

Division of Pediatric Gastroenterology and Hepatology

SSM Health Cardinal Glennon Children's Hospital and Saint Louis University School of Medicine, St. Louis, MO



Physicians in the Pediatric Gastroenterology and Hepatology Division at SSM Health Cardinal Glennon Children's Hospital are internationally and nationally acclaimed for their excellent outcomes and research in areas such as childhood nutrition problems, motility and other neuro-gastroenterology disorders, intestinal failure, inflammatory bowel disease, and liver transplantation. The team also commands extensive expertise in the treatment of chronic liver diseases such as alpha-1 antitrypsin (AAT) deficiency, hepatitis, biliary atresia and nonalcoholic fatty liver disease as well as rare and orphan liver diseases.

Center of Excellence in Liver Diseases

Faculty are involved in a wide range of basic, translational, and clinical research as part of the Saint Louis University Liver Center, a center of excellence at Saint Louis University School of Medicine. The center, which brings together pediatric and adult gastroenterology specialists from multiple departments and divisions, is known globally for its biomedical research and patient care and is the site of more than 50 NIH- and industry-sponsored clinical trials related to diseases such as fatty liver disease (NASH), hepatitis hepatorenal syndrome, and biliary atresia. Of particular note is the hepatitis research and patient care program, which is one of the largest such programs in the world. SSM Health Cardinal Glennon also is one of only a few pediatric hospitals within the NIH-funded Hepatitis B Research Network. Among the latest published research from the division is investigation into the use of novel diagnostic imaging techniques. The team recently published that Shear-wave elastography was found to accurately correlate with liver fibrosis scores in young patients with liver disease.

Internationally Recognized Nutrition Services

Gastroenterologists and hepatologists here have published groundbreaking research in the area of pediatric nutrition disorders. The hospital is home to one of the few NIH-funded centers for childhood nutrition care. It also has achieved outstanding outcomes that exceed national metrics in the Glennon Intestinal Rehabilitation and Feeding (GIRAF) Program, the region's first and only multidisciplinary rehabilitation program for children diagnosed with complex intestinal failure or disorders. Faculty were the first in the United States to begin a clinical trial focused on the development of new therapeutics to prevent long-term complications of total parenteral nutrition (TPN) therapy. One of the latest NIH-funded research efforts in this area is focused on the role of gut microbiota and the use of fecal transplant in patients with TPN-associated injury.

For physician consultations, call the SSM Health Cardinal Glennon Access Center at **1-888-229-2424**.



Neuro-Gastroenterology and Pediatric Motility Center

SSM Health Cardinal Glennon is one of only a few hospitals in the country to have a comprehensive and dedicated center for the treatment of pediatric motility disorders. The center offers advanced diagnostic testing and treatment for conditions such as severe constipation, fecal incontinence, achalasia, anorectal abnormalities, dysphagia, gastroparesis, and other GI tract dysfunctions. Physicians also are involved in several translational and clinical research efforts. Among the most recent is a collaborative research effort with the Saint Louis University Cystic Fibrosis Center that will use advanced motility technology such as manometry and SmartPill to identify factors involved in delayed gastrointestinal transit in patients diagnosed with cystic fibrosis.

Childhood Obesity

The hospital is one of only a few hospitals in the country that offer a comprehensive weight management program that includes pediatric bariatric surgery. In addition, research on factors driving over-eating is under way.

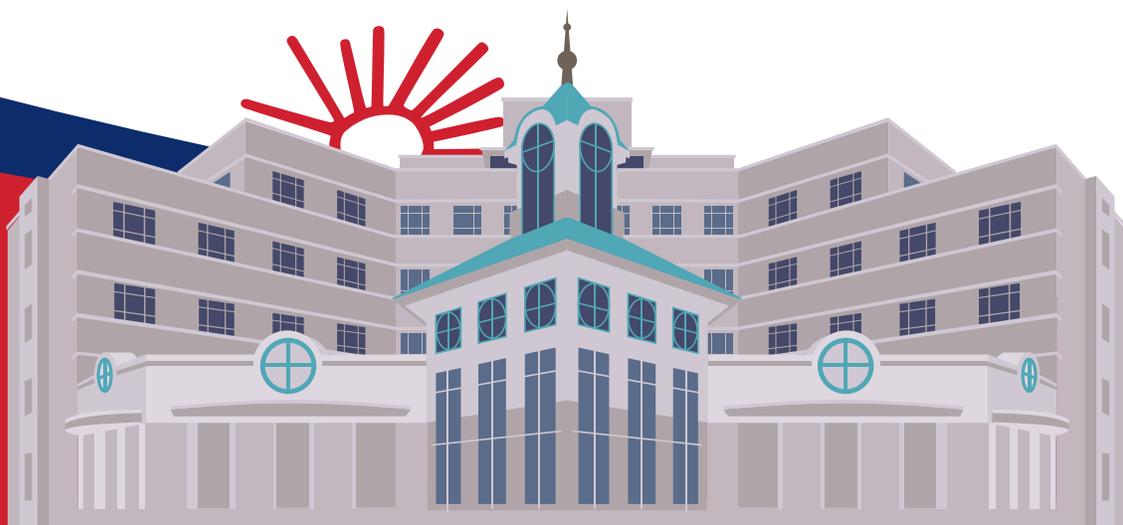
Center for Crohn's and Colitis at SSM Health Cardinal Glennon and Saint Louis University School of Medicine

Excellent outcomes that exceed national benchmarks are the hallmark of this program, which sees young patients diagnosed with diseases such as Crohn's disease and ulcerative colitis. Clinical remission rates are above the national average at 85%, and more than 90% of patients are successfully able to receive adequate nutrition following treatment. A multidisciplinary team that includes a physician, nurse, psychologists, dietitian, research coordinator and a social worker offers a variety of treatment options and support to patients with inflammatory bowel disease. Research within the Center is conducted as part of the Division's participation in the ImproveCareNow Collaborative, with participation

in nationwide clinical trials, including the COMBINE study, a randomized placebo-controlled trial evaluation the use of combination therapy of Methotrexate with anti-TNF medicines. As part of recent research, pediatric gastroenterologists at SSM Health Cardinal Glennon have found that non-contrast MR enterography is accurate in detecting active bowel inflammation instead of using gadolinium-based contrast agents in patients with suspected inflammatory bowel disease.

Liver Transplant

With a longstanding track record of excellent outcomes and innovative clinical research, the pediatric liver transplant team at SSM Health Cardinal Glennon Children's Hospital offers a full range of services before, during, and after a transplant. We perform isolated and multi-organ transplants, including whole and split livers. The program is a UNOS-certified center that meets CMS requirements and includes a team of pediatric hepatologists, transplant surgeons, dedicated nurses and nurse coordinators, dedicated transplant dietitians, financial coordinators and psychologists. The program consistently exceeds national benchmarks and is one of only 42 centers worldwide participating in the international Studies of Pediatric Liver Transplantation (SPLIT) collaborative research group. The team currently is involved in a potentially groundbreaking research effort investigating Cytokeratin 18 (CK-18) as a biomarker for rejection after liver transplant. The team also is pioneering strategies to mitigate ischemia-reperfusion injury in livers post transplantation and has developed a multi-collaborative team and a device platform for therapeutic testing and novel drug discovery.



Notable Publications

Farmakis SG, Buchanan PM, Guzman MA, Hardy AK, Jain AK, Teckman JH. Shear wave elastography correlates with liver fibrosis scores in pediatric patients with liver disease. *Pediatric Radiology* 49: 1742.

Kim SJ, Ratchford T, Buchanan PM, Patel D, Tao TY, Brown J, Teckman JH, Brown J, Farmakis SG. Diagnostic accuracy of non-contrast MR enterography in detecting active bowel inflammation in pediatric patients with diagnosed or suspected inflammatory bowel disease to determine necessity of gadolinium-based contrast agents. *Pediatric Radiology* 49(6):759-769.

Villalona G, Price A, Blomenkamp KS, Manithody C, Ratchford T, Saxena S, Westrich M, Kakarla V, Pochampally S, Phillips W, Heafner N, Korremla N, Greenspon J, Guzman M, Jain AK. No gut no gain! Enteral bile acid treatment preserves gut growth but is not protective for parenteral nutrition associated liver injury in a novel extensive short bowel animal model. *Premier Research Paper. JPEN J Parenter Enteral Nutr.* 2018 Nov;42(8):1238-1251

Di Bisceglie, A. M., & Teckman, J. (2019). Liver Disease Due to Alpha-1 Antitrypsin Deficiency: Are We Surprised That It Is More Complex Than We Thought? *Hepatology* 70(1), 5-7.

Faculty Honors

Jeffrey Teckman, MD.

2019 Keynote speaker, "Molecular Therapies for Liver Disease in Alpha-1 Antitrypsin Deficiency," Telethon Institute of Genetics and Medicine (TIGEM) International Symposium, Italy.

2019 Mentoring Leadership Catalyst Award, Crohn's and Colitis Foundation-Missouri Chapter.

2019 Inaugural recipient of the Drs. Patricia & James Monteleone Endowed Chair in Pediatric Gastroenterology, Saint Louis University School of Medicine/SSM Health Cardinal Glennon Children's Hospital.

Ajay Jain, MD, DNB.

2020 Stanley J. Dudrick Award, National Award in Nutrition

2020 Course Director, "Novel Nutritional Status Biomarkers," Tampa, Florida

2019 Naomi Judd Award in Hepatology

2019 Course Director, "Pediatric Liver Disease," American Liver Foundation, Education Series

2018 National Nutrition Award, North American Society for Pediatric Gastroenterology, Hepatology & Nutrition. 2018 Harry M. Vars National Nutrition Award, American Society for Parenteral and Enteral Nutrition.

Faculty within the Division of Gastroenterology and Hepatology are affiliated with Saint Louis University School of Medicine and members of its SLUCare Physician Group. SSM Health Cardinal Glennon Children's Hospital is the only free-standing, not-for-profit Catholic pediatric hospital in the United States. It is a member of SSM Health, one of the largest Catholic health care systems in the country. For more information about the hospital, visit cardinalglennon.com.

SLUCare Division of **Pediatric Gastroenterology** and **Hepatology Faculty**



Jeffrey Teckman, MD

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***Fernando Medina Carbonell, MD**

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**Starting July 2020*

