Dr. Kübler GmbH

"CANCER IS A MOLECULAR ACCIDENT
THAT OUGHT TO BE AVOIDED"

Biomarker-Analytics
Individualization of Cancer Diagnostics and Therapy

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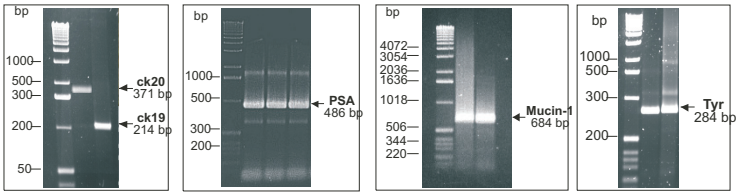
Cancer is a disease of uncontrollable stem cells. The Dr. Kübler GmbH has a patented system available for isolation, quantification and molecular characterisation of these cells. Cancer stem cells (CSC) already circulate in the bloodstream before a primary tumour gets visible; that means revolution in prophylaxis, diagnosis and therapy. The number of CSC circulating in the bloodstream correlates with the evolution and stage of the disease. The molecular characteristics of these uncontrollable stem cells is decisive in the choice of the appropriate therapeutic agent (kinase inhibitors, monoclonal antibodies, natural killer cells, HSP proteins). The technologies of personalized medicine already exist today.[1-6]

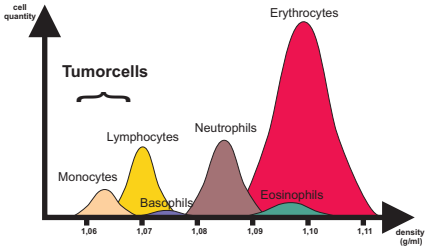
RT-PCR

The RT-PCR (reverse transcriptase-polymerase chain reaction) allows a qualitative detection of circulating epithelial cells in the bloodstream.



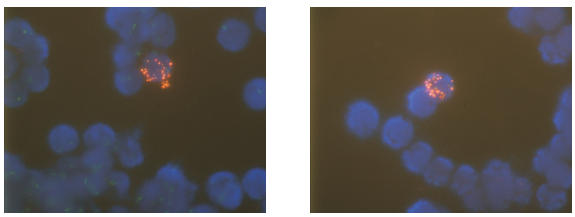
Diagnostic Apheresis

The Diagnostic Apheresis enables a quantitative extraction of circulating Cancer Stem Cells from the bloodstream and their complete molecular-pathological characterization without any biopsy.[1],[4],[8]



FISH

The application of FISH-Analytics (fluorescence in situ hybridisation) allows a single cell detection of cells with an amplified c-erb/B2 gene and consequently a quantification of these cells.[7]



c-erb/B2 gene amplification

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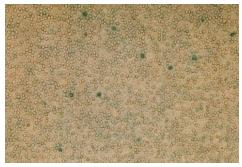
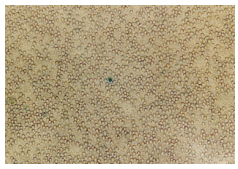
ELISA

A specifically developed ELISA test (enzyme linked immunosorbent assay) also provides a single cell detection and consequently a quantification. Furthermore an expression profile of curculating tumor cells is created by determination of different biomarkers.[8]



c-Met positive cells

Oct-3/4 positive cells



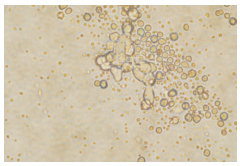
c-erb/B3 positive cell

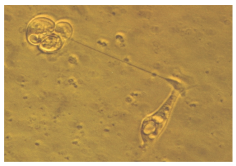
Prognostic und predictive BIOMARKERs:

myc	CD44v5/v6
ras	VEGF
p53m	Akt/mTOR
EGFR	Indolamindeoxygenase
erb/B2	Survivin
erb/B3	Oct-3/4
MDR	etc.
c-Met	

Therapeutic consequences

A combined immunotherapy consisting of Natural Killercells (NK cells) and heat-shock proteines can specifically attack and destroy Cancer Stem Cells.[8]





NK cells

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Weiterführende Literatur unter www.kueblergmbh.com