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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.

Précis: The formation of integrin β1-containing protrusions mediates FAK signaling to promote metastatic cell proliferation and colonization.


Précis: IDO orchestrates inflammation, vascularization, and immunosuppression to establish a protumorigenic environment in lung cancer and metastasis models.

Correction
Correction: High Frequency of PIK3R1 and PIK3R2 Mutations in Endometrial Cancer Elucidates a Novel Mechanism for Regulation of PTEN Protein Stability


Précis: miR-34a functions as a subtype-specific tumor suppressor in glioblastoma through targeted inhibition of SMAD4-regulated transcription.

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• FDA Offers Guidance for Neoadjuvant Trials
• Cancer Trials Fail to Track Tobacco Use
• FDA to Speed Its Work on Shortages, Generics
• Georgia Tech Opens Integrated Research Center
• Seeing Deeper Inside Tissues

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.