English laymen summary
Dansk Forskningscenter for Lungekræft

Small cell lung cancer (SCLC) is an aggressive form of lung cancer with a poor prognosis. Many patients with SCLC harbor anti-neural antibodies, because the immune system can develop these in response to antigens, which are abnormally expressed in SCLC cells. In high titers, these SCLC-associated autoantibodies are strongly positively correlated with paraneoplastic neurologic autoimmune diseases, but they can also be present in SCLC patients without autoimmune disease, in lower titers. Crucially, the presence of these SCLC-associated antibodies can precede the identification of a tumor.

The overall goal of this project is to evaluate the use of anti-neural antibodies in plasma as biomarkers for early detection of small cell lung cancer. We also aim to clarify, whether there is any correlation between SCLC related morbidity and mortality, and the presence of anti-neural antibodies in a person who has not yet received a diagnosis of cancer.

This project is a retrospective study, which utilizes blood samples from participants in the Danish Blood Donor Study (DBDS). In relation to each blood donation, plasma samples are drawn and stored. DBDS participants permit the use of both historical and future plasma samples for research. Hence, there are multiple specimens available from each donor, which were taken over a large timespan, and stored for retrospective investigation. Although blood donors are healthy at the time they are included in DBDS, some of them will eventually become ill at a later point in time. DBDS participants with SCLC will be identified through the Danish health registries. The samples, which were drawn from these donors prior to diagnosis, will be tested for anti-neural antibodies at the Department of Clinical Immunology, Odense University Hospital.

On behalf of the research group
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