

## **Dr. Niklas Klümper, urologist at UKB, receives Research and Innovation Award for Urological Oncology for scientific findings on new cancer drug**

Dr. Niklas Klümper, Resident at the Department of Urology and working group leader at the Institute of Experimental Oncology at the University Hospital Bonn (UKB), was awarded the Research and Innovation Prize for Urological Oncology of the German Society of Urology e.V. in recognition of his outstanding scientific uro-oncological work.

The 31-year-old is investigating which patients with metastatic bladder cancer benefit from a new form of oncological therapy, the antibody-drug conjugates, in order to be able to use these promising drugs in a more targeted manner. His new findings have already been published in an article in the renowned oncology journal *Clinical Cancer Research*.

With his research results, he already won the prestigious C. E. Alken Prize at the end of last year. Congratulations!

Chemotherapies used to treat aggressive advanced and metastatic urothelial carcinoma are often associated with many side effects. Recently, a new class of drugs called antibody-drug conjugates has become available for patients with metastatic urothelial carcinoma. Recently, Enfortumab vedotin was approved by the EMA. Antibody-drug conjugates consist of an antibody directed against tumor cells and linked to a highly toxic chemotherapeutic agent. This combines the selectivity of targeted antibody therapy with the cytotoxic potential of conventional chemotherapy, representing an innovative and novel oncology therapeutic approach.

### **Use of antibody-drug conjugates**

The Department of Urology at UKB is also using this new drug to treat patients with metastatic urothelial carcinoma. "Enfortumab vedotin is a very promising drug for the treatment of patients with metastatic urothelial carcinoma. However, we still understand little about who really benefits from this therapy, which can also cause severe side effects such as skin irritation or nerve disorders," says Dr. Niklas Klümper, assistant physician at the Department of Urology at UKB.

### **Targeted therapy does not reach all tumor cells**

"We were able to show for the first time that the surface molecule for targeted delivery of the chemotherapeutic agent in metastatic urothelial carcinoma is often diminished or absent. Lack of this surface target, which can be detected by conventional immunohistochemistry, is associated with resistance to Enfortumab vedotin, so these patients may be better treated with alternative therapies. Our work is therefore a step toward precision oncology for patients with metastatic urothelial carcinoma," Dr. Klümper said. His goal is to ensure that these potentially toxic drugs are only used in patients who can also benefit from the therapy.

### **Publication:**

Niklas Klümper, et al, "Membranous NECTIN-4 expression frequently decreases during metastatic spread of urothelial carcinoma and is associated with enfortumab vedotin resistance."

<https://aacrjournals.org/clincancerres/article/doi/10.1158/1078-0432.CCR-22-1764/711754/Membranous-NECTIN-4-expression-frequently>