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VIENNA, AUSTRIA, 15–18 MARCH 2017

THE BREAST

An Associate Journal of the Australasian Society for Breast Disease
Affiliated with the European Society of Breast Cancer Specialists
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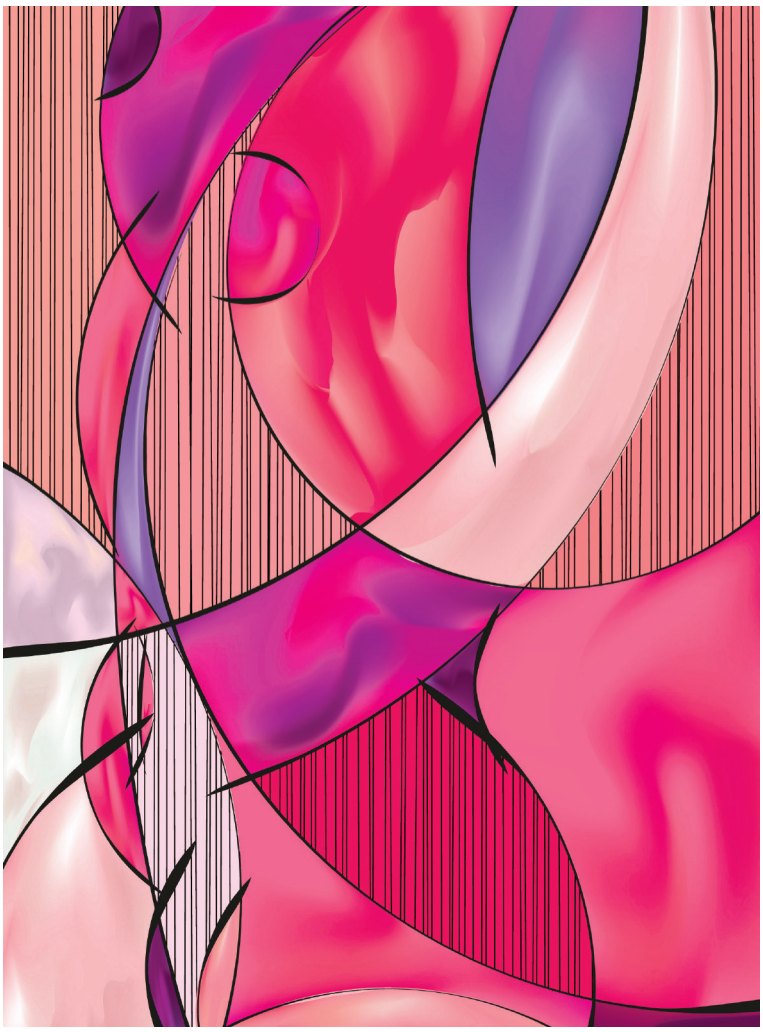

THE BREAST

PRIMARY THERAPY
OF EARLY BREAST CANCER
Evidence, Controversies, Consensus

15th St.Gallen International Breast Cancer Conference
Vienna/Austria, 15–18 March 2017

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Clinical outcomes following Recurrence Score-based therapy in N+ ER+ breast cancer: a cohort study

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Aims: Recent outcome data including those from the prospective TAILORx trial strongly confirmed the role of the Recurrence Score® (RS) in node negative (N0) estrogen receptor (ER)+ human epidermal growth factor receptor 2 (HER2)-negative breast cancer. The prospective WSG PlanB study showed excellent outcomes in high-risk N0 and node-positive (N+) patients with RS ≤ 11 and no adjuvant chemotherapy. RS testing is increasingly being used in N+ ER+ HER2-negative breast cancer. Our aim was to evaluate treatments/clinical outcomes in N+ BC patients tested through Clalit Health Services (CHS).
Methods: This prospectively-designed cohort study included patients with micrometastases or 1–3 positive axillary nodes who were RS-tested from 1/2006 (CHS approval of the test) through 12/2011. Medical records were reviewed to verify treatments/recurrences/survival.
Results: The analysis included 709 patients with a median follow-up of 5.9 years. Median age was 62 years, 53.9% had grade 2 tumors, 69.8% had tumors ≤2 cm, 84.5% had invasive ductal carcinoma, 42.0% were N1mi, whereas 37.2%, 15.5%, and 5.2% had 1, 2, and 3 positive nodes, respectively; 53.4% had RS < 18, 36.4% RS 18–30, and 10.2% RS ≥ 31. Overall, 26.9% received adjuvant chemotherapy: 7.1%, 39.5%, and 86.1% of those with RS < 18, 18–30, and ≥31, respectively. The 5-year Kaplan-Meier (KM) estimates for distant recurrence were 3.2%, 6.3%, and 16.9% for patients with RS < 18, 18–30 and ≥31, respectively; the corresponding 5-year estimates for breast cancer death were 0.5%, 2.9%, and 5.7%. In RS < 18 patients, 5-year distant recurrence rates were 1.2% for N1mi, 4.4% for 1 positive node, and 5.4% for 2–3 positive nodes. As patients were not randomized to treatment and treatment decision is heavily influenced by RS, analysis of 5-year distant recurrence by chemotherapy use was exploratory. In RS < 18 patients, recurrence rate was 7.7% in chemotherapy-treated (n = 27) compared to 2.9% in chemotherapy-untreated patients (n = 352); P = 0.245. In RS 18–30 patients, however, recurrence rate in chemotherapy-treated patients (n = 102) was significantly lower than in untreated patients (n = 156) (1.0% vs 9.7% P = 0.019).
Conclusions: Chemotherapy use was aligned with the RS results. The findings support using endocrine therapy alone in ER+ HER2-negative breast cancer patients with micrometastases/1–3 positive nodes and RS < 18.

Disclosure of Interest: Salomon M. Stemmer reports consulting for Novartis; receiving grant funding from Teva; receiving travel expenses from Genomic Health, Inc; and conducting research funded by Teva. Noa Ben-Baruch reports receiving honoraria from Teva, and serving on the speaker's bureau of Genomic Health. All other authors report no conflict of interest.

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On consolidated predictive model of the natural history of breast cancer considering primary tumour and distant metastases growth

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Aims: The research aim is to improve predicting accuracy of breast cancer (BC) progression using an original mathematical model referred to CoMPaS and corresponding software. We are interested in: (1) modelling the whole natural history of the primary tumor (PT) and the distant metastases (MTS); (2) developing adequate and precise CoMPaS which reflects relations between PT and MTS; (3) analysing the CoMPaS scope of application; (4) implementing the model as a software tool.
Methods: The CoMPaS is based on exponential tumor growth model and consists of a system of determinate nonlinear and linear equations; corresponds to TNM classification. It allows to calculate different growth periods of the PT and MTS: (1) "non-visible period" for PT; (2) "non-visible period" for MTS; (3) "visible period" for MTS. The CoMPaS is validated on clinical data of 10-years and 15-years survival depending on the tumor stage and diameter of the PT (1. Engel J. et al. Eur J. Cancer. 2003; 39(12): 1794–1806; 2. Engel J. et al. Int. J. Radiat. Oncol. Biol. Phys. 2003; 55(5): 1186–1195; 3. Engel J. et al. Cancer Metastasis. 2012; 31(1–2): 235–246). The new predictive tool: (1) is a solid foundation to develop future studies of BC models; (2) does not require any expensive diagnostic tests; (3) is the first predictor which makes forecast using only current patient data, the others are based on the additional statistical data.
Results: The CoMPaS model and predictive software: (a) fit to clinical trials data; (b) detect different growth periods of the PT and MTS; (c) make forecast of the period of MTS appearance; (d) have higher average prediction accuracy than the other tools; (e) can improve forecasts on survival of BC and facilitate optimization of diagnostic tests.
Conclusions: The following are calculated by CoMPaS: the number of doublings for «non-visible» and «visible» growth period of MTS; tumor volume doubling time (days) for «non-visible» and «visible» growth period of MTS.
The CoMPaS enables, for the first time, to predict "whole natural history" of the PT and MTS growth on each stage (pT1, pT2, pT3, pT4) relying only on PT sizes.
Summarizing: (a) CoMPaS describes correctly PT growth of IA, IIA, IIB, IIIB (T1-4N0M0) stages without metastases in lymph nodes (N0); (b) facilitates the understanding of the appearance period and inception of MTS.

Disclosure of Interest: No significant relationships.

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Pathological complete response after neoadjuvant therapy in patients undergoing breast conservative therapy: an experience from tertiary care hospital

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Aim: Our aim was to identify the factors responsible for pathological complete response after neoadjuvant therapy.
Methods: All the patients who presented to our hospital from Jan 2006 to Dec 2013 with breast cancer and underwent breast conservative therapy (BCT) were analyzed. We included all the patients who received neoadjuvant therapy followed by BCT and excluded all those in whom upfront surgery and mastectomy was performed. On follow-up examinations, occurrence of loco regional and/or distant disease was considered as recurrence. The SPSS version 20 was utilized for all statistical analyses. Kaplan-Meier curve was employed to estimate the overall and disease-free survival. Multivariate cox proportional hazard model was used for the