

Shiying Hao

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Bio

INSTITUTE AFFILIATIONS

- Member (Staff), Cardiovascular Institute

Publications

PUBLICATIONS

- **Post-COVID Conditions in US Primary Care: A PRIME Registry Comparison of Patients With COVID-19, Influenza-Like Illness, and Wellness Visits.** *Annals of family medicine*
Velásquez, E. E., Kamdar, N. S., Rehkopf, D. H., Saydah, S., Bull-Otterson, L., Hao, S., Vala, A., Chu, I., Bazemore, A. W., Phillips, R. L., Boehmer, T.
2024; 22 (4): 279-287
- **COVID-19 Vaccine Strategy Left Small Primary Care Practices On The Sidelines.** *Health affairs (Project Hope)*
Hao, S., Rehkopf, D. H., Velasquez, E., Vala, A., Bazemore, A. W., Phillips, R. L.
2023; 42 (8): 1147-1151
- **Single center blind testing of a US multi-center validated diagnostic algorithm for Kawasaki disease in Taiwan.** *Frontiers in immunology*
Kuo, H. C., Hao, S., Jin, B., Chou, C. J., Han, Z., Chang, L. S., Huang, Y. H., Hwa, K., Whitin, J. C., Sylvester, K. G., Reddy, C. D., Chubb, H., Ceresnak, et al
2022; 13: 1031387
- **A machine-learning algorithm for diagnosis of multisystem inflammatory syndrome in children and Kawasaki disease in the USA: a retrospective model development and validation study** *LANCET DIGITAL HEALTH*
Lam, J. Y., Shimizu, C., Tremoulet, A. H., Bainto, E., Roberts, S. C., Sivilay, N., Gardiner, M. A., Kanegaye, J. T., Hogan, A. H., Salazar, J. C., Mohandas, S., Szmuszkowicz, J. R., Mahanta, et al
2022; 4 (10): E717-E726
- **A machine-learning algorithm for diagnosis of multisystem inflammatory syndrome in children and Kawasaki disease in the USA: a retrospective model development and validation study.** *The Lancet. Digital health*
Lam, J. Y., Shimizu, C., Tremoulet, A. H., Bainto, E., Roberts, S. C., Sivilay, N., Gardiner, M. A., Kanegaye, J. T., Hogan, A. H., Salazar, J. C., Mohandas, S., Szmuszkowicz, J. R., Mahanta, et al
2022; 4 (10): e717-e726
- **Machine Learning for Pediatric Echocardiographic Mitral Regurgitation Detection.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*
Edwards, L. A., Feng, F., Iqbal, M., Fu, Y., Sanyahumbi, A., Hao, S., McElhinney, D. B., Ling, X. B., Sable, C., Luo, J.
2022
- **Gestational Dating by Urine Metabolic Profile at High Resolution Weekly Sampling Timepoints: Discovery and Validation.** *Frontiers in molecular medicine*
Sylvester, K. G., Hao, S., Li, Z., Han, Z., Tian, L., Ladella, S., Wong, R. J., Shaw, G. M., Stevenson, D. K., Cohen, H. J., Whitin, J. C., McElhinney, D. B., Ling, et al
2022; 2: 844280
- **Deviation from the precisely timed age-associated patterns revealed by blood metabolomics to find CRC patients at risk of relapse at the CRC diagnosis**
Thyparambil, S. P., Zhu, X., Zhang, Y., Sun, H., Peng, J., Cai, S., Li, Y., Fu, C., Bao, P., Hao, S., Li, Z., Ding, Y., Yao, et al
LIPPINCOTT WILLIAMS & WILKINS.2022
- **Early-pregnancy prediction of risk for pre-eclampsia using maternal blood leptin/ceramide ratio: discovery and confirmation.** *BMJ open*
Huang, Q., Hao, S., You, J., Yao, X., Li, Z., Schilling, J., Thyparambil, S., Liao, W., Zhou, X., Mo, L., Ladella, S., Davies-Balch, S. R., Zhao, et al

2021; 11 (11): e050963

- **Multi-omics longitudinal analyses in stages I to III CRC patients: Surveillance liquid biopsy test to predict early recurrence and enable risk-stratified postoperative CRC management.**
Liu, X., Zhang, Y., Zhu, X., Thyparambil, S. P., Liao, W., Zheng, X., You, J., Masood, A., Li, Z., Yang, G., Yao, X., Hao, S., Heaton, et al
LIPPINCOTT WILLIAMS & WILKINS.2021
- **Electronic Health Record-Based Prediction of 1-Year Risk of Incident Cardiac Dysrhythmia: Prospective Case-Finding Algorithm Development and Validation Study.** *JMIR medical informatics*
Zhang, Y., Han, Y., Gao, P., Mo, Y., Hao, S., Huang, J., Ye, F., Li, Z., Zheng, L., Yao, X., Li, Z., Li, X., Wang, et al
2021; 9 (2): e23606
- **Identification of patients at risk of new onset heart failure: Utilizing a large statewide health information exchange to train and validate a risk prediction model.** *PLoS one*
Duong, S. Q., Zheng, L., Xia, M., Jin, B., Liu, M., Li, Z., Hao, S., Alfreds, S. T., Sylvester, K. G., Widen, E., Teuteberg, J. J., McElhinney, D. B., Ling, et al
2021; 16 (12): e0260885
- **The Correlation Between SPP1 and Immune Escape of EGFR Mutant Lung Adenocarcinoma Was Explored by Bioinformatics Analysis.** *Frontiers in oncology*
Zheng, Y., Hao, S., Xiang, C., Han, Y., Shang, Y., Zhen, Q., Zhao, Y., Zhang, M., Zhang, Y.
2021; 11: 592854
- **Maternal metabolic profiling to assess fetal gestational age and predict preterm delivery: a two-centre retrospective cohort study in the US.** *BMJ open*
Sylvester, K. G., Hao, S., You, J., Zheng, L., Tian, L., Yao, X., Mo, L., Ladella, S., Wong, R. J., Shaw, G. M., Stevenson, D. K., Cohen, H. J., Whitin, et al
2020; 10 (12): e040647
- **Pertussis-like syndrome often not associated with Bordetella pertussis: 5-year study in a large children's hospital.** *Infectious diseases (London, England)*
Xiong, Q., Hao, S., Shen, L., Liu, J., Chen, T., Zhang, G., Huang, Y.
2020: 1–7
- **Towards personalized medicine in maternal and child health: integrating biologic and social determinants.** *Pediatric research*
Stevenson, D. K., Wong, R. J., Aghaeepour, N., Maric, I., Angst, M. S., Contrepois, K., Darmstadt, G. L., Druzin, M. L., Eisenberg, M. L., Gaudilliere, B., Gibbs, R. S., Gotlib, I. H., Gould, et al
2020
- **Deviation from the precisely timed phenomic ageotypes can assist in early CRC screening and reveal underlying pathophysiology.**
Thyparambil, S. P., You, J., Liu, K., Sun, H., Peng, J., Cai, S., Li, Y., Fu, C., Bao, P., Li, Q., Hao, S., Zhang, Y., Li, et al
LIPPINCOTT WILLIAMS & WILKINS.2020
- **Development of an early-warning system for high-risk patients for suicide attempt using deep learning and electronic health records.** *Translational psychiatry*
Zheng, L. n., Wang, O. n., Hao, S. n., Ye, C. n., Liu, M. n., Xia, M. n., Sabo, A. N., Markovic, L. n., Stearns, F. n., Kanov, L. n., Sylvester, K. G., Widen, E. n., McElhinney, et al
2020; 10 (1): 72
- **Multicentre validation of a computer-based tool for differentiation of acute Kawasaki disease from clinically similar febrile illnesses.** *Archives of disease in childhood*
Hao, S. n., Ling, X. B., Kanegaye, J. T., Bainto, E. n., Dominguez, S. R., Heizer, H. n., Jone, P. N., Anderson, M. S., Jaggi, P. n., Baker, A. n., Son, M. B., Newberger, J. W., Ashouri, et al
2020
- **Prediction for Intravenous Immunoglobulin Resistance Combining Genetic Risk Loci Identified From Next Generation Sequencing and Laboratory Data in Kawasaki Disease.** *Frontiers in pediatrics*
Chen, L., Song, S., Ning, Q., Zhu, D., Jia, J., Zhang, H., Zhao, J., Hao, S., Liu, F., Chu, C., Huang, M., Chen, S., Xie, et al
2020; 8: 462367
- **Kinetics of SARS-CoV-2 positivity of infected and recovered patients from a single center.** *Scientific reports*
Huang, J. n., Zheng, L. n., Li, Z. n., Hao, S. n., Ye, F. n., Chen, J. n., Gans, H. A., Yao, X. n., Liao, J. n., Wang, S. n., Zeng, M. n., Qiu, L. n., Li, et al
2020; 10 (1): 18629
- **Changes in pregnancy-related serum biomarkers early in gestation are associated with later development of preeclampsia.** *PLoS one*

- Hao, S. n., You, J. n., Chen, L. n., Zhao, H. n., Huang, Y. n., Zheng, L. n., Tian, L. n., Maric, I. n., Liu, X. n., Li, T. n., Bianco, Y. K., Winn, V. D., Aghaeepour, et al
2020; 15 (3): e0230000
- **Identification of elders at higher risk for fall with statewide electronic health records and a machine learning algorithm.** *International journal of medical informatics*
Ye, C. n., Li, J. n., Hao, S. n., Liu, M. n., Jin, H. n., Zheng, L. n., Xia, M. n., Jin, B. n., Zhu, C. n., Alfreds, S. T., Stearns, F. n., Kanov, L. n., Sylvester, et al
2020; 137: 104105
 - **High-throughput quantitation of serological ceramides/dihydroceramides by LC/MS/MS: Pregnancy baseline biomarkers and potential metabolic messengers.** *Journal of pharmaceutical and biomedical analysis*
Huang, Q. n., Hao, S. n., Yao, X. n., You, J. n., Li, X. n., Lai, D. n., Han, C. n., Schilling, J. n., Hwa, K. Y., Thyparambil, S. n., Whitin, J. n., Cohen, H. J., Chubb, et al
2020; 192: 113639
 - **A Real-Time Early Warning System for Monitoring Inpatient Mortality Risk: Prospective Study Using Electronic Medical Record Data.** *Journal of medical Internet research*
Ye, C., Wang, O., Liu, M., Zheng, L., Xia, M., Hao, S., Jin, B., Jin, H., Zhu, C., Huang, C. J., Gao, P., Ellrodt, G., Brennan, et al
2019; 21 (7): e13719
 - **Prediction of the 1-Year Risk of Incident Lung Cancer: Prospective Study Using Electronic Health Records from the State of Maine** *JOURNAL OF MEDICAL INTERNET RESEARCH*
Wang, X., Zhang, Y., Hao, S., Zheng, L., Liao, J., Ye, C., Xia, M., Wang, O., Liu, M., Weng, C., Duong, S. Q., Jin, B., Alfreds, et al
2019; 21 (5)
 - **A proteomic clock for malignant gliomas: The role of the environment in tumorigenesis at the presymptomatic stage.** *PLoS one*
Zheng, L. n., Zhang, Y. n., Hao, S. n., Chen, L. n., Sun, Z. n., Yan, C. n., Whitin, J. C., Jang, T. n., Merchant, M. n., McElhinney, D. B., Sylvester, K. G., Cohen, H. J., Recht, et al
2019; 14 (10): e0223558
 - **Improved detection of prostate cancer using a magneto-nanosensor assay for serum circulating autoantibodies.** *PLoS one*
Xu, L., Lee, J., Hao, S., Ling, X. B., Brooks, J. D., Wang, S. X., Gambhir, S. S.
2019; 14 (8): e0221051
 - **Prediction of the 1-Year Risk of Incident Lung Cancer: Prospective Study Using Electronic Health Records from the State of Maine.** *Journal of medical Internet research*
Wang, X. n., Zhang, Y. n., Hao, S. n., Zheng, L. n., Liao, J. n., Ye, C. n., Xia, M. n., Wang, O. n., Liu, M. n., Weng, C. H., Duong, S. Q., Jin, B. n., Alfreds, et al
2019; 21 (5): e13260
 - **Prediction of Incident Hypertension Within the Next Year: Prospective Study Using Statewide Electronic Health Records and Machine Learning.** *Journal of medical Internet research*
Ye, C. n., Fu, T. n., Hao, S. n., Zhang, Y. n., Wang, O. n., Jin, B. n., Xia, M. n., Liu, M. n., Zhou, X. n., Wu, Q. n., Guo, Y. n., Zhu, C. n., Li, et al
2018; 20 (1): e22
 - **Gene expression network analysis in aneuploid human trophoblast progenitor cells (TBPC) reveals modular structures**
Leon-Martinez, D., Ling, X., Hao, S., Sylvester, K., Bianco, K.
MOSBY-ELSEVIER.2018: S163-S164
 - **Assessing Statewide All-Cause Future One-Year Mortality: Prospective Study With Implications for Quality of Life, Resource Utilization, and Medical Futility.** *Journal of medical Internet research*
Guo, Y. n., Zheng, G. n., Fu, T. n., Hao, S. n., Ye, C. n., Zheng, L. n., Liu, M. n., Xia, M. n., Jin, B. n., Zhu, C. n., Wang, O. n., Wu, Q. n., Culver, et al
2018; 20 (6): e10311
 - **Fluid overload independent of acute kidney injury predicts poor outcomes in neonates following congenital heart surgery.** *Pediatric nephrology (Berlin, Germany)*
Mah, K. E., Hao, S. n., Sutherland, S. M., Kwiatkowski, D. M., Axelrod, D. M., Almond, C. S., Krawczeski, C. D., Shin, A. Y.
2017
 - **Defining and characterizing the critical transition state prior to the type 2 diabetes disease.** *PLoS one*
Jin, B. n., Liu, R. n., Hao, S. n., Li, Z. n., Zhu, C. n., Zhou, X. n., Chen, P. n., Fu, T. n., Hu, Z. n., Wu, Q. n., Liu, W. n., Liu, D. n., Yu, et al
2017; 12 (7): e0180937

- **Estimating One-Year Risk of Incident Chronic Kidney Disease: Retrospective Development and Validation Study Using Electronic Medical Record Data From the State of Maine.** *JMIR medical informatics*
Hao, S. n., Fu, T. n., Wu, Q. n., Jin, B. n., Zhu, C. n., Hu, Z. n., Guo, Y. n., Zhang, Y. n., Yu, Y. n., Fouts, T. n., Ng, P. n., Culver, D. S., Alfreds, et al
2017; 5 (3): e21
- **Unique Molecular Patterns Uncovered in Kawasaki Disease Patients with Elevated Serum Gamma Glutamyl Transferase Levels: Implications for Intravenous Immunoglobulin Responsiveness** *PLOS ONE*
Wang, Y., Li, Z., Hu, G., Hao, S., Deng, X., Huang, M., Ren, M., Jiang, X., Kanegaye, J. T., Ha, K., Lee, J., Li, X., Jiang, et al
2016; 11 (12)
- **Web-based Real-Time Case Finding for the Population Health Management of Patients With Diabetes Mellitus: A Prospective Validation of the Natural Language Processing-Based Algorithm With Statewide Electronic Medical Records.** *JMIR medical informatics*
Zheng, L., Wang, Y., Hao, S., Shin, A. Y., Jin, B., Ngo, A. D., Jackson-Browne, M. S., Feller, D. J., Fu, T., Zhang, K., Zhou, X., Zhu, C., Dai, et al
2016; 4 (4)
- **A Classification Tool for Differentiation of Kawasaki Disease from Other Febrile Illnesses.** *journal of pediatrics*
Hao, S., Jin, B., Tan, Z., Li, Z., Ji, J., Hu, G., Wang, Y., Deng, X., Kanegaye, J. T., Tremoulet, A. H., Burns, J. C., Cohen, H. J., Ling, et al
2016; 176: 114-120 e8
- **Exploring the Role of Polycythemia in Patients With Cyanosis After Palliative Congenital Heart Surgery.** *Pediatric critical care medicine*
Siehr, S. L., Shi, S., Hao, S., Hu, Z., Jin, B., Hanley, F., Reddy, V. M., McElhinney, D. B., Ling, X. B., Shin, A. Y.
2016; 17 (3): 216-222
- **Urinary Colorimetric Sensor Array and Algorithm to Distinguish Kawasaki Disease from Other Febrile Illnesses** *PLOS ONE*
Li, Z., Tan, Z., Hao, S., Jin, B., Deng, X., Hu, G., Liu, X., Zhang, J., Jin, H., Huang, M., Kanegaye, J. T., Tremoulet, A. H., Burns, et al
2016; 11 (2)
- **Prospective stratification of patients at risk for emergency department revisit: resource utilization and population management strategy implications.** *BMC emergency medicine*
Jin, B., Zhao, Y., Hao, S., Shin, A. Y., Wang, Y., Zhu, C., Hu, Z., Fu, C., Ji, J., Wang, Y., Zhao, Y., Jiang, Y., Dai, et al
2016; 16 (1): 10-?
- **NLP based congestive heart failure case finding: A prospective analysis on statewide electronic medical records.** *International journal of medical informatics*
Wang, Y., Luo, J., Hao, S., Xu, H., Shin, A. Y., Jin, B., Liu, R., Deng, X., Wang, L., Zheng, L., Zhao, Y., Zhu, C., Hu, et al
2015; 84 (12): 1039-1047
- **Development, Validation and Deployment of a Real Time 30 Day Hospital Readmission Risk Assessment Tool in the Maine Healthcare Information Exchange** *PLOS ONE*
Hao, S., Wang, Y., Jin, B., Shin, A. Y., Zhu, C., Huang, M., Zheng, L., Luo, J., Hu, Z., Fu, C., Dai, D., Wang, Y., Culver, et al
2015; 10 (10)
- **Online Prediction of Health Care Utilization in the Next Six Months Based on Electronic Health Record Information: A Cohort and Validation Study** *JOURNAL OF MEDICAL INTERNET RESEARCH*
Hu, Z., Hao, S., Jin, B., Shin, A. Y., Zhu, C., Huang, M., Wang, Y., Zheng, L., Dai, D., Culver, D. S., Alfreds, S. T., Rogow, T., Stearns, et al
2015; 17 (9)
- **Cerebrospinal fluid protein dynamic driver network: At the crossroads of brain tumorigenesis** *METHODS*
Tan, Z., Liu, R., Zheng, L., Hao, S., Fu, C., Li, Z., Deng, X., Jang, T., Merchant, M., Whitin, J. C., Guo, M., Cohen, H. J., Recht, et al
2015; 83: 36-43
- **Cerebrospinal fluid protein dynamic driver network: At the crossroads of brain tumorigenesis.** *Methods (San Diego, Calif.)*
Tan, Z., Liu, R., Zheng, L., Hao, S., Fu, C., Li, Z., Deng, X., Jang, T., Merchant, M., Whitin, J. C., Guo, M., Cohen, H. J., Recht, et al
2015; 83: 36-43
- **Utility of Clinical Biomarkers to Predict Central Line-associated Bloodstream Infections After Congenital Heart Surgery.** *Pediatric infectious disease journal*
Shin, A. Y., Jin, B., Hao, S., Hu, Z., Sutherland, S., McCammond, A., Axelrod, D., Sharek, P., Roth, S. J., Ling, X. B.
2015; 34 (3): 251-254
- **Development, Validation and Deployment of a Real Time 30 Day Hospital Readmission Risk Assessment Tool in the Maine Healthcare Information Exchange.** *PloS one*

Hao, S., Wang, Y., Jin, B., Shin, A. Y., Zhu, C., Huang, M., Zheng, L., Luo, J., Hu, Z., Fu, C., Dai, D., Wang, Y., Culver, et al
2015; 10 (10)

- **Risk prediction of emergency department revisit 30 days post discharge: a prospective study.** *PloS one*

Hao, S., Jin, B., Shin, A. Y., Zhao, Y., Zhu, C., Li, Z., Hu, Z., Fu, C., Ji, J., Wang, Y., Zhao, Y., Dai, D., Culver, et al
2014; 9 (11)

- **Risk prediction of emergency department revisit 30 days post discharge: a prospective study.** *PloS one*

Hao, S., Jin, B., Shin, A. Y., Zhao, Y., Zhu, C., Li, Z., Hu, Z., Fu, C., Ji, J., Wang, Y., Zhao, Y., Dai, D., Culver, et al
2014; 9 (11): e112944