

Background and History

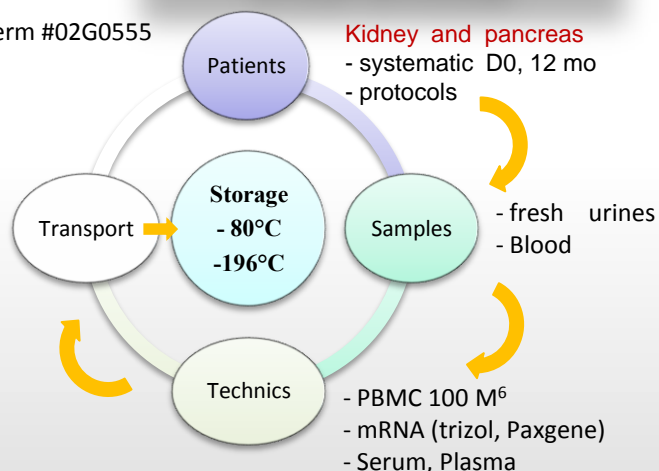
The current DIVAT Data bank was constituted on the basis of a unique investigative network in France, connecting the 6 main renal transplantation centers :

- ✓ 1) Nantes, Paris-Necker, Nancy since 1990, 2) Montpellier and Toulouse since 1998, 3) Lyon since 2008.
- ✓ All patients at these centers who are over 18 years old and who received renal transplants are registered.
- ✓ The DIVAT network is accredited by the CNIL (Commission Nationale de l'Informatique et des Libertés).
- ✓ In 2010, the DIVAT cohort recorded **15631 patients** (16610 transplants).
- ✓ Today, about 50% of the kidney transplants in France are recorded in DIVAT.
- ✓ More than 300 clinical and biological parameters are prospectively collected in the databank at the time of transplant, and then at 3 months, 6 months, and at each anniversary of the transplant (complications, acute rejection, infections, neoplasia, detailed biopsies, post-transplantation anti HLA immunization, etc).
- ✓ Standardized data is collected by technical staff following a common thesaurus.
- ✓ The quality of the DIVAT cohort requires less than 1% of errors or missing data and is ensured by yearly cross-audits between centers



DIVAT Biobank

Inserm #02G0555

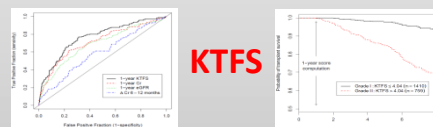


- ✓ Specific Link for **each sample** to the DIVAT-Data base
- ✓ **IBISA Label**
- ✓ **Current Extension** to Necker and Lyon (Centaure)
- ✓ **40 000 Samples** since 2004
- ✓ **Integration of the CRB** of Nantes University Hospital in 2011

DIVAT BioStat

The DIVAT Databank has been coupled, 3 years ago, to a Biostatistics and Epidemiologic unit under the responsibility of Dr Foucher Y (MCU, Nantes University). This unit is associated with the department of Biostatistics of the Faculty of Health Sciences in Nantes University (Pr. Sébille V and Dr Hardouin JB). Numerous partnerships have been established with other epidemiology and biostatistic research teams in France or in Switzerland (Pr. Daurès JP in Montpellier, Pr. Landais P in Paris Necker and Pr. Combesure C in Geneva). This statistical/epidemiologic group adds an active research on fundamental and applied statistic and epidemiology to the usual methodological support and has resulted in several methodological advances during the last three years.

As an example, the clinical data collected from the DIVAT cohort was recently used to construct a composite score one year after transplantation. This Kidney Transplant Failure Score (**KTFS**) was subsequently evaluated for its capacity to predict graft failure at eight years. The KTFS outperformed the classical surrogates with an area under the time-dependent ROC curve at 0.78 (CI95% = [0.73, 0.80]). Validation on an independent databank revealed the same predictive capacity (0.78, CI95% = [0.71, 0.86]). This score could from now be used with enough confidence to screen high and low risk patients for graft loss.



(Y Foucher et al., KI, 2010, N° Patent N° 0959043).

Scientific Programs

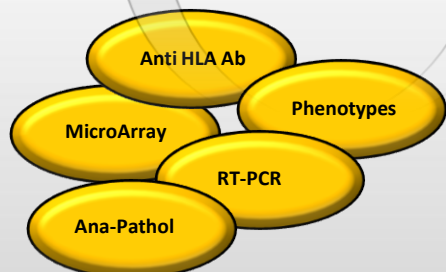
DIVAT Data Bank

Pre-graft Clinical data

GRAFT

Post-graft Clinical data

DIVAT Biocol



INPUT

BIOSTATISTIC MODELING

OUTPUT

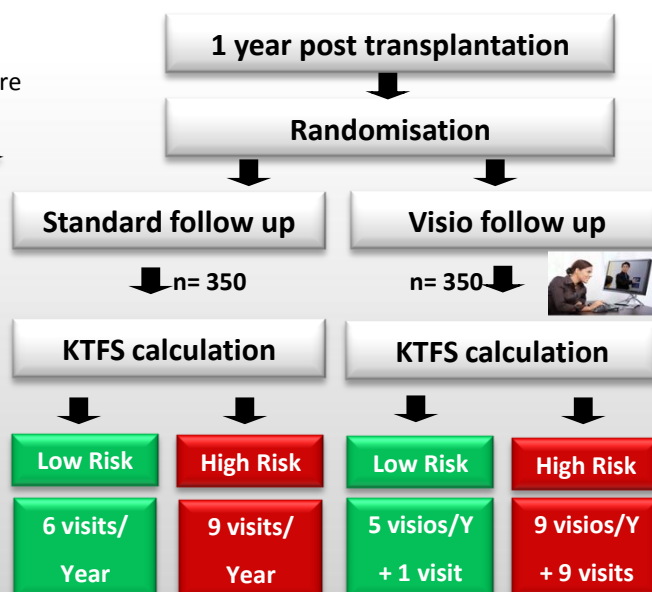
HIGH RISK

LOW RISK

KTFS
N°α

Toward a
Telemedicine
program
according to the
risk of graft failure

Call for ASIP Santé (ARS) and PHRC Nat. 2011



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