



ISRRT

INTERNATIONAL
SOCIETY OF
RADIOGRAPHERS
& RADIOLOGICAL
TECHNOLOGISTS

APRIL 2020

NEWS & VIEWS FROM AROUND THE WORLD



**INDONESIAN
SOCIETY OF
RADIOGRAPHERS**

**ISRRT INVITED
TO ATTEND THE
ICRP MEETING**



COVID-19

**WINNERS OF THE
IAEA'S DIGITAL
COMPETITION**



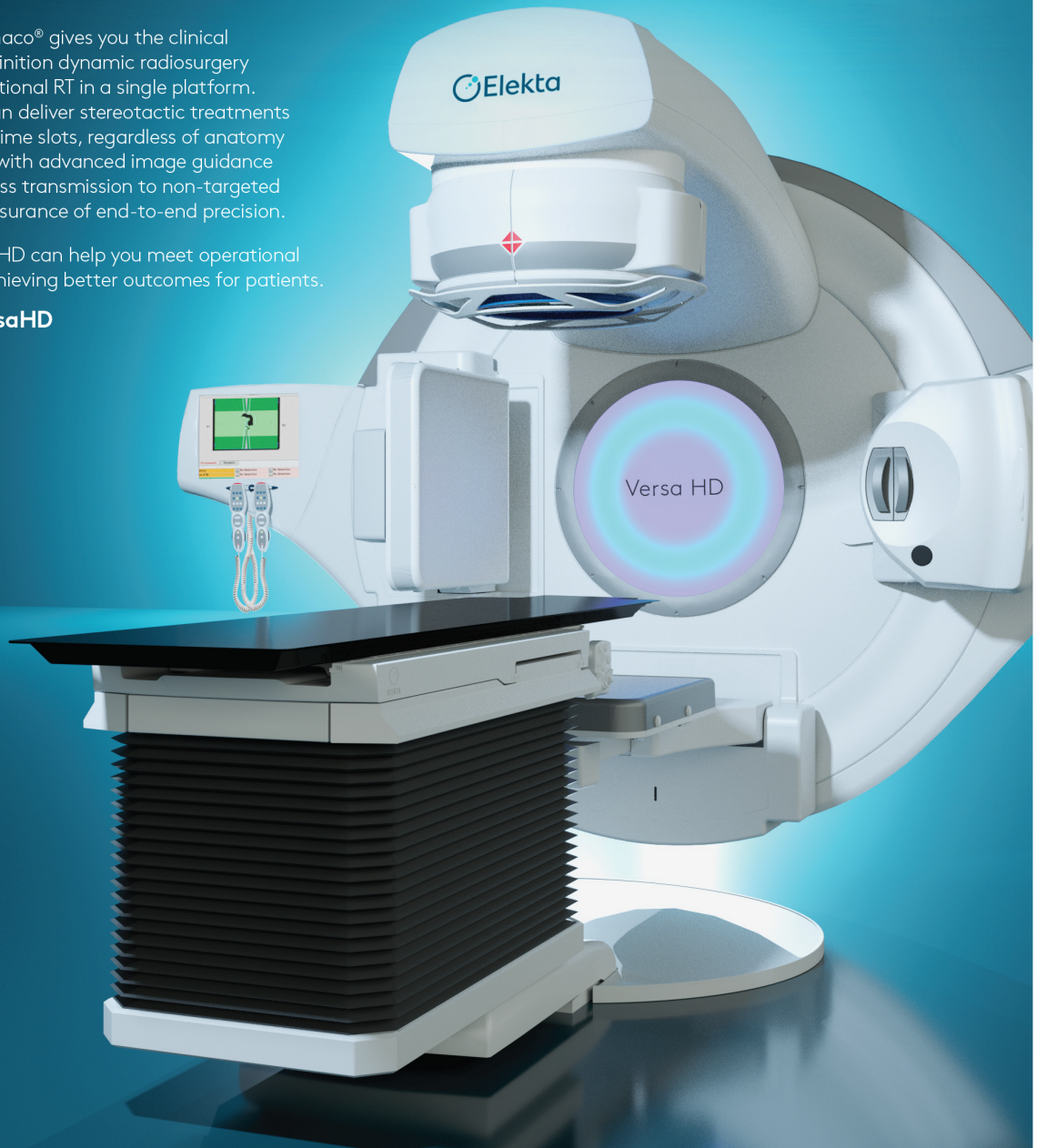
VersaHD.

Powered by high definition dynamic radiosurgery.

Versa HD™ with Monaco® gives you the clinical flexibility of high definition dynamic radiosurgery (HDRS) and conventional RT in a single platform. HDRS means you can deliver stereotactic treatments within standard RT time slots, regardless of anatomy or complexity. And, with advanced image guidance tools and up to 5x less transmission to non-targeted regions, you have assurance of end-to-end precision.

Discover how Versa HD can help you meet operational efficiencies while achieving better outcomes for patients.

elekta.com/VersaHD



Focus where it matters.

 Elekta

Art. No. 4513 371 1539_03.17 © 2017 Elekta AB (publ.) All mentioned trademarks and registered trademarks are the property of the Elekta Group. All rights reserved. No part of this document may be reproduced in any form without written permission from the copyright holder.

I CONTENTS

REPORT

Annual radiology meeting, UAE	18
ISRRT-CHESNEY capacity building workshop in Africa: Training the trainers workshop in radiation protection	20
14th National Deliberation, Presidential Election Day and the Inauguration of the Indonesian Society of Radiographers Executive Board 2019-2023	24

ARTICLE

COVID-19	12
2019 Annual Meeting of senior representatives of organisations in formal relations with ICRP	16
Winners of the IAEA's digital competition "Towards a Strong Radiation Safety Culture in Medicine"	28
Ethical use of low dose ct scanning for detection of narcotics trafficking by "body packers"	30

NEWS

News from member societies:	
Myanmar	42
The Americas: America, Canada	43
Europe: Denmark	44
Africa: Tunisia	45

REGULARS

ISRRT Officers of Board of Management	4
ISRRT Committee Regional Representatives	4
President's report	5
CEO report	8
Treasurer's report	10
Contact details for ISRRT editorial and advertising	7
Professional Practice report	36
Education report	38
Diary dates	37
WRETF	40



ISSN NO. 1027-0671

ISRRT Editorial Committee

Alain Crompt
Donna Newman
Sharon Wartenbee
Dimitris Katsifarakis

Editor

Rachel Bullard

Production & Design

Deep Blue Design Studio
deepbluedesign1@me.com

www.isrrt.org

Views expressed in this
Newsletter are not necessarily
those of the ISRRT.

ISRRT OFFICERS: BOARD OF MANAGEMENT

PRESIDENT

Donna Newman
donna.newman@gmail.com

VICE PRESIDENTS

The Americas

Terrence (Terry) Ell
terryell@shaw.ca

Asia and Australasia

Dr Napapong Pongnapang
napapong@hotmail.com

Europe and Africa

Håkon Hjelmly
hakon@radiograf.no

REGIONAL DIRECTORS

Europe

Euthimios (Tim) Agadakos
eagadakos@gmail.com

Africa

Boniface Yao
kwame_boniface@yahoo.fr

Asia and Australasia

Tan Chek Wee
sunrisepl@hotmail.com

The Americas

Sharon Wartenbee
wartenbee@sio.midco.net

TREASURER

Philippe Gerson
philgerson@neuf.fr

DIRECTOR OF EDUCATION

Yudthaphon Vichianin
yudthaphon@gmail.com

DIRECTOR OF PROFESSIONAL PRACTICE

Stewart Whitley
aswhitley@msn.com

DIRECTOR OF PUBLIC RELATIONS & COMMUNICATIONS

Alain Crompt
acrompt@ac-consultant.ca

CHIEF EXECUTIVE OFFICER SUPPORT SERVICES

Dimitris Katsifarakis
ceo@isrrt.org

FINANCE COMMITTEE

Philippe Gerson
Napapong Pongnapang
Terry Ell
Håkon Hjelmly
See Board of Management for Finance Committee contact.

ISRRT COMMITTEES REGIONAL REPRESENTATIVES

EDUCATION COMMITTEE

Europe

Ozan Tekin
tekin765@gmail.com

Africa

Hesta Friedrich-Nel
hfried@cut.ac.za

Asia and Australasia

Yudthaphon Vichianin
yudthaphon@gmail.com

The Americas

Dr Robin Hesler
lscolonel@rogers.com

PROFESSIONAL PRACTICE COMMITTEE

Europe

Pam Black
pamb@sor.org

Africa

Elizabeth Balogun
kanmibalo@yahoo.com

Asia and Australasia

Naoki Kodama
n_kodama@jart.or.jp

The Americas

Christopher Steelman
csteelman@x-rayintl.org

PUBLIC RELATIONS & COMMUNICATIONS COMMITTEE

Europe

Hanna Kalliomäki
hanna.kalliomaki@sorf.fi

Africa

Stephen Mkoloma
stephenmkoloma@hotmail.com

Asia and Australasia

Edward Wong
wongthe@gmail.com

The Americas

Timmerie Cohen
tfcohen@vcu.edu

PRESIDENT'S MESSAGE



DONNA NEWMAN
ISRRT PRESIDENT

DEAR ISRRT MEMBERS,

As your leaders we continue to prepare for the World Congress and Council meeting this August, 2020. The ISRRT along with the Irish society will continue to monitor the COVID-19 Pandemic around the world and remain optimistic about the World Congress.

The COVID-19 virus continues to evolve and we know that ISRRT members worldwide are trying to prepare and respond to this pandemic. As a frontline staff, radiography departments are incorporating additional precautions for radiographers and support staff to protect themselves and prevent the transmission in the health care setting.

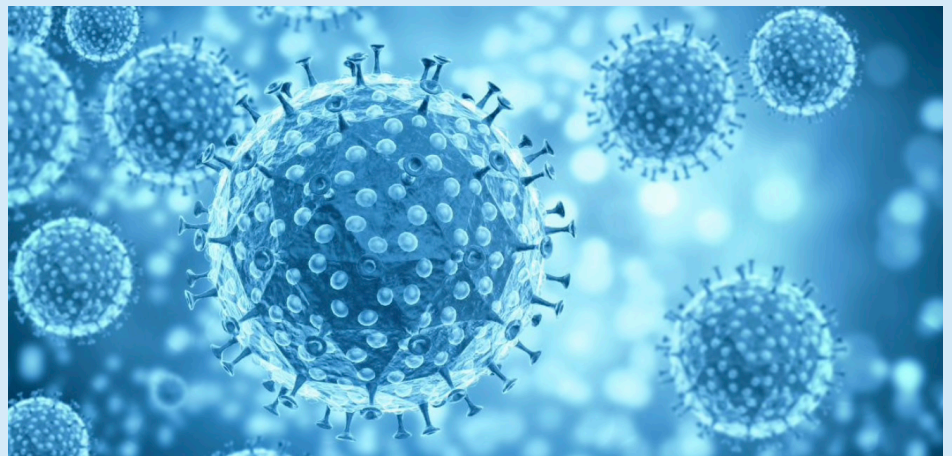
The unprecedented COVID-19 virus is affecting many of our radiographer colleagues around the world today. Please follow the 'BEST PRACTICE' guidelines produced by your professional organizations and authorities within your own countries. The ISRRT has developed a new tab on our ISRRT website that has all member societies COVID-19 links available so member can access information easily.

Please be reassured that the ISRRT is working closely with these organizations on a continuing basis to pass on any relevant ongoing developments regarding the COVID-19 virus you will find these updates

on our website as well. Please be reassured that the ISRRT is taking every opportunity to represent the radiographers' voice at all the relevant WHO and IAEA committees engaged in fighting this virus.

The ISRRT asked the WHO to collaborate and create a task working group with the ISRRT to produce a best practice strategy for droplet precautions in the form of a technical document specifically for the medical imaging department relating to the COVID-19 virus and radiographers. This will address control of infection safety practices while also being mindful of safe radiation protection practices during this Pandemic. The ISRRT has diligently been working on a draft document of best practice in each of the medical specialty areas. Our organization is so blessed to have so many members that are willing to share their experience and expertise relating to the COVID-19 best practice. Thanks to all who have already contributed to the draft document. We hope to have this available in the near future. I am happy to announce that the IAEA will also be collaborating on the work being produced.

The ISRRT Board of Management appreciates all radiographers/radiological technologists worldwide who are serving as frontline professionals. ISRRT understands and appreciates that your knowledge, care,

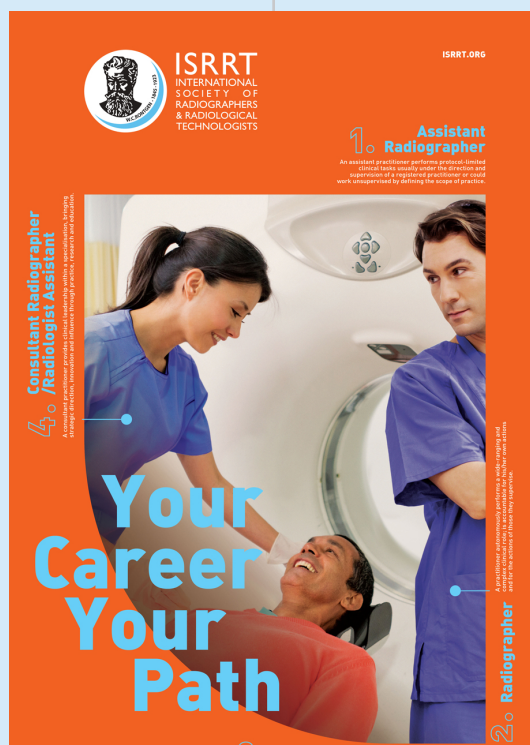


expertise and efforts make a difference for all of our patient's health care. STAY SAFE and know that we are thinking of you.

As your global leaders, the ISRRT Board of Management is also continuing on our strategic agenda for this year. I am happy to share some of this great work with our members.

I couldn't be more pleased with the response the ISRRT received from our members helping create the content for our first official special edition in celebration of World Radiography Day that successfully reached a global audience helping to champion and promote the radiographer's role in safety culture. The ISRRT has begun preparing their World Radiography Day 2020 second special edition. We again hope to increase public awareness featuring the radiographer's vital role, as part of the health care team. This year we are delighted to collaborate with ISRRT member experts, ISRRT member societies and regional stakeholders. This year's World Radiography Day theme is "Elevating Patient Care with Artificial Intelligence". Radiographers are essential in elevating patient care with artificial intelligence. We are still taking authors interested in writing for this special edition. Please contact the ISRRT if you are interested in participating. We look forward to featuring more of our expert's radiographers around the world.

ISRRT continues to take every opportunity it can to promote ISRRT position statements while representing our profession at global standard development and international stakeholders' meetings. This fall right into the strategic goals and ISRRT mission of providing its members Standards that can help elevate patient care in daily practice in their developing and developed countries that. These current position statements can be found on the ISRRT website under the Professional Practice tab. Thank you as always to being our members that took time to be content experts and contributed to the review of the two draft positions statements. All comments have been reviewed and incorporated for final consideration at the council meeting.



1. ISRRT's Position Statement of the Radiographer/Radiological Technologist's Role in Patient Care and Patient Safety
2. ISRRT's Position Statement of the Radiographer's/ Radiological Technologist's Role in Communication and Education of Patient, Health Care Team Professionals and the Public

Wonderful news to report on our joint working group that was established by the International Society of Radiographers and Radiological Technologists (ISRRT) and the European Federation of Radiographer Societies (EFRS) in May 2019 to explore the impact that artificial intelligence may have on the radiography profession.

The working group was co-chaired by Hakon Hjemly (ISRRT) and Dr Nick Woznitza (EFRS) with contributions from Prof Maryann Hardy (EFRS), Lars Henriksen (ISRRT), Dr Sundaran Kada (EFRS), Prof Naoki Kodama (ISRRT), Dr John Stowe (EFRS) and Dr Yudthaphon Vichianin (ISRRT). The group has worked hard to develop a draft consensus statement that was approved by both the ISRRT and the EFRS boards recently. I am excited to announce that the joint statement will be published in the May 2020 issue of Radiography titled: Artificial Intelligence and the Radiographer/Radiological Technologist Profession: A joint statement of the International Society of Radiographers and Radiological Technologists and the European Federation of Radiographer Societies. I encourage everyone to take time to read this article. Soon you will find this document on both the ISRRT website for download and use. The second phase of the project will be starting soon which include a survey and a white paper on AI and the radiographers profession.

Your Director of Education, Yudthaphon Vichianin has been working hard on our ISRRT Advocacy and Education Tobacco Free Campaign for Radiography Schools Globally

As an official partner of the World Health Organization (WHO), the ISRRT is delighted to announce a strategic partnership with the WHO in supporting the WHO Framework Convention on Tobacco

Control (WHO FCTC). The aim of this project is to support the WHO FCTC by educating and resourcing radiography schools to reduce the impact of tobacco use amongst the medical radiation sciences schools to reduce the impact of tobacco use amongst the medical radiation sciences profession and its practitioners. Our aim is to create a tobacco -free profession for the benefit of all.

Tobacco Free project Campaign detail and poster are available for download on the ISRRT website www.isrrt.org/tobacco-free-profession We are inviting all our member societies and radiography school to participate in the WHO No smoking day this May,31, 2020 using our ISRRT No Smoking Poster.

ISRRT has been working hard on a call for Call-for-Action Campaign to address the 18 million Health Care worker shortage that is facing our globe.

By keeping our educational standards vital and a new reformed service model for radiography will invest in both the expansion and transformation of the global health and social workforce.

A global Campaign to promote a new career path for a new workforce generation with strategies will ensure the right skill set is established and that healthcare worker can go and work where the need is the greatest.

ISRRT action: - Promotion of a Reformed Service Model for Radiography - Introduction of a Four Tier Educated Radiographer Profession

1. Assistant Radiographer

An assistant practitioner performs protocol-limited clinical tasks usually under the direction and supervision of a registered practitioner or could work unsupervised by defining the scope of practice.

2. Radiographer

A practitioner autonomously performs a wide-ranging and complex clinical role; is accountable for his/her own actions and for the actions of those they supervise.

3. Advanced Radiographer

An advanced practitioner, autonomous in clinical practice, defines the scope of practice of others and continuously develops clinical practice within a defined field.

4. Consultant Radiographer/Radiologist Assistant

A consultant practitioner provides clinical leadership within a specialisation, bringing strategic direction, innovation and influence through practice, research and education.

Continue to watch the ISRRT media platforms to receive updates and progress of this project. ■

Donna Newman
ISRRT President

ADVERTISING INFORMATION

The ISRRT Newsletter would like to invite readers and others to take advantage of the extent of our circulation and advertising service.

The ISRRT Newsletter *News & Views* reaches 72 countries, 4,500 associate members, libraries and schools of radiography, government bodies and professional societies.

**The following are costs for
colour advertising as at January 2020.**

	1 issue	2 issues	3 issues
full page	£300	£550	£750
half page	£225	£400	£500
quarter page	£100	£150	£200
one eighth page	£60	£100	£150

SIZES:

FULL PAGE:

NO BLEED: 170mm x 228mm

BLEED: 210mm 273

HALF PAGE: 210mm x 140mm

QUARTER PAGE: 92mm x 140mm

Please send hi-res print ready file (PDF, JPG) to:

CEO Email: ceo@isrrt.org

Production Editor: deepbluedesign1@me.com

CHIEF EXECUTIVE MESSAGE



DIMITRIS KATSIFARAKIS
CEO

DEAR ISRRT members and partners,

There is no doubt that we are in the midst of unprecedented conditions.

Seems that all the planet is on hold. More than 3 billion people have been confined in their homes with feelings of anxiety and fear for the days to come.

WHO has declared the COVID-19 as a pandemic and humanity mourns thousands of victims of this invisible invader, the Coronavirus. The healthcare sector globally has lost valuable members too.

Science and education have the capacity to provide people with knowledge and equipment in order to confront the situation to make the future bright again. No doubt about that. Thus, we should be optimistic, humanity will cope. The human race has managed several times in the past, we will get through it together.

This pandemic has brought the radiography profession to the center scene, as our colleagues, all of you, are now working on the battlefield. Radiographers and radiological technologists are in direct contact with the patient, who may be either asymptomatic or a confirmed COVID-19 and isolated patient.

Today heroic radiographers and radiological technologists equipped with knowledge and skills square up to the situation with professionalism and compassion. Radiographers/RTs meet the patient and guide them through the practice of imaging procedures which are safe in terms of infection for both, the patient and the radiographer/RT. This is achieved by practicing infection control techniques to minimize viral transmission from the previous patient who may have been COVID-19 confirmed, and at the same time, maintain a decontaminated imaging or therapy clinical area.

Dear colleagues, during these troubled times, the message is "to protect yourself and uphold your capacity to support the health care system of your country". This is essential.

The ISRRT Board supports and publicizes the pandemic related messages from the WHO on the ISRRT website.

Meanwhile, the projects of the ISRRT are still ongoing and the plans as they have been decided by the board are running smoothly.

As Chief Executive of the ISRRT and a former radiographer, I have to salute with feelings of deep respect and admiration all radiographers/RTs globally, for the great humanitarian effort, who continue to provide high quality imaging and therapy services to patients and thus, support their national healthcare system.

My heart and mind are with you all, dear colleagues.

Stay safe and keep offering as you always do!

In solidarity. ■

Dimitris Katsifarakis
Chief Executive



21st ISRRT World Congress postponed till August 17-21, 2021, Dublin, Ireland

Dear ISRRT members,

We are writing to each of you to give an update on the 21st ISRRT World Congress scheduled to be held this August 26-29, 2020 in Dublin Ireland.

As you will all be aware, the COVID-19 pandemic is affecting most of our countries around the world today in an unprecedented manner. The ISRRT is aware that many of its members are engaged in the battle of the COVID-19 as frontline health professionals. The ISRRT also acknowledges that most countries have implemented a travel ban for health care workers which may be extended beyond the end of this year. It remains unknown when the COVID-19 pandemic will end, and when international travel restrictions will be lifted.

The ISRRT has now had several meetings with the Irish Institute of Radiography and Radiation Therapy organizing committee to find a viable solution for the World Congress. As organizations, it is with heavy heart that the ISRRT Board of Management and the Irish Society planning committee must announce that the **21st ISRRT World Congress will be postponed to August 17-21, 2021 Dublin Ireland.**

For those, people that have already registered for the 2020 World Congress, please be reassured that your registration fee will be moved forward and applied to the August 17-21, 2021 meeting dates. Hence, they are considered registered for the Congress in 2021. If you have additional questions relating to your registration please contact the planning committee at ISRRT2020@advantagegroup.ie

The approved abstracts for the 21st World Congress in 2020 will be automatically upheld for the August 17-21, 2021 dates. A new email will be sent to all abstract writers, in order to RSVP and reaffirm plans for attending the 2021 meeting. Please note, that a new abstract section for COVID-19 is being developed and thus the opportunity to submit an abstract with the pandemic experiences to be accepted for next year's meeting track as well. Visit the ISRRT website for related information.

Hotels agreements are being renegotiated for next year's dates by the PCO and the Irish planning committee. The PCO and/or the hotel you have originally booked will be in contact with you to move your booking if you have already booked accommodation. There is no need for you to take any action until they have been in contact with you.

Although we need to postpone, we are all very excited to host our ISRRT 21st World Congress on August 17-21, 2021. Furthermore, be assured that the postponement of the World congress to Dublin 2021 will not impact the dates and year of the scheduled 22nd ISRRT World Congress which will still be held in Bangkok, Thailand, 2022.

ISRRT members, we appreciate your knowledge, skills, expertise and care as frontline health professionals in the COVID-19 pandemic. Let us all continue our efforts for every patient's well-being, stay safe and know that the ISRRT is always here to support you.

Sincerely,

Donna Newman, ISRRT President and
Dean Harper, IIRRT President

TREASURER MESSAGE



PHILIPPE GERSON
TREASURER

DEAR COLLEAGUES,

The situation is serious and Covid-19 has mobilized all radiographers around the world.

Nevertheless, as treasurer and as all members of the board of directors of the ISRRT, we continue our work and, above all, we communicate even more.

Since my appointment and in collaboration with the CEO and the President, our goal has been: reduce expenditure and increase income.

It is one of the basic principles of good management of a company or association.

This was achieved in 2019 thanks to a very big job by our CEO, who I want to thank, and also by the Board which has complied with the guidelines of our president.

For 2020, and for future years, we have the same objectives.

This year, the world congress in Dublin is planned but as I write to you, there is still, and you will understand, uncertainties about the event's holding.

In the area of our expenditure, we have made great efforts on those of the Board of Directors, but we did not want to limit those related to our workshops which are the core of the ISRRT's mission.

Our training and aid objectives with our colleagues are essential.

As such, I have personally developed our relations with the countries of the near and Middle East who for many (UAE, Palestine, Egypt) are going to join our big family.

I wish my next message in our newsletter can speak to the past of the dramatic episode we live in.

Good luck to all, the ISRRT is taking care and supports you. ■

Philippe Gerson
ISRRT Treasurer



Designed to work the way you work

FlowSens®



OptiStar® Elite



OptiOne®



OptiVantage®



Illumena®Néo



**Quality, Efficiency
Flexibility, Safety**

Ready-Box®



**LF@guerbet.com
www.guerbet.com**

Guerbet | 
Contrast for Life

Disclaimer: these products are medical devices intended for use by medical imaging and diagnostic health professionals, for injection of contrast media and saline solutions during a CT exam. For complete information about precautions and optimal usage conditions for these medical devices, we recommend consulting the instructions notice/user's manual. Ensure that injection from multi-dose containers and to more than one patient respects the valid rules of good practice and the marketing authorisation (MA) of the contrast agent and local regulatory requirements.

FlowSens®, OptiStar® Elite, OptiOne®, OptiVantage®, Illumena® & Ready-Box® are trademarks of Guerbet & Liebel Flarsheim. Patents requests on-going. FlowSens®: Class IIb – CE0459 – Manufacturer: MEDEX - 240 Allée Jacques Monod, 69800 Saint-Priest, France. OptiStar® Elite, OptiOne®, OptiVantage® & Illumena®: Class IIb – Ready-Box®: Class IIa – CE0123 – Manufacturer: Liebel-Flarsheim Company LLC - 2111 East Galbraith Road, Cincinnati, OH 45237, USA. Document creation date: January 2017. © Copyright 2015 Guerbet - All rights reserved.

MKTADV2017-001

COVID - 19

ISRRT develops resources for members to use in COVID-19 pandemic

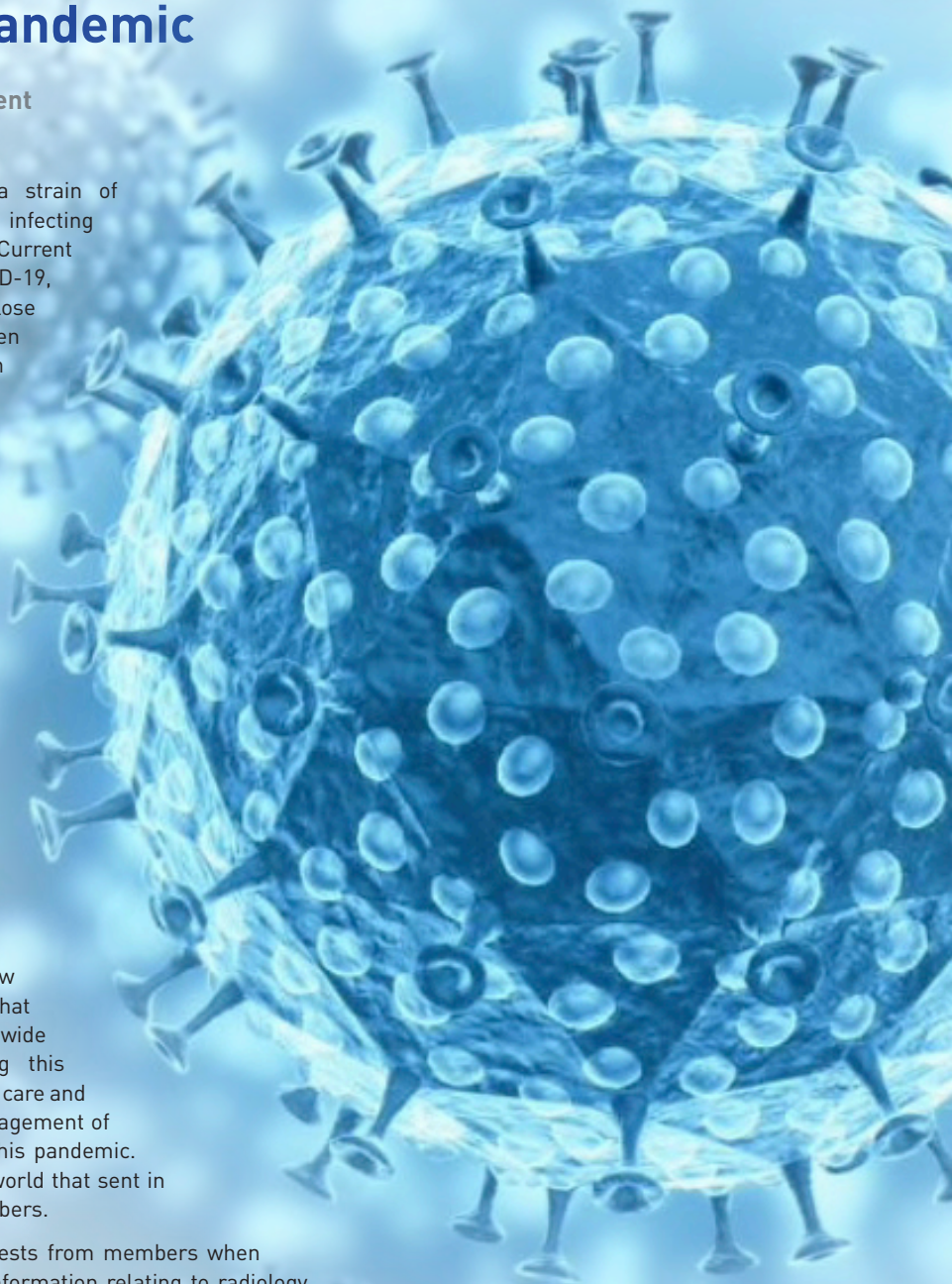
Report by Donna Newman, ISRRT President

COVID-19 is a respiratory virus caused by a strain of coronavirus called SARS-CoV-2 that is infecting people in all countries around the world. Current evidence available suggests that the virus COVID-19, is transmitted from person to person through close contact and respiratory droplet transmission when a person coughs or sneezes. These droplets can enter the nose or mouth and subsequently be inhaled into the lungs. Transmission can also occur when a contaminated surface with droplets is touched by a person and they then touch their face, eyes or mouth. The evidence also suggests that COVID-19 isn't transmitted by airborne transmission.

Radiographers by virtue of their profession are at high risk of acquiring the COVID-19 virus. Radiographers are in close proximity with patients everyday as they perform medical imaging procedures. As frontline staff, radiography departments need to incorporate additional precautions for radiographers and support staff to protect themselves and prevent the transmission of COVID-19 in the healthcare setting.

The unprecedented COVID-19 virus is affecting many of our Radiographer colleagues around the world today. As a profession, we know these are turbulent times and we appreciate that radiographers/radiological technologists worldwide are serving as frontline professionals during this pandemic. ISRRT recognizes that your knowledge, care and efforts contribute greatly in the delivery and management of the care and treatment of patients affected by this pandemic. Thank you to those individuals from around the world that sent in best practice PPE pictures to share with our members.

The ISRRT Board of Management received requests from members when asked for resources on PPE and best practice information relating to radiology practice questions for COVID-19. Stewart Whitley, ISRRT Director of Professional Practice brought forward a request from the ISRRT Board of Management to develop technical documents relating specifically to best practice for radiographers at the March 27, 2020 WHO Non-governmental Organization (NGO) meeting. The WHO and other NGOs agreed with this proposal that more resources were needed specifically for the Medical Imaging and Therapy Departments. Some projects are already underway.



In response to the first meeting ISRRT has commenced work on a document which highlights informative best practices and procedures for all imaging modalities and therapy.

At short notice experts from around the world have contributed to the content of a publication gathering and reflecting best practices in their countries as well as current guidance publications issued by several professional societies.

COVID-19 ISRRT Response Document - appropriate and safe use of medical imaging and radiation therapy with infection control measures considered in addition to standard radiation protection procedures is a comprehensive technical guidance document which addresses the personal protective equipment necessary for personnel working in medical imaging and therapy centers.

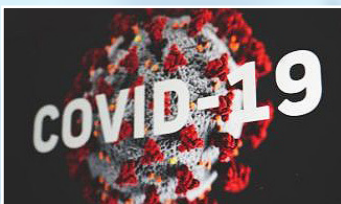
The document considers the control of infection measures necessary to manage imaging and therapy procedures for patients who may carry the COVID-19 virus, as well as advising on measures for imaging and therapy the more complex and higher risk patients undergoing AGP's. All of these considerations are leveled against the necessary standard radiation protection and medical imaging safety measures.

The ISRRT Board of Management thanks the professional experts worldwide that are listed in the document. They took time, at short notice, to research and share best practice from their organisations, hospitals and countries to allow the gathering and comprehensive information provided in this document.

Please find the document available for download and dissemination at www.isrrt.org under the COVID-19 tab.

As society members the ISRRT is asking all council members to help distribute this information to its members .

The ISRRT has also served on two committees with the WHO and IAEA. I, as President served on the writing committee



for the IAEA/WHO COVID-19 Emergency in Nuclear Medicine Departments and provided information from our document to be included. Stewart Whitley, ISRRT Director of Professional Practice and I are currently serving on the writing committee call Rapid Advice Clinical Guide on appropriate use of radiological imaging in COVID-19.

E-Learning Platform on COVID-19 training for Radiographers

The ISRRT in partnership with the European Federation of Radiographer Societies (EFRS) are developing e-learning resources on COVID-19 for medical imaging radiographers across the world that are undertaking mobile radiography and caring for our patients as frontline staff. This material will be free of charge and can be accessed starting on Tuesday April 21 at www.isrrt.org

Just click on the COVID e-learning button found on the front homepage of the ISRRT website. Here you will find eLearning materials with emphasis on mobile chest radiography. We appreciate that many hospitals, regions within countries and countries are spending time to create teaching and support materials. The work being undertaken will save time by providing a single international resource. In the first instance, the following will be covered:

- Introduction to viruses for radiographers; introduction to Covid-19 for radiographers
- Measures radiographers can take to minimise risk to themselves during professional working and their families
- Effective communication
- Mobile X-ray equipment
- Radiographic Procedure
- Radiation Protection
- Image review and reporting
- Patient informatics
- Audit and learning

The above will be accompanied by a guide document which will provide an overview of the learning and support materials in order to make the information easy to use and access. Information will be announced very shortly about how to access the website.

Finally, we would like to thank Professor Peter Hogg (University of Salford, UK) and Mr Ken Holmes (University of Cumbria, UK) for leading this work along with a large number of content authors from across the world for creating the teaching and support materials. I appreciate our CEO Dimitris Katsifarakis for being the point person from the ISRRT on this project. Getting

COVID - 19



COVID-19

ISRTT Response Document - Appropriate and safe use of Medical Imaging and Radiation Therapy with infection control measures considered in addition to standard radiation protection procedures.

ISRTT Board of Management approved April 2020

Based on Input to the World Health Authority (WHO) Non-Governmental Organizations (NGOs) meeting facing COVID-19 held March 27th 2020 and development of various WHO/IAEA Technical documents including 'WHO-Rapid Advice Clinical Guide on appropriate use of radiological imaging in COVID-19' and IAEA/WHO Technical brief for Nuclear Medicine in COVID-19.

the e-learning platform details set was invaluable. We all appreciate your dedication to the ISRTT Board.

The ISRTT and EFRS website and social media platforms for information on a live Webinar on COVID-19 will give an overview and direct professionals

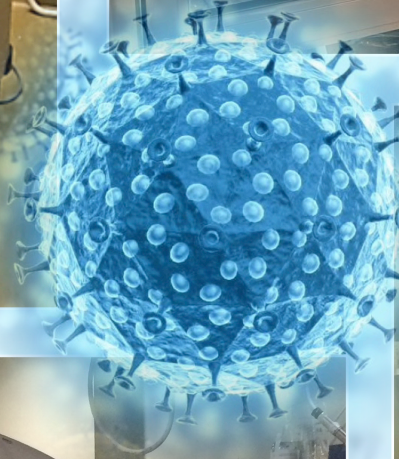
somewhere to go to get additional e-learning material to be used in their daily practice.

Our ISRTT Regional Director of Europe, Efthimios Tim Agadakos has developed an e-learning on COVID-19 in computed tomography and will provide our members with best practice information relating to PPE and consideration when performing CT's on patients under investigation or COVID-19 positive.

Also on the ISRTT website www.isrtr.org there will be a new tab called COVID-19 where you will find all the important documents and information relating to COVID-19 pandemic. We have created a hyperlink to all our member societies' web pages that have COVID-19 information to make it easy access to finding important information relating to best practice.

Again know that the ISRTT appreciates our members' time and dedication to the fight against COVID-19 and because of your dedication we know our patients are getting the best care possible worldwide. As professionals by being a frontline worker you are impacting change, affecting change and creating change with the fight against the COVID-19 virus. ■





2019 ANNUAL MEETING OF SENIOR REPRESENTATIVES OF ORGANISATIONS IN FORMAL RELATIONS WITH ICRP

PARIS, FRANCE | SEPTEMBER 17, 2019

REPORT BY DIMITRIS KATSIFARAKIS, CEO ISRRT



| ICRP President, General Secretary and the official representatives of organizations that have official relationships with the ICRP, during a break of the 2019 assembly.

I HAD the privilege and the honor to represent the ISRRT at the 7th Annual meeting of senior representatives of organizations in formal relations with ICRP, held in the Nuclear Energy Agency headquarters in Paris on September 17, 2019.

It was the first time the ISRRT has received an invitation to participate in a meeting of the ICRP.

This happened due to the good contacts and exchange of information that took place and was cultivated by the ISRRT President Donna Newman and a senior member of the committee 3 of the ICRP, past year.

Amongst the 29 invited International Organizations and societies, were the ISR, IOMP, ICRUM, IAEA, WNA, and the WHO.

It was the 7th annual meeting and the one-day agenda was constructed around the question: "In Practice, what further is necessary to integrate protection of the environment in radiological protection?"

Also a second question was: "What would be the practical implications of a more individualized system of radiological

protection based on variations in individual response to radiation exposure?"

The aforementioned questions came from a report to the ICRP from the Green Peace: "If man is protected can also the environment be protected?" or in other words: How to protect biological diversity from excess radiation?

The opening of the meeting question was: Living in an era of personalized medicine can protection be personalized or should be Individualized? How does the system apply in different exposure situation?

During the breakout sessions I had the chance to present to the peers the ISRRT's activities and devotion on Radiation safety Culture for the individuals (including Patients, relatives and staff).

I described the importance of the nuclear medicine technologist role on the Radiation substances handling during the preparation of the Radionuclide injection, during the administration and after it. I also highlighted the role of our profession in education of the patient who received that radiopharmaceutical substance, and

the actions a Technologists is undertaking in the rare situation an accident can occur.

Among the important remarks of the meeting summary were:

- The system of radiological protection should be as simple as possible while still Being able to handle complex issues.
- Protection of the environment is already integrated into the system of radiological protection, but further advice is needed on how to implement it in practice especially with respect to comparing worker, public, and environmental exposures.
- A degree of individualisation of radiological protection in medicine is already occurring, and is appropriate.
- Individualisation of radiological protection for public and occupational exposures is complicated by incomplete knowledge and complex ethical considerations.
- Individual response is already taken into account in the system of radiological protection; no change is needed based on current knowledge.

In future attention should be paid in education on radiation Protection not only in technical but on how to tackle with public communication and handling public concerns.

Transparency of all the available information to stakeholders is of a paramount value.

- Inclusiveness of stakeholders of the optimization process and making decision with the people.
- Benefit and harm should be balanced
- Science and values and communication combined in future, in order to help people on the taking decision process.



■ Dimitris Katsifarakis, ISRRT CEO, Cristopher Clemant, ICRP Vice Chair, and Claire Cousins, ICRP Chair.

My perception from the meeting was that the ISRRT is counted as an important Stakeholder to the ICRP, and they want to have the ISRRT as a Senior representative organization to their body.

At the closing session ICRP President, Prof. Claire Cousins and the Scientific Secretary Dr Cristofer Clemant expressed their pleasure the ISRRT has joined the ICRP meeting and they invited ISRRT to continue to work with them.

Obviously, on behalf of the ISRRT president and the Board I thanked ICRP president and reassured them that we will develop and maintain regular contacts with them. ■

IMPORTANT REMARKS ON THE ICRP

By Dimitris Katsifarakis

ICRP is an independent, international organization that advances for the public benefit the science of radiological protection, in particular by providing recommendations and guidance on all aspects of protection against ionizing radiation.

A charity (not-for-profit organization) registered with the Charity Commission of England and Wales (registration number 1166304)

A community of more than 250 globally recognized experts in radiological protection science, policy, and practice from more than 30 countries

ICRP is comprised of the Main Commission, the Scientific Secretariat, four standing Committees (Committee 1 on Effects, Committee 2 on Doses, Committee 3 on Medicine, and Committee 4 on Application), and a series of Task Groups.

Committee 3

Radiological Protection in Medicine

Committee 3 addresses protection of persons and unborn children when ionizing radiation is used in medical diagnosis, therapy, and biomedical research, as well as protection in veterinary medicine.

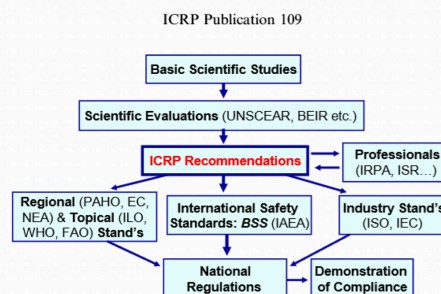


Fig. 3.1. The basis for and use of ICRP recommendations on radiological protection policy.

ANNUAL RADIOLOGY MEETING (ARM), UAE

DUBAI, UAE | OCTOBER 15-17, 2019

REPORT BY PHILIPPE GERSON, ISRRT TREASURER



| Philippe Gerson with students.

THE ANNUAL Radiology Meeting (ARM) was held in Dubai, UAE October 15-17, 2019.

This congress gathers together more than 1,800 radiologists, engineers and radiographers from all over the UAE along from other countries.

It is organized by the RSE (Radiology of the Emirates). ISRRT had the honor of being a partner of this event for the first time in 2019.

For the second consecutive year, there was a session for radiographers held over two days to which I was invited, as I was the previous year, to be a guest speaker.

I presented two topics; one on the ISRRT (organization, objectives, actions), and another on the ISRRT actions in Haiti.

My colleague Christina Malamateniou, from the University of London, was also invited to this event and presented a paper on "mentoring".

Twenty-three communications were presented from radiographers and radiologists with different subjects on all aspects of our profession to the 150 participants.

A delegation of our Palestinian colleagues were present and we were able to discuss together the first and next congress of AFRSA (Arab Federation of Radiology and Medical Imaging Associations), which was to be held in Tunisia on April 17-19, 2020. Unfortunately due to COVID-19 this was not held. AFRSA was created in April 2019 in collaboration with ISRRT and particularly myself.

It includes 12 Arab countries (Tunisia, Algeria, Morocco, Lebanon, Palestin, Sudan, Egypt, Jordania, Syria, Mauritania, Oman, Lybia).

Many students from different universities in the region attended the ARM conference and presented posters.

I was able to be part of the jury of evaluation of these posters with Samar El Farra, Chief Academic Officer of Higher College of Dubai and also organizer of the congress.

The Radiographers Association Society of the Emirates (RASE) is in the process of being formed and is keen to join the ISRRT at our next World Congress in Dublin.

I wanted to thank them for their warm welcome and invitation my colleagues and now friends Samar, Hessah and Hashim and wishing to see them again in November 2020 in Dubai. ■



■ Palestinian radiographers with Philippe Gerson.



■ Philippe Gerson with local team from the Radiographers Association Society of the Emirates (RASE).

ISRRRT-CHESNEY CAPACITY BUILDING WORKSHOP IN AFRICA: TRAINING THE TRAINERS WORKSHOP IN RADIATION PROTECTION

DOUALA LAGOS, NIGERIA | NOVEMBER 18-20, 2019

REPORT BY BONIFACE KOUAMÉ YAO, REGIONAL DIRECTOR AFRICA



| Lagos workshop delegates.

WORKSHOP

The ISRRT is the umbrella body of radiographers worldwide. It is saddled with the responsibilities of educating, training and professional practice of her members. Via its action plan to echo Bonn Call-for-Action, ISRRT is working to strengthen radiographers' skills so that they could help to maintain and improve the standards of Radioprotection within Africa. Part of which is the "Training the Trainers workshop in radiation protection", a capacity building workshop that is organized in the different regions of Africa.

The 2019 session for English speaking Africa was hosted by Nigeria, West Africa and held November 18-20, 2019 in Big Hall Presken Hotel, 1, Shonny Street, Shonibare Estate Ikeja Lagos.

The workshop was shaped to provide theoretical knowledge and methodological contributions in reflexive posture on real-life training scenarios in radiation protection teaching, a methodology to organise, design and animate training sessions in radiation protection for radiographers.

The three-day program was taught in a variety of ways and with a high degree of interaction. The workshop was practically oriented, and the thorough analysis of the participants' home situation as regard to radiation protection issues, was helpful in building next steps. It gathered 60 participants coming from six countries; Kenya, Tanzania, Uganda, Rwanda, Côte d'Ivoire and Nigeria.

After the opening ceremony chaired by the representant of the Ministry of Health and the representant of the Lagos State, I introduced the workshop giving an overview of the objectives and goals. In my presentation, I stressed on the fact that the major focus which has characterised the ISRRT and its contribution to world health, is that of education and setting standards; a focus that the regional committees should have the prime objective of encouraging a drive for higher education for their members and the sharing of standards across the ISRRT world.

I then added that the ISRRT-Chesney capacity building workshop in radiation protection was shaped to afford all delegates the opportunity to network and share experiences with the aim of providing a platform to address radiation protection and safety issues in Africa.

The workshop was marked by an innovative experimentation. Two



| Boniface Yao, ISRRT Regional Director Africa and Elisabeth Balogun, ISRRT Regional Coordinator Professional Practice.

presentations were delivered by Håkon Hjemly remotely, using the video conference software Zoom, which was appreciated by the participants.

The scientific programme was made up by six teaching sessions and two hands on training activities to provide capacity building.

THE INTERACTIVE BREAKOUT SESSION

Training and re-training of radiographers and radiologic technologists has been ongoing with the leadership and sponsorship of the ISRRT and expert support from the IAEA. In view of the level of commitment shown by the ISRRT, Radiographers in Africa at the just concluded Train the trainers' workshop during and interactive peer-review breakout sessions, comprising eight (8) different groups identified common challenges of radiation protection across the region and also made a declaration tagged the "Lagos Declaration on Radiation Protection".

Summary of Outcome(s) of Activity / Conference:

Several challenges were identified during the session with representatives from the different countries. Most challenges were similar across countries in the region. These challenges were grouped under three thematic areas based on the principles of radiation protection.

Justification of Medical Exposures

- Lack of awareness, appropriateness and audit of justification of medical exposures among referrers and users of ionizing radiation in the region.
- Lack of synergy among health professionals in clinical practice, research and academic institutions.
- Lack of regular update courses and CPDs on radiation protection.
- Lack of harmonized training curriculum in radiography and radiation protection for Africa.
- Lack of specialized training and update courses on paediatric radiation protection.
- Lack of clinical imaging guidelines and referral guidelines.
- Poor awareness, advocacy and implementation of radiation safety culture.
- Poor implementation of government policies on radiation protection in practice.



| IAEA expert Dr Mohamed Mogaadi, main trainer at the workshop.

Optimization of radiation protection

- Lack of routine quality control and quality assurance for both conventional and digital radiography.
- Use of old and obsolete X-ray equipment, a threat to public health in Africa.
- A growing menace of Quackery across the sub-region.
- Poor research quality and funding opportunities for optimization of radiographic procedures.
- Lack of standardized paediatric protocols and techniques.
- Lack of Standard Operations Procedures (SOPs).
- Service maintenance contracts virtually absent for X-ray imaging and other imaging modalities.
- Lack of National Diagnostic Reference Levels (NDRLs) for most radiographic procedures across the sub-region.
- Poor implementation of ALARA principle in digital radiography among radiographers in the region.
- Poor awareness of digital quality control practices among radiographers.
- Non-involvement of radiographers in equipment procurement process.
- Poor incident, accidents, and error reporting culture.
- Lack of patient dose data registry for the region and high dependence on UK, Europe and US data.

Dose limitation

- Lack of personnel monitoring devices and practices across the sub-region.
- Lack of information on the advantages and disadvantages of TLD versus INSTANT DOSE.
- Lack of radiation safety officers and radiation protection committee in most hospitals across the sub-region.
- Poor uptake and implementation of guidelines for personnel radiation protection and monitoring.
- Radiographers representation in national Ministries of Health virtually absent in most countries.
- Accreditation, peer-review and evaluation of practice and centres in the sub-region is poor.

Delegates were optimistic that these common challenges are surmountable with will from the regional leaders of health making radiation protection of patients, staff and the public a priority consistent with the recommendations of the international basic safety standards of the IAEA. Further support in terms of funding, training of radiographers to enhance justification and the use of referral guidelines in the region is strongly recommended with requisite support from the ISRRT.

Summary of the Evaluation forms

The post workshop evaluation forms distributed

were filled and returned by 47 of the respondents. Although not all the delegates responded to all the questions on the evaluation forms, the responses were quite insightful and informative. Most of the responses were in the affirmative. The three outstanding responses based on the 4-point Likert scale were; 93% of the respondents strongly agreed that they would be interested in further workshops related to radiation protection, 89% of the respondents strongly agreed that the instructors were knowledgeable in their area with none disagreeing to that fact and 85% strongly agreed that the materials related to the title of the workshop. A summary of all other responses is shown in table 1.0 below.

On the second aspect of the evaluation form where respondents were asked to indicate whether the following sessions (use of the USB in the formal presentations , the film sessions, quiz sessions, presentations by local Nigerian professionals) assisted them in developing their skills in justification of procedures and optimization in radiation protection, 39 of the 47 i.e 83% of the respondents indicated with 100 % affirmation (YES) that the session assisted them in developing justification skills while, 8 of the respondents were divided on the different sessions.

The third aspect of the evaluation were open ended questions.

Table 1.0 Delegates evaluation of the ISRRT ToT workshop

	4		3		2		1	
	Counts/ N	%	Counts/ N	%	Counts/ N	%	Counts/ N	%
Workshop content was well organised	26/47	55	18/47	38	2/47	4	1/47	2
Good balance of learning format	22/47	47	21/47	45	4/47	9	-	-
Knowledgeability of instructors	41/46	89	5/46	11	-	-	-	-
Relationship of materials to title	40/47	85	6/47	13	1/47	2	-	-
Relevance of materials to work environment	34/46	74	11/46	24	-	-	1/46	2
Usefulness of information to workplace (Applicability)	30/46	65	13/46	28	2/46	4	1/46	2
Comfortability of accommodation if applicable	6/25	24	12/25	48	7/25	28	-	-
Organisation & timeliness of transportation	11/36	31	11/36	31	11/36	31	3/36	8
Catering for the workshop was good	15/47	32	19/47	40	10/47	21	3/47	6
Interest in further workshops related to radiation protection	43/46	93	2/46	4	-	-	1/46	2

4= strongly agree, 1 = strongly disagree; N = total number of respondents that attempted a question; - = missing values.

This gave respondents the opportunity to freely comment on somethings they liked most, least liked, workshops in subjects they may be interested in and any other comments. Although, not all the respondents made comments, a summary of the comments shows that 15 of the 47 respondents liked the quality, content and competence of the presentations and presenters, specific areas of mention were the interactive nature of the presentations, use of web-based tools for teaching, punctuality and friendliness of the foreign presenters. Other persons liked the group discussions or peer-review session where delegates interacted about challenges and possible solutions to radiation protection in English Speaking Africa. Other persons also liked the practical hands-on session at the Lagos University Teaching Hospital (LUTH), while, others were impressed with the unity, collaboration and networking opportunities afforded by the workshop.

With respect to comments on things they liked least or disliked, poor time management was a recurring theme, the French accent of the major presenter from IAEA made it difficult for some of the delegates from the English-speaking background to completely comprehend some of the presentations.

The quality of catering service provided, poor interpersonal relationship of the caterers, transportation arrangements, quality of the remote presentation and delay in delivery of the workshop materials were things disliked by most delegates.

Delegates indicated interest in workshops on the following subject areas; radiation protection training with hands-on training (more than half of the delegates indicated interest on this), Quality assurance and Quality control training for (conventional, digital radiography and for CT), paediatric radiography and radiation protection, MRI safety training, ultrasonography, pattern recognition, radiotherapy, interventional radiography, research in radiography, training of radiography lecturers, environmental

radiation protection, radioactive waste management, regulatory enforcement training, private practice radiography and training of radiographers on integrating radiography into national health care policies.

The general comments from delegates were mostly commendations and appreciation to the organisers of the workshop particularly the ISRRT in collaboration with the IAEA as well as the local organizing committee with a mild recommendation that future workshops should consider the English Language proficiency of resource persons to enhance effective communication and better understanding. Having enjoyed the just concluded workshop, most of the delegates are looking forth to more of such workshops in future with wider publicity and participation.

On the final note on whether delegates will be willing to complete a follow up evaluation to determine the relevance of the workshop in their workplace, 36 Of the 47, i.e 77% delegates indicated willingness to participate in the survey while, others did not comment on it.

At the end of the workshop an online course offer from IAEA was welcomed by the participants. The details are below:

3 online courses ready

<https://www.iaea.org/resources/rpop/resources/online-training>

1. Safety and Quality in Radiotherapy
2. Dose management in CT
3. Tips and Tricks in Radiation Protection for Radiographers

Module 2: Repeat Reject Analysis

Link: <https://360.articulate.com/review/content146c6d07-29f7-4fe8-a875-eab572573070/review> ■



■ Lagos workshop organising committee.

14TH NATIONAL DELIBERATION, PRESIDENTIAL ELECTION DAY and the INAUGURATION OF THE INDONESIAN SOCIETY OF RADIOGRAPHERS EXECUTIVE BOARD 2019-2023

LOMBOK, INDONESIA | NOVEMBER 8, 2019



| President Sugiyanto with all board members and executive council of Indonesia Society of Radiographers after the inauguration.

INDONESIAN Society of Radiographers (PARI) has succeeded in holding a National Deliberation and re-election of the President of Indonesian Society of Radiographers for the 2019-2023 period. The election of the President PARI takes place every four years, and in 2019 it took place on the island of Lombok, West Nusa Tenggara Province, of Indonesia, a developing province that is persistently beautifying the island for tourism.

Indonesian Society of Radiographers National Deliberation was also filled by the National Radiology Workshop taking place at the Lombok Raya Hotel Ballroom in the city of Mataram, West Nusa Tenggara Province, from November 8-10, 2019 attended by more than 650 participants from various provinces throughout Indonesia with the theme 'Development of Radiographers Competence in Radiodiagnostic, Imaging, Radiotherapy and Nuclear Medicine in Welcoming the Industrial Revolution 4.0'.

The 2-day National Radiology Workshop was completed by hands-on radiology imaging modalities, radiology development seminars, professional discussions, parallel classes, poster contests and oral presentations.

Speakers who took part in the national radiography workshop included Dr Rayhan Eddy Yunus, Radiologist from Indonesian



| 14th National Deliberation of Indonesian Society of Radiographers, Election Day, Dr Sugiyanto with Madam Fatimah inserted ballot papers.

National Hospital Cipto Mangunkusumo Jakarta, Dr Nur Huda Hendra Setyawan Radiologist from National Hospital Dr Sardjito Yogyakarta, Indonesia. Dr H Sugiyanto, from the Ministry of Health, Indonesian Agency for Health Human Resources Development, Dr Agus Indarjo from Ministry of Technology Research and Higher Education, and all other 14 speakers.

The Indonesian PARI Presidential election was held on November 9, 2019, the previous President, Dr H. Sugiyanto, S.Pd, M.App.Sc (MRI) was re-elected for the second time as President of PARI for the 2019-2023 period. Congratulations and success to Dr H Sugiyanto for his re-election as President of PARI for 2019-2023 period.

A month after the inauguration of the president of PARI, was the inauguration of the Central Board of the Indonesian Society of Radiographers whose members were directly elected by the president of PARI to assist his duties during the running of the government of PARI.

The inauguration of the central board was held on December 15, 2019 at the newly renovated PARI secretariat building, located at Jalan Bambu Apus, East Jakarta, Indonesia.

The elected PARI Central Board consists of Board of Trustees,



| Signing of the Presidential Inauguration Vow and Integrity Pact.



| President Sugiyanto with speakers, and vendors of national radiology workshops.



| Inauguration of new elected President Of Indonesia Society Radiographers period 2019-2023, Dr. H Sugiyanto, S.Pd, M.App.Sc (MRI).

the Inspection Board, the Indonesian Radiographers Ethics and Disciplinary Council (MDRI), President of PARI, six Vice Presidents, the General Secretary, the Treasurer, eight departments.

Central boards come from various regions in Indonesia with various educational backgrounds, skills, specializations, but have the same profession as a radiographer. The inauguration program consisted of taking the oath of the PARI board's promise and signing the Integrity Pact.

After being inaugurated, all board members and the executive



| Opening Ceremony of National Radiology Workshop Indonesian Society of Radiographers.

council of Indonesia Society Radiographers began their devotion for Indonesia radiographers, working in accordance with the given job description. Still with the motto of the Indonesian Society of Radiographers, Together, Prosperous, and Worldwide.

Congratulations and success to the elected central board, hopefully can provide the best service to Indonesian radiographers and bring Indonesian radiographers to achieve all goals. All committee and organizers would like to thank all participants and parties who have succeeded the event. ■



OFFERING HOME STUDY COURSES SINCE 1985
IN
ECHOCARDIOGRAPHY
VASCULAR TECHNOLOGY
DIAGNOSTIC MEDICAL ULTRASOUND

STUDENTS FROM MANY COUNTRIES
HAVE GRADUATED FROM OUR HOME STUDY COURSES

THE COURSES PROVIDE ALL THE THEORY NEEDED TO
PERFORM ULTRASOUND IN THE FOLLOWING AREAS:

PELVIS
BREAST
ABDOMEN
OBSTETRICS
GYNECOLOGY
NEUROSONOLOGY
MUSCULOSKELETAL
ECHOCARDIOGRAPHY
VASCULAR TECHNOLOGY

MOST COURSES ARE WORTH 30 CME CREDITS

www.burwin.com



PHONE: 204-254-1439 (Central Time) or 902-634-3238 (Atlantic Time)
FAX: 204-254-7473

WINNERS OF THE IAEA'S DIGITAL COMPETITION "TOWARDS A STRONG RADIATION SAFETY CULTURE IN MEDICINE"

REPORT BY ANASTASIA SARCHOSOGLOU AND RODANTHI KARAVELAKI
THERAPEUTIC RADIOGRAPHERS, GENERAL ONCOLOGICAL HOSPITAL OF KIFISIA, GREECE



| Stewart Whitley, Director of Professional Practice at ISRRT, with a group of delegates from the meeting.

LAST SPRING we were alerted from the ISRRT website about the competition "Towards a Strong Safety Culture in Medicine" that International Atomic Energy Agency (IAEA) had conducted. Driven by the ISRRT initiatives and our eager as therapeutic radiographers to contribute to promoting safety culture in radiation therapy, we applied for the contest. The contest was about creating a digital presentation of one of the ten safety traits that IAEA has identified as prerequisites for improving radiation safety culture.

Effective communication is the trait that IAEA recognise as one of the cornerstones of safety. We chose to present this trait as we strongly believe it can make a difference between failure and success in developing a sound safety culture. Besides, all the reports about accidents from the major organizations and professional societies identify ineffective communication as a common contributing factor to many radiotherapy incidents. Moreover, at the Bonn Call-for-Action, a jointed IAEA-WHO plan in radiation protection which is fully supported by ISRRT, risk communication was recognised as an area that needs improvement for strengthening patient safety. Eight years later, communication still needs to be improved and always will be.

Communication is a human depended dynamic process that has a direct impact on safety culture. In a three minutes video presentation, combining art and science, we tried to highlight the importance of effective communication in establishing safety culture in radiation therapy departments. In a pleasant yet drastic way, through animated drawings, we demonstrated the influence of communication over the other nine safety traits. We also presented barriers to effective communication and we focused on tips to communicate



| Juan Carlos Lentijo, IAEA Deputy Director General and Head of the Department of Nuclear Safety and Security awarded first prize to Anastasia Sarchosoglou and Rodanthi Karavelaki, therapeutic radiographers from Greece.



■ Tour to the IAEA Radiation and Monitoring Laboratory.

effectively. At the digital presentation we were proud to introduce CLAB acronym as a tip to effective communication. “Keep CLAB in mind when you communicate: Clarity, Listening, Assertiveness, Body Language”. <http://ns-files.iaea.org/safety-culture/14.mp4>. The digital presentation is part of the new training material that IAEA is developing to strengthen Radiation Safety Culture in Medicine.

In February 2020, we were deeply honored to claim first prize of the competition from Mr Lentijo, IAEA’s Deputy Director General and Head of the Department of Nuclear Safety and Security. The award ceremony took place during the IAEA Consultancy Meeting on Strengthening Radiation Safety Culture in Medicine, in IAEA headquarters in Vienna, where we were happy to participate and present Effective Communication trait. We also had the great pleasure to meet prominent personalities in the field of radiation safety.

We are highly thankful to Ms Gilley, Radiation Protection Specialist of IAEA, for her warm welcome, the great arrangements she made for a productive and creative meeting and also for the fascinating tour to the IAEA Radiation and Monitoring Laboratory.

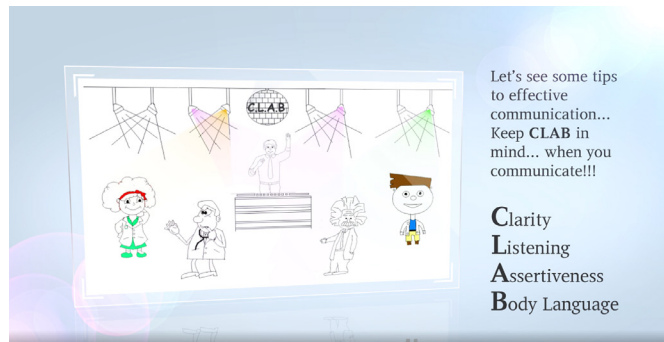
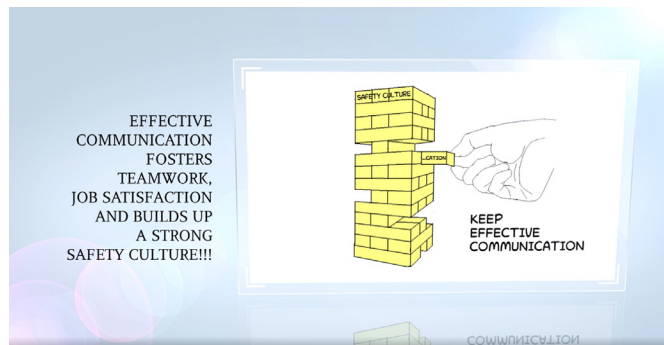
We would also like to express our sincere appreciation to Prof. Graciano Paulo, European Federation of Radiographer Societies (EFRS) representative, for stressing radiographer’s involvement in patient safety. Moreover, we are grateful for having the opportunity to meet the ISRRT Director of Professional Practice, Mr Stewart Whitley whose work in profession’s development has been enormous and admirable. Mr Whitley presented the ISRRT initiatives and activities in promoting safety culture from which we were highly motivated to participate to the competition. ■



■ Stewart Whitley, Director of Professional Practice at ISRRT and Prof. Graciano Paulo EFRS representative with the winners’ competition.



■ Debbie Gilley, Radiation Protection Specialist at IAEA in the Division of Radiation, Transport and Waste Safety Radiation Protection of Patients Unit with the winners.



■ Snapshots of the winning digital project, “Communication in Safety Culture: Communicate Safety...Safely” which is included to IAEA new training material in strengthening Radiation Safety Culture.

ETHICAL USE OF LOW DOSE CT SCANNING FOR DETECTION OF NARCOTICS TRAFFICKING BY “BODY PACKERS”

REPORT BY MALVIKA MEHTA, CRANFIELD UNIVERSITY, UK

INTRODUCTION

There has been a worldwide increase in internal concealment of illicit drugs carried by drug mules in the last few years. Cocaine, heroin and hashish are three common drugs transported internally by swallowing or inserted through vagina or rectum to escape security measures. Liquid packets of cocaine are said to be carried in body spaces too. Drug carriers are often identified by the border control officers and brought to the nearest hospital for confirmatory imaging tests and management. There are multiple levels of side effects that body packers face in case of rupture and at some point, may require medical or surgical intervention. Figure 1 demonstrates comparison between a body packer and a body stuffer/pusher.

Studies say that “A body packer can carry 50-200 packages, each containing 8–10 g of narcotic agents, weighing up to 1 kg in

a single transport” (Sica et al., 2015). They can be found in the gastrointestinal tract. Children and women (especially pregnant woman) are easy targets of drug syndicates.

SEARCH STRATEGIES

While security officers use various traditional methods like body language, active listening, trained dogs and baggage scanning to minimize the risk of drugs transport, the body packers develop advanced methods to elude cross border security. Drug carriers are often caught due to intoxication or gastro intestinal obstructions that require surgical intervention. Interrogation is carried out by the officials and quite often the suspects will not confess. Physical examination as a security measure at the ports or airports may not be successful for body packers. Body stuffers tend to quickly swallow or hide these packages vaginally and can be only be found on rectal and vaginal examination.

	Body packer	Body stuffer
Definition	Persons professionally carrying a large number of packages containing narcotic materials using their body spaces	Persons hiding packages from security forces with the fear of getting caught; often self-abuser or street dealer
Synonyms	Swallowers, mules, couriers, internal carriers, burriers	Mini packer, quick swallowers
Number of carried packages	High quantity (an average of 50-100 packages)	Low quantity (an average of 1-15 packages)
Packet features		
Type of production	Mechanically or handmade	Handmade
Features of packaging	Tight and durable	Loose and sloppy
Size	2-8cm	0.5-2cm
Contents	Mostly cocaine, heroin, methamphetamine, liquid cocaine	Mostly cocaine (powder or crack) and heroin
Clinical importance	Probability of surgical complication (i.e. ileus, perforation) is higher	Probability of intoxication is higher
Radiological diagnosis	Relatively easy	More difficult
First examination	Plain film, ultrasound or low-dose CT	Low-dose CT
Standard of reference	Non-enhanced CT	Non-enhanced CT

Figure 1: Comparison between a body packer and a body stuffer, features of stuffed packets and its diagnosis (Bulakci and Cengel, 2016)

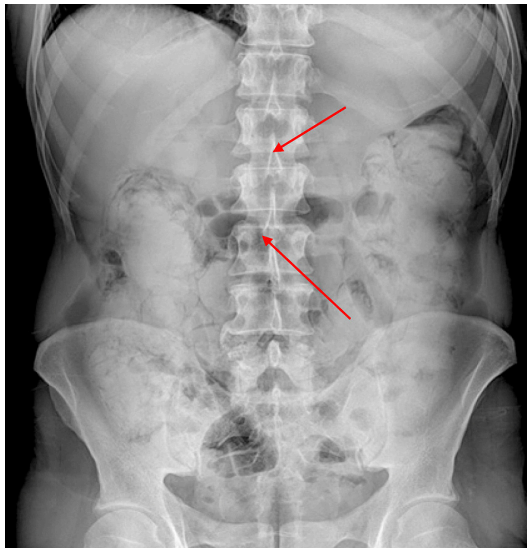


Figure 2: X-ray image of a 48-year-old male body packer. Solid drug packages are visible in the loops of the colon. However, liquid cocaine cannot be identified clearly. Number of packets also remain unambiguous. Source:[Bulakci and Cengel, 2016, p-4].

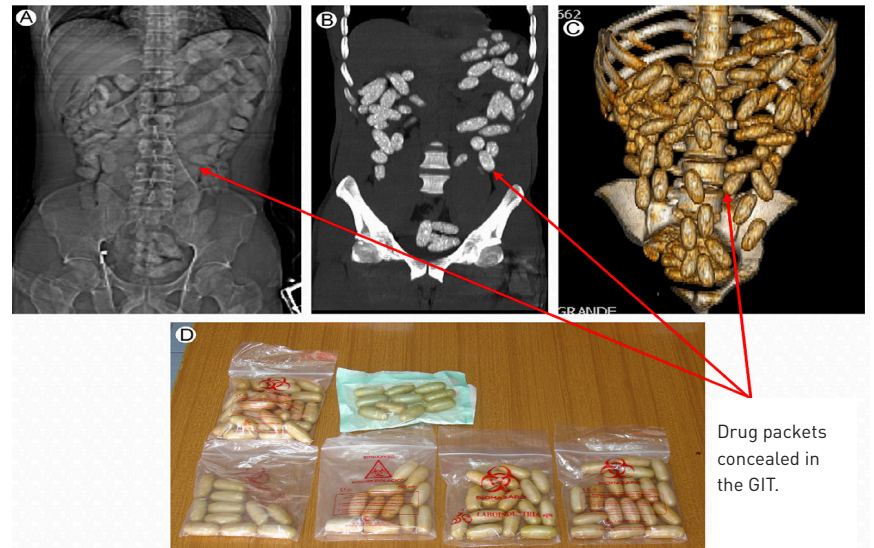


Figure 3: (A) 2D coronal multiplanar (B) 3D-CT (C) CT image demonstrating tic-tac sign. (D) Drug packets emptied by the carrier [Sica et al., 2015, p-44]. Exact location, number and size of the packets can be seen in a CT scan.

In case a package leaks, then urine and stool analysis will show traces of drugs present. But otherwise there aren't any other known generic methods to identify suspects. The need for radiological intervention hence steps in. Plain film abdominal X-ray and Ultrasound sonography are current methods to perform primary screening tests.

PLAIN FILM ABDOMINAL X-RAY

A conventional X-ray uses a fixed tube that sends X-rays in one direction as shown in figure 2. Apart from being a low dose technique it is comparatively cheap and a faster method. According to Booker "the sensitivity of abdominal X-ray in the detection of drug packets in body packers is reported as 47–95%" (2008). The chances of getting false-positive results may increase with ant motility drugs or because of constipation. Small quantity drugs may not be visualized. 16 out of 48 cases of body packers were reported to be false negative [McCarron and Wood, 1983].

CT SCANNING

Computerized Tomography (CT) scan combines a series of X-ray images which are taken with the help of motorized X-ray source. It rotates around the patient and passes narrow beams through the body. These X-rays are picked up by the special detectors opposite to the X-ray tube and transmitted to a computer. Cross sectional images of the bones, blood vessels, soft tissues and organs inside the body are created by computer processing. It can reveal abnormal features (concealments too) and is helpful for medical purposes to plan and monitor the treatment. Image can be 2-dimensional or 3-dimensional (figure 3).

According to Sica et al, CT imaging is superior in terms of sensitivity which ranges between 95.6–100%, its specificity, along

with positive and negative predictive value (2015). In comparison with plain abdominal X-ray, it has better contrast resolution. There are two ways of performing CT scans, general unenhanced CT (up to 10mSv) and low dose CT (up to 2mSv).

ADVANTAGES

Studies by Schulz et al have shown a good comparison between abdominal X-rays and CT scan. A normal X-ray scan produces about 1.7mSv of radiation. It is obvious that multiple X-ray scans will be required to present entire Gastro intestinal tract. Meanwhile hospitals in Denmark, take minimum three scans in such cases (Algra, Brogdon and Marugg, 2007). A modern approach of using low dose CT scan will produce less than 2mSv radiation and will give better presentation of entire gastrointestinal tract as compared to minimum three scans of plain radiography (1.7x3=5.1mSv). There is no need to consume contrast liquids too.

CT scan can identify intracorporeal concealments, locate and enables us to count the number of packets too. Thereby, making it appropriate for management of complications. Research says, that ruptured packets can also be identified using CT imaging. It can be seen in the form of irregular shape, smaller size (difference between other undamaged packets is noticed), its density will also vary (Sica et al., 2015). Earlier unenhanced CT was used which exposed up to 10mSv radiation. Upon comparison between both these methods, a low dose CT scan is preferable since similar results can be achieved without exposing the patient to higher doses initially.

Table 1 shows different signs that are visible in various imaging techniques. Even though plain film radiography can show similar

Imaging type	Signs	Powdered drugs	Liquid cocaine	Sensitivity	Specificity	Accuracy
<i>(Bulakci and Cengel, 2016)</i>			<i>(Flach et al., 2012)</i>			
Plain film radiography/ abdominal x-ray	- Double condom sign - Tic-tac sign - Rosette sign - Parallelism sign	Dense material sign	Opaque Thin lucent lines due to trapped air between packages, difficult to identify	Body packer: 58.3% Body stuffer: 28.6%	Body packer: 85.3% Body stuffer: 100%	Body packer: 73.3% Body stuffer: 100%
CT scan	- Double condom sign - Tic-tac sign - Rosette sign - Parallelism sign	Dense material sign	Hyper density Thin hypodense lines Jigsaw pattern	Body packer: 100% Body stuffer: 100%	Body packer: 100% Body stuffer: 100%	Body packer: 100% Body stuffer: 100%

signs like CT, its false negative or false positive prediction rate is quite high (Schulz et al., 2014). Sensitivity, specificity and accuracy of CT is undoubtedly high. A study on using CT scan as a definitive tool for diagnosis of a body packer was done in 2014. They approached different methods to identify suspected drug carriers approved by the ethical committee. Their sample strength consisted of 36 men and two women with a mean age of 34yrs (Schulz et al., 2014). Plain film radiography with three different X-ray units were performed. CT scans of abdomen was taken using five different equipment's, the tube current (30-80mA) and voltage (100-120kV) was changed to decrease the dose from 10mSv significantly to about 2mSv. These recordings were studied by two experienced radiologists.

In about 25% of the cases, plain radiography failed to identify concealments or had unclear results. Even if it did, the exact count could not be established. It had a negative predictive value of 80% and about 20% positive predictive value. Furthermore, the contrast is limited, presence of intestinal gas, and movement of bowels could not be easily distinguished. In case of uncertainty the radiographers then had to opt for CT imaging, which eventually increased more radiation overall (Schulz et al., 2014).

The 'principles of protection' form the foundation of all international advice and UK legislation (Cooper et al., 2007, p-28). It states:

- **Justification:** "Any decision that alters the radiation exposure situation should do more good than harm."

Comments: CT scan can provide a definitive visualization of the number of packets, can give an insight about leakage and rupture. The dose of radiation will be less harmful than intoxication because of the drugs in the body. There is a chance for medical intervention at the right time, else it can be fatal.

- **Optimisation of protection:** "the likelihood of incurring exposures, the number of people exposed, and the magnitude of their individual doses should be kept as low as reasonably achievable, taking into account economic and societal factors."

Comments: Low dose CT scan emits up to 2mSv radiation, and by changing the tube current and voltage even lesser radiation can be achieved. It is almost equivalent to a regular abdominal X-ray (1.7mSv). Researchers like Poletti et al calculated the radiation dose as 1.76 +/- 0.2 mSv for females and 1.26 +/- 0.1mSv for males at 30mAs (2012). In another study by Aissa et al the mean radiation dose is 1.06 +/- 0.49 mSv at 100kVp and automated tube-current modulation (2015).

- **Dose limitation:** "the total dose to any individual from regulated sources in planned exposure situations other than medical exposure of patients should not exceed the appropriate limits recommended by the Commission."

Comments: ICRP sets dose limits (figure 4) for annual radiation. Effective dose up to 20mSv annually is considered safe for occupational purposes and 1mSv for public. ALARA principle says to keep the radiation 'As Low As Reasonably Achievable'. Low dose CT scanning technology can therefore replace the conventional Plain abdominal radiography given

TABLE 5.1: ICRP recommended dose limits in planned exposure situations (ICRP, 2007a)

Type of limit	Occupational	Public
Effective dose	20 mSv per year, averaged over defined periods of 5 years	1 mSv in a year
Annual equivalent dose in:		
Lens of the eye	150mSv	15 mSv
Skin	500mSv	50 mSv
Hands and feet	500 mSv	–

Figure 4: ICRP recommended dose limits (ICRP, 2007, p-31). Refer figure 6, appendix for categories of exposure to radiation.

that the tube voltage and tube current is changed to its lowest limits as discussed before :100kVp and 30mAs as ideal. The HPA advises that placing a limit of 5mSv effective dose over a 5-year period may be appropriate in case a person is willingly agreeing to exposure (written consent) that is beneficial in such circumstances (figure 7, appendix).

Exceptions to suspects where pregnant women are involved, they can undergo non-ionising methods like Ultrasound sonography as their initial screening test. If suspicious then relevant risk assessments should be done prior to CT scan. It is justifiable in such situations because the intoxication due to drugs is more dangerous than radiation.

One can reduce the total exposure to radiation by opting for CT scan initially. Figure 5 demonstrates the process of using CT as a primary examination technique. It saves time and hassles of multiple plain X-rays. Now a days, body packers carry drugs in radiolucent wrappings (Thali, Michael J., 2011). They even swallow radio opaque substances like sand to blur radiographs. Small packets can easily be missed, especially if majority of the packets are in the upper alimentary tract. Different types of packaging material are used. They are either handmade or produced in a factory. They can play with the radiodensity to avoid the risk of detection.

Ionising Radiations Regulations 2017 set out minimal standards for radiological protection and these are followed by Radiologists. According to Thali et al, low dose protocols for CT imaging must be undertaken. Collimation 1.2mm, 120kV ref. 120mAs could be lowered to 80kV ref. 250mAs (2011). They also suggested of taking a scout scan first. If there are any suspicious densities or gas formations then CT scan can be done. With latest development, there is a possibility of detecting which drug is being smuggled (Hounsfield Units (HU)).

Traditional method: The drug carriers are given mild laxatives and pain medication until excretion of three drug free stools (Flach et al., 2012). However, this method, can be surpassed in cases of severe constipation. There are isolation units where chances of manipulation of these packets is possible. The carriers may dilute the drugs with food or scrub the drugs on the walls or blankets. According to the European law, the detainees are not allowed to be put under 24 hrs. surveillance physically or digitally by a camera. The Swiss law states that the drug carrier can be charged

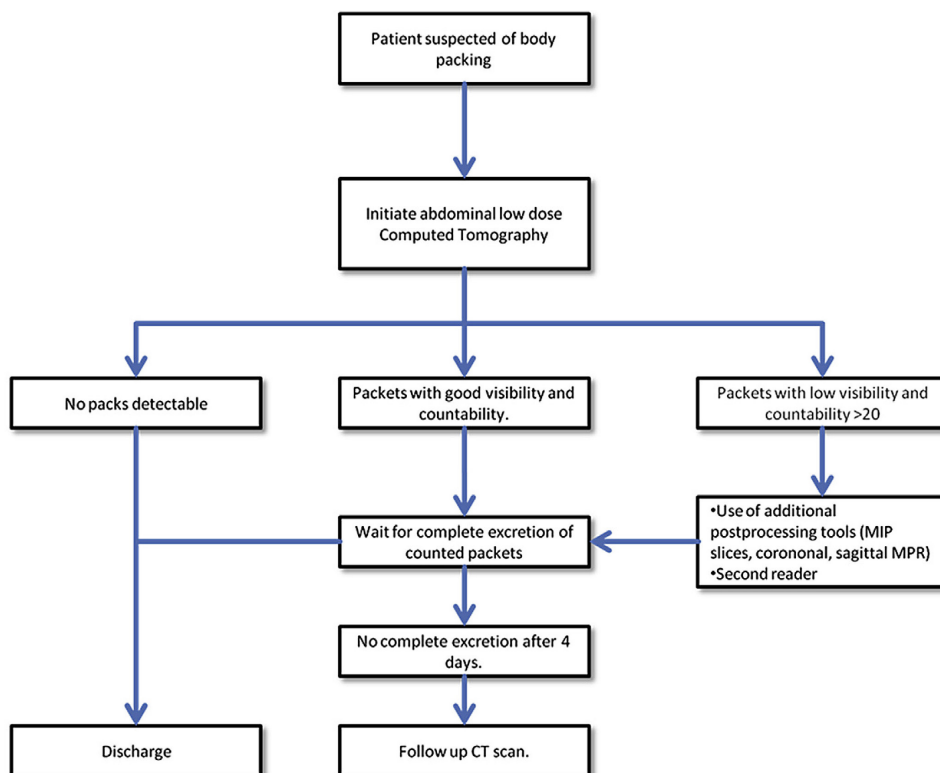


Figure 5: An example of proposed examination steps using Computer Tomography. A repeat CT scan is advised in case of any other complication. (Schulz et al., 2014)

only for the amount of drugs collected as evidence. This can be manipulated by re-swallowing the excreted pack or other methods (Thali, Michael J., Viner, M.D., Brogdon, B. G., 2011).

PROTECTION BY RADIATION

(Thali, Michael J., Viner, M.D., Brogdon, B. G., 2011)

Radiation can produce various biological and malignant effects in the human body.

- Control booth barrier: made with lead glass window, protects officials while exposures are made. The staff must be behind the protection of the screen. Radiation warning lights at the entrance is required.
- Shielding: additionally, with lead or barium plasters. In case of mobile equipment's, the direction of X-ray tube can be limited.
- Distance: keep maximum distance from the X-ray unit.
- Dosimeters: to be used to monitor radiation exposure received over a period.
- Pregnancy must be informed as soon as known to the person.
- ALARA: As Low As Reasonably Achievable is the key both in live and post mortem cases.
- Ionising Radiation Regulation 1999 guidelines must be followed.

DISADVANTAGES

While there are many advantages of using CT scanning techniques to detect body packers, there are a few disadvantages too. One of the main concerns is exposure to radiation. It causes unnecessary exposure to radiation for innocent public who may not be involved in drug transport. Secondly, distention of gas, bowel movements may be misleading. Another concern is unavailability of CT equipment at the airport. It prolongs the examination and is time and cost consuming. False predictive value may also be a concern towards the lower scale. Overall, the experience of a Radiologist is of utmost value.

LIMITATIONS

Presence of hard feces and gas surrounding the drug packets may cause inaccuracy in determining presence of drugs. Intra-abdominal calcification, foreign bodies may also mislead. It cannot be used for pregnant woman and underaged people. Instead, non-ionising screening methods like USG and MRI are the choice of primary evaluation.

CONCLUSION

The sensitivity and specificity of CT imaging is high as compared to Plain Radiography. The radiation dose can be easily kept under control by changing the exposure parameters. Plain radiography cannot capture the entire Gastro intestinal tract at once, and hence more than three scans may be required. It then exposes the body to twice as much as radiation as compared to CT. By using low dose CT, complications and clinical consequences can be effectively managed. Smaller quantities of packets, or packets lying in the upper GIT can be easily spotted. It is a common practice to perform CT examination to confirm that all the drug packets have been removed post excretion. The rate of true positives is more than false negatives. ‘Exposing to radiation risk is better than exposing yourself to drugs’ keeping this in mind the guidelines stated by IRR 2017 should be effectively adopted. By obtaining a 3D view of the body, it can be used for 3D reconstruction in the future, and further research may improve the accuracy of measurements of these packets. Assuming prior consent is taken from the patient after explaining him the risks of exposing him to radiation and the risks of intoxication of drugs is explained: The use of low dose CT

scanning for detection of narcotics trafficking by ‘body packers’ should be ethical, given that it is prompted by heavy safety and security concerns.

REFERENCES

Accardo, J. and Chaudhry, M.A. (2014) ‘Radiation exposure and privacy concerns surrounding full-body scanners in airports’, *Journal of Radiation Research and Applied Sciences*, 7(2) Elsevier Ltd, pp. 198–200.

Algra, P.R., Brogdon, B.G. and Marugg, R.C. (2007) ‘Role of radiology in a national initiative to interdict drug smuggling: The Dutch experience’, *American Journal of Roentgenology*, 189(2), pp. 331–336.

Bulakci, M. and Cengel, F. (2016) ‘The role of radiology in diagnosis and management of drug mules: An update with new challenges and new diagnostic tools’, *British Journal of Radiology*, 89(1060), pp. 1–13.

Cooper, J., Bouffler, S., Ebdon-Jackson, S., Harrison, J., McColl, N., Morrey, M., Muirhead, C., Paynter, R., Simmonds, J. and Stewart, J. (2007) ‘Application of the 2007 Recommendations of the ICRP to the UK’, *Environmental Hazards*, , p. 76.

Flach, P.M., Ross, S.G., Ampanozi, G., Ebert, L., Germerott, T., Hatch, G.M., Thali, M.J. and Patak, M.A. (2012) ‘“Drug mules” as a radiological challenge: Sensitivity and specificity in identifying internal cocaine in body packers, body pushers and body stuffers by computed tomography, plain radiography and Lodox’, *European Journal of Radiology*, 81(10) Elsevier Ireland Ltd, pp. 2518–2526.

Schulz, B., Grossbach, A., Gruber-Rouh, T., Zangos, S., Vogl, T.J. and Eichler, K. (2014) ‘Body packers on your examination table: How helpful are plain x-ray images? A definitive low-dose CT protocol as a diagnosis tool for body packers’, *Clinical Radiology*, 69(12) The Royal College of Radiologists, pp. e525–e530.

Sica, G., Guida, F., Bocchini, G., Iaselli, F., Iadevito, I. and Scaglione, M. (2015) ‘Imaging of Drug Smuggling by Body Packing’, *Seminars in Ultrasound, CT and MRI*, 36(1) Elsevier, pp. 39–47.

Thali, Michael J., Viner, M.D., Brogdon, B. G. (ed.) (2011) *Forensic Radiology*. Second edi. CRC press. ■

APPENDIX

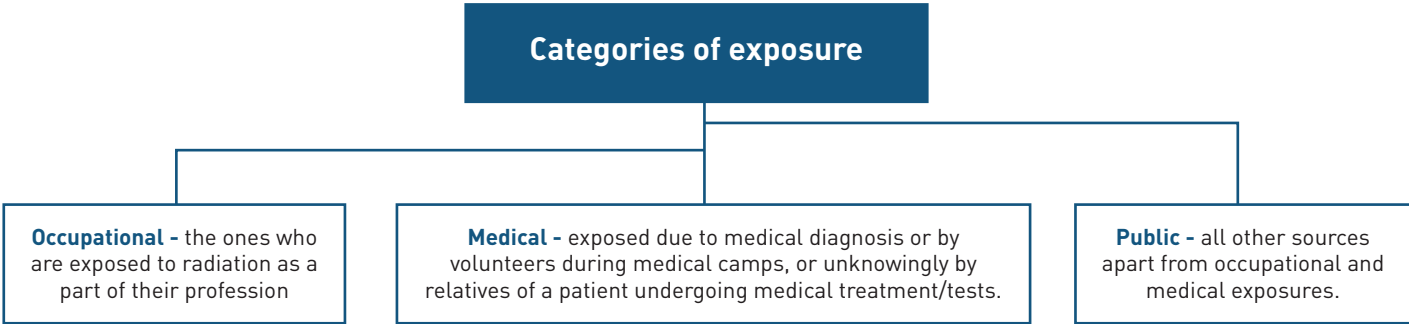


Figure 6: Categories of exposure to radiation (Cooper et al., 2007, p-25).

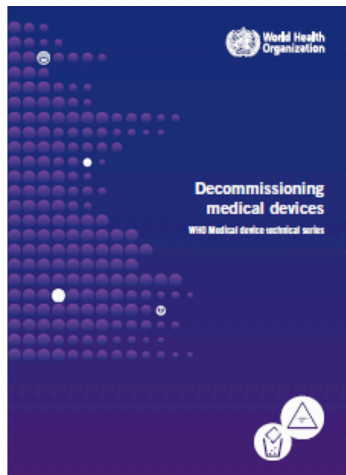
TABLE 5.2: ICRP framework for source-related dose constraints and reference levels (ICRP, 2007a)

Range for upper bound on optimisation (constraint or reference level) {mSv effective dose}	Characteristics of the exposure situation	Examples
>20-100 Higher reference levels may exceptionally be set for trained emergency workers	Extreme exposure situations that normally require protective actions to be applied to exposure pathways, since source either impracticable to control or uncontrolled	Emergency exposure situations
>1-20	Individuals will usually receive benefit from accepting the exposure situation Protection may be applied to exposure pathways or to source	Occupational exposure in planned situations, and during remedial actions taken after an emergency Comforters and carers of patients treated with radiopharmaceuticals Existing exposure situations
1 or less	Benefit to society rather than to individual Protection usually applied to source	Public exposure in planned situations

Figure 7: ICRP framework for dose constraints and examples (Cooper et al., 2007)).

PROFESSIONAL PRACTICE DIRECTOR'S REPORT

REPORT BY STEWART WHITLEY ISRRT DIRECTOR PROFESSIONAL PRACTICE



HOT NEWS! WHO Medical Devices book on 'Decommissioning of Medical Devices' published

This new publication from the WHO, launched December 2019 addresses the decommissioning as the removal of medical devices from their originally intended use in a health care facility to an alternative use or disposal. It further explains the options to eliminate or reuse and the notion of disinvestment decision.

WHO developed this guide with the support from a range of experts from different WHO aligned organisations of which ISRRT played an important role.

This publication is part of the WHO Medical Device Technical Series which includes a range of medical equipment related topics including 'The safe use of Medical Equipment' and 'Procurement Process Resource Guide'

Decommissioning of Medical Devices is a very important document as it addresses all the various aspects associated with the decommissioning of equipment including:-

- Medical device life cycle
- Decommissioning
- Decontamination
- Removal of patient data
- Waste management system
- Single- use medical devices
- Reusable medical devices

- Special care devices
- Implants
- Computer software and hardware

Radiographers will be familiar with the types and range of imaging and supporting medical equipment used in Diagnostic Imaging and Radiotherapy and will play a pivotal role in their; procurement, use, decommissioning and eventual replacement.

With such professional knowledge and experience radiographers and ISRRT member organisations are represented by the ISRRT to advise the WHO as an official non-state actor (NGO) organisation. As such ISRRT is recognised an important stake holder serving on several WHO committees and working Technical groups to share their knowledge and offer advice including the development of WHO publications. Such feedback is incorporated into these published documents reflecting the evidenced based knowledge of radiographers. Examples include the 'WHO list of Priority Medical Devices for Cancer Management' and the forthcoming 'WHO list of Priority Medical Devices for Cardiovascular, Stroke and Diabetes'.

Several issues were raised by ISRRT relating to 'The Decommissioning of Medical Devices' and have been incorporated into the final document.

A full report is given in the ISRRT December 2019 edition of *News & Views*, but as an example topics in the book include advice relating to the decommissioning of MRI and associated equipment, disposal of waste including infectious materials, disposal of radioactive sources and photographic chemistry used in radiographic film processing. ■

CALL FOR
ABSTRACT & FULL PAPER
DEADLINE
31st May 2020

7TH SOUTHEAST ASIA RADIOGRAPHERS & RADIOLOGICAL TECHNOLOGIST CONFERENCE (SEARC) & 8TH ASIA RADIOTHERAPY SYMPOSIUM (ARTs) & MSR GOLDEN JUBILEE

8TH-10TH OCTOBER 2020

VENUE: PENANG, MALAYSIA.

For registration kindly visit our website
<http://msradiographer.org/>

Honouring The Past, treasuring The Present, Nurturing The Future

Organised by:
Malaysian Society Of Radiographers
E-mail: searc2020@gmail.com

Logos: Association of Southeast Asian Nations of Radiographers, International Society of Radiographers & Radiological Technologists (ISRRT), and Penang Free Zone Malaysia 2020.

Diary Dates

2020

October 28-31, 2020
ICR Congress
Muscat, Oman

October 8-10, 2020
7th SEARC and
8th ARTs and
MSR Golden Jubilee
Penang, Malaysia
<http://msradiographer.org/>

2021

May 19-21
NCR: Nordic Congress
of Radiology
Helsinki, Finland

August 17-21, 2021
21st ISRRT World Congress
Dublin, Ireland
www.theccd.ie/

News & Views Editorial submissions & deadlines

Deadline for the three times a year issues are:

- March 10 (April issue) • July 10 (August issue) • November 10 (December issue)

All material must be sent electronically. Advertisements and images must be sent as high resolution PDF, TIF, EPS, JPEG files.

You are invited to comment in relation to the ISRRT newsletter editorial content and make suggestions for future issues.

All comments will be considered by the Editor and the Editorial Committee.

Advertisements/Secretariat

A section is reserved for the advertising of educational programs, courses or new radiological texts.

To submit news or to advertise please contact the ISRRT Chief Executive Officer: Mr Dimitris Katsifarakis, ceo@isrrt.org

HOW TO GAIN ACCESS TO THE ISRRT E-LEARNING COURSES

REPORT BY YUDTHAPHON VICHIANIN, DIRECTOR OF EDUCATION AND REGIONAL COORDINATOR OF EDUCATION A/A REGION

SINCE NOVEMBER last year the ISRRT has launched the e-Learning platform for its members around the world to access selected contents from anywhere and anytime. Members may access the provided courses by taking a free registration to obtain their username and password in order to gain access to the platform. The URL of the e-Learning platform is located here at www.elearning.isrrt.org/



Currently, there are various courses offered on the e-Learning system. The courses are listed as:

- Osteoporosis and DXA scanning by Sharon Wartenbee.
- Medical imaging equipment procurement and equipment specifications by Stewart Whitley.
- Introduction to the Picture Archiving and Communication System by Yudthaphon Vichianin.
- Clinical Audit in Medical Imaging by Hakon Hjemly.
- Digital Imaging: Issues in Quality and Radiation Safety by Vesna Balac.
- Dose Reduction Techniques by Sigurd Sundland.

For the first time, new users are required to register to the system by go to this URL www.elearning.isrrt.org/login/index.php. Then scroll down to the bottom of the page and find the "Create new account" and click on the button.

Is this your first time here?

For full access to this site, you first need to create an account.

Create new account

The system will navigate you to the Privacy Policy. Then down below the page you will find the button "I agree to the Privacy policy". Please click the button to proceed to the next page.

Data Protection Officer

207 Providence Square, Mill Street
London SE1 2EW, UK

I agree to the Privacy policy

You can learn more about cookies and the following third-party websites:

- AllAboutCookies: <http://www.allaboutcookies.org/>
- Network Advertising Initiative: <http://www.networkadvertising.org/>

I agree to the Cookies policy

On the next page, users are also required to accept the Cookies policy. Similarly, at the bottom of the page, you will find the "I agree to the Cookies policy" button. Read the policy and click on the button to proceed to the user information.

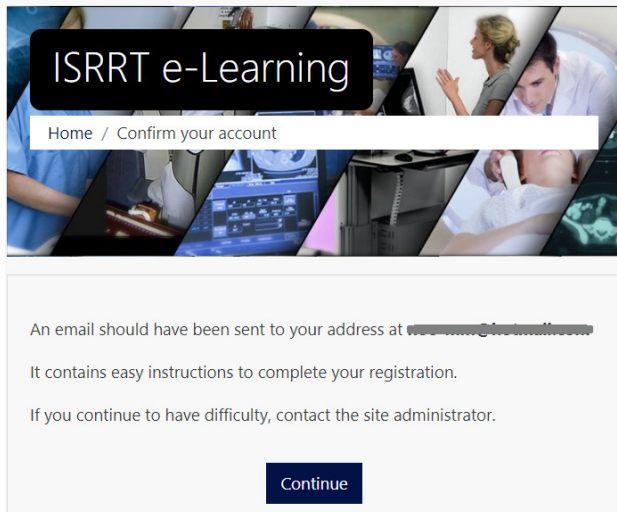
On the user registration page called "New account", new users need to prepare information including:

- Username (your desired unique username)
- Password (at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as *, -, or #)
- Email address (for password reset and certificate delivery upon the course completion)
- First name (as appear on the certificate of completion)
- Surname (as appear on the certificate of completion)
- City, town, country (optional information)

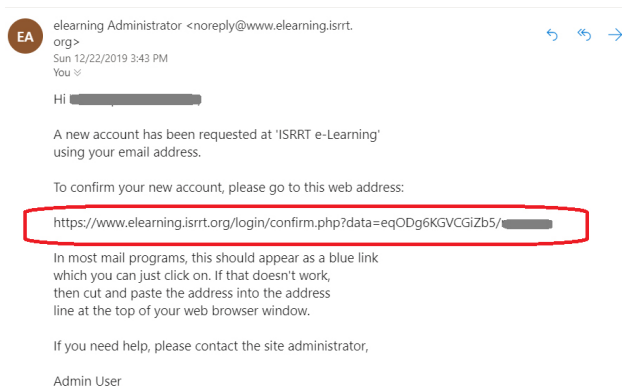
The screenshot shows the 'New account' registration page for the International Society of Radiographers and Radiological Technologists (ISRRT). The form is titled 'New account' and includes a 'Collapse all' link. It is divided into two main sections: 'Choose your username and password' and 'More details'. The 'Choose your username and password' section has fields for 'Username' and 'Password'. The 'Password' field has a red error icon and a message: 'The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as *, -, or #'. The 'More details' section has fields for 'Email address', 'Email (again)', 'First name', 'Surname', 'City/town', and 'Country'. The 'Country' field is a dropdown menu with 'Select a country' as the placeholder. At the bottom of the form, there are two buttons: 'Create my new account' and 'Cancel'. A note at the very bottom states: 'There are required fields in this form marked *'.

All required fields that users need to fill in the information will be marked with “!” sign.

Upon completion, you will be navigated to a page that inform users to check their mailbox and [confirm email](#) in order to gain the access to the system using the provided username and password.

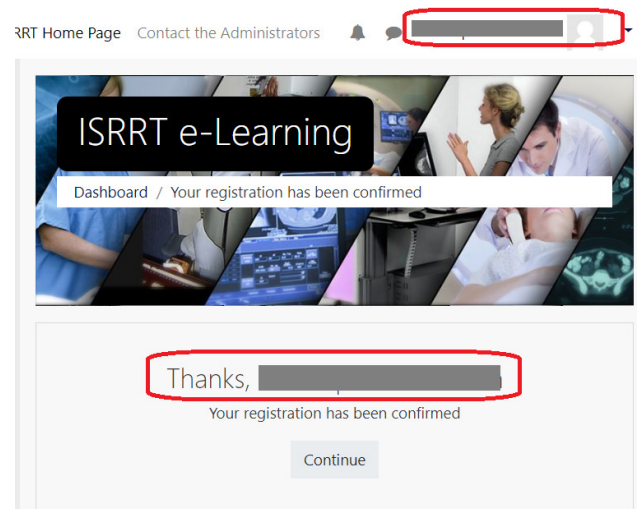


New users need to check their email. Sometimes the email may be accidentally transferred to the Junk mail box (as my case), so please carefully check and find the email which usually sent out in few minutes. After you found the email, [copy the provided URL link](#), then open your new web browser window, and paste the URL to go to the ISRRT email account confirmation page.

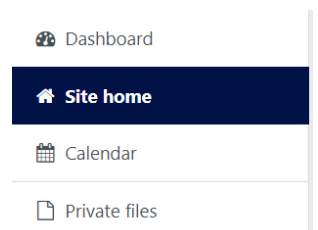


From the link in the verification email, the system will display the

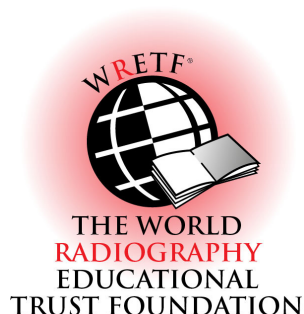
welcome page and [log the user into the platform automatically](#). From this step forward, you are free the access to the system under your username and password.



Once successfully login to the system, you may go to the menu on the left-side to navigate to the available online courses. My recommendation for new users is to use the “[Site home](#)” menu item to explore the existing uploaded courses. All registered users are allowed to enroll into all courses. Happy learning! ■



www.wretf.org



[email: admin@wretf.org](mailto:admin@wretf.org)

TRUSTEES

Chris Steelman (USA)
 Alan Budge (UK)
 Cynthia Cowling (Australia)
 Marie-Dominique Galy (France)
 Ian Henderson (UK)
 Robert Shen (Taiwan)
 Keith Piper (UK)

CHAIRPERSON

Chris Steelman

HONORARY TREASURER

Ian Henderson

HONORARY SECRETARY

Alan Budge

The World Radiography Education Trust Foundation is incredibly proud of the work of all of our dedicated Ambassadors. Volunteer Ambassadors are one of the WRETf's greatest assets. It is through the efforts of these dedicated volunteers that the Foundation fulfills its mission of increasing access to educational opportunities for radiographers and radiation therapists working in areas of the world where resources are limited. It is impossible to capture the energy and enthusiasm of these dedicated professionals.

The following information represents just a glimpse into their activities.

Ambassador Pradip Sharma – Nepal

Ambassador Pradip Sharma visited the Kathmandu School of Medical Technology (KSMT). The radiography program has been in existence for over a decade. The school is a three-year program which offers thirty seats per academic year. KSMT graduates work as radiographers performing general x-ray, special x-ray and assist in CT and MRI.



The images above are projects from the school's 2019 World Radiography Day, Nepal.

After the program students can do BSc. MIT and MSc. MIT. Pradip was invited to a student assembly where he was introduced as a WRETf Ambassador by the principal. He then met with school leaders and educators to discuss curriculum development, public radiation safety awareness and the challenges of providing medical imaging education in Nepal.

Ambassador Mohammed Abdalghani – Palestine

Ambassador Mohammed Abdalghani recently visited the Arab American University in Jenin City to coordinate the first international conference on radiology and medical imaging in Palestine. Mohammed has a long history of facilitating educational opportunities and medical imaging scientific workshops at the Arab American University and Al - Najah University in Nablus City. Mohammed coordinated with the head of the medical imaging departments in the Palestinian universities to successfully establish the Educational Advisory Council in Palestine. In 2019, he also coordinated with specialized associations in radiography in the Arab world and was able to arrange the first meeting of twelve Arab radiography and medical imaging associations. After that meeting it was announced that the first Arab federation of specialized associations in the field of radiography was established.

Ambassador Bismark Bright Ofori-Manteaw – Ghana

Ambassador Bismark Bright Ofori-Manteaw's key objective this year is to embark on activities aimed at projecting and creating a better understanding of the WRETf through the various student and professional bodies while establishing positive links with individuals or departments which seek support from the WRETf.

Consequently, in February 2020, the WRETf ambassador was privileged to engage undergraduate students and a section of postgraduate students from the department of Medical Imaging of the University of Allied Health Sciences, Ghana on activities of the WRETf and the various opportunities available through the foundation. In addition,

the ambassador visited the radiology professionals of the Ho Teaching Hospital, Ghana about the WRETF and a possible twinning program.

Ambassador Bismark Bright Ofori-Manteaw has been engaging members to pursue the WRETF travel bursary and has initiated talks with the president of the University of Ghana Society of Student Radiographers (UGSSR) and the president of the Ghana Society of Radiographers (GSR), the mother association for an opportunities to engage its members through their annual week celebrations and workshops/scientific conferences.

Ambassador John Felix Habimana – Rwanda

Ambassador Habimana also participated in a community health outreach activity organized by Medical Imaging Sciences department at College of Medicine and Health Sciences/ Remera Campus in University of Rwanda that took place in Nyarugenge District-Kigali/Rwanda. The aim of the activity was to raise awareness on medical imaging services, radiation safety and the use of ultrasound in the screening of abdominal organs.

After his outreach activities, John Felix spoke to a group from the University of Rwanda College of Science and Technology where he raised awareness among students and academic staff from Medical Imaging Sciences Department regarding the WRETF vision, mission and available opportunities.



| Rwanda.

Ambassador Stephen S. Mkoloma – Tanzania

Ambassador Stephen S. Mkoloma shares, "There is a saying in Tanzania that 'The Sky is Blue, Radiography is Glue.' This saying is said to put emphasis to radiographers that the limit is the sky - which is blue to symbolize calmness. One cannot manage to fly but as a whole, radiography brings us together."

The Tanzania Association of Radiographers (TARA) had their Scientific Conference which was held in the capital city in Dodoma from 27th to 29th of February, 2020. As the President of the association and a member of the conference scientific and organizing committee, Stephen had then provided a presentation on WRETF. Stephen introduced himself and Ambassador Adam Zuberi as the WRETF ambassadors for Tanzania and focused on the WRETF and its mission for global

radiography education and capacity building. A total of 72 radiographers participated in this scientific conference. Stephen also reports that "despite the fact that the radiography community in Tanzania is becoming stronger and stronger, many radiographers miss opportunities to unite with others in the international arena due to lack of funding." ■

Christopher Steelman Chairman



| Tanzania.



NEWS FROM MEMBER COUNTRIES

AUSTRALASIA

MYANMAR

8th MYANMAR MEDICAL RADIATION TECHNOLOGIST'S CONFERENCE

The 8th Myanmar Medical Radiation Technologists Conference was held at the Wyndham Grand Hotel, on 9-10 November 2019.

Three hundred participants from the whole of Myanmar and 30 foreign participants from the societies of ASEAN countries, Australia, China, Hong Kong, Japan, Macao and Sri Lanka attended. The first day was purely a workshop co-organized by the Japanese Society of Radiological Technology (JSRT) and Myanmar Society of Medical Radiation Technologists (MSMRT). That is the 2nd Faculty and Instructional Development Workshops for Rad. Tech. Teaching in Myanmar. Clinical and Education of Nuclear Medicine lectures were given by



Therapy, Prof. Dr Shoichi Suzuki explained the importance of Quality Assurance and Quality Control of medical equipment. Then, in the MRI lecture Dr Yasuo Takatsu spoke about the Principles and Application of MRI.

Practical mini-workshop conducted by JSRT.

Use of Simple PIN Photodiode Detector shown by Prof Noriyuki YANAGAWA & Dr. Hiroko YAMASHINA

Before lunch time, Vendor's talk session started and six companies gave their presentations.

On November 10, 2019, MSMRT celebrated World Radiography Day 2019 and the opening ceremony of the 8th Myanmar Medical Radiation Technologists Conference.

On behalf of the Minister of Health & Sports, Dr Tha Tun Kyaw, Permanent Secretary of MoHS, delivered a Greeting & Opening Speech. Then, Ms Tan Chek Wee, Regional Director for Asia & Pacific Region also gave a speech on behalf of ISRRT. Mr Khin Maung Tin, President of MSMRT gave a Warm Welcome speech.

Group photo was taken with the Guest of Honors and participants. Honorable Permanent Secretary Dr. Tha Tun Kyaw opened the Exhibition booths.

The academic session was started with the invited lecture by Prof. Dr. Tint Lwin, Advisor to the Minister of Health and Honorary Professor of the Military Academy of Science. His topic is "All you need to know about Artificial Intelligence". After that twenty two scientific papers were read.

The Gala dinner was given by Snow Everest (Philips Co.).

Khin Maung Tin, President, Myanmar Society of Medical Radiation Technologists



THE AMERICAS

AMERICA

ASRT launches centennial web page

The American Society of Radiologic Technologists launched a new [web page](#) that chronicles its 100-year history. In addition to the site, the ASRT, founded in 1920, will commemorate its centennial anniversary with a yearlong series of programs, initiatives and celebrations that pay tribute to the organization's seminal role in shaping the radiologic sciences and promoting the advancement of radiologic technologists. "The positive impact our organization has made over the past century is undeniable," said ASRT President Stephanie Johnston, MSRS, RT(R)(M)(BD)(BS), FASRT. "ASRT still leads the way in championing patient safety, spearheading high-quality education and improving the professional status of all medical imaging and radiation therapy personnel. I'm so proud to celebrate ASRT's enduring legacy." In addition, the website highlights the ASRT Museum and Archives, counts down to the June 2020 celebration to be held at the organization's office in Albuquerque, New Mexico, and rounds up ASRT Centennial news and social media mentions that feature the observance of the centennial anniversary. Experience the web page at [asrt.org/100](#). Additional Centennial events include an expanded annual meeting and educational session in Albuquerque, June 24-28, and new displays, exhibits and two new educational films in the ASRT Museum and Archives. The organization is also producing two extensively researched books on the history of ASRT, its state affiliate societies and the profession.

ASRT study reports some decrease in student enrollments

Educational program directors for radiography, radiation therapy and nuclear medicine report that the number of students entering their program decreased slightly in 2019, according to a survey conducted by American Society of Radiologic Technologists. Entering



class enrollments, student capacity and demographic analysis data are among the findings released this month in the [ASRT Enrollment Snapshot of Radiography, Radiation Therapy and Nuclear Medicine Technology Programs - 2019](#). According to the survey results, an estimated 15,972 students entered radiography programs in 2019, down from 16,374 in 2018.

Radiation therapy programs also saw a drop in entering students in 2019 down to a reported 1,155 students nationally from 1,356 students in 2018. The estimated total number of students entering nuclear medicine technology programs dropped slightly in 2019 from 1,287 to 1,129. "We now have 18 years of longitudinal tracking of enrollment data," said ASRT Director of Research John Culbertson, M.A., M.Ed. "This is the first year since 2014 that the number of students enrolled in radiography programs slightly decreased, but there have been more fluctuations in radiation therapy and nuclear medicine enrollments over that same period."

ASRT Foundation White Paper explores Rad Tech role in Artificial Intelligence

Employing a survey of some 20,000 medical imaging and radiation therapy professionals, the ASRT Foundation has published a white paper on artificial intelligence and radiologic science professionals' perceptions of how they will work with it in the future. See the ASRT Foundation white paper here: [The Artificial Intelligence Era: The Role of Radiologic Technologists and Radiation Therapists](#). Authored by the HCIAC Corporate Roundtable Subcommittee on Artificial Intelligence, the 21-page study explores the attitudes and perspectives of medical imaging and radiation therapy professionals toward emerging AI technology and its potential effects on image quality and patient care. In general, survey respondents did not demonstrate widespread concern that AI will adversely affect their professional role or staffing level requirements. More than 38% of 18 to 24-year-olds said they saw possibilities for an expanded scope of their role with additional integration of artificial intelligence and machine learning. Most respondents believed they would see beneficial or neutral effects from AI implementation, while only about 30% anticipated AI would have a negative effect on patient interaction. In preparation for potential changes, the paper encourages radiologic science

professionals to welcome the technology and find ways to make their future role more relevant.

- Individuals should participate in or lead efforts to maintain quality of AI-based devices and to incorporate AI into quality programs, particularly for patient radiation dose.
- Professionals should be poised for role or workforce changes and be aware and prepared; new opportunities likely will arise, especially for individuals who choose to adapt and learn.
- Stakeholders must come together as groups to encourage beneficial use of AI in line with established codes of ethics.

"Medical imaging and radiation therapy professionals should embrace the positive role of AI in patient care and its assistance with manual and repetitive tasks, leaving them time to perform more value-added responsibilities," the study concludes. "Professionals still will practice the science and techniques for which they were trained with the help of relatable, pertinent, and predictive tools. The combination of equipment with machine learning and the educated professional will help radiologic science staff work smarter while providing the essential human element of patient care."

Donna Long
Council Member

ASRT Foundation Selects Two for International Speakers Award

Kori Stewart, MHS, RT(R)(CT), CIIP, and **Stacy Anderson**, MS, RT(T), CMD, have been selected as the 2020 recipients of the ASRT Foundation's International Speakers Exchange Award.

Kori Stewart, right, will present "Artificial Intelligence in Radiology: Will Radiographers/Technologists Work with Robots Soon?" at the 2020 UKIO

Congress June 1-3, 2020, in Liverpool, England. She is clinical assistant professor and clinical director for the CT,



MRI and ultrasound certificate programs at the University of Hartford in West Hartford, Connecticut. Stewart is also pursuing a doctoral degree in biomedical informatics at Rutgers University.



Stacy Anderson, left, will present "Quantitative Imaging in Radiation Therapy: What's our Role?" at the 2020 CARO Annual Scientific Meeting September 23-26, 2020, in Toronto,

Ontario. She currently serves as program director of the radiation therapy and medical dosimetry programs in the College of Allied Health at the University of Oklahoma Health Sciences Center. Anderson developed the first medical dosimetry program at the graduate level at OUHSC while pursuing professional and research interests in radiation physics and medical dosimetry, among other topics.

For more than a decade, the ASRT Foundation has funded radiologic technologists to participate in the [ISEA program](#). It promotes global cooperation through the sharing of research, best practices and professional development in the radiologic sciences. It also provides speakers the opportunity to forge important professional connections with international colleagues. The award includes conference registration, travel and lodging expenses, and a stipend to cover related costs.

Sharon Wartenbee
Regional Director of America's



CANADA

A word of thanks to all MRTs, RTs and radiographers everywhere

The CAMRT would like to thank all those practicing in medical radiation technology/radiography at this time during the pandemic. The tremendous dedication to the care of your patients and the health of the public at large, in the face of personal risk, is a testament to

your professionalism and care.

Supporting MRTs through the COVID-19 pandemic

From the moment the COVID-19 became a pandemic, there was an understanding at the CAMRT that practice would have to change. Since that time, the CAMRT has been working to develop and release new initiatives in advocacy, education, membership and professional practice to support the immediate needs of MRTs working on the frontlines of the crisis.

As in many corners of the world, access to personal protective equipment quickly became a critical issue. The CAMRT has been in discussions with the public health authorities in Canada, working to ensure that MRTs are recognized for frontline work with the frontline protection afforded to others.

Additional measures the CAMRT has taken in the emergency situation include opening avenues for MRTs retired or on leave to come back to the profession to help with the national effort, including helping them find the facilities that require the most help.

For more, see www.camrt.ca/covid19

Journal of Medical Imaging and Radiation Sciences (JMIRS)

The JMIRS is pleased to announce the appointment of a new Editor-in-Chief (EIC), Dr Amanda Bolderston's goals include expanding our traditional technical focus, increasing citations, and building readership. We thank Lisa Di Prospero the outgoing EIC, during her tenure she oversaw dramatic growth at the journal, and the JMIRS was awarded prestigious PubMed/[MEDLINE indexing](#).

Be sure to check out www.jmirs.org to view our Editor's Choice papers, along with our first recorded podcast! We have new article collections, including MRI-guided radiation therapy (MRGT) and Targeted-Alpha-Therapy (TAT11), and our popular [Artificial Intelligence issue](#) is also available and open access.

At present, the JMIRS is preparing a special issue on the topic of [Soft Skills](#) which will be published in December 2020. Aside from traditional research, we welcome expert insight and commentary of soft skills in the professions, real-life cases, and narratives from experience. Submissions in the form of Letters to the

Editor or Commentaries can be accepted up to August 15th, 2020. Questions? Contact the Managing Editor at:

editor@camrt.ca

Online CPD

For those seeking CPD, CAMRT has a catalogue with more than 200 high-quality courses and webinars on topics from across all disciplines of medical imaging and radiation therapy.

CAMRT Online CPD is available to MRTs anywhere and is approved for category A credit! Simply visit the CAMRT CPD catalogue and select webinars in the left-hand column: <https://camrt.force.com/CPBaseStore?site=a0a1a00000AMdCoAAL>

Support for those interested in working in Canada

The CAMRT encourages those considering working as MRTs (radiographers) in Canada to review two learning modules for Internationally Educated Medical Radiation Technologists (IEMRTs). The first module on describes practice/employment in Canada. The second is a module providing education on "How to Write a Competency Based Exam". Both are available in the certification section of the CAMRT website:

www.camrt.ca/certification/

Marcia Smoke
ISRT Council Member

EUROPE

DENMARK

The development in the radiography area is growing fast – and Denmark is one of the leading countries. The latest technology is integrated in the year of 2022 when Denmark opens the first of six super-hospitals spread throughout the country.

Radiographic research has grown fast, and in a short time Denmark has become very visible at international conferences – the number of radiographs with PhDs in Denmark has increased 600% in three years and continues to increase.

Artificial Intelligence is a reality and it is a big challenge for the radiographers



all over the world to maintain centered patient care.

Denmark is prepared to welcome radiographers from all over the world on many radiographic fronts and therefore invites ISRRT's World Congress 2024. The outcome will be decided in Dublin 2020.

We will meet You in Dublin in August 2020 and maybe in Denmark 2024.

Charlotte Falkvard, President & Claus Brix, Director of Professional Policy Danish Council of Radiographers

AFRICA

TUNISIA

To celebrate the international day of radiology, several scientific and cultural events were organized by the Tunisian Association of Radiological Technologists (ATTR), its regional committees and other scientific organizations before or after this date.

The third day of radio-pediatrics was organised at the city of Monastir with a special invitation of Professor Hubert Ducou LePointe from A. Trousseau Hospital, Paris, France and Professor Wiem Douira from the Tunis Children's Hospital.

The 6th Radiology Day of the Center took place in the city of Sousse in collaboration with the friendly cadres and agents of the University Hospital of Sahloul and the medical imaging department of the maternity and neonatology hospital of Monastir. MRI pelvis and thomosynthesis



were the main topics of this training.

The regional hospital of Kebili, in southern Tunisia, organised, in collaboration with the radiology department of the Fattouma Bourguiba University Hospital, the 13th day of training in radiology on November 9, 2019. Several topics were discussed: contrast agents used in CT, CT angiography and thoracic emergencies, polytrauma in radiology and teleradiology.

Finally, ATTR also organised its 75th national congress at the beautiful tourist island Djerba from November 15-17, 2019 with around 400 Tunisian and foreign technologists.

The first Pan Arab Congress of Radiology for radiological technologists was scheduled to be held in the Tunisian tourist city, Mahdia, from April 17-19, 2020 but has been cancelled due to COVID-19.

Nazlea Behardien-Peters



| Tunisia 75th National Congress of ATTR.

**Keep up-to-date
with all the latest
ISRRT news
through:**



ISRRT
INTERNATIONAL
SOCIETY OF
RADIOGRAPHERS
& RADIOLOGICAL
TECHNOLOGISTS

ISRRT Website at

www.isrrt.org



ISRRT Facebook at

www.facebook.com/isrrt.org/



ISRRT Twitter at

twitter.com/isrrt

For a full list of the names and addresses of member societies & ISRRT Council Members please go to the link at:

www.isrrt.org/national-societies



www.isrrt.org