

Endoscopy Research Fellowship

Curriculum

Center for Digestive Health



Introduction & Background

Built on the foundation of Virginia Mason's internationally renowned Digestive Disease Institute, which was established to bring our accomplished group of digestive disease specialists and investigators together in a highly collaborative environment, the Center for Digestive Health's active, state-of-the-art therapeutic endoscopy service at Virginia Mason Medical Center performs in excess of 1,148 endoscopic retrograde cholangiopancreatography (ERCP) and approximately 953 endoscopic ultrasound (EUS) procedures every year.

Our active therapeutic endoscopy program is internationally renowned and sees over 2,500 patients every year. The Center for Digestive Health sponsors the Endoscopy Research Fellowship in keeping with the Institute's mission to optimize patient care through innovations in research, education, and a multidisciplinary approach to treatment of digestive and liver diseases.

Rajesh Krishnamoorthi, MD, Center for Digestive Health Medical Director, Endoscopy Research Fellowship Program Director, works to ensure a valuable educational experience. Endoscopy research fellows work with research analysts and multidisciplinary providers as well as program faculty.

Program Faculty

Supervision and mentoring will be provided by Rajesh Krishnamoorthi, MD, Fellowship Director, and other faculty (listed below) depending upon specific areas of engagement. These faculty members are part of the Center for Disease Health and include surgeons, gastroenterologists, pathologists, and radiologists with expertise in the treatment and research of digestive disease.

- **Rajesh Krishnamoorthi, MD**, Center for Digestive Health Medical Director, Endoscopy Research Fellowship Director
- **Shayan Irani, MD**, Associate Director, Pancreatic Center of Excellence
- **Scott Helton, MD**, Director, Liver, Pancreas & Biliary Surgical Center of Excellence
- **Russell Dorer, MD, PhD**, GI Pathologist
- **Christopher Gault, MD**, GI Pathologist
- **David Coy, MD**, GI Radiologist

Duration of Fellowship

The duration of training is one year. This duration of time can be modified in special circumstances to two years.

Number of Positions

One.

Salary

The Endoscopy Research Fellow will receive a competitive salary and benefits at the appropriate regionally determined PGY level, depending on level of training. Additionally, the Fellow is entitled to a \$2,000 conference stipend + \$1,000 for statistical coursework fees.

Prerequisites for Training

Trainees for the Endoscopy Research Fellowship must have an MD degree or equivalent, have completed residency, and have an interest in advanced therapeutic endoscopy. Non-native speakers of English must take and submit TOEFL scores that meet minimum requirements. Submission of a goal statement, curriculum vitae, and three written letters of recommendation with phone and email contact information are required. International applicants will need to be US citizens. Applicants with J1 visa or H1-B status are ineligible for the Endoscopy Research Fellowship.

Selection Criteria

Each applicant to the Endoscopy Research Fellowship program will be evaluated on the following criteria:

- Has the applicant submitted each Application Requirement in its entirety? (Y/N)
- How well will the applicant meet program goals? (Likert Scale, 1 – 5)
- How well will the applicant achieve expected products and activities? (Likert Scale, 1 – 5)
- How well did the applicant respond in an interview? (Likert Scale, 1 – 5)
- Overall ranking of the applicant (Likert Scale, 1 – 5)

Program Goal

The goal of the Endoscopy Research Fellowship program is to provide a unique and challenging experience for the fellow to:

1. Perform meaningful, supervised research and engage in scholarly activities. The fellow will not participate in clinical patient care.
2. Examine records from a population of endoscopy patients in the context of a high-volume service, both outpatient and inpatient.
3. Learn a multidisciplinary team approach to medical research. Fellows are expected to shadow and observe the work of major providers in four main areas—gastroenterology, surgery, interventional radiology, and pathology—and serve as valued and important contributors to the team.
4. Study, analyze, present, and publish on multiple aspects of endoscopy at Virginia Mason.

Objectives

By the end of the fellowship year, the fellow will be able to:

Medical Knowledge

- Demonstrate understanding and application of medical knowledge in the assessment of endoscopic clinical data.
- Apply knowledge of medical literature to evaluation of clinical data and profiles of patients treated endoscopically.
- Use medical knowledge and analytical thinking to develop presentations and manuscripts that will contribute significantly to the literature.

Research Skills

- Design and execute scientific research projects.
- Apply knowledge of Human Subjects Research ethics and institutional review board requirements to submission of projects for approval.
- Apply various statistical methods to analysis of clinical data.
- Use data abstraction and analysis skills to report from and analyze data to meet study aims.

Interpersonal Skills, Communication Skills and Professionalism

- Complete assigned tasks, including documentation, reliably and in a timely manner.
- Demonstrate integrity, respect for others, honesty, and compassion.
- Set a tone of respect and collegiality for individuals and the team.

Expected Activity

1. Design, complete, and submit manuscript to peer-reviewed journal for at least three research projects in endoscopy. If a project cannot be finished before the Fellow graduates, the project will be continued by the incoming Fellow, who then becomes a co-author.
 - a. **Identify a topic/project**—meet with a member of the faculty to identify/confirm potential topic, data needed or available, and knowledge necessary to investigate further.
 - b. **Formulate a hypothesis**—using the knowledge you have gained, formulate a hypothesis about a cause or effect of the phenomenon, or the relationship of the phenomenon to some other phenomenon.
 - c. **Test the hypothesis**—plan and carry out tests of the hypothesis, including gathering and sorting data as needed.
 - d. **Analyze the data**—use proper mathematical analysis to see if the results of the experiment support or refute the hypothesis.
 - e. **Draft a manuscript**—use AMA formatting to draft a publishable academic research article; provide initial and subsequently improved drafts to faculty member to receive input for improvement; identify appropriate peer-reviewed journals for submission.
 - f. **Submit manuscript**—follow publisher guidelines for submitting manuscript, make changes in response to reviewer feedback, and re-submit in a timely manner.
2. Interact daily with supervisor to identify next steps on research plan(s), collaborate on analysis and submission, enhance research methodology, perform statistical review, and build on database creation and analysis skills.
3. Work with DDI business analysts and multidisciplinary providers to determine appropriate inclusion/exclusion criteria for use in building robust databases.
4. Participate actively in grand rounds, regularly scheduled conferences, and Journal Club:

Grand Rounds—Every Friday, 7:30–8:30am, Volney Richmond Auditorium

Weekly education is provided on wide variety of medical topics. Attendees can earn *AMA PRA Category 1 Credit™* for Grand Rounds by completing a registration form and sending it to the CME department.

GI Cancer Conference—Every Tuesday 5–6pm, Rad-Onc Conference Room

Biweekly cancer conference focuses on gastrointestinal cancers. Faculty and fellows from gastroenterology, hepatology, surgery, pathology, interventional radiology, and oncology meet weekly to present, review, and discuss the medical conditions and treatment options of individual patients with gastrointestinal and pancreaticobiliary cancers. Consensus recommendations for further evaluation and treatment for each patient are documented and communicated to patients and treating physicians.

GI Pathology Conference—4th Tuesday of month 7:30–8:30am, Pathology Conference Room

Meet monthly with pathologists, radiologists, and gastroenterologists to review biopsy specimens. Some of biopsies have been performed by the Radiology Department, referral hospitals and/or referral physicians. The number of biopsies reviewed will vary. For any patient who has an autopsy, the results will be discussed during the conference as well. All explants will be reviewed during pathology conference.

GI Radiology Conference—3rd Tuesday of month 7:30–8:30am, Correa B Conference Room

Faculty, gastroenterologists, surgeons, general radiologists, interventional radiologists, and fellows meet monthly to review computed tomography, magnetic resonance, angiograms, and ultrasonography on selected patients to be discussed. Indications, contra-indications, limitations, and complications of all radiologic procedures pertinent to the subspecialty of pancreatic cancer are also discussed.

Journal Club—1st Tuesday of month, 7:30–8:30 am, Buck 5 Radiology Conference Room.

Providers meet weekly to discuss the latest news from literature published for physicians and health care providers.

Conference Schedule

Name	Conference Director	Occurrence	Location
AHPBA Grand Rounds	Helton	1st Wednesday, every month, 2:00pm	Rad/Onc Conference Room, Buck 1
Bariatric Care Conference	Hunter	Last Monday, every month, 7:00 am	Rad/Onc Conference Room Bainbridge Island (CR WIN VIDEO) Federal Way Auditorium-- (CR SO AUDITORIUM)
GI Journal Club	Krishnamoorthi	1 st Tuesday, every month, 7:30am	Buck 5 Radiology Conference Room
GI / Pathology	Dorer	Regularly 4th Tuesday, every month, 7:30am	Pathology Conference Room, Buck 6
GI / Radiology	Coy	3rd Tuesday, every month, 7:30am	Correa B, Central Pavilion 4
GI / M&M	Anand	1st Tuesday, every month, 7:30am	Correa B, Central Pavilion 4
GI Cancer Conference	Rocha (Pancreas-Biliary) B. Lin, Song (Luminal GI)	Every Tuesday, 5:00pm	Rad/Onc Conference Room
Hepatology Didactics	Burman and Helton	Every other Wednesday, 1:00 to 2:00 pm	Hill Library
Liver Conference	Burman and Helton	Every Tuesday, 4:15pm	Rad/Onc Conference Room
Thoracic Cancer Conference	Hubka	Every Wednesday, 4:00pm	Rad/Onc Conference Room, Buck 6
Hepatology/Pathology Conference	Dorer	Every Wednesday, 1:00pm	Pathology Conference Room, Buck 6
Multidisciplinary Team Conference for IBD	TBD	First Thursday, 5pm Followed by City-Wide IBD Journal Club	Buck 327 Conference Room

Program Objectives

In the **first quarter**, the fellow will:

1. Complete CITI GPC/Ethics Training and Statistics course.
2. Attend the Wilske Research Symposium in September.
3. Develop studies and submit IRBs.
4. Complete data collection and present to Fellowship Director.

In the **second quarter**, the fellow will:

1. Develop additional studies and submit IRBs.
2. Present research findings at Center for Disease Health Director's Meeting in December.
3. Submit abstracts to Digestive Disease Week by December.
4. Finalize analysis; write and distribute manuscripts.

In the **third quarter**, the fellow will:

1. Finalize approval of manuscripts.
2. Finalize analysis; write and distribute new manuscripts.
3. Submit 3+ manuscripts for publication.
4. Present at University of Washington Frontiers in GI in March/April.

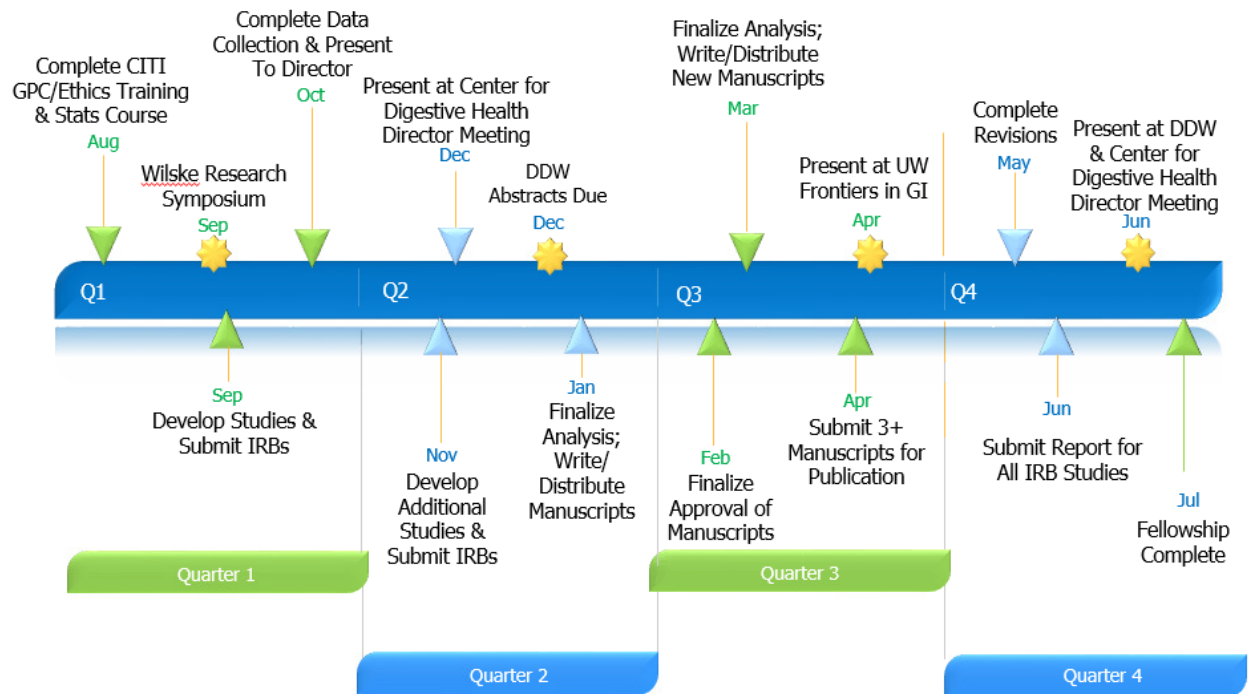
In the **fourth quarter**, the fellow will:

1. Complete all revisions on studies and manuscripts and resubmit.
2. Submit report for all IRB approve studies.
3. Present research findings at Digestive Disease Week and Center for Disease Health Fellow Director's Meeting in May/June.

All research data must be stored on a secured, shared drive. No PHI may be placed on a flash drive or moved from the secured, shared drive in any manner.

If the fellow is unable to complete a manuscript prior to completion of appointment as a Center for Disease Health Fellow, authorship may change. Access to Virginia Mason Franciscan Health's electronic medical record, including for the purpose of research, concludes when the fellowship appointment ends.

Research Fellowship Research Timeline



Expected Products/Outcomes

1. At least three publications on endoscopic topics in peer-reviewed journals per year, co-authored with mentoring providers.
2. Presentation of research at a minimum of one national or international meeting.

Evaluation and Feedback

The fellow will meet with the Program Director regularly and will receive verbal and written evaluations quarterly. The fellow will be expected to provide confidential assessment and feedback about the program and faculty. The Center for Digestive Health faculty, research support staff, Center for Digestive Health business analysts, and other staff who interact with the fellow may also be asked periodically to evaluate the Fellow. Assessment will focus on the goals, objectives, activities, and outcomes above.