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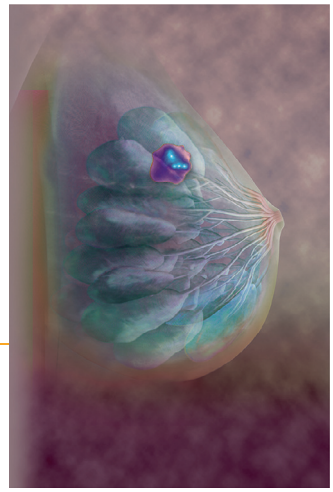

Illustration by Erin Moore

Original Studies

concerns regarding residual axillary disease. The role of regional nodal irradiation (RNI) is controversial. This retrospective study of 1963 patients found no survival benefit with the addition of RNI in these patients.

136 Comparison of Immediate Breast Reconstruction Outcomes in Patients With and Without Prior Cosmetic Breast Surgery

Caroline K. Fiser, Joshua P. Kronenfeld, Sophia N. Liu, Neha Goel, Wrood Kassira, John C. Oeltjen, Susan B. Kesmodel

In patients undergoing skin-sparing or nipple-sparing mastectomy with immediate breast reconstruction, prior cosmetic breast surgery did not increase risk of surgical complications or reconstruction loss. Mastectomy and immediate breast reconstruction can be safety performed in appropriately selected patients who have had prior cosmetic breast surgery.

143 Real-World Outcomes of Everolimus and Exemestane for the Treatment of Metastatic Hormone Receptor-Positive Breast Cancer in Patients Previously Treated With CDK4/6 Inhibitors

Hanjie Mo, Catherine E. Renna, Halle C.F. Moore, Jame Abraham, Megan L. Kruse, Alberto J. Montero, Susan B. LeGrand, Lu Wang, G. Thomas Budd

This retrospective study (n = 192 patients) identified that patients who received everolimus + exemestane with prior CDK4/6 inhibitor use had a significantly decreased progression free survival of 3.8 months vs. 5.4 months compared to those who did not use prior CDK4/6 inhibitors. It is reasonable to use this combination after CDK4/6 inhibitors in selected patients, recognizing that additional benefit is modest.

149 Correlation Between Preoperative Radiological and Postoperative Pathological Tumor Size in Patients With HER2^{+} Breast Cancer After Neoadjuvant Chemotherapy Plus Trastuzumab and Pertuzumab

Veronica Falcone, Elisabeth Reiser, Lenka Grula, Zsuzsanna Bago-Horvath, Myriam Stolz, Anja Catic, Christine Deutschmann, Christian Singer, Georg Pfeiler

In a patient population with HER2 positive breast cancer, who received neoadjuvant chemotherapy and anti-HER2 treatment, the correlation between preoperative radiological and postoperative pathological tumor size was performed. Concordance of radiological and pathological tumor size was found in 55.7%, leading to more extensive breast surgery as required in 7 cases and to the underestimation of 6 neoplastic lesions before surgery, respectively.

161 A Systematic Comparison of Overall Survival Between Men and Women With Triple Negative Breast Cancer

Sumeet Kumar Yadav, Swechchha Silwal, Siddhartha Yadav, Geetha Krishnamoorthy, Mohammad Muhsin Chisti

Triple-negative breast cancer (TNBC) in men is very rare. The clinical characteristics, prognostic factors and overall survival of men with TNBC have not been characterized. In this study of national cancer database, men with stage I-III triple negative breast cancer were found to have poorer overall survival compared to women despite adjusting for usual prognostic factors.

170 Convolutional Neural Network of Multiparametric MRI Accurately Detects Axillary Lymph Node Metastasis in Breast Cancer Patients With Pre Neoadjuvant Chemotherapy

Thomas Ren, Stephanie Lin, Pauline Huang, Tim Q. Duong

Sentinel lymph node biopsy and axillary dissection have significant postoperative comorbidities. Fluorodeoxyglucose positron emission tomography and MRI have the potential to interrogate multiple nodes non-invasively. Artificial intelligence has become increasingly popular for analyzing diagnostic images. The model using combined T1- and T2-W MRI performed best compared to all other models and better than radiologists in detecting nodal metastasis.

178 Feasibility of an Online Patient Community to Support Older Women With Newly Diagnosed Breast Cancer

Rachel H. Occhiogrosso, Siyang Ren, Nabihah Tayob, Tianyu Li, Haley C. Gagnon, Andia Paz, Rachel A. Freedman

We assessed whether an online patient community was an appealing forum to improve older women's breast cancer treatment experience. Among 45 enrolled women, 2.2% met our feasibility endpoint (sustained use), although 17.8% met engagement criteria for ≥25% of study duration. Future interventions should explore ways to optimally support older patients, who have increasing access to technology while facing social isolation.

186 Characterizing Occult Nodal Disease Within a Clinically Node-Negative, Neoadjuvant Breast Cancer Population

Jacob B. Hammond, Derek W. Scott, Heidi E. Kosiorek, Taylor H. Parnall, Richard J. Gray, Brenda J. Ernst, Donald W. Northfelt, Ann E. McCullough, Idris Tolgay Ocal, Barbara A. Pockaj, Patricia A. Cronin

A retrospective cohort study evaluating rates and risk factors of axillary upstaging in node-negative breast cancer patients receiving neoadjuvant therapy. Tumor subtype was found to be the predominant factor, with ER+/HER2- patients exhibiting the highest risk for occult nodal disease and upstaging despite use of either neoadjuvant endocrine or chemotherapy.

Available Exclusively Online at www.clinical-breast-cancer.com

e135 Identification of Differentially Expressed Plasma lncRNAs As Potential Biomarkers for Breast Cancer

Minghui Wang, Huilin Liu, Wenyao Wu, Jinxia Zhao, Guanghui Song, Xi Chen, Rong Wang, Changfeng Shao, Jing Li, Haiyan Wang, Qing Wang, Xiaodong Feng

Breast cancer is the most common malignant tumor in women and is not easy to diagnose. Long non-coding RNAs (lncRNAs) play important regulatory roles in the occurrence and progression of many cancers, including breast cancer. We demonstrated that *MIAT, LINC01140, and LINC00968 could be used as effective, non-invasive biomarkers for the diagnosis of breast cancer, and the effects were further improved when the lncRNAs were combined.*

e142 Feasibility of ABUS as an Alternative to Handheld Ultrasound for Response Control in Neoadjuvant Breast Cancer Treatment

Maria Eleni Hatzipanagiotou, Deborah Huber, Valeria Gerthofer, Madeleine Hetterich, Blanca Roca Ripoll, Olaf Ortmann, Stephan Seitz

This study evaluated the use of Automated Breast Ultrasound Screening (ABUS) for response control in neoadjuvant chemotherapy. Response controls via ABUS and handheld ultrasound were compared with pathologic tumor size. There was no statistical difference between the measurements with handheld ultrasound or ABUS. ABUS seems to be a suitable method to conduct response control in neoadjuvant breast cancer treatment.

e147 Combined Estrogen Receptor and Progesterone Receptor Level Can Predict Survival Outcome in Human Epidermal Growth Factor Receptor 2-positive Early Breast Cancer

Mengdi Chen, Jiayi Wu, Deyue Liu, Weilin Chen, Caijin Lin, Lisa Andriani, Shuning Ding, Ou Huang, Jianrong He, Xiaosong Chen, Weiguo Chen, Yafen Li, Kunwei Shen, Li Zhu

Breast cancer patients with HR+/HER2+ tumors have a different clinical behavior pattern compared with HR-/HER2+ patients, but PR has been rarely discussed in HER2+ patients. We found out that higher ER and PR level was a favorable predictor of survival outcome in HER2+ patients. Our study calls for more attention to PR expression in HER2+ breast cancer.

e157 Breast Cancer and the Male-Female Divide: It's Even More Complicated

Maria Castaldi, Ted James

e158 Bracketing with Multiple Radioactive Seeds to Achieve Negative Margins in Breast Conservation Surgery

Mary S. Guirguis, Cristina Checka, Beatriz E. Adrada, Gary J. Whitman, Mark J. Dryden, Jia Sun, Qing-Qing Ding, Huong Le-Petross, Gaiane M. Rauch, Mark Clemens, Tanya W. Moseley

Breast conservation surgery is the standard treatment for early stage, unifocal breast cancer. Bracketed, image-guided preoperative localizations using multiple radioactive seeds can facilitate breast conservation surgery in patients with multifocal/multicentric breast cancer and extensive ductal carcinoma in situ. We retrospectively examined 157 bracketed lumpectomies. Negative margins were achieved in 79% of cases, validating this approach.

e167 Long-Term Outcomes Using Electron IOERT APBI for Early Stage Breast Cancer: The Verona University Hospital Experience

Nunzia Luna Valentina Cernusco, Paola Del Bianco, Mario Romano, Alessandro Muraglia, Gabriella Rossi, Maria Grazia Giri, Stefania Guariglia, Davide Lombardi, Francesca Pellini, Carlo Cavedon, Giovanni Paolo Pollini, Renzo Mazzarotto

We have evaluate long-term outcome of intraoperative electron accelerated partial breast radiotherapy (IOERT APBI) on 295 patients suitable for breast-conserving therapy. With a median follow-up of 7.1 years (95% CI, 6.5;7.4) 6 women (2.0%) experienced a true local recurrence. Our trial suggests that, in highly selected early stage breast cancers, a single-dose IOERT can be safely delivered with excellent results and very low long-term recurrence rates.

e173 Downregulation of PDGF-D Inhibits Proliferation and Invasion in Breast Cancer MDA-MB-231 Cells

Jing-Feng Lu, Zhi-Qiu Hu, Meng-Xuan Yang, Wei-Yan Liu, Gao-Feng Pan, Jun-Bin Ding, Jia-Zhe Liu, Lang Tang, Bin Hu, Hong-Chang Li

This study demonstrated that silencing of PDGF-D could inhibit breast cancer cells proliferation, increase the apoptosis rate, and inhibit cell metastasis. These results suggested that PDGF-D gene may involve in the occurrence and development of breast cancer.

e184 A Comparison of the Oncological Outcomes After Breast-Conserving Surgery With or Without Latissimus Dorsi Myocutaneous Flap Reconstruction for Breast Cancer

Ryu Tokui, Makoto Ishitobi, Tomoyuki Kurita, Takaaki Hatano, Mariko Maekawa, Hiroki Kusama, Saki Matsui, Nobuyoshi Kittaka, Yasuhiro Tamaki, Takahiro Nakayama

We studied 1185 patients with stage 0 to 3 breast cancer who underwent breast-conserving surgery (BCS) with or without immediate reconstruction using a latissimus dorsi myocutaneous flap (LDMF). The surgical margin positivity rates after initial surgery were significantly lower in the BCS with LDMF group than in the BCS alone group. There were no marked differences in the local recurrence rates between the groups.

e191 CXCL8 Facilitates the Survival and Paclitaxel-Resistance of Triple-Negative Breast Cancers

Maolin Yi, Chengcheng Peng, Bingxiang Xia, Lin Gan

1. Overexpression of CXCL8 in TNBC tissues and cells. 2. CXCL8 negatively regulates sensitivity of TNBC cells to paclitaxel. 3. CXCL8 decreases cell apoptosis in PTX-resistant TNBC cells.

e199 miR-875 Serves as A Candidate Biomarker for Detection and Prognosis and Is Correlated with PHH3 Index Levels in Breast Cancer Patients

Xiaokang Liu, Mengshu Liu, Haiming Ma, Jin Wang, Yuenan Zheng

miRNAs play crucial roles in cancers and the clinical role of miR-875 and association with PHH3 in breast cancer remain unclear. The clinical study that included 115 breast cancer patients and 68 healthy individuals investigated the expression of miR-875 and its clinical significance. The results revealed miR-875 may be a diagnostic/prognostic marker and associated with PHH3 index in breast cancer.

e206 Breast Cancer Incidence and Mortality in Relation to Hormone Replacement Therapy Use Among Postmenopausal Women: Results From a Prospective Cohort Study

Yi Jiang, QinLi Xie, Rong Chen

Hormone replacement therapy increases the risk of breast cancer, but little evidence assesses the effects of potential interactions of different hormone replacement therapy types on breast cancer. To examine this issue, a total of 689 breast cancer cases and 81 breast cancer deaths were identified during 372,210 person-years of follow-up. The total current hormone replacement therapy use was associated with an increased risk of breast cancer especially for slim women. This study suggests that hormone replacement therapy use was associated with an altered risk of the occurrence of breast cancer in the US postmenopausal women.

e214 MRI Response to Pre-operative Stereotactic Ablative Body Radiotherapy (SABR) in Early Stage ER/PR+ HER2- Breast Cancer correlates with Surgical Pathology Tumor Bed Cellularity

R. Jared Weinfurtner, Natarajan Raghunand, Olya Stringfield, Mahmoud Abdalah, Bethany L. Niell, Dana Ataya, Angela Williams, Blaise Mooney, Marilin Rosa, Marie C. Lee, Nazanin Khakpour, Christine Laronga, Brian Czerniecki, Roberto Diaz, Kamran Ahmed, Iman Washington, Michael Montejo

This study compares MRI response to pathologic response in 19 pre-operative SABR-treated ER/PR + HER2- breast cancers. Analysis of tumor % volume remaining on MRI post-SABR compared to baseline demonstrates linear correlation with pathologic % tumor cellularity. This helps identify patients benefiting from neoadjuvant radiation treatment, a group in which complete pathologic response to neoadjuvant therapy is rare.

e224 Quantitative Changes in Skin Composition Parameters after Radiation Therapy According to Surgery Types Among Patients with Breast Cancer: A Prospective Study

Gyu Sang Yoo, Danbee Kang, Im-Ryung Kim, Hyeokgon Park, Eunjoo Kim, Won Kyung Cho, Haeyoung Kim, Doo Ho Choi, Juhee Cho MA, Won Park

We conducted prospective study to evaluate the radiation dermatitis (RD) with both quantitative measurements and patient-reported outcomes. RD was compared between breast-conserving surgery (n = 20), and modified-radical mastectomy (n = 20) groups. Quantitatively measured skin changes and patient-reported symptoms sustained until 3 months after the radiotherapy. The erythema was more severe in the modified-radical mastectomy group 1 week after the start of radiotherapy.

e232 Review of Variables Associated With Positive Surgical Margins Using Scout Reflector Localizations for Breast Conservation Therapy

Angela I Choe, Raisha Ismail, Julie Mack, Vonn Walter, Ae Lim Yang, Daleela G. Dodge

The aim of this study is to evaluate factors contributing to positive surgical margins associated with reflector guidance for patients undergoing breast conserving therapy for malignancy. We retrospectively reviewed 254 cases of Scout device pre-surgical localizations. There is a statistically significant decrease in the positive surgical margins with concomitant use of intraoperative ultrasound but increase in positive margins with the presence of ductal carcinoma in situ. These results add new information with regard to achieving better surgical outcomes for breast conserving surgery to treat breast cancer.

e239 Impact of Incorporating Trabecular Bone Score Into Fracture Risk Assessment and Recommendation for Use of Bone-Modifying Agents in Women With Breast Cancer

Mahwash F. Siddiqui, Naim M. Maalouf

e242 AGR2 and AGR3 play an important role in the clinical characterization and prognosis of basal like breast cancer

Carolina Leão de Moraes, Natália Cruz e Melo, Maira Andrea Valoyes Valoyes, Waldemar Naves do Amaral

There are a large group of patients affected by BLBC, a type of cancer with poor prognosis and without effective therapies. The large amount of data deposited in public databases allowed us to identify two

promising genes that could serve as important diagnosis and prognostics biomarkers. AGR2 and AGR3 could differentiate BLBC from non-BLBC, predict clinical phenotype and survival.

e253 Association Between Metabolic Syndrome and Immunohistochemical Profile at Breast Cancer Diagnosis in Postmenopausal Women

Andre H. Motoki, Daniel A.B. Buttros, Ana Luisa Gaspar, Benedito S. Almeida-Filho, Eduardo Carvalho-Pessoa, Heloisa D.L Vespoli, Jorge Nahas-Neto, Eliana A.P. Nahas

The present observational study with 189 postmenopausal women with newly diagnosed breast cancer found that 33.3% of the patients had metabolic syndrome (MetS) at the time of diagnosis. And that the presence of MetS and obesity were associated with smaller tumor size, PR-positive and HER-2-negative status, and the luminal B tumor subtype.