A message from our director

In the Midwest and nationally, Indiana University Health Gastroenterology and Hepatology is making an impact in the lives of patients living with gastrointestinal and liver diseases. As one of the largest gastroenterology and hepatology programs in the nation, our clinical specialty areas continue to grow in volume with several recognized nationally for expertise, innovation and patient outcomes. I’m pleased to share some highlights and distinguishing features of our comprehensive program.

- We remain a regional and national destination for the expert treatment and care of liver and pancreatobiliary diseases, neurogastroenterology and motility disorders, inflammatory bowel disease (IBD), fecal microbiota transplant, colorectal cancer screening, and advanced and innovative endoscopy.
- The recipient of federal grant funding in key clinical research areas, our hepatology program is one of the busiest in the country and the site of dozens of investigator-initiated and industry trials.
- Our adult liver transplant program set a record in 2023 with 189 lifesaving liver transplants. With a robust living donor liver transplant program, we expect our transplant program volumes to continue this upward trajectory.
- Led by experienced physicians—faculty at Indiana University School of Medicine—our GI and hepatology teams served more than 100,000 patients in 2023. This represents a 30% increase in patient volume compared to 2019. Additionally, our outpatient endoscopy volume has grown each year.
- In downtown Indianapolis, our physicians and care teams continue to serve veterans at the VA medical center and underserved populations at our county hospital. We are also able to provide care closer to home for patients through outreach locations in Central Indiana and other parts of the state.
- Our research portfolios are growing rapidly, and we continue to attract funding from major funding sources.
- Fulfilling our mission of excellence in teaching, our training programs, including our accredited clinical GI fellowship program, are attracting postdoctoral trainees from around the globe.

In this annual report, you will find more details about our specialty programs, as well as our efforts in leading-edge research and exceptional graduate medical education. We are proud of our most recent accomplishments, as well as the legacy of excellence for which we’ve become known nationwide. On behalf of our division, I thank you for your interest in our program. If you have any questions, please feel to reach out to me at moalhadd@iu.edu.

Sincerely,

Mohammad Al-Haddad, MD, MSc, FASGE, FACP, AGAF
Director, IU Health Gastroenterology and Hepatology
Naga P. Chalasani Chair of Gastroenterology and Hepatology, and Professor of Medicine, IU School of Medicine
### About our program

#### Procedure volume

<table>
<thead>
<tr>
<th>Procedure type</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esophagogastroduodenoscopy (EGD)</td>
<td>15,281</td>
<td>14,411</td>
<td>14,860</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>15,715</td>
<td>17,470</td>
<td>17,971</td>
</tr>
<tr>
<td>Endoscopic retrograde cholangiopancreatography (ERCP)</td>
<td>3,610</td>
<td>3,896</td>
<td>3,144</td>
</tr>
<tr>
<td>Endoscopic ultrasound (EUS)</td>
<td>2,536</td>
<td>2,473</td>
<td>2,339</td>
</tr>
<tr>
<td>Gastroenterology motility testing</td>
<td>1,077</td>
<td>1,957</td>
<td>846</td>
</tr>
<tr>
<td>Video capsule endoscopy</td>
<td>312</td>
<td>291</td>
<td>124</td>
</tr>
<tr>
<td>Double-balloon enteroscopy (Small bowel enteroscopy)</td>
<td>41</td>
<td>62</td>
<td>129</td>
</tr>
<tr>
<td>Total*</td>
<td>37,237</td>
<td>37,449</td>
<td>37,122</td>
</tr>
</tbody>
</table>

* Procedure volume is for IU Health and IU Health Physicians practices in downtown Indianapolis and the city’s northside. Volume does not include procedures performed at Eskenazi Health, the Richard L. Roudebush VA Medical Center and statewide outreach sites.

#### Adult liver transplants in 2023: 189

IU Health Gastroenterology and Hepatology set a record in 2023 for the total number of adults receiving lifesaving liver transplants.

#### Outpatient volume

<table>
<thead>
<tr>
<th>Patient visits</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>New patients (in person)</td>
<td>9,794</td>
<td>10,294</td>
</tr>
<tr>
<td>New patients (virtual)</td>
<td>2,048</td>
<td>1,683</td>
</tr>
<tr>
<td>Returning patients (in person)</td>
<td>26,157</td>
<td>28,804</td>
</tr>
<tr>
<td>Returning patients (virtual)</td>
<td>9,274</td>
<td>9,849</td>
</tr>
<tr>
<td>RETURNING PATIENTS TOTAL</td>
<td>35,431</td>
<td>38,653</td>
</tr>
</tbody>
</table>
About our program

Research funding

Total National Institutes of Health (NIH) award dollars

- Fiscal year 2022
  - TOTAL: $7,560,394
    - INDIRECT: $1,841,420
- Fiscal year 2023
  - TOTAL: $9,177,920
    - INDIRECT: $2,343,130

Total award dollars

- Fiscal year 2022
  - TOTAL: $13,043,030
    - INDIRECT: $3,271,509
- Fiscal year 2023
  - TOTAL: $15,637,694
    - INDIRECT: $4,050,533

Gastroenterology and Hepatology team members

- Full-time faculty: 70
- Affiliate faculty: 5
- Postdoctoral students: 1
- Fellows: 19
- Total: 95

Our physicians practice in 12 locations.

- **Central Indiana**
  - IU Health Methodist Hospital
  - IU Health North Hospital
  - IU Health Saxony Hospital
  - IU Health at Spring Mill Medical Building
  - IU Health University Hospital
  - IU Health Physicians Zionsville
  - Eskenazi Health
  - Richard L. Roudebush VA Medical Center
- **North Central Indiana**
  - IU Health Tipton Hospital
  - Witham Health Services*
- **South Central Indiana**
  - IU Health Morgan
- **South East Indiana**
  - Margaret Mary Health


AFFILIATED WITH

INDIANA UNIVERSITY
SCHOOL OF MEDICINE

- Our physicians are faculty members in the Division of Gastroenterology/Hepatology—one of 10 internal medicine specialty divisions at IU School of Medicine.
- The unique partnership with one of the nation’s leading medical schools gives patients access to innovative treatments and leading-edge therapies.
Meet our physicians and faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohammad Al-Haddad, MD, MSc, FASGE, FACC, AGAF</td>
<td>Naga P. Chalasani Chair of Gastroenterology and Hepatology, and Professor of Medicine, IU School of Medicine; Director, IU Health Gastroenterology and Hepatology</td>
</tr>
<tr>
<td>Khaled Abdeljawad, MD</td>
<td>Assistant Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Awais Ahmed, MD</td>
<td>Assistant Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Zhibo An, MD</td>
<td>Assistant Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Umer Bhatti, MD</td>
<td>Assistant Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Matthew Bohm, DO</td>
<td>Associate Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Naga Chalasani, MD</td>
<td>David W. Crabb Professor of Gastroenterology and Hepatology, IU School of Medicine</td>
</tr>
<tr>
<td>Lixian Chen, PhD</td>
<td>Assistant Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>David Crabb, MD</td>
<td>Professor Emeritus of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Archita Desai, MD</td>
<td>Assistant Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>John DeWitt, MD</td>
<td>Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Christen Dilly, MD, MEHP</td>
<td>Associate Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Jeffrey Easler, MD</td>
<td>Associate Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Hala Fatima, MD</td>
<td>Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Nabil Fayad, MD</td>
<td>Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Monika Fischer, MD</td>
<td>Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Evan Fogel, MD</td>
<td>Stuart Sherman Professor of Gastroenterology, and Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Heather Francis, PhD</td>
<td>Professor of Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Samer Gawrieh, MD</td>
<td>Professor of Clinical Medicine, IU School of Medicine</td>
</tr>
<tr>
<td>Marwan Ghabril, MD</td>
<td>Professor of Medicine, IU School of Medicine</td>
</tr>
</tbody>
</table>
Meet our physicians and faculty

Ashley Gilmore, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Toyia James-Stevenson, MD, MBA
Chief Physician Executive, Indianapolis Suburban Region

Konstantina Kyritsi, PhD
Assistant Research Professor, IU School of Medicine

Mark Gromski, MD
Assistant Professor of Medicine, IU School of Medicine

Sean Jones, PhD
Assistant Professor of Clinical Medicine, IU School of Medicine

Marco Lacerda, MD
Associate Professor of Clinical Medicine, IU School of Medicine

John Guardiola, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Charles Kahi, MD
Professor of Medicine, IU School of Medicine

Craig Lammert, MD
Associate Professor of Medicine, IU School of Medicine

John Holden, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Lindsey Kennedy, PhD
Assistant Research Professor, IU School of Medicine

Tiebing Liang, PhD
Associate Research Professor, IU School of Medicine

Rachel Holmes, PhD
Assistant Professor of Clinical Medicine, IU School of Medicine

William Kessler, MD
Associate Professor of Clinical Medicine, IU School of Medicine

Suthat Liangpunsakul, MD, MPH
Professor of Medicine, IU School of Medicine

Nazmul Huda, PhD, MSC
Assistant Research Professor, IU School of Medicine

Hak Nam Kim, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Jing Ma, PhD, MSC, BMED
Assistant Research Professor, IU School of Medicine

Thomas Imperiale, MD
Lawrence Lumeng Professor of Gastroenterology and Hepatology, and Distinguished Professor, IU School of Medicine

Satya Kurada, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Jessica Maiers, PhD
Assistant Professor of Medicine, IU School of Medicine
Meet our physicians and faculty

Jennifer Maratt, MD
Assistant Professor of Medicine, IU School of Medicine

Eric Orman, MD
Associate Professor of Medicine, IU School of Medicine

Akira Saito, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Smitha Marri, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Anahli Patel, PsyD, HSPP
Assistant Professor of Clinical Medicine, IU School of Medicine

Niharika Samala, MD
Assistant Professor of Medicine, IU School of Medicine

Lee McHenry, MD
Professor of Medicine, IU School of Medicine

Douglas Rex, MD
Distinguished Professor Emeritus, IU School of Medicine

Keisaku Sato, PhD, MSC, BSC
Assistant Research Professor, IU School of Medicine

Anne Mary Montero, PhD
Assistant Professor of Clinical Medicine, IU School of Medicine

Chris Robinson, PhD
Assistant Professor of Medicine, IU School of Medicine

Ashina Singh, MD
Assistant Professor of Medicine, IU School of Medicine

Lauren Nephew, MD, MSCE
Assistant Professor of Medicine, IU School of Medicine

Nicholas Rogers, MD
Associate Professor of Clinical Medicine, IU School of Medicine

Robert Siwiec, MD
Associate Professor of Clinical Medicine, IU School of Medicine; Clinical Director, Division of Gastroenterology and Hepatology, IU Health

Thomas Nowak, MD
Professor of Clinical Medicine, IU School of Medicine

Nasir Saleem, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Margaret Sozio, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Ite Obaitan, MD
Assistant Professor of Clinical Medicine, IU School of Medicine

Sashidhar Sagi, MD
Associate Professor of Clinical Medicine, IU School of Medicine

John Tang, DO
Assistant Professor of Clinical Medicine, IU School of Medicine
Meet our physicians and faculty

**Eduardo Vilar-Gomez, MD, PhD**
Assistant Research Professor, IU School of Medicine

**Raj Vuppalanchi, MD**
Professor of Medicine, IU School of Medicine

**Megan Walker, MD**
Assistant Professor of Clinical Medicine, IU School of Medicine

**James Watkins, MD**
Associate Professor of Medicine, IU School of Medicine

**Joel Wittles, MD**
Associate Professor of Medicine, IU School of Medicine

**John Wo, MD**
Douglas Rex Professor of Gastroenterology and Hepatology, IU School of Medicine

**Zhihong (Joe) Yang, PhD**
Assistant Research Professor, IU School of Medicine

**Tianhao (Vincent) Zhou, PhD**
Assistant Research Professor, IU School of Medicine

**Advanced practice providers**

- **Lindsay Yoder, PA-C**
  Clinical manager, Advanced practice providers
- **Sarah Stainko, NP**
  Pancreatobiliary
- **Brianna Bonne, PA-C**
  Shania Mayer, PA-C
- **Jessica Samson, PA-C**
  General gastroenterology
- **Sarah Stainko, NP**
  Pancreatobiliary
- **Brianna Bonne, PA-C**
  Shania Mayer, PA-C
- **Jessica Samson, PA-C**
  General gastroenterology
- **Benjamin Horne, PA-C**
  Nefeli Makris, NP
- **Leigh Preston, PA-C**
  Inpatient gastroenterology
- **Chelsea Sexton, NP**
  General hepatology
- **Nadia Blessing, PA-C**
  Loren Cihlar, PA-C
- **Laura Corbito, PA-C**
  Michelle Haugh, PA-C
- **Garret Minardo, PA-C**
  Haleigh Rodgers, PA-C
- **Lindsay Yoder, PA-C**
  Transplant hepatology
- **Dawn Korson, DNP**
  Inflammatory bowel disease
- **Laura Worley, PA-C**
  Medical weight loss
- **Benjamin Horne, DMS, PA-C**
  Motility
- **Rachel Anderson, NP**
  Victoria Crosby, NP

Physicians and team members of IU Health Gastroenterology and Hepatology
Specialty programs overview

**Endoscopic ultrasound (EUS)**
- One of the busiest EUS units in the nation
- Leading-edge interventional procedures
  - EDGE – EUS-directed transgastric ERCP
  - Rendezvous EUS-ERCP procedures
  - Placement of lumen-opposing stents to drain walled-off pancreatic necrosis and obstructed bile ducts
  - Injection of cyanoacrylate and coil placement into gastric and ectopic varices
  - Ablation of solid pancreatic tumors with radiofrequency waves and ablation of pancreatic cysts with chemotherapeutic agents
- Current research
  - Investigation of EUS for ablation of benign pancreatic tumors
  - NIH-sponsored study investigating the use of chemotherapy for injection and ablation of pancreatic cystic neoplasms
  - Molecular markers for the prognostication of pancreatic cysts

**ERCP**
- Nationally recognized clinical leader in the management of complex pancreatobiliary disease
- Dedicated inpatient pancreatobiliary consultation service; weekly complex pancreatobiliary multidisciplinary conference with surgical and interventional radiology colleagues
- Advanced ERCP techniques
  - Endoscopic papillectomy
  - Post-surgical anatomy ERCP
  - Complex hilar and intrahepatic strictures
  - Endoscopic shock wave lithotripsy for difficult pancreatic stones
  - Single operator cholangioscopy/pancreatoscopy
- Current research
  - Clinical and procedural aspects of pancreatobiliary disease

A leader in infection prevention in ERCP, our experts have authored groundbreaking journal publications in duodenoscope reprocessing and implementation of novel duodenoscope designs that have established best practices in the field.

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IU Health is among the highest volume pancreatobiliary centers in the world. Each year, our team performs more than 3,500 ERCP procedures and more than 2,300 EUS procedures.
Specialty programs overview

Neurogastroenterology and motility disorders

- Extensive clinical and procedural portfolio for patients with neurogastroenterology and GI motility disorders
- One of the nation’s most prominent sites for gastric electrical stimulation to treat gastroparesis
- Peroral endoscopic myotomy of the pylorus for gastroparesis (G-PoEM) and PoEM for achalasia through our GI destination program
- Clinical, translational and device research
- Clinical trials and investigator-initiated translational studies in collaboration with the Center for Implantable Devices in the Weldon School of Bioengineering at Purdue University

Inflammatory bowel disease (IBD)

- Only program of its kind in Indiana
- Continuity of care for more than 4,000 patients living with chronic IBD, including Crohn’s disease, ulcerative colitis, microscopic colitis and celiac disease
- Outpatient and inpatient management expertise and exceptional procedural capabilities (colonoscopy, chromoendoscopy, endoscopic stricture dilation and double balloon enteroscopy)

Through our Fecal Microbiota Program, more than 1,000 patients with recurrent and recalcitrant clostridium difficile infection have achieved cure.

The GI Motility Lab at IU Health University Hospital accommodates our large patient volume and offers the latest in diagnostic testing:

- Esophageal impedance-manometry
- Ambulatory pH monitoring
- Electrogastrogram
- Endoluminal functional lumen imaging probe (EndoFLIP)
- Antroduodenal manometry
- Anorectal manometry-compliance

IBD clinical trials in the Division of Gastroenterology and Hepatology*

* Industry-funded and federally funded

2013
2
trials

2023
28
trials
Specialty programs overview

Medical weight loss

- Largest medical weight loss program in Indiana
- Committed to addressing the increasing obesity burden, as well as preventing and improving obesity-related comorbidities
- Only program in the state to offer comprehensive nonsurgical obesity care, including endoscopic, pharmaceutical and intensive lifestyle modification therapies
- Recently expanded to provide medical and endoscopic weight loss offerings to veterans through the Richard L. Roudebush VA Medical Center in Indianapolis

Psychology

Digestive and liver disorders

- Evidence-based treatment for disorders of gut-brain interaction (DGBI) and associated psychological functioning with robust patient improvement across both physical and psychological domains
- High patient and peer referral satisfaction rates: Greater than 98% for patients and 100% (5.0 on a five-point scale) for physicians and advanced practice providers
- Presentation on a novel interdisciplinary assessment protocol for preoperative evaluation at the 2023 American Surgical Conference; nearly 30 additional presentations and publications on health psychology integration

Transplant

- Pretransplant assessments to optimize psychosocial transplant candidacy
- Assessment of all living kidney and liver donor candidates
- Integrated mental healthcare and substance abuse treatment following transplant
- American Psychological Association training rotations in transplant psychology for residents and postdoctoral clinical health psychology fellows

Responsible for establishing the first full-time clinical GI psychology program in the nation, our two clinical psychologists receive national and international patient referrals for assessment and treatment of conditions related to DGBI. Services include preoperative and postoperative evaluation, transplant candidacy assessment, assessment of capacity, and more.
Specialty programs overview

**Third space and innovative endoscopy**

- One of the busiest programs in the nation with more than 250 third space endoscopy procedures performed annually
- Procedures performed
  - Esophageal POEM
  - Gastric POEM (endoscopic pyloromyotomy)
  - Z-POEM for Zenker’s diverticulum repair
  - Endoscopic submucosal dissection (ESD) for early-stage esophageal, gastric and rectal cancers
  - Variety of endoscopic resections that include freehand and device-assisted full thickness resections and subepithelial tunneling, among other techniques
- Expanding portfolio in innovative endoscopy
  - EUS-guided gall bladder drainage and EUS-guided gastrojejunostomy
  - EUS-guided ablation of cystic and solid tumors of the pancreas
  - ERCP-EUS hybrid procedures for patients with altered upper GI anatomy
  - Endoscopic closure options, including endoscopic suturing and other device-assisted partial and full thickness closures

We are one of the nation’s largest referral programs for achalasia and refractory gastroparesis management. In addition to novel assessment tools, we provide leading-edge therapeutics, including POEM, G-POEM and gastric electric stimulators.

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**Innovative endoscopy volume: 2023**
Specialty programs overview

**Hepatology**

- Only academic hepatology group in Indiana
- Traditional inpatient and outpatient facilities and novel healthcare delivery modes, including:
  - Hepatology urgent care clinic
  - Transitional liver program
  - Liver tumor program
  - Cirrhosis program
  - Fatty liver disease program
  - Rare liver disease program
  - Inpatient telehepatology consult service (inpatient remote e-consults)
  - Transfer avoidance program
  - Hospital-at-home program
- Collaborative care model using a paired hepatologist and hepatology advanced practice provider to improve capacity and access for patients who need specialized hepatology care
- Leading-edge, noninvasive tools to risk stratify patients with liver disease
- Personalized care by leveraging decades of academic excellence integrating patient-oriented clinical research with clinical care

We offer comprehensive care that includes standard of care treatment options, lifestyle measures and access to novel therapeutics through an array of clinical trials funded by the NIH and pharmaceutical industry sponsors.
Specialty programs overview

**Transplant hepatology**

- 189 liver transplants performed in 2023 – the highest annual total in IU Health history
- Consistently among the top 10 largest hepatology transplant programs in the United States; in 2023, IU Health was ranked ninth in the nation
- Home to a successful and thriving living donor liver transplant program projected for significant growth in the coming years

**Liver transplant survival rates**

<table>
<thead>
<tr>
<th></th>
<th>Patient survival – One year</th>
<th></th>
<th>Patient survival – Three years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IU Health</td>
<td>95.95%</td>
<td>n = 325</td>
<td>IU Health</td>
<td>95.03%</td>
</tr>
<tr>
<td>Expected</td>
<td>94.74%</td>
<td></td>
<td>Expected</td>
<td>90.55%</td>
</tr>
<tr>
<td>U.S.</td>
<td>93.95%</td>
<td></td>
<td>U.S.</td>
<td>89.89%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Graft survival – One year</th>
<th></th>
<th>Graft survival – Three years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IU Health</td>
<td>94.56%</td>
<td>n = 334</td>
<td>IU Health</td>
<td>92.68%</td>
</tr>
<tr>
<td>Expected</td>
<td>93.12%</td>
<td></td>
<td>Expected</td>
<td>88.15%</td>
</tr>
<tr>
<td>U.S.</td>
<td>92.02%</td>
<td></td>
<td>U.S.</td>
<td>87.40%</td>
</tr>
</tbody>
</table>

**Commitment to diversity and healthcare equity**

IU Health Gastroenterology and Hepatology is engaged in research studies to determine barriers to transplant for liver cancer among minorities. A team led by Lauren Nephew, MD, MSCE, is currently writing an R21 grant proposal to adapt a toolkit of interventions targeted at community GI providers and patients across Indiana. Designed for providers who treat vulnerable populations, the interventions aim to improve the ability of these providers to connect patients to IU Health for liver transplant.

- **30% of the patients** receiving liver transplants at IU Health receive Medicaid
- **12% of IU Health liver transplant patients** live in counties defined by the U.S. Census Bureau as rural
Research highlights

IU Health key contributor to leading pancreatitis research

IU Health is one of 10 centers in the U.S. conducting groundbreaking pancreatitis research as part of the Consortium for the Study of Chronic Pancreatitis, Diabetes and Pancreatic Cancer (CPDPC). Forty healthcare facilities vied for the opportunity to lead and enroll patients in these studies, which include research related to the interaction between chronic pancreatitis, pancreatogenic (Type 3c) diabetes and pancreatic cancer. Studies in both adults and children focus on:

- Risk factors
- Disease progression
- Early diagnosis
- Clinical features
- Pathogenesis
- Management
- Outcomes

Led by principal investigator Evan Fogel, MD, IU Health and Indiana University’s CPDPC clinical site plays a prominent role in the consortium and is the top enrolling center in several studies, including the CPDPC’s main longitudinal cohort study, PROCEED (PROspective Evaluation of Chronic Pancreatitis for Epidemiologic and Translational Studies). Our team also has received two R01 grants to lead ancillary studies in the consortium—MINIMAP (magnetic resonance imaging as a noninvasive method for the assessment of pancreatic fibrosis) and STTEPP (safety, tolerability and dose limiting toxicity of lacosamide in patients with painful chronic pancreatitis). Several publications have resulted from these studies.

As the CPDPC completes its second five-year funding cycle in 2024, plans are underway to continue the consortium’s research initiatives. Emphasis has shifted to completing enrollment in existing high-priority studies, performing data analyses, publishing manuscripts, and designing and carrying out clinical trials in pancreatitis. In addition, there is consortium-wide discussion about discovery and validation of biomarkers for pancreatitis.

The CPDPC was formed and funded in 2015 by the National Institute of Diabetes and Digestive and Kidney Diseases and the National Cancer Institute. The consortium represents the NIH’s largest investment in pancreatitis research.
Researchers continue legacy in study of alcohol-associated liver disease

- **Suthat Liangpunsakul, MD, MPH**, professor of medicine, is one of the leading experts in basic and translational studies in alcohol-associated liver disease. His laboratory, extensively funded by the NIH and the National Institute on Alcohol Abuse and Alcoholism (NIAAA), is a training ground for promising, next-generation basic science researchers. **Jing Ma, PhD, MSC, BMED**, and **Zhihong (Joe) Yang, PhD**, were recently awarded K99/R00 and R01 grants from the NIAAA.

- **Dr. Liangpunsakul** is also conducting an NIH-funded clinical trial of S-adenosyl-L-methionine (SAMe) in patients with alcohol-related cirrhosis.

- **Samer Gawrieh, MD**, professor of clinical medicine, and **Wanzhu Tu, PhD**, professor of biostatistics and health data science, are co-leaders of the data coordinating center for the Alcoholic Hepatitis Network (AlcHepNet). Funded by the NIAAA, the network conducts important observational studies and leading-edge clinical trials in patients with acute alcohol-related hepatitis.

- **Naga Chalasani, MD**, David W. Crabb Professor of Gastroenterology and Hepatology, is a principal investigator in AlcHepNet. His work is integral to the ongoing alcohol-associated liver disease research conducted by IU Health Gastroenterology and Hepatology and IU School of Medicine.

The renowned alcohol-associated liver disease research program at IU School of Medicine and IU Health is rooted in the foundational research conducted by our division’s founding members and nationally recognized leaders in the field, David Crabb, MD, professor emeritus of medicine, and the late Lawrence Lumeng, MD.

Cirrhosis research aims to improve quality of life

With the only liver transplant and hepatology program in Indiana, IU Health Gastroenterology and Hepatology serves nearly every patient in the state diagnosed with cirrhosis. Over the past decade, our clinical and translational research efforts related to cirrhosis have risen dramatically.

- **Eric Orman, MD**, associate professor of medicine, conducts novel studies designed to reduce the burden of high readmission rates associated with cirrhosis and to integrate palliative care for those with advanced cirrhosis.

- **Archita Desai, MD**, assistant professor of medicine, investigates patient-reported outcomes and health-related quality of life in patients with cirrhosis. Her trailblazing work includes incorporating “hospital at home” for patients with cirrhosis and “emergency room hepatology.”

- **Lauren Nephew, MD, MSCE**, assistant professor of medicine, leads impactful work to better understand the barriers for timely liver transplantation and liver cancer treatment.

- Our team is initiating transformational models of care via digital health to serve a large and growing number of patients with cirrhosis throughout Indiana and surrounding states.

Our primary focus is health services and outcomes research to improve the lives of patients with cirrhosis. Cirrhosis research conducted by members of our team is funded by the NIH.
Research highlights

**Novel studies aim to find new treatments for nonalcoholic steatohepatitis (NASH)**

IU School of Medicine and IU Health are founding members of the NASH Clinical Research Network funded by the National Institute of Diabetes and Digestive and Kidney Diseases.

- **Naga Chalasani, MD**, was the primary author of the multisociety practice guideline on the diagnosis and management of nonalcoholic fatty liver disease (NAFLD) published in 2012 and updated in 2018.

- Under the leadership of Dr. Chalasani and **Samer Gawrieh, MD**, IU Health Gastroenterology and Hepatology directs a large HIV NASH Clinical Research Network. Funded by the NIH and an industry partner, this $13 million endeavor is engaged in seminal observational studies and a clinical trial in persons with HIV and NAFLD. Led by Indiana University, the network includes leading academic centers Duke University, Johns Hopkins, the University of California at San Diego and the University of California at San Francisco.

- Dr. Chalasani and his team, in collaboration with investigators from Regeneron Genetics Center and the Lundquist Institute, are conducting genomic and multi-omic investigations in NASH that will likely reveal important gene-environment interactions and novel therapeutic targets.

- Under the leadership of Director of Hepatology and Professor of Medicine **Raj Vuppalanchi, MD**, IU Health Gastroenterology and Hepatology is at the forefront of clinical trials exploring novel compounds for patients with NASH.

**Notable publications**

**Gastroenterology: January 2023**

Prospective, Multi-Institutional, Real-Time Next-Generation Sequencing of Pancreatic Cyst Fluid Reveals Diverse Genomic Alterations That Improve the Clinical Management of Pancreatic Cysts

PMID: 36209796

**Gastroenterology: March 2023**

Identification of Reduced ERAP2 Expression and a Novel HLA Allele as Components of a Risk Score for Susceptibility to Liver Injury Due to Amoxicillin-Clavulanate

PMID: 36496055

**Gastroenterology: July 2023**

Distinct Serum Immune Profiles Define the Spectrum of Acute and Chronic Pancreatitis From the Multicenter Prospective Evaluation of Chronic Pancreatitis for Epidemiologic and Translational Studies (PROCEED) Study

PMID: 37061168

**Gastroenterology: August 2023**

Fibrosis Progression Rate in Biopsy-Proven Nonalcoholic Fatty Liver Disease Among People With Diabetes Versus People Without Diabetes: A Multicenter Study

PMID: 37127100

**Hepatology: April 2023**

CAP and LSM as Determined by VCTE Are Independent Predictors of All-Cause Mortality in the US Adult Population

PMID: 36626638

**Journal of Hepatology: July 2022**

Unexplained Liver Test Elevations after SARS-CoV-2 Vaccination

PMID: 35282897

**Hepatology: August 2023**

Burden of Fatty Liver and Hepatic Fibrosis in Persons With HIV: A Diverse Cross-Sectional US Multicenter Study

PMID: 36805976

**Hepatology: November 2022**

PNPLA3 rs738409 and Risk of Fibrosis in NAFLD: Exploring Mediation Pathways Through Intermediate Histological Features

PMID: 35349726

**Hepatology: December 2023**

PROMIS Profile-29 Is a Valid Instrument With Distinct Advantages Over Legacy Instruments for Measuring Quality of Life in Chronic Liver Disease

PMID: 37222262

**Diabetes Care: January 2023**

Development of a Clinical Prediction Model for Diabetes in Chronic Pancreatitis: The PREDICT3c Study

PMID: 36382801
Commitment to education and physician and faculty development

Our mission

IU Health Gastroenterology and Hepatology aims to provide an excellent educational experience to medical students, residents and fellows in our training programs. We strive to develop and deliver excellent lectures, clinical experiences, advising, assessment and research mentorship for our trainees. For faculty members, we continuously assess and address their needs for skill development and try to maximize the intrinsic and extrinsic rewards of teaching. Through these efforts, we contribute to the mission of the IU School of Medicine Department of Medicine and IU Health in training the workforce that will meet the needs of the people of Indiana.

Fellowship program

Accredited by the Accreditation Council for Graduate Medical Education (ACGME), our fellowship program provides robust clinical training that covers the various aspects of gastrointestinal, pancreatobiliary and liver diseases in inpatient and outpatient settings. With multiple training sites at IU Health, Eskenazi Health and the Richard L. Roudebush VA Medical Center, our graduates are uniquely prepared to care for patients in any clinical or socioeconomic setting.

Other highlights of our program

- Fellows gain endoscopy experience that exceeds most other programs both in quantity and nature of procedures.
- Engaged in multiple research opportunities, our fellows are mentored by experts, present abstracts regularly at the leading national GI meetings and publish in prominent journals.

“We support our fellows throughout their training by prioritizing their personal well-being and customizing training plans for each individual. Our graduates embark on successful careers after fellowship—many are academic leaders in the field, and others are serving diverse patients and communities.”

Nabil Fayad, MD
Fellowship program director

Faculty development

Mini faculty educational development sessions are incorporated as part of regular faculty meetings. Topics include:

- Setting expectations with learners
- Providing feedback and building a supportive learning environment
- Using a servant leadership model to prevent burnout on teaching teams
- Creating an environment of inquiry and providing feedback

Fellowship program by the numbers

- **16 positions approved by the ACGME:** All positions currently filled
- **5 or 6 graduates each year with first-attempt GI board exam pass rate of 98%** for the past decade
- **59%** remained in academia (2022 – 2023 academic year)
- **26%** retained as IU School of Medicine faculty (2022 – 2023 academic year)
Gastroenterology fellows

Mahmoud Ahmed Rahal, MD, RES
PGY 7

Azizullah Beran, MB, BS
PGY 5

Ramzi Hassounah, DO, MS
PGY 5

Andrew Ortega, MD
PGY 4

Gabriella Aitcheson, MD
PGY 6

Wade Billings, MD
PGY 7

Yervant Ichkhanian, MD, RES
PGY 4

Feenalie Patel, MD
PGY 7

Natashay Bailey, MD
PGY 5

Jason Browne, MD
PGY 5

Chelsea Jacobs, DO
PGY 6

Alexander Scherer, MD, PhD
PGY 4

Serge Baroud, MD, RES
PGY 4

Ben Byriel, DO
PGY 6

Jiayi Ma, MD
PGY 6

Hani Shamseddeen, MD
PGY 4

Fellowship program diversity

2023 – 2024 academic year
25% women
25% URiM*

2024 – 2025 academic year
37.5% women
25% URiM*

* Underrepresented in medicine