

Clinical Breast Cancer

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Illustration by Erin Moore

Current Trial Report

- 311 Phase II Study of Systemic High-dose Methotrexate and Intrathecal Liposomal Cytarabine for Treatment of Leptomeningeal Carcinomatosis From Breast Cancer

Maciej M. Mrugala, Bryan Kim, Akanksha Sharma, Natalie Johnson, Carrie Graham, Brenda F. Kurland, Julie Gralow

Original Studies

- 317 Treatment Patterns and Outcomes Associated With Palbociclib Plus Letrozole for Postmenopausal Women With HR⁺/HER2⁻ Advanced Breast Cancer Enrolled in an Expanded Access Program

Adam Brufsky, Debanjali Mitra, Keith L. Davis, Saurabh P. Nagar, Lynn McRoy, Matthew J. Cotter, Vered Stearns

A retrospective chart review of patients with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative advanced breast cancer receiving palbociclib in combination with letrozole (as part of an expanded access program) in the United States suggested that most patients derived benefit from this treatment despite having received multiple prior treatment lines for metastatic disease.

- 326 Serum sPD-1 and sPD-L1 as Biomarkers for Evaluating the Efficacy of Neoadjuvant Chemotherapy in Triple-Negative Breast Cancer Patients

Yao Li, Xiang Cui, Yong-Jun Yang, Qing-Qiu Chen, Ling Zhong, Ting Zhang, Rui-Li Cai, Jing-Ya Miao, Shi-Cang Yu, Fan Zhang

Serum biomarkers for monitoring the efficacy of neoadjuvant chemotherapy in triple-negative breast cancer patients have not been established. We found that serum levels of sPD-L1 and sPD-1 were increased with tumor stages in triple-negative breast cancer patients with higher tumor stage and were significantly reduced after neoadjuvant chemotherapy in patients with positive outcomes.

- 333 B² Prognostic Score: External Validation of a Clinical Decision-making Tool for Metastatic Breast Cancer

Tanja Nadine Stueber, Manfred Wischnewsky, Elena Leinert, Joachim Diessner, Catharina Bartmann, Roland Gregor Stein, Achim Woeckel

The B² Prognostic Score (B²PS) is a decision-making tool in metastatic breast cancer. A total of 641 patients treated between 2001 and 2009 were classified into risk groups based on the B²PS, and survival parameters were compared. Intermediate- and high-risk groups showed decreased survival, and the distribution of risk groups varied within the intrinsic subtypes. The B²PS helps in counseling patients with metastatic breast cancer.

- 340 The Impact of Partial Weak Staining in Normal Breast Epithelium on the Reliability of Immunohistochemistry Results in HerceptTest-positive Breast Cancer**
Chantal Farra, Faysal Fedda, Arafat Tfayli, Ayman Tawil, Ghazi Zaatari, Hanin Ashkar, Grece Issa, Fouad Boulos
- We studied the significance of human epidermal growth factor receptor-2 (HER2) staining in normal epithelium and its relationship to HER2 amplification by fluorescence in situ hybridization (FISH) in breast cancer. A total of 154 cases with a normal gland component were stained for HER2 by immunohistochemistry and FISH. Thirty-four cases showed staining in normal glands, 9 of which were FISH non-amplified. This shows a strong association between normal epithelial staining and lack of HER2 amplification by FISH.
- 345 The Characteristics of Local Recurrence After Breast-Conserving Surgery Alone for Malignant and Borderline Phyllodes Tumors of the Breast (KROG 16-08)**
Noorie Choi, Kyubo Kim, Kyung Hwan Shin, Yumi Kim, Hyeong-Gon Moon, Won Park, Doo Ho Choi, Su Ssan Kim, Seung Do Ahn, Tae Hyun Kim, Mison Chun, Yong Bae Kim, Suzy Kim, Byung Ock Choi, Jin Hee Kim
- Despite margin-negative breast-conserving surgery, malignant and borderline phyllodes tumors show frequent local recurrence. In this large-scale multicenter study we analyzed the characteristics of locally recurrent tumors after initial treatment with breast-conserving surgery alone. Local recurrences almost always occur near the primary tumor bed. Multiple events are relatively common, with each subsequent event showing increasing risk of borderline-to-malignant transformation.
- 354 Aspirin Treatment Effect and Association with PIK3CA Mutation in Breast Cancer: A Biomarker Analysis**
Yunyun Zhou, Josh Simmons, Christina D. Jordan, Mohamad Bassam Sonbol, Nita Maihle, Shou-Ching Tang
- Aspirin's treatment effect in breast cancer (BRCA) is not clear. We retrospectively studied 1227 patients with BRCA who used aspirin or did not. We found regular high-dose (325 mg) aspirin use after diagnosis may confer better treatment benefit. Also, PIK3CA may serve as a biomarker for aspirin treatment in patients with BRCA but requires further assessment in future studies.
- 363 The Impact of a Postmastectomy Chest Wall Scar Boost on Local Recurrence-free Survival in High-risk Patients**
Ashley Albert, Sophy Mangana, Mary R. Nittala, Toms Vengaloor Thomas, Lacey Weatherall, Srinivasan Vijayakumar
- Data regarding the use of a scar boost following postmastectomy radiation are limited. In this study, 140 patients with invasive breast cancer treated with mastectomy and postmastectomy radiation were analyzed. In this cohort, the use of a scar boost did not translate into a local recurrence-free survival benefit even among patients with high-risk features.
- 370 Usefulness of Lateral Thoracic Adipofascial Flaps After Breast-conserving Surgery in Small-to Moderate-sized Breasts**
Shikai Hong, Shengying Wang, Jianjun Liu, Zehao Qiang, Xucai Zheng, Gongpu Chen
- The usefulness of lateral thoracic adipofascial flaps to reconstruct breast defects following breast-conserving surgery (BCS) is unknown. In current study, bases on 58 female patients who underwent BCS, we first identified that the lateral thoracic adipofascial flaps were reliable and useful for reconstructing breast defects after BCS when the resected volume was confined to between 50 and 100 g, particularly in patients with small-to-moderate-sized breasts.
- 377 A Review of the Impact of Neoadjuvant Chemotherapy on Breast Surgery Practice and Outcomes**
Niamh O'Halloran, Aoife Lowery, Catherine Curran, Ray McLaughlin, Carmel Malone, Karl Sweeney, Maccon Keane, Michael Kerin
- Neoadjuvant chemotherapy facilitates breast conserving surgery and allows surgical treatment if patients are considered inoperable at baseline. The number of patients with breast cancer being treated with neoadjuvant chemotherapy is increasing, although mastectomy is still central to the surgical management of breast cancer.

e563 The Impact of CASP8 rs10931936 and rs1045485 Polymorphisms as well as the Haplotypes on Breast Cancer Risk: A Case-Control Study

Elham Vahednia, Fatemeh Homaei Shandiz, Matineh Barati Bagherabad, Atefeh Moezzi, Fahimeh Afzaljavan, Amir Tajbakhsh, Mohammad Mahdi Kooshyar, Alireza Pasdar

To investigate the association of rs1045485 and rs10931936 in caspase 8 (CASP8) and their haplotypes with molecular profile as well as breast cancer in Iran, 287 breast cancer patients and 490 healthy women were genotype using the amplification refractory mutation system and polymerase chain reaction restriction fragment length polymorphism. Results indicated a protective effect for CC genotype of rs1045485 and the decrease risk of breast cancer for C-C haplotype of rs10931936-rs104548 in CASP8.

e578 Extended Adjuvant Therapy With Aromatase Inhibitors for Early Breast Cancer: A Meta-analysis of Randomized Controlled Trials

Ling Xu, Zhuo Zhang, Qian Xiang, Qianxin Liu, Xuening Duan, Yinhua Liu, Yimin Cui

This meta-analysis aimed to assess the efficacy and toxicity of extended adjuvant aromatase inhibitors (AIs) in early breast cancer. Seven randomized clinical trials that involved 16,926 patients were selected for analysis. The results showed that extended AI therapy could significantly improve disease-free survival, especially for contralateral breast cancer recurrence. In addition, there were no significant differences between AIs and control for overall survival and serious adverse events.

e589 A Case of Metastatic Malignant Breast Adenomyoepithelioma With a Codon-61 Mutation of HRAS

Satomi Watanabe, Tomoyuki Otani, Tsutomu Iwasa, Takayuki Takahama, Masayuki Takeda, Kazuko Sakai, Kazuto Nishio, Akihiko Ito, Kazuhiko Nakagawa

e593 Ribociclib Causing Transient Glanzmann Thrombasthenia-like Picture: A Report of 4 Cases

Abdalla S. Awidi, Hisham S. Bawa'neh, Laith N. Al-Showbaki, Husam A. Alqaisi, Muhammad A. Awidi, Laiali T. Khalil, Osama H. El Khatib, Ahmad T. Mansour

e596 LOC643714 Polymorphisms Contribute to an Elevated Susceptibility to Breast Cancer: A Meta-analysis of 231,191 Subjects

Fucun Gao, Rongli Ge

This is the most comprehensive meta-analysis on LOC643714 polymorphisms and breast cancer so far, and our findings indicated that LOC643714 rs3803662, rs8051542, rs12443621, and rs12922061 polymorphism were all significantly associated with breast cancer in certain populations.

e611 Radiotherapy After Skin-Sparing Mastectomy and Implant-Based Breast Reconstruction

Sezin Yuçe Sari, Ozan Cem Guler, Melis Gultekin, Berna Akkus Yildirim, Cem Onal, Gokhan Ozyigit, Ferah Yildiz

We aimed to evaluate the cosmetic results of radiotherapy in 170 breast cancer patients after implant-based reconstruction. Cosmetic results were excellent or fair in most patients after radiotherapy. However, bolus use, lymphatic irradiation, and the volume receiving at least 110% of the prescribed dose being >1% significantly deteriorated the outcomes.

e617 Functional CD3⁺CD8⁺PD1⁻ T Cell Accumulation and PD-L1 Expression Increases During Tumor Invasion in DCIS of the Breast

Shuzhen Lv, Shuo Wang, Guoliang Qiao, Xiaoli Wang, Xinna Zhou, Fengcai Yan, Yanping Li, Suyu Wang, Michael A. Morse, Amy Hobeika, Jun Ren, Herbert Kim Lyerly

We explored quantitative T-cell distribution among samples of 49 patients with ductal carcinoma in situ vs. those with minimal infiltration lesions to find the functional alterations. CD3⁺CD8⁺ programmed death 1-negative T cell and programmed death ligand 1-positive expression increased as disease progressed.

e624 Analysis of Data From Breast Diseases Treated With 5-Alpha Reductase Inhibitors for Benign Prostatic Hyperplasia

Qinghua Fang, Peiya Chen, Ningchao Du, Kuty Selva Nandakumar

e637 Benefits of Organized Mammographic Screening Programs in Women Aged 50 to 69 years: A Surgical Perspective

Alessandro Fancellu, Valeria Sanna, Maria L. Sedda, Daria Delrio, Pietrina Cottu, Angela Spanu, Giuliana Giuliani, Maurizio Conti, Rafaela Piras, Paola Crivelli, Alberto Porcu

The role of organized mammography screening has been questioned by some authors. We evaluated the benefits of mammographic screening from a surgical point of view through a comparative study. Patients belonging to an organized screening program had a higher probability to receive less invasive treatment, such as breast-conserving surgery and sentinel node biopsy, and to have a shorter hospital stay. Our results support the use of campaigns aimed at increasing adherence to mammography screening.

e643 Our Radiological Experience on B3 Lesions: Correlation Between Mammographic and MRI Findings With Histologic Definitive Result

Domiziana Santucci, Eliodoro Faiella, Alessandro Calabrese, Luisa Favale, Bruno Beomonte Zobel, Carlo de Felice

Lesions suspected for breast cancer are always sampled by biopsy before management decisions are made. The result is classified basing on histologic characteristics, ranging from B1 to B5. The B3 class represents benign lesions with a possible, but not always predictable, risk of increased malignancy. Currently, every single B3 case has to be discussed in a multi-disciplinary team. Specific mammography and magnetic resonance findings can reduce the rate of surgeries on benign lesions and better evaluate the malignancy rate of B3 lesions.

e654 Effectiveness of Adjuvant Ovarian Function Suppression in Premenopausal Women With Early Breast Cancer: A Multicenter Cohort Study

Arlindo R. Ferreira, Joana Ribeiro, Ana Miranda, Alexandra Mayer, José Luís Passos-Coelho, Margarida Brito, João Fernandes, Joaquim Gouveia, Luís Costa, Inês Vaz-Luis

The use and effectiveness of adjuvant ovarian function suppression (OFS) for stage I to III hormone receptor-positive breast cancer is poorly characterized. In a multicenter retrospective cohort study of premenopausal women, we found that the use of OFS increased after 2014 from 16% to 25% of patients, in 30% of whom it was used in combination with aromatase inhibitors. Use of OFS improved overall survival.