



Fighting Bladder Cancer with Natural Killer Cells

- A collaboration between XNK Therapeutics and the Karolinska University Hospital -

XNK Therapeutics and the Karolinska University Hospital are collaborating to evaluate the autologous Natural Killer (NK) cell product XNK03 in locally advanced or metastatic urothelial cancer. The American Cancer Society expects there to be over 80,000 new cases of bladder cancer in the US alone in 2023. We asked **Dr. Anders Ullén, Professor and Senior Physician at Karolinska Institutet and leader of the research group at the Karolinska University Hospital**, about the study.

What are your expectations for this study?

"The ongoing study is a non-interventional, prospective, proof-of-concept study in patients with advanced muscle-invasive bladder cancer. Overall, the study aims to clarify if it is possible to isolate and ex vivo expand autologous NK cells from these patients before and after exposure to platinum-based chemotherapy. We also aim to evaluate the cytotoxicity of these NK cells against urothelial tumour cells lines in vitro. We hope for positive results thus paving the way for the next step which is an interventional prospective clinical trial combining autologous NK cells therapy with standard treatment against advanced urothelial cancer."

What are your thoughts of working with an autologous NK cell product?

"Working with this autologous NK-cell product as a potential key component in a novel combined immunotherapeutic approach is highly motivating considering the short overall survival and clinical unmet needs for patients with advanced bladder cancer."

How do you see the future of immunotherapy treatments for advanced bladder cancer patients?

"Immunotherapy has dramatically changed the treatment arena for this category of patients during the last years with the introduction of several checkpoint-inhibitors of the PD1/PDL1 axis, at different phases of the disease. The clinical benefit and treatment responses however varies significantly and even though we observe some patients with dramatic and durable responses, the overall response-rate is limited to below one third of the patients."

"Novel and more efficient treatment concepts overcoming primary and acquired resistance to currently approved checkpoint-inhibitors are therefore clearly highly warranted. Combining cell therapy with checkpoint inhibitors could further activate the immune system and contribute to the development of more effective treatment strategies. This is an exciting and active research area. Another great challenge for the scientific community is to identify treatment predictive biomarkers for these immunotherapies to individualize and maximise the clinical benefit for each patient."

