



**THE SRI LANKA COLLEGE  
OF ONCOLOGISTS**

10<sup>th</sup> - 14<sup>th</sup> October 2024

# **PROGRAMME AND ABSTRACTS**

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## **ANNUAL ACADEMIC SESSIONS 2024**

Expanding Horizons, Enhancing Lives



THE SRI LANKA COLLEGE  
OF ONCOLOGISTS

10<sup>th</sup> - 14<sup>th</sup> October 2024

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ANNUAL ACADAEMIC SESSIONS 2024

Expanding Horizons, Enhancing Lives

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# The Sri Lanka College of Oncologists Council for 2024/25



**First Row (Left to Right)** - Dr Prabani Maddumarachchi (**Public Relations Officer**), Dr A. J. Hilmi (**Past President**), Dr N. Jeyakumaran (**Past President**), Dr Sanath Wanigasooriya (**President-Elect**), Dr Umagowry Saravanamuttu (**President**), Dr Prasad Abeysinghe (**Immediate Past President**), Dr Buddhika Somawardana (**Secretary**), Dr Kamthi Perera (**Past President**), Dr Pradeep Siriwardana (**Treasurer**)

**Second Row (Left to Right)** - Dr Ahamed Iqbal (**Assistant Treasurer**), Dr Sasikala Paramakulasingham, Dr Roshan Gunaratne, Dr Sujeewa Siyambalapatiya, Dr Sujeewa Weerasinghe, Dr Sanjeeva Gunasekera (**Co-Editors**), Dr Kavitha Indranath, Dr Hasanthi Jayalath, Dr Leela Siriwardhana

**Third Row (Left to Right)** - Dr Lakshan Abeynaike, Dr Wasantha Rathnayake, Dr Devinda Jayathilake (**Assistant Secretary**), Dr T. Skandarajah (**Co-Editors**), Dr Jaliya Jayasekera, Dr Mahalingam Chenthran, Dr Mahilal Wijekoon, Dr N Yogannathan

**Absent:** Dr Thushari Hapuarachchi (**Vice President**), Dr Dehan Gunasekera (**Past President**), Dr Nuradh Joseph, Dr Chintana Hapuarachchige, Dr Mahendra Somathilaka, Dr Kusal de Silva

# Council Members

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Secretary	<b>Dr Buddhika Somawardana</b>
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	<b>Dr Yasantha Ariyaratne</b>
Assistant Secretary	<b>Dr Devinda Jayathilake</b>
Assistant Treasurer	<b>Dr Iqbal Ahamad</b>
Public Relations officer President - Young Oncologists Forum	<b>Dr Prabani Maddumarachchi</b>
Council Members	<b>Dr Lakshan Abeynaike</b>
	<b>Dr Mahalingam Chenthuran</b>
	<b>Dr Nuradh Joseph</b>
	<b>Dr Kavitha Indranath</b>
	<b>Dr Hasanthi Jayalath</b>
	<b>Dr Jaliya Jayasekera</b>
	<b>Dr Chintana Hapuachchige</b>
	<b>Dr Mahendra Somathilaka</b>
	<b>Dr Sujeeva Weerasinghe</b>
	<b>Dr Mahilal Wijekoon</b>
	<b>Dr Kusal de Silva</b>
	<b>Dr Wasantha Rathnayake</b>
	<b>Dr N Yoganathan</b>
	<b>Dr Sujeewa Siyambalapitiya</b>
	<b>Dr Sasikala Paramakulasingam</b>
	<b>Dr Roshan Gunarathne</b>
	<b>Dr Leela Siriwardhana</b>

# Message from the President



It is indeed an honour and a privilege to extend a warm welcome to all the delegates of the 21st Annual Academic Sessions of the Sri Lanka College of Oncologists (SLCO). SLCO as the academic body representing all oncology professionals in the country considers its annual academic session as the pinnacle of its busy calendar of activities.

The landscape of cancer treatment has witnessed a remarkable transformation in recent years, marked by the innovative novel therapies, increasing use of assistive technology and sharper focus on multi modal therapy. Despite the challenges posed by the pandemic and economic crisis in the country, we have prioritized on delivering value based care by expanding the horizons of cancer care professionals, upgrading radiotherapy facilities and encouraging and facilitating inter disciplinary care.

The support we have received from our own colleagues and international counterparts have been immense in this regard. The series of webinars on topics of current interest, collaborative educational sessions with other colleges and regional meetings are some of examples for this. Our annual academic sessions will consist of pre congress workshops on practical radiotherapy, bone marrow transplant, symposia, plenary sessions case-based discussions covering the full spectrum of common malignancies and a post congress workshop and brachytherapy for rectal cancer. In addition, the free paper presentation session go a long way, help reach the lofty goals we have set for ourselves this year.

I sincerely appreciate the organizing committee for the untiring efforts during the preparation of the sessions and the generous sponsors for their unwavering support for all our activities. My council and I have left no stone unturned to ensure the success of this event that you will leave not only with your knowledge enhanced but with pleasant memories of camaraderie, collaboration and fellowship as well.

**Dr Umagowry Saravanamuttu**

*The President*

*The Sri Lanka College of Oncologists.*

# Message from the Secretary



Dear esteemed colleagues and participants,

It is with great pleasure that I welcome you to the Annual Academic Congress 2024 of the Sri Lanka College of Oncologists. This year, we are honoured to gather our esteemed members alongside distinguished delegates from the USA, UK, Spain, Canada, Singapore, India and the UAE. We are particularly grateful to nearly 20 foreign experts who are here to share their knowledge and insights, enriching our academic experience.

Our academic program has been thoughtfully curated to meet the diverse interests of our participants. We kick off with four pre-congress sessions focusing on Surgical Oncology, Radiotherapy Contouring, Haematopoietic Stem Cell Transplantation and Acute Oncology. Notably, the Masterclass on Haematopoietic Stem Cell Transplantation—endorsed by the European Society for Blood and Marrow Transplantation (EBMT)—marks a significant milestone in Sri Lanka, aiming to enhance our understanding and application of this vital field. We will also offer a post-congress session on Rectal Brachytherapy, further enhancing our educational offerings.

Over the past year, we have conducted numerous academic activities, including monthly journal clubs and collaborative Continuing Medical Education (CME) events. These efforts culminate in this congress, our most significant event to date. Additionally, we have signed a Memorandum of Understanding (MOU) with the EBMT, paving the way for future collaborations and knowledge exchange.

This year has been dedicated to our members and the improvement of oncology care in Sri Lanka. We have expanded the chemotherapy priority drug list and initiated enhancements to our radiotherapy facilities, striving for equitable, high-quality care nationwide.

I extend my heartfelt gratitude to all participants, speakers and organizers who have made this event possible. I believe this congress will be a milestone in our pursuit of excellence in oncology.

As Mahatma Gandhi once said, "Live as if you were to die tomorrow. Learn as if you were to live forever." May this congress inspire us to expand our horizons and improve the lives of our patients.

**Dr Buddhika Somawardana**

*Secretary*

*The Sri Lanka College of Oncologists.*

# Message from the Chief Guest



It is a great honour to extend my warmest wishes to the Sri Lanka College of Oncologists on the occasion of its 21st Annual Academic Sessions. The theme for this year, "Expanding Horizons, Enhancing Lives," resonates deeply with our collective mission to improve the quality of life for every Sri Lankan, particularly in the face of the rising burden of cancer.

Cancer has become a significant public health challenge in our nation. According to the National Cancer Control Programme (NCCP), the incidence of cancer in Sri Lanka has been steadily increasing, demanding a comprehensive response from all sectors of healthcare. The government remains steadfast in its commitment to provide universal health coverage, ensuring that no Sri Lankan is deprived of life-saving treatments, regardless of their financial situation. This commitment is reflected in the substantial portion of the health budget allocated to oncology care, recognising that health is a fundamental responsibility of the state.

The Sri Lanka College of Oncologists has been an invaluable partner in this endeavour, serving as an academic and advisory pillar of strength to the Ministry of Health. During the recent economic crisis, the College played a pivotal role in formulating an essential drug list, which ensured the sustainable supply of priority cancer medications. This initiative allowed the government to prioritise funding for critical drugs and, with the College's guidance, we have been able to expand this list based on the cost-effectiveness of individual therapies.

Furthermore, the ongoing expansion of radiotherapy facilities across the country is a testament to our shared commitment to equity and quality in cancer care. The Phase 2 LINAC project, now in its final stages of approval, will bring advanced radiotherapy technology to every province, ensuring that all Sri Lankans have access to high-quality treatment, regardless of their location.

I am also pleased to acknowledge the significant progress we have made in cancer prevention and control through the establishment of a national cancer policy. This policy has led to commendable improvements in the services provided to our people and I am confident that the continued collaboration between the Ministry of Health and the Sri Lanka College of Oncologists will yield even greater advancements in the future.

As we gather for these academic sessions, let us reaffirm our dedication to expanding the horizons of cancer care and enhancing the lives of those we serve. I am deeply grateful to the Sri Lanka College of Oncologists for their unwavering support and leadership and I look forward to witness the continued progress of oncology care in our beloved country.

**Dr P.G. Mahipala**

*Secretary of Health*

*Ministry of Health, Sri Lanka*



# Message from the Guest of Honour



Dear Colleagues,

It is an honor and a privilege to deliver this message as the guest of honor at this esteemed annual academic session for 2024. As we reflect on the past, celebrate the present and look forward to the future, I am reminded of the remarkable progress the Sri Lanka College of Oncologists has made in our endeavor to conquer what was once an relentless affliction.

A few decades ago, cancer was often perceived as a formidable enemy, with treatment options primarily centered around surgery, chemotherapy and radiation. Some even instilled fear in the public by focusing solely on the deleterious side effects of these treatments, diminishing their overall impact.

However, today our collective efforts have borne fruit as we entered the age of precision and personalized medicine. We have witnessed incredible advancements in our understanding of the molecular underpinnings of cancer, leading to therapies tailored to the specific genetic and molecular profiles of tumors. The advent of immunotherapy has been nothing short of revolutionary, harnessing the power of the body's immune system to fight cancer more effectively.

Moreover, the integration of artificial intelligence and big data into oncology practice is opening new horizons for diagnosis, treatment planning and patient monitoring. We can now provide more individualized care, predicting how a patient might respond to a given therapy and adjusting treatment strategies in real-time.

While we have made significant strides, our journey is far from over. The next frontier lies in overcoming resistance to existing therapies, improving the quality of life for cancer survivors and making advanced treatments accessible to all.

Let us remember that every advancement we celebrate today was once a distant goal.

I wish to extend my heartfelt appreciation for your unwavering dedication!

**Dr Mahendra Perera**

*Consultant in Clinical Oncology*

*Dr Neville Fernando, Teaching Hospital, Sri Lanka*

# Message from the Editor



The Annual Academic Sessions of the Sri Lanka College of Oncologists (SLCO) is the pinnacle event of the calendar of the college and this year the organizing committee has left no stone unturned to ensure it lives upto the theme of this meeting “Expanding horizons, Enhancing care.”

The focus of this year’s conference is how best to adapt international best practices to suit the local setting and how locally driven innovations can impact patient outcomes in Sri Lanka and abroad. Deviating from the standard practice of didactic lectures usually seen in this type of meetings the organizing committee has placed a greater emphasis on practical workshops, case based discussions, multi disciplinary approach to patient care etc and has tried to include topics such as artificial intelligence in patient care, pharco-economic paradigms of cancer care which are beyond the tradional realm of the oncology space.

SLCO throughout the years has worked diligently to promote research in cancer care and it is very heartening to note the large number of research abstracts received this year for the free paper session. We firmly believe that any initiative to improve quality of care need to be informed by evidence generated in the local setting and I am sure we would see the impact of our efforts of “Expanding horizons” in research capacity among the oncology community in “Enhancing care” of our patients with cancer in Sri Lanka.

We are much thankful for our esteemed local and international faculty whose contributions are pivotal to the success of the conference and would like to extend a warm welcome to all the delegates whose presence is much appreciated by the organizing committee as well. I wish all the participants very best for a successful meeting

**Dr Sanjeeva Gunasekera**

*Ediitor*

*The Sri Lanka College of Oncologists.*

# Message from the Chairperson of the Young Oncologists' Forum



As Chairperson of the Young Oncologists' Forum for the Sri Lanka College of Oncologists, I am delighted to present this abstract book for the Annual Academic Sessions 2024. This year's event features four pre-congress workshops focusing on Haematopoietic Stem Cell Transplant, Radiotherapy Contouring and Planning, Acute Oncology, Surgical Oncology and a post-congress workshop on Brachytherapy for rectal cancer. These workshops are designed to offer diverse and interactive learning experiences with extensive case-based discussions, enhancing practical skills and knowledge.

Our collaboration with various specialties highlights the significance of a multidisciplinary approach and knowledge sharing to improve patient care. This collaborative effort reflects our commitment to intergrate diverse expertise for optimal patient outcomes.

I extend my sincere gratitude to Dr Naduni Imbulgoda for establishing the Young Oncologists' Forum under the guidance of Dr A J Hilmi in 2021. This initiative has provided valuable opportunities for junior oncologists to engage more actively in college activities. I also appreciate the efforts of Dr Imbulgoda and Dr Vimukthini Pieris for their contributions in previous years.

Looking back, we have expanded our reach beyond the sessions held in Kandy, creating an interactive WhatsApp group for tumor-specific discussions. This platform has facilitated a multidisciplinary approach to complex oncological cases.

This year, our initiatives have further developed with successful sessions in Kurunegala, demonstrating increased collaboration across various disciplines. The "Oncotalk" Zoom-based discussions, occurring twice a month, have been well-received, providing updates and insights into the latest advancements in oncology. We have also seen increased engagement from young oncologists, both nationally and internationally.

I am looking forward to continued enthusiastic participation and collaboration. Together, we will advance our knowledge, enhance patient care and strengthen our oncological community.

Thank you for your ongoing support and dedication.

**Dr Prabani Maddumarachchi**

*Chairperson of the Young Oncologists' Forum  
The Sri Lanka College of Oncologists.*

The background of the image consists of a solid blue color overlaid with a pattern of thin, white, wavy lines that create a sense of movement and depth. The lines are more densely packed in some areas and more spread out in others, creating a dynamic, organic feel.

# **SLCO FELLOWSHIP AWARDEES 2024**



**Dr Prasad Abeysinghe**  
**MBBS, MD**



**Dr N Jeyakumaran**  
**MBBS, MD**



**Dr T Skandarajah**  
**MBBS, MD**



**Dr A J Hilmi**  
**MBBS, MD**

**DR KUMAR WEERASEKARA  
MEMORIAL ORATION  
2024**

# Oration Abstract

Dr Chrisanthi Rajasooriyar  
Teaching Hospital, Jaffna, Sri Lanka  
Tellippalai Trail Cancer Hospital, Jaffna, Sri Lanka



## Challenges in Cancer Care: A Multifaceted Issue in Sri Lanka

Cancer in Sri Lanka presents complex challenges that affect patients' physical, psychological, social and economic well-being. Despite efforts to improve cancer care, gaps remain at various levels—micro, mezzo and macro.

At the micro level, a main challenge include difficulties in communicating a cancer diagnosis. While 95% of patients prefer direct communication, over half of families request doctors to disclose information to them first, complicating patient-doctor trust. Additionally, a lack of information affects patients' ability to make informed decisions, often leading to emotional trauma, as seen in women undergoing mastectomies without knowledge of breast-conserving surgery options. Cultural misconceptions about radiotherapy, such as the belief it causes bodily harm, also result in treatment refusal, often due to family influence.

Mezzo-level issues highlight the stigma surrounding cancer, which is linked to notions of karma and punishment. This stigma isolates patients and discourages treatment. A significant proportion of cancer patients are non-compliant with treatment, particularly in head and neck cancer, where 10% of patients fail to continue after diagnosis. Furthermore, the healthcare system faces organizational challenges, such as limited infrastructure and a lack of trained personnel, which hampers the standard of care for diseases like breast cancer.

At the macro level, psychosocial support is severely lacking, leaving patients and families without emotional assistance. Additionally, Sri Lanka faces a critical shortage of oncologists, with only 55 specialists handling an overwhelming patient load—far beyond the recommended capacity. This shortage extends to other healthcare roles, worsened by the country's ongoing brain drain. The economic crisis further strains cancer care, reducing access to essential medicines and modern treatments. A potential strategy, like voluntary licensing, may provide affordable access to cancer drugs in the future.

Addressing these issues holistically will be key to improving cancer care outcomes in Sri Lanka.

# SCIENTIFIC PROGRAMME



# 10<sup>th</sup> October 2024

## Pre-congress 01 | UH KDU | 08:00 - 13:30

### Hands-on Experience in Radiotherapy Contouring and Planning

Time	Topic	Speaker
08:30 - 10:00	Radiotherapy contouring: CA Prostate	Dr Ashok Nikapota
10:00 - 10:30	Tea	
10:30 - 12:00	Radiotherapy contouring: CA Lung	Dr Anna Britten
12:00 - 13:00	Lunch	
13:00 - 15:30	Radiotherapy planning	Dr Ashok Nikapota/ Dr Anna Britten

## Pre-congress 02 | Hotel Galadari | 08:00 - 13:30

### Masterclass in Haematopoietic Stem Cell Transplantation

Time	Topic	Speaker
08:00 - 08:30	Registration and opening remarks	Dr Buddhika Somawardana
08:30 - 08:55	HSCT in Thalassaemia	Dr Biju George
08:55 - 09:20	Conditioning regimens: Different approaches and why	Dr Auro Viswabandya
09:20 - 09:45	Haploidentical HSCT: Principles and challenges in limited resource setting	Dr Biju George
09:45 - 10:10	Challenges in the management of MDR bacterial infections in HSCT	Dr Mallikarjun Kalashetty
10:10 - 10:40	Tea	
10:40 - 11:05	Managing CMV infection: The new landscape	Dr Mallikarjun Kalashetty
11:05 - 11:30	Treatment of acute GvHD	Dr Auro Viswabandya
11:30 - 11:55	Treatment of chronic GvHD	Dr Hassan Alkhateeb
11:55 - 12:20	Graft failure, poor graft function and failing chimerism	Dr Annalisa Ruggeri
12:20 - 12:45	Critical and rare complications of HSCT	Dr Hassan Alkhateeb
12:45 - 13:30	Lunch	
13:30 - 13:55	Late effects of HSCT	Dr Emmanouil Nikolousis
13:55 - 14:20	HLA system and impact on donor selection: What's new?	Dr Neema Mayor
14:20 - 14:45	Quality Management of HSCT unit	Dr Emmanouil Nikolousis
14:45 - 15:10	Closing remarks	Dr Buddhika Somawardana
15:10 - 15:30	Tea	

# 11<sup>th</sup> October 2024

## Pre-congress 03 | Hotel Galadari | 08:00 - 13:00

### Workshop on Acute Oncology

In collaboration with Sri Lanka College of Internal Medicine, Ceylon College of Critical Care Specialists and College of Anaesthesiologists and Intensivists of Sri Lanka

#### Advanced Management of Oncological Emergencies: A Multidisciplinary Approach

Topic	Panel Members
Tumour lysis syndrome	Dr S Gunasekera Dr Dilshan Priyankara
Neutropenic sepsis	Dr B Somawardana Dr Anushka Mudalige
Acute kidney injury	Dr P Siriwardena Dr Lilanthi Subasinghe
Chemotherapy-induced heart failure	Dr P Maddumarachchi Dr Nalika Karunaratne
Tea	Dr A G S Asiri Dr B Vidanagama
Small group discussions: Q & A with mini case scenarios	Dr Yapa Udaya Kumara Dr Chamila Liyanage Dr U Wariyapperuma Dr Janaki Arulmoli Dr Suranga Manilgama Dr Dimuthu Gunasena
Lunch	

## Pre-congress 04 | NCISL | 08:00 - 14:00

### Workshop on Hepatobiliary Oncology in collaboration with SLASO & SLHPBA

Live hepatic resection and interactive discussions on liver anatomy, radiology, anaesthesia, surgical techniques and oncology by a multidisciplinary expert panel

Topic	Panel Members
Basic Liver Anatomy	Dr Buddhika Dassanayake
Tips and Tricks of Liver Surgery; Lessons from the Master	Prof Rajesh Shinde
Anaesthesia for Liver Surgery	Prof Bhagya Gunathilake
Liver Volume Assessment and Optimization	Dr Prabath Kumarasinghe
Liver Parenchymal Transection Methods	Dr Suchintha Tillakaratne
Radiological Assessment of Liver SOL and Liver Volume Assessment	Dr Eranga Ganewatte
Place of Neoadjuvant Chemotherapy for Resectable CRC Liver Metastases	Dr Ramavath Devendra Naik
Lunch	

# 12<sup>th</sup> October 2024 | Day 01

## Main Congress | Hotel Galadari | 08:00 - 16:05

Time	Session	Topic	Speaker
08:30 - 08:35	Opening remarks		<b>President, SLCO</b>
08:35 - 09:05	Plenary 1	Unveiling the intricacies of PET CT for clinicians	<b>Dr Sanjeewa Munasinghe</b>
09:05 - 09:35	Keynote	Artificial intelligence: Mastering the unknown	<b>Dr Pandula Siribaddana</b>
09:35 - 09:55	Symposium 1 (Genito - Urinary cancers)	Prostatectomy in early prostate cancer: To whom, when and how	<b>Dr Kumaradasan Umashankar</b>
09:55 - 10:15		Radiotherapy in prostate cancer: Navigating the current evidence	<b>Dr Ashok Nikapota</b>
10:15 - 10:35		Castration resistant prostate cancer: Exploring treatment and sequencing options for maximum benefit	<b>Dr Wong Siew Wei</b>
10:35 - 10:50	Felicitation of Dr R S Jayatilake		<b>Dr Sarath Wattedgama</b>
10:50 - 11:20	<b>Tea</b>		
11:20 - 12:20	Symposium 2 (Case discussion)	Patient centred excellence in haemato-oncology	<b>Dr Hassan Alkhateeb</b> <b>Dr Ashok Nikapota</b> <b>Dr Emmanouil Nikolousis</b> <b>Dr Biju George</b> <b>Dr Devinda Jayathilake</b>
12:20 - 12:50	Plenary 2	Surgical excision of cervical lymph nodes in thyroid cancer: Is more always better?	<b>Dr Dileepa Mahaliyana</b>
12:50 - 13:35	<b>Lunch</b>		
13:35 - 13:55	Symposium 3 (Neuro Endocrine tumours)	Advanced radiology in neuroendocrine tumours: Optimizing decision making and patient outcomes	<b>Dr T Naidu</b>
13:55 - 14:15		Medical management of neuroendocrine tumours in the modern era: Current strategies and clinical practice	<b>Dr Sajeevan K V</b>
14:15 - 14:35		Modern management of pancreatic NETs: An evidence-based approach	<b>Prof Shailesh V Shrikhande</b>
14:35 - 15:05	Plenary 3	Optimizing germ cell tumour outcomes: Balancing efficacy and side effects through risk-stratified treatment	<b>Dr Brian Costello</b>
15:05 - 16:05	Symposium 4 (Case discussion)	Collaborative strategies for optimizing lung cancer outcomes	<b>Dr Dhammika Rasnayake</b> <b>Dr Anna Britten</b> <b>Dr Wong Siew Wei</b> <b>Dr Eranga Ganewatte</b>
16:05	<b>Tea</b>		

# 13<sup>th</sup> October 2024 | Day 02

## Main Congress | Hotel Galadari | 08:00 - 13:15

Time	Session	Topic	Speaker
08:30 - 08:45	Recap day 1		
08:45 - 09:15	Plenary 4	Unlocking the full potential of rectal brachytherapy	Prof Arthur Sun Myint
09:15 - 10:15	Symposium 5 (Case discussion)	Evolving paradigms of head and neck cancer treatment	Dr Sasi Krishna Kavutarapu
			Dr Kanishka De Silva
			Dr Mahilal Wijekoon
			Dr Prahlad Yathiraj
10:15 - 11:15	Free Paper Presentation		
11:15 - 11:45	Tea		
11:45 - 12:45	Symposium 6 (Case discussion)	Tailoring treatment: Personalized care in breast cancer	Dr Sajeevan K V
			Dr Buddhika Ubayawansa
			Dr Leela Siriwardana
			Dr Ramavath Devendra Naik
			Dr Roshana Constantine
12:45 - 13:15	Plenary 5	Radiotherapy for bone metastases: Highly effective, yet often overlooked	Dr Prahlad Yathiraj
13:15	Lunch		

# 14<sup>th</sup> October 2024

## Post-congress | NCISL Live Workshop on Brachytherapy

Time	Session	Speaker
09:00 - 14:15	Brachytherapy for distal rectal cancer in the era of organ preservation	Prof Arthur Sun Myint
14:15	Lunch	



# FACULTY

# Faculty & Moderators



**Dr Hassan Alkhateeb**  
Consultant Haematologist  
Mayo Clinic, Minnesota  
USA



**Dr Anna Britten**  
Consultant Clinical  
Oncologist  
Sussex Cancer Centre  
UK



**Dr Roshana Constantine**  
Consultant Histopathologist  
National Hospital of  
Sri Lanka



**Dr Brian Costello**  
Consultant Oncologist  
Mayo Clinic, Minnesota  
USA



**Dr Eranga Ganewatte**  
Consultant Radiologist-  
Interventional, National  
Cancer Institute  
Sri Lanka



**Dr Biju George**  
Professor, Department of  
Haematology, Christian  
Medical College of Vellore  
India



**Dr Devinda Jayathilake**  
Consultant Haemato-  
oncologist, National Cancer  
Institute  
Sri Lanka



**Dr Mallikarjun Kalashetty**  
Consultant Haematologist  
and Trasplant Physician  
Manipal Hospital Bengaluru,  
India



**Dr Sasi Krishna  
Kavutarapu**  
Assoc. Professor, Head and  
Neck Surgery Homi Bhabha  
Cancer Hospital  
India



**Dr Dileepa Mahaliyana**  
Consultant Surgical  
Oncologist, National  
Hospital, Galle  
Sri Lanka



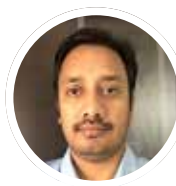
**Dr Neema Mayor**  
Head of Immunogenetics  
Research Anthony Nolan  
Research Institute, UK



**Maj. Gen.(rtd) Dr S H  
Munasinghe**  
Consultant Radiologist  
Sri Lanka



**Prof Arthur Sun Myint**  
Consultant Clinical  
Oncologist Clatterbridge  
Cancer Centre, UK



**Dr T Naidu**  
Assoc. Professor  
Radiodiagnosis, KIMS  
Medical College, India



**Dr Emmanouil Nikolousis**  
Consultant Haematologist  
American Hospital  
UAE



**Dr Ashok Nikapota**  
Consultant Clinical  
Oncologist  
Sussex Cancer Centre, UK



**Dr Ramavath Devendra Naik**  
Consultant Medical  
Oncologist  
Medicover Hospitals, India



**Dr Dhammike Rasnayake**  
Consultant Thoracic Surgeon  
National Hospital for Resp.  
Diseases, Sri Lanka



**Dr Annalisa Ruggeri**  
Consultant Haematologist  
San Raffaele Scientific  
Institute, Milano Italy



**Prof Shailesh V Shrikhande**  
Professor of Surgery  
Tata Memorial Center  
Mumbai, India



**Dr Kanishka De Silva**  
Consultant Oncological  
Surgeon, National Cancer  
Institute, Sri Lanka



**Prof Rajesh Shinde**  
Consultant GI & Thoracic  
Surgeon, Apollo Hospital  
Navi Mumbai, India



**Prof Pandula Siribaddana**  
Professor in Medical  
Education, Postgraduate  
Institute of Medicine  
Sri Lanka



**Dr Leela Siriwardhana**  
Consultant Clinical  
Oncologist, Teaching  
Hospital Ratnapura  
Sri Lanka



**Dr Buddhika Ubayawansa**  
Consultant Surgical  
Oncologist, Teaching  
Hospital Ratnapura, Sri  
Lanka



**Dr Kumaradasan Umashankar**  
Consultant Urologist &  
Transplant Surgeon NINDT,  
National Hospital  
Sri Lanka



**Dr Sajeevan K V**  
Consultant Medical  
Oncologist, MVR Cancer  
Center and Research  
Institute, India



**Dr Auro Viswabandya**  
Medical Director - BMT  
University of Toronto  
Canada



**Dr Wong Siew Wei**  
Consultant Medical  
Oncologist, Gleneagles  
Hospital, Singapore



**Dr Mahilal Wijekoon**  
Consultant Clinical  
Oncologist, National  
Hospital, Galle  
Sri Lanka



**Dr Prahlad Yathiraj**  
Consultant Radiation  
Oncologist, Rela Institute and  
Medical Centre, India



**Dr Janaki Arulmoli**  
Consultant Anaesthetist  
NHSL



**Dr Buddhika Vidanagama**  
Consultant Anaesthetist  
NCISL



**Prof Bhagya Gunathilake**  
Professor in  
Anaesthesiology  
University of Kelaniya



**Dr Buddhika  
Somawardana**  
Consultant Haemato-  
Oncologist  
NCISL



**Dr Sanjeeva Gunasekera**  
Consultant Paediatric  
Oncologist, NCISL



**Dr Chamila Liyanage**  
Consultant Anaesthetist  
LRH



**Dr A G Susantha Asiri**  
Specialist in Internal Medicine  
NCISL



**Dr Dilshan Priyankara**  
Consultant Intensivist  
NHSL



**Dr Dimuthu Gunasena**  
Consultant Anaesthetist  
NHSL



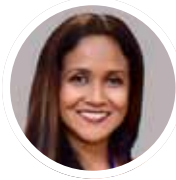
**Dr Lilanthi Subasinghe**  
Consultant Intensivist  
University Hospital KDU



**Dr Yapa Udaya Kumara**  
Specialist in Internal  
Medicine  
BH Beruwala



**Dr Prabath Kumarasinghe**  
Consultant HPB Surgeon  
NHSL



**Dr Anushka Mudalige**  
Consultant Intensivist  
CNTH



**Dr Suchintha Tillakaratne**  
Consultant GI Surgeon &  
Lecturer  
University of Kelaniya



**Dr Prabani  
Maddumarachchi**  
Consultant Paediatric  
Oncologist, NCISL





**Dr Nalika Karunaratne**  
Acting Consultant Intensivist  
NHSL



**Dr Pradeep Siriwardena**  
Consultant Haemato-  
Oncologist  
NCISL



**Dr Suranga Manilgama**  
Specialist in Internal Medicine  
NIID



**Dr Ushani Mayurika  
Wariyapperuma**  
Specialist in Internal  
Medicine & Lecturer  
University of Moratuwa



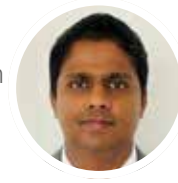
**Dr Nirosan Atulugama**  
Consultant Surgical  
Oncologist  
TH Kurunegala



**Dr Buddhika Dassanayake**  
Consultant HPB Surgeon &  
Lecturer  
University of Peradeniya



**Dr Duminda Subasinghe**  
Consultant GI & HPB Surgeon  
Lecturer  
University of Colombo



**Dr Janaka Thushan  
Piyasiri**  
Consultant Clinical  
Oncologist, TH Badulla



**Dr Sachintha  
Wijesiriwardana**  
Consultant Clinical  
Oncologist, DGH Chilaw



**Dr Malith Nandasena**  
Consultant General & HPB  
Surgeon  
Lecturer USJP




**Dr Yasiru Malinda**  
Consultant Clinical  
Oncologist  
TH Batticaloa



**Dr Sidath Wijesekera**  
SABR Clinical Fellow  
University Hospital,  
Sussex,UK





# **FACULTY ABSTRACTS**

# Workshop on Radiotherapy Contouring and Planning

## Hands-on experience in Lung and Prostate Cancer

This comprehensive workshop focuses on the essential aspects of radiotherapy contouring and treatment planning for prostate and lung cancers. Designed for radiation oncologists, trainees, clinical fellows and medical physicists, the session will cover advanced techniques in target delineation and contouring, ensuring accurate radiation delivery while minimizing toxicity to surrounding tissues. Attendees will learn best practices for contouring critical structures in prostate and lung cancers using modern imaging techniques such as CT, MRI and PET scans.

In addition, a segment of the workshop is dedicated to radiotherapy planning for physicists, with an emphasis on plan review and quality assurance. Participants will have the opportunity to engage in hands-on exercises, reviewing clinical cases and constructing individualized treatment plans under expert guidance. By the end of the workshop, attendees will have a deeper understanding of both contouring and radiotherapy planning processes, leading to improved patient outcomes in clinical practice.

# Workshop on Haematopoietic Stem Cell Transplantation

## Masterclass endorsed by European Society for Blood and Marrow Transplantation (EBMT)

The Masterclass in Haematopoietic Stem Cell Transplantation (HSCT), a groundbreaking pre-congress session of the Annual Academic Congress 2024 by the Sri Lanka College of Oncologists (SLCO), marks an unprecedented event in Sri Lanka. Endorsed by the European Society for Blood and Marrow Transplantation (EBMT), this session will bring together all key stakeholders in the field of stem cell transplantation in Sri Lanka. The event is designed to provide a comprehensive update to participants ranging from trainees to seasoned experts, covering the latest advancements in the Human Leukocyte Antigen (HLA) system, conditioning regimens, haploidentical HSCT and the management of multidrug-resistant infections. Further discussions will cover the latest strategies in managing Cytomegalovirus (CMV) infections, acute and chronic Graft-versus-Host Disease (GvHD), graft failure and the long-term effects of HSCT. Crucially, the session will also address quality management in HSCT units, aiming to standardize practices across Sri Lanka. The collaboration with EBMT established through this event is expected to foster long-term enhancements in the field, significantly advancing stem cell transplantation in the country.

## Workshop on Acute Oncology

### Advanced Management of Oncological Emergencies: A Multidisciplinary Approach

The Sri Lanka College of Oncologists is organizing an engaging workshop on Acute Oncology as a pre-congress workshop for the Annual Academic Congress 2024. In partnership with the Sri Lanka College of Internal Medicine, Ceylon College of Critical Care Specialists and the College of Anaesthesiologists and Intensivists of Sri Lanka, the workshop features four case-based discussions covering neutropenic sepsis, electrolyte disturbances, acute renal injury and cardiac complications. Participants will also benefit from small group discussions on intravenous fluid selection, inotrope/vasopressor choice, blood gas analysis, hypertension and hyperglycaemia. This session is designed to address queries and enhance understanding for consultants, post-graduate trainees, medical officers and nurses.

## Workshop on Liver Surgery

### Live hepatic resection and interactive discussion in collaboration with SLASO & SLHPBA

Liver surgery is naturally complex in nature. It demands technical expertise and meticulous training. Though there are separate specialists like hepatopancreaticobiliary (HPB) surgeons who are trained to tackle these complex operations, general surgeons cannot be completely naïve to HPB surgery as it is a common encounter in trauma casualties.

So having knowledge on basics of liver surgery would be imperative for safety of the patients in an emergency specially when there is no availability of liver surgeons. Along with, there is only a dearth of trained HPB surgeons in the country and they would not be able to provide timely intervention to all HPB oncology patients in the country. Therefore, performing simple liver resections for cancers on the liver by general surgeons would minimize the burden on major centres and benefit the patients in providing treatment without delay.

With this backdrop we have organized this live workshop with the help of international and local experts. The main resource person will be Prof. Rajesh Shindae, a well renowned HPB surgeon at Apollo Hospital, Mumbai, India, who will be demonstrating a live Liver resection. Along with, there will be few talks aligned to inculcate the basics of liver surgery. This will be an interactive workshop with continuous back and forth communication that would be a golden opportunity for the attendees to demystify their doubts.

### Unveiling the Intricacies of the PET CT Scans for Clinicians

PETCT is a pivotal imaging modality for oncological imaging, assisting diagnosis, staging patients with newly diagnosed malignancy, restaging following therapy and surveillance. <sup>18</sup>F FDG is the most commonly used radiotracer. This is a glucose analog that enters the cells similarly to glucose but does not enter into glycolysis and hence accumulates within the cells. Image interpretation is based on the concentration of FDG within the cells and the degree of metabolic activity of the cells.

However, there are limitations/pitfalls in this modality as well. FDG is not tumour / cancer-specific and accumulates in areas of high metabolic activity, resulting in false positives. It could be physiological uptake by brown fat in the body, muscles, heart or brain. A variety of conditions other than malignancy can cause increased FDG uptake, like infections, inflammations, fractures, post-surgical, post-chemotherapy, immunotherapy or radiotherapy and certain benign tumours like adenomas. Similarly, there are false negatives as well. Some of the tumours are low or non-FDG avid. Lesions smaller than 10mm could appear as non-FDG avid due to partial volume averaging. Patients' blood glucose levels could affect the results, as FDG has to compete with glucose to enter the cells. All these conditions could complicate PET CT scan findings, resulting in intricacies in interpretation. The lecture will unveil these conditions.

### Artificial Intelligence: Mastering the Unknown

In this keynote titled, "Artificial Intelligence: Mastering the Unknown," we will delve into the transformative potential of AI, particularly in cancer care. The keynote will first address the exploding AI jargon by simplifying some of the common terminologies such as machine learning, deep learning, predictive modelling, generative AI etc. We will also explore how AI technologies differ from traditional means of analyzing data, the development of AI models and inherent challenges in applying AI technologies, particularly in a field such as Oncology and in low and middle-income country settings. The participants will also gain insights into real-world applications of AI from the field of oncology illustrating how AI-driven tools are already making a tangible difference in clinical settings. However, mastering the unknown comes with its set of ethical and practical challenges. We will address concerns related to data privacy, the interpretability of AI decisions and the importance of maintaining the human touch in patient care. By highlighting these aspects, we aim to provide a balanced perspective that recognizes the immense potential of AI while acknowledging the need for careful and thoughtful implementation.

### Place of surgery in early prostate cancer

Prostate cancer is the second most common malignancy and the sixth most common cause of cancer deaths among men. The median age of patients with prostate cancer is 72 years. The diagnosis is made from clinical, biochemical and histological domains. Staging is done using CECT Pelvis, MRI pelvis, PSMA PET & Bone scan

Management of early prostate cancer includes active surveillance/watchful waiting, radical prostatectomy & radiotherapy. The goal of treatment by any approach is the eradication of cancer while, whenever possible, preserving pelvic organ function. Radical prostatectomy is still a preferred option in well selected cases of localized prostatic cancer in terms of

higher disease-specific and overall survival and lower local and metastatic progression. Drawbacks are risks of impotence and urinary incontinence which can be reduced by nerve sparing techniques and proper case selection. Pelvic lymph node dissection is only for prognostic and staging purposes. Regardless of the surgical approach (open vs laparoscopic vs robotic) the outcomes remains the same.

#### **Evolving treatment landscape in mCRPC**

The cornerstone of treatment of advanced prostate cancer is androgen deprivation therapy (ADT). In metastatic castration sensitive prostate cancer, large body of datasets have supported early intensification of treatment by adding novel hormonal agent (NHA) and/or chemotherapy. Treatment options and sequencing in metastatic castration resistant prostate cancer is shaped by prior treatment exposure, comorbidities, performance status and underlying genomic alteration. Up to 20% of patients with mCRPC may harbour somatic DNA repair pathway alterations that can be targeted using Poly ADP Ribose polymerase (PARP) inhibitors. Less than 5% of patients may have loss of mismatch repair protein expression, rendering them sensitive to treatment with checkpoint inhibitors. Genomic testing should therefore be offered to all patients with mCRPC.

Prostate specific membrane antigen (PSMA) is widely expressed on the surface of most prostate cancer cells. PSMA expression can be harnessed to deliver PSMA-based radioligand therapy in mCRPC patients who have failed novel hormonal agent and/or chemotherapy.

#### **Haemato-Oncology Symposium: Acute Leukemia and Lymphoma**

The Haemato-Oncology Symposium will focus on the latest advances in the diagnosis, treatment and management of acute leukemia and lymphoma. Acute leukemia, including both acute myeloid leukemia (AML) and acute lymphoblastic leukemia (ALL), remains a significant clinical challenge due to its aggressive nature and poor prognosis in many cases. The symposium will highlight novel therapeutic strategies, such as targeted therapies, immunotherapies and advancements in haematopoietic stem cell transplantation. Emerging biomarkers for early detection, risk stratification and monitoring minimal residual disease will also be discussed.

Similarly, lymphoma, particularly Hodgkin's and non-Hodgkin's lymphoma, continues to evolve in its treatment landscape. Experts will delve into recent breakthroughs in CAR-T cell therapy, antibody-drug conjugates and combination regimens that are transforming patient outcomes. Additionally, sessions will explore the impact of personalized medicine, molecular diagnostics and the integration of genetic profiling in both acute leukemia and lymphoma.

This symposium aims to foster collaboration and knowledge exchange among clinicians, researchers and healthcare professionals to advance the care of patients with these haematological malignancies. Attendees will gain insights into cutting-edge research and clinical trials, paving the way for improved therapeutic approaches and patient outcomes in the future.

**Surgical excision of neck lymph nodes in thyroid cancer: Is more always better?**

Thyroid carcinoma, particularly papillary thyroid carcinoma (PTC), commonly presents with lymph node metastasis (LNM). The central compartment (level VI) and lateral cervical lymph nodes (levels II-V) are the most frequent sites of metastasis, occurring in up to 30-80% of patients.

Although the presence of LNM is associated with increased risk of recurrence, its impact on overall survival remains debatable, with most studies indicating a limited effect on mortality.

LNM is more common in younger patients (<45 yrs), men, multi-focality and those with larger tumors or extrathyroidal extension. While LNM does not dramatically alter overall prognosis, it influences disease management, often leading to more aggressive surgical approaches, such as central neck dissection (CND) or lateral neck dissection (LND). Preoperative detection through ultrasound and fine-needle aspiration (FNA) biopsy plays a pivotal role in tailoring treatment strategies.

Ultimately, the extent of lymph node dissection should be balanced against the risks of surgical complications and the potential benefits in terms of disease control and long-term outcomes.

**Optimizing germ cell tumour outcomes balancing efficacy and side effects through risk-stratified treatment**

Testicular cancer is highly treatable solid tumor of young men. In 2022, there were 72,031 new cases resulting in 9,056 deaths from testicular cancer worldwide. While there are effective treatments for testicular cancer, approaches to treatment can be nuanced and complex cases can require multi-disciplinary care. We will review the available chemotherapy regimens for both initial treatment and relapsed disease, as well as indications for surgery and radiation. We will discuss common toxicities and long-term survivorship issues which can arise from treatment.



### Unlocking the full potential of Rectal Brachytherapy

In this presentation, "Unlocking the Full Potential of Rectal Brachytherapy," we will explore the role of rectal brachytherapy as a radiation dose escalation technique to improve organ preservation in rectal cancer patients who are unsuitable for or refuse surgery due to age, comorbidities, or stoma aversion. While external beam radiotherapy (EBRT) with or without chemotherapy can achieve a clinical complete response (cCR) in some patients, the likelihood of long-term organ preservation remains limited. Rectal brachytherapy offers a viable alternative, utilizing either Contact X-ray Brachytherapy (CXB) or High Dose Rate (HDR) techniques to deliver precise doses of radiation.

Recent trials, such as the OPERA and MORPHEUS, have shown that CXB significantly improves organ preservation rates to 97% in cancers smaller than 3 cm, compared to 63% with EBRT alone. Side effects such as rectal bleeding and ulceration are generally mild and self-limiting. These findings underscore the importance of offering dose escalation options to patients who cannot or do not wish to undergo surgery, enhancing their quality of life without compromising oncological outcomes.

### Symposium: evolving paradigms of head and neck cancer treatment

The Sri Lanka College of Oncologists is pleased to present a symposium on the Evolving Paradigms of Head and Neck Cancer Treatment at the Annual Academic Congress 2024. This session will focus on the transformative advancements in both radiotherapy and surgical techniques that are reshaping the management of head and neck cancers.

Led by experts in surgical, medical and radiation oncology, the symposium will take a case-based approach, featuring a few relevant cases to highlight cutting-edge radiotherapy and surgical innovations. Each case will illustrate the integration of advanced treatment modalities into multidisciplinary care, emphasizing how these techniques reduce treatment-related toxicity, preserve organ function and improve survival outcomes. In addition, the session will explore strategies for managing side effects and enhancing patient quality of life through supportive care.

This symposium is designed for oncologists, surgeons and radiotherapy specialists, offering practical insights into real-world scenarios that demonstrate the evolving landscape of head and neck cancer treatment.

### Symposium (Case discussion): Tailoring treatment: Personalized care in breast cancer

Breast cancer remains a leading cause of cancer-related morbidity and mortality worldwide, including Sri Lanka. This case-based discussion focuses on optimizing breast cancer management through a multidisciplinary approach. We present real-world cases highlighting the complexities in diagnosis, treatment planning and post-treatment surveillance. Topics include the role of genetic profiling, the importance of early detection through mammography and advancements in treatment modalities such as neoadjuvant chemotherapy, surgery, radiation and targeted therapies.

We explore challenges in managing advanced breast cancer, addressing metastasis and therapeutic resistance. Special attention is given to local resource constraints and their impact on clinical decision-making. The discussion emphasizes the need for personalized

treatment strategies, balancing efficacy with quality of life considerations. Insights into evolving guidelines, the role of immunotherapy and innovative approaches in palliative care will also be covered.

By sharing these case studies, the session aims to foster collaborative learning among Sri Lankan clinical oncologists, equipping them with the latest evidence-based practices to improve patient outcomes in breast cancer care across diverse clinical settings.

## Workshop on Rectal Brachytherapy

### Live demonstration of brachytherapy for Distal Rectal Cancer in the Era of Organ Preservation

The Sri Lanka College of Oncologists is honored to present a live workshop on Brachytherapy for Distal Rectal Cancer, led by Professor Arthur Sun Myint, a global authority in this field. This post-congress session will focus on the emerging role of brachytherapy as a vital tool in organ preservation, providing an effective alternative to traditional radical surgery for distal rectal cancer.

Participants will witness a live demonstration by Professor Sun Myint, showcasing the precise application of brachytherapy and its benefits in preserving rectal function and enhancing patient quality of life. The workshop will address patient selection criteria, optimal treatment planning and the integration of brachytherapy into multidisciplinary treatment approaches.

This session is designed for oncologists, onco-surgeons, physicists and radiographers who seek to advance their expertise in minimally invasive cancer treatment and organ preservation strategies.



# **ORAL PRESENTATIONS**

# From Heat to Hope: Outcomes of Hyperthermic Intraperitoneal Chemotherapy and Cytoreductive Surgery - A Sri Lankan Experience

Siriwardena WDHD<sup>1</sup>, Manatunga MRS<sup>1</sup>, Mahaliyana SD<sup>1</sup>, Ariyaratna JC<sup>1</sup>, Chiran RP<sup>1</sup>, Siyambalapitiya S<sup>1</sup>, Jayasekera J<sup>1</sup>, Jayawardhana S<sup>1</sup>, Ekanayake U<sup>1</sup>, Gunarathna R<sup>1</sup>, Siriwardhana L<sup>1</sup>

<sup>1</sup>Teaching hospital, Kurunegala.

## Introduction and Objectives

This study aims to evaluate the results of patients receiving Hyperthermic Intraperitoneal Chemotherapy (HIPEC) with Cytoreductive Surgery (CRS). Gaining insights into these outcomes and their demographic correlations are essential for refining patient selection and management strategies.

## Method

A retrospective analysis was performed on 53 patients who underwent HIPEC and CRS at teaching hospital, Kurunegala from July 2018 to July 2023. Data included patient demographics, primary cancer types, perioperative morbidity, mortality and overall survival (OS) outcomes.

## Results

In our study, 79.2% of participants were females with a mean age of 49.9 years. Ovarian cancer was the predominant primary diagnosis, comprising 52.8% of cases followed by appendiceal cancer. A majority of patients (75.5%) received HIPEC as their primary treatment. The average blood loss was 1693.4 ml and the mean surgery duration was 438.6 minutes. Postoperative complications occurred in 39.6% of patients and the one-month mortality rate was 13.2%. The two-year OS was 40%. Multivariate analysis did not identify any independent predictors of poor OS.

## Conclusion

This study reveals that HIPEC combined with CRS is challenging yet potentially beneficial for Sri Lankan patients with advanced peritoneal malignancies. The procedure's complexity is evident from significant blood loss and extended surgery times. Despite notable postoperative risks one-month mortality of 13.2% and two-year OS of 40% highlights its potential value, underscoring the need for refined patient selection and post operative management strategies.

# Impact of *PIK3CA* Mutations on Disease Outcome & Recurrence-free Survival (RFS) of Sri Lankan Breast Cancer Patients; a Pilot Study

Cabraal LLTR<sup>1</sup>, Kumarasinghe I<sup>2</sup>, Perera R<sup>2</sup>, Balawardana J<sup>2</sup>, Viswakula S<sup>1</sup>, Perera N<sup>3</sup>, Galhena GH<sup>1</sup>

<sup>1</sup>Faculty of Science, University of Colombo, Sri Lanka

<sup>2</sup>University Hospital, General Sir John Kotelawala Defence University, Sri Lanka

<sup>3</sup>Genetech Molecular Diagnostics, Sri Lanka

## Introductions and Objectives

Mutations of the *PIK3CA* oncogene have been identified as driver mutations in breast cancer pathogenesis, impacting patient prognosis and treatment outcomes. This study aimed to investigate the relationship between *PIK3CA* mutations, selected clinicopathological parameters, and recurrence-free survival (RFS) among the Sri Lankan breast cancer population.

## Method

The study was conducted based on a mutational analysis done on 32, formalin-fixed, paraffin-embedded samples of breast cancers surgically excised at the University Hospital KDU. Kaplan-Meier analysis and Cox proportional regression were employed to evaluate the associations between *PIK3CA* mutations, selected clinicopathological parameters, and RFS.

## Results

Our findings reveal a significant association between reported *PIK3CA* mutations and RFS for the first time in Sri Lankan breast cancer patients ( $p=0.003$ ). The presence of *PIK3CA* mutations was associated with a striking 15-fold higher risk of recurrence (Hazard Ratio/HR 15.489, 95% Confidence Interval/CI 1.373– 174.720), highlighting its potential in worsening the disease outcome of the patients. Additionally, lymph node metastasis ( $p=0.026$ , HR 135.784) and Ki67 proliferative index  $\geq 20\%$  ( $p=0.029$ , HR 125.397) were also associated with a very high risk of cancer recurrence in our population.

## Conclusion

Despite the need to be validated in a larger cohort of patients, these results indicate the prognostic value of *PIK3CA* mutations in breast cancer survival and also disclose the importance of *PIK3CA* mutation testing in predicting the risk of recurrence. Furthermore, they underscore the need to integrate PI3K inhibitors, which are already being prescribed in developed countries, into the therapeutic management of Sri Lankan breast cancer patients.

## Paediatric Acute Myeloid Leukemia: Challenges in optimizing survival outcomes in Sri Lanka

Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>, Jayasekara DT<sup>1</sup>, Chiran RP<sup>1</sup>, Gunasekera DS<sup>1</sup>, Hapuarachchi T<sup>1</sup>, Somathilaka M<sup>1</sup>, Rathnayake RWMWK<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka (NCISL)

### Introduction and objectives

Acute Myeloid Leukemia (AML) is a severe form of leukemia with high mortality. Its management is based on genetic risk factors and evaluation of minimal residual disease (MRD). Allogeneic haematopoietic stem cell transplant (Allo-SCT) is the standard of care for patients with high-risk genetics or positive MRD. This study aims to analyze the demographics, overall survival (OS), event-free survival (EFS) and relapse-free survival (RFS) of AML patients.

### Method

This retrospective cohort study examined records of patients under 19 years with AML at NCISL from 01/01/2016 to 30/08/2024. Kaplan-Meier and Cox-regression analyses used to evaluate survival rates.

### Results

The cohort included 272 patients. The OS was 46.7%, with a median 5-year survival of 16 months. EFS was 58.6% and RFS was 61.4%. Adolescents had poorer OS ( $P = 0.012$ ), while those with trisomy 21 had better EFS ( $P=0.028$ ) and RFS ( $P=0.038$ ). Genetic studies were lacking in 49.3%, while only a limited translocation panel was done in 46.7%. However, the first assessment of bone marrow morphology was a significant predictor of OS. Treatment abandonment was associated with worse EFS and RFS. Major causes of death included treatment complications (39.3%) and disease progression (32.4%). Among those 14 patients who received HSCT, 8 were alive, significantly improving OS compared to the non-Allo-SCT group.

### Conclusion

This study highlights the urgent need for improved diagnostic resources and supportive care for AML in Sri Lanka. Expanding access to genetic testing and Allo-SCT is crucial for enhancing treatment outcomes.

# Are women with early breast cancer supported to make healthy surgical treatment decisions? Dissecting autonomy in a resource-constrained setting

Kumar R<sup>1</sup>, Sivakumar G<sup>2</sup>, Thuseetharan D<sup>2</sup>, [Rajasooriyar C](#)<sup>3,4</sup>

<sup>1</sup>Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna, Jaffna, Sri Lanka

<sup>2</sup>Faculty of Medicine, University of Jaffna, Sri Lanka

<sup>3</sup>Teaching Hospital, Jaffna, Sri Lanka

<sup>4</sup>Tellippalai Trail Cancer Hospital, Jaffna, Sri Lanka

## Introduction and objectives

Breast cancer treatment is a contested space in which therapeutic decisions collide with women's preferences. In northern Sri Lanka, mastectomy remains the mainstay of surgical treatment of early breast cancer despite equivalent survival outcomes following breast conserving surgery (BCS) and radiotherapy. This study explores autonomy in decision-making among women with early breast cancer who were eligible for BCS yet opted for mastectomy in northern Sri Lanka.

## Method

An exploratory descriptive qualitative study was carried out among 15 women referred for adjuvant therapy to Tellippalai Trail Cancer Hospital in Jaffna district after undergoing mastectomy for early breast cancer. All women who matched the study criteria were recruited prospectively until data saturation was reached. Data were collected through in-depth semi-structured interviews, which were transcribed in Tamil, translated into English, coded using QDA Miner Lite software and analysed thematically.

## Results

The decision-making environment was not conducive for informed decision-making. Pre-surgical counselling was brief and often held during busy ward rounds. Most women received partial information regarding surgical treatment options; a fifth were not aware of BCS and a substantial proportion did not know they were eligible. Neither survival rates nor risks/benefits were compared in a constructive manner. However, many women expressed satisfaction with their involvement in decision-making, although on closer analysis, we found their decisions were based on incomplete information and fears of spread/recurrence communicated by treating teams.

## Conclusion

Opportunities for women to exercise their autonomy in relation to treatment of early breast cancer are limited in northern Sri Lanka. Most participants made decisions under unsupportive conditions without access to evidence-based information. While it behooves medical professionals to provide this information, health authorities must institute systems to support patient autonomy.

**Keywords:** Patient autonomy, Breast cancer, Mastectomy, Breast conservation therapy, Sri Lanka.

## A quality improvement project to reduce the average number of days taken for optimal pain control among palliative cancer patients in the National Cancer Institute (NCI) Sri Lanka

Hapuarachchi TD<sup>1</sup>, Dilankani SASS<sup>1</sup>, Weerasinghe S<sup>1</sup>, Senarath AY<sup>1</sup>, Karunarathne KKDT<sup>1</sup>, Amarasuriya RS<sup>1</sup>, Ranasinghe S<sup>1</sup>

<sup>1</sup>Palliative Care Unit, National Cancer Institute, Sri Lanka.

### Introduction and Objectives

Suboptimal pain management significantly impacts the quality of life in onco-palliative patients. This study aims to identify factors leading to inadequate pain control and implement targeted interventions to improve pain management. Our primary objective is to reduce the average time to decrease self-reported severe pain scores (>6/10) to mild pain (<4/10) from 8 days to 4 days among adult onco-palliative patients at NCI's oncology wards, within a six-month period.

### Method

Between May 1<sup>st</sup> 2022 and December 1<sup>st</sup> 2022, a random sample of 75 onco-palliative patients from 11 adult oncology wards at NCI was selected during their in-patient stay. Pain levels were assessed using the Numerical Pain Scale. A pre-survey established the baseline duration for reducing severe pain to mild pain. Contributing factors to inadequate pain control were identified through process mapping, fishbone analysis and Pareto charts. Targeted interventions were then implemented. The effectiveness of these interventions was monitored using run charts plotted twice weekly. A post-survey evaluated improvements and a sustainment plan was developed.

### Results

By the end of the study, the average time required to reduce severe pain to mild pain decreased from 8 to 3 days. Each implemented intervention contributed significantly to this improvement.

### Conclusion

The study realized a reduction of over 50% in the time required for pain control, highlighting the effectiveness of quality improvement initiatives in low-resource, settings. This success underscores the potential for enhancing overall quality of care at NCI Sri Lanka.



# Implementing ultra-hypofractionated radiotherapy for prostate cancer in resource-limited settings

De Silva P<sup>1</sup>, Jayawantha B<sup>1</sup>, Chathurika K<sup>1</sup>, Gunawardena I<sup>1</sup>, Gamage A<sup>2</sup>, Choudhury A<sup>3</sup>, Joseph N<sup>2,4</sup>

<sup>1</sup>National Hospital Galle, Sri Lanka.

<sup>2</sup>District General Hospital, Hambantota, Sri Lanka.

<sup>3</sup>The Christie Hospital, Manchester, UK.

<sup>4</sup>District General Hospital, Matara, Sri Lanka.

## Introduction & Objectives

Conventional fractionation regimens of localised prostate cancer comprise 7-8 weeks, with moderate hypofractionation regimens requiring 4 weeks of treatment. These schedules place a significant burden on our radiotherapy departments, where waiting times extend up to 12 weeks. The PACE-B trial proved equivalence of an ultra-hypofractionated 5 fraction regimen with moderate hypofraction both in terms of toxicity and biochemical disease free-survival. Following the publication of this trial, we began implementing this regimen at the National Hospital, Galle for patients being referred from the District General Hospital, Hambantota.

## Methodology

Patients with localised or oligometastatic prostate cancer referred for radiotherapy to the prostate gland from the District General Hospital, Hambantota were included in the study. Patients underwent CT simulation with the standard bladder-filling protocol and were treated with a daily enema prior to simulation and treatment. Contouring was done according to the PACE-B protocol. The CTV comprised the prostate gland, while the PTV was derived with an expansion of 3-5mm. The CTV received a dose of 40 Gy in 5 fractions and the PTV was treated to 35 Gy. Treatment was delivered every other day and all patients underwent a limited CT simulation on each fraction with fusion with the planning CT to ensure acceptable bladder and rectal conformity. Acute GI and GU toxicity was recorded 90 days post-treatment.

## Results

Twelve patients were successfully treated with this schedule from November 2023 to June 2024. Rectal, bowel and bladder constraints were successfully met in all patients along with CTV and PTV coverage. Grade 2 GI toxicity was reported in 4/12 (33%) patients while 3/12 reported Grade 2 GU toxicity. There was no grade 3 acute toxicity.

## Conclusion

Delivery of ultra-hypofractionated radiotherapy is feasible in our setting and would lead to significant sparing of resources.

# Dosimetric Impact of the Mono Isocentric Technique and Dual Isocentric Technique in Breast cancer Radiotherapy

WWDKN Dissanayaka<sup>1</sup>, L Thasanthan<sup>1</sup>, U Saravanamuttu<sup>2</sup>

<sup>1</sup>Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka.

<sup>2</sup>National Cancer Institute, Sri Lanka

## Introduction

Role of radiotherapy in breast cancer management is significant. Sparing the surrounding normal tissues is one of the key considerations in radiotherapy. In breast radiotherapy, heart and lungs are the main organs at risks (OARs). Mainly the tumor bed, whole breast or the chest wall (CW) and the regional lymph nodes need to be irradiated for the optimal survival outcomes.

## Method

This quantitative study has generally compared the mean doses of OARs between Mono Isocentric Technique (MIT) and Dual Isocentric Techniques (DIT) and it was done retrospectively. 200 patients, who had undergone adjuvant left breast radiotherapy as a curative intent were obtained at the Department of Radiotherapy and Oncology, National Cancer Institute, Sri Lanka (NCISL). After that, patients were divided into MIT and DIT according to the isocenter placement in CW field and Supra Clavicular Fossa (SCF) field. Then analyzed the comparison between MIT and DIT with respect to the mean doses of Left Lung and Heart in 95% coverage of Planning Target Volume by using SPSS 29.0.

## Results

In CW field, the P value for mean heart dose in MIT and DIT was 0.931 and mean left lung dose in MIT and DIT was 0.304. So, there was no significant difference. In Contrast, mean heart doses (0.39 Vs 0.174) and mean left lung doses (9.324 vs 4.345) had less doses with MIT than DIT in SCF field.

## Conclusion

In MIT, OARs doses were smaller than DIT. So, working with MIT is safer than DIT in terms of dosimetry. In both techniques heart doses were less than the left lung doses.



# POSTER PRESENTATIONS

# A Novel BCR-ABL Translocation in Acute Lymphoblastic Leukaemia

Athukorala TG<sup>1</sup>, Kumara WTGCR<sup>1</sup>, Hettiarachchi THS<sup>2</sup>, Punchihewa C<sup>1</sup>, Jayathilake PWDCC<sup>2</sup>

<sup>1</sup>Genelabs Medical (Pvt) Ltd

<sup>2</sup>Haemato-Oncology Unit, National Cancer Institute Sri Lanka.

## Introduction and Objectives

BCR-ABL1 or Philadelphia chromosome (Ph)-positive Acute Lymphoblastic Leukaemia (ALL) has about 60% long-term survival rate. Recent improvement of survival of these patients is largely due to the addition of tyrosine kinase inhibitors to the treatment protocol. BCR-ABL1 positive ALL accounts for about 25-30% of adult cases. BCR-ABL1 fusion-oncogene exists in three main forms and here we describe a novel entity.

## Case report

Previously well, 32-year-old male presented with one-week history of febrile illness and bone marrow biopsy was compatible with B-ALL. He was started with induction chemotherapy comprising steroids, vincristine, daunorubicin, intrathecal-methotrexate and asparaginase. With RNA extracted from bone marrow, a Gel-electrophoresis following conventional PCR was performed. 1000-1500bp unexpected band appeared in gel-picture instead of 550bp product expected for p190 with breakpoint in exon1 of the BCR gene. No bands were observed for p210, p230, t(1;19), t(4;11) or t(12;21) confirming the absence of these translocations. Sanger sequencing was performed with gel-purified PCR product. An e6a2 translocation, a novel presentation of Ph-positive ALL was identified which was occurring as a result of a rare translocation between BCR Exon6 and ABL1 exon2. This wouldn't have been identified with the standard RT-PCR and was identified only due to the addition of gel-electrophoresis. Then Imatinib, a tyrosine kinase inhibitor, was added to the treatment protocol of the patient.

## Conclusion

Routinely checked translocations for ALL were absent in our patient and a novel e6a2 BCR-ABL1 variant was detected with gel-electrophoresis. This will help to improve patient's treatment outcome.

# A clinical audit on mammography follow-up of localized breast cancer patients in a single unit of National Cancer Institute, Sri Lanka (NCISL), according to the European Society of Medical Oncology (ESMO) Clinical Practice Guidelines 2023

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Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chiran RP<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka

## Introduction

Breast cancer continues to be the most prevalent cancer among women in Sri Lanka. Current guidelines recommend annual mammography for five years as the standard follow-up for patients with treated localized and asymptomatic breast cancer.

This audit evaluates the adherence to the follow up protocol in 2023 ESMO Clinical Practice Guidelines in a local clinic setting.

## Method

A retrospective cross-sectional analysis was conducted on breast cancer patients registered in 2019, assessing their follow-up plans based on clinic records. SPSS version 21 was used for data analysis.

## Results

Out of total 83 patients registered with localized breast cancer, 16% developed either loco regional recurrence or distant metastases and 8% defaulted follow up. Among the patients eligible for the 1st follow up mammogram, 82% underwent the test, but mean interval was 19 months. Only 67%, 62% and 57% had the 2nd, 3rd and 4th follow up mammogram respectively and the mean duration between two mammograms were 20, 16 and 13 months respectively.

## Conclusion

Although majority underwent 1<sup>st</sup> follow up mammography, the duration is longer than the desired interval. Adherence rates for the second, third and fourth mammograms were further reduced in both number and the interval. Mammography being the only recommended follow up tool, there is a significant gap in adherence to guidelines which might compromise detecting early recurrences. Further analysis is needed to evaluate the causes in order to optimize the survivorship care.

## Factors associated with knowledge on Pap smear screening among women aged 35-60 years, attending the outpatient department at a tertiary care hospital in Sri Lanka

Dinethra MWT<sup>1</sup>, Gammanpila NT<sup>1</sup>, Hiranya KM<sup>1</sup>, Pathivila SV<sup>1</sup>, Chinthanie DLJ<sup>1</sup>, Seneviwickrama KLMD<sup>1,2</sup>, Wijesinghe MSD<sup>3</sup>, Vidanapathirana DM<sup>4</sup>

<sup>1</sup>Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

<sup>2</sup>Centre for Cancer Research, University of Sri Jayewardenepura, Sri Lanka

<sup>3</sup>Health Promotion Bureau, Ministry of Health, Sri Lanka

<sup>4</sup>Department of Pathology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

### Introduction

In Sri Lanka, cervical cancer is the 4<sup>th</sup> most common type of cancer among females. Pap smear is a proven, cost-effective and efficient method of screening cervical cancer by detecting pre-cancerous cells.

### Objectives

Our aim was to describe factors associated with knowledge on Pap smear in women 35-60 years of age.

### Method

A descriptive cross-sectional study was conducted from March 2023 to February 2024 among 373 women between 35-60 years attending outpatient department at Sri Jayewardenepura General Hospital selected by using systematic sampling. An 18-item pretested interviewer administered questionnaire was used to assess knowledge. The knowledge was dichotomized as "Good" and "Poor" based on mean score. Data were analyzed using SPSS version 25.0. Chi-square test was used to find sociodemographic factors associated with knowledge. Level of significance was taken as  $p < 0.05$ .

### Results

The mean age was 48.38 (SD 7.96). 53.9% had good knowledge about Pap smear. Level of education, employment and civil status were found to be associated with knowledge on Pap screening. Good level of knowledge was found among women who hold a degree (73.9% vs 7.7%,  $X=18.496$ ,  $df=1$ ,  $p < 0.001$ ), employed (62.8% vs 48.2%,  $X=7.513$ ,  $df=1$ ,  $p=0.006$ ) and married (56.7% vs 26.1%,  $X=9.110$ ,  $df=2$ ,  $p=0.011$ ).

### Conclusion

Higher education, being employed and married were the factors associated with good knowledge. Since only 53% of women had a good level of knowledge on Pap screening, more awareness programmes are needed to make women aware of this screening service.

**Key words:** Pap smear, cervical cancer screening, oncology, knowledge, associated factors.

## Feeding and Nutrition of Childhood Cancer Patients: Insights for A Positive Outcome

Godevithana J<sup>1</sup>, Perera S<sup>2</sup>, Mallawarachchi S<sup>3</sup>, Kalhari G<sup>2</sup>

<sup>1</sup>Department of Community Medicine, Faculty of Medicine, University of Ruhuna

<sup>2</sup>National Cancer Control Programme, Ministry of Health

<sup>3</sup>National Cancer Institute, Sri Lanka

### Introduction

Low and middle-income countries account for 90% of childhood cancers. The nutritional status of a child with cancer is of pivotal importance in treatment, outcome and survival.

### Method

A cross-sectional study was conducted among childhood cancer patients admitted to National Cancer Institute, Sri Lanka. Data on feeding and associated symptoms were collected using an interviewer-administered questionnaire. While cancer information was retrieved from clinical documents, the weight, height and mid-upper arm circumference were measured by trained data collectors.

### Results

Two hundred childhood cancer patients (one month to 18 years of age) were included in the study. Nearly one-third of children were underweight (67, 33.5%) or wasted (68, 34.0%) and one-fourth of children were stunted (43, 21.5%). Leukaemia was the commonest cancer (117, 58.5%) and B cell Acute Lymphoblastic Leukaemia (87, 43.5%) was the commonest histological type. Oral feeding was the main feeding method. A significant number of children experienced symptoms affecting feeds (119, 59.5%) and showed undesirable dietary behaviours such as food aversion (129, 64.5%) and refusing foods (107, 53.5%). Being underweight and wasting were associated with solid tumours ( $p=0.05$  and  $0.03$ , respectively). None of the symptoms or behaviours were associated with cancer type.

### Conclusion

Undernutrition was higher and associated with solid tumours. Symptoms affecting feeding and undesirable dietary behaviours were common. We recommend further intervention to improve feeding and nutritional status of childhood cancer patients.

**Keywords:** Childhood Cancer Nutrition, Dietary Behaviour, Feeding, Malnutrition.

## Complications of 5-fluorouracil Based Chemotherapy in Patients Undergoing Ambulatory Chemotherapy via an Infusion Pump

Jayasinghe D<sup>1</sup>, Malaviarachchi SL<sup>2</sup>, Balawardane J<sup>3</sup>, Perera NRP<sup>3</sup>, Senanayake AN<sup>3</sup>, Jayalath H<sup>3</sup>

<sup>1</sup>Palliative Care Unit, National Cancer Institute, Sri Lanka

### Introduction and objectives

5-fluorouracil (5-FU) is a chemotherapeutic agent which is combined with other agents such as oxaliplatin and leucovorin to improve response rates but associated with increased toxicity. Continuous infusion over 44 hours has become the standard of care and it could be provided via a central venous access port and an infusion pump.

### Method

This is a retrospective study conducted on all patients treated with 5-fluorouracil infusion via an ambulatory infusion pump, between March 2021 and April 2022. Side effects, developed after administration of chemotherapy were assessed according to National Cancer Institute Common Terminology Criteria for Adverse Events version 5.0 (NCI-CTC).

### Results

Forty-five patients were included in the study. The mean age was 54.9 years (SD±9.6) and the commonest age group was 56-65 years. Patients were diagnosed with either colorectal carcinoma (93.3%) or Head and Neck cancer (6.4%). All patients received 5-FU infusion with 40 patients (88.9%) receiving the FOLFOX-4 regimen. 394 infusion cycles were given (mean=9 cycles). Neutropenia (42.2%) and anaemia (37.8%) were the common haematological toxicities. Asthenia (86.7%), anorexia (84.4%) nausea (73.3%) and peripheral neuropathy (55.6%) were common non-haematological side effects. Catheter thrombosis (6.7%), catheter tip dislocation (6.7%) and exit site infections (2.2%) were noted.

### Conclusion

5-FU based chemotherapy is associated with haematological and non-haematological toxicity. Infusion pumps, while being a safe and convenient option, may lead to reduced mobility and cause interruption of daily activities. Recommend performing further studies to compare adverse effects profile between continuous 5-FU infusion and a bolus.



## The prevalence of symptoms and their associated factors among newly registered adult onco-palliative patients in the palliative care unit of the National Cancer Institute Sri Lanka (NCISL) : A single institution experience

Weerasinghe S<sup>1</sup>, Hapuarachchi TD<sup>1</sup>, Dilankani SASS<sup>1</sup>, Amarasuriya RS<sup>1</sup>, Kalhari LAC<sup>1</sup>, Kandemulla KAUH<sup>1</sup>, Jayawardana MKPDS<sup>1</sup>, Kumara RADD<sup>1</sup>, Kalpani KHN<sup>1</sup>, Kumari WAK<sup>1</sup>, Prasadini HAL<sup>1</sup>

<sup>1</sup>Palliative Care Unit, National Cancer Institute, Sri Lanka,

### Introduction and objectives

Palliative care, an emerging specialty in Sri Lanka. NCISL is the prime center for onco-palliative services that caters 1,000 new patients annually. Despite the abundance of global research on symptomatology in onco-palliative patients, there's a dearth of studies in Sri Lanka. This study intended to bridge this gap, improve patient care and advance clinical education.

The main objective is to determine the prevalence of symptoms and their associated factors among newly registered adult onco-palliative patients in NCISL.

### Method

A retrospective cross sectional study was conducted among 732 newly registered adult onco-palliative patients in NCISL from 01.01.2022 to 31.12.2022. Descriptive and analytical statistics were used in data analysis.

### Results

The most prevalent symptoms among the onco-palliative patients were pain (93%), lack of energy (71%), loss of appetite (70%), sleep disturbances (69%) and psychological symptoms (67%). This was consistent regardless of sex or primary malignancy.

Patients under 60 showed a higher prevalence of pain and psychological symptoms compared to those over 60 ( $p < 0.05$ ).

Patients with metastatic disease reported a higher prevalence of symptoms compared to patients with non metastatic disease ( $p < 0.05$ ).

Majority (79%) of the patients exhibited a palliative performance scale above 50%.

### Conclusion

This study sheds light on the symptomatology among onco-palliative patients at the NCISL. These insights pave the way for tailored interventions aimed at improving patient outcomes and fostering holistic wellbeing within the realm of onco-palliative care.

## Prevalence of Asymptomatic Bacteriuria, Antibiotic Sensitivity Patterns of Isolated Bacteria and Association of Cancer-Related and Patient-Related Factors in Cancer Patients Attending Trail Cancer Hospital, Tellippalai, Sri Lanka

Wijewardhane RIH<sup>1</sup>, Hapitigama RHGL<sup>1</sup>, Samaraweera SAPK<sup>1</sup>, Gnanakarunyan TJ<sup>1</sup>, Ramachandran R<sup>2</sup>, Saravanabavananthan S<sup>2</sup>, Kumbukage PSP<sup>3</sup>

<sup>1</sup>Department of Medical Laboratory Science, Faculty of Allied health Science, University of Jaffna, Sri Lanka

<sup>2</sup>Teaching Hospital, Jaffna, Sri Lanka

<sup>3</sup>National Cancer Institute, Maharagama, Sri Lanka

### Introduction and objectives

Cancer patients, especially in developing countries, face increased infection risks and complications like sepsis from untreated asymptomatic UTIs. Frequent antibiotic use can lead to resistance, necessitating regular monitoring of bacterial patterns. This study aimed to determine the prevalence of asymptomatic bacteriuria (ABU), the antibiotic sensitivity patterns of isolated bacteria and the association of cancer-related and patient-related factors in cancer patients at Trail Cancer Hospital, Tellippalai.

### Method

A descriptive cross-sectional study was conducted with 245 cancer patients without UTI symptoms. Urine samples were analyzed using standard microbiological techniques and antibiotic susceptibility testing was performed with the CLSI disk diffusion method. Data on patient and cancer-related factors were collected via an interviewer-administered questionnaire and analyzed with SPSS version 20, with statistical significance set at  $P < 0.05$ .

### Results

Among 245 patients, 26.5% were inpatients and 73.5% outpatients. ABU was found in 8.2% (20/245) of patients, more common in inpatients (13.85%) than outpatients (6.11%). The most common bacteria were coliforms (55%), followed by *Pseudomonas* species (15%), coagulase-negative *Staphylococcus* (15%), *Acinetobacter* species (10%) and *Streptococcus* species (5%). Multidrug resistance was present in 20% of isolates. Effective antibiotics for Gram-negative bacilli included Nitrofurantoin, Amikacin, Netilmicin, Meropenem, Imipenem and Piperacillin-tazobactam. Coliforms showed significant resistance to Amoxicillin (63.6%), Ampicillin (54.5%) and Co-amoxiclav (45.5%). Significant associations with ABU were found for age ( $p=0.01$ ), occupation ( $p=0.019$ ) and UTI history ( $p=0.029$ ).

### Conclusion

ABU prevalence was higher among inpatients, with coliforms being the most prevalent pathogen. This study suggests that second-line antibiotics are highly effective for treating Gram-negative bacilli, while resistance trends are noted for first-line antibiotics.

## Unveiling the Surge: Paediatric Acute Myeloid Leukemia Trends in Sri Lanka

Siriwardena WDHD<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Gunasekera DS<sup>1</sup>, Somathilaka M<sup>1</sup>, Rathnayake RWMWK<sup>1</sup>, Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>, Chiran RP<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka.

### Introduction and objectives

Acute Myeloid Leukemia (AML) in children, though rare, is an aggressive and high-mortality haematologic malignancy. Concerns are mounting about its increasing incidence. In Sri Lanka, no data exists on the incidence trends of paediatric AML, highlighting a significant knowledge gap. This study aims to analyze the trends in paediatric AML cases in Sri Lanka from recent years and forecast future incidences to guide health care strategies.

### Method

A retrospective study was conducted on paediatric AML cases in Sri Lanka from 2016 to 2023. Age-standardized incidence rates (ASIR) per 1 million population were calculated. Joinpoint regression analysis identified significant trends, while the Annual Percent Change (APC) and Average Annual Percent Change (AAPC) assessed trend significance. Forecasts were based on AAPC.

### Results

Between 2016 and 2023, the ASIR for paediatric AML rose from 1.57 to 2.12 per 1 million, a 1.35-fold increase. The AAPC was 4.45, reflecting a significant upward trend. Joinpoint regression analysis confirmed this increase as statistically significant ( $p < 0.05$ ).

### Conclusion

The significant rise in paediatric AML in Sri Lanka emphasizes the urgent need to strengthen healthcare infrastructure, including specialized care units, intensive care facilities, haematopoietic stem cell transplant (HSCT) services and expanded isolation units. Future research should explore risk factors contributing to this alarming trend.

# Analysis of Epidemiological and Histopathological Features in a Cohort of Breast Cancer Patients: Highlighting the Need for a National Breast Cancer Screening Programme in Sri Lanka

Cabraal LLTR<sup>1</sup>, Kumarasinghe I<sup>2</sup>, Perera R<sup>2</sup>, Balawardana J<sup>2</sup>, Viswakula S<sup>1</sup>, Perera N<sup>3</sup>, Galhena GH<sup>1</sup>

<sup>1</sup>Faculty of Science, University of Colombo, Sri Lanka

<sup>2</sup>University Hospital, General Sir John Kotelawala Defence University, Sri Lanka

<sup>3</sup>Genetech Molecular Diagnostics, Sri Lanka

## Introduction and Objectives

The disease presentation of breast cancer is known to vary by the population tested. The present study aims to identify the epidemiological and histopathological features among Sri Lankan breast cancer patients.

## Method

A retrospective analysis was conducted on 42 Sri Lankan breast cancer patients whose tumors were surgically excised at the University Hospital KDU during 2019 - 2023.

## Results

The age of diagnosis (in years) ranged from 39 to 84 with a mean of 59. Both the mode and median age of diagnosis were 56. The mean tumor size was 3.25cm, with 69.05% of the tumors spanning a maximum diameter > 2 cm. A majority of the tumors were excised from the right breast (57.14%) and were Invasive Breast Carcinomas of No Special Type (83.34%). Most of the tumors were moderately-differentiated tumors of grade 2 (57.50%) and pathological stage II (66.67%) at diagnosis, with 37.50% of the patients having metastatic axillary lymph nodes. 80.95% of the tumors were ER/PR-positive, Her2-negative, luminal molecular subtypes with the rest being either Her2-enriched or triple-negative breast cancers.

## Conclusion

Despite the median age at diagnosis being higher than a local study done 6 years ago, our results suggest a comparatively earlier onset of breast cancer in Sri Lankans, aligning with a trend generally reported in Asians, compared to the late onset in Westerners. This, together with most tumors being stage II and having passed stage I at diagnosis, emphasizes the urgent need for establishing an efficient breast cancer screening program in Sri Lanka.

# Aetiological agents and antifungal susceptibility pattern of fungal bloodstream infections in patients from National Cancer Institute, Sri Lanka

Pemasiri KACC<sup>1,2</sup>, Jayasekera PI<sup>1</sup> Hapudeniya HWMM<sup>3</sup>

<sup>1</sup>Department of Mycology, Medical Research Institute, Colombo, Sri Lanka

<sup>2</sup>Faculty of Medicine, University of Kelaniya

<sup>3</sup>Ministry of Health, Colombo, Sri Lanka

## Introduction and Objectives

Invasive fungal bloodstream infections are common opportunistic infections among patients with malignancy that lead to high morbidity and mortality. Understanding the local prevalence of fungal pathogens and their susceptibility to antifungal agents is crucial in clinical management and addressing antimicrobial resistance.

## Method

Blood culture isolates received between 2015 and 2023 from the National Cancer Institute to the Department of Mycology-Medical Research Institute were retrospectively analyzed to identify the aetiological agents and their antifungal susceptibility pattern.

## Results

Among the 471 isolates received, there were 391 *Candida* isolates, 64 non-candida yeast isolates and 8 mold isolates. *Candida tropicalis*, *Candida parapsilosis* and *Candida albicans* were the most prevalent *Candida* species, with percentages of 33.0%, 29.2% and 7.8% respectively while *Candida glabrata*, *Candida kruseii* were less frequently isolated.

*Trichosporon* (9.5%) and *Saccharomyces* (3.3%) were the most prevalent non-candida yeasts while molds (*Fusarium* and *Aspergillus* species) were occasionally isolated.

Overall susceptibility of *C. tropicalis*, *C. parapsilosis* and *C. albicans* to fluconazole was 71.0%, 71.4% and 77.7% respectively. Higher resistance to fluconazole was noted in *C. glabrata* and *Trichosporon* species. Over 99% of the isolates were sensitive to amphotericin throughout the years. These susceptibility patterns have not differed significantly over the years.

Fourteen isolates, including a few probable *Candida auris* isolates, could not be speciated by the available laboratory facilities.

## Conclusion

*C. tropicalis* and *C. parapsilosis* were the most common causes of fungaemia. The susceptibility of blood culture isolates has remained high for amphotericin but relatively lower for fluconazole over the years.

## A Clinical Audit of Colorectal Cancer Patients' Colonoscopy Follow-Up at the National Cancer Institute of Sri Lanka

Senanayaka SDLB<sup>1</sup>, Chandramali HT<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chiran RP<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka

### Introduction and Objective

Colorectal carcinoma (CRC) is the 3rd most common cancer in Sri Lanka, responsible for 4% of cancer deaths. Early detection of recurrence through follow-up is crucial for timely treatment. This audit aimed to assess the current practice of colonoscopy follow-up for CRC patients in two units of the National Cancer Institute, Sri Lanka (NCISL) based on NCCN Guidelines.

### Method

A retrospective cross-sectional study was conducted, analyzing follow-up care for CRC patients who had initial surgery at local hospital as well as NCISL. Two units were randomly selected and all localized CRC patients registered in 2019 were included. Audit standards were defined per NCCN guidelines and clinic records were used for data collection. Data were analyzed using SPSS version 21.

### Results

Of 51 patients, 30 had colon cancer and 21 had rectal cancer. Thirty-nine patients were eligible for the first-year follow-up colonoscopy; 1 developed metastatic disease and 11 defaulted. Of the 39 patients, 71.4% (n=30) underwent the first follow-up colonoscopy with a mean duration of 19.6 months. Patients who did not undergo pretreatment colonoscopy (45.1%) had their first colonoscopy with a mean interval of 18.25 months. Eighteen patients were eligible for a second colonoscopy at three years, of those 61.1% (n=11) underwent the procedure with a mean duration of 36.27 months.

### Conclusion

While the majority underwent first-year colonoscopy, the duration was not satisfactory per NCCN guidelines, particularly for those who missed the pretreatment colonoscopy. The second colonoscopy duration was satisfactory, though the patient number was small. Further studies are needed to identify causes and to improve current practices.

# Financial Toxicity of Colorectal Carcinoma in Sri Lanka

Senanayake D<sup>1</sup>, Mithushan J<sup>1</sup>, Wimalasena TBGH<sup>1</sup>, Senenvirathne S<sup>1,2</sup>

<sup>1</sup>Department of Surgery, Faculty of Medicine, University of Colombo

<sup>2</sup>University Surgical Unit, National Hospital Sri Lanka, Colombo

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## Introduction and objectives

Financial toxicity in cancer refers to the excessive financial strain on patients, families and society due to cancer-related expenses. This study assesses the financial toxicity in a cohort of Sri Lankan patients with colorectal cancer.

## Method

Data from patients with colorectal carcinoma of any stage, diagnosed 6- 24 months prior and receiving treatment from the National Cancer Institute were collected using an interviewer-administered questionnaire.

## Results

Two-hundred patients were included. Financial toxicity was highly prevalent with 86.0%; (n=172) reporting a financial toxicity of 4 or 5 on a scale of 1 to 5. Transport 77.5%(n=155), external investigations 73.0%(n=146), supportive medications 73.5%(n=147) and active cancer management 64.5%(n=129) were the major factors contributing to financial burden. The main impacts of financial toxicity included compromised spending on food (47.0%,n=94), children's education (26.0%,n=52) and recreation (57.5%,n=115). Financial toxicity resulted in 81.5% (n=163) exhausting life savings, 45.5%(n=91) losing property and 37.0%(n=74) resorting to loans. Financial aid was received by 145 (72.5%), primarily from their relatives (125, 62.5%), with minimal support from the government (n=22, 11.0%) or the hospital (n=3, 1.5%)

## Conclusion

Despite free healthcare in Sri Lanka, patients with colorectal carcinoma seeking treatment from the public health sector were found to be facing significant financial toxicity, often compromising basic day-to-day needs. Many had exhausted their life savings, lost property or had to resort to loans impacting the future economic stability of the whole household.

## Early Etoposide Therapy in Haemophagocytic Lymphohistiocytosis: Insights from the Sri Lankan Experience.

Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>, Chiran RP<sup>1</sup>, Gunasekera DS<sup>1</sup>, Somathilaka M<sup>1</sup>, Rathnayake RWMWK<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka.

### Introduction

Hemophagocytic lymphohistiocytosis (HLH) is a severe, life-threatening condition requiring prompt treatment. Etoposide, a critical component of the HLH-2004 protocol, has demonstrated efficacy globally. This study evaluates the impact of early etoposide therapy on survival outcomes in Sri Lankan HLH patients, aiming to refine treatment strategies.

### Method

A retrospective cohort study analyzed records of patients under 18 with HLH at the National Cancer Institute, Sri Lanka (NCISL) from January 2016 to July 2024. Data included demographics, timing of etoposide initiation and survival outcomes. Kaplan-Meier and Cox regression analyses were used to assess survival rates and the effect of early etoposide treatment.

### Results

The cohort comprised 25 patients, predominantly male (68%), with a mean age of 2.5 years. Etoposide was administered to 92% of patients, with a mean initiation delay of 41 days. Survival rates were 45% at 2 years, with significant early mortality (24% within the first week, 16% within the first month). Performance status at admission to NCISL, time-to-etoposide administration significantly impacted survival ( $P=0.003$  and  $P=0.02$ , respectively). Poor outcomes were notably associated with probable familial HLH or malignancy-related HLH.

### Conclusion

Early initiation of etoposide is crucial for improving survival in HLH patients. Delays in treatment with etoposide and poor performance status at presentation are significant predictors of adverse outcomes. This study underscores the need for prompt diagnosis and early treatment with etoposide to enhance survival rates, especially in high-risk HLH subgroups.



# Mutation Profile of the *PIK3CA* Oncogene in Sri Lankan Breast Cancer Patients; a Pilot Study

Cabraal LLTR<sup>1</sup>, Kumarasinghe I<sup>2</sup>, Perera R<sup>2</sup>, Balawardana J<sup>2</sup>, Viswakula S<sup>1</sup>, Perera N<sup>3</sup>, Galhena GH<sup>1</sup>

<sup>1</sup>Faculty of Science, University of Colombo, Sri Lanka

<sup>2</sup>University Hospital, General Sir John Kotelawala Defence University, Sri Lanka

<sup>3</sup>Genetech Molecular Diagnostics, Sri Lanka

## Introduction and Objectives

*PIK3CA* is one of the most frequently mutated oncogenes in breast cancer patients worldwide, where mutation profiles are highly heterogeneous across diverse populations, ethnicities and ancestries. This study was done with the objective of uncovering its prevalence within the Sri Lankan breast cancer population for the first time.

## Method

The QClamp® *PIK3CA* Mutation Detection Real-time PCR Test was performed on DNA extracted from 42, surgically excised formalin-fixed, paraffin-embedded (FFPE) samples of malignant breast tissue, obtained from the University Hospital KDU in order to amplify two hotspot mutations (H1047R, E542K) of the oncogene in exon 20 and 9. This was followed by a statistical correlation with the patient clinicopathological data.

## Results

A *PIK3CA* mutation prevalence of 16.67% was observed in our population. While a majority of the mutated samples (57.14%) had the H1047R (c.3140A>G) mutation, 28.57% harbored the E542K (c.1624G>A) mutation. A co-mutation was observed in one patient (14.29%). All these mutations were seen in ER/PR-positive, Her2-negative luminal molecular subtypes. In addition, the observed mutations were significantly associated with the presence of lymph node metastasis in patients ( $p=0.005$ ).

## Conclusion

Our study provides preliminary insights into the *PIK3CA* mutation profile in Sri Lankan breast cancer patients, highlighting the crucial prognostic implications of the *PIK3CA* oncogene in risk assessment and in directing therapy choices like axillary management to stop cancer cells from spreading beyond the initial tumor location. The findings advocate further validation of our observations in a larger local cohort to elucidate impacts of *PIK3CA* mutations on patient survival.

## Pancreatic cancer: A review of demographics and treatments: Sri Lankan Experience

Senanayaka SDLB<sup>1</sup>, Chandramali HT<sup>1</sup>, Saravanamuttu U<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chiran RP<sup>1</sup>, Gunasekara HRLD<sup>1</sup>, Rajapaksha AN<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka

### Introduction and objectives

Pancreatic cancer is one of the most aggressive malignancies with low survival rates. In Sri Lanka, it is an emerging concern, but local clinical data are limited. The National Cancer Institute, Sri Lanka (NCISL), is the main oncology referral center, providing an opportunity to analyze clinical patterns and treatments.

This retrospective analysis reviews the clinical profiles and treatments of pancreatic cancer patients treated at NCISL.

### Method

Medical records of patients diagnosed with pancreatic cancer from 2018-2024 were reviewed. Data included demographics, presentation and treatment modalities.

### Results

Of 85 patients, 56% were male and 68% were aged 50-70. Abdominal pain (57%) and obstructive jaundice (32%) were common presentations, with 61% presenting at stage IV. Adenocarcinoma was the most frequent histological type (54%) and 28% were treated without biopsy. Computed Tomography was the preferred diagnostic tool (75%). Pre-treatment CA19.9 was high in 74%, undocumented in 10%. The pancreatic head was the commonest primary tumour site (65%). Surgery was performed in 46% of non metastatic cases. Eight percent of patients received neoadjuvant chemotherapy. For adjuvant therapy, 46% received FOLFIRINOX. Among metastatic patients, 45% received only symptomatic care and among palliative chemotherapy regimens, Capecitabine(30%) and Gemcitabine(27%) were commonly used.

### Conclusion

While sociodemographic data are compatible with world data, this study highlights the concerning inadequacies of pretreatment assessment in pancreatic cancer, including the lack of biopsies and underutilization of neoadjuvant chemotherapy. Emphasizing adherence to established guidelines could improve diagnostic accuracy and treatment efficacy, ultimately enhancing patient outcomes in pancreatic cancer management.

## Radiotherapy techniques in focus : A comparative study of IMRT and 3DCRT for parotid carcinoma, Sri lankan experience in a tertiary cancer care centre

Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chiran RP<sup>1</sup>, Gunasekara HRLD<sup>1</sup>, Pothmulla TK<sup>1</sup>

<sup>1</sup>National Cancer Institute of Sri Lanka (NCISL)

### Introduction and Objectives

Parotid carcinoma is a rare malignancy where radiotherapy plays a key role, especially for high-risk patients. Historically, 3DCRT was the preferred method for adjuvant radiotherapy, but IMRT is now increasingly used. This study compares 3DCRT and IMRT in parotid carcinoma radiotherapy, focusing on target volume coverage and organ-at-risk doses.

### Method

A retrospective analysis was conducted on patients with parotid carcinoma who received radiotherapy at NCISL from January 2018 to July 2024. Data included demographics, tumour characteristics, treatment modalities and radiotherapy techniques. The analysis comparing IMRT and 3DCRT was performed among patients treated for tumor bed without lymph node irradiation.

### Results

Out of 100 patients, 62% were female and 32% were aged 30-69. Mucoepidermoid carcinoma was most common (53%). Among the patients who received adjuvant radiotherapy, 36% had close margins and 50% were R1 resections. A majority (61%) were treated with IMRT and among them, 63% received nodal irradiation. PTV coverage was achieved in only 20% of 3DCRT plans versus 63% IMRT plans. IMRT showed statistically significant superior PTV coverage while 3DCRT showed lower contralateral parotid doses (Mean doses-10.9Gy vs 7.1Gy). Both techniques stayed within acceptable brainstem and spinal cord limits, with no difference in cochlear doses.

### Conclusion

Considering the technicality, IMRT offers a superior PTV coverage while 3DCRT spares the contralateral parotid better. Assessment of event free survival, overall survival and quality of life are needed to decide on their impact on outcomes and choosing the best suited technique in local setting with limited radiotherapy resources.

## The use of MRI for locoregional staging of rectal cancers in Sri Lanka

Senanayake D<sup>1</sup>, Wimalasena TBGH<sup>1</sup>, Jayawickraame M<sup>2</sup>, Priyani AHH<sup>3</sup>, Wijesinghe H<sup>3</sup>, Sivaganesh S<sup>1,3</sup>

<sup>1</sup>Department of Surgery, Faculty of Medicine, University of Colombo

<sup>2</sup>Department of Pathology, National Hospital Sri Lanka

<sup>3</sup>Department of Pathology, Faculty of Medicine, University of Colombo

<sup>4</sup>University Surgical Unit, National Hospital Sri Lanka

### Introduction and Objectives

Rectal MRI is superior to CT in locoregional staging of rectal cancers. This guides decisions on the suitability of neoadjuvant chemo-radio therapy (CRT/RT) before surgery in mid or lower rectal cancers. The utility of MRI in this process is dependent on factors including the use of rectum specific protocols, reporting standards and the stage distribution of rectal cancer in the population concerned. This study aims to evaluate the spectrum of locoregional disease in a cohort of Sri Lankan patients and the utility of routine MRI.

### Method

All histopathology reports of anterior resections (AR) and abdomino-perineal resections (APR) done at in a tertiary hospital were retrospectively analyzed from 2018 to 2022. Tumour location, T and N stage were tabulated.

### Results

Out of 184 resections, 57.1% (n=105) were upper rectal/rectosigmoid, 4.9% (n=9) middle and 25.5% (n=47) lower rectal cancers. (In 23 samples (12.5%) exact location in the rectum was not specified). 66.7% (n=70) of upper rectal cancers were pT3 or above and 21% (n=22) received neoadjuvant CRT/RT. 66.7% (n=6) of mid-rectal cancers were pT3 or above and received neoadjuvant CRT/RT. 51% (n=24) low-rectal cancers were pT3 or above and 57.4% (n=27) received neoadjuvant CRT/RT.

### Conclusion

More than 50% of mid and lower-rectal cancers were pT3 or above. This may be an underestimate due to T-stage downstaging after neoadjuvant CRT/RT. This study cannot comment on the utility of routine MRI to stage rectal cancer in Sri Lanka. Further studies using larger numbers and comparative prospective CT/ MRI staging may help clarify this question.

## Rhino-cerebral mucormycosis in acute myeloid leukemia patients: A case series from Sri Lanka

Siriwardena PPR<sup>1</sup>, Wariyapperuma UM<sup>2</sup>, Nanayakkara NGPM<sup>3</sup>, Jayawardena MN<sup>1</sup>, Mendis DM<sup>1</sup>, Bahar M<sup>1</sup>, Somawardana UABP<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka

<sup>2</sup>Department of Physiology, Faculty of Medicine, University of Moratuwa, Sri Lanka

<sup>3</sup>Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

### Introduction

Rhino-cerebral mucormycosis varies widely in incidence across Europe, from 0.2 to 3 cases per million and is underreported and underdiagnosed in the Indian subcontinent. Nonetheless, it is a medical emergency. This progressive fungal infection often arises in patients with haematological malignancies, particularly in patients with neutropenia, leading to multi-organ failure requiring ICU management. Despite intensive care, this invasive infection in haematological malignancies often result in poor outcomes. This case series details the presentations and unique challenges faced during management in patients with acute myeloid leukemia who developed rhino-cerebral mucormycosis.

### Case report

We present three cases of rhino-cerebral mucormycosis occurring in patients with acute myeloid leukemia: two females aged 35 and 29 and one male aged 42. Symptoms manifested during chemotherapy induction, with all patients experiencing symptoms suggestive of rhino, orbital or cerebral infection in a background of severe neutropenia (Absolute Neutrophil Count<0.5). Nasal endoscopy revealed necrotic tissue in all cases, with contrast-enhanced CT confirming invasive fungal infection. *Rhizopus* species were isolated in cultures from the two female patients and histopathological evidence of fungal invasion was noted in one. Treatment with Amphotericin B combined with debridement with functional endoscopic sinus surgery (FESS) resulted in survival of two patients, though one succumbed during treatment.

### Conclusion

This case series highlights the importance of clinical vigilance and the initiation of early multidisciplinary team management for better clinical outcomes in patients with rhino-cerebral mucormycosis and haematological malignancies.

## Screening strategies and their impact on the incidence of gynecological cancers in Sri Lanka

Madhusanka RBD<sup>1</sup>, Abeykoon WDSE<sup>2</sup>, Gunawardana SR<sup>3</sup>, Silva SKSS<sup>4</sup>, Edirisinghe ESY<sup>5</sup>, Pathirage LPMMK<sup>2</sup>

<sup>1</sup>District Base Hospital, Rikillagaskada, Sri Lanka

<sup>2</sup>Faculty of Medicine, University of Peradeniya, Sri Lanka

<sup>3</sup>Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

<sup>4</sup>Divisional Hospital, Koongahawela, Sri Lanka.

<sup>5</sup>National Hospital, Kandy, Sri Lanka

### Introduction

Gynecological cancers, involving uterus, cervix and ovary raise a significant public health concern. The aim of this study was to assess the screening strategies and their impact on the incidence across age categories from 2006 to 2021.

### Method

Secondary published data from Sri Lankan cancer registry was retrospectively analyzed from 2006 to 2021. Comparisons were made of the incidence, crude rates (CR) and age specific rates (ASR) along the screening methods introduced.

### Results

The incidence of ovarian cancer has risen from 672 to 1308, with a CR rise from 6.7 to 11.4 with an age group shift from 55-59 to 60-64. Despite increased incidence, a 1% drop from 8% in 2006 to 7% in 2021 over all female cancers noted, while the ASR increased from 6.7 to 9.9. Cervical cancer incidence has increased from 934 to 1238, with a CR increase from 9.4 to 10.8, whilst a drop from 12% to 6%, as a proportion of all female cancers was noted with a decline in ASR from 9.6 to 9.1, possibly due to the inclusion of 40-year age cohort in 2007 to the PAP screening and HPV vaccination in year 2017. The age category has remained static over the time frame. Uterine cancer saw a significant rise in incidence from 270 to 1228, with CRs increasing from 2.7 to 10.7 and ASR from 2.8 to 9, with a shift in the commonest age group from 55-59 to 60-64.

### Conclusion

The analysis reveals a rise in incidence and ASR of ovarian and uterine cancers in the absence of effective screening methods while a drop in cervical cancer depicts the effectiveness of preventive and screening methods currently in use.

**Key Words:** Cervical Cancer, Uterine Cancer, Ovarian Cancer, Incidence

# Clinicopathological profile and survival outcomes in patients with paediatric synovial sarcoma.

Siriwardena WDHD<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Gunasekera DS<sup>1</sup>, Somathilaka M<sup>1</sup>, Rathnayake RWMWK<sup>1</sup>, Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>, Chiran RP<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka.

## Introduction

Synovial sarcoma (SS) is a rare soft tissue tumour and research on its paediatric cases in Sri Lanka is limited. This study aims to provide a detailed assessment of SS in children, focusing on demographic features, histological types, treatment approaches and survival outcomes.

## Method

We conducted a retrospective analysis of paediatric SS cases (ages 0-19) at the National Cancer Institute, Sri Lanka, from January 2016 to December 2023. The study covered patient demographics, histological subtypes, diagnostic methods, treatment strategies and clinical outcomes.

## Results

The study included 29 paediatric patients (58.6% female) with a mean age of 10.18 years. SS accounted for 13.6% of all soft tissue sarcomas (STS) and 25.22% of non-rhabdomyosarcoma STS in this group. In 2023, the incidence was 0.3 cases per million. SS primarily affected the extremities (65.5%), with axial locations involved in 34.5% of cases. Most patients (88.9%) had localized disease, while 11.1% had metastatic disease. Primary surgery was performed in 82.8% of cases, with 62.1% classified as IRS group II. Monophasic SS was the most frequent histological subtype (51.7%). The median follow-up was 22 months, revealing 17.2% local recurrences and 6.8% metastatic recurrences. The 5-year overall survival rate was 94% and the 5-year event-free survival rate was 67%.

## Conclusion

This study provides valuable insights into the characteristics and outcomes of paediatric synovial sarcoma in Sri Lanka, highlighting the need for continued research to improve diagnosis and treatment strategies.

## Clinical characteristics and outcomes in hilar cholangiocarcinoma: A 6-year experience

D.Senanayake<sup>1</sup>, J Mithushan<sup>1</sup>, D Subasinghe<sup>1,2</sup>, N Fernanpulle<sup>1,2</sup>, V Dissanayake<sup>1,3</sup>, S Sivaganesh<sup>1,2</sup>

<sup>1</sup>Department of Surgery, Faculty of Medicine, University of Colombo

<sup>2</sup>University Surgical Unit, National Hospital Sri Lanka

<sup>3</sup>Department of Anesthesiology and Critical Care, University of Colombo, Sri Lanka

### Introduction and Objectives

Hilar cholangiocarcinomas (HC) are associated with poor outcomes. This study outlines the demography and outcomes of patients with HC from a single HPB surgical unit in Sri Lanka.

### Method

A retrospective analysis of the unit HC database from 2019 to 2024 was done.

### Results

Forty-eight patients were included, with a mean age of 63.5 years; 29(60.4%) were male. Majority were ASA II (n=19,39.6%). The most common symptom was obstructive jaundice (n=37,77.1%), followed by anorexia and weight loss (n=30,62.5%). The mean duration of symptoms on presentation was 3 months. Most tumours were Bismuth type 4 (n=12,25.0%) and type 1(n=3, 6.3%), type 2 (n=9, 18.8%), type 3A (n=5, 10.4%), type 3B(n=6,12.5%). Staging laparoscopy was performed in 22 (45.8%) patients, with 11 revealing metastatic disease. 39 (77.1%) patients were inoperable and only 9(18.8%) lesions were resectable. However, surgery was performed in only 6 (12.5%). There were two patients with poor performance status and one with cirrhosis which precluded curative resection. The majority (n=42,87.5%) received palliative care. Metastatic disease was found in 23(47.9%). Surgical procedures included extended right hepatectomy+extrahepatic biliary resection(EHBR) and hepaticojejunostomy (n=4) and left hepatectomy with EHBR+hepaticojejunostomy(n=2). Other interventions included ERCP+palliative biliary stenting (n=17,35.4%), external biliary drainage (n=15,31.3%), PTC (n=6,12.5%),EUS-BD (Hep-Gas) (n=1). Post-operative complications included pneumonia(n=3) and transient liver dysfunction(n=2). There was one postoperative mortality due to post-hepatectomy liver failure.

### Conclusion

Locally advanced or metastatic disease and poor patient fitness have led to poor outcomes for hilar cholangiocarcinoma. Early referral to specialized surgical units should be emphasized.



## Prevalence of Total Mastectomy and Axillary Clearance Among Patients Eligible for Wide Local Excision and Sentinel Node Biopsy

Chiran RP<sup>1</sup>, Maddumarachchi PS<sup>1</sup>, Siriwardena WDHD<sup>1</sup>, Chandramali HI<sup>1</sup>, Senanayaka SDLB<sup>1</sup>

<sup>1</sup>National Cancer Institute, Sri Lanka.

### Introduction and Objectives

Management of early-stage breast cancer has matured, with wide local excision (WLE) and sentinel lymph node biopsy (SNB) being considered the standard management options for many. The high prevalence of total mastectomy (TM) and axillary clearance (AC) in patients who might benefit from less invasive options highlights the need to re-evaluate current treatment practices.

This study evaluates the proportion of TM and AC in clinically indicated patients who were eligible for WLE and SNB.

### Methodology

A retrospective analysis of data from Teaching Hospital Kurunegala (2019-2022) collected data on patient demographics, clinical indications for surgical choices.

### Results

Out of 400 patients, 18.7% have T1 and 63% have T2 tumours. A large number of the patients who are eligible for WLE and SNB are being subjected to TM and/or AC.

Among patients with T1 tumours, 76% and among T2, 62% were treated with TM despite eligibility for less invasive procedures. Additionally, 68% of T1 and 55% of T2 patients underwent AC instead of SNB. Factors influencing these decisions included limited resources, theatre time constraints, radiation therapy delays, patient fears of recurrence and surgeon preferences.

### Conclusion

The prevalence of TM and AC among patients eligible for WLE and SNB suggests a divergence from current guidelines advocating for less invasive treatments. Understanding the underlying reasons for these choices can inform future strategies to align clinical practices with evidence-based guidelines, ultimately improving patient outcomes and reducing unnecessary surgical interventions and planning for future development of regional centres.

# Evaluation of Overall Survival after Whole Brain Radiotherapy for Patients with Brain Metastases from Non-Small Cell Lung Cancer and Breast Cancer

Anjun SH<sup>1</sup>, Kumari AGA<sup>1</sup>, Thasanthan L<sup>1</sup>, Jeyakumaran N<sup>2</sup>

<sup>1</sup>Department of Radiography/Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka.

<sup>2</sup>National Cancer Institute, Sri Lanka.

## Introduction and objectives

Lung cancer is a rapidly growing global health concern, predicted to become the second most common cancer in men by 2030. We aimed to present the outcomes of a five-year follow-up study focusing on the demographic and histopathological data of lung tumours in Sri Lanka.

## Method

A descriptive study conducted at the National Hospital for Respiratory Diseases, Welisara, from 2017 to 2021 with patients whose lung tumours were analysed through histopathological examination. Associations between demographic and pathological characteristics were analysed.

## Results

The study comprised 733 patients, with a median age of 59 years with male predominance(60.7%). The right lower lobe and left upper lobes were the commonest tumour sites. Benign neoplasms were present in 42/733 cases(5.7%), while the most common benign lung tumour was hamartoma(n=25/42,59.5%). Among 524 primary malignant lung tumours, adenocarcinoma was the most prevalent(n=285/524,54.4%). Out of 167 metastatic deposits in the lungs, the majority were due to colorectal adenocarcinomas(27/167,16.2%). The patients with primary malignant tumours had a higher median age(61 years) compared to those with benign(51 years) and secondary malignant(51 years) lung tumours[Kruskal-Wallis test(W=70.029,p<.001)]. Benign and primary malignant lung tumours were more common among males, while secondary malignant tumours were more common in females( $\chi^2(df=2,N=733)=24.633,p<.001$ ).

## Conclusion

Adenocarcinoma emerged as the predominant histopathological type in both primary and metastatic lung tumours. The higher prevalence of lung cancer in males may be attributed to gender-related smoking patterns in Sri Lanka. Implementation of screening programs and early interventions is crucial to improve lung tumour outcomes in Sri Lanka.

## Genomic profile of hereditary breast cancer in a Sri Lankan cohort: Insights from a decade-long retrospective study

Thillainathan K<sup>1</sup>, Sirisena ND<sup>1</sup>, Hendalage DPB<sup>1</sup>, Dissanayake VHW<sup>1</sup>

<sup>1</sup>Department of Anatomy, Genetics and Biomedical Informatics, Faculty of Medicine, University of Colombo, Sri Lanka

### Introduction and objectives

Breast cancer represents 27% of all cancers among Sri Lankan women, with genetic predisposition accounting for 5-10% of these cases. However, there is a paucity of cancer genomics data for this population. This study aims to delineate the germline genomic profiles associated with hereditary breast cancer in a Sri Lankan cohort.

### Method

A retrospective analysis was conducted on a database containing whole-exome sequencing (WES) data from 98 patients diagnosed with hereditary breast cancer between January 2015 and July 2024.

### Results

Mean age at cancer onset was 46 years(SD±14). Predominant histological type was invasive ductal carcinoma, 57(84%). Germline variants were identified in 49(50%) patients, including 24(49%) missense, 21(43%) frameshift, 1(2%) synonymous, 1(2%) stop-gained, 1(2%) splice site and 1(2%)-3' untranslated region. Classified variants included 22(45%) pathogenic (P), 7(14%) likely pathogenic (LP) and 20(41%) variants of uncertain significance (VUS). Pathogenic variants occurred in BRCA1-13(59%), BRCA2-8(36%), BRIP1-1(5%); LP variants in BRCA2-3(43%), BRCA1-2(29%), PALB2-1(14%), PTCH1-1(14%); and VUS in BRCA1-3(15%), BRCA2-2(10%), CHEK2-2(10%), ATM-2(10%), CDKN2A-1(5%), FANCI-1(5%), BRIP1-1(5%), STK11-1(5%), APC-1(5%), EPCAM-1(5%), NF2-1(5%), PMS2-1(5%), PMS1-1(5%), BARD1- 1(5%), MET-1(5%) genes. BRCA1/2 variants constituted 31(63%) of all detected variants while 18(37%) were attributed to non-BRCA genes. Five (10%) novel variants were identified, three LP: BRCA1(2) and BARD1(1) and two VUS: CDKN2A(1) and PALB2(1). Variants in BRCA2 (P) and BARD1 (VUS) were identified in two males.

### Conclusion

While the majority of germline variants were in BRCA1/2, significant non-BRCA gene variants were detected in one-third of patients, highlighting the comprehensive diagnostic potential of WES in identifying inherited risks for breast cancer.

**Keywords:** Breast Cancer, Germline, Genomics, Hereditary, Sri Lanka

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