

# CONFERENCE BOOKLET





# Table of **CONTENTS**

## **CONFERENCE BOOKLET**

<b>01</b>	<b>WELCOME ADDRESS</b>
<b>02</b>	<b>EXECUTIVE ADDRESSES</b>
<b>03</b>	<b>TIMELINE</b>
<b>04</b>	<b>SUBCOMMITTEE MEMBERS</b>
<b>05</b>	<b>OUR ESTEEMED SPONSORS</b>
<b>06</b>	<b>PRE-CONFERENCE WEBINARS</b>
<b>07</b>	<b>PRESS CONFERENCE</b>
<b>08</b>	<b>OVERVIEW KEYNOTE ADDRESSES</b>
<b>09</b>	<b>SCIENTIFIC PRESENTATIONS</b>
<b>10</b>	<b>CLOSING CEREMONY</b>

# WELCOME ADDRESS

Dear Attendees,

It is with great enthusiasm that we welcome you to MEDCON '24 – Pulse to Precision, a transformative event dedicated to advancing medical education and fostering collaboration within the global medical community. Organized by the Georgian International Medical Student Organization (GIMSOC), this conference serves as a platform for engaging discussions, innovative learning, and professional networking, all centered around the vital field of Internal Medicine.

Internal medicine lies at the core of patient care, offering solutions to complex medical challenges and emphasizing a holistic approach to treatment. At MEDCON '24, we aim to deepen our collective understanding of this critical discipline through a diverse lineup of sessions, including keynote addresses, hands-on workshops, and scientific presentations that provide cutting-edge insights and practical expertise.

Taking place on November 2-3, 2024, in the historic city of Tbilisi, this conference brings together medical students, practitioners, leading universities, and experts from around the world. With both onsite and virtual platforms, MEDCON '24 creates a global dialogue, bridging gaps in knowledge and practice within internal medicine.

The event also offers participants the opportunity to showcase their research and innovations through oral, poster and virtual presentations. We hope this experience will expand your knowledge and foster lasting connections within the medical community. We are honored to host this remarkable event and are grateful for your participation. Together, let's embrace the future of internal medicine with precision, compassion, and innovation.



# FOUNDER'S MESSAGE



## ONYEKACHI EMMANUEL ANYAGWA CO-FOUNDER

A community established by and for students, the Georgian International Medical Students Society (GIMSOC) is dedicated to the cultivation of a platform that promotes the development of clinical and social skills. Born out of need, GIMSOC strives to offer resources and opportunities that enable future medical professionals to acquire hands-on clinical skills and knowledge in and out of their field of specialization, giving them a holistic view of their medical practice with the help of our seasoned faculty. Our events and workshops aim to also expose students in Georgia to an international network while simultaneously promoting a culture of excellence. The society's annual international medical conference, MEDCON '24, aims to enhance medical education for aspiring medical professionals and healthcare professionals. This conference focuses on Internal medicine, expanding the knowledge and innovation of the field, casting light on new research through abstracts and oral presentations, and improving the skill set of its attendees through extensive workshops. As educational institutions like Amboss, KenHub, Project IMG, and others collaborate with us to bring this project to life, we anticipate that MEDCON '24 will be innovative, insightful, and foster a synergy among the medical community. We hope our attendees, both home and abroad, enjoy the experience of MEDCON, as it builds a bridge that connects our pulse for medicine to precision for the craft. For the love of Medicine and all that lies between, welcome to MEDCON '24.

# FOUNDER'S MESSAGE



## RAJEEKA SINGH TAK CO-FOUNDER

The Georgian International Medical Student Society (GIMSOC) is a student organisation that aims to create a vibrant community of aspiring healthcare professionals from various backgrounds. Our objective is to encourage academic achievement, cultural interchange, and professional growth in medical students. We desire to help medical students in Georgia develop the required skills as they pursue their varied paths to medicine.

MEDCON '24 is a platform that brings together medical students, professionals, and experts from all over the world, providing an outstanding opportunity for knowledge sharing and networking. With engaging workshops, captivating keynote speakers, and collaborative conversations, MEDCON '24 promises to broaden our understanding of global health concerns and innovation. I invite each of you to join, lend your ideas, and help shape the future of medicine. Together, we can empower one another and make a lasting difference in our communities. Thank you for your commitment to excellence in medical education.

# CHAIRPERSON'S MESSAGE



## FARHAD ISLAM CO-CHAIRPERSON

At GIMSOC, we strive to foster a community that empowers, nurtures and strengthens the academic prowess of international medical students within Georgia. Through our robust network of international doctors and 14 medical universities across Tbilisi, we aim to provide our members with the highest quality clinical workshops, events, seminars, mentorship, research opportunities and conferences. MEDCON '24, our flagship International Conference stands testament to GIMSOC's pursuit of excellence, and highlights our ambitions beyond the boundaries of Georgia. We are honoured to be associated with few of the most pivotal, internationally renowned organisations in the field of Healthcare such as Project IMG, Amboss, IMG Unity, Kenhub and Blackwell's. GIMSOC's vision is strongly centered around its members, enabling the best possible platform and environment for them to develop their clinical armamentarium. Our team has meticulously curated each element of MEDCON 2024 to deliver an attendee experience of the highest calibre. We feel privileged to host each of you, and genuinely hope you have a wonderful experience with us.

# CHAIRPERSON'S MESSAGE



## OLUWATOYIN DAIRO CO-CHAIRPERSON

GIMSOC is a medical organisation founded via student's residing within Tbilisi, Georgia. We pride ourselves in offering students additional workshops and events to not only enhance their current medical skills outside of their normal curriculum, but also to broaden opportunities for them to network and connect with medical professionals world-wide. We encourage students from all walks of life to partake within our organisation and its activities. Whether you're an international student or a Georgian native, all of our events and workshops bring medical students together as one, encouraging unity and diversity. After the success of MedCon'23, this year's annual conference via GIMSOC is planned to be even bigger and better. With the theme being Internal Medicine, we hope to provide students with a greater scope of the various avenues one may take if selecting this particularly division of medicine. Additionally, we have collaborated with a variety of organisations to increase our international reach. This includes non-profit organisations such as Project IMG, IMG Unity, Amboss and Blackwell's scrubs. We hope that all of our attendees leave our conference inspired, more knowledgeable and prepared for the world of medicine that awaits the



# DIRECTOR'S MESSAGE



## MARYAM SHAKEEL CONFERENCE DIRECTOR

In the midst of life's hectic pace, GIMSOC emerged as more than just an idea—it was a call to discovery, empowerment, and community building. From the very start, our journey was fueled by a deep commitment to building a community that empowers, supports, and strengthens the academic journey of medical students from around the world. As the Conference Director at GIMSOC, with the same vision in mind, I present to you GIMSOC's 2nd Annual International Conference - MEDCON'24 - Pulse to Precision.

Good things come to those who plan, prepare, and persevere—a motto that kept us going as we organised this conference, bringing together knowledge, community, and inspiration for all. At one point in time, organising a conference of this scale felt like a distant goal. And Today, with God's grace and MedCon subcommittee's dedication and hardwork, here we are, partnering with some of the most influential and globally respected organisations in healthcare—Project IMG, Amboss, IMG Unity, Kenhub, and UK CPD accreditations. This conference would not have been possible without the relentless efforts of our dedicated team, the invaluable guidance from our Advisory Board, sponsors, volunteers and the commitment of all those working behind the scenes. I am deeply grateful to everyone who has played a part to make this possible.

As the director of this conference, I am deeply proud to say that we've poured our hearts into creating an experience designed just for you. Every detail has been thoughtfully curated to ensure that you leave with not only cherished memories but also invaluable insights and connections that you can carry with you long after the event. We want each of you to feel inspired and enriched, with so much to take back home that reflects the spirit of MedCon 2024.

Thank You for being part of MedCon'24.



# DIRECTOR'S MESSAGE



## **SHEEDA JABEEN** **ASSISTANT CONFERENCE DIRECTOR**

It is an incredible honor to welcome you to MedCon 2024, one of Tbilisi's largest and most impactful medical conferences. This event will offer a truly enriching experience, featuring groundbreaking research presentations, hands-on workshops, and inspiring talks from both international and Georgian speakers. Our conference also provides exceptional networking opportunities and exciting giveaways, including exciting goodie bags filled with surprises you've never seen before, sure to leave a lasting impression. Working with such a talented and creative team of dedicated individuals has been an absolute privilege. Together, we have worked tirelessly toward one shared goal: to create a knowledge-filled, networking-rich conference that leaves a lasting impression on everyone who attends. It has been my honor to serve as your Assistant Conference Director, and we sincerely hope you enjoy MedCon 2024 as much as we enjoyed crafting this unique experience for you. We look forward to welcoming you and wish you a memorable and inspiring time at the conference!

# DIRECTOR'S MESSAGE



## AHSAN ARSHAD ASSISTANT CONFERENCE DIRECTOR

Being appointed as an Assistant Conference Director for this year's conference has provided me with invaluable leadership experience that has significantly shaped my professional development, particularly in the intricacies of planning and executing a successful event. This role has taught me the importance of humility, recognizing that every team member's contribution is vital to our collective success. One of the highlights of my role so far has been meeting an array of students, all of which are working hard to ensure that MEDCON'24 leaves a long lasting legacy on all attendees and students in and out of Georgia. My key focus has been to create a healthy and student-friendly work environment, not only by entrusting my team with creative and leadership roles and to also to promote a culture of inclusivity and respect amongst all. This has enabled my team members to voice their ideas and concerns freely, leading to enhanced creativity. Our collaborations with medical societies and universities from India, Brazil, and the USA, along with partnerships with key sponsors like Amboss, Kenhub, Project IMG, and IMG Unity, were instrumental in enhancing the quality and resources available at MEDCON'24, particularly for our international medical students in Tbilisi, Georgia. In addition to our international collaborations and sponsorships, MEDCON'24 worked closely with four universities in Tbilisi: Ilia State University, Caucasus International University, Ivane Javakhishvili University, and New Vision University. This simultaneous partnership with key local institutions has helped towards integrating the conference into the academic community in Georgia, providing a platform for both local and international medical students to share ideas, learn, and grow. With all that being said I warmly welcome all of you to MEDCON'24 ! We are thrilled to have you here looking forward to an event filled with learning, inspiration, and amazing experiences.



# EVENT TIMELINE



Timing	Activity
9.00- 10.00 am	Registration
10.00-10.30 am	Press Conference (Opening Ceremony) <b>Topic: Connecting the Dots: Navigating the Continuum of Medical Care</b>  Dr. Lasha Gulbani (General Surgeon) Dr. Tinatin Kutchukhidze (Obstetrician & Gynecologist) Dr. Mariam Nikolashvili (Endocrinologist) Dr. Bela Nishnianidze ( Pediatrician )
10.30- 10.40 am	Opening Speech by Co-Chair Farhad Islam
10:40 AM - 11:00 AM	Dr. Anzor Gogiberidze <b>"Asthma and COPD Overlap Syndrome (ACOS)"</b>
11:00 AM - 11:20 AM	Dr. Dhaval Naik <b>"ECMO in Cardiac Critical Care and its Indications, Techniques, and Outcomes"</b>
11:20 AM - 11:35 AM	Swarali Yatin Chodnekar <b>"A 30-Minute Cure To Breast Cancer: A Systematic Review Of The TARGIT-IORIT System."</b>
11:35 AM - 12:00 PM	Poster Presentations + Coffee Break
12:00 PM- 12:10 PM	Project IMG Introduction: Michael E. Hermosa
12:10 PM - 12:30 PM	Dr. Mariam Nikolashvili <b>"Obesity Pandemic"</b>
12:30 PM - 12:45 PM	Angeline Abraham <b>"Machine to Bone; Integrating AI in the Prediction and Diagnosis of Rheumatoid Arthritis flares and guiding therapy: A Systematic Review"</b>
12:45 PM - 12:55 PM	Closing Speech by Co-Founder Onyekachi Emmanuel
1:00 PM - 2:00 PM	LUNCH BREAK + Networking
2:00 PM - 2:45 PM	Workshop Registrations
2:45 PM - 6:00 PM	<b>Workshops</b> <b>CIU:</b> ECG, BLS, ACLS, Injection, Auscultation, NG Intubation <b>ISU:</b> ECG, BLS, Injection, Auscultation <b>TSU:</b> AMBOSS, OSCE, Alumni, CN <b>NVU:</b> ECG, BLS, ACLS, Injection, Auscultation

<b>Timing</b>	<b>Activity</b>
8:45 AM - 9:45 AM	Registration
9:45 AM - 10:00 AM	Opening Speech by Co-Chair Toyin Dairo
10:00 AM - 10:20 AM	Dr. Gvantsa Kachiashvili "Internists Expanding Role in Promoting Patient Well-Being: Early Identification & Prevention of Potential Health Concerns Based on Personalized Medicine Principles"
10:20 AM - 10:40 AM	Dr. Nino Kavtaradze "Monoclonal antibodies and their role in the management of autoimmune diseases."
10:40 AM - 10:55 AM	Dilan Sathi Prakasan "Leptospirosis in ICU: Clinical Manifestations at the Modern Stage"
11:00 AM - 11:25 AM	Poster Presentations + Networking
11:25 AM - 11:45 AM	Dr. Giorgi Mgeladze "The Rising Tide: Antibiotic Resistance and Its Future Fallout"
11:45 PM - 12:00 PM	Nikhila Liz Aby "Forensic Insights into Sudden Cardiac Arrest Linked to Genetic Mutations in Athletes: A Systematic Review of Channelopathies"
12:00 PM - 12:30 PM	Closing Ceremony Prize distribution
12:30 PM - 12:40 PM	Closing Speech by Conference Director Maryam Shakeel (& Asst Conf. Directors)
12:40 PM - 2:00 PM	LUNCH + Networking
2:00 PM - 2:45 PM	Workshops Registration
2:45 PM - 5:00 PM	Workshops CIU: ECG, BLS, ACLS, Injection, Auscultation, Micro ISU: ECG, BLS, ACLS, Injection, Auscultation TSU: OSCE, CN NVU: ECG, BLS, ACLS, Injection, Auscultation
7:30 PM	Gala Dinner

# SUBCOMMITTEE MEMBER



We are thrilled to acknowledge the remarkable Subcommittee Members of MEDCON'24, a group of individuals whose dedication, passion, and tireless efforts have been instrumental in bringing this conference to life. For over 10 months, they have worked behind the scenes, meticulously planning and executing every detail with precision and care. Their unwavering commitment has ensured that every aspect of this event, from its content to its logistics, aligns with the high standards of MEDCON'24. The countless hours of collaboration, creativity, and hard work they've poured into this conference have transformed it into a platform for groundbreaking discussions in internal medicine. This team's collective energy, professionalism, and dedication have been key to crafting an event that will serve as a beacon of medical education, innovation, and collaboration. We express our deepest gratitude for their efforts, knowing that the success of MEDCON'24 is a direct reflection of their excellence and perseverance.



# CONFERENCE DIRECTORS



**MARYAM SHAKEEL**  
CONFERENCE DIRECTOR



**SHEEDA JABEEN**  
ASSISTANT CONFERENCE  
DIRECTOR



**AHSAN ARSHAD**  
ASSISTANT CONFERENCE  
DIRECTOR

# WORKSHOP SUBCOMMITTEE



**JOHORA AKTER**  
**HEAD**



**KAYNAT PARWAIS KHAN**  
**ASSISTANT HEAD**



**NADIA RAHMAN MOMO**



**SYED IFTIQAR AHMED**



**YASHASHREE JADHAV**

# FINANCE & BUDGETING SUBCOMMITTEE



**SOUMIYA NADAR**  
**HEAD**



**RICHISHA KHEMKAR**



# ORGANISATION & PROGRAMME PLANNING SUBCOMMITTEE



**GUNCHA SHAIKH**  
**HEAD**



**HIMA MAHESHA**



**ATIF SALIM KHATIB**

# PR, MARKETING & CONTENT WRITING SUBCOMMITTEE



**AISHWARYA PARIHAR**  
**HEAD**



**HADESH CHAUDHARY**  
**ASSISTANT HEAD**



**AAKANKSHA SAHARAN**  
**ASSISTANT HEAD**



**SANA SHAIKH**



**ALISHAN SHARIF**



**GANESH  
CHANDRASHEKHAR**

# PR, MARKETING & CONTENT WRITING SUBCOMMITTEE



**VAISHNAVI SURESH**



**AADITYA BOBISH**



**AZIZAH NAWAZ**



**ANGELA THOMAS**



**ARCHITA PATIL**



**SANA SHAIKH**

**SANIA REHMAN**



# VOLUNTEER MANAGEMENT SUBCOMMITTEE



**NIYATI VAIDYA**  
**HEAD**



**DITI SANGOI**

# REGISTRATION & ATTENDEE SERVICES SUBCOMMITTEE



**ANUSHKA SEN**  
**CO-HEAD**



**ISHIKA GOEL**  
**CO-HEAD**



**ANUSHKA AMIN**



**DISHA GUJARATHI**

# SPONSORSHIP & INTERNATIONAL MARKETING SUBCOMMITTEE



**NINO DEKANOIDZE**  
**HEAD**



**MATHEESHA HALPAGE**  
**ASSISTANT HEAD**



**AAYISHA NIYAS**



**CHRISANN MOREIRO**

# SPONSORSHIP & INTERNATIONAL MARKETING SUBCOMMITTEE



**SARVESH RAJESH**



**TAZEEN KADRI**



**FREYA MAJITHIYA**



**YUKTA ANCHAN**



# SCIENTIFIC SUBCOMMITTEE



**HASHIM MOHAMED SIRAJ**  
**HEAD**



**AAFREEN ALI NYAZ**  
**ASSISTANT HEAD**

# LOGISTICS SUBCOMMITTEE



**MANSI PILLAY**  
**HEAD**



**PEARL MARIE MATHEW**  
**ASSISTANT HEAD**



**SHABBEER IMTIAZ**



**THARIQ THAHIR KOTTILINGAL**

# PRESS TEAM



**KARISHMA GAJANAN LOHAR**



**ABDUL AZIZ KHALEELULLAH**



**SYED JAVEED AHMED**



**NIKHILA LIZ ABY**



**RYMA SEN**

# GALA TEAM



**PRINCY JAMES**



**SNEKAMUKI  
MUTHUKUMARAN**



**HETVI PATEL**



**SYED AASIM SYED NASIR**



**SAJA AHMED  
MAHGOUB MOHAMED**



**NIMISH CHAWLA**

**ANIQAH INAS**



# SOCIAL MEDIA AMBASSADORS



**MALEESHA SEWMINI**



**PRADNYA KAILAS PATIL**



**MALIHA KARIM**



**AZEEM FAISAL**



**AYUSH DRUVANTH NAGARAJ**

**INSHA SAMSULHUDA KHAN**

**M. IMRAN YOUSAF**

# OUR ESTEEMED SPONSORS



We are immensely grateful to our Esteemed Sponsors, whose generous support has been pivotal in making MEDCON'24 a reality. Their commitment to advancing medical education and fostering innovation within the healthcare community aligns perfectly with the mission of this conference. Through their partnership, we are able to provide a platform that brings together leading experts, students, and professionals in the field of internal medicine, driving impactful discussions and learning opportunities. We extend our deepest appreciation for their invaluable contributions.

# LEAD SPONSORS



**IMG Unity** represents a global alliance of medical students and graduates with a shared dedication to ensuring universal access to essential medical care for all vulnerable patients. Driven by our unwavering commitment to achieving global health equity, we acknowledge the profound impact each of us can have on the world. Our collective vision encompasses a future where every individual can avail themselves of indispensable healthcare, bolstered by the unwavering support of present and future physicians devoted to advancing global health equity for succeeding generations.



**Project IMG** is a platform designed to interconnect international medical students and graduates with the goal of advancing equality in global medical education. It offers a comprehensive system of carefully curated programs and peer support, empowering students to progress in their academic pursuits. **MISSION:** Our mission is to unite medical students, graduates, and physicians in the collective effort to promote equality in medical education on a global scale.



**Blackwell's Scrubs** specializes in providing premium medical apparel designed to offer a seamless blend of comfort and style tailored specifically for healthcare professionals. Committed to enhancing workday comfort and functionality, Blackwell's Scrubs offers an array of innovative scrubs and accessories meticulously crafted to meet the stringent demands of contemporary healthcare settings.



# ACADEMIC PARTNERS



**Amboss** has emerged as a premier medical education platform, offering comprehensive resources tailored specifically for the USMLE Step and NBME Shelf examinations. Developed with contributions from leading physicians affiliated with prestigious institutions such as Harvard, Yale, and Stanford, AMBOSS ensures that its content is both accurate and relevant. Since its successful launch in the United States in 2017, AMBOSS has grown to comprise a diverse team of over 300 professionals dedicated to disseminating high-quality medical knowledge. The platform currently serves more than one million healthcare professionals across 180 countries, and it is recognized by numerous top-tier medical schools and major hospital networks, including Helios in Europe, as an essential educational resource. With a commitment to enhancing medical education, AMBOSS continues to innovate and expand its offerings to meet the evolving needs of healthcare professionals worldwide.



**The Global Nexus Research Alliance** focuses on research tutoring, academic mentoring, and personal/professional development to empower university students, graduates, and young professionals. They offer personalized mentorship, online learning, and career guidance. Their strategies for growth include forming university partnerships, utilizing social media, and building a supportive community. Revenue is generated through membership fees, course fees, sponsorships, and merchandise sales. GNRA's competitive edge comes from low startup costs and targeted support for an underserved market, positioning them for success in academic development.



**Kenhub** is an online platform dedicated to making the study of human anatomy enjoyable and effective. It offers a comprehensive suite of learning tools, including detailed articles, colorful videos, interactive quizzes, and high-quality atlas images. With over 500 video tutorials, 500 adaptable quizzes, 770 articles, and 5,000 atlas images, Kenhub's content is continually expanding. Their vision is to create a single, integrated online platform that optimizes the learning experience, making anatomy education simpler, easier, and faster for users.



# INTERNATIONAL SOCIETIES



**The Federation of African Medical Students' Associations, FAMSA**, is an independent, non-political federation of Medical Students' Associations (MSAs) in Africa. FAMSA was founded to foster friendship and cooperation among African medical students. FAMSA is a project-oriented medical student body and is recognized as the official international forum of African medical students by the World Health Organization and the African Union. FAMSA is the forum for medical students throughout the African continent to discuss topics related to health, education and medicine, formulate action plans from such discussions and carry out appropriate activities. It is a mechanism for medical students' professional exchange and projects and remains a versatile advocacy body that sensitizes and redirects African governments' policies towards the path to sustainable health and development. It also acts as a mechanism for organizations under its membership to raise funds for projects recognized by FAMSA. Their motto is "Towards the improvement of health in Africa." FAMSA's vision is to continue to be a strong network of medical students, constantly aware of global health issues and responsive to contemporary questions facing the medical profession and global health.



**The International Federation of Medical Students' Associations (IFMSA)** is a global organization aimed at connecting and representing medical students worldwide, with a branch at Stellenbosch University in Cape Town, South Africa. IFMSA has six standing committees focused on raising awareness and supporting health-related issues: Medical Education, Public Health, Research Exchange, Professional Exchange, Reproductive and Sexual Health (including HIV/AIDS), and Human Rights and Peace. The organization is structured with national and regional committees that assist local societies in achieving their objectives. At Stellenbosch University, the focus is on providing educational workshops to enhance clinical skills and reasoning, along with community projects and health advocacy initiatives.



**Rotaract Club of Medicrew** is a student-led organization of medical students dedicated to community service, operating under the international Rotaract movement. The club addresses health and social challenges in local communities by organizing health camps, awareness campaigns, and outreach programs to promote public health. In addition to healthcare initiatives, Medicrew is involved in education, environmental sustainability, and social welfare activities. The club emphasizes leadership development and networking, empowering future healthcare professionals to make a meaningful impact beyond their studies. By collaborating with other Rotaract and Rotary clubs worldwide, members contribute to local and global initiatives that promote peace, health, and development.

# MEDIA SPONSORS



**Medventures** was established by influential leaders Devanshu Sandeep Ganje, Krupa Sachin Kavale, Aditya Dinesh Panchal, and Chanchal Ganesh Rathod, is dedicated to revolutionizing medical research. Their objective is to equip the upcoming generation of medical innovators with the necessary tools. MedVentures offers researchers access to superior resources, mentorship, and practical experiences to address healthcare dilemmas. By amalgamating scholastic prowess with collaborative efforts, they foster imaginative thinking and propel medical science forward. MedVentures goes beyond enhancing research capabilities; they are molding the future of global healthcare and preparing trailblazers to transform the field of medicine.



**M.A.C.C** was established by dedicated alumni from various universities in Georgia, the Medical Alumni Career Club (MACC) is a dynamic, registered, non-profit, student-run organization. MACC is committed to empowering medical students across Georgia by providing career guidance, comprehensive support for license exam preparation, and organizing educational seminars, workshops, and events. These opportunities offer valuable networking and learning experiences for our peers.



**ALTE student research unit** was established by Rushikesh Rajesh Patil and Debleena Chand, followed by Yash Pradeep Dhage, with the primary goal of creating a collaborative environment for student-led research initiatives. ASRU is committed to empowering students by providing them with resources, mentorship, and opportunities to engage in innovative projects addressing real-world challenges. The unit's core objective is to cultivate critical thinking and research skills among students, promoting academic excellence and interdisciplinary collaboration. By encouraging students to explore their interests and contribute to the academic community, ASRU seeks to enhance the educational experience at Alte University and prepare students for future professional endeavors.

# PRODUCTION PARTNER



**Trident Georgia** is a creative venture, where three passionate minds unite to redefine content creation. Trident specializes in stunning photography, cinematic videography, and breathtaking aerial content, transforming ideas into captivating visual experiences that resonate with audiences. With a fresh approach, they tell unique stories that stand out in today's media landscape. Each project is a collaboration fueled by creativity and a shared vision. At Trident, we don't just create content; we craft magic that leaves a lasting impression. We are thrilled to collaborate with GIMSOC for MedCon 2024, promising an extraordinary experience that blends innovation and creativity in the medical field!

# WELFARE PARTNERS



**Tbilisi Volunteers** is an organization dedicated to connecting local and international volunteers with meaningful community service opportunities in Tbilisi, Georgia. Committed to fostering a spirit of collaboration and cultural exchange, Volunteer Tbilisi offers various programs that address social, educational, and environmental needs within the community. By engaging volunteers in impactful projects, the organization aims to promote social responsibility and contribute to the development of Tbilisi while enhancing the personal growth of participants through valuable experiences and cross-cultural interactions.



# WORKSHOP PARTNER



**Body Interact** is a clinical system adopted around the world to train learners in decision-making and critical thinking, with lifelike virtual patients, in hundreds of clinical scenarios. Body Interact enables both medical professionals and students to accelerate learning, develop clinical skills and achieve excellence in their performance. We are thrilled to collaborate with GIMSOC for MEDCON 2024, that blends advancement and innovation in the medical field

# VENUE PARTNER



## IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY

The MEDCON team extends its heartfelt gratitude to Ivane Javakhishvili Tbilisi State University (TSU) for graciously hosting MEDCON'24. As Georgia's oldest and most esteemed academic institution, TSU's commitment to excellence and its stunning blend of heritage and modernity provides the perfect backdrop for our conference. We are truly honored to hold this event at a university with such cultural and academic significance in the Caucasus. Thank you, TSU, for your warm welcome and unwavering support in bringing MEDCON'24 to life.

# WORKSHOP VENUE PARTNER



**New Vision University's** Clinical Skills Center is a premier training facility focused on providing practical, hands-on experience for medical students and healthcare practitioners. Equipped with advanced simulation tools and realistic patient care environments, the center allows participants to develop and refine essential clinical skills. Through interactive learning and real-world practice, it bridges the gap between classroom theory and clinical application, ensuring graduates are well-prepared to excel in professional healthcare settings.

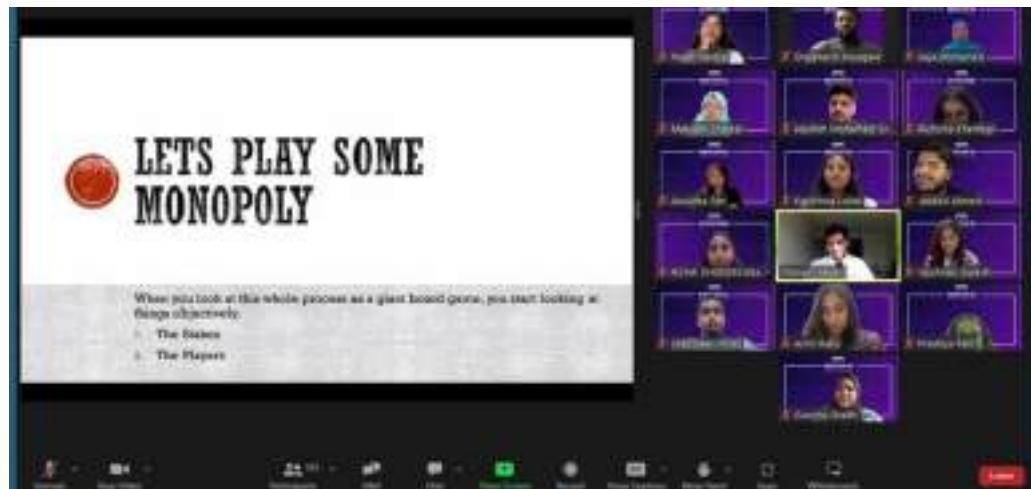


The Clinical Skills Center at **ILIA STATE UNIVERSITY** is a cutting-edge facility dedicated to the practical training of healthcare professionals. It features advanced simulation equipment and life-like patient scenarios, enabling participants to refine their clinical techniques and decision-making skills in a controlled environment. The center emphasizes hands-on learning, allowing students to translate academic knowledge into practical expertise, ensuring they are fully prepared to face the complexities of real-world medical practice.



The Clinical Skill Center at **CAUCASUS INTERNATIONAL UNIVERSITY** is a modern facility designed to provide hands-on training for medical and healthcare professionals. Equipped with advanced simulation technologies and realistic patient scenarios, it offers a comprehensive environment for students and professionals to practice clinical procedures, enhance diagnostic skills, and improve patient care techniques. The center focuses on bridging the gap between theoretical knowledge and practical application, ensuring learners are well-prepared for real-world medical challenges.

# PRE-CONFERENCE WEBINAR



First Pre-Conference Webinar Recap: Navigating the Path to US Residency

Date: 22nd September 2024

Time: 10 AM ET (6 PM GET)

Platform: Zoom

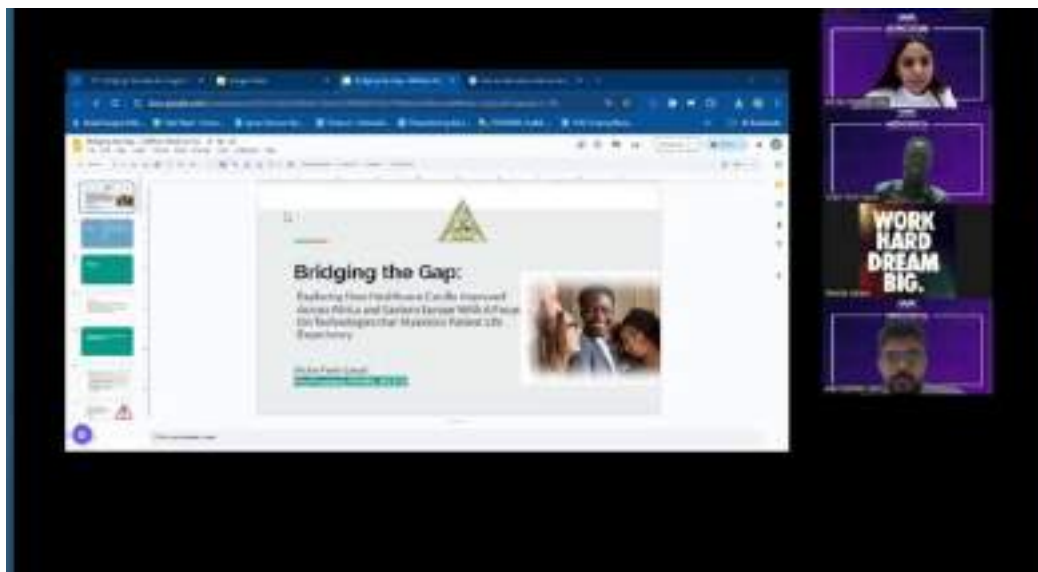
Moderator: Hashim

Speaker: Dr. Sharan Jhaveri

As part of the pre-conference webinar series leading up to MEDCON'24, the first session, "Navigating the Path to US Residency," was held on September 22nd, 2024. Moderated by Hashim, the event featured Dr. Sharan Jhaveri, a first-year Internal Medicine resident at Cleveland Clinic, known for his innovative approach to technology in healthcare. Dr. Jhaveri brings an impressive background, having served as a clinical scientist at conference, hosting The Doc Suit podcast, and founding The OTTO Research Initiative and The Avani & Subir Jhaveri Foundation, both aimed at expanding global access to research. Key Highlights: US Residency Pathway Overview: Dr. Jhaveri outlined critical steps for international medical graduates (IMGs) pursuing US residency, from the application process and matching programs to building a competitive profile. Resource Optimization: He emphasized the importance of leveraging available resources, creating networking opportunities, and staying updated on residency requirements and policies. Technology Integration: With a focus on merging medicine and technology, Dr. Jhaveri shared insights into how IMGs can utilize digital tools to enhance their profiles and streamline their journey. Key Takeaways: Application Strategy: Focus on early preparation and aligning experiences to enhance competitiveness. Networking: Engage with mentors, alumni, and professional networks to gain guidance and opportunities. Adaptability: Stay informed about evolving residency policies and requirements to remain flexible in approach. The session concluded with attendees expressing gratitude for Dr. Jhaveri's guidance and practical advice, setting an enthusiastic tone for MEDCON'24 and reinforcing the value of the pre-conference webinars as essential preparation for the conference.



# PRE-CONFERENCE WEBINAR



Second Pre-Conference Webinar Recap: Bridging the Gap : An Insight Into How Health Care Can Be Improved Across Africa And Eastern Europe, And New Technologies Which Can Maximise Patient Life Expectancy

Date: 3rd October 2024

Time: 7pm GST Platform:

Zoom Moderator: Richa Khandelwal

Speaker: Mr. Victor Femi-Lawal

GIMSOC featured Mr. Victor Femi-Lawal, a fifth-year medical student from the University of Ibadan and global health researcher. This session, organized in collaboration with The Federation of African Medical Students' Associations explored digital health's transformative role in Africa, focusing on innovative technologies, health statistics, pathways into public health, and international medical exams. Mr. Femi-Lawal discussed digital health technologies like mobile health (mHealth) apps, electronic health records (EHRs), and telemedicine, emphasizing their impact on improving healthcare access, efficiency, and quality. He highlighted how these tools streamline administrative processes, reduce costs, and enhance real-time data analysis for better public health strategies. Key Points: Digital Health Implementation: Access: Telemedicine bridges gaps in remote areas, reducing travel barriers. Efficiency: Digital systems cut paperwork, saving costs and minimizing errors. Data Use: Real-time data aids in monitoring and policy-making. Blockchain in Healthcare: Security: Protects patient data with secure, decentralized storage. Interoperability: Enables seamless data sharing for continuity of care. Supply Chain: Tracks pharmaceuticals to reduce counterfeit risks. Health Statistics for Children and Women: Child Health: Malnutrition and infectious diseases remain critical issues. Women's Health: Maternal mortality and HIV/AIDS disproportionately affect women, highlighting the need for urgent interventions. USMLE & PLAB Exams: Brief insights into these exams for those seeking to practice in the US and UK. Public Health Pathways: Emphasized the importance of education, experience, and networking for careers in public health. The webinar concluded with a call for active engagement and collaboration in leveraging technology to enhance healthcare outcomes, motivating participants to take action for future improvements.

# PRE-CONFERENCE WEBINAR



Third Pre-Conference Webinar Recap: Precision Medicine - Reducing Over-Treatment, Enhancing Outcomes

Date: 10th October 2024

Time: 7pm GST

Platform: Zoom

Moderator: Nikhila Liz Aby Speaker:

Dr. Yash Shah, Dr. Shashank Matta

The MEDCON preconference webinar focused on the theme of precision medicine, exploring its potential to reduce over-treatment and enhance patient outcomes. This informative session was organized by GIMSOC in collaboration with RCMedicrew, bringing together healthcare professionals to discuss innovative approaches to medical care. Hosted by Dr. Yash Jignesh Shah and Dr. Shashank Matta, the webinar featured insights from two distinguished guest speakers. Key Highlights: Dr. Yash Shah: A first-year Orthopaedics PG resident at Wockhardt Hospital, Mumbai, shared his medical journey and academic accomplishments, including scholarships from MedEngage and Tata Trusts. Dr. Shashank Matta: A 2023 medical graduate and Surgical Resident at Dobrobut Hospitals, Ukraine, discussed his experiences in humanitarian medical camps and his ongoing MBA in Healthcare Management. Panel Discussion: The doctors highlighted the growing importance of telemedicine in enhancing healthcare access and reducing barriers for underserved communities. They addressed questions from participants regarding the practical implications of telemedicine based on their experiences. Key Points: Technology in Patient Care: The session emphasized integrating telemedicine and innovative technologies in clinical practice to improve healthcare delivery. Healthcare Access: Telemedicine serves as a crucial tool for bridging gaps in healthcare access, particularly in remote areas. Efficient Care Delivery: The discussion underscored the significance of reducing over-treatment through precise medical interventions enabled by digital health solutions.

# PRE-CONFERENCE WEBINAR



Fourth Pre-Conference Webinar Recap: Importance Of Building A Network In Residency Date: 18th October 2024

Time: 7pm GST

Platform: Zoom

Moderator: Guncha Shaikh

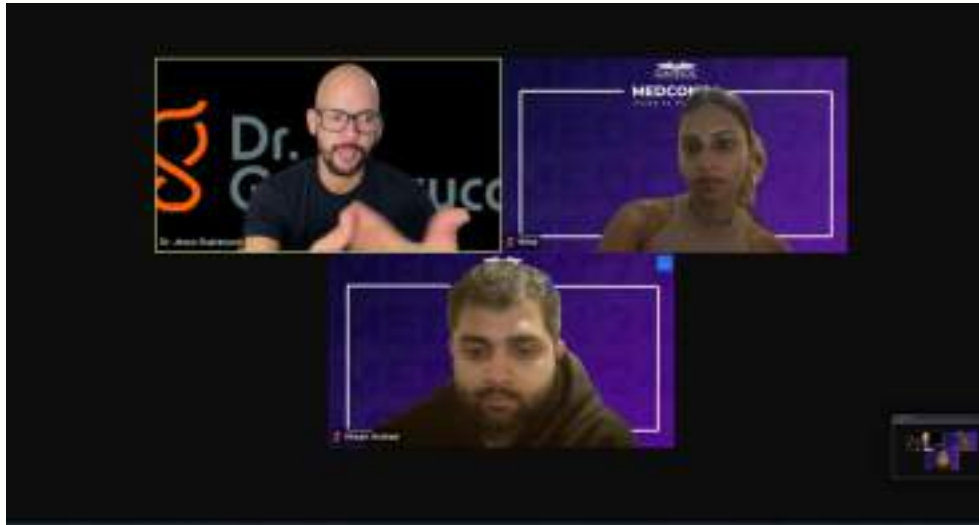
Speaker: Dr. Chioma Moneme

Our pre-conference webinar featured Dr. Chioma Moneme, a PGY-3 Surgery Resident at UVA Health System, who led an engaging discussion on the significance of networking in residency. The session emphasized an interactive format, allowing students to directly engage with Dr. Moneme. Here are the key points from the webinar:

- Conversational Approach:** The session moved away from traditional formats, fostering a more dynamic exchange where students asked direct questions.
- Experience and Insights:** Dr. Moneme shared her journey through prestigious institutions like the LAC+USC Medical Center and Children's Hospital Los Angeles, illustrating the impact of networking on her career.
- Networking Benefits:** She highlighted how her network has provided continuous opportunities and support throughout her medical journey, from medical school to residency.
- Meaningful Connections:** Dr. Moneme emphasized the importance of building relationships with mentors, peers, and colleagues, which contribute to professional growth and resilience.
- Guidance Through Challenges:** Specific connections have guided her in pivotal decisions, demonstrating how relationships in residency can shape career trajectories.
- Reciprocal Networking:** She encouraged students to view networking as a mutual exchange, where connections can be invaluable in both challenging and opportunistic times.
- Practical Tips:** In the Q&A session, Dr. Moneme provided tailored advice on networking strategies, helping attendees prepare for MEDCON'24. Dr. Moneme's insights serve as a vital reminder that cultivating relationships is essential for navigating and thriving in our medical careers.



# PRE-CONFERENCE WEBINAR



## Fifth Pre-Conference Webinar Recap: Mastering Clinical Skills & How To Stand Out In Rotations

Date: 23rd October 2024

Time: 7pm GST

Platform: Zoom

Moderator: Hima Mahesha

Speaker: Dr. Jesús Guarecuco

In the pre-conference webinar, Dr. Jesús Guarecuco, a PGY-3 General Surgery Resident at Larkin Community Hospital, provided invaluable insights into the essential skills and strategies needed to excel during clinical rotations. With his extensive experience as a surgeon and a strong commitment to medical education, Dr. Guarecuco shared practical advice aimed at helping residents and medical students stand out in a competitive environment. This session, organized in collaboration with Project IMG, emphasized the importance of proactive learning, effective communication, and relationship-building in the clinical setting. Here are the key points discussed: Proactivity: Take initiative in seeking learning opportunities and be actively involved in patient care and clinical discussions. Punctuality: Arrive on time for all rotations, meetings, and procedures to demonstrate reliability and respect for others' time. Well-Informed Responses: Prepare thoroughly for discussions by having a solid understanding of clinical concepts, enabling you to provide accurate and informed answers. Mastering Clinical Skills: Continually work on developing and refining your clinical skills to enhance your competency and confidence in patient care. Thoroughness in Answers: When responding to questions, ensure your answers are comprehensive and detailed, reflecting a deep understanding of the subject matter. Building Relationships: Establish strong working relationships with all healthcare staff, including nurses and allied health professionals, to foster a collaborative environment. Understanding Hospital Leadership: Familiarize yourself with the hospital's directors and key personnel, as this can facilitate better communication and networking opportunities. Embracing Constructive Criticism: Be open to feedback from supervisors and colleagues; use it as a tool for personal and professional growth. Peer-to-Peer Learning: Engage in learning with peers, sharing knowledge and experiences to enhance collective understanding and skills. Dr. Guarecuco's insights serve as a valuable guide for medical students and residents aiming to excel in their clinical rotations and build a successful career in medicine.



# PRE-CONFERENCE WEBINAR



## Sixth Pre-Conference Webinar Recap: The Blue Therapy – Aquatherapy

Date: 25th October 2024

Time: 7pm GST

Platform: Zoom

Moderator: Vaishnavi Suresh

Speaker: Dr. Sakina Bhopawala

In the pre-conference webinar on aquatherapy, Dr. Sakina Bhopawala, a physiotherapist specializing in Musculoskeletal (MSK) physiotherapy, shared her expertise as the keynote speaker. Hosted in collaboration with RcMedicrew, Dr. Bhopawala presented insights from her extensive experience, which includes her ongoing Master's studies at Sheffield Hallam University and work within the NHS, specifically focusing on complex MSK cases. With a background that includes a Bachelor of Physiotherapy from DY Patil University and certifications in aquatherapy, Dr. Bhopawala brought a wealth of knowledge from her time at DY Patil Hospital, NSCI Sports Doc Clinic, and Jaslok Hospital. Dr. Bhopawala began by exploring the fundamental principles and applications of aquatic therapy in physiotherapy, highlighting its benefits in patient rehabilitation across various conditions. Key points from her presentation included: Understanding Aquatic Therapy Principles: Dr. Bhopawala provided a detailed overview of the principles of buoyancy, hydrostatic pressure, and turbulence, illustrating how each can be leveraged in therapy to support patients of different mobility levels. Techniques and Adaptations: She outlined techniques that utilize water's natural resistance to promote muscle engagement and control, explaining how adjusting factors like water depth, temperature, and flow can create a tailored therapeutic experience. Utilizing Specialized Equipment: Her presentation included information on equipment such as flotation devices, resistance paddles, and aquatic weights. These tools allow for intensity and stability adjustments, making water-based exercises more effective for diverse patient needs. Health and Safety Measures: Dr. Bhopawala emphasized the critical importance of thorough patient assessments and continuous supervision to maintain a safe environment during aquatic therapy sessions. The webinar concluded with video demonstrations that showcased real-life applications, providing attendees with a clear view of how aquatic therapy can be implemented to enhance rehabilitation outcomes. Dr. Bhopawala's expertise highlighted the unique and adaptable nature of aquatic therapy, underscoring its value as a patient-centered approach within physiotherapy. This session was an invaluable learning experience for those interested in the innovative applications of aquatic therapy in MSK rehabilitation.

# PRE-CONFERENCE WEBINAR



## Seventh Pre-Conference Workshop Recap: Amboss Conquering the USMLE

Date: 31st October 2024

Time: 5pm GST

Location : New Vision - Health Hub

Speaker: Marghertia Masotti, Nino Deckanoidze

In the pre-conference workshop for "AMBOSS Conquering the USMLE in collaboration with AMBOSS," attendees engaged in a comprehensive session aimed at optimizing their preparation strategies for the USMLE using the AMBOSS platform. Key highlights from the workshop included:

- General Introduction to AMBOSS:** The workshop began with an overview of AMBOSS, detailing its mission to enhance medical education through innovative technology. Participants were introduced to the platform's resources, designed to support students throughout their medical journey.
- Platform Structure:** An explanation of the platform's structure was provided, highlighting its user-friendly interface. Participants learned to navigate the various sections, including the library, question bank, and interactive features that facilitate effective studying.
- ANKI Add-On:** The significance of the ANKI add-on was emphasized, showcasing its role in integrating spaced repetition into study routines. Attendees learned how to customize flashcards and sync them with AMBOSS resources.
- AMBOSS for USMLE Preparation:** The workshop focused on tools and features within AMBOSS tailored for USMLE preparation, including high-yield content and practice questions.
- Platform Tour:** A guided tour of the AMBOSS platform demonstrated its main features, including 3D anatomy models, detailed articles, and multimedia files. Interactive elements such as key info and high-yield sections were also highlighted.
- Question Bank Overview:** Participants explored the question bank, examining both study mode and exam mode. The workshop included a demonstration of analysis tools to track progress and identify areas for improvement.
- Personal Experience Sharing:** A segment featured a personal reflection on how AMBOSS fosters a deeper understanding of medical concepts beyond exam preparation, emphasizing its long-term benefits for developing clinical skills.
- Practical Applications:** The session concluded with demonstrations on creating personalized study plans tailored to individual needs, accessing questions, and exploring resources for social sciences. Pre-made study plans were showcased for organizing study efforts. The workshop fostered an engaging atmosphere, encouraging participants to ask questions and share experiences, reinforcing the value of AMBOSS as a comprehensive tool for medical students preparing for the USMLE.

# PRESS CONFERENCE OVERVIEW



At MEDCON 2024, we are honored to present a press conference moderated by our dedicated Press Team: Karishma Gajanan Lohar, Syed Javeed Ahmed, Ryma Sen, Abdul Aziz Khaleelullah, and Nikhila Liz Aby. They will be engaging with our esteemed panelists through well-constructed questions on the topic: "Connecting the Dots: Navigating the Continuum of Medical Care." This theme emphasizes the journey through the entire spectrum of healthcare, from the cellular level to full-body systems, showcasing how multidisciplinary approaches intersect to provide comprehensive care. We will delve into the inspiration behind each panelist's specialty and explore how their fields contribute to this continuum. The press conference will explore how healthcare moves through the spectrum of care, starting at the molecular and cellular levels in endocrinology, transitioning into the intricacies of reproductive health in gynecology, and advancing to the complexities of pediatric care, focusing on the unique needs of children's health and development. The journey concludes with surgical interventions, illustrating the full continuum of care from cells to organs and beyond. This engaging discussion will provide insights into how modern medicine integrates various specialties, highlighting the essential collaboration needed to achieve optimal patient outcomes. By connecting these dots, the panelists aim to present a comprehensive view of how healthcare professionals work together across fields to ensure a seamless continuum of medical care.



# PRESS CONFERENCE PANELISTS



**Dr. Mariam Nikolashvili** is an endocrinologist at the National Institute of Endocrinology in Tbilisi, Georgia. With extensive experience in hormonal research and education, she serves as a visiting lecturer in biochemistry at multiple medical institutions. Dr. Nikolashvili's work focuses on the intricate roles of hormones and their impact on overall health, making her a vital voice in understanding the molecular foundations of medical care.



**Dr. Bela Nishnianidze** is a licensed pediatrician who graduated with a Doctor of Medicine from Tbilisi State Medical University in 2019 and completed her pediatrics licensure in 2022. She has substantial experience as a Junior Doctor in multiple Tbilisi clinics, including the American Hospital Tbilisi and PSP New Hospitals, providing comprehensive patient care and medical assessments. Dr. Nishnianidze also lectures at Georgian American University, where she fosters student learning and academic development in the medical field.



# PRESS CONFERENCE PANELISTS



**Dr. Tinatin Kutchukhidze** is a dedicated gynecologist recognized for her remarkable contributions to female well-being. Honored with the Diana Award in 2023, she is an expert in youth empowerment and serves as an invited lecturer specializing in health and science. With memberships in esteemed organizations like the Endocrine Society and the European Society of Endocrinologists, Dr. Kutchukhidze's expertise underscores the critical role of gynecology and reproductive health in the continuum of medical care.



**Dr. Lasha Gulbani** is a skilled general surgeon with a diverse background in surgical practices. After graduating from Tbilisi State Medical University, he completed a clinical residency in General Surgery in Minsk, Republic of Belarus. Dr. Gulban further honed his expertise as an intern in the Department of Abdominal and Head Surgery at a clinic in Bulgaria and later in the Department of Abdominal and General Surgery in Kharkiv, Ukraine. His extensive experience spans various multidisciplinary clinics and hospitals throughout Georgia, highlighting his commitment to advancing surgical care.

# KEYNOTE ADDRESS



The keynote addresses at MEDCON'24 align perfectly with the theme, "Internal Medicine: Pulse to Precision." This segment will showcase leading experts and specialists across various fields within internal medicine, including endocrinology, microbiology, rheumatology, cardiology, ECMO (Extracorporeal Membrane Oxygenation) specialization, and cardiac surgery. Together, these experts will delve into the nuances of precision medicine, the latest technological advancements, and evidence-based practices that drive patient care and outcomes. Attendees will gain insights into the interconnected nature of these specialties, reflecting the holistic and integrative approach that modern internal medicine embodies.

# KEYNOTE SPEAKER



## DR. ANZOR GOGIBERIDZE

Dr. Anzor Gogiberidze is a dedicated internal medicine physician and lecturer at Tbilisi State Medical University (TSMU). He graduated from TSMU in 2017, where he developed a strong foundation in medical science and practice. Following his graduation, Dr. Gogiberidze joined the Tbilisi Heart Center, where he currently specializes in internal medicine, providing comprehensive care to patients with cardiovascular conditions. Since 2017, he has also served as a lecturer in anatomy at TSMU, imparting knowledge and skills to medical students while fostering their understanding of complex anatomical concepts. In 2021, Dr. Gogiberidze obtained his license in internal medicine, further enhancing his qualifications. His research interests center on obstructive diseases, including asthma and chronic obstructive pulmonary disease (COPD). Dr. Gogiberidze is committed to advancing the understanding and treatment of these conditions, contributing to the broader field of internal medicine through his academic and clinical endeavors.



# KEYNOTE SPEECH

## ASTHMA AND COPD OVERLAP SYNDROME (ACOS)

Dr. Anzor Gogiberidze's presentation addressed Asthma-COPD Overlap (ACO), highlighting its shared features with asthma and COPD, such as persistent airflow obstruction that is only partially reversible. ACO is increasingly recognized in patients over 40 with a smoking history and presents challenges due to its complex clinical presentation.

- ACO is prevalent among individuals with higher BMI, predominantly affecting females, and often involves more severe disease progression, with elevated risks for exacerbations and lung cancer similar to those found in COPD patients.
- Two hypotheses were presented on ACO's pathogenesis:
- Dutch Hypothesis: Views asthma and COPD on a spectrum, with both conditions arising from common genetic and environmental factors.
- British Hypothesis: Suggests that asthma and COPD are distinct diseases, each with its own inflammatory drivers; ACO may result from overlapping inflammatory pathways.
- Diagnosis involves examining a patient's history of asthma or COPD, smoking habits, and allergic conditions, supported by diagnostic tests such as pulmonary function assessments and imaging studies, which help distinguish ACO's features from those of asthma or COPD alone.
- Treatment strategies prioritize ICS/LABA combination therapy to control symptoms effectively, avoiding LABA monotherapy due to associated risks. For those with persistent symptoms, a triple therapy approach with ICS, LABA, and LAMA may be recommended to improve lung function and reduce exacerbations.

Dr. Gogiberidze emphasized a comprehensive and balanced approach to ACO management, where preventive strategies, personalized care, and a combination of pharmacologic treatments aim to improve outcomes by addressing the overlapping yet distinct characteristics of asthma and COPD.



# KEYNOTE SPEAKER



## DR. DHAVAL NAIK

Dr. Dhaval Naik is a distinguished cardiac and heart transplant surgeon with over 18 years of experience. He earned his MBBS from B.J. Medical College, Ahmedabad, and completed his general surgery training at Civil Hospital. Dr. Naik trained in cardiac surgery at Apollo Hospital, Chennai, and furthered his expertise at Royal Prince Alfred Hospital, Sydney. He has received advanced training in ECMO, cardiac transplantation, and LVAD implantation in Germany and Sydney. A recipient of multiple awards from the Indian Medical Association, Dr. Naik has performed over 20,000 cardiac surgeries, including CABG, heart valve surgeries, and heart transplants. He has published numerous research articles and has organized various national and international conferences, serving on the committee for an annual event that attracts over 2,000 doctors. In addition to his surgical practice, Dr. Naik is a trustee of the V-Able Charitable Trust and actively supports education and research through the CIMS Foundation. He has also held leadership roles in national organizations like IACTS, ESOI, and Abbott.

# KEYNOTE SPEECH

## ECMO IN CARDIAC CRITICAL CARE: INDICATIONS, TECHNIQUES, AND OUTCOMES

Dr. Dhaval Naik's presentation explores the application of ECMO (Extracorporeal Membrane Oxygenation) in managing severe cardiac and respiratory failure, particularly in critical care settings. He outlines ECMO's indications, procedural techniques, and potential outcomes, emphasizing its role as a temporary bridge for organ support, recovery, or transplantation. Main Takeaways: Indications for ECMO: Used as a bridge for organ recovery, heart transplant, or long-term support devices (e.g., LVAD). Applied in acute cardiogenic shock, post-cardiac surgery support, high-risk interventions, and as emergency cardiopulmonary resuscitation (ECPR). ECMO Techniques: Various ECMO configurations, such as VA ECMO for cardiovascular support and VV ECMO for respiratory support. Cannulation methods tailored to clinical needs, including peripheral and central options for optimal blood flow and oxygenation. Patient Management and Complications: Careful monitoring to prevent complications like bleeding, thrombosis, limb ischemia, and neurological issues (e.g., intracranial hemorrhage). Specific complications, such as Harlequin syndrome, are managed through adjustments in oxygenation and flow. Outcomes and Weaning: ECMO provides time for myocardial and pulmonary recovery, often assessed through imaging and hemodynamic stability. Successful weaning involves echocardiographic and clinical markers of improved cardiac and pulmonary function. Dr. Naik's insights emphasize ECMO's critical role in providing temporary life support in severe cardiac and respiratory failures, allowing for recovery or transition to long-term solutions, thereby improving survival rates and patient outcomes in critical care settings.

# KEYNOTE SPEAKER



## DR. MARIAM NIKOLASHVILI

Dr. Mariam Nikolashvili is an experienced endocrinologist and biochemistry lecturer based in Tbilisi, Georgia. She earned her MD from Tbilisi State Medical University and completed her residency in endocrinology at the National Institute of Endocrinology, where she currently practices. Dr. Nikolashvili has extensive teaching experience as a visiting lecturer in biochemistry at Tbilisi Medical Academy, The University of Georgia, and Georgian American University. Her professional development includes participation in international conferences and advanced training programs, such as the Erasmus+ mobility program in the Netherlands and postgraduate courses in clinical endocrinology across Europe. Dr. Nikolashvili actively contributes to research, with publications on hypercortisolism and obesity-related hormonal imbalances. A member of EYES and EASD, she is dedicated to advancing endocrine science, patient care, and medical education in Georgia and beyond.

# KEYNOTE SPEECH

## THE OBESITY PANDEMIC: TRENDS, CAUSES, AND THERAPEUTIC ADVANCES

The Obesity Pandemic: Trends, Causes, and Therapeutic Advances Dr. Mariam Nikolashvili's presentation addresses the global obesity pandemic, emphasizing its widespread impact, associated health risks, and current research efforts toward prevention and management. She explores various factors contributing to obesity, including genetic predispositions, environmental influences, and lifestyle choices. The presentation also delves into anti-obesity pharmacotherapy advancements, highlighting both historical and emerging treatments.

Main Takeaways:

- **Prevalence and Impact:** Obesity rates are projected to reach 1.5 billion by 2035, with significant prevalence across continents. Linked to over 200 complications, including cardiovascular diseases and metabolic disorders, obesity reduces life expectancy and impairs quality of life.
- **Contributing Factors:** Genetic and environmental agents, such as food habits, socioeconomic factors, and sedentary lifestyles, contribute to obesity. Genetic mutations, including leptin deficiency and melanocortin receptor variants, influence obesity onset and severity.
- **Comorbidities and Risks:** Obesity is associated with various comorbidities: type 2 diabetes, cardiovascular disease, certain cancers, and musculoskeletal issues. Psychological impacts include stigmatization and reduced self-confidence, especially among children and adolescents.
- **Treatment Approaches:** Pharmacotherapy: Several FDA-approved drugs, including appetite suppressants and fat absorption inhibitors, demonstrate varying effectiveness but require careful management due to potential side effects. Behavioral and Lifestyle Modifications: Emphasis on diet, physical activity, and self-monitoring tools. Surgical Interventions: Bariatric surgery provides significant weight loss, particularly for high-risk patients, though long-term effects need more research.

Dr. Nikolashvili's insights underline the urgency of combating obesity through integrated strategies, including lifestyle interventions, targeted pharmacotherapy, and ongoing research into underlying mechanisms, to improve long-term health outcomes.



# KEYNOTE SPEAKER



## DR. GVANTSA KHACHIASHVILI

Dr. Gvantsa Khachiashvili is a junior doctor at the Department of Internal Medicine at High Technology Medical Center University Clinic and serves as an invited lecturer in Preventive Medicine, Health Promotion, and Environmental Health at Tbilisi State Medical University. She graduated from Tbilisi State Medical University's Faculty of Medicine and has passed both Step 1 and Step 2 of the United States Medical Licensing Examinations, showcasing her commitment to a high standard of medical practice. With a strong enthusiasm for integrating basic sciences into clinical applications, Dr. Khachiashvili is passionate about expanding her expertise through research, patient care, and medical education. Her professional interests focus on treating and researching solid malignancies, leveraging advancements in precision medicine to enhance patient outcomes. Known for her dedication to interdisciplinary learning and innovation, she aspires to contribute meaningfully to the evolving field of internal medicine, combining scientific insight with compassionate patient care.

# KEYNOTE SPEECH

## INTERNISTS EXPANDING ROLE IN PROMOTING PATIENT WELL-BEING: EARLY IDENTIFICATION AND PREVENTION OF POTENTIAL HEALTH CONCERNS BASED ON PERSONALIZED MEDICINE PRINCIPLES

Dr. Khachiashvili discusses the evolving role of internists in preventive medicine and the early identification of health risks. Her presentation explores the integration of personalized medicine principles in routine clinical practice to enhance patient outcomes and promote overall well-being, outlining structured approaches to periodic health maintenance and emphasizing cardiovascular disease prevention and cancer screening.

### Main Takeaways:

- **Periodic Health Maintenance:** Health visits every three years for adults  $\leq 49$  years, and annually for adults  $\geq 50$  years.
- **Cardiovascular Disease Prevention:** Risk assessment recommended every 3-5 years for adults aged  $\geq 20$ . Focus on modifiable risk factors: diet, smoking, hypertension, dyslipidemia, obesity, physical activity, and diabetes management.
- **Cancer Screening:** Importance of lifestyle modifications such as healthy weight, physical activity, and diet. Recommendations for screening of breast, cervical, colorectal, and lung cancers.
- **Immunisations:** Overview of vaccines for adults, including influenza, HPV, and pneumococcal vaccines as per CDC guidelines.
- **Medicine Approach:** Using patient-specific data to tailor preventive strategies for early detection and intervention.

Dr. Khachiashvili's insights emphasize the proactive role internists play in promoting patient well-being through preventive measures and personalized care, highlighting their impact on improving long-term health outcomes.

# KEYNOTE SPEAKER



## DR. NINO KAVTARADZE

Dr. Nino Kavtaradze is a highly respected Georgian rheumatologist and cardiologist with a career spanning over a decade, dedicated to clinical practice, academic teaching, and pioneering research. She graduated with an MD from Tbilisi State Medical University. Her specialisation in cardiology and rheumatology was further refined at TSMU's Institute of Postgraduate Medical Education and the V. Tsitlanadze Scientifically-Practical Center of Rheumatology, where she currently practices as a physician. Dr. Kavtaradze has been deeply involved in clinical trials that have advanced the understanding and treatment of rheumatoid arthritis and gout, including bioequivalence studies and Phase 3 trials on emerging therapies. Her academic career is equally distinguished; she teaches at SEU-Georgian National University and GAU-Georgian American University, sharing her expertise with the next generation of healthcare professionals. Her commitment to improving patient outcomes and advancing the field of rheumatology has made her a valued contributor to both clinical medicine and the academic community.

# KEYNOTE SPEECH

## MONOCLONAL ANTIBODIES AND THEIR ROLE IN THE MANAGEMENT OF AUTOIMMUNE DISEASES

Dr. Nino Kavtaradze's presentation on biologic agents in rheumatology provides a comprehensive view of bDMARDs, which are essential for treating autoimmune diseases by targeting immune system imbalances. These biologics are particularly effective in managing rheumatoid arthritis (RA), ankylosing spondylitis (AS), psoriatic arthritis (PsA), juvenile idiopathic arthritis (JIA), systemic lupus erythematosus (SLE), and primary vasculitides.

Categories of Biologic Agents:

- **Cytokine-Targeted Therapies:** TNF- $\alpha$  Inhibitors (e.g., etanercept, infliximab, adalimumab) work by blocking the inflammatory TNF pathway, crucial in inflammatory diseases. Interleukin Inhibitors (e.g., tocilizumab for IL-6, secukinumab for IL-17) target specific interleukin pathways, regulating immune responses in conditions like RA and PsA.
- **B-Cell Targeted Therapies:** CD20 Monoclonal Antibodies (e.g., rituximab) deplete B cells, effectively managing conditions such as SLE and vasculitis.
- **T-Cell Targeted Therapy:** Abatacept binds to CD80/CD86, blocking T-cell activation and reducing pro-inflammatory cytokine release.

Mechanisms of Action:

These biologics use various mechanisms to decrease immune response:

- **Soluble Receptor Antagonists and Monoclonal Antibodies** block cytokine binding to receptors.
- **Cell Surface Receptor Antagonists** compete with cytokines for receptor binding, curbing cell activation and inflammation.

**Side Effects and Monitoring:** While bDMARDs can increase infection risks, such as tuberculosis reactivation, and cause local injection site reactions, monitoring includes TB screening, pre-infusion medications, and regular blood tests. Infliximab, given intravenously, may lead to allergic responses.

**Preventive Care and Follow-Up:** Dr. Kavtaradze emphasizes consistent follow-ups, including blood tests to monitor efficacy and safety, underscoring the effectiveness of bDMARDs in personalized autoimmune disease management.



# KEYNOTE SPEAKER



## DR. GIORGI MGELADZE

Dr. Giorgi Mgeladze is a skilled microbiologist and gastroenterologist with a background in both clinical practice and academia. He earned his medical degree from Tbilisi State Medical University (TSMU), where he also completed a residency in gastroenterology. Currently pursuing a Ph.D. in microbiology and immunology at TSMU, Dr. Mgeladze has served as a microbiologist at the Richard Lugar Research Center and is now practicing as a gastroenterologist. In academia, he holds positions as an assistant professor at Georgian American University, where he teaches microbiology, and as an invited lecturer in gastroenterology at Caucasus International University and Tbilisi State Medical University. Dr. Mgeladze has participated in numerous international scientific conferences and is a member of the United European Gastroenterology and the European Society of Clinical Microbiology and Infectious Diseases. His contributions to clinical research and education reflect his commitment to advancing knowledge in both microbiology and gastroenterology.

# KEYNOTE SPEECH

## THE RISING TIDE: ANTIBIOTIC RESISTANCE AND ITS FUTURE FALLOUT

The Rising Tide: Antibiotic Resistance and Its Future Fallout Dr. Giorgi Mgeladze's presentation, The Rising Tide: Antibiotic Resistance and Its Future Fallout, emphasizes the escalating danger of antibiotic resistance and its serious impacts on healthcare and society:

- **Origins of the Crisis:** Antibiotic resistance is driven by over-prescription, agricultural use, and bacterial evolution. Overuse of antibiotics, like in "The Boy Who Cried Wolf," diminishes their effectiveness as bacteria adapt.
- **Current State of Resistance:** 2.8 million resistant infections occur annually in the U.S., with 1.3 million deaths worldwide. Resistant strains, such as MRSA, pose a serious threat as new antibiotics are not being developed quickly enough.
- **Potential Future Scenarios:** Without action, antibiotic resistance may lead to a dystopian world where: Minor infections become fatal. Routine surgeries carry high risks. Economic and healthcare systems struggle under the burden. A scenario where doctors prescribe "garlic and herbal tea" highlights the desperate outlook if effective antibiotics run out.
- **Preventive Measures:** Responsible antibiotic prescribing. Infection prevention through proper hygiene and vaccination. Increased research for new antibiotics. Educating patients to avoid unnecessary antibiotic use.
- **Conclusion & Call to Action:** Immediate actions can prevent this grim future. Emphasis on hygiene, responsible prescription practices, and public awareness. "The future is in your hands—wash them!" encapsulates the role of individual actions in addressing this global threat.

# ORAL PRESENTATIONS



## SWARALI YATIN CHODNEKAR – TEACHING UNIVERSITY GEOMEDI LLC – SYSTEMATIC REVIEW

A 30-Minute Cure To Breast Cancer: A Systematic Review Of The TARGIT-IORT System.

- **Background:** Targeted Intraoperative Radiotherapy (TARGIT-IORT) represents a groundbreaking approach to breast cancer treatment. It is a viable, time-efficient alternative, offering the potential for A 30- minute cure to breast cancer by delivering a single-dose radiotherapy in a single session rather than the conventional multi-week regimen. This systematic review evaluates the effectiveness and safety of TARGIT-IORT as a single-dose treatment for early-stage breast cancer, comparing it to conventional external beam radiotherapy (EBRT).
- **Methods:** Data from multiple international studies, and clinical trials involving 32 hospitals across ten countries and 2,746 women were extracted. TARGIT-IORT was administered as a single 20-30 minute dose immediately after lumpectomy using a small ball-shaped device, while EBRT required daily sessions spanning over three to six weeks.
- **Results:** A single dose of TARGIT-IORT demonstrated similar , if not better, results to weeks of EBRT in terms of local recurrence risk. TARGIT-IORT was associated with fewer deaths (42 vs. 56) compared to EBRT. Long-term follow-up (median 8.6 years, maximum 18.9 years) revealed no statistically significant differences in local recurrence-free survival, mastectomy-free survival, distant disease- free survival, overall survival, or breast cancer mortality. Notably, mortality from causes other than breast cancer was significantly lower in the TARGIT-IORT group (hazard ratio 0.59, 95% confidence interval 0.40 to 0.86, P=0.005).
- **Benefits:** TARGIT-IORT offers several advantages over EBRT. It reduces the number of hospital visits and treatment duration, with a single 20 to 30-minute session performed during lumpectomy. This method leads to fewer radiation-related side effects, including less pain and better cosmetic outcomes, thereby improving the overall quality of life for patients.
- **Conclusion:** TARGIT-IORT is an effective and efficient alternative to conventional radiotherapy for early-stage breast cancer. It provides comparable long-term outcomes with the added benefit of significantly lower mortality from non-cancer causes, supporting its role as a time-efficient, patient-friendly treatment option.

# ORAL PRESENTATIONS



## ANGELINE ABRAHAM – TBILISI STATE MEDICAL UNIVERSITY – SYSTEMATIC REVIEW

Machine to Bone : Integrating AI in the Prediction And Diagnosis of Rheumatoid Arthritis Flares and Guiding Therapy : A Systematic Review

- **Background:** Rheumatoid arthritis (RA) is a chronic autoimmune condition characterized by inflammation and flares. Initial diagnosis and effective monitoring are essential for optimal management. Artificial intelligence (AI) has the potential to advance RA care by improving prediction of flares and treatment adjustments. Incorporation of AI in the form of deep learning, machine learning, natural language processing and more, can lead to improved patient outcomes.
- **Objective:** This study evaluates AI's role in diagnosing RA, predicting flares, and guiding management.
- **Methodology:** This study follows PRISMA guidelines, conducting a comprehensive search in PubMed and Google Scholar using terms such as "artificial intelligence", "Rheumatoid arthritis", "diagnosis", "therapy guidance", and "RA flares" with Boolean operators AND/OR for various combinations. 40 studies were screened and 16 were selected, meeting the inclusion criteria: English-language research from the past 10 years, original studies on human patients, and involving AI in RA diagnosis or management. Rayyan software was used for deduplication, which was assessed by reviewers. Data extraction was performed using a standardized form, and baseline characteristics were compared using R software. The Revised Cochrane Collaboration tool was applied to evaluate bias risk in included randomized control trials, classifying them as "low", "moderate", or "high" risk.
- **Results:** Out of 40 collected studies, 16 were selected, showing AI's diagnostic accuracy for RA up to 89%, and flare prediction accuracy between 88–92%. AI-assisted therapy strategies improved outcomes by 15%, and combining clinical and imaging data enhanced predictive accuracy by 20%. The risk of bias was generally low to moderate, with no significant publication bias noted.
- **Discussion:** This review highlights AI potential in improving RA diagnosis and flare prediction. Despite encouraging results, challenges like bias risk and ethical concerns remain. Future research should refine AI models and address transparency issues to enhance clinical integration.
- **Conclusion:** AI significantly improves RA diagnosis, management, and treatment. AI improves RA diagnosis and management, though further research is needed to address challenges. Continued research is necessary for expanding the application and effectiveness.



# ORAL PRESENTATIONS



## NIKHILA LIZ ABY – GEORGIAN NATIONAL UNIVERSITY SEU – SYSTEMATIC REVIEW

Forensic Insights into Sudden Cardiac Arrest Linked to Genetic Mutations in Athletes: A Systematic Review of Channelopathies

- **Background:** Sciatic neuralgia frequently occurs in diabetic patients with neuropathy, leading to considerable pain and disability. Traditional methods, such as medication, have only been somewhat effective in controlling neuropathic pain in this group of people. Neuromodulation methods like SCS, PNS, and TENS are becoming popular options for managing pain. This systematic review and meta-analysis seek to assess efficacy and safety of neuromodulation therapies in managing sciatic neuralgia in diabetic neuropathy patients.
- **Methodology:** An extensive review of literature was carried out in databases such as PubMed, Cochrane Library, and Scopus covering studies up to September 2024. The study included both randomized controlled trials (RCTs) and observational studies that investigated the application of neuromodulation techniques in diabetic patients that were suffering from sciatic nerve pain. The primary goal of the research was to reduce pain, as well as enhance functioning and overall quality of life. The meta-analysis employed a random-effects model, wherein the heterogeneity assessment was done using the  $I^2$  statistic.
- **Results:** 12 studies, consisting of 6 randomized controlled trials and 6 observational studies, with a total of 1,034 participants were incorporated. A meta-analysis indicated that neuromodulation led to a significant decrease in pain scores in comparison to standard treatment (weighted mean difference: -2.85; 95% CI: -3.45 to -2.25;  $p < 0.001$ ). Patients experienced significant improvements in their functioning and overall quality of life. SCS demonstrated the highest effectiveness, with PNS coming in second, while TENS showed moderate yet consistent results. The negative incidents were scarce, and no remarkable issues were documented.
- **Discussion:** The findings of this systematic review show that neuromodulation techniques, particularly spinal cord stimulation (SCS) and peripheral nerve stimulation (PNS), are both safe and efficient choices for managing sciatic neuralgia in diabetic patients. These methods offer better pain management and enhance functional results when compared to conventional treatments.
- **Conclusion:** Since sciatic neuralgia in diabetic neuropathy is both persistent and disabling, integrating neuromodulation methods offers a hopeful alternative for patients who do not respond well to traditional treatments. Future research should prioritize pinpointing individual patient characteristics that could forecast the long-term success and results of these treatments, guaranteeing personalized and efficient treatment approaches.

# POSTER PRESENTATIONS



## SAMIKSHA BALAGURAGI – IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY – CASE REPORT

Brown Blood Treated With Blue : A Case of Acquired- Methemoglobinemia Secondary to Dapsone Use

- **Introduction:** Methemoglobinemia, a blood disorder characterized by abnormal production of methemoglobin, which affects oxygen supply to tissues. It can be congenital or rarely acquired (from toxins or medications). Symptoms correlate with levels of methemoglobin, ranging from fatigue to coma. This case report discusses a patient with acquired-methemoglobinemia, exhibiting vague symptoms with no predominant clinical findings.
- **Case:** A 46-year-old male, with a history of dermatitis herpetiformis (on dapsone therapy for one month), presented to the pulmonologist for one week-complaints of headache, shortness of breath (SOB), fatigue, grayish skin and nail discoloration. On physical examination, he was hypoxic, with oxygen saturation of (SpO<sub>2</sub>) of 88.89%, exhibited no wheezing or chest pain but was otherwise hemodynamically stable. There were no changes in ECG, chest X-ray or pulmonary function tests. He was transferred to the Emergency Department, found to be tachycardic with SpO<sub>2</sub> 80% and was initiated on a non-rebreather mask with 87% saturation. Further tests like urine dipstick was negative but arterial blood gas indicated pH of 7.4, hemoglobin of 12.4g/dL, lactate of 1.4mmol/L, methemoglobin of 12.9%, partial pressure of carbon dioxide of 38 mmHg, partial pressure of oxygen of 188 mmHg and arterial oxygen of 96.6%. The discrepancy of saturation gap and increased levels of MethHb, led to diagnosis of dapsone-induced acquired methemoglobinemia. The patient was treated with intravenous methylene blue (MB) (150 mg in D5 infusion) and was admitted to the ICU with continued oxygen support, gradually improving SpO<sub>2</sub> to 95% on room air. Upon dermatology consultation, his medications were modified and was discharged with outpatient follow-up.
- **Discussion:** Around 15% of the population encounter acquired-methemoglobinemia caused by dapsone. Its metabolites convert hemoglobin into methemoglobin. Treatment includes MB and eliminating causative agents. Patients should always be tested for G6PD-deficiency due to risk of hemolysis. MB should be paired with vitamin-c and dextrose.
- **Conclusion:** It is important for clinicians to counsel patients for regular checkup when prescribing dapsone and seek emergency care if symptoms emerge. Using advanced pulse oximetry, like Rainbow- SET Rad-57 Pulse CO-Oximeter allows steady monitoring of methemoglobin and early detection.

# POSTER PRESENTATIONS



## DINA KARAMI – THE UNIVERSITY OF GEORGIA – CASE SERIES

Coexistence of Muscular Dystrophy and Multiple Sclerosis : A Rare Case Series

- **Introduction:** Muscular dystrophies (MD) are congenital disorders characterized by progressive muscle weakness. Multiple sclerosis (MS), an autoimmune demyelinating disorder of the central nervous system, is rarely associated with MDs. Despite the shared neurological features, reports of co-occurrence are sparse. This case series presents four patients diagnosed with both MS and different types of muscular dystrophies, highlighting potential pathophysiological links.
- **Case Presentations:** We describe four patients, aged 21-40, diagnosed with various forms of MD, including Facioscapulohumeral dystrophy (FSHD), Myotonic dystrophy, and Limb-Girdle Muscular Dystrophy (LGMD), alongside MS. Neurological symptoms such as optic neuritis, muscle weakness, atrophy, and gait disturbances were prevalent across cases. Magnetic resonance imaging (MRI) confirmed demyelinating lesions in the brain and spinal cord, consistent with MS, and electromyography (EMG) results showed myopathic changes typical of MD. Treatment regimens, including corticosteroids and interferon- beta, led to varying levels of symptom improvement.
- **Discussion:** The concurrent presence of MD and MS may suggest shared genetic or epigenetic mechanisms, though the relationship remains unclear. This series supports the hypothesis that these disorders might have overlapping pathogenic pathways, warranting further investigation into their genetic links.
- **Conclusion:** It is important for clinicians to counsel patients for regular checkup when prescribing dapsone and seek emergency care if symptoms emerge. Using advanced pulse oximetry, like Rainbow- SET Rad-57 Pulse CO-Oximeter allows steady monitoring of methemoglobin and early detection.



# POSTER PRESENTATIONS



## SAKSHI BIDKAR – DAVID TVILDIANI MEDICAL UNIVERSITY – SYSTEMATIC REVIEW

### The Potential Link Between Gluten- Related Disorders And Psychosis

- **Introduction:** Gluten, composed of gliadin and glutenin, is ubiquitous in numerous widely consumed cereals in Western societies, including wheat, oats etc. 1,2 It can elicit pathogenic immune responses and hypersensitivity reactions. Gluten-related disorders (GRD) comprise a spectrum of conditions, such as wheat allergy, non-celiac gluten sensitivity (NCGS), and celiac disease (CD). 2 Emerging evidence suggests a positive association of GRDs with psychotic presentations. 3,5,6,8,11,12,13,15 This study explores this connection, assessing literature that indicates a gluten-free diet(GFD) may be advantageous for those suffering from secondary psychosis.
- **Methods:** A systematic review was conducted based on the PRISMA guidelines using the PubMed database, with search terms "gluten," "celiac disease," "non-celiac gluten sensitivity," "wheat," and "psychosis." The search was restricted to articles published between 2014 and 2024. A total of 442 articles were identified and screened. 15 relevant studies, with 8 case reports were included for qualitative synthesis.
- **Result:** A total of 8 patients, predominantly female(n=7) were analyzed with a mean age of 32.7 years. 7 patients were hospitalized for an average of 4.8weeks with hallucinations(75%) alongside anxiety and depression(50%) as most common symptom, necessitating acute treatment. Weight loss(n=3) and gastrointestinal symptoms(n=2) prompted physicians to investigate CD, leading to the diagnosis of CD in 3, NCGS in 4, and wheat allergy in 1 patient. Antipsychotics offered only partial relief, whereas GFD achieved complete symptom resolution within an average of 14.75 days. However, others(n=4) required adjunctive antipsychotic/vitamin therapy for sustained remission. Non-adherence to GFD led to relapses(n=5), often more severe than initial presentation.
- **Discussion:** Gluten induced psychosis is a complex condition equally affecting all age groups, with higher prevalence in women compared to men. 11 The partial effectiveness of antipsychotics 3,5,6,8 , complete remission with GFD 1,14 , and relapses upon non-adherence with resolution within 2 weeks of reinstating GFD 4,5,6,7,8 aligns with studies associating gluten and psychosis. 12,14, Some studies suggest combining both approaches for sustained remission. 4,5,9,10
- **Conclusion:**Currents evidence underscores the relation between gluten and psychosis; the considerable challenges it presents in diagnostic processes; and the necessity for clinical focus. The study highlights the importance of a GFD in management of GRD induced psychosis patients, though its efficacy and pathophysiology need further study.



# POSTER PRESENTATIONS



## AHMED HASHIM AZEEZ – TBILISI STATE MEDICAL UNIVERSITY – SYSTEMATIC REVIEW AND META-ANALYSIS

The Impact of Hypertension Control on Slowing CKD Progression: A Meta-Analysis of Antihypertensive Agents

- **Introduction:** Chronic kidney disease (CKD) is one of the world's most pressing current health issues, faced by many globally. Hypertension is a modifiable risk factor that enhances the rate at which CKD progresses to ESKD (End-Stage Kidney Disease). There is a reciprocal relationship between hypertension and CKD; CKD generates hypertension, and untreated hypertension aggravates kidney damage. This meta-analysis explores the use of antihypertensive medications in the management of hypertension and their effects on the progression of CKD.
- **Methods:** A systematic review and meta-analysis incorporated randomized controlled trials (RCTs), cohort, and observational studies published between 2010 and 2023. Searches were conducted in PubMed, Cochrane Library, and Scopus using keywords like "hypertension," "chronic kidney disease," and "CKD progression." Studies assessing the impact of antihypertensive medications on CKD progression were included. Data on drug classes, blood pressure control, and renal function were extracted, and statistical analyses were conducted.
- **Result:** This meta-analysis involved 25 studies with more than 10,000 patients with chronic kidney disease. Antihypertensive agents decreased the risk of progressive CKD with a hazard ratio of 0.67 (95% CI: 0.60–0.75). The use of RAAS (Renin Angiotensin Aldosterone System) inhibitors, including Angiotensin converting enzyme inhibitors (ACE) and Angiotensin receptor blockers (ARBs), was associated with a 30% reduced chance of progression to ESKD, an appreciable reduction in proteinuria, and a reduction in estimated glomerular filtration rate (eGFR) decline rate. The threshold and optimal blood pressure usually less than 130/80 mmHg helped in minimizing the cardiovascular disease risks. Nonadherence to therapy increased the progression of CKD by 27% and nocturnal hypertension was among the strong risk factors for disease progression.
- **Discussion:** This analysis brings home the importance of hypertension management in the disease management of chronic kidney disease. In cases of Renin-angiotensin system inhibitors hypertension control along with proteinuria reduction yielded great renal protective effect. Hence it is essential to individualize treatment courses in particular for age and comorbidities. These strategies can treat resistant hypertension more effectively and also provide beneficial effects on the kidneys.
- **Conclusion:** As a result, the most important in the adjustment of CKD is the lowering of blood pressure/combating hypertension most efficiently. Hypertensive drug treatment, and in particular ACE inhibitors and ARB, are very important to renoprotection. In the subsequent studies, the hypertension treatment approaches should focus more on long-term studies.

# POSTER PRESENTATIONS



## AMY ELIZABETH MATHEW – TBILISI STATE MEDICAL UNIVERSITY – CASE REPORT

### Guillain Barre Syndrome As an Uncommon Sequelae of Dengue Infection

- **Introduction:** Dengue is hemorrhagic fever caused by an arbovirus, transmitted through *Aedes aegypti* mosquito. It commonly presents with fever and myalgia. Although it can have neurological complications such as encephalopathy and encephalitis, neurological sequelae like Guillain Barre syndrome (GBS) is uncommon. We present a case of Dengue infection which later developed GBS.
- **Case Presentation :** A 42-year-old Asian woman living in the middle east, presented with high fever, severe myalgia, malaise, orbital pain following a holiday in Bali. She was diagnosed to have Dengue fever. Dengue NS-1 antigen was positive. Investigations at the time of diagnosis showed mild neutropenia, lymphocytosis and transaminitis. Her platelet count remained normal throughout her illness. 7 days later she complained of 'pins and needles' sensation of the whole body. She also had difficulty walking for 3 days. On examination, she was conscious, alert and oriented. Vital signs were normal. Cranial nerves were normal. The power in both upper and lower limbs were normal. Plantar was flexor. Lower limb deep tendon reflexes were absent. She was mildly ataxic. There was no sensory deficit. Systemic examination was otherwise normal. CSF analysis showed albumino- cytological dissociation. Nerve conduction study showed predominantly motor demyelinating polyradiculoneuropathy. The patient recovered completely with IVIG treatment.
- **Discussion:** GBS is evoked as an immune response to an antecedent infection, which results in acute polyneuropathy. Neurological complications have been reported to occur in 0.5–6% of cases with dengue fever. Approximately 70% of GBS cases occur 1–3 weeks following an acute infection. However, the precise incidence rate of GBS complicated by dengue infection still remains unclear.
- **Conclusion:** Our patient presented with vague symptom of "burning sensation" all over her body. Unless the clinician is aware and is alert, it is easy to miss this early manifestation of GBS as a complication of the Dengue virus infection . Hence cases such as these need to be documented to raise awareness in the medical community.

# POSTER PRESENTATIONS



## JOSHUA ANNAMALAI – TBILISI STATE MEDICAL UNIVERSITY – SYSTEMATIC REVIEW AND META-ANALYSIS

Novel Pharmacotherapical Advancements In Patients With Hypertrophic Cardiomyopathy

- **Introduction:** Hypertrophic cardiomyopathy (HCM) is an autosomal dominant disorder with risk of sudden cardiac death (SCD) in children and adolescents. A recently developed FDA approved cardiac myosin ATPase inhibitors could potentially revolutionize HCM management, including patients with obstructive HCM (HOCM) as it addresses the underlying pathophysiology.
- **Methodology :** This review was performed per the preferred reporting items for systematic review and meta- analyses guidelines. PubMed, Cochrane Library, and Scopus were searched from inception to August 2024.
- **Results:** We applied inclusion and exclusion criteria, and narrowed down to 4 studies which covered a total of 444 patients (mean [SD] age, 51.9 [11.9] years; men [71.6%]). Cardiac myosin ATPase inhibitor demonstrated a significant improvement in the primary end point compared with placebo. The mean (SD) Valsalva LVOT peak gradient decreased from 106.8 (43.2) mm Hg at baseline to 48.9 (40.4) mm Hg at week 30 among mavacamten-treated patients, whereas for placebo, an increase from 99.8 (41.1) mm Hg at baseline to 116.3 (52.2) mm Hg (LSM difference, 19.2 mm Hg) at week 30 was observed. The least-squares mean (LSM) difference between groups was -70.3 mm Hg on Zhuang study. At week 30, more patients receiving mavacamten than placebo achieved a Valsalva LVOT peak gradient less than 50 mm Hg and less than 30 mm hg by the week 16 compared to placebo and has shown NYHA class improvement (59.3% [32 of 54] vs 14.8% [4 of 27]) on all groups. Greater improvements were also observed with mavacamten regarding the Kansas City Cardiomyopathy Questionnaire Clinical Summary Score. A reduction in NT-proBNP level was 82% greater for mavacamten compared with placebo (proportion of geometric mean ratio between treatments 0.18; 95% CI, 0.13-0.24).
- **Conclusion:** In summary, this meta-analysis of patients showed that mavacamten has the potential to significantly impact outcomes in HCM patients, particularly improvement in  $\geq 1$  NYHA class, KCCQ-CSS scores, post-exercise LVOT gradients, therefore can reduce the risk of sudden cardiac death setting the stage for future trials to confirm our findings and test this drug in more HCM patients, averting the route from the conventional sub-optimal or invasive treatment options to a non-invasive and optimal treatment option.



# POSTER PRESENTATIONS

## SEKINAH ADEKEMI ADEPOJU – NEW VISION UNIVERSITY – CASE SERIES

### COR TRIATRIATUM SINISTRUM: A CASE SERIES

Cor triatriatum sinistrum, a rare congenital cardiac anomaly affecting approximately 0.1-0.4% of patients with congenital heart defects, is characterized by a fibromuscular membrane that divides the left atrium into two chambers. Less than 250 cases have been reported since the condition was first identified in 1868. A notable association has been observed with other congenital abnormalities in between 24% and 80% of instances. Undiagnosed cases of the illness might persist into adulthood due to different degrees of left atrial blockage caused by partial resorption of the pulmonary veins. Clinically, the condition causes problems with ventricular filling and is linked to persistent left superior vena cava, which can cause symptoms including atrial fibrillation and congestive heart failure, which affect about 32.8% of patients. Restrictive cardiomyopathy has also been reported, and in some severe instances even sudden cardiac death. Cardiovascular catheterisation, CT scans, and transthoracic and transoesophageal echocardiograms are commonly used to confirm the diagnosis. A thin echogenic membrane can be seen on echocardiographic imaging. In order to assess the haemodynamic severity, cardiac catheterisation is used to measure the pressure difference between the genuine left atrium and the pulmonary venous chamber. Surgical intervention is frequently required to re-establish normal blood flow. Physicians Lewis and Vineberg pioneered procedures in 1956 that involved median sternotomy, cardiopulmonary bypass, and fibromuscular membrane excision. To prevent iatrogenic injury, a thorough assessment of the mitral valve and its competency must be done, which may influence surgical access. Because the condition is rare, thorough data on postoperative recovery, complications, and death are currently difficult to collect, even with the possibility of surgical correction. It is necessary to further investigate non-invasive corrective techniques to improve knowledge and treatment results for individuals with cor triatriatum sinistrum.



# POSTER PRESENTATIONS



## NIKHILA LIZ ABY – GEORGIAN NATIONAL UNIVERSITY SEU – SYSTEMATIC REVIEW AND META ANALYSIS

Efficacy of Neuromodulation Techniques in Managing Sciatic Neuralgia in Diabetic Neuropathy: A Systematic Review and Meta-Analysis

- **Background:** Sciatic neuralgia frequently occurs in diabetic patients with neuropathy, leading to considerable pain and disability. Traditional methods, such as medication, have only been somewhat effective in controlling neuropathic pain in this group of people. Neuromodulation methods like SCS, PNS, and TENS are becoming popular options for managing pain. This systematic review and meta-analysis seek to assess efficacy and safety of neuromodulation therapies in managing sciatic neuralgia in diabetic neuropathy patients.
- **Methodology :** An extensive review of literature was carried out in databases such as PubMed, Cochrane Library, and Scopus covering studies up to September 2024. The study included both randomized controlled trials (RCTs) and observational studies that investigated the application of neuromodulation techniques in diabetic patients that were suffering from sciatic nerve pain. The primary goal of the research was to reduce pain, as well as enhance functioning and overall quality of life. The meta-analysis employed a random-effects model, wherein the heterogeneity assessment was done using the  $I^2$  statistic.
- **Main results:** 12 studies, consisting of 6 randomized controlled trials and 6 observational studies, with a total of 1,034 participants were incorporated. A meta-analysis indicated that neuromodulation led to a significant decrease in pain scores in comparison to standard treatment (weighted mean difference: -2.85; 95% CI: -3.45 to -2.25;  $p < 0.001$ ). Patients experienced significant improvements in their functioning and overall quality of life. SCS demonstrated the highest effectiveness, with PNS coming in second, while TENS showed moderate yet consistent results. The negative incidents were scarce, and no remarkable issues were documented.
- **Discussion:** The findings of this systematic review show that neuromodulation techniques, particularly spinal cord stimulation (SCS) and peripheral nerve stimulation (PNS), are both safe and efficient choices for managing sciatic neuralgia in diabetic patients. These methods offer better pain management and enhance functional results when compared to conventional treatments.
- **Conclusion :** Since sciatic neuralgia in diabetic neuropathy is both persistent and disabling, integrating neuromodulation methods offers a hopeful alternative for patients who do not respond well to traditional treatments. Future research should prioritize pinpointing individual patient characteristics that could forecast the long-term success and results of these treatments, guaranteeing personalized and efficient treatment approaches.

# POSTER PRESENTATIONS



## NIVEDITA PANT – DAVID TVILDIANI MEDICAL UNIVERSITY – CASE REPORT

**Introduction** High-flow connections with feeder arteries, a central nidus, and multiple enlarged draining veins characterize arteriovenous malformations (AVM).[2] Arteriovenous fistulas (AVF) on the other hand, are low-flow connections between an artery and a vein.[3] This case report presents a complex AVM in the right orbit with two separate components, a high-flow AVF and a diffuse AVM, treated with embolization alone.

**Case presentation** A 19-year-old male presented with swelling in the right orbital area, accompanied by dark discoloration and intermittent diplopia over the past five years. On examination, the swelling was pulsatile, and a bruit was heard on auscultation. MRI of the orbit was suggestive of possible vascular malformation. He was scheduled for a digital subtraction angiography (DSA) of the cerebral vessels. DSA revealed a complex AVM with AVF in the right orbital region. The high-flow AVF was primarily supplied by a branch of the right ophthalmic artery and drained into the superficial veins. Due to significant tortuosity of the ophthalmic artery, access to the AVF was achieved percutaneously under ultrasound and fluoroscopic guidance using a 22-gauge butterfly needle and was completely embolized with 33% histoacryl. The diffuse AVM was primarily supplied by the right ophthalmic artery, with minimal contribution from the right sphenopalatine artery. The sphenopalatine artery was selectively cannulated and embolized with polyvinyl alcohol sponge particles of 300–500 microns, while the remaining nidus was accessed percutaneously and partially embolized with 33% histoacryl. Post-embolization angiograms of the right external carotid artery showed no opacification of the AVM, whereas the right internal carotid angiogram indicated 10–20% residual nidus supplied by the right ophthalmic artery.

**Discussion** The management of intraorbital AVM is commonly preoperative embolization followed by surgical excision in case of symptoms.[2] Risks include central retinal artery thrombosis and hemorrhage.[1] Embolization can relieve symptoms and cause smaller AVMs to resolve, thus eliminating the need for surgical removal. Nonetheless, embolization alone cannot be curative in most cases due to the formation of collateral vessels.[2] However, the patient ablated all but 10–20% of the residual nidus, fed mainly by a branch from the right ophthalmic artery.

**Conclusions** This case highlights the successful management of a rare right orbital AVM through subtotal embolization, resolving symptoms and lesions.

# POSTER PRESENTATIONS



## ENSIYEH OLAMA – FACULTY OF MEDICINE, GEORGIAN NATIONAL UNIVERSITY SEU – SYSTEMATIC REVIEW AND META-ANALYSIS

Marital status and risk of type 2 diabetes

### **Purpose:**

Marital status is among the factors influencing Type 2 diabetes mellitus (T2D). However, the precise relationship remains incompletely understood. This meta-analysis aims to evaluate the association between marital status and the incidence of T2D.

### **Methods:**

A review and meta-analysis of observational studies were conducted to investigate the relation between marital status and diabetes incidence. We searched three databases, including PubMed, Google Scholar, and Scopus, for relevant studies published up to August 16th, 2023. In our initial search, we identified a total of 358 articles. After a demanding screening process, which involved evaluating titles, abstracts, and full-text content, we ultimately included six studies for our meta-analysis.

**Result:** Comprising a total of 1,440,904 participants, our study found that in comparison to married individuals, unmarried participants exhibited a higher likelihood of developing diabetes (odds ratio [OR]: 1.47, 95% confidence interval [CI]: 0.88–2.45, I<sup>2</sup>: 91%, p-value=0.14). Divorced participants had a reduced likelihood of developing diabetes compared to married participants (OR: 0.84, 95% CI: 0.77–0.91, I<sup>2</sup>: 17%, p<0.001). Similarly, widowed participants showed a lower risk of developing diabetes compared to divorced participants (OR: 0.35, 95% CI: 0.26–0.46, I<sup>2</sup>: 83%, p<0.00001).

### **Conclusion:**

This study provides strong evidence of links between marital status and Type 2 diabetes risk. Unmarried individuals are more susceptible to T2D, divorced individuals have a lower risk, and widowed individuals exhibit reduced T2D risk. Further research should investigate underlying mechanisms and confounding factors.

# POSTER PRESENTATIONS



## JAIMIN DIPAKBHAI RATHOD – TEACHING UNIVERSITY GEOMEDI LLC – SYSTEMATIC REVIEW

Technology's Role in Early Detection of Coronary Heart Disease : A Systematic Review of AI and Wearable Devices

### INTRODUCTION:

Coronary heart disease (CHD) poses a substantial burden on global healthcare. It has one of the highest mortality rates. The early identification of heart disease is vital for timely intervention. In such conditions, Artificial intelligence (AI), and wearable devices play a crucial role in predicting and early diagnosing CHD.

### AIMS:

This paper aims to find the current accuracy of AI, and wearable devices in predicting CHD. Also, this paper discusses the current scenario and future possibilities of AI in cardiology.

### METHODOLOGY:

This systematic literature review is followed by PRISMA guidelines for reviewing. A total of 501 Articles were taken from PubMed, Scopus, and Google Scholar databases. From which 73 articles were taken for the final review using keywords "Coronary Heart Disease", "Artificial intelligence", "Machine learning", and "Wearable devices. Articles ranging from 2019 to 2024 in the English language were included. Deep learning (DL), machine learning (ML) models like random forest, logistic regression, support-vector clustering (SVC), K- nearest neighbor (KNN), artificial neural network (ANN) were included in the study.

### RESULTS:

Deep learning models showed accuracy ranging from 0.73-0.77 area under cover (AUC). Accuracy, sensitivity, and specificity ranged 73%-77%. After optimization, 92% to 99.9% accuracy was noticed, (0.88-1.00 AUC) by SVC, k-nearest neighbor, and others. (94.80% sensitivity, 96.96% specificity). Models using ML shows an accuracy of 82% to 98% (0.792- 0.984 AUC). Wearable devices also show high accuracy of 95.59 to 97.7% (Sensitivity 94.80%, Specificity 96.69%).

### DISCUSSION:

There is a significant increase in the accuracy of AI in predicting heart attacks. We can predict that an AI read ECG machine can be developed using such technology. Sensitivity and Specificity were low in the past but AI has improved a lot. However, AI uses can be controversial and ethically must be discussed. More studies can be done to make it feasible.

### CONCLUSION:

AI can be accurately predicted and using such wearable devices can help to become more aware of CHD. In the future, AI in-built devices can be found and it can help to rescue against CHD decreasing mortality.



# POSTER PRESENTATIONS



## NINO BEBIASHVILI – DAVID TVILDIANI MEDICAL UNIVERSITY – CASE REPORT

Treating Bipolar Disorder masking Pituitary Nonsecretory Macroadenoma: Case Report

**Introduction:** Pituitary adenomas, benign tumors originating from the anterior pituitary gland, are categorized into microadenomas or macroadenomas by size, and secretory or nonsecretory based on hormone secretion. Nonsecretory macroadenomas can lead to hypopituitarism by damaging surrounding pituitary tissue. Large macroadenomas may compress the optic chiasm, causing symptoms like bitemporal hemianopsia due to mass effect.

**Clinical Presentation:** A 35-year-old male was brought to the Psychiatry Department by law enforcement authorities, presenting with marked agitation, aggression directed towards his immediate environment, pronounced irritability, elevated mood, disrobed state, and engaging in risky behaviors. Following clinical assessment, a diagnosis of Bipolar Disorder with psychosis was established, and pharmacotherapy comprising lithium, quetiapine, and valproate was initiated. Subsequently, after a two-week hospitalization period, the patient was discharged. In the ensuing months, the patient entered into marriage; however, despite concerted efforts, he and his partner encountered difficulties in conceiving, alongside complaints of decreased libido and hair loss. Attributing these symptoms to potential adverse effects of his prescribed medications, patient opted to abruptly terminate his pharmacological regimen with medical consultation. Consequently, he experienced a severe manic episode culminating in his disappearance for 72 hours, necessitating his readmission to the Center for Mental Health and Prevention of Addiction. Upon readmission, the patient reported symptoms of headache, diplopia, and bitemporal hemianopia. Neuroimaging via MRI with intravenous contrast revealed the presence of a Pituitary Nonsecretory Macroadenoma. Prompt surgical intervention was undertaken to excise the tumor, resulting in resolution of his previous complaints. Following surgical intervention, the patient resumed pharmacological management for Bipolar Disorder, achieving optimal symptom control and stabilization.

**Conclusion:** This case underscores the imperative for clinicians to maintain a vigilant approach to psychiatric patients, recognizing the potential intersection of organic etiologies and mental health conditions. It highlights the necessity of interdisciplinary collaboration and comprehensive assessment to address both psychiatric and medical comorbidities effectively. Clinicians should prioritize thorough evaluation, timely diagnosis, and holistic management, integrating pharmacotherapy, psychoeducation, and surgical intervention when necessary. This case underscores the importance of a patient-centered approach, emphasizing the need for clinicians to remain vigilant and proactive in addressing complex clinical presentations.

# POSTER PRESENTATIONS



## NUPURA AJESH – TBILISI STATE MEDICAL UNIVERSITY – CASE REPORT

Unlocking Weight Loss : Mounjaro's Breakthrough For Non- Diabetics

### INTRODUCTION

Obesity, a health concern worldwide, predisposes people to various chronic diseases. Tirzepatide, commercialized under the brand Mounjaro, initially indicated for the treatment of type 2 diabetes is now prescribed for significant weight loss, making this drug an attractive alternative for the treatment of obesity amongst non-diabetic patients.

### CASE

In April, a 45-year-old man presented with complaints of erectile dysfunction (ED), premature ejaculation, and absence of morning erections. On physical assessment, he weighed 113 kgs with BMI of 37.9 and BP of 150/95 mmHg with no other comorbidities. In December 2023, he was diagnosed with hypertension (HTN) (amlodipine 5 mg). Ultrasound and lab reports including CBC, TSH, creatinine and amylase were insignificant. The patient attributed his ED to obesity, upon discussing weight loss options, the patient opted Mounjaro for weight management (four doses per month). Month later, he discontinued his HTN medications. By July the patient lost 20kgs, reported return of morning erections and his BP had stabilized (102/64 mmHg). On September 10th, he weighed 84 kg, reporting improved mood, better sleep, increased sexual activity, and resolution of ED. Over four months, he achieved significant weight loss, from 113 kg to 84 kg.

### DISCUSSION

SURMOUNT-4 trial showed Tirzepatide boosts satiety, reduces stomach emptying, and improves insulin sensitivity by working on GIP and GLP-1 receptors. Consequently helps obesity related problems like cardiovascular disease and sleep apnea, by 20%. Helps with fat burn and preserves muscle mass, improves BP and glycemic control, helping diabetes care. It can cause gastrointestinal side effects like pancreatitis. In a 72-week study, participants lost 15% to 21% of weight, placebo group lost 3%, which was an important record for the potential of Tirzepatide to be an obesity treatment.

### CONCLUSION

Tirzepatide represents a new opportunity in obesity management for non-diabetic patients, especially among patients who fail to achieve satisfactory results with the current armamentarium. Further research into dual receptor agonists, chronic benefits and clinical indications will go a long way in establishing its role in combating this increasing pandemic of obesity taking the world by storm.

# POSTER PRESENTATIONS



## MOHAMMAD AAMIR QAYYUM SARGUROH KHAN – IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY- LITERATURE REVIEW

Comparison of Nivolumab with Docetaxel in the Treatment of Advanced Squamous Cell Non-small Cell Lung Cancer

### **Background:**

Lung squamous-cell carcinoma is a global health challenge with limited treatment options. Immune checkpoint inhibitors, especially nivolumab, have revolutionized cancer therapy, particularly in non-small cell lung cancer (NSCLC). Nivolumab targets the PD-1 protein and shows potential in treating advanced squamous-cell NSCLC by blocking the PD-1/PD-L1 immune checkpoint pathway.

### **Methodology:**

This article critically reviews the development of nivolumab and compares its efficacy with docetaxel in advanced squamous-cell NSCLC. Clinical trials were analyzed for overall survival rates, adverse events (AEs), and patient-reported outcomes, including mental well-being.

### **Results:**

Clinical trials indicate that nivolumab offers higher overall survival rates and fewer AEs compared to docetaxel. Improvements in patient-reported outcomes, such as quality of life and mental well-being, were also observed with nivolumab.

### **Discussion:**

While nivolumab demonstrates superior efficacy and safety over docetaxel, limitations such as short trial durations hinder the analysis of long-term outcomes and delayed AEs. The comparison is limited to nivolumab and docetaxel, excluding other FDA-approved monoclonal antibodies. These limitations must be addressed to improve clinical decision making and guide future research.

### **Conclusion:**

Nivolumab shows promise as a treatment option for advanced squamous-cell NSCLC, offering better efficacy and safety than traditional chemotherapy. However, its real-world efficacy and long-term safety require further investigation to solidify its role in NSCLC management.

# POSTER PRESENTATIONS



## GANESH CHANDRASHEKAR – GEORGIAN AMERICAN UNIVERSITY – CASE REPORT

Unmasking The Hidden Culprit : A Case Report of Resistant Hypertension and Primary Hyperaldosteronism

### Introduction:

Primary hyperaldosteronism (PA) is one of the most common causes of secondary hypertension, which is resistant to a standard antihypertensive therapy. PA is characterised by excess production of aldosterone which results in resistant hypertension, hypokalaemia, and high prevalence of cardiovascular events. Unilateral adrenal adenomas and bilateral adrenal hyperplasia are the two most common underlying causes of PA requiring a surgical cure or medication therapy, respectively. Herein, we report a case of resistant hypertension due to long-standing undiagnosed PA.

### Case report:

A 53-year-old male presented with a 10-year history of poorly controlled hypertension ( $>170/100$  mmHg) despite the use of five antihypertensive medications (bisoprolol, perindopril, indapamide, amlodipine, and moxonidine). Initial investigations revealed hypokalaemia ( $K=3.4$  mmol/L). Primary aldosteronism was suspected hence the patient was switched to verapamil and terazosin along with potassium supplements. In 4 weeks, blood pressure decreased to 140/90 mmHg, potassium normalised ( $K=3.55$  mmol/L), so the relevant laboratory investigations were done. The laboratory tests showed elevated aldosterone (292 pg/mL), low renin (1.1  $\mu$ U/mL), and a high aldosterone-to renin ratio (260).

### Discussion:

Considering the elevated aldosterone, decreased renin, and the presence of spontaneously developed hypokalaemia, confirmatory testing was not deemed necessary, so relevant imaging study was performed. Abdominal CT revealed bilateral adrenal hyperplasia, with nodular thickening of the right adrenal gland. To understand the laterality of hyperaldosteronism and provide the most optimal care for the patient, adrenal vein sampling (AVS) was recommended; however, due to unavailability of the investigation in the country, mineralocorticoid antagonist—spironolactone 100 mg daily—was initiated. During the next follow-up in 4 weeks, the patient's condition significantly improved with blood pressure remaining below 130/80 mmHg.

### Conclusion:

This case signifies the importance of suspecting and detecting PA early on, in order to provide a better care for patients suffering with resistant hypertension, providing a potential cure of the disease. Raising awareness among healthcare professionals regarding primary hyperaldosteronism can dramatically improve patient care and prevent cardiovascular complications.



# POSTER PRESENTATIONS



## WELE PARPELAGE MALEESHA SEWMINI– TBILISI STATE MEDICAL UNIVERSITY – LITERATURE REVIEW

Elevating Care With Nano Particles : Approaches to Conquer Non- Small Cell Lung Cancer in Non- Smokers

### Introduction

Non-small cell lung cancer (NSCLC) is a prevalent malignant form of lung cancer. Non-smokers with NSCLC present distinct genetic mutations in the EGFR, p53 and ALK genes driving tumor growth and resistance to traditional therapies.

### Objectives

The review seeks to identify the limitations in conventional treatments of NSCLC and to develop a connection with recognized nanoparticles (NP) for early diagnosis and treatment.

### Methodology

An extensive search was done through Pubmed and Google Scholar from 2014-2024. Studies examining the use of different NP formulations for drug delivery, mRNA-based therapy, and diagnostic applications, NP-based chemotherapeutic drugs, including as cisplatin-loaded nanoparticles. Research was focused on the usage of lipid-based mRNA nanoparticles for targeting EGFR and p53 mutations. The application of gold nanoparticles in imaging or breath- based biomarker detection, were examined

### Results

Gold nanoparticles have unique optical characteristics making it excellent use in imaging and photothermal therapies, and non-invasive diagnostic tools. It accelerated tumor ablation when combined with conventional treatments Air-filled microbubbles improved lung-specific delivery. Lipid-based mRNA nanoparticles, dual-targeted mRNA nanoparticles composed of cationic lipids and hyaluronic acid, and drug-loaded nanoparticles have potential to target EGFR and p53 mutations. Drug-loaded nanoparticles, including cisplatin and cisplatin combinations, increase chemotherapy effectiveness while decreasing systemic toxicity. Loss of function mutations of caspase 8 (CASP8) contributes to resistance of apoptosis in NSCLC. Significant apoptosis in tumor cells was induced by A549 tumor spheroids and NPs delivering therapeutic genes like CASP8 indicating enhanced drug penetration and effectiveness.

### Discussion

Nonsmokers are less likely to be detected early on due to the lack of smoking-related risk factors. Early detection is crucial as it improves prognosis and lessens the need for more aggressive therapies. Drug resistance is difficult to treat in nonsmokers with NSCLC, although nanoparticle formulations and combined drug delivery systems show promise in overcoming it. These NPS improve drug delivery to the tumor location, while minimizing the systemic toxicity associated with traditional therapy and is vital for nonsmokers experiencing serious side effects from high-dose chemotherapy. Overall, the application of nanotechnology in NSCLC treatment in nonsmokers by providing focused precision, early diagnosis to enhance quality of life for these patients is a futuristic approach.

# VIRTUAL PRESENTATIONS



## RANA SAJAWAL JOIYA – CMH LAHORE MEDICAL COLLEGE – ORIGINAL STUDY

Impact of Examination Stress on Premenstrual Syndrome among Female Medical Students

### **Background:**

Stress is an unwelcome yet necessary aspect of all our lives that dictates our quality of life. This emotion is particularly unwelcome during exam periods, especially for females. Premenstrual Syndrome (PMS) is a collection of symptoms occurring one week to ten days prior to a menstrual cycle, involving but not limited to, fatigue, abdominal cramps, and restlessness. These symptoms can disrupt lives and negatively affect the academic performance of female medical students.

### **Objective:**

To determine the effect of examination stress on Premenstrual Syndrome in Pakistani medical students and to identify any correlation between the two.

### **Methods:**

This cross-sectional study was conducted between March and September 2022 at CMH Lahore, where 177 female medical students were enrolled prior to their exams. The exclusion criteria included females on antiepileptic medication, antipsychotics, or birth control. Non-probability convenient sampling was employed. Two pre-tested questionnaires, the Student Stress Inventory (SSI) and Premenstrual Syndrome Scale (PMSS), were used to measure stress and Premenstrual Syndrome simultaneously, with the process being consensual and anonymous. A Chi-squared test was utilized, with a p-value less than 0.05 considered significant.

### **Results:**

Out of 177 female students, SSI results showed that 53 had mild stress, 115 had moderate stress, and 5 had high stress. As for PMSS, 2 students had no symptoms, 34 had mild symptoms, 63 had moderate symptoms, 57 had severe symptoms, and 17 had very severe symptoms. A statistically significant link was found between pre-examination stress and its detrimental effects on Premenstrual Syndrome, with both the PMSS and the SSI showing a p-value of 0.004, establishing a noteworthy association.

### **Conclusion:**

A strong link was found between pre-examination stress and menstrual irregularities in this research.

# VIRTUAL PRESENTATIONS



## MUSAB DYAELDIN – THUMBAY UNIVERSITY HOSPITAL – CASE REPORT

Plasmodium Vivax Malaria With Complications in a Pediatric Patient – Case report

### INTRODUCTION

Malaria is a parasitic infection transmitted by the bite of female anopheles mosquitoes. There are 3 main types; Plasmodium Vivax, Plasmodium Ovale and Plasmodium Falciparum. While P. Vivax is less likely to cause severe disease compared to P. Falciparum, it can still lead to serious complications. We report a case of a 14-year-old male presenting with Plasmodium vivax malaria complicated by thrombocytopenia and jaundice.

### CASE PRESENTATION

A 14yo male from Pakistan presented to the ER with a 7-day history of persistent cough and a 5-day history of high-grade fever with chills, vomiting, and loose stool. Upon physical examination the patient was febrile, dehydrated, lethargic, and had signs of jaundice. Laboratory tests confirmed Plasmodium vivax malaria with severe thrombocytopenia (platelets: 28,000/ $\mu$ L) and indirect hyperbilirubinemia (1.36mg/dL). Treatment initially started with oral Coartem (4 tablets TDS on Day 1 and 4 tablets BD for the next 3 days). However, due to intolerance and persistent vomiting, the treatment was adjusted to IV Artesunate administered at 0, 12, and 24 hours. Supportive therapy included IV fluids, antibiotics, and close monitoring. On Day 4, the patient was reviewed and found to be vitally stable with one episode of loose stool and a fever spike. Medication was switched back to a full course of Coartem as his symptoms improved and he was able to tolerate oral intake better. On Day 5, clinical examination showed mild myalgia and weakness, but the overall condition had improved, leading to discharge on Primaquine for 2 weeks with instructions for follow-up.

### DISCUSSION

Plasmodium vivax, though less fatal than Plasmodium Falciparum, could present with severe complications such as thrombocytopenia and jaundice. The prompt diagnosis and urgent start of antimalarial therapy, including IV Artesunate, were crucial in managing the disease effectively. This case highlights the importance of tailored treatment plans and of vigilant monitoring for complications in pediatric patients with malaria.

### CONCLUSION

This case emphasizes the paramount importance of early recognition and treatment of malaria to prevent severe complications while the patient's recovery demonstrates the efficacy of Artesunate and Coartem in managing complicated Plasmodium vivax malaria. Continuous follow-up and the use of Primaquine were utilized to prevent relapse and ensure complete recovery.

# VIRTUAL PRESENTATIONS

## AHMED SALEH AHMED ABDELKADER – NEW VISION UNIVERSITY – CASE REPORT

### SPINAL HYDATID DISEASE

#### Introduction

The parasitic tapeworm *Echinococcus granulosus* causes cystic echinococcosis, also known as hydrodatidosis. It is a serious medical condition that can show up in different ways. Spinal involvement occurs in about 45% of bone echinococcosis cases, it represents only 0.5–4% of all echinococcosis cases. The disease can spread to the spine through hematogenous dissemination, direct invasion, or cerebrospinal fluid seeding from ruptured cysts. While the liver and lungs are the most commonly affected organs, spinal involvement can lead to severe complications, including radiculopathy, motor deficits, and paraparesis.

#### Case Report

The patient is a 51-year-old male from the Kakheti who presented with progressive generalized weakness, nausea, vomiting, and lumbar pain. He had a history of spinal echinococcosis, diagnosed 15 years ago, but was unable to complete antiprotozoal treatment due to intolerance to albendazole. Over the years, his condition deteriorated, leading to lower paraplegia, urinary incontinence, necessitating a suprapubic cystostomy. Imaging revealed extensive septated cystic lesions in Th4–S1, which spread to the ribs and subcutaneous tissues. Despite neurosurgical intervention to reduce the cyst burden, the infestation persisted. Multiple hospitalizations were required for complications such as urinary tract infections and pneumonia. Joint supervision managed the patient's condition, but he continued to experience spherocyte discharge from numerous fistulas.

#### Discussion

Diagnosing bone echinococcosis is challenging due to its nonspecific clinical presentation and radiological findings. Symptoms such as pain, swelling, and pathological fractures can be attributed to other musculoskeletal conditions. The radiological appearance of bone echinococcosis can mimic other bone lesions, as giant cell tumors, metastases, tuberculosis, often leading to misdiagnosis and delayed treatment.

Combining clinical history, physical exams, lab tests, and imaging is crucial for diagnosing echinococcosis, though differentiation remains challenging.

#### Conclusion

This case underscores the severe and chronic nature of spinal echinococcal infection, particularly when complete antiprotozoal treatment is not feasible. The patient did not experience severe neurological complications despite the extensive disease burden and the development of multiple vertebral-cutaneous fistulas, possibly due to the continuous drainage of spherocytes. This unusual clinical course highlights the importance of comprehensive management and the potential impact of innovative approaches on managing complex parasitic infections.



# VIRTUAL PRESENTATIONS



## SHAAN SINOJIA KIRITKUMAR – DAVID TVILDIANI MEDICAL UNIVERSITY – LITERATURE REVIEW

Bainbridge-Ropers Syndrome: An Overview

### **Introduction:**

Bainbridge-Ropers Syndrome (BRS) is a rare disorder characterized by a distinctive facial appearance, intellectual disability, and slow growth. Despite increasing knowledge, the underlying process and effective management strategies remain elusive.

### **Aim of the study:**

The purpose of this review is to provide an overview of BRS, focusing on its clinical features, genetic etiology, and current research and medical conditions. By consolidating the existing literature and highlighting gaps in knowledge, this review aims to deepen understanding of this challenge and inform future research.

### **Materials and Methods:**

Embase and Google Scholar repositories were used to identify relevant studies published between 2000 and 2024. Inclusion criteria were limited to studies that provided original research data on patients with BRS, included clinical descriptions, genetic analyses, and clinical outcomes. Protruding forehead, large eyes, and small chin. Intellectual disability, developmental delay, and behavioral problems are also frequently reported.

### **Results:**

Genetic studies have identified mutations in the ASXL1 gene as the most common cause of BRS. However, a subset of BRS patients may have mutations in other genes, such as the KDM6A gene.

### **Discussion:**

ASXL1 is a chromatin-modifying enzyme involved in gene regulation, suggesting that dysregulation of epigenetic mechanisms may play an important role in the pathogenesis of BRS. There is currently no specific treatment for BRS, although ongoing research is investigating therapeutic targets based on the underlying genetic disease.

### **Conclusion:**

Diseases characterized by specific phenotypes and intellectual disabilities. Mutations in the ASXL1 gene are usually genetic, but other genes may also play a role. Despite the challenges of developing effective treatments, ongoing research holds promise for improving the quality of life for BRS patients. Future research should focus on further genetic analysis, elucidating the molecular mechanisms of the disease, and investigating therapeutic interventions.

# CLOSING REMARKS

As we come to the conclusion of MEDCON'24, it is with a profound sense of gratitude and reflection that we look back on the incredible journey we have shared over these two days. The theme, "Internal Medicine: Pulse to Precision," has not only guided our discussions but has also illuminated the path towards a more integrated and innovative approach to healthcare. We extend our heartfelt thanks to our distinguished speakers, who have generously shared their expertise, insights, and passion for their respective fields. Your contributions have enriched our understanding and highlighted the critical importance of multidisciplinary collaboration in providing comprehensive patient care. To our attendees, thank you for your active participation and engagement throughout the conference. Your questions, enthusiasm, and commitment to learning have fostered a vibrant atmosphere of collaboration and discovery. It is your dedication to the field of internal medicine that inspires us all to strive for excellence and innovation in our practice. A special acknowledgment goes to the MEDCON team, whose tireless efforts made this event possible. From planning and logistics to ensuring a seamless experience for everyone involved, your dedication and hard work have not gone unnoticed. The success of MEDCON'24 is a testament to your commitment and passion for advancing medical education and fostering a community of learning. As we close this chapter, let us carry forward the insights gained and the connections made. May the discussions and collaborations sparked at this conference continue to flourish, paving the way for future innovations in healthcare. Together, we can make a significant impact on the lives of our patients and the communities we serve. Thank you once again to everyone who made MEDCON'24 a resounding success. We look forward to seeing you at future events as we continue this important journey together.

# TEAM MEDCON'24



**TOGETHER WE BUILT  
BRIDGES IN MEDICINE**