

# Stanford

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## Danton Char

Associate Professor of Anesthesiology, Perioperative and Pain Medicine (Pediatric)

### CLINICAL OFFICES

- **Anesthesia Department**

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### Bio

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### BIO

Danton Char is a pediatric cardiac anesthesiologist, clinical researcher, and empirical bioethics researcher at Lucile Packard Children's Hospital and Stanford University. He focuses on improving the lives of infants, children, and adults with complex congenital cardiac disease and supporting the well-being of their caregivers and families. His research also focuses on identifying and addressing ethical concerns arising with implementation of next generation technologies to bedside clinical care for all patients, including genomic testing, artificial intelligence/machine learning, and mechanical circulatory support.

### CLINICAL FOCUS

- Anesthesia

### ACADEMIC APPOINTMENTS

- Associate Professor - University Medical Line, Anesthesiology, Perioperative and Pain Medicine
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Maternal & Child Health Research Institute (MCHRI)

### PROFESSIONAL EDUCATION

- Fellowship: Stanford University Anesthesiology Residency (2011) CA
- Fellowship: UCSF Anesthesiology Fellowships (2010) CA
- Residency: UCSF Anesthesiology Residency (2009) CA
- Medical Education: University of California at San Francisco School of Medicine (2005) CA
- Board Certification: Pediatric Anesthesia, American Board of Anesthesiology (2013)
- Internship: Stanford Hospital and Clinics - Dept of Surgery (2006) CA
- Board Certification: Anesthesia, American Board of Anesthesiology (2010)

## LINKS

- Lab Website: <https://charlab.stanford.edu/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Char's research is focused on identifying and addressing ethical concerns associated with the implementation of next generation technologies like whole genome sequencing and its attendant technologies like machine learning to bedside clinical care.

## Publications

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### PUBLICATIONS

- **Bereaved Caregiver Perspectives on the End of Life in Pediatric Patients With Ventricular Assist Devices.** *Pediatric critical care medicine : a journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*  
Bui, C. M., Schneider, L. M., Brown, M. R., Char, D. S., McIlvennan, C. K., Hollander, S. A.  
2022
- **Could, Should Families Watch Their Loved One's Surgeries and, If So, When?** *Anesthesia and analgesia*  
Quinonez, Z. A., Pyke-Grimm, K. A., Char, D.  
2022; 135 (4): 704-707
- **Could, Should Families Watch Their Loved One's Surgeries and, If So, When?** *ANESTHESIA AND ANALGESIA*  
Quinonez, Z. A., Pyke-Grimm, K. A., Char, D.  
2022; 135 (4): 704-707
- **Family-centered care and acute care cardiology: borrowing lessons from other disciplines.** *Cardiology in the young*  
Gal, D. B., Char, D. S., Anderson, J. B., Cooper, D. S., Madsen, N. L.  
2022: 1-3
- **Important Design Questions for Algorithmic Ethics Consultation.** *The American journal of bioethics : AJOB*  
Char, D.  
2022; 22 (7): 38-40
- **Challenges of Local Ethics Review in a Global Healthcare AI Market.** *The American journal of bioethics : AJOB*  
Char, D.  
2022; 22 (5): 39-41
- **Foundational Considerations for Artificial Intelligence Utilizing Ophthalmic Images.** *Ophthalmology*  
Abramoff, M. D., Cunningham, B., Patel, B., Eydelman, M. B., Leng, T., Sakamoto, T., Blodi, B., Grenon, S. M., Wolf, R. M., Manrai, A. K., Ko, J. M., Chiang, M. F., Char, et al  
2021
- **Compassionate Deactivation of Ventricular Assist Devices in Children with Heart Failure.** *ASAIO journal (American Society for Artificial Internal Organs : 1992)*  
Char, D. S., Hollander, S. A., Feudtner, C.  
2021
- **Parental Attitudes Toward Clinical Genomic Sequencing in Children With Critical Cardiac Disease.** *Pediatric critical care medicine : a journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*  
Gal, D. B., Deutch, N., Lee, S. S., Simon, R. T., Char, D. S.  
2021
- **Compassionate Deactivation of Pediatric Ventricular Assist Devices: A Review of 14 Cases.** *Journal of pain and symptom management*  
Hollander, S. A., Kaufman, B. D., Bui, C. n., Gregori, B. n., Murray, J. M., Sacks, L. n., Ryan, K. R., Ma, M. n., Rosenthal, D. N., Char, D. n.  
2021

- **A Framework to Evaluate Ethical Considerations with ML-HCA Applications-Valuable, Even Necessary, but Never Comprehensive.** *The American journal of bioethics : AJOB*  
Char, D., Abramoff, M., Feudtner, C.  
2020; 20 (11): W6-W10
- **Identifying Ethical Considerations for Machine Learning Healthcare Applications.** *The American journal of bioethics : AJOB*  
Char, D. S., Abramoff, M. D., Feudtner, C.  
2020; 20 (11): 7-17
- **Parents Demand and Teenager Refuses Epidural Anesthesia.** *Pediatrics*  
Berkowitz, I., Burgart, A., Truog, R. D., Mancuso, T. J., Char, D., Lantos, J. D.  
2020
- **Considerations for Triaging Elective Cases in Children with Cardiac Disease in a Time of Crisis.** *Circulation*  
Gal, D. B., Char, D. S.  
2020
- **Pectoral Nerve Blocks Decrease Postoperative Pain and Opioid Use After Pacemaker or Implantable Cardioverter-Defibrillator Placement in Children.** *Heart rhythm*  
Yang, J. K., Char, D. S., Motonaga, K. S., Navaratnam, M., Dubin, A. M., Trella, A., Hanisch, D. G., McFadyen, G., Chubb, H., Goodyer, W., Ceresnak, S. R.  
2020
- **Machine Learning Implementation in Clinical Anesthesia: Opportunities and Challenges.** *Anesthesia and analgesia*  
Char, D. S., Burgart, A. n.  
2020
- **Lessons learnt about Autonomous AI: Finding a safe, efficacious and ethical path through the development process.** *American journal of ophthalmology*  
Abramoff, M. D., Tobey, D. n., Char, D. S.  
2020
- **How Anesthesiologists Experience and Negotiate Ethical Challenges from Drug Shortages.** *AJOB empirical bioethics*  
Sinow, C. n., Burgart, A. n., Char, D. S.  
2020: 1-8
- **The opioid crisis should lead pediatric anesthesiologists to a broader vision of opioid stewardship.** *Paediatric anaesthesia*  
Burgart, A. M., Char, D.  
2019; 29 (11): 1078-80
- **Use of genetic risks in pediatric organ transplantation listing decisions: A national survey** *PEDIATRIC TRANSPLANTATION*  
Graf, M., Char, D., Hanson-Kahn, A., Magnus, D.  
2019; 23 (4)
- **Use of genetic risks in pediatric organ transplantation listing decisions: A national survey.** *Pediatric transplantation*  
Graf, M., Char, D., Hanson-Kahn, A., Magnus, D.  
2019: e13402
- **The Decision to Withdraw in Children With Ventricular Assist Devices.** *The American journal of bioethics : AJOB*  
Char, D., Hollander, S. A.  
2019; 19 (3): 61-62
- **The Decision to Withdraw in Children With Ventricular Assist Devices** *AMERICAN JOURNAL OF BIOETHICS*  
Char, D., Hollander, S. A.  
2019; 19 (3): 61-62
- **Translating genomic testing results for pediatric critical care: Opportunities for genetic counselors.** *Journal of genetic counseling*  
Deutch, N. n., Soo-Jin Lee, S. n., Char, D. n.  
2019
- **Surveillance and Digital Health.** *The American journal of bioethics : AJOB*  
Martinez-Martin, N., Char, D.

2018; 18 (9): 67–68

- **Implementing Machine Learning in Health Care - Addressing Ethical Challenges** *NEW ENGLAND JOURNAL OF MEDICINE*  
Char, D. S., Shah, N. H., Magnus, D.  
2018; 378 (11): 981–83
- **Anticipating uncertainty and irrevocable decisions: provider perspectives on implementing whole-genome sequencing in critically ill children with heart disease.** *Genetics in medicine : official journal of the American College of Medical Genetics*  
Char, D. S., Lee, S. S., Magnus, D. n., Cho, M. n.  
2018
- **The Advance of Rescue Technologies and the Border of Viability.** *The American journal of bioethics : AJOB*  
Char, D.  
2017; 17 (8): 40-41
- **Genomic Contraindications for Heart Transplantation.** *Pediatrics*  
Char, D. S., Lázaro-Muñoz, G., Barnes, A., Magnus, D., Deem, M. J., Lantos, J. D.  
2017
- **CPR and Ventricular Assist Devices: The Challenge of Prolonging Life Without Guaranteeing Health.** *American journal of bioethics*  
Magnus, D., Char, D.  
2017; 17 (2): 1-2
- **Pediatric Acute Care Decision Implications of Genetically Discoverable Mental Disorders** *AMERICAN JOURNAL OF BIOETHICS*  
Char, D.  
2017; 17 (4): 32-33
- **Can Destination Therapy be implemented in children with heart failure? A study of provider perceptions.** *Pediatric transplantation*  
Char, D. S., Lee, S. S., Ikoku, A. A., Rosenthal, D., Magnus, D.  
2016; 20 (6): 819-824
- **Anesthesia Intraoperative Handoffs: Is Decision Ownership Compatible With Transitions of Care Providers?** *American journal of bioethics*  
Char, D.  
2016; 16 (9): 19-20
- **Anesthesia for Placement of a Paracorporeal Lung Assist Device and Subsequent Heart-Lung Transplantation in a Child with Suprasystemic Pulmonary Hypertension and End-Stage Respiratory Failure.** *A & A case reports*  
Char, D. S., Yarlagadda, V., Maeda, K., Williams, G.  
2016; 6 (10): 308-310
- **Cognitive Dysfunction in Children with Heart Disease: The Role of Anesthesia and Sedation.** *Congenital heart disease*  
Char, D., Ramamoorthy, C., Wise-Faberowski, L.  
2016; 11 (3): 221-229
- **Accuracy of Pulse Oximeters Intended for Hypoxemic Pediatric Patients.** *Pediatric critical care medicine*  
Harris, B. U., Char, D. S., Feinstein, J. A., Verma, A., Shiboski, S. C., Ramamoorthy, C.  
2016; 17 (4): 315-320
- **Accuracy of Pulse Oximeters Intended for Hypoxemic Pediatric Patients** *PEDIATRIC CRITICAL CARE MEDICINE*  
Harris, B. U., Char, D. S., Feinstein, J. A., Verma, A., Shiboski, S. C., Ramamoorthy, C.  
2016; 17 (4): 315-320
- **Supervised Controlled Substance Use.** *American journal of bioethics*  
Char, D.  
2016; 16 (4): 56-58
- **How should whole-genome sequencing be implemented in children? A consideration of the current limitations** *PERSONALIZED MEDICINE*  
Char, D. S.  
2016; 13 (1): 33-42
- **How should whole-genome sequencing be implemented in children? A consideration of the current limitations.** *Personalized medicine*

- Char, D. S.  
2016; 13 (1): 33-42
- **Parental Refusal of Newborn Screening for Congenital Hearing Loss.** *American journal of bioethics*  
Char, D.  
2016; 16 (1): 33-35
  - **Negotiating the dilemma of anaesthesia and sedation in NICUs.** *The Lancet. Respiratory medicine*  
Char, D. S.  
2015; 3 (10): 741-742
  - **Ethics of Disclosure Regarding Drug Shortages That Affect Patient Care.** *Anesthesia and analgesia*  
Char, D. S., Magnus, D.  
2015; 121 (2): 262-263
  - **Whole-genome sequencing in critically ill infants and emerging ethical challenges.** *The Lancet. Respiratory medicine*  
Char, D. S.  
2015; 3 (5): 333-335
  - **Whole genome sequencing in critically ill children.** *The Lancet. Respiratory medicine*  
Char, D. S., Cho, M., Magnus, D.  
2015; 3 (4): 264-266
  - **Preventive Genomic Sequencing and Care of the Individual Patient.** *American journal of bioethics*  
Char, D.  
2015; 15 (7): 32-33
  - **Ethical concerns raised among pediatric heart failure clinicians.** *American journal of bioethics*  
Char, D. S.  
2015; 15 (5): 36-37
  - **Are preoperative B-type natriuretic peptide levels associated with outcome after pulmonary artery banding and the double switch operation in patients with congenitally corrected transposition of the great arteries: A pilot study** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*  
Char, D. S., Shiboski, S. C., Hanley, F. L., Fineman, J. R.  
2014; 148 (5): 2434-2436
  - **Are preoperative B-type natriuretic peptide levels associated with outcome after pulmonary artery banding and the double switch operation in patients with congenitally corrected transposition of the great arteries: a pilot study.** *journal of thoracic and cardiovascular surgery*  
Char, D. S., Shiboski, S. C., Hanley, F. L., Fineman, J. R.  
2014; 148 (5): 2434-2436
  - **Preoperative B-type natriuretic peptide levels are associated with outcome after total cavopulmonary connection (Fontan).** *journal of thoracic and cardiovascular surgery*  
Radman, M., Keller, R. L., Oishi, P., Datar, S. A., Wellnitz, K., Azakie, A., Hanley, F., Char, D., Hsu, J., Amrinovin, R., Adatia, I., Fineman, J. R.  
2014; 148 (1): 212-219
  - **General anesthesia treatment of propriospinal myoclonus in a patient with fibrodysplasia ossificans progressiva.** *A & A case reports*  
Char, D. S., Hutchison, H. T., Kitterman, J. A., Gregory, G. A.  
2014; 3 (1): 6-8
  - **Unintended effects on morale of mandatory postincident testing.** *American journal of bioethics*  
Char, D. S.  
2014; 14 (12): 42-44
  - **The effects of ketamine on dexmedetomidine-induced electrophysiologic changes in children.** *Paediatric anaesthesia*  
Char, D., Drover, D. R., Motonaga, K. S., Gupta, S., Miyake, C. Y., Dubin, A. M., Hammer, G. B.  
2013; 23 (10): 898-905
  - **Volatile anesthetic rescue therapy in children with acute asthma: innovative but costly or just costly?\*** *Pediatric critical care medicine*  
Char, D. S., Ibsen, L. M., Ramamoorthy, C., Bratton, S. L.  
2013; 14 (4): 343-350

- **Case report: airway and concurrent hemodynamic management in a neonate with oculo-auriculo-vertebral (Goldenhar) syndrome, severe cervical scoliosis, interrupted aortic arch, multiple ventricular septal defects, and an unstable cervical spine** *PEDIATRIC ANESTHESIA*

Char, D. S., Gipp, M., Boltz, M. G., Williams, G. D.

2012; 22 (9): 932-934