Conference Digest
December 2015

Practical Gastroenterology is excited to bring you this special supplement featuring abstract highlights and author insights from the American College of Gastroenterology’s 2015 Annual Scientific Meeting. The abstracts highlights and author insights below first appeared on the ACG Blog and were selected by the ACG Educational Affairs and PR Committees as newsworthy.

FEATURED INFLAMMATORY BOWEL DISEASE ABSTRACTS

ORAL 19

A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL OF OZANIMOD, AN ORAL S1P RECEPTOR MODULATOR, IN MODERATE TO SEVERE ULCERATIVE COLITIS: RESULTS OF THE MAINTENANCE PERIOD OF THE TOUCHSTONE STUDY

Author Insight from Stephen B. Hanauer, MD, Division of Gastroenterology, Department of Medicine, Feinberg School of Medicine, Northwestern University

What’s new here and important for clinicians?

Ozanimod is a sphingosine 1-phosphate 1 receptor (S1P1R) modulator. S1P1R is expressed on white blood cells (lymphocytes), including those responsible for the development of disease. S1P1R modulation causes selective and reversible retention, or sequestration, of circulating lymphocytes in peripheral lymphoid tissue. This sequestration is achieved by modulating cell migration patterns (known as “lymphocyte trafficking”), specifically preventing migration of autoreactive lymphocytes to areas of disease inflammation, which is a major contributor to autoimmune disease. S1P1R modulation may also involve the reduction of lymphocyte migration into the gut in patients with inflammatory bowel disease. Ozanimod has also undergone preliminary trials in multiple sclerosis, with promising results. This therapeutic approach diminishes the activity of autoreactive lymphocytes that are the underlying cause of many types of autoimmune disease. Ozanimod is administered orally, once daily.

What do patients need to know?

Other agents that impact on lymphocyte trafficking (e.g. natalizumab, Tysabri® and vedolizumab, and Entyvio®) have been effective in Crohn’s disease and ulcerative colitis. Similar to other lymphocyte trafficking agents, the risk of infections and malignancies appears to be low.

We are reporting on a phase II trial that demonstrated both induction and maintenance effects with one daily, oral ozanimod.
Potential Risks of Immunosuppressant Drugs to the Pregnant Patient

Author Insight from Brindusa Truta, Johns Hopkins University School of Medicine, Department of Medicine

What's new here and important for clinicians?
The treatment of chronic autoimmune disease in pregnancy represents a challenge for many providers. The drugs shown to have therapeutic benefit, such as the biologics and immunosuppressant medications (mainly thiopurines), have potentially negative, long-term effects on babies who undergo intrauterine exposure to these drugs.

We have learned that the most important factor in the pregnancy outcome, at least for inflammatory bowel disease, is the activity of the disease: as long the disease is in remission, a pregnant woman with IBD has a similar risk for preterm birth, intrauterine growth retardation, small for gestation and stillborn baby as a pregnant woman without IBD. Therefore, maintaining remission is the goal of any provider involved in the care of IBD, and this goal justifies the use of more aggressive therapy (biologics, thiopurine) if needed.

Despite the reassurance given by the results of the PIANO study, which focused on 1,000 IBD pregnancies treated with immunosuppressive drugs and showed that use of biologics (anti-tumor necrosis factors) and thiopurines is not associated with an increased risk of poor outcomes in pregnancy, many women discontinue the medications because they are concerned about the long-term effect of the medications on the baby. If the disease relapses and the patient becomes symptomatic, corticosteroids are preferred as a “safe” alternative to conventional therapy.

For this reason, we aimed to investigate the risk associated with the use of thiopurines, biologics and steroids in pregnancy, and we performed a retrospective analysis of 1,134,964 pregnant women registered with the Truven Health Analytics MarketScan database from January 2010-December 2012.

Over 20,000 (21,457) pregnant women were exposed to these medications: 522 were exposed to anti-TNF (infliximab, adalimumab and certolizumab), 317 to thiopurines, 47 to both (anti-TNF and thiopurines) and 20,422 to steroids (orally or intravenously). Six thousand, five hundred eighty-six pregnant women had IBD and 1,391 of these were exposed to immunosuppressive drugs, including steroids.

The use of anti-TNFs or thiopurines was found to be safe and not associated with an increased risk of poor outcomes, e.g. intrauterine growth retardation (IUGR), stillbirth or puerperal infection; however, combination therapy of anti-TNFs and thiopurines was associated with increased risk of preterm births (6.75% vs 19.15%; p=0.001) and risk for severe acute respiratory infections in the first 2 years of life.

All the immunosuppressant drugs were associated with increased risk for severe acute respiratory infection in the first 2 years of life, more significantly in combination therapy (p<0.001).

Importantly, the use of steroids in IBD showed a significant increased risk for preterm birth, IUGR and stillbirth (7.83% vs 13.74%, 2.5 vs 5.13% and 0.71% vs 1.83%; p=0.006, respectively). In the non-IBD population, steroid use was also associated with fetal abnormalities (1.77% vs 2.39%). These side effects were not seen with budesonide, probably because of the lower dosage per treatment and lower blood levels in comparison with prednisone of intravenous steroids.

It is possible that, in fact, the risk associated with steroids does not represent the side effects of the drug but rather a poor control disease during which the steroids are only masking the ongoing activity of the inflammation. In either case, corticosteroids do not represent a safe treatment option.

We conclude that the use of biologics and thiopurine in IBD pregnancy is not associated with a higher risk of complications when compared with the general population, unless when used in combination with steroids. Corticosteroids may be useful in an acute setting to control the flare-ups, but long-term use in pregnancy is associated with poor outcomes for the mother and the baby.
may feel alone. Online forums allow patients to interact with other individuals who feel the same way, allowing them to share information and inspiration.

POSTER 1743
EFFECTS OF IBD ON PATIENT HEALTH-RELATED QUALITY OF LIFE: INSIGHTS FROM THE ONLINE COMMUNITY

Author Insight from
Mark W. Reid, PhD,
CS-CORE Research Lab

What’s new here and important for clinicians?
This study employs a novel method of collecting data on the IBD patient experience. Instead of using focus groups to understand health-related quality of life (HRQOL) changes that occur as part of IBD, we collected data from Twitter and patient-focused message boards—a method referred to as digital ethnography. A key benefit of this strategy is that patients are presenting “free range” information, without prompts from a doctor or closed-ended survey questions. Thus, patients not only verify much of what we already know about IBD HRQOL (e.g., high levels of frustration, anxiety, and catastrophizing, or fearing the worst could happen), but also report development of an external locus of control (i.e., feeling like their symptoms are out of their control). They also report positive changes in HRQOL, such as increased activity or group support, that are not captured using typical methods. Clinicians should be encouraged to understand how IBD impacts their own patients’ HRQOL, and to develop treatment plans that improve functioning across life domains as opposed to merely addressing symptoms of IBD.

What do patients need to know?
Patients should know that when they express frustrations and ask questions online, doctors now have a means of listening to them. IBD patients should also be encouraged to seek out social support online, since many of the patients we identified reported that social interactions with other patients made them feel better. When patients are reduced to limited interactions solely with care providers, they often express frustration and may feel alone. Online forums allow patients to interact with other individuals who feel the same way, allowing them to share information and inspiration.

POSTER 1032
IBD, I BARELY DISCERN: A COMPARATIVE ANALYSIS OF ONLINE PATIENT EDUCATION RESOURCES RELATING TO INFLAMMATORY BOWEL DISEASE

Author Insight from
Rishabh Gulati, MD,
Rutgers New Jersey Medical School

What’s new here and important for clinicians?
The Institute of Medicine defines health literacy as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.” The Internet provides the freedom and anonymity to its users to research health topics without apprehension or constraint. This provides an opportunity for people to participate in a better-informed decision making process.

Having said that, studies done in other fields have already been published showing the readability of online, patient-centered information to be above the recommended level between 6th to 7th grade. Our study’s novelty lies in dissecting the information into subcategories and analyzing which aspect of information is most difficult to read so that special emphasis may be given to that aspect to people who source their information online.

What do patients need to know?
Patients need to be comfortable with the information that they read online. Peer-reviewed information from recognized professional bodies must be their primary source of information. Always discuss the information
you peruse online from these sources with your doctor and engage in a shared and informed decision making process.

POSTER 1077

ENDOSCOPIC SEALING OF AN ENTEROCUTANEOUS FISTULA WITH A COMBINATION OF JAGWIRE PLACEMENT AND AN OVER THE SCOPE CLIP

Author Insight from Sarina Kapoor, MD, West Virginia University Hospital Ruby Memorial Hospital

What’s new here and important for clinicians?

For the first time, we describe a case in which a guidewire (Jagwire) is inserted into an abnormal connection in the bowels (fistula) and used to visualize the location of a fistula. We then used the over-the-scope (OVESCO) clip to close the fistula through the colonoscope.

We present this case to encourage the innovative use of endoscopic tools by other clinicians and to describe a case in which old tools are used in a new way to aid patient care.

What do patients need to know?

Patients need to know there are endoscopic ways to heal abnormal connections between their bowels. They do not have to go straight to surgery.

POSTER 1039

MANY IBD PATIENTS ARE NOT IMMUNE TO MEASLES AND PERTUSSIS

Author Insight from Noa Krugliak Cleveland, MD, University of Chicago Medicine

What’s new here and important for clinicians?

It is well-known that patients with inflammatory bowel disease (IBD) receiving immunosuppressive (ISS) treatments are at an increased risk for a number of vaccine-preventable infections such as influenza, pneumococcal pneumonia, and zoster. Additionally, we know that the immune response to vaccinations is reduced in IBD patients who are on ISS therapy, and current CDC and IBD guidelines indicate that live vaccinations are contraindicated in these patients.

Given the recent resurgence of measles as well as pertussis (whooping cough) infections, we assessed the immune status of our IBD population at the University of Chicago Inflammatory Bowel Disease Center in order to advise about these risks.

We found that a significant number of our IBD patients lack immunity to measles and the majority of our IBD patients do not have detectable immunity to pertussis. Patients with disease durations of longer than 10 years and patients 50 years and older had significantly lower immunity (titer levels) to these infections. We also found that many of the non-immune patients were women of childbearing age, putting them at risk of these infections during pregnancy, as well as patients who are receiving ISS and are therefore unable to receive the booster.

Our findings emphasize that clinicians need to be aware of the risk of these infections as well as their patients’ immune status in order to provide recommendations for management, protection and counseling. Additionally, knowing the immune status for measles is especially important prior to initiation of ISS therapy, as the measles, mumps and rubella (MMR)
vaccine is a live vaccine that can only be administered prior to initiation of such therapy.

What do patients need to know?
IBD patients receiving ISS should be aware of their increased risk for vaccine preventable infections such as influenza, pneumococcal pneumonia, and shingles, as well as measles and pertussis. They should be proactive about being up to date with their vaccinations and ask their physician to check their immune status for measles and pertussis. We also encourage patients to discuss with their gastroenterologist any additional vaccinations they should receive prior to initiation of ISS or immunomodulation therapy.

POSTER 352
IATROGENIC MALNUTRITION IN HOSPITALIZED PATIENTS WITH INFLAMMATORY BOWEL DISEASE

Author Insight from Kimberly J. Kolkhorst, DO, MA, University of South Florida, Department of Gastroenterology

What’s new here and important for clinicians?
This study shows how energy requirements in hospitalized patients with inflammatory bowel disease are not being adequately met due to insufficient diet orders. Our study encourages clinicians to pay more careful attention when placing diet orders in this patient population.

What do patients need to know?
Patients should be aware of the fact that adequate diet orders can be inadvertently delayed or overlooked by clinicians. This study encourages hospitalized patients with IBD to be more proactive regarding discussions about inpatient diet orders in order to meet nutritional needs in the setting of acute illness.

POSTER 1798
INFLIXIMAB ASSOCIATED PSORIASIFORM ALOPECIA

Author Insight from Zenas Yiu, MBChB, MRCP, University of Manchester

What’s new here and important for clinicians?
This case series raises awareness of the phenomenon of psoriasiform alopecia associated with tumor necrosis factor inhibitors. It is important for clinicians to consult patients that psoriasiform alopecia is unlikely to result in scarring, and treatment with potent topical corticosteroids in conjunction with a cessation in their tumor necrosis factor inhibitor treatment can result in hair regrowth.

What do patients need to know?
Patients need to be aware of the possibility that a rash that looks like psoriasis may occur on the scalp with treatment with tumor necrosis factor inhibitors, and it can lead to reversible hair loss.
Poster 363

Vitamin D Status Is an Independent Risk Factor for Colonic Dysplasia in IBD: A Case-Control Study

Author Insight from Toufic Kabbani, MD, MPH

What’s new here and important for clinicians?
Several pre-cancerous conditions and cancer types have been associated with a low vitamin D status. While there is data on vitamin D status and colon cancer in the general population, data on the risk of dysplasia in IBD subjects is lacking to date. Our study addressed the association of vitamin D status with an important IBD complication: dysplasia. Using a case-control study model, we analyzed data of IBD subjects who were diagnosed with dysplasia on surveillance colonoscopy biopsies between 2009 and 2013. For comparison, 4:1 age, gender and disease duration-matched IBD subjects who underwent colonoscopy for surveillance for CRC during the same period and had no dysplasia were randomly selected as controls.

Males constituted 63% of the patients (cases and their matched controls) and the mean age of the cohort was 48.6 years. The mean time from IBD diagnosis to dysplasia diagnosis was 12.8 years. Smoking status was comparable between cases and controls (25.9% vs. 25.5%, respectively; p=1.0). The mean vitamin D levels (prior to supplementation) for cases were significantly lower compared to controls (28.6 ng/ml vs. 37.1 ng/ml; p=0.0001). Thirty of the 54 patients (55.6%) with dysplasia received vitamin D supplementation compared to 41.3% of controls (0.09%). Multinomial logistic regression controlling for the use of steroids, immunomodulators and anti-TNF medications showed that mean vitamin D status over the study period correlated negatively with risk of dysplasia [coefficient -0.1, 95% CI (-0.2, -0.06); p=0.001].

In summary, lower Vitamin D levels are associated with higher risk of dysplasia in patients with IBD. We recommend monitoring and supplementation of vitamin D in subjects with low vitamin D levels as routine care in IBD patients. While our results are novel and promising, large, long-term, prospective studies that evaluate the effects of vitamin D supplementation on the risk of colorectal dysplasia and CRC in IBD are warranted.

What do patients need to know?
If you have IBD please be aware that taking vitamin D supplements to achieve normal vitamin D levels is not only beneficial for your bone health but may be also protective against dysplasia. Dysplasia is pre-cancerous change of the inner lining of the colon. If left untreated, dysplasia will develop into colon cancer.

Poster 1051

Safety and Efficacy of Endoscopic Dilation for Primary Crohn’s Disease Strictures in the Upper GI Tract

Author Insight from Amandeep Singh, MD, Cleveland Clinic Foundation

What’s new here and important for clinicians?
Our preliminary data indicates that endoscopic balloon dilations of primary Crohn’s strictures of the upper gastrointestinal tract is a safe and effective treatment modality (technical success 94%, clinical efficacy 88%), with a low complication rate (4%). It leads to prolonged clinical benefit with need for redilation in 62.9% and surgery in 26.8% during a median follow-up of 23 months. It should be considered as an alternative to surgery in all CD-related primary UGI strictures amenable to endoscopic intervention.

What do patients need to know?
Endoscopic balloon dilatation is a non-surgical option for Crohn’s disease-induced upper gastrointestinal
strictures. It is very safe and effective. It can be done multiple times without any additional complications at subsequent dilations.

**POSTER 1062**

**URBAN BIRTHPLACE MAY BE ASSOCIATED WITH A MORE SEVERE DISEASE PHENOTYPE IN A HISPANIC IMMIGRANT INFLAMMATORY BOWEL DISEASE COHORT**

Author Insight from Nirupama Bonthala, MD, MS, University of Southern California

What’s new here and important for clinicians?

Global epidemiological trends suggest that inflammatory bowel disease (IBD) is associated with industrialization. Our goal was to determine if urban exposure at birth influences phenotype and severity of IBD.

Our study in 259 patients with IBD, of whom 61% are Hispanic, demonstrates that those born in an urban setting were more likely to have Crohn’s disease. Furthermore, in Crohn’s disease, early urban exposure may be linked to a more severe disease phenotype, with an earlier age of onset and higher rates of surgery. In ulcerative colitis, those born in an urban environment had higher rates of pancolitis compared to those born in rural areas or small towns. This effect persisted after controlling for factors such as family history, NSAID use, smoking or being born outside of the United States.

Further study is warranted to identify specific factors within an urban environment that may explain these differences.

What do patients need to know?

Inflammatory bowel disease (IBD) is a complex condition that includes Crohn’s disease and ulcerative colitis. While we do not know the exact cause, we believe both genetics and the environment play a large role. Only recently are researchers evaluating what impact the environment may have on the disease course of IBD.

Our study shows that those born in urban or suburban areas are more likely to have one type of IBD called Crohn’s disease. They may also be younger when diagnosed and may have a greater need for surgery throughout their lives. This suggests that the early birth environment may play a larger role than previously thought.

It is important for patients to make their doctors aware of their environmental history, since this may aid in understanding the course of their disease.

**POSTER 347**

**HISPANIC IMMIGRANTS DEVELOPING IBD ARE MORE LIKELY TO EAT AMERICAN FOOD**

Author Insight from Oriana Damas, MD, University of Miami Miller School of Medicine

What’s new here and important for clinicians?

The study of inflammatory bowel disease (IBD) among immigrants coming from low to high IBD prevalent countries offers a unique opportunity to identify environmental exposures that may contribute to development of IBD. In our study, we looked at immigrant Hispanics with and without IBD and asked them for a detailed intake of their diet and acculturation.

We found that Hispanic immigrants with IBD were more likely to report changes in their diet and to reflect a more “Americanized diet” compared to Hispanic controls. To our knowledge, this is the first time that anyone in the U.S. has examined changes in diet as a result of migration and the impact this has on development of IBD.

This is important for clinicians to recognize because it highlights that an “Americanized” diet, which implies more fast food intake, as well as higher protein and fat intake, is important not only in prevention of obesity
and metabolic syndrome, but also, perhaps, in the prevention of immune-mediated diseases, such as IBD.

**What do patients need to know?**
It’s important for patients to know that inflammatory bowel disease (IBD) develops as a result of both genetics and environmental factors. Not everyone has the same likelihood of developing IBD, and a component of this has to do with your own family history. In this study, we found that in patients who immigrated to the U.S. and ate “more American” diets, there was a higher prevalence of IBD than in those who ate “less American.” This implies that if you have a strong family history of IBD, it may be another reason to consume a healthier diet. With that said, larger prospective studies are needed to confirm these findings and whether these results are relevant to people of all ethnic backgrounds.

**FEATURED FECAL MICROBIOTA TRANSPLANTATION ABSTRACTS**

**ORAL 4**

**GUT MICROBIOTA CHANGES AS PREDICTORS OF TREATMENT FAILURE IN PRIMARY CLOSTRIDIUM DIFFICILE INFECTION**

**Author Insight from Sahil Khanna, MBBS, MS, Mayo Clinic, Rochester, MN**

**What’s new here and important for clinicians?**
C. difficile infection patients are at a high risk for complications such as treatment failure (5-15%) and recurrent infection (20% after first infection). Gut microbiota signatures associated with CDI have been described, but it is unclear if differences in gut microbiota play a role in response to therapy. No studies have identified predictors of treatment failure, and we aimed to identify gut microbiota signatures to predict response to treatment for primary CDI. While there were no clinical predictors of treatment response, there were increases in certain genera in patients with successful treatment response in the fecal samples at initial diagnosis compared to non-responders. A risk index built from this panel of microbes highly differentiated between patients based on response and ROC curve analysis showed that this risk index was a strong predictor of treatment response, with an area under the curve of 0.85. Gut microbiota signatures can be used to predict response to initial treatment, potentially allowing patients likely to fail treatment to be treated earlier, with more effective therapies such as fecal microbiota transplantation.

**What do patients need to know?**
C. difficile-infected patients are at a high risk of complications such as treatment failure (5-15%) and recurrent infection (20% after first infection). Clinical predictors of treatment failure in C. difficile are not known, but there are differences in composition of the gut bacteria in the stool that may predict treatment response. These findings suggest that there may be a role for the performance of microbiome analyses in the stool samples at C. difficile diagnosis to predict successful treatment response.

**POSTER 1495**

**MANAGEMENT AND OUTCOMES OF PATIENTS WITH FAILED FECAL MICROBIOTA TRANSPLANTATION FOR RECURRENT CLOSTRIDIUM DIFFICILE INFECTION**

**Author Insight from Sahil Khanna, MBBS, MS, Mayo Clinic, Rochester, MN**

**What’s new here and important for clinicians?**
C. difficile-infected patients are at a high risk of recurrent infection: 20% after the first infection and 60% after...
the third infection. Data on management and clinical sequelae of patients who have recurrent CDI after FMT are scarce. In this study, we reported our single-center tertiary care experience on post-FMT treatment and outcomes of patients with failed FMT. After a median follow-up of 61.4 weeks (range 4-147 weeks), of the 238 rCDI patients who underwent FMT, the rate of FMT failure was 10.5%. Amongst these patients, 33% had underlying IBD. Among FMT failures, post-FMT, 16% had minimal symptom improvement after FMT and were early failures. The median time to recurrent CDI after FMT was 19.5 weeks (range 1.4-152 weeks) with 90% patients recurring within 68 weeks. Patients with recurrent CDI after FMT were commonly exposed to systemic antibiotics (60%) leading to FMT failure, and 33% had underlying IBD, which appeared to be a risk factor in the absence of antibiotic exposure. These patients were managed with repeat course of antibiotics or repeat fecal transplant (20%).

What do patients need to know?
C. difficile-infected patients are at a high risk of complications such as recurrent infection. Management options for recurrent infection include antibiotic therapy, but results are dismal. Fecal microbiota transplantation (FMT) is a safe and effective treatment for recurrent Clostridium difficile infection with success rates >85%. Data on management and clinical sequelae of patients who have recurrent CDI after FMT are scarce. The rate of recurrent CDI was 10% in patients after FMT, and most common reasons included repeat antibiotic exposure and underlying inflammatory bowel disease. Patients with FMT failure can be managed with antibiotics or repeat FMT.

POSTER 103

A DUAL CENTER, RANDOMIZED TRIAL COMPARING COLONOSCOPY AND ORAL CAPSULE DELIVERED FECAL MICROBIOTA TRANSPLANTATION IN THE TREATMENT OF RECURRENT CLOSTRIDIUM DIFFICILE INFECTION: PRELIMINARY RESULTS

Author Insight from Dina Kao, MD, University of Alberta

What’s new here and important for clinicians?
The optimal route of delivering fecal transplant for recurrent Clostridium difficile infection (RCDI) has not been determined. Our preliminary results in this head-to-head study comparing colonoscopy vs pill delivery of fecal transplant seems to show that both ways are equally effective, approaching 100% in our study of patients who have mild to moderate RCDI.

What do patients need to know?
Both methods of delivery have pros and cons. In our study, patients have to take quite a number of pills, which would not be possible if individuals have swallowing difficulties. Pills have the advantage of being cheaper and not invasive. Colonoscopy is more invasive, but at the same time could also identify unexpected findings, such as polyps (growths in the large intestine).
ORAL 39

PREDICTORS OF FAILURE AFTER FECAL MICROBIOTA TRANSPLANTATION (FMT) FOR THE THERAPY OF CLOSTRIDIUM DIFFICILE INFECTION (CDI)

Author Insight from Monika Fischer, MD, MSCR, Assistant Professor of Clinical Medicine, Division of Gastroenterology and Hepatology, Indiana University

What’s new here and important for clinicians?

This is a retrospective study of two large U.S. centers’ (Brown University and Indiana University) FMT outcomes and predictors of failure of a single FMT to resolve C. difficile infection (CDI). Success was defined as no CDI-related symptoms or negative C. diff PCR at 3 months post FMT without the need of an anti-CDI therapy. The analysis included a total of 345 patients, a mixture of mainly ambulatory patients with recurrent CDI and hospitalized patients with refractory or severe and complicated CDI. The overall success rate was 76%, suggesting that the cure rate with FMT is likely somewhat lower than the ~90% success rate established based upon small RTCs and small case series.

Results based on the multivariable logistic regression showed that three risk factors were significantly associated with a greater risk for FMT failure at 3 months. Patients with FMT performed in an inpatient setting are almost seven times more likely to fail at 3 months than those with FMT performed in an outpatient setting. Immunosuppressed patients are 3.5 times more likely to fail at 3 months. In addition, patients with greater number of CDI-related hospitalization prior to FMT are more likely to have a failure outcome. With every additional hospitalization, the odds of failure increases by 45%.

Based upon the above model, we created a risk score for each patient to indicate the risk for failure to resolve CDI with one FMT.

- FMT performed in an inpatient setting: 5 points
- CDI-related hospitalization prior to FMT: each hospitalization = 1 point
- Immunosuppressed: 3 points

Risk scores for patients range from 0 to 12. We divided patients into 3 risk categories indicating low, medium, and high risk for failure and found the following risks: Patients with 0 risk scores have 13% chance of failure, patients with risk scores between 1-3 have 17% chance of failing a single FMT, and patients with > 4 risk scores have a 44% chance of failing.

What do patients need to know?

Patients with certain risk factors for failure such as immunocompromised state, being hospitalized while receiving fecal transplant—suggesting severe C. diff episode, concomitant non-C. diff antibiotic use (other than vancomycin, metronidazole or fidaxomicin), and previous hospitalization for C. diff(meaning history of previous severe C. diff episode as identified in our study) might need more than one fecal transplant to achieve cure. Having more than one of the risk factors for failure might significantly decrease the likelihood of success with a single fecal transplant to cure C. difficile infection.
POSTER 795
WEIGHT CHANGE AFTER FECAL MICROBIOTA TRANSPLANTATION (FMT) IS NOT ASSOCIATED WITH DONOR BODY MASS INDEX (BMI)

Author Insight from Monika Fischer, MD, MSCR, Assistant Professor of Clinical Medicine, Division of Gastroenterology and Hepatology, Indiana University

What’s new here and important for clinicians?
The gut microbiota has been shown to differ in lean and obese individuals. Anecdotal data suggest that patients may encounter dramatic weight changes following FMT. We aimed to assess changes in BMI in comparison to stool donors’ BMI following a single FMT. In a study of 58 patients and donor pairs during a mean 13 months of follow-up, we found no correlation between recipient % BMI change and baseline donor BMI (p=0.608), or % BMI change/months (p=0.824). Twenty-six patients received stool from a lean donor (BMI 23.1±1.1), 22 patients from an overweight donor (BMI 29.1±1.5), and 9 patients from an obese donor (BMI 32.4±2.6). Of note, only two patients experienced change in taste of foods, both stating that sweet food tasted bitter since FMT. Otherwise, all recipients denied any voluntary attempts to lose/gain weight, changes in food cravings, or appetite.

In our study of 58 recipient-donor pairs, donor weight was not associated with weight change in the recipient following a single FMT. We found no clinically relevant change in recipient BMI following a single FMT regardless of donor BMI.

What do patients need to know?
Anecdotal data exists about weight gain following a single fecal transplant. In our study of 58 patient and stool donor pairs, we did not find significant weight change associated with the donor’s weight. In other words, a single stool transplant from a lean donor did not lead to weight loss and a single stool transplant from an overweight or even obese donor did not lead to weight gain.

ORAL 38
THE COST-EFFECTIVENESS OF COMPETING STRATEGIES FOR MANAGING MULTIPLY RECURRENT CLOSTRIDIUM DIFFICILE INFECTION: EXAMINING THE IMPACT OF UNIVERSAL STOOL BANKS AND ENCAPSULATED FECAL MICROBIOTA TRANSPLANTATION

Author Insight from Zain Kassam MD, MPH, FRCPC, OpenBiome/MIT Center for Microbiome Informatics & Therapeutics

What’s new here and important for clinicians?
Clostridium difficile is the leading healthcare-associated infection and translates to a cost of $4.8 billion per year in the United States. Fecal microbiota transplantation (FMT) is a promising therapy for recurrent Clostridium difficile infection (rCDI). Universal stool banks like OpenBiome have emerged to improve safe access to FMT, and have developed FMT capsules. However, the economic impact of these novel public health approaches is unclear.

We designed a cost decision-analysis model to compare the cost-effectiveness of 1) universal stool bank FMT, 2) directed donor (e.g. spouse, sibling) FMT, or 3) oral vancomycin taper for CDI. Results suggest the universal stool bank FMT approach was the most cost-effective strategy, showing an incremental cost-effectiveness ratio (i.e. the additional cost per additional unit of effectiveness gained) of just over $28,500 compared to vancomycin. We also examined the cost-effectiveness of four FMT delivery modalities: 1) colonoscopy, 2) capsule, 3) enema, 4) naso-enteric delivery. The results suggest FMT capsules are the
most cost-effective delivery modality, dominating other treatments with an incremental direct cost savings of $3,661 relative to vancomycin. However, FMT capsules only dominate when clinical cure rates were >89.2%. Given limited efficacy data for FMT capsules, further studies including dose-finding trials are needed before widespread clinical adoption. Overall, FMT by colonoscopy remains a cost-effective treatment for rCDI with an incremental direct cost savings of $3,647 compared to vancomycin.

What do patients need to know?
C. difficile is a terrible intestinal infection that causes diarrhea, abdominal pain and sometimes death. C. difficile is a major problem in hospitals, and costs the U.S. healthcare system close to $5 billion a year. Unlike antibiotics, fecal microbiota transplantation (FMT) are very effective at curing recurrent C. difficile, but doctors often have trouble getting safe stool. Stool banks, like OpenBiome, have come to the rescue and have helped treat over 6,000 patients in more than 400 hospitals in 5 countries. Our study shows that using a universal stool bank is the most cost-effective way of treating recurrent C. difficile. Also, FMT capsules may be the most cost-effective way of doing FMT, but more studies are needed to pick the right dose. For now, it seems FMT by colonoscopy is the most cost-effective treatment for recurrent C. difficile, with an incremental direct cost savings of $3,647 compared to standard antibiotics.

FEATURED OBESITY AND METABOLIC SYNDROME ABSTRACTS

ORAL 7

DOES OBESITY IMPACT MORTALITY AND OTHER OUTCOMES IN PATIENTS WITH UPPER GASTROINTESTINAL HEMORRHAGE? A NATIONWIDE ANALYSIS

Author Insight from Marwan S. Abougergi, MD, Catalyst Medical Consulting

What’s new here and important for clinicians?
Obesity has been shown to negatively impact prognosis for a wide range of medical conditions, including breast cancer and bipolar disease, as well as surgical interventions including coronary artery bypass grafting. To our knowledge, no previous study has examined the national impact of obesity on non-variceal upper gastrointestinal hemorrhage outcomes. We used the largest publicly available national inpatient database to study the outcomes of obese vs. non-obese patients with upper gastrointestinal bleeding.

We found that obese and non-obese patients had similar in-hospital mortality rates. However, obese patients were more likely to undergo an in-hospital endoscopy and receive endoscopic treatment, and to need ICU-level care and experience hemorrhagic shock compared with non-obese patients. In addition, obese patients had a lower rate of endoscopies performed within the first 24 hours of admission compared with non-obese patients, with similar rates of surgery and radiologic interventions. Finally, obese patients had longer lengths of hospital stay and higher total hospitalization charges compared with non-obese patients.

When looking at the reasons for upper gastrointestinal hemorrhage, obese and non-obese patients had similar upper gastrointestinal hemorrhage diagnoses. The top four diagnoses for both groups
were: unspecified hemorrhage of gastrointestinal tract/hematemesis, gastric/duodenal ulcer with hemorrhage, Mallory Weiss tear, and gastritis with hemorrhage.

Obese patients experienced more hemorrhagic shock and required more frequent intensive care unit level care compared with non-obese patients. While the limitations of the database does not allow to directly ascertain the reasons for those findings, we found that obese patients suffered from more comorbidities, including diabetes mellitus, myocardial infarction, congestive heart failure, and cerebrovascular accidents that are usually managed with anticoagulation and anti-platelets medications. Those medications could have potentially led to more severe hemorrhage at presentation. This may also explain the increased frequency of endoscopic interventions for obese, compared with non-obese, patients. Interestingly, obese patients experienced delays in undergoing endoscopic procedures. The reasons for these delays are unclear, but may be related to lengthier resuscitation needed before endoscopy, the patients’ comorbidities, or difficulties with sedation/need for endotracheal intubation. Nonetheless, endoscopic interventions appear to control hemorrhage equally well for obese and non-obese patients, since the rate of radiologic intervention and surgery were similar between the two groups.

In addition, we found that total hospitalization charges were directly dependent on length of stay, even after adjusting for multiple factors including patients’ characteristic (e.g. age, Charlson comorbidity index) and hospital characteristics (e.g. size, teaching status). However, we also found that the proportion of endoscopies performed within 24 hours of admission was lower for obese, compared with non-obese, patients. Increasing the number of endoscopies performed within 24 hours is thus important not only because the American College of Gastroenterology clinical guidelines recommend it, but because it helps reduce length of stay and ultimately decreases cost.

In conclusion, unlike in many other medical conditions, obesity is not a negative prognostic factor for in-hospital mortality for patients with upper gastrointestinal hemorrhage. Obese patients do have an increase in intensive care unit admissions, incidence of hemorrhagic shock, and resource utilization, including length of stay and total hospitalization charges. More frequent in-hospital endoscopies and endoscopic interventions performed for obese patients could potentially explain the similar overall clinical outcomes.

What do patients need to know?
Obesity does not increase the risk of death during a hospitalization for upper gastrointestinal bleeding. However, obese patients become sicker than non-obese patients during an upper gastrointestinal bleeding episode and require more care in the intensive care unit and more upper endoscopies to stop the bleeding. In addition, obese patients tend to stay for a longer time in the hospital and incur higher payments for the hospital care compared with non-obese patients.

POSTER 98
OBESITY IMPACTS RESOURCE UTILIZATION BUT NOT MORTALITY AMONG PATIENTS ADMITTED WITH LOWER GASTROINTESTINAL HEMORRHAGE: A NATIONWIDE ANALYSIS

Author Insight from Marwan S. Abougergi, MD, Catalyst Medical Consulting

What’s new here and important for clinicians?
Obesity has been shown to negatively impact prognosis for a wide range of medical conditions and surgical interventions, including breast cancer treatment, bipolar disease treatment, and coronary artery bypass grafting. To our knowledge, no study examined the impact of obesity on lower gastrointestinal hemorrhage outcomes on the national scale. We used the largest publicly available national inpatient database to study this question.

We found that obese and non-obese patients had similar in-hospital mortality rates. In addition, the two groups had similar hemorrhagic shock and ICU admission rates. Looking at resource utilization, obese patients were more likely to receive an in-hospital colonoscopy, (with similar endoscopic treatment rates
between the two groups), had a longer length of stay despite similar time from admission to colonoscopy, more CT scans of the abdomen and pelvis, and higher total hospitalization charges compared with non-obese patients.

In conclusion, unlike in many other medical conditions, obesity has no effect on in-hospital morbidity or mortality among patients with lower gastrointestinal hemorrhage. Despite that fact, resource utilization was significantly higher for obese patients, leading to higher total hospitalization charges.

What do patients need to know?

Obesity does not increase the risk of death or severe illness during a hospitalization for lower gastrointestinal bleeding. However, obese patients require more interventions, imaging studies, and other treatment modalities, which lead to a longer hospital stay and higher payments for hospital care compared with non-obese patients.

POSTER 5

SEVERE OBESITY PREDICTS ADVERSE OUTCOMES IN ACUTE PANCREATITIS

Author Insight from Ben L. Da, MD, Department of Medicine, University of Southern California Medical Center

What’s new here and important for clinicians?

This study is a prelim assessment of an ongoing prospective study on acute pancreatitis. We found that severe obesity (BMI >35) is predictive of severe pancreatitis and mortality. This study aims to recruit 400-500 patients in total and will be the largest study to date on the subject. We hope to prove that patients with severe obesity need to be very carefully monitored for the development of organ failure and/or systemic complications. Clinicians need to be aware of this in
order to provide adequate resuscitation and monitoring in this subgroup of pancreatitis patients.

What do patients need to know?
Patients with severe obesity and perhaps a history of acute pancreatitis need to know that if they develop epigastric pain consistent with acute pancreatitis, they may be sicker than they realize. They should see a physician as soon as possible and reassessed properly.

POSTER 1928

ONE IN FIVE ADULTS IN THE UNITED STATES WHO ARE NOT OBESE HAVE METABOLIC SYNDROME: AN ANALYSIS OF THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY, 2001-2012

Author Insight from Robert Wong, MD, MS, Attending Physician, Gastroenterology & Hepatology, Director, GI Education & Research Highland Hospital

What’s new here and important for clinicians?
The prevalence of metabolic syndrome is rising in the U.S., with nearly one third of all adults affected by this disease syndrome. Metabolic syndrome increases risk of cardiovascular disease and nonalcoholic fatty liver disease, two disease states that account for a significant proportion of morbidity and mortality in the U.S. While obesity and weight gain increase the risk of developing metabolic syndrome, metabolic syndrome can and does occur in patients without obesity. Our current study demonstrated that nearly one in five patients who do not have obesity still have metabolic syndrome. This emphasizes the importance of recognizing the other risk factors for metabolic syndrome, including diabetes, dyslipidemia, and hypertension, to improve the early diagnosis of metabolic syndrome so that early interventions can be implemented to reduced long term health consequences.

POSTER 1929

OLDER AGE AND HISPANIC ETHNICITY ARE ASSOCIATED WITH SIGNIFICANTLY HIGHER RISK OF METABOLIC SYNDROME

Author Insight from Robert Wong, MD, MS, Attending Physician, Gastroenterology & Hepatology, Director, GI Education & Research, Highland Hospital

What’s new here and important for clinicians?
The prevalence of metabolic syndrome is rising in the U.S., with nearly one third of all adults affected by this disease syndrome. Metabolic syndrome increases risk of cardiovascular disease and nonalcoholic fatty liver disease, two disease states that account for a significant proportion of morbidity and mortality in the U.S. While being overweight and obese can increase your risk of metabolic syndrome, it is also important to treat and optimize other risk factors including diabetes, hypertension, and abnormal cholesterol levels.
interventions can be implemented, such as aggressively managing hypertension, diabetes, dyslipidemia and obesity.

What do patients need to know?
Metabolic syndrome is an important disease state that leads to major health consequences such as heart disease and liver disease. Conditions that increase one’s risk for metabolic syndrome include hypertension, diabetes, abnormal cholesterol and triglyceride levels, and obesity. Certain populations are at higher risk for metabolic syndrome, including older individuals, females, and those of Hispanic ethnicity. Implementing healthy lifestyle and dietary behaviors can help reduce the risk of metabolic syndrome and its related health consequences.

FEATURED CONSTIPATION ABSTRACTS

POSTER 322
RESTRICTED EATING PATTERNS IN CHRONIC CONSTIPATION ARE ASSOCIATED WITH BLOATING AND ABDOMINAL SYMPTOMS MORE SO THAN RECTAL AND STOOL SYMPTOMS

Author Insight from Kyle Staller, MD, MPH, Massachusetts General Hospital, Harvard Medical School

What’s new here and important for clinicians?
Many patients with chronic constipation attribute their symptoms to dietary factors, and restrictive eating is a common phenomenon among patients in this population. We found that abdominal symptoms (i.e. bloating), much more so than rectal symptoms (i.e. straining, incomplete evacuation), predicted restricted eating practices. Patients with abdominal symptoms of constipation are the most likely to restrict their eating and could benefit from structured, evidence-based dietary interventions rather than their own, self-imposed diets.

What do patients need to know?
Among those suffering from chronic constipation, bloating and abdominal symptoms clearly affect eating patterns. Those patients suffering from constipation and bloating/abdominal discomfort could be better candidates for guided dietary interventions that can improve these symptoms.

POSTER 323
CO-MORBID DEPRESSION, NOT SYMPTOM SEVERITY OR DISEASE-SPECIFIC QUALITY OF LIFE, PREDICTS WORK ABSENTEEISM IN CHRONIC CONSTIPATION

Author Insight from Kyle Staller, MD, MPH, Massachusetts General Hospital, Harvard Medical School

What’s new here and important for clinicians?
Constipation is exceedingly common and exerts a considerable economic effect. Although many clinicians assume that the severity of constipation symptoms is the primary driver of obligation absenteeism, our data from over 100 patients undergoing physiologic evaluation for chronic constipation demonstrates that comorbid depression was a bigger predictor of work and school absenteeism. This suggests that clinicians should consider screening for comorbid depression in their patients presenting with chronic constipation and making appropriate referrals to mental health services +/- use of adjunctive SSRIs.

What do patients need to know?
Patients should remember that mental health is the lens through which many somatic symptoms are expressed. Although patients with chronic constipation very often have true problems with gastrointestinal function, mental health problems can have an outsized impact on the ability of symptoms to affect one’s daily life.
POSTER 1724

PATIENTS’ USE OF AND EXPERIENCE WITH MEDICATIONS FOR MANAGEMENT OF SYMPTOMS OF CHRONIC CONSTIPATION

Author Insight from William Spalding, Director, Health Economics and Outcomes Research, Ironwood Pharmaceuticals

What’s new here and important for clinicians?

Many older medications, such as polyethylene glycol (PEG) and stimulant laxatives have long been and continue to be prescribed as first-line therapy after lifestyle and dietary modifications have failed for chronic idiopathic constipation (CIC). Yet our study indicates that the majority of patients are generally not satisfied with these treatments.

Our 2013 Phase 3b study screened nearly 1,500 patients who were enrolling in a clinical trial for CIC, and found that approximately 70% had taken at least one class of older medications (polyethylene glycol [PEG]), psyllium, wheat dextrin, stimulant laxatives, docusate or lubiprostone) during the prior six months. Approximately one-third to two-thirds of patients on these older medicines reported lacking confidence in their ability to have a bowel movement (BM) at least once every other day, and the majority stated that they could not predict when their BM would take place after taking their medication. Overall, the majority of CIC patients participating in the study were “not at all” or “a little” satisfied with the older medications’ ability to relieve their constellation of constipation and abdominal symptoms.

Despite the fact that the CIC patients participating in the study who had taken laxatives and other older medications during the prior 6 months reported being generally unsatisfied, these medications continued to be widely used with these patients. We believe these findings indicate the importance of obtaining a detailed history from CIC patients to understand what constipation medications they have tried and their level of satisfaction with these, and the need to revisit how well a constipation medication is working over time. The persistence of an unmet treatment need among these CIC patients who have utilized these older medications may also warrant consideration of different classes of treatments, such as guanylate cyclase-C (GC-C) agonists, that may effectively address the multiple bowel and abdominal symptoms experienced by these patients.

What do patients need to know?

First, you are not alone in suffering from symptoms of chronic idiopathic constipation (CIC) and, as our research showed, it is very common for patients to not fully respond to many older, commonly used classes of constipation medications, even though these are often prescribed as first-line therapy after lifestyle and dietary modifications have failed.

Second, in our study, the majority of CIC patients taking certain older medications could not predict when a BM would take place and were “not at all” or “a little” satisfied with the medications’ ability to relieve their constipation and abdominal symptoms.

Third, talk to your doctor if you suffer from CIC, and be sure to tell them any medications you have already tried, how you responded to those medications, and all of the symptoms you are experiencing.
FEATURED LIVER ABSTRACTS

ORAL 1

DIABETES MELLITUS AND METABOLIC SYNDROME: INDEPENDENT RISK FACTORS FOR HEPATOCELLULAR CARCINOMA (HCC)

Author Insight from Allison J. Kasmari, MD, Penn State, Milton S. Hershey Medical Center

What’s new here and important for clinicians?

Diabetes mellitus and metabolic syndrome are common medical conditions that increase the risk of various comorbidities, including cardiovascular disease and stroke. Until now, the major identified risk factors for hepatocellular carcinoma (HCC) have been hepatitis C infection and cirrhosis.

Analysis of MarketScan database indicates that individuals with diabetes mellitus, metabolic syndrome, hypertension, and hyperlipidemia, regardless of presence of hepatitis C, were more likely to develop hepatocellular carcinoma than age and sex matched controls. Medications commonly used to treat diabetes mellitus and hyperlipidemia were also analyzed.

It appears that tighter glycemic control in the setting of diabetes mellitus was protective against developing hepatocellular carcinoma. Interestingly, individuals with hyperlipidemia that were on lipid-lowering agents seemed to have the highest rate of development of hepatocellular carcinoma.

What do patients need to know?

Your primary care doctor has likely counseled you about the potential dangers of uncontrolled diabetes, high blood pressure, and high cholesterol. Left without appropriate treatment, these diseases increase the risk of heart attacks, strokes, and kidney disease, just to name a few. There is now one more reason to adequately control your diabetes.

A recent review of patients with hepatocellular carcinoma, or primary liver cancer, shows that individuals with diabetes, high blood pressure, and high cholesterol are more likely to develop primary liver cancer than those patients without these conditions.

Until now, the largest identified risk factor for developing primary liver cancer has been hepatitis C infection. Our analysis indicates that patients with diabetes, high cholesterol, and high blood pressure have increased risk of developing primary liver cancer, even without hepatitis C infection. Further review of these cases indicates that medications which more tightly control diabetes may offset the increased risk associated with the disease, and in some cases were protective against developing primary liver cancer.

ORAL 65

HIGH SVR RATES AMONG US PATIENTS REGARDLESS OF RACE OR ETHNICITY IN HCV GT1 PATIENTS RECEIVING THE LABEL-RECOMMENDED REGIMEN OF OMBITASVIR/PARITAPREVIR/R+DASABUVIR+/RIBAVIRIN: INTEGRATED SAFETY AND EFFICACY ANALYSIS

Author Insight from Nancy Reau, MD, Chief, Section of Hepatology, Associate Director, Solid Organ Transplantation, Rush University Medical Center

What’s new here and important for clinicians?

Traditionally baseline characteristics, especially race, have led clinicians to characterize HCV patients as likely or unlikely to achieve a cure. The all-oral combination
of ombitasvir/paritaprevir/r+dasabuvir+/ribavirin has allowed treatment efficacy to overcome these hurdles.

What do patients need to know?
All-oral therapy for HCV is highly effective. If treatment was deferred in the past due to a high risk of failure, they should re-consider treatment.

POSTER 1834
HEALTH CARE DISPARITY IN DELIVERING OPTIMAL CARE TO CHRONIC HEPATITIS B PREGNANT MOTHERS

Author Insight from Rasham Mittal, MD, Kaiser Permanente Los Angeles Medical Center

What’s new here and important for clinicians?
Roughly 24,000 chronic hepatitis B (CHB) pregnant women give birth in United States every year. Since perinatal acquisition of CHB contributes significantly to prevalence of CHB, it becomes imperative to provide optimal antenatal care to these mothers. We aimed to determine if health care disparities exist in antenatal care of CHB pregnant mothers at a large, integrated health care system in United States.

We looked at 4 Quality Metrics:
• Antenatal hepatitis Be antigen (HBeAg)
• Antenatal hepatitis B virus (HBV) viral load
• Specialist consultation visit
• Infant HBsAg serological testing at 9-18 months

Antenatal hepatitis B antigen (HBeAg) serology testing was performed in 274 (59.3%) patients and hepatitis B virus (HBV) viral load was tested in 156 (33.8%), mothers only. Only 93 (20.1%) mothers had a specialist consultation during their pregnancy. Among these 93 mothers, 90 consulted gastroenterologists and 3 hepatologists. Additionally, 104 (26.2%) infants born to these CHB mothers had no HBsAg serological testing at 9-18 months’ follow-up.

Infant immunoprophylaxis failure leading to vertical transmission has been reported in mothers with hepatitis B e-antigen (HBeAg) and high viremia. It can result in a vertical transmission rate of 8%–30%. In the absence of diligent antenatal HBeAg or HBV viral load testing, many of the CHB pregnant mothers with high viremia might not be offered anti-retroviral therapy.
which has been proposed as a promising intervention to reduce the vertical transmission.

Post-vaccination serological testing (PVST) is a vital component of managing these infants to assess the adequacy of infant immune response. It is essential for both caring of infants with an inadequate immune response and monitoring the advancement towards possibly zeroing down the vertical transmission (VT) rate. PVST is a critical measure for assessing adequacy of recommended care in this subset of population.

The American College of Obstetrician and Gynecologists (ACOG) recommends referring CHB pregnant mothers to specialists experienced in the management of chronic liver disease. Our findings of disparity in standard care of CHB pregnant mothers and their infants suggest that there is a critical need to create a more superior and effective multidisciplinary health care provider’s network.

**What do patients need to know?**
CHB pregnant mothers must get their HBV DNA/HBeAg tested with PCP/OBGYN during pregnancy. Infants born to CHB pregnant mothers must be tested for HbsAg at 9-18 months of age.

**POSTER 1811**

**DEPRESSION AND CHRONIC HEPATITIS C (CH-C): A COMMON AND COSTLY ASSOCIATION**

Author Insight from Zobair M. Younossi, MD, MPH FACG, Center for Liver Diseases, Inova Fairfax Hospital

**What’s new here and important for clinicians?**
Hepatitis C is a common cause of liver disease with a number of extrahepatic manifestations. Approximately 25% of people with hepatitis C also have depression. This rate of depression is substantially higher than the rate of depression in the general population, with an associated cost of $1,038 million a year for treatment.

**What do patients need to know?**
Many do not know that hepatitis C is connected with conditions outside of the liver (the extrahepatic manifestations of HCV). In particular, many do not know that people with hepatitis C may be connected to depression as a neuropsychiatric manifestation of HCV.

Our study was carried out to see if hepatitis C was connected to depression, and if so, how many people might be affected, and compare this number to the number of people with depression in the population without HCV. We also wanted to see what the cost of having hepatitis C and depression might be.

So we reviewed all the medical literature from the early 1990s to 2014, looking for articles that studied HCV and depression. We found that approximately 25% of people with hepatitis C also have depression. This rate of depression is almost 20% higher than the rate of depression in the general population and costs $1,038 million a year to treat.

**POSTER 1815**

**IMPLEMENTATION OF BABY BOOMER HEPATITIS C (HCV) SCREENING AND LINKING TO CARE IN GASTROENTEROLOGY (GE) PRACTICES: A MULTI-CENTER PILOT STUDY**

Author Insight from Zobair M. Younossi, MD, MPH FACG, Center for Liver Diseases, Inova Fairfax Hospital

**What’s new here and important for clinicians?**
The Centers for Disease Control and Prevention (CDC) and U.S. Preventative Services Task Force (USPTF) have recommended screening for hepatitis C (HCV) in the baby boomer cohort. This is because the risk-based screening for HCV patients has been difficult for the medical community, and therefore, it has been difficult to provide appropriate medical care in treating the disease.

In order to understand the feasibility of the USPSTF
recommendation, we implemented a screening program in 5 clinical gastroenterology (GE) practices to identify baby boomers who could potentially be infected with HCV by collecting a blood sample using the OraQuick HCV rapid antibody test. Results became available to patients and providers within 20 minutes, and those who tested positive were linked to appropriate medical care to treat hepatitis C.

Our data show that the process of screening for HCV and the linkage of the HCV positive patient to care in GE practices are feasible and relatively easy. Nevertheless, baby boomers seen in GE practices appeared to have a lower prevalence of HCV, but the linkage to care occurred at all the centers. We also show that the HCV-antibody patients had lower quality of life, as shown by more fatigue, poorer concentration, less activity, and decreased levels of energy. Therefore, it is important to create a strategy to maximize both HCV screening and linkages to care with appropriate providers in order to successfully treat patients infected with HCV.

What do patients need to know?
The group with the highest prevalence of HCV is baby boomers (people who were born between 1945 and 1965), with approximately 3-4% becoming infected. More than 50% of people infected with hepatitis C do not know they are infected because they have no obvious symptoms. If HCV is left untreated, HCV can lead to more serious conditions like cirrhosis (scarring of the liver), liver failure, liver cancer, and death. There is also evidence that HCV infection is associated with tremendous economic burden as well as lost years of life, impaired quality of life, and work productivity. The high rates of prevalence and undiagnosed condition has prompted the CDC and the USPSTF to make screening recommendations to include a one-time hepatitis C screening of all individuals in this group. For more HCV information please go to: www.cdc.gov/knowmorehepatitis.

FEATURED COLORECTAL CANCER ABSTRACTS

POSTER 551

COLORECTAL CANCER SCREENING BARRIERS AMONG MINORITIES IN THE UNITED STATES: A SYSTEMATIC REVIEW AND META-ANALYSIS

Author Insight from Tara Keihanian, MD, MPH, Jackson Memorial Hospital, University of Miami

What’s new here and important for clinicians?
Colorectal cancer screening rates are suboptimal among minority populations, especially among African-American and Hispanic groups, in the United States. This series identified colorectal cancer screening barriers that are unique to, and shared by, these minority groups. Identifying these barriers and designing screening programs sensitive to these barriers is important if our community is to achieve the goal of 80% screened by 2018.

What do patients need to know?
Many colorectal cancer screening tests are available. Options exist that may make colorectal cancer screening more palatable with respect to barriers in racial/ethnic minority groups. The U.S. Preventive Services Task Force recommends colorectal cancer screening for individuals aged 50-75 years.
Force (USPSTF) recommends routine colorectal cancer screening for adults at average risk, beginning at age 50 years and continuing until age 75 years. The USPSTF guidelines recommend several options, including stool testing, sigmoidoscopy, or colonoscopy as the appropriate screening methods.

ORAL 32

COLORECTAL CANCER: CLINICAL DIFFERENCES AMONG HISPANICS AND NON-HISPANIC WHITES: A SINGLE INSTITUTION’S EXPERIENCE OVER 20 YEARS

Author Insight from Daniel Pievsky, DO, RD, Rutgers New Jersey Medical School

What’s new here and important for clinicians?
Our study found that Hispanics were being diagnosed with colorectal cancer (CRC) at an earlier age and with more advanced disease than their non-Hispanic white counterparts. We also noted that once Hispanics were diagnosed, they tended to have a higher recurrence rate after treatment and a shorter lifespan in general. Hispanics are the largest and fastest growing ethnic group in the U.S., and it is of vital importance that we as clinicians are aware of potential cultural and ethnic differences in health and presentation of disease. For those physicians who regularly treat Hispanics, it may be worthwhile to ask about symptoms of CRC at an earlier age and to stress compliance with current screening modalities, such as colonoscopy or sigmoidoscopy (because Hispanics tended to have over 70% of their CRC on the left side) to hopefully detect these cancers at earlier stages. Additional studies are clearly needed, but if this information is confirmed by larger and prospective trials, a change in current screening guidelines for Hispanics may be justified.

What do patients need to know?
It is very important for all U.S. Hispanics to know that they may be at greater risk for colorectal cancer than their non-Hispanic white counterparts. The best thing that Hispanics can do is to see their primary care doctor regularly and follow current colon cancer screening guidelines, which may be able to detect these cancers early thus leading to earlier lifesaving treatment.

FEATURED FUNCTIONAL BOWEL DISORDERS ABSTRACTS

POSTER 1006

BREATHE TESTING FOR SMALL INTESTINAL BACTERIAL OVERGROWTH IN IRRITABLE BOWEL SYNDROME: A META-ANALYSIS

Author Insight from Jonathan Pourmorady, MD, Cedars-Sinai Medical Center

What’s new here and important for clinicians?
Our meta-analysis of 1,641 patients in nine case-control studies revealed that positive hydrogen breath tests are more common among irritable bowel syndrome (IBS) patients in comparison to healthy controls, suggesting that small intestinal bacterial overgrowth (SIBO) is more common in the IBS patient population.

What do patients need to know?
The pathogenesis of IBS is multifactorial with various host factors contributing to the underlying disease process. More recently, there has been mounting evidence that the gastrointestinal microbiome and bacterial imbalance play an important role in the development of IBS. Breath testing is a mainstay clinical tool commonly used to diagnose SIBO, and our study revealed that positive breath tests were more prevalent in the IBS patient population compared to healthy controls.
POSTER 1718
EFFECT OF ANTIDEPRESSANTS ON SLEEP IN FUNCTIONAL DYSPEPSIA

Author Insight from Yuri A. Saito-Loftus, MD, Mayo Clinic Rochester

What’s new here and important for clinicians?
Patients with functional dyspepsia (FD) frequently report fatigue. This study shows that FD patients frequently have poor sleep quality. This study suggests that a known side effect of amitriptyline — sleepiness — has resulted in longer sleep duration, but not necessarily improvement in global sleep quality. For FD patients reporting poor sleep, a potential added benefit of amitriptyline is longer nighttime sleep.

What do patients need to know?
Poor sleep quality is common in individuals with FD.

FEATURED SMALL INTESTINE/UNCLASSIFIED ABSTRACTS

POSTER 1282
SHORT DINNER TO BEDTIME INTERVAL CORRELATES WITH INCREASED INTESTINAL PERMEABILITY IN DAY WORKERS AND SHIFT WORKERS

Author Insight from Garth Swanson, MD, MS, Associate Professor of Medicine, Specialist in Digestive Diseases, Rush University Medical Center

What’s new here and important for clinicians?
The main signal that entrains the circadian rhythms of the gastrointestinal tract is food timing. Recently, there has been increased interest in how food timing can impact diseases linked to metabolic syndromes such as obesity and diabetes. In this study, we show that a short interval between bedtime can increase intestinal permeability, which is an important factor in diseases such as Crohn’s disease, celiac disease, and diabetes.

What do patients need to know?
Shift work is common in modern society, as is social jet lag or constantly adjusting one’s sleep/wake cycle on the weekend. Patients should be aware that eating late at night just before bed time may be associated with adverse health consequences.

POSTER 1294
TRYING TO STAY HEALTHY CAN SOMETIMES MAKE YOU SICK IF YOU HAVE CELIAC DISEASE: VITAMINS AT MASS MARKET RETAIL AND WAREHOUSE STORES OFTEN CONTAIN GLUTEN

Author Insight from Marie Borum, MD, EdD, MPH, Professor of Medicine, Director, Division of Gastroenterology and Liver Diseases, George Washington University

What’s new here and important for clinicians?
Gluten is an under-recognized component of vitamins. It is important that individuals with celiac disease adhere to gluten avoidance and are informed about potential sources for hidden gluten.

What do patients need to know?
Individuals with celiac disease must be aware that gluten can be contained in vitamins. It is important to carefully review the ingredients of all vitamins, supplements and medications.
FEATURED PANCREASS/BILIARY ABSTRACTS

ORAL 49

COST EFFECTIVENESS AND CLINICAL EFFICACY OF PLASTIC VS SELF-EXPANDABLE METAL STENTS FOR MANAGEMENT OF BILIARY OBSTRUCTION DUE TO PANCREATIC ADENOCARCINOMA IN PATIENTS UNDERGOING NEOADJUVANT THERAPY

Author Insight from Timothy B. Gardner, MD, MS, Dartmouth-Hitchcock Medical Center

What’s new here and important for clinicians?
This is the first study that demonstrates that fully covered metal stents are cost effective in the treatment of patients undergoing neoadjuvant therapy for pancreatic cancer. Previously, it was known that metal stents were less likely to occlude, but now we know that because metal stents prevent occlusion and the costs associated with that occlusion, the initial up front cost is offset by their prevention of subsequent complications and associated costs. This is the first time that this has been demonstrated in a randomized controlled trial.

What do patients need to know?
Clinicians should be placing fully covered metal stents when they treating patients who are diagnosed with pancreatic cancer because of their clinical efficacy and cost effectiveness.

POSTER 16

THE ASSOCIATION BETWEEN METEOROLOGICAL FACTORS AND STONE-ASSOCIATED PANCREATOHEPATOBILIARY DISEASE

Author Insight from Eitaro Kume, MD, St. Luke’s International Hospital

What’s new here and important for clinicians?
We are among the first in the world to use the differential value of barometric pressures as a new point of view. We have also discovered a new risk factor concerning the occurrence of gallstone-related hepatobiliary-pancreatic diseases. This fact may lead to further understanding of the mechanism of pathogenesis of gallstone-related events and development of new treatment.

What do patients need to know?
There may be certain days (rainy days, stormy days, changes of seasons, etc) of the year on which the risk for the occurrence of gallstone-related hepatobiliary-pancreatic diseases may rise. Therefore, avoiding other known gallstone-related aggravating factors during these periods could decrease the incidence of these conditions.

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