Cancer Immunology Research

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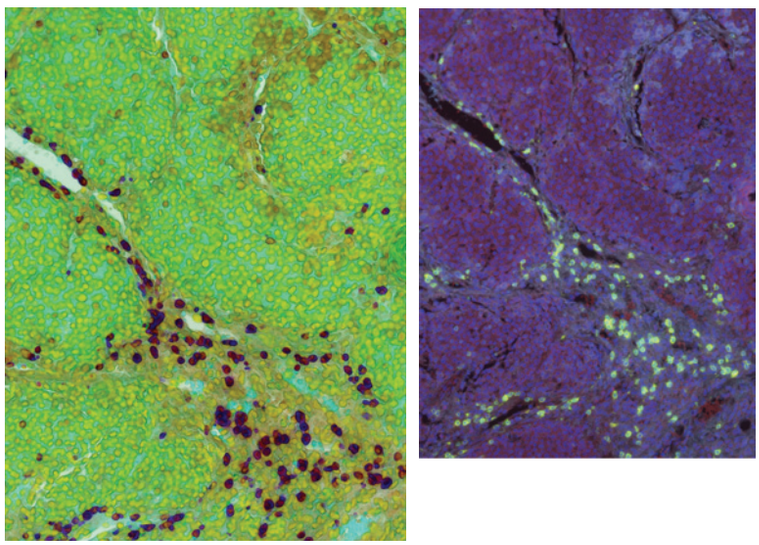
ABOUT THE COVER

At their best, T cells kill tumors and can provide long-term protection against recurrence. However, T cells need to overcome two major obstacles. First, after T-cell stimulation, CTLA-4 is expressed and suppresses further proliferation. Second, activated T cells upregulate the inhibitory receptor PD-1, the ligands for which are frequently found within tumors, shutting down infiltrating T cells. Blocking either of these checkpoints initiates antitumor immune responses in a segment of the patient population. To increase the percentage of responding patients, clinicians are testing combinations of these two checkpoint inhibitors, but this dual treatment increases the number and severity of immune-related complications. Early identification of which patients are responding would be key. McNamara and colleagues have screened multiple mouse models early in the course of treatment for prognostic biomarkers in blood. Peripheral blood lymphocytes of responders produced large amounts of IFNγ and were better at predicting response than other markers that were assayed. The cover art (left) is based on an original micrograph (right) showing CD3$^+$CD8$^+$ T cells (green/yellow) infiltrating a murine breast tumor that had been treated with combination anti-checkpoint therapies. This image was captured by Mohammad Farhad and supplied by the Redmond laboratory at the Earle A. Chiles Research Institute, Portland, Oregon. Artwork is by Lewis Long. Read more starting on page 650 of this issue of *Cancer Immunology Research*.



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