maintrac®

maintrac® Cell Counting

Therapy Monitoring

maintrac®

What is maintrac®?

maintrac® is a highly sensitive, minimally invasive laboratory test, that enables the detection of living **circulating tumor cells in the blood (Liquid Biopsy).** The test can be used **before, during and after therapy**[1]. Circulating tumor cells can thus be used as a **biomarker**[2].

Tumor cells can detach from the primary tumor or metastases at very early stages and can enter the bloodstream. These cells are called **circulating epithelial tumor cells** (CETCs/CTCs). They are responsible for the **recurrence of the disease**. Systemic therapy is designed to eliminate circulating tumor cells. During the course of disease, the number and characteristics of circulating tumor cells may change. The **maintrac®** method is **highly sensitive** for the **early detection** of these changes[3].

Approximately 90% of all tumors are of epithelial origin. Using **maintrac® Liquid Biopsy**, circulating tumor cells can be detected in a **blood sample** due to the expression of the surface protein EpCAM[4].

maintrac® Liquid Biopsy can be used for all **solid epithelial tumors**[1,5,6].

maintrac® Cell Counting

maintrac® Cell Counting makes it possible to **monitor therapy** and **directly observe the activity of the remaining tumor burden** (minimal residual disease) in patients with primary and metastatic tumors prior to the detection by imaging methods[7].

Repeated analysis with **maintrac® Cell Counting** (every 3-6 months), captures the dynamics of the number of circulating tumor cells.

The changes of **maintrac®** cell numbers over time allows **monitoring of the therapy** (effectiveness) as well as **monitoring of tumor activity** during **follow-up, after the end of the therapy** and **in the metastasized situation**.

maintrac® Cell Counting provides an additional tool for personalized therapy.

Results to date show[6]:

- **Decreasing cell numbers** under systemic therapy indicate a **positive response to therapy**.
- If **cell numbers remain constant** with or without therapy, it can be concluded that the **tumor dynamics** is currently **low**.
- **Repeated increase** of cell numbers indicate an **increased risk of recurrence**.

maintrac® Quality Features

- **Highly sensitive** detection of living circulating tumor cells without enrichment steps[1]
- **Quantitative** determination of living tumor cells from peripheral blood[3]
- **Fast** and **reproducible**[1]
- Performed in a DIN EN ISO 15189 **certified laboratory**, accredited by DAkkS (ILAC approved)[8]

Additional examinations

- maintrac® **Therapeutic Substance Testing**
- maintrac® **Therapy Relevant Tumor Cell Characteristics**
- stemtrac® **Tumorspheres**

Requisition

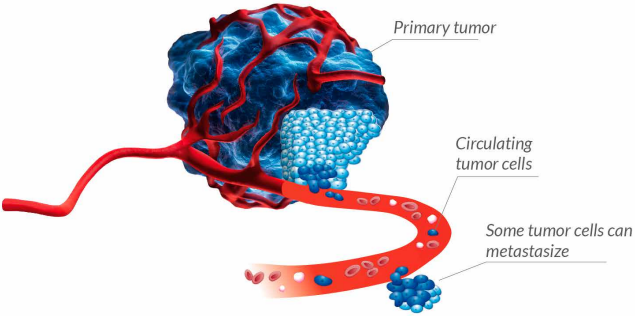
Shipping boxes including the lab request form can be ordered free of charge online at:
www.maintrac.de/en/order/order-maintrac-boxes

Only 15 ml EDTA blood is required for the examination.

Transmission of Results

The results are usually sent **digitally** (DSGVO-compliant) or **by post** within one week.

Your competent partner in oncology.



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Costs

At present, the maintrac® diagnostics are not reimbursed by the statutory health insurances, but are a self-pay service. Whether and to what extent privately insured patients can receive reimbursement from their insurance company must be clarified with their own private health insurance company.

[1] Pachmann, Katharina et al. "Standardized quantification of circulating peripheral tumor cells from lung and breast cancer." Clinical chemistry and laboratory medicine vol. 43,6 (2005): 617-27. doi:10.1515/CCLM.2005.107
[2] Pachmann, Katharina et al. "Assessing the efficacy of targeted therapy using circulating epithelial tumor cells (CETC): the example of SERM therapy monitoring as a unique tool to individualize therapy." Journal of cancer research and clinical oncology vol. 137,5 (2011): 821-8. doi:10.1007/s00432-010-0942-4
[3] Pizon, M et al. "Heterogeneity of circulating epithelial tumour cells from individual patients with respect to expression profiles and clonal growth (sphere formation) in breast cancer." Ecancermedicalscience vol. 7 343. 23 Aug. 2013, doi:10.3332/ecancer.2013.343
[4] Gasent Blesa, J M et al. "Circulating tumor cells in breast cancer: methodology and clinical repercussions." Clinical & translational oncology : official publication of the Federation of Spanish Oncology Societies and of the National Cancer Institute of Mexico vol. 10,7 (2008): 399-406. doi:10.1007/s12094-008-0222-9
[5] Gold, Madeleine et al. "Monitoring of circulating epithelial tumor cells using the Maintrac® method and its potential benefit for the treatment of patients with colorectal cancer." Molecular and clinical oncology vol. 15,4 (2021): 201. doi:10.3892/mco.2021.2363
[6] Pachmann, Katharina et al. "Circulating epithelial tumor cells as a prognostic tool for malignant melanoma." Melanoma research vol. 28,1 (2018): 37-43. doi:10.1097/CMR.0000000000000407
[7] Pachmann, Katharina et al. "Monitoring the Response of Circulating Epithelial Tumor Cells to Adjuvant Chemotherapy in Breast Cancer Allows Detection of Patients at Risk of Early Relapse." Journal of Clinical Oncology vol. 26,8 (2008): 1208-1215. doi: 10.1200/JCO.2007.13.6523
[8] The maintrac method is a method produced in the Dr. Pachmann laboratory (in-house production). It is used exclusively in the Dr. Pachmann laboratory and is therefore not marketed.

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