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WORLD GASTROENTEROLOGY NEWS

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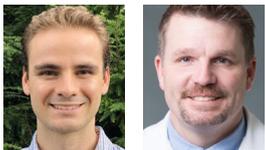


VOL. 27, ISSUE 3 SEPTEMBER 2022

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of Gastroenterology, December
12-14, 2022 in Dubai
Joost PH Drenth, MD, PhD



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Steven M. Hadley, Jr., AB
Timothy B. Gardner, MD, MS



Accomplishments of the
Philippine Society of Gastroenterology
Allan A. Policarpio, MD

Challenges of Implementing Fecal Microbiota Transplantation



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1. Introduction

Fecal microbiota transplantation has been established as a treatment option for recurrent *Clostridioides difficile* infection (CDI)¹ and has been showing promising results for other pathologies as well.² However, there are still several technical and economic aspects regarding FMT that raise difficulties in implementation, partly related to regulatory restraints and partly related to the elaborate process of donor screening and stool banking implementation.

2. Variations in legal framing

There is currently no universally accepted legal framing for FMT, which is understandable, as the exact microbial composition and corresponding metabolic profile of products used for microbiome restoration by FMT are not consistent. A large spectrum of regulatory statuses for FMT can be noticed in various regions, ranging from lacking specific regulation to strict framing.³

At the emergence of FMT as therapy for recurrent CDI, the US Food and Drug Administration (FDA) suggested that microbiota derived from feces meets the required criteria for being framed both a drug and a biological product and, therefore, warrants regulation for FMT as a drug and required the use of an investigational new drug application to perform FMT.⁴ This initial framing raised several issues, especially related to limiting patients' access to FMT on one hand and leading to the potential for a do-it-yourself approach for FMT, posing significant safety concerns.⁵ Consequently, the FDA revised its decision and has suggested an enforcement discretion for clinicians to use FMT for managing patients with recurrent *C. difficile* infection not responding to standard therapies.⁶ Since then, additional draft guidance have been issued but not yet

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finalized.

In addition to the USA, countries such as the UK and France also regulate FMT as a medicinal product.⁷ In the UK, framing FMT as a medicinal product led to compliance with good manufacturing practice (GMP) standards regarding the FMT production service and to involve the Medicines and Healthcare products Regulatory Agency (MHRA) as a regulating authority for accreditation and quality control. All FMT services within the UK are licensed by the MHRA. Moreover, the MHRA traced specific proportion for the FMT regulation, depending on various factors, including production scale, differentiating between clinical setting, with prescription on a named patient basis, larger scale production and clinical trial use.⁸

Considering that the FMT product combines the presence of both human cells and non-human components (eg, microbial genes), in 2012, the Competent Authorities on Substances of Human Origin Expert Group of the European Union debated the matter and concluded that fecal transplantation is not covered by the European Human Tissue Directive 2004/23/EC.⁹ The debate was resumed in 2014, when the European Commission concluded that fecal microbiota transplantation is not covered by Directive 2004/23/EC, based on the fact that the human cellular components of the FMT product are not the active one for the therapeutic effect, leaving each Member State the autonomy in regulating FMT on a national level.¹⁰ Moreover, all the following European Consensus on stool banking stated that stool banking should undergo appropriate approval from the relevant national regulatory authorities of each country.¹¹

3. Donor recruitment process and traceability of the sample from donor to recipient

Like any donation process, stool donation for FMT must also be voluntary, with donors being informed regarding the benefits and potential risks and offering a proper written informed consent. A thorough organization of the donor screening process is essential for an appropriate recruitment process. This should include an extensive questionnaire including key issues (such as disease history, intake of drugs altering the microbiota), aiming to minimize the risk of yielding transmission of infectious agents or unfavorable microbiota characteristics with the FMT administration. The next step in the donor screening process is represented by an extensive blood and stool testing, to exclude transmittable diseases, as indicated by several currently available guidelines.^{8, 11, 12}

There is increasing concern directed towards the traceability of samples from donors to recipient, with recommendations expanding the time to keep the records for FMT from at least ten years with the prior European consensus in 2019¹¹, to the latest European Consensus regarding stool banking, recommending a further extended period for keeping all data necessary to map the donation process for a minimum of 30 years. Records should not only include traceability information, but also current recommendations support keeping a frozen aliquot of each stool donation for future testing in the case of AEs, in keeping with regulatory guidance.¹³

In spite of all progress towards standardizing the donor screening and optimizing FMT, there are still several aspects to be optimized. The setting of stool banking may raise several ethical issues, considering that the donor should be available to donate on several occasions over time, with

repeating the screening tests at 8–12 weeks interval and applying a short questionnaire on the day of the donation to check for any recent-onset potential detrimental events.¹³ One aspect to be considered is the frequent collection of private information, but also the imposition of restrictions on donating, based on personal behavior (related to travel history, medication use) and requirement to submit to a significant amount of personal surveillance data. Consequently, ethical concerns include protecting the privacy of stool donors, together with limiting the perception of autonomy restriction and preventing a sense of obligation.¹⁴

4. Potential safety concerns and COVID-19 pandemic shift

Several safety concerns with FMT have been raised both through FDA alerts for potential transmission of multi-drug resistant organism Food and Drug Administration¹⁵, and during the COVID-19 pandemic, considering the evidence of potential digestive transmission of SARS CoV-2. Another current challenge is overcoming the paucity of donors in general and reaching suitable donors in particular. Studies have reported that donors have declined inclusion in the screening process, due to donation requirements, such as frequency and duration of donations.¹⁶ Moreover, a significant percentage of donors is excluded after the completion of the extensive questionnaire, reported around 50% in one Australian study and even raising up to over 90% following the clinical evaluation reported by the US OpenBiome stool bank.¹⁷ This aspect is of even higher concern, taking into account that these data are prior to COVID-19 pandemic, which raised further issues regarding FMT safety considering the potential fecal-oral transmission of SARS CoV-2 [18].¹⁸ This led to expanding the screening process with

including SARS CoV-2 transmission-related questions within the screening questionnaire and also SARS CoV-2 testing during the screening process. There is already encouraging data for successful FMT with donors sampled during the pandemic, without any SARS CoV-2 transmission, provided that the safety measures, including targeted questionnaire and SARS CoV-2 testing are applied within the screening process.¹⁹ Furthermore, there is promising data for developing standardized RT-PCR stool testing in the faecal donor samples,²⁰ contributing the improving potential donor screening and therefore increasing safety of the procedure.

5. Conclusions

Implementing FMT can be challenging, considering the need for expertise and costs. However, the need for a clear establishment of regulatory context of FMT and the resources required to develop stool banking are needed in order to maximize safety and accessibility of the procedure.

References

- McDonald LC, Gerding DN, Johnson S, et al. Clinical practice guidelines for *Clostridium difficile* infection in adults and children: 2017 update by the Infectious diseases Society of America (IDSA) and Society for healthcare epidemiology of America (SHEA). *Clin Infect Dis* 2018; 66:987–94.
- Ooijevaar RE, Terveer EM, Verspaget HW, et al. Clinical application and potential of fecal microbiota transplantation. *Annu Rev Med* 2019; 70:335–51.
- Verbeke, Janssens Y, Wynendaele E, De Spiegelee B, et al. Faecal microbiota transplantation: a regulatory hurdle? *BMC Gastroenterology* 2017; 17:128.
- Food & Drug Administration, Fecal Microbiota for Transplantation: Scientific and Regulatory Issues 309, May 2, 2013, <http://www.fda.gov/downloads/BiologicsBloodVaccines/NewsEvents/WorkshopsMeetingsConferences/UCM352903.pdf>
- Sachs R, Edelstein C. Ensuring the safe and effective FDA regulation of fecal microbiota transplantation. *J Law Biosci* 2015; 396–415.
- Guidance for industry: enforcement policy regarding investigational new drug requirements for use of fecal microbiota for transplantation to treat *Clostridium difficile* Infection not responsive to standard therapies; availability, 78 Fed. Reg. 42,965, 42,965 (July 18, 2013).
- Cammarota G, Gallo A, Ianiro G, et al. Emerging drugs for the treatment of *Clostridium difficile*. *Expert Opin Emerg Drugs* 2019; 24:17–28.
- Mullish BH, Quraishi MN, Segal JP, et al. The use of faecal microbiota transplant as treatment for recurrent or refractory *Clostridium difficile* infection and other potential indications: joint British Society of Gastroenterology (BSG) and Healthcare Infection Society (HIS) guidelines. *Gut* 2018; 67:1920–1941. Suppl Material 3.
- Directive 2004/23/EC of the European Parliament and of the Council of 31 March 2004 on setting standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells. Official Journal of the European Union, L 102/48.
- Competent authorities on substances of human origin expert group (CASoHO E01718) meeting of the competent authorities for tissues and cells 3–4 December 2014 Summary Report 2014.
- Cammarota G, et al. International consensus conference on stool banking for faecal microbiota transplantation in clinical practice. *Gut* 2019; 68:2111–2121.
- Gilca-Blanariu GE, Stefanescu G, Girleanu I, et al. Romanian national guideline on translating fecal microbiota transplantation applications related to *Clostridium difficile* infection into the local clinical practice. *J Gastrointest Liver Dis* 2021; 30(1):147–163.
- Keller JJ, Ooijevaar RE, Hvas CL, et al. A standardised model for stool banking for faecal microbiota transplantation: A consensus report from a multidisciplinary UEG working group. *United European Gastroenterol J* 2021; 9:229–247.
- Mikail M, O’Doherty KC, Poutanen SM, Hota SS. Ethical implications of recruiting universal stool donors for faecal microbiota transplantation. *Lancet Infect Dis* 2020; 20(3):e44–e49.
- Important Safety Alert Regarding Use of Fecal Microbiota for Transplantation and Risk of Serious Adverse Reactions Due to Transmission of Multi-Drug Resistant Organisms. Available at: <https://www.fda.gov/vaccines-blood-biologics/safety-availability-biologics/important-safety-alert-regarding-use-fecal-microbiota-transplantation-and-risk-serious-adverse>

16. Paramsothy S, Borody TJ, Lin E, Finlayson S, Walsh AJ, Samuel D, van den Bogaerde J, Leong RW, Connor S, Ng W, Mitchell HM, Kaakoush N, Kamm MA. Donor Recruitment for Fecal Microbiota Transplantation. *Inflamm Bowel Dis* 2015; 21(7):1600-6.
 17. Kassam Z, Dubois NE, Ling K, et al. 512 – donor health screening for fecal microbiota transplantation: prospective evaluation of 15,317 candidate donors. *Gastroenterology* 2019; 156:S-100–S-101.
 18. Guo, M., Tao, W., Flavell, R.A. et al. Potential intestinal infection and faecal–oral transmission of SARS-CoV-2. *Nat Rev Gastroenterol Hepatol* 2021; 18, 269–283.
 19. Khanna S, Tande A, Rubin DT, Khoruts A, Kahn SA, Pardi DS. Fecal microbiota transplantation for recurrent *C. difficile* infection during the COVID-19 pandemic: experience and recommendations. *Mayo Clin Proc* 2021; 96(6):1418-1425.
 20. Manzoor SE, Zaman S, Whalley C, Inglis D, Bosworth A, Kidd M, Shabir S, Quraishi N, Green CA, Iqbal T, Beggs AD. Multi-modality detection of SARS-CoV-2 in faecal donor samples for transplantation and in asymptomatic emergency surgical admissions. *F1000 Res* 2021; 11; 10:373.
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Message from the Editors



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To our WGO Community,

In this edition of our *e-WGN*, we begin with an expert point of view by Steven Hadley and Dr. Timothy Gardner for the expanding indications of islet cell autotransplantation (IAT), first utilized in 1977. Today, it is a more refined and accessible consideration to not discard the benign pancreas in several disease conditions including pancreatic inflammatory disease, trauma, islet cell tumors, pancreatic and ampullary adenocarcinoma, all while also reducing the risk of diabetes and other associated morbidity.

Next, Dr. Georgiana Gilcă-Blanariu and Dr. Sahil Khanna provide an insightful review regarding challenges in implementation of fecal microbiota transplantation (FMT) including regulatory constraints as well as issues related to both donor screening and implementation of stool banking. Additional safety concerns, particularly as it relates to the COVID-19 pandemic, are also discussed.

In an international collaborative effort to improve GI health care in Rwanda, Dr. Steve Bensen from Dartmouth Hitchcock Medical Center and Dr. Vincent Dusabejamba from Rwanda's primary teaching hospital, Centre Hospitalier Universitaire de Kigali, came together to create and build a Rwandan gastroenterology training program. The team shares the ardent goal, which first began in early 2014, and over time, these efforts have successfully evolved into the formation of the annual Rwanda Endoscopy Week. As of May 2022, the launch of the inaugural Rwanda gastroenterological fellowship program marks a significant feat. The results of the marked success and demonstration of sustainability in efforts are also shared during this year's Rwanda Endoscopy Week.

In celebration of World Digestive Health Day, each year WGO initiates a worldwide public health campaign with focus on a particular digestive or liver disorder. This year's campaign,

Colorectal Cancer Prevention: Getting Back on Track led by Dr. Aasma Shaukat (USA) and Dr. Michal Kaminski (Poland) is a social media awareness initiative with selfie card photos amplifying colorectal cancer prevention and screening efforts. Snap a photo and share in the awareness campaign efforts using #WDHD2022, #GettingBackOnTrack, #ColorectalCancer, and #ColonCancer.

The WGO Train the Trainers (TTT) program continues to expand in providing educational skills and bringing together faculty and participants from around the globe. Over the past 20 years, there have been 29 workshops held in 19 countries, with over 1,100 alumni with some of these testimonials shared with us.

President of WGO, Dr. Guilherme Macedo, who is also the President of the Portuguese Digestive Disease Week 2022, shares the many accomplishments of the week. Semana Digestiva 22 was held in June in Porto, Portugal with over 1,000 participants, providing clinically relevant and state-of-the-art lectures in all major GI topics. Next, Dr. Allan Policarpio, President of the Philippine Society of Gastroenterology, shares their great accomplishments over the past year including the 2022 Joint Annual Convention held in March 2022, with the theme of "Redefining the Future of GI Healthcare," as well as the October 2021 mid-year convention chaired by Dr. Teresita Cabreira, with the theme "Unlocking Opportunities in the New Normal."

This year, EASL's flagship International Liver Congress (ILC) 2022 brought together over 7,000 delegates from 114 countries with a spectacular scientific programme and offering

of the Postgraduate Course. Five new EASL Clinical Practice Guidelines were also recently published in the *Journal of Hepatology* and these were released during the congress. As you look at these guidelines, we also encourage you to review the four Cascade-Based WGO Practice Guidelines on hepatitis B, hepatitis C, hepatocellular carcinoma and management of acute viral hepatitis. WGO's Hepatology Interest Group recently hosted three distinct webinar series examining *The Global Burden of Viral Hepatitis*.

Hopefully you enjoy reading this e-WGN newsletter and we invite all of you to attend the World Congress of Gastroenterology held this year in Dubai, United Arab Emirates between December 12-14, 2022. This joint venture between the Emirates Gastroenterology & Hepatology Society (EGHS) and World Gastroenterology Organization (WGO) marks the first World Congress hosted in the Middle East. We hope to see you there!

Mahesh and Anita



Expanding Indications for Islet Cell Autotransplantation



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Introduction:

Islet cell autotransplantation (IAT) was first utilized in 1977 as a way to mitigate the risk of developing diabetes in patients who underwent pancreatectomy.¹ Since then, gradual improvements in isolation techniques have enabled IAT to serve as an effective treatment for chronic pancreatitis (CP) and recurrent acute pancreatitis (RAP).²⁻⁴ As IAT continues to be refined and become more accessible, evidence suggests that IAT can be expanded to include indications other than CP and RAP. By not discarding benign pancreas and by harvesting viable islets for transplantation, physicians will generate enhanced clinical outcomes for patients requiring pancreatectomy.

IAT Procedure:

After surgical excision of the pancreas, the main arteries in the head (gastroduodenal artery) and tail (splenic artery) of the pancreas are cannulated and flushed with lactated ringer's solution. Any non-pancreatic

tissue is removed. Then, an angiocath is inserted into the pancreatic duct(s) and flushed with a solution containing proteases and collagenases. After the pancreas is saturated with the enzyme solution, the organ is mechanically fractionated with scissors. These pieces are then put into a Ricordi chamber, which is shaken and warmed to augment enzymatic digestion. Every few minutes, samples are collected and stained for inspection under a microscope to examine islet cell form and number. During the isolation, the islets progress from being "embedded" in the exocrine tissue, to becoming "free" from the acinar tissue, to becoming "fragmented" with ongoing digestion. Although the stopping point of the isolation is subjective, some evidence suggests that erring on the side of a longer digestion towards the development of more "fragments" results in enhanced clinical glycemic outcomes.⁵ Once the digestion is deemed finished, the cells are gathered, centrifuged, and then washed. They are then suspended with

human serum albumin and heparin and infused into the portal venous system.⁶

Expanding Access to IAT:

Although local isolation with a dedicated islet isolation facility remains the gold standard for IAT, islet isolation labs are expensive and require specialized training and equipment. Consequently, some hospitals coordinate with centers that have such facilities to expand the accessibility of IAT. In this remote isolation, the explanted pancreas is transported to a remote site for isolation and then transported back for infusion of the islets. Though local isolation leads to improved islet function following transfusion, remote isolation results in similar rates of insulin independence as local isolation.

Moreover, local islet isolation without a dedicated islet isolation lab, first reported by Fan et al., presents another solution for the scarcity of dedicated islet isolation facilities.⁷ The isolation occurs in the operating room after pancreatic resection. Navas et al. demonstrated that intraoperative isolation is comparable to remote isolation regarding IEQ/kg, insulin requirements, mean c-peptide levels, and hemoglobin A1c (HbA1c).⁸ Given these results, both remote and intraoperative isolation present effective options for when local isolation with a dedicated islet cell lab is not feasible.

Pancreatic Inflammatory Disease:

When partial pancreatectomy is indicated for pancreatic inflammatory disease, IAT should be considered to reduce the patient's risk of diabetes. In a retrospective study of 22 patients who had pancreatectomy for benign pan-

creatic inflammatory disease, Siegel et al. found that compared to those who did not have IAT, the nine who underwent IAT experienced statistically significant smaller increases in HbA1c levels. At 22 months post-operation, IAT patients had an average HbA1c increase of 0.42 mmol/mol versus the average increase of 2.83 mmol/mol in patients who did not have IAT. Of the 22 patients evaluated in the study, one IAT patient developed diabetes compared to three control patients, though this value did not reach statistical significance.⁹

Ris et al. conducted a study comparing islet isolation results in 15 patients who underwent IAT after partial pancreatectomy with those results in 10 patients who had CP or were donors with brain death (DBD). Those who underwent IAT after a partial pancreatectomy experienced statistically significantly higher mean islet yields (5,455 IEQ/gram) than the CP and DBD patients (1,457 IEQ/gram in CP patients and 3,738 in DBD patients). At ten years following the operation, the investigators observed insulin independence in 94 percent of the IAT partial pancreatectomy patients combined with a 100 percent survival rate.¹⁰

In another study, Balzano et al. examined patients who underwent partial pancreatectomy for benign or borderline malignant pancreatic disease and either received IAT or no IAT. Those who received IAT experienced statistically significant longer diabetes-free survival rates over a ten-year period than those who did not receive IAT. Balzano also observed a trend towards insulin independence in patients who underwent IAT, though this value did not reach statistical significance. 76 percent of patients who had IAT remained insulin independent compared to 55.9 percent of patients who did not have IAT.¹¹

Despite the absence of random-

ized controlled trials, the evidence indicates the efficacy and safety of IAT for enhancing clinical glycemic outcomes in patients who have partial pancreatectomy for benign pancreatic disease. Jin et al. determined that at two years post-operation, only 27 percent of patients with an islet yield greater than 5,154 IEQ/Kg experienced impaired glycemic control compared to 86 percent of patients with a yield under 5,154 IEQ/Kg.¹² Thus, a high islet cell yield combined with the right patient (each case should still be considered and evaluated individually) has the potential to enhance both clinical outcomes and the patient's quality of life.

Trauma:

Despite the rarity of pancreatic trauma, IAT should be considered in cases of damage resulting in surgical removal in order to mitigate the risks of diabetes. Three cases have been reported—each underscoring the value of IAT when benign pancreas is resected. In one case, an 18-year-old female victim of a motor vehicle collision required a partial pancreatectomy due to trauma. IAT was administered because of a family history of diabetes. Although she initially required a small amount of insulin upon discharge, at 20 months post-operation, she was insulin independent with a healthy HbA1c of 5.6 percent.¹³ In the next case, an 18-year-old male was stabbed, which resulted in pancreatic ductal injury requiring a total pancreatectomy. After IAT, the patient was insulin independent the day of his transplantation. He remained insulin independent at his six-year follow-up.¹³ The third case involved a 21-year old male who was shot in the abdomen three times. After extensive abdominal surgery, IAT was performed, which resulted in normal islet function 114 days post-transplant. Despite requiring a small amount of insulin immediately following the procedure,

the patient successfully discontinued insulin 24 days post-transplant.¹⁴

Islet Cell Tumors:

Islet cell tumors are contraindications for IAT. In one patient who had a planned IAT for CP, the physicians incidentally discovered a neuroendocrine tumor. Although they ultimately decided to proceed with the patient's IAT, islet cell malignancy remains a contraindication for IAT.¹⁵

Pancreatic Adenocarcinoma:

Though typically IAT is limited in cases of cancer because of the risk of spreading cancerous cells, some evidence suggests that IAT should not be completely excluded in patients with pancreatic cancer. One case report of a 63-year-old male who underwent pancreatectomy for pancreatic adenocarcinoma received IAT. After an R₀ resection of the pancreatic mass, the physicians discovered a life-threatening leakage of the pancreaticojejunostomy. Consequently, a total pancreatectomy with IAT was performed. A K-ras mutation was present in the adenocarcinoma but was not detected in the islets before transplantation. At his one-year follow-up, although he required exogenous insulin, his engrafted islets functioned, no signs of local or liver metastases existed, and no evidence of K-ras appeared in the peripheral blood. However, the patient passed 2.5 years post-operation from tumor recurrence.¹⁶ In any potential case involving IAT after pancreatectomy for malignancy, the patient should be informed of the risk of infusing malignant cells into the liver and should be monitored closely for liver metastases. Further investigation is needed to reveal to what extent and in which cases pancreatic cancer is multicentric and to determine whether IAT can be performed safely without contamination.

Ampullary Adenocarcinoma:

One case has been reported in which a 72-year-old woman with acute necrotizing pancreatitis secondary to an ampullary adenocarcinoma underwent total pancreatectomy because the normal treatment of pancreaticoduodenectomy to excise the ampullary lesion was contraindicated due to the necrotizing pancreatitis. To diminish the risk of diabetes, IAT accompanied the pancreatectomy. At her three-month post-operative follow-up, she only required a small amount of exogenous insulin.¹⁷ Her case demonstrates the efficacy of pancreatectomy with IAT for treating ampullary adenocarcinoma when the preferred method of pancreaticoduodenectomy cannot be performed.

Conclusion:

As the IAT procedure continues to be refined, expanding indications for IAT enables this effective treatment option to be utilized in a greater number of patients who must undergo total or partial pancreatectomy and who would significantly benefit from the enhanced clinical glycemic outcomes associated with IAT. While each case should be evaluated on an individual basis, as a general rule, benign pancreas should not be discarded. Given the success of IAT, islet transplantation should be considered to reduce the risk of diabetes and its associated morbidity.

References:

- Najarian JS, Sutherland DE, Matas AJ, Steffes MW, Simmons RL, Goetz FC. Human islet transplantation: a preliminary report. *Transplant Proc.* 1977;9(1):233-236.
- Sutherland DE, Radosevich DM, Bellin MD, et al. Total pancreatectomy and islet autotransplantation for chronic pancreatitis. *J Am Coll Surg.* 2012;214(4):409-426. doi:10.1016/j.jamcollsurg.2011.12.040.
- Gardner TB, Adler DG, Forsmark CE, Sauer BG, Taylor JR, Whitcomb DC. ACG Clinical Guideline: Chronic Pancreatitis. *Am J Gastroenterol.* 2020;115(3):322-339. doi:10.14309/ajg.0000000000000535.
- Chinnakotla S, Beilman GJ, Dunn TB, et al. Factors Predicting Outcomes After a Total Pancreatectomy and Islet Autotransplantation Lessons Learned From Over 500 Cases. *Ann Surg.* 2015;262(4):610-622. doi:10.1097/SLA.0000000000001453.
- Hadley Jr. SM, Smith KD, Chaidarun SS, Fischer DA, Gardner TB. Progression to Fragmentation during Cellular Isolation Improves Clinical Glycemic Outcomes in Patients Undergoing Islet Cell Transplantation. *JOP.* 2021; S7:01-08.
- Kesseli SJ, Smith KA, Gardner TB. Total pancreatectomy with islet autologous transplantation: the cure for chronic pancreatitis?. *Clin Transl Gastroenterol.* 2015;6(1):e73. Published 2015 Jan 29. doi:10.1038/ctg.2015.2.
- Fan CJ, Hirose K, Walsh CM, et al. Laparoscopic Total Pancreatectomy With Islet Autotransplantation and Intraoperative Islet Separation as a Treatment for Patients With Chronic Pancreatitis. *JAMA Surg.* 2017;152(6):550-556. doi:10.1001/jamasurg.2016.5707.
- Navas CM, Smith KD, Chaidarun SS, Fischer DA, Gardner TB. Effectiveness of Intraoperative Versus Dedicated Islet Cell Laboratory Isolation for Total Pancreatectomy With Islet Autotransplant. *Transplant Direct.* 2022;8(5):e1314. Published 2022 Apr 7. doi:10.1097/TXD.0000000000001314.
- Siegel M, Barlowe T, Smith KD, et al. Islet autotransplantation improves glycemic control in patients undergoing elective distal pancreatectomy for benign inflammatory disease. *Clin Transplant.* 2020;34(7):e13891. doi:10.1111/ctr.13891.
- Ris F, Niclauss N, Morel P, et al. Islet autotransplantation after extended pancreatectomy for focal benign disease of the pancreas. *Transplantation.* 2011;91(8):895-901. doi:10.1097/TP.0b013e31820f0892.
- Balzano G, Maffi P, Nano R, et al. Diabetes-free survival after extended distal pancreatectomy and islet auto transplantation for benign or borderline/malignant lesions of the pancreas. *Am J Transplant.* 2019;19(3):920-928. doi:10.1111/ajt.15219.
- Jin SM, Oh SH, Kim SK, et al. Diabetes-free survival in patients who underwent islet autotransplantation after 50% to 60% distal partial pancreatectomy for benign pancreatic tumors. *Transplantation.* 2013;95(11):1396-1403. doi:10.1097/TP.0b013e31828c0c29.
- Garraway NR, Dean S, Buczkowski A, et al. Islet autotransplantation after distal pancreatectomy for pancreatic trauma. *J Trauma.* 2009;67(6):E187-E189. doi:10.1097/TA.0b013e31815ede90.
- Jindal RM, Ricordi C, Shriver CD. Autologous pancreatic islet transplantation for severe trauma. *N Engl J Med.* 2010;362(16):1550. doi:10.1056/NEJMc0912392.

- 15 Serrano OK, Peterson KJ, Mettler T, et al. Incidental Neuroendocrine Tumor Discovered After Total Pancreatectomy Intended for Islet Autotransplantation: Important Considerations for Surgical Decision-Making. *Pancreas*. 2018;47(6):778-782. doi:10.1097/MPA.0000000000001069.
- 16 Forster S, Liu X, Adam U, et al. Islet autotransplantation combined with pancreatectomy for treatment of pancreatic adenocarcinoma: a case report. *Transplant Proc*. 2004; 36(4):1125-1126.
- 17 Iyegha UP, Asghar JA, Beilman GJ. Total pancreatectomy and islet autotransplantation as treatment for ampullary adenocarcinoma in the setting of pancreatic ductal disruption secondary to acute necrotizing pancreatitis. A case report. *JOP*. 2012; 13(2):239-242.



Come to the World Congress of Gastroenterology, December 12-14, 2022 in Dubai



Joost PH Drenth, MD, PhD

Chair, Scientific Programs Committee, WGO
Nijmegen, The Netherlands

I am happy to announce the World Congress of Gastroenterology (WCOG) will take place in Dubai, United Arab Emirates, between 12 and 14 December 2022. The WCOG 2022 is a joint venture of the Emirates Gastroenterology & Hepatology Society (EGHS) and the World Gastroenterology Organisation (WGO). We are particularly proud to announce that this is the first time that the World Congress will be held in the Middle East.

The WCOG Scientific Programs Committee members include Carolina Olano, Jonathan A. Leighton, Mohammed Banama, Nawal Al Nahdi, Ahmed-Mohammed-Khassouan, and myself. My colleagues have been instrumental in designing a competitive program that stands out by topics and outstanding faculty.

If there is one lesson that we take away from the COVID-19 pandemic, it is that nothing can replace personal contact. So that is why we have decided to have an in-person only World Congress. So, you need to be there to enjoy all the fun.

What can you expect from us?

The venue for WCOG 2022 is the majestic Dubai International Convention & Exhibition Centre. It is a very well-equipped event venue, strategically located in Dubai's business district.

We have some unique offerings in store for you this year. The World Congress is being preceded by a fantastic postgraduate teaching program that plays out over two full days. The course brings a great line up of fantastic speakers to you. We went through great lengths to select those topics that you see in practice quite frequently, but are not featured regularly at other meetings, such as cardiogastroenterology and bacterial overgrowth in the small bowel.

Live endoscopy is one of the greatest magnets of WCOG 2022. Indeed, we have Jonathan Leighton and Sett Gross as drivers behind the live endoscopy sessions. They have come up with an exciting program that gives you the chance to observe firsthand the progress has been in endoscopy.

This will allow you to brush up your skills, to learn new tricks, and to see the newest tools that have entered the market. Sessions will be streamed from Rashid Hospital in the United Arab Emirates.

One of the greatest benefits of WCOG 2022 is that the program allows for a close interaction between faculty and participants. We have created sunrise sessions on hot topics in gastroenterology. In Dubai, you will find sessions on hepatitis D, non-alcoholic liver disease, upper gastrointestinal bleeding, and fecal incontinence, to name a few. The experts will present a brief state of the art of the topic, and you will then be able to interact and ask the questions you always wanted to ask.

A fine and new addition to the program is the pro-con debates. Medicine is not without controversial topics and from clinical practice we all know these issues where the evidence is just not there. That is why it is important to provide you with multiple perspectives on burning themes such as whether drug management in IBD should be "top down or bottom up."

DUBAI 2022
WCOG
WORLD CONGRESS OF GASTROENTEROLOGY

SAVE THE DATE
12-14 | December 2022

DUBAI CONVENTION AND EXHIBITION CENTER
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GASTROENTEROLOGY & HEPATOLOGY SOCIETY

The backbones of WCOG 2022 are the symposia. We have designed more than 30 clinical symposia for you covering a wide range of topics. We bring 90-minute symposia filled with four to five short talks. This allows you to get up to speed within a very short time. The expert faculty is there to help you navigate controversial areas. For example, the symposium on hepatocellular carcinoma gives you the newest insight in the management of this complex disorder

Conscious of the environmental pressure on our planet, we would like to pay attention to climate change and where we come in as gastroenterologists. Green endoscopy has become a relevant topic and we need

to think how we can contribute to a better world. We will give you the tools to achieve this goal, for example, improving waste management in your endoscopy suite.

Carolina Olano, WGO's current Secretary General and former Chair of the Scientific Program Committee, spearheaded the initiative to have a symposium dedicated to women in gastroenterology. This symposium will focus on issues unique to female gastroenterologists and will serve as a platform to share experiences and offer learning pathways to go forward. I have no doubt that this will inspire female gastroenterologists.

The proximity to Africa offers us

with the unique opportunity to have a superb faculty from this region to educate us on tropical disorders that are common in sub-Saharan Africa and are seen incidentally in other parts of the world. We will learn from the unique experience gained in managing these patients. This is an unparalleled opportunity and shows what WGO stands for: global outreach.

WCOG is a great opportunity to meet and WGO offers you a great platform to make that happen. Take the opportunity to connect and reconnect with your peers in a stimulating environment and become part of the WGO family. Dubai is waiting for you.



WDHD 2022: Raising Awareness One Selfie at a Time

Each year, the World Gastroenterology Organisation (WGO) celebrates World Digestive Health Day (WDHD) by initiating a worldwide public health campaign that focuses on a particular digestive or liver disorder in order to increase awareness of prevention, prevalence, diagnosis, management, and treatment of the disease or disorder worldwide. This year's campaign *Colorectal Cancer Prevention: Getting Back on Track*, led by co-chairs Drs. Aasma Shaukat (USA) and Michal Kaminski (Poland), was held on Sunday, 29 May 2022.

As part of the campaign, WGO members were asked to take a selfie card photo, amplifying short messages related to CRC prevention and screening efforts. Healthcare professionals and the public shared their photos with WGO, with submissions received from all parts of the world. WGO is delighted to feature some of these photos in this issue of e-WGN as well as on WGO's social media channels.

In addition to efforts organized locally by WGO member societies, WGO members were also encouraged to engage with the awareness campaign online through social media by using the hashtags #WDHD2022, #GettingBackOnTrack, #ColorectalCancer, and #ColonCancer. You are invited to see more activities

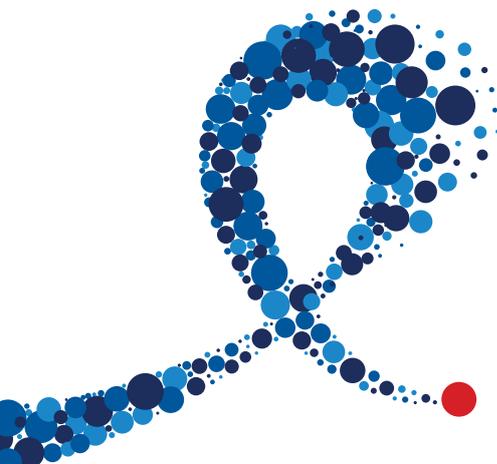
from WDHD 2022 by viewing these hashtags on Facebook, Twitter, Instagram, and LinkedIn.

About Colorectal Cancer

Colorectal cancer (CRC) is the second leading cause of cancer-related deaths in the world. The majority of CRCs progress through the adenoma-carcinoma sequence, presenting opportunities to remove precursor lesions and prevent cancer or to identify CRC in its earliest, curable stages. There are also several modifiable dietary, lifestyle, and environmental risk factors for CRC. When detected in the preclinical stages, CRC tends to be localized and often curable with surgical resection with an excellent prognosis.

CRC screening efforts are directed towards the detection of early stage colorectal cancer and removal of pre-neoplastic lesions. There are several screening modalities that are effective and cost-effective, such as fecal immunochemical test, flexible sigmoidoscopy, CT colonography, and colonoscopy. In the last decade, studies have highlighted a worrisome increase in CRC incidence among younger individuals. In addition, the COVID-19 pandemic disrupted CRC screening programs and created a backlog of endoscopy procedures across the world.

By increasing worldwide awareness of the risk factors for CRC, benefits of screening, and practical tools to implement CRC screening programs, we can affect overall human health across the globe, in particular among low- and middle-resource countries. The WGO global network of member societies, partners, and sponsors is ideal for raising this level of awareness.



Editorial | Expert Point of View | WGO International Meetings | WDHD News | WGO News | WGO Global Guidelines | Calendar of Events

WGO On The Road Once Again

With fewer travel restrictions in place, WGO has been able to have a presence at a variety of meetings and events over the last few months. Here is a snapshot of recent activities!



WGO Members gather for a group selfie during the WGO Networking Reception on 22 May 2022 while attending Digestive Disease Week in San Diego, California, USA.



WGO Governing Council Members gathered for important discussions on 21 May 2022 while attending Digestive Disease Week in San Diego, California, USA. From left to right, Profs. Mark Topazian, Luis Carlos Sabbagh, Nancy Reau, Varocha Mahachai, Guilherme Macedo, Naima Lahbabi-Amrani, Carolina Olano, and Geoffrey Metz.



WGO Past President Naima Lahbabi-Amrani and Secretary General Carolina Olano complete their WDHD 2022 Selfie Cards picture during the WGO Networking Reception on 22 May 2022.



Prof. Frank Zerbib facilitates endoscopy training with participants during the 20th anniversary course of the WGO Training Center in Rabat, Morocco in June 2022.

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Participants gather for a group selfie during the 20th anniversary course of the WGO Training Center in Rabat, Morocco in June 2022.



WGO Volunteer Prof. Lubna Kamani said hello to Secretariat Staff Member Zach Blevins at WGO's booth at EASL's International Liver Congress in London, United Kingdom on 24 June 2022.



WGO President Guilherme Macedo, along with IFSO Immediate Past President Lilian Know, chaired the *Liver Issues in Obesity* panel on 25 August 2022 at the 25th IFSO World Congress in Miami, Florida, USA.



WGO President Guilherme Macedo, Prof. Reem Sharaiha, and Prof. David Vitor at WGO's booth on 25 August 2022 at the 25th IFSO World Congress in Miami, Florida, USA.

WGO Train the Trainers Alumni Testimonials

Developed in 2001, the Train the Trainers (TTT) program concentrates on expanding the educational skills of educators in the fields of gastroenterology, hepatology, endoscopy, and GI surgery, who are responsible for teaching, using current educational techniques and philosophies. It brings together faculty and participants from across the globe in an intensive and interactive workshop, characterized by numerous hands-on sessions with many opportunities for discussion. TTT is dedicated to the development of teaching and training skills.

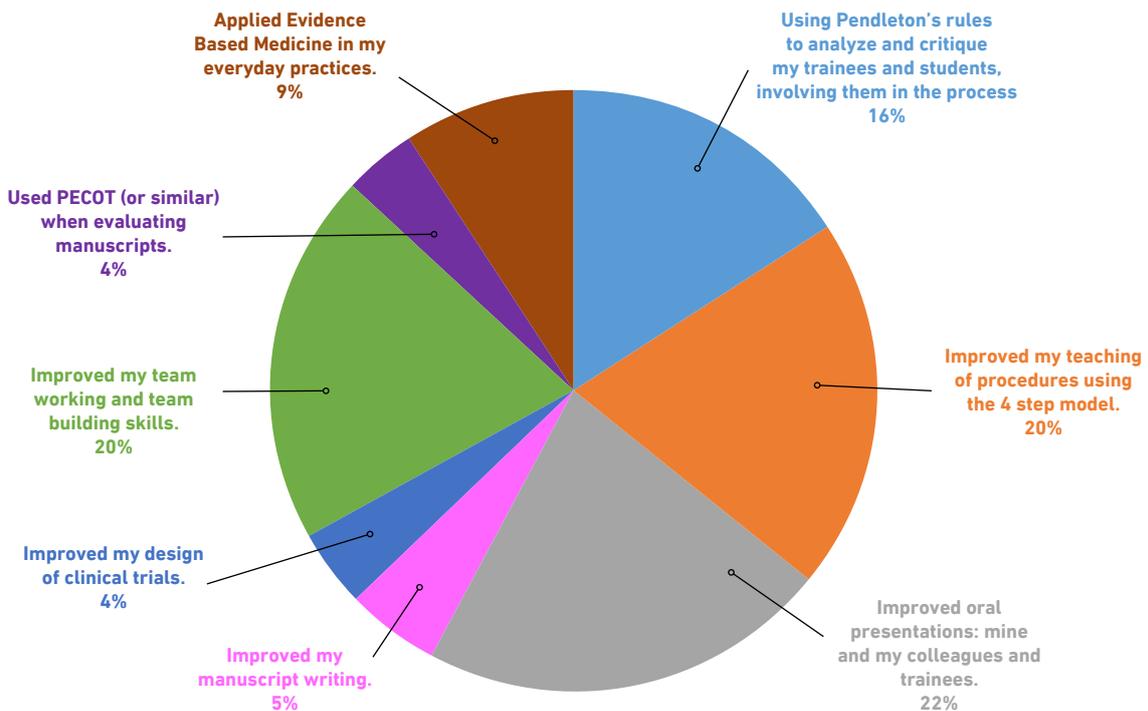
Over the past 20 years, 28 workshops have been held in 18 different countries across six continents with over 1,100 alumni from more than 90 countries.



A map of where TTT alumni live



Participants and faculty join together for a group photo at TTT Warsaw 2022 this past August.



In a recent survey to alumni, we asked them, "What 3 Specific Changes Did You Make in Your Practice After?"

TTT: 2018 – Khartoum, Sudan



Avinash Balekuduru, MD
Bangalore, India

I attended the TTT in Khartoum, Sudan, and it was my first time visiting Africa. The program deals with different aspects of being a researcher - how to deal with peers/superiors, writing papers, short group learning, discussion of common topics, and hands-on conducting training. The workshops are usually only for six hours a day and remaining time is usually relaxation. The program is intense with sessions starting from 7am and ending at 7pm. The energy of the faculty is supreme. The dedication is beyond words or description. We were motivated by them.

A few things I have put into practice since the TTT:

- PECOT: Population; Exposure/ intervention; Control; Outcome; Time Frame
- Searching a CAT: Scenario; Search in PubMed; Commentary; Critical appraisal; PECOT; Take home message
- Make an impactful PowerPoint presentation



2018 – Khartoum, Sudan – Group Boat Tour on the Nile



2018 – Khartoum, Sudan – Group Photo with new friends



2018 – Khartoum, Sudan – Workshop Group Work

The Global Burden of Viral Hepatitis Webinar Series

WGO's Hepatology Interest Group, in celebration of World Hepatitis Day, has organized a webinar series examining viral hepatitis over three webinar installments. Globally, 354 million people live with hepatitis B or C. In addition, hepatitis is one of the most deadly diseases - claiming the life of someone every 30 seconds.

Entitled *The Global Burden of Viral Hepatitis*, expert speakers provide important information on various topics relating to hepatitis D, hepatitis C, and hepatitis B. Registration is free and open to all, and completion of the registration process is required to access the webinars live at the scheduled times. Register today using the link below.

Two sessions of the series have already been broadcasted. Developments with Hepatitis D was aired on 28 July on World Hepatitis Day. A Closer Look at Hepatitis C was aired on 25 August. The final session, Breakthroughs with Hepatitis B, will commence at 12:00 UTC on 22 September. Below is the complete series overview.

- The Global Burden of Viral Hepatitis – Developments with Hepatitis D**
 Date: 28 July at 12:00 UTC
 Speakers & Topics:
 Prof. Cecilia Cabrera (Peru) – Epidemiology and Risk Factors
 Prof. Alice Lee (Australia) – Screening and Diagnosis Algorithm
 Prof. Nancy Reau (USA) – Current Therapy and Data on New Therapy Close to Market
- The Global Burden of Viral Hepatitis – A Closer Look at Hepatitis C**
 Date: 25 August at 12:00 UTC
 Speakers & Topics:
 Prof. Mohamed El-Kassas (Egypt) – Screening Guideline Changes
 Prof. Rui Gaspar (Portugal) – Simplified Therapy
 Prof. Mustapha Benazzouz (Morocco) – Opportunities for Microelimination
- The Global Burden of Viral Hepatitis – Breakthroughs in Hepatitis B**
 Date: 22 September at 12:00 UTC
 Speakers & Topics:
 Prof. Rui Tato Marinho (Portugal) – Push for Universal Screening and Vaccination Updates
 Prof. Ebada Said (Egypt) – Indications for Treatment and Potential Areas for Expansion
 Prof. Suna Yapali (Turkey) – Stopping Rules and Risk for Relapse

Recordings of the webinar sessions will be released following the conclusion of the series. Registered attendees will receive first notification. Therefore, we encourage you to complete the registration process for the series. In addition, the release of the recordings will be announced on WGO's social media channels on [Facebook](#), [Twitter](#), [LinkedIn](#), and [Instagram](#).

About World Hepatitis Day

Organized by the World Hepatitis Alliance, World Hepatitis Day (WHD) takes place every year on 28 July bringing the world together under a single theme to raise awareness of the global burden of viral hepatitis and to influence real change. In 2022 the theme is "I Can't Wait." World Hepatitis Day is one of WHO's seven officially mandated global public health days. Get involved and access campaign resources on the World Hepatitis Day website: <https://www.worldhepatitisday.org/>



THE GLOBAL BURDEN OF VIRAL HEPATITIS

A Webinar Series



Developments with Hepatitis D

28 July | 12:00 UTC



Epidemiology and
Risk Factors

Prof. Cecilia Cabrera
Peru



Screening and
Diagnosis Algorithm

Prof. Alice Lee
Australia



Current Therapy and
Data on New Therapy
Close To Market

Prof. Nancy Reau
United States

A Closer Look at Hepatitis C

25 Aug. | 12:00 UTC



Screening Guideline
Changes

Prof. Mohammed El-Kassas
Egypt



Simplified Therapy

Prof. Rui Gaspar
Portugal



Opportunities for
Microelimination

Prof. Mustapha Benazzouz
Morocco

Breakthroughs in Hepatitis B

22 Sept. | 12:00 UTC



Push for Universal
Screening and
Vaccination Updates

Prof. Rui Tato Marinho
Portugal



Indications for
Treatment and Potential
Areas for Expansion

Prof. Ebada Said
Egypt



Stopping Rules and
Risk for Relapse

Prof. Suna Yapali
Turkey



Organized by the WGO Hepatology Interest Group

Rwanda Endoscopy Week: A Live International Collaborative Commitment to Improve GI Health for All



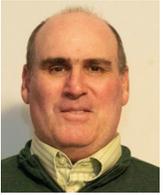
Niyongira Jean Paul, MD

Chief Internal Medicine Resident, University of Rwanda



Rebecca Strigenz, BS

University of Wisconsin School of Medicine and Public Health



Brent Shannon, MA

Graduate student TDI



Rebecca E. Laird, MD, MPH

Adjunct Professor of Medicine, Dartmouth Geisel School of Medicine



Steve P. Bensen, MD

Professor of Medicine, Dartmouth Geisel School of Medicine
President, GI-Rising Rwanda



Dusabejamba Vincent, MD

Senior Lecturer/CMHS/SoMP, Senior Consultant Internist, Endoscopist
President, Rwanda Society for Endoscopy
Team Leader, Rwanda Endoscopy Week

Introduction/Objectives/Methods

Rwanda, a country of over 13 million people located in East Africa, suffers from a heavy burden of gastrointestinal disease. Despite a high prevalence of gastrointestinal malignancy, endemic *H. pylori* with associated peptic ulcer disease, and advanced cirrhotic and non-cirrhotic portal hypertension among other conditions, gastrointestinal specialized care remained rudimentary throughout the 20th century. Since the mid-1990's however, significant health care advances have been made in Rwanda with the implementation of nationwide, universal health care and massive investments in primary care. However, gastrointestinal diagnostic and therapeutic endoscopic services remained limited. Prior to 2014, Rwanda had only few internists performing primarily diagnostic upper endoscopies.

This all changed beginning in 2014 when Dr. Steve Bensen, MD, a gastroenterologist at Dartmouth Hitchcock Medical Center (DHMC) partnered with Dr. Vincent Dusabejamba, a Rwandan internist at Rwanda's primary teaching hospital, Centre Hospitalier Universitaire de Kigali (CHUK), through the Human Resources for Health (HRH) program. This collaboration began with the lofty goal of creating a Rwandan gastroenterology training in Rwanda with the hope of bringing sustainable gastroenterological care throughout Rwanda. Initially, the partnership focused on increasing the capacity for endoscopic procedures in Rwanda by bringing suitcases full of endoscopy equipment and training existing Rwandan internists in therapeutic endoscopy. These efforts evolved into the formation of the Rwanda Society

Procedure			Province of origin						Total
			DRC= Democratic Republic of Congo						
			DRC	East	Kigali	North	South	West	
Colonoscopy	Age	<18	0	0	2	0	3	0	5
		>50	1	0	19	4	5	3	32
		18-50	0	4	18	3	18	5	48
	Total		1	4	39	7	26	8	85
EGD	Age	<18	0	0	10	1	8	3	22
		>50	1	10	49	10	35	74	179
		18-50	1	16	79	18	66	92	272
	Total		2	26	138	29	109	169	473
ERCP	Age	>50			6				6
		18-50			2				2
	Total				8				8
Total	Age	<18	0	0	12	1	11	3	27
		>50	2	10	74	14	40	77	217
		18-50	1	20	99	21	84	97	322
	Total		3	30	185	36	135	177	566

Table 1. Demographic Characteristics

for Endoscopy, which began hosting their annual Rwanda Endoscopy Week in 2017. International teams are comprised of American, Dutch, and Australian gastroenterologists, fellows, residents, endoscopy nurses, technicians, and biomedical engineers. These professionals work with and train Rwandan teams to perform esophagogastroduodenoscopy (EGD), colonoscopy, esophageal varices ligation, balloon dilation, and endoscopic retrograde cholangiopancreatography (ERCP), among other therapeutic endoscopic procedures. The continued collaboration also spawned bilateral educational exchanges where Rwandan residents and faculty have trained at DHMC and American medical students, residents, and fellows have participated in Rwanda Endoscopy Week to further strengthen the partnership.

Now, eight years later, the goal set out by Dr. Bensen and Dr. Dusabemjambo has begun to come to fruition. The inaugural Rwanda gastroenterological fellowship was approved in May 2022 and its class has been selected to begin the formal two-year gastroenterological subspecialty training in teaching, research, and clinical care. EGD and colonoscopy are now performed year-round in

Rwanda, thanks to the continued training of Rwandan internists in gastroenterological procedures. Most recently the Rwanda Society for Endoscopy research symposium occurred from March 14 to 18, 2022, with gastroenterological research conducted in Rwanda presented as well as gastroenterological and oncologic didactic sessions by the international counterparts. It was followed by the 4th annual Rwanda Endoscopy Week (REW-4) from March 21 to 25, 2022. Previous REW conferences were held in 2017, 2018, and 2019, but

the COVID-19 pandemic caused a nearly two-year hiatus.

The REW conference was organized by the Rwanda Society for Endoscopy and collaborating organizations and institutions included the University of Rwanda, GI Rising Rwanda, Boston Scientific Corporation, and the World Endoscopy Organization.

Participants & Sites

Five operational sites participated in REW-4: Gisenyi District Hospital, CHUK, Centre Hospitalier Universitaire de Butare (CHUB), King

Procedure	Main indications	Sex		Total
		F	M	
Colonoscopy	Abdominal pain	24.4%	6.8%	15.3%
	Constipation	46.3%	43.2%	44.7%
	Diarrhea	2.4%	2.3%	2.4%
	Previous imaging findings		11.4%	5.9%
	Rectal bleeding	26.8%	34.1%	30.6%
	Therapeutic		2.3%	1.2%
EGD	Abdominal pain		.5%	.2%
	Control exam	3.6%	3.6%	3.6%
	Dysphagia	1.4%	3.1%	2.1%
	Epigastric pain	82.2%	80.2%	81.4%
	Foreign body	.4%		.2%
	Previous imaging findings	.4%	.5%	.4%
	Therapeutic	.7%		.4%
	Upper GI bleeding	5.3%	5.7%	5.5%
	Vomiting	6.0%	5.7%	5.9%
	Weight loss		.5%	.2%
ERCP	Obstructive jaundice	100.0%	100.0%	100.0%

Table 2. Main Complaints (N = 566 cases)

Faisal Hospital, and Charite Digestive Charity Clinic. These sites had a combined total of 97 healthcare personnel, including eight gastroenterologists, 12 Internal medicine specialists, and other specialists, nurses, and anesthesia technicians.

Results

A total of 566 patients were examined during REW-4 (Table 1). The majority (322 of 566) were between the ages of 18 and 50 years and most came from three provinces (Kigali, South, and West). Of these, the most frequently reported patient complaints were epigastric pain (81.4%), constipation (44.7%), rectal bleeding (30.6%), and abdominal pain (15.3%) (Table 2). Percentages of epigastric pain, constipation, and rectal bleeding were similar between men and women but approximately three-times more women had abdominal

pain than men (24.4% versus 6.8%).

During REW-4 2022, a total of 615 procedures were performed with a total of 433 specialized consultations, a slight decrease from REW 2019 (665), but still nearly three times the first REW in 2017 (244) (Table 3). The majority of the procedures (566) were performed at CHUK (248), Gisenyi DH (166), and CHUB (152). Most of the procedures were either EGD (500) or colonoscopy (102) (Table 3). A total of 21 procedures were performed on pediatric patients, primarily EGD (17). Of the 97 participating medical personnel, only 14 were international, indicating a significant shift towards Rwandan providers.

Most colonoscopies (98.8%) were performed under sedation, representing a huge advancement over previous REWs. Approximately half (48.8%) of the EGDs were performed under



Atypical EGD findings in a 20-year-old boy

sedation, consistent with local practice. Sedation use by procedure and institution is summarized in Table 4.

Approximately 27% of the colonoscopy findings were normal (Table 5). The most frequent abnormal findings were hemorrhoids (18.8%), rectal mass (17.6%), and colitis (11.8%). A high prevalence of colorectal tumors was observed in patients > 50 years old.

Approximately 27% of upper GI endoscopy findings were normal (Table 5). The most frequent abnormal findings were gastritis (31.5%) and duodenal ulcers (14.2%). Of note, approximately 3% of the patients were found to have gastric tumors. Endoscopy findings by age group are provided in Table 5.

Conclusions

The two-year hiatus caused by the COVID-19 pandemic did not detract from the continued success of this program or enthusiastic support from Rwanda and international partners. A total of approximately 2,000 endoscopies were performed during the four REWs. These procedures contributed to fulfilling an urgent unmet medical need in Rwanda by advancing gastroenterology services and care and developing local knowledge and expertise in this medical specialty. The endoscopies performed had a high yield of diagnostic findings compared with

The 4th REW-part 1: Endoscopic procedures						
		Procedure-total (Adult/Pediatric)				Total
		Colonoscopy	EGD	ERCP	EUS	
Hospital	CHUK	49(47/2)	191(182/9)	8(8/0)	0	248(237/11)
	CHUB	31(29/2)	121(141/7)	0	0	152(143/9)
	GISENYI DH	5(5/0)	161(161/0)	0	0	166(166/0)
	Charité Digestive Clinic	3(3/0)	4(4/0)	0	0	7(7/0)
	KFH	14/0	23(22/1)	0	5(5/0)	42(41/1)
Total		102(98/4)	500(483/17)	8(8/0)	5(5/0)	615(594/21)

Table 3. Endoscopy Procedures by Institution.

Procedure			Hospital			Total
			CHUB	CHUK	GISENYI DH	
Colonoscopy	Sedation	No	0	0	1	1
		Yes	31	49	4	84
EGD	Sedation	No	81	0	161	242
		Yes	40	191	0	231
ERCP	Anesthesia	Yes		8		8
				100.0%		100.0%

Table 4. Endoscopic Sedation Utilization (N = 566 cases)

higher-resourced countries, confirming the high-level of disease burden in Rwanda. Importantly, the makeup of the participating medical personnel has shifted from primarily international to primarily Rwandan showing the sustainable nature of GI care as well as the growth of concurrent anesthesia services. This year marks the exciting launch of the first Rwandan GI fellowship training program which is paramount to permanent sustainability to care for the high burden of GI disease in Rwanda by Rwandans.



Colonoscopy finding in a 53-year-old man with hematochezia and abdominal pain

Procedure	Findings	Age group (years)		Total	
		<18	>50	18-50	
Colonoscopy	Colitis	20.0%	6.3%	14.6%	11.8%
	Diverticulae		6.3%		2.4%
	Dolichocolon	20.0%	9.4%	10.4%	10.6%
	Hemorrhoids		12.5%	25.0%	18.8%
	Normal	60.0%	25.0%	25.0%	27.1%
	Incomplete exam		6.3%		2.4%
	Polyps		9.4%	8.3%	8.2%
	Rectal mass		25.0%	14.6%	17.6%
	Rectal prolapse			2.1%	1.2%
	EGD	Achalasia		.6%	1.5%
Bulbar ulcer		4.5%	1.7%	2.9%	2.5%
Duodenal ulcers		13.6%	8.9%	13.2%	11.6%
Duodenitis		4.5%	2.2%	1.8%	2.1%
Esophageal polyps			1.1%	.4%	.6%
Esophageal stenosis		9.1%	.6%		.6%
Esophageal tumor				.7%	.4%
Esophageal varices		4.5%	.6%	.7%	.8%
Esophagitis		9.1%	1.1%	4.0%	3.2%
Foreign body			.6%		.2%
Gastric tumor		4.5%	3.9%	2.2%	3.0%
Gastric ulcer			4.5%	3.7%	3.8%
Gastritis		13.6%	31.3%	33.1%	31.5%
Gastroesophageal reflux		4.5%	.6%	.7%	.8%
Hiatal hernia			10.1%	6.6%	7.6%
Normal		31.8%	28.5%	25.7%	27.1%
Incomplete exam			1.1%	.4%	.6%
Pyloric stenosis		2.2%	2.2%	2.1%	
Watermelon gastritis		.6%		.2%	
ERCP	Cholangiocarcinoma		66.7%	50.0%	62.5%
	Gastric tumor		16.7%		12.5%
	Pancreatic tumor		16.7%	50.0%	25.0%

Table 5. Major Findings (N = 566 cases)

Accomplishments of the Philippine Society of Gastroenterology



Allan A. Policarpio, MD
President, Philippine Society of Gastroenterology



A screenshot from PSG’s PowerPoint presentation highlighting their accomplishments of this past year. This slide features promotional materials

The Philippine Society of Gastroenterology (PSG) achieved many accomplishments throughout this past fiscal year. The 2022 Joint Annual Convention was held 11-12 and 18-19 of March with the theme “Redefining the Future of GI Health-care,” though it was purely virtual due to the pandemic. The organizing committee, led by the overall Chair Dr. Allan Policarpio, came up with a wonderful four-day GI scientific conference. The conference included a keynote address by Professor Guil-

herme Macedo and the Asia Specific Leader Forum “The Future of GI Health Care in the Asia Pacific- Learning from the Past”. There were five state-of-the-art lectures, seven clinical symposia and three MDT case conferences. Indeed, was a very successful conference.

The PSG mid-year convention was purely virtual. This was chaired by Dr. Teresita Cabreira. It was held last 16 October 2021 with the theme “Unlocking Opportunities in the New Normal.” There were 1,014

The Philippine Society of Gastroenterology (PSG) is a component society of the Philippine College of Physicians (PCP). PSG is also a member of the World Gastroenterology Organisation (WGO) and the Asia Pacific Association of Gastroenterology (APAGE).

participants. An inspirational talk was given by Senator Richard Gordon on “Languishing to Flourishing.”

Furthermore, the 2022 Philippine Digestive Health Week (PDHW) was celebrated nationally together with the Department of Health. PSG, being the lead society in the preparation and celebration of the PDHW, collaborated with other medical organizations. PSG was true to its commitment in empowering Filipinos to care for their digestive health “Malusog na Tiyan, Masiglang Katawan.”

As a whole, despite the pandemic, our beloved society was able to accomplish various activities, both scientific and non-scientific for the fiscal year 2021-2022.



Portuguese Digestive Disease Week 2022



Guilherme Macedo, MD, PhD, FACP, FASGE, AGAF, FAASLD

President, World Gastroenterology Organisation
President, Portuguese Digestive Week 2022
Porto, Portugal

The Portuguese Digestive Disease Week 2022 (Semana Digestiva 22), held in Porto from 22-25 June, was the largest national gastroenterology meeting ever organized in Portugal. With over 1,000 participants, it allowed an intense and vivid discussion of all the major topics in GI practice. Topics included state-of-the-art lectures, hands-on courses, and controversies in clinical management. The meeting also showcased brand new and exciting issues such as climate change as a concern for gastroenterologists, and the game changer artificial intelligence, an ongoing reality rather than a promise for the future.

Our faculty, endorsed by WGO and the American College of Gastroenterology, included many national experts (from all generations!) and important leading figures from WGO's universe, such as Andy Veitch, Joost Drenth, Reem Sharaiah, Subrata Gosh, and Jonathan Leighton among others.

The venue was the perfect spot to host our vibrant community, the ideal place to celebrate the comeback we all needed. Our social events highlighted our trademark cultural and social engagement, particularly seen in the Faculty Reception at Porto City Hall and in the Corrida de S. João (Run for your Digestive Health). These events

involved thousands of participants (sports enthusiasts, families, children, and adults) that enjoyed the scenery of the Douro River Bank near its mouth in the Atlantic Ocean.

Industry partners had significant participation and illustrated the expectations and growing relevance of Digestive Health issues in our daily life. The Opening Session was a significant moment from political and health authorities to acknowledge and testify to what the Portuguese Society of Gastroenterology, and all its professionals, have been achieving over the years.

Digestive health issues, from prevention to treatment, are well understood as our core business and are being promptly recognized as a major topic for the lay public and authorities in the coming years.

We suggest you have a glimpse of what happened throughout those glorious and busy days in our video available through WGO social media!



International Liver Congress 2022

After two digital editions, the much-anticipated International Liver Congress™ (ILC) 2022 marked a return to meeting face-to-face in a big way. This year, EASL's flagship congress brought together 7,000 delegates from 114 countries to present, discuss and debate the latest science in hepatology.

Community Impact

During the Opening Ceremony, we heard about the long-term vision of

EASL to unite all those concerned with hepatology. This includes providing a positive lasting impact on the lives of all those connected to our events, as well as giving back to the people living in the communities hosting the congress.

Thus, EASL launched its first impact projects in London to coincide with ILC 2022, focusing on attracting key talent in the field, to provide early education on liver and to support efforts to improve preventative screen-

ing of liver diseases.

Scientific Programme

The congress, which took place 22-26 June, showcased over 1,700 abstracts presented in more than 250 scientific sessions covering all aspects of hepatology.

In addition to the abstract sessions, complex cases were discussed at the Solve the Case sessions. Delegates were able to get hands-on experience with abdominal sonography, endohepatology, ultrasound and sonography in the Skills Learning Centre.

With a focus on personalized medicine and big data, the Postgraduate Course discussed how AI can be used to standardize diagnosis and treatment and improve prognosis of patients. The course ended with an insightful State-of-the-Art on the future of omics and big data.

During the Basic Science Seminar, the faculty gave us a glimpse into the future with sessions dedicated to emerging concepts in liver metabolism. Presentation topics included epigenetics, neuroimmunology, and hepatic inflammation.

The Meet the Expert sessions were highly interactive sessions during which traditional roles were reversed, and it was the delegates answering questions from the faculty in the room.

It is impossible to review all the sessions that occurred during EASL's flagship congress. Fortunately, all ILC 2022 content is available on demand for registered delegates on [EASL Campus](#).

Clinical Practice Guidelines

Five new EASL Clinical Practice Guidelines (CPGs) were recently published in the *Journal of Hepatology*



ILC 2022 gathered delegates from all around the world



Delegates attending sessions at the Auditorium Meet the Experts sessions



and released during the congress. The CPGs provide evidence-based answers to clinical questions and aid the clinical decision-making process for: haemochromatosis, the management of hepatic encephalopathy, sclerosing cholangitis and the management of cystic diseases.

ILC 2022 in the Media

Thanks to strong media presence at the congress, two official press conferences, and cutting-edge science, ILC 2022 received a rush of media coverage in multiple languages. Articles covering hepatitis in children, fatty liver disease and scientific developments were published. Journalists onsite were able to meet with Ukrainian hepatologists, whose attendance at the congress was facilitated by EASL, to hear their views.

EASL Studio

After 20+ digital episodes, [EASL Studio](#), your weekly broadcast news in hepatology and related fields, was also physically present at ILC 2022. Onsite delegates were able to watch EASL Studio live for the first time, whereas online delegates were able to catch the episodes live on the congress



The EASL Studio was broadcasted live from the congress centre

platform. The 13 episodes hosted roundtable discussions as well as daily expert highlights and debriefs.

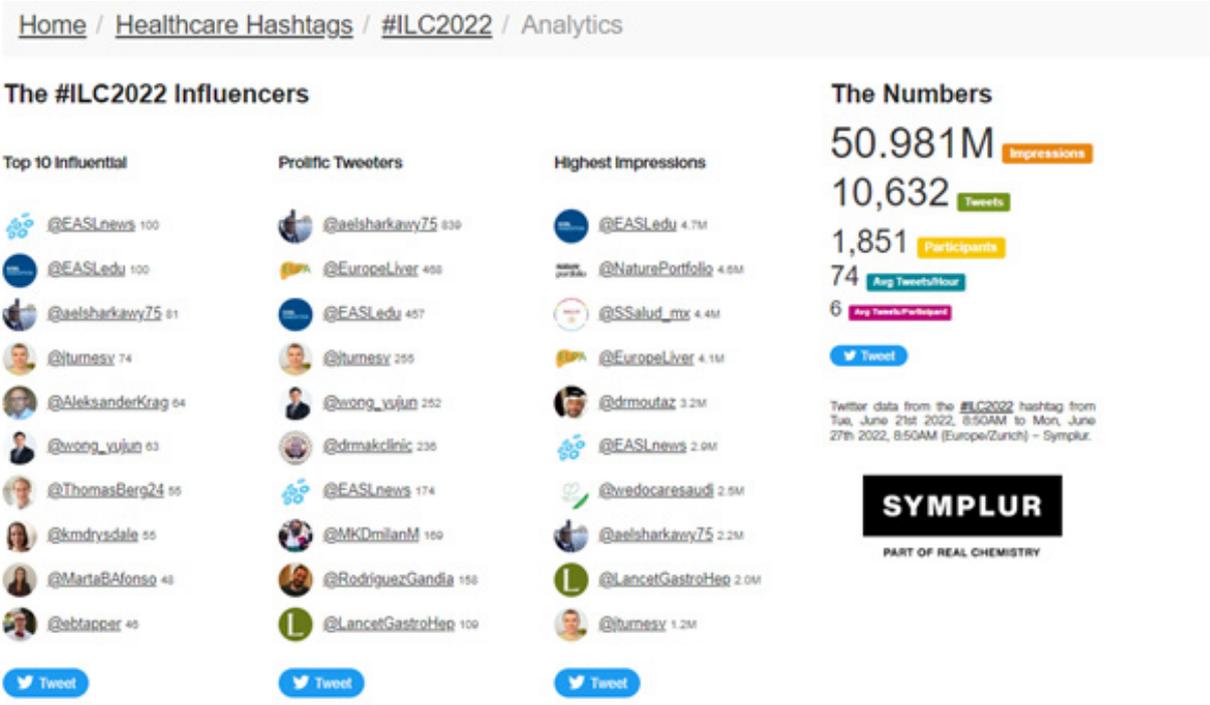
ILC 2022 Online

With the help of the EASL Social Media Ambassadors, live tweeting and reporting from the congress, many fruitful discussions also occurred online. In fact, during the five day congress, 1,800 participants joined in

the conversation with 10,000 tweets on Twitter, pushing #ILC2022 to over 50 million impressions.

Wrap-up

The ILC 2022 was a great success and highlighted the importance of face-to-face interactions which facilitate networking and lively discussions. The digital component was also an added richness as it allowed delegates unable



Top 10 Influencers is determined by the SymplurBank algorithm.

to travel, due to local restrictions, to still partake in what is the highlight of many hepatologists' calendar. You can download the [Best of ILC 2022 Slide Decks](#), providing a comprehensive, yet user-friendly, overview of the best of the congress. If you missed anything, catch up at your own pace, with on-demand ILC 2022 content on EASL Campus.

Save the date for our next year's flagship congress: [EASL Congress 2023, 21-25 June 2023](#). We look forward to a new and exciting congress together with you.



Delegates networking at the EASL Community Hub

WGO Guidelines and Cascades News

Spotlight on Hepatology

WGO's Hepatology Interest Group, in celebration of World Hepatitis Day, has recently hosted a webinar series – *The Global Burden of Viral Hepatitis* -- over the past few weeks. These have examined viral hepatitis across three distinct webinars.

Four of WGO's practice Guidelines focus on topics of hepatology: Hepatitis B, Hepatitis C, Hepatocellular Carcinoma (HCC), and Management of Acute Viral Hepatitis.

WGO is the only organization which has adopted a global focus. Cascade-based WGO guidelines offer different options for diagnosis and treatment depending on the available resources. WGO Guidelines are globally applicable by the nature of their **cascades** -- a hierarchical set of diagnostic or therapeutic techniques for the same disease, ranked according to the resources available -- which identify other ways of achieving the best possible outcome by taking the available resources into account. In addition, each guideline review team includes non-Western experts with direct knowledge of conditions in their regions. The Hepatitis B, Hepatitis C, and HCC guidelines each incorporate cascades.

Hepatitis B

Hepatitis B is a viral disease process caused by the hepatitis B virus (HBV). The virus is endemic throughout the world. It is shed in all bodily fluids by individuals with acute or chronic infection. When transmission occurs vertically (from mother to child) or horizontally between small children during play, the infection nearly always becomes chronic. By contrast, when transmis-

sion occurs in adolescents/adults--usually via sexual contact, contaminated needles ("sharps"), and less often from transfusion of blood products, the infection usually resolves unless the individual is immunocompromised (e.g., infected with human immunodeficiency virus). Providing education about how to avoid risky behavior can play an important role in prevention.

Hepatitis C

This guideline covers all stages of the hepatitis C management pathway: screening, testing, diagnosis, referral, treatment, care, and follow-up of children and adults with, or exposed to, hepatitis C (HCV) infection. Through the concept of "cascades," WGO Guidelines are applicable to differing resource environments, by providing a collection of related diagnostic and treatment options arranged hierarchically in terms of conditions and available resources. More widespread use of cascades in guidelines may also motivate research into the best options for resource-limited services. The high prevalence of HCV infection in low- and middle-income countries (LMICs) leads to a high health-resource and financial burden on already resource-constrained countries. The main risk factor for HCV in LMICs is unsafe therapeutic injections, due to poor practical application of universal infection control guidelines, including sterilization of equipment. The availability and quality of diagnostic tests for HCV infection makes screening extremely difficult even in high-risk populations, leading to inaccurate data collection and reporting. Similarly, the standardization and methodology of polymerase chain reaction testing makes the option of "whom to treat"



A Resource Sensitive Solution

even more difficult. The natural history of HCV is also different in the high-, middle-, and low-income countries due to specific risk factors such as alcohol use, addiction, intravenous drug use, coinfections, and superinfections. Other comorbidities and nutritional deficiencies also affect liver histology and progression of the disease.

Hepatocellular Carcinoma (HCC)

More than 600,000 people die from hepatocellular carcinoma (HCC) each year. Worldwide research on the disease needs to be intensified in both the medical and pharmaceutical fields, especially with a focus on providing help to areas where resources are limited.

Management of Acute Viral Hepatitis

Acute viral hepatitis (AVH) is a systemic infection predominantly affecting the liver. It is most often caused by viruses that are hepatotropic (hepatitis A, B, C, D, and E). Other viral infections may also occasionally affect the liver, such as cytomegalovirus (CMV), herpes simplex, coxsackievirus, and adenovirus. Whereas hepatitis A and E are self-limiting, infection with hepatitis C and to a lesser extent hepatitis B usually become chronic.

All WGO Guidelines are available at worldgastroenterology.org/guidelines.

Calendar of Events

Due to uncertainties of scheduling from the COVID-19 situation, please check the WGO Meetings and Events Calendar for the latest updates at <https://www.worldgastroenterology.org/meetings/meetings-and-events-calendar>

WGO RELATED EVENTS

WGO Webinar: The Global Burden of Viral Hepatitis – Breakthroughs in Hepatitis B

When: September 22, 2022

Location: Online

Country: Webinar

Organizer(s): WGO

Website: https://us02web.zoom.us/join/register/5316577415946/WN_FiJHYVVFQbaAEBbgo8nlfg

World Congress of Gastroenterology 2022

When: December 12, 2022 - December 14, 2022

Location: Dubai, United Arab Emirates

Organizers: WGO and the Emirates Gastroenterology and Hepatology Society

Website: <https://wcog2022.org/>

World Congress of Gastroenterology 2023

When: November 15, 2023 - November 17, 2023

Location: Seoul

Country: Korea

Organizer(s): WGO and The Korean Society of Gastroenterology

Website: <https://www.worldgastroenterology.org/meetings/world-congress-of-gastroenterology>

CALENDAR OF EVENTS

PPPP Congress 2022: 8th International Congress on Probiotics, Prebiotics, Postbiotics in Pediatrics

When: September 15, 2022- September 17, 2022

Location: Valencia

Country: Spain

Organizers: World Association of Probiotics, Prebiotics, Postbiotics in Pediatrics

Website: <https://www.mcascientificevents.eu/biotics4pediatrics>

Annual Meeting SGG-SGVC-SASL & SVEP 2022

When: September 15, 2022 - September 16, 2022

Location: Interlachen

Country: Switzerland

Organizer: Swiss Society of Gastroenterology

Website: www.sgg-sgvc-congress.ch

EUS-ENDO International Live Course 2022

When: September 15, 2022 - September 17, 2022

Location: Aix-en-Provence, France

Organizer: Dr. Marc Giovannini

Email: audrey.soulier@mcocongres.com

Website: <https://eus-endo.org/en/>

Congreso Gastroenda 2022

When: September 15, 2022 - September 17, 2022

Location: Mendoza, Argentina

Organizers: FAGE, FAAED and SAGE

Website: gastro2022.org

Taiwan Digestive Disease Week (TDDW) 2022

When: September 23, 2022 - September 25, 2022

Location: National Taiwan University Hospital

Address: Taipei, Taiwan

Organizer: Gastroenterological Society of Taiwan

Website: <http://www.tddw.org/>

18th ISDE World Congress

When: September 26, 2022 - September 28, 2022

Location: Tokyo, Japan

Organizers: International Society for Diseases of the Esophagus and Japan Esophageal Society

Website: <https://isde.net/ISDE-World-Congress>

XV Congreso Paraguayo de Gastroenterología y Endoscopia Digestiva

When: September 28, 2022 - September 30, 2022

Location: Asuncion, Paraguay

Organizer: Sociedad Paraguaya de Gastroenterología

Website: www.spge.org.py

UEG Week 2022

When: October 8, 2022 - October 11, 2022

Location: Vienna, Austria

Organizer: United European Gastroenterology

Website: <https://ueg.eu/week>

ACG 2022 Annual Meeting

When: October 21, 2022 - October 26, 2022

Location: Charlotte, North Carolina, USA

Organizer: American College of Gastroenterology

Website: <http://www.gi.org>

JDDW 2022 - Japan Digestive Disease Week 2022**When:** October 27, 2022 - October 30, 2022**Location:** Fukuoka, Japan**Organizer:** Organization of JDDW**Website:** <http://www.jddw.jp/english/index.html>**42nd Panhellenic Congress of Gastroenterology****When:** November 10, 2022 - November 13, 2022**Location:** Athens**Country:** Greece**Organizer:** Hellenic Society of Gastroenterology**Website:** <https://hsgcongress2022.gr/>**Asian Pacific Digestive Week APDW 2022****When:** November 17, 2022 - November 21, 2022**Location:** Xi'an, China**Organizer:** APAGE**Website:** <https://www.apage.org/index.html>**Semana Nacional de Gastroenterología 2022****When:** November 18, 2022 - November 22, 2022**Address:** Centro Internacional de Congresos de Yucatán**Location:** Merida, Mexico**Organizer:** Asociación Mexicana de Gastroenterología**Website:** <https://www.gastro.org.mx/eventos/2022/semana-nacional-de-gastroenterologia>**Annual Meeting of The New Zealand Society of Gastroenterology****When:** November 23, 2022 - November 25, 2022**Location:** Grafton Auckland Hotel**Address:** Auckland, New Zealand**Organizer:** The New Zealand Society of Gastroenterology**Website:** <https://www.gastroconference.co.nz/>**6th Korea Digestive Disease Week (KDDW 2022)****When:** December 1, 2022 - December 3, 2022**Location:** Grand Hyatt Incheon**Address:** Incheon, Korea**Organizer:** Korean Society of Gastrointestinal Endoscopy**Email:** kddw@conventionpm.com**Website:** www.kddw.org**SBAD 2022****When:** December 1, 2022 - December 4, 2022**Location:** Florianopolis**Country:** Brazil**Organizer:** Federação Brasileira de Gastroenterologia**Website:** <http://www.fbg.org.br>**Annual Meeting of the Gastroenterological Association of Thailand 2022****When:** December 15, 2022**Location:** Pattaya, Chonburi**Country:** Thailand**Organizer:** Gastroenterological Association of Thailand**Website:** <http://www.gastrothai.net>**APASL 2023****When:** February 15, 2023 - February 19, 2023**Location:** Taipei International Convention Center**Address:** Taipei, Taiwan**Organizer:** Asian Pacific Association for the Study of the Liver**Website:** www.apasl2023.tw**The 53rd Annual Meeting of GEST****When:** March 25, 2023 - March 26, 2023**Country:** Taiwan**Organizer:** Gastroenterological Society of Taiwan**Website:** <http://www.gest.org.tw>**26th Annual Meeting of the Asociacion Espanola de Gastroenterologia****When:** March 28, 2023 - March 31, 2023**Location:** Madrid**Country:** Spain**Organizer:** Asociacion Espanola de Gastroenterologia**Website:** <http://www.aegastro.es>**Digestive Disease Week® (DDW) 2023****When:** May 6, 2023 - May 9, 2023**Location:** McCormick Place**Address:** Chicago, Illinois, United States**Organizer:** DDW**Website:** <https://ddw.org/>**2023 International Liver Congress™****When:** June 21, 2023 - June 25, 2023**Location:** Vienna**Country:** Austria**Organizer:** EASL**Website:** <https://easl.eu/event/easl-congress-2023/>**IFSO Congress 2023****When:** August 30, 2023 - September 1, 2023**Location:** Naples**Country:** Italy**Organizer:** IFSO**Website:** <https://www.ifso.com/world-congress/>**Semana Panamericana de las Enfermedades Digestivas 2023****When:** October 8, 2023 - October 11, 2023**Location:** Santiago**Country:** Chile**Organizer(s):** Organización Panamericana de Gastroenterología and Sociedad Interamericana de Endoscopia Digestiva**Website:** <https://www.opge.org/sitio/>

UEG Week 2023

When: October 14, 2023 - October 17, 2023

Location: Bella Center

Address: Copenhagen, Denmark

Organizer: United European Gastroenterology

Website: <https://ueg.eu/week>

JDDW 2023 - Japan Digestive Disease Week 2023

When: November 2, 2023 - November 5, 2023

Location: Kobe, Japan

Organizer: Organization of JDDW

JDDW 2024 - Japan Digestive Disease Week 2024

When: October 31, 2024 - November 3, 2024

Location: Kobe, Japan

Organizer: Organization of JDDW

Website: <http://www.jddw.jp/english/index.html>

WGO Member Societies Submit Your Event

Are you a WGO Member Society wanting to share your event with WGO readers? Visit <https://www.worldgastroenterology.org/forms/submit-event.php> to submit your event for publication in WGO's website conference calendar as well as the quarterly *e-WGN* calendar of events!



DONATE TODAY

Contributions to WGO support and expand the educational, training, research, and awareness programs and initiatives of WGO by strengthening the reach of WGO to areas in the world that benefit directly from the education offered through programs such as Training Centers, Train the Trainers, World Digestive Health Day, Global Guidelines, and international meetings such as the World Congress.

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