Endothelial ALK1 Is a Therapeutic Target to Block Metastatic Dissemination of Breast Cancer
Sara I. Cunha, Matteo Bocci, John Lövröt, Nikolas Eleftheriou, Pernilla Roswall, Eugenia Cordero, Linda Lindström, Michael Bartoscheck, B. Kristian Haller, R. Scott Pearsall, Aaron W. Mulivor, Ravindra Kumar, Christier Larson, Jonas Bergh, and Kristian Pietras

Précis: These findings offer preclinical proof of concept for the utility of ALK1 inhibitors to treat metastatic breast cancer, with immediate implications for evaluation of this strategy in the clinic.


Précis: These epidemiologic results indicate that the incidence of HPV-positive oropharyngeal cancer is higher and rising more sharply among men than women in the United States because of gender-associated sexual behaviors.
2478 Targeting Mitochondria with Avocatin B Induces Selective Leukemia Cell Death
Eric A. Lee, Leonard Angka, Sarah-Grace Rota, Thomas Hanlon, Andrew Mitchell, Rose Hurren, Xiao Ming Wang, Marcela Gronde, Ezzl Boyaci, Barbara Bosko, Mark Minden, Shrivani Sriskanthadevan, Alessandro Datti, Jeffery L. Wanta, Andrea Edgington, Janusz Pawlisyn, Jamie W. Joseph, Joe Quadrilaterno, Aaron D. Schimmer, and Paul A. Spagnuolo
Précis: A natural product derived from avocado fruit can selectively eradicate leukemia cells based on a specific difference in mitochondrial function.

2489 Acquired Resistance to the Mutant-Selective EGFR Inhibitor AZD9291 Is Associated with Increased Dependence on RAS Signaling in Preclinical Models
Précis: These results offer early insight into how acquired resistance arises to a new mutation-selective inhibitor of EGFR that is in fast-track clinical development, illustrating the inescapable cat-and-mouse chase in the evolution of cancer cell–targeting drugs in the management of cancer patients.

2501 Breast Cancer Detection by B7-H3–Targeted Ultrasound Molecular Imaging
Sunita V. Bachawal, Kristin C. Jensen, Katheryne E. Wilson, Lu Tian, Amelie M. Lutz, and Jürgen K. Willmann
Précis: The immunoregulator B7-H3 is differentially expressed on vascular endothelial cells of breast cancer compared with normal or benign breast pathologies, and this study offers a preclinical proof of concept for the use of B7-H3–targeted ultrasound molecular imaging to improve the diagnostic accuracy of breast cancer detection in patients.

2510 Effects of Sorafenib Dose on Acquired Reversible Resistance and Toxicity in Hepatocellular Carcinoma
Elizabeth A. Kuczynski, Christina R. Lee, Shan Man, Eric Chen, and Robert S. Kerbel
Précis: Reductions in the plasma levels of the tyrosine kinase inhibitor sorafenib that occur naturally in some patients represent a potential contributing cause of drug resistance, with broader implications for optimal dosing of other tyrosine kinase inhibitors.

2520 Grapefruit-Derived Nanovectors Use an Activated Leukocyte Trafficking Pathway to Deliver Therapeutic Agents to Inflammatory Tumor Sites
Qilong Wang, Yi Ren, Jingyao Mu, Nejat K. Egilmez, Xiaoyin Zhuang, Zhongbin Deng, Lifeng Zhang, Jun Yan, Donald Miller, and Huang-Ge Zhang
Précis: This interesting report defines and characterizes the tumor-targeting features of a readily available, generalizable, and nontoxic vehicle to improve the targeted delivery of therapeutic drugs to cancerous or precancerous sites, possibly offering a low-cost clinical formulation strategy to widen the therapeutic window for many drugs.

2530 Drug Redeployment to Kill Leukemia and Lymphoma Cells by Disrupting SCD1-Mediated Synthesis of Monounsaturated Fatty Acids
Andrew D. Southam, Farhat L. Khanim, Rachel E. Hayden, Julia K. Constantinou, Katarzyna M. Koczula, Robert H. Mitchell, Mark R. Viant, Mark T. Drayson, and Chris M. Bunce
Précis: The combination of two drugs found to have anticancer activity in patients is mechanistically linked in this study to decreased levels of a candidate therapeutic target involved in fatty-acid synthesis.

2541 Grade-Dependent Metabolic Reprogramming in Kidney Cancer Revealed by Combined Proteomics and Metabolomics Analysis
Hiromi I. Wettersten, A. Ari Hakimi, Dexter Morin, Cristina Bianchi, Megan E. Johnstone, Dallas R. Donohoe, Josephine F. Trot, Omran Abu Aboud, Steven Stürdivant, Bruce Neri, Robert Wölfert, Benjamin Stewart, Roberto Perez, James J. Hsieh, and Robert H. Weiss
Précis: This work uncovers new aspects of grade-dependent metabolic reprogramming in renal cancers that could lead to novel personalized treatments, including the use of inhibitors of glucose, glutamine, and tryptophan metabolism that are being developed in other clinical settings.

2553 Lin28B/Let-7 Regulates Expression of Oct4 and Sox2 and Reprograms Oral Squamous Cell Carcinoma Cells to a Stem-like State
Chia-Shiu Chien, Mong-Lien Wang, Pen-Yuan Chu, Yuh-Lih Chang, Wei-Hsiu Liu, Cheng-Chia Yu, Yuan-Tzu Lan, Pin-I. Huang, Yi-Yen Lee, Yi-Wei Chen, Wen-Liang Lo, and Shih-Hwa Chiou
Précis: These results show how cancer stem-like properties are controlled in oral squamous cancers, and how this control system may promote drug resistance and tumor relapse in advanced cancers.
G-CSF Promotes Neuroblastoma Tumorigenicity and Metastasis via STAT3-Dependent Cancer Stem Cell Activation
Saurabh Agarwal, Anna Lakoma, Zaowen Chen, John Hicks, Leonid S. Metelitsa, Eugene S. Kim, and Jason M. Shohet

Précis: This seminal study challenges the clinical use of G-CSF as a treatment to support white blood cell counts in children with neuroblastoma, based on the ability of this factor to promote the growth of the cancer stem-like cell population in this setting.

Corrections
- Identification of Pax5 as a Target of MTA1 in B-cell Lymphomas (2580)
- Metastasis-Associated Protein 1 Transgenic Mice: A New Model of Spontaneous B-cell Lymphomas (2582)