

Correlation between tumor markers and response to systemic doxorubicin/paclitaxel neoadjuvant chemotherapy in patients with locally advanced breast cancer

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As of July 2002, 108 patients with locally advanced breast cancer (LABC; T4 or N2 or M1) had entered the study; 103 of them concluded the initial treatment with primary chemotherapy consisting of 3 cycles of doxorubicin (A) plus Paclitaxel (P) followed by 12 weekly paclitaxel doses followed by surgery. This group of patients was the target of this study.

During the study, representative specimens from all available surgical paraffin-embedded tissue blocks were selected, and by using the syringe-action of a paraffin tissue punch extractor representative tissues cores were prepared by tissue macro array (TMA).

Further analysis of the specimens was put on hold in view of a collaboration that had started to test patterns of gene expression of over 390 genes by means of Taqman's quantitative reverse transcriptase polymerase chain reaction (QRT-PCR) technique. When available, the results of the QRT-PCR analysis (expected by March 2004) will be cross-checked in a blinded fashion with the results of immunohistochemical tests on the TMA to validate the gene-expression profiles.

During my training program I collaborated in continuously updating the clinical database of the 103 patients who entered the study.

I was in charge of designing and implementing two databases, in both electronic and hard formats, that contain pathological information related to the 'pre-chemotherapy' biopsy and the 'post-chemotherapy' surgical specimens from all the patients involved in the study.

In collaboration with the Pathology Division, I reviewed the technical aspects of the pathological tissue processing for the preservation of the paraffin-embedded tissues as well as the potential problems relating to this new procedure in view of TMA and QRT-PCR applications. The project is continuing.

During my ESMO fellowship I had the opportunity to attend the following scientific meetings:

- * "Evento formativo N.401-39096: Sindrome di cachessia-anoressia: Ruolo dell'alimentazione orale", Istituto Nazionale dei Tumori, Milan, Italy, March 2003
- * "5th Milan Breast Cancer Conference", European School of Oncology (E.S.O.), Milan, Italy, June 2003
- * ESMO Summer Educational Conference (ESEC), Edinburgh, Scotland, UK, June 2003
- * "Corso monotematico di senologia clinica", Istituto Nazionale dei Tumori, Milan, Italy, September 2002
- * "Complicazioni neurologiche in oncologia", Istituto Nazionale dei Tumori, Milan, Italy, September 2002
- * Courses held online ("Treatment for Anthracycline-Pretreated Breast Cancer"; "Single-Agent Capecitabine: A Reference Treatment for Taxane-Pretreated Metastatic Breast Cancer?"; "Moving Forward with Capecitabine: a Glimpse of the Future"; "Combination Versus Sequential Therapy in Metastatic Breast Cancer"; and "Adjuvant Therapy for Breast Cancer: Recommendations for Management Based on Consensus Review and Recent Clinical Trials"), April 2003

In October 2002 I started to collaborate 3 days a week as medical adviser at SENDO (Southern Europe New Drug Organization) Foundation, an academic research organization in the field of oncology, on secondment from the Istituto Nazionale dei Tumori, Milan, under Dr. Silvia Marsoni's supervision. At the SENDO Foundation I was trained as a medical writer (under the supervision of Jennifer Tursi, MSc, and Irene Corradino) and I prepared Phase I and Phase II study reports of some drugs evaluated by SENDO.

Under Dr. Cristiana Sessa's supervision I attended Friday morning pharmacology meetings and the outpatients' Phase I clinic at the Istituto Nazionale dei Tumori from July to November 2003.

I would like to thank the ESMO Fellowship Program, which has offered me the opportunity of participating in so many new and interesting activities that have enriched my personal experience and improved my knowledge and awareness of some medical oncology problems.

You may be confident that I will take advantage of this European experience in order to improve the quality of my work and the quality of care that I will provide to future patients.