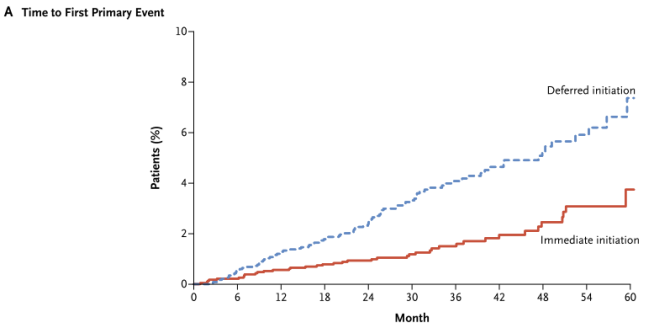
Annual highlight(s)

The first year of the Centre's existence has been focused on establishment of the research infrastructure that is unique within the field of medical research. Normally researchers are focused on research within their own specialty and therefore establishing this centre that builds on the idea that in patients with impaired immune function – irrespective of disease group – there are common pattern that can reliably predict the risk of developing infectious complications, must encompass researchers throughout the hospital, both from clinical and diagnostic departments. This was achieved be establishment of active Executive and Advisory Committees, a number of Scientific Interest Groups meeting regularly and well attended monthly immunological colloquia.

Further establishing a data warehouse containing historic and prospective data on all patients with potential impaired immune function from national, regional and hospital databases on all relevant parameters has created a unique platform for easy access to research data for PERSIMUNE researchers, but also for researchers at Rigshospitalet in general.

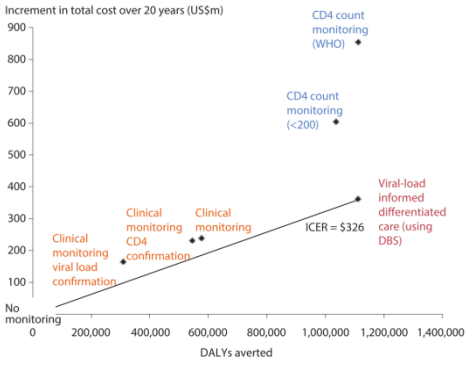
Early versus delayed initiation of HIV therapy

During the International AIDS Conference in Vancouver in July and with simultaneous publication in New England Journal of Medicine, Jens Lundgren presented the ground breaking results of the START study including 4685 HIV+ patients with initial high counts of white blood cells (CD4 count above 500 cells per m^3) documenting a 57% reduction of risk of any serious AIDS-related event, serious non–AIDS-related event, or death from any cause in the patient group starting treatment early. The results were followed by immediate change of the WHO guidelines and subsequently national and regional guidelines throughout the world.



Sustainable HIV treatment in Africa through viral-load-informed differentiated care

There are inefficiencies in current approaches to monitoring patients on HIV therapy in sub-Saharan Africa. Patients typically attend clinics every 1 to 3 months. The clinic costs are comparable with the costs of the drugs themselves and white blood cell (CD4) counts are measured every 6 months, but patients are rarely switched to second-line therapies if cell counts decrease. In contrast to the CD4 count, measurement of the level of HIV virus (RNA) in plasma (the viral load) provides a direct measure of the current treatment effect. Viral-load-informed differentiated care is a mean of tailoring care so that those with suppressed viral load visit the clinic less frequently and attention is focussed on those with unsuppressed viral load. We used modelling to synthesize evidence and found that viral-load-informed differentiated care using dried blood spot sample testing was cost-effective and a recommended strategy for patient monitoring, although further empirical evidence as the approach is rolled out would be of value (Nature).



Development and Validation of a Risk Score for Chronic Kidney Disease in HIV Infection

Chronic kidney disease (CKD) is a major health issue for HIV-positive individuals, associated with increased morbidity and mortality. Studying 17,954 HIV+ individuals with normal kidney function (baseline eGFR>60 ml/min/ $1.73m^2$) revealed that both traditional and HIV-related risk factors were predictive of CKD. These factors were used to develop a risk score for CKD in HIV infection, externally validated, that has direct clinical relevance for patients and clinicians to weigh the benefits of certain HIV drugs against the risk of CKD and to identify those at greatest risk of CKD (PLOS Medicine, risk tool at www.cphiv.dk).