EDITORIAL
The Era of Cancer Discovery ...... vi
Lewis C. Cantley, PhD, and José Baselga, MD, PhD, Editors-in-Chief

IN THIS ISSUE
Highlighted research articles....................... 4

NEWS IN BRIEF
Important news stories affecting the community............... 6

NEWS IN DEPTH
Update from the Hill: Budget Battle..................... 7

RESEARCH WATCH
Selected highlights of recent articles of exceptional significance from the cancer literature............. 10

VIEWS
In The Spotlight
KRAS Oncogene Rearrangements and Gene Fusions: Unexpected Rare Encounters in Late-Stage Prostate Cancers ............ 12
H. Edgren, S. Kangaspeska, and O. Kallioniemi
Commentary on Wang et al., p. 35

A New BATTLE in the Evolving War on Cancer ............... 14
L. V. Sequist, A. Muzikansky, and J. A. Engelman
Commentary on Kim et al., p. 44

The BATTLE Trial: A Bold Step toward Improving the Efficiency of Biomarker-Based Drug Development ............. 17
E. H. Rubin, K. M. Anderson, and C. K. Gause
Commentary on Kim et al., p. 44

Epidemiology—Found in Translation .................. 21
M. R. Spitz, N. E. Caporaso, and A. N. Freedman
Commentary on Plotz et al., p. 68

A New Target for Therapy in Squamous Cell Carcinoma of the Lung ............... 23
K. Ohashi and W. Pao
Commentary on Hammerman et al., p. 78

In Focus
Toward Molecular Imaging–Driven Drug Development in Oncology ............... 25
E. G. E. de Vries, T. H. Oude Munnink, M. A. T. M. van Vugt, and W. B. Nagengast

MINI REVIEW
Stumbling Blocks on the Path to Personalized Medicine in Breast Cancer: The Case of PARP Inhibitors for BRCA1/2-Associated Cancers ............... 29
J. Balmaña, S. M. Domchek, A. Tutt, and J. E. Garber

RESEARCH BRIEF
Characterization of KRAS Rearrangements in Metastatic Prostate Cancer .................. 35
Précis: The first oncogenic gene fusion of KRAS is identified in metastatic prostate cancer.
The BATTLE Trial: Personalizing Therapy for Lung Cancer

Précis: Phase II results from the BATTLE trial demonstrate the potential of personalized therapy for lung cancer.

Leukocyte Complexity Predicts Breast Cancer Survival and Functionally Regulates Response to Chemotherapy

Précis: Tumor immune microenvironment plays an important role in the response to chemotherapy.

A Novel Two-Stage, Transdisciplinary Study Identifies Digoxin as a Possible Drug for Prostate Cancer Treatment

Précis: Digoxin is identified as a possible therapeutic for prostate cancer.

Mutations in the DDR2 Kinase Gene Identify a Novel Therapeutic Target in Squamous Cell Lung Cancer

Précis: DDR2 kinase is identified as a therapeutic target in squamous cell lung cancer, a disease for which no targeted therapies currently exist.

ON THE COVER

A structural model shows dasatinib bound to the discoidin domain receptor 2 (DDR2) kinase. Hammerman and colleagues identified DDR2 as a potential therapeutic target in a subset of lung squamous cell carcinomas (SCC). They also found that dasatinib inhibited DDR2, and they observed a clinical response in one patient. These findings warrant further clinical evaluation of this drug and target in a subset of SCC patients. For details, please see the article by Hammerman and colleagues on page 78.