Highlights of This Issue 6081

SPECIAL FEATURES

CCR Translations

6083 Real-time Pathology to Guide Breast Surgery: Seeing Alone Is Not Believing
Irving J. Bigio
See article p. 6315

6086 Regulatory T Cells Move in When Gliomas Say "I DO"
Bryan D. Choi, Peter E. Fecci, and John H. Sampson
See article p. 6110

Molecular Pathways

6089 Molecular Pathways: The Metabolic Regulator Estrogen-Related Receptor α as a Therapeutic Target in Cancer
Ching-yi Chang and Donald P. McDonnell

6096 Molecular Pathways: Regulation of Metabolism by RB
Brian F. Clem and Jason Chesney

Review

6101 Accelerating Cancer Therapy Development: The Importance of Combination Strategies and Collaboration. Summary of an Institute of Medicine Workshop

HUMAN CANCER BIOLOGY

6110 IDO Expression in Brain Tumors Increases the Recruitment of Regulatory T Cells and Negatively Impacts Survival
Derek A. Wainwright, Irina V. Balyasnikova, Alan L. Chang, Atique U. Ahmed, Kyung-Sub Moon, Brenda Auffinger, Alex L. Tobias, Yu Han, and Maciej S. Lesniak
See commentary p. 6086

Quantitative Immunofluorescence Reveals the Signature of Active B-cell Receptor Signaling in Diffuse Large B-cell Lymphoma

Expression Profiling of Archival Tumors for Long-term Health Studies
Levi Waldron, Shujie Ogin, Yuji Hoshida, Kaori Shim, Amy E. McCart Reed, Peter T. Simpson, Yoshifumi Baba, Katsuhiko Nosho, Nicola Segata, Ana Cristina Vargas, Margaret C. Cummings, Sunil R. Lakhan, Gregory J. Kirkner, Edward Giovannucci, John Quackenbush, Todd R. Golub, Charles S. Fuchs, Giovanni Parmigiani, and Curtis Huttenhower

Decreased NK Cells in Patients with Head and Neck Cancer Determined in Archival DNA

Stemness of B-cell Progenitors in Multiple Myeloma Bone Marrow
Kelly Boucher, Nancy Parquet, Raymond Widen, Kenneth Shain, Rachid Baz, Melissa Alsina, John Kooen, Claudio Anasetti, William Dalton, and Lia E. Perez

Molecular Epidemiology of EGFR and KRAS Mutations in 3,026 Lung Adenocarcinomas: Higher Susceptibility of Women to Smoking-Related KRAS-Mutant Cancers
Snjezana Dogan, Ronglai Shen, Daphne C. Ang, Melissa L. Johnson, Sandra P. D’Angelo, Paul K. Paik, Eddyta B. Brzostowski, Gregory J. Biely, Mark G. Kris, Maureen F. Zakowski, and Marc Ladanyi

Establishment and Characterization of Novel Cell Lines from Sinonasal Undifferentiated Carcinoma
Yoko Takahashi, Michael E. Kupferman, Diana Bell, Tilahun Jiffar, June Goo Lee, Tong-Xin Xie, Ning-Wei Li, Mei Zhao, Mitchell J. Frederick, Alexander Gelbard, Jeffrey N. Myers, and Ehab Y. Hanna
Overexpression of Ecdysoneless in Pancreatic Cancer and Its Role in Oncogenesis by Regulating Glycolysis

Proliferation in the Normal FTE Is a Hallmark of the Follicular Phase, Not BRCA Mutation Status
Sophia H.L. George, Anca Milea, and Patricia A. Shaw

Radioimmunotherapy of Fibroblast Activation Protein Positive Tumors by Rapidly Internalizing Antibodies
Eliane Fischer, Krishna Chaitanya, Thomas Wiest, Andreas Wadle, Andrew M. Scott, Maries van den Broek, Roger Schibli, Stefan Bauer, and Christoph Renner

Activation of HER Family Signaling as a Mechanism of Acquired Resistance to ALK Inhibitors in EML4-ALK–Positive Non–Small Cell Lung Cancer
Junko Tanizaki, Isamu Okamoto, Takafumi Okabe, Kazuko Sakao, Kaoru Tanka, Hidetoshi Hayashi, Hiroyasu Kaneda, Ken Takeawa, Kiyoko Kuwata, Haruka Yamaguchi, Erina Hatashita, Kazuto Nishio, and Kazuhioko Nakagawa

Superior Efficacy of a Combined Epigenetic Therapy against Human Mantle Cell Lymphoma Cells
Warren Fiskus, Rekha Rao, Ramesh Balusu, Siddhartha Ganguly, Jianguo Tao, Eduardo Sotomayor, Uma Mudumurtu, Jacqueline E. Smith, Stacey L. Hembrough, Peter Atadja, Victor E. Marquez, and Kapil Bhalala

Targeting the PI3K Pathway in the Brain—Efficacy of a PI3K Inhibitor Optimized to Cross the Blood–Brain Barrier

In Vivo Phosphoantigen Levels in Bisphosphonate-Treated Human Breast Tumors Trigger Vγ9Vδ2 T-cell Antitumor Cytotoxicity through ICAM-1 Engagement
Ismahene Benzaid, Hannu Mönkkönen, Edith Bonneleye, Jukka Mönkkönen, and Philippe Clézardin

Synthetic miR-34a Mimics as a Novel Therapeutic Agent for Multiple Myeloma: In Vitro and In Vivo Evidence
Maria T. Di Martino, Emanuela Leone, Nicola Amadio, Umberto Foresta, Marta Lionetti, Maria R. Pitali, Maria E. Gallo Cantafio, Annamaria Guilla, Francesco Conforti, Eugenio Morelli, Vera Tomaino, Marco Rossi, Massimo Negri, Manlio Ferrarini, Michele Caraglia, Massoud A. Shammas, Nikhil C. Munshi, Kenneth C. Anderson, Antonino Neri, Piero Sandro Tagliaferri, and Pierfrancesco Tassone

TRAIL and Noxa Are Selectively Upregulated in Prostate Cancer Cells Downstream of the RIG-1/MAVS Signaling Pathway by Nonreplicating Sendai Virus Particles
Taeko Matsushima-Miyagi, Koji Hatano, Motonari Nomura, Liu Li-Wen, Tomoyuki Nishikawa, Kotaro Saga, Takashi Shimbo, and Yasufumi Kaneda

Universal Cancer Peptide-Based Therapeutic Vaccine Breaks Tolerance against Telomerase and Eradicates Established Tumor
Magalie Dosset, Yann Godet, Charline Vauchy, Laurent Beziaud, Yu Chun Lone, Christine Sedlik, Christelle Liard, Emeline Lévi-Froment, Bertrand Clerc, Federico Sandovol, Etienne Dagouindau, Simon Wain-Hobson, Eric Tartour, Pierre Langlade-Demoyen, Christophe Berg, and Olivier Adotévi

Antibody-Dependent Cell-Mediated Cytotoxicity Overcomes NK Cell Resistance in MLL-Rearranged Leukemia Expressing Inhibitory KIR Ligands but Not Activating Ligands
Wing Keung Chan, May Kung Sutherland, Ying Li, Jonathan Zalevsky, Sarah Schell, and Wing Leung
Measurement of Tumor VEGF-A Levels with 89Zr-Bevacizumab PET as an Early Biomarker for the Antiangiogenic Effect of Everolimus Treatment in an Ovarian Cancer Xenograft Model

Scatter Spectroscopic Imaging Distinguishes between Breast Pathologies in Tissues Relevant to Surgical Margin Assessment
Ashley M. Laughney, Venkataramanan Krishnaswamy, Elizabeth J. Rizzo, Mary C. Schwab, Richard J. Barth, Brian W. Pogue, Keith D. Paulsen, and Wendy A. Wells

Impact of the Integrin Signaling Adaptor Protein NEDD9 on Prognosis and Metastatic Behavior of Human Lung Cancer
Shunsuke Kondo, Satoshi Iwata, Taketo Yamada, Yutuke Inoue, Hiromi Ichihara, Yoshiho Kichikawa, Tomoki Kayosuke, Akiko Souta-Kuribara, Hiroo Yamazaki, Osamu Hosono, Hiroshi Kasawagi, Hiroshi Tanaka, Yuichiro Hayashi, Michio Sakamoto, Kazunori Kamiya, Nam H. Dang, and Chikao Morimoto

Clinical Significance of the Genetic Landscape of Pancreatic Cancer and Implications for Identification of Potential Long-term Survivors
Shinichir Yachida, Catherine M. White, Yoshiho Naito, Yi Zhong, Jacqueline A. Broxnan, Anne M. Macgregor-Das, Richard A. Morgan, Tyler Saunders, Daniel A. Laheru, Joseph M. Herman, Ralph H. Hrubes, Alison P. Klein, Sian Jones, Victor Velculescu, Christopher L. Wolfgang, and Christine A. Iacobuzio-Donahue

Serum Lactate Dehydrogenase Is Prognostic for Survival in Patients with Bone Metastases from Breast Cancer: A Retrospective Analysis in Bisphosphonate-Treated Patients
Janet E. Brown, Richard J. Cook, Allan Lipton, and Robert E. Coleman

Outcomes of Phase II Clinical Trials with Single-Agent Therapies in Advanced/Metastatic Non–Small Cell Lung Cancer Published between 2000 and 2009
Filip Janku, Donald A. Berry, Jing Gong, Henrik A. Parsons, David J. Stewart, and Razelle Kurzrock

Using Pharmacokinetic and Pharmacodynamic Data in Early Decision Making Regarding Drug Development: A Phase I Clinical Trial Evaluating Tyrosine Kinase Inhibitor, AEE788
José Baselga, Alain C. Mita, Patrick Schoffski, Herlinde Dumez, Frederico Rojo, Josep Taberner, Clifford D'Lea, William Mielkowsli, Christi Low, Jerry Huang, Margaret Dugan, Kathryn Parker, Eric Walk, Allan van Oosterom, Erika Martinei, and Chris H. Takimoto

Personalized Medicine in a Phase I Clinical Trials Program: The MD Anderson Cancer Center Initiative
Apostolos-Maria Tsimberidou, Nancy G. Iskander, David S. Hong, Jennifer J. Wheler, Gerald S. Falchook, Siqing Fu, Sarina Pihia-Paul, Aung Naing, Filip Janku, Rajayakshmi Luthra, Yang Ye, Sijin Wen, Donald Berry, and Razelle Kurzrock

Association between VEGF Splice Isoforms and Progression-Free Survival in Metastatic Colorectal Cancer Patients Treated with Bevacizumab
David O. Bates, Paul J. Catalano, Kirsty E. Symonds, Alex H.R. Varey, Pramila Ramani, Peter J. O'Dwyer, Bruce J. Giontonio, Neal J. Meropol, Al Bowen Benson, and Steven J. Harper
ABOUT THE COVER

Replication-incompetent Sendai virus particles were injected into orthotopic prostate cancers in NOD-SCID mice on day 29 after the inoculation of human prostate cancer PC3 cells. The dual 4',6-diamidino-2-phenylindole (blue) and terminal deoxynucleotidyl transferase–mediated dUTP nick-end labeling (DAPI; green) staining showed that the TUNEL-positive apoptotic cells were dramatically increased in tumor regions. For details, see the article by Matsushima-Miyagi and colleagues on page 6271 of this issue.