

Highlights of This Issue 5183

SPECIAL FEATURES


CCR 20th Anniversary Commentary

- 5185** CCR 20th Anniversary Commentary: Molecular Pathology of ALK-Rearranged Lung Tumors
A. John Iafrate

CCR Translations

- 5188** Can the Lung Cancer Pie Be Divided into Angiogenic Slices?
Tina Cascone and John V. Heymach
See related article, p. 5253


CCR New Strategies

- 5191** New Strategies in Engineering T-cell Receptor Gene-Modified T cells to More Effectively Target Malignancies
Thomas M. Schmitt, Ingunn M. Stromnes, Aude G. Chapuis, and Philip D. Greenberg
- 5198** New Strategies in Stereotactic Radiotherapy for Oligometastases
 David A. Palma, Alexander V. Louie, and George B. Rodrigues

CCR Perspectives in Drug Approval

- 5205** FDA Approval Summary: Lenvatinib for Progressive, Radio-iodine–Refractory Differentiated Thyroid Cancer
Abhilasha Nair, Steven J. Lemery, Jun Yang, Anshu Marathe, Liang Zhao, Hong Zhao, Xiaoping Jiang, Kun He, Gaetan Ladouceur, Amit K. Mitra, Liang Zhou, Emily Fox, Stephanie Aungst, Whitney Helms, Patricia Keegan, and Richard Pazdur

Molecular Pathways

- 5209** Molecular Pathways: New Signaling Considerations When Targeting Cytoskeletal Balance to Reduce Tumor Growth
 Kristi R. Chakrabarti, Lindsay Hessler, Lekhana Bhandary, and Stuart S. Martin

CANCER THERAPY: CLINICAL

- 5215** Multiple Gastrointestinal Polyps in Patients Treated with BRAF Inhibitors
Ravi K. Amaravadi, Kathryn E. Hamilton, Xiaohong Ma, Shengfu Piao, Armando Del Portillo, Katherine L. Nathanson, Matteo S. Carlino, Georgina V. Long, Igor Puzanov, Xiaowei Xu, Jennifer J.D. Morrisette, Kenneth Y. Tsai, Keith T. Flaherty, Jeffrey A. Sosman, Grant R. Goodman, Grant A. McArthur, Anil K. Rustgi, David C. Metz, Lynn M. Schuchter, Paul B. Chapman, and Antonia R. Sepulveda
- 5222** Cellular Mechanisms Underlying Complete Hematological Response of Chronic Myeloid Leukemia to BRAF and MEK1/2 Inhibition in a Patient with Concomitant Metastatic Melanoma
Miles C. Andrews, Natalie Turner, Janis Boyd, Andrew W. Roberts, Andrew P. Grigg, Andreas Behren, and Jonathan Cebon
- 5235** A Phase I Trial of Combined Ridaforolimus and MK-2206 in Patients with Advanced Malignancies
Shilpa Gupta, Guillem Argilés, Pamela N. Munster, Antoine Hollebecque, Olav Dajani, Jonathan D. Cheng, Ruixue Wang, Ann Swift, Alessandra Tosolini, and Sarina A. Piha-Paul
- 5245** Randomized Phase II Study of Adjuvant Chemotherapy with Long-term S-1 versus Cisplatin+S-1 in Completely Resected Stage II–IIIA Non–Small Cell Lung Cancer
Yasuo Iwamoto, Tetsuya Mitsudomi, Kazuko Sakai, Takeharu Yamanaka, Hiroshige Yoshioka, Makoto Takahama, Masahiro Yoshimura, Ichiro Yoshino, Masayuki Takeda, Shunichi Sugawara, Tomoya Kawaguchi, Toshiaki Takahashi, Mitsunori Ohta, Yukito Ichinose, Shinji Atagi, Morihito Okada, Hideo Saka, Kazuhiko Nakagawa, Yoichi Nakanishi, and Kazuto Nishio

PERSONALIZED MEDICINE AND IMAGING

- 5253** Gene Expression Signatures Predictive of Bevacizumab/Erlotinib Therapeutic Benefit in Advanced Nonsquamous Non–Small Cell Lung Cancer Patients (SAKK 19/05 trial)
Anca Franzini, Florent Baty, Ina I. Macovei, Oliver Dürr, Cornelia Droege, Daniel Betticher, Bogdan D. Grigoriu, Dirk Klingbiel, Francesco Zappa, and Martin H. Brutsche
See related commentary, p. 5188

Table of Contents

5264 Genome-wide Analysis Identifies Novel Loci Associated with Ovarian Cancer Outcomes: Findings from the Ovarian Cancer Association Consortium

Sharon E. Johnatty, Jonathan P. Tyrer, Siddhartha Kar, Jonathan Beesley, Yi Lu, Bo Gao, Peter A. Fasching, Alexander Hein, Arif B. Ekici, Matthias W. Beckmann, Diether Lambrechts, Els Van Nieuwenhuysen, Ignace Vergote, Sandrina Lambrechts, Mary Anne Rossing, Jennifer A. Doherty, Jenny Chang-Claude, Francesmary Modugno, Roberta B. Ness, Kirsten B. Moysich, Douglas A. Levine, Lambertus A. Kiemeny, Leon F.A.G. Massuger, Jacek Gronwald, Jan Lubiński, Anna Jakubowska, Cezary Cybulski, Louise Brinton, Jolanta Lissowska, Nicolas Wentzensen, Honglin Song, Valerie Rhenius, Ian Campbell, Diana Eccles, Weiva Sieh, Alice S. Whittemore, Valerie McGuire, Joseph H. Rothstein, Rebecca Sutphen, Hoda Anton-Culver, Argyrios Ziogas, Simon A. Gayther, Aleksandra Gentry-Maharaj, Usha Menon, Susan J. Ramus, Celeste L. Pearce, Malcolm C. Pike, Daniel O. Stram, Anna H. Wu, Jolanta Kupryjanczyk, Agnieszka Dansonka-Mieszkowska, Iwona K. Rzepecka, Beata Spiewankiewicz, Marc T. Goodman, Lynne R. Wilkens, Michael E. Carney, Pamela J. Thompson, Florian Heitz, Andreas du Bois, Ira Schwaab, Philipp Harter, and Jacobus Pisterer and Peter Hillemanns on behalf of the AGO Study Group, Beth Y. Karlan, Christine Walsh, Jenny Lester, Sandra Orsulic, Stacey J. Winham, Madalene Earp, Melissa C. Larson, Zachary C. Fogarty, Estrid Høgdall, Allan Jensen, Susanne Kruger Kjaer, Brooke L. Fridley, Julie M. Cunningham, Robert A. Vierkant, Joellen M. Schildkraut, Edwin S. Iversen, Kathryn L. Terry, Daniel W. Cramer, Elisa V. Bandera, Irene Orlow, Tanja Pejovic, Yukie Bean, Claus Høgdall, Lene Lundvall, Ian McNeish, James Paul, Karen Carty, Nadeem Siddiqui, Rosalind Glasspool, Thomas Sellers, Catherine Kennedy, Yoke-Eng Chiew, Andrew Berchuck, Stuart MacGregor, Paul D.P. Pharoah, Ellen L. Goode, and Anna deFazio, Penelope M. Webb, and Georgia Chenevix-Trench on behalf of the Australian Ovarian Cancer Study Group

5277 A Phase I/II Study for Analytic Validation of ⁸⁹Zr-J591 ImmunoPET as a Molecular Imaging Agent for Metastatic Prostate Cancer

Neeta Pandit-Taskar, Joseph A. O'Donoghue, Jeremy C. Durack, Serge K. Lyashchenko, Sarah M. Cheal, Volkan Beylergil, Robert A. Lefkowitz, Jorge A. Carrasquillo, Danny F. Martinez, Alex Mak Fung, Stephen B. Solomon, Mithat Gönen, Glenn Heller, Massimo Loda, David M. Nanus, Scott T. Tagawa, Jarett L. Feldman, Joseph R. Osborne, Jason S. Lewis, Victor E. Reuter, Wolfgang A. Weber, Neil H. Bander, Howard I. Scher, Steven M. Larson, and Michael J. Morris

5286 Stool Bacteriomic Profiling in Patients with Metastatic Renal Cell Carcinoma Receiving Vascular Endothelial Growth Factor–Tyrosine Kinase Inhibitors

Sumanta K. Pal, Sierra M. Li, Xiwei Wu, Hanjun Qin, Marcin Kortylewski, JoAnn Hsu, Courtney Carmichael, and Paul Frankel

5294 Analysis of Molecular Markers by Anatomic Tumor Site in Stage III Colon Carcinomas from Adjuvant Chemotherapy Trial NCCCTG N0147 (Alliance)

Frank A. Sinicrope, Michelle R. Mahoney, Harry H. Yoon, Thomas C. Smyrk, Stephen N. Thibodeau, Richard M. Goldberg, Garth D. Nelson, Daniel J. Sargent, and Steven R. Alberts, for the Alliance for Clinical Trials in Oncology

5305 EGFR Exon 18 Mutations in Lung Cancer: Molecular Predictors of Augmented Sensitivity to Afatinib or Neratinib as Compared with First- or Third-Generation TKIs

Yoshihisa Kobayashi, Yosuke Togashi, Yasushi Yatabe, Hiroshi Mizuuchi, Park Jangchul, Chiaki Kondo, Masaki Shimoji, Katsuaki Sato, Kenichi Suda, Kenji Tomizawa, Toshiki Takemoto, Toyooki Hida, Kazuto Nishio, and Tetsuya Mitsudomi

CANCER THERAPY: PRECLINICAL

5314 Phase I Clinical Pharmacology Study of F14512, a New Polyamine-Vectorized Anticancer Drug, in Naturally Occurring Canine Lymphoma



Dominique Tierny, François Serres, Zacharie Segoula, Ingrid Bemelmans, Emmanuel Bouchaert, Aurélie Pétain, Viviane Brel, Stéphane Couffin, Thierry Marchal, Laurent Nguyen, Xavier Thuru, Pierre Ferré, Nicolas Guilbaud, and Bruno Gomes


5324 Pyrvinium Targets CD133 in Human Glioblastoma Brain Tumor-Initiating Cells

Chitra Venugopal, Robin Hallett, Parvez Vora, Branavan Manoranjan, Sujeivan Mahendram, Maleeha A. Qazi, Nicole McFarlane, Minomi Subapanditha, Sara M. Nolte, Mohini Singh, David Bakhshinyan, Neha Garg, Thusyanth Vijayakumar, Boleslaw Lach, John P. Provias, Kesava Reddy, Naresh K. Murty, Bradley W. Doble, Mickie Bhatia, John A. Hassell, and Sheila K. Singh


5338 Combining an Aurora Kinase Inhibitor and a Death Receptor Ligand/Agonist Antibody Triggers Apoptosis in Melanoma Cells and Prevents Tumor Growth in Preclinical Mouse Models

Yan Liu, Oriana E. Hawkins, Anna E. Vilgelm, Jeffrey S. Pawlikowski, Jeffrey A. Ecsedy, Jeffrey A. Sosman, Mark C. Kelley, and Ann Richmond

Table of Contents

- 5349** Aspirin Suppresses the Growth and Metastasis of Osteosarcoma through the NF- κ B Pathway 
Dan Liao, Li Zhong, Tingmei Duan, Ru-Hua Zhang, Xin Wang, Gang Wang, Kaishun Hu, Xiaobin Lv, and Tiebang Kang

BIOLOGY OF HUMAN TUMORS

- 5360** Genome Analysis of Latin American Cervical Cancer: Frequent Activation of the PIK3CA Pathway
Hong Lou, Guillermo Villagran, Joseph F. Bolland, Kate M. Im, Sarita Polo, Weiyin Zhou, Ushie Odey, Eligia Juárez-Torres, Ingrid Medina-Martínez, Edgar Roman-Basaure, Jason Mitchell, David Roberson, Julie Sawitzke, Lisa Garland, Maria Rodríguez-Herrera, David Wells, Jennifer Troyer, Francisco Castillo Pinto, Sara Bass, Xijun Zhang, Miriam Castillo, Bert Gold, Hesler Morales, Meredith Yeager, Jaime Berumen, Enrique Alvarez, Eduardo Gharzouzi, and Michael Dean
- 5371** Transcriptomic Profiling of Sequential Tumors from Breast Cancer Patients Provides a Global View of Metastatic Expression Changes Following Endocrine Therapy 
Jean McBryan, Ailís Fagan, Damian McCartan, Fiona T. Bane, Damir Varešlija, Sinéad Cocchiglia, Christopher Byrne, Jarlath Bolger, Marie McIlroy, Lance Hudson, Paul Tibbitts, Peadar Ó Gaora, Arnold D. Hill, and Leonie S. Young

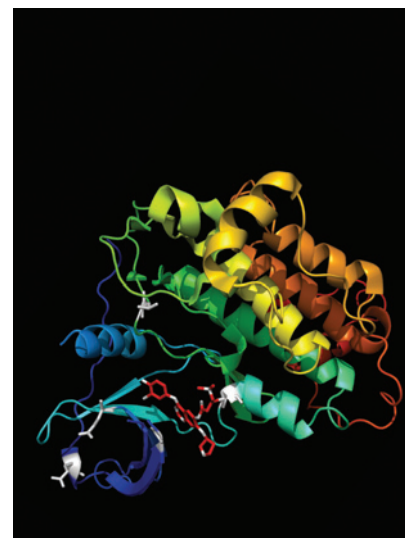
 AC icon indicates Author Choice

 CME icon indicates that this article is available for continuing medical education credit at <http://cme.aacrjournals.org>

For more information please visit www.aacrjournals.org

ABOUT THE COVER

The cover shows a crystal structure of EGFR protein with afatinib, one of the second generation EGFR tyrosine kinase inhibitors. Afatinib forms a covalent bond with cysteine 797. For details, see the article by Kobayashi and colleagues on page 5305 of this issue.



- 5380** Dysfunctional Antibodies in the Tumor Microenvironment Associate with Impaired Anticancer Immunity
Ningyan Zhang, Hui Deng, Xuejun Fan, Anneliese Gonzalez, Songlin Zhang, Randall J. Brezski, Byung-Kwon Choi, Michael Ryczyn, William Strohl, Robert Jordan, and Zhiqiang An

- 5391** Activation of *EZH2* and *SUZ12* Regulated by E2F1 Predicts the Disease Progression and Aggressive Characteristics of Bladder Cancer
Se-Ra Lee, Yun-Gil Roh, Seon-Kyu Kim, Ju-Seog Lee, So-Young Seol, Hyun-Hee Lee, Won-Tae Kim, Wun-Jae Kim, Jeonghoon Heo, Hee-Jae Cha, Tae-Hong Kang, Jin Woong Chung, In-Sun Chu, and Sun-Hee Leem

LETTER TO THE EDITOR

- 5404** Missed Opportunities and Lost Lives: Consequences of Some Proposed Changes to Regulations on Research with Human Tissues—Letter
William E. Grizzle

Clinical Cancer Research

21 (23)

Clin Cancer Res 2015;21:5183-5405.

Updated version Access the most recent version of this article at:
<http://clincancerres.aacrjournals.org/content/21/23>

E-mail alerts [Sign up to receive free email-alerts](#) related to this article or journal.

Reprints and Subscriptions To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at pubs@aacr.org.

Permissions To request permission to re-use all or part of this article, use this link <http://clincancerres.aacrjournals.org/content/21/23>.
Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.