

EEMEA Scientific Seminars

2024 Riyadh, Kingdom of Saudi Arabia

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Dear Esteemed Delegate,

It is with great pride that we present the proceedings of the recent multidisciplinary seminars held in November 2024 in Riyadh, Kingdom of Saudi Arabia. This remarkable event brought together over 300 delegates, including leading international experts and distinguished representatives from both the public and private healthcare sectors across the Middle East.

Against the dynamic backdrop of Riyadh's rapidly evolving healthcare landscape, the seminars served as a pivotal platform for the exchange of cutting-edge knowledge and practical insights in the fields of autoimmunity, hemostasis, and acute care diagnostics. The event was further enriched by the active participation of key stakeholders from across the region, whose contributions highlighted the local commitment to scientific excellence and innovation in patient care.

The sessions explored complex scientific topics through a collaborative and interdisciplinary lens, addressing current challenges while shedding light on emerging trends and future directions. The diversity of perspectives fostered a uniquely comprehensive dialogue, reinforcing the importance of knowledge-sharing across borders and disciplines. These proceedings capture the depth and breadth of the discussions held in Riyadh and aim to serve as a valuable resource for continued professional development and research. We hope this compilation will inspire further collaboration and progress among all those dedicated to advancing healthcare science and delivery across the region and beyond.

With warm regards,

AFMS

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2024
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5th EEMEA
Acute Care Experts Meeting
November 4-5, 2024 • Riyadh
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Introduction
Acute Care Diagnostics

In today's healthcare environment, interdisciplinary dialogue and collaboration are essential for driving progress in patient care, especially in Acute Care Settings. With this goal in mind, the *EEMEA Acute Care Experts Meeting* has become a valued forum, making a notable clinical and scientific impact in the EEMEA region.
The 5th *EEMEA Acute Care Experts Meeting* was held on November 4–5 in Riyadh, bringing together 16 Experts from various healthcare specialties such as cardiologists, perfusionists, anesthesiologists, surgeons, experts in hemostasis and hematologists, as well as Point of Care testing and laboratory professionals. Chaired by Dr. Klaus Görlinger (Germany) and Prof. James H. Nichols (USA), the event welcomed approximately 100 delegates from the Middle East and beyond.
The sessions focused on Patient Bleeding Management within the contexts of Cardio-Vascular and Cardio-Thoracic Surgery, Postpartum Hemorrhage, and Liver Transplantation, as well as Laboratory and Point of Care Testing with special emphasis on the pre-analytical phase of blood gas testing and quality in Point of Care Testing.
Participants actively engaged in lively discussions, sharing real-world experiences and evidence-based practices to address challenges, drive advancements, and work toward the common goal of optimizing patient care and enhancing hospital efficiency. A highlight of the event was the distinguished presence of Dr. Maram Al-Otaiby, President of Health Support Services at the Ministry of Health Saudi Arabia, whose keynote speech emphasized the essential role of diagnostic innovation in healthcare transformation.
The EEMEA Acute Care Expert Meetings reflect Werfen's goal to Power Patient Care by fostering international networks and cross-collaboration, expanding knowledge and expertise, and developing actionable strategies that can be practically implemented to improve the standard of care.

DAY 1

Part 1 **Cardio-vascular and Cardio-thoracic Surgery**
Part 2 **Goal-directed bleeding management in Post Partum Hemorrhage**
Part 3 **Point of Care hemostasis monitoring during liver transplantation**
Part 4 **Implementation of Patient Blood Management in Clinical Practice**

DAY 2

Part 1 **Pre-analytical errors, Point of Care Testing and patient safety**
Part 2 **The role of Connectivity in managing Point of Care testing devices**
Part 3 **Ensuring quality and regulatory compliance with Point of Care Testing**

Cardio-vascular and Cardio-thoracic Surgery

PART 1

The session on **Cardio-vascular and Cardio-thoracic Surgery** addressed the challenges of heparin administration during cardiopulmonary bypass and differentiating between surgical and coagulopathic bleeding.

Klaus Görlinger shared his profound knowledge based on his extensive work in bleeding management within cardiac surgeries. Klaus Görlinger emphasized the urgency of shifting from outdated universal strategies to more refined, personalized treatment pathways. This innovative mindset goes beyond the restrictive "one-size-fits-all" approach, promoting a method that is tailored to individual patient scenarios and conditions.

Ahmed Galal discussed the complexities of managing heparin and protamine dosages, covering factors affecting ACT, dosing methods, protocols, and the use of viscoelastic tests to manage anticoagulation, thereby reducing bleeding and thrombotic risks during cardiac surgery.

A lively panel discussion followed, highlighting the importance of fast, accurate Point of Care results to enhance treatment decisions and patient outcomes during cardiac surgeries.

Topics and Speakers

SCAN or CLICK

Optimizing patient safety through comprehensive bleeding management in cardiac surgery

Klaus Görlinger
Medical Director
Patient Blood Management, Werfen, Germany

SCAN or CLICK

Heparin monitoring during cardiac surgery

Ahmed Galal
Consultant cardiac anesthetist at Prince Sultan Cardiac Center,
Riyadh, Kingdom of Saudi Arabia

Goal-directed bleeding management in Post Partum Hemorrhage

PART 2

Goal-directed bleeding management in Postpartum Hemorrhage (PPH) involves tailored interventions to control excessive bleeding after childbirth. This session was focused on how Point of Care Viscoelastic Testing can support clinical decision-making, enabling effective actions to improve clinical outcomes and reduce maternal mortality through fast, actionable results.

Tarek Ansari focused on viscoelastic testing-guided bleeding management for postpartum hemorrhage, emphasizing its role in real-time assessment of coagulation status. This approach allows for targeted interventions, improving patient outcomes and reducing the need for unnecessary transfusions.

Fatima Khatoon through real case discussions, shared her experience with goal-directed bleeding management in postpartum hemorrhage, confirming its reliability. Thanks to this approach, it is possible to achieve an effective blood loss control, minimizing treatment risks, reducing transfusion rates, and improving perioperative outcomes

The session ended with an involving panel discussion about the use of specific protocols in viscoelastic testing-guided bleeding management in postpartum hemorrhage, facilitating valuable exchanges among participants.

Topics and Speakers

SCAN or CLICK

Viscoelastic testing guided bleeding management for post-partum haemorrhage

Tarek Ansari
Acting Deputy Chief Medical Officer
Department of Anaesthesia - CMO
Corniche Hospital, Abu Dhabi, United Arab Emirates

SCAN or CLICK

Goal directed hemostatic therapy in obstetric haemorrhage: case discussions

Fatima Khatoon
Department of Anaesthesia and Intensive Care
Hamad Medical Corporation, Doha, Qatar

PART 3

Point of Care hemostasis monitoring during liver transplantation

This session covered multiple aspects related to Point of Care hemostasis monitoring during liver transplantation, focusing on how it allows real-time assessment of coagulation status, managing bleeding risks, optimizing patient outcomes, and minimizing complications during surgery.

Fuat H. Saner shared a detailed explanation of how viscoelastic testing helps in reducing frozen plasma transfusion in liver transplantation by providing real-time assessment of coagulation status. This condition allows for targeted administration of specific clotting factors or platelets, ensuring precise management of bleeding and minimizing the need for unnecessary frozen plasma transfusions.

Fatima Al Saleh described the coagulation challenges during liver transplantation, emphasizing the complexities of managing bleeding and clotting in this high-risk setting. She explored improved perioperative transfusion practices based on a deeper understanding of coagulation pathophysiology, the use of Point of Care diagnostic tests, treatment algorithms, and advancements in surgical techniques to optimize patient outcomes and reduce transfusion-related complications.

The session ended with a panel discussion in which participants shared their experiences and best practices on Point of Care haemostasis monitoring during liver transplantation, emphasizing goal-directed bleeding management to improve patient care.

Topics and Speakers

SCAN or CLICK

How to reduce frozen plasma transfusion in liver transplant

Fuat H. Saner
Organ Transplant Center of Excellence at King Faisal Specialist Hospital & Research Centre
Riyadh, Kingdom of Saudi Arabia

SCAN or CLICK

Reducing transfusion requirements in liver transplantation

Fatima Al Saleh
Transplant Anesthesiologist at King Fahad Specialist Hospital, Dammam
Kingdom of Saudi Arabia

PART 4

Implementation of Patient Blood Management in Clinical Practice

This session focused on the implementation of Patient Blood Management (PBM) in clinical practice to optimize blood use, minimize blood loss, and reduce the need of transfusions.

Rizq Al Amri highlighted how implementing Patient Blood Management approach involves multidisciplinary aspects, utilizing strategies such as preoperative anemia management, intraoperative hemostasis monitoring, and postoperative blood conservation to improve patient outcomes, reduce complications, and lower healthcare costs.

Sibylle Langenecker presented her experience with the implementation of Patient Blood Management in Austria, discussing European guidelines, the value of viscoelastic testing in goal-directed bleeding management, and the importance of interdisciplinary competencies in this field.

The final panel discussion emphasized the importance of tailored therapeutic strategies and multidisciplinary collaboration in Patient Blood Management to improve patient outcomes, highlighting the role of interdisciplinary competencies in ensuring its effective and sustainable implementation.

Topics and Speakers

SCAN or CLICK

Implementation of PBM in clinical practice - Experience from Saudi Arabia

Rizq Al Amri
Anesthesia and Pain Management consultant at East Jeddah General Hospital, Jeddah, Kingdom of Saudi Arabia

SCAN or CLICK

Implementation of PBM in clinical practice - Experience from Austria

Sibylle Langenecker
Chairperson, Department of Anaesthesia and Intensive Care at the Evangelical Hospital, Vienna, Austria

Pre-analytical errors, Point of Care Testing and patient safety

Pre-analytical errors in Point of Care Testing (POCT) can significantly impact patient safety by leading to inaccurate test results, which may affect clinical decisions. Proper sample handling, correct device calibration, and staff training are essential to minimize these errors and ensure reliable results that support timely and safe patient care.

Najwa Adlan discussed best practices to reduce sample quality errors in Point of Care Blood Gas Testing. This includes ensuring proper training focused on sample collection techniques for healthcare providers, minimizing delays between collection and analysis, and implementing rigorous quality control measures to ensure accurate and reliable test results.

Amjad Alotaibi explored strategies to improve patient safety by preventing pre-analytical errors in blood gas analysis. She highlighted how such errors can lead to incorrect diagnoses and compromised patient safety, emphasizing the importance of proper training, adherence to SOPs, and the use of technology in maintaining accurate test results.

The panel discussion featured numerous questions and lively audience interaction, highlighting the growing importance of implementing optimal solutions for Point of Care (POC) testing to reduce pre-analytical errors and ensure patient safety.

Topics and Speakers

SCAN or CLICK

Reducing sample quality errors in Point of Care Blood Gas Testing

Najwa Adlan
Lab Manager and Director
at Aldara Hospital and Medical Center
Riyadh, Kingdom of Saudi Arabia

SCAN or CLICK

How to improve patient safety by preventing pre-analytical errors in blood gas analysis

Amjad Alotaibi
Point of Care Manager at King Faisal
Specialist Hospital & Research Centre
Riyadh, Kingdom of Saudi Arabia

PART 2

The role of Connectivity in managing Point of Care testing devices

This session focused on the critical role of connectivity solutions in managing Point of Care systems across multiple sites, especially when operated by non-technical staff.

Abdelrahman Al Anazi conferred about how integrating a reliable Point of Care management system into a hospital or lab can reduce manual data entry, prevent errors, and give healthcare providers real-time results enabling prompt and informed treatment decisions.

Jaham Shada shared her experience in managing different Point of Care devices in a large healthcare institution across multiple locations using connectivity systems. She emphasized how centralized connectivity solutions streamline Point of Care operations, reduce errors, and enhance operator training and competency by providing a unified platform for monitoring and education.

The session ended with a dynamic discussion on how connectivity solutions can improve efficiency, minimize errors, and ultimately enhance patient care.

Topics and Speakers

SCAN or CLICK

Implementing connectivity solutions for quality assurance and regulatory compliance in Point of Care Testing

Abdelrahman Al Anazi
Head of Point of Care Services at National Guard Hospital Riyadh, Kingdom of Saudi Arabia

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Oversight and management of Point of Care Testing in a large Health Institution - Experience from Qatar

Jaham Shada
POCT Supervisor DLMP, Point of Care Corporate Service, Department of Laboratory Medicine & Pathology Hamad Medical Corporation, Doha, Qatar

PART 3

Ensuring quality and regulatory compliance with Point of Care Testing

This session was centered on the importance of ensuring quality and regulatory compliance in Point of Care Testing, which is crucial to guarantee the reliability and safety of diagnostic results outside traditional laboratory settings.

James H. Nichols presented advancements in blood gas testing technology, showcasing how real-time monitoring and error detection have improved quality management. Through a multisite study discussion, he emphasized that these technologies can quickly identify and correct errors, ensuring accurate results.

Mohamad Al Safi discussed the relevance of fulfilling regulatory and accreditation requirements for Point of Care Testing (POCT), highlighting the importance of compliance with established standards such as those set by CLIA, FDA, ISO, and OSHA. He underlined the crucial role of local unified guidelines for POCT, advanced training for supervisors, and encouraging participation in accreditation to ensure the quality and accuracy of testing in non-laboratory settings.

The panel discussion showcased that quality management in Point of Care Testing within healthcare institutions can enhance testing accuracy, ensure consistent performance, and uphold patient safety, all while meeting essential compliance requirements.

Topics and Speakers

SCAN or CLICK

Advances in quality management systems in Point of Care Testing: Experience from a multisite study across 4 sites in USA and UK

James H. Nichols
PhD, DABCC, FAACC, Professor of Pathology, Microbiology and Immunology, Medical Director, Clinical Chemistry and Point of Care Testing, Vanderbilt University School of Medicine, Nashville, TN, USA

SCAN or CLICK

Fulfilling regulatory and accreditation requirements for Point of Care Testing

Mohamad Al Safi
Head of Point of Care Testing and Immunology Lab at King Fahad Armed Forces Hospital Jeddah, Kingdom of Saudi Arabia

Joint Session Hemostasis and Autoimmunity with a focus on Antiphospholipid Syndrome

Antiphospholipid Syndrome (APS) is a complex autoimmune disorder characterized by the presence of antiphospholipid antibodies (aPL) and a thrombotic or obstetric phenotype.

This joint session on Hemostasis and Autoimmunity delves into the intricate relationship between APS and the coagulation system, highlighting the latest advancements in diagnosis, management, and research.



Joint Session Hemostasis and Autoimmunity with a focus on Antiphospholipid Syndrome

Lupus Anticoagulant and Laboratory Challenges with DOACs

Prof. Armando Tripodi, a renowned expert in the field, presented the challenges posed by direct oral anticoagulants (DOACs) in the laboratory diagnosis of lupus anticoagulant. He explored the mechanisms underlying the interference of DOACs with coagulation tests and provide insights into strategies to optimize laboratory results.

APS in Pregnancy: Protection and Management

Prof. Najat Rouhaldeen addressed the specific challenges faced by pregnant women with APS. She will discuss the increased risk of thrombotic events and pregnancy complications associated with APS and outlined strategies for prevention and management.

Topics and Speakers

SCAN or CLICK

Lupus Anticoagulant and laboratory challenges with the DOACs

Armando Tripodi
Full Professor of Laboratory Medicine at Humanitas University. Established Investigator, Angelo Bianchi Bonomi Hemophilia and Thrombosis Center, IRCCS Maggiore Hospital Foundation, Italy

SCAN or CLICK

APS in pregnancy: Protection and Management

Prof. Najat Rouhaldeen
Hematology Department, Maternity Hospital, Kuwait

Joint Session Hemostasis and Autoimmunity with a focus on Antiphospholipid Syndrome

New Developments in the Classification of APS

Prof. Pier Luigi Meroni presented the latest updates on the classification criteria for APS. He discussed the evolving understanding of the disease and the implications of the revised classification criteria for clinical practice.

APS Diagnosis: Where Are We Now?

Prof. Savino Sciascia provided an overview of the current state of APS diagnosis. He will discuss the diagnostic challenges, the role of laboratory testing, and the importance of clinical criteria in establishing the diagnosis.

This joint session brought together leading experts in the field to share their knowledge and insights. By exploring the latest research and clinical practices, this session aims to enhance the understanding and management of APS, ultimately improving patient outcomes.

Topics and Speakers

SCAN or CLICK

New developments in the classification of the APS

Prof. Pier Luigi Meroni
Istituto Auxologico Italiano, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Laboratory of Immuno-Rheumatology, Milan, Italy. Department of Clinical Sciences and Community Health, University of Milan

SCAN or CLICK

APS diagnosis: where are we now?

Prof. Savino Sciascia
University Center of Excellence on Nephrologic, Italy Rheumatologic and Rare Diseases (ERK-net, ERN-Reconnect and RITA-ERN Member) with Nephrology and Dialysis Unit and Center of Immuno-Rheumatology and Rare Diseases, Coordinating Center of the Interregional Network for Rare Diseases of Piedmont and Aosta Valley, San Giovanni Bosco Hub Hospital, Turin


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Introduction
Hemostasis

It was our pleasure again in 2024 to organize the 15th Advanced Hemostasis Seminar. The Hemostasis Seminar is a now a tradition for hundreds of attendees each year to listen to and exchange with an esteemed cohort of speakers.

At Werfen we strive to Powering Patient Care through, among other things, our continued commitment to sharing the latest scientific content that enables healthcare professionals and institutions to improve patient outcomes.

This year, through a collaboration with the Autoimmunity seminar, we had a great focus on Antiphospholipid Syndrome through a Joint Session on the first day followed by separate Hemostasis and Autoimmunity sessions.

The 15th edition that took place in Riyadh, Kingdom of Saudi Arabia in November of 2024 and was quite eventful with exciting new topics and significant participation.

Part 1 Bleeding Disorders

Part 2 Heparin Induced Thrombocytopenia and Thrombotic Thrombocytopenic Purpura

Part 3 Cancer, Thrombosis and Novel Therapies

Part 4 Thrombophilia and Hemostasis Diagnosis Challenges in the Middle East and North Africa

Bleeding disorders

PART 1

The first session, presented by Prof. Alberto Tosetto, delved into the evolution of hemophilia treatments and the crucial role of laboratory testing in monitoring patient care. The second session, led by Prof. Emna Gouider Belhadjali, explored the various therapeutic options available for hemophilia, including both replacement and non-replacement therapies.

Following these insightful sessions, the seminar turned its focus to Von Willebrand Disease (VWF). Prof. Alberto Tosetto again took the stage, this time discussing the implementation of VWF guidelines and the importance of standardized diagnostic and therapeutic approaches.

Von Willebrand factor (VWF) is a large multimeric glycoprotein that plays a crucial role in hemostasis. It helps platelets adhere to the damaged vessel wall, a critical step in the blood clotting cascade as well as help platelets to aggregate, forming a platelet plug that seals the damaged vessel.

Topics and Speakers

SCAN or CLICK

The evolution of Hemophilia Treatments and Laboratory Testing

Alberto Tosetto
Head of the Hemostasis and Thrombosis - Center Saint Bortolo Hospital, Vicenza

SCAN or CLICK

Hemophilia Replacement and Non-Replacement Therapies

Emna Gouider Belhadjali
Head of the Department of Biological Hematology Aziza Othmana Hospital - Physician in charge of Tunisia the Hemophilia Center Aziza Othmana Hospital
Head of UR14ES11 Faculty of Medicine of Tunis, Tunis

SCAN or CLICK

Implementation of Guidelines on the Diagnosis of VWD

Alberto Tosetto
Head of the Hemostasis and Thrombosis Center Saint Bortolo Hospital, Vicenza, Italy

PART 2

Heparin Induced Thrombocytopenia and Thrombotic Thrombocytopenic Purpura

Heparin-Induced Thrombocytopenia (HIT) is a serious thrombotic disorder that can occur in patients treated with heparin. It is triggered by the formation of antibodies against heparin-platelet factor 4 complexes. The first session delved into the pathophysiology, clinical manifestations, and diagnosis of HIT. Challenges in diagnosing HIT, the importance of early recognition, and the management strategies to prevent thrombotic complications were presented.

Congenital Thrombotic Thrombocytopenic Purpura (cTTP) is a rare, life-threatening bleeding and thrombotic disorder caused by a deficiency or dysfunction of the ADAMTS13 protein. The second session explored the underlying mechanisms of cTTP, its clinical presentation, and diagnostic approaches. The speaker discussed the challenges in managing cTTP, the importance of early diagnosis, and the therapeutic options available for patients with this disorder.

Topics and Speakers

PD Dr. med. Lars Asmis
Head of the Center for Perioperative Thrombosis and Switzerland Hemostasis Hematology and Internal Medicine Zurich, Switzerland

SCAN or CLICK

FIRST TALK
Heparin Induced Thrombocytopenia

SECOND TALK
Congenital Thrombotic Thrombocytopenia Purpura

Cancer, Thrombosis and Novel Therapies

PART 3

Cancer-associated thrombosis (CAT) is a significant complication of cancer, increasing morbidity and mortality. The first session delved into the risk factors, pathophysiology, and clinical presentation of CAT. Various risk assessment models that can help identify patients at high risk for CAT were presented. These models can aid in risk stratification, guiding therapeutic decisions, and optimizing patient care.

Factor XI (FXI) is a coagulation factor involved in the intrinsic pathway of blood clotting. Recent studies have highlighted the potential role of FXI inhibition as a novel therapeutic approach for thrombotic disorders. The second session explored the mechanisms of FXI-mediated thrombosis and the rationale for targeting FXI. The ongoing clinical trials investigating FXI inhibitors and their potential benefits in various thrombotic conditions were presented.

Topics and Speakers

Prof. Marcello Di Nisio
Department of Medicine and Ageing Sciences Italy
University G. D'Annunzio Chieti, Italy



SCAN or CLICK

FIRST TALK
Risk Assessment Models in Cancer-Associated Thrombosis



SECOND TALK
Factor XI: A new target for anticoagulation?

Thrombophilia and Hemostasis Diagnosis Challenges in the Middle East and North Africa

PART 4

The session on Familial Thrombophilia delved into inherited conditions that predispose individuals to venous thrombosis. It discussed various types of familial thrombophilia and when it is appropriate to test. The speaker addressed the a series of cases, the diagnostic challenges encountered, and the significance of early identification and management.

Wrapping up the 15th Advanced Hemostasis Seminar, a panel discussion brought together experts from the Middle East and North Africa to address the unique challenges faced in the diagnosis of hemostasis disorders in the region. The discussion covered topics such as the limited availability of specialized testing, the interpretation of test results, and the impact of genetic variations on coagulation phenotypes. The panelists discussed strategies to improve the quality of hemostasis testing, enhance laboratory capacity, and foster regional collaboration to overcome these challenges. The discussion was informed by a presentation on the specific challenges faced by hemostasis laboratories in Saudi Arabia.

Topics and Speakers

Tarek Owaidah
King Faisal Specialist Hospital and Research Center,
Kingdom of Saudi Arabia - Riyadh

FIRST TALK
Screening for familial thrombophilia

SCAN or CLICK

SECOND TALK
Introduction on the Challenges of the Hemostasis Diagnosis

Panel Discussion

Challenges in Hemostasis Diagnosis in the Middle East and the Arab World

Prof. Najat Rouhaldeen
Hematology Department, Maternity Hospital, Kuwait

Prof. Emna Gouider Belhadjali
Head of the Department of Biological Hematology Aziza Othmana Hospital
Physician in charge of Tunisia the Hemophilia Center Aziza Othmana Hospital - Tunisia

Prof. Tarek Owaidah
King Faisal Specialist Hospital and Research Center,
Kingdom of Saudi Arabia - Riyadh

Dr. Mona Al Faraj
Consultant Hematophologist and transfusionist Deputy Director of Medical Laboratory Department and Blood Bank - Qatif Health Network, Qatif
Kingdom of Saudi Arabia







Introduction
Autoimmune Diagnostics

The global network of clinical and translational researchers continues to drive unprecedented progress in autoimmune disease research. Scientific conferences play a pivotal role in exchanging ideas, theories, and research tools, fostering interdisciplinary collaboration and innovation.
The 11th International Autoimmunity Seminar, held on November 4-5, 2024, in Riyadh, Saudi Arabia, brought together leading experts to discuss key advancements and challenges in the field. Chaired by Daniele Ielo, the event provided a platform for dynamic discussions on practical experiences and evidence-based practices. Approximately 80 delegates actively participated, engaging in insightful exchanges and sharing best practices from their institutions.
Due to its great success, the prestigious journal Autoimmunity Reviews has invited the publication of two articles highlighting the event's key findings. This recognition will further enhance the seminar's prestige within the global immunology and rheumatology communities, solidifying its impact on the field.
Looking ahead, the 12th International Autoimmunity Seminar is scheduled for October 2025 in Vilnius, Lithuania, promising another significant gathering of experts dedicated to advancing autoimmune research. These ongoing meetings continue to shape the future of autoimmune disease understanding and treatment, reinforcing the importance of global collaboration.

The sessions were meticulously curated to address specific challenges encountered in various clinical settings and have been divided in different chapters as follows:

Part 1 **Clinical manifestations and management of patients with CTD**

Part 2 **From undifferentiated to definite CTD: the role of autoantibodies testing**

Part 3 **New developments on antiphospholipid antibodies**

Part 4 **The International Consensus on Antinuclear Antibodies Patterns (ICAP)**

Part 5 **New insights into primary cholangitis**

Part 6 **Inflammatory Bowel Disease: from pathogenesis to laboratory testing**

Clinical manifestations and management of patients with CTD

PART 1

Pediatric systemic connective tissue diseases (CTD) include juvenile systemic lupus erythematosus (jSLE), juvenile dermatomyositis (JDM), systemic and localized scleroderma, mixed connective tissue disease (MCTD), and Sjögren syndrome. Rare cases of IgG4-related disease have also been reported. While the exact etiology remains unclear, genetic predisposition and environmental triggers contribute to disease development, with immune dysregulation and type I interferon (IFN-I) activation playing key roles.

jSLE is a multisystem autoimmune disease, often more severe than adult-onset SLE, affecting the kidneys, heart, CNS, and joints. JDM, the most common juvenile myopathy, presents with muscle weakness and characteristic rashes, while myositis-specific antibodies help predict complications like interstitial lung disease.

Scleroderma includes systemic sclerosis (SSc) and localized scleroderma (morphea). SSc leads to progressive fibrosis affecting the skin, lungs, heart, and kidneys. Sjögren syndrome primarily affects the salivary and lacrimal glands, causing dryness, while IgG4-related disease presents with glandular enlargement, pancreatitis, and organ fibrosis.

CTD treatment requires balancing immunosuppression and organ protection. Therapies include cyclophosphamide, rituximab, and biologics, with newer targeted treatments such as IFN-I inhibitors and CAR-T cells offering promising advancements.

Topics and Speakers

SCAN or CLICK

Clinical Manifestations and Management of Pediatric Patients with Connective Tissue Diseases

Dr. Shima Kamal
Pediatric rheumatology, Department of Pediatrics,
King Abdullah Specialized Children's Hospital, King Abdulaziz Medical City, National Guard Health Affairs, Jeddah

PART 2

From undifferentiated to definite CTD: the role of autoantibodies testing

Diagnosing connective tissue diseases (CTDs) requires integrating clinical signs, symptoms, and immunological profiles. The overlapping features of autoimmune disorders often make early diagnosis challenging, particularly in the initial stages, where symptoms may be limited. Early identification is crucial to prevent long-term organ damage and enhance patient care.

Autoantibodies, detectable years before symptom onset, serve as valuable biomarkers for disease prediction and progression. Recent advancements in biomarker discovery and imaging have improved early diagnosis and precision medicine, particularly with the growing use of biologics. However, predicting organ damage remains difficult, especially in patients with mild early symptoms. Conditions like undifferentiated connective tissue disease (UCTD) further complicate classification and management.

Emerging multi-analyte platforms integrating AI-driven analysis offer promising advancements in autoantibody diagnostics. A prospective study using particle-based multi-analyte technology (PMAT) followed 194 patients with CTD-like symptoms over three years. Initially, 27.8% were diagnosed with early systemic lupus erythematosus (SLE), while 72.2% were classified as UCTD. Over time, 66% developed a definitive CTD, with distinct autoantibody profiles predicting progression.

This study highlights the need for early intervention in UCTD and the potential of PMAT testing to identify high-risk patients. These findings lay the groundwork for targeted diagnostics and biomarkers, supporting future research into early CTD detection before irreversible organ damage occurs.

Topics and Speakers

SCAN or CLICK

Predicting progression from undifferentiated connective tissue disease to clinically overt disease using particle-based multi-analyte technology

Prof. Savino Sciascia
University Center of Excellence on Nephrologic, Rheumatologic and Rare Diseases San Giovanni Bosco Hub Hospital, Turin, Italy

New developments on antiphospholipid antibodies

PART 3

Updating classification criteria for autoimmune disorders is crucial for improving clinical trials, particularly for systemic lupus erythematosus (SLE) and antiphospholipid syndrome (APS). While the new ACR/EULAR criteria enhance disease classification, they raise concerns in routine diagnosis.

For SLE, the new criteria require ANA positivity (≥1:80) as an entry criterion. However, HEp-2IFA ANA testing at this dilution has low predictive value, as positive results can occur in unrelated conditions. Higher cut-offs or solid-phase assays with improved specificity may be more reliable.

For APS, classification requires medium/high aPL positivity detected by ELISA. However, automated solid-phase assays like chemiluminescent immunoassay (CLIA) yield different analytical values. This discrepancy may overestimate APS risk, potentially leading to unnecessary treatment. Physicians must be aware of assay variations, especially in low-titer cases. Despite poor quantitative agreement, there is categorical concordance across platforms when considering multiple aPL assays. Scientific committees are working to harmonize interpretations between ELISA and automated assays.

Ultimately, classification criteria are for research purposes, ensuring homogeneous study populations, while diagnosis remains a clinical decision. Proper interpretation of ANA and aPL results, including higher cut-off dilutions or reliable non-ELISA assays, can help address these challenges in routine practice.

Topics and Speakers

SCAN or CLICK

ANA as an entry criterion for the classification of SLE

Prof. Pier Luigi Meroni
Istituto Auxologico Italiano, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Laboratory of Immuno-Rheumatology, Milan, Italy-Department of Clinical Sciences and Community Health, University of Milan, Italy

The International Consensus on Antinuclear Antibodies Patterns (ICAP)

PART 4

The International Consensus on ANA Patterns (ICAP) is a subcommittee of the Autoantibody Standardization Committee, affiliated with the International Union of Immunology Societies (IUIS). It aims to harmonize technical and interpretative aspects of HEp-2/IFA testing by establishing consensus on pattern classification, immunological associations, and clinical relevance. Over its first decade, ICAP has organized meetings, published educational modules, and held sessions at global congresses to promote its standardized nomenclature. A special publication provided guidelines for HEp-2/IFA laboratory reporting, enhancing its application in patient care and research.

ICAP has classified 32 ANA patterns, assigning alphanumeric codes AC-, structured into Competent- and Expert-level patterns. Analysts are encouraged to progress from Competent to Expert level through training. Recently, two new Expert-level patterns (AC-30, AC-31) were added. Pattern classification must remain independent of specific autoantibody detection to avoid bias. Unclassified (AC-XX) Patterns require further research and should not be misclassified.

ICAP also emphasizes mixed and multiple patterns, ensuring accurate recognition of samples with multiple autoantibodies. New educational modules on AC-XX patterns and mixed/multiple patterns will be available soon.

The ICAP website (*https://anapatterns.org*)—translated into multiple languages and available as a free app (iOS/Android)—offers an interactive pattern classification tree, educational modules, FAQs, publications, and HEp-2/IFA literature. It provides a pre-/post-assessment tool with certification, supporting global standardization in autoantibody testing.

Topics and Speakers

SCAN or CLICK

International Consensus on Antinuclear Antibodies Patterns (ICAP) 2024: what's new

Dr. Maria Infantino
SOS Laboratorio Immunologia Allergologia,
Azienda Usl Toscana Centro - Dipartimento di Medicina
di Laboratorio Ospedale San Giovanni di Dio

New insights into primary cholangitis

PART 5

Primary sclerosing cholangitis (PSC) and primary biliary cholangitis (PBC) are autoimmune liver disorders with distinct features but shared challenges in diagnosis and management.

PSC is a chronic inflammatory liver disease that leads to fibrosis and biliary strictures, often progressing to end-stage liver disease. Around 50% of patients require liver transplantation, and there is a heightened risk of cholangiocarcinoma (CCA). PSC frequently coexists with inflammatory bowel disease (IBD), further complicating diagnosis. Unlike PBC, PSC lacks specific blood markers, making imaging techniques such as magnetic resonance cholangiography (MRC) and endoscopic retrograde cholangiography (ERC) essential for diagnosis. Current research focuses on gut-liver axis biomarkers to enhance risk stratification and therapy development.

Conversely, PBC primarily affects middle-aged women and is diagnosed based on clinical features and immunological markers. The presence of anti-mitochondrial antibodies (AMA) in over 90% of patients makes it a key diagnostic marker, as it can also predict future disease onset. In rare AMA-negative cases (≤5%), disease-specific anti-nuclear antibodies (ANA) aid in diagnosis. Recent discoveries of KLHL12 and HK1 antibodies offer additional diagnostic clarity, especially for AMA-seronegative PBC.

While PSC and PBC differ in pathogenesis and progression, advances in biomarker research are improving diagnosis and disease understanding. These developments hold promise for more targeted therapies, ultimately enhancing patient outcomes.

Topics and Speakers

SCAN or CLICK

Autoimmune hepatitis from diagnosis to clinical practice

Prof. Abdulrahman A. Aljumah
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Primary biliary cholangitis: the disease of 100 autoantibodies

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PART 6

Inflammatory Bowel Disease: from pathogenesis to laboratory testing

Inflammatory Bowel Disease (IBD), including ulcerative colitis (UC) and Crohn's disease (CD), is a chronic immune-mediated disorder affecting the gastrointestinal tract. Risk factors include genetic predisposition, family history, and environmental influences such as smoking, diet, gut microbiota changes, and viral exposure. Over 200 susceptibility loci, including NOD2, ATG16L1, and IL23R, contribute to immune dysregulation and impaired mucosal barrier function.

The global incidence and prevalence of IBD are rising, with peak incidence rates in North America (30/100,000) and Europe (46/100,000) and prevalence reaching 478/100,000 and 832/100,000, respectively. Symptoms range from chronic gastrointestinal issues (abdominal pain, weight loss, diarrhea) to extraintestinal manifestations (joint pain, skin rash, perianal disease). Diagnosis involves stool calprotectin, blood markers, and imaging, but endoscopy remains the gold standard.

Calprotectin, a 36kDa S100 A8/A9 protein complex, is abundant in neutrophils and monocytes, with antimicrobial properties. Its elevation in stool serves as a biomarker for IBD, cystic fibrosis, bacterial infections, and gastric cancer. The stool calprotectin test is non-invasive, stable, rapid, and widely used across age groups, though caution is needed in infants. False positives may occur due to NSAIDs, PPIs, blood contamination, or recent colonoscopy prep. Standardized extraction methods are essential for accurate monitoring. Compared to other neutrophil-derived markers, stool calprotectin is cost-effective and widely available, making it the preferred choice in clinical practice. STRIDE2 guidelines recommend normalizing fecal calprotectin as an intermediate treatment target in IBD. Stool calprotectin is a crucial, guideline-recommended tool for IBD diagnosis and long-term monitoring due to its accuracy, accessibility, and non-invasiveness.

Topics and Speakers

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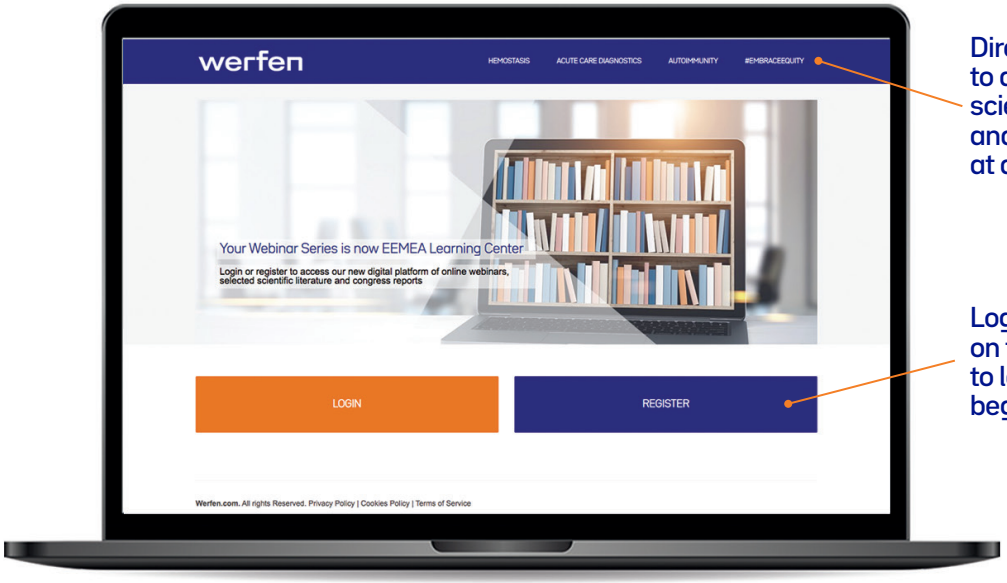
The Impact of Fecal Calprotectin in IBD patients

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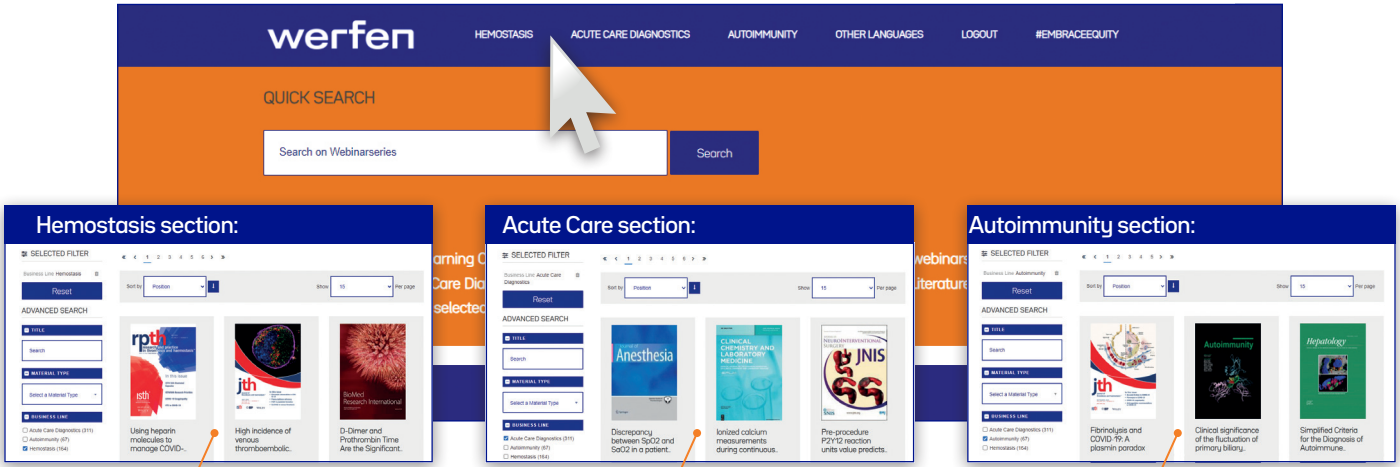


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