



Enumeration and molecular characterization of circulating tumor cells in prostate cancer patients using the GILUPI CellCollector®

GILUPI GmbH announces the release of clinical data from a prostate cancer setting in August 2016. The scientific paper demonstrate the isolation of circulating tumor cells (CTCs) from blood of prostate cancer patients with GILUPI CellCollector®.

Liquid biopsy - isolating and analyzing circulating tumor cells (CTCs) from the blood of prostate cancer patients - can provide additional information on prognosis of patients, treatment efficacy and molecular tumor evolution. Dr. Gerit Theil and further researcher from the Martin Luther University Halle-Wittenberg wanted to investigate the use of the GILUPI CellCollector® - in a proof of concept study. After *in vivo* isolation, CTCs underwent enumeration and characterization using molecular methods.

The researcher tested the functionality of the GILUPI CellCollector® in a preclinical step. They studied blood samples of 43 prostate cancer patients by applying the medical devices *ex vivo*.

Detection of CTCs in all tumor stages could be shown. The mean CTC count was 4.6 CTCs in patients with localized prostate cancer, 16.8 CTCs in patients with locally advanced prostate cancer, and 26.8 CTCs in patients with metastatic prostate cancer. More importantly, it could be shown that there was a significant difference in the cancer-specific survival rates. Patients with CTC counts < 5 CTCs had significant longer survival rates than patients with more than 5 CTCs. Furthermore, Theil *et al.* demonstrated that the captured CTCs could be characterized on a molecular level. The investigators detected tumor-associated transcripts of epidermal growth factor receptor (EGFR) and prostate-specific membrane antigen (PSMA) in patients with metastatic PCa in 42.8% and 14.3% of the analyzed samples, respectively. The above data was generated to demonstrate to the Federal Institute for Drugs and Medical devices (Germany, BfArM) the safe and effective use prior to *in vivo* application of the GILUPI CellCollector® in this indication. Further studies are ongoing to validate this finding as further diagnostic tool in the treatment of patients with prostate tumors.

The scientific paper entitled "The Use of a New CellCollector to Isolate Circulating Tumor Cells from the Blood of Patients with Different Stages of Prostate Cancer and Clinical Outcomes - A Proof-of-Concept Study." by Theil *et al.*, was published in PLoS One., 11(8):e0158354. doi: 10.1371/journal.pone.0158354. eCollection 2016. (1th August 2016).

About GILUPI GmbH

GILUPI GmbH is a medical device company founded in 2006 with focus on the development and production of innovative products for the *in vivo*



isolation of rare cells from the blood circulation. Currently, the main focus of GILUPI is the diagnostics market for cancer.

Individual oncological targeted therapies will become more and more important in tomorrow's personalized medicine. The identification of the right drug for the specific patient is the upcoming challenge. To address this medical need, the application of the GILUPI CellCollector[®] enriches rare cells (circulating tumor cells - CTCs) by directly "fishing" them in the patient's bloodstream. By using special diagnostic analyses, these isolated cells can be characterized and/or analyzed at a molecular level.

The GILUPI CellCollector[®] is the first *in vivo* CTC isolation product worldwide that is CE approved.

For further information visit www.gilupi.com