<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>4595</td>
<td>BREAKING ADVANCES</td>
<td>Highlights from Recent Cancer Literature</td>
<td></td>
</tr>
<tr>
<td>4597</td>
<td>OBITUARY</td>
<td>Emil Frei III, MD: In Memoriam (1924–2013)</td>
<td></td>
</tr>
<tr>
<td>4599</td>
<td>REVIEWS</td>
<td>A Road Map to Comprehensive Androgen Receptor Axis Targeting for Castration-Resistant Prostate Cancer</td>
<td>Nicholas Mitsiades</td>
</tr>
<tr>
<td>4606</td>
<td></td>
<td>Myeloid-Derived Suppressor Cells as Osteoclast Progenitors: A Novel Target for Controlling Osteolytic Bone Metastasis</td>
<td>Anandi Sawant and Selvarangan Ponnazhagan</td>
</tr>
<tr>
<td>4611</td>
<td>PERSPECTIVE</td>
<td>Cancer Research Advocacy: Past, Present, and Future</td>
<td>Jane Perlmutter, Shannon K. Bell, and Gwen Darien</td>
</tr>
<tr>
<td>4629</td>
<td>MICROENVIRONMENT AND IMMUNOLOGY</td>
<td>Tumor Promotion by Intratumoral Plasmacytoid Dendritic Cells Is Reversed by TLR7 Ligand Treatment</td>
<td>Isabelle Le Mercier, Dominique Poujol, Amélie Sanlaville, Vanja Sisirak, Michael Gobert, Isabelle Durand, Bertrand Dubois, Isabelle Treilleux, Jacqueline Marvel, Jaromir Vlach, Jean-Yves Blay, Nathalie Bendriss-Vermare, Christophe Caux, Isabelle Puisieux, and Nadège Goutagny</td>
</tr>
<tr>
<td>4641</td>
<td></td>
<td>Vaccine-Instructed Intratumoral IFN-γ Enables Regression of Autochthonous Mouse Prostate Cancer in Allogeneic T-Cell Transplantation</td>
<td>Rodrigo Hess Michelini, Teresa Manzo, Tabea Sturmhein, Veronica Basso, Martina Rocchi, Massimo Freschi, Joanna Listopad, Thomas Blankenstein, Matteo Bellone, and Anna Mondino</td>
</tr>
<tr>
<td>4653</td>
<td></td>
<td>IL-18–Primed Helper NK Cells Collaborate with Dendritic Cells to Promote Recruitment of Effector CD8+ T Cells to the Tumor Microenvironment</td>
<td>Jeffrey L. Wong, Erik Berk, Robert P. Edwards, and Pawel Kalinski</td>
</tr>
<tr>
<td>4663</td>
<td></td>
<td>Potent Immunomodulatory Effects of the Trifunctional Antibody Catumaxomab</td>
<td>Diane Goët, Caroline Flamant, Sylvie Busakiewicz, Vichnou Poirier-Colame, Oliver Kepp, Isabelle Martins, Julien Pesquet, Alexander Eggermont, Dominique Elias, Nathalie Chaput, and Laurence Zitvogel</td>
</tr>
</tbody>
</table>

**Precis:** By providing important details on cancer acidity, pH calculations could help support the development of new cancer therapeutics targeting tumor metabolism.
Intravital FLIM-FRET Imaging Reveals Dasatinib-Induced Spatial Control of Src in Pancreatic Cancer  
Précis: Defining the spatial and temporal factors that limit drug targeting in live tumors could help optimize the preclinical development of new therapeutic agents.

PLZF Confers Effector Functions to Donor T Cells That Preserve Graft-versus-Tumor Effects while Attenuating GVHD  
Arnab Ghosh, Amanda M. Holland, Yildirim Dogan, Nuruz L. Yim, Uttam K. Rao, Lauren E. Young, Mallory L. West, Natalie V. Singer, Hae Lee, Il-Kang Na, Jennifer J. Tsai, Robert R. Jeng, Olaf Penack, Alan M. Hanash, Cecilia Lezcano, George F. Murphy, Chen Liu, Michel Sadelaïn, Martin G. Sauer, Derek Sant'Angelo, and George F. Murphy, Chen Liu, Michel Sadelaïn, Martin G. Sauer, Derek Sant'Angelo, and Martin G. Sauer  
Précis: This study describes a strategy to improve the qualities of adoptive cell therapies that use alloreactive T cells for immune treatment of cancer, focusing particularly on the reduction of undesirable graft-versus-host side effects.

Progestosterone Receptor Signaling in the Microenvironment of Endometrial Cancer Influences Its Response to Hormonal Therapy  
Deanna M. Janzen, Miguel A. Rosales, Daniel Y. Paik, Daniel S. Lee, Daniel A. Smith, Owen N. Witte, M. Luisa Iruela-Arispe, and Sanaz Memarzadeh  
Précis: Striking findings show that the efficacy of hormonal therapy in endometrial cancer is not related to effects on cancer cells, but rather to effects on stromal cells where the progesterone receptor is necessary and sufficient to mediate antitumor effects in the microenvironment.

Proteomic and Lipidomic Signatures of Lipid Metabolism in NASH-Associated Hepatocellular Carcinoma  
Kyle Muir, Antonious Hazim, Ying He, Marion Peyressatre, Do-Young Kim, Xiaoling Song, and Laura Beretta  
Précis: This study reveals a role for lipid-modifying enzymes in liver cancer, identifying in particular a specific type of long-chain polyunsaturated fatty acid participating in nonalcoholic steatohepatitis and liver cancer risk.

Posttranscriptional Regulation of PER1 Underlies the Oncogenic Function of IRE1α  
Précis: Circadian rhythms that may affect chemotherapeutic efficacy are linked here for the first time to the unfolded protein response, a signaling pathway widely activated in cancer that plays an important role in tumor aggressiveness.

Peroxiredoxin-2 Represses Melanoma Metastasis by Increasing E-Cadherin/β-Catenin Complexes in Adherens Junctions  
Doo Jae Lee, Dong Hoon Kang, Mina Choi, Yang Ji Choi, Joo Young Lee, Joo Hyun Park, Yoon Jung Park, Kyung Wha Lee, and Sang Won Kang  
Précis: In discovering a specific antioxidant enzyme that can repress melanoma metastasis, this study also suggests a tractable new direction to treat this deadly disease.

TR3 Modulates Platinum Resistance in Ovarian Cancer  
Andrew J. Wilson, Annie Y. Liu, Joseph Roland, Oluwafunmiluyoyo B. Adebayo, Sarah A. Fletcher, James C. Slaughter, Jeanette Saskowski, Marta A. Crispens, Howard W. Jones III, Samuel James, Oluwafe Fadare, and Dinez Khabele  
Précis: There remains great interest in determining general strategies to overcome resistance to platinum compounds that are used very widely to treat cancer, including ovarian cancer.

MOLECULAR AND CELLULAR PATHOBIOLOGY

Histone Demethylase RBP2 Promotes Lung Tumorigenesis and Cancer Metastasis  
Yu-Ching Teng, Cheng-Feng Lee, Ying-Shiuan Li, Yi-Ren Chen, Pei-Wen Hsiiao, Meng-Yu Chan, Feng-Mao Lin, Hsien-Da Huang, Yen-Ting Chen, Yung-Ming Jeng, Chih-Hung Hsu, Qin Yan, Ming-Daw Tsai, and Li-Jung Juan  
Précis: Finding establish an oncogenic function in lungs for an Rb binding protein that modifies chromatin, with implications for malignant progression in this tissue.
Pathway-Based Serum microRNA Profiling and Survival in Patients with Advanced Stage Non–Small Cell Lung Cancer

Yan Wang, Jian Gu, Jack A. Roth, Michelle A.T. Hildebrandt, Scott M. Lippman, Yuanqing Ye, John D. Minna, and Xifeng Wu

THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

Novel Recombinant Human B7-H4 Antibodies Overcome Tumoral Immune Escape to Potentiate T-Cell Antitumor Responses

Denarda Dangaj, Evripidis Lanitis, Aizhi Zhao, Shree Joshi, Yi Cheng, Raphael Sandaltzopoulos, Hyun-Jeong Ra, Gwenn Danet-Desnoyers, Daniel J. Powell, Jr, and Nathalie Scholler

PanIn-Specific Regulation of Wnt Signaling by HIF2α during Early Pancreatic Tumorigenesis

Angela Criscimanna, Li-Juan Duan, Julie A. Rhodes, Volker Fendrich, Emily Wickline, Douglas J. Hartman, Satdarshan P.S. Monga, Michael T. Lotze, George K. Gittes, Guo-Hua Fong, and Farzad Esni

Enhanced Radiation Sensitivity in HPV-Positive Head and Neck Cancer

Randall J. Kimple, Molly A. Smith, Grace C. Blitzer, Alexandra D. Torres, Joshua A. Martin, Robert Z. Yang, Chimerica, Peet, Laurel D. Lorenz, Kwangok P. Nickel, Aloysius J. Klingelhutz, Paul Lambert, and Paul M. Harari

PREVENTION AND EPIDEMIOLOGY

4870 Genetic Ablation of the Fatty Acid–Binding Protein FABP5 Suppresses HER2-Induced Mammary Tumorigenesis

Liraz Levi, Glenn Lobo, Mary Kathryn Doud, Johannes vonLintig, Darcie Seachrist, Gregory P. Tochtrop, and Noa Noy

Précis: A protein that delivers fatty acids to the transcription factor PPARG is critical for mammary tumor development, rationalizing the development of FABP5 inhibitors to prevent or treat breast cancer.

4871 PanIn-Specific Regulation of Wnt Signaling by HIF2α during Early Pancreatic Tumorigenesis

Angela Criscimanna, Li-Juan Duan, Julie A. Rhodes, Volker Fendrich, Emily Wickline, Douglas J. Hartman, Satdarshan P.S. Monga, Michael T. Lotze, George K. Gittes, Guo-Hua Fong, and Farzad Esni

Précis: This study identifies root signaling connections between hypoxia control and the Wnt and Smad4 pathways in early development of pancreatic cancer.

4872 Enhanced Radiation Sensitivity in HPV-Positive Head and Neck Cancer

Randall J. Kimple, Molly A. Smith, Grace C. Blitzer, Alexandra D. Torres, Joshua A. Martin, Robert Z. Yang, Chimerica, Peet, Laurel D. Lorenz, Kwangok P. Nickel, Aloysius J. Klingelhutz, Paul Lambert, and Paul M. Harari

Précis: Activation of residual p53 in HPV+ head and neck cancers may explain why this type of disease has a relatively better outcome in patients.

4873 Pathway-Based Serum microRNA Profiling and Survival in Patients with Advanced Stage Non–Small Cell Lung Cancer

Yan Wang, Jian Gu, Jack A. Roth, Michelle A.T. Hildebrandt, Scott M. Lippman, Yuanqing Ye, John D. Minna, and Xifeng Wu

Précis: Accumulating evidence argues that microRNA signatures derived from blood serum may offer simple quantitative tools for clinical prognosis and therapeutic development in many settings.

4874 A 20-Year Prospective Study of Plasma Prolactin as a Risk Marker of Breast Cancer Development

Shelley S. Tworoger, A. Heather Ellasses, Xuehong Zhang, Jing Qian, Patrick M. Slass, Bernard A. Rosner, and Susan E. Hankinson

Précis: Elevated levels of plasma prolactin are associated with an increased risk of breast cancer, but only for 10 years after assessment of this risk marker, supporting a role for prolactin at later stages in breast carcinogenesis.

4875 Novel Recombinant Human B7-H4 Antibodies Overcome Tumoral Immune Escape to Potentiate T-Cell Antitumor Responses

Denarda Dangaj, Evripidis Lanitis, Aizhi Zhao, Shree Joshi, Yi Cheng, Raphael Sandaltzopoulos, Hyun-Jeong Ra, Gwenn Danet-Desnoyers, Daniel J. Powell, Jr, and Nathalie Scholler

Précis: Blockade of inhibitory T-cell receptor signals in the same general family as the CTLA-4 molecule targeted by ipilimumab (Yervoy) may offer a paradigm for simultaneous targeting of not only tumor cells, but also tumor-associated macrophages that drive immune escape.

4876 Transcription Poisoning by Topoisomerase I Is Controlled by Gene Length, Splice Sites, and miR-142-3p

Stéphanie Solier, Michael C. Ryan, Scott E. Martin, Sudhir Varma, Kurt W. Kohn, Hongfeng Liu, Barry R. Zeeberg, and Yves Pommer

Précis: Comptothecins used in cancer therapy may act to a major extent by targeting a p53-dependent microRNA.

4877 C-RAF Mutations Confer Resistance to RAF Inhibitors

Rajee Antony, Caroline M. Emery, Allison M. Sawyer, and Levi A. Garraway

Précis: These findings may provide a rationale for the future development of allosteric or pan-RAF inhibitors that disrupt the RAF dimerization interface.

4878 Pivotal Role of the Lipid Raft SK3–Orai1 Complex in Human Cancer Cell Migration and Bone Metastases


Précis: This study links a therapeutically targetable potassium channel to bone metastasis, a common feature of advanced breast and prostate cancers that is generally untreatable.

4879 Docetaxel Conjugate Nanoparticles That Target α-Smooth Muscle Actin–Expressing Stromal Cells Suppress Breast Cancer Metastasis

Mami Murakami, Mark J. Ernsting, Elijus Undržys, Nathan Holwell, Warren D. Foltz, and Shyh-Dar Li

Précis: A novel cytotoxic nanoparticle that specifically degrades stromal elements in the tumor microenvironment exhibits potent antitumor activity.
Expression in Malignant Germ Cell Tumors Downregulates let-7 and Increases Oncogene Levels

A Renewable Tissue Resource of Phenotypically Stable, Biologically and Ethnically Diverse, Patient-Derived Human Breast Cancer Xenograft Models
Xiaomei Zhang, Sofie Claerhout, Aleix Pratt, Lacey E. Dobrolecki, Ivana Petrovic, Qing Lai, Melissa D. Landis, Lisa Wierchmann, Rachel Schiff, Yuan Liu, Melissa D. Landis, Lisa Wiechmann, Rachel Schiff, Mario Giuliano, Helen Wong, Suzanne W. Fuqua, Alejandro Contreras, Carolina Gutierrez, Jian Huang, Sufeng Mao, Anne C. Pavlick, Amber M. Froehlich, Meng-Fen Wu, Anna Tsimelzon, Susan G. Hilsenbeck, Edward S. Chen, Pavel Zuloaga, Chad A. Shaw, Mothaffar F. Rimawi, Charles M. Perou, Gordon B. Mills, Jenny C. Chang, and Michael T. Lewis

Aptamer Identification of Brain Tumor–Initiating Cells
Youngmi Kim, Qianlan Wu, Petra Hamerlik, Masahiro Hitomi, Andrew E. Sloan, Gene H. Barnett, Robert J. Weil, Patrick Leahy, Anita B. Hjelmeland, and Jeremy N. Rich

Loss of p120-Catenin Induces Metastatic Progression of Breast Cancer by Inducing Anoikis Resistance and Augmenting Growth Factor Receptor Signaling
Ron C.J. Schackmann, Sjoerd Klarenbeek, Eva J. Vlug, Susan Stelloo, Miranda van Amersfoort, Milou Tenhagen, Tanya M. Braumuller, Jeroen F. Vermeulen, Petra van der Groep, Ton Peeters, Elsk van der Wall, Paul J. van Diest, Jos Jonkers, and Patrick W.B. Derksen

Canonical Wnt Signaling Is Required for Pancreatic Carcinogenesis
Yaqing Zhang, John P. Morris IV, Wei Yan, Heather K. Schofield, Austin Gurney, Diane M. Simeone, Sarah E. Millar, Timothy Hoey, Matthias Hebrok, and Marina Pasca di Magliano

TRAF6 Upregulates Expression of HIF-1α and Promotes Tumor Angiogenesis
Heng Sun, Xue-Bing Li, Ya Meng, Li Fan, Min Li, and Jing Fang

Retraction: Sp100 as a Potent Tumor Suppressor: Accelerated Senescence and Rapid Malignant Transformation of Human Fibroblasts through Modulation of an Embryonic Stem Cell Program

Correction: IKK4a/ARF Inactivation with Activation of the NF-κB/IL-6 Pathway Is Sufficient to Drive the Development and Growth of Angiosarcoma

Correction: IKK4a/ARF Inactivation with Activation of the NF-κB/IL-6 Pathway Is Sufficient to Drive the Development and Growth of Angiosarcoma
ABOUT THE COVER

Schematic representation of the IRE1α-dependent activation loop that controls tumor cell adaptation. Tumor cell is presented in light gray, stromal cells in dark gray. Proteins are represented by circles, with upregulation in green and downregulation in red. Connections following stress-mediated activation of IRE1α are presented in green for activation and red for inhibition. For details, see article by Pluquet and colleagues on page 4732.