**PRESS RELEASE**

**New Immunotherapy for Small Cell Lung Cancer Impresses in Phase II Clinical Trial**

**Karl Landsteiner University of Health Sciences important study center. Data published in *New England Journal of Medicine*.**

**Krems (Austria), 23. November 2023: Results from a recently published phase II clinical trial of an immunotherapeutic agent (Tarlatamab) for the treatment of small cell lung cancer have demonstrated anti-tumor activity and a promising extension of overall survival in patients. The international study (DeLLphi-301) was conducted at 56 clinical centers in 17 countries. The University Hospital Krems of the Karl Landsteiner University of Health Sciences (KL Krems) played a particularly active role, treating numerous patients from Austria, Switzerland and the Czech Republic. Tarlatamab was evaluated as a possible treatment alternative for patients previously considered to be beyond treatment – and the results now available are promising in this respect.**

Small cell lung carcinoma is a serious disease associated with poor survival. Although most patients respond to first- and second-line treatment, the disease usually progresses within a few months. However, options for subsequent third-line treatment are very limited as there are currently no approved drugs. The clinical evaluation of a new immunotherapeutic agent from Amgen Inc. offers hope. After a successful phase I trial, the results of the subsequent phase II trial were eagerly awaited – and have now been published in *New England Journal of Medicine*.

**Successful Study**

"In fact, the analysis of this global study with 220 patients showed that with a dosage of 10 mg Tarlatamab, anti-tumor activity was initiated and maintained in 40% of patients treated in this way," explains one of the principal investigators of the study, Dr. Sabin Handzhiev from the Department of Pneumology at the University Hospital Krems, one of the education- and research sites of KL Krems. The analysis also showed a median progression-free survival of 4.9 months and a median overall survival of 14.3 months. Dr. Sabin Handzhiev continued: "To put these results in perspective, it is important to understand that patients with the current third-line treatment in clinical trials have a very poor prognosis. Only about 20 percent of them respond to any third-line treatment at all – and median overall survival is well below six months. Tarlatamab is a promising alternative, especially since 58% of patients responded to the 10 mg dose for at least 6 months.”

**Targeted Therapy**

Tarlatamab works by directing the body's own immune cells (T cells) to small cell lung cancer cells leading to the destruction of the cancer cells. Tarlatamab is a monoclonal antibody with two binding sites – one that binds to a molecule on the surface of T cells (CD3) and one that binds to a molecule specifically found on the surface of small cell lung cancer cells (DLL3). Tarlatamab thus specifically binds the immune cell to the cancer cell, which is then destroyed. Dr. Handzhiev comments: "DLL3 is an interesting therapeutic target for patients with small cell lung cancer because over 85% of patients have this surface molecule on the cancer cells, while its expression in normal cells is minimal.”

The study also evaluated a 100 mg dose, which proved to be less beneficial in terms of effect and side effects compared to the 10 mg dosage. Overall, the results of the DeLLphi-301 study demonstrate the potential of antibodies that bind T cells to cancer cells for the treatment of a common solid tumor. Further studies to translate this potential into clinical application are planned or already underway. KL Krems will also actively support these studies and fully utilize its expertise in molecular oncology for the benefit of patients.

Images available on request

**Original publication**: https://kris.kl.ac.at/en/publications/tarlatamab-for-patients-with-previously-treated-small-cell-lung-c

**About Karl Landsteiner University of Health Sciences (2023)**

At Karl Landsteiner University of Health Sciences (KL) in Krems, the comprehensive approach to health and disease is a fundamental objective for research and teaching. With its Europe-wide recognized bachelor-master system, KL is a flexible educational institution that is tailored to the needs of students, the requirements of the labor market as well as the scientific challenges. Currently KL hosts about 700 students in the fields of medicine and psychology. The three university hospitals in Krems, St. Poelten and Tulln as well as ion beam therapy and research centre MedAustron in Wiener Neustadt and the Psychosomatisches Zentrum Waldviertel in Eggenburg ensure clinical teaching and research at the highest quality level. In research, KL focuses on interdisciplinary fields with high relevance to health policy - including medical technology, molecular oncology, mental health and neuroscience, as well as water quality and related health aspects. KL was founded in 2013 and accredited by the Austrian Agency for Quality Assurance and Accreditation (AQ Austria). [www.kl.ac.at/en](http://www.kl.ac.at/en)

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