


## Highlights of This Issue 1829

### SPECIAL FEATURES

#### CCR Translations

- 1831** Natural Killer Cell–Based Immunotherapy in Acute Myeloid Leukemia: Lessons for the Future  
Aura Muntasell and Miguel López-Botet  
*See related article, p. 1914*
- 1834** Everything Old Is New Again: Using Nelfinavir to Radiosensitize Rectal Cancer  
Raymond E. Meyn, Sunil Krishnan, and Heath D. Skinner  
*See related article, p. 1922*


#### Molecular Pathways

- 1837** Molecular Pathways: Isocitrate Dehydrogenase Mutations in Cancer  
 Owen Clark, Katharine Yen, and Ingo K. Mellinghoff

#### CCR Focus

- 1844** Disruptive Immunology  
Susan E. Bates
- 1845** Emerging Opportunities and Challenges in Cancer Immunotherapy  
Theresa L. Whiteside, Sandra Demaria, Maria E. Rodriguez-Ruiz, Hassane M. Zarour, and Ignacio Melero
- 1856** Reversing T-cell Dysfunction and Exhaustion in Cancer  
Hassane M. Zarour
- 1865** The Where, the When, and the How of Immune Monitoring for Cancer Immunotherapies in the Era of Checkpoint Inhibition  
Priti S. Hegde, Vaios Karanikas, and Stefan Evers
- 1875** Making Better Chimeric Antigen Receptors for Adoptive T-cell Therapy  
Marcela V. Maus and Carl H. June


- 1885** Targeting the Heterogeneity of Cancer with Individualized Neopeptide Vaccines  
Özlem Türeci, Mathias Vormehr, Mustafa Diken, Sebastian Kreiter, Christoph Huber, and Ugur Sahin

- 1897** Dendritic Cell–Based Immunotherapy: State of the Art and Beyond  
 Kalijn F. Bol, Gerty Schreibelt, Winald R. Gerritsen, I. Jolanda M. de Vries, and Carl G. Figdor

### SPECIAL REPORT

- 1907** Research Priorities, Measures, and Recommendations for Assessment of Tobacco Use in Clinical Cancer Research  
Stephanie R. Land, Benjamin A. Toll, Carol M. Moinpour, Sandra A. Mitchell, Jamie S. Ostroff, Dorothy K. Hatsukami, Sonia A. Duffy, Ellen R. Gritz, Nancy A. Rigotti, Thomas H. Brandon, Sheila A. Prindiville, Linda P. Sarna, Robert A. Schnoll, Roy S. Herbst, Paul M. Cinciripini, Scott J. Leischow, Carolyn M. Dresler, Michael C. Fiore, and Graham W. Warren

### CANCER THERAPY: CLINICAL

- 1914** Larger Size of Donor Alloreactive NK Cell Repertoire Correlates with Better Response to NK Cell Immunotherapy in Elderly Acute Myeloid Leukemia Patients  
Antonio Curti, Loredana Ruggeri, Sarah Parisi, Andrea Bontadini, Elisa Dan, Maria Rosa Motta, Simonetta Rizzi, Sara TrabANELLI, Darina Ocadlikova, Mariangela Lecciso, Valeria Giudice, Fiorenza Fruet, Elena Urbani, Cristina Papayannidis, Giovanni Martinelli, Giuseppe Bandini, Francesca Bonifazi, Russell E. Lewis, Michele Cavo, Andrea Velardi, and Roberto M. Lemoli  
*See related commentary, p. 1831*
- 1922** Clinical Trial of Oral Nelfinavir before and during Radiation Therapy for Advanced Rectal Cancer  
 Esme J. Hill, Corran Roberts, Jamie M. Franklin, Monica Enescu, Nicholas West, Thomas P. MacGregor, Kwun-Ye Chu, Lucy Boyle, Claire Blesing, Lai-Mun Wang, Somnath Mukherjee, Ewan M. Anderson, Gina Brown, Susan Dutton, Sharon B. Love, Julia A. Schnabel, Phil Quirke, Ruth Muschel, William G. McKenna, Michael Partridge, and Ricky A. Sharma  
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**1932** First-in-Human Phase I Study of GSK2126458, an Oral Pan-Class I Phosphatidylinositol-3-Kinase Inhibitor, in Patients with Advanced Solid Tumor Malignancies

Pamela Munster, Rahul Aggarwal, David Hong, Jan H.M. Schellens, Ruud van der Noll, Jennifer Specht, Petronella O. Witteveen, Theresa L. Werner, E. Claire Dees, Emily Bergsland, Neeraj Agarwal, Joseph F. Kleha, Michael Durante, Laurel Adams, Deborah A. Smith, Thomas A. Lampkin, Shannon R. Morris, and Razelle Kurzrock

**1940** KDR Amplification Is Associated with VEGF-Induced Activation of the mTOR and Invasion Pathways but does not Predict Clinical Benefit to the VEGFR TKI Vandetanib



Monique B. Nilsson, Uma Giri, Jayanthi Gudikote, Ximing Tang, Wei Lu, Hai Tran, Youhong Fan, Andrew Koo, Lixia Diao, Pan Tong, Jing Wang, Roy Herbst, Bruce E. Johnson, Andy Ryan, Alan Webster, Philip Rowe, Ignacio I. Wistuba, and John V. Heymach

**1951** Gemtuzumab Ozogamicin Reduces Relapse Risk in *FLT3*/ITD Acute Myeloid Leukemia: A Report from the Children's Oncology Group

Katherine Tarlock, Todd A. Alonzo, Robert B. Gerbing, Susana C. Raimondi, Betsy A. Hirsch, Lillian Sung, Jessica A. Pollard, Richard Aplenc, Michael R. Loken, Alan S. Gamis, and Soheil Meshinchi

## PERSONALIZED MEDICINE AND IMAGING

**1958** The Stat3/5 Signaling Biosignature in Hematopoietic Stem/Progenitor Cells Predicts Response and Outcome in Myelodysplastic Syndrome Patients Treated with Azacitidine

Paraskevi Miltiades, Eleftheria Lamprianidou, Theodoros P. Vassilakopoulos, Sotirios G. Papageorgiou, Athanasios G. Galanopoulos, Christos K. Kontos, Panagiotis G. Adamopoulos, Evangelia Nakou, Sofia Vakalopoulou, Vassilia Garypidou, Maria Papaioannou, Evdoxia Hatjiharissi, Helen A. Papadaki, Emmanuil Spanoudakis, Vassiliki Pappa, Andreas Scorilas, Constantinos Tsatalas, and Ioannis Kotsianidis on behalf of the Hellenic MDS Study Group

**1969** The Immune Checkpoint Regulator PD-L1 Is Highly Expressed in Aggressive Primary Prostate Cancer

Heidrun Gevensleben, Dimo Dietrich, Carsten Golletz, Susanne Steiner, Maria Jung, Thore Thiesler, Michael Majores, Johannes Stein, Barbara Uhl, Stefan Müller, Jörg Ellinger, Carsten Stephan, Klaus Jung, Peter Brossart, and Glen Kristiansen

## CANCER THERAPY: PRECLINICAL

**1978** Selective Toxicity of Investigational Ixazomib for Human Leukemia Cells Expressing Mutant Cytoplasmic NPM1: Role of Reactive Oxygen Species

Jacqueline S. Garcia, Min Huang, Bruno C. Medeiros, and Beverly S. Mitchell

**1989** AGS16F Is a Novel Antibody Drug Conjugate Directed against ENPP3 for the Treatment of Renal Cell Carcinoma



Fernando Doñate, Arthur Raitano, Kendall Morrison, Zili An, Linnette Capo, Hector Aviña, Sher Karki, Karen Morrison, Peng Yang, Jimmy Ou, Ryuichi Moriya, Yuriy Shostak, Faisal Malik, Rossana Nadell, Wendy Liu, Dautlet Satpayev, John Atkinson, Ingrid B.J. Joseph, Daniel S. Pereira, Pia M. Challita-Eid, and David R. Stover

**2000** Mechanistic Investigation of Bone Marrow Suppression Associated with Palbociclib and its Differentiation from Cytotoxic Chemotherapies



Wenyue Hu, Tae Sung, Bart A. Jessen, Stephane Thibault, Martin B. Finkelstein, Nasir K. Khan, and Aida I. Sacaan

**2009** Taselisib (GDC-0032), a Potent  $\beta$ -Sparing Small Molecule Inhibitor of PI3K, Radiosensitizes Head and Neck Squamous Carcinomas Containing Activating *PIK3CA* Alterations

Zachary S. Zumsteg, Natasha Morse, Gabriel Kringsfeld, Gaorav Gupta, Daniel S. Higginson, Nancy Y. Lee, Luc Morris, Ian Ganly, Stephan L. Shiao, Simon N. Powell, Christine H. Chung, Maurizio Scaltriti, and José Baselga

**2020** Romidepsin and Azacitidine Synergize in their Epigenetic Modulatory Effects to Induce Apoptosis in CTCL

Sima Rozati, Phil F. Cheng, Daniel S. Widmer, Kazuyasu Fujii, Mitchell P. Levesque, and Reinhard Dummer

## BIOLOGY OF HUMAN TUMORS

**2032** An Immunogenetic Signature of Ongoing Antigen Interactions in Splenic Marginal Zone Lymphoma Expressing IGHV1-2\*04 Receptors

Vasilis Bikos, Maria Karypidou, Evangelia Stalika, Panagiotis Baliakas, Aliko Xochelli, Lesley-Ann Sutton, George Papadopoulos, Andreas Agathangelidis, Evdoxia Papadopolou, Zadie Davis, Patricia Alarga, George Kanellis, Alexandra Traverse-Glehen, Manuela Mollejo, Achilles Anagnostopoulos, Maurilio Ponzoni, David Gonzalez, Sarka Pospisilova, Estella Matutes, Miguel Angel Piris, Theodora Papadaki, Paolo Ghia, Richard Rosenquist, David Oscier, Nikos Darzentas, Dimitrios Tzovaras, Chrysoula Belessi, Anastasia Hadzidimitriou, and Kostas Stamatopoulos

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**2041** ICAM-1-Related Noncoding RNA in Cancer Stem Cells Maintains ICAM-1 Expression in Hepatocellular Carcinoma

Weixing Guo, Shupeng Liu, Yuqiang Cheng, Lei Lu, Jie Shi, Guixia Xu, Nan Li, Kai Cheng, Mengchao Wu, Shuqun Cheng, and Shanrong Liu

**2051** Identification of CD25 as STAT5-Dependent Growth Regulator of Leukemic Stem Cells in Ph<sup>+</sup> CML

Irina Sadovnik, Andrea Hoelbl-Kovacic, Harald Herrmann, Gregor Eisenwort, Sabine Cerny-Reiterer, Wolfgang Warsch, Gregor Hoermann, Georg Greiner, Katharina Blatt, Barbara Peter, Gabriele Stefanzi, Daniela Berger, Martin Bilban, Susanne Herndlhofer, Heinz Sill, Wolfgang R. Sperr, Berthold Streubel, Christine Mannhalter, Tessa L. Holyoake, Veronika Sexl, and Peter Valent

**2062** Defects in the Fanconi Anemia Pathway in Head and Neck Cancer Cells Stimulate Tumor Cell Invasion through DNA-PK and Rac1 Signaling

Lindsey E. Romick-Rosendale, Elizabeth E. Hoskins, Lisa M. Privette Vinnedge, Grant D. Foglesong, Marion G. Brusadelli, S. Steven Potter, Kakajan Komurov, Samantha A. Brugmann, Paul F. Lambert, Randall J. Kimple, Elizabeth L. Virts, Helmut Hanenberg, Maura L. Gillison, and Susanne I. Wells

**2074** Genomic DNA Hypomethylation and Risk of Renal Cell Carcinoma: A Case-Control Study

Julia Mendoza- Pérez, Jian Gu, Luis A. Herrera, Nizar M. Tannir, Surena F. Matin, Jose A. Karam, Maosheng Huang, David W. Chang, Christopher G. Wood, and Xifeng Wu

**2083** NOTCH1 and SOX10 are Essential for Proliferation and Radiation Resistance of Cancer Stem-Like Cells in Adenoid Cystic Carcinoma

Alex Panaccione, Michael T. Chang, Beatrice E. Carbone, Yan Guo, Christopher A. Moskaluk, Renu K. Virk, Luis Chiriboga, Manju L. Prasad, Benjamin Judson, Saral Mehra, Wendell G. Yarbrough, and Sergey V. Ivanov

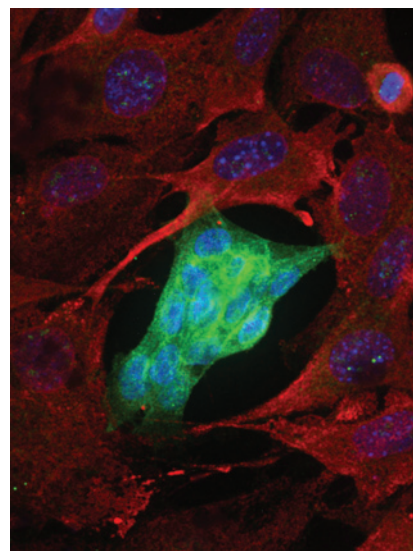
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## ABOUT THE COVER

Expression of NOTCH1 (green) in cancer stem cells isolated from salivary adenoid cystic carcinoma. For details, see the article by Panaccione and colleagues on page 2083 of this issue.



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