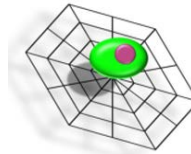


Newsletter CTCTrap



The CTCTrap consortium aims to develop and test technology to identify tumor cells in blood of all breast and prostate cancer patients with disseminated disease. Realization of this ambitious goal will enable a real-time liquid biopsy for the selection of the most appropriate therapy.

A first major step was made by enabling the clinical sites participating in the consortium to investigate the presence of CTC that are not detected by CellSearch (only clinically validated system for CTC enumeration). The sites were equipped with an Automated Sample Collection Device (ASCD) to collect blood discarded by the CellSearch system, a pump with disposable filtration units to collect CTC based on size and a staining holder to stain the cells collected onto a microsieve slide (**Figure 1**). A protocol was developed to stain the collected cells on the microsieve slide. **Figure 2** shows a stained area of a microsieve in which a tumor cell was identified. After the sites have demonstrated proficiency in the use of these tools, testing can commence on blood samples of metastatic breast and prostate cancer patients.

Further efforts to improve the reagents used to identify the CTC are ongoing as well as the tools to interrogate the genetic contents of the CTC. The gathered knowledge and tools will be used to isolate and characterize the tumor cells trapped with the CTC apheresis device (CTCTrap). After demonstration of proof of principal in small scale devices efforts have started to upscale the devices to those that can be used in the clinic.

The CTCTrap consortium is developing a healthcare implementation plan and has a separate work package devoted to the health economic impact of CTCTrap. A first study has identified the potential added value of CTCTrap diagnostics along the diagnostic track.

Currently, the team is preparing a meeting with the CTCTrap health economics advisory board parallel to the third annual symposium on personalized medicine and health economics in Luxembourg (November, 13 and 14, 2014). The symposium also schedules a session about paying for personalized medicine, which will feature payers and public authorities.



Figure 1 ASCD, pump with disposable filtration unit and staining holder with microsieve slide for detection of CTC discarded by the CellSearch system

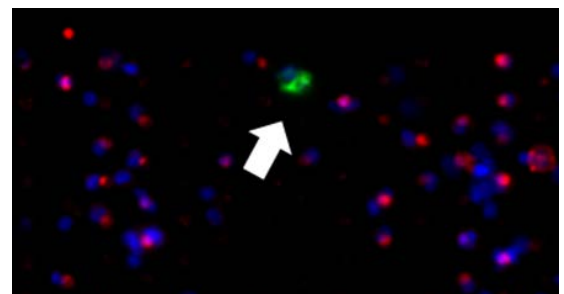


Figure 2 Cell collected and stained on microsieve slide . Arrow points at a CTC depicted green, other cells colored red and blue are white blood cells

CTCTrap consortium



For more information on CTCTrap please visit our website: www.tnw.utwente.nl/ctctrap or contact mcbp@tnw.utwente.nl

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