

3rd World

HEART CONGRESS



MARCH 12-13, 2025

LONDON, UK

Venue:

Renaissance London Heathrow Hotel
Bath Rd, Hounslow TW6 2AQ, United Kingdom

08:30–08:45: Registrations

08:45–09:00: Opening Ceremony

DAY 1

MARCH 12, 2025

Keynote Presentations

09:00–09:40

Janine Hopkins
Hopkins Dermatology, USA

Title: Understanding the Importance of Image-guided Superficial Radiation Therapy for Treatment of Non-melanoma Skin Cancer

9:40–10:20

Nilufar Fatema
Bangabandhu Sheikh Mujib Medical University,
Dhaka, Bangladesh

Title: 2D Longitudinal Strain Imaging

10:20–11:00

Mohammad Delwar Hossain
DRiiMS Interventional Radiology Hospital,
Bangladesh

Title: Ultrasound vs CT guided FNAC/Core biopsy of Retroperitoneal masses

Group Photo | Coffee Break 11:00–11:20 @ Foyer

Session Introduction

Tracks

Heart failure | Breast Cancer | Myocardial infarction | Cancers Therapy & Treatments| Stem Cell Therapy | Cancers Biopsy| Radiation Therapy | Cancers Therapy & Treatments

Session Chair: Mohamed Hosni, London Northwest University Hospitals, UK

Oral Presentations

11:20–11:40

Tianhui Yuan
The First Affiliated Hospital of Guangzhou
University of Chinese Medicine, China

Title: Exploring the Pharmacological Components of Xinyang and Xinyin Tablets in the Treatment of Chronic Heart Failure

11:40-12:00

April Spencer

Founder & Chief operating surgeon Global
Breast Health & Wellness Center, USA

Title: Treat it, Beat it & Move On: A Praying Surgeon's Guide to
Prevention, Treatment, and Thriving Beyond Breast Cancer

12:00-12:20

Jake Parnian

Core Medical Trainee, University Hospitals of
Sussex, United Kingdom

Title: Assessing the Impact of a Dedicated In-patient Heart Failure
Nurse Service

12:20-12:40

Nazar Vasyliv

University of Edinburgh, UK

Title: Targeting Glioblastoma: Enhancing Neurosurgical and
Therapeutic Outcomes through Necroptosis Pathways Post-
Photodynamic Therapy

Lunch Break 12:40-13:40

13:40-14:00

Tom Stephenson

Director of services and strategic partnerships at
Simul8, UK

Title: How Simulation-powered digital Twins can Help Tackle Cancer
Patient Waiting lists

Poster Presentations

14:00-14:20

Dana Taizhanova

Medical university Karaganda, Kazakhstan

Title: Genetic polymorphism in BMPR2 is associated with
susceptibility to PAH in Kazakhstan

14:20-14:40

Blake J. McKinley

Mayo Clinic, USA

Title: Mayo Clinic's Approach to Hormone Therapy in Estrogen
Receptor-Positive Breast Cancer in a Transgender Woman

14:40-15:00

Dongxiao Liu

Division of Cardiovascular Surgery, Tohoku
University Graduate School of Medicine, Sendai,
Miyagi, Japan

Title: Novel Stem Cell Therapy for Lung Ischemia Reperfusion Injury
Imposed on Pulmonary Hypertension

15:00-15:20

Marianna Da Fonseca Ioannou

University of Edinburgh, UK

Title: Atrial Flutter in Patients with Congenitally Corrected
Transposition of the Great Arteries: A Case Report.

15:20-15:40

Roza Bodaubay

Karaganda Medical University" NCJSC.
Karaganda. Kazakhstan

Title: Genetic Polymorphism in BMPR2 is Associated with
Susceptibility to PAH in Kazakhstan

Networking & Refreshments 15:40–15:50 @ Foyer

Oral Presentations

15:50-16:10

Nilufar Fatema

Bangabandhu Sheikh Mujib Medical University,
Dhaka, Bangladesh

Title: Myocardial Infarction in Patients with Ischemic and Hemorrhagic Stroke: A Cross Sectional Study in Tertiary Hospital of Bangladesh

16:10-16:30

Janine Hopkins

Hopkins Dermatology, USA

Title: Combination Therapy for Non-Surgical Cure of Skin Cancer

16:30-16:50

Mohamed M Hosni

London Northwest University Hospitals, UK

Title: Role of endometrial ablation in women with precancerous uterine lesions. A global view

16:50-17:10

Karen Cabiloque

Centuria Medical Makati Philippines
University of San Agustin, Philippines

Title: Stem Cell on Cancer Therapy

Panel Discussion & Certificate Felicitation
Day –1 Ends

DAY 2

MARCH 13, 2025

Zoom Meeting (GMT+1) Time in London

10:30-10:50

Jonathan Alvin Wiryaputra

National Cardiovascular Center Harapan Kita
Hospital, Indonesia

Title: Stem Cell Therapy in Post-CABG Patients with Cardio-Diabetes: A Potential Strategy for Cardiac Repair and Recovery

10:50-11:10

CR Mathangi

MBBS student at RRMCH, Bangalore, India

Title: Harnessing Nanoparticles for Targeted Cancer Therapy in Pancreatic and Breast Malignancies

11:10-11:30

Ihtisham Anjum

Rokhan Medical University, Iran

Title: Molecular Mechanisms and Therapeutic Strategies Involved in Bone Metastasis of Breast Cancer

11:30-11:50

Mohammad Saleh Safari

Department of Pathobiology, Faculty of
Veterinary, Bu_Ali Sina University, Hamedan,
Iran

Title: The Relationship Between Future Cancer Metastases and Fibroblast Activation Protein- α (FAP- α)

11:50-12:10

Fahimeh Moghimi

Science and research university Branch of IAU,
Tehran, Iran

Title: A New Ultrasound Method for Predicting Breast cancer and other Breast Tissue Diseases Based on Neural Network

12:10-12:30

Mohammadreza Moghimi

Tarbiat Modares University, Tehran, Iran

Title: Impact of Insulation Materials on Indoor Air Quality: Analyze the Potential Release of Harmful Substances from Fiberglass, Mineral wool, and cellulose Insulation

12:30-12:50

Zouaoui Amel

Tlemcen-Algeria(department of dentistry)

Title: Renunciation Dental Care in Patients with Cardiovascular Disease: New Issue in Public Health

12:50-13:10

Evelyn Enit Inga

The University of New Mexico, United states

Title: Ventricular Tachycardia Outcomes in Implantable Cardioverter-Defibrillator-Treated Patients with Ischemic vs. Nonischemic Cardiomyopathy

13:10-13:30

Tonjeh Mary Stella Bah

Hematologist and oncologist at Metro Health
Medical Center Cleveland, USA

Title: Ageism in Breast Cancer

13:30-13:50

Margaret-Ann Simonetta

GI Cancers Alliance, Inc, USA

Title: Gastric Cancer Patient Insights: Patient-Reported Outcomes
and Real-World Perspectives from the
Gastric Cancer Patient Community

13:50-14:10

Evelyn Enit Inga

The University of New Mexico, United states

Title: Outcomes of Transcatheter versus Surgical Aortic Valve
Replacement in Aortic Stenosis with Bicuspid Aortic Valve and
Chronic Coronary Artery Disease: Nationwide Inpatient Analysis
2015-2021

Panel Discussion



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KEYNOTE PRESENTATIONS
DAY 1



Janine Hopkins

Hopkins Dermatology, Monroe, USA

Hopkins Dermatology, Southlake, USA

Combination Therapy For Non-Surgical Cure Of Skin Cancer

In 2020, non-melanoma skin cancers accounted for 78% of all skin cancer cases and 63,700 deaths worldwide. The standard treatment of non-melanoma skin cancer is surgical excision with Mohs microscopic surgery being the most commonly performed procedure. However, some patients present with tumors that are inoperable. To address these tumors, combination therapy using systemic medication to shrink the size and depth of the tumor followed by image guided superficial radiation therapy for definitive cure has been performed. Three case reports using such combination therapy are described. This approach helps reduce morbidity and mortality associated with these nonsurgical non-skin cases and is an approach that offers an improvement in the quality of care when managing these patients.

Biography:

Janine Hopkins, M.D., F.A.A.D., is a board-certified dermatologist practicing in Monroe, LA, since 1996 and in Southlake, TX, since 2021. She trained in surgical and cosmetic dermatology at LSU's School of Medicine in New Orleans. As a passionate educator, Dr. Hopkins lectures internationally and is involved in various professional organizations, including the American Academy of Dermatology and the Women's Dermatological Society. She also engages with the Louisiana Medical Society, LDS Advocacy Committee, Texas Medical Society, and American Society of Dermatological Surgery. Recognized as "Top Doc" by her patients and an expert injector by *New Beauty Magazine*, she is dedicated to dermatological excellence.



Nilufar Fatema

FESC. Assistant Professor, Cardiology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh

2D longitudinal Strain Imaging in Clinical Practice

Strain imaging is a cardiac imaging technique that detects sub clinical ischemia before they become obvious as regional wall motion abnormalities on conventional echocardiography. Myocardial strain imaging is a way to quantify cardiac function with different parameters. Global longitudinal strain (GLS) is the best-evaluated strain parameter so far and is considered more sensitive for the assessment of systolic function than left ventricular ejection fraction. It has many clinical applications like detection of systolic dysfunction in HFpEF, evaluation in suspicion of cardiomyopathy, hypertrophic cardiomyopathy, athlete's heart, chemotherapy-induced cardio toxicity, doubtful cases of ischemic heart disease where reduction in peak systolic strain, systolic lengthening and post-systolic shortening, dilated cardiomyopathy, cardiac dyssynchrony where it is a guide lead placement for cardiac resynchronization therapy (CRT). Procedure: ECG gated cine mode of apical long axis, apical 4 chamber and apical 2 chamber views are stored. Then Post processing is done by identification of end-diastole and end-systole, definition of the myocardial region of interest and dimension to be examined, definition of the points or features to be tracked (segmentation) and tissue tracking and computing of the respective strain curves. The region of interest defines by endocardial: inner contour of the cardiac wall, epicardial: outer contour of the cardiac wall, myocardial: refers to the middle between inner and outer contours. Interpretation is done if the global longitudinal strain less than -12% indicates severe systolic dysfunction; a value less than -16% seems to pose a risk in patients with preserved ejection fraction and a value more than or equal -20% are normal value.

Biography:

Dr. Nilufar Fatema has completed her MBBS on 2000 from Dhaka University (DU), Diploma in Cardiology on 2006 from DU, MSc in Clinical Cardiology from Imperial College London on 2009. She is a Fellow of European Society of Cardiology. She is working as an Assistant Professor of Cardiology in a post graduate teaching hospital (BSMMU) in Dhaka Bangladesh. She has published more than 50 papers in National and International journals. She has achieved UK study Alumni award in 2022 in Social impact category.



Mohammad Delwar Hossain

DRiMS Interventional Radiology Hospital, Bangladesh

Ultrasound vs CT Guided FNAC/Core Biopsy Of Retroperitoneal Masses

With the advancement of medical science Ultrasound plays an important role as a guide in different interventional procedures. Ultrasound-guided FNAC, Percutaneous core biopsy have gained wide acceptance in clinical practice because of their safety, simplicity & effectiveness. The choice of guidance methods depends upon the location, size of lesion, the Radiologist's preference and the availability of imaging facilities. There are different imaging modalities for interventional procedures but Ultrasound is better than any other imaging modalities when lesion is approached by ultrasound. CT scan is more expensive, less available, has radiation hazards & more time consuming. On the other hand, sonographic guidance is usually quicker, more precise, less expensive, easily available, no radiation hazards, repeatable, less traumatic, can be done in bed side. One of ultrasound's greatest strengths as a biopsy guidance method is its ability to continuously monitor needle-tip advancement under real time visualization so injury to vessels in its pathway can be avoided & materials can be taken from periphery of lesion avoiding necrosis.

Biography:

Professor Dr. Mohammad Delwar Hossain is a specialist in Radiology & Imaging with special interest on Interventional Radiology. He completed MBBS in 1984, DMRD from IPGMR (Now BSMMU) and FCPS (Radiology & Imaging) from BCPS. He has ten publications & more than hundreds of presentations in different national and international conferences of various countries; ICR in New Delhi, India (1998); IAEA conference in Hanoi, Vietnam (2015); SIGT conference in New Delhi, India (2015); APCIO conference in New Delhi, India (2017); CSIR conference in Zhengzhou, China (2017). He organized an international conference in collaboration with IAEA in Dhaka (2016).



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SPEAKER PRESENTATIONS

DAY 1



Tianhui Yuan

The First Affiliated Hospital of Guangzhou University of Chinese Medicine, Guangzhou, China.

Exploring the Pharmacological Components of Xinyang and Xinyin Tablets in the Treatment of Chronic Heart Failure

Xinyang tablet (XYAT) and Xinyin tablet (XYIT) are two classic Chinese medicine formulations officially approved by the Guangdong Pharmaceutical and Food Administration. Despite the nearly 20-year history of XYAT and XYIT usage in heart failure treatment, there has been a lack of research investigating the pharmacologically active substances, pharmacokinetics, and ingredient interactions associated with these preparations. We developed a ultra-high performance liquid chromatography-high resolution mass spectrometry (UPLC-HRMS) method to separately identify the components of XYIT and XYAT, as well as their exposed components in rat plasma and urine. A high-performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) method was subsequently validated to quantify prototype components in rat plasma and investigate their pharmacokinetics. In total, 162 and 130 compounds were detected in XYAT and XYIT, respectively, with 148 and 119 compounds exhibiting structural characteristics. Of these, 40 and 34 compounds were identified using reference standards. A validated HPLC-MS/MS method was established to quantify 20 key compounds in rat plasma. The method demonstrated good linearity ($R^2 > 0.99$), with intra-day and inter-day precision RSDs below 10.79% and 14.36%, respectively, and an LLOQ < 0.25 ng/mL. Pharmacokinetic analysis revealed higher bioavailability for all components, except Formononetin, in XYAT compared to XYIT. The UPLC-HRMS method developed in this study effectively and rapidly separates and identifies pharmacological compounds in XYAT and XYIT from rat biological samples. The validated quantitative method for prototype components in rat plasma allows for accurate quantification of 20 compounds. This study provides insights into the clinical differences between XYAT and XYIT from a pharmacokinetic perspective.

Biography:

Tianhui Yuan has completed his MD/PhD at the age of 29 years from Guangzhou University of Chinese Medicine and exchange studies from Tufts University. She is the director of cardiology, a general clinical medicine organization. She has published more than 40 papers in reputed journals.



April Spencer

Founder & Chief operating surgeon Global Breast Health & Wellness Center, USA

Treat it, Beat it & Move On: Integrating Spirituality into Oncology for Holistic Cancer Care

The book encourages physicians to consider the transformative power of spiritual guidance as a complement to evidence-based medicine. By fostering a holistic connection with patients, *Treat it, Beat it & Move On* demonstrates how spiritual fortitude can enhance treatment outcomes, improve emotional resilience, and inspire hope in those navigating the challenges of cancer.

Through personal anecdotes, actionable strategies, and inspiring scriptures, *Treat it, Beat it & Move On* empowers healthcare professionals to:

- Create compassionate care plans that respect patients' emotional and spiritual needs.
- Encourage patients to take control of their healing journeys, fostering empowerment and self-advocacy.
- Blend cutting-edge medical advancements with a faith-centered approach to support holistic well-being.

This perspective aligns seamlessly with the 9th World Congress on Cancer Sciences and Therapy theme, "Exploring the Recent Research and Advancements in Oncology and Cancer Research." By discussing the integration of spirituality in cancer care, Dr. Spencer would add a transformative and forward-thinking dimension to the conference dialogue, advocating for a comprehensive, patient-centered approach in oncology.

With its unique fusion of spirituality and medical expertise, *Treat it, Beat it & Move On* has become a movement, not just a moment. We would be thrilled to explore these concepts further at the conference in March, demonstrating how spirituality and medicine together can revolutionize cancer care and empower women to thrive beyond their diagnoses.

Biography:

Dr. April Spencer, a distinguished breast cancer surgeon with over 20 years of experience, is the author of the groundbreaking book *Treat it, Beat it & Move On: A Praying Surgeon's Guide to Prevention, Treatment, and Thriving Beyond Breast Cancer*. Featured on CNN and ranked #1 on Amazon's "New Releases" in the medical category, this transformative work redefines patient care by integrating spirituality into oncology practice.

Dr. Spencer emphasizes a holistic approach to cancer treatment—addressing the body, mind, and spirit—to enhance patient resilience, treatment outcomes, and overall well-being. Through personal experiences, actionable strategies, and faith-based principles, she advocates for compassionate, patient-centered care that empowers individuals to take control of their healing journey.



Jake Parnian

Core Medical Trainee, University Hospitals of Sussex, United Kingdom

Assessing the Impact of a Dedicated In-patient Heart Failure Nurse Service

Introduction:

Heart failure accounts for 5% of all NHS medical emergency admissions (NICE, 2024)

This study looks at inpatients reviewed by the heart failure team at Worthing Hospital, West Sussex. Prior to January 2023, the heart failure nursing team would conduct ad hoc reviews alongside scheduled clinical duties. In January 2023 a dedicated 'nurse of the week' was allocated in-patients.

The impact of this change was assessed in the following ways:

- 1) Initiation of the '4 pillars' of heart failure
- 2) Timely review after discharge
- 3) Rates of readmission with heart failure presentations

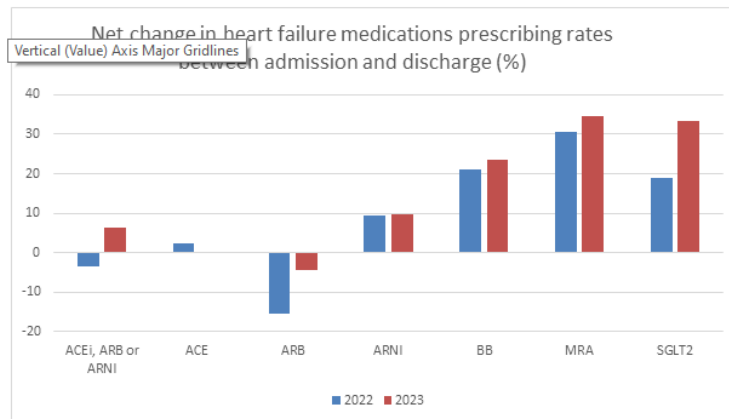
Methods: Medical records provided data on 209 patients reviewed by the heart failure team between Dec 2021 and November 2023. Further data was manually collected regarding admission diagnosis and medications on discharge.

Results:

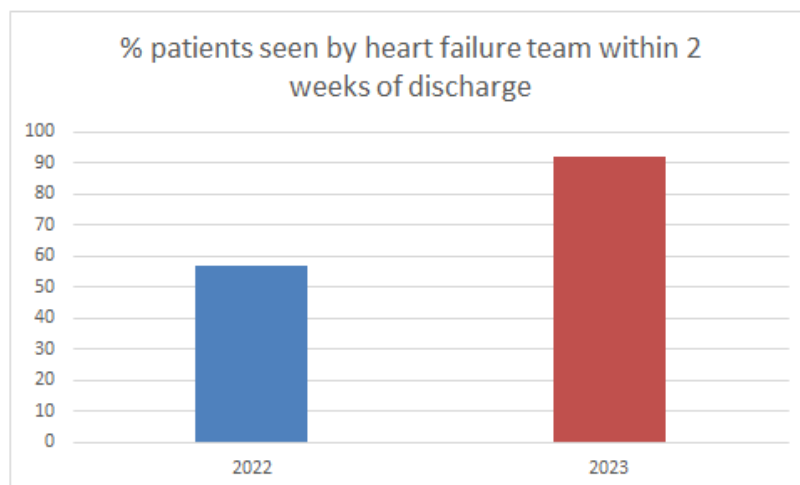
1. 33% of patients reviewed in the 2023 cohort were on a sodium-glucose-cotransporter 2 inhibitors (SGLT2) on discharge, compared with just 18% in 2022.

More patients were on beta-blockers (BB) and mineralocorticoid antagonists (MRA) on discharge in 2023 compared to 2022.

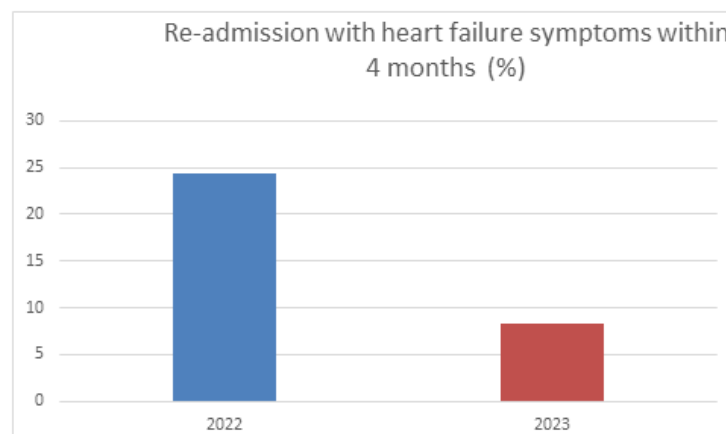
In 2022, fewer patients were on angiotensin-converting-enzyme inhibitors (ACE), angiotensin-receptor blockers (ARB) or angiotensin-receptor neprilysin-inhibitors (ARNI) on discharge.



2) Over 90% of patients were reviewed by the heart failure team within 2 weeks in 2023, compared to just 55% in 2022.



3) 24% of patients in 2022 were readmitted with heart failure within 4 months, compared to just 8% in 2023. This accounted for 48 fewer bed days across the two groups.



Discussion:

Since the introduction of a dedicated nurse of the week, there were greater prescribing rates of the 4 pillars of heart failure, and more patients were reviewed after hospital discharge. It is highly likely this contributed to the significant reduction in readmission rates for patients, representing greater control and overall management of heart failure in these patients.

Bibliography

NICE. (2024). *Heart Failure Chronic - Prevalence* . Retrieved from NICE: <https://cks.nice.org.uk/topics/heart-failure-chronic/background-information/prevalence/>

Biography:

My name is Jake Parnian and I am a Core Trainee working in University Hospitals of Sussex trust. I have an interest in cardiology and acute medicine, as well as promoting the use of ultrasound by doctors in bedside clinical assessment. I completed an MSc in Climate Change at King College and have conducted teaching and research into sustainable healthcare and planetary health.



Nazar Vasylyv

The University of Edinburgh, United Kingdom

Targeting Glioblastoma: Enhancing Neurosurgical and Therapeutic Outcomes through Necroptosis Pathways Post-Photodynamic Therapy

Glioblastoma (GBM), one of the most aggressive brain tumours, remains a significant challenge in neurosurgery and oncology due to its infiltrative nature and resistance to conventional treatments. This study investigates the combinatorial approach of photodynamic therapy (PDT) with necroptosis induction to target glioblastoma stem cells (GSCs), a primary driver of tumour recurrence. PDT, utilising 5-aminolevulinic acid (5-ALA), selectively generates reactive oxygen species in GSCs, triggering oxidative stress. By integrating molecular strategies to activate the RIPK1/RIPK3/MLKL necroptosis pathway, we effectively bypass apoptotic resistance in these cells. Using advanced imaging, biochemical assays, and genetic manipulation, we demonstrate the enhanced cytotoxicity of this dual-targeted approach. The findings highlight significant therapeutic potential in overcoming GBM resistance, improving treatment precision, and reducing recurrence rates. These insights into the molecular mechanisms underlying necroptosis and PDT provide a translational foundation for innovative glioblastoma therapies.

Keywords: Glioblastoma, Photodynamic Therapy, Necroptosis, 5-ALA, Cancer Stem Cells

Biography:

Nazar Vasylyv, MD, MSc, is a PhD candidate at the University of Edinburgh's Centre for Clinical Brain Sciences and an affiliate of the University of Glasgow's Wolfson Wohl Cancer Research Centre. His research focuses on translational approaches to neuro-oncology, particularly the interplay of photodynamic therapy and regulated cell death mechanisms in glioblastoma. As CEO of the Global Alliance for Neurosurgical and Brain Cancer Research Innovations, he leads efforts to advance multidisciplinary collaborations in cancer research. Nazar has presented at international conferences and authored peer-reviewed publications on cancer stem cell targeting and therapeutic advancements in brain tumours.



Tom Stephenson

Director of services and strategic partnerships at Simul8,
United Kingdom

How Simulation-powered Digital Twins can Help Tackle Cancer Patient Waiting Lists

Think of simulation-powered digital twins as being able to capture all of the thinking of the most experienced hospital planner. Aneurin Bevan University Health Board, in partnership with The Wales Cancer Network and Simul8, is in the process of leveraging this technology to tackle cancer patient waiting lists by transforming process efficiency.

The digital twin will draw on three years of data for cancer referrals across the Health Board that include six key points along the patient's journey, from their first referral through consultation and treatment, if needed. The data will contain no patient identifiers and remain completely anonymous. An open-source forecasting tool called Prophet, which was created by Meta, the parent company of Facebook, will help to build a reliable picture of the daily fluctuations in demand. This will enable planning teams to match capacity to accurately forecasted demand so that available resources are maximised at the times they are required for a better patient experience.

This presentation will explore exactly how the Health Board is using this advanced technology. Combining the real time data capabilities of digital twins with the experimentation of simulation creates a simulation-powered digital twin that lives alongside the real-world system for continuous operational use. When you add simulation to a digital twin, it is able to conduct continuous 'what-if' scenarios and facilitate advanced optimisation by running thousands of permutations to evaluate and then optimise the different strategies available.

Biography:

Tom is the Director of Services and Strategic Partnerships at Simul8 Corporation. Over the past 12 years he's delivered over 100 projects in different sectors including healthcare, manufacturing and the public sector. Tom is passionate about helping others by leveraging technology to make cutting edge simulations.



**Nilufar Fatema^{1*}, Md. Moniruzzaman
Bhuiyan², Md. Aynul Hoque³**

¹Assistant Professor, Cardiology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh

²Professor, Neurology, BSMMU, Dhaka, Bangladesh

³Consultant, Junior consultant, Neurology, Pabna Medical College, Pabna, Bangladesh

Myocardial Infarction in Patients with Ischemic and Hemorrhagic Stroke: A Cross sectional Study in Tertiary Hospital of Bangladesh

Stroke and myocardial infarction are the main manifestation of circulatory disease. Stroke, followed by cardiovascular diseases, represent the leading cause of mortality worldwide. Both entities share risk factors, pathophysiology and etiologic aspects by means of a main common mechanism, atherosclerosis. However, each entity has its own peculiarities. An ischemic stroke increases the risk of suffering a coronary heart disease, and vice versa. The aims of the study were to observe the myocardial infarction in patients with ischemic and hemorrhagic stroke.

A Cross-sectional observational study was conducted from September 2014 to February 2023 in the department of Neurology and Cardiology, BSMMU, Dhaka. 780 patients of both ischemic and hemorrhagic stroke confirmed by neuroimaging (CT scan of head/ MRI of brain), meeting the inclusion and exclusion criteria were included in the study. Among them 600 were ischemic and 180 were hemorrhagic stroke patients. Myocardial infarction was present in 100 (16.7%) cases and 10 (5.6%) cases in ischemic and hemorrhagic stroke respectively. This study suggests that myocardial infarction is more common in patients with ischemic than hemorrhagic stroke.

Biography:

Dr. Nilufar Fatema has completed her MBBS on 2000 from Dhaka University (DU), Diploma in Cardiology on 2006 from DU, MSc in Clinical Cardiology from Imperial College London on 2009. She is a Fellow of European Society of Cardiology. She is working as an Assistant Professor of Cardiology in a post graduate teaching hospital (BSMMU) in Dhaka Bangladesh. She has published more than 50 papers in National and International journals. She has achieved UK study Alumni award in 2022 in Social impact category.



Janine Hopkins

Hopkins Dermatology, Monroe, USA
Hopkins Dermatology, Southlake, USA

Understanding the Importance of Image-guided Superficial Radiation Therapy for Treatment of Non-melanoma Skin Cancer

Image-guided superficial radiation therapy (IGSRT) combines superficial radiation therapy (SRT) with full dermal visualization (FDV) via high-resolution dermal ultrasound (HRDUS) for the treatment of non-melanoma skin cancer (NMSC). The gold standard for IGSRT delivery includes a comprehensive cancer care model with support for dermatologists from a multidisciplinary team. When delivered in this model, IGSRT can achieve cure rates of 99% for treatment of NMSC. This paper focuses on the benefits of HRDUS used in conjunction with SRT for NMSC. Medical records from 7 dermatology clinics of 883 patients with 1507 cases of NMSC treated with IGSRT between 2017 and 2018 were retrospectively reviewed. In total, 92% of the NMSC lesions showed daily depth fluctuations, 60.32% of lesions did not require changes during therapy, and nearly 40% of lesions required at least one compensatory change during therapy. In total, 83% of NMSC lesions were labeled as high risk based on the 2024 NCCN guidelines. Increasing and decreasing tumor depth measurements during IGSRT inform dermatologists when adaptive changes in energy (kV), TDF, and dose will result in more efficacy and less toxicity, respectively.

Biography:

Janine Hopkins, M.D., F.A.A.D., is a board-certified dermatologist practicing in Monroe, LA, since 1996 and in Southlake, TX, since 2021. She trained in surgical and cosmetic dermatology at LSU's School of Medicine in New Orleans. As a passionate educator, Dr. Hopkins lectures internationally and is involved in various professional organizations, including the American Academy of Dermatology and the Women's Dermatological Society. She also engages with the Louisiana Medical Society, LDS Advocacy Committee, Texas Medical Society, and American Society of Dermatological Surgery. Recognized as "Top Doc" by her patients and an expert injector by *New Beauty Magazine*, she is dedicated to dermatological excellence.



Mohamed M Hosni

London Northwest University Hospitals, UK

Role of endometrial ablation in women with precancerous uterine lesions. A global view

Endometrial ablation (EA) has become one of the most commonly performed gynaecologic procedures in the developed and developing countries. Global endometrial ablation (GEA) devices have supplanted resectoscopic ablation, primarily because they have brought with them technical simplicity and unprecedented safety. These devices are typically used to treat dysfunctional uterine bleeding (DUB) in premenopausal women. However, there is a widespread concern about the effect of ablation on the incidence and development of endometrial cancer in such population, and whether such ablative techniques introduce a masking effect resulting in delayed diagnosis of endometrial cancer or does it provide a protective effect against it ?

Biography:

Mr Mohamed Hosni is a Consultant Obstetrician and Gynecologist at London Northwest University Hospitals, with over 20 years of experience. He is a very experienced laparoscopic surgeon, with international reputation in minimal access surgery he has a broad clinical research background and has collaborated with numerous doctors and scientists on different projects in Obstetric research, with many peer-reviewed publications. He has presented both Nationally and Internationally, have several peer-reviewed publications in scientific journals. He completed MD, MSc, and he is currently a member of the Royal College of Obstetricians and Gynaecologists. He is a firm believer in a patient-centred approach, personalized on an individual basis. He places a significant importance on taking time to listen to each patients' specific needs and providing them with a thorough explanation of their treatment options. Entirely dedicated to his profession.



Karen Cabiloque

Centuria Medical Makati Philippines
University of San Agustin, Philippines

Cancer and Stem Cell Therapy

Cancer-a leading cause of death in all countries and an increasing medical burden worldwide due to aging and population growth. It is mainly treated using invasive treatment such as surgical resection, fractionated radiotherapy and chemotherapy. However, treatment related side effects, off target effects and drug resistance limit the efficacy of such therapeutic options; hence recurrence is extremely likely.

On the other hand, therapies employing stem cells are showing increasing promise in the treatment of cancer. Stem cell can function as novel delivery platforms by homing and targeting both primary and metastatic tumor.

Moreover, stem cells can be applied in regenerative medicine, immunotherapy and drug screening applications. Therefore, this presentation focuses on recent progress toward stem cell-based cancer treatments and aims to summarize treatment advantages and opportunities, and shortcomings and looking forward to potentially refine future trials and facilitate the shift from experimental to clinical studies.

KEYWORDS: Stem Cell, Targeted Cancer Therapy, Regenerative Medicine, Chemotherapy, Surgical Resection, Fractionated Radiotherapy

Biography:

She is a Stem Cell Specialist, a Luminare Awardee 2021 as the Most Successful Aesthetic Doctor of the Year, Hall of Fame Awardee as Filipino Achiever on Stem Cell and International Medicine 2022. Postgraduate Student of Harvard Medical School Global Health, Master in Quality and Safety. Covid 19 Research Participant Harvard Medical School, Stem Cell and Healthcare Advocate, Fellow of Royal Institute of Singapore, Phenomenal Speaker of World Cancer Society 2019-2025, Research Participant and Speaker of MAIWP UCMI, Malaysia, PRISAL Pharmaceutical Awardee for Research on Stem Cell and Cancer Treatment, Kuala Lumpur, Awarded with ASEA International Award as Lifetime Achiever for Healthcare, India under World Research Congress, Bugal/Pride Awardee as Alumni for University of San Agustin. Doctorate on Global Healthcare Management, University of Thames, France



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HYBRID EVENT

POSTER PRESENTATIONS
DAY 1



**Taizhanova D.*, Nurpisova T.,
Bodaubay R.***

Karaganda Medical University, Karaganda,
Kazakhstan



Genetic Polymorphism in BMPR2 is Associated with Susceptibility to PAH in Kazakhstan

Background: Pulmonary arterial hypertension (PAH) is a progressive and fatal disorder. Our aim was to determine BMPR2 mutations in a Kazakhstan patient group. 53 idiopathic PAH (IPAH) patients were screened to determine BMPR2 mutations in a Kazakhstan patient group. No study covers this problem in a Kazakhstan population.

Results: The mean age at diagnosis was 43.93 years with a female preponderance of 86.8%. Our results indicate that rs2228545 variants in BMPR2 contributed to an increased susceptibility to IPAH. The genotypic frequency of GG/GA/AA was 3/30/19 in IPAH group versus 7/102/16 in non-IPAH group and was statistically significant ($\chi^2 = 12.517$, $p < .001$). Furthermore, no association was found between rs1061157, rs17199249 and rs113305949. The effects of BMPR2 gene polymorphism on the risk of IPAH were mPAP and PVR. Conclusion. This is the first study investigating the genetic causes of IPAH, which showed that BMPR2 genetic polymorphism is associated with an increased risk of IPAH and characterizes the clinical features of the disease in Kazakhstan.

Biography:

Taizhanova Dana Zhumagalievna - MD, professor of the Department of Internal Medicine of the Karaganda Medical University. Accredited independent expert, therapist, cardiologist of the highest qualification. She has international certificates "Integrated training and assessment of clinical competence in medical education" of the School of Medicine of the University of Southampton (UK), Salzburg Clinical Seminars (Austria). She studied at the Gordon Center for Research in Medical Education of the University of Miami (USA). Under her supervision 6 dissertations for the degree of candidate of medical sciences, 5 master's dissertations and three PhD dissertations. She was head of Grant Research in Cardiology, Internal Medicine.

Biography:

Bodaubay Roza – MD, MMS, PhD, associate professor of the Department of Internal Medicine of the Karaganda Medical University. Therapist of the second category. Bodaubay Roza received her higher medical education at the Karaganda State Medical University (KSMU), Kazakhstan. In 2016, she received a Master of Medicine degree, defending her dissertation on the topic "Clinical and diagnostic value of determining testosterone in obese men". In 2022, she was awarded a Doctor of Philosophy (PhD) degree for her dissertation work "Polymorphism of PON1 and CYP2C19 genes in restenosis of the coronary arteries". Her research papers have been published in leading journals indexed in Scopus and Web of Science, including studies on genetic markers of the risk of cardiovascular complications and gene polymorphism in restenosis. She is currently undergoing a scientific internship under the "500 Scientists" program at King's College London, UK.



**Blake J. McKinley*, D.O.; Tanmayi Pai, M.D.;
Rohit R. Rao, M.B.B.S., M.D**
Mayo Clinic, Jacksonville, Florida USA

Mayo Clinic's Approach to Hormone Therapy in Estrogen Receptor-Positive Breast Cancer in a Transgender Woman

Background: There is a lack of literature to help guide adjuvant hormone therapy in transgender women (male to female, MTF) on gender-affirming therapy with estrogen receptor-positive (ER+) breast cancer. This report helps outline Mayo Clinic's approach to hormone therapy in the treatment of ER+ breast cancer in a transgender woman.

Case report: A 42-year-old transgender woman (MTF) who completed 3 years of gender-affirming therapy with spironolactone and estrogen was found to have an 8.8 cm retroareolar mass on breast MRI. Core needle biopsy of the mass and lymph node showed invasive ductal carcinoma, Nottingham grade 2, ER+ (95% staining), progesterone receptor weakly positive (2% staining), HER2/Neu negative (score 1+ by immunohistochemistry). The patient received neoadjuvant chemotherapy with doxorubicin, cyclophosphamide, and paclitaxel prior to right breast skin-sparing mastectomy with sentinel node biopsy. A 6-cm mass was removed with pathology consistent with previous biopsy and 1/2 lymph nodes positive, resulting in stage ypT3, ypN1a. For hormone therapy, the patient chose tamoxifen over an aromatase inhibitor due to concern for aromatase inhibitor toxicity. Gender-affirming therapy was discontinued at diagnosis; however, spironolactone 200 mg daily was re-initiated after surgery to offset increased hair growth and changes in skin and emotions. Symptoms from high androgen levels persisted. The patient was given a gonadotropin-releasing hormone (GnRH) agonist, leuprolide acetate, in addition to spironolactone and tamoxifen. This effectively managed androgen symptoms; patient has not had any recurrence of disease.

Conclusions: In transgender women with ER+ breast cancer, we recommend discontinuing estrogen therapy at diagnosis and reducing endogenous estrogen after surgery, either with an aromatase inhibitor for optimal estrogen reduction or tamoxifen for potentially better tolerance. To reduce male secondary sex characteristics, spironolactone may be started with the addition of a GnRH agonist. Future clinical trials are warranted to optimize hormone therapy in this unique patient population.

Biography:

Blake McKinley is from Utah, USA. He completed his Bachelor of Arts in biology with a Minor in chemistry at Utah State University. He attended Medical School at Rocky Vista University College of Osteopathic Medicine where he graduated with honors and achievement of induction into Sigma, Sigma Phi Honor Society and Gold Humanism Honor Society. He is currently finishing up his third year of internal medicine residency at Mayo Clinic and will start his fellowship in hematology/oncology this summer at the University of Utah, Huntsman Cancer Center.



Dongxiao Liu, MD^{1*};

Division of Cardiovascular Surgery, Tohoku University Graduate School of Medicine, Sendai, Miyagi, Japan

Novel Stem Cell Therapy for Lung Ischemia Reperfusion Injury Imposed on Pulmonary Hypertension

Background: Lung ischemia-reperfusion injury (LRI) occurs when cardiac surgeries are performed under cardiopulmonary bypass. This damage can be life-threatening if LRI is imposed on patients with preoperative pulmonary hypertension (PH). There has been no established modality of treatment to resolve this dreadful condition. We have attempted to introduce stem cell therapy using Multilineage-differentiative Stress Enduring cells (Muse cells). Possessing the ability of automatically homing to the injury site makes them work efficiently through a simple intravenous injection.

Method: Monocrotaline (50 mg/kg) was intraperitoneally injected into 7-week-old Male Sprague Dawley rats to create chronic PH model. Three weeks later, LRI was induced by clamping the left pulmonary artery with a micro clip for 1 hour followed by unclamping. Then they were randomly divided into 3 treatment groups, i.e., Muse cells (2×10^5), non-Muse mesenchymal stem cells (MSCs) (2×10^5) and vehicle (400 μ l PBS solution) administration via the penile vein. Five days after the surgery the animals were sacrificed. To assess the degree of PH, right ventricular systolic pressures (RVSPs) were measured prior to therapeutic intervention and immediately before sacrifice. To evaluate pulmonary function, blood gas analysis was performed after the cell therapy. The left lung was preserved after 4% paraformaldehyde perfusion fixation for subsequent histopathological assessments.

Results: LRI induced significant increase in RVSP in all the PH groups; non-Muse MSC administration did not affect RVSP, whereas, in Muse cell administration group, RVSP increase was mitigated by 81% compared to vehicle group (3.0 vs 15.8 mmHg). Alveolar-arterial oxygen difference (A-aDO₂) in Muse cell group was 70% lower than vehicle (28.4 vs 93.0, $p=0.034$), Pathology and PCR results are also supportive for the stem cell therapy.

Conclusion: Muse cell therapy suppressed physiological impairment induced by LRI imposed on pulmonary hypertension.

Key words: cardiac surgery; lung ischemia reperfusion injury; pulmonary hypertension; stem cell therapy; Muse cell.

Biography:

Dongxiao Liu is a PhD candidate at the division cardiovascular surgery, Tohoku University. He has been selected as a researcher engaged in the Pioneering Research Support Project funded by the Japan Science and Technology Agency. He has been challenging to explore a better treatment modality for lung ischemia reperfusion injury imposed on the preexisting pulmonary hypertension. He originally graduated from Shanxi Medical University in June 2020 and has been enrolled in Tohoku University since October 2020.



**Marianna F Ioannou^{1*}, Steve Liskov²,
Konstantinos Aronis²**

¹Edinburgh Medical School, University of Edinburgh, Edinburgh,
United Kingdom

Atrial Flutter in Patients with Congenitally Corrected Transposition of the Great Arteries: A Case Report

Introduction

Conduction disturbances and atrial tachyarrhythmias are common among patients with congenitally corrected transposition of the great arteries (cc-TGA). Atrial flutter (AFL) is the most common atrial tachyarrhythmias, followed by focal atrial tachycardia, with many patients harboring multiple arrhythmias. Aberrant AV node anatomy, associated cardiac lesions, and previous cardiac surgeries complicate catheter ablation in this population. Limited data exists on arrhythmia ablation in cc-TGA patients, with few published reports of successful outcomes.

Clinical case

Patient SV, a 69-year-old female with cc-TGA and situs solitus, status post atrial septal defect and ventricular septal defect repair in childhood, was referred to Electrophysiology for recurrent atrial tachyarrhythmias. She was diagnosed with AFL a year prior and endorses New York Heart Association functional class 1 symptoms, although reports frequent palpitations.

SV elected to proceed with electrophysiology study and catheter ablation of AFL. The presenting rhythm was AFL variant 1 (AFL-1) at tachycardia cycle length (TCL) 365ms. Endocardial voltage mapping in the right atrium (RA) demonstrated linear scar from the superior vena cava (SVC) to the inferior vena cava (IVC). Activation mapping demonstrated peri-tricuspid AFL. Radiofrequency ablation successfully terminated AFL-1, revealing a second variant (AFL-2) at TCL 442 ms. Activation and entrainment mapping localised AFL-2 to the typical cavotricuspid isthmus (CTI), and ablation in this region terminated it. A third AFL variant (AFL-3) at TCL 348ms was induced. Activation mapping of AFL-3 demonstrated peri-atriotomy activation involving scar in the lateral RA. Radiofrequency ablation connecting the SVC and IVC terminated AFL-3.

A post-ablation electrophysiology study showed no inducible atrial arrhythmias and a 7-day Holter monitor confirmed no arrhythmia episodes.

Conclusion:

This successful catheter ablation in a patient with cc-TGA underscores the importance of comprehensive pre-procedural anatomical assessment and a systematic approach during the electrophysiology study to evaluate for multiple arrhythmias.

Key words: Congenitally corrected transposition of the great arteries, Atrial flutter, Catheter ablation

Biography:

Marianna Ioannou is a final-year medical student at The University of Edinburgh, holding a first-class honours degree in Biomedical Sciences with a focus on Epidemiology. She has also led a nationwide cohort study on the associations between type 2 diabetes, cardiovascular disease outcomes, and site-specific cancer risks in Scotland.



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Jonathan Alvin Wiryaputra

National Cardiovascular Center Harapan Kita Hospital, Indonesia

Stem Cell Therapy in Post-CABG Patients with Cardio-Diabetes: A Potential Strategy for Cardiac Repair and Recovery

Coronary artery bypass grafting (CABG) is a common treatment for patients with severe coronary artery disease (CAD), frequently complicated by comorbid conditions such as cardio-diabetes. Diabetes mellitus exacerbates vascular dysfunction, impedes tissue repair, and increases the risk of post-surgical complications, including poor graft patency, impaired myocardial recovery, and heart failure. Stem cell therapy has emerged as a promising adjunct to conventional CABG, offering potential benefits in repairing damaged myocardial tissue, enhancing angiogenesis, and improving overall cardiac function in this high-risk patient population. Mesenchymal stem cells (MSCs), induced pluripotent stem cells (iPSCs), and cardiac progenitor cells (CPCs) have been explored for their regenerative potential in post-CABG patients. In patients with cardio-diabetes, where chronic hyperglycemia exacerbates myocardial injury and fibrosis, stem cells may improve endothelial function, reduce inflammation, and stimulate tissue repair. Preclinical and clinical studies suggest that stem cell therapy can enhance left ventricular ejection fraction (LVEF), promote myocardial regeneration, and potentially improve long-term graft survival. Despite these promising results, significant challenges remain, including optimizing cell delivery methods, addressing patient-specific factors such as glycemic control, and ensuring long-term safety and efficacy. This review highlights the current evidence supporting the role of stem cell therapy in post-CABG patients with cardio-diabetes and emphasizes the need for further randomized controlled trials to define treatment protocols, evaluate clinical outcomes, and establish the optimal use of stem cell therapies in this patient cohort.

Keywords: CABG, Cardio-Diabetes, Stem cell

Biography:

Jonathan Alvin Wiryaputra is a medical doctor from Airlangga University with extensive experience in cardiovascular thoracic surgery. He has undertaken several elective programs in Japan and Taiwan, gaining valuable insights into advanced medical practices. Throughout his career, Dr. Jonathan has been involved in numerous multidisciplinary research projects, both nationally and internationally, collaborating with leading referral hospitals across Indonesia. His current focus lies in thoracic cardiovascular surgery, particularly its practical implementation in clinical settings. Dr. Jonathan continues to contribute to the advancement of surgical techniques and patient care in Indonesia's healthcare landscape.



CR Mathangi

MBBS student at RRMCH, Bangalore, India.

Harnessing Nanoparticles for Targeted Cancer Therapy in Pancreatic and Breast Malignancies

Background:

Cancer is a significant global health challenge, with breast and pancreatic cancers often diagnosed at advanced stages, leading to poor treatment outcomes. Chemotherapy is commonly used, but it can be difficult to administer and produces undesirable side effects. Nanoparticles offer a promising solution by providing targeted delivery of anticancer drugs.

Objective:

To compare efficacy, safety and tumor response rates between chemotherapy and nanoparticle based drug delivery for pancreatic and breast malignancies.

Idea:

A case-control study will recruit 150 men and women (aged 40-85 years) diagnosed with pancreatic cancer and 120 women (aged 30-85 years) diagnosed with breast cancer. Participants will undergo complete medical history, GPE biopsies, tumor marker tests, and staging.

Intervention: Participants will receive either standard chemotherapy or nanoparticle-based drug delivery. The nanoparticle-based system involves encapsulating FDA-approved drugs in biocompatible polymers, adding nanoparticles and aptamers, using MRI to find tumor site, followed by passage of infrared light to melt the polymer and release its components only at the tumor site

b) Progression-free and overall survival (Kaplan-Meier Analysis and Cox proportional hazards regression).

ci Safety evaluation (adverse events and toxicity profiles).

6. Data Analysis:

Continuous variables; t-tests.

b) Categorical variables: chi-square tests.

7. Sample Size Calculation:

It will be performed based on the expected effect size and standard deviation,

8. Ethics:

It will be conducted in compliance with relevant ethical guidelines and regulations.

Conclusion:

Nanoparticle-based drug delivery system represents a significant advancement in cancer management by harnessing the power of targeted therapy. Its successful implementation has the potential to revolutionize cancer treatment and contribute to more effective control of this devastating disease

Biography:

Mathangi is an MBBS student, an avid reader of scientific research papers and medical journals to keep herself updated, a passionate blogger who writes about different scientific breakthroughs from her perspective. Mathangi is currently working on finding a treatment that could save many more lives for one of the most lethal diseases - cancer and has published her research paper on the same in the IJCRT journal. She was the founder and president of Youth Leaders in Medicine - Bangalore Chapter where she foresees, reviews and works on medical content for the youth, leading a team of graphic designers and other content writers for over 3 years. She is also the associate editor and core member of Synapse Students Association, an organisation by medical students, for medical students and the public. Fascinated by medicine, particularly oncology, since a young age, with an unparalleled love and passion for Human Biology, from middle school, Mathangi looks forward to more opportunities in the field of STEM, particularly medicine.



Ihtisham Anjum
Rokhan Medical University, Pakistan

Molecular Mechanisms and Therapeutic Strategies in Breast Cancer Bone Metastasis

Summary:

We present a comprehensive review of the molecular mechanisms and therapeutic strategies involved in bone metastasis of breast cancer, highlighting the critical interaction between metastatic breast cancer cells and the bone microenvironment that drives disease progression, aiming to improve patient outcomes and provide a framework for future research initiatives.

Introduction:

The human species is afflicted by more than 100 types of cancer, and despite tremendous strides in treatment and diagnosis, a significant number of patients continue to suffer from advanced metastatic disease, such as stage 4 cancer. Metastasis, the primary cause of cancer-related mortality, poses a significant obstacle in combating cancer as a life-threatening condition. Despite the substantial advancements made in metastasis research over the past decade, yielding invaluable insights into tumor-intrinsic and tumor-extrinsic mechanisms governing metastatic behaviors, as well as the molecular and cellular foundations of distinct metastatic progression pathways in various cancers and the factors contributing to therapy resistance, an integrated approach to oncological drug development is crucial to effectively counter metastatic disease progression at all stages.

Breast cancer metastasis to bone is currently an incurable condition. Investigation into its spread to secondary organs and bone has faced obstacles due to poorly translatable animal studies that inflict considerable suffering. In a significant advancement, researchers from Tampere University, Finland, and the Izmir Institute of Technology, Turkey, have established sophisticated in vitro human-relevant cancer models to examine breast cancer's progression to bone. These models successfully replicate human physiological conditions by merging cancer biology, microfluidics, and soft materials, allowing for accurate bone metastasis risk assessment and identification of underlying mechanisms, thereby driving progress in understanding and addressing breast cancer metastasis.

Metastatic Bone Disease:

Metastatic bone disease can be categorized into two main types: osteolytic and osteoblastic. Osteolytic lesions lead to bone destruction and overall bone loss, whereas osteoblastic lesions result in abnormal bone growth and excess bone deposition. Notably, both bone resorption and formation often occur simultaneously in the early stages of metastasis.

Breast cancer metastases primarily progress to osteolytic lesions, leading to bone loss and associated complications, including:

- Bone pain
- Pathologic fractures (weak bones prone to breaking)
- Nerve compression syndrome (nerve damage)
- Metabolic disturbances (calcium and electrolyte imbalances)
- Bone marrow aplasia

Understanding the type and progression of metastatic bone disease is crucial for effective management and treatment.

Mechanisms:

When breast cancer spreads to the bone, it can cause serious damage to the bone tissue. This process often leads to the formation of osteolytic lesions, which is a type of bone loss. Tumor cells release certain factors, like RANKL and PTHrP, that disrupt the normal balance between bone formation and resorption, leading to increased destruction of bone. As the bone is broken down, it releases various growth factors such as IGF-I, IGF-II, TGF- β , PDGF, and FGF, as well as bone morphogenetic proteins (BMP). These released factors create an environment that supports further tumor growth and progression.

Breast cancer metastasis to bone involves several complex mechanisms that enable cancer cells to not only survive but also thrive in the bone microenvironment. Here are some of the key mechanisms involved:

1. Circulation and Homing:

- o Cancer cells can enter the bloodstream (intravasation) and travel to distant sites, including bones. They often express specific adhesion molecules (like integrins) that help them adhere to the bone marrow microenvironment upon arrival.

Therapeutic Strategies:

In cases of metastatic breast cancer with bone involvement, whether symptomatic or asymptomatic, therapies targeting bone, including bisphosphonates (zoledronic acid and pamidronate) and denosumab, are consistently advised. Nonetheless, the choice between these two therapeutic options remains to be determined



Alieva R.B

Republican Specialized Scientific and Practical Medical Center of Cardiology of the Ministry of Health of the Republic of Uzbekistan" Tashkent, Uzbekistan

Comparison of Patients with Ischemic Heart Disease with and without a History of Major Cardiovascular Events

Introduction: Cardiovascular diseases (CVD) continue to occupy a leading place in the structure of mortality and disability of the population in most economically developed countries of the world. Prevention of adverse outcomes is the most important goal of treatment of patients with stable ischemic heart disease (IHD), no less significant than a positive effect on the manifestations of ischemia. Since the beginning of the twentieth century, acute myocardial infarction and stroke have been considered and remain to this day the leading causes of death of patients worldwide. Arterial hypertension, dyslipidemia, obesity, diabetes mellitus, chronic inflammation remain some of the most important risk factors for the development of CHD, as well as the development of cardiovascular outcomes. In this regard, the aim of the study was to evaluate the markers of coronary heart disease in patients with and without MACE (Major adverse cardiovascular events).

Materials and methods: The study included 109 pts with an established diagnosis of CHD, hospitalized in the RSSPMCC due to destabilization or the need for revascularization. The patients were given anamnesis on the presence of MACE and divided into 2 groups with and without MACE. In this case, laboratory and instrumental data of the study were carried out with their subsequent interpretation and comparison of the groups.

Results: The 2 groups were comparable with each other and did not differ in age 59 ± 8.0 and 61 ± 2.0 years, respectively, for the MACE group and without. And the gender distribution was approximately equal 59.4% men and 41.6% women for the first group, and 57.7% men and 42.3% women, respectively. When evaluating laboratory data, a lower level of HDL-C was noted in patients with PCI (percutaneous interventions) (46 ± 7 dg/ml and 40.00 dg/ml, $p < 0.005$). However, when evaluating patients with a history of CABG, an increased waist circumference (WC) was noted 104 ± 4.1 cm versus 99 ± 5.2 cm in patients without CABG, $p < 0.005$. Elevated lipid profile was noted in patients without CABG TC 225 ± 27 mg/dl and 197 ± 21 dg/ml, $p < 0.001$, LDL-C 142 ± 24 dg/ml and 121 ± 29 dg/ml, $p < 0.001$ for groups 2 and 1, respectively. The latter is most likely due to the fact that patients with CABG previously underwent PCI and lipid-lowering therapy was selected, but due to the fact that LDL-C remained above target values, destabilization and the need for subsequent revascularization occurred. But despite this, the inflammatory marker C-reactive protein (CRP) was elevated in patients with CABG (2.32 mg/l and 1.91 mg/l, $p < 0.005$), indicating the presence of a chronic inflammatory process. Stroke was not assessed due to the small number of cases.

Conclusion: Patients with MACE have an elevated lipid profile and inflammation, as well as the presence of abdominal obesity represented by increased WS.

Biography:

Alieva Rano has completed her PhD at the age of 45 years at the Department of Ischemic Heart Disease and Atherosclerosis. Explores the incidence of atherosclerosis in Uzbekistan, in-depth studies the familial forms of dyslipidemia, in particular its heterozygous and homozygous forms. He is the executive secretary of the Familial Hypercholesterolemia Register of the European Atherosclerosis Society. He holds a PhD in Cardiology Medicine and is a leading researcher in the atherosclerosis department. December 2024- has completed her Doctor of Science of Medicine. Optimization of diagnostic, risk stratification and treatment of dyslipidemias in patients with CAD taking into account phenotypic and genotypic features. She has published more than 63 papers in reputed journals and has been serving as an editorial board member of repute. 2 monographs and 2 manuals for doctors.



Mohammad Saleh Safari

Department of Pathobiology, Faculty of Veterinary, Bu_Ali Sina University, Hamedan, Iran

The Relationship Between Future Cancer Metastases and Fibroblast Activation protein- α (FAP- α)

Introduction:

Fibroblast activation protein- α (FAP- α) has been implicated in cancer progression and metastasis. As a cell-surface serine protease expressed in cancer-associated fibroblasts (CAFs), FAP- α contributes to tumor invasion and metastasis. Understanding its relationship with future cancer metastases may offer insights into prognosis and therapeutic targets.

Methods: This study is a review study by searching scientific databases such as Scopus, PubMed, and Embase from 2016 to 2024 by using the keywords Cancer, Metastasis, Fibroblast Activation Protein- α , 63 articles related to inclusion criteria were extracted and then analyzed.

Results: The results revealed that high levels of FAP- α expression in tumors correlate with increased likelihood of future metastasis. The most significant associations were observed in cancers such as colorectal, breast, and pancreatic cancers. FAP- α overexpression also correlated with poorer overall survival and increased invasiveness, confirming its role as a potential predictor of metastatic behavior.

Discussion:

This analysis highlights the crucial role of FAP- α in cancer metastasis. Its overexpression in CAFs appears to facilitate tumor invasion by remodeling the extracellular matrix and promoting tumor-stroma interactions. Targeting FAP- α could offer new therapeutic strategies to prevent metastasis, especially in cancers where it is highly expressed. However, further research is needed to clarify its exact mechanisms and potential as a prognostic biomarker across different cancer types.

Keywords: Cancer, Metastasis, Fibroblast Activation Protein- α .

Biography:

I finished my DVM degree in 2022 and immediately after that I started my PhD in immunology. I am interested in the field of cancer research and cancer immunology and I hope to be able to take positive steps in the treatment of cancer and improving the condition of patients.



Fahimeh Moghimi

Science and research university Branch of IAU, Tehran, Iran

A new Ultrasound Method for Predicting Breast Cancer and other Breast Tissue Diseases Based on Neural Network

Conventional imaging methods and pathological examinations detect the type of lesion; the disease will change the modulus of elasticity of the tissue. By using ultrasound image processing of breast tissue with optical flow analysis method, elastic parameters were calculated on cancerous tissue and other tissues such as fibrocystic tissue, micro calcification. Using the neural network, it was determined that there is a significant difference between the elasticity parameters in the mentioned disease groups. Therefore, the importance of this method due to its non-invasiveness and practicality, as well as its low cost and lack of use of ionizing rays, as well as the ease of recording ultrasound images, can be discussed in order to detect cancer and other breast tissue diseases.

Biography:

Fahimeh Moghimi has completed his Ms. at the age of 30 years from Science and research university Branch of IAU, Tehran, Iran. She is the director of Biomedical Company. She has published more than 22 papers in reputed journals and has been serving as an editorial board member of repute



Mohammadreza Moghimi

Tarbiat Modares University, Tehran, Iran

Impact of insulation materials on indoor air quality: Analyze the potential release of harmful substances from fiberglass, mineral wool, and cellulose insulation

Impact of Insulation Materials on Indoor Air Quality

This study investigates the potential health risks associated with commonly used insulation materials: fiberglass, mineral wool, and cellulose. By analyzing the emission of harmful substances, including volatile organic compounds (VOCs) and particulate matter, we assessed their impact on indoor air quality. Our findings reveal that these materials significantly contribute to indoor air pollution. To mitigate these risks, we recommend prioritizing low-emission insulation, effective ventilation, and regular indoor air quality monitoring. Continued research is essential to develop innovative, sustainable insulation materials and to fully understand the long-term health implications of insulation-related pollutants.

Keywords: insulation materials, indoor air quality, fiberglass, mineral wool, cellulose, harmful substances, respiratory health, volatile organic compounds (VOCs), particulate matter, health risks, building materials, environmental impact

Biography:

Mohammad Reza Moghimi has completed his MA at the age of 25 years from Tarbiat Modares university, Tehran, Iran. His works are mostly in the field of visualization also there are many building designs constructed by him. He has been accepted to the SCI-arc for two times at edge program and fiction and entertainment.



**Zouaoui.A^{1*}, Kechkouche.Z¹, Hadj Slimane Y¹,
Hadj Slimane Y¹, Meziane Tani.A², Bouziane.
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-Oran-Algeria.

Renunciation Dental Care in Patients with Cardiovascular Disease: New Issue in Public Health

Introduction:

During our daily consultations, we find ourselves more and more confronted with a phenomenon which tends to take on a disproportionate extent, represented by edentulism, with the aesthetic and functional damage which results from it, particularly in patients with cardiovascular disease.

The renunciation of care corresponds to one of the most involved etiologies.

So what are these different aspects and issues?

Answering this question justifies the choice of our theme.

Objective :

Describe the demographic-clinical profile of this vulnerable category of patients, consulting the periodontology department - Tlemcen University Hospital -Algeria involved in this phenomenon.

Materials/Method:

This was a cross-sectional descriptive study, spread over a period of three years (from October 2015 to October 2018), at the periodontology department - Tlemcen University Hospital, among patients with cardiovascular disease.

A self-questionnaire established for this purpose was used to collect data.

Results/Discussion:

Our study allowed the enrollment of 75 patients. The average age was 48.64 ± 1 years. The male gender was the most prevalent (53%), i.e. a sex ratio of 1.12.

Only 1.3% of our respondents were able to benefit from successful treatment, particularly in periodontics.

The majority of our patients, 89.3%, reported having already undergone a tooth extraction.

The carious process, alone or associated with mobility, were respectively the two most cited reasons (52%, 33.3%).

The multiplicity of sessions was the reason which most led (41.3%) to the interruption of this support, followed in second place by the cost (18.7%), mentioned above all for the private sector, lastly , the distance and difficulty of access were mentioned.

Conclusion/Recommendations:

Promoting the training of qualified personnel capable of meeting the needs of this vulnerable population, civil service, telemedicine and home care offer themselves as the alternatives of choice that can help remedy this burden.

Key words: Cardiovascular disease- renunciation dental care.



Margaret-Ann Simonetta

Cancers Alliance Communications Director, USA

Gastric Cancer Patient Insights: Patient-Reported Outcomes and Real-World Perspectives from the Gastric Cancer Patient Community

Background: According to the National Cancer Institute Surveillance, Epidemiology, and End Results Program, an estimated 26,890 patients in the United States will be diagnosed with gastric (stomach) cancer in 2024. Estimated deaths from the disease in 2024 will reach 10,880, with a five-year relative survival rate of 36%. Understanding the need for increased gastric cancer education and awareness, the GI Cancers Alliance created a 12-month series of engagement opportunities to better understand and listen to the gastric cancer patient voice and perspectives. Methods: Our 12-month patient-reported outcomes (PRO) research (September 2023 – August 2024) included an online survey, in person and virtual focus groups, and personalized follow-up interviews. 651 gastric cancer patients and survivors participated in these engagement opportunities, with 89% of participants asking for follow-up personalized interviews. One of our program goals was to reach and interact with patients who often experience barriers in receiving quality cancer care. Our PRO research provided an opportunity to amplify the patient voice and lived experience by engaging patients in medically underserved communities, rural and urban populations, diverse ethnic communities, and patients receiving care in community-based and federally funded oncology centers, and charity (indigent) care. Results: Overarching results from our study suggest that while advances have been made, health equity, racial disparities and barriers in cancer care remain a challenge. 651 patient participants (43% male, 54% female, 3% non-binary) identified their race/ethnicity as: 24% Black/African American, 22% Hispanic, 21% Multiracial, Non-Hispanic/White 19%, Asian/Pacific Islander 7%, Native American 2%, and 5% Other. 69% of patients reported that their clinician did not suggest biomarker testing, nor discuss the role of biomarkers to help make informed treatment decisions. 68% of patients were concerned that they lacked knowledge and options to make informed decisions regarding their treatment. 64% of patients reported they suffered from mental health concerns ranging from severe depression, feelings of hopelessness and anxiety; 63% of patients struggled to afford nutritious food to meet their changing dietary needs, especially post-surgery.

Conclusion: Our PRO research underscores the need for increased education and outreach for gastric cancer patient communities experiencing barriers to high quality cancer prevention, early detection, and treatment. By partnering with our 100+ advocacy partner organizations, we will continue to amplify the gastric cancer patient voice by establishing new programming, initiatives, and enhanced outreach addressing the challenges and barriers to quality cancer care for all patients.



Evelyn Inga, MD

Department of Internal Medicine
The University of New Mexico, United States

Ventricular Tachycardia Outcomes in Implantable Cardioverter-Defibrillator-Treated Patients with Ischemic vs. Nonischemic Cardiomyopathy

Cardiomyopathy is a significant cause of ventricular tachycardia (VT), with ischemic (ICM) and nonischemic (NICM) subtypes exhibiting distinct pathophysiological characteristics. Implantable cardioverter-defibrillators (ICDs) continue to be the standard of care for VT prevention, yet clinical outcomes in ICM versus NICM patients remain a subject of debate. This meta-analysis assesses VT recurrence, ICD effectiveness, and related predictors in ICM and NICM patients. A systematic review and meta-analysis were conducted in accordance with PRISMA guidelines, encompassing 52 studies (43 observational and 9 RCTs) from 2015 to 2025. Inclusion criteria focused on studies that reported VT outcomes in ICD-treated ICM and NICM patients. Data were analyzed descriptively due to study heterogeneity. Key predictors of VT/VF included late gadolinium enhancement (LGE) on MRI, prolonged electrocardiographic intervals, and elevated biomarkers such as galectin-3 and serum uric acid. ICDs effectively reduced the incidence of VT/VF in high-risk patients, although catheter ablation was necessary in drug-refractory cases. Cardiac resynchronization therapy with defibrillation (CRT-D) provided superior arrhythmia control compared to pacing-only CRT-P, albeit with higher complication risks. VT recurrence was more prevalent in specific NICM subgroups, such as arrhythmogenic right ventricular cardiomyopathy (ARVC) and cardiac amyloidosis. While ICDs remain a cornerstone of VT management, patient selection should be directed by risk stratification tools rather than cardiomyopathy subtype alone. Preventive VT ablation and optimal ICD programming can further enhance outcomes. Future randomized trials are needed to refine treatment guidelines for NICM subpopulations.

Keywords: VT, Cardioverter-Defibrillator, cardiomyopathy, Catheter ablation

Biography:

Evelyn Inga, MD, is a second-year internal medicine resident at the University of New Mexico with a strong research background. Her research interests center on improving outcomes for underrepresented minorities in cardiology. Dr. Inga's experience includes research fellowships at Beth Israel Deaconess Medical Center, Harvard University. She has presented her research at local, state, national, and international cardiology conferences. She already has several publications and more on the way. Dr. Inga is committed to advancing cardiology care through research and clinical practice.



Evelyn Inga, MD

Department of Internal Medicine
The University of New Mexico, United States

Outcomes of Transcatheter versus Surgical Aortic Valve Replacement in Aortic Stenosis with Bicuspid Aortic Valve and Chronic Coronary Artery Disease: Nationwide Inpatient Analysis 2015-2021

Introduction: Surgical aortic valve replacement (SAVR) has remained the standard management in patients with bicuspid aortic valve (BAV), aortic stenosis (AS), and coronary artery disease (CAD). In such patients, transcatheter aortic valve replacement (TAVR) is not commonly utilized and has not yet been investigated in randomized clinical studies. We compared the outcomes of TAVR and SAVR in BAV patients with chronic CAD using data from the National Inpatient Sample (NIS) database.

Methods: We conducted a retrospective cohort analysis of the NIS 2015-2021 database. The primary outcomes were inpatient mortality, length of hospital stay (LOS), and total hospital charges. The data were analyzed using STATA version 16 and SAS version 9.4. Propensity-matched scoring was used to produce matched populations of TAVR versus SAVR patients.

Results: 1,708 patients with both bicuspid valve AS and CAD were included during the study period of 2015-2021. Of these, 130 (7.6%) underwent TAVR, and 1,578 (92.4%) underwent SAVR. The TAVR group was older than the SAVR group (69.7 vs. 68.0 years). TAVR was associated with higher inpatient mortality (3.1% vs. 1.2%, OR 1.63, $p < 0.103$) and increased total hospital charges (\$230,000 vs. \$210,000, OR 1.13, $p < 0.259$) when compared with SAVR. However, neither was statistically significant. TAVR group had a statistically significant shorter LOS (6.0 days vs. 7.7 days, OR 3.32, $p < 0.001$). Furthermore, TAVR patients had a lower rate of cardiogenic shock ($p < 0.396$) but a higher rate of acute kidney injury (AKI) ($p < 0.098$). There was no difference in stroke or heart failure ($p > 0.1$).

Conclusion: Patients with BAV aortic stenosis and CAD undergoing TAVR experienced shorter hospital LOS and lower incidence of cardiogenic shock. However, a higher rate of AKI, mortality, and total hospital charges was evident. Thus, the dilemma exists regarding the deployment of these procedures in patients with BAV and CAD, warranting the need for further studies.

Biography:

Evelyn Inga, MD, is a second-year internal medicine resident at the University of New Mexico with a strong research background. Her research interests center on improving outcomes for underrepresented minorities in cardiology. Dr. Inga's experience includes research fellowships at Beth Israel Deaconess Medical Center, Harvard University. She has presented her research at local, state, national, and international cardiology conferences. She already has several publications and more on the way. Dr. Inga is committed to advancing cardiology care through research and clinical practice

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