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RESEARCH BRIEF

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Précis: Intratumoral injection of a STAT3 decoy oligonucleotide safely reduced target gene expression in a phase 0 clinical trial, and chemical modification may enable systemic delivery.
The Outgrowth of Micrometastases Is Enabled by the Formation of Filopodium-like Protrusions.  
T. Shibue, M.W. Brooks, M.F. Inan, F. Reinhardt, and R.A. Weinberg  
Précis: The formation of integrin $\beta_1$-containing protrusions mediates FAK signaling to promote metastatic cell proliferation and colonization.

IDO Is a Nodal Pathogenic Driver of Lung Cancer and Metastasis Development  
Précis: IDO orchestrates inflammation, vascularization, and immunosuppression to establish a protumorigenic environment in lung cancer and metastasis models.

microRNA Regulatory Network Inference Identifies miR-34a as a Novel Regulator of TGF-β Signaling in Glioblastoma  
Précis: miR-34a functions as a subtype-specific tumor suppressor in glioblastoma through targeted inhibition of SMAD4-regulated transcription.

Correction  
Correction: High Frequency of PIK3R1 and PIK3R2 Mutations in Endometrial Cancer Elucidates a Novel Mechanism for Regulation of PTEN Protein Stability  
Sen and colleagues conducted an exploratory, first-in-human phase 0 trial that showed that intratumoral injection of a STAT3 decoy oligonucleotide during tumor resection surgery could safely reduce STAT3 target gene expression in head and neck squamous cell carcinomas (HNSCC). Modification of the STAT3 decoy by linkage or circularization of the 2 strands increased its stability in vitro, which facilitated systemic administration of the STAT3 decoy in vivo. Intravenous injection of a cyclic STAT3 decoy, but not the parental decoy, decreased STAT3 target gene expression in HNSCC xenografts and significantly suppressed tumor growth. For details, please see the article by Sen and colleagues on page 694.