

Stanford



Michael Khodadoust

Assistant Professor of Medicine (Oncology) and of Dermatology at the Stanford University Medical Center

Medicine - Oncology

CLINICAL OFFICES

- **Medicine**

300 Pasteur Dr Rm JC007

Stanford, CA 94305

Tel (650) 725-5071

Fax (650) 725-8381

Bio

CLINICAL FOCUS

- Medical Oncology

ACADEMIC APPOINTMENTS

- Assistant Professor - Med Center Line, Medicine - Oncology
- Assistant Professor - Med Center Line, Dermatology

HONORS AND AWARDS

- Young Investigator Award, Journal of Clinical Oncology, Conquer Cancer Foundation (2015)
- Fellow Award, Leukemia and Lymphoma Society (2014-)
- Dean's Postdoctoral Fellowship, Stanford University (2014)
- Distinction in Academics and Research, University of Michigan, Ann Arbor (2010)
- William Dodd Robinson Award, University of Michigan, Ann Arbor (2010)
- Membership, Alpha Omega Alpha (2009)
- Predoctoral Fellowship Award, National Science Foundation (2002)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University Hematology and Oncology Fellowship (2015) CA
- Residency: Stanford University Internal Medicine Residency (2012) CA
- Internship: Stanford University Internal Medicine Residency (2011) CA
- Board Certification: Medical Oncology, American Board of Internal Medicine (2017)
- Board Certification, Oncology, American Board of Internal Medicine (2017)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2013)
- PhD, University of Michigan, Immunology (2010)
- Medical Education: University of Michigan Health System (2010) MI

LINKS

- Khodadoust Lab website: <http://med.stanford.edu/khodadoustlab.html>
- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CLINICAL TRIALS

- Clinical and Pathologic Studies in Non-Hodgkin's Lymphoma and Hodgkin's Disease, Recruiting
- TLR9 Agonist SD-101, Anti-OX40 Antibody BMS 986178, and Radiation Therapy in Treating Patients With Low-Grade B-Cell Non-Hodgkin Lymphomas, Recruiting
- TLR9 Agonist SD-101, Ibrutinib, and Radiation Therapy in Treating Patients With Relapsed or Refractory Grade 1-3A Follicular Lymphoma, Recruiting
- Trial of Duvelisib in Combination With Either Romidepsin or Bortezomib in Relapsed/Refractory T-cell Lymphomas, Recruiting
- A Multi-Center Study of Ibrutinib in Combination With MEDI4736 in Subjects With Relapsed or Refractory Lymphomas, Not Recruiting
- A Phase I/II Study of Intratumoral Injection of SD-101, Not Recruiting
- A Safety, Efficacy and Pharmacokinetics Study of CD11301 for the Treatment of Cutaneous T-Cell Lymphoma (CTCL), Not Recruiting
- Efficacy of Axicabtagene Ciloleucef Compared to Standard of Care Therapy in Subjects With Relapsed/Refractory Diffuse Large B Cell Lymphoma, Not Recruiting
- NM-IL-12 in Cutaneous T-Cell Lymphoma (CTCL) Undergoing Total Skin Electron Beam Therapy (TSEBT), Not Recruiting
- Pembrolizumab in Treating Patients With Relapsed or Refractory Stage IB-IVB Mycosis Fungoides or Sezary Syndrome, Not Recruiting
- Phase 1-2 of a CpG-Activated Whole Cell Vaccine Followed by Autologous Immunotransplant for MCL, Not Recruiting
- Phase 1/2A Dose Escalation Study in CLL, SLL or NHL, Not Recruiting
- Safety and Efficacy of KTE-C19 in Adults With Refractory Aggressive Non-Hodgkin Lymphoma, Not Recruiting
- Safety and Efficacy of KTE-C19 in Combination With Atezolizumab in Adults With Refractory Diffuse Large B-Cell Lymphoma (DLBCL), Not Recruiting
- Study of IPH4102 in Patients With Relapsed/Refractory Cutaneous T-cell Lymphomas (CTCL), Not Recruiting
- Study of SD-101 in Combination With Localized Low-dose Radiation in Patients With Untreated Low-grade B-cell Lymphoma, Not Recruiting
- Testing the Combination of Two Experimental Drugs MK-3475 (Pembrolizumab) and Interferon-gamma for the Treatment of Mycosis Fungoides and Sézary Syndrome and Advanced Synovial Sarcoma, Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Research Mentor

Eric Mou, Tianying Su

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Hematology (Fellowship Program)
- Immunology (Phd Program)
- Oncology (Fellowship Program)

Publications

PUBLICATIONS

- **Pembrolizumab in Relapsed and Refractory Mycosis Fungoides and Sézary Syndrome: A Multicenter Phase II Study.** *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*

- Khodadoust, M. S., Rook, A. H., Porcu, P., Foss, F., Moskowitz, A. J., Shustov, A., Shanbhag, S., Sokol, L., Fling, S. P., Ramchurren, N., Pierce, R., Davis, A., Shine, et al
2019; JCO1901056
- **B cell lymphomas present immunoglobulin neoantigens.** *Blood*
Khodadoust, M. S., Olsson, N., Chen, B., Sworder, B., Shree, T., Liu, C. L., Zhang, L., Czerwinski, D. K., Davis, M. M., Levy, R., Elias, J. E., Alizadeh, A. A.
2018
 - **Antigen presentation profiling reveals recognition of lymphoma immunoglobulin neoantigens** *NATURE*
Khodadoust, M. S., Olsson, N., Wagar, L. E., Haabeth, O. A., Chen, B., Swaminathan, K., Rawson, K., Liu, C. L., Steiner, D., Lund, P., Rao, S., Zhang, L., Marceau, et al
2017; 543 (7647): 723-?
 - **Autologous tumor cell vaccine induces antitumor T cell immune responses in patients with mantle cell lymphoma: A phase I/II trial.** *The Journal of experimental medicine*
Frank, M. J., Khodadoust, M. S., Czerwinski, D. K., Haabeth, O. A., Chu, M. P., Miklos, D. B., Advani, R. H., Alizadeh, A. A., Gupta, N. K., Maeda, L. S., Reddy, S. A., Laport, G. G., Meyer, et al
2020; 217 (9)
 - **A Long-Term Study of Persistent Sézary Syndrome: Evidence for Antigen Shift by Multiparameter Flow Cytometry and Its Significance in Overall Survival.** *The American Journal of dermatopathology*
Hoffmann, J. C., Atwater, S. K., Hong, E., Kumar, J., Khodadoust, M., Kim, Y., Ohgami, R. S.
2020; 42 (6): 389–96
 - **Antagonism of TNFR2: Focus on novel antibodies with preference for tumor microenvironment Tregs and oncogenes expressed on the tumor**
Khodadoust, M., Kim, Y., Yang, M., Torrey, H., Tran, L., Faustman, D.
BMC.2019
 - **Interim results of a Phase I/II trial of intratumoral CpG, local low-dose radiation, and oral ibrutinib in patients with low-grade B-cell lymphoma**
Shree, T., Khodadoust, M. S., Czerwinski, D., Frank, M. J., Hong, W. X., Greenstein, R., Guo, S., Long, S., Martin, B. A., Levy, R.
AMER ASSOC CANCER RESEARCH.2019
 - **Determining cell type abundance and expression from bulk tissues with digital cytometry** *NATURE BIOTECHNOLOGY*
Newman, A. M., Steen, C. B., Liu, C., Gentles, A. J., Chaudhuri, A. A., Scherer, F., Khodadoust, M. S., Esfahani, M. S., Luca, B. A., Steiner, D., Diehn, M., Alizadeh, A. A.
2019; 37 (7): 773–+
 - **Volumetric Modulated Arc Therapy and 3-Dimensional Printed Bolus in the Treatment of Refractory Primary Cutaneous Gamma Delta Lymphoma of the Bilateral Legs** *PRACTICAL RADIATION ONCOLOGY*
Obeid, J., Gutkin, P. M., Lewis, J., Skinner, L., Wang, E. B., Khodadoust, M. S., Kim, Y. H., Weng, W., Hoppe, R. T., Hiniker, S. M.
2019; 9 (4): 220–25
 - **IPH4102, a first-in-class anti-KIR3DL2 monoclonal antibody, in patients with relapsed or refractory cutaneous T-cell lymphoma: an international, first-in-human, open-label, phase 1 trial.** *The Lancet. Oncology*
Bagot, M., Porcu, P., Marie-Cardine, A., Battistella, M., William, B. M., Vermeer, M., Whittaker, S., Rotolo, F., Ram-Wolff, C., Khodadoust, M. S., Bensussan, A., Paturel, C., Bonnafous, et al
2019
 - **Low-dose Total Skin Electron Beam Therapy for Refractory Cutaneous CD30 Positive Lymphoproliferative Disorders.** *The Journal of dermatological treatment*
Panjwani, N., Yoo, C. H., Wang, E., Khodadoust, M. S., Kim, Y. H., Hoppe, R. T., Hiniker, S. M.
2019: 1–5
 - **Volumetric modulated arc therapy and 3-dimensional printed bolus in the treatment of refractory primary cutaneous gamma delta lymphoma of the bilateral legs.** *Practical radiation oncology*
Obeid, J., Gutkin, P. M., Lewis, J., Skinner, L., Wang, E. B., Khodadoust, M. S., Kim, Y. H., Weng, W., Hoppe, R. T., Hiniker, S. M.
2019
 - **Reply to J. Wang et al.** *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*
Kurtz, D. M., Scherer, F., Jin, M. C., Soo, J., Craig, A. F., Esfahani, M. S., Chabon, J. J., Stehr, H., Liu, C. L., Tibshirani, R., Maeda, L. S., Gupta, N. K., Khodadoust, et al

2019: JCO1801907

- **Determining cell type abundance and expression from bulk tissues with digital cytometry.** *Nature biotechnology*
Newman, A. M., Steen, C. B., Liu, C. L., Gentles, A. J., Chaudhuri, A. A., Scherer, F., Khodadoust, M. S., Esfahani, M. S., Luca, B. A., Steiner, D., Diehn, M., Alizadeh, A. A.
2019
- **Acute myeloid leukemia immunopeptidome reveals HLA presentation of mutated nucleophosmin.** *PloS one*
Narayan, R., Olsson, N., Wagar, L. E., Medeiros, B. C., Meyer, E., Czerwinski, D., Khodadoust, M. S., Zhang, L., Schultz, L., Davis, M. M., Elias, J. E., Levy, R.
2019; 14 (7): e0219547
- **Predicting HLA class II antigen presentation through integrated deep learning.** *Nature biotechnology*
Chen, B., Khodadoust, M. S., Olsson, N., Wagar, L. E., Fast, E., Liu, C. L., Muftuoglu, Y., Sworder, B. J., Diehn, M., Levy, R., Davis, M. M., Elias, J. E., Altman, et al
2019
- **Durable Responses with Pembrolizumab in Relapsed/Refractory Mycosis Fungoides and Sezary Syndrome: Final Results from a Phase 2 Multicenter Study**
Khodadoust, M. S., Rook, A., Porcu, P., Foss, F. M., Moskowitz, A. J., Shustov, A. R., Shanbhag, S., Sokol, L., Fling, S. P., Li, S., Davis, A., Fong, S., Kim, et al
AMER SOC HEMATOLOGY.2018
- **The Combination of Duvelisib, a PI3K-delta,gamma Inhibitor, and Romidepsin Is Highly Active in Relapsed/Refractory Peripheral T-Cell Lymphoma with Low Rates of Transaminitis: Results of Parallel Multicenter, Phase 1 Combination Studies with Expansion Cohorts**
Horwitz, S. M., Moskowitz, A. J., Jacobsen, E. D., Mehta-Shah, N., Khodadoust, M. S., Fisher, D. C., Myskowski, P., Wang, E. K., Tawa, M., Davey, T., Blouin, W., Hancock, H., Ganesan, et al
AMER SOC HEMATOLOGY.2018
- **IPH4102; An Anti-KIR3DL2 Monoclonal Antibody in Refractory Sezary Syndrome: Results from a Multicenter Phase 1 Trial**
Bagot, M., Porcu, P., William, B. M., Battistella, M., Vermeer, M., Whittaker, S., Ram-Wolff, C., Khodadoust, M. S., Sicard, H., Azim, H. A., Kim, Y. H.
AMER SOC HEMATOLOGY.2018
- **The Novel SYK/JAK Inhibitor Cerdulatinib Demonstrates Good Tolerability and Clinical Response in a Phase 2a Study in Relapsed/Refractory Peripheral T-Cell Lymphoma and Cutaneous T-Cell Lymphoma**
Horwitz, S. M., Feldman, T. A., Hess, B. T., Khodadoust, M. S., Kim, Y. H., Munoz, J., Patel, M. R., Phillips, T. J., Smith, S. D., Smith, S. M., Wilcox, R. A., Steele, A., Pandey, et al
AMER SOC HEMATOLOGY.2018
- **Pembrolizumab in mycosis fungoides and Sezary syndrome: Updated results of the CITN multicenter Phase 2 study**
Khodadoust, M. S., Rook, A. H., Porcu, P., Foss, F., Moskowitz, A., Shustov, A. R., Shanbhag, S., Sokol, L., Fling, S. P., Li, S., Fong, S., Kim, J., Yang, et al
ELSEVIER SCI LTD.2018: S37
- **Novel treatment of cutaneous T cell lymphoma: Targeting TNFR2, an oncogene and marker of potent Tregs, with anti-TNFR2 antibodies**
Torrey, H., Defusco, A., Baum, D., Rhabar, Z., Khodadoust, M., Kim, Y. H., Faustman, D. L.
AMER ASSOC CANCER RESEARCH.2018
- **IPH4102 in relapsed/refractory cutaneous T cell lymphoma (CTCL): Results of the first-in-human multicenter phase 1 study**
Bagot, M., Porcu, P., William, B., Vermeer, M., Whittaker, S., Wolff, C., Khodadoust, M., Battistella, M., Paiva, C., Sicard, H., Azim, H., Kim, Y.
ELSEVIER SCI LTD.2018: S29
- **Circulating Tumor DNA Measurements As Early Outcome Predictors in Diffuse Large B-Cell Lymphoma.** *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*
Kurtz, D. M., Scherer, F., Jin, M. C., Soo, J., Craig, A. F., Esfahani, M. S., Chabon, J. J., Stehr, H., Liu, C. L., Tibshirani, R., Maeda, L. S., Gupta, N. K., Khodadoust, et al
2018: JCO2018785246
- **Surgical and molecular characterization of primary and metastatic disease in a neuroendocrine tumor arising in a tailgut cyst.** *Cold Spring Harbor molecular case studies*
Erdrich, J., Schaberg, K., Khodadoust, M. S., Zhou, L., Shelton, A. A., Visser, B. C., Ford, J. M., Alizadeh, A. A., Quake, S. R., Kunz, P. L., Beausang, J. F.
2018
- **TNFR2-targeted elimination of Tregs and tumor-residing T cells in advanced cutaneous T cell lymphoma**
Faustman, D. L., Torrey, H., Khodadoust, M., Defusco, A., Baum, D., Rhabar, Z., Kim, Y. H.

AMER ASSOC CANCER RESEARCH.2018

- **T-cell immunopeptidomes reveal cell subtype surface markers derived from intracellular proteins.** *Proteomics*
Olsson, N., Schultz, L. M., Zhang, L., Khodadoust, M. S., Narayan, R., Czerwinski, D. K., Levy, R., Elias, J. E.
2018
- **Targeted killing of TNFR2-expressing tumor cells and Tregs by TNFR2 antagonistic antibodies in advanced Sézary syndrome.** *Leukemia*
Torrey, H., Khodadoust, M., Tran, L., Baum, D., Defusco, A., Kim, Y. H., Faustman, D. L.
2018
- **Potential Association of Anti-CCR4 Antibody Mogamulizumab and Graft-vs-Host Disease in Patients With Mycosis Fungoides and Sézary Syndrome.** *JAMA dermatology*
Dai, J., Almazan, T. H., Hong, E. K., Khodadoust, M. S., Arai, S., Weng, W. K., Kim, Y. H.
2018
- **Transcript-indexed ATAC-seq for precision immune profiling.** *Nature medicine*
Satpathy, A. T., Saligrama, N., Buenrostro, J. D., Wei, Y., Wu, B., Rubin, A. J., Granja, J. M., Lareau, C. A., Li, R., Qi, Y., Parker, K. R., Mumbach, M. R., Serratelli, et al
2018
- **Profiling Tumor Infiltrating Immune Cells with CIBERSORT.** *Methods in molecular biology (Clifton, N.J.)*
Chen, B., Khodadoust, M. S., Liu, C. L., Newman, A. M., Alizadeh, A. A.
2018; 1711: 243–59
- **Early detection of molecular residual disease in localized lung cancer by circulating tumor DNA profiling.** *Cancer discovery*
Chaudhuri, A. A., Chabon, J. J., Lovejoy, A. F., Newman, A. M., Stehr, H., Azad, T. D., Khodadoust, M. S., Esfahani, M. S., Liu, C. L., Zhou, L., Scherer, F., Kurtz, D. M., Say, et al
2017
- **Clinical activity of ponatinib in a patient with FGFR1-rearranged mixed-phenotype acute leukemia.** *Leukemia*
Khodadoust, M. S., Luo, B., Medeiros, B. C., Johnson, R. C., Ewalt, M. D., Schalkwyk, A. S., Bangs, C. D., Cherry, A. M., Arai, S., Arber, D. A., Zehnder, J. L., Gotlib, J.
2016; 30 (4): 947-950
- **Value of Surveillance Studies for Patients With Stage I to II Diffuse Large B-Cell Lymphoma in the Rituximab Era.** *International journal of radiation oncology, biology, physics*
Hiniker, S. M., Pollom, E. L., Khodadoust, M. S., Kozak, M. M., Xu, G., Quon, A., Advani, R. H., Hoppe, R. T.
2015; 92 (1): 99-106
- **Tumor antigen discovery through translation of the cancer genome.** *Immunologic research*
Khodadoust, M. S., Alizadeh, A. A.
2014; 58 (2-3): 292-299
- **DEK expression in melanocytic lesions** *HUMAN PATHOLOGY*
Kappes, F., Khodadoust, M. S., Yu, L., Kim, D. S., Fullen, D. R., Markovitz, D. M., Ma, L.
2011; 42 (7): 932-938
- **The DEK oncoprotein is a Su(var) that is essential to heterochromatin integrity** *GENES & DEVELOPMENT*
Kappes, F., Waldmann, T., Mathew, V., Yu, J., Zhang, L., Khodadoust, M. S., Chinnaiyan, A. M., Luger, K., Erhardt, S., Schneider, R., Markovitz, D. M.
2011; 25 (7): 673-678
- **Melanoma Proliferation and Chemoresistance Controlled by the DEK Oncogene** *CANCER RESEARCH*
Khodadoust, M. S., Verhaegen, M., Kappes, F., Riveiro-Falkenbach, E., Cigudosa, J. C., Kim, D. S., Chinnaiyan, A. M., Markovitz, D. M., Soengas, M. S.
2009; 69 (16): 6405-6413
- **DEK is a poly(ADP-ribose) acceptor in apoptosis and mediates resistance to genotoxic stress** *MOLECULAR AND CELLULAR BIOLOGY*
Kappes, F., Fahrer, J., Khodadoust, M. S., Tabbert, A., Strasser, C., Mor-Vaknin, N., Moreno-Villanueva, M., Buerkle, A., Markovitz, D. M., Ferrando-May, E.
2008; 28 (10): 3245-3257
- **The DEK nuclear autoantigen is a secreted chemotactic factor** *MOLECULAR AND CELLULAR BIOLOGY*

Mor-Vaknin, N., Punturieri, A., Sitwala, K., Faulkner, N., Legendre, M., Khodadoust, M. S., Kappes, F., Ruth, J. H., Koch, A., Glass, D., Petruzzelli, L., Adams, B. S., Markovitz, et al
2006; 26 (24): 9484-9496

- **p300/CBP-associated factor drives DEK into interchromatin granule clusters** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Cleary, J., Sitwala, K. V., Khodadoust, M. S., Kwok, R. P., Mor-Vaknin, N., Cebrat, M., Cole, P. A., Markovitz, D. M.
2005; 280 (36): 31760-31767