



Fighting cancer using the immune system

2013

The Center for Cancer Immune Therapy (CCIT) is working at full throttle to investigate how our own immune system can be used to fight cancer. The department, which was set up in 2006, is the only one of its kind in Denmark and in just a few years has distinguished itself on the international scene. Professor Inge Marie Svane at Herlev Hospital explains how the department has achieved a rare breakthrough in the fight against aggressive melanoma – a disease that used to be tantamount to a death sentence.

What is the objective of your work – and how do patients stand to benefit?

- Our ultimate goal is to improve cancer treatment for our patients. We are the only hospital in Denmark where research is conducted exclusively on cancer immunology and immunotherapy, i.e. research on how the immune system acts and functions and how the immune system can be deployed against cancer cells. We concentrate very much on building bridges between basic and clinical research, which means that the most up-to-date knowledge can be implemented in our treatments as fast as possible. This gives us a permanent edge and also gives our patients the chance to participate in trials with the latest treatments. We work with the development of cancer vaccines and different forms of cell therapy. For example, we are the first centre in Europe to offer T cell therapy, which involves using a patient's T cells to fight cancer metastases and to kickstart the immune system.

How do you work – and who are your partners?

- We attach great importance to working across disciplines. In other words our centre employs both healthcare and scientific staff, and the management team comprises, for example, a doctor, a chemical engineer and a biologist. In this way we complement each other and engage in a lively professional exchange. Furthermore we work in cooperation with a wide range of partners from the health service and other institutions, with hospitals and researchers from all over the globe contributing to new know-how. We also work successfully in partnership with the medical industry, both in the form of clinical trials, but also on fundamental research. This enables us to monitor the entire process from the laboratory to the patient to ensure that the latest knowledge is utilised in actual treatment for patients and that the results of the treatment flow back to the laboratory.

What has been your greatest achievement in recent years?

- We are incredibly proud to have created a research environment that enjoys national and international recognition so soon after its establishment in 2006. We are right at the cutting edge of T cell therapy in Europe, which has revolutionised the treatment of melanoma. By removing immune system cells from the tumours of cancer patients, multiplying and 'strengthening' them in a laboratory, we are now able to transplant them into the patient so that they can destroy cancer cells and, in some cases, cure the patient.

What do you hope will be the next step?

- We hope in time to be able to expand the treatment so that it can be used not only on melanoma patients, but also against other types of cancer. We are also aiming for large-scale international trials, so that T cell therapy will become a standard treatment in the future. It's worth remembering that when we launched the centre in 2006, there was no effective treatment for melanoma and that we can now hopefully look forward to curing some patients – we have seen tangible effects of treatment on half of tested patients. Moreover, we are also developing different forms of cancer vaccines as another weapon against cancer metastases.

Why they received the award

The primary objective of Center for Cancer Immune Therapy is to develop immunotherapy for the treatment of cancer. It is the only place in Denmark that focuses fully on cancer immunology and immunotherapy. CCIT was formed in 2006 and is a young, compact, highly specialised and dynamic environment. It works closely with clinical departments to speedily implement new research results, and the centre exemplifies a clear, direct link between research and patients.

The Global Excellence review committee underlined that CCIT stands out as a strong, innovative environment highly focused on its continuing development potential. In just a few years, the department has built up fruitful cooperation at national as well as international level and excels in particular in the implementation of results, innovation and cooperation.

Facts

Located at Herlev Hospital, the Centre for Cancer Immune Therapy has a mixed scientific and technical staff of 25. The department has had over 200 patients since 2006. It also cooperates with the pharmaceutical industry on testing immunotherapy, which has benefited approximately 75 patients.

Contact person

Professor Inge Marie Svane
inge.marie.svane@regionh.dk

Further information

www.regionh.dk/globalexcellence