Clinical Cancer Research

Table of Contents

AACR American Association for Cancer Research

May 1, 2019 • Volume 25 • Number 9

SPECIAL FEATURES

Highlights of This Issue 2677

CCR Translations

2679 **New Hope in Prostate Cancer Precision Medicine? miRNA Replacement and Epigenetics**
Anders Bjartell
See related article, p. 2755

2682 **BRAF Inhibition: Bridge or Boost to T-cell Therapy?**
Stephanie L. Goff and Steven A. Rosenberg
See related article, p. 2783

CCR Drug Updates

2685 **FDA Approval Summary: (Daunorubicin and Cytarabine) Liposome for Injection for the Treatment of Adults with High-Risk Acute Myeloid Leukemia**
Aviva C. Krauss, Xin Gao, Liang Li, Michael L. Manning, Paresma Patel, Wentao Fu, Kumar G. Janoria, Gerlie Gieser, David A. Bateman, Donna Przepiorka, Yuan Li Shen, Stacy S. Shord, Christopher M. Sheth, Anamitro Banerjee, Jiang Liu, Kirsten B. Goldberg, Ann T. Farrell, Gideon M. Blumenthal, and Richard Pazdur

Review

2691 **Immunotherapy for the First-Line Treatment of Patients with Metastatic Non–Small Cell Lung Cancer**
Pablo Martinez, Solange Peters, Timothy Stammers, and Jean-Charles Soria

CLINICAL TRIALS: TARGETED THERAPY

2699 **A Phase I, Open-Label, Multicenter, Dose-escalation Study of the Oral Selective FGFR Inhibitor Debio 1347 in Patients with Advanced Solid Tumors Harboring *FGFR* Gene Alterations**
Martin H. Voss, Cinta Hierro, Rebecca S. Heist, James M. Cleary, Funda Meric-Bernstam, Josep Tabernero, Filip Janku, Leena Gandhi, A. John Iafrate, Darrell R. Borger, Nobuya Ishii, Youyou Hu, Yulia Kirpicheva, Valerie Nicolas-Metral, Anna Pokorska-Bocci, Anne Vaslin Chessex, Claudio Zanna, Keith T. Flaherty, and Jose Baselga

2708 **A Phase I Study of Pegylated Arginine Deiminase (Pegargiminase), Cisplatin, and Pemetrexed in Argininosuccinate Synthetase 1-Deficient Recurrent High-grade Glioma**
Peter E. Hall, Rachel Lewis, Nelofer Syed, Richard Shaffer, Jane Evanson, Stephen Ellis, Matthew Williams, Xiaoxing Feng, Amanda Johnston, Jim A. Thomson, Fiona P. Harris, Raj Jena, Tomasz Matys, Sarah Jefferies, Kate Smith, Bor-Wen Wu, John S. Bomalaski, Timothy Crook, Kevin O'Neill, Dimitris Paraskevopoulos, Ramsay S. Khadeir, Michael Sheaff, Simon Pacey, Piers N. Plowman, and Peter W. Szlosarek

2717 **A Phase II Study of Talazoparib after Platinum or Cytotoxic Nonplatinum Regimens in Patients with Advanced Breast Cancer and Germline *BRCA1/2* Mutations (ABRAZO)**
Nicholas C. Turner, Melinda L. Telli, Hope S. Rugo, Audrey Mailliez, Johannes Ettl, Eva-Maria Grischke, Lida A. Mina, Judith Balmaña, Peter A. Fasching, Sara A. Hurvitz, Andrew M. Wardley, Colombe Chappey, Alison L. Hannah, and Mark E. Robson on behalf of the ABRAZO Study Group

2725 **Vaccine-Induced Memory CD8$^+$ T Cells Provide Clinical Benefit in HER2 Expressing Breast Cancer: A Mouse to Human Translational Study**
Erika J. Crosby, William Gwin, Kimberly Blackwell, Paul K. Marcom, Serena Chang, Holden T. Maecker, Gloria Broadwater, Terry Hyslop, Sungjin Kim, Andre Rogatko, Veronica Lubkov, Joshua C. Snyder, Takuya Osada, Amy C. Hobeika, Michael A. Morse, H. Kim Lyerly, and Zachary C. Hartman

Table of Contents

PRECISION MEDICINE AND IMAGING

2737 **Continued Endocrine Therapy Is Associated with Improved Survival in Patients with Breast Cancer Brain Metastases**
Elisabeth S. Bergen, Anna S. Berghoff, Mela Medjedovic, Margaretha Rudas, Florian Fitzal, Zsuzsanna Bago-Horvath, Karin Dieckmann, Robert M. Mader, Ruth Exner, Michael Gnant, Christoph C. Zielinski, Guenther G. Steger, Matthias Preusser, and Rupert Bartsch

2745 **The sTRA Plasma Biomarker: Blinded Validation of Improved Accuracy Over CA19-9 in Pancreatic Cancer Diagnosis**
Ben Staal, Ying Liu, Daniel Barnett, Peter Hsueh, Zonglin He, ChongFeng Gao, Katie Partyka, Mark W. Hurd, Aatur D. Singhi, Richard R. Drake, Ying Huang, Anirban Maitra, Randall E. Brand, and Brian B. Haab

TRANSLATIONAL CANCER MECHANISMS AND THERAPY

2755 **Epigenetic Silencing of miRNA-338-5p and miRNA-421 Drives SPINK1-Positive Prostate Cancer**
Vipul Bhatia, Anjali Yadav, Ritika Tiwari, Shivansh Nigam, Sakshi Goel, Shannon Carskadon, Nilesh Gupta, Apul Goel, Nallasivam Palanisamy, and Bushra Ateeq
See related commentary, p. 2679

2769 **Endogenous Production of IL1B by Breast Cancer Cells Drives Metastasis and Colonization of the Bone Microenvironment**
Claudia Tulotta, Diane V. Lefley, Katy Freeman, Walter M. Gregory, Andrew M. Hanby, Paul R. Heath, Faith Nutter, J. Mark Wilkinson, Amy R. Spicer-Hadlington, Xinming Liu, Steven M.J. Bradbury, Lisa Hambley, Victoria Cookson, Gloria Allocca, Marianna Kruithof de Julio, Robert E. Coleman, Janet E. Brown, Ingunn Holen, and Penelope D. Ottewell

2783 **BRAF Targeting Sensitizes Resistant Melanoma to Cytotoxic T Cells**
Cigdem Atay, Taekyoung Kwak, Sergio Lavilla-Alonso, Laxminarasimha Donthireddy, Allison Richards, Valerie Moberg, Shari Pilon-Thomas, Michael Schell, Jane L. Messina, Vito W. Rebecca, Min Xiao, Jiufeng Tan, Gao Zhang, Jeffrey S. Weber, Meenhard Herlyn, Amod A. Sarnaik, and Dmitry I. Gabrilovich
See related commentary, p. 2682

2795 **Activation of the Lysosome-Associated Membrane Protein LAMP5 by DOT1L Serves as a Bodyguard for MLL Fusion Oncoproteins to Evade Degradation in Leukemia**
Wen-Tao Wang, Cai Han, Yu-Meng Sun, Zhen-Hua Chen, Ke Fang, Wei Huang, Lin-Yu Sun, Zhan-Cheng Zeng, Xue-Qun Luo, and Yue-Qin Chen

2809 **Stratifin Inhibits SCF^{FBW7} Formation and Blocks Ubiquitination of Oncoproteins during the Course of Lung Adenocarcinogenesis**
Aya Shiba-Ishii, Jeongmin Hong, Takatsugu Hirokawa, Yunjung Kim, Tomoki Nakagawa, Shingo Sakashita, Noriaki Sakamoto, Yukinori Kozuma, Yukio Sato, and Masayuki Noguchi

2821 **Unstable Genome and Transcriptome Dynamics during Tumor Metastasis Contribute to Therapeutic Heterogeneity in Colorectal Cancers**
Sung-Yup Cho, Jeesoo Chae, Deukchae Na, Wonyoung Kang, Ahra Lee, Seoyeon Min, Jinjoo Kang, Boram Choi, Jieun Lee, Chang Ohk Sung, Jeffrey H. Chuang, Charles Lee, Won-Suk Lee, Hansoo Park, and Jong-Il Kim

2835 **EGFR/Notch Antagonists Enhance the Response to Inhibitors of the PI3K-Akt Pathway by Decreasing Tumor-Initiating Cell Frequency**
Wenyan Fu, Changhai Lei, Yue Yu, Shuowu Liu, Tian Li, Fangxing Lin, Xiaoyan Fan, Yafeng Shen, Min Ding, Ying Tang, Xuting Ye, Yongji Yang, and Shi Hu

2848 **Genetic Ancestry–dependent Differences in Breast Cancer–induced Field Defects in the Tumor-adjacent Normal Breast**
Harikrishna Nakshatri, Brijesh Kumar, Heather N. Burney, Mary L. Cox, Max Jacobsen, George E. Sandusky, Crislyn D'Souza-Schorey, and Anna Maria V. Storniolo

2860 **Integrated Genomic and Functional microRNA Analysis Identifies miR-30-5p as a Tumor Suppressor and Potential Therapeutic Nanomedicine in Head and Neck Cancer**
Anthony D. Saleh, Hui Cheng, Scott E. Martin, Han Si, Pinar Ormanoglu, Sophie Carlson, Paul E. Clavijo, Xinping Yang, Rita Das, Shaleeka Cornelius, Jamie Couper, Douglas Chepeha, Ludmila Danilova, Thomas M. Harris, Michael B. Prystowsky, Geoffrey J. Childs, Richard V. Smith, A. Gordon Robertson, Steven J. M. Jones, Andrew D. Cherniack, Sang S. Kim, Antonina Rait, Kathleen F. Pirollo, Esther H. Chang, Zhong Chen, and Carter Van Waes

2874 ***L*-Carnitine–Mediated Tumor Cell Protection and Poor Patient Survival Associated with OCTN2 Overexpression in Glioblastoma Multiforme**
Matthias A. Fink, Heiko Paland, Susann Herzog, Markus Grube, Silke Vogelgesang, Kerstin Weitmann, Angela Bialke, Wolfgang Hoffmann, Bernhard H. Rauch, Henry W.S. Schroeder, and Sandra Bien-Möller

2887 **Loss of SMAD4 Promotes Colorectal Cancer Progression by Recruiting Tumor-Associated Neutrophils via the CXCL1/8–CXCR2 Axis**
Ryotaro Ogawa, Takamasa Yamamoto, Hideyo Hirai, Keita Hanada, Yoshiyuki Kiyasu, Gen Nishikawa, Rei Mizuno, Susumu Inamoto, Yoshiro Itatani, Yoshiharu Sakai, and Kenji Kawada

Table of Contents

2900 **Ligand-binding Domain–activating Mutations of ESR1 Rewire Cellular Metabolism of Breast Cancer Cells**
Lotem Zinger, Keren Merenbakh-Lamin, Anat Klein, Adi Elazar, Shani Journo, Tomer Boldes, Metsada Pasmanik-Chor, Avishay Spitzer, Tami Rubinek, and Ido Wolf

2915 **Eradication of Neuroblastoma by T Cells Redirected with an Optimized GD2-Specific Chimeric Antigen Receptor and Interleukin-15**
Yuhui Chen, Chuang Sun, Elisa Landoni, Leonid Metelitsa, Gianpietro Dotti, and Barbara Savoldo

2925 **A T-cell–engaging B7-H4/CD3-bispecific Fab-scFv Antibody Targets Human Breast Cancer**
Akira Iizuka, Chizu Nonomura, Tadashi Ashizawa, Ryota Kondou, Keiichi Ohshima, Takashi Sugino, Koichi Mitsuya, Nakamasa Hayashi, Yoko Nakasu, Kouji Maruyama, Ken Yamaguchi, and Yasuto Akiyama

CORRECTIONS

2935 **Correction: Functional *Ex Vivo* Assay Reveals Homologous Recombination Deficiency in Breast Cancer Beyond BRCA Gene Defects**
Titia G. Meijer, Nicole S. Verkaik, Anieta M. Sieuwerts, Job van Riet, Kishan A.T. Naipal, Carolien H.M. van Deurzen, Michael A. den Bakker, Hein F.B.M. Sleddens, Hendrikus-Jan Dubbink, T. Dorine den Toom, Winand N.M. Dinjens, Esther Lips, Petra M. Nederlof, Marcel Smid, Harmen J.G. van de Werken, Roland Kanaar, John W.M. Martens, Agnes Jager, and Dik C. van Gent

2936 **Correction: Downregulation of Human Endogenous Retrovirus Type K (HERV-K) Viral *env* RNA in Pancreatic Cancer Cells Decreases Cell Proliferation and Tumor Growth**
Ming Li, Laszlo Radvanyi, Bingnan Yin, Kiera Rycaj, Jia Li, Raghavender Chivukula, Kevin Lin, Yue Lu, JianJun Shen, David Z. Chang, Donghui Li, Gary L. Johanning, and Feng Wang-Johanning

2937 **Correction: *KIT* Exon 11 Codons 557–558 Deletion Mutation Promotes Liver Metastasis Through the CXCL12/CXCR4 Axis in Gastrointestinal Stromal Tumors**
Hao-Chen Wang, Tzu-Ying Li, Ying-Jui Chao, Ya-Chin Hou, Yuan-Shuo Hsueh, Kai-Hsi Hsu, and Yan-Shen Shan

2938 **Correction: Dual Inhibition of Canonical and Noncanonical NF-κB Pathways Demonstrates Significant Antitumor Activities in Multiple Myeloma**
Claire Fabre, Naoya Mimura, Kathryn Bobb, Sun-Young Kong, Güllü Gorgun, Diana Cirstea, Yiguo Hu, Jiro Minami, Hiroto Ohguchi, Jie Zhang, Jeffrey Meshulam, Ruben D. Carrasco, Yu-Tzu Tai, Paul G. Richardson, Teru Hideshima, and Kenneth C. Anderson

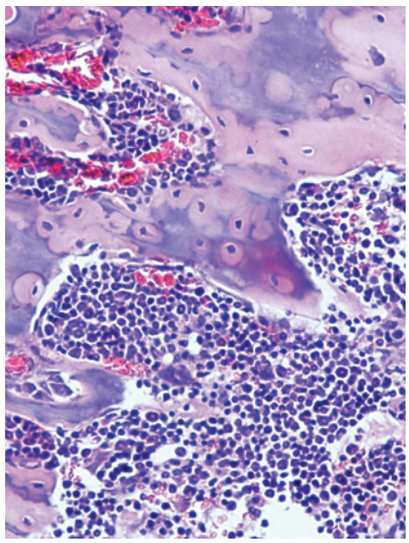
2939 **Correction: Durable Carcinoembryonic Antigen (CEA)-Specific Humoral and Cellular Immune Responses in Colorectal Carcinoma Patients Vaccinated with Recombinant CEA and Granulocyte/Macrophage Colony-Stimulating Factor**
Gustav J. Ullenhag, Jan-Erik Frödin, Mahmood Jeddi-Tehrani, Niklas Lidströmer, Karin Strigård, Emma Eriksson, Ali Samanci, Aniruddha Choudhury, Bo Nilsson, Eva D. Rossmann, Szilvia Mosolits, and Håkan Mellstedt

RETRACTION

2940 **Retraction: Antitumor Effects of a Novel Phenylbutyrate-based Histone Deacetylase Inhibitor, (*S*)-HDAC-42, in Prostate Cancer**
Samuel K. Kulp, Chang-Shi Chen, Da-Sheng Wang, Ching-Yu Chen, and Ching-Shih Chen

AC icon indicates AuthorChoice
For more information please visit www.aacrjournals.org

Table of Contents

ABOUT THE COVER

H&E-stained photomicrograph showing the growth plate from the tibia of a BALB/c nude mouse 32 days after injection of breast cancer cells. Breast cancer cells expressing low concentrations of IL-1B do not induce metastases in bone. For details, see the article by Tulotta and colleagues on page 2769 of this issue.