



## Mrigender Singh Virk

Clinical Associate Professor, Pathology

### CLINICAL OFFICE (PRIMARY)

- **Stanford Dept of Pathology**

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### Bio

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#### BIO

Dr. Mrigender Virk completed his residency in Anatomic & Clinical Pathology at Georgetown University before joining Stanford for his Transfusion Medicine Fellowship. After completion of the fellowship, Dr. Virk joined the Department of Pathology as a member of the faculty for Transfusion Medicine. Dr. Virk is currently the Director of the Transfusion Medicine Laboratory and the Blood Banking & Transfusion Medicine Fellowship Program. His work has primarily focused on the improvement of blood bank inventory management through optimization of O-neg RBC utilization and waste mitigation of all blood products in an expanding enterprise footprint. Dr. Virk has also improved inventory efficiency and safety through the implementation of pathogen reduced platelets and pathogen reduced cryoprecipitated fibrinogen complex.

#### CLINICAL FOCUS

- Anatomic and Clinical Pathology
- Transfusion Medicine

#### ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Pathology

#### ADMINISTRATIVE APPOINTMENTS

- Medical Director, Division of Transfusion Medicine, Stanford University Medical Center, (2026- present)
- Director, Transfusion Medicine Fellowship Program, Stanford University Medical Center, (2021- present)

#### PROFESSIONAL EDUCATION

- Board Certification: Blood Banking/Transfusion Medicine, American Board of Pathology (2018)
- Fellowship: Stanford University Department of Pathology (2018) CA
- Board Certification, American Board of Pathology , Anatomic & Clinical Pathology (2017)
- Residency: Medstar Georgetown University Hospital (2017) DC
- Medical Education: St George's University School of Medicine Grenada West Indies (2013) NY West Indies

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## Teaching

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Transfusion Medicine (Fellowship Program)

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## Publications

### PUBLICATIONS

- **Clinical significance of anti-M in pregnancy and self-reported ancestry: The BEST collaborative study.** *Transfusion*  
Lu, W., Ziman, A., Yin, C., Yan, M. T., Virk, M. S., Dilly Stephens, L., Raval, J. S., Radwi, G., Morrison, D., Marrero-Rivera, G., Ly, J., Juskewitch, J. E., Ikeda, et al  
2026
- **Electronic enhancement to decrease rejection of blood type verification specimens.** *Transfusion*  
Sethapati, V. R., Morton, E., Kilambi, S., Pancoast, M., Virk, M. S.  
2025
- **Implementation of pathogen reduced cryoprecipitate for surgical services: A retrospective review of blood product utilization and fibrinogen repletion.** *Transfusion*  
Nicholas, J., Graber-Naidich, A., Pham, T., Panigrahi, A. K., Virk, M.  
2025
- **Therapeutic Plasma Exchange After Spontaneous Intracranial Hemorrhage for a Patient With Antiphospholipid Syndrome and Lupus Anticoagulant Hypoprothrombinemia.** *Journal of clinical apheresis*  
Nicholas, J., Wali, J., Ellis-Caleo, T., Virk, M. S., Yunce, M.  
2025; 40 (5): e70064
- **Validating transport conditions of fresh frozen plasma units.** *Transfusion*  
Baykara, Y., Poblacion, J., Jin, J., Virk, M.  
2025
- **Serologic investigation and management of an antibody screen negative para-Bombay phenotype during pregnancy.** *Transfusion medicine (Oxford, England)*  
Jamal, Y. A., Nicholas, J. A., Wang, T., Abdelmonem, M., Pandey, S., Virk, M. S.  
2025
- **Combined use of Carfilzomib and plasmapheresis in antibody-mediated liver transplant rejection.** *Transfusion and apheresis science : official journal of the World Apheresis Association : official journal of the European Society for Haemapheresis*  
Jamal, Y. A., Wali, J., Shin, C., Virk, M. S., Zhang, M., Yunce, M.  
2025; 64 (4): 104175
- **Differences in the product characteristics and clinical use of granulocytes for transfusion: The BEST Collaborative study.** *Transfusion*  
Cain, L., Lafrance, C., Morton, S., Latour, C., Girard, M., Tiberghien, P., de la Taille, V., Datta, S. S., Virk, M. S., Andrews, J., Yahalom, V., Pugliese, A. M., Alba, et al  
2025
- **Residual red blood cells in liquid plasma products: A quality assessment.** *American journal of clinical pathology*  
Yigitbilek, F., Pandey, S., Pham, T., Virk, M. S.  
2025
- **Improving RBC inventory by optimizing preoperative ordering and eliminating crossmatch and hold.** *Transfusion*  
Virk, M. S., Cederlof, K., Howard, E., Panigrahi, A.  
2024
- **Implementation and early outcomes with Pathogen Reduced Cryoprecipitated Fibrinogen Complex.** *American journal of clinical pathology*  
Sethapati, V. R., Pham, T. D., Quach, T., Nguyen, A., Le, J., Cai, W., Virk, M. S.  
2024

- **Comparison of the solid-phase red cell adherence assay and tube method for detection and identification of red blood cell antibodies.** *American journal of clinical pathology*  
Abdelmonem, M., Dussaq, A., Papakonstantino, K., Yunce, M., Virk, M. S.  
2024
- **Serologic reactivity of unidentified specificity in antenatal testing and hemolytic disease of the fetus and newborn: The BEST collaborative study.** *Transfusion*  
Lu, W., Ziman, A., Yan, M. T., Waters, A., Virk, M. S., Tran, A., Tang, H., Shih, A. W., Scally, E., Raval, J. S., Pandey, S., Pagano, M. B., Shan, et al  
2023
- **Validated transport conditions maintain the quality of washed red blood cells.** *Transfusion*  
Baker, S. A., Wong, L. K., Wieland, R., Bulterys, P., Allard, L., Nguyen, L., Quach, T., Nguyen, A., Chaesuh, E., Cheng, P., Bowen, R., Virk, M.  
2022; 62 (9): 1860-1870
- **Transfusion Outcomes between Regular and Low Yield Pathogen Reduced Platelets across Different Patient Populations in a Single Institution**  
Tang, M., Shu, E., Sussman, H., Virk, M., Pandey, S., Shan, H., Pham, T.  
WILEY.2022: 268A
- **Transfusion outcomes between regular and low yield pathogen reduced platelets across different patient populations in a single institution.** *Transfusion*  
Tang, M. S., Shu, E., Sussman, H., Virk, M., Pandey, S., Shan, H., Pham, T.  
2022
- **Multinational Analysis of Children Transfused With Pathogen Inactivated Platelets.** *Hospital pediatrics*  
Delaney, M., Andrews, J., Virk, M., Barber, J. R., Bost, J. E., Baech, J., Feys, H. B.  
2022; 12 (3): 311-316
- **How do I implement pathogen-reduced platelets?** *Transfusion*  
Pham, T. D., Kadi, W., Shu, E., Pandey, S., Sussmann, H., Shan, H., Virk, M. S.  
2021
- **Multinational Analysis of Transfusion Reactions in Children Transfused with Pathogen Inactivated Platelets**  
Delaney, M., Barber, J. R., Andrews, J., Virk, M., Bost, J. E., Baech, J., Feys, H. B.  
WILEY.2021: 8A-9A
- **Establishing a Satellite Transfusion Service Within an Academic Medical Center.** *American journal of clinical pathology*  
Murphy, C. H., Lim, A. Y., Chua, L., Shan, H., Goodnough, L. T., Virk, M. S.  
2020
- **Optimizing O-negative RBC utilization using a data-driven approach.** *Transfusion*  
Virk, M. S., Lancaster, D. n., Quach, T. n., Lim, A. n., Shu, E. n., Belanger, G. n., Pham, T. D.  
2020
- **Blood Donation During Pregnancy Due to Anti-Ku Hemolytic Disease of the Fetus and Newborn** *LABORATORY MEDICINE*  
Virk, M., Papakonstantino, K., Cai, W., Oh, D., Andrews, J.  
2019; 50 (4): 421–25
- **Non-HLA Antibody-Mediated Rejection of Lung Transplant Masquerading Transfusion-Related Acute Lung Injury**  
Yunce, M., Virk, M., Zhang, B. M., Mooney, K., Saleem, A., Shan, H.  
WILEY.2019: 199A
- **Detection of Anti-ABO Antibodies by Flow-Based Assays Predicts Clinical Hemolysis in HSCT Patients**  
Virk, M., Liu, H., Khoa Dang Nguyen, Chen, G., Tho Pham  
WILEY.2019: 90A
- **A FLOW CYTOMETRY BASED ABO-BLOOD GROUP ANTIBODY ASSAY (FABO-AB) FOR PREDICTING HEMOLYSIS IN ABO-MISMATCHED BONE MARROW TRANSPLANTATION (BMT)**  
Liu, H., Nguyen, K. D., Virk, M. S., Pham, T. D., Chen, G.  
ELSEVIER SCIENCE INC.2019: 40

- **International assessment of massive transfusion protocol contents and indications for activation** *TRANSFUSION*  
Thomasson, R. R., Yazer, M. H., Gorham, J. D., Dunbar, N. M., Adhikari, P., Apelseh, T., Bahr, M., Blain, H., Bohonek, M., Boral, L., Browne, I., Cheng, N., Cohn, et al  
2019; 59 (5): 1637–43
- **Granulocyte Transfusions in a Cohort of Neutropenic Patients with Life-Threatening Infections and Hematologic Diseases** *AMER SOC HEMATOLOGY*  
Ediriwickrema, A., Virk, M., Andrews, J.  
2019: 3696
- **Severe Underestimation of Serum Na following IVIG Treatment.** *Laboratory medicine*  
Virk, M. S., Dean, N. P., Wong, E. C.  
2018; 49 (4): 372-376
- **ABO Antibody Detection with Biolayer Interferometry**  
Virk, M., Khoa Nguyen, Khosravi, M., Miller, E., Tho Pham  
WILEY.2018: 145A
- **Rh Immunoprophylaxis for Women With a Serologic Weak D Phenotype.** *Laboratory medicine*  
Virk, M., Sandler, S. G.  
2015; 46 (3): 190-4