5301 Nuclear FAK and Runx1 Cooperate to Regulate IGFBP3, Cell-Cycle Progression, and Tumor Growth
Marta Canel, Adam Byron, Andrew H. Sims, Jessy Cartier, Hitesh Patel, Margaret C. Frame, Valerie G.Brunton, Bryan Serrels, and Alan Serrels
Précis: These findings enhance understanding of the basic biology underlying ongoing clinical trials of FAK inhibitors for cancer therapy.

5313 HNF1B Loss Exacerbates the Development of Chromophobe Renal Cell Carcinomas
Mianen Sun, Pan Tong, Wen Kong, Baijun Dong, Yiran Huang, In Young Park, Lijun Zhou, Xian-De Liu, Zhiyong Ding, Xuesong Zhang, Shanshan Bai, Peter German, Reid Powell, Quan Wang, Xuefei Tong, Nizar M. Tannir, Surena F. Matin, W. Kimryn Rathmell, Gregory N. Fuller, Ian E. McCutcheon, Cheryl L. Walker, Jing Wang, and Eric Jonasch
Précis: These findings provide new insights into key epigenetic events, which drive an unusual type of kidney tumor, where additional loss of TP53 function promotes poor prognosis.

5327 MRE11 Promotes Tumorigenesis by Facilitating Resistance to Oncogene-Induced Replication Stress
Elizabeth Spehalski, Kayla M. Capper, Cheryl J. Smith, Mary J. Morgan, Maria Dinkelmann, Jeffrey Buis, JoAnn M. Sekiguchi, and David O. Ferguson
Précis: New insights into how a DNA repair complex can promote tumorigenesis suggest new approaches to selectively improve cancer cell killing.

TUMOR AND STEM CELL BIOLOGY

5339 Chromatin-Associated Protein SIN3B Prevents Prostate Cancer Progression by Inducing Senescence
Anthony J. Bainor, Fang-Ming Deng, Yu Wang, Peng Lee, David J. Cantor, Susan K. Logan, and Gregory David
Précis: These results suggest a tumor suppressor function for SIN3B in prostate cancer, with potential implications for the use of SIN3B and its target genes as candidate diagnostic markers to distinguish indolent from aggressive disease.

5349 Oncogenic KRAS and p53 Loss Drive Gastric Tumorigenesis in Mice That Can Be Attenuated by E-Cadherin Expression
Jacob E. Till, Changhwan Yoon, Bang-Jin Kim, Kerry Roby, Prince Addai, Evan Jonokuchi, Laura H. Tang, Sam S. Yoon, and Sandra Ryerom
Précis: These findings describe the first autochthonous mouse model of gastric adenocarcinoma that can recapitulate the metastatic processes that occur widely in patients.

5360 S100A4 Is a Biomarker and Regulator of Glioma Stem Cells That Is Critical for Mesenchymal Transition in Glioblastoma
Kin-Hoe Chow, Hee Jung Park, Joshy George, Keiko Yamamoto, Andrew D. Gallup, Joel H. Graber, Yuanxin Chen, Wen Jiang, Dennis A. Stein, Rieder, Eric G. Neilson, Betty Y.S. Kim, and Kyuson Yun
Précis: These findings demonstrate the role of S100A4 in glioblastoma as a regulator of the stemness and mesenchymal transition.

THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

5374 Trastuzumab Increases HER2 Uptake and Cross-Presentation by Dendritic Cells
Victor A. Gall, Anne V. Philips, Na Qiao, Karen Clise-Dwyer, Alexander A. Perakis, Mao Zhang, Gay T. Clifton, Pariya Sukhumalchandra, Qing Ma, Sangeetha M. Reddy, Dihua Yu, Jeffrey J. Molldrem, George E. Peoples, Gheath Alatrash, and Elizabeth A. Mittendorf
Précis: These findings describe a potential mechanism by which patients treated with trastuzumab, followed by vaccination with a CD8 T-cell-eliciting vaccine, may experience a robust antitumor immune response.

5384 Combination Therapy with Bispecific Antibodies and PD-1 Blockade Enhances the Antitumor Potency of T Cells
Chien-Hsing Chang, Yang Wang, Rongxin Li, Diane L. Rossi, Donglin Liu, Edmund A. Rossi, Thomas M. Cardillo, and David M. Goldenberg
Précis: Bispecific antibodies that can bind a T cell along with a tumor cell antigen and redirect the T cell to the tumor can leverage the therapeutic benefits of PD1 blockade, an important present goal in immuno-oncological treatment of solid tumors.

5395 Mitotic Vulnerability in Triple-Negative Breast Cancer Associated with LIN9 Is Targetable with BET Inhibitors
Précis: These findings demonstrate that BET inhibitors can target genes such as LIN9, whose chromatin lacks super-enhancer-associated epigenetic marks.
INTEGRATED SYSTEMS AND TECHNOLOGIES

5409 Integrating Models to Quantify Environment-Mediated Drug Resistance
Noemi Picco, Erik Sahai, Philip K. Maini, and Alexander R.A. Anderson
Précis: Quantification of the environmental contribution to drug resistance reveals that tumor heterogeneity altering treatment dynamics can be exploited for therapeutic gain.

CLINICAL STUDIES

5419 Genomic Alterations in Circulating Tumor DNA from Diverse Cancer Patients Identified by Next-Generation Sequencing
Précis: This milestone study showcases the power of genomic profiling of tumors by next-generation sequencing of circulating tumor DNA, as illustrated in the first large and diverse cohort of cancer patients, including for difficult-to-biopsy tumors.

CORRECTION

5438 Evolution of Cancer Stem-like Cells in Endocrine-Resistant Metastatic Breast Cancers Is Mediated by Stromal Microvesicles

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ABOUT THE COVER

JCAD and LATS2 were stained immunohistochemically with specific primary antibodies and secondary antibodies labeled with Alexa-488 (green for JCAD) or Alexa-594 (red for LATS2). The nucleus was visualized by DAPI staining in blue. JCAD is overlaid with LATS2 in the proximity of the nucleus and appears in yellow. For details, see article by Ye and colleagues on page 5287.