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431 Broadening Specificity and Enhancing Cytotoxicity of Adoptive T Cells for Nasopharyngeal Carcinoma Immunotherapy
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A clinically translatable platform was developed to track T-cell populations without prior knowledge of their specificity. TCR sequencing data could be used to distinguish patients with glioblastoma who will benefit and are benefitting from immunotherapy.
Inhibition of Soluble Tumor Necrosis Factor Prevents Chemically Induced Carcinogenesis in Mice
Andrea Sobo-Vujanovic, Lazar Vujanovic, Albert B. DeLeo, Fernando Concha-Benavente, Robert L. Ferris, Yan Lin, and Nikola L. Vujanovic

The role of soluble TNF in tumorigenesis, distinct from transmembrane TNF, was delineated. Soluble TNF promoted chemically induced carcinogenesis and mediated the expansion of myeloid-derived suppressor cells. This pathway could serve as a potential target for cancer prevention and therapy.

Systemic Immunotherapy of Non-Muscle Invasive Mouse Bladder Cancer with Avelumab, an Anti–PD-L1 Immune Checkpoint Inhibitor
Amanda J. Vandeveer, Jonathan K. Fallon, Robert Tighe, Helen Sabzevari, Jeffrey Schlom, and John W. Greiner

In an orthotopic model of non-muscle invasive bladder cancer, in which BCG had minimal activity, systemic administration of the anti–PD-L1 checkpoint inhibitor avelumab demonstrated durable antitumor responses and long-term survival mediated by CD4 and CD8 T cells.

Neoantigen Load, Antigen Presentation Machinery, and Immune Signatures Determine Prognosis in Clear Cell Renal Cell Carcinoma
Hirokazu Matsushita, Yusuke Sato, Takahiro Karasaki, Tohru Nakagawa, Haruki Kume, Seishi Ogawa, Yukio Homma, and Kazuhiro Kakimi

In ccRCC the abundant neoepitopes associated with more effective antitumor immune responses were counterbalanced by a strongly immunosuppressive microenvironment. Therefore, combining blockade of immunosuppressive molecular pathways with immunotherapies targeting neoantigens may achieve synergistic antitumor activity.

Correction: Using Quantitative Seroproteomics to Identify Antibody Biomarkers in Pancreatic Cancer

ABOUT THE COVER
Cancer patients are often treated with immunotherapy; yet it is difficult to readily track the immune response to these treatments. Hsu, Sedighim, and colleagues have developed a clinically translatable platform that allows tracking of individual T-cell clones without prior knowledge of their specificity. By comparing sequences found in glioblastoma tumors to those found in the peripheral blood, the authors verified that the blood samples reflected the same specific T cells infiltrating into the tumors. T-cell receptor sequencing data could help distinguish glioblastoma patients that benefited, or could potentially benefit, from immunotherapy (specifically dendritic cell vaccination). The micrograph (right) upon which the cover this month is based shows, by multiplex immunohistochemistry, a tumor derived from one of the patients in this study. It is heavily infiltrated with T cells, which are critical for the immune response within the microenvironment. Photo by Shaina Sedighim. Artwork by Lewis Long. Read more starting on page 412 of this issue of Cancer Immunology Research.