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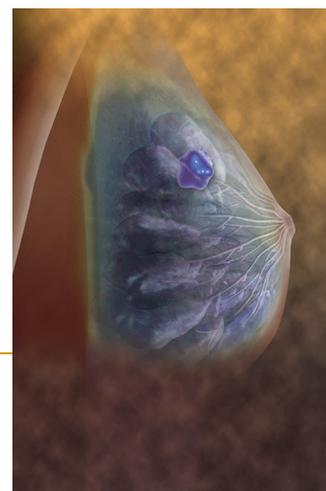


Illustration by Erin Moore

Reviews

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- 165 **The Global and Regional Survival Rate of Women With Breast Cancer: A Systematic Review and Meta-analysis**
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Original Studies

- 178 **Examining Associations of Racial Residential Segregation With Patient Knowledge of Breast Cancer and Treatment Receipt**
Sidra N. Bonner, Cheryl Clark, Nancy L. Keating, Elena M. Kouri, Rachel A. Freedman
The purpose of this study was to investigate the relationship between racial residential segregation and patient knowledge of their breast cancer as well as receipt of adjuvant therapy. In this study, we found no significant differences in receipt of care according to different levels of black and Hispanic segregation, however, there were some differences in knowledge of tumor characteristics. Future studies should assess multiple geographic regions to measure the role of segregation on cancer disparities along the spectrum of diagnosis to treatment.
- 188 **Use of Everolimus and Trastuzumab in Addition to Endocrine Therapy in Hormone-Refractory Metastatic Breast Cancer**
Elisavet Paplomata, Amelia Zelnak, Cesar A. Santa-Maria, Yuan Liu, Keerthi Gogineni, Xiaoxian Li, Carlos S. Moreno, Zhengjia Chen, Virginia Kaklamani, Ruth M. O'Regan
Patients with endocrine-refractory, hormone receptor-positive, HER2-negative metastatic breast cancer were treated with everolimus (n = 30) or trastuzumab (n = 24) in addition to their existing endocrine therapy. We hypothesized that the combination could restore sensitivity to endocrine therapy. Progression-free survival was 5.7 months, and 2.2 months, and clinical benefit rate at 24 weeks was 48% and 11% for patients who received everolimus or trastuzumab, respectively.
- 197 **Obesity Does Not Influence Management of Advanced Breast Cancer in the Elderly**
Laurel L. Tangalakis, Chandler S. Cortina, Jennifer D. Son, Jennifer Poirier, Andrea Madrigano
A retrospective review of patients age 70 years and greater with advanced breast cancer shows that body mass index does not impact surgical management or adjuvant treatment.

- 200 Impact of Subtype on Survival of Young Patients With Stage IV Breast Cancer**
Rin Ogiya, Yasuaki Sagara, Naoki Niikura, Rachel A. Freedman
 We used population-based cancer registry data (n = 6,302) to characterize the clinicopathologic features of young patients with stage IV breast cancer and to evaluate overall survival by age in the context of disease subtypes. Compared with patients with breast cancer aged 40 to 59 years, those aged < 40 years experienced significantly longer survival, except in the setting of triple-negative disease.
- 208 Axillary Lymph Node Tattooing and Targeted Axillary Dissection in Breast Cancer Patients Who Presented as cN+ Before Neoadjuvant Chemotherapy and Became cNO After Treatment**
Ioannis Natsiopoulos, Stavros Intzes, Triantafyllos Liappis, Konstantinos Zarampoukas, Thomas Zarampoukas, Vasiliki Zacharopoulou, Konstantinos Papazisis
 Axillary lymph node tattooing and targeted axillary dissection, as axillary staging, was evaluated in 75 breast cancer patients who presented as cN+ before neoadjuvant chemotherapy and became cNO after treatment. Marking axillary lymph nodes with tattoo is a feasible, accurate, and low-cost method. Tattoo ink migration from one node to another might affect the objectivity of the procedure.
- 216 Results From the First Multicenter, Open-label, Phase IIIb Study Investigating the Combination of Pertuzumab With Subcutaneous Trastuzumab and a Taxane in Patients With HER2-positive Metastatic Breast Cancer (SAPPHIRE)**
Natasha Woodward, Richard H. De Boer, Andrew Redfern, Michelle White, Jennifer Young, Matt Truman, Jane Beith
 This open-label, non-randomized study examined the safety and tolerability of combination pertuzumab, subcutaneous trastuzumab (Herceptin), and taxane chemotherapy in previously untreated patients with human epidermal growth factor receptor 2-positive metastatic breast cancer. Fifty patients were assessed. The overall response rate was 73.3% (95% confidence interval, 58.1%-85.4%), and the median progression-free survival was 17.0 months (95% confidence interval, 12.5-31.2 months). This combination has an acceptable safety and tolerability profile.

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- e399 Prognostic Significance of Obesity and Diabetes Mellitus in Women With Brain Metastases From Breast Cancer Should Be Revisited**
Kadri Altundag
- e400 Pathogenic Germ Line Variants in a Patient With Severe Toxicity From Breast Radiotherapy**
Tyler J. Wilhite, Ryan S. Youland, Shulan Tian, Randi R. Finley, Jann N. Sarkaria, Kimberly S. Corbin
- e406 Characteristics of Patients With Breast Cancer With Brain Metastases Who Live Longer Than 60 Months**
Kadri Altundag
- e407 Vitamin D Receptor in Breast Cancer Tissues and Its Relation to Estrogen Receptor Alpha (ER- α) Gene Expression and Serum 25-hydroxyvitamin D Levels in Egyptian Breast Cancer Patients: A Case-control Study**
Mahmoud A. Hemida, Nadia A. AbdElmoneim, Taha I. Hewala, Mona M. Rashad, Shymaa Abdaallah
 This case-control study was performed on 40 patients with breast cancer and 40 controls to investigate the role of vitamin D receptor in breast cancer tissues and its relation to estrogen receptor- α gene expression in the same tissues and serum 25-hydroxyvitamin D. Females with decreased levels of serum 25-hydroxyvitamin D, increased tissues levels of vitamin D receptor and increased tissue expression of estrogen receptor- α gene expression had significantly increased risk for breast cancer incidence.

- e415 A Genetic Variant of rs145204276 in the Promoter Region of Long Noncoding RNA GAS5 Is Associated With a Reduced Risk of Breast Cancer**
Yiyin Tang, Yishan Wang, Xi Wang, Yang Liu, Kai Zheng
The growth arrest-specific 5 (GAS5) rs145204276 AGGCA/- polymorphism was analyzed in 575 patients with sporadic breast cancer (BC) and 602 controls to test the association between the polymorphism and BC risk. The rs145204276 del allele might protect against the development of BC via inducing the promoter activity by binding to transcriptional factor specificity protein 1, and finally resulting in higher levels of GAS5.
- e422 The Results of Surveillance Imaging After Breast Conservation Surgery and Partial Breast Reconstruction With Chest Wall Perforator Flaps; A Qualitative Analysis Compared With Standard Breast-Conserving Surgery for Breast Cancer**
Jesse Hu, Giulio Cuffolo, Vaishali Parulekar, Victoria Chan, Alexandra Tenovici, Pankaj G. Roy
There are few published data on mammographic surveillance after partial breast reconstruction using chest wall perforator flaps (CWPF). In this study we compared 36 patients who underwent breast conservation surgery with CWPF or standard wide local excision. Over a median 4-year follow up, 138 surveillance mammograms demonstrated no significant difference in mammographic features between the 2 groups. Only 1 CWPF patient was recalled for further imaging.
- e428 Prophylactic Versus Therapeutic Mastectomy: A Contemporary Analysis of the ACS-NSQIP Database**
Ryan J. Hendrix, Connie Lee, Ann-Kristin Friedrich, Eva Rouanet, Anne C. Larkin, Jennifer LaFemina
Rates of prophylactic mastectomy are increasing in the United States and might be elected for prevention in women with a hereditary predisposition to breast cancer. Using the American College of Surgeons National Surgical Quality Improvement Program database to study 30,803 patients, the data show that women who undergo prophylactic, rather than therapeutic, mastectomy, show a 5.8-fold increased risk of deep venous thrombosis.
- e433 Screening Mammography Findings in Women With Chronic Kidney Disease on a Renal Transplant Waiting List**
Nuray Voyvoda, Bekir Voyvoda, Tülay Özer
Kidney transplant candidates are placed on a waiting list. Because of their concomitant disease, their systematic assessment is important. Screening mammography must be a part of the examination.
- e440 Cost Minimization Analysis of Intravenous or Subcutaneous Trastuzumab Treatment in Patients With HER2-Positive Breast Cancer in Ireland**
Gary L. O'Brien, Cian O'Mahony, Katie Cooke, Ada Kinneally, Sarah-Jo Sinnott, Valerie Walshe, Mark Mulcahy, Stephen Byrne
This study analyzed which route of trastuzumab administration, for the treatment of human epidermal growth factor receptor (HER)2-positive breast cancer, was more cost-effective and time-saving in relation to active health care professional time. In clinical practice, trastuzumab subcutaneous treatment resulted in greater cost and time savings compared with trastuzumab intravenous treatment. At present, trastuzumab subcutaneous treatment should be considered a clinically equivalent and more cost-effective option to trastuzumab intravenous treatment.
- e452 Fulvestrant 500 mg Versus Exemestane in Postmenopausal Women With Metastatic Breast Cancer Resistant to Adjuvant Nonsteroidal Aromatase Inhibitors in Clinical Practice: A Multicenter Retrospective Study**
Yizhao Xie, Yi Li, Yinbin Zhang, Shuqun Zhang, Wei Li, Xiaoxiang Guan, Yannan Zhao, Chengcheng Gong, Xichun Hu, Jian Zhang, Enying Cao, Leiping Wang, Rui Ge, Biyun Wang
There is no direct comparison of fulvestrant 500 mg and exemestane among metastatic estrogen receptor-positive (ER⁺) breast cancer patients. This retrospective study enrolled 120 patients in China. We found that fulvestrant 500 mg showed better efficacy than exemestane in first-line therapy for metastatic breast cancer of ER⁺ postmenopausal women after adjuvant nonsteroidal aromatase inhibitor treatment failure.

e459 Evaluation of a Retroglandular Oncoplastic Technique as a Standard Level I Oncoplastic Breast-Conserving Surgery: A Retrospective Clinicopathologic Study of 102 Patients With Breast Cancer

Zoltán Mátrai, Mihály Újhelyi, Tibor Kovács, Péter Kelemen, Ákos Sávolt, Eszter Kovács, Klára Éles, Norbert Mészáros, István Kenessey, Alexia Stamatou, Dávid Pukancsik

This study presents a Level I oncoplastic breast-conserving surgery technique for performing tumorectomy by retroglandular exploration through a skin incision made in the inferior mammary fold. A retrospective study was performed involving patients with early stage breast cancer ($n = 102$). Retroglandular oncoplastic breast-conserving surgery is a novel, effective Level I oncoplastic technique for radical resection of breast tumors ≤ 3 cm in size.

e468 Intensive Imaging Surveillance of Survivors of Breast Cancer May Increase Risk of Radiation-induced Malignancy

Carlos Meyer, Pablo Millán, Valeria González, Gonzalo Spera, Andrés Machado, John R. Mackey, Rodrigo Fresco

Non-recommended imaging is commonly indicated in surveillance of early breast cancer survivors, despite guidelines recommending against. Five theoretic imaging surveillance models were used to estimate imaging radiation-induced malignancy risks. Our models suggest that non-recommended imaging may increase imaging radiation-induced malignancy risks and should be avoided during early breast cancer surveillance.

e475 Factors Determining Anthracycline Use in Hormone Receptor Positive, Early-Stage Breast Cancer

Jordan Henderson, Paul Adams, Kimberly Barber

In this study we investigated factors associated with prescribing patterns for an anthracycline-based chemotherapy in hormone receptor-positive stage I to III breast cancer. We carried out a retrospective analysis of the Michigan Breast Oncology Quality Initiative data set of 17,788 women with stage I to III estrogen receptor/progesterone receptor-positive HER2/*neu*-negative invasive breast cancer. Patients with a high recurrence score and lymph node-positive status were just as likely to receive an anthracycline as a nonanthracycline-based regimen.

e481 A Reappraisal of the Comparative Effectiveness of Lumpectomy Versus Mastectomy on Breast Cancer Survival: A Propensity Score–Matched Update From the National Cancer Data Base (NCDB)

Jeffrey Landercasper, Luis D. Ramirez, Andrew J. Borgert, Humera F. Ahmad, Benjamin M. Parsons, Leah L. Dietrich, Jared H. Linebarger

In a propensity score–matched investigation of more than 800,000 patients with breast cancer in the National Cancer Database, the effect of surgery type (lumpectomy vs. mastectomy) on overall survival was dependent on cancer stage and hormone receptor status.