Despite the tremendous hardships over the past 18 months due to the Covid pandemic, our GI/Liver research group remains committed to high-quality research endeavors. In this issue, we present our current and recently completed projects led by TPMG Gastroenterologists and Hepatologists. In addition, we are excited to include a new “GI Fellows Corner” to highlight the research activities by our outstanding GI fellows.
Background & Aims: Some guidelines recommend starting colorectal cancer (CRC) screening before age 50 years for African Americans, but there are few data on screening uptake and yield in this population.

Methods: We performed a prospective study of fecal immunochemical test (FIT) screening among African American members of the Kaiser Permanente Northern California health plan. We compared data from African American members screened when they were 45–50 years old (early screening group) in 2018 with data from previously unscreened African American, white, Hispanic, and Asian/Pacific Islander health plan members who were 51–56 years old. Screening outreach was performed with mailed FIT kits. Logistic regression models, adjusted for sex, were used to evaluate differences among groups in screening uptake, colonoscopy follow-up of abnormal test results, and test yield.

Results: Among 10,232 African Americans in the early screening group who were mailed a FIT, screening was completed by 33.1%. Among the 4% with positive test results, 85.3% completed a follow-up colonoscopy: 57.8% had any adenoma, 33.6% had an advanced adenoma (adenoma with advanced histology or polyp ≥10 mm), and 2.6% were diagnosed with CRC. African Americans in the early screening group were modestly more likely to have completed screening than previously unscreened African Americans, whites, and Hispanics 51–56 years old. The groups did not differ significantly in positive results from the FIT (range, 3.8%-4.6%) and more than 74% received a follow-up colonoscopy after a positive test result. The test yields for any adenoma (range, 56.7%-70.7%), advanced adenoma (range, 20.0%-33.6%), and CRC (range, 0%-7.1%) were similar.

Conclusions: Proportions of African Americans who participated in early (aged 45–50 years) FIT screening and test yield were comparable to those of previously unscreened African Americans, whites, Hispanics, and Asian/Pacific Islanders who were 51–56 years old.
Upcoming Events

1. **Digestive Disease Week.**
   Virtual Meeting.

2. **ACG Annual Meeting.**
   Las Vegas, NV

3. **The Liver Meeting (AASLD).**
   Virtual Meeting.

Internal Research Resources and Funding Opportunities

- General Funding Opportunities
- Division of Research
- **Delivery Science and Applied Research**
GI Fellows Corner

Jeffrey Lee, MD, MAS - Academic Director of GI Fellowship

My research focuses on the epidemiology of colorectal cancer and colorectal adenomas; optimizing the colorectal cancer screening and surveillance processes through the use of large community-based healthcare databases and informatics; evaluating and improving invasive and non-invasive diagnostic tests for colorectal cancer screening; and pharmacoepidemiology. My current projects, mostly funded by the National Cancer Institute, are focused on evaluating yield and surveillance colonoscopy; developing and validating a colorectal cancer risk prediction model after initial screening to tailor surveillance; understanding the etiology and drivers of early-onset colorectal cancer; and evaluating surgical trends for the management of benign colorectal polyps. In addition, we were recently funded by TPMG’s Delivery Science Program to evaluate different outreach methods for de-implementing outdated surveillance interval recommendations among patients with low-risk adenomas.

Angela Lam, MD - GI Fellow

I am originally from the Bay Area, went to college at Berkeley followed by medical school at UCSF, and did internal medicine residency in Chicago at Northwestern before starting GI fellowship at KP. In residency I worked on research in colonoscopy quality, investigating root causes of interval colorectal cancer and the effect of an ADR-focused quality improvement program on interval CRC rates over time.

My research interests remain in colonoscopy quality as well as CRC screening and prevention, and I am currently working on projects studying the risk of mechanical tumor seeding during colonoscopy and the effect of COVID-19 on colonoscopy surveillance with Dr. Lee and Dr. Corley. I am also interested in healthcare disparities and will evaluate whether the effect of COVID-19 on colonoscopy surveillance disproportionately affected racial/ethnic minorities. Additionally, my QI project is focused on early CRC screening in African American patients at Kaiser SF. My clinical interests also include eosinophilic esophagitis, after having had the opportunity to work with patients referred to Northwestern’s eosinophilic esophagitis (EoE) clinic in residency – I am currently working with a dietician on establishing dietary therapy pathways for EoE patients at Kaiser SF. I am also interested in endoscopic resection, ERCP and general GI.
Liat Gutin, MD - GI Fellow

I am originally from the east coast, where I completed my undergraduate and medical education at the University of Maryland. In 2016, I moved to San Francisco to begin my residency at the University of California, San Francisco. I fell in love with the bay area and was fortunate to match at Kaiser Permanente, Northern California for my gastroenterology fellowship, as one of the two inaugural fellows of the program.

My research interests include nutrition in various gastrointestinal disorders, and specifically in inflammatory bowel disease. I am currently working on a project that is applying a screening tool for malnutrition to the electronic medical record at Kaiser Permanente in order to identify patients with inflammatory bowel disease who are at risk for malnutrition. We are also seeking to determine risk factors for the development of malnutrition and whether certain adverse outcomes are associated with the presence of malnutrition in this patient population. In addition, I have a clinical interest in disorders of gut-brain interaction and am working on a quality improvement project in collaboration with a dietician at KP to create a video on the low FODMAP diet for patients with irritable bowel syndrome to view independently prior to meeting with one of our dieticians.

TPMG Gastroenterology/Hepatology
Accepted Abstracts for DDW 2021

<table>
<thead>
<tr>
<th>ID#</th>
<th>TPMG GI presenter and co-authors</th>
<th>Title</th>
<th>Session Type</th>
<th>Section</th>
<th>Date/Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3526129</td>
<td>Nizar A. Mukhtar, Weilu Wu, Joanna B. Ready, Suk I. Seo, Brock A. Macdonald, Sreepriya Balasubramanian, Varun Saxena, Julie A. Schmittdiel</td>
<td>PREDICTING INDIVIDUALS WITH HEPATITIS C VIRUS CURE WHOSE RISK OF HEPATOCellular CARCINOMA APPROACHES THE GENERAL POPULATION: IMPLICATIONS FOR WHO CAN SAFELY BE DISENROLLED FROM HEPATOCellular CARCINOMA SURVEILLANCE PROTOCOLS</td>
<td>Research Forum</td>
<td>Hepatobiliary Neoplasia</td>
<td>Fri, May 21 11:15 AM</td>
<td>Chat (DDW Virtual)</td>
</tr>
<tr>
<td>3517554</td>
<td>Lawrence J. Leung, Gene K. Ma, Howard Y. Chang, Jonathan Svahn, Norio Fukami, Ming-Ming Xu, Steven Lam, Amita Risbud, Jeffrey K. Lee, Terry L. Jue</td>
<td>ESTABLISHMENT OF A POEM SERVICE IN A LARGE INTEGRATED HEALTHCARE SYSTEM</td>
<td>Poster Session</td>
<td>Esophagus Poster Session</td>
<td>Fri, May 21 12:15 PM</td>
<td>ePosters (DDW Virtual)</td>
</tr>
<tr>
<td>Session ID</td>
<td>Author(s)</td>
<td>Title</td>
<td>Presentation Type</td>
<td>Location</td>
<td>Date/Time</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------</td>
<td>----------------------------------</td>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td>3524596</td>
<td>Lawrence Jun Leung, Sophie A. Merchant, Christopher D. Jensen, Jeffrey K. Lee, Asim Alam, Douglas A. Corley</td>
<td>WORLD ENDOSCOPY ORGANIZATION MODELED ANALYSIS OF POST-COLONOSCOPY COLORECTAL CANCER ETIOLOGIES IN A LARGE INTEGRATED HEALTHCARE SETTING</td>
<td>Research Forum</td>
<td>Improving Colorectal Cancer Screening and Surveillance</td>
<td>Fri, May 21 2:02 PM  (Chat (DDW Virtual))</td>
<td></td>
</tr>
<tr>
<td>3525668</td>
<td>Fernando Velayos, Jennifer R Dusendang, Julie A Schmittdiel</td>
<td>PREDNISONE, BUT NOT BIOLOGICS OR IMMUNOMODULATORS ARE ASSOCIATED WITH SEVERE COVID-19 OUTCOMES: A COMMUNITY BASED STUDY</td>
<td>Research Forum</td>
<td>Epidemiology and Natural History of IBD</td>
<td>Fri, May 21 5:46 PM  (Chat (DDW Virtual))</td>
<td></td>
</tr>
<tr>
<td>347050</td>
<td>Douglas A. Corley</td>
<td>SMART SURVEILLANCE – HOW OFTEN AND HOW TO BETTER RISK STRATIFY</td>
<td>Clinical Symposium</td>
<td>Barrett’s Esophagus: What’s New From Diagnosis Through Treatment</td>
<td>Sat, May 22 10:38 AM  (Live Q&amp;A (DDW Virtual))</td>
<td></td>
</tr>
<tr>
<td>3470512</td>
<td>Joel H. Rubenstein, Rebecca C. Fitzgerald, Douglas A. Corley, Nicholas J. Shaheen</td>
<td>LIVE Q&amp;A</td>
<td>Clinical Symposium</td>
<td>Barrett’s Esophagus: What’s New From Diagnosis Through Treatment</td>
<td>Sat, May 22 11:10 AM  (Live Q&amp;A (DDW Virtual))</td>
<td></td>
</tr>
<tr>
<td>3522295</td>
<td>Theodore R. Levin, Christopher D. Jensen, Amy R. Marks, Wei K. Zhao, Kevin T. Kao, Dan Li, Jeffrey K. Lee, Joanne E. Schottinger, Nirupa R. Ghai, Richard Contreras, Yi-Fen I Chen</td>
<td>IMPACT OF THE COVID-19 PANDEMIC ON A LARGE ORGANIZED COLORECTAL CANCER SCREENING PROGRAM BASED ON FECAL IMMUNOCHEMICAL TESTING AND OPPORTUNISTIC COLONOSCOPY</td>
<td>Poster Session</td>
<td>Racial Disparities in GI Cancer/COVID in GI Cancer</td>
<td>Sat, May 22 12:15 PM  (ePosters (DDW Virtual))</td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Title</td>
<td>Symposium</td>
<td>Date</td>
<td>Time</td>
<td>Chat (DDW Virtual)</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>----------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>3525988</td>
<td>PREDICTING INDIVIDUALS WITH HEPATITIS C VIRUS CURE WHOSE RISK OF CIRRHOSIS, DECOMPENSATED CIRRHOSIS OR MORTALITY APPROACHES THE GENERAL POPULATION: IMPLICATIONS FOR WHO CAN SAFELY BE DISCHARGED FROM SPECIALTY CLINIC</td>
<td>Research Forum</td>
<td>Sat, May 22</td>
<td>2:15 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3470252</td>
<td>GETTING THE MOST OUT OF JOURNALS IN THE SHORTEST PERIOD OF TIME</td>
<td>Clinical Symposium</td>
<td>Sat, May 22</td>
<td>3:54 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3521904</td>
<td>VALIDATION OF TOOLS FOR PREDICTING INCIDENT ADENOCARCINOMA OF THE ESOPHAGUS OR ESOPHAGO Gastric JUNCTION</td>
<td>Research Forum</td>
<td>Sun, May 23</td>
<td>6:28 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3521312</td>
<td>RISK OF METACHRONOUS ADVANCED NEOPLASIA AFTER ADENOMA DETECTION IN PATIENTS AGED 40-49 YEARS COMPARED TO PATIENTS AGED 50-59 YEARS</td>
<td>Research Forum</td>
<td>Sun, May 23</td>
<td>6:28 PM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Active or Recently Completed Funded Research Projects

1. Early follow up after emergency room presentation reduces repeat emergency care in patients with inflammatory bowel disease.
   PI: Ben Hassid. Co-I’s: Fernando Velayos, Julia Wei
   Supported by: Community Benefits Grant

2. Volumetric Laser Endomicroscopy in dysplastic Barrett’s esophagus: Can we see the invisible lesions?
   PI: Ben Hassid. Co-I’s: Samantha Ho, Howard Chang
   Supported by: GME (residency) funding

3. Burden of psychiatric co-morbidity in patients presenting to the Emergency department with inflammatory bowel disease
   PI: Ben Hassid, Shellie Kahane. Co-I’s: Jimmy He
   Supported by: GME (residency) funding

4. Colorectal Cancer Risk in Patients with Diverticulitis: Is Routine Colonoscopy Warranted?
   PI: Tanaaz Baldawala Co-I’s: Dan Li, Christina Lin
   Supported by: Community Benefits Grant

   PI: TR Levin and Aasma Shaukat (UMN) Co-I’s: Jeff Fox, Dan Li, Jeff Lee, Ben Hassid
   Supported by: Freenome, Inc.

6. PICASO study of pandemic related impact on colorectal cancer screening outcomes.
   PI: TR Levin Co-I’s: Kevin Kao, Joanne Schottinger, Dan Li, Jeff Lee, Chris Jensen
   Supported by: Garfield Foundation

7. Non-alcoholic fatty liver disease and prevalence of associated mortality: NAFLD PAM
   PI: TR Levin Co-I: Varun Saxena
   Supported by: Community Benefits Grant

8. PREDICT: Predicting advanced neoplasia on surveillance colonoscopy
   PI: TR Levin, Co-I’s: Jeff Lee, Oleg Sofrygin
   Supported by: TPMG Delivery Science Grants Program, Physician Researcher Program, Delivery Science and Applied Research (DARE)
9. De-implementation of Outdated Colonoscopy Surveillance Interval Recommendations Among Patients with Low-risk Adenomas (DESIRE)
   PI: Jeff Lee Co-I's: TR Levin, Jeff Fox
   Supported by: TPMG Delivery Science Grants Program, Delivery Science and Applied Research (DARE)

10. Risk of Metachronous Advanced Neoplasia After Colonoscopy in Patients Aged 40-49 Years Compared to Patients Aged 50-59 Years
    PI: Gene Ma, Co-I: Dan Li
    Supported by: Community Benefits Grant

11. Incidence of Serrated Polyps in Patients Aged 40-49 Years and Associated Risk for Metachronous Advanced Neoplasia
    PI: Gene Ma. Co-I's: Dan Li and Priyanka Pillai
    Supported by: Community Benefits Grant and GME funding

    PI: Dan Li. Co-I: Lisa Herrinton
    Supported by: Physician Researcher Program, Delivery Science and Applied Research (DARE)

    PI: Dan Li. Co-I’s: Doug Corley, TR Levin, Jeffrey K Lee, Minggui Pan
    Supported by: Community Benefits Grant

14. The Incidence of Gastric Adenocarcinoma after Helicobacter pylori Eradication Therapy in a Large U.S. Population.
    PI: Dan Li. Co-I: Doug Corley.
    Supported by: Community Benefits Grant

15. Effectiveness of screening for colorectal cancer in average risk adults: Colonoscopy vs. FIT (SCOLAR 2)
    PI: Doug Corley
    Supported by: National Cancer Institute

16. Optimizing Colorectal Cancer Screening PREcision and Outcomes in Community-Based Populations (PRECISE)
    Lead PI: Doug Corley Co-I: TR Levin
    Supported by: National Cancer Institute

17. Validation of the MeScore
    PI: Doug Corley
    Supported by: Medial EarlySign Research
18. Cardiovascular Mortality after Azithromycin versus Amoxicillin Prescription: Pilot Feasibility Study  
PI: Jon Zaroff  Co-I: Doug Corley 
Supported by: Pfizer

19. System-Level Capture of Family History Data to Assess Risk of Cancer and Provide Longitudinal Care Coordination  
PI: Doug Corley  
Supported by: Patient Centered Outcomes Research Institute (PCORI)

20. SARS-CoV-2 Serological Antibody Testing for Disease Surveillance and Clinical Use  
PI: Jacek Skarbinski  Co-I: Doug Corley  
Supported by: National Cancer Institute

21. Colorectal cancer screening decisions based on predicted risk: the PREcision ScreENing randomized controlled Trial (PRESENT)  
PI: Jeff Lee  Co-I: Doug Corley  
Supported by: National Cancer Institute

22. Prednisone, but not biologics or immunomodulators are associated with severe COVID-19 outcomes: A community-based study  
PI: Fernando Velayos, Jennifer Dusendang, Julie Schmittdiel

23. Optimization of Hepatocellular Carcinoma Surveillance Protocols  
Co-I’s: Varun Saxena, Julie Schmittdiel  
Supported by: Delivery Science Grants Program, Delivery Science and Applied Research (DARE)

Co-I’s: Krisna Chai, Joanna Ready, Andy Avins  
Supported by: Rapid Analytics Unit, Delivery Science and Applied Research (DARE)

Co-I’s: Fernando Velayos, Julie Schmittdiel  
Supported by: Rapid Analytics Unit, Delivery Science and Applied Research (DARE)

26. Telemedicine (Compared to in-Person Gastroenterology Visits) Had High Patient Satisfaction and Comparable Physician Decision-Making  
Co-I’s: Craig Munroe, Doug Corley  
Supported by: Rapid Analytics Unit, Delivery Science and Applied Research (DARE)
27. Predicting Serious Colonic Growths to Risk Stratify People Coming Due for Surveillance Colonoscopy
   PI: TR Levin, Co-I: Jeff Lee
   Supported by: Physician Researcher Program, Delivery Science and Applied Research (DARE)

28. Improving health outcomes and reducing healthcare costs in individuals with Helicobacter pylori infection, in a large, community-based population
   PI: Dan Li, Co-I: Doug Corley
   Supported by: Physician Researcher Program, Delivery Science and Applied Research (DARE)

29. Benefits of Hepatitis C Cure
   PI: Varun Saxena, Co-I: Nizar Mukhtar, Sreepriya Balasubramanian
   Supported by: Rapid Analytics Unit, Delivery Science and Applied Research (DARE)

30. Hepatocellular Carcinoma Biomarker Study with Glycotest®
    PI: Varun Saxena, Co-I: Nizar Mukhtar, Sreepriya Balasubramanian
    Supported by: Glycotest

31. Retreatment of Hepatitis C Infection in Patients who Previously Failed Sofosbuvir/Velpatasvir/Voxilepravir
    PI: Varun Saxena
    Collaboration with KPSC and UCSF

32. Risk of Hepatocellular Carcinoma in Patients with Isolated Anti-Hepatitis B Core Antibody Positivity: Implications for Surveillance
    PI: Jamila Champsi, Co-I’s: Varun Saxena, Joanna Ready
    Supported by: Community Benefits Grant

33. Evaluation of hepatocellular carcinoma management practices and patient survival within the Kaiser Permanente Northern California health care system to identify disparities in disease severity and outcomes based on sex, race/ethnicity, socioeconomic status, and geographic location
    PI: Nizar Mukhtar, Co-I: Varun Saxena

34. Sarcopenia and Frailty Among Liver Transplant Recipients
    PI: Sreepriya Balasubramanian, Co-I: Joanna Ready

35. Reproductive Health Following Liver Transplant
    PI: Sreepriya Balasubramanian
    Collaboration with UCSF

36. International Travel for Liver and/or Kidney Transplantation
Pl: Joanna Ready, Co-I: Varun Saxena
Collaboration with UCSF

37. Identifying the Determinants and Incidence of Colorectal Neoplasia after a Negative Colonoscopy in Patients with Inflammatory Bowel Disease
Pl: Fernando Velayos Co-I: Doug Corley
Supported by: Community Benefits Grants

38. Prior immunosuppressive therapy and severe illness among patients diagnosed with SARS-CoV-2: a community-based study
Pl: Fernando Velayos Co-I’s: Julie Schmittdiel, Jennifer Dusendang
Supported by: Delivery Science and Applied Research (DARE)

39. Contemporary Probability of Occult Colorectal Cancer in Patients with Colitis-Related Dysplasia undergoing Colectomy
Pl: Fernando Velayos Co-I: Eshan Boparai
Supported by: KPNC Fellowship Funds

40. A phase III, randomised, double blind, parallel group, placebo controlled, multicentre study to assess efficacy and safety of adult allogeneic expanded adipose-derived stem cells (eASCs) for the treatment of complex perianal fistulising Crohn's disease over a period of 24 weeks and a follow-up period up to 52 weeks.
Site Pl: Fernando Velayos
Supported by: Takeda Pharmaceuticals

Publications or other Scholarly Work
Co-authored by KPNC Gastroenterologists and Hepatologists (2020 – April, 2021)


44. Murthy SK, Feuerstein JD, Nguyen GC, Velayos FS. AGA Clinical Practice Update on Endoscopic Surveillance and Management of Colorectal Dysplasia in Inflammatory Bowel Disease. Manuscript submitted, under review.


51. Rubenstein JH, Raghunathan T, Doan C, Schneider J, Zhao W, Metko V, Noz K, Khodadost M, Corley DA. Validation of Tools for Predicting Incident Adenocarcinoma


