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CLINICAL OFFICE (PRIMARY)

- **Department of Pathology**

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Bio

CLINICAL FOCUS

- Anatomic and Clinical Pathology
- Pediatric Pathology
- Medical and Transplant Liver Pathology

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Pathology
- Member, Maternal & Child Health Research Institute (MCHRI)

ADMINISTRATIVE APPOINTMENTS

- Director, Pediatric Pathology Service, Pathology, (2024- present)
- Director, Pediatric Pathology Fellowship, Pathology, (2024- present)

PROFESSIONAL EDUCATION

- Board Certification: Pediatric Pathology, American Board of Pathology (2019)
- Board Certification, Pediatric Pathology , American Board of Pathology (2019)
- Board Certification: Anatomic and Clinical Pathology, American Board of Pathology (2017)
- Fellowship: Ann and Robert H Lurie Children's Hospital Pediatric Pathology Fellowship (2019) IL
- Fellowship: Stanford University Surgical Pathology Fellowship (2018) CA
- Residency: Stanford University Pathology Residency (2017) CA
- Postdoctoral Fellowship, Stanford University Department of Biochemistry (2014)
- Residency, Stanford University General Surgery Residency , CA (2013)
- Medical Education: Duke University School of Medicine (2008) NC

Publications

PUBLICATIONS

- **Multomics and deep learning dissect regulatory syntax in human development.** *Nature*
Liu, B. B., Jessa, S., Kim, S. H., Ng, Y. T., Higashino, S. I., Marinov, G. K., Chen, D. C., Parks, B. E., Li, L., Nguyen, T. C., Wang, A. T., Wang, S. K., Tan, et al
2026
- **Does This Imaging Make Me Look NFATC2? The Value of Radiologic-pathologic Correlation in NFATC2-rearranged Sarcomas of Bone.** *The American journal of surgical pathology*
Kallen, M. E., Perret, R., Charville, G. W., Michal, M., Warmke, L. M., Larousserie, F., Höeller, S., Lee, J. C., Min, V. L., Shuliang, G., Nor, F. E., Le Loarer, F., Tan, et al
2026
- **Somatic PIK3CA Activating Mutation in a Plexiform Lesion of a Patient With HHT and PAH.** *JACC. Case reports*
Schimmel, K., Hallmark, T., DeBose-Scarlett, E., Qi, Y., Tan, S., Mastrodicasa, D., Hopper, R. K., Wu, J., Marchuk, D., Spiekerkoetter, E.
2026: 106786
- **Angiosarcoma Arising in 1 of 2 Adolescent Twins With Cryptogenic Cirrhosis and MAF Gene Mutation.** *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*
Duggan, M. P., Warriar, R., Burgin, A., Ganeshan, V., Galliano, G., Tan, S. Y.
2025: 10935266251406043
- **Malignant peripheral nerve sheath tumors: a report from children's oncology group study ARST0332.** *Journal of the National Cancer Institute*
Crane, J. N., Xue, W., Qumseya, A., Barkauskas, D. A., Chau, K., Tan, S. Y., Hiniker, S., Dasgupta, R., Venkatramani, R., Spunt, S. L., Weiss, A. R., Laetsch, T. W.
2025
- **Benchmarking cell type and gene set annotation by large language models with AnnDictionary.** *Nature communications*
Crowley, G., Quake, S. R.
2025; 16 (1): 9511
- **Sequential Combination of Unfavorable Histology followed by Clinical Stage M Defines High-Risk Neuroblastoma: A Report from the Children's Oncology Group.** *Clinical cancer research : an official journal of the American Association for Cancer Research*
Hazard, F. K., Toland, A. M., Tan, S. Y., Chiu, B., Ikegaki, N., Naranjo, A., Cohn, S. L., London, W. B., Gastier-Foster, J. M., Ramirez, N. C., Reshmi, S. C., Wagner, E., Nuchtern, et al
2025
- **Comparative analysis of RNA expression identifies effective targeted drug in myoepithelial carcinoma.** *NPJ precision oncology*
Vasquez, Y. A., Sanders, L., Beale, H. C., Lyle, A. G., Kephart, E. T., Learned, K., Peralez, J., Li, A., Huang, M., Pyke-Grimm, K. A., Tan, S. Y., Salama, S. R., Haussler, et al
2025; 9 (1): 145
- **Prenatal Diagnosis of a Large Congenital Epulis.** *NeoReviews*
Chitkara, R., Balakrishnan, K., Jayapal, P., Judy, A., Tan, S. Y., Hintz, S.
2025; 26 (5): e357-e361
- **BA-ECM Score: Automated Quantification of Liver Fibrosis Architecture in Biliary Atresia with Potential for Prognostic Value - A Pilot Study.** *Annals of surgery*
Liang, N. E., Guo, J. L., Griffin, M. F., Bauer-Rowe, K. E., Narang, A., Januszky, M., Fell, G. L., Dunn, J. C., Chao, S. D., Tan, S. Y., Longaker, M. T., Hyun, J. S.
2025
- **Loss of H3K27me3 Is Not Specific to Malignant Triton Tumor: Immunohistochemical Analysis of 23 Cases of Embryonal Rhabdomyosarcoma.** *Archives of pathology & laboratory medicine*
Warmke, L. M., Davis, J. L., Al-Ibraheemi, A., Arnold, M., Tan, S., Shenoy, A., Surrey, L. F., Parham, D. M., Rudzinski, E. R.
2025
- **sc-SPLASH provides ultra-efficient reference-free discovery in barcoded single-cell sequencing.** *bioRxiv : the preprint server for biology*
Dehghanasiri, R., Kokot, M., Starr, A. L., Maziarz, J., Gordon, T., Tan, S. Y., Wang, P. L., Voskoboynik, A., Musser, J. M., Deorowicz, S., Salzman, J.

2024

- **Congenital peribronchial myofibroblastic tumors harbor a recurrent EGFR kinase domain duplication.** *Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc*
Younes, S., Suarez, C. J., Pogoriler, J., Bhatti, T., Shenoy, A., Saab, R., Surrey, L. F., Tan, S. Y.
2024: 100661
- **Aggressive Pediatric Primitive Round Cell Tumors with MN1::ZNF341 Fusion: A Mimic of Neuroblastoma.** *Pediatric blood & cancer*
Tan, S. Y., Evans, M. G., Saab, R., Gupta, A., Reid, J., Dao, T., Rubin, E., Crymes, A., Semenova, K., Shimada, H., Livasy, C., Nael, A.
2024: e31425
- **Dipeptidylpeptidase 4 Is Overexpressed in the Extracellular Matrix of Biliary Atresia-Associated Liver Fibrosis**
Liang, N., Griffin, M., Parker, J. B. L., Guo, J. L., Bauer-Rowe, K. E., Fell, G. L., Dunn, J. C. Y., Tan, S. Y. S., Hyun, J. S., Longaker, M. T.
LIPPINCOTT WILLIAMS & WILKINS.2024: S347-S348
- **A lymphocyte chemoaffinity axis for lung, non-intestinal mucosae and CNS.** *Nature*
Ocón, B., Xiang, M., Bi, Y., Tan, S., Brulois, K., Ayesha, A., Kunte, M., Zhou, C., LaJevic, M., Lazarus, N., Mengoni, F., Sharma, T., Montgomery, et al
2024
- **Crystalline Hepatopathy Associated With Bietti Crystalline Dystrophy: A Striking Manifestation of Disordered Fatty Acid Metabolism.** *The American journal of surgical pathology*
Dulken, B. W., Bahceci, D., Leung, L. S., Mahajan, V. B., Choi, W. T., Tan, S. Y.
2024
- **Perivascular Epithelioid Cell-Family Tumors in Children, Adolescents and Young Adults: Clinicopathologic Features in 70 Cases.** *Archives of pathology & laboratory medicine*
Hammer, P. M., Toland, A., Shaheen, M., Shenoy, A., Esnakula, A., Hicks, M. J., Warran, M., Al-Ibraheemi, A., Davis, J. L., Tan, S. Y.
2024
- **Soft Tissue Perivascular Epithelioid Cell Tumors.** *Surgical pathology clinics*
Hammer, P. M., Tan, S. Y.
2024; 17 (1): 105-118
- **Clinical Features of SARS-CoV-2 Infection During Pregnancy and Associated Placental Pathologies** *INTERNATIONAL JOURNAL OF GYNECOLOGICAL PATHOLOGY*
Ryan, E. E., Brar, N., Allard, G., Wang, A., Winn, V. D., Folkins, A., Yang, E. J., Tan, S., Hazard, F. K., Howitt, B. E.
2024; 43 (1): 15-24
- **Melanoma in infants, caused by a gene fusion involving the anaplastic lymphoma kinase (ALK).** *Pigment cell & melanoma research*
Perkins, I. U., Tan, S. Y., McCalmont, T. H., Chou, P. M., Mully, T. W., Gerami, P., Pomerantz, J. H., Reyes-Múgica, M., Balkin, D. M., Kruse, L. L., Huang, B., Reichel, J. L., Gangopadhyay, et al
2023
- **The Pathologic Diagnosis of Pediatric Soft Tissue Tumors in the Era of Molecular Medicine: The Sarcoma Pediatric Pathology Research Interest Group Perspective.** *Archives of pathology & laboratory medicine*
Black, J. O., Al-Ibraheemi, A., Arnold, M. A., Coffin, C. M., Davis, J. L., Parham, D. M., Rudzinski, E. R., Shenoy, A., Surrey, L. F., Tan, S. Y., Spunt, S. L.
2023
- **The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans.** *Science (New York, N.Y.)*
Jones, R. C., Karkanas, J., Krasnow, M. A., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaupt, B., Brown, P., Harper, W., Hemenez, M., Ponnusamy, R., Salehi, et al
2022; 376 (6594): eabl4896
- **Dissecting alveolar patterning and maintenance at single-cell resolution.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*
Gillich, A., Brownfield, D. G., Travaglini, K. J., Zhang, F., Farmer, C. G., St Julien, K. R., Tan, S. Y., Gu, M., Zhou, B., Feinstein, J. A., Metzger, R. J., Krasnow, M. A.
2022; 36 Suppl 1
- **Publisher Correction: Cell types of origin of the cell-free transcriptome.** *Nature biotechnology*

Vorperian, S. K., Moufarrej, M. N., Tabula Sapiens Consortium, Quake, S. R., Jones, R. C., Karkanias, J., Krasnow, M., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaupt, B., Brown, P., et al
2022

- **Leiomyomatosis in an Infant With a SUFU Splice Site Variant: Case Report.** *Journal of pediatric hematology/oncology*
Rao, R. R., Dulken, B. W., Matalon, D. R., Borensztein, M., McGuinness, M., Cizek, S. M., Bruzoni, M., Tan, S. Y., Kreimer, S.
2022
- **Cell types of origin of the cell-free transcriptome.** *Nature biotechnology*
Vorperian, S. K., Moufarrej, M. N., Tabula Sapiens Consortium, Quake, S. R., Jones, R. C., Karkanias, J., Krasnow, M., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaupt, B., Brown, P., et al
2022
- **Intestinal Failure in Junctional Epidermolysis Bullosa: Mild Skin Disease, Severe Diarrhea.** *Digestive diseases and sciences*
DeMaria, K. A., Fink, C., Pepper, M., Rieger, K., Tan, S. Y., Namjoshi, S. S.
2022
- **ALK rearrangements in infantile fibrosarcoma-like spindle cell tumors of soft tissue and kidney.** *Histopathology*
Tan, S. Y., Al-Ibraheemi, A., Arhens, W. A., Oesterheld, J. E., Fanburg-Smith, J. C., Liu, Y. J., Spunt, S. L., Rudzinski, E. R., Coffin, C., Davis, J. L.
2021
- **Severe delayed hypersensitivity reactions to IL-1 and IL-6 inhibitors link to common HLA-DRB1*15 alleles.** *Annals of the rheumatic diseases*
Saper, V. E., Ombrello, M. J., Tremoulet, A. H., Montero-Martin, G., Prahalad, S., Canna, S., Shimizu, C., Deutsch, G., Tan, S. Y., Remmers, E. F., Monos, D., Hahn, T., Phadke, et al
2021
- **Hepatogonadal fusion in a neonate with testicular torsion** *JOURNAL OF PEDIATRIC SURGERY CASE REPORTS*
Yun, C. J., Tan, S., Mueller, C. M.
2021; 74
- **RNA splicing programs define tissue compartments and cell types at single cell resolution.** *eLife*
Olivieri, J. E., Dehghannasiri, R., Wang, P. L., Jang, S., de Morree, A., Tan, S. Y., Ming, J., Ruohao Wu, A., Tabula Sapiens Consortium, Quake, S. R., Krasnow, M. A., Salzman, J.
2021; 10
- **Arteriovenous Malformations-Current Understanding of the Pathogenesis with Implications for Treatment.** *International journal of molecular sciences*
Schimmel, K., Ali, M. K., Tan, S. Y., Teng, J., Do, H. M., Steinberg, G. K., Stevenson, D. A., Spiekerkoetter, E.
2021; 22 (16)
- **Sclerosing Epithelioid Fibrosarcoma of the Kidney: First Reported Case in a Young Child.** *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*
Kurtz, J. L., Tan, S. Y., Hazard, F. K.
2021: 1093526620977738
- **Dissecting the Cardiac Conduction System: Is It Worthwhile?** *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*
Tan, S. Y., Fritsch, M. K., White, S., Arva, N. C.
2020: 1093526620944756
- **Barrett Esophagus and Intestinal Metaplasia of the Gastroesophageal Junction in Children: A Clinicopathologic Study.** *Journal of pediatric gastroenterology and nutrition*
Putra, J., Arva, N. C., Tan, S. Y., Melin-Aldana, H., Bass, L. M., Mitchell, P. D., Fox, V. L., Goldsmith, J. D.
2020; 70 (5): 562-567
- **Capillary cell-type specialization in the alveolus.** *Nature*
Gillich, A. n., Zhang, F. n., Farmer, C. G., Travaglini, K. J., Tan, S. Y., Gu, M. n., Zhou, B. n., Feinstein, J. A., Krasnow, M. A., Metzger, R. J.
2020
- **Gonadal Tissue Cryopreservation for Children with Differences of Sex Development** *HORMONE RESEARCH IN PAEDIATRICS*

- Johnson, E. K., Finlayson, C., Finney, E. L., Harris, C. J., Tan, S. Y., Laronda, M. M., Lockart, B. A., Chen, D., Rowell, E. E., Cheng, E. Y., Yerkes, E. B.
2020; 92 (2): 84–91
- **Solitary Fibrous Tumors in Pediatric Patients: A Rare and Potentially Overdiagnosed Neoplasm, Confirmed by STAT6 Immunohistochemistry** *PEDIATRIC AND DEVELOPMENTAL PATHOLOGY*
Tan, S. Y., Szymanski, L. J., Galliani, C., Parham, D., Zambrano, E.
2018; 21 (4): 389–400
 - **Thrombotic Microangiopathy with Intraglomerular Monoclonal IgM Pseudothrombi**
Tan, S., Sibley, R., Higgins, J., Kambham, N., Troxell, M.
NATURE PUBLISHING GROUP.2018: 618
 - **Single-cell transcriptomics of 20 mouse organs creates a Tabula Muris.** *Nature*
2018; 562 (7727): 367–72
 - **Pleomorphic myxoid liposarcoma in an adolescent with Li-Fraumeni syndrome.** *Pediatric surgery international*
Sinclair, T. J., Thorson, C. M., Alvarez, E., Tan, S., Spunt, S. L., Chao, S. D.
2017
 - **BRAF inhibitor treatment of primary BRAF-mutant ameloblastoma with pathologic assessment of response** *ORAL SURGERY ORAL MEDICINE ORAL PATHOLOGY ORAL RADIOLOGY*
Tan, S., Pollack, J. R., Kaplan, M. J., Colevas, A. D., West, R. B.
2016; 122 (1): E5-E7
 - **Developmental origin of lung macrophage diversity** *DEVELOPMENT*
Tan, S. Y., Krasnow, M. A.
2016; 143 (8): 1318-1327
 - **A novel laparoscopic-assisted approach to the repair of pediatric femoral hernias.** *Journal of laparoendoscopic & advanced surgical techniques. Part A*
Tan, S. Y., Stevens, M. J., Mueller, C. M.
2013; 23 (11): 946-948
 - **Heterotaxy and complex structural heart defects in a mutant mouse model of primary ciliary dyskinesia** *JOURNAL OF CLINICAL INVESTIGATION*
Tan, S. Y., Rosenthal, J., Zhao, X., Francis, R. J., Chatterjee, B., Sabol, S. L., Linask, K. L., Bracero, L., Connelly, P. S., Daniels, M. P., Yu, Q., Omran, H., Leatherbury, et al
2007; 117 (12): 3742-3752