



Breast Cancer
Analysis of a
15 year data set

01/2021



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Summary of data collection of more than 50.000 Test Analyses over 15 years. Dynamic profiling (>3 Test analyses) were conducted in more than 4000 patients. Detailed clinical information were available in 1325 patients with breast cancer.

Note: providing detailed clinical data would lead to a more detailed and better corellated dynamic risk profiling

The upward trend of the number of CTC/CETCs (Circulating Tumour Cells) **in repeated testing** is correlated with an **increased risk of a recurrence.**

The same applies **if the number of CTC/CETCs more than doubles with repeated testing.**

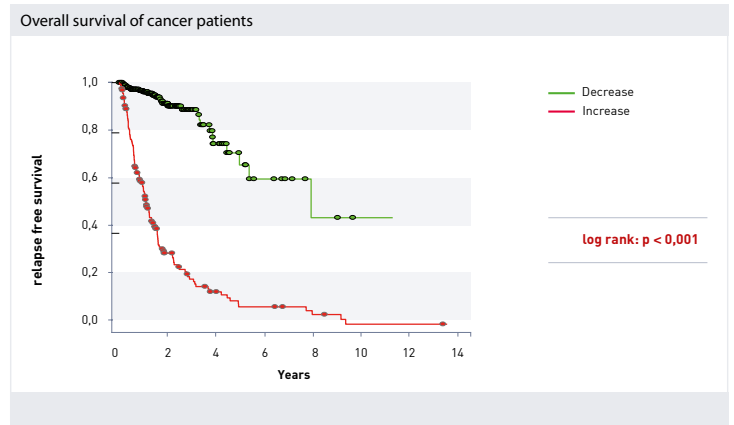
Analyses of all cancer patients

Total N = 1325

Decreasing CTC/CETCs (N=702)
median RFS (Relapse Free Survival): **8.8 years**

Increasing CTC/CETCs (N=632)
median RFS (Relapse Free Survival): **1.004 years**

Result is statistically highly significant:
 $p < 0.001$, hazard ratio 8.8



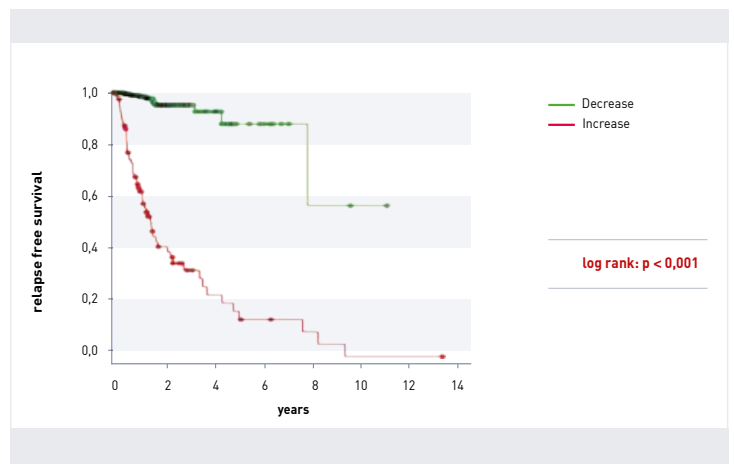
Analyses of Primary Breast Cancer

Total N = 362

Decreasing CTC/CETCs (N=276)
median RFS could not be calculated
less than 50% relapses occurring during the observation period

Increasing CTC/CETCs (N=86)
median RFS (Relapse Free Survival): **1.6 years**

Result is statistically highly significant:
 $p < 0.001$, hazard ratio 18,113



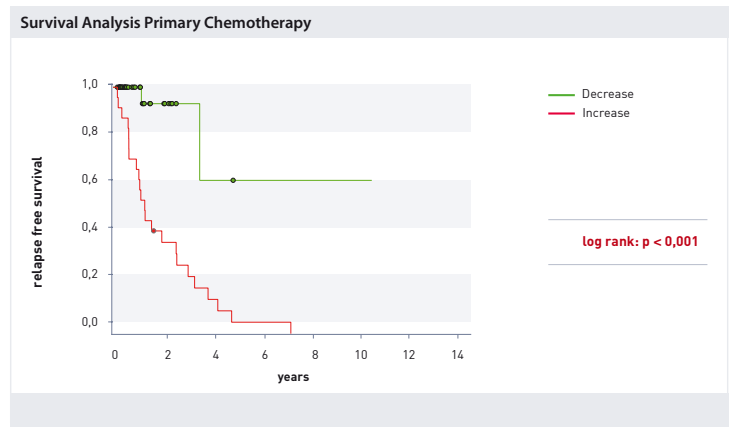
Analyses of Primary Breast Cancer, with adjuvant Chemotherapy

Total N = 69

Decreasing CTC/CETCs (N=39)
median RFS (Relapse Free Survival): **11.31 years**

Increasing CTC/CETCs (N=30)
median RFS (Relapse Free Survival): **1.24 years**

Result is statistically highly significant:
 $p < 0.001$, hazard ratio 11



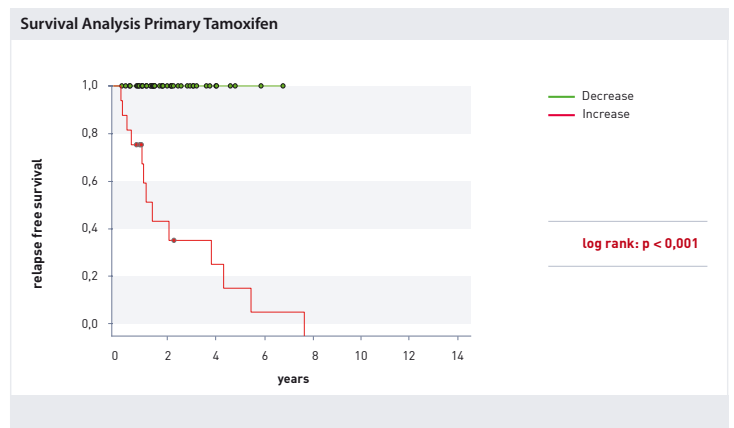
Analyses of primary breast cancer, on Tamoxifen

Total N = 65

Decreasing CTC/CETCs (N=48)
NO relapses detected! RFS could not be calculated.

Increasing CTC/CETCs (N=17)
median RFS (Relapse Free Survival): **1.58 years**

Result is statistically highly significant:
 $p < 0.001$, hazard ratio not analyzable



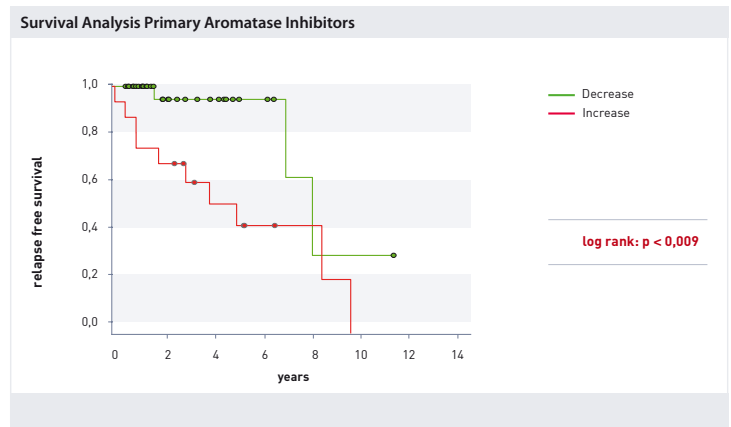
Analyses of Primary breast cancer, on AIs

Total N = 50

Decreasing CTC/CETCs (N=33)
median RFS (Relapse Free Survival): **7,94 years**

Increasing CTC/CETCs (N=17)
median RFS (Relapse Free Survival): **4,9 years**

Result is statistically highly significant:
 $p < 0.009$, hazard ratio 5



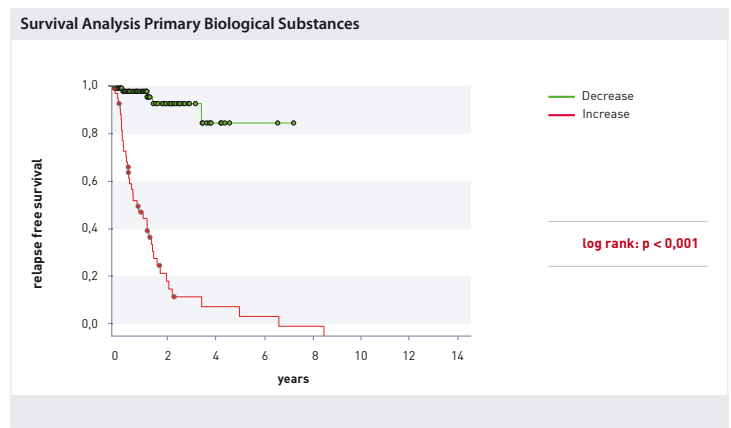
Analyses of Primary breast cancer, treated with biological substances

Total N = 135

Decreasing CTC/CETCs (N=85)
median RFS could not be calculated.
less than 50% relapses occurred during,
the observation period.

Increasing CTC/CETCs (N=50)
median RFS (Relapse Free Survival): **1.06 years**

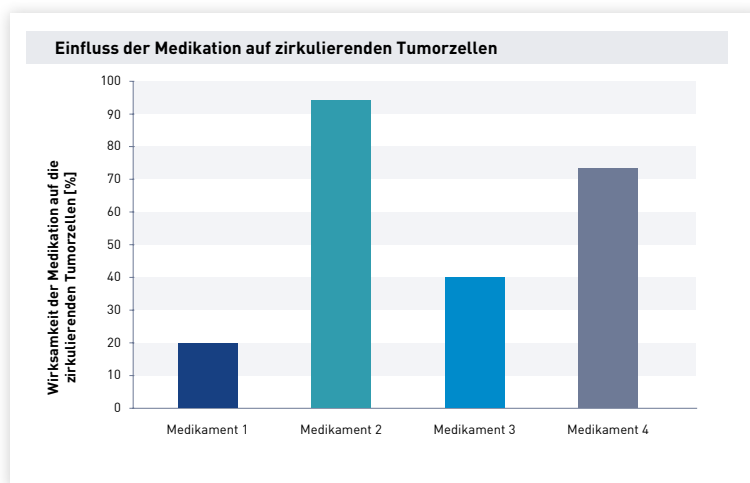
Result is statistically highly significant:
 $p < 0.001$, hazard ratio 21.7



What to do when number of CTC/CETCs increases:

CTC/CETCs can be interrogated for the sensitivity or resistance to a chosen therapy. This can help physicians and patients to decide on appropriate treatment.

The in-vitro analysis includes the direct exposure of living CTC/CETCs to a therapeutic concentration of the chosen substance. The direct cytotoxic effect is calculated by the % of tested living cells who have died during the test phase. This test can be done at any time before, during and after a therapy.



The drug with the greatest effect on the living circulating tumor cells is also the most likely to act as a therapy.

In this case, drug 2 has the highest probability of effectiveness.

Dynamic Risk: The change in numbers of CTC/CETCs over time functions as one indicator for personalised therapeutic decision.

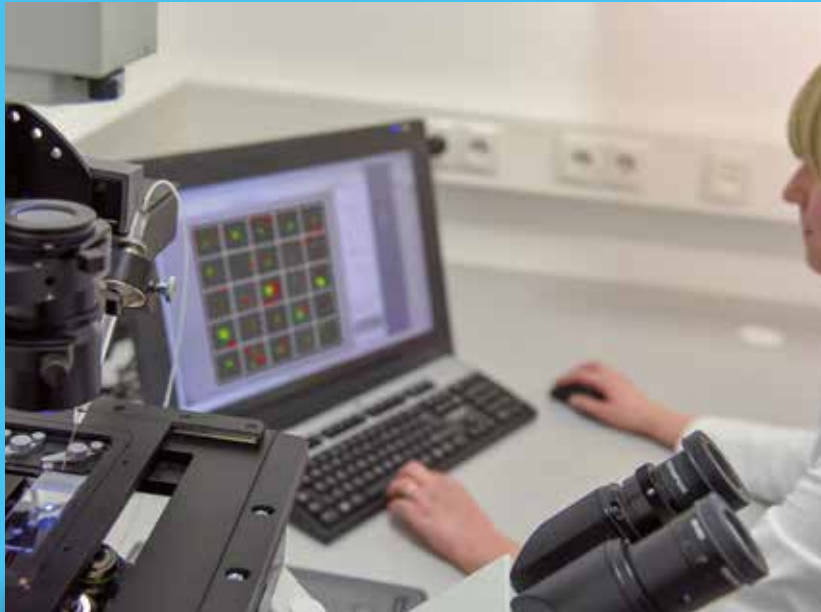
For further information contact the Maintrac Team via email maintrac@laborpachmann.de or via phone +49 921 730052-10

Educational seminars, webinars, publications are listed on our webpage: www.maintrac-seminare.de

Best
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PS: Further information ware available at www.maintrac.com

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