The Initial Hours of Metastasis: The Importance of Cooperative Host–Tumor Cell Interactions during Hematogenous Dissemination

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MicroRNAs Reprogram Normal Fibroblasts into Cancer-Associated Fibroblasts in Ovarian Cancer

A.K. Mitra, M. Zillhardt, Y. Hua, P. Tiwari, A.E. Murmann, M.E. Peter, and E. Lengyel

Précis: Changes in microRNA expression in ovarian cancer promote cancer-associated fibroblast reprogramming and induce the expression of the tumor-promoting chemokine CCL5 in fibroblasts.

Metabolomics Strategy Reveals Subpopulation of Liposarcomas Sensitive to Gemcitabine Treatment


Précis: Nucleoside salvage activity in a subset of liposarcomas can be identified via PET imaging and enhances tumor response to gemcitabine.

FGFR Genetic Alterations Predict for Sensitivity to NVP-BGJ398, a Selective Pan-FGFR Inhibitor


Précis: Mutations of FGFR family members or ligands may represent stratification biomarkers that identify patients likely to respond to targeted FGFR inhibition.
Dual Roles of PARP-1 Promote Cancer Growth and Progression


Précis: PARP-1 represents a potential therapeutic target in prostate cancer due to its roles in DNA repair and regulation of androgen receptor activity.

Identification of Luminal Breast Cancers That Establish a Tumor-Supportive Macroenvironment Defined by Proangiogenic Platelets and Bone Marrow-Derived Cells


Précis: Luminal breast cancers stimulate distant tumor growth by generating a systemic protumor environment composed of activated circulating platelets and bone marrow cells.

Acknowledgment to Reviewers

Braas and colleagues performed mass-spectrometry–based metabolomics to assess alternative nutrient uptake in liposarcoma and observed nucleoside consumption and elevated activity of the nucleoside salvage pathway enzyme deoxycytidine kinase (dCK) in patient-derived liposarcoma cell lines and a subset of primary liposarcoma samples. Nucleoside salvage pathway activity could be imaged in vivo by positron emission tomography (PET) using a cytidine-derived tracer, 1-2′-deoxy-2′-[18F]fluoroarabinofuranosyl) cytosine (FAC), and enhanced the sensitivity of liposarcoma cell lines and xenograft tumors to gemcitabine, a nucleoside analogue prodrug, in a dCK-dependent manner. These results suggest that FAC–PET may identify patients with liposarcoma who will benefit from gemcitabine treatment. For details, please see the article by Braas and colleagues on page 1109.