

# Ochsner 2026 Post-Doctoral Research Fellow



## Samantha Beland

Mentor: Dr. Eilan Levkowitz

Assessing the Accuracy of the Pediatric Age-Adjusted Shock Index (SIPA) in Identifying Midgut Volvulus in Pediatric Emergency Department Patients

Shock index, pediatric age-adjusted (SIPA) is a formula defined as maximum heart rate (HR) divided by minimum systolic blood pressure (BP). It has been shown in trauma and critical care literature to be more accurate than individual vital signs in identifying patients requiring surgical operation, blood transfusions, endotracheal intubations, inotropic support, and has been associated with increased hospital length of stay (LOS), ICU admissions, and higher rates of in-hospital mortality. The proposed study investigates the potential application of age-adjusted shock index (SIPA) as an early predictor of outcomes at initial ED triage for patients diagnosed with intestinal malrotation.



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**Chen Fang**

**Mentor: Dr. Salima Qamruddin**



Assessment of Global Longitudinal Strain and Myocardial Work in Patients with Low-Flow, Low Gradient Aortic Stenosis Undergoing TAVR

This study aims to evaluate the prognostic value of baseline global myocardial work and myocardial work efficiency, in comparison to global longitudinal strain, for predicting one-year survival and at least 10% improvement in ejection fraction among low-flow, low-gradient aortic stenosis patients undergoing transcatheter aortic valve replacement. A secondary aim is to characterize changes in myocardial work and global longitudinal strain during low-dose dobutamine stress echocardiography, particularly in patients who do not achieve ejection fraction improvement but demonstrate favorable survival outcomes.



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**Karmveer Kaur**

**Mentor: Dr. Fawad Khan**

Delays in Diagnostic Neurological Testing for Acute Emergencies  
in Hospitalized Adults

Rapid Response Teams (RRT), operationalized in hospital settings, are proven to reduce hospital mortality. There are critical gaps in the literature specific to neurological emergencies and best practices for executing effective RRT activation. Our study addresses these gaps in the context of RRT activations for neurological emergencies by:

1. **Quantifying delays** in neurological evaluation by consulting neurologists, head imaging, and EEG acquisition, and characterizing contributing factors.
2. **Analyzing clinical deterioration** that occurs as a result of these delays.
3. **Identifying modifiable barriers** to timely neurological assessment and intervention, using data-driven insights from real-world practice.



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## Amanda Lucas

Mentor: Dr. Craig Sable



Intermediate and Long-Term Outcomes After Transcatheter PDA Closure in Premature Infants: A Large Single-Center Experience

Patent ductus arteriosus (PDA) is a common congenital anomaly in which there is persistence of the fetal vascular structure bridging the descending aorta to the main pulmonary artery. PDA has an incidence of 1 in 2000 in term infants, but is significantly more common in premature infants. This single-center study aims to evaluate the safety and efficacy of transcatheter PDA closure in premature infants, and to compare our experience in transcatheter PDA closure between premature and older patients. It will be the largest single-center study of Piccolo device PDA closures in preterm infants and the largest single-center study of PDA closure in infants <700g.



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**Mahan Najhawan**

**Mentor: Dr. Rohith Arcot**



Evaluating the Appropriateness of PSMA PET Scans in Patients with Unfavorable Intermediate Risk Prostate Cancer

In patients with clinically localized NCCN (National Comprehensive Cancer Network) defined unfavorable intermediate risk prostate cancer, the current NCCN guidelines recommend soft tissue and bone imaging to assess for regional and distant metastatic disease. Until now conventional imaging such as CT and NM bone scan have been standard of care, but recently replaced with PSMA (Prostate Specific Membrane Antigen) PET imaging due to improved sensitivity and specificity in detecting metastatic disease. There is a paucity of literature outlining positivity rates of PSMA PET scans in patients with unfavorable intermediate risk prostate cancer and clinical benefit of using this imaging modality in this group of patients when compared with those with NCCN high risk and very high-risk disease. Our goal is to identify the utility of this scan in those patients with relatively low risk of metastatic disease at presentation.



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## Venkata Parachuri

Mentor: Dr. James Milburn and Dr. Srinivasan Vijayakumar

Evaluating Preoperative Mechanical and Geometric Imaging Parameters as Predictors of Surgical Outcomes in Asymptomatic Carotid Stenosis following Carotid Endarterectomies

Landmark trials such as the Asymptomatic Carotid Surgery Trial (ACST) demonstrated that carotid endarterectomy (CEA) reduces ipsilateral stroke risk compared with medical management in asymptomatic patients with high-grade stenosis. For decades, luminal stenosis has remained the primary imaging parameter guiding decisions on surgical intervention. However, there is growing recognition that additional, modern imaging metrics could improve risk stratification and more accurately identify patients with asymptomatic carotid stenosis who are most likely to benefit from surgery. The goal of this study is to evaluate the predictive value of preoperative mechanical and geometric imaging parameters for determining surgical outcomes in patients with asymptomatic carotid stenosis undergoing carotid endarterectomy.



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**Rachel Thomason**

**Mentor: Dr William Kethman**

Implementation and Outcome Evaluation of a Prehabilitation Program in a Multispecialty Surgical Setting

Ochsner recently implemented a frailty-driven prehabilitation program in which an elevated Risk Analysis Index (RAI) score triggers a Best Practice Alert (BPA) in Epic, prompting the option for referral to targeted prehabilitation. This project will analyze the program's first-year outcomes to impact on surgical morbidity, and alignment with best practices, with the goal of identifying opportunities for improvement, informing program refinement, and establishing a framework for ongoing performance monitoring to enhance patient outcomes across our community. Additional analyses may explore social vulnerability indices to evaluate potential disparities in access to prehabilitation services, further guiding strategies to improve equity in perioperative care.

