

Stanford

David C Shyr

Clinical Associate Professor, Pediatrics - Stem Cell Transplantation

CLINICAL OFFICE (PRIMARY)

- **Pediatric Stem Cell Transplantation**

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Bio

CLINICAL FOCUS

- Pediatric Hematology-Oncology

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Pediatrics - Stem Cell Transplantation

PROFESSIONAL EDUCATION

- Board Certification: Pediatric Hematology-Oncology, American Board of Pediatrics (2019)
- Medical Education: Medical College of Wisconsin (2005) WI
- Fellowship: Baylor College of Medicine-Pediatric Hematology/Oncology Fellowship (2012) TX
- Fellowship: Children's Hospital of Orange County Hematology/Oncology Fellowship (2011) CA
- Residency: University of California, San Diego (2008) CA

Research & Scholarship

CLINICAL TRIALS

- Gene Correction in Autologous CD34+ Hematopoietic Stem Cells (HbS to HbA) to Treat Severe Sickle Cell Disease, Recruiting
- Stem Cell Transplant From Donors After Alpha Beta Cell Depletion in Children and Young Adults, Recruiting
- Mismatched Related Donor Versus Matched Unrelated Donor Stem Cell Transplantation for Children, Adolescents, and Young Adults With Acute Leukemia or Myelodysplastic Syndrome, Not Recruiting
- US Phase I Study of ECT-001-CB in Patients With Sickle-Cell Disease, Not Recruiting
- A Study to Evaluate Axatilimab Versus Best Available Therapy in Pediatric Participants With Chronic Graft-Versus-Host Disease After at Least 2 Prior Lines of Systemic Therapy (AGAVE-256), Not Specified

Publications

PUBLICATIONS

- **Exploring Pattern of Relapse in Pediatric Patients with Acute Lymphocytic Leukemia and Acute Myeloid Leukemia Undergoing Stem Cell Transplant Using Machine Learning Methods** *J. Clin. Med.*

Shyr , D., Zhang, B. M., Saini , G., Brewer, S. C.

2024; 13(14) (4021)

- **Stem cell transplantation for ALL: you've always got a donor, why not always use it?** *Hematology. American Society of Hematology. Education Program*
Shyr, D., Davis, K. L., Bertaina, A.
2023; 2023 (1): 84-90
- **Longitudinal Clinical Data Improves Survival Prediction after Hematopoietic Cell Transplantation Using Machine Learning.** *Blood advances*
Zhou, Y., Smith, J., Keerthi, D., Li, C., Sun, Y., Mothi, S. S., Shyr, D., Spitzer, B., Harris, A. C., Chatterjee, A., Chatterjee, S., Shouval, R., Naik, et al
2023
- **Effect of Testicular Boost in Children With Leukemia Receiving Total Body Irradiation and Stem Cell Transplant: A Single-Institution Experience.** *Advances in radiation oncology*
Blomain, E. S., Jiang, A., Donaldson, S. S., Agarwal, R., Bertaina, A., Shyr, D., Eisenberg, M. L., Hoppe, R. T., Hiniker, S. M., Oh, J.
2023; 8 (1): 101071
- **Effect of Testicular Boost in Children With Leukemia Receiving Total Body Irradiation and Stem Cell Transplant: A Single-Institution Experience** *ADVANCES IN RADIATION ONCOLOGY*
Blomain, E. S., Jiang, A., Donaldson, S. S., Agarwal, R., Bertaina, A., Shyr, D., Eisenberg, M. L., Hoppe, R. T., Hiniker, S. M., Oh, J.
2023; 8 (1)
- **Precision Delivery of Steroids as a Rescue Therapy for Gastrointestinal Graft-versus-Host Disease in Pediatric Stem Cell Transplant Recipients** *Journal of Clinical Medicine*
Levitte, s., Ganguly, A., Frolik, S., Guevara-Tique, A., et al
2023; 12 (4229)
- **Machine Learning Approaches Incorporating High-Dimensional Longitudinal Data Improve the Prediction of Survival after Allogeneic Hematopoietic Cell Transplantation**
Zhou, Y., Smith, J., Keerthi, D., Sarvode, S., Shyr, D. C., Spitzer, B., Chatterjee, A., Chatterjee, S., Naik, S., Tang, L., Sharma, A.
AMER SOC HEMATOLOGY.2022
- **Outcomes Following Treatment for Adenosine Deaminase Deficient Severe Combined Immunodeficiency: A Report from the PIDTC.** *Blood*
Cuvelier, G. D., Logan, B. R., Prockop, S., Buckley, R. H., Kuo, C. Y., Griffith, L. M., Liu, X., Yip, A., Hershfield, M., Ayoub, P., Moore, T. B., Dorsey, M., O'Reilly, et al
2022
- **Role of Cytokine Secretion Signatures of Donor-derived T Cells and Recipient Serum Cytokine Profiles as Predictive Biomarkers of Acute Graft-Versus-Host Disease in alpha beta T-cell/CD19 B-cell Depleted Hematopoietic Stem Cell Transplant Pediatric Recipients**
Montiel-Esparza, R., Barbarito, G., Patil, R., Shyr, D., Saini, G., Parkman, R., Liu, Y., Bertaina, A.
WILEY.2022
- **Predicting Relapse In Pediatric Patients with Acute Leukemia Undergoing Stem Cell Transplant Using Interpretable Machine Learning-A Proof-of-Concept Study of Applying Machine Learning Beyond "Big Data"**
Shyr, D. C., Kelly, B., Brewer, S. C.
WILEY.2022
- **Volumetric modulated arc therapy total body irradiation in pediatric and adolescent/young adult patients undergoing stem cell transplantation: Early outcomes and toxicities.** *Pediatric blood & cancer*
Marquez, C., Hui, C., Simiele, E., Blomain, E., Oh, J., Bertaina, A., Klein, O., Shyr, D., Jiang, A., Hoppe, R. T., Kovalchuk, N., Hiniker, S. M.
2022: e29689
- **CEDAR Trial in Progress: A First in Human, Phase 1/2 Study of the Correction of a Single Nucleotide Mutation in Autologous HSCs (GPH101) to Convert HbS to HbA for Treating Severe Sickle Cell Disease**
Di Persio, J. F., Kanter, J., Leavey, P., Shyr, D. C., Thompson, A. A., Porteus, M. H., Intondi, A., Lahiri, P., Dever, D., Petrusich, A., Lehrer-Graiwer, J.
CELL PRESS.2022: 379
- **Combinatorial Cytokine Secretion Signature of Donor-Derived T Cells Infused with the Graft: A New Potential Biomarker of Acute Graft-Versus-Host Disease in ss t-Cell/CD19 B-Cell Depleted Hematopoietic Stem Cell Transplant Recipients**
Montiel-Esparza, R., Barbarito, G., Peck, S., Bazzano, M., Patil, R., Shyr, D. C., Saini, G., Parkman, R., Liu, Y., Bertaina, A.
AMER SOC HEMATOLOGY.2021
- **Cedar Trial in Progress: A First in Human, Phase 1/2 Study of the Correction of a Single Nucleotide Mutation in Autologous HSCs (GPH101) to Convert HbS to HbA for Treating Severe SCD**

- Kanter, J., DiPersio, J. F., Leavey, P., Shyr, D. C., Thompson, A. A., Porteus, M. H., Intondi, A., Lahiri, P., Dever, D. P., Petrusich, A., Lehrer-Graiwer, J.
AMER SOC HEMATOLOGY.2021: 1864-+
- **The Determinative Role of Hematopoietic Stem and Progenitor Cell Graft Composition on the Engraftment Kinetics after HSCT**
Barbarito, G., Dejene, B., Saini, G., Patil, R., Shyr, D. C., Parkman, R., Bertaina, A., Weinberg, K. I.
AMER SOC HEMATOLOGY.2021: 1794-+
 - **Machine Learning Applications in the Diagnosis of Benign and Malignant Hematological Diseases.** *Clinical hematology international*
Muhsen, I. N., Shyr, D., Sung, A. D., Hashmi, S. K.
2021; 3 (1): 13-20
 - **Correction to: Infections in Infants with SCID: Isolation, Infection Screening and Prophylaxis in PIDTC Centers.** *Journal of clinical immunology*
Dorsey, M., Wright, N. A., Chaimowitz, N. S., Davila Saldana, B. J., Miller, H., Keller, M. D., Thakar, M. S., Shah, A. J., Abu-Arja, R., Andolina, J., Aquino, V., Barnum, J. L., Bednarski, et al
2020
 - **HLA-haplotype loss after TCRalpha/CD19-depleted haploidentical HSCT.** *Bone marrow transplantation*
Shyr, D. C., Zhang, B. M., Saini, G., Madani, N. D., Schultz, L. M., Patel, S., Kristovich, K., Fernandez-Vina, M., Bertaina, A.
2020
 - **Infections in Infants with SCID: Isolation, Infection Screening, and Prophylaxis in PIDTC Centers.** *Journal of clinical immunology*
Dorsey, M. J., Wright, N. A., Chaimowitz, N. S., Davila Saldana, B. J., Miller, H., Keller, M. D., Thakar, M. S., Shah, A. J., Abu-Arja, R., Andolina, J., Aquino, V., Barnum, J. L., Bednarski, et al
2020
 - **Excellent Outcomes Following Hematopoietic Cell Transplantation for Wiskott-Aldrich Syndrome: A PIDTC Report.** *Blood*
Burroughs, L., Petrovic, A., Brazauskas, R., Liu, X., Griffith, L. M., Ochs, H. D., Bleesing, J., Edwards, S., Dvorak, C. C., Chaudhury, S., Prockop, S., Quinones, R., Goldman, et al
2020
 - **Experience with Ruxolitinib (Jakafi (R)) As a Salvage Therapy for Graft-Versus-Host Disease in Children and Young Adults**
Mavers, M., Klinger, E., Shyr, D. C., Shah, A. J., Bertaina, A., Soni, S.
ELSEVIER SCIENCE INC.2020: S179
 - **Transplantation Outcomes for Children with Severe Combined Immune Deficiency (SCID) Have Improved over Time: A 36-Year Summary Report By the Primary Immune Deficiency Treatment Consortium (PIDTC)**
Thakar, M. S., Logan, B., Buckley, R. H., Haddad, E., Dvorak, C. C., O'Reilly, R. J., Kapoor, N., Satter, L., Martinez, C., Pai, S., Heimall, J., Jyonouchi, S., Sullivan, et al
ELSEVIER SCIENCE INC.2020: S18-S19
 - **Hematopoietic Cell Transplantation in Patients With Primary Immune Regulatory Disorders (PIRD): A Primary Immune Deficiency Treatment Consortium (PIDTC) Survey.** *Frontiers in immunology*
Chan, A. Y., Leiding, J. W., Liu, X., Logan, B. R., Burroughs, L. M., Allenspach, E. J., Skoda-Smith, S., Uzel, G., Notarangelo, L. D., Slatter, M., Gennery, A. R., Smith, A. R., Pai, et al
2020; 11: 239
 - **SCID genotype and 6-month posttransplant CD4 count predict survival and immune recovery** *BLOOD*
Haddad, E., Logan, B. R., Griffith, L. M., Buckley, R. H., Parrott, R. E., Prockop, S. E., Small, T. N., Chaisson, J., Dvorak, C. C., Mumane, M., Kapoor, N., Abdel-Azim, H., Hanson, et al
2018; 132 (17): 1737-49
 - **Genotype, Phenotype and T Cell Counts at One Year Predict Survival and Long Term Immune Reconstitution after Transplantation in Severe Combined Immune Deficiency (SCID)-The Primary Immune Deficiency Treatment Consortium (PIDTC)**
Haddad, E., Logan, B. R., Griffith, L. M., Buckley, R. H., Parrott, R. E., Dvorak, C. C., Puck, J., Prockop, S. E., Kapoor, N., Abdel-Azim, H., Hanson, I. C., Martinez, C., Bleesing, et al
ELSEVIER SCIENCE INC.2017: S101-S102