Stanford

Katherine Jane Ryan

- Clinical Assistant Professor, Pediatrics - Hematology & Oncology
- Clinical Assistant Professor (By courtesy), Adult Neurology

CLINICAL OFFICE (PRIMARY)

- **Pediatric Hematology and Oncology**

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ACADEMIC CONTACT INFORMATION

- **Administrative Assistant**

  Astryd Munoz Astrada

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Bio

BIO

I am an attending pediatric neuro-oncologist at Lucile Packard Children's Hospital Stanford and a Clinical Assistant Professor of Pediatrics and Neurology (by courtesy) at Stanford University, with a focus on designing and leading early-phase clinical trials that harness immunotherapy—particularly CAR T cell therapy—for children with aggressive central nervous system tumors.

CLINICAL FOCUS

- Neuro oncology
- Pediatric Hematology-Oncology

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Pediatrics - Hematology & Oncology
- Clinical Assistant Professor (By courtesy), Adult Neurology
- Member, Maternal & Child Health Research Institute (MCHRI)

PROFESSIONAL EDUCATION

- Board Certification: Pediatric Hematology-Oncology, American Board of Pediatrics (2025)
- Board Certification: Pediatrics, American Board of Pediatrics (2025)
- Fellowship, Duke University Hospital - Brain Tumor Center , Neuro-Oncology (2023)
- Fellowship: Duke University Medical Center Pediatric Hematology-Oncology Fellowship (2021) NC
- Residency: Sinai Hospital Of Baltimore (2018) MD
- D.O., University of North Texas Health Science Center, Texas College of Osteopathic Medicine , Medicine (2015)

LINKS

- Support our GPC2 CAR T Clinical Trial & Research: https://my.supportlpch.org/fundraiser/5927575

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Katherine “Katie” Ryan, D.O., is a Clinical Assistant Professor of Pediatrics (with courtesy in Neurology) at Stanford University and Lucile Packard Children’s Hospital, specializing in pediatric neuro-oncology, neuro-immuno-oncology, and solid tumor oncology. Her research and clinical practice focus on advancing novel therapies for children with high-risk and treatment-refractory central nervous system (CNS) tumors.

Dr. Ryan serves as the Principal Investigator of the first-in-human Phase 1 clinical trial of GPC2-directed CAR T-cell therapy (CCT6014, NCT07087002) for children and young adults with relapsed or refractory medulloblastoma, embryonal tumors with multilayered rosettes (ETMR), atypical teratoid/rhabdoid tumor (AT/RT), and pineoblastoma. Her work emphasizes:

• Innovative Trial Design

• Novel Delivery Approaches

• Correlative Science

• Safety & Supportive Care

In addition to her research leadership, Dr. Ryan is a core member of the world-renowned Stanford Children’s Pediatric Brain Tumor Program, where she plays a central role in the diagnosis and treatment of children with brain and spinal cord tumors. Her clinical practice encompasses both inpatient and outpatient care, with a strong emphasis on integrating novel therapies into frontline and relapse management. She collaborates closely with neurosurgery, radiation oncology, neuropathology, and supportive care teams to provide comprehensive, multidisciplinary care to patients and families.

Dr. Ryan is also deeply engaged in collaborative efforts to advance immunotherapy for pediatric brain tumors on a national and international scale. She contributes leadership to several major consortia, including the Pediatric Brain Tumor Consortium (PBTC), the Pediatric Oncology Experimental Therapeutics Investigators’ Consortium (POETIC), and the Children’s Oncology Group (COG). Within COG, she is an active member of the CNS Committee, contributing to immunotherapy strategy and the design of early-phase clinical trials. She co-chairs the POETIC Immunotherapy Working Group and partners with multi-institutional teams to translate cellular therapies from the laboratory to the clinic.

Her overarching mission is to bridge laboratory innovation, clinical trial design, and patient-centered care to create transformative therapies for children with CNS tumors. Through her leadership in cellular immunotherapy, her collaborative engagement in national consortia, and her role as a clinician within Stanford’s Brain Tumor Program, Dr. Ryan is committed to improving outcomes and quality of life for children and families facing these devastating diseases.

CLINICAL TRIALS

- GPC2-CAR T Cell Therapy for Relapsed or Refractory Medulloblastoma in Children and Young Adults, Recruiting
- Phase I GD2 CAR T Cells for H3K27M-mutant Diffuse Midline Glioma (DMG), Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Pediatric Hem/Onc (Fellowship Program)

Publications

PUBLICATIONS

- **Quantitative surfaceome profiling of high-risk medulloblastoma prioritizes the oncofetal antigen GPC2 for potent CAR-T cell therapy**
  Usta, D., Gwynne, W., Suk, Y., Chen, Y., Radosevic, M. T., Chernova, D., Delaidelli, A., Feng, Y., Nasajpour, E., Trissal, M. C., Poetschke, R. D., Dunham, C., Labanie, et al
  OXFORD UNIV PRESS INC.2025: v373

- **Inflammation-driven Resistance to MAPK inhibition in Pediatric Gliomas: Mechanisms and Therapeutic Strategies**
  Panovska, D., Xing, Y., Nasajpour, E., Dobler, R., Zakaraoui, O., Baroncini, L., Caruso, J., Priker, R., Munoz, D., Banik, I., Nguyen, D., Hwang, Y., Lin, et al
  OXFORD UNIV PRESS INC.2025: v182

- **CHROMOSOMAL LOSSES CORRELATE WITH POOR OVERALL SURVIVAL IN H3K27M-ALTERED DIFFUSE MIDLINE GLIOMAS**
  Leal-Ekman, J., Nguyen, T., Campen, C., Ryan, K., Wheeler, J., Mahdi, J., Monje, M., Partap, S., Prolo, L.
  OXFORD UNIV PRESS INC.2024