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Cancer Research

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- 13 | **Lactate Dehydrogenase B Is Critical for Hyperactive mTOR-Mediated Tumorigenesis**
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- Précis:* Findings offer preclinical proof-of-concept for targeting a key glycolytic enzyme as a therapeutic strategy to attack cancers driven by mTOR signaling.

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- Précis:* Glioblastomas switch their growth pattern after anti-VEGF therapy in the absence of a second wave of angiogenesis.

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- Précis:* Deep sequencing of the gastric cancer cell genome identifies hundreds of new kinase variants, revealing new extremes of genetic complexity in cancer development and progression.

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- 40 | **Endothelial Cell-Specific Deletion of Transcription Factor FoxM1 Increases Urethane-Induced Lung Carcinogenesis**
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- Précis:* A known oncogene in lung tumorigenesis functions in an opposing manner as a tumor suppressor in endothelial cells, acting to restrict pulmonary inflammation and canonical Wnt signaling.
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- 61 | **In vivo Antitumor Activity of a Recombinant IL-7/HGF β Hybrid Cytokine in Mice**
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Précis: Findings suggest that interactions between BRCA2 and NPM mediate suppression of hereditary breast and ovarian cancer.

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Précis: Characterization of known and new microRNAs leads to the discovery of a new gene within the human ERBB2 oncogene.

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Précis: Findings define a molecular cascade that mechanistically rationalizes the design of new adjuvant therapies to treat cervical precancerous lesions and prevent their malignant progression.

98 **Appearance of the Novel Activating F1174S ALK Mutation in Neuroblastoma Correlates with Aggressive Tumor Progression and Unresponsiveness to Therapy**

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Précis: Mutation of a critical kinase in neuroblastoma progression may be missed in the initial tumor biopsy, requiring testing later at progression.

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Précis: Findings offer the first validated mouse model to study secondary malignancies, an increasingly common complication of cancer therapy in survivors that has yet to be systematically analyzed.

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Précis: Loss of a child associates with a higher risk of several cancers, chiefly ones that are associated with HPV infections.

123 **A Randomized Trial of Dietary Intervention for Breast Cancer Prevention**

Lisa J. Martin, Qing Li, Olga Melnichouk, Cary Greenberg, Salomon Minkin, Greg Hislop, and Norman F. Boyd

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Précis: A PET imageable marker for tumor angiogenesis could enable noninvasive monitoring of dynamic changes in patients, helping guide treatment strategies, optimal dose finding, and drug combination studies.
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Précis: Findings offer preclinical proof-of-concept for an effective combination of proapoptotic therapies that can eradicate malignant glioma cells in vitro and in vivo.
- 164 **PDGFR Signaling Blockade in Marrow Stroma Impairs Lung Cancer Bone Metastasis**
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Précis: Findings support the important concept that concomitant targeting of the tumor and tumor stroma can confer a far more effective approach to block bone metastasis in cancer.
- 175 **TGF- β -RI Kinase Inhibitor SD-208 Reduces the Development and Progression of Melanoma Bone Metastases**
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Précis: Preclinical proof-of-concept rationalizes application of small molecule inhibitors of TGF- β receptor signaling to prevent and treat osteolytic bone metastases in melanoma.
- 185 **Autophagic Survival in Resistance to Histone Deacetylase Inhibitors: Novel Strategies to Treat Malignant Peripheral Nerve Sheath Tumors**
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Précis: Findings identify a potentially important resistance mechanism to histone deacetylase inhibitors, the abrogation of which could in particular enhance their anticancer activity against an aggressive neurological tumor that is poorly managed in the clinic.
- 197 **Novel Synthetic Antagonists of Canonical Wnt Signaling Inhibit Colorectal Cancer Cell Growth**
Jo Waaler, Ondrej Machon, Jens Peter von Kries, Steven Ray Wilson, Elsa Lundenes, Doris Wedlich, Dietmar Gradl, Jan Erik Paulsen, Olga Machonova, Jennifer L. Dembinski, Huyen Dinh, and Stefan Krauss
Précis: New small molecule inhibitors of the canonical Wnt pathway are described that potently block the growth of colorectal cancers.
- 206 **Activation and Involvement of Ral GTPases in Colorectal Cancer**
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Précis: Findings validate the significance of a lesser studied Ras effector pathway for therapeutic inhibition of mutant KRAS in colorectal cancer.
- 216 **Biological Activity of 4-Substituted Methoxybenzoyl-Aryl-Thiazole: An Active Microtubule Inhibitor**
Chien-Ming Li, Zhao Wang, Yan Lu, Sunjoo Ahn, Ramesh Narayanan, Jeffrey D. Kearbey, Deanna N. Parke, Wei Li, Duane D. Miller, and James T. Dalton
Précis: SMART compounds are as efficacious as currently approved antitubulin drugs for cancer treatment, but unlike these drugs they can circumvent P-glycoprotein-mediated drug resistance.
- 225 **MiR-26a Inhibits Cell Growth and Tumorigenesis of Nasopharyngeal Carcinoma through Repression of EZH2**
Juan Lu, Ming-Liang He, Lu Wang, Ying Chen, Xiong Liu, Qi Dong, Yang-Chao Chen, Ying Peng, Kai-Tai Yao, Hsiang-Fu Kung, and Xiang-Ping Li
Précis: This study contributes significant new information concerning the molecular pathogenesis of nasopharyngeal carcinoma, a major cancer in China where it is associated with Epstein-Barr virus infection.

TUMOR AND STEM CELL BIOLOGY

- 234 | **Phosphatase PRL-3 Is a Direct Regulatory Target of TGF β in Colon Cancer Metastasis**
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Précis: Findings link TGF β signaling in cancer progression to upregulation of a survival pathway that could be a determinant of metastasis, with implications for its therapeutic attack.
- 245 | **Snail2 is an Essential Mediator of Twist1-Induced Epithelial Mesenchymal Transition and Metastasis**
Esmeralda Casas, Jihoon Kim, Andrés Bendesky, Lucila Ohno-Machado, Cecily J. Wolfe, and Jing Yang
Précis: Findings identify an essential regulatory relationship between two key factors that control the EMT program to promote metastasis.
- 255 | **Higher miRNA Tolerance in Immortal Li-Fraumeni Fibroblasts with Abrogated Interferon Signaling Pathway**
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- 266 | **hTERT Overexpression Alleviates Intracellular ROS Production, Improves Mitochondrial Function, and Inhibits ROS-Mediated Apoptosis in Cancer Cells**
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Précis: Findings define a novel function for TERT in alleviating cellular ROS levels, endowing cancer cells with an additional mechanism to evade cell death stimuli.

- 277 | **Plasminogen Activator uPA is a Direct Transcriptional Target of the JAG1-Notch Receptor Signaling Pathway in Breast Cancer**
Mamiko Shimizu, Brenda Cohen, Pavel Goldvasser, Hal Berman, Carl Virtanen, and Michael Reedijk
Précis: Important new mechanistic findings link two pathways of poor prognosis in breast cancer.

LETTER TO THE EDITOR

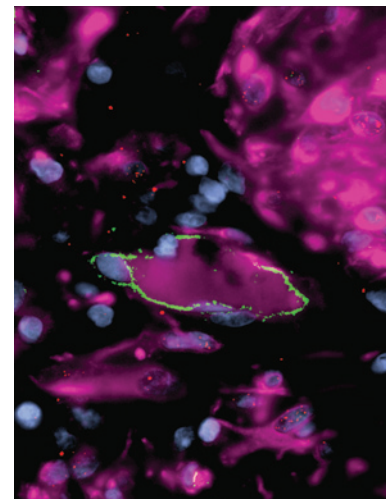
- 287 | **Fish Oil Exacerbates Colitis in SMAD3 Mice**
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CORRECTIONS

- 289 | **Correction: F3-Targeted Cisplatin-Hydrogel Nanoparticles as an Effective Therapeutic that Targets Both Murine and Human Ovarian Tumor Endothelial Cells *In vivo***
- 290 | **Correction: Induction of Human Epithelial Stem/Progenitor Expansion by FOXM1**

ABOUT THE COVER

Double immunofluorescence for nestin (pink) and the endothelial marker CD34 (green) with EGFR fluorescence in situ hybridization (red) confirms expression of nestin in endothelial cells and in GBM cells of patients treated with cediranib. For details, see the article by di Tomaso et al. on page 19 of this issue.



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