### Highlights of This Issue 509

#### SPECIAL FEATURES

**CCR Translations**

- **Breast Cancer Stem Cells: We’ve Got Them Surrounded**
  - Hasan Korkaya and Max S. Wicha
  - *See article, p. 643*

- **A Focus on PD-L1 in Human Melanoma**
  - Peter Hersey and Stuart Gallagher
  - *See article, p. 598*

**CCR New Strategies**

- **New Strategies in Prostate Cancer: Translating Genomics into the Clinic**
  - Himisha Beltran and Mark A. Rubin

**CCR Drug Updates**

- **Vandetanib for the Treatment of Medullary Thyroid Cancer**
  - Nicole G. Chau and Robert L. Haddad

**Molecular Pathways**

- **Molecular Pathways: Targeted α-Particle Radiation Therapy**
  - Kwamina E. Baidoo, Kwon Yong, and Martin W. Brechbiel

#### Perspective

- **Changing the Way We Do Business: Recommendations to Accelerate Biomarker Development in Pancreatic Cancer**
  - Margaret A. Tempero, David Klimstra, Jordan Berlin, Tony Hollingsworth, Paula Kim, Nipun Merchant, Malcolm Moore, Doug Pleskow, Andrea Wang-Gillam, and Andrew M. Lowy

#### Review

- **Does Microenvironment Contribute to the Etiology of Estrogen Receptor–Negative Breast Cancer?**
  - Mary Helen Barcellos-Hoff

### HUMAN CANCER BIOLOGY

- **Deciphering the Mechanisms of Tumorigenesis in Human Pancreatic Ductal Epithelial Cells**
  - Zhe Chang, Zhongkui Li, Xiaoyang Wang, Ya’an Kang, Yuhui Yuan, Jiangong Niu, Huamin Wang, Deyali Chatterjee, Jason B. Fleming, Min Li, James L. Abbruzzese, and Paul J. Chiao

- **SLC1A5 Mediates Glutamine Transport Required for Lung Cancer Cell Growth and Survival**
  - Mohamed Hassanein, Megan D. Hoeksema, Masakazu Shiota, Jun Qian, Bradford K. Harris, Heidi Chen, Jonathan E. Clark, William E. Alborn, Rosana Eisenberg, and Pierre P. Massion

- **Impact of Tumor Microenvironment and Epithelial Phenotypes on Metabolism in Breast Cancer**
  - Heather Ann Brauer, Liza Makowski, Katherine A. Hoadley, Patricia Casbas-Hernandez, Lindsay J. Lang, Erick Román-Pérez, Monica D’Arçy, Alex J. Freemerman, Charles M. Perou, and Melissa A. Troester

### CANCER THERAPY: PRECLINICAL

- **Sorafenib Inhibits Cell Migration and Stroma-Mediated Bortezomib Resistance by Interfering B-cell Receptor Signaling and Protein Translation in Mantle Cell Lymphoma**
  - Silvia Xargay-Torrent, Mónica López-Guerra, Arnau Montraveta, Ilgínia Saborit-Villarroya, Laia Rosich, Alba Navarro, Patricia Pérez-Galán, Gael Roué, Elias Campo, and Dolors Colomer

- **The Activation of MAPK in Melanoma Cells Resistant to BRAF Inhibition Promotes PD-L1 Expression That Is Reversible by MEK and PI3K Inhibition**
  - Xiaofeng Jiang, Jun Zhou, Anita Giobbie-Hurder, Jennifer Wargo, and F. Stephen Hodi
  - *See commentary, p. 514*

- **Dual Blockade of HER2 in HER2-Overexpressing Tumor Cells Does Not Completely Eliminate HER3 Function**
  - Joan T. Garrett, Cammie R. Sutton, María Gabriela Kubí, Rebecca S. Cook, and Carlos L. Arteaga
A Potent Combination of the Novel PI3K Inhibitor, GDC-0941, with Imatinib in Gastrointestinal Stromal Tumor Xenografts: Long-Lasting Responses after Treatment Withdrawal
Giuseppe Floris, Agnieszka Wozniak, Raf Sciot, Haifu Li, Lori Friedman, Thomas Van Looy, Jasmien Wellens, Peter Vermaelen, Christophe M. Denoeste, Jonathan A. Fletcher, Maria Debiec-Rychter, and Patrick Schoffs

Impairment of Glioma Stem Cell Survival and Growth by a Novel Inhibitor for Survivin–Ran Protein Complex
Hacer Guvenc, Marat S. Pavlyukov, Kaushal Joshi, Habibe Kurt, Yeshavanth K. Banasavadi-Siddowgoda, Ping Mao, Christopher Hong, Yousseke Yamada, Chang-Hyuk Kwon, Deepak Bhasin, Somu sundaram Chettiar, Gaspar Kitange, In-Hee Park, Jann N. Sarkaria, Chenglong Li, Mihail I. Shakhparonov, and Ichiro Nakano

Targeting CXCR1/2 Significantly Reduces Breast Cancer Stem Cell Activity and Increases the Efficacy of Inhibiting HER2 via HER2-Dependent and -Independent Mechanisms

Resistance to BRAF Inhibition in BRAF-Mutant Colon Cancer Can Be Overcome with PI3K Inhibition or Demethylating Agents

Systemic Administration of a Novel Immune-Stimulatory Pseudovirion Suppresses Lung Metastatic Melanoma by Regionally Enhancing IFN-γ Production
Kotaro Saga, Katsumoto Tamai, Takehiko Yamazaki, and Yasufumi Kaneda

Antitumor Activity of Cell-Permeable RUNX3 Protein in Gastric Cancer Cells
Junghee Lim, Tam Duong, Nga Do, Phuong Do, Jaetaek Kim, Hyuncheol Kim, Wael El-Rifai, H. Earl Ruley, and Daewoong Jo

Effective Assessment of egfr Mutation Status in Bronchoalveolar Lavage and Pleural Fluids by Next-Generation Sequencing
Fiamma Butilitta, Lara Felicioni, Maela Del Grannastro, Giampaolo Filice, Alessia Di Lorio, Sara Malatesta, Patrizia Viola, Irene Centi, Tommaso D’Antuono, Roberta Zappacosta, Sandra Rosini, Franco Cuccurullo, and Antonio Marchetti

Molecular Markers in Key Steroidogenic Pathways, Circulating Steroid Levels, and Prostate Cancer Progression
Éric Lévesque, Shu-Pin Huang, Étienne Audet-Walsh, Louis Lacombe, Bo-Ying Bao, Yves Fradet, Isabelle Laverdière, Mélanie Rouleau, Chao-Yuan Huang, Chia-Cheng Yu, Patrick Caron, and Chantal Guilmellette

Detection of miR-34a Promoter Methylation in Combination with Elevated Expression of c-Met and β-Catenin Predicts Distant Metastasis of Colon Cancer
Helge Siemens, Jens Neumann, Rene Jackstadt, Ulrich Mansmann, David Horst, Thomas Kirchner, and Heiko Hermeking

Serum CD163 and TARC as Disease Response Biomarkers in Classical Hodgkin Lymphoma
Kimberley Jones, Frank Varl, Colm Keane, Pauline Crooks, Jamie P. Nourse, Louise A. Seymour, David Gottlieb, David Ritchie, Devinder Gill, and Maher K. Gandhi
A Phase II Study of Sorafenib in Patients with Platinum-Pretreated, Advanced (Stage IIIB or IV) Non–Small Cell Lung Cancer with a KRAS Mutation
Anne-Marie C. Dingemans, Wouter W. Mellema, Harry J.M. Groen, Atie van Wijk, Sjaak A. Burgers, Peter W.A. Kunst, Erik Thunnissen, Danielle A.M. Heideman, and Egbert F. Smit

Correction: Thalidomide in Total Therapy 2 Overcomes Inferior Prognosis of Myeloma with Low Expression of the Glucocorticoid Receptor Gene NR3C1

ABOUT THE COVER
Cytology specimens may represent the only available material for molecular diagnosis in non–small cell lung cancer patients. When the number of neoplastic cells in these samples is very low in a large excess of nonneoplastic cells, the specimen is usually judged inadequate for mutation analysis with conventional methods. The cover figure shows a cytological smear obtained from a bronchoalveolar lavage with a limited number of tumor cells. Next-generation sequencing can greatly improve the detection of mutations in these cases. For details, see the article by Buttitta and colleagues on page 691 of this issue.