



Research Grant Report Form

EVITA study - Epstein-Barr Virus Infection monitoring in renal transplant recipients.
Early identification of increased risk of infection and cancer for individualised immunosuppression.

Name and origin of applicants:

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Purpose of research project granted:

Compared to the general population kidney transplant recipients have a high risk of developing lymphomas (post-transplant lymphoproliferative disease, PTLD). In most of the PTLDs there is a close association to simultaneous Epstein-Barr virus (EBV) infection, either re-activation or a primary infection. EBV IgG negative recipients receiving an EBV IgG positive organ are at highest risk. Part of the PTLD treatment is reduction of immunosuppression. Currently there is no international consensus on how to monitor EBV post-engraftment. There is also a lack of knowledge regarding a possible EBV DNA “threshold” when immunosuppression should be reduced.

Our project aims to estimate the incidence and clinical significance of EBV DNA in both whole blood and plasma (EBV DNAemia) to determine if persistence of EBV DNAemia can predict increased risk of PTLD and also other infections and cancer in renal transplant recipients. The project is designed as a prospective observational multicentre study of systematically repeated measurements of EBV

DNA in 500 de novo renal transplant patients recruited in Norway (Oslo) and Denmark (Aarhus, Odense). Children will also be included. All patients will be followed from day of transplantation and until 2 years post-engraftment. Proteomic analyses will be performed on selected samples to identify also other biomarkers.

The study can facilitate consensus in screening approaches for EBV DNA and definitions of EBV disease and guide interventional studies of pre-emptive therapy against PTLD. We may be able to develop Scandinavian and international guidelines to better prevent PTLD and other infections and cancer after transplantation.

Amount granted:

27.000 €

Report of scientific progress:

The 500 patients have been included at the 3 transplantation centers, and at the end of 2024 all have been followed for the planned two years.

The study has intensified clinical and scientific co-work between the centers, and the PhD student Lene Ugilt did part of her work in Oslo. She will submit her thesis including one-year follow up EVITA results by August 31, 2024.

The first publication based on this grant is to be expected in 2025.
