EARLY DIAGNOSES OF THE LIMITED NUMBER OF CIRCULATING TUMOR CELLS SIGNIFICANTLY INCREASES THE EARLY AND EFFECTIVE TREATMENT OF THE DISEASE

M. Chatziioannou[1], P. Apostolou[1], M. Toloudi[1], R. Hammon[2], U. Jacob[3], I. Papasotiriou [1,4]
[1]R.G.C.C. Ltd. (Research Genetic Cancer Centre Ltd), Filotas – Florinas, Greece
[2] Alternative and Traditional Medical Centre, Texas, U.S.A.
[3] Privatklinik Dr.Ursula Jacob GmbH, Dornstetten OT Hallawangen, Deutschland
[4] Martin-Luther-Universität Halle-Wittenberg, Onkologie-Hämatologie Abteilung, Halle (Saale), Deutschland

Aim

The aim of this study was to show whether the early diagnoses of the limited circulating tumor cells can contribute to an effective treatment of the disease with the already established drugs used in chemotherapies.

Materials and methods

There were studied: 38 patients with breast cancer (men and women, stages I-IV), 21 men with prostate cancer (stages I-IV) and 11 patients with colon cancer (men and women, stages I-IV). The circulating tumor cells were detected with flow cytometry, with the use of specialised markers-antigens per cancer type.

Results

Breast cancer: 21% showed complete response, 18% stable disease or partial response and only 10% progress of disease.

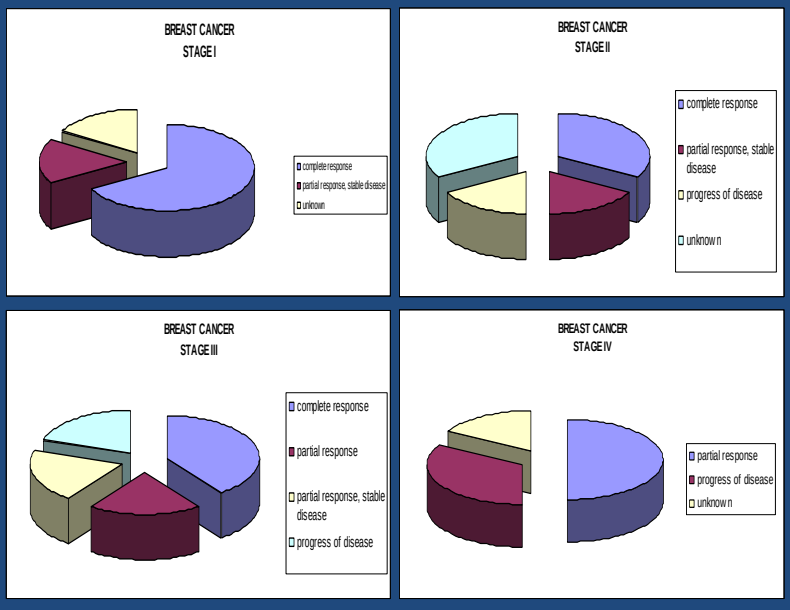
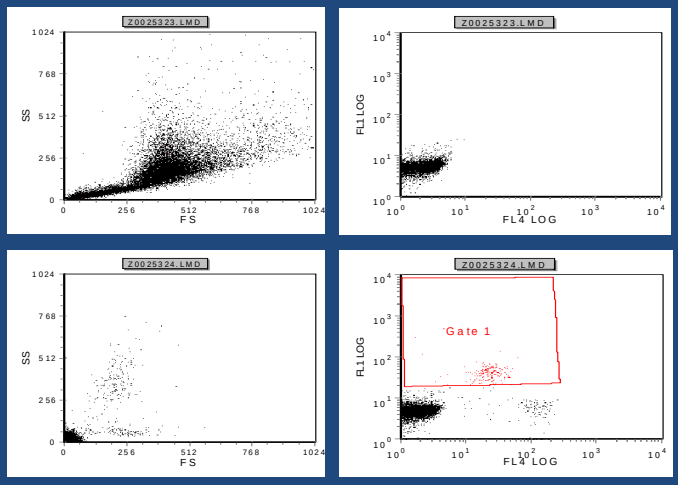


Fig.1 Illustration of the response percentage in chemotherapy, per stage, in breast cancer patients.

Prostate cancer: 14% showed complete response, 19% stable disease or partial response and only 5% showed progress of disease.

Colon cancer: 9% showed complete response, 27% stable disease or partial response and 18% showed progress of disease.



Εικ.2 Detection of circulating tumor cells with flow cytometry in breast cancer patients.

Conclusion

It was observed that the early detection of circulating tumor cells as well as the treatment of the disease with chemotherapeutic agents at its early stage, has a significant contribution to the effective treatment of the disease.

References
•Yamamoto, M; Bharti A, Li Y, Kufe D (May. 1997). "Interaction of the DF3/MUC1 breast carcinoma-associated antigen and beta-catenin in cell adhesion". *J. Biol. Chem.* (UNITED STATES) 272 (19): 12492–4. doi:10.1074/jbc.272.19.12492. ISSN 0021-9258. PMID 9139698
•http://www.medicalnewstoday.com/articles/138480.php
•http://clincancerres.aacrjournals.org/cgi/content/abstract/3/1/81
•Budd G, Cristofanilli M, Ellis M, et al. (2006). "Circulating Tumor Cells versus Imaging - Predicting Overall Survival in Metastatic Breast Cancer". *Clin Can Res* 12: 6404–09.
•et al. (2008). "The Relationship of Circulating Tumor Cells to Tumor Response, Progression-Free Survival, and Overall Survival in Patients with Metastatic Colorectal Cancer". *JCO* 26: 3213–21. doi:10.1200/JCO.2007.15.8923.

R.G.C.C. Ltd.
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