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Role of novel biomarkers in kidney transplantation

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Abstract

Clinical application of biomarkers is an integral component of transplant care. Clinicians and scientists alike are in search of better biomarkers than the current serologic (serum creatinine, donor-specific antibodies), urine-derived (urinalysis, urine protein), and histologic ones we now use. The science behind recent biomarker discovery spans across multiple molecular biologic disciplines, including transcriptomics, proteomics, and metabolomics.

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Non-invasive Biomarkers of Acute Rejection in Kidney ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6331461>

Jan 08, 2019 · Here, we provide an overview of the current status on research of **biomarkers** of acute **kidney transplant** rejection in blood and urine. We specifically discuss relatively **novel** research strategies in **biomarker** research, including transcriptomics and proteomics, and elaborate on donor-derived cell-free DNA as a potential **biomarker**.

Cited by: 13

Author: Michael Eikmans, Els M. Gielis, Kristien J...

Publish Year: 2019

Biomarkers for renal transplantation: where are we?

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3794846>

Different types of **biomarkers** for renal allograft monitoring in **kidney transplantation**. Diverse confounding factors such as viral infection, malignancy, surgical complication, and nephrotoxicity from immunosuppressive drugs can affect graft **function**, and even survival.¹ Therefore, specific **biomarkers** were investigated for such varying clinical scenarios of **kidney transplantation**.^{7–9}

Cited by: 5

Author: Fangmin Ge, Qiaoding Dai, Weihua Gong

Publish Year: 2013

Non-invasive Biomarkers of Acute Rejection in Kidney ...

<https://www.frontiersin.org/articles/10.3389/fmed.2018.00358/full> ▾

Keywords: **kidney transplantation**, acute rejection, **transplant** outcome, **biomarker**, non-invasive, transcriptomics, proteomics, cell-free DNA. Citation: Eikmans M, Gielis EM, Ledeganck KJ, Yang J, Abramowicz D and Claas FFJ (2019) Non-invasive **Biomarkers** of Acute Rejection in **Kidney Transplantation: Novel** Targets and Strategies. Front.

Cited by: 13

Author: Michael Eikmans, Els M. Gielis, Kristien J...



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Non-invasive Biomarkers of Acute Rejection in Kidney ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6331461>

Jan 08, 2019 · In kidney transplantation an ideal biomarker should **rapidly, accurately, inexpensively and non-invasively identify subjects with incipient allograft injury**, and **discern the type of injury**. Clinically useful assays have a high sensitivity, specificity, and negative and positive predictive values (NPV, PPV), and a diagnostic area under the receiver curve (AUC) nearing 1.0 (26).

Cited by: 13 **Author:** Michael Eikmans, Els M. Gielis, Kristien J...

Publish Year: 2019

Novel Biomarkers to Monitor and Predict ... - Kidney News

<https://www.kidneynews.org/kidney-news/features/...> ▾

Novel Biomarkers to **Monitor and Predict Rejection** in Kidney Transplantation. By Uday Nori MD. Uday Nori, MD, is affiliated with Ohio State University Wexner Medical Center in Columbus, OH. Despite the substantial successes of kidney transplantation, this field continues to be hampered by the inability to monitor the intensity of the immunosuppressive regimens.

Biomarkers in Kidney Transplantation - ScienceDirect

<https://www.sciencedirect.com/science/article/pii/B978012803014100008X>

Jan 01, 2017 · The field of **transplantation** has an excellent track record of conducting large, well-powered clinical trials with fairly homogenous patient populations. It may be advantageous for future clinical studies to include specimen collection for the express purpose of further defining the **role of biomarkers in transplantation**.

Cited by: 3 **Author:** Alkesh Jani

Publish Year: 2011

PEOPLE ALSO ASK

What is a novel biomarker of renal function? ▾

What is a biomarker for acute kidney injury? ▾

What are the names of the kidney biomarkers? ▾

Kidney Transplantation

A surgical transplant procedure wherein a healthy donor's kidney is implanted into the body of a kidney failure patient.

Type of procedure: Invasive

Recovery time: Can take several weeks

Duration: About 2-4 hours

Hospital stay: Typically a few days

May treat

[See all \(5+\)](#)

Chronic Kidney Disease

Common

Chronic kidney disease is a type of kidney disease in which there is gradual ...

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End Stage Kidney ...

Common

A diagnosis of end-stage kidney disease means that you are in the final stage ...

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What to expect before procedure

- Regular blood test reports should be given to the hospital if a matching kidney donor is unavailable so as to get one immediately when available.
- If a deceased donor's kidney matches, promptly transplant can be done. Preparing in advance for such an urgency is recommended.
- If a family member is a donor, blood tests like blood type, human leukocyte antigen and biopsies are done for both to check the compatibility.
- Once the compatible kidney is available, cardiovascular tests, abdominal ultrasound and gynecological ultrasound (for females) is required to be done.
- Adult family member accompanying is advised for convenience.
- Pack your belongings for at least a week's stay after the transplant.
- Fasting for at least 10 to 12 hours is required before the procedure.