VOL. 29, ISSUE 1

MARCH 2024

In this issue







Should We Routinely Measure and Correct Coagulopathy Prior to Paracentesis in Patients with Liver Disease? A Review of Available Outcome Data Ana Maria Davila Morales, MD

Zoë Post, MD Costica Aloman, MD







Practice of Therapeutic Drug Monitoring in IBD

Karoline Soares Garcia, MD Camilla de Almeida Martins, MD, PhD Natália Sousa Freitas Queiroz, MD, PhD



Train the Trainers Kolkata: Exploring New Levels of Medical Education

Mahesh K Goenka, MD, DM, AGAF, FACG, FASGE, FRCP (Glasgow & London)

The World is Awakening and the Future Looks Exciting



Geoffrey Metz, AO, MBBS (Hons), FRACP, MD, FRCP(UK), FACP, FACG

President, World Gastroenterology Organisation Melbourne, Australia

I would like firstly to acknowledge my predecessor Professor Guilherme Macedo for his outstanding achievements as President of WGO over the past two years. I have known Guilherme for nearly 20 years as a great physician, endoscopist, teacher and researcher, but also as a great leader who has achieved so much for his hospital, his university, his community, his national gastroenterology organization and, most recently, for world gastroenterology. All these accomplishments have been made possible through his enormous energy, tireless work ethic and his generosity of time and spirit. Guilherme exemplifies the old saying "if you want a big task done really well then give it to a really busy person!" Thank you Guilherme!

At the time this is being written, the WGO Executive Committee has just completed a two-day strategic planning meeting and I am delighted to report to you that after several years overshadowed by the constraints imposed on the whole world by the CO-VID-19 pandemic, the future is looking less constrained and, in fact, very exciting!

For over 65 years, WGO has been in the unique situation of delivering information, education, advocacy and, more recently, research to a steadily increasing number of member societies. WGO now proudly encompasses 119 member societies and their 65,000 members stemming from high-, middle- and low-income countries.

There are several organizations delivering excellent education packages to gastroenterologists in different regions around the globe. These colleagues are whom we have been collaborating with, and should continue to collaborate with, to deliver best practice gastroenterology and hepatology education for the benefit of all patients throughout the world

For the first 40 years after the inception of our organization in 1958, WGO was best known for our World Congresses of Gastroenterology, covering every aspect of gastrointestinal (GI) medicine. We continue to plan World Congresses and international conferences in collaboration with our member societies throughout various locations and regions, but several of these meetings had to be postponed during the height of the COVID pandemic. Last year, I attended several GI conferences in the USA, England, Asia, and Australia and there is clearly a hunger for clinicians and researchers to reconnect at national and international meetings for learning, research development, networking and the rekindling of friendships that have sustained us all for decades.





VOL. 29, ISSUE 1

Editors



Mahesh K Goenka, MD, DM, AGAF, FACG, FASGE, FRCP (Glasgow & London)

Director and Head, Institute of Gastrosciences and Liver Transplant Director, Medical Education Apollo Multispecialty Hospitals Kolkata, India



Nancy Fanous, MBBS, MSc, MD

Consultant of Gastroenterology, Hepatology & Endoscopy Police Authority Hospital Cairo, Egypt

Managing EditorsZachary Blevins Caitlin Brandstatter

Art ProductionJennifer Gubbin

Editorial Office

WGO Executive Secretariat 555 East Wells Street, Suite 1100 Milwaukee, WI 53202 USA info@worldgastroenterology.org



https://www.facebook.com/WorldGastroOrg



https://twitter.com/WorldGastroOrg



 $\underline{https://www.instagram.com/worldgastroorg/}$



https://www.linkedin.com/company/world-gastroenterology-organisation-wgo-wgo-foundation

www.worldgastroenterology.org



The World is Awakening and the Future Looks Exciting

1

Geoffrey Metz, AO, MBBS (Hons), FRACP, MD, FRCP(UK), FACP, FACG

Editorial

Message from the Editors

6

8

13

19

Mahesh K Goenka, MD, DM, AGAF, FACG, FASGE, FRCP (Glasgow & London)

Nancy Fanous, MBBS, MSc, MD

Expert Point of View

Should We Routinely Measure and Correct Coagulopathy Prior to Paracentesis in Patients with Liver Disease? A Review of Available

Outcome Data

Ana Maria Davila Morales, MD

Zoë Post, MD

Costica Aloman, MD

Practice of Therapeutic Drug Monitoring in IBD

Karoline Soares Garcia, MD Camilla de Almeida Martins, MD, PhD Natália Sousa Freitas Queiroz, MD, PhD

WGO International Meetings

GASTRO 2024 in Marrakech: A State-of-the-Art International Meeting

WGO News

Meet the 2024-2025 WGO Committee Members 20

Embracing AI at the WGO Porto Training Center 24 Guilherme Macedo, MD, PhD, MACG

Celebrating 30 Years of Care at Clínica Reina Sofía 25

International Women's Day 2024: Financial Independence Remains the Missing Piece in the Gender Equality Puzzle

Alizeh Arshad

Lubna Kamani, MD, MRCP(UK), FCPS, FRCP(Lond)

WGO Merchandise Store Now Open!

28

26

©2024 World Gastroenterology Organisation. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form without the prior permission of the copyright owner.





WGO News

Train the Trainers Kolkata: Exploring New Levels of Medical Education Mahesh K Goenka, MD, DM, AGAF, FACG, FASGE, FRCP (Glas & London)	29 sgow
The Lithuanian Society of Gastroenterology Celebrates the 50 th Anniversary of its National Meeting Goda Sadauskaitė, MD Edita Kazėnaitė, MD Juozas Kupcinskas, MD Limas Kupcinskas, MD, PhD	33
JDDW 2023: Breaking Records and Pushing Boundaries Kazuhiko Koike, MD	35
A Successful Korea Digestive Disease Week in Seoul Jae Gyu Kim, MD, PhD	37
Asian Pacific Digestive Week (APDW) 2024 Bali Ari Fahrial Syam, MD, MMB, FACP, FACG	39
WGO Global Guidelines	
Portuguese Translation of Updated Obesity Guidelines Available	40
Calendar of Events	
Calendar of Events	41

INTERESTED IN WRITING FOR e-WGN? SUBMIT YOUR ARTICLE TODAY!

WGO is accepting article submissions for upcoming issues of *e-WGN*. Articles reach a global audience and are disseminated through WGO's mailing list and social media platforms.

Article Instructions

To find more information on article and author instructions, visit our *e-WGN* submission portal! This portal contains all necessary instructions to help you complete your *e-WGN* contribution and allows you to submit all information in one place.

There are many ways to contribute to our newsletter! Expert Point of View, meeting promotions and summaries, testimonials and more are all welcome inside of *e-WGN*! Explore our submission portal at:

e-WGN Submission Portal

Please note that the Co-Editors of *e-WGN* may make edits and changes to your article.

For more information, please email <u>info@</u> worldgastroenterology.org.



I am therefore pleased to report that with the world reawakening post-CO-VID, and in collaboration with our member societies, WGO is now again preparing top-level meetings with excellent programs to be held in exciting destinations! All of these elements will surely come together with our next conference to be held in association with Société Marocaine Des Maladies de L'Appareil Digestif (SMMAD) from 7-9 November 2024 in the amazing city of Marrakech, Morocco. Our Scientific Programs Committee under the chairmanship of Professor Jonathan Leighton from the Mayo Clinic is developing an outstanding program which will be completed and advertised shortly.

Our Train the Trainers (TTT) program was first developed by Professor James Toouli 23 years ago to deliver the most up-to-date and effective education modules to mid-career colleagues involved in teaching and training our younger trainees. Initially, we held one course in English each year limited to 50 registrants. The program has become so successful that it is now delivered two or three times each year and is always oversubscribed from applicants wishing to attend. Part of the global appeal of TTT is the course's ability to be offered in multiple languages. TTT has been offered in English, Spanish, French, and for the first time later this year, Portuguese! Our most recent course was held this February in Kolkata, India. I send my thanks and sincerest gratitude to the Indian Society of Gastroenterology (ISG), Professors Mahesh Goenka and Govind Makharia for hosting us, and to Professor Kelly Burak and his faculty for delivering yet another outstanding TTT event. Over 1,300 of our colleagues from over 100 countries have now been through our Train the Trainers program and all enthusiastically report that it has improved their teaching, training skills and thereby



Executive Committee members and Secretariat Staff meet together in Porto for a strategic planning session.

the training of their trainees. "Graduates" of the TTT program tell us our program has "changed their lives" and certainly it elevates the quality of the training they deliver to trainees in every country throughout the world. If you are serious about training, you should consider attending a TTT course!

Those of you who trained in gastroenterology 20 or more years ago will recall that the brightest trainees from low- or middle-income countries usually traveled to high income countries for their specialist training and very often, after completion of their training, they never returned to their country of origin, adding to the so-called "international brain drain." We can be very proud of the fact that over the past 20 years WGO has developed Training Centers (TCs) in strategic cities around the world to train young aspiring gastroenterologists and hepatologists from around their region. The TC graduates nearly always remain in their region for the benefit of patients where they are needed the most and reversing the "brain drain." The number of TCs has steadily grown to 24 TCs currently, for the enormous benefit of patients in those regions.

WGO has many other important and unique activities including our Global Guidelines and Cascades, World Digestive Health Day and we will soon be launching its knowledge hub, the WGO Academy. More details to come about those later!

Does this mean that WGO can now rest, satisfied that "the job is done?" Well, no!

In recent years, WGO colleagues have been at the forefront of interest, research, and education in relation to developing areas including the microbiome, the brain-gut axis and neuro-gastroenterology and promotion of women in GI. In 2023, WGO produced four excellent webinars on Women in GI under the direction of Professors Naima Amrani (Morocco) and Carolina Olano (Uruguay).

Since 2015, WGO has had increasing interest in climate change and its impact on GI diseases. Over the past three years we have created a separate committee on climate change and have developed strong and effective collaborations with the world's leaders in the field. These relationships resulted in the culmination of a series of nine webinars last year under the direction of Professor Desmond Leddin from Canada.



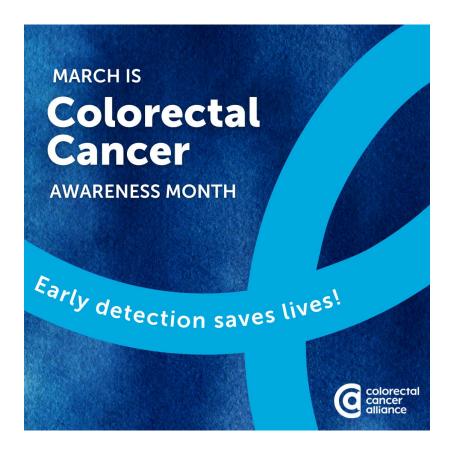
Also over the last few years, our Hepatology Committee under the guidance of Professor Nancy Reau produced several excellent webinars. All of these webinars can be viewed on our website and eventually through the WGO Academy.

Are there other areas of gastroenterology in need of further development? Well, yes! Pancreatic diseases are increasingly prevalent and a burden on health. The incidence of pancreatic cancer is rising rapidly, and we have strong evidence that chronic pancreatitis is significantly underdiagnosed, yet few organizations have pancreatic diseases front and center in relation to their activities.

Similarly, nutrition is an area of medicine which would appear at first glance to involve many sub-specialty areas including cardiology (hyperlipidemia), endocrinology (diabetes), surgery (obesity) and dietetics as well as genetic, infectious and inflammatory sub-specialties. However, when considering nutrition and malnutrition, the natural home for overall management should surely be gastroenterology, drawing together the multiple clinical conditions impacting nutrition and malnutrition.

If any of you have a special interest already and would like to explore the development of WGO into either rapidly growing area, please contact WGO at info@worldgastroenterology.org with a very brief outline of your current interest and we will explore developing a working group.

It is an enormous honor and privilege to serve as your president over the next two years. I am committed to working long and hard to promote WGO for the benefit of our member societies and our patients worldwide.



Message from the Editors



Mahesh K Goenka, MD, DM, AGAF, FACG, FASGE, FRCP (Glasgow & London)

Director and Head, Institute of Gastrosciences and Liver Transplant Director, Medical Education Apollo Multispecialty Hospitals Kolkata, India



Nancy Fanous, MBBS, MSc, MD

Consultant of Gastroenterology, Hepatology & Endoscopy Police Authority Hospital Cairo, Egypt

Dear colleagues and readers,

While the adage "old is gold" is true, it is also a universal fact that "old order changeth, yielding place to new." WGO, as an organization, is going through many changes. As of the start of this year, Prof. Geoffrey Metz from Melbourne, Australia is our new President. He is a respected clinician, passionate educator, and a great team builder. Prof. Metz, or Geoffrey as he prefers to be addressed, has been associated with WGO for many years while serving the organization in various roles. His enthusiasm and perfection was obvious to all those who attended the recent TTT meeting in Kolkata, India. WGO is also undergoing a structural change with our e-WGN Editorial Board being incorporated into our new Media and Community Engagement Committee. We are sure this will result in greater input from committee members and lead to further improvement in content and visibility of e-WGN. Finally, Prof. Nancy Fanous (Egypt) takes over as a Co-Editor of e-WGN and Prof. Anita Afzali (USA) has taken on the role of the Chair of the

Media and Community Engagement Committee. Dr. Fanous works as a senior Consultant of Gastroenterology, Hepatology & Endoscopy at Police Authority Hospital in Cairo. She belongs to several societies including the European Society for the Study of Liver Diseases (EASL), Pan Arab Liver Transplant Society (PALTS), Egyptian Society of Tropical Medicine, Infectious and Parasitic Diseases (ESTIP), Egyptian Society of Gastroenterology and Hepatology & Egyptian Society of Internal Medicine. We are sure to have continuous support and guidance from Prof. Afzali as her long experience in managing e-WGN affairs will continue to shine through in her new role. We also welcome the new Governing Council and committee members of WGO as detailed later in this issue.

In this issue of *e-WGN* we have a large and diverse collection of articles. President Prof. Metz has outlined his vision for WGO in the coming years. His vision, as mentioned in his presidential address, will take this prestigious organization to the next level.

In their article, Drs. Garcia, Mar-

tins, and Queiroz from Brazil have a given an overview to the importance of "Therapeutic Drug Monitoring in Management of Inflammatory Bowel Disease." This can improve the outcome while making the therapy more cost effective as well.

In another EPOV article, Drs. Morales, Post and Aloman from the USA have discussed the pros and cons of performing coagulation tests, such as INR and platelet count, in patients with liver diseases before any invasive procedures. They have shown evidence that in a low-risk procedure, such as paracentesis, it is not justifiable to perform these tests other than a few essential situations. This strategy can avoid undue costs, procedure delays, and reduce the risk of infection. This message could be useful globally and may change our treatment paradigm in specific situations.

The recently conducted Train the Trainers in Kolkata, India, saw the participation of representatives from 14 countries across the world. This outcome perfectly reflects the true global framework of WGO. Thanks to Prof. Kelly Burak, our TTT Chair, and to the Indian Society of Gastroenterology. During these days we had not only lectures, small group discussions, and workshops, but participants also used the occasion to understand one another's diverse cultures. The evenings were filled with fun and provided ample opportunity for networking amongst our participants and faculty.

Prof. Guilherme Macedo, our Past President, has informed us to the addition of artificial intelligence inside the WGO Training Center in Porto, Portugal. Additions of robotic arms to magnetic capsules are likely to

increase capsule capture area.

Since our WGO members speak a wide variety of languages, it is important to translate some of our important publications, such as Global Guidelines, into other languages in order to have a wider dissemination of knowledge. The Portuguese translation of the recently updated Obesity Guideline is now available. Access to the guideline is provided within this issue. WGO also collaborated with International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) for this endeavor.

In their article entitled "International Women's Day 2024: Financial Independence Remains the Missing Piece in the Gender Equality Puzzle," Arshad and Dr. Kamani have raised awareness on an important and burning issue of financial independence as we move closer towards gender equality. This aligns with WGO's goal of diversity, equity, and inclusion. The authors use this article to raise thought provoking questions.

This issue also gives an overview to some other important scientific events held in the last few months. The 31st Japan Digestive Disease Week (JDDW 2023) was held at the Kobe Convention Center in November 2023 with an attendance of nearly 25,000 participants. Also, the Lithuanian Society of Gastroenterology (LSG) commemorated their 50th anniversary at Vilinius University. Clinica Reina Sofia had their 30th anniversary in Colombia. All these academic meetings are aligned with WGO's goal of furthering awareness and education of digestive health.

We are happy to announce WGO now has its own merchandise store! You can buy apparel like ties and sweaters, as well as other products with special WGO logos. As members of our global community, we hope you feel proud to wear and use these products in your daily practice as well as during your national and international events.

As is customary, we have included information regarding dates in respect to various gastrointestinal and liver meetings across the world in the coming year. Our goal is to help in planning your calendar and to promote the most prestigious GI events throughout the world. In particular, Dr. Sayam, President of Indonesian Society of Gastroenterology, has personally invited all of you to attend APDW 2024 through this newsletter. He has provided further information about Asian Pacific Digestive Week (APDW) 2024, the largest conglomeration of gastroenterologists in the Asia-Pacific region that may be worth your reading!

As always, we welcome your positive comments and constructive feedback of our newsletter. We hope this newsletter is found to be an enjoyable and informative reading experience for you. Finally, we invite you to submit your own *e-WGN* content, or encourage colleagues to do the same!

Mahesh and Nancy

Women in GI Webinar Series

Recording Available

Featuring Women in Leadership & Guest Ally



Georgiana Gîlcă-Blanariu Moderator



Nazish Butt Pakistan



Mashiko Setshedi South Africa



Reem Sharaiha



Leticia Moreira Spain



Geoffrey Metz Guest Ally



Should We Routinely Measure and Correct Coagulopathy Prior to Paracentesis in Patients with Liver Disease? A Review of Available Outcome Data



Ana Maria Davila Morales, MD

Internal Medicine Resident Rush University Medical Center Chicago, Illinois, USA



Zoë Post, MD

Gastroenterology and Hepatology Fellow Rush University Medical Center Chicago, Illinois, USA



Costica Aloman, MD

Associate Professor, Hepatology & Liver Transplantation Westchester Medical Center Valhalla, New York, USA

Introduction

Paracentesis is a procedure that serves as a diagnostic and therapeutic measure in patients with end stage liver disease (ESLD).1 Cirrhosis leads to decreased synthesis of pro- and anti-coagulants as well as thrombocytopenia, therefore placing patients at a theoretical risk for post-procedural bleeding. However, paracentesis has been deemed a safe procedure with rarely reported complications when performed using correct technique.2 Such complications include infection, bowel perforation and bleeding.2 Multiple studies have evaluated the need for coagulation parameters prior to paracentesis to avoid potential bleeding complications, yet no data support cut off values for platelet count or

International Normalized Ratio (INR) based on prothrombin time (PT) for which corrective platelet transfusions or fresh frozen plasma (FFP) respectively should be administered preprocedurally. The aims of this review are 1) to summarize available data on post-procedural outcomes in ESLD patients undergoing paracentesis and 2) to highlight the current guidelines and recommendations regarding routine pre-procedural INR and platelet measurement as well as transfusions to correct coagulopathy in patients with advanced liver disease.

Rates and risk factors of periprocedural bleeding

Multiple studies have evaluated risk factors and rates of bleeding in ESLD

patients undergoing paracentesis. An early study by McVay et al. evaluated 441 paracentesis outcomes and of all patients who did not receive FFP prior to procedure, only one required a transfusion for paracentesis-related bleeding, conferring an event rate of 0.25%. This patient had a normal platelet count and an elevated INR to the same extent as the other 261 patients who underwent paracentesis without complications.3 Patients with markedly elevated serum creatinine levels (6.0 to 14.0 mg/dL) had significantly greater average hemoglobin loss than patients with normal serum creatinine levels, suggesting that these patients deserve close post-procedure observation. In 2005, Pache et al. conducted one of the largest studies addressing this topic. A total of 4,729 patients with ESLD undergoing paracentesis were evaluated over a 10-year period and found severe hemorrhage in nine patients, conferring a rate of 0.2% (Table 1). Bleeding was not associated with INR or platelet count in these patients as only two of the nine patients had significant coagulopathy as evidenced by a platelet count less than 50 or INR greater than two. In fact, bleeding was found to occur in patients with significant pre-existing renal dysfunction, which may suggest uremia as a predisposing factor for bleeding complications.1 Another large study by Grabau et al. evaluated 1,100 large-volume paracenteses (LVP) performed at a gastroenterology clinic over a seven-year period. No major bleeding events occurred despite 27% of patients having an INR greater than 2.0 and 54% having

a platelet count of less than 50,000/L. Moreover, there were no major bleeding events even in patients with platelet counts being as low as 19,000/L and INR as high as 8.7.2 Kurup et al. evaluated 205 thrombocytopenic patients with platelet counts of less than 50,000 /μL (mean platelet count of 38,400 9,300 /µL). Three major bleeding complications requiring red blood cell transfusion were observed in patients with platelet counts of 41,000 to 46,000 /µL, for a complication rate of 0.99%. None of these three patients required any additional procedure or died secondary to bleeding complications and there was no association between platelet count and bleeding complications.4 In addition, a study by Webster et al. reviewed the cases of 179 patients with cirrhosis undergoing LVP in an outpatient setting during a one-year period. Of these, four patients (2.2%) developed severe hemorrhagic complications requiring hospital admission and blood product administration.

Studies have also evaluated postprocedural bleeding in ESLD patients undergoing other nonsurgical procedures such as thoracentesis, lumbar punctures, endoscopic procedures, and biopsies and have found equally

low rates of bleeding complications.5 A recent multicenter study in 2023 by Intagliata et al. enrolled 1,187 patients undergoing nonsurgical procedures and prospectively monitored them until surgery, transplantation, or 28 days from admission. A total of 93 post-procedural bleeding events were identified, and major bleeding was reported in 2.3% of patient admissions and 0.9% of the procedures. Patients with bleeding were more likely to have nonalcoholic steatohepatitis (NASH) and higher body mass index. Preprocedural INR, platelet level and antithrombotic use were not predictive of bleeding.5 This study not only emphasizes the idea that the literature does not support a correlation between degree of coagulopathy and risk of bleeding but also raises the concern for lack of reliable tests or risk scores to assess true bleeding risk in patients with cirrhosis.6 Furthermore, a recent expert opinion report published in 2023 also recommends against taking INR into account before performing low-risk procedures in patients with ESLD. However, based only on opinion, the lowest acceptable platelet count was considered to be 30x109/L. This further suggests that platelet count cutoffs lack scientific data and

have been largely based on opinion and subjective information.⁷

Risk of bleeding assessment

In cirrhosis, there is a decrease in both pro- and anti-coagulants and there is growing evidence that these patients are "rebalanced" to maintain a tenuous but balanced state of hemostasis. INR level only measures the activity of procoagulants, failing to capture changes in anticoagulants. Therefore, INR may provide a measure of liver function but does not accurately predict bleeding risk in these patients.8 Similarly, platelet adherence decreases in cirrhosis however von Willebrand factor (vWF) levels are elevated in proportion to the severity of liver disease. This provides a compensatory change that makes platelet counts an equally ineffective way to predict bleeding risk in patients with advanced liver disease.9

The use of INR and platelet count testing to establish arbitrary preprocedure transfusion guidelines lacks clinical benefit, as evidenced by low procedure-related bleeding rates regardless of coagulopathy or pre-procedural blood product administration. However, post-procedure bleeding events do occur and can be

Study author, year	Type of study	Sample size (n)	INR	Platelet count (109/L)	Blood products received	Complication rate
McVay et al., 1991	Prospective cohort study	441	Not evaluated	50-99	Not included in study	0.2%
Pache et al., 2005	Retrospective review	4,729	As high as 8.7 (mean 2.0)	As low as 19 (mean 102)	Not included in study	0.19%
Grabau et al., 2004	Retrospective review	1,100	Range:0.9-8.7	Range:19-341	Not included in study	No bleeding events
Intagliata et al., 2023	Prospective observational study	1,187	Mean 1.7	Mean 128	223 FFP or platelet transfusions (7.8%)	Major bleeding in 2.3% of patient admissions and 0.9% of procedures
Webster et al., 1996	Retrospective review	179	Any level	Any level	Not included in study	2.2%
De Pietri et al., 2016	Randomized control trial	60	INR >0.8	<50	SOC group: 97% TEG group: 17%	SOC group: 3.3% TEG group: 0%
Rowley et al., 2019	Retrospective review	3,116	Mean 1.6	Mean 122	No products	0.19%

Table 1: Overview of studies evaluating bleeding complications in patients with ESLD and coagulopathy. SOC = standard of care, TEG = thromboelastography, INR = international normalized ratio.

associated with significant morbidity and mortality, underscoring the need to better identify the patients at increased risk. Thromboelastography (TEG) is a measure of blood coagulation efficiency and studies have evaluated its utility in the assessment and reversal of coagulopathy among ESLD patients as compared to standard coagulation testing. 10 A systematic review and meta-analysis by Kovalic et al. found that there was a significant reduction in number of patients requiring coagulopathy-corrective transfusions when using TEG. In addition, this method was found to improve overall number of patients exposed to blood product transfusions, quantity of transfusions and bleeding events. To better define the patient population that could benefit from pre-procedural correction of coagulopathy, De Pietri et al. performed a randomized controlled trial in 2015 aiming to define the efficacy and safety of TEG in guiding the use of FFP or platelet transfusion before invasive procedures in patients with liver cirrhosis and impaired coagulation parameters. Enrollment criteria included INR greater than 1.8 and/ or platelet count less than 50,000/L. 60 patients were randomly allocated to TEG-guided transfusion strategy or standard of care (SOC). The TEG group would receive FFP if the reaction time was >40 min and/or platelet transfusion if maximum amplitude was <30 mm while the SOC group received transfusions per hospital guidelines. In the SOC group, all but one patient received blood product transfusions versus five in the TEG group (97% vs 17%), suggesting that TEG-guided transfusion strategies lead to significantly lower use of blood products compared to SOC without an increase in bleeding complications.11

In addition, fibrinogen levels have recently been viewed as poten-

Guideline	Pre-procedural INR/Plate- let testing	Pre-procedure transfusion thresholds
SHM	None	
AGA	None	
SIR	None	Consider PLT goal >20,000
AASLD		No prophylaxis

Table 2. Overview of (inter)national guideline recommendations on pre-procedural testing and transfusion thresholds for low-risk procedures including paracentesis. SHM = Society of Hospital Medicine; AGA = American Gastroenterological Association; SIR = Society of Interventional Radiology; AASLD = American Association for the Study of Liver Diseases.

tially more meaningful than INR and platelet levels as a measure of bleeding risk.12 The current American Gastroenterological Association (AGA) Clinical Practice Guideline from 2019 recommends a fibrinogen transfusion threshold of >120 mg/dL, however, this is only for active bleeding or high-risk procedures. There is no guidance on transfusion thresholds for low-risk procedures including LVP. While data on fibrinogen level and procedural outcomes is limited, a small retrospective study by Lin et al. demonstrated that a low fibrinogen level could independently predict bleeding events in acute on chronic liver failure (ACLF) patients with a MELD score of at least 25.13 Certainly, more studies are needed to develop clinically relevant recommendations in terms of pre-procedure fibrinogen testing and transfusion thresholds. When fibrinogen repletion is desired, cryoprecipitate can be used and has less impact on volume expansion and portal hypertension as it contains smaller volume than FFP.12 It has also been suggested that lower volume factor replacement such as prothrombin complex complexes (PCC) and recombinant factor VIIa are more effective than FFP in decreasing INR values in ESLD patients and do not carry the risk of volume overload.14

Current Guidelines

Based on the aforementioned studies, guidelines have been established by multiple professional societies to

provide guidance on how to safely manage ESLD patients undergoing paracentesis (Table 2).

According to the Society of Hospital Medicine, studies have widely demonstrated that neither INR nor platelet count accurately predict bleeding risk in this population and there is lack of benefit from routine measurement and administration of corrective products.6 The American Gastroenterological Association (AGA) also suggests against the use of extensive preprocedural testing such as PT/INR or platelet count, and the Society of Interventional Radiology (SIR) recommends against using an INR threshold for low-risk procedures such as paracentesis but may be considered for patients receiving warfarin or heparin products. 15, 16 In patients with disseminated intravascular coagulation (DIC) and fibrinolysis, coagulation parameters should always be obtained to move forward with paracentesis.1

Currently, the American Association for the Study of Liver Diseases (AASLD) recommends against the routine prophylactic use of FFP or platelets before paracentesis. ¹³ However, the SIR recommends that platelet transfusions should be *considered* for low-bleeding risk procedures when platelet count is <20,000/L. ¹⁶

Impact of unnecessary correction of coagulopathy in ESLD patients
Despite all the recommendations by professional societies as outlined

above, there are multiple reports regarding the negative impact of unnecessary correction of coagulopathy in patients with ESLD. Barnhill et al. found that at a United States (US) tertiary care center in Washington D.C., out of 177 patients undergoing LVP from 2011 to 2015, 22.2% received prophylactic FFP and 17.3% received prophylactic platelet transfusions before paracentesis, demonstrating the large number of patients still undergoing seemingly unnecessary product transfusions.¹⁷ In the presence of substantial evidence that these parameters do not accurately predict bleeding risk, unnecessary transfusions are contributing to procedural delays, bacterial contamination, and transfusion-associated adverse events such as anaphylaxis, circulatory overload, and lung injuries.6 Specifically in patients with decompensated liver cirrhosis, volume expansion from transfusions may contribute to worsening portal hypertension and increase risk of variceal bleeding.6 Unnecessary transfusions are also a burden to healthcare-related costs. Rowley et al. aimed to evaluate the rate and risk factors for hemorrhage in patients undergoing ultrasound-guided paracentesis without correction of coagulopathy. Over a two-year period, 3116 paracentesis procedures were performed in both outpatient and inpatient settings. Mean INR was 1.6 and 437 patients (14%) had an INR >2. Mean platelet count was 122,000/ μL and 368 patients (12%) had a platelet count <50,000/µL. Without correction of coagulopathy, significant post-paracentesis hemorrhage occurred in five (0.19%) patients, and only one patient required an angiogram with embolization. Transfusion of 1,125 units of FFP and 366 units of platelets were avoided, for a transfusion-associated cost savings of \$816,000 over two years.18

Indications for pre-procedural coagulopathy correction

There are a few exceptions where pre-procedural transfusions to correct coagulopathy in patients with ESLD are indicated, including patients with DIC and hyperfibrinolysis. If patients lack signs and symptoms of these two clinical scenarios, it is recommended that providers avoid routine measurement of INR and platelet count in preparation for paracentesis. Moreover, providers should avoid routine transfusion of FFP and platelets prior to paracentesis even in the presence of abnormal coagulation parameters.

Conclusion

There is substantial evidence in the literature demonstrating that neither INR nor platelet counts accurately predict bleeding risks in cirrhotic patients undergoing paracentesis. Providers should not routinely measure coagulation parameters in cirrhotic patients in preparation of a low-risk procedure such as paracentesis and should avoid routine platelet and FFP transfusions. Exceptions include patients with DIC or hyperfibrinolysis. Implementing these measures could result in fewer procedural delays, bacterial contamination, healthcarerelated costs, transfusion-associated reactions, and volume expansion leading to worsening portal hypertension.

References

- 1. Pache, I. and Bilodeau, M. (2005), Severe haemorrhage following abdominal paracentesis for ascites in patients with liver disease. Alimentary Pharmacology & Therapeutics, 21: 525-529. https://doi.org/10.1111/j.1365-2036.2005.02387.x
- Grabau, C.M., Crago, S.F., Hoff, L.K., Simon, J.A., Melton, C.A., Ott, B.J. and Kamath, P.S. (2004), Performance standards for therapeutic abdominal paracentesis. Hepatology, 40: 484-488. https:// doi.org/10.1002/hep.20317
- 3. McVay, P.A. and Toy, P.T.C.Y. (1991), Lack of increased bleeding after paracentesis and thoracentesis in patients with mild coagulation abnormalities. Transfusion, 31: 164-171. https://doi.org/10.1046/j.1537-2995.1991.31291142949.x
- Kurup, A.N., Lekah, A., Reardon, S.T., Schmit, G.D., McDonald, J.S., Carter, R.E., Kamath, P.S., Callstrom, M.R. and Atwell, T.D. (2015), Bleeding Rate for Ultrasound-Guided Paracentesis in Thrombocytopenic Patients. Journal of Ultrasound in Medicine, 34: 1833-1838. https://doi. org/10.7863/ultra.14.10034
- 5. Intagliata NM, Rahimi RS, Higuera-de-la-Tijera F, Simonetto DA, Farias AQ, Mazo DF, Boike JR, Stine JG, Serper M, Pereira G, Mattos AZ, Marciano S, Davis JPE, Benitez C, Chadha R, Méndez-Sánchez N, deLemos AS, Mohanty A, Dirchwolf M, Fortune BE, Northup PG, Patrie IT, Caldwell SH. Procedural-Related Bleeding in Hospitalized Patients With Liver Disease (PROC-BLeeD): An International, Prospective, Multicenter Observational Study. Gastroenterology. 2023 Sep;165(3):717-732. doi: 10.1053/j.gastro.2023.05.046. Epub 2023 Jun 2. PMID: 37271290.

- 6. Crowe, Byron, et al. "Things We Do for No ReasonTM: Routine Correction of Elevated INR and Thrombocytopenia Prior to Paracentesis in Patients with Cirrhosis." Journal of Hospital Medicine, Society of Hospital Medicine, Sept. 2020, cdn.mdedge.com/files/s3fs-public/issues/articles/lessing08150923e.pdf.
- Riescher-Tuczkiewicz, A., Caldwell, S. H., Kamath, P. S., Villa, E., & Rautou, P.-E. (2023). Expert opinion on bleeding risk from invasive procedures in cirrhosis. *JHEP Reports*, 100986. https://doi.org/10.1016/j. jhepr.2023.100986
- 8. Tripodi, A., Caldwell, S.H., Hoffman, M., Trotter, J.F. and Sanyal, A.J. (2007), Review article: the prothrombin time test as a measure of bleeding risk and prognosis in liver disease. Alimentary Pharmacology & Therapeutics, 26: 141-148. https://doi.org/10.1111/j.1365-2036.2007.03369.x
- 9. Northup, P. G., & Caldwell, S. H. (2013). Coagulation in liver disease: A guide for the clinician. Perspectives in Clinical Gastroenterology and Hepatology, 11: 1064-1074. https://doi. org/10.1016/j.cgh.2013.02.026
- 10. Kovalic AJ, Khan MA, Malaver D, Whitson MJ, Teperman LW, Bernstein DE, Singal A, Satapathy SK. Thromboelastography versus standard coagulation testing in the assessment and reversal of coagulopathy among cirrhotics: a systematic review and meta-analysis. Eur J Gastroenterol Hepatol. 2020 Mar;32(3):291-302. doi: 10.1097/MEG.0000000000001588. PMID: 32012141.

- 11. De Pietri, L., Bianchini, M., Montalti, R., De Maria, N., Di Maira, T., Begliomini, B., Gerunda, G.E., di Benedetto, F., Garcia-Tsao, G. and Villa, E. (2016), Thrombelastography-guided blood product use before invasive procedures in cirrhosis with severe coagulopathy: A randomized, controlled trial. Hepatology, 63: 566-573. https://doi.org/10.1002/hep.28148
- 11. Liu P, Hum J, Jou J, Scanlan RM, Shatzel J. Transfusion strategies in patients with cirrhosis. Eur J Haematol. 2020 Jan;104(1):15-25. doi: 10.1111/ejh.13342. Epub 2019 Nov 19. PMID: 31661175; PMCID: PMC7023893.
- 12. Jacqueline G. O'Leary, Charles S. Greenberg, Heather M. Patton, Stephen H. Caldwell. AGA Clinical Practice Update: Coagulation in Cirrhosis, Gastroenterology. Volume 157, Issue 1, Pages 34-43.e1. (2019). https://doi.org/10.1053/j.gastro.2019.03.070.
- 13. Lin S, Wang M, Zhu Y, et al. Hemorrhagic Complications Following Abdominal Paracentesis in Acute on Chronic Liver Failure: A Propensity Score Analysis. *Medicine (Baltimore)*. 2015;94(49):e2225. doi:10.1097/MD.000000000000002225
- 14. Patrick G. Northup, Ton Lisman, Lara N. Roberts. Treatment of bleeding in patients with liver disease. Journal of Thrombosis and Haemostasis. Volume 19, Issue 7, Pages 1644-1652 (2021). ISSN 1538-7836. https://doi.org/10.1111/jth.15364.
- 15. O'Leary JG, Greenberg CS, Patton HM, Caldwell SH. AGA Clinical Practice Update: Coagulation in Cirrhosis. Gastroenterology. 2019 Jul;157(1):34-43.e1. doi: 10.1053/j.gastro.2019.03.070. Epub 2019 Apr 12. PMID: 30986390.

- 16. Biolato M, Vitale F, Galasso T, Gasbarrini A, Grieco A. Minimum platelet count threshold before invasive procedures in cirrhosis: Evolution of the guidelines. World J Gastrointest Surg. 2023 Feb 27;15(2):127-141. doi: 10.4240/wjgs.v15.i2.127. PMID: 36896308; PMCID: PMC9988645.
- 17. Barnhill, M., Lee, A., and Montero, A (2017). Adherence Rates to Recommended Guidelines for Paracentesis in Cirrhotic Patients at a Tertiary Care Center and Associated Complications. The American Journal of Gastroenterology, 112: p504. https://journals.lww.com/ajg/fulltext/2017/10001/adherence_rates_to_recommended_guidelines_for.899.aspx
- 18. Rowley MW, Agarwal S, Seetharam AB, Hirsch KS. Real-Time Ultrasound-Guided Paracentesis by Radiologists: Near Zero Risk of Hemorrhage without Correction of Coagulopathy. J Vasc Interv Radiol. 2019 Feb;30(2):259-264. doi: 10.1016/j.jvir.2018.11.001. PMID: 30717961.

Practice of Therapeutic Drug Monitoring in IBD



Karoline Soares Garcia, MD

Department of Gastroenterology, University of São Paulo School of Medicine São Paulo, Brazil



Camilla de Almeida Martins, MD, PhD

Department of Gastroenterology, University of São Paulo School of Medicine São Paulo, Brazil



Natália Sousa Freitas Queiroz, MD, PhD

Health Sciences Graduate Program, School of Medicine, Pontifícia Universidade Católica do Paraná (PUCPR) IBD Unit, Hospital Santa Cruz Curitiba, Brazil

Rationale

Therapeutic drug monitoring (TDM) has emerged as a promising strategy for optimizing the treatment of inflammatory bowel diseases (IBD). It is currently recognized as part of the available tools to assess response to therapy and ensure maintenance of remission in IBD. The reasons to routinely perform TDM testing rely on three main factors: the observation of loss of response to biologics, which, especially for anti-tumor necrosis factor (anti-TNF) agents, is strongly associated with pharmacokinetic failure and immunogenicity; the association between drug exposure and response and the variability in drug clearance explained by pharmacokinetic covariates.1,2

Anti-TNF drugs are effective

treatments for the management of IBD but treatment failure is common. In a recently published prospective observational study of 1610 biologic-naïve Crohn's disease (CD) patients treated with infliximab or adalimumab (PANTS study), week 14 primary non-response was observed in 23.8% of patients and the rate of week 54 remission was 36.9%. The study also demonstrated that treatment failure is predicted by low drug concentrations and mediated in part by immunogenicity. It was found that 7 and 12 mg/L week 14 concentrations for infliximab and adalimumab, respectively, were associated with both remissions at week 14 and 54.3

The relationship between higher biologic drug concentrations and favorable outcomes (including clinical remission, endoscopic healing, or resolution of fistula discharge) has been demonstrated for all biologics in post hoc analysis of randomized controlled trials (RCTs) and retrospective studies.⁴ This association is well established for anti-TNF agents, especially infliximab (IFX).⁴

Exposure-response relationships are also evident for vedolizumab (VDZ) and ustekinumab (UST). The GEMINI I/II trials observed that ulcerative colitis (UC) and CD patients with the highest quartile of serum vedolizumab levels had a greater likelihood of clinical remission. ^{5, 6} For UST, studies support the association between ustekinumab levels and positive outcomes during the induction and maintenance phases in CD patients. ^{7, 8}

Several studies have demonstrated an association between higher drug clearance, suboptimal biologic concentrations, and undesired therapeutic outcomes.9 The mechanisms related to the clearance of biologic drugs are fecal loss of protein, linking to anti-drug antibodies, intracellular catabolism, and intensification in target load.9, 10 Numerous factors are related to drug clearance. In particular, body weight, serum albumin, and the formation of anti-drug antibodies (ADAs) have been associated with low drug levels of almost all biologics.9 Figure 1 summarizes the variables associated with drug clearance of all biologics available.

Various factors, such as body weight, male gender, serum albumin, immunogenicity, prior biologic therapy, inflammatory burden, and the use of concomitant immuno-

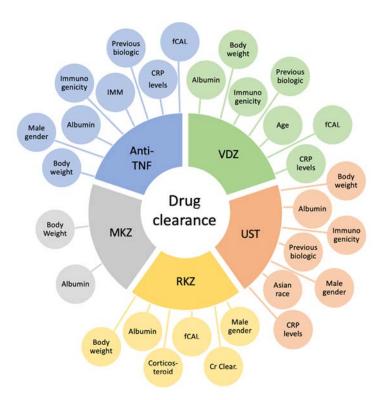


Figure 1: Factors associated with drug clearance of all biologics in IBD patients. Anti-TNF: anti-tumor necrosis factor; VDZ: vedolizumab; UST: ustekinumab; RZK: rizankizumab; MKZ: mirikizumab; CRP: C-reactive protein; fCAL: calprotectin fecal; Cr Clear.: creatinine clearance.

modulators influence drug clearance for anti-TNF in IBD. 11-16 The route of administration also affects pharmacokinetic behavior. The bioavailability of immunobiologics administered subcutaneously is extremely variable among patients, ranging from 50 to 80%. 10, 17 Recently, a RCT showed noninferiority of IFX subcutaneous to IFX intravenous concerning pharmacokinetics, with efficacy and safety similar between both groups. 18

For vedolizumab, factors affecting drug clearance include body weight, albumin, immunogenicity, previous biologic therapy, age, higher endoscopic Mayo score, fecal calprotectin, and C-reactive protein (CRP).^{9, 19} A study by Rosario et al. observed that there is no difference of serum vedolizumab concentrations between intravenous and subcutaneous administration.¹⁹ For ustekinumab, drug clearance is influenced by factors

such as body weight, serum albumin, immunogenicity, previous use of biologics, male gender, Asian race and higher CRP levels.^{20, 22}

Whilst data for the new biologic drugs risankizumab and mirikizumab is limited, Suleiman et al. observed that body weight, albumin, fecal calprotectin, corticosteroid use, creatinine clearance and male gender were related with the risankizumab clearance.²³ Also,

recent findings by Chua et al. associated serum albumin and body weight with mirikizumab clearance.²⁴

How to perform TDM: Reactive x Proactive TDM

Reactive TDM

Reactive TDM includes the measurement of serum drug and anti-drug antibody concentrations to guide treatment changes. It is performed when patients experience a disease flare and helps to elucidate the mechanism of primary or secondary loss-of-response to biologic therapy.^{2,} 10,25 Reactive TDM is proven to be more cost-effective than empiric dose escalation. ^{26,27} It is also endorsed by various gastroenterology societies, medical associations, and expert groups. ^{2,28-33} The algorithm proposed is described in Figure 2.

Some interesting questions have arisen about this algorithm. First, in the context of an immune-mediated pharmacokinetic failure, is switching in class a feasible option? A large retrospective study by Vande Casteele et al. indicates a greater chance of developing ADAs to a second anti-TNF in patients who used anti-TNF previously and developed ADAs or had subtherapeutic drug levels.³⁴ Interestingly, Costable et al. observed that previous immunogenicity to anti-TNF is not related to an increased risk of immunogenicity of vedolizumab or Ustekinumab.35

ADAs/Drug concentration	Subtherapeutic drug trough concentration	Therapeutic drug trough concentration
Undetectable ADAs	Nonimmune-Mediated pharmackinetic failure V Increase Dose	Mechanistic failure V Swith out of class
Detectable ADAs	Immune-mediated pharmackinetic failure	Mechanistic failure V Switch out of class ± immunomodulador

Figure 2: Algorithm for reactive TDM.

This initial issue leads to a second question: which levels of ADAs should be considered relevant, and which ones can be addressed through dose escalation? Two studies suggest that higher ADA levels are related to undetectable drug concentrations and cannot be overcome with dose escalation.36,37 Additionally, a drug-tolerant assay with detectable drug concentration and the presence of ADAs seems clinically irrelevant.³⁷ Conversely, overcoming low-titer ADAs is possible through dose escalation, reducing dose interval and/or adding an immunomodulator.38,39 Nonetheless, distinguishing between low and high ADA titers remains challenging due to assay-specific nuances, with scarce data available for assays beyond Homogenous Mobility Shift Assay (HMSA) and biologics other than IFX.40,41

Recently, an expert consensus by Cheifetz et al. recommended using HMSA for antibody measurement. It considered low titer antibodies to infliximab < 10U/mL for the HMSA.³² According to this consensus, stopping treatment with infliximab or adalimumab is not recommended until the drug concentration reaches a minimum of $10-15~\mu g/mL$.³²

Proactive TDM

A proactive TDM approach is defined by measuring drug and antidrug antibody levels, regardless of disease activity, targeting optimal levels for achieving better outcomes and preventing failure of therapy. It is important to emphasize that optimal serum drug levels vary according to the drug, disease phenotype, treatment target, and phase of treatment (induction or maintenance). 4, 32

Numerous data exploring the exposure-outcome relationship have been published for anti-TNF agents, and there is increasing evidence for TDM with vedolizumab and ustekinumab either. However, we

must point out that TDM for these new biological drugs is less consistent in the literature and less available than for anti-TNF agents, limiting its use in most patients. ^{4,32} TDM data for rizankizumab and mirikizumab are still limited, given the most recent use of these medications, and until now there is no guideline endorsing TDM for these drugs.

Although proactive TDM is still less established than reactive TDM, the proactive approach for anti-TNF agents is recommended by several medical societies and expert groups. ^{32, 42, 43} This strategy is probably most important in patients with high inflammatory burden (e.g. during induction therapy, in those with more severe and extensive disease, and pediatric patients), and increased drug

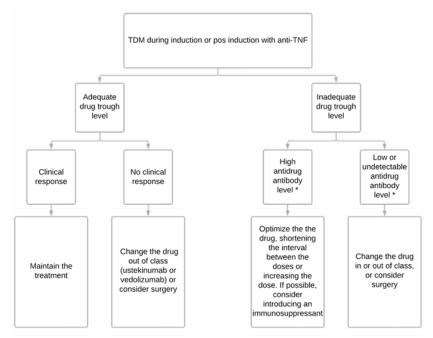


Figure 3: Algorithm designed to guide therapeutic decisions based on TDM.75

	Indu	tion	Post induction	Maintenance	
Infliximab*	Week 2	Week 6	Week 14	5 - 10 μg/mL	
	20 – 25 μg/mL	15- 20 μg/mL	7 - 10 μg/mL		
Adalimumab	Week 4		Week 12	8 - 12 μg/mL	
	8 - 12 μg/mL		8 – 12 μg/mL	υ 12 μβ/πε	
Certolizumab	N/A		N/A	13 - 15 μg/mL	
Golimumab	N/A		N/A	1 - 3 μg/mL	
Vedolizumab*	Week 6		Week 14	15 - 20 μg/mL	
	33- 37 μg/mL		15 - 20 μg/mL		
Ustekinumab	mab N/A		Week 8	1 - 3 μg/mL	
			3 - 7 μg/mL		

Table 1: Suggested optimal trough level for biologic agents in different phases of the treatment.^{4, 32} * For intravenous formulation

clearance, whose risk of inadequate drug exposure, immunogenicity, and treatment failure is high. This subgroup of IBD patients is likely to benefit more from proactive TDM and enhanced early biological efficacy.^{4, 32}

When to perform TDM?

Induction and post-induction

Higher biological drug levels during and straight after the induction phase have been associated with better short- and long-term outcomes in IBD, including better rates of response to therapy and patients' quality of life, pharmacoeconomic benefits, and prevention of future complications. ^{44, 46} On the other hand, inadequate drug exposure has been associated with immunogenicity and loss of response to the drug. ^{47, 48}

Early proactive TDM offers two main applications: monitoring patients to ensure adequate drug exposure (table 1), and optimizing infliximab monotherapy as an alternative to combination therapy with an immunosuppressant (ISS) in selected patients.32 Avoiding immunosuppressants has been considered in patients at high risk of infections and malignancies since studies have shown that optimized infliximab monotherapy guided by proactive TDM optimization has similar efficacy to combination therapy with thiopurines. 49 Figure 3 summarizes the suggested approach.

Maintenance

Numerous studies assessing the exposure-outcome relationship for biological drugs have shown that higher anti-TNF drug levels during maintenance are associated with more favorable therapeutic outcomes, such as lower rates of relapses, less need for hospitalizations and surgeries, and higher rates of corticosteroid-free remission, endoscopic healing and fistula closure. 50-55 The NOR-DRUM

B trial demonstrated that in patients with immune-mediated inflammatory diseases, including UC and CD, proactive TDM during maintenance therapy with IFX was more likely to lead to sustained disease control compared with clinically based treatment.⁵⁶

As recommended by Cheifetz et al. we usually try to monitor patients under anti-TNF therapy TDM once a year, but some barriers, such as the cost of the tests, can make this systematic approach difficult.³²

Guiding treatment de-escalation

Despite the current discussion regarding cycling biological therapy in IBD patients in sustained deep remission, the risk of relapse after anti-TNF discontinuation in CD patients is approximately 40% at one year, and 50% at two years. ^{57, 58} With that in consideration, we do not routinely withdraw biological agents from patients in remission. We agree that discontinuing biological therapy should only be considered in special situations and after careful assessment of risks and benefits.

Proactive TDM may be used to decrease virtual supra-therapeutic exposure to a drug in patients in remission.32 Lucidarme et al. evaluated IBD patients in clinical and biological remission, and they found that TDM-guided de-escalation when infliximab trough level (ITL) is > 7mg/L was associated with a decreased risk of relapse compared with clinically guided de-escalation.⁵⁹ Additionally, Petitcollin et al. studied factors that influence relapse after IFX de-escalation in IBD patients in deep remission.⁶⁰ The authors showed that ITL < 2.4 mg/L after de-escalation was an independent predictor of relapse.60 Following the pointed studies and the latest TDM consensus, we consider de-escalating the dose of a biological agent in patients in deep remission when the drug trough level is above the minimum value considered appropriate (table 1). Also, we check whether the trough level remains adequate after this procedure.

Another utility for proactive TDM is when considering discontinuation of the immunossupressant in patients on combotherapy. Drobne et al.

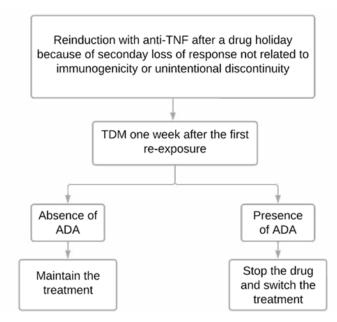


Figure 4: Algorithm used to guide anti-TNF reintroduction after a drug holiday. 70,71

evaluated CD patients under anti-TNF in combotherapy and showed that ITL > 5mg/mL at the time of ISS withdrawal was predictive of not losing response to infliximab.⁶¹

After a drug holiday

A drug holiday is defined as a delay of three or more doses of a biological agent.62 Re-exposure to anti-TNF after that time poses a greater risk of immunogenicity and, therefore, a higher risk of therapy failure and infusion reactions. 63-67 The use of immunosuppressant in combination with anti-TNF after a drug holiday has been associated with a decrease in both risks (infusion reactions and pharmacokinetic failure). 63-67 Even though it is used in some centers, premedication with corticosteroids or antihistamines has not been found to be effective in preventing infusion reactions. 68, 69

An important strategy to prevent reported complications is guiding anti-TNF reintroduction by TDM.32, 70,71 As the greatest risk of a serious infusion reaction occurs early (before the second or third infusion after a re-exposure) we usually restart anti-TNF therapy in association with immunosuppressant and collect samples for TDM one week after the first reinduction dose (Figure 4).32,70, 71 However, in centers where a pointof-care test is available, the test can be done just before the second infusion.³² The second dose is recommended only after it has been confirmed that there are no high levels of antidrug antibodies.32,70,71 We should not restart the drug if it was previously discontinued due to the development of antidrug antibodies.32

There is not much research on the reintroduction of VDZ and UST after a drug holiday, but it's known these drugs are relatively low immunogenic and TDM for them isn't easily available, so we could restart them without TDM.³²

Special situations

Perianal Crohn's disease

Given the greater inflammatory burden and the need for higher anti-TNF concentrations to achieve more stringent outcomes, such as early fistula response and fistula healing, patients with perianal Crohn's disease (pCD) are more likely to be exposed to subtherapeutic anti-TNF levels.44, ⁷² ITL predictive of fistula response at week 14 were ≥ 20.2 mg/ml at week two, ≥ 15 mg/ml at week six, and \geq 7.2 mg/ml at week 14.44,72 Considering these points and the limited options for treating this phenotype of IBD, monitoring drug and antidrug antibody levels, and not giving up treatment until optimizing therapy is of the utmost importance (44,72). As suggested by Papamichail and Cheifetz, we usually optimize IFX in pCD until an ITL of at least 10-15 µg/ml is achieved.41

Perioperative care

It seems that prior biologic exposure and detectable serum drug levels (anti-TNF, vedolizumab or ustekinumab) are not significantly associated with a high risk of infections or surgical site complications in the postoperative period.⁷³ A large prospective multicenter trial assessing the risk of surgery and biologics (The Postoperative Infection in Inflammatory Bowel Disease— PUCCINI) evaluated 947 patients (382 with exposure to anti-TNF up to 12 weeks before surgery), and the rates of overall infectious complications or surgical site infections did not differ between patients with previous exposure to anti-TNFs and controls.73 Despite controversies surrounding this topic, we do not believe TDM has a great impact on guiding key decisions in perioperative care, such as the most appropriate time to perform surgery or the need for a protective stoma.

More studies are still needed to clarify whether that exposure is harmless, and to avoid unnecessary interruptions in biological treatment, delays in surgery and unnecessary ostomies.

Pregnancy and newborn care

Except for certolizumab, biological drugs pass through the umbilical cord which results in potential exposure of the fetus and newborns to these drugs. Discontinuing a biologic agent before the third trimester can limit that exposure. However, continuing these drugs during the entire pregnancy appears to be safe, and interruption of biological therapy may increase the chances of relapse, with negative consequences for both mother and fetus. Likewise, a drug holiday may increase the risk of secondary loss of response in the postpartum period. Although withholding biologic therapy in the third trimester has been associated with an increased risk of flaring during pregnancy, this approach may be considered safe when guided by TDM in selected pregnant women.74

Although biologic therapy seems not to increase the risk of serious infections in the first years of children exposed in utero to anti-TNF, vedolizumab or ustekinumab, these drugs can impact the effectiveness and safety of vaccinations in the first year of life. 74 For this reason, European Crohn's and Colitis Organisation (ECCO) guidelines recommend that in children exposed in utero to biologics, live attenuated vaccines should be withheld within the first year of life or until the biologic is no longer detectable in the infant's blood. 74

Conclusion

The positive association between trough concentration and clinical outcomes and drug concentrations and antidrug antibodies help guide

decisions. Reactive TDM is more cost-effective and more appropriately directs therapy than empiric dose escalation. Proactive TDM for optimizing anti-TNF therapy optimizes outcomes when compared to standard of care and should likely be applied during induction. More data are needed on how to best utilize reactive and proactive TDM for non-TNF biologics.

References

Readers may access the full list of references at the link: https://www.worldgastroenterology.org/publications/ewgn/e-wgn-expert-point-of-view-articles-collection/practice-of-therapeutic-drugmonitoring-in-ibd

Commentary series

Digestive health and climate change

Read today

The nine highly acclaimed WGO webinars on the impact of climate change on digestive health, broadcasted online from March to June 2023, have been summarized into a commentary series and published in Gut. These commentaries were written by the experts featured inside the webinar series.

GASTRO 2024 in Marrakech: A State-of-the-Art International Meeting



On behalf of the World Gastroenterology Organisation (WGO) and the Société Marocaine Des Maladies de L'Appareil Digestif (SMMAD), we look forward to welcoming you to Marrakech for GASTRO 2024, a comprehensive international gastroenterology meeting to be delivered in English by a highly respected international and regional faculty!

Although partnering for a meeting for the first time, WGO and SM-MAD have a long-standing relationship through the WGO Rabat Training Center and a Train the Trainers course previously held in Marrakech. The GASTRO meeting will take place from 7-9 November 2024. We are thrilled to be returning to such a vibrant city! Marrakech is known for its historic buildings and landmarks,

exquisite cuisine, bustling souks, and so much more!

We are committed to developing an inspiring and highly engaging scientific program featuring world-renowned faculty, comprised of keynote lectures, live transmission sessions, hands-on workshops, professional networking opportunities, case-based video presentations, peer-reviewed oral and poster sessions, and much more!

Besides the great learning opportunity, we are also working hard to develop a unique cultural and social program to ensure all our guests experience first-hand the warm hospitality that distinguishes the Moroccan culture and Marrakech in particular, a city universally known for its incredible capacity of offering beautiful memories to all its visitors.

We encourage you to be part of this important event that will bring together delegates from around the globe and to share knowledge, experience, and best practices that will aid the advancement of the health science of gastroenterology.

Once again, we look forward to welcoming you to our GASTRO 2024 meeting in the extraordinary city of Marrakech, and rest assured that we will spare no efforts to leave a pleasant memory in the minds of our attendees for years to last.

For more information about GASTRO 2024, including updates on registration and abstract submission, please visit: https://www.worldgastro-enterology.org/forms/mailing-list.php.

Meet the 2024-2025 WGO Committee Members

In December of 2023, WGO held its General Assembly and confirmed the 2024-2025 new Governing Council. Our Governing Council is made up of our Executive Committee and the chairs of each of our specialized committees. These individuals serve as leaders inside of our global community and work tirelessly to achieve all of our many goals. Our chairs are responsible for leading their groups through committee initiatives, meetings and serving as the committee's advocate throughout the organization. WGO would not be possible without the dedicated service, time, and knowledge our members provide, especially those in leadership roles.

In addition to our new Governing Council, we are also excited to announce the creation of several new committees. Our IBD Committee, Climate Change Committee, and Media and Community Engagement Committee will all serve valuable roles inside of WGO. These committees were created to further innovate the organization and best represent the needs and interests of our members. We are excited to see the goals and projects all our committees wish to achieve in the coming year.

Governing Council



PresidentProfessor Geoffrey Metz
Australia



President-Elect
Professor Carolina Olano
Uruguay



Past President and Chair of Nominations Professor Guilherme Macedo Portugal



Secretary General Professor Vivek Kaul USA



Treasurer and Chair, Finance Committee Professor Kaichun Wu China



Director At-LargeProfessor Dan Dumitrascu
Romania



Chair, Climate Change Committee Professor Desmond Leddin Canada



Chair, Clinical Research Committee Professor Govind Makharia India



Chair, Endoscopy
Committee
Professor Sandie Thomson
South Africa



Chair, Guidelines Committee Professor Alejandro Piscoya



Chair, Hepatology Committee Professor Nancy Reau USA



Chair, IBD CommitteeProfessor Susana Lopes
Portugal



Chair, Media and Community Engagement Committee Professor Anita Afzali USA



Promotion of Education in Asia-Pacific Region Professor Varocha Mahachai Thailand



Chair, Scientific Program Committee Professor Jonathan Leighton



Chair, Training Centers Committee Professor Luis Carlos Sabbagh Colombia



Chair, Train the Trainers Committee Professor Kelly Burak Canada



Chair, Young Members Committee Professor Kavel Visrodia USA

Climate Change Committee

Desmond Leddin, Canada (Chair) Anahita Sadeghi, Iran (Vice Chair)

Lars Aabakken, Norway Raja Affendi Raja Ali, Malaysia Justin Yeong Yeh Lee, Malaysia Naima Lahbabi-Amrani, Morocco Sedat Boyacioglu, Türkiye Amna Subhan Butt, Pakistan Rabia De Latour, United States Marjolijn Duijvestein, Netherlands Reda Elbadawy, Egypt Reda Elwakil, Egypt Kwong-Ming Fock, Singapore Yasser Fouad, Egypt Rui Jorge Guedes Morais, Portugal Wajid Ali Khan, Pakistan Vivek Kaul, United States Farhana Kayani, Pakistan Govind Makharia, India Geoffrey Metz, Australia Sandeep Nijhawan, India Abdulwakil Hassen Omer, Ethiopia Oscar Miguel Oreste Laudanno, Argentina Mai Ling Perman, Fiji Roque Sáenz, Chile Quang Trung Tran, Vietnam Kaichun Wu, China

Clinical Research Committee

Cihan Yurdaydin, Türkiye

Govind Makharia, India (Chair)

Harold Benites Goa, Peru Nazish Butt, Pakistan Evaristus Sunday Chukwudike, Nigeria Alex Diaz, Chile Ernst Fredericks, South Africa Linda Gathara, Kenya Sidrah Ghafoor, Pakistan Mohamed Hassany, Egypt Jamilya Kaibullayeva, Kazakhstan Gilaad Kaplan, Canada Sahil Khanna, United States Justin Yeong Yeh Lee, Malaysia Wai Keung Leung, Hong Kong Jung-Chun Lin, Taiwan Leticia Moreira, Spain Raja Affendi Raja Ali, Malaysia Anahita Sadeghi, Iran

Vishal Sharma, India Roger Sombie, Burkina Faso Ari Fahrial Syam, Indonesia Tetsuji Takayama, Japan Horace Williams, United Kingdom Mujdat Zeybel, Türkiye

Endoscopy Committee

Sandie Thomson, South Africa (Chair)

Sabina Beg, United Kingdom (Vice Chair)

Ashraf Albreedy, Egypt Fatih Aslan, Türkiye Dafr-Allah Benajah, Morocco Nazish Butt, Pakistan Mark Anthony de Lusong, Philippines Amr El Fouly, Egypt Mahesh K. Goenka, India Christopher Hair, Australia Adel Hassan, Egypt Srisha Hebbar, United Kingdom Harshit S. Khara, United States Shivangi Kothari, United States Elias Makhoul, Lebanon Jose Carlos Marin Gabriel, Spain Pedro Moutinho-Ribeiro, Portugal Ganiyat Kikelomo Oyeleke, Nigeria Mathew Philip, India Eduardo Pinto, Portugal Felicien Shikama, Rwanda Ghias Un Nabi Tayyab, Pakistan Augusto Francisco Vera Calderon, Peru Yun-Sheng Yang, China

Finance Committee

Kaichun Wu, China (Treasurer, Chair)

Geoffrey Metz, Australia
Carolina Olano, Uruguay
Vivek Kaul, United States
Luis Carlos Sabbagh, Colombia
Kelly Burak, Canada
Alejandro Piscoya, Peru
Aleksejs Derovs, Latvia
Eduardo Galiana Gutierrrez, Uruguay
Reda Elwakil, Egypt
Chengwei Tang, China
Wojciech Marlicz, Poland

Guidelines Committee

Alejandro Piscoya, Peru (Chair) Tahiri Mohammed, Morocco (Vice Chair)

Shahab Abid, Pakistan Laith Al-Rubaiy, United Kingdom Serhat Bor, Türkiye Martin Brand, South Africa Dan Lucian Dumitrascu, Romania Mohamed El Kassas, Egypt Nobuyuki Enomoto, Japan Jorge Espinoza-Rios, Peru Lubna Kamani, Pakistan Peter Katelaris, Australia Talal Khurshid Bhattu, Pakistan Rakesh Kochhar, India Leonid B Lazebnik, Russia Justin Yeong Yeh Lee, Malaysia Jung-Chun Lin, Taiwan Reza Malekzadeh, Iran Dafina Nikolova, Macedonia Oscar Miguel Oreste, Argentina Shabana Pasha, United States Ebada Said, Egypt Michael Paul Schultz, New Zealand Tony C.K. Tham, Ireland Martin Ariel Toro, Argentina Anca Trifan, Romania Ira Inductivo Yu, Philippines

Hepatology Committee

Nancy Reau, United States (Chair)

Alice Lee, Australia (Vice Chair) Aman Ullah Abbasi, Pakistan Guruprasad Aithal, United Kingdom Meriem Bakkar, Morocco Hatice Yasemin Balaban, Türkiye Mustapha Benazzouz, Morocco Cecilia Cabrera Cabrejos, Peru Wah-Kheong Chan, Malaysia Ian Homer Y. Cua, Philippines Mohamed El Kassas, Egypt Ahad Eshraghian, Iran Rui Gaspar, Portugal Ahmed Ali Gomaa Elshal, Egypt Muhammad Asif Gul, Pakistan Saeed S. Hamid, Pakistan Joseph K. Lim, United States Ken Liu, Australia Rui Tato Marinho, Portugal Ehab F. Moustafa, Egypt

Mario Reis Alvares-da-Silva, Brazil Juan Pablo Roblero, Chile Ebada Said, Egypt Wei-Fen Xie, China Suna Yapali, Türkiye

IBD Committee

Susana Lopes, Portugal (Chair) Francis A. Farraye, United States (Vice Chair)

Anita Afzali, United States Mohamed Alboraie, Egypt Nawal Alkhalidi, Iraq Wafaa Badre, Morocco Ignacio Catalán-Serra, Norway Hugo Cedrón, Peru Marla Dubinsky, United States Pierre Ellul, Malta Georgiana-Emmanuela Gilca-Blanariu, Romania Marietta Iacucci, United Kingdom Lubna Kamani, Pakistan Dadang Makmun, Indonesia Nuru Noor, United Kingdom Pilar Nos, Spain Flavio Steinwurz, Brazil Joana Torres, Portugal Murat Toruner, Türkiye

Media and Community Engagement Committee

Anita Afzali, United States (Chair) Tony C. Tham, Ireland (Vice Chair)

Mahesh Goenka, India, Nancy Fanous, Egypt, Antonio Mendoza-Ladd, United States Aisha Elsharkawy, Egypt Dhanasekhar Kesavelu, India Georgiana Gilca-Blanariu, Romania Jung-Chun Lin, Taiwan Hiroshi Nakase, Japan Dao Viet Hang, Vietnam Tarkan Karakan, Türkiye Mahrukh Ali Bugti, Pakistan Sherief Abd-Elsalam, Egypt Sridhar Sundaram, India Wojciech Marlicz, Poland Hanna Aberra, Rwanda Hailemichael Desalegn, Ethiopia Mohamed-Naguib Wifi, Egypt

Motaz Fathy Saad, Egypt

Yoshiyuki Ueno, Japan Aydin Seref Koksal, Türkiye

Nominations Committee

Guilherme Macedo, Portugal (WGO Past President, Chair)

Geoffrey Metz, Australia Naima Lahbabi-Amrani, Morocco Amy Oxentenko, United States Nurdan Tözün, Turkey Arnoldo Riquelme, Chile Wojciech Marlicz, Poland Varocha Mahachai, Thailand Abdelmounem Abdo, Sudan

Scientific Program Committee

Jonathan Leighton, United States (Chair)

Claudia Defilippi, Chile (Vice Chair)

Anca Trifan, Romania Babatunde Duduyemi, Ghana Yasser Fouad, Egypt Rodrigo Jover, Spain Carol A. Burke, United States Finlay Macrae, Australia Carolina Olano, Uruguay Yunsheng Yang, China Maryam Alkhatry, UAE Akram Pourshams, Iran Waseem Hamoudi, Jordan Amna Subhan Butt, Pakistan Wai-Kay Walter SETO, Hong Kong Leticia Moreira, Spain Bulent Degertekin, Türkiye Aleksejs Derovs, Latvia TS Chandrasekar, India Sajida Qureshi, Pakistan Takanori Kanai, Japan Seth Gross, United States

Train the Trainers Committee

Kelly Burak, Canada (Chair) Christina Surawicz, United States (Vice Chair)

Wojciech Marlicz, Poland José María Sanguinetti, Argentina Nancy Fanous, Egypt Luis Lara, United States Maryam Alkhatry, UAE KR Palaniswamy, India Aleksejs Derovs, Latvia Mark Anthony De Lusong, **Philippines** Susana Lopes, Portugal Georgiana-Emmanuela, Romania Mashiko Setshedi, South Africa Gabriel Rahmi, France Harshit Khara, United States Mario Reis Alvares-das-Silva, Brazil Liliana Sampaio Costa Mendes, Brazil Anna Pietrzak, Poland Truptesh H. Kothari, United States Joseph K. Lim, United States Jean-Christophe Saurin, France Aasma Shaukat, United States Emmanuelle Williams, United States Laila Amrani, Morocco Shahzad Riyaz, Pakistan

Training Centers Committee

Luis Carlos Sabbagh, Colombia (Chair)

Ganiyat Oyeleke, Nigeria (Vice Chair)

Amir Sultan, Ethiopia Sedat Boyacıoğlu, Türkiye Nonthalee Pausawasdi, Thailand Melita Gordon, Malawi Diego Aponte, Colombia Ibrahim Mostafa, Egypt Ahmed ElBehiry, Egypt Wasim Jafri, Pakistan Abdelmounem E. Abdo, Sudan Adedapo Osinowo, Nigeria Miguel Villa-Gomez, Bolivia Guido Villa-Gomez, Bolivia Agustina Redondo, Argentina Nestor Chopita, Argentina Miguel Angel Ramírez Luna, Mexico Enrique Coss-Adame, Mexico Shiv Kumar Sarin, India Elly O. Ogutu, Kenya Thomas Mutie, Kenya Guilherme Macedo, Portugal Susana Lopes, Portugal Mário Reis Álvares-da-Silva, Brazil Amine Benkabbou, Morocco Laila Amrani, Morocco Guido Costamagna, Italy Cristiano Spada, Italy Gill Watermeyer, South Africa Herbert Burgos, Costa Rica Marcela Porras Alfaro, Costa Rica



Joji Malani, Fiji Christopher Hair, Australia Mai Ling Perman, Fiji Kaichun Wu, China Moe Myint Aung, Myanmar Thein Myint, Myanmar Henry Cohen, Latin America TCs, Uruguay

Young Members Committee

Kavel Visrodia, USA (Chair) Georgiana-Emmanuela Gilca-Blanariu, Romania (Vice Chair) Meriem Bakkar, Morocco Hany Dabbous, Egypt Miguel Villa-Gomez, Bolivia Jose DeLeon, Guatemala Juan Pablo Gutierrez Aguiar, Uruguay Gursimran Kochhar, United States Wai Kay Seto, Hong Kong Vikash Sharma, Fiji Quang Trung Tran, Vietnam Jonathan O'Donnell, Australia Toufik Bouchelghoum, Algeria Zikai Wang, China Ken Liu, Australia Emilija Nikolovska Trpcevska, Macedonia Talal Khurshid, Pakistan Ahad Eshraghian, Iran Marianela Bedini, Argentina Wiqas Ahmad, Pakistan

Áureo Augusto de Almeida Delgado, Brazil Rashid Nok Shun Lui, Hong Kong Shimaa Afify, Egypt Atteyat Semeya, Egypt Sevda Aghayeva, Azerbaijan Tanyaporn Chantarojanasiri, Thailand Aliya Ualiyeva, Kazakhstan Bruno Li, Peru Guillermo Ricard Cevallos Cedeño, Ecuador Haluk Tarik Kani, Türkiye Reem Sharaiha, United States



Embracing AI at the WGO Porto Training Center



Guilherme Macedo, MD, PhD, MACG

Director, Porto WGO Gastroenterology and Hepatology Training Center Past President and Chair of Nominations, WGO Porto, Portugal

Since May 2023, the Porto WGO Gastroenterology and Hepatology Training Center has been using an innovative modality of magnetic capsule endoscopy with a robotic arm (OMOM*). Beyond all the investigations we have been performing on artificial intelligence and endoscopy in the AI Precision Unit of our Training Center, this incremental innovation is believed to potentially play a great role in several circumstances. It offers a safe, noninvasive, and fully automated diagnostic gastroscopy, allowing not only gastroscopy but a thorough check of the small bowel, in just one sitting due to its extended capsule battery life. The system

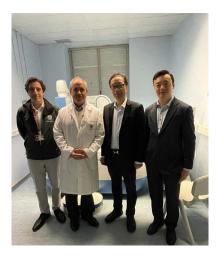
consists of a robotic movement unit, a control console (with reporting software), a recording unit and the disposable robotic capsule.

This capsule is moved in translational (three types movements: forward and backward, up and down, left and right) and rotational directions (vertical, horizontal). These movements capture the gastric images until the full gastric coverage is achieved when the robotic movement unit stops automatically. All six gastric anatomical landmarks (cardia, fundus, body, angulus, antrum, and pylorus) are covered and it takes about 12 minutes to complete the gastric examination. The use of a robotic arm

means that, unlike with magnetic capsule endoscopy, no human operator is needed, and the immediate impact is that it reduces the need for trained operators.

In the final days of November, Jinshan Wang, Chairman of the Jinshan Group, visited us and had a comprehensive tour in our facilities, acknowledging all the research we have been doing on the frontline of innovation in digestive endoscopy. This visit provided further understanding of how we are merging medical assistance, research, and education.





Mr. Jinshan Wang and colleagues posing for a photo with Prof. Macedo on their visit to Portugal.



Mr. Jinshan Wang visiting Prof. Macedo at the Porto Training Center.



Al robotic technology assisting in endoscopic procedures.

Celebrating 30 Years of Care at Clínica Reina Sofía

This year, Clínica Reina Sofía is celebrating their 30th Anniversary International Course of Gastroenterology and Endoscopy Advance Digestive. This meeting was held at the Grand Hyatt Hotel, Bogotá, Colombia on 1-3 February. This educational seminar offered 99 courses for endoscopy nursing assistants and 12 courses for gastroenterological residents. An important element of the meeting was the wide variety of topics covered during the course. These topics included, but were not limited to, gastroesophageal reflux disease, Barrett's esophagus, current approach to gastric cancer and its predisposing factors, and management of dysplastic colon polyps.

Clínica Reina Sofía has served the Bogotá community for the past 30 years. Inaugurated in 1992, their focus has been to serve every patient with dignity and respect at a prestigious high-quality level of care. Building relationships through compassionate communication and facilitating internal information, sharing and coordinating the care has been key. Patient focused care includes communication with patients, partnerships, health promotion and top-quality physical care (medication and treatments). Clínica Reina Sofía conceptualizes patient-focused care as being the care they want their loved ones to receive.

Every interaction a patient has with Clínica Reina Sofía from a front desk receptionist to a doctor impacts patient care. Implementing customer service into healthcare has been an important factor within their process of admitting and discharging patients. Patient care has been their top priority for several decades. Building trust



Prof. Guilherme Macedo poses with Prof. Luis Carlos Sabbagh at the WGO booth.

with the patients is essential to further proceed with any care, surgery, or treatment. This special anniversary course celebrated not only the latest in gastroenterology but also the wonderful care Clínica Reina Sofía has to offer.

This event was led and orchestrated by Prof. Luis Carlos Sabbagh, Head of the Gastroenterology Department from "Clínica Solsanitas." Prof. Sabbagh is also the chair of WGO's Training Centers Committee. Many international lecturers from around the world attended the course. Experts from the United States, Europe, and Latin American all gathered to share their expertise and knowledge with the attendees.



Profs. Guilherme Macedo and Vivek Kaul visit the WGO Training Center in Bogotá, Colombia.

International Women's Day 2024: Financial Independence Remains the Missing Piece in the Gender Equality Puzzle



Alizeh Arshad

Undergraduate Student, Economics and Sociology Department University of Edinburgh Scotland, United Kingdom



Lubna Kamani, MD, MRCP(UK), FCPS, FRCP(Lond)

President Pak, GI & Liver Disease Society (PGLDS)
Professor of Gastroenterology
Director, GI Residency Program, Liaquat National Hospital
Consultant, Aga Khan University Hospital
Karachi, Pakistan

Since 1980 the World Gender Parity Index (GPI) has consistently increased towards parity. However, in over 40 years there is still not a single country that exists that has achieved complete parity. At the current rate of progress it will take at least 131 years to reach parity, a time frame that has increased significantly from the 100 year estimate pre 2020 due to the financial impact the pandemic has had.

The healthcare sector is no exception. Worldwide, women still face (on average) a 24% salary differential from their male counterparts, a figure that has largely remained the same since the beginning of the century. It is estimated that in the US alone health inequalities account for \$320 billion in annual healthcare spending, creating a massive strain on the economy.¹

The healthcare industry is one that is predominantly made up of women, however it is still one of the sectors where the gender pay gap remains clearly apparent. There are certain parts of the industry, as well as certain

fields and jobs (such as nursing), that are often considered to be "female typical roles" where traditionally there has been a high percentage of women employed in these positions. In its entirety, the healthcare sector is made up of approximately 67% women, however these roles are sometimes looked down upon. Traditionally "female typical roles" have been undervalued and underpaid, and when a previously male-dominated role has an influx of women, funding may be removed or redistributed. To summarize, when women take over a male-dominated field the median salary over time drops for all those employed in that same field.

Unfortunately, the inequalities do not stop at merely the wage difference. Women are also more likely to receive less funding during their academic and professional journeys. In academic medicine male trainees receive increased sponsorship from both male and female sponsors as compared to female trainees; however, when women do receive sponsorship,

they choose to utilize it to its full extent. The provision of sponsorships can impact an individual's entire professional journey as it may expose them to new unique experiences and techniques that they can then utilize in their own practice thereby rapidly advancing in their careers. When women are barred from these experiences, it limits their professional development and does not facilitate advancement in their medical careers. This in turn limits them from reaching positions of leadership and providing other women in the future with sponsorships and funding. The impact of this can be seen through research grants, where a majority of them are awarded to male principal investigators. The disparity varies across fields. For instance, for studies related to infectious diseases in the UK, about 75-80% of the funding was awarded to men, with women receiving considerably fewer grants in both number and size.2

When it comes to a lack of financial support, it is not only women receiving fewer opportunities individually but collectively too. Women often have to display hyper-competence to not be judged because of their gender by their male colleagues.³ Female led conferences are often not given as much gravitas and as a result are often not able to secure the funds that they require from organizations in order to keep them running. This is when the lack of women in leadership roles becomes glaringly apparent as there are excruciatingly few funding agencies or programs that are able to or willing to support these conferences.

In addition, businesses do not often

struggle to attract female mentees as they are the first to volunteer when it comes to applying for development opportunities. However, the issue that arises is that women are over mentored and under promoted; therefore, even though they may be participating more and developing their skills, they are still not able to obtain the desired result of furthering their professional career.4 There is also a disparity in the way that men and women are mentored. While men may be taught essential skills, women may be limited by learning primarily how to be confident in their role. Now, while this may be essential to learn, it is also imperative that the skills men and women are given guidance on are according to their own personal experience and not generalized assumptions based on gender.

Claudia Goldin, a Harvard professor, was awarded the Nobel in Economics last year for her decades long studies of women in the work force.



She is only the third woman to have won this prize and is the first that has not had to share it with anyone. While in the past differences between education and occupation could have explained the wage gap between men and women, Dr. Goldin has now shown that the difference is now between men and women in the same fields. She and her colleagues also discovered that the pay gap seems to widen a year or two after the woman has given birth to her first child.

Gender parity is not possible without the financial independence of women. Equality is only possible when it is present in all countries, across all sectors and jobs. Financial independence is not an "unattainable fantasy." It is something that, despite all the setbacks, is now more in our reach than ever before. Furthermore, it is not something that purely benefits women alone, but it also benefits men. Therefore, it should not fall only on women to be pioneers of and to advocate for gender parity and economic equality. We must all take responsibility and step up to the mark to do our part and challenge the status quo that restricts us. We must do this not just for the next generation of women but also the countless generations that have worked so tirelessly in the past.

References

 Andy Davis et al. US health care can't afford health inequities. Deloitte insights. https://www2. deloitte.com/us/en/insights/industry/health-care/economic-cost-ofhealth-disparities.html

- 2. The conversation. Men get most of the research funding- it's a serious problem for women and science. : https://theconversation.com/men-get-most-of-the-research-funding-its-a-serious-problem-for-women-and-science-85469#:~:text=Our%20study%20 investigated%20the%20 amount,principal%20investigators%20%E2%80%93%20a%20 huge%20difference
- 3. Jones E et al. Perceived Barriers to Professional Equality Among Women in Gastroenterology. J Can Assoc Gastroenterol. 2022 Jul 18;5(5):226-233. doi: 10.1093/jcag/gwac023. Erratum in: J Can Assoc Gastroenterol. 2022 Oct 08;5(6):297.
- 4. Ceri Moyers. Why women are over mentored and under promoted. Building. https://www.building.co.uk/building-the-future-commission/whywomen-are-over-mentored-and-under promoted/5122581.article#:~:text=Mentoring%20schemes%20for%20example%20are,critics%20of%20their%20own%20performance

WGO Merchandise Store Now Open!

WGO is thrilled to announce the opening of our own merchandise store! We are delighted to unveil the latest high-quality products representing our logo and organisation. The purpose of the WGO store is to build upon our global awareness, member recognition, branding, and celebration of what it means to belong to the World Gastroenterology Organisation. These items can be used to promote our 65th anniversary, Train the Trainers workshop, or any of our other wonderful programs.

Inside the WGO store you will find a wide variety of merchandise. Our store offers everything from apparel, such as sweaters and ties, to everyday items, such as a water bottle or a book bag. Whatever your need is, you are sure to find it inside our new online store. We hope through our new merchandise you not only find high-quality items, but a sense of comradery and global community.

Ordering from WGO is only a few steps away! Follow the link inside the graphic below and you will be immediately transported into our new WGO storefront. Click on any category and explore the images. You can customize nearly any item to showcase the logo of your choosing and its placement on the product. Place your order today and wear your WGO swag with pride!



International
Shipping Available

Train the Trainers Kolkata: Exploring New Levels of Medical Education



Mahesh K Goenka, MD, DM, AGAF, FACG, FASGE, FRCP (Glasgow & London)

Director and Head, Institute of Gastrosciences and Liver Transplant Director, Medical Education Apollo Multispecialty Hospitals Kolkata, India

"Teaching is a very noble profession that shapes the character, caliber, and future of an individual. If people remember me as a good teacher, that will be the biggest honor for me" - APJ Abdul Kalam, Ex-President of India

In keeping with the importance of teaching as mentioned above, the World Gastroenterology Organisation (WGO) in association with the Indian Society of Gastroenterology (ISG) organized a four-day Train the Trainers course at ITC Royal Bengal Hotel in the heart of Kolkata, India between 7 - 10 February 2024. The conference underscores the shared dedication of two societies to elevate the standards of education and

research in the field of gastroenterology at a global scale. By focusing on effective training methodologies for educators, the aim was to equip the trainers with the tools and knowledge necessary to mentor future generations of gastroenterologists and drive innovation in the field.

The TTT workshops include gastroenterologists currently involved in training the next generation of physicians. Renowned faculty from across the globe engage with gastroenterologists at various stages in their professional careers in a setting using an innovative curriculum that highlights the latest principles in modern education from all over the world. The knowledge and skills acquired

here along with the global networking opportunity serve attendees for the rest of their professional lives.

The first Train the Trainers course was held in 2001, and since then 32 workshops have been held around the world involving more than 1,300 participants from 93 countries. The feedback from this course has been uniformly positive and participants have reported an impactful experience and a meaningful change in their practice.

Who all participated

The program had a selected group of nearly 50 participants who have been selected based on their curriculum vitae and their ability to translate this



President Prof. Geoffrey Metz initiating the meeting



Group photo of TTT 2024 in front of ITC, Royal Bengal, Kolkata

learning to training the next generation of gastroenterologists. Apart from India, there were participants from all over the world including Argentina, Costa Rica, Egypt, Japan, Kenya, Nigeria, Peru, Portugal, Romania, South Africa, and the United States of America. The faculty for this program included reputed WGO trainers from Australia, Canada, Nigeria, Poland, South Africa, and the United States of America as well as India.

Techniques used

In this event, many techniques of education including small group sessions, large group learning, workshops, roleplay, and interactive models were used to impart specific teaching techniques to the trainers. The technique of how to give constructive structured feedbacks aimed at positively impacting the training process was highlighted. The other objectives include inculcating leadership qualities, making impactful presentations, imparting skills for facilitating conflict resolution, critical appraisal of scientific papers, planning research studies, choosing appropriate trial designs, and promoting innovations in gastroenterology. The overarching goal was to improve patient care all over the world by creating a ripple effect by educating gastroenterologists.

Organization

The program at Kolkata was organized locally by Prof. Mahesh Goenka, Director and Head, Institute of Gastro Sciences and Liver Transplant at Apollo Multispeciality Hospitals, Kolkata. ISG was represented by its President, Dr. Govind Makharia, and Secretary General, Dr. Mathew Philip. Dr. Goenka mentioned, "I have organized many meetings earlier on a

much larger scale, such as Asian-Pacific Digestive Week 2019. However, organizing TTT was special with great education, engaging interaction, and lots of fun. We had 50 participants and 11 faculty from across the globe. A total of 11 lectures, 18 breakout sessions, and eight workshops were included during this meeting."

About the program

The course had a structured training program, chaired by Prof. Geoffrey Metz (Australia), who is the current President of WGO, and led by Prof. Kelly Burak (Canada). The focus of the training was to train adults with an interactive model. The style of training was to facilitate the learning process as a dialogue rather than an authoritative lecturing model. This frame shift in the teaching process was to facilitate practicing gastroenterologists to re-look the methods being deployed to train the next generation. In the medical profession, there is a continuous teaching and learning process. It has been found that this model is associated with better retention and has a lasting impact on adult learners. Participants were encouraged to actively engage in sessions, exchange insights, and cultivate meaningful connections with peers. Through collective efforts, they aspire to make a lasting impact on gastroenterology education and research thereby ultimately improving patient outcomes worldwide.

In addition to the educational components, evenings were spent by this niche group, mingling with one another and sharing their experience involving geographical diversity and various cultures. These elements included a cultural program, evening at a cruise on Ganges, and a farewell dinner at rooftop restaurant.



Participants and faculty pose for a photo after a group discussion session.



Quiz conducted by Prof. Kelly Burak



Faculty Day deliberations



Faculty are seen enjoying the sunset river cruise.





Cultural evening

Faculty & participants

Testimonial

Some comments by faculty:

"Thank you all for your extraordinary hospitality, engagement, and friendship. This was the most successful TTT that I've ever attended and reinforces in my mind just how important TTTs are, and can continue to be, as an educational tool that brings all GIs from every corner of the world together for the benefit of mankind.

Thanks again Mahesh as well as Govind, Mathew, and ISG colleagues. Thanks again to Kelly, Milly, Maria, and our WGO colleagues."

-Geoffrey Metz, Australia (President, WGO)

"Over the past 20 years I have attended many TTT, first as a participant, later as Faculty, and more recently in my role as Chair of the WGO TTT Committee. All of these meetings have been special, unique, and impactful experiences. However, the recent TTT in Kolkata stands out for me and will always hold a special place in my heart. This is in large part due to the commitment and dedication of the local organizers, including Dr. Mahesh Goenka and his team, Dr. Govind Makharia, Dr. Mathew Philips, and the Indian Society of Gastroenterology. They not only made the meeting possible but made it so very memorable

for those who attended. I also want to acknowledge our WGO team (Milly and Maria), the talented Faculty, and the very engaged participants from India and around the world. Thank you all!"

- Kelly Burak, Canada (Chair, TTT Committee, WGO)

"This was a high impact educational and training event with renowned national and international faculty engaging with attendees from 12 countries. Such focused, high quality, interactive programs have a transformational impact for the attendees and open new doors for networking and collaboration for the next generation of physician educators."

-Vivek Kaul, USA (Secretary General, WGO)

"It has truly been one of the most fun educational meetings I have been to. Sincere congratulations to all the organizers for a most spectacular TTT. And once again, it has been amazing to have been part of it."

-Mashiko Setshedi, South Africa (Faculty)

"TTT Kolkata was spectacular! Thank you all for this heart chakra opening event! Let's keep going and collaborating for a better world."

- Wojciech Marlicz, Poland (Faculty)

"Such a pleasure to have spent some time together. We all are pleased and honored to have you all in Kolkata. We appreciate your efforts to motivate our colleagues around the world. To say it yet again, TTT is a unique experience and joyful. The event is very likely to make into our long-term memory not only because of its content but also diligent and grandiose execution of the event by Dr. Goenka."

- Govind Makharia, India (President, ISG)

"It was inspiring to connect with so many professionals and aspiring scientists from around the world. The days flew by, filled with fantastic learning, networking, and knowledge sharing. The exceptional hospitality ensured that every moment was enjoyable. A special thanks to Mahesh and the team for their hospitality. I'm sincerely grateful to all the faculty members; they were simply outstanding. And to Milly, Maria, Nisha, and Saurabh, thank you for your support."

- Mathew Philip, India (Secretary General, ISG)

Some comments by participants:

"The only word I can think of is an outstanding workshop with unmatched hospitality. Everyone has echoed this feeling time and again and I have same feelings."

- Ajay Jain, India

"I feel extremely blessed to be a part of this program. Never had such an experience of learning blended with Bonhomie. It was so nicely organized, and everyone was engaged. The success of any medical education program is to bring a change in the behavior or clinical practice for the benefit of humanity. TTT 2024 has done it so efficiently. Hats off!

Highly grateful to Dr. Goenka Sir, WGO, ISG, and all faculty members. Lots of love and regards. Missing you all."

- Nadeem Parvez, India

"Thank you everyone for such a wonderful experience. When I came to this conference, I was very reluctant. After attending each and every session, I was enjoying each and every session. I will consider this as one of the best workshops which I have ever attended. Each and every session was neatly timed. All sessions were very engaging, and the interactions were very good. All faculty have done their part to utmost perfection. Regarding the arrangements and conduct of the conference, it was extraordinary. Every minute things have been taken care of. All credits to Dr. Mahesh Goenka sir and team for being such an extraordinary host."

- Arun Prasannan, India

"Three days of a carefully crafted program meant to open the minds of all of us to a whole new world of becoming a better teacher, researcher, and professional. The beauty was that it never felt boring or overbearing!! And to top it all was the added doses of friendship, food, fun and frivolity – another master organization by Dr. Goenka Sir and his team."

- Jayanta Samanta, India

"The last four days have really opened my eyes to new possibilities in medical education. I, as many before like me, have a standard way of looking at medical education, teaching, and research. This is mostly based on what we see as we are growing up in gastroenterology. But what I witnessed and learned in last few days was that there are better ways to do the same. There are ways

where we can learn and teach while feeling good and respectable. Few of the highlights for me are as follows

- The small group discussions are a great way of fostering relationships and learning. Solving a common problem really breaks down the whole process into smaller manageable issues. It truly reflects that we should always learn to collaborate.
- The feedback sessions and practice of techniques is something that is applicable in all spheres of life and not just medical education.
- Evidence-based medicine and critical approaches to literature is one of the important parts of our daily life and the sessions improved our understanding.
- Conflict resolution was an amazing session. I really wish it was much more than one hour.

In a nutshell, this has been one the best experiences of my life, helping me make great memories and new friends which I am sure will last a long time. In my opinion, this should be mandatory training for anyone who wants to have a career in medical education. Once again thank you and particularly for the exceptional hospitality which I am sure everyone enjoyed."

- Zubin Sharma, India

"Was wonderful meeting and working with all of you! Maybe we will be back as faculty someday."

- Nancy Reau, USA

"I would like to say thank you for this amazing TTT event and for the fact that I had the honor to be a part of it. The venue and the attention to detail combined with the quality of the lectures made this event amazing and one of the best experiences that I had in my career. The ISG and the WGO did an amazing job, and all your work for this event has paid off."

- Radu Farcas, Romania



The Lithuanian Society of Gastroenterology Celebrates the 50th Anniversary of its National Meeting



Goda Sadauskaitė, MD

Vilnius University
President of the Lithuanian Society of Gastroenterology
Lithuania



Edita Kazėnaitė, MD

Head of the Centre of Hepatology, Gastroenterology and Dietetics at Vilnius University Hospital Santaros Clinics Vilnius University Lithuania



Juozas Kupcinskas, MD

Head of Gastroenterology Department and Institute for Digestive Research Lithuanian University of Health Sciences



Limas Kupcinskas, MD, PhD

Full member of the Lithuanian Academy of Sciences Lithuanian University of Health Sciences Lithuania

On the 27th of October, the Lithuanian Society of Gastroenterology (LSG) convened its National Meeting to commemorate 50 years since its establishment. The event took place at Vilnius University, one of the oldest universities in Eastern Europe. Researchers and practitioners from across Lithuania delivered lectures and sharing their professional experiences. Invited lecturers, including Prof. H. Van Vlierberghe, Prof. S. Vermeire (Belgium), Prof. D. Dumitrascu (Romania), and Prof. P.

Malfertheiner (Germany), covered a spectrum of topics, ranging from emerging trends in digestive health to cutting-edge research in gastroenterological disorders.

The current president, Assoc. Prof. G. Sadauskaite, and former presidents of LSG; Prof. A. Irnius, Prof. J. Valantinas, Acad. L. Kupcinskas, Prof. G. Kiudelis, delivered a united lecture about the development of the society over the 50-year period.

As part of the festivities, awards were bestowed upon distinguished



Former president of LSG, Acad. Prof. Limas Kupcinskas; current President of LSG, Assoc. Prof. Goda Sadauskaite; former President of LSG, Prof. Algimantas Irnius; and former President of LSG, Prof. Jonas Valantinas.

LSG members. LSG members actively participate in different projects, including the International Research Project on Hepatitis B and C Epidemiology, "Polaris Observatory" (Coordinator: CDA Foundation, USA). LSG member Assoc. Prof. E. Kazenaite initiated and coordinated two projects supported by Vilnius University and Vilnius University Hospital Santaros Clinics: "Chronic Liver Diseases Genomic and Proteomic, These Diseases Pathogenetic Relationship with Other Abdominal Disease, Optimization of Therapeutic and Surgical Treatment" and "Assessment of the prevalence, interaction, use of health care services and medicines, and clinical completions of chronic non-infectious diseases in Lithuania."

Dr. E. Dieninyte (Vilnius University Hospital Santaros Clinics) from the UEG young talents group initiated and coordinated the international project "Prophylactic PPI Prescription Guidelines."

LSG members from Lithuanian University Kaunas Health Sciences currently participate in six EU grants:

Horizon Europe projects "Personalised blueprint of intestinal health (miGut-Health)," "An Artificially Intelligent Diagnostic Assistant for Gastric Inflammation (AIDA)," "A European 'shield' against colorectal cancer based on novel, more precise and affordable risk-based screening methods and viable policy pathways (ONCOSCREEN)," EU4Health program project "Towards Gastric Cancer Screening Implementation In The European Union (TOGAS)," Horizon Europe / "ERA-NET co-funded project 'LyophilizeD fecal micrObiome traNsfer for primAry closTridioides difficilE infection (DONATE study): a multicenter randomized controlled trial."

LSG member Academic L. Kupcinskas, also a full member of the Lithuanian Academy of Sciences, initiated the program for the elimination of hepatitis C in Lithuania, proving to be very effective. Over 750,000 (27% of inhabitants of Lithuania) born between 1944 and 1994 were screened in one year, and more than 6,000 cases of hepatitis C were detected. Forty percent of the patients have already started treatment.

In addition to our national meeting, LSG members actively participate



Dean of the Faculty of Medicine at Vilnius University, Prof. Dalius Jatuzis; President of the Lithuanian Society of Gastroenterology, Assoc. Prof. Goda Sadauskaite; Head of the Centre of Hepatology, Gastroenterology, and Dietetics of Vilnius University Hospital Santaros Clinics Assoc. Prof. Edita Kazenaite; Director of the Institute of Clinical Medicine at Vilnius University, Prof. Tomas Poskus.



Members of the current and former boards of LSG

in UEG, EASL, DDV, ECCO, EHM-SG, and other international meetings with posters and oral presentations. They are elected as board members and members of scientific committees in different international organizations related to gastroenterology and hepatology. LSG member Prof. J. Kupcinskas recently has been elected as General Secretary of the European Helicobacter and Microbiota Study Group. Prof. J. Kupcinskas also serves as a board member of the European Association of Gastroenterology Endoscopy and Nutrition and is a board member of the European Fecal Transplantation Network and European Microscopic Colitis Study Group.

A special book was released in celebration of the anniversary, marking the key milestones in the society's development, summarizing the internal aspects of its progress, and encapsulating the achievements of the society over 50 years.

Assoc. Prof. Goda Sadauskaite, Assoc. Prof. Edita Kazenaite, Prof. Juozas Kupcinskas, Acad. Prof. Limas Kupcinskas.

JDDW 2023: Breaking Records and Pushing Boundaries



Kazuhiko Koike, MDPresident, Organization of JDDW Tokyo, Japan



Society Presidents gather together for a group photo at JDDW.

About JDDW 2023

The 31st Japan Digestive Disease Week (JDDW 2023) was held at the Kobe Convention Center from November 2nd (Thursday) to 5th (Sunday). JDDW is one of Japan's largest academic conferences, exceeding 20,000 registered participants every year. Covering a broad spectrum from basic research to everyday clinical practices in the digestive field, this event transcends the boundaries of internal medicine and surgery. It brings together members from five societies involved in upper and lower digestive tracts, liver, gallbladder, and pancreas, fostering diverse opinions and lively discussions.

Due to the impact of the COVID-19 pandemic, since 2020, JDDW has incorporated a hybrid format, and this year's participation reached a recordbreaking count of approximately 24,500 attendees, marking the highest number in history.

Program Highlights

Following the program schedule of the past events, it commenced with three days of general programs, and the fourth day was dedicated to educational lectures. Adopting a hybrid format, the presentations were generally given onsite accompanied by online live streaming. The educa-

tional lectures on the final day were all conducted as e-learning.

A notable feature of JDDW 2023 was that two out of the five society presidents were women (Dr. Sumiko Nagoshi, President of the 65th Annual Meeting of the Japanese Society of Gastroenterology; Dr. Akiko Shiotani, President of the 106th Congress of the Japan Gastroenterological Endoscopy Society). This significant representation also influenced JDDW 2023's scientific program.

The Integrated Program, one of the programs organized through cooperation with the participating societies, discussed the themes of gender differences in the gastrointestinal field, obesity-related gastrointestinal diseases, the collaboration between therapeutic endoscopy and surgery, systems for clinical research support and implementation, bioinformatics, and new diagnostic modalities. The Women's Committee of Japanese Gastroenterology Study Group, a voluntary organization, has held its meetings during JDDW since 2002. This meeting was renamed the Program for Women in the Gastroenterological Field and has been organized by the IDDW committee since 2018. The program this year considered the use of social media in women physicians' career formation. The Seminar on



JDDW Welcome Board inviting attendees inside the Kobe Convention Center.



Dr. Sumiko Nagoshi (center) and Dr. Akiko Shiotani (left).

Medical Issues addressed reform of physicians' working style in Japan, and the Medical Staff Program took up hospital-hospital and hospital-clinic collaboration and multidisciplinary collaboration in palliative care. The 7th Joint Session between JDDW-KDDW-TDDW 2023, a joint symposium with KDDW of Korea and TDDW of Taiwan, the International Session with its focus on collaboration with other Asian countries, and the Strategic International Session were also organized.

About JDDW 2024

JDDW 2024 is scheduled to be held from October 31st (Thursday) to November 3rd (Sunday) at the Kobe Convention Center. We look forward to welcoming everyone to Kobe.

A Successful Korea Digestive Disease Week in Seoul



Jae Gyu Kim, MD, PhD

President, Organizing Committee of KDDW 2023 President, The Korean Society of Gastroenterology Professor, Division of Gastroenterology, Chung-Ang University Hospital, Chung-Ang University College of Medicine Seoul Korea



The Korea Digestive Disease Week 2023 (KDDW 2023) took place at Grand Walkerhill in Seoul, Korea, from November 16 to 18. It was a significant event in the global medical community, particularly for those interested in gastroenterology and hepato-pancreatology. The theme revolved around "Breakthroughs in Gastroenterology & Hepato-Pancreatology: Translating Knowledge into Practice." Approximately 2,200 people from 41 countries attended, including 37 speakers from 10 different countries.

There was a wide variety of sessions participants could attend, such as an exclusive symposium, postgraduate course, and abdominal ultrasound hands-on program. Academic sessions like the plenary session, free paper session, and an e-poster session provided a platform for researchers worldwide to discuss their latest findings. A total of 520 research abstracts were submitted from 21 countries. Six outstanding abstracts received their plenary session, and 114 oral presentations were featured in 29 free paper sessions, complemented by 400 presentations as e-posters. Beyond presentations, KDDW 2023 hosted global experts exploring future fields of medicine like precision medicine and regenerative medicine as well as sharing insights into gastroenterol-









ogy. The conference offered a real understanding of clinical practices and research in digestive health.

After delving into specific topics, 20 individuals received Outstanding Abstract Presentation Awards (KGFID Award), 20 were honored with the Young Investigator Award, 46 achieved the Excellent E-Poster Award, and 10 were presented with the KDDW Contribution Award.

KDDW 2023 collaborated with the American Gastroenterological Association, introducing a joint symposium. This collaboration created opportunities for emerging researchers in South



Korea to engage in global academic research. The conference solidified its position as a standout international academic event in the Asia-Pacific region by maintaining continuous exchanges with Japan Digestive Disease Week (JDDW) and Taiwan Digestive Disease Week (TDDW).

Transitioning fully offline after the COVID-19 pandemic, KDDW 2023 accommodated an expanding on-site attendance phase by providing online broadcasting for international participants. This strategic move engaged overseas participants and enhanced the global recognition of KDDW 2023, expanding opportunities for international attendees. Looking ahead,

KDDW aims to focus on research and academic exchange in gastroenterology and digestive diseases, collaborating with societies and groups globally, not only in Asia but also in the Americas and Europe.

Korea Digestive Disease Week 2024 is scheduled for November 14 to 16, 2024. Reflecting on the successes of KDDW 2023, we eagerly anticipate welcoming all esteemed participants back for another enriching experience in 2024.

For more information about KDDW, check out our website: https://www.kddw.org/.

Asian Pacific Digestive Week (APDW) 2024 Bali



Ari Fahrial Syam, MD, MMB, FACP, FACG

President, Indonesian Society of Gastroenterology (ISG) Dean Faculty of Medicine, Universitas Indonesia Cipto Mangunkusumo National General Hospital Jakarta. Indonesia



A group photo is taken at the Faculty Dinner at APDW 2023.

Asian Pacific Digestive Week (APDW) is a very influential international conference worldwide, particularly to the Asia region. We are grateful that the Indonesian Society of Gastroenterology (ISG) will host the "Asian Pacific Digestive Week (APDW) 2024" which will be held on 21-24 November 2024 in Bali Nusa Dua Convention Center (BNDCC), Bali, the Island of God.

In 2014, Indonesia hosted a tremendous Asian Pacific Digestive Week with Prof. Abdul Aziz Rani, MD, as the Congress President. Looking ahead to APDW 2024, we are very grateful to have Prof. Dadang Makmun, MD, PhD, FACG as the Congress President.

Gastrointestinal diseases continue to rise as burdensome healthcare chal-

lenges. On the other hand, there are some advancements in diagnostic and therapeutic modalities for gastrointestinal endoscopy, hepatology, and surgery as the promising alternatives for overcoming these challenges. We have specifically arranged this event as a platform to exchange the latest knowledge and skills in the fields of gastroenterology, hepatology and digestive endoscopy.

The theme for APDW 2024 is "Identifying and Addressing the Unmet Need." It serves the purpose of and is designed to cover a wide array of themes and topics to bring together leading experts, researchers, and professionals in the fields of gastroenterology, hepatology, digestive endoscopy, and digestive surgery from across the Asia-Pacific region.

This conference will provide a platform for the exchange of knowledge, collaboration, and advancements in digestive diseases. This meeting will give the opportunity for delegates to interact with leading professionals and researchers in the field. Networking sessions, panel discussions, and collaborative forums will establish valuable connections.

We look forward to the successful meeting and extend a warm invitation to participants from all Asian Pacific countries and others worldwide. We eagerly anticipate a fruitful exchange of ideas and expertise at APDW 2024.



Portuguese Translation of Updated Obesity Guidelines Available

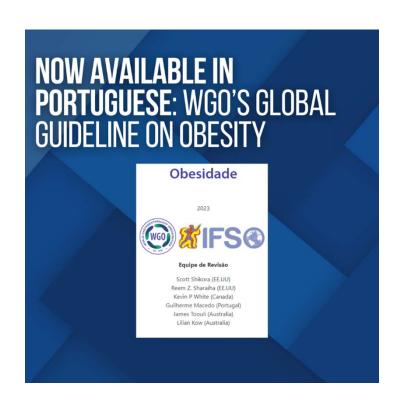
WGO is pleased to announce that the executive summary of the updated Obesity Guideline is now available online in Portuguese under the title "Obesidade." This guideline can be viewed and downloaded at https://www.worldgastroenterology.org/guidelines/obesity.

Roughly 1.5 billion people live with obesity worldwide. This disease can exert appreciable adverse effects on virtually all aspects of a person's life – physical, psychological, and socioeconomic. Empirically linked to several-year reductions in both quality-adjusted-life-years and lifespan, it confers increased risks for a host of life-altering and potentially life-threatening comorbidities including diabetes, cardiovascular disease,

and at least 13 forms of cancer. Yet only a small minority of patients seek formal treatment, and few achieve meaningful sustained weight loss or the amelioration of obesity-associated comorbidity. One major reason for this is woefully inadequate knowledge among the public and primary healthcare providers regarding various treatment options that have been proven effective.

WGO worked in partnership with the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) on this publication. This joint effort provides clinicians with a tool to use when dealing with those who struggle with obesity. The guideline was led by Drs. Scott Shikora (USA), Reem Sharaiha (USA), Kevin P. White (Canada), Guilherme Macedo (Portugal), James Toouli (Australia) and Lilian Kow (Australia). Prof. Macedo is the immediate Past President of WGO (2021-2023) and Prof. Toouli is also a Past President of WGO (2013-2015).

In addition to the summary, the "Methodology and results of a joint IFSO-WGO Delphi Survey of 94 intercontinental, interdisciplinary experts in obesity management" paper is also available in Portuguese on WGO's website. The translated article is entitled as "Metodologia e resultados de uma pesquisa Delphi conjunta IFSO-WGO de 94 especialistas intercontinentais e interdisciplinares no tratamento da obesidade."



Calendar of Events

WGO RELATED EVENTS

GASTRO 2024

When: November 7-9, 2024 Location: Marrakech Country: Morocco

Organizer: WGO and Société Marocaine Des Maladies de L'Appareil

Digestif (SMMAD)

Website: https://www.worldgastroenterology.org/meetings/wgo-internation-

al-meetings

CALENDAR OF EVENTS

HUG 2024

When: March 14, 2024 - March 16,

Location: Lotte Hotel Address: Seoul, Korea

Organizers: Korean College of Helicobacter and Upper Gastrointestinal

Research

Website: www.helicobacterkorea.org

Dutch Digestive Days 2024

When: March 20, 2024 - March 21, 2024

Location: NH Conference Center Koningshof

Address: Veldhoven, The Netherlands **Organizer:** Nederlandse Vereniging

Voor Gastro-enterologie

Website: https://www.nvge.nl/meetings-en-congressen/digestive-diseasedays

APASL 2024

When: March 27, 2024 - March 31, 2024

Location: ICC Kyoto Address: Kyoto, Japan

Organizer: Asian Pacific Association

for the Study of the Liver

Website: www.apasl2024kyoto.org

Scrubs and Heels Leadership Conference 2024

When: April 12, 2024 - April 14, 2024

Location: Miami, Florida **Country:** United States **Organizer:** Scrubs and Heels Website: https://scrubsandheels.com/

leadership-summit/

AWIG 2024

When: April 18, 2024 - April 21, 2024

Location: The Crane Country: Barbados

Organizer: The Association of West

Indian Gastroenterologists

Website: https://www.awigcaribbean.

org/

PSG Summit - 40th Annual Conference

When: April 19, 2024 - April 21, 2024

Location: Quetta Country: Pakistan

Organizer: Pakistan Society of Gastroenterology & GI Endoscopy Website: http://www.psgpak.org/

ESGE Days 2024

When: April 25, 2024 - April 27, 2024

Location: Berlin Country: Germany

Organizer: European Society of Gas-

trointestinal Endoscopy Website: https://esgedays.org

IHPBA World Congress 2024

When: May 15, 2024 - May 18, 2024 **Location:** Cape Town International

Convention Centre

Address: Cape Town, South Africa Organizer: International Hepato-Pancreatico-Biliary Association (IHPBA) Website: https://www.ihpba2024.org/

DDW 2024

When: May 18, 2024 - May 21, 2024

Location: Washington, DC **Country:** United States

Organizers: AASLD, AGA, ASGE

and SSAT

Website: https://ddw.org/

EASL Congress 2024

When: June 5, 2024 - June 8, 2024

Location: Milan **Country:** Italy Organizer: EASL

Website: https://easl.eu/event/easl-

congress-2024/

83rd Congress of the Spanish Society of Digestive Pathology

When: June 13, 2024 - June 15, 2024

Location: Valencia Country: Spain

Organizer: Sociedad Española de

Patología Digestiva

Website: https://congresosepd.com/

BSG Live 2024

When: June 17, 2024 - June 20, 2024

Location: ICC

Address: Birmingham, United King-

Organizer: British Society of Gastro-

enterology

Website: https://live.bsg.org.uk/

Semana Digestive 2024

When: June 20, 2024 - June 24, 2024

Location: Vilamoura **Country:** Portugal

Organizer: Sociedade Portuguesa de

Gastrenterología

Website: https://www.spg.pt/

7th Annual Conference: Gut Health Across Borders

When: July 5, 2024 Location: Grand Nile Hotel Address: Cairo, Egypt

Organizer: Egyptian Association for Research and Training in Hepatogas-

troenterology (EARTH)

Website: https://www.earth-eg.org/

IFSO World Congress 2024

When: September 3, 2024 - September 6, 2024

Location: Melbourne Country: Australia

Organizer: International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO)

Website: https://ifso2024.org/

XII Congreso Nacional de Gastroenterología y Endoscopía Digestiva

When: September 5, 2024 - Septem-

ber 7, 2024

Location: Ciudad de Panama

Country: Panama

Website: https://projectsswebsitewy.funnels.aplicacionespymes.com/

ALEH Congress 2024

When: September 9, 2024 - Septem-

ber 11, 2024 **Location:** Santiago **Country:** Chile

Organizer: Asociación Latinoamericana para el Estudio del Hígado (ALEH)

Website: https://congresoaleh.com/

Annual Meeting SGG-SGVC-SASL-SVEP 2024

When: September 12, 2024 - September 13, 2024

Location: Interlaken
Country: Switzerland

Organizer: Swiss Society of Gastroen-

terology

Website: https://sggssg.ch/

EUS ENDO International Live Course 2024

When: September 19, 2024 - Septem-

ber 21, 2024

Location: Parc Chanot **Country:** France

Organizer: Dr. Marc Giovannini **Website:** https://eus-endo.org/

XVI Congreso Paraguayo de Gastroenterología y Endoscopia Digestiva

When: September 25, 2024 - Septem-

ber 27, 2024

Location: Asuncion **Country:** Paraguay

Organizer: Sociedad Paraguaya de

Gastroenterología

Website: https://www.spge.org.py

UEG Week 2024

When: October 12, 2024 - October

15, 2024

Location: Messe Wien **Address:** Vienna, Austria **Organizer:** UEG

Website: https://ueg.eu/week-

ACG 2024 Annual Scientific Meeting & Postgraduate Course

When: October 25, 2024 - October

Location: Philadelphia, Pennsylvania

Country: United States Organizer: ACG Website: www.gi.org/

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

The Liver Meeting 2024

When: November 15, 2024 - Novem-

ber 19, 2024

Location: San Diego, California **Country:** United States

Organizer: AASLD

Website: https://www.aasld.org/the-

liver-meeting

Semana Nacional de Gastroenterologia 2024

When: November 15, 2024 - Novem-

ber 19, 2024

Location: Merida, Yucutan

Country: Mexico

Organizer: Asociación Mexicana de

Gastroenterología

Website: https://www.gastro.org.mx/eventos/2024/semana-nacional-de-

gastroenterologia

Asia Pacific Digestive Disease Week 2024

When: November 21, 2024 - Novem-

ber 24, 2024 **Location:** Bali **Country:** Indonesia

Organizer: Asian Pacific Association of

Gastroenterology (APAGE)

Website: https://www.apdwcongress.org/

<u>015</u>/

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!



www.biocodexmicrobiotainstitute.com/pro: an international hub of knowledge dedicated to microbiota!

Biocodex Microbiota Institute is an international scientific institution that aims to foster health through spreading knowledge about the human microbiota. To do so, the Institute addresses both healthcare professionals and the general public to raise their awareness about the central role of this still little-known organ of the body.

It is designed to provide you with reliable, updated, and adapted content. It is also designed to reflect the dynamism and innovation of the human microbiota.



Available in 7 languages (English, French, Spanish, Russian, Polish, Turkish, and Portuguese), this online international hub provides Healthcare Professional with the latest scientific news and data about microbiota including the Institute's exclusive content such as Microbiota magazine, thematic folders, continuing medical education (CME) courses and interviews with experts. Check them out!



Navigate through this hub of knowledge: www.biocodexmicrobiotainstitute.com/pro