

Deborah J Levine, MD, FCCP, FAST

Clinical Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

CLINICAL OFFICE (PRIMARY)

- **Stanford Lung Transplant Program**

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Bio

BIO

Dr. Deborah Jo Levine is a board-certified pulmonologist and lung transplantation and pulmonary hypertension specialist. She is a clinical professor of medicine in the Department of Pulmonary, Allergy, and Critical Care Medicine. Dr. Levine also serves as director of lung transplant outreach for Stanford Health Care.

Dr. Levine is internationally recognized for her work in lung transplantation and pulmonary hypertension (PH). She has been instrumental in developing international guidelines for defining, diagnosing, and managing antibody-mediated rejection (AMR) after lung transplantation. She has served as chair of pulmonary AMR guidelines for the International Society of Heart and Lung Transplantation.

Dr. Levine's research interests include lung allograft monitoring and risk assessment. Her research has also included monitoring lung allograft health using donor-derived cell-free DNA (dd-cfDNA)—a technique pioneered at Stanford Medicine. She has received National Institutes of Health (NIH) funding as a clinical investigator. Dr. Levine is a co-chair of the ALAMO (AlloSure Lung Assessment and Metagenomics Outcomes) Study national registry. She has been involved in many clinical trials in lung transplantation and pulmonary hypertension.

As a respected educator and researcher, Dr. Levine has led and contributed to dozens of abstracts, presentations, and peer-reviewed articles. She has also written several books and book chapters on pulmonary hypertension, interstitial lung disease, pulmonary vascular disorders, and lung transplantation.

Dr. Levine is editor-in-chief for *Advances in Pulmonary Hypertension*, the quarterly journal of the Pulmonary Hypertension Association. She is an editorial board member of *The Journal of Heart and Lung Transplantation* and an ad hoc reviewer for several other industry journals. Dr. Levine also serves as a grant reviewer and section study reviewer for the American College of Chest Physicians and the American Society of Transplantation.

Dr. Levine is a fellow of the American College of Chest Physicians and the American Society of Transplantation. She is also the chair of the Diffuse Lung Disease and Lung Transplant Network and the incoming vice chair of the Council of Networks for the American College of Chest Physicians (CHEST).

CLINICAL FOCUS

- Pulmonary Disease

ACADEMIC APPOINTMENTS

- Clinical Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

HONORS AND AWARDS

- Chairperson, Thoracic Community of Practice, American Society of Transplantation
- Co-Chair, Lung Transplantation Master Class, International Society for Heart and Lung Transplantation (2023)
- Co-Chair, Reiteration of the Pulmonary Antibody-Mediation Rejection Guidelines, International Society of Heart and Lung Transplantation (2023)
- President and Chair, International Paris Lung Transplant Congress (2022)
- Guidelines Committee Chair, Pulmonary Hypertension-Interstitial Lung Disease, American College of Chest Physicians (2022)
- Course Chair, Pulmonary Hypertension-Interstitial Lung Disease, American College of Chest Physicians (2022)
- Chair, Advanced Lung Disease Course, American College of Chest Physicians
- Transplant Grant Chair, American College of Chest Physicians (2022)
- Donor Management Course Chair, Gift of Hope, American College of Chest Physicians (2022)

PROFESSIONAL EDUCATION

- Board Certification: Critical Care Medicine, American Board of Internal Medicine (2002)
- Board Certification: Pulmonary Disease, American Board of Internal Medicine (2001)
- Fellowship: UT Health San Antonio Pulmonary Medicine Fellowship (2003) TX
- Fellowship: UT Health San Antonio Critical Care Fellowship (2002) TX
- Fellowship: Banner Good Samaritan Medical Center (2001) AZ
- Residency: Banner Good Samaritan Regional Medical Center AZ
- Medical Education: University of Arizona College of Medicine (1996) AZ

Publications

PUBLICATIONS

- **Pathologists' experience and routine practice in high-volume lung transplant centers: An international survey.** *JHLT open*
Calabrese, F., Hwang, D. M., Lunardi, F., Iannaco, R., Adam, J., Akyürek, L. M., Adam, B., Jan, B., Berry, G., D'Sa, L., Fabre, A., Fattori, A., Fishbein, et al
2026; 11: 100415
- **Considerations for Endpoints in Lung Transplant Clinical Trials: An ISHLT Consensus Statement.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Greenland, J. R., Perch, M., Halloran, K., Levine, D. J., Morrell, E. D., Reed, A., Shaver, C. M., Singer, J. P., Sweet, S. C., Vos, R., Aryal, S., Avdimiretz, N., Burrows, et al
2025
- **2025 Report of the STAR Working Group on Donor Derived Cell Free DNA: Establishing Analytical Validity as the Basis for Appropriate and Effective Clinical Utilization.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
Valenzuela, N. M., Lan, J., Hitchman, K. M., Amstutz, U., Bloom, R. D., Levine, D. J., Mengel, M., Mannon, R. B.

2025

- **Pregnancy After Solid Organ Transplantation: Review of the Evidence and Recommendations.** *Transplantation*
Katz-Greenberg, G., Afshar, Y., Bonn, J., Casale, J., Constantinescu, S., DeFilippis, E. M., George, R. P., Iltis, A., Jesudason, S., Kittleson, M., Levine, D. J., Moritz, M. J., Sarkar, et al
2025; 109 (9): 1483-1494
- **Diagnostic significance of intragraft donor-specific anti-HLA antibodies in pulmonary antibody-mediated rejection.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Hirschi, S., Hell, G., Levine, D., Coiffard, B., Severac, F., Picard, C., Bunel, V., Le Pavec, J., Essaidy, A., Reynaud-Gaubert, M., Roux, A., Brugiere, O., Renaud-Picard, et al
2025
- **Trajectories of FEV1 after lung transplantation and patient outcomes.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Raynaud, M., Belousova, N., Glorion, M., Hillebrand, C., Picard, C., Dhanani, Z. N., Beaumont-Azuar, L., de Verdière, S. C., Sage, É., Messika, J., Bunel, V., Tissot, A., Levine, et al
2025
- **Recommendations to Overcome Barriers to Transplant Fellowship Training: A Report from the American Society of Transplantation Fellows Task Force.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
Kobashigawa, J., Levitsky, J., Singh, N., Khush, K., Pinney, S., Aby, E., Afzal, A., Adey, D., Bhalla, A., Doshi, M., Farouk, S., Fox, A., Hall, et al
2025
- **Post-Operative Lung Transplant Considerations in the Older Recipient.** *Chest*
Hanna, S., Beermann, K., Levine, D. J., Loor, G., Singer, J. P., Smith, P. J., Ali, H. A.
2025
- **Approach to Lung Transplantation in Pulmonary Arterial Hypertension: A Delphi Consensus on Behalf of the Transplant Task Force of the Pulmonary Vascular Research Institute.** *Pulmonary circulation*
Kolaitis, N. A., Barnes, H., Levine, D. J., Castillo, H., Arcasoy, S. M., Bacchetta, M., Benvenuto, L., Berman-Rosenzweig, E., Cevasco, M., Demarest, C. T., Dewachter, C., Erasmus, M. E., Glanville, et al
2025; 15 (2): e70088
- **Pregnancy After Solid Organ Transplantation: Review of the Evidence and Recommendations.** *Transplantation*
Katz-Greenberg, G., Afshar, Y., Bonn, J., Casale, J., Constantinescu, S., DeFilippis, E. M., George, R. P., Iltis, A., Jesudason, S., Kittleson, M., Levine, D. J., Moritz, M. J., Sarkar, et al
2025
- **Innovations in Lung Transplant Research and Practice: The Future is Now.** *Transplant international : official journal of the European Society for Organ Transplantation*
Vos, R., Lindstedt, S., Levine, D. J., Shigemura, N.
2025; 38: 14336
- **A Systematic Literature Review to Determine Gaps in Diagnosing Suspected Infection in Solid Organ Transplant Recipients.** *Open forum infectious diseases*
Park, S. Y., Goldman, J. D., Levine, D. J., Haidar, G.
2025; 12 (1): ofaf001
- **Detection of lung allograft injury through a comprehensive multidisciplinary analysis of donor-derived cell-free DNA in plasma and bronchoalveolar lavage: a real-world single center experience.** *Frontiers in immunology*
Calabrese, F., Pezzuto, F., Vedovelli, L., De Chellis, C., Lunardi, F., Loy, M., Faccioli, E., Vadori, M., Biondini, D., Marinello, S., Braccioni, F., Meloni, F., Schiavon, et al
2025; 16: 1619771
- **Transplantation, bridging, and support technologies in pulmonary hypertension.** *The European respiratory journal*
Savale, L., Benazzo, A., Corris, P., Keshavjee, S., Levine, D. J., Mercier, O., Davis, R. D., Granton, J. T.
2024
- **Triazole antifungal drug interactions-practical considerations for excellent prescribing.** *The Journal of antimicrobial chemotherapy*
Lewis, R., Niazi-Ali, S., McIvor, A., Kanj, S. S., Maertens, J., Bassetti, M., Levine, D., Groll, A. H., Denning, D. W.

2024

- **Inhaled treprostinil in patients with pulmonary hypertension associated with interstitial lung disease with less severe haemodynamics: a post hoc analysis of the INCREASE study.** *BMJ open respiratory research*
Weatherald, J., Nathan, S. D., El-Kersh, K., Argula, R. G., DuBrock, H. M., Rischard, F. P., Cassady, S. J., Tarver, J., Levine, D. J., Tapson, V. F., Deng, C., Shen, E., Das, et al
2024; 11 (1)
- **Complexities and outcomes of pulmonary hypertension in kidney transplant patients: a comprehensive review.** *Turkish journal of nephrology*
Lentine, K. L., Levine, D. J., Runo, J. R., Caliskan, Y., Costa, S., Lam, N. N., Axelrod, D. A., Woodside, K. J.
2024; 33 (1): 8-26
- **Complexities and Outcomes of Pulmonary Hypertension in Kidney Transplant Patients: A Comprehensive Review** *TURKISH JOURNAL OF NEPHROLOGY*
Lentine, K. L., Levine, D. J., Runo, J. R., Caliskan, Y., Costa, S. P., Lam, N. N., Axelrod, D. A., Woodside, K. J.
2024; 33 (1)
- **Chronic Lung Allograft Dysfunction is Associated with an Increased Number of Non-HLA Antibodies.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Xu, Q., Elrefaei, M., Taupin, J. L., Hitchman, K. M., Hiho, S., Gareau, A., Iasella, C., Marrari, M., Belousova, N., Bettinotti, M., Narula, T., Alvarez, F., Sanchez, et al
2023
- **The 2022 Banff Meeting Lung Report.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
Pavlisko, E. N., Adam, B. A., Berry, G. J., Calabrese, F., Cortes-Santiago, N., Glass, C. H., Goddard, M., Greenland, J. R., Kreisel, D., Levine, D. J., Martinu, T., Verleden, S. E., Sam, et al
2023
- **Lung Transplantation Training in North America: Bridging the Gap.** *Chest*
Azfar Ali, H., Levine, D. J.
2023; 164 (3): 580-582
- **Defining a NK cell-enriched molecular rejection-like state in lung transplant transbronchial biopsies.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
Gauthier, P. T., Mackova, M., Hirji, A., Weinkauff, J., Timofte, I. L., Snell, G. I., Westall, G. P., Havlin, J., Lischke, R., Zajacova, A., Simonek, J., Hachem, R., Kreisel, et al
2023
- **Guidelines and principles for the care of the cardiothoracic transplant patient in the intensive care unit.** *Clinical transplantation*
Nurok, M., Nunnally, M. E., O'Connor, M., Pierson, R. N., Baran, D. A., Harper, M. D., Malinoski, D., El Banayosy, A., Orija, A., Hall, S., Edelman, J. D., Sundt, T. M., Levine, et al
2023: e14978
- **OPTN required SARS-CoV-2 lower respiratory testing for lung donors: Striking the balance.** *Transplant infectious disease : an official journal of the Transplantation Society*
Booker, S. E., Jett, C., Fox, C., Anesi, J. A., Berry, G. J., Dunn, K. E., Fisher, C. E., Goldman, J. D., Ho, C., Kittleson, M., Lee, D. H., Levine, D. J., Marboe, et al
2023: e14048
- **Transplant of organs from donors with positive SARS-CoV-2 nucleic acid testing: A report from the organ procurement and transplantation network ad hoc disease transmission advisory committee.** *Transplant infectious disease : an official journal of the Transplantation Society*
Goldman, J. D., Pouch, S. M., Woolley, A. E., Booker, S. E., Jett, C. T., Fox, C., Berry, G. J., Dunn, K. E., Ho, C. S., Kittleson, M., Lee, D. H., Levine, D. J., Marboe, et al
2023: e14013
- **A survey of intensive care unit models in cardiothoracic transplantation at high-volume centers.** *Clinical transplantation*
Nurok, M., Nunnally, M. E., Gill, G., O'Connor, M., Harper, M., Edelman, J., Orija, A., Banayosy, A. E., Malinoski, D., Sundt, T., Baran, D. A., Levine, D., Hall, et al
2023: e14911
- **Immunosuppression in Lung Transplantation.** *Handbook of experimental pharmacology*

- Nelson, J., Kincaide, E., Schulte, J., Hall, R., Levine, D. J.
2022; 272: 139-164
- **Clinical features and allograft failure rates of pulmonary antibody-mediated rejection categories.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Charya, A. V., Ponor, I. L., Cochrane, A., Levine, D., Philogene, M., Fu, Y. P., Jang, M. K., Kong, H., Shah, P., Bon, A. M., Krishnan, A., Mathew, J., Luikart, et al
2022
 - **Lung allograft standardized histological analysis (LASHA) template: A research consensus proposal.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Calabrese, F., Roden, A. C., Pavlisko, E., Lunardi, F., Neil, D., Adam, B., Hwang, D., Goddard, M., Berry, G. J., Ivanovic, M., Thusen, J. v., Gibault, L., Lin, et al
2022
 - **Screening Strategies for Pulmonary Hypertension in Patients With Interstitial Lung Disease: A Multidisciplinary Delphi Study.** *Chest*
Rahaghi, F. F., Kolaitis, N. A., Adegunsoye, A., de Andrade, J. A., Flaherty, K. R., Lancaster, L. H., Lee, J. S., Levine, D. J., Preston, I. R., Safdar, Z., Saggat, R., Sahay, S., Scholand, et al
2022; 162 (1): 145-155
 - **Biological Variation of Donor-Derived Cell-Free DNA in Stable Lung Transplant Recipients.** *The journal of applied laboratory medicine*
Keller, M., Mutebi, C., Shah, P., Levine, D., Aryal, S., Iacono, A., Timofte, I., Mathew, J., Varghese, A., Giner, C., Agbor-Enoh, S.
2022; 7 (4): 901-909
 - **Donor-derived cell-free DNA as a composite marker of acute lung allograft dysfunction in clinical care.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Keller, M., Sun, J., Mutebi, C., Shah, P., Levine, D., Aryal, S., Iacono, A., Timofte, I., Mathew, J., Varghese, A., Giner, C., Agbor-Enoh, S.
2022; 41 (4): 458-466
 - **Utilization of risk assessment tools in management of PAH: A PAH provider survey.** *Pulmonary circulation*
Sahay, S., Balasubramanian, V., Memon, H., Poms, A., Bossone, E., Highland, K., Kay, D., Levine, D. J., Mullin, C. J., Melendres-Groves, L., Mathai, S. C., Soto, F. J., Shlobin, et al
2022; 12 (2): e12057
 - **Incidence, Clinical Correlates, and Outcomes of Pulmonary Hypertension After Kidney Transplantation: Analysis of Linked US Registry and Medicare Billing Claims.** *Transplantation*
Lentine, K. L., Lam, N. N., Caliskan, Y., Xiao, H., Axelrod, D. A., Costa, S. P., Levine, D. J., Runo, J. R., Te, H. S., Rangaswami, J., Dadhania, D. M., Schnitzler, M. A., Kasiske, et al
2022; 106 (3): 666-675
 - **White paper on antimicrobial stewardship in solid organ transplant recipients.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
So, M., Hand, J., Forrest, G., Pouch, S. M., Te, H., Ardura, M. I., Bartash, R. M., Dadhania, D. M., Edelman, J., Ince, D., Jorgenson, M. R., Kabbani, S., Lease, et al
2022; 22 (1): 96-112
 - **Acute respiratory distress syndrome in the cardiothoracic patient: State of the art and use of veno-venous extracorporeal membrane oxygenation.** *JTCVS open*
Copeland, H., Levine, D., Morton, J., Hayanga, J. W.
2021; 8: 97-103
 - **ISHLT consensus document on lung transplantation in patients with connective tissue disease: Part II: Cardiac, surgical, perioperative, operative, and post-operative challenges and management statements.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Bermudez, C. A., Crespo, M. M., Shlobin, O. A., Cantu, E., Mazurek, J. A., Levine, D., Gutsche, J., Kanwar, M., Dellgren, G., Bush, E. L., Heresi, G. A., Cypel, M., Hadler, et al
2021
 - **Single Center "Snapshot" Experience With Donor-Derived Cell-Free DNA After Lung Transplantation.** *Biomarker insights*
Levine, D. J., Ross, D. J., Sako, E.
2020; 15: 1177271920958704

- **Chronic lung allograft dysfunction: Definition and update of restrictive allograft syndrome-A consensus report from the Pulmonary Council of the ISHLT.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Glanville, A. R., Verleden, G. M., Todd, J. L., Benden, C., Calabrese, F., Gottlieb, J., Hachem, R. R., Levine, D., Meloni, F., Palmer, S. M., Roman, A., Sato, M., Singer, et al
2019; 38 (5): 483-492
- **Banff Lung Report: Current knowledge and future research perspectives for diagnosis and treatment of pulmonary antibody-mediated rejection (AMR).** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
Roux, A., Levine, D. J., Zeevi, A., Hachem, R., Halloran, K., Halloran, P. F., Gibault, L., Taupin, J. L., Neil, D. A., Loupy, A., Adam, B. A., Mengel, M., Hwang, et al
2019; 19 (1): 21-31
- **Clinical risk factors for invasive aspergillosis in lung transplant recipients: Results of an international cohort study.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Aguilar, C. A., Hamandi, B., Fegbeutel, C., Silveira, F. P., Verschuuren, E. A., Ussetti, P., Chin-Hong, P. V., Sole, A., Holmes-Liew, C., Billaud, E. M., Grossi, P. A., Manuel, O., Levine, et al
2018; 37 (10): 1226-1234
- **Human leukocyte antigens antibodies after lung transplantation: Primary results of the HALT study** *AMERICAN JOURNAL OF TRANSPLANTATION*
Hachem, R. R., Kamoun, M., Budev, M. M., Askar, M., Ahya, V. N., Lee, J. C., Levine, D. J., Pollack, M. S., Dhillon, G. S., Weill, D., Schechtman, K. B., Leard, L. E., Golden, et al
2018; 18 (9): 2285-94
- **Lung autoantibodies: Ready for prime time?** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Milross, L., Hachem, R., Levine, D., Glanville, A. R.
2017
- **Antibody-mediated rejection of the lung: A consensus report of the International Society for Heart and Lung Transplantation.** *journal of heart and lung transplantation*
Levine, D. J., Glanville, A. R., Aboyou, C., Belperio, J., Benden, C., Berry, G. J., Hachem, R., Hayes, D., Neil, D., Reinsmoen, N. L., Snyder, L. D., Sweet, S., Tyan, et al
2016; 35 (4): 397-406