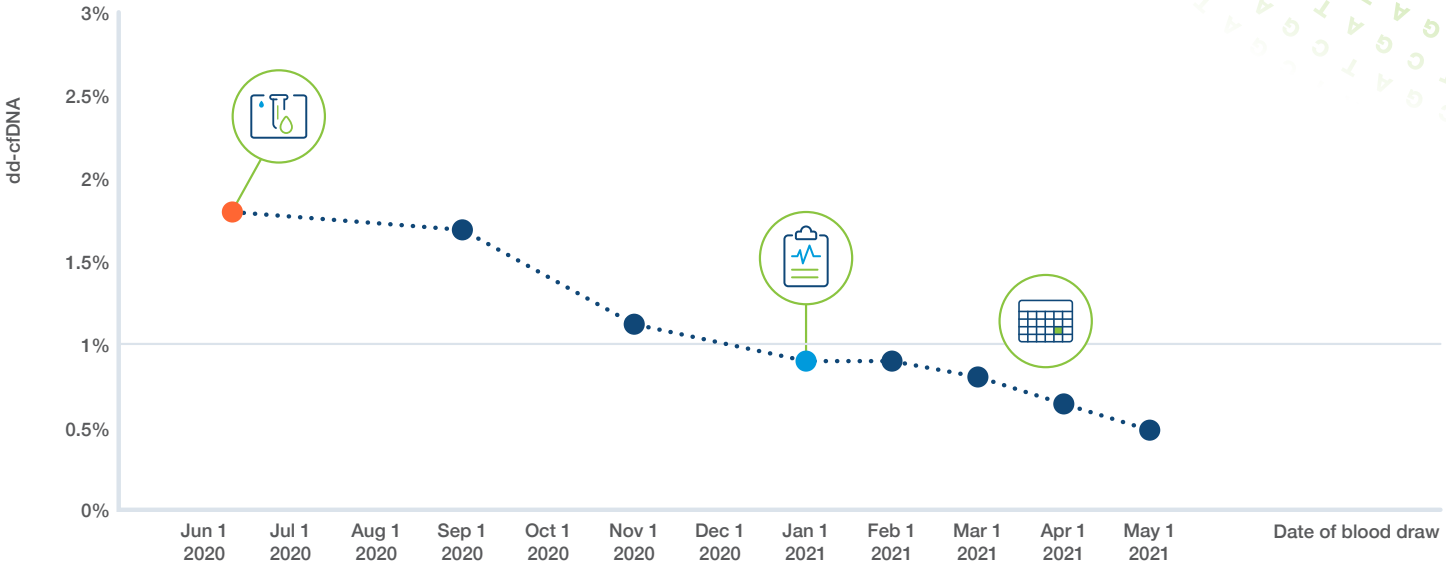
Treatment Plan with Prospera



Monthly assessments with Prospera to determine if results are within range of previously established baseline.

Impact of Prospera Surveillance

John's physician used the Prospera result each month to assess if treatment was working.



Prospera result prompted the physician to **change immunosuppressant management** by increasing the MMF to 1000 mg twice per day.

Prospera results were **decreasing but the Cr was elevated** which was the impetus for the biopsy. The biopsy showed no active rejection.

Physician determined using **Prospera on a monthly basis could supplement Cr** results to reduce the need for biopsies prompted by elevated Cr alone.

KEY TAKEAWAY

Prospera surveillance testing allowed John's doctor to closely track fluctuations from the baseline result, which served as reassurance even though the Cr levels were rising. After a potentially unnecessary biopsy in January 2021, the physician determined future biopsies may be avoidable when Prospera results are available to supplement fluctuating Cr results due to Prospera's strong negative predictive value.[1]

Prospera-powered monitoring for any transplant patient

Let's get started

Explore using Prospera for more frequently across a broader spectrum of patients through these options with Natera:

Request a clinical discussion between you and a local transplant nephrologist to hear why and how they have implemented surveillance monitoring with Prospera. Email **prospera@natera.com** to get connected.

Discuss potential surveillance options for your patient types with our clinical team to incorporate Prospera in your practice. Email **prospera@natera.com** to set up a clinical discussion.

Utilize the Natera physician portal to enable automatic scheduling of routine Prospera standing orders to certain patient cohorts. Reach out to your **Natera Sales Representative** for a demo.

View videos of other physicians and their stories about Prospera:
Visit us **natera.com/prospera-for-any-type**

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Sigdel TK et al. Optimizing detection of kidney transplant injury by assessment of donor-derived cell-free DNA via massively multiplex PCR. J Clin Med. 2019;8(1):19.