

## CANCER IMMUNOLOGY MINIATURES

- 175 Eosinophilic Fasciitis and Acute Encephalopathy Toxicity from Pembrolizumab Treatment of a Patient with Metastatic Melanoma**  
Leila Khoja, Catherine Maurice, MaryAnne Chappell, Leslie MacMillan, Ayman S. Al-Habeeb, Nada Al-Faraidy, Marcus O. Butler, Patrik Rogalla, Warren Mason, Anthony M. Joshua, and David Hogg  
*The patterns and kinetics of toxicity with anti-PD-1 agents are emerging. The incidence of grade 3 or above toxicities is low. We identify an idiosyncratic toxicity, eosinophilic fasciitis, that requires particular clinical vigilance to enable diagnosis and management.*
- 179 Melanoma Brain Metastasis Pseudoprogression after Pembrolizumab Treatment**  
Justine V. Cohen, Ahmed K. Alomari, Alexander O. Vortmeyer, Lucia B. Jilaveanu, Sarah B. Goldberg, Amit Mahajan, Veronica L. Chiang, and Harriet M. Kluger  
*This case report documents pseudoprogression in brain metastases treated with antibodies to PD-1. Use of immune checkpoint inhibitors in melanoma and other malignancies is increasing, making it important to recognize and treat effects unique to brain metastases.*

## RESEARCH ARTICLES

- 183 Regulatory T Cells from Colon Cancer Patients Inhibit Effector T-cell Migration through an Adenosine-Dependent Mechanism**  
Patrik Sundström, Hanna Stenstad, Veronica Langenes, Filip Ahlmanner, Lisa Theander, Tapuka Gordon Ndah, Kamilla Fredin, Lars Börjesson, Bengt Gustavsson, Jérémy Bastid, and Marianne Quiding-Järbrink  
*Regulatory T cells suppress many effector T-cell functions. Tregs from patients with colon cancer were found to inhibit transendothelial migration of conventional T cells, perhaps explaining the paucity of effector T cells within tumors.*
- 194 PD-1 Blockade Expands Intratumoral Memory T Cells**  
Antoni Ribas, Daniel Sanghoon Shin, Jesse Zaretsky, Juliet Frederiksen, Andrew Cornish, Earl Avramis, Elizabeth Seja, Christine Kivork, Janet Siebert, Paula Kaplan-Lefko, Xiaoyan Wang, Bartosz Chmielowski, John A. Glaspy, Paul C. Tumeh, Thinle Chodon, Dana Pe'er, and Begoña Comin-Anduix  
*Tumor biopsies from patients treated with antibodies to PD-1 showed that therapy altered tumor composition. T cells, B cells, and myeloid-derived suppressor cells were increased, and patients who responded to anti-PD-1 therapy had increased memory CD8<sup>+</sup> T cells.*

- 204 Identification of T-cell Receptors Targeting KRAS-Mutated Human Tumors**  
Qiong J. Wang, Zhiya Yu, Kayla Griffith, Ken-ichi Hanada, Nicholas P. Restifo, and James C. Yang  
*This study identifies HLA-A11\*01-restricted T-cell receptors (TCRs) that specifically target mutated KRAS, which is an oncogenic driver mutation found in many types of cancers. These TCRs have antitumor activity and thus show potential for clinical use in multiple cancers.*
- 215 Phase I Study of Random Healthy Donor-Derived Allogeneic Natural Killer Cell Therapy in Patients with Malignant Lymphoma or Advanced Solid Tumors**  
Yaewon Yang, Okjae Lim, Tae Min Kim, Yong-Oon Ahn, Hana Choi, Hyejin Chung, Bokyoung Min, Jung Hyun Her, Sung Yoo Cho, Bhumsuk Keam, Se-Hoon Lee, Dong-Wan Kim, Yu Kyeong Hwang, and Dae Seog Heo  
*Completely allogeneic NK cells could provide a ready source of antitumor activity. This preliminary clinical trial shows that such cells are well tolerated and have potential benefits for cancer patients by upregulating the host immune responses against cancer.*
- 225 Using Quantitative Seroproteomics to Identify Antibody Biomarkers in Pancreatic Cancer**  
Darshil T. Jhaveri, Min-Sik Kim, Elizabeth D. Thompson, Lanqing Huang, Rajni Sharma, Alison P. Klein, Lei Zheng, Dung T. Le, Daniel A. Laheru, Akhilesh Pandey, Elizabeth M. Jaffee, and Robert A. Anders  
*Serum samples from patients in a phase II pancreas cancer vaccine clinical trial were subjected to quantitative proteomics. Three highly induced proteins in the pancreas after vaccination became targets of antibodies. Patients harboring these antibodies had improved clinical outcomes.*
- 234 Comprehensive Immune Profiling of Lung Adenocarcinomas Reveals Four Immunotypes with Plasma Cell Subtype a Negative Indicator**  
Yutaka Kurebayashi, Katsura Emoto, Yuichiro Hayashi, Ikuo Kamiyama, Takashi Ohtsuka, Hisao Asamura, and Michiie Sakamoto  
*Lung cancer is a complex disease with variable outcomes. Immune cells from 114 cases were quantified immunohistochemically, identifying four immunotypes of lung adenocarcinoma (CD8, mast cell, macrophage/DC, and plasma cell) that could potentially be useful for therapy selection.*

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**248** Immunotherapy against Metastatic Melanoma with Human iPS Cell–Derived Myeloid Cell Lines Producing Type I Interferons

Azusa Miyashita, Satoshi Fukushima, Satoshi Nakahara, Yosuke Kubo, Aki Tokuzumi, Junji Yamashita, Jun Aoi, Miwa Haruta, Satoru Senju, Yasuharu Nishimura, Masatoshi Jinnin, and Hironobu Ihn  
*Human myeloid cell lines derived from iPS cells were genetically modified to express type I IFNs. These cells durably inhibited the growth of human melanoma in xenograft models by infiltrating tumors and providing local antitumor effects.*

**259** CAR T Cells Targeting Podoplanin Reduce Orthotopic Glioblastomas in Mouse Brains

Satoshi Shiina, Masasuke Ohno, Fumiharu Ohka, Shunichiro Kuramitsu, Akane Yamamichi, Akira Kato, Kazuya Motomura, Kuniaki Tanahashi, Takashi Yamamoto, Reiko Watanabe, Ichiro Ito, Takeshi Senga, Michinari Hamaguchi, Toshihiko Wakabayashi, Mika K. Kaneko, Yukinari Kato, Vidyalakshmi Chandramohan, Darell D. Bigner, and Atsushi Natsume  
*The glioblastoma subtypes with the worst prognoses often bear podoplanin. T cells expressing a chimeric antigen receptor that targets podoplanin were specific and effective against PDPN-positive glioblastoma cells in vitro and increased survival time in a mouse model.*

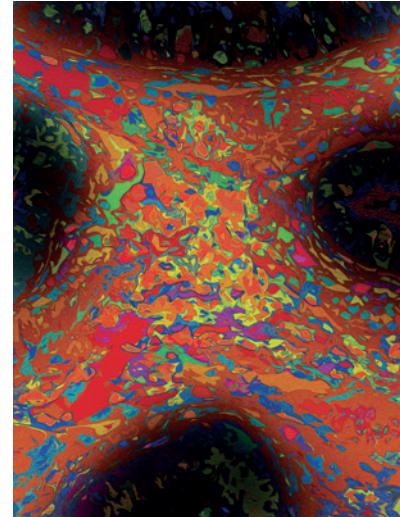


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## ABOUT THE COVER

A cancer cell's behavior heavily depends on its immediate neighbors, but it is not known how different patterns of immune and stromal cell infiltrates are set up, nor how stable they may be. A comprehensive histological look at over 100 lung cancer tumors revealed four major subtypes of tumors, based on which immune cells reside in the tumors. The worst outcomes were associated with the plasma cell subtype, which seems to be sustained by APRIL-expressing myeloid cells. Artwork by Lewis Long is based on Fig. 5H in the article by Kurebayashi and colleagues that starts on p. 234 of this issue of *Cancer Immunology Research*.



# Cancer Immunology Research

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