



ISRRT
INTERNATIONAL
SOCIETY OF
RADIOGRAPHERS
& RADIOLOGICAL
TECHNOLOGISTS

news & views

APRIL 2016

from around the world

The Official Publication of the ISRRT





**One Solution.
Unlimited Possibilities.**

VersaHD

4513 371 1124 01:13

The convergence of conventional radiotherapy
with advanced stereotactic precision.

www.VersaHD.com

Versa HD is not available for sale or distribution in all markets. Please contact your Elekta representative for details.



ELEKTA

Contents

REPORT

Magnetic Resonance Imaging workshop, Myanmar	18
Radiation Dose optimisation Ambassadors, Hong Kong	19
Professional Practice overview, 2015 update	26
Professional Practice, news from around the globe	32
The America's Report	40

ARTICLES

Ghana Society of Radiography 2015 highlights	20
South Africa celebrates	22
2015 Roentgen Run, Malaysia	24
Poster Winner: South African 2015 Imaging Congress	28

NEWS

News from member societies:	
Asia/Australasia: New Zealand, Hong Kong	42
The Americas: America, Canada	42
Europe: France	44
Africa: Ghana, South Africa	45

REGULARS

ISRRT Officers of Board of Management	5
ISRRT Committee Regional Representatives	5
Contact details for: Submissions, deadlines, advertising & WRETF	6
President's Message	7
Chief Executive Officer's report	10
Treasurer's report	13
Obituary: Dr E. Akpan	14
Profile: Shane Foley	16
WRETF	41
Names and addresses of member societies & ISRRT Council Members	47

ISSN NO. 1027-0671



ISRRT Editorial Committee:

Dr Fozy Peer
Dr Alexander Yule
Alain Crompt

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.

WHAT'S New IN 2016?

WE ARE CREATING
A **NEW** GLOBAL LEADER
IN MEDICAL IMAGING



Guerbet | 
Contrast for Life

ISRRT Officers: Board of Management

PRESIDENT

Dr Fozy Peer,
PO Box 1435, Wandsbeck,
KwaZulu-Natal, South Africa 3631
Tel: 27 31 2401881; Fax: 27 31 0865215256
Email: fozypeer@gmail.com

VICE PRESIDENTS

The Americas

Terry Ell
228 Signature Pt. S.W., Calgary
Alberta, Canada
Email: terry.ell@albertahealthservices.ca

Asia and Australasia

Dr Napapong Pongnapang
Depart. of Radiological Technology,
Faculty of Medical Technology,
Mahidol University, 2 Prannok Rd,
Siriraj Hospital, Bangkok 10700, Thailand
Tel: +66 2 419 7173; Fax: +66 2 412 4110
Mobile: +66 81 900 2210
Email: napapong@hotmail.com;
mtnpp@mahidol.ac.th

Europe and Africa

Mr Philippe Gerson
Cadre Paramédical Pôle Imagerie
Hôtel Dieu de Paris
1 Place du Parvis Notre Dame
75004 Paris, France
Tel: +33142348228; Fax: +33142348741
Mobile: +33630191555
Email: philgerson@neuf.fr

FINANCE COMMITTEE

Dr Fozy Peer, Mr Stewart Whitley, Dr Napapong Pongnapang, Mr Philippe Gerson, Mr Terry Ell. See Board of Management for Finance Committee addresses.

ISRRT Committees Regional Representatives

EDUCATION COMMITTEE

The Americas

Dr Robin Hesler
594 Upper Paradise Road
Hamilton,
ON, Canada L9C 5P6
Email: lscolonel@rogers.com

Africa

Hesta Friedrich-Nel
Department of Clinical Sciences, CUT
Private Bag X20539, Bloemfontein
9300, South Africa
Email: hfried@cut.ac.za

Europe

Ian Henderson
School of Health Sciences
Robert Gordon University
Garthdee Road, Aberdeen
AB10 7QG Scotland
Email: p.i.henderson@rgu.ac.uk

Asia and Australasia

Yudthaphon Vichiani
396/20 Jarunsanidwong 32 Rd.
Siriraj, Bangkoknoi, Bangkok 10700
Email: yudthaphon@gmail.com

REGIONAL DIRECTORS

The Americas

Jonathan Mazal
8500 16th Street, Apt 410, Silver Spring
MD 20910, USA
Email: jmazal@isrrt.org

Asia and Australasia

Tan Chek Wee
National University Health System
Department of Radiation Oncology
Medical Centre Level 8
5, Lower Kent Ridge Road
Singapore 119074
Tel: +65 67728380
Email: sunrisepl@hotmail.com

Africa

Boniface Yao
18 BP 720, Abidjan 10, Cote d'Ivoire
Mobile: (00225) 07052526/55066420/
40097740
Tel: (00225) 21242900 poste 240
Email: kwame_boniface@yahoo.fr

Europe

Mr Dimitris Katsifarakis
10 Kalavriton, Moschato, 183 44 Athens
E-mail: d_katsifarakis@yahoo.gr

TREASURER

Mr Stewart Whitley
UK Radiology Advisory Services Ltd

38, The Brooklands, Wrea Green, Preston
Lancashire, England PR4 2NQ
Tel: +44(0)1772 686689;
M: +44(0)7973458499

DIRECTOR OF EDUCATION

Dr Maria Y.Y. Law
Medical Physics and Research
8/F, Lee Shu Fan Block,
Hong Kong Sanatorium and Hospital
2 Village Road, Happy Valley, HK
Email: maria.law@polyu.edu.hk

DIRECTOR OF PROFESSIONAL PRACTICE

Ms Donna Newman
300 NP AVE #307
Fargo North Dakota 58103
Tel: +1 (701) -234-5664
Email: donna.newman@sandfordhealth.org

DIRECTOR OF PUBLIC RELATIONS

Alain Crompt
7700 rue du Mans # 606
Saint-Leonard, Quebec
Canada H1S 1Z9
Email: alaincrompt@videotron.ca

CEO

Dr Alexander Yule
143 Bryn Pinwydden
Pentwyn, Cardiff, Wales CF23 7DG
United Kingdom
Tel: 44 2920 735038; Fax: 44 2920 540551
Email: isrrt.yule@btinternet.com

PROFESSIONAL PRACTICE COMMITTEE

The Americas

Christopher Steelman
791 Chestnut St Apt 9
San Carlos CA 94070-3069
Email: csteelman@isrrt.org

Asia and Australasia

James Ho Namkoong
PETMRI Center
Department of Radiology
Seoul National University Hospital
101 Daehak-ro
Jongro-gu, Seoul, 110-744, Korea
Email: koreajamesho@gmail.com

Africa

Elizabeth Balogun
Plot 526 Aina Akingbala Street
Omole Phase 2 Estate
Isheri, Lagos
Email: kanmibalo@yahoo.com

Europe

Piret Vahtramae
Parnu Hospital
Ristiku 1, Parnu 80010, Estonia
E-mail: piretv@ph.ee or piretv@gmail.com

PUBLIC RELATIONS COMMITTEE

The Americas

Sharon Wartenbee
504 Autumn Lane
Sioux Falls
SD 57105
USA
Email: wartenbee@sio.midco.net

Asia and Australasia

Mr Robert T.L. Shen
Dept. of Radiology, Veterans General Hospital
201, Sec. 2 Shipai Rd., Taipei, Taiwan 11217
Email: tlshen@yahoo.com

Europe

Bodil Andersson
Temyntsgränd 3
SE-296 33 Åhus, Sweden
Email: bodil-t.andersson@med.lu.se

Africa

Ayodele Okhiria
HR & Medical Department
Chevron Nigeria Limited,
2, Chevron Drive, Lekki Peninsula
PMB 12825, Lagos, Nigeria
Email: AOKH@chevron.com

The ISRRT is registered as a charity in the United Kingdom: Registration No. 27 6218.

Editorial Submissions & Deadlines

Remember to e-mail your news before the deadline to:

Production Editor

Mrs Rachel Bullard

Email: deepbluedesign1@me.com

Deadline for the three times a year issues are:

March 1 (April issue)

July 1 (August issue)

November 1 (December issue)

All material must be sent electronically.

Advertisements and images to 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 her Committee.

Advertisements/Secretariat

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

For further details or to advertise your program or new publications please contact the ISRRT CEO:

Dr Alexander Yule

143 Bryn Pinwydden

Pentwyn, Cardiff Wales CF23 7DG

United Kingdom

Tel: +44 0 2920 735038

Fax: +44 0 2920 540551;

Email: isrrt.yule@btinternet.com

World Radiography Educational Trust Foundation (WRETF)

Secretary: Ms Sue Marchant
143 Corfield Street,
Bethnal Green,
London
E2 ODS UK
susanmarchant@wretf.org

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 reaches 72 countries, 4500 associate members, libraries and schools of radiography, government bodies and professional societies.

The following are costs for colour advertising as at January 2015.

	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

210mm x 290mm (add 5mm all round for bleed)

HALF PAGE: 210mm x 140mm

QUARTER PAGE: 92mm x 140mm

EIGHT PAGE: 210mm x 65mm

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

CEO Email: isrrt.yule@btinternet.com

Production Editor: deepbluedesign1@me.com



Dr Fozy Peer
President,
International Society of Radiographers
and Radiological Technologists

President's message

The ISRRT Board of Management was privileged to hold a full strategic planning meeting prior to a one-day Board meeting in January 2016. The strategic plan is intended to focus our activities in keeping with the ISRRT Vision and Mission. The final strategic plan is as a result of a culmination of intense meetings of the Board and CEO with a strategist, Susan Ward. Susan actively involved all Board members in the discussions that resulted in a meaningful plan. She also assisted the Board understand the analysis of three separate surveys, that were undertaken prior to the meeting. The surveys were:

1. Swot analysis survey completed by the members of the Board
 2. Survey of member societies undertaken by a post graduate student supervised by Cynthia Cowling and
 3. Survey of external stakeholders undertaken by Francois Couillard and Lyn Mc Donell.
- The facilitation of the ISRRT strategic workshop and the 3 separate surveys were undertaken at virtually no cost to the ISRRT.

The strategic goals identified are:

- Collaborate to develop and promote international standards
- Advocate for the profession
- Empower societies

with the underlying foundation principles of communication and governance.

We have linked strategic priorities to each of these goals with initiatives, measures, timelines and champions to help achieve these goals. The full version of the strat plan will be presented at the pre-Council meeting in Seoul, Korea in October this year. We look forward to and are committed to deliver on the strategic goals as set. Below is the summarised strategic framework of the ISRRT.

The final documentation for radiographers/radiological technologists to be recognised as professionals has been submitted and received by the International Labour Organisation (ILO). Hopefully this will be addressed at their next meeting and corrected on the International Standard Classification of Occupations document.

A memorandum of understanding has been agreed to between the ISRRT and the International Radiation Protection Association (IRPA).



President's message

RSNA

The ISRRT booth at the RSNA in Chicago in December 2015 was a hive of activity. As always the booth was ably manned by Alison Yule allowing Sandy and I the opportunity to attend to other ISRRT business. We attended the 'Associated Sciences' session which is sponsored by the ISRRT. There were three excellent presentations by Jonathan Mazal (ISRRT), Melissa Culp (RAD-AID) and Miriam Mikhail.

Jonathan arranged a meeting with Melissa Culp who is the Vice President of Operations for RAD-AID International where we discussed the possibility of teaming up for certain projects.

At another meeting we met with Jonathan and members from the ICR 2016 congress committee to discuss the arrangements for the ISRRT Radiographer tract at the ICR in Argentina.

We met with the CEOs of some societies where relevant ISRRT business was discussed. At that stage some CEOs pledged their support for the travel support fund for the 2016 ISRRT World Congress in Seoul in October 2016.

The Philips Dosewise Award was presented during RSNA to Anthony Tessier for his paper on reducing eye lens dose in CT procedures by hyper-flexion of the head position. Philips received an overwhelming number of entries and had a tough choice deciding on the overall winner. We look forward to continuing this relationship with Philips.

While at RSNA we attended meetings with the 'Image Gently' team, the British Institute of Radiology (BIR) and the International Society of Radiologists (ISR).

Meetings were held related to the CEO succession plan. There has been much communication between the ISRRT and the CEO of the SCor to finalise arrangements for the administrative support to be provided to the ISRRT. An interview for the CEO support service has also been arranged for June 2016.

ECR

Sandy Yule and I attended the ECR in Vienna in March this year where we met with many stakeholders including member societies, non member societies and associate members. We also had fruitful meetings with the different wings of the IAEA. We were invited to participate in the ISR Quality and Safety Alliance meeting where we reported on the ISRRT algorithm on Justification. We once again had a fruitful meeting with the EFRS – the EFRS has a new President, Hakon Hjemly. We had many positive meetings with vendors related to corporate membership of the ISRRT.

As recognition of the ISRRT as an important stakeholder, the ISRRT was once again invited to and represented at the IAEA Technical Meeting on justification of medical exposures and the use of the appropriateness criteria and at the HERCA meeting on the justification of medical exposures. Both meetings were held in Vienna in March 2016.

I would like to thank every Board member and CEO and regional coordinators for their worthy contributions and valued support. We look forward to your participation in the 19th ISRRT World Congress in Seoul, South Korea from 20-22 October 2016.

Dr Fozy Peer
President, ISRRT



Lawrence Lau, Fozy Peer and Sandy Yule at ECR.



Meeting with Executive Members of EFRS.



Fozy Peer and Deborah Murley (CAMRT).



CNPIM



Comité National de
Protection contre les
Rayonnements Ionisants

CNPRI



AFPPE



ISRRT

SOUS LE HAUT PATRONAGE DE S.E. MONSIEUR LE PRESIDENT DE LA REPUBLIQUE

LE CONSEIL NATIONAL DES PROFESSIONNELS D'IMAGERIE MEDICALE DE LA RDC

EN COLLABORATION AVEC

INTERNATIONAL SOCIETY OF RADIOGRAPHERS AND RADIOLOGICAL TECHNOLOGISTS

ORGANISE LE

9^{ème} CONGRES INTERNATIONAL D'AFRIQUE FRANCOPHONE D'IMAGERIE MEDICALE ET RADIOTHERAPIE

THEME:



Optimisation de la Radioprotection et sécurité des Patients



ISRRT's response to Bonn Call for Action

www.isrrt.org/images/isrrt/ISRRT_Bonn_Call_for_Action.pdf

Lieu & Date

Centre Catholique NGANDA de Kinshasa

du 1er au 3 Septembre 2016

Au programme : Ateliers, communications libres, Posters ...

2^{ème} ANNONCE ET APPEL A COMMUNICATION

Droit d'inscription: 50\$ US

BIENVENUE

BETUABU KARIBU MBOTE

ISRRT-CHESNEY WORKSHOP

HITACHI
Inspire the Next

FUJIFILM
MEDICAL SYSTEMS
Value from Innovation

stephaniX
RADIOLOGICAL SOLUTIONS

Contacts: +243 813 750 005; +243 998 046 978 - cafimra.rdc2016@gmail.com / Web: www.cnpim.org/CAFIMRA2016



Dr Alexander Yule
CEO

Chief Executive Officer report

As reported in the last newsletter I attended the Radiological Society of North America (RSNA) Congress in Chicago in December 2015 along with the ISRRT President Dr Fozy Peer. The ISRRT shares a booth with the other Associated Sciences members including the American Society of Radiological Technologists (ASRT) and the Canadian Association of Medical Radiation Technologists (CAMRT). The booth has many visitors and everyone shows a great interest in the work of the ISRRT (Photo). As part of the educational programme for the Associated Sciences, I chaired an excellent session on Global Health Systems. Fozy Peer and I take the opportunity to meet with many vendors and association leaders attending the RSNA. Hosting our annual meeting with association leaders at the headquarters of the Joint Review Committee on Education in Radiologic Technology (JRCERT) gives a further chance to share the activities of each organization and update knowledge.

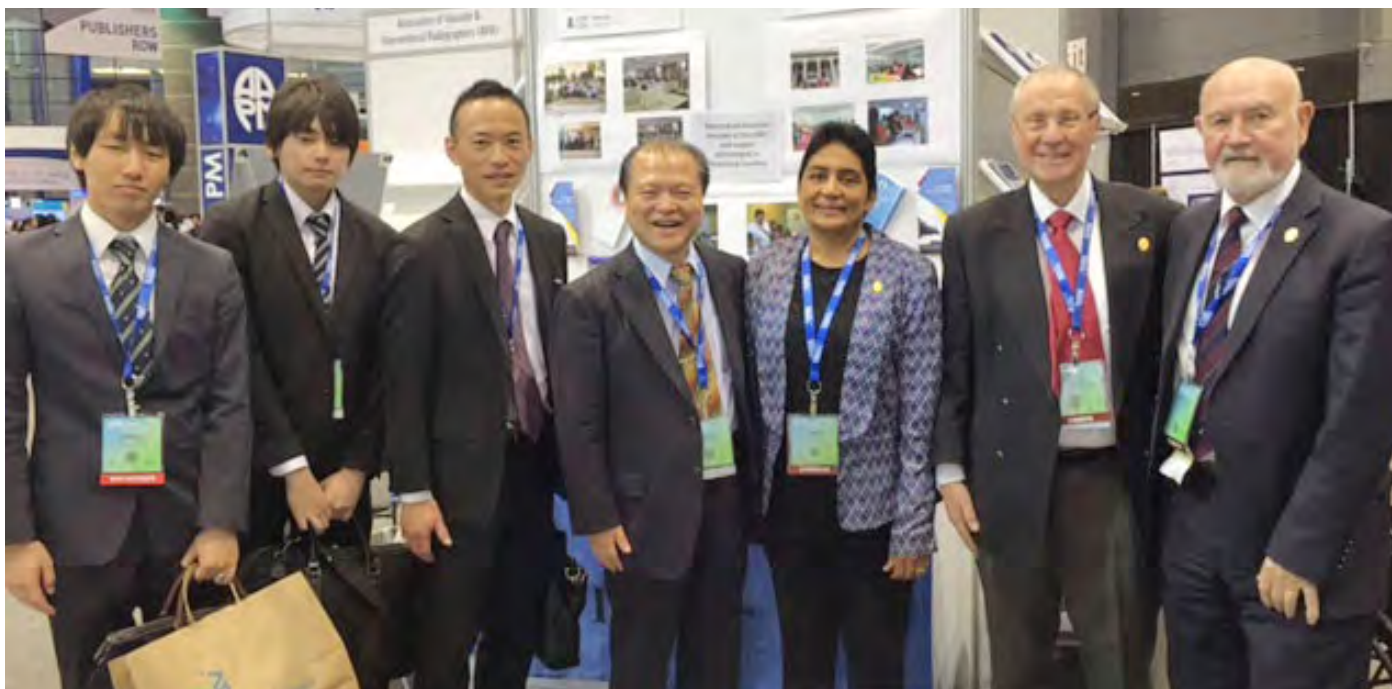
The ISRRT is also invited to attend the reception for the President Elect of the RSNA and a reception for the Leaders in Radiology. Once again I had the privilege of being invited to the apartment of the Consul General of the United Kingdom to meet with representatives from international organisations and UK companies.

The second meeting of the ISRRT Board which was elected by the ISRRT Council in Helsinki in 2014 was held in January 2016. In addition to the normal agenda a Strategic Planning meeting was held over two days. This strategic planning consisted of a number of intense meetings of the Board and CEO with a strategist, Susan Ward. Susan assisting the Board with the final analysis of three separate surveys: a Swot analysis survey completed by the members of the Board; a Survey of member societies undertaken by a post graduate student supervised by Cynthia Cowling; a Survey of external stakeholders undertaken by Francois Couillard and Lyn Mc Donnell. Three strategic goals were identified: 1. Collaborate to develop and promote international standards, 2. Empower societies, 3. Advocate for the profession, with the underlying foundation principles of communication and governance. A full explanation and discussion will take place during the Pre Council meeting to be held at the World Congress in Seoul, South Korea in October 2016.

In memory of the Chesney sisters a new award has been agreed by the Board, the **ISRRT Chesney Research Award 2016**. The theme is: "A Novel approach on optimisation and/or justification of Medical Exposures by radiographers for radiation protection and safety". For guidelines and application form please contact isrrt.yule@btinternet.com

Closing date for submission of grant application is 30 April 2016.

Award decision will be announced in July 2016.



Attending JART 2015.



Participation at the European Congress of Radiology (ECR) in Vienna in March 2016 provided the opportunity to meet with radiographers from Europe and from other parts of the world. The ISRRT once again had a booth staffed by ISRRT President Fozy Peer and our Honorary Member of the ISRRT Alison Yule. Our booth was visited by Ola Holmberg and Jenia Vassileva both from the IAEA. Fozy Peer and myself visited the IAEA Headquarters and met with Harry Delis, Dosimetry and Medical Radiation Physics Section, Division of Human Health and Mr Ahmed Meghzifene, Section Head DMRP.

Our annual meeting with the European Federation of Radiography Societies (EFRS) took place and the main topic discussed was the finalisation of the work done by ISRRT and the EFRS related to the skill level in which radiographers are classified. Surveys had been undertaken by both organisations and the results and analysis have been presented to the International Labour Organisation (ILO). It is hoped that this information will enable the ILO to classify the radiographers in their rightful skill level.

The ISRRT met with the International Society of Radiologists (ISR) at the inauguration of the new ISR Radiological Quality and Safety (RQS) forum. The ISRRT highly values its relationship with the ISR and there is no doubt in our minds that a strong partnership between radiologist/radiographer/medical physics organisations is pivotal towards improvements in RQS. Dr Lawrence Lau continues as Chair of the ISR RQS Committee.

A meeting with representatives from the ISRRT and Philips was held during the ECR and the ISRRT are delighted to announce that

the DoseWise Radiographer of the Year will again be held during 2016. The award recognises excellence in maximizing patient and clinical safety by managing medical radiation in the X-ray environment. Philips and the ISRRT are committed to working together to promote the As Low As Reasonably Achievable (ALARA) principle.

The annual meeting between the ISRRT Treasurer Stewart Whitley and myself took place in March during which time we met with Mr Jack Nandha, Wormalds Chartered Accountants, to discuss the audit of the 2016 accounts. Following this meeting the accounts are prepared by the auditor and sent to the UK Charity Commission for approval.

Finally I would like to thank the ISRRT President Fozy Peer, the Treasurer Stewart Whitley, all Board members, Societies and Council members for their help throughout the year and also Alison, my wife, for her continual support.

Dr Alexander Yule
CEO, ISRRT

Pictured above left: Meeting with IAEA. Mr Ahmed Meghzifene IAEA, Mr Alexander Yule, Mrs Fozy Peer, Harry Delis IAEA.

Above right: RSNA, Alison Yule, Nicholas Yule, Fozy Peer.

Below left: Speakers at Associated Sciences Consortium. Miriam Mikhail, Fozy Peer, Jonathan Mazal, Melissa Culp, Sandy Yule, Stewart Whitley.

Below right: ISRRT Board meeting in Dubai.





DoseWise Portal

Take control of dose management across your organization

DoseWise Portal is the core component in your radiation dose management program. DoseWise Portal is a vendor-agnostic, web-based solution that collects, measures, analyzes, and reports patient and staff radiation exposure, assisting you to make data-informed decisions, improve efficiency, and demonstrate a commitment to quality, satisfaction, patient and staff safety.

innovation  you

www.philips.com/dosewise

PHILIPS



Stewart Whitley
Treasurer

Treasurer's report

This is a short report to record that the Treasurers report for 2015 was presented at the ISRRT Board meeting January 2016. This report has been communicated to all Council members for their scrutiny and highlights the fact that the outcome for 2015 indicates a projected surplus thanks to the legacy of the estate of the late Noreen Chesney.

The official accounts are in the process of being compiled by our official accounts Wormald & Partners based in Bristol, UK and they are expected to be available June 2016 soon after which they will be presented to the UK Charity Commission.

As reported previously we are pleased to announce that this year workshops have been approved to take place in: Poland, French African – Kinshasa, Latin America and Vietnam. These workshops will be sponsored by a number of member organisations in partnership with ISRRT to help reduce the overall cost to ISRRT.

We are now in the process of agreeing a budget for 2017. This involves a number of steps with the first step involving all Board members from the April 1 until June 15, 2016 being asked to consider budget requests for workshops and other important matters. A dialogue therefore between Council members and their respective Regional Vice President and Regional Director will soon be on the way. This will be your opportunity to have input to the decision making process.

All of our activities are funded by member societies, associate members, corporate sponsors and surplus income from World Congresses. The Board members are grateful for your on-going financial support.

We look forward to the future and assure you of our ongoing commitment to be prudent and good stewards of our limited resources.

Stewart Whitley
Treasurer

ISRRT WEBSITE

The ISRRT website carries up-to-date addresses of all member societies.

Please contact:

isrrt.yule@btinternet.com

Here you can find information on the ISRRT and details of future meetings.

COMMENTS ON THE NEWSLETTER

You are invited to comment on the presentation and contents of the newsletter and make suggestions for future issues.

Your comments will be considered by the Editor and her Committee.

email: deepbluedesign1@me.com



Dr E. Akpan

obituary

Dr E. Akpan 1932 – 2016

Obong Dr Effiong Philip Akpan peacefully passed away on Friday, March 4, 2016 at Yaba, Lagos, Nigeria. He was aged 84 years of age.

Philip Akpan is survived by his wife of many years, Clara Abosede and four children.

He was a pioneer Principal and Head of the first Radiography School in Nigeria. He was also pioneer member and President of the Association of Radiographers of Nigeria and instrumental to the establishment of the regulatory agency for Radiographers in Nigeria.

He was very well known on the international scene, and especially in England where he had many colleagues and friends. He delivered papers at many conferences and workshops of the ISRRT. His last of such papers was at the 15th World Congress held in Durban, South Africa in 2008.

Dr Philip Akpan was President of the ISRRT from 1989-1994.



It is our pleasure to invite you to participate in the Baltic Congress of Radiology 2016 that has been organized by Latvian, Lithuanian and Estonian societies.

This will be the 8th Congress for Radiographers and the 6th Congress for Radiologists.

The Congress will be dedicated to the developing field of Nuclear medicine in the Baltic States – Positron Emission Tomography, followed by extensive scientific program of plenary lectures, up-to-date lectures, categorical courses, poster and scientific sessions for radiologists and radiographers. This congress will have also focused sessions on Ultrasound, Pediatric and Breast imaging. Highly qualified experienced international and local faculty have been chosen to cover new trends of radiology and discuss different aspects of daily practice. Scientific lectures and case discussions are incorporated in each session to show recent advances in our field.

On the first day we will have a School of Radiology - an event that was given life by the Lithuanians in Vilnius 4 years ago. This year, the special topic for the School of Radiology will be PET in Oncology.

For further information please take a look at www.balticradiology.com

Mrs Piret Vahtramäe
Estonia

Association of Educators in Imaging and Radiologic Sciences

www.aeirs.org

Rebecca Ludwig, Ph.D., FAEIRS, FASRT



The 2016 AEIRS Annual Meeting will be July 14-15, 2016 in Portland, Oregon, USA. Topics will include successful retention strategies, student counseling, student scholarship/research, using virtual dissection as a learning tool, and multi-media use in classroom teaching. There will also be a scientific poster session. This meeting is preceded by an accreditation and site visitor workshop on July 13 presented by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

For more information, please go to http://www.aeirs.org/hp_2016_info.html

Elections are underway to fill the open board positions for the coming year, and preparations have already begun for the Annual Meeting in 2017. This will be the 50th anniversary of AEIRS, to be held July 13-14, 2017 in Saint Louis, Missouri, USA. We look forward to an outstanding event in honor of this milestone. More information will be shared following the annual meeting this year.

Resources available for educators on the AEIRS webpages at www.aeirs.org include magnetic resonance curriculum information, helpful links, an online store for AEIRS apparel, and a listing of employment opportunities. The links connect to academic programs for educators to advance their degrees, related professional organizations, international and conference partners, and a host of other helpful sites. Membership is not required to access these resources, so please feel free to check them out. The goal of AEIRS to serve the needs and address the interests of all imaging sciences educators. Your participation and involvement are welcomed.

INTERPRETING CHEST X-RAYS STEPHEN ELLIS

25% DISCOUNT FOR ALL ISRTT MEMBERS



RRP: £24.99/\$40.00

PAPERBACK

250PP

ISBN: 9781904842774

Use discount code: **ISRTT** when ordering online at: www.scionpublishing.com/ISRTT, where high resolution images can also be found.



- 22 chapters, each one a stand-alone lecture with soundtrack and printable text
- Over 1800 high quality annotated radiographs and illustrations
- Index and dictionary included for use as an atlas.
- Developed by **Dr. Ian Cowan MB.ChB. FRANZCR Radiologist New Zealand** for radiographers in remote locations

Cost 25 pounds plus shipping

Obtainable from Head Office of ISRTT

For more information email isrtt.yule@btinternet.com

My goal is that this resource will give you a strong base of understanding about some fundamental principles of X-ray interpretation, and knowledge about some of the abnormalities that x-rays can show to the trained eye

Dr. Ian Cowan MB.ChB. FRANZCR
Radiologist New Zealand

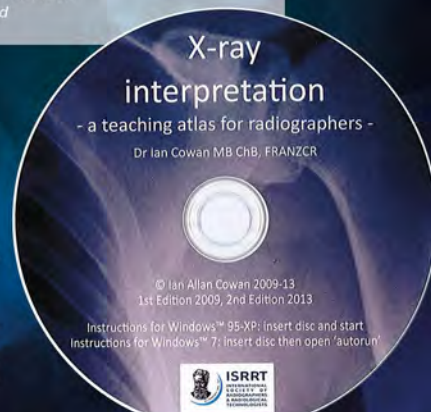
Radiographer Quotes from feedback following Uganda workshop on Image Interpretation.

All the information on the CD was superb and to me it acted as a reference source for those who do not have other reference books on imaging

Guided me in clinical discussion with General Practitioner for patient better outcomes with good diagnosis and decision making on case management

A comprehensive atlas of X-ray image interpretation.

It will be very useful since it gives the radiographer confidence in providing a documentary opinion on their product.





Shane Foley

Shane Foley

ISRRT Council Member, Ireland

On completion of my BSc (Radiography) in University College Dublin, UCD, in 1999 I worked as both a Radiographer and Senior Radiographer in the Mater Misericordiae Hospital, Dublin and was involved in numerous clinical research projects prior to commencing work in UCD as a Lecturer in Diagnostic Imaging in 2007.

Since joining UCD I have been in the role of Clinical Coordinator, coordinating the clinical placements for all undergraduate students across the eight UCD training sites across the country and working with the Practice Tutors in each site to maximise the student experience. Since 2014 I have been the Program Coordinator for the BSc Radiography undergraduate program.

Professionally I have been a member of the Irish Institute of Radiography and Radiation Therapy (IIRRT) national council since 2008 and was President 2012-12. I have been the Irish representative to the ISRRT and the EFRS also since 2011.

Research Interests

My research interests are primarily in the area of Computed Tomography, in which I obtained my post graduate diploma and PhD. In particular I am interested in radiation dose optimisation and dose reference level establishment. To date I have published 18 peer reviewed articles with 163 citations and a h-index of 7 (February 2016).

October 17-22, 2016
COEX, Seoul, Korea
www.isrrt2016.kr

 **KRTA**
 **ISRRT**
INTERNATIONAL
 SOCIETY OF
 RADIOGRAPHERS
 & RADIOLOGICAL
 TECHNOLOGISTS



2016 Seoul
 19th International Society of Radiographers &
 Radiological Technologists, World Congress

We are RTs

 **KOREA**
TOURISM
 ORGANIZATION
 **SEOUL**
NICE ALLIANCE
 **MINISTRY OF
 HEALTH & WELFARE**



ISRRT Chesney Research Fund

Call for Grant Application 2016

Theme:

A Novel approach on optimisation and/or justification of Medical Exposures by radiographers for radiation protection and safety

The aim of the ISRRT Research Fund is to promote research that helps improve the standards of delivery and practice of medical imaging and radiotherapy as well as to encourage evidence-based practice. The ISRRT Research Fund was set up in 2009 and a research proposal was funded the first time in 2010.

Starting 2016 to commemorate the Chesney sisters who left in their will a legacy to ISRRT we will name the ISRRT Research Award as the ISRRT Chesney Research Fund.

The theme of the 2016 award is the "A Novel approach for optimisation and/or justification of Medical Exposures by radiographers for radiation protection and safety".

The theme is based around actions spelt out in the Bonn Call for Action published by the WHO and IAEA in which radiographers play an important role in radiation protection in medical exposures. Please refer to the following website for the joint statements by IAEA and WHO:

<https://rpop.iaea.org/RPOP/RPoP/Content/News/bonn-call-for-action-joint-position-statement.htm>

While Radiographers play a major role in is in optimisation process, their role in justification is also important for the healthcare team as they are the usually the first to see patients following a request for imaging from the referring physician.

What are the possible roles of radiographers or Radiological Technologists in the optimisation or justification of medical exposure? Around this theme, you and your colleagues are invited to submit a research proposal.

Bids may include new methodology and modification to standard protocols and procedures which may result in patient dose reduction with no detrimental effect on image quality or patient management.

Applications with other themes are also welcome but priority will be given to applications following the proposed theme for 2016.

The grant is **£2500 for 1-year** and **£5000 for 2-year** projects. Full details of the Research Fund Guidelines and application form can be downloaded from the ISRRT website www.isrrt.org.

Closing date for submission of grant application is April 30, 2016.

Funding decision will be announced in July 2016.

I would be grateful if you could promulgate the invitation message to members of your societies. This call for application is also available on the ISRRT website [website: www.isrrt.org](http://www.isrrt.org)

Yours faithfully,
Alexander Yule OBE
 CEO, ISRRT



Magnetic Resonance Imaging

**Training Centre of Yangon General Hospital, Myanmar
January 8-10, 2016**

Report by **Khin Maung Tin**

The workshop on Magnetic Resonance Imaging was held at the Training Centre of Yangon General Hospital on January 8-10, 2016.

This workshop was co-organised by the Myanmar Society of Medical Radiation Technologists and the Thai Society of Radiological Technologists. This marks the milestone of close and friendly relationship and co-operation between two societies in ASEAN Community.

The workshop was attended by 95 medical radiation technologists from Government Hospitals and Private Hospitals throughout Myanmar.

The faculties are: Prof. Dr Napapong Pongnapang, Faculty of Medical Technology, Mahidol University, Dr Sawwanee Asvaphatibul, Faculty of Medicine at Ramathibodi Hospital, Mahidol University and Mr Patrapop Kumkrua, Faculty of Medicine at Ramathibodi Hospital, Mahidol University.

The workshop was sponsored by Bayer Healthcare, Biz-Partner Group (Carestream), Meditech Co., Ltd. (Siemens), Okkar Thiri Co., Ltd (Hitachi), Sea Lion Co., Ltd (GE Healthcare) and Snow Everest Co., Ltd (Philips Healthcare).





Ambassadors help spread the message of Radiation Protection in Radiology.

Radiation Dose Optimisation Ambassadors

HK Polytechnic University Hong Kong

Report by **Edward Wong**, Chairman HKRA

The Hong Kong Radiographers' Association (HKRA) and the Hong Kong College of Radiographers and Radiation Therapists (HKCRRT) supported by RAA held a five session course from October 2015-February 2016 on radiation dose optimisation.

Candidates are recommended radiographers from HA clusters or private sectors (preferably with CT & PACS Experience)

Lecture Hours: 15 hours (5 session x 3 hours each)

Examination: 1/2 hour, 30 MCQs

Each attendee was given a Certificate who attended at least 80% of the course and 50 marks in examination

The five sessions were:

Session 1

3 Oct 2015

- Introduction
- Radioactivity & effects
- International Standards

Session 2

7 Nov 2015

- Data mining
- Legislation
- Organisation Optimisation

Session 3

12 Dec 2015

- Dose measurement & calculation in different modalities

Session 4

9 Jan 2016

- Radiation protection in different modalities

Session 5

20 Feb 2016

- Workshop
- Research related to radiation dose
- Examination

Radiological Examination account for more than 50% of human received ionizing radiation, Western Countries show more concern and try to regulate by setting up dose monitoring and quality assurance standards. Hong Kong, as the hub of APAC, is a good starting point to comply with the international requirements. In this sense, HKRA in liaison with HKCRRT has organised a course to train up radiographers who will get the basic knowledge of Dose Calculation, Monitoring & Optimisation.

Speakers:

Dr Charles Chan (PolyU)

Mr Mike Lai (HKCH)

Dr Chris Lai (PolyU)

(Bayer HC)

Mr Anson Cheung (BH)

Mr Wong Kwok Fai (PMH)

Mr Edward Wong



World Radiography Day dignitaries and participants.

Ghana Society of Radiographers share their 2015 highlights

Report by **James Ampofo**, President GSR

The theme for the Ghana Society of Radiographers in 2015 was “Ensuring quality and standards in medical imaging and radiotherapy”.

National Workshop

The first mayor activity of the Ghana Society of Radiographers for the year under review was a Scientific Workshop on the theme “Quality assurance in diagnostic imaging and radiotherapy”. It took place from April 10-11, 2015 in the capital city Accra. It was a collaboration between the Ghana Society of Radiographers and the School of Biomedical and Allied Health Sciences (SBAHS) of the College of

Health Sciences of the University of Ghana.

The Workshop was partly pre-financed by the Office of Research and Innovations in Development (ORID) of the University of Ghana.

Zonal Workshops

Two Zonal Workshops were organized; one in each of the two zones. They were under the same theme: “Upholding standards and quality in diagnostic imaging and radiotherapy – the role of standard operating procedures and protocols.”



Ghana National Executives.



Ghana Southern Zone participants.

The **Southern Zone** comprise radiographers from the Volta, Eastern, Greater-Accra, Central and Western Regions of the country. They gathered in the Port City of Sekondi-Takoradi in the Western Region on August 1 at the serene Akroma Plaza Hotel. 53 radiographers participated, half of the total number expected. It was the first a Zonal was hosted in that region. The presentations were on point and the atmosphere was generally good.

Radiographers from the **Northern Zone** of the country – Ashanti, Brong-Ahafo, Northern, Upper East and Upper West Regions had their turn on August 8, 2015. It was held at the Picorna Hotel and Conference Centre in Tamale, the Northern Regional Capital City. Three National Executives from the South of the Country joined their colleagues radiographers in the Northern Zone for the event. 44 radiographers participated at this workshop which was about 65% of the total membership in the zone.

The low level of turn out was partly due to schedules of work at the various health facilities.



Southern Zone participants.

The World Radiography Day

The commemoration of the 120th WRD was organised to include a National Scientific Conference and a special Congress November 6-8, 2015 in the Garden City of Kumasi, the Ashanti Regional Capital. The theme was “The radiographer has a pivotal role in the justification of medical exposures”.

Several days preceding the World Radiography Day, the National President, the Vice and some senior colleagues had the opportunity to speak on some selected television stations about radiography in Ghana and the highlights of the upcoming events.

The climax was held at the Splendor Hotel and among the dignitaries which graced the occasion were the Ashanti Regional Director of Health Services and the Director of Diagnostic Services of the Okomfo Anokye Teaching Hospital in Kumasi. In their speech they emphasise the need for Radiographers in Ghana to make themselves visible.

The National President of the Society decried the low numbers of radiographers in Ghana which stood at less than two practitioners to over 250,000 inhabitants. He reminded all gathered that radiography is

a very dynamic and rewarding profession, one in which the practitioner gets an inner satisfaction because he interacts and helps the patient. He encouraged radiographers to keep themselves abreast with progress in science and technology and that the future of radiography is very bright because radiographers are going to be relied on more and more.

During the Special Congress a number of committees set up to by the National Executive Council of the Society presented their reports. These included amendments to portions of the Society’s Constitution, research on a future Ghana College of Radiography, Welfare of Members and Remuneration of Radiographers in private practice.

There was a dinner dance and launching of a fabric to identify members of the Ghana Society of Radiographers.

The celebrations were concluded with a Thanksgiving Church Service.

Other activities

2015 saw several collaborations between the Ghana Society of

Radiographers and the Allied Health Professions Council, the training institutions, the Federation of Allied Health Professions and student radiographers.

There was great improvement in communication among the Membership. Platforms in the social media were created to ensure easy flow of information and sharing of knowledge.

Plans of activities for the year 2016 were drawn by the National Executive Council on December 6, 2015.



Northern Zone participants.



South Africa celebrates

Report by **Hesta Friedrich-Nel**, ISRRT Africa Education Representative

World Radiography Day 2015 Celebrations

World Radiography Day (WRD) is celebrated around the world on 8 November. In 2015 the radiography profession celebrated 120 years of the existence of x-rays, which was discovered by Wilhelm Conrad Röntgen on 8 November 1895. Röntgen performed the first x-ray of a hand using his wife Anna Bertha's as a patient two weeks after he discovered x-rays. The theme for World Radiography was: Radiographers' have a Pivotal Role in the Justification of Medical Exposures. This simply means that each radiographer should always ensure that every x-ray examination that is done is necessary to prevent any unnecessary radiation to the patient. Linking on to the community responsibility, the SORSA Bloemfontein branch used the subtheme "120 years of imaging – into 120 minutes of community awareness" for the celebrations.

To realise this theme all the x-ray departments in Bloemfontein were given the opportunity to raise awareness in the community regarding the use of x-rays for imaging of the human body. Radiographers and student radiographers creatively reached out to pre-primary schools, primary schools, high schools, children's wards at some hospitals, and a hospice, with interesting presentations. SORSA provided balloons with a 120 years logo, and confectioneries for the children. The response from the participants in the festivities



was very positive. In Bloemfontein the 2015 WRD was celebrated on 22 October to allow students to participate in the events before they started with their final assessment.

WRD in Bloemfontein also means competition time, since each participating practice received a cash prize sponsored by the Bloemfontein SORSA Branch. The groups that participated: Universitas, Drs Van Dyk & partners, National Hospital, Drs Spies & partners, Pelonomi Hospital & Drs Von Bezing and partners.

The 3rd year Radiography students epaulette ceremony

Third year students received their epaulettes from the Bloemfontein SORSA branch at their formal function at the end of 2015, just before they commenced with their community service year in 2016. Dr B van der Merwe (SORSA president), Dr J du Plessis, and the student coordinator at the National Hospital, Ms Cindy La Grange (all committee members of SORSA Bloemfontein branch) handed the epaulettes to the students at the function.

Bloemfontein branch AGM and morning seminar

The Annual General Meeting of the Bloemfontein Branch was held on February 11, 2016 and the morning seminar on February 20, 2016. The theme of the morning seminar was 'Taking hands in health





2015 Third Year students at their epaulette ceremony.



The third year students used the opportunity to sell their home-baked cupcakes to raise funds for their 2016 projects.

care'. The presenters at the seminar were Dr Nantes Combrinck who addressed the delegates on postmortem CT in forensic radiology; Dr Martina Matthee who presented on the efficiency of the triage colour system at National District Hospital in Bloemfontein; and Ms Raheema Panker who presented on the essentials of foetal MRI. Two B Tech students, who completed their studies in 2015, Ms Sylvia Mokuoane and Ms Tanya Wainwright presented the outcomes of their results at the seminar. Ms Mokuoane addressed the delegates on the influence of FFD on the measurement of the heart shadow. Ms Wainwright presented on the effect of disinfection intervention on radiographic equipment. The seminar was closed with a presentation on the topic back to basics: ethics/professional conduct revisited by Mr Sakkie Muller. Fifty delegates attended the seminar and delegates received three general and two ethics CEUs.

KZN Branch

2016 AGM and Seminar

The KwaZulu-Natal branch, yet again, hosted a successful seminar and annual general meeting (AGM) on February 6, 2016. The venue was the Tsogosun Marine Parade, one of Durban's prestige hotels located on the Golden Mile beach front. 101 delegates attended the seminar. 57 SORSA members were present for the AGM prior to the commencement of the seminar. Mrs Angela Moonsamy was inaugurated as KZN chairperson. Honorary member Dr Fozy Peer assisted in coordinating the nominations and voting session.



Captivating presentations included; back to basic radiography techniques; treatment of breast cancer; benefits of having a fully integrated hospital system; the lack of infection control when performing portable imaging and practical ethics in radiography. Positive feedback was received from attendees.

Below left is Ms Susan Meyer presenting the benefits of a hospital integrated information system.

Hesta Friedrich-Nel

With acknowledgement to Marcel Ramos-Swanepoel and Ashnie Ramkhelawan





2015 Roentgen Run

**Bukit Recreational Park, Selangor, Malaysia
November 8, 2015**

Report by **Pushpa Thevi Rajendran**, MSR Vice President



Radiography fraternities around the world celebrated the World Radiography Day to commemorate the day Conrad Wilhelm Roentgen discovered X-rays on November 8, 1895. Annually various hospitals organise events such as continuous medical education and radiography courses to celebrate this momentous occasion. The Malaysian Society of Radiographers (MSR), conferences are usually held in November. For 2015, the MSR decided to collaborate with the National University of Malaysia in organising the 2015 Roentgen Run. It is the first time MSR has co-organised an event such as this to celebrate World Radiography Day. The theme of the World



Participants taking part in the warm-up aerobic exercises.

Radiography Day 2015 by the International Society of Radiographers and Radiological Technologist (ISRRT) was 'Radiographers have a pivotal role in the justification of medical exposures'.

This run was held at the Bukit Jalil Recreational Park, Selangor, Malaysia. The objective of this event was to create a platform:

- for new graduates to interact with the public before entering the working world;
- to foster ties between the new graduates with the alumna of the radiography and radiotherapy programme especially with radiographers who are attached to the hospitals
- to train the new graduates to organise and host an event of high impact for the community in order to instill leadership qualities; and
- to promote the radiography and radiotherapy program at the National University of Malaysia.

The planning for this event started in September 2015 to make it a success. The student body of the National University of Malaysia meticulously planned the event with the involvement of the faculty members and committee members from the Malaysian Society of Radiographers. A flyer was distributed to all the participants which showed the main activities to be carried out namely the Roentgen Run, Poster Competition, Forum and lastly the Creative Talk.

The 2015 Roentgen Run Day commenced at 6.30am and concluded at around 2.00pm. Registration was from 6.30am-7.30am and there were 360 registered participants. This was a big turnout which comprised of students, radiographers, their family members as well as the general public took part in the run.



Dean of the Allied Health Sciences Faculty, Professor Baharuddin Omar and Madam Vice President of MSR Pushpa Thevi Rajendran judging the posters by students.

Prior to the commencement of the Roentgen Run, participants were involved in a 15 minute warm-up of aerobics exercises that was led by students. The run started at 8.00am and participants had the opportunity to decide whether they wanted take part in the 5km or 8km run.

While the participants ran, the Dean of the National University of Malaysia, Prof Baharuddin Omar and myself the Vice President of the Malaysian Society of Radiographers were given the task to judge the posters that were produced by the students from the National University of Malaysia and also College KPJ Nilai. Some of the posters were really good. The students worked in groups to design the most creative posters.

On completion of the run, the event was officiated by the Dean of the National University of Malaysia, Prof Baharuddin Omar and was accompanied by the Chairperson of the Centre for Research in Diagnostic Sciences and Applied Physics (Professor Dato Dr Jamaluddin Mohamed), the Head of the Radiography & Radiotherapy Program, the National University of Malaysia (Associate Professor (C) Kanaga Kumari Chelliah), The President of the Malaysian Society of Radiographers and who also represented the Radiation Therapist (Mr Mohammad Faizal Abdullah), The Head of Profession for Diagnostic Radiographers in Ministry of Health Malaysia (Hj Daud Ismail). Following this, the prizes were presented to the first three winners of each run, 5km and 8km run. The event was bustling with music to keep the mood alive and participants as well as the invited guests were invited to have some light refreshment before continuing the program.

The next activity was the forum which was moderated by none other than the Head of the Radiography & Radiotherapy Program. The panelist for this forum was the Head of the imaging Department, Kuala Lumpur Hospital (Dr Hajjah Zaleha Abdul Manaf); The President of the Malaysian Society of Radiographers (Mr.Mohammad Faizal Abdullah); The Head of Profession for Diagnostic Radiographers in Ministry of Health Malaysia (Hj Daud Ismail); Physicist from the Department of Diagnostic Imaging, Kuala Lumpur Hospital (Mdm Zunaidah Said) and Regional Sales Manager of Hologic Asia (Mr Alvin Chan Kok Leong) who represented the equipment vendors. The forum was very stimulating and thought provoking. The students posed several questions to the panel to get their views on the dangers of radiation, services of radiographers at the government hospital and private sector.

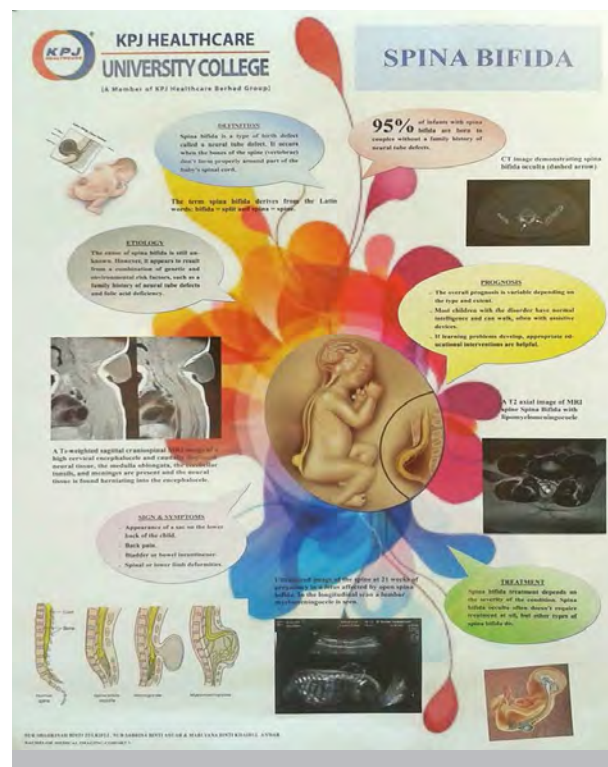
The last activity for the day was the Creative Talk whereby five students from the National University of Malaysia and also KPJ Nilai participated. The five students presented on various topics from



The Head of the Radiography & Radiotherapy Program, the National University of Malaysia, Associate Professor (C) Kanaga Kumari Chelliah presenting the token of appreciation and finishers medal to all participants who completed the 5 & 8km run.

pathology to radiation related issues etc. The presentations were mind boggling and stimulating. There were two judges for this activity. The secretary of the Malaysian Society of Radiographers (Mr.Mazli Mohd Zain) and myself were given the task to evaluate the presenters which was rather daunting. Each student had seven minutes to present their talk and the judges similarly had only seven minutes to listen to the presentation, give marks and comment on each presentation. Therefore it was quite nerve wrecking, but it was all done in sheer delight to support the event.

It was close to 2.00pm when we presented the prizes to the winners for the posters and also for the Creative Talk. The event was concluded with a sumptuous meal after all the hardwork. In conclusion, we the organisers of the 2015 Roentgen Run, hope to repeat this event next year to celebrate World Radiography 2016 in a big way. Here's wishing the radiography and radiotherapy family the world over a Happy World Radiography Day.



A poster on Spina Bifida that was very unique in its presentation.

Professional Practice Committee

Update on Global Projects during 2015

Report by **Donna Newman**, Director of Professional Practice ISRR

The Professional Practice Committee and ISRR board has been kept very busy this past year. I would like to highlight some of the projects that I have participated in and presented work on with the professional practice over the past year to ensure our membership up-to-date. Most important to report would be the fact that we had a fantastic Strategic Planning meeting this past January, 2016 in Dubai. Three key goals were established that the professional practice committee will be contributing to over the next several years and which some of our past work this year as also contributed to which I will highlight threw out this article First one collaborate to develop and promote international standards with a strategic priority being contributed to and promote a radiation protection safety culture. One of our initiatives includes notify member societies about the role of ISRR in radiation protection and safety and promote and disseminate tools and information. Another area that I wish to discuss in this article relating to professional Practice is to advocate for the profession with one of the key initiatives being contributing to radiation protection and safety education.

Also discussed was the Goal to collaborate to develop and promote international standards with the key strategic priority being to contribute to and promote professional practice.

As part of the professional practices initiatives that will contribute to this key strategic priority is as follows from the past we have already been working on contribute to and review publications to enhance knowledge. We have in the past contributed to the DS399 to ensure that the information was related to the most current practice as well as ensuring that the technologist voice was represented in the document. Now that the Safety series has been written and accepted we will continue as an organisation to disseminate the information and educate our membership about the current information in the document.

A second initiative is to provide expert opinion when consulted on issues related to scope of practice. I am excited to work toward this

very project over the next several months. I think it is important to understand that countries around the world have different law facing them in their every day practice. With that said there are practice issues that members need expert position statements to support our professions scope of practice. The professional practice committee along with Stewart Whitely is beginning to develop some position statements that are needed to support our professional every day practice. These position statements will be presented to the council members to review and accept in Seoul Korea. If there is a particular scope of practice issue affecting your country that needs to be address please contact me and we will make sure this is included in our project.

Also included are some past projects with updates to keep members informed about our past initiatives we have participated in or currently working on in professional practice. Also included is professional practice new each of our regions around the world from our regional coordinators.

April, 2015-WHO Consultation to define priority Medical Devices for Cancer Management targeting Low and middle income setting"

As Director of professional Practice, this consultation project with the WHO fits into our strategic framework of collaborate to develop and promote international standards. The Strategic priority being contributes to and promotes a radiation protection safety culture. We are currently contributing by collaborating with other international stakeholders and healthcare professionals by contributing to the outcome of this important project which will help ensure health care for all throughout the world for cancer management in low and middle income setting. Here is some detail about what has been happening with this project. Last spring I sent out the draft document to our regional coordinator, ISRR board and some member societies



Donna Newman.



Donna Newman, Fozy Peer, Sandy Yule.

to gather input and suggestion on consultation for this document The ISRRT received a invitation following from the WHO, consultation, help and implementation of the member states, and international partner and the WHO these targets will help contribute to the global target of 25% reduction in premature mortality from NCD's by 2025. The terms of reference were established and endorsed by the World Health Assembly in May of 2014 and in Sept 2014 the WHO Global coordination mechanism working group was established enhance the coordination of activities, multiple stakeholder engagement and actions across sectors in order to contribute to the implementation of the action plan 2013-2020.

As part of this plan, the WHO has created a project called medical devices for cancer management to develop information for the selection of medical devices required to manage cancer care in a resource stratified version for low and middle income countries. The project objective is to define a comprehensive tool to guide policy makers and health care managers in the selection of medical devices for achieving the most appropriate cancer management. As you can see the top cancers are being considered in the project overview cervical, breast, prostate, lung, colorectal and leukemia as it is believed this will have the biggest impact globally in the continuum of care including prevention, diagnosis, treatment and follow-up and palliation. Common medical devices used for various types of cancer in the following specialties: Primary clinical assessment, surgery, radiotherapy, laboratory, diagnostic imaging and pathology. The third was to discuss the input from specialists and expert groups' preliminary review of the list of medical devices and health interventions previous to the consultation. The fourth was to agree on the medical devices required for each intervention, specialty area, type of cancer and health care facility in different resource setting. Finally the fifth was to propose country implementation strategies and finally to define action plan: activities, responsible organisations and timeline required to consolidate a list of medical devices for cancer management by health care level and type of health care facilities and propose future meetings. I have compiled the first report from our members input and sent in before the deadline. This report was sent to the WHO regarding essential devices needed for delivery of treatment in the continuum of care for the cancer provided in this project. Recommendations relating to radiation therapy-external beam radiation therapy and radiation therapy-high dose brachytherapy included as radiotherapy building/housing specification requirements for basic infrastructure services as they are challenges in terms of the layout and approach of the current document.

Another part of this project that ISRRT had a opportunity to participate in happened this past Sept, 2015 as I was nominated to serve on the Advisory Committee with WHO on Priority medical devices for cancer management. The expert group of imaging and nuclear medicine was comprised of 16 experts from around the world including radiologists, Industry, technologists and staff from both the IAEA and WHO. The groups meet via WebEx every Tuesday morning during the month of November and December 2015. The goal of the project was to take the information gathered from part one of the project and further develop the list of priority medical devices required for basic health interventions to manage cancer which will allow member states to use as reference according to the local needs and local infrastructure and specialised human resources available.

The group reviewed documents gathered and I gave the technologists input on the list of medical devices required for cancer management and to determine the basic list of health conditions and services needed to provide cancer care for the five cancer for both men and women worldwide including breast cancer, cervical, colorectal, leukaemia, lung and prostate. The most current guidelines were systematically review and a list procedure from the guidelines



Donna Newman Director Professional Practice ISRRT and Mary McCoffey representative from ESTRO during panel discussion of the role professional organisations play in new Radiation Protection with new Safety Series.

along with list of medical devices needed to perform these procedures also listed of recommended interventions and procedures for these types of health conditions and medical devices and technologies needed. The project also included determining what medical devices would need to be allocated for each level of care and what medical devices and services should be provided at the three levels of Health care facilities. Level one being Health Post or Health Center for basic needs, Level two would be considered a District hospital with surgery and pathology and some outpatient radiation therapy and finally Level three was considerate a specialised hospital with all services available including surgery, high level radiology equipment and full radiation therapy and medical oncology department. The timeline for this part of the project was October 2015 develop terms of reference. This included review the general basic medical devices per service using working tool one, then identify the basic services, functions/Interventions and specific basic medical devices to included in the WHO model list of basic medical devices of cancer management using working tool 2, then use the multi criteria decision analysis tool to complement the selection and prioritisation exercise in case of contentious options using working tool three. Finally develop special notes per service (imaging, surgery, laboratory and pathology) working tools and review and nomination of experts to advisory committee, Oct and Nov 2015 establish contact with participation's for expert group, Nov 9-Dec 20, 2015 WebEx conference and discussion with Expert groups to review outline comments, constraints and draft of document with key and contextual considerations. January to March of 2016 review and complete final document have expert group review coherence WHO will compile.

ISRRT response to the Bonn Call-for-Action justification and authorisation of planned medical exposures

Also part of our goals from our strategic framework was the goal of collaborate to develop and promote international standards with the strategic priority being to contribute to and promote a radiation protection and safety culture. One of our initiatives relating to this goal was to notify member societies about the role of the ISRRT in radiation protection and safety and promote and disseminate tools and information. ISRRT response to the Bonn Call-for-Action is part of this very initiative specifically Action one.

Action 1: Enhance the implementation of the principle of justification and Action 10 which addresses the strengthening the implementation of safety requirement globally

- a) Add a section on the web site to promote and post information justification and the contribution of the radiographer
- b) Develop decision tool on Justification role of radiographer in the health care team house on ISRRT website and present to HERCA for consensus
- c) Produce a policy document which supports and influences the implementation of the BSS

I have worked with Stewart Whitley over the last six months as a sub-committee of the ISRRT board to produce a draft document including an article about justification and authorisation of planned medical exposures for the news and views which covered the current environment of justification with referring physicians as well as information on how to educate our members. We also developed a guideline to be posted on website for members to download and use in their professional practice. Dimitris Katsafarakis contact for the HERCA project and Maria Law Director of Education for ISRRT both reviewed our draft document and gave input on drafts before it was sent out for input from the entire board for comments and suggestions. Dimitris Katsafarakis will present the completed project as well lead the second part of the project which includes working with radiology schools on how to implement into their curriculum. As part of our strategic plan of educating our members here is some relative information regarding understanding team approach to justification here is some background information for you.

New International BSS calls for a team approach to justification and authorisation of medical exposure – what role can the technologists/radiographer play in justification and authorisation. The new Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (BSS) was published by the International Atomic Energy Agency (IAEA) as General Safety Requirements Part 3 in July 2014.

In terms of justification of medical exposures the BSS covers four areas of responsibilities for the protection and safety of patients. It states that the person or organisation responsible for facilities and activities that give rise to radiation risk shall have the prime responsibility for protection and safety. The overall objective is to produce a common approach to justification and authorisation of medical exposures across all countries and healthcare settings. ISRRT believes that common approach, with a defined pathway, will assist radiographers and technologists in understanding the principles and their role of justification and authorisation process and provide some helpful and practical information to enable this to happen successfully.

**May, 2015 World Health Assembly Side event
(Speaker and Panelist)**

Again you can see we are following the ISRRT strategic framework is of collaborate to develop and promote international standards with the strategic priority being contributed to and promote a radiation protection and safety culture. Our initiative relating to this strategic priority is to contribute to radiation protection and safety education which is why the ISRRT decided to send a representative to participate in the side event for Imaging for Saving Kids, the inside story about patient safety in paediatric radiology on May 26. World Health Assembly in Geneva May 18-26, 2015 I represented the ISRRT as a speaker and panelist at the side event. One of the primary goals of the WHO is Universal Health care coverage to ensure that patients obtain access to health services without financial hardship.

This outcome only happens with efficient health care systems in countries, access to essential medicine and technologies and sufficient capacity of well trained health professionals. Resources vary from country to country as well as regions and setting with in regions. As children are more vulnerable to ionising radiation related health risk received during exposure from x-rays the important of Safety comes to the for front in overall health care system. The event brought policymakers, health care providers, equipment manufacturers and patient advocates together to jointly discuss the current environment in pediatric imaging in these four member countries. As a panelist we were given the opportunity to discuss what can be done to improve health care and services delivery by maximising the benefit and minimising the risk when using medical imaging in children. I presented about how the ISRRT is a global stakeholder that represents over 500,000 radiographers globally and as technologists we understand that Patient Safety in Pediatric is a shared responsibility. I also presented that we supports countries incorporating regulations, policies and protocols that are specific for the pediatric population relating to safety from the BSS. Included in my message was that the ISRRT supports the use of alternate exams that use no radiation exposure such as Ultrasound and MRI where appropriate. I presented that the ISRRT has been supportive and participated in projects that help with Communications to ensure clear understand of Benefit and Risk which will ensure that the Right procedure is performed with the Right amount of Radiation dose. I presented that the ISRRT promotes the use of pediatric protocols or technique charts for current equipment using the most up to date evidence based information for example from the Alliances for Radiation Safety in Paediatric Imaging. The ISRRT promotes implementation in all health systems a Quality Assurance program emphasising radiation management, dose monitoring to patients and use of diagnostic reference levels. The ISRRT promotes and support a system in place that check patient medical imaging history for duplicate examinations and ensures that the history and indication agree with the imaging department's protocol. The ISRRT promotes Pediatric Radiation Safety training for all the imaging team including, radiologist, technologist, physicists and referring physician.

Finally I presented on using the best avenue for success in the area is to have the ministry of Health begin to incorporate regulations that relate to patient safety in alignment with the BSS specifically in the area of diagnostic dose reference levels, mandatory training specific to pediatric population for all health care workers and equipment design specific with software and hardware for paediatric exposures and other stakeholders involved as panelist and speakers were health professionals (ISR, IMOP, Patient advocate group. and representatives from 4 ministries of Health.

Although there were several speakers, a very common theme arouses from the speakers, one such message was the fact that there is a large variation in the radiation doses used in different facilities for the same procedure and an important need for policies focused on children, a need to establish diagnostic reference levels for children. Another common message was to emphasize that radiology is important and that paediatric imaging can save lives and at the same time to explain that children are vulnerable. Use radiation when necessary, "image wisely" links to the concept of justification. When using radiation in radiology we should use as much as we need for the medical purpose, neither more nor less, to achieve the benefits of medical imaging. Image gently links to the concept of optimisation. The third common theme was to take advantage of standards, guidance and tools globally developed, that can be locally adopted/ adapted. Examples: international basic safety standards (BSS), Bonn Call-for-Action, WHO Global Initiative on Radiation Safety, WHO Radiation Risk Communication tool, etc underuse and overuse of

medical imaging in Children. We should improve justification of procedures and optimization of diagnostic data, radiation protection, and promote use of imaging referral guidelines. Radiation safety is linked to several relevant WHO activates/programers that are all collaborating, as reflected in their participation in this side event. National programs should consider collaboration between health authorities and experts/ professionals, with the support from international societies. A take home message from this Side Event was “Perform medical radiation imaging according to standards.”

The presentations and panel discussion was well received by the audience and the panelist and stakeholders spent the remainder of the afternoon reviewing and formulating a call for action plan for the Who to Implement later this year. The plan includes an international global campaign which will be announced later this year. Also determined was a website threw the WHO specific to the campaign and important key information for the global stakeholder to disseminate key messages and strategies from the session. As we receive information we will be sure to post

October 2015, SA Imaging Congress meeting

This meeting was jointly hosted by the Society of Radiographers of South Africa and the Radiological Society of South Africa in Johannesburg, South Africa in October 2015 gave me an opportunity to again contribute to our strategic framework in both the area of contribute to and promote professional practice and also contribute to and promote a radiation protection safety culture. I did this by focusing my keynote presentation with a topic relating to these very issues called Health Care 2015 - Justification and Optimisation; is it an individual or team approach. Christophe covered dose limits and the optimisation and justification of dose as a medical physicist and I covered the technologist role in team approach to justification. The timing was perfect as Stewart Whitley and I had been working on the ISRRT's response to the Bonn Call-to-Action item on justification

and we had just finished our guideline for technologists to use in daily practice with respect to the team approach to Justification. There was a perfect platform for educators, radiologists and technologists on how each person on the health care team plays an important role in Justification including the technologist. This topic gave rise to lots of good networking and collaboration during the meeting with both radiologists and technologists from South Africa. I also had a chance to speak on a subsection of the program called dose optimisation, justification and ethical considerations. I addressed the topic of occupational radiation protection in medicine from a technologist's perspective. The conferences panel discussion relating to professional Practice Issues facing South African technologists gave me an opportunity to contribute to professional practice issues facing our profession. This panel discussion brought to light how complicated scope of practice issues can be in countries with different laws. The key technologists in the country presented the technologist view and key radiologists leaders gave their view as well. I appreciate this opportunity to be involved in this meeting which helped bring to light the need for position statement from the ISRRT supporting technologist scope of practice in their daily practices globally. You will begin to see more in this area over the next year.

November 2015

I participated as a speaker and panelist in this five day training course held in Vienna by the IAEA designed to meet the basic requirements of the International Basic Safety Standards for Radiation Protection and Safety of Radiation Sources. (IAEA Safety Standards Series No. GSR, Part 3) in cooperation with WHO, PAHO and ILO at United Nation. Participating in this training course fits into our strategic framework goal of collaborate to develop and promote international standards with the strategic priority of contributing to and promoting professional practice as well as radiation protection safety culture both. Our initiative was to contribute to radiation protection and safety culture and collaborate with other international stakeholders and health care professionals which is the reason we sent a representative to participate and be a speaker at this meeting. More than 50 representative from member states including regulatory representative, health authorities radiologist, technologist and physicist participated and exchanged practice experience and approaches on how to implement the new safety guide.

The five day course was divided into in department training on roles and responsibilities and competencies of each professional including how to collaborate with regulatory bodies and health Authorities. I represented the ISRRT and gave a lecture on the professional organisation role and what the ISRRT has been doing to contribute to radiation projection and safety as it relates to BSS including our document on Benchmarking Curriculum analysis document and guideline for Education of Entry level Professional Practicing in Medical radiation Science. ISRRT Collaborates with IAEA, WHO, HERCA, international professional organisations and other international NGO's on stakeholder projects that affect our profession including the successes that have happened in the last few years (WHO-Communication Radiation Risks in Paediatric Imaging to support risk-benefit dialogue (for referring physicians), joint position statement on the IAEA patient radiation exposure tracking, referral guidelines for diagnostic imaging for referring physicians. The ISRRT commitment to updates on the BSS and Safety series in on their website and official News



& Views, the ISRR Response to Bonn Call-to-Action including Action 10: strengthen the implementation of safety requirement globally promoting the new BSS, ISRR Workshop 2015-2016 and the ISRR's new web-based decision tool for radiographers for the Authorization and Justification of imaging procedures using ionizing

July, 6-10 2015, Consultancy for draft Safety Guide DS399

Finally I want to touch on a project we worked on over the last two years and the impact we made as from the ISRR to the global community. This project fits into our strategic frame work of collaborate to develop and promote international standards with the strategic priority being contribute to and promote professional practice as well as radiation protection safety culture. The initiative was to collaborate with other international stakeholders and health care professionals as well as the initiative of contributing to and review publications to enhance knowledge. We did this by participating in the Draft Consultancy meeting on the Safety Guide DS399 (Radiation Protection and Safety in Medical Uses of ionizing Radiation held at the IAEA Headquarters on the week of July 6-10, 2015. We also contributed to our strategic framework by our members taking an active participation in contributing a 177 draft comments for consideration at this meeting which you will read about a little further down in the article. For starter the purpose of the meeting was to review and address collected comments from Members States and professional organisations, and to prepare an updated draft of the document DS399, which will be then finalised by the technical officer for presentation to the Radiation Safety Standards Committee.

The IAEA invited experts from the core writing group of the DS399 to review the comments that were submitted. The group included two technologists Mary Coffey (Ireland) from the Radiation Therapy writing group along with myself Donna Newman (USA) from the Nuclear medicine writing group. Also invited to the consultancy group was Dr Maria Perez from the WHO, representing the physician's voice, and two Physicist from the core writing group, Anthony Wallace (Australia) and Cari Boras (USA). Jena Vassileva coordinated the meeting and acted as the technical officer to incorporate the accepted comments back into the draft DS399 document. Also in attendance for expert input from the NAHU of the IAEA was, Ahmed Meghzifene, Harry Delis, Gian Luca Poli, Brendan Healy, Karen Christaki, and Ola Holmberg from RPOP. A total of 847 comments to the IAEA had been collected through the official channel by the deadline from Members states and professional organisations. Five international organisations were officially asked to review the draft DS399 including professions representing the technologists (ISRR), radiologists (ISR) and the physicist (IMOP), WFNMB and ESTRO.

I am happy to report that the ISRR submitted a total of 177 comments for review from its member countries. Once again your expertise and dedication to our profession showed in the detailed responses the ISRR received from its members on comments of this draft document. As director of Professional Practice I combined and submitted all comments in their original form to be considered. The ISRR board wanted to thank everyone who took the time to review this important document and submitted expert comments to be considered in the draft DS399 the technologist voice showed real leadership in our profession.

A breakdown of the 847 comments was as follows with 49 general comments on the safety series as a whole being reviewed. Chapter one which is the introduction, background, scope and structure of the book received only two comments.

Chapter two covered the general recommendation for radiation protection and safety in medical uses of radiation including the types

of exposure situation and categories of exposure, applications of the radiation protection requirements, graded approach, roles and responsibility, and education training, qualification and competence had a total of 178 comments submitted to be reviewed. The group met the first day and half of the second day of the meeting to address these comments ensuring that expertise was available for all comments submitted for consideration.

The group then broke into sub-groups the group then broke into sub-groups to review the comments received on the specific recommendations for radiation protection and safety in Diagnostic radiology and Image guided interventional procedures (Chapter 3), Nuclear Medicine (Chapter 4) and Radiation Therapy (Chapter 5). Chapter three received a total of 226 comments, Chapter 4 201 comments and Chapter 5 177 comments to be reviewed and considered. Each specialty group took the comments related to their expertise on the appendix which received 14 comments for consideration.

One important comment that was received from the ISRR and technologist voice was asking the term radiographer to be used to describe our professional instead of medical radiation technologist which is the term used in the Basic Safety Standards. I wanted to help educate our profession that as a safety series which is a supplement of the BSS we have to use the terms defined in the BSS. As a profession we will have to keep this in mind and work toward changing this term in the next revision of the BSS.



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

Professional Practice Committee

News from around the globe

Submitted by **Christopher Steelman**,
Director Professional Practice, The Americas

Jamaica's Radiation Safety and Control Act

Andrea Dyer McKen, President of Society of Radiographers Jamaica reports that the government has fast tracked the passing of Radiation Laws in Jamaica. When passed, the law will be known as the Radiation Safety and Control Act. This will allow more stringent monitoring of radiation used across all sectors and will be facilitated by the Ministry of Industry and Commerce. The year has also seen the reintroduction of mandatory continuing education for annual re-registration for medical imaging professionals and radiation therapists. Ms Dyer-McKen shares "this has now forced the Society of Radiographers Jamaica to actively endorse research among our peers in an effort to bring new material to the fore." Jamaica is currently in the process of installing two state of the art RAPID ARC treatment units to assist with the treatment of cancer patients and re-establishing the Nuclear Medicine with the thrust of the Ministry of Health to combat non communicable diseases.

American Society for Radiation Oncology

Anticipating the needs of its diverse international community and the patients they serve, The American Society for Radiation Oncology (ASTRO) and Elsevier have launched its first entirely open-access journal, *Advances in Radiation Oncology*. ASTRO endeavors to broaden the scope of its audience by removing financial barriers to educational content. Through an open-access model, complete access to content published in *Advances* is available to those who can access the Internet. The journal and all of its articles are available for free for anyone to download, read and share, increasing the reach of research. The Society believes this will be particularly beneficial to nations where access has previously been limited. All work published by this journal is thoroughly peer reviewed by the editorial board and expert reviewers in radiation oncology. Authors retain copyright of their articles and reuse is governed under a Creative Commons license so that readers can freely and easily share information.

www.advancesradonc.org/

American Society of Radiologic Technologists elections

Voting in the American Society of Radiologic Technologists (ASRT) election took place February 11 – March 10, 2016. The ASRT membership elects the President-elect, Vice President and Secretary-Treasurer as well as delegates from the ASRT's 15 chapters. There are several ways ASRT members learn about the candidates before casting their vote. Each candidate submits a position statement and biography which is posted on the Society's website. In addition, National officer candidates for the positions of president-elect, vice president and secretary-treasurer participate in internet enabled live forums with ASRT members. National officer and chapter delegate candidates also have the opportunity to respond questions posed through ASRT's online community. Once elected to the Board of Directors, these volunteers help lead the ASRT, provide direction for the profession and attend multiple meetings throughout the year to discuss potential partnerships and to stay current on emerging technologies and practice issues in the radiologic technology community. The delegates for each chapter provide a direct voice to the ASRT on behalf of their specialty areas. Every year, these

representatives gather at the ASRT Annual Governance and House of Delegates Meeting to review motions, attend chapter meetings and participate in discussions that shape the ASRT and the radiologic technology profession. That meeting will take place June 24-26, 2016.

Radcademy Inspires Young Learners

Radcademy is an initiative that uses "contemporary media techniques and real-life situations to engage young people and their imaginations." Created by the American Society of Radiologic Technologists, Radcademy features a website and accompanying videos that are specifically designed for children between the ages of 12 to 16. The campaign's website uses colorful graphics and shares bite-sized pieces of information called RADfacts. Content on the site is scientifically accurate but age appropriate; presented in a way that children can learn about the scientific foundations of x-ray, computed tomography, magnetic resonance imaging, radiation therapy, nuclear medicine and other radiologic procedures.

www.asrt.org/radcademy/home

Image Wisely

On January 12, the Image Wisely campaign received its 40,000th pledge. To take the Image Wisely pledge, facilities must participate in a dose index registry and be accredited by an organization that directly evaluates: radiation dose indices and compliance with accreditation pass/fail dose thresholds, clinical image quality, phantom image quality and personnel qualifications. The American College of Radiology and the Radiological Society of North America formed the Joint Task Force on Adult Radiation Protection to address concerns about the surge of public exposure to ionizing radiation from medical imaging. The Joint Task Force then collaborated with the American Association of Physicists in Medicine and the American Society of Radiologic Technologists to create the Image Wisely campaign with the objective of lowering the amount of radiation used in medically necessary imaging studies and eliminating unnecessary procedures. www.imagewisely.org/

Submitted by **Elizabeth Balogun**,
Regional Coordinator of Professional Practice for Africa

As the saying goes the world has become a global village.

The practice of radiography has improved greatly especially as the years roll by.

More African Nations especially the West and East Africa sub-region have embraced the public private partnership model of healthcare provision. This has brought about great investment into medical practice especially Radiography.

For this reason, newer and more patient friendly equipment is brought into the hospital system for use as well as adequate training of personnel.

Most of the hospitals can now boast of at least a computed radiography equipment thereby reducing repeats and of course radiation dose to patients.

Of note is the new protocol for shoulder pain in Nigeria, where patient are required to have an ultrasound scan (musculoskeletal) done first before plain x-rays as a means of radiation protection



From left: AFK Bakre, participant; Dr Emmanuel Ehiwe (PhD), Consultant Sonographer from the UK, Facilitator; David Oluwo, participant; Dr Chyke Ohuegbe (DMedIm) Consultant Sonographer from the UK, Facilitator; Front row: Mrs Blessing Kpopo, participant.

and early diagnosis of soft tissue pathology which cannot be demonstrated on x-ray.

A workshop on Musculoskeletal (MSK) Ultrasound was organised by the Association of Radiographers of Nigeria during the 2015 Annual Conference. This allowed for more radiographers to be exposed to 'hands on training' and other applications in MSK.

Submitted by **Piret Vahtramae**,
Regional Coordinator of Professional Practice for Europe

First Baltic Course "Tips, Tricks and Pearls in Paediatric Radiology"

The 1st Baltic Course "Tips, Tricks and Pearls in Paediatric Radiology" organised by Riga Children University Hospital was held February 17-19, 2016, in collaboration with International Atomic Energy Association and Societies of Radiology of Latvia, Lithuania and Estonia.

The aim of this course was to put accents if paediatric imaging avoiding using unnecessary ionising radiation and to give best tips to answer clinical questions. The presentations were given by 24 lecturers from six countries (Finland, Austria, Slovenia, Latvia, Lithuania, Estonia); the total number of participants was 190.

Our deep thanks to the lecturers Jenia Vassileva from International Atomic Energy Agency, Vienna, Raija Seuri, Erja Tyrväinen, Anu Ruuskanen, Marja Perhomaa, Anna Föhr and Mikko Olavi Halonen from Finland, Dean Pekarovic from Slovenia, Birutė Švykaitė Gricienė, Irina Adomaitiene and Saulius Rutkauskas from Lithuania, Pilvi Ilves, Mare Lintrop and Aita Tilk from Estonia as well as lecturers from Latvia - Sarmīte Dzelzīte, Maija

Radzina, Aleksey Katashev, Arta Šmite - Laguna, Natalija Merkla, Liga Sembele, Zane Liepa, Jury Bormotov, Amanda Smildzere! Our colleagues from Children Clinical University Hospital – we are really proud of you, and thank you for your support!

Many thanks also to Ilze Kaspars, Agra Liepiņa and P. Jurjan's Music School children for the wonderful concert in the Latvian National Library, and also to Liga Hartpēga and her colleagues from Latvia Tours for the coordinating and organising of this wonderful and valuable course!

The photos below were taken by Jānis Brencis.

Mrs Ilze Apine
Latvija



Persons at the lecturers photo:

From left on the back: Arta Šmite-Laguna, Anna Föhr, Erja Tyrväinen, Jenia Vassileva, Raija Seuri, Aita Tilk, Anu Ruuskanen, Mare Lintrop, Pilvi Ilves, Sarmīte Dzelzīte, Marja Perhomaa, Birutė Švykaitė Gricienė, Maija Radzina, Natalija Merkla, Liga Sembele.

Front: Saulius Rutkauskas, Olavi Halonen, Ilze Apine, Dean Pekarovic

This poster won the Oral Poster Presentation at the South African 2015 Imaging Congress, Sandton, Johannesburg

The response of the central auditory system to sound in normal hearing adults with and without HIV/AIDS: A fMRI study

Pretorius, C¹, Soer, ME¹, Pottas, L¹, van Dijk, C², Hofmeyr, LM³, Woods, KJ⁴, Meintjies, EM⁴

1. Department of Speech Language Pathology and Audiology, University of Pretoria, Pretoria, South Africa.

2. Ear Institute, Pretoria, South Africa

3. Department of Otorhinolaryngology, University of Pretoria, Pretoria, South Africa

4. MRC/UCT Medical Imaging Research Unit, Department of Human Biology, University of Cape Town, Cape Town, South Africa



Introduction

A group of approximately 5.7 million people living in South Africa make up the world's largest population infected with HIV (Human Immune deficiency virus) (AIDS epidemic update, 2015). The occurrence of HIV infection is increasing and acquired immune deficiency syndrome (AIDS) is a worldwide pandemic that affect the lives of people with this disease⁷. Presently, antiretroviral treatment (ART) is the only method of controlling the progression of the disease. HIV/AIDS affects the immune system. ART can cause undesirable side effects that have a negative impact on the quality of life of the people depending on the treatment¹. Impaired hearing is one of the manifestations of HIV/AIDS². The central auditory pathway can be influenced by HIV/AIDS and this in turn can have an effect on the central nervous system. Approximately 75% of adults with HIV/AIDS have a hearing deficiency caused by opportunistic infections and the action of antiretroviral medication^{2,9}.

Aims and Objectives

People with HIV may present with hearing disorders of the central auditory nervous system (CANS). The lesions can occur at any level in the peripheral nervous system and central nervous system pathway. This information is important in determining the extent of the CANS involvement, and the normal hearing status is used to ascertain the disease involvement on a baseline level^{4,6,9}.

- The **primary aim** of this research was to determine the **response** of the CANS to nonsense syllables sound and evaluate the **lower activation** in normal hearing adults with HIV/AIDS, using functional MRI (fMRI).
- The **secondary aim** was to investigate the **effect** of CD4 count and ART on the neural response of CANS to the auditory stimulation in the HIV/AIDS group.

The **objective** of the research is to **apply fMRI** to identify the areas in CANS where auditory pathologies are caused by HIV/AIDS.

Methods

HIV+ and HIV- (control) participants, all with normal hearing were selected to take part in the study. In order to confirm normal hearing, conventional (250Hz-8000Hz) pure tone audiometry was performed

on all participants. Participants were considered to have normal hearing when they could hear pure tones of 25 dB or lower across all frequencies³.

Twenty-seven participants were included in the study, 12 HIV+(mean \pm standard deviation) ($M \pm SD = 32.8 \pm 6.5$ yrs) and 15 HIV- control participants ($M \pm SD = 25.67 \pm 5.6$).

Structural and functional MRI images were acquired using a 1.5T Siemens Magnetom Espree. The protocols were approved by the Research Ethics Committee of the Faculty of Humanities, University of Pretoria and South African Military Health Services.

Earphones were fitted on the participant's head covering both ears for the auditory stimuli that was presented to both ears. During the fMRI scan, participants were instructed to lie down with their eyes closed and listen to the binaural auditory stimuli comprising "nonsense" syllables. 20s blocks of nonsense syllables were alternated with 20s blocks of silence (Figure 1).

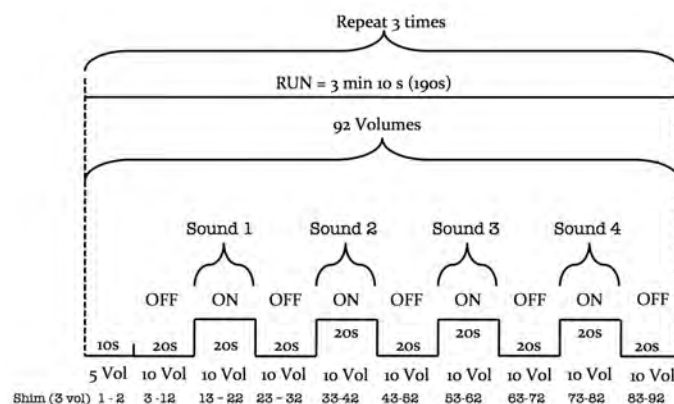


Figure 1: Nonsense syllables block design.

All fMRI data analyses were performed using Brain Voyager QX (Brain Innovation, Maastricht, the Netherlands). Random effects analysis of variance was performed using a general linear model with a predictor for auditory blocks convolved by the standard hemodynamic function, as well as the six motion correction parameters as predictors of no interest.



A priori regions of interest (ROIs) were defined based on the study “Structural brain changes in tinnitus” by Mühlaus et al., 2006. ROIs were defined as spheres with radii of 5mm (8mm for the medial geniculate nucleus), centered on the MNI co-ordinates for the ventral and dorsal cochlear nuclei, superior olivary complex, inferior colliculus and the medial geniculate nucleus, as well as the primary and secondary auditory cortices corresponding to Brodmann areas 21, 22, 38, 41 and 42. The MNI coordinates (Montreal-Neurological Institute) were transformed into Talairach coordinates using Brainmap (<http://www.brainmap.org/ale/>). The Brodmann areas were selected from the Talairach brain atlas (Talairach & Tournoux, 1988) in Brainvoyager. Separate participant analyses were performed on the average signal in each ROI using the general linear model. The beta values generated from this analysis, reflect the mean percent signal change for each condition for each participant, were used. Group comparisons were performed using a one-tailed t-test.

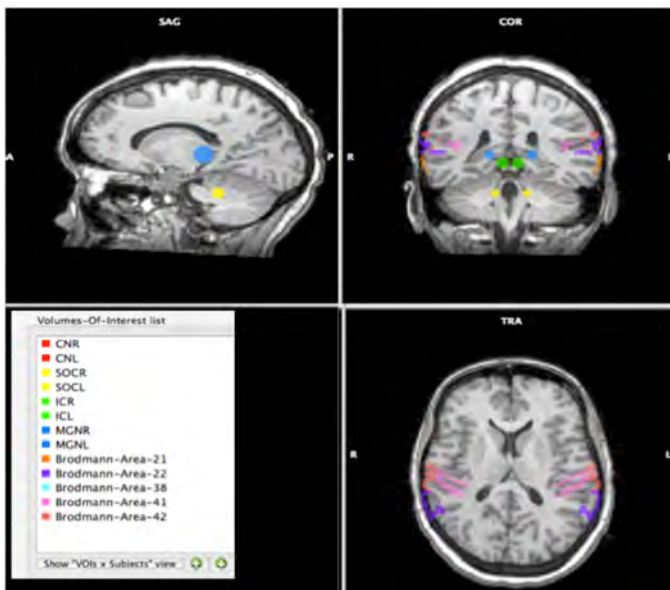


Figure 2: Regions of interest for the auditory pathway.

Whole brain group analyses were performed for each task separately with a random effect analysis of variance using the general linear model with a predictors based on the known experimental blocks convolved by the standard hemodynamic function. The six motion correction parameters were added as predictors of no interest. For each task, beta maps were created for each participant for the contrast of interest and analysed at the second level using a repeated measures ANOVA, with one within-subjects factor (warble tone or nonsense syllables) and one between-subjects factor (group: HIV and Control). Activations for each of the tasks in the control and HIV groups were examined separately and also identified regions where activation differed between the groups. For the nonsense syllables task, the voxelwise threshold was set to $p < 0.05$ (corrected for multiple comparisons using the False Discovery Rate method). Regions are reported if their extent is greater than 50 contiguous voxels, where voxel size refers to the $1 \times 1 \times 1 \text{ mm}^3$ resolution of the iso-voxeled structural images. For the warble tone task, the voxelwise threshold was set to $p < 0.05$, and regions of greater than 150 contiguous voxels are reported.

Each participant's functional data sets were co-registered to his/her high-resolution anatomical MRI, rotated into the AC-PC plane and normalized to the Talairach space using a linear transform calculated on the anatomical images. The $3.9 \times 3.9 \times 4 \text{ mm}^2$ fMRI voxels were interpolated during Talairach normalization to $3 \times 3 \times 3 \text{ mm}^2$.

Results

The ROI analysis showed that the groups differed significantly in activation in **Brodmann area (BA) 41** (anterior transverse temporal area) and **BA 42** (posterior transverse temporal area) (Figure 3).

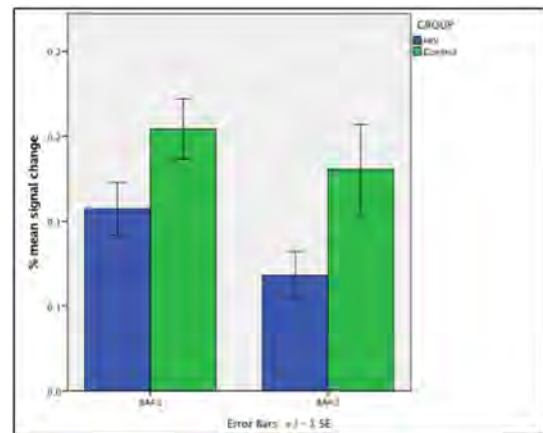


Figure 3: Percent signal change during the nonsense task in BA 41 and BA 42.

Controls activated BA 41 more than the HIV group ($t(25)=2.06$, $p = 0.03$, means \pm standard deviation ($M_s \pm SD$) = 0.10 ± 0.05 and 0.15 ± 0.07 for the HIV+ and control groups, respectively).

Controls also activated BA 42 more than the HIV group ($t(25)=2.06$, $p = 0.03$, $M_s \pm SD = 0.07 \pm 0.05$ and 0.13 ± 0.10 for the HIV+ and control groups, respectively).

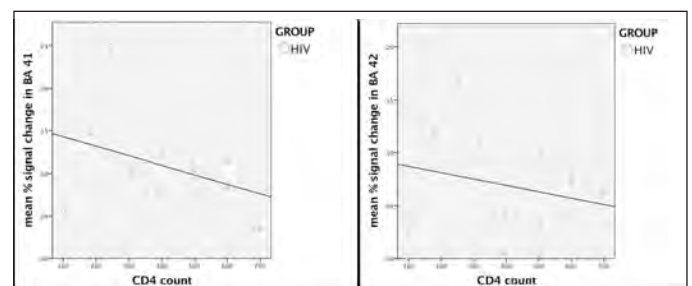


Figure 4: Relation of CD4 count to mean percentage signal change in BA area 41 and 42.

In this study the CD4 count of the participants with HIV only were used. Higher CD4 count in the HIV+ group is related to lower activation in BA 41 and BA 42 (Figure 4).

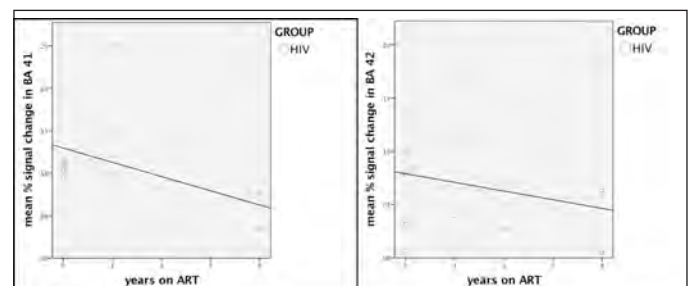


Figure 5: Relation between years on ART and mean percentage signal change in BA 41 and BA 42.

In the HIV group that is on ART it shows that the longer they are on ART the less percentage signal change in the BA 41 and BA 42 (Figure 4).

Table 1: Regions showing group differences in activation during the nonsense syllables task.

Region	Brodmann area	Mean x^a	Mean y^a	Mean z^a	Number of voxels ^b	Max t
Control Group > HIV Group (p(FDR) < 0.05)						
Frontal lobe						
Right middle frontal gyrus		40.3	29.59	23.89	727	4.69
Left inferior frontal gyrus		-49.3	20.91	2.26	294	3.27
Anterior lobe						
Right culmen		4.37	-47.85	-21.85	230	3.60
Parietal lobe						
Left sub-gyral		-32.48	-49.83	39.14	460	4.23
Left postcentral gyrus	40	-61.03	-21.67	14.34	478	3.83
Temporal lobe						
Left superior temporal gyrus	41	-46.17	-31.63	12.6	277	3.09
HIV Group > Control Group (p(FDR) < 0.05)						
Frontal lobe						
Right sub-gyral		16.85	26.66	41.26	214	3.13
Left medial frontal gyrus		-7.46	58.66	15.59	275	2.87
Left sub-gyral		-16.11	22.93	42.32	271	3.77
Left superior frontal gyrus		-18.68	36.31	38.82	318	3.52
Parietal lobe						
Right precuneus	7	11.45	-52.8	49.19	283	3.46
Temporal lobe						
Right sub-gyral		34.2	-70.66	13.87	220	3.84
Occipital lobe						
Right middle occipital gyrus		37.42	-80.6	3.30	281	2.90
Sub-lobar						
Right extra-nuclear		34.14	8.61	-9.09	306	3.50
Right lentiform nucleus; putamen		22.84	8.42	-0.52	291	3.59
Right extra-nuclear; corpus callosum		2.79	25.12	2.66	496	3.90
Left sub-lobar extra-nuclear		-14.22	-43.41	24.85	257	3.46
Left sub-lobar extra-nuclear		-30.36	-42.9	10.6	494	4.05
Left insula		-37.92	9.98	-6.21	510	4.13
Limbic lobe						
Right parahippocampal gyrus	19	26.54	-49.74	-3.35	219	3.06
Right anterior cingulate		13.14	33	22.11	234	4.13

^aCo-ordinates are Talairach co-ordinates of the peak voxel^bVoxel size refers to the 1 x 1 x 1 mm³ resolution of the iso-voxeled structural images

Table 2: Regions showing greater activity during the nonsense syllables task compared to baseline.

Region	Brodmann area	Mean x^a	Mean y^a	Mean z^a	Number of voxels ^b	Max t
Control Group (p(FDR) < 0.05)						
Temporal lobe						
Right superior temporal gyrus	41	51.06	-21.86	6.90	3277	6.87
Left superior temporal gyrus	41	-49.52	-25.51	9.03	2575	7.05
Left inferior temporal gyrus		-45.11	-70.94	1.52	499	6.48
Right middle temporal gyrus	37	44.32	-63.89	1.36	205	6.25
Occipital Lobe						
Right middle occipital gyrus		33.82	-69.26	9.47	193	6.03
HIV Group (p(FDR) < 0.05)						
Temporal lobe						
Right superior temporal gyrus	13	46.36	-19.49	6.18	1248	7.38
Left superior temporal gyrus	41	-51.48	-25.67	6.06	1936	7.27

^aCo-ordinates are Talairach co-ordinates of the peak voxel^bVoxel size refers to the 1 x 1 x 1 mm³ resolution of the iso-voxeled structural images

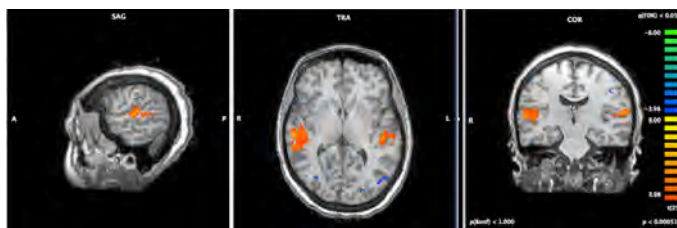


Figure 6: Regions activated by the control group during the nonsense task.



Figure 7: Regions activated by the HIV+ group during the nonsense task.

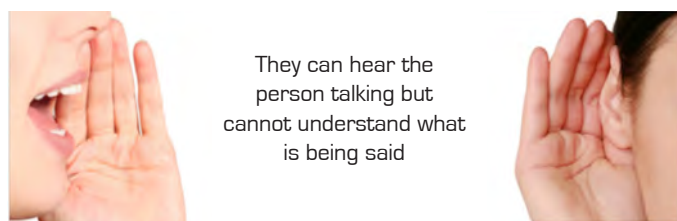
Whole brain analyses

In the between-group comparison of the nonsense syllables task compared to baseline, the control subjects show greater activity compared to the HIV+ subjects the left superior temporal gyrus (BA 41) part of the auditory cortex (Table 1). The HIV+ group show greater activation compared to the control group in the right sub-gyral in the temporal lobe (Table 1).

In the nonsense syllable task, the control group activates the bilateral superior temporal regions, including BA 41 part of the auditory cortex and the right occipital region of the middle temporal gyrus (BA 37) and the left inferior temporal gyrus (Table 2, Figure 6). The HIV group only shows activity in the bilateral superior temporal gyrus, including BA 41 (Table 2, Figure 7).

Conclusion

Damage to **BA 41 & BA 42** causes **auditory verbal agnosia** (pure word deafness).

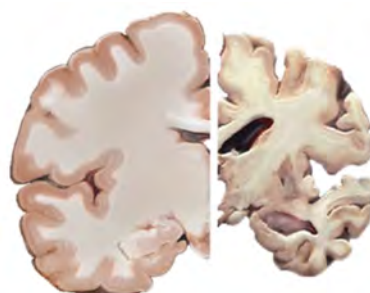


Auditory verbal agnosia can present as the result of acute damage or as a result of acute damage or as chronic progressive degeneration over time. **Auditory verbal agnosia** can present as a symptom of neurodegenerative disease⁷.

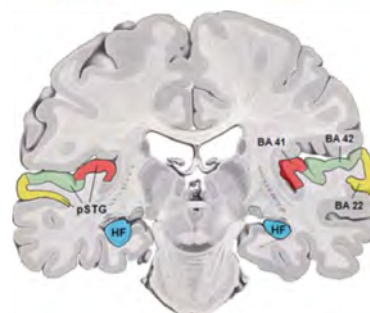
The current predicament is that HIV/AIDS does affect the CANS and that these changes are not explored sufficiently and should therefore be investigated and documented

Cortical deafness is a rare disorder that is not easily detectable on MRI and dysarthria pathology does occur in **BA 41 and 42** the observed functional alterations do contribute to the severe cognitive changes that are associated with HIV.

The response of the CANS to sound in persons with HIV/AIDS does ultimately contribute to ensure an **enhanced diagnosis** and an **improved service delivery**.



Chronic degeneration



BA 41 and 42

References

- Assuiti, Luciana Ferreira Cardoso, Lanzoni, Gabriela Marcellino de Melo, Santos, Fabiana Cristine dos, Erdmann, Alacoque Lorenzini, & Meirelles, Betina Hörner Schlindwein. (2013). Hearing loss in people with HIV/AIDS and associated factors: an integrative review. *Brazilian Journal of Otorhinolaryngology*, 79(2), 248-255.
- Campanini, A., Marani, M., Mastroianni, A., Cancellieri, C., & Vicini, C. (2005). Human immunodeficiency virus infection: personal experience in changes in head and neck manifestations due to recent antiretroviral therapies. *Acta otorhinolaryngologica italiana*, 25(1), 30.
- Martin, F. N., & Clark, J. G. (2015). *Introduction to Audiology: Global Edition*. Pearson Higher Ed.
- Melrose, R. J., Tinaz, S., Castelo, J. M. B., Courtney, M. G., & Stern, C. E. (2008). Compromised fronto-striatal functioning in HIV: an fMRI investigation of semantic event sequencing. *Behavioural brain research*, 188(2), 337-347.
- Mühlau, M., Rauschecker, J. P., Oestreicher, E., Gaser, C., Röttinger, M., Wohlschläger, A. M., Simon, F., Etgen, T., Conrad, B., & Sander, D. (2006). Structural brain changes in tinnitus. *Cerebral Cortex*, 16(9), 1283-1288.
- Reger, M., Welsh, R., Razani, J., Martin, D. J., & Boone, K. B. (2002). A meta-analysis of the neuropsychological sequelae of HIV infection. *Journal of the International Neuropsychological Society*, 8(03), 410-424.
- Rouse, M. (2015). *Neuroanatomy for Speech Language Pathology and Audiology*. Jones & Bartlett Publishers.
- Swanepoel, D. W., & Louw, B. (2010). *HIV/AIDS Related Communication, Hearing, and Swallowing Disorders*. San Diego: Plural Publishing.
- Van der Westhuizen, Y., Swanepoel, D. W., Heinze, B., & Hofmeyr, L. M. (2013). Auditory and otological manifestations in adults with HIV/AIDS. *International journal of audiology*, 52(1), 37-43.

Acknowledgements

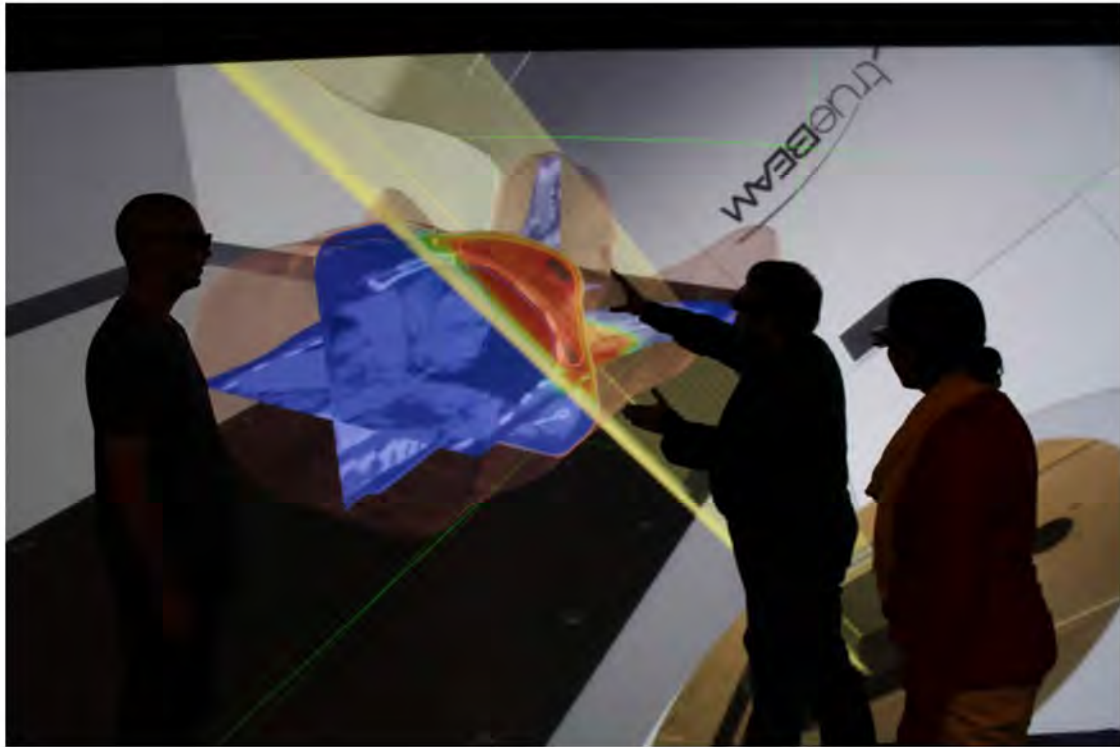
This research is funded by the International Society of Radiographers and Radiological Technologist (ISRRT, Registered Office No.276218: Cardiff, Wales, United Kingdom).

The scanning sessions were sponsored by Dr W de Jager (Drs de Beer, de Jager Radiologist, Pretoria, South Africa).



VERTTM

The flight simulator for Linacs



- A Linac in the classroom. Uses real hand pendant controls. Loads real DICOM data.
- Explain complex radiation therapy principles simply. Improves understanding.
- Offers an offline platform for staff to refresh knowledge, to review and develop techniques.
- Learners see CT images, structures, beams and dose from real patients.
- Visualize surface anatomy, internal anatomy and dose.
- Deliver beams. Simulate treatment errors.
- Demonstrate DIBH, SABR, IMRT and VMAT plans. Practice Image matching.

A proven training tool that provides a safe and non-pressured learning environment.

For more information or to book a demonstration

Email: sales@vertical.co.uk Or visit: www.vertical.co.uk

memberships

> Membership

Full membership of societies is open to national societies of radiographers or radiological technologists with similar objectives to the ISRRT. These are: "to advance the science and practice of radiography and allied sciences by the promotion of improved standards of education and research in the technical aspects of radiation medicine and protection".

> Corporate Membership

Corporate membership is open to all organisations wishing to support the work of the ISRRT and who would otherwise not be eligible for full membership. This includes commercial companies, regional or local professional organisations, governments, hospitals, universities and colleges. Corporate members receive certain benefits including preferred space at ISRRT organised technical exhibitions, priority opportunity to participate in ISRRT sponsored educational activities, preferential advertising opportunities in ISRRT publications and official recognition in the ISRRT Newsletter. In addition, hospitals, universities and professional associations can apply to host ISRRT organised seminars and workshops.

Details of Corporate membership are available from the Secretary General. We express our appreciation for the continued support of our Corporate members and invite other industry and professional leaders to offer their support to the advancement of international radiation medicine. Current Corporate members are:

- ELEKTA
- GE Healthcare Medical Diagnostics
- Philips Healthcare
- Bracco Suisse SA
- Wardray Premise Limited
- Durban College of Technology

> Associate Membership

Associate membership provides the opportunity for individual radiographers to learn more of the activities of the ISRRT. They do this by receiving a copy of the Newsletter that contains reports on all ISRRT activities and upcoming events. Associate members also receive advance notice of Conferences and Congresses and receive a small rebate on registration fees at these ISRRT meetings. In addition many of our member societies allow ISRRT Associate Members to register for their national conferences at the same preferred members rate if they reside outside the country of the Conference. ❖

Application for Associate Membership

Please complete in block letters and return to:

Secretary General, 143 Bryn Pinwydden, Pentwyn, Cardiff, Wales CF23 7DG, United Kingdom

Title (please tick) ☐ Mr ☐ Mrs ☐ Ms ☐ Miss ☐ Dr ☐ Other

Family Name(s):

Given Name(s)

Address:

I wish to support the work and objectives of the ISRRT and hereby apply for Associate Membership. I enclose payment of:

Pounds Sterling

US Dollars

Euro

☐ 1 year £ 8.00

☐ 1 year \$15.00 US

☐ 1 year 15 Euro

☐ 3 years £20.00

☐ 3 years \$40.00 US

☐ 3 years 40 Euro

I am a member of my national society which is: _____

My specialty is (please tick one or more):

☐ Imaging ☐ Therapy ☐ Nuclear Medicine ☐ Education ☐ Management ☐ Ultrasound

Signature

Date

Please make payment by cheque, bank draft or money order, payable to ISRRT.

Bank details for payment:

Lloyds Bank, Victoria Park Branch, Cardiff, UK

Sort Code: 30 98 94 Acct No: 28160960

Acct Name: International Society of Radiographers and Radiological Technologists (ISRRT)

BIC: LOYDGB21454 IBAN: GB11 LOYD 3098 9428 1609 60

I would like to support:

☐ ISRRT Development Fund
and include a donation in
the amount of: _____

☐ World Radiography
Educational Trust Fund
and include a donation
in the amount of: _____

Name: _____

Address: _____

Signature: _____

Date: _____

Donations to Secretary General ISRRT,
Mr Alexander Yule
143 Bryn Pinwydden
Pentwyn, Cardiff
Wales CF23 7DG
United Kingdom

The America's Report

Terry Ell, ISSRT Vice President, Americas Region

Jonathan Mazal, ISSRT Regional Director, Americas Region

We are pleased to report that the Americas region has been as busy as ever advocating for the radiographers and radiologic technologists in the Americas. Below is a short synopsis of our recent activities over the past three months and you will see that we have stayed true to our primary focus of building greater communication within our region.

3rd ISSRT Americas Regional Web-Conference:

With special gratitude for the technical support of the Canadian Association for Radiologic Technologists, on Sept. 28, 2015 we held yet another successful meeting of medical imaging leaders within our region. The meeting consisted of brief yet informative 5 minute presentations from organisational representatives, highlighting educational, professional practice, and public relations efforts currently underway as related to radiology within our region. The following organisations and countries were represented:

ISSRT:

Donna Newman (Director of Professional Practice, USA); Alain Crompt (Director for Public Relations, Canada); Sharon Wartenbee (Regional Coordinator for Public Relations, USA); Robin Hessler (Regional Coordinator for Education, Canada), Terry Ell (Regional VP, Canada); Jonathan Mazal (Regional Director, USA).

American Society of Radiologic Technologists:

Donna Thaler-Long (Council Member, USA)

Barbados Association of Radiographers:

Ian Withers (President, Barbados)

Belize Ministry of Health:

Timothy Afowoyo (Senior Radiographer, Belize)

Canadian Association of Medical Radiation Technologists:

Marcia Smoke (ISSRT Council Member, Canada)

Guyana Ministry of Health:

Donna Bowman (Senior Radiographer, Guyana)

Jamaica Society of Radiographers:

Carlene Rankin (Council Member, Jamaica)

Society of Radiographers Trinidad & Tobago:

Aneesa Ali (President, Trinidad)

World Radiography Educational Trust Foundation: Christopher Steelman (Regional Coordinator for Professional Practice, USA) Being our third web-conference, this completed our first year of regional communication and we are very thankful to all those who have participated thus far, and excited to see the triannual meeting grow and establish itself as the primary form of regional communication for radiographer leaders in the Americas.

ISSRT Americas Regional List-Serve: To ensure continued communication between our triannual web-conference calls, we have also established an ISSRT Americas Regional List-Serve for email communication amongst our growing regional network of radiographer leaders.

If you belong to an organisation not listed above that you feel deserves representation during the web-conference as well as inclusion with the ISSRT Regional List-Serve, please do not hesitate to contact us directly to discuss a potential invite to join.

Meeting Attendance: We also believe in the importance of face to face networking and would like to take a moment to highlight some conferences that we have and will be attending. Terry is currently scheduled to attend the 5th National Congress and 2nd International Interchange of the Professionals of the Radiological Techniques in Brazil (October 30-November 1) as well as the Barbados Association of Radiographers and Barbados Health Information Management Association biennial conference on November 20-22. Jonathan attended an expert consultation meeting on Quality Assurance Standards for Mammography in Latin America and the Caribbean hosted by the Pan American Health Organizations (PAHO) in Washington DC, USA from October 27th-29th (a detailed report is provided elsewhere in the News and Views) as well as the RAD-AID International meeting on Nov 7th, 2015, also in Washington, DC. Jonathan will also be attending the Radiology Society of North America and speaking during the Associated Sciences Track on Nov. 30th, in Chicago, IL. Of course, we strongly encourage you to contact either of us if you plan on attending any of the same meetings. We also encourage you to review the member country reports in this issue of News & Views for details of other upcoming society meeting worth attending.

Educational Workshops: We are excited to share that the ISSRT sponsored PAHO educational workshop on digital radiography in Managua, Nicaragua was a success, and have prepared a special report (elsewhere in the News and Views) detailing the four days of learning provided. We also would like to share that we are hard at work collaborating with the International Society of Radiologists (ISR) to offer a custom radiographers session during the ICR World Congress to be held in September 2016 in Buenos Aires, Argentina.

As always we welcome any and all correspondence regarding ISSRT efforts to advocate for radiographers/radiologic technologists within the Americas region, and invite you to contact us directly with questions, suggestions, ideas, needs for support, etc. There is plenty of work to be done, and volunteer support is always welcome! Also, as we continue to branch out our work into Latin America, ad contacts that can be shared would be greatly appreciated. Emails in Spanish are welcome!

Terry Ell Terry.Ell@albertahealthservices.ca

Jonathan Mazal jmazal@issrt.org

**Honorary Secretary:**

Ms Sue Marchant
Honorary Secretary WRETF
 143 Corfield Street,
 Bethnal Green,
 London E2 ODS UK
 email:
susanmarchant@wretf.org

Honorary Treasurer:

Alan Budge

Website Manager:

Sue Marchant

**THE TRUST IS
 ADMINISTERED BY
 THE FOLLOWING
 TRUSTEES**

Alan Budge (UK)

Sue Marchant (UK)

Michael Ong (Singapore)

**Marie-Dominique Galy
 (France)**

Chris Steelman (USA)

Cynthia Cowling (Australia)

Noreen Sinclair (UK)

www.wretf.org

World Radiography Educational Trust Foundation

News

In November 2015, Trustees appointed the first Trustee Assistant, Sophie Durrans (pictured left), who will assist Trustees with a number of tasks such as developing the website strategy, reviewing the current website and assisting

in its development as well as assisting in the use of social media. This is a new venture for the Trust. With her communication skills Sophie will also be assisting Alan Budge, communications lead for the Trust, with drafting Press Releases and other communications. Sophie's short biography is available to view on our website. This appointment is for one year in the first instance with a view to either continuing or possibly moving into a Trustee role.

Support

2015 was a disappointing one for the Trust with only a few applications for textbook support. Trustees are looking at ways of trying to raise awareness of the support we can give.

Ambassadors

Trustee Chris Steelman has been reviewing the ambassador program and has updated information about the program and role description. These are to be found on the Trust's website. It is hoped that Ambassadors, who in the main are based in developing countries, can assist in raising awareness of the work of WRETF and the support it can give.

Bursary Scheme

In November Trustees assessed the application forms that had been received by the extended closing date October 15 following some activity by Trustee Chris Steelman to raise awareness of the

imminent closing date. This produced a small number of applications. Mr Komlan of Togo, pictured above, was selected to receive a bursary. He had already attended the French Conference in Paris in October where he presented on

catheterisation. His report and photo are on the Trust's website. Another bursary recipient, Mr Sarker of Bangladesh is pictured below who visited the Tata Memorial Hospital in Mumbai.

**Donations**

The Trust was delighted to have received a donation from the Middlesex Hospital School of Radiography History Trust, following a decision taken by their Board of Trustees. The money was raised from sales of the book – "Radiating Knowledge" – a history of the School at The Middlesex Hospital and also from donations made in memory of Marion Frank – a well-known and respected former principal of The Middlesex Hospital School of Radiography. It has been agreed that the donation which is in two parts, the first having been handed over at a joint meeting of representatives of the two Trusts, will be used to fund bursaries specifically to make educational visits. This generous donation will enable the bursary scheme to continue for the foreseeable future.



News from member countries

AUSTRALASIA

NEW ZEALAND



On behalf of the New Zealand Institute of Medical Radiation Technology (NZIMRT) I wish our radiography colleagues throughout the world a Happy New Year.

In December 2015 Fiona O'Halloran resigned from the NZIMRT Board of Directors and as President due to moving to Australia for new work opportunities. Fiona has been a valuable Board member having organised a number of annual conferences including the recent NZIMRT/AIR Conference. Fiona had accepted a second term as President at the 2015 AGM and the NZIMRT are very sorry to see her go. I have accepted the role as President until the 2016 AGM in August and will continue as ISRRT representative.

NZIMRT members celebrated World Radiography Day last November with a mix of shared lunches, cake stalls, themed morning teas and department breakfasts. Donated / fundraised monies were put toward supporting the travel fund for the ISRRT World Congress.

The NZIMRT Board of Directors met in Auckland in March and as part of this meeting held a training day for committee members of the various regional branches throughout the country. This is the first time a formal training session has been held in New Zealand and the Board see it as vital to ensure succession planning for the future.

The NZIMRT Annual Conference is being held in Christchurch this year and a call for abstracts has been published. Themed "Aspire – Reach for the Skies" it will be exciting to visit Christchurch, a city almost levelled by earthquakes in 2011. More information can be found on the Conference website:

The NZIMRT continues to promote the work of ISRRT through both the NZIMRT newsletter "Attenuation" and on the website: www.nzimrt.co.nz

Kathy Colgan
NZIMRT ISRRT Director



HK Ambassadors with their awards.

HONG KONG



The Hong Kong Radiographers' Association (HKRA) and the Hong Kong College of Radiographers and Radiation Therapists (HKCRRT) supported by RAA held a five session course from October 2015-February 2016 on radiation dose optimisation. A full report is found in this issue of *News & Views* on page 19.

Edward Wong
Chairman HKRA

THE AMERICAS

AMERICA



American Society of Radiologic Technologists Membership Update

As of December 2015, ASRT's total membership stood at 153,409. The association's annual net retention rate is 88.60 percent and its annual net growth rate is 0.30 percent.

ASRT Launches Compliance Suite Series

The American Society of Radiologic Technologists has launched the ASRT Compliance Suite, a collection of 30 training modules that provide health care professionals with information to help them meet educational requirements for certification by state and national accrediting bodies including The Joint Commission and Joint Review Committee

on Education in Radiologic Technology. The modules provide health care professionals and facilities with critical information about a number of topics that are included in state, federal and accreditation requirements. Topics range from hand hygiene and fire safety to patient rights and patient safety. The modules are applicable to all health care professionals and support staff. www.asrt.org/membership/membership-benefits/compliance-suite

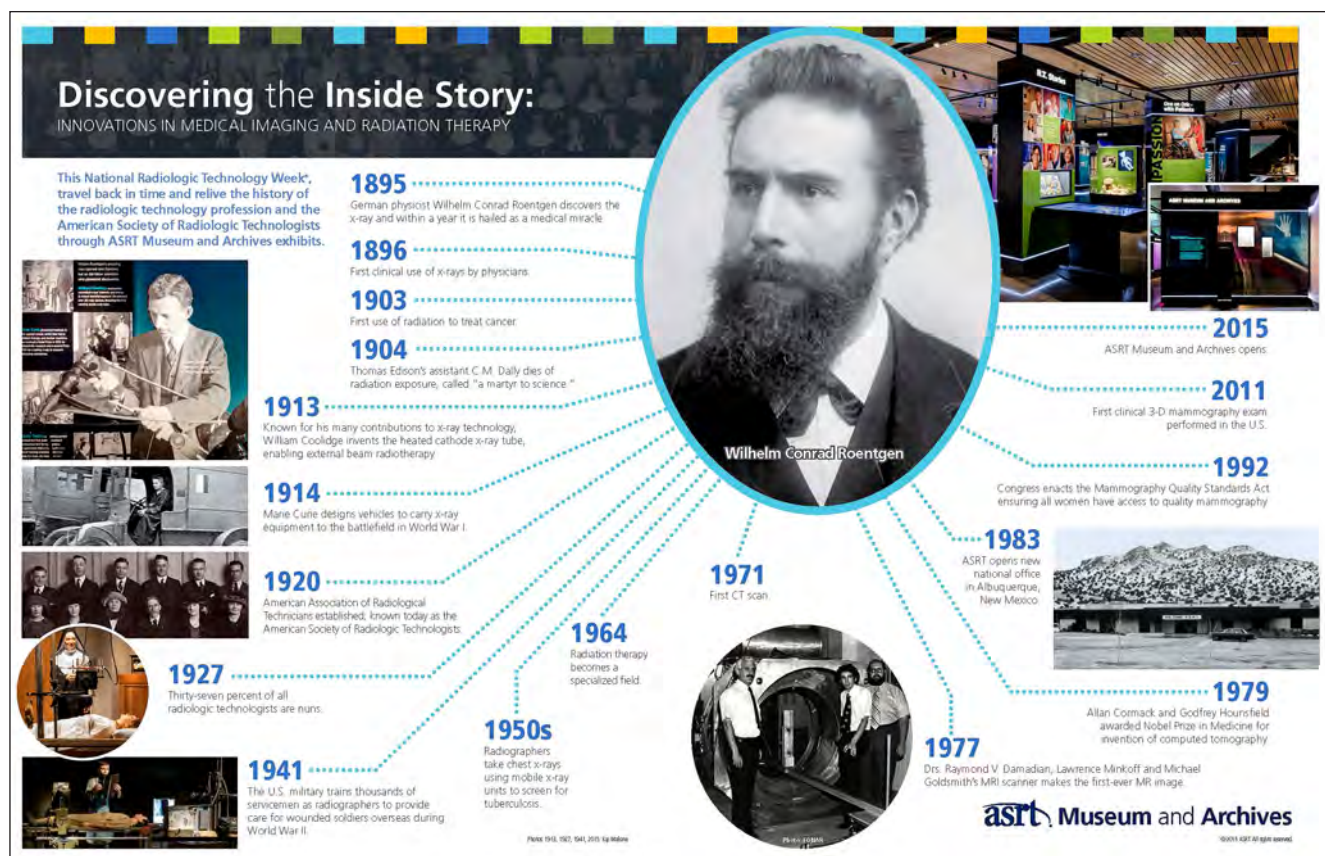
Radcademy Inspires Young Learners

In a new campaign that teaches kids about the world of medical imaging and radiation therapy, one teenager describes radiologic technology as, "Pretty rad!" Radcademy is an initiative that uses contemporary media techniques and real-life situations to engage young people and their imaginations. Created by the ASRT, Radcademy features a website and accompanying videos that are specifically designed for boys and girls aged 12 to 16.

The campaign's website component calls to mind the colourful graphics of mobile apps while using bite-sized pieces of information called RADfacts. Content on the site is written in such a way that



"Radiologic technology is pretty rad!"



kids can easily learn about the fascinating scientific foundations of x-ray, computed tomography, magnetic resonance imaging, radiation therapy, nuclear medicine and other radiologic procedures. "Radcademy is a unique initiative as it provides teenagers with fundamental information about the science behind medical imaging and radiation therapy, and also offers radiologic technologists a series of tools they can use for educational purposes," said ASRT CEO Sal Martino, Ed.D., R.T.(R), FASRT, CAE. "What's exciting is radiologic technologists are already telling us they want to use Radcademy for career days, school presentations and to show their friends and families what they do for a living."

www.asrt.org/radcademy

Foundation Reaches Campaign Milestone

The ASRT Foundation's 30th anniversary celebration campaign reached a major milestone in January with more than \$2.5 million raised in commitments from individuals and organisations. The funds donated for this historic campaign will be used to ensure medical imaging and radiation therapy professionals attain the level of education, leadership and influence required to meet the needs of patients for many years to come. Launched in June 2014, the Positioning for a Brighter Tomorrow campaign provides

the Foundation – the philanthropic arm of the ASRT – with long-term financial stability in its efforts to empower radiologic technologists and strengthen the radiologic technology profession. In addition, the campaign works to improve collaboration with industry partners to increase the quality and safety of patient care around the world for years to come. The campaign will continue through June 2016.

The Foundation invites individuals and corporations to make transformational gifts that will help medical imaging and radiation therapy professionals and students advance through scholarships, research grants and community outreach programs.

In addition, donations will enhance collaborative initiatives to improve R.T. education and patient care. <https://foundation.asrt.org/support-our-work/celebration-campaign>

NRTW® 2015 Highlights Profession's History

In honor of National Radiologic Technology Week®, Nov. 8-14, 2015, the ASRT highlighted the x-ray's birthday and its profound effect on patient care with a Discovering the Inside Story infographic. See above graphic.

The design tracks the history of medical imaging and radiation therapy using exhibits and resources featured in the ASRT

Museum and Archives, the only museum in the world devoted to telling the story of the radiologic technology profession. Learn more about the ASRT Museum and Archives and schedule a tour.

www.asrt.org/docs/default-source/museum/pr15_roentgentimeline_nrtw_final.pdf?sfvrsn=2

ASRT@RSNA 2015

ASRT@RSNA 2015, Dec. 2-3 in Chicago, was a resounding success. Held in conjunction with RSNA's Scientific Assembly and Annual Meeting Exhibition, the one-and-a-half day educational program provided radiologic technologists and radiation therapists with continuing education and networking opportunities. ASRT@RSNA 2016 is scheduled for Nov. 27-Dec. 2 at McCormick Place in Chicago. Visit www.asrt.org/events-and-conferences/asrtatrsna to learn more about this annual program.

ASRT Coming Events

June 23-26, 2016
Las Vegas
ASRT Educational Symposium and Annual Governance & House of Delegates Meeting
<https://www.asrt.org/events-and-conferences/asrt-educational-symposium-and-annual-meeting>

Sept. 25-27, 2016

Boston

ASRT Radiation Therapy Conference

www.asrt.org/events-and-conferences/asrt-radiation-therapy-conference

Nov. 6-12, 2016

National Radiologic Technology Week®

www.asrt.org/events-and-conferences/national-radiologic-technology-week

Donna Long
Council Member

CANADA



New CAMRT CPD Repository

The CAMRT is launching a new repository of continuing professional development opportunities (www.camrt.ca/repository) for those in the practice of medical radiation technology (radiography). This user-friendly website allows users to search through dozens of courses, webinars and events from CAMRT and its partners to identify opportunity for professional development and personal growth.

All CAMRT CPD courses are available at competitive rates in distance learning formats to any graduate of a medical radiation technology program, regardless of the country of education. All courses are approved for Category A credit, accepted by the ARRT and others.

2016 CAMRT Conference

The CAMRT 74th Annual General Conference (AGC) will be taking place from June 9-12, 2016 at the World Trade and Convention Centre in Halifax, Nova Scotia. This event offers excellent opportunities for learning and networking experiences among radiologists, technologists, and other health-care professions. A strong program track for nuclear medicine technologists is on offer, along with a series of plenary sessions on topical issues. See www.camrt.ca/agc/ for more information and registration.

Journal of Medical Imaging and Radiation Sciences

JMIRS has announced a call for papers for our next special edition on the topic, "The Patient Experience," due May 1, 2016. We will be targeting articles from multi-disciplinary perspectives from all over the

globe. Examples of relevant subjects for this issue include: supportive care/services; psychosocial; person-centered care, patients as partners; education curriculum inclusive of the patient experience; families, etc. Please send your ideas or questions to the Managing Editor at editor@camrt.ca.

Advanced Practice in Medical Radiation Technology

The CAMRT is pushing ahead with its initiatives to establish advanced medical radiation technology practice in Canada. This includes a ground-breaking new AP certification process, currently in its pilot. The [CAMRT Advanced Practice Framework](#), published in the spring of 2014, discusses opportunities for advanced practice roles in medical imaging.

A New Partnership with RAD-AID

The CAMRT has formed a new partnership with RAD-AID International to offer its members the opportunity to contribute to the healthcare needs of developing countries through participation in RAD-AID missions around the world. Recipients of this award will join RAD-AID's project teams in international initiatives designed to improve access to quality medical imaging for populations in need.

CAMRT Best Practice Guidelines

The CAMRT has added several new guidelines to its extensive Best Practice Guidelines page (www2.camrt.ca/bpg/). Even more content is planned for the upcoming year.

Radioisotope supply

The CAMRT continues to play an active role in a pan-Canadian working group working to identify mitigation strategies in case of potential future Tc-99m shortages. There is no planned shortage in the foreseeable future and the situation is being monitored closely.

Support for those interested in working in Canada

The CAMRT has produced two learning modules for Internationally Educated Medical Radiation Technologists (IEMRTs) interested in working in Canada. Both are available in the [certification](#) section of the CAMRT website. The first module on describes practice/employment in Canada. The second is a module providing education on "How to Write a Competency Based Exam".

Christopher Topham

EUROPE

FRANCE



Since the last ISRRT newsletter, a lot has been going on in France. A very important series

of law has been voted in December which will decisively influence the radiographer profession in France.

First and foremost, it will be required to prove every three years that one's practice is up-to-date, the modality of this will be defined in the coming months.

Also it has been recognised that some practices can be delegated from the radiologist to the radiographer. For example some very standardised protocols for follow-up examinations.

The new organisation of the health system in France should also encourage the centralisation of radiology examinations, with the creation or strengthening of greater radiology services.

In October 2015 was the French Radiology Congress (Journées Françaises de Radiologie, a now well known congress in Europe), where radiographers have a dedicated program. A lot of interesting presentations, from interventional radiology to dosis evaluation in repetitive CT scans, passing through image post treatment and psychology advices for breast examination. As usual the radiographer attendance to this congress was very good.

In February this year, over 700 French radiographers met in Marseille for the CT radiographer congress where the best communication price was given to a presentation of CT explorations of abdominal/inguinal hernias.

A very emotional moment was the story of how the night of November 13, 2015 (Paris terrorist attacks) was relived in a radiology service, with images that are seldom seen in our country. The organisation of this exceptional night and the follow up for the radiographers who were involved was explained with many details and much talent. This was concluded with a well-deserved standing ovation.

Benoit Billebaut
Council Member

NORWAY



The Norwegian Society of Radiographers has a new president, Bent Ronny Mikalsen. Bent lives in Haugesund

and works at Helse Fonna as a senior radiographer, Specialist in MRI. He will be a full-time President.

The former President, Anna Pettersen, has retired after eighteen years as President of the Society.

AFRICA

GHANA



The Ghana Society of Radiographers had a theme for 2015 of "Ensuring quality and standards in medical imaging and radiotherapy".

To support this theme we hosted three workshops. The National Workshop and two Zonal Workshops, The Southern Zone and the Northern Zone.

The 120th World Radiography Day celebration in November was organised to include a National Scientific Conference and a Special Congress in the Garden City of Kumasi.

The year saw several collaborations between the Ghana Society of



South African delegates..

Radiographers and the Allied Health Professions Council, the training institutions, the Federation of Allied Health Professions and student radiographers.

A full report is found in this issue of *News & Views* on page 20.

**James
President, GSR**

SOUTH AFRICA



Since the last report in *News & Views* the South African Branch has been very busy.

On November 8 world Radiography Day celebrated 120

years of the existence of xrays discovered by Wilhelm Conrad Röntgen.

The xray departments in Bloemfontein were given the opportunity to raise awareness in the community regarding the use of xrays. Radiographers and student radiographers creatively reached out to pre-primary schools, primary schools, high schools, children's wards at some hospitals, and a hospice, with interesting presentations. Each participating practice received a cash prize sponsored by the Bloemfontein SORSA Branch.

At the end of 2015 the third year Radiography students had their epaulette ceremony.

The annual general meeting of the Bloemfontein Branch was held on February 11, 2016 and the morning seminar on 20 February 2016.

A full report is found in this issue of *News & Views* on page 22.

Hesta Friedrich-Nel



Ghana radiographers attending the Southern Zone Workshop.

ADVANCED HEALTH EDUCATION CENTER

EDUCATION ▲ STAFFING ▲ CONSULTING

**I'm sure glad the hole isn't
at my end of the boat!**



Is your boat sinking? Let us help you!

Skills Training Provided In:

- ▲ **Bone Densitometry**
- ▲ **Computed Tomography**
- ▲ **Digital Technology**
- ▲ **Mammography**
- ▲ **Magnetic Resonance Imaging**
- ▲ **Quality Management**
- ▲ **Ultrasound**
 - General Ultrasound
 - Echocardiography
 - Vascular Ultrasound

***Also Available: Short-Term Training
and On-Site Consulting***

See us on the web at: **www.AHECOnline.com**
or call us at: **1-800-342-6704**

Advanced Health Education Center • 8502 Tybor Drive • Houston, TX 77074

Australia	Australian Institute of Radiography 25 King Street Melbourne, Vic. Australia 3000 PO Box 16234 Collins St. West Melbourne, Vic., Australia 8007 Tel. +61 3 9419 3336 Fax +61 3 9416 0783 Email: info@air.asn.au Website: www.air.asn.au	Gerststraat 4, 8400 Roksem Email: Patrick.Suvee@hologic.be
<i>Council Member</i>	Chris Whennan Email: Chris.Whennan@health.wa.gov.au	
Austria	Verband DRTA Österreich, Corvinusring 20 2700, Wiener Neustadt, Austria Tel: + 43 699 1749 8367 Fax: +43 2622 321 2685 Email: office.rtaustria@gmx.at Website: www.rtaustria.at	
<i>Council Member</i>	Ms Karin Haller Email: isrrt.rtaustria@gmx.at	
Argentina	Argentine Society of Radiology Arenales 1985 PB Ciudad de Buenos Aires (C1124AAC) Argentina	
<i>Council Member</i>	Dr Alfredo Buzzi	
Bangladesh	Bangladesh Association of Radiology & Imaging Technologists (BARIT) President: SM Abdur Rabm Department of Radiology and Imaging Dhaka Medical College Hospital Dhaka 1207 Mobile: +8801721176300 Email: president@barit.org	
<i>Council Member</i>	Mr S.M Abdur Rab Mobile: +8801721176300 Email: president@barit.org Website: www.barit.org	
Barbados	Barbados Association of Radiographers c/o X-ray Dept, Queen Elizabeth Hospital Martinsdale Road, St. Michael, Barbados Tel: 246 426-5378 Fax: 246 429-5374 Email: info@imagingandtherapy.bb Web Site: www.imagingandtherapy.bb	
<i>Council Member</i>	Derlwyn Wilkinson Email: bar@imagingandtherapy.bb	
Belgium	Medical Radiological Technicians of Belgium, Avenue des Paquerettes, 23 B - 1410, Waterloo, Belgium Tel: 32 64 55 71 99 Fax: 32 64 55 71 99 Email: mrtb@skynet.be	
<i>Council Member</i>	Mr Eric Bertrand, Rue Provinciale 81, B-4042 Liers Email: Eric.bertrand@hologic.be	
Belgium	Vereniging Medisch Beeldvormers VMBV/Philippw Van Laer, Beukendref 96, 9080 Lochristi, Belgium Email: ymbv@mail.be	
<i>Council Member</i>	Mr Patrick Suvée	
Benin	Organisation Des professionnels En Imagerie Medicale Du Benin 02 BP 8125, Cotonou Tel: (229) 39 02 99 Mr Antoine Agbo 02 BP 8125, Cotonou Email: ag_antoine@yahoo.fr	
<i>Council Member</i>		
Bosnia & Herzogovina	The Association of Engineers of Medical Radiology in Federation of Bosnia and Herzegovina Udruzenje Inzinjera Medicinske Radiologije Federacije Bosne i Hercegovine	
Botswana	Radiological Society of Botswana PO Box 80789, Gaborone, Botswana Tel: (267) 585475 Fax: (267) 585475 Email Soc: xtina@mega.bw	
<i>Council Member</i>	Mrs Avis N. C.Bareki , address as Society Email: avis@it.bw	
Burkina Faso	Association Burkinabe du Personnel Paramedical d'Electro-Radiologie S/C CHNYO (Service de Radiologie) 03 BP 7022 Ouagadougou 03 Tel: 226 33 37 14 & 31 59 90/91 Poste 506 & 590 Email: abpper@bf.refer.org	
<i>Council Member</i>	Mr Landry Power Kabore address as Society Email: kaboreissaka@yahoo.fr	
Cameroun	Association Camerounaise du Personnel Technique d'Electroradiologie Médicale Acptimr BP 4856, Douala, Cameroon Tel: 237 2236218 Fax: 237 2222086 Email: acptimr@yahoo.fr Website: www.acptimr.org	
<i>Council Member</i>	Mrs Gale Tientcheu Email: galetien@yahoo.fr	
Canada	Canadian Association of Medical Radiation Technologists, 10th Floor, 85, rue Albert Street Ottawa, ON K1P 6A4 Tel: 613 234-0012 Fax: 613 234-1097 Email: fcouillard@camrt.ca Website: www.camrt.ca	
<i>Council Member</i>	Ms Marcia Smoke Email: Marcia.Smoke@jcc.hhsc.ca	
Croatia	Croatian Association of Engineers of Medical Radiology, Mlinarska 38, 10000 Zagreb Tel: 00 385 1 4669771 Fax: 00385 1 4669772 Email Soc: vladimir@bahun.com	

<i>Council Member</i>	Website: www.hdimr.hr Mr Nenad Vodopija Vlascika 15, 10000 Zagreb Email: Nenad.vodopija@vmskola.hr nenad@hdimr.hr	<i>Council Member</i>	Esayas Tiruneh
Cyprus	Cyprus Society of Registered Radiologic Technologists & Radiation Therapy Technologists 215 Old Road Nicosia-Limassol 2029, Strovolos, Nicosia, Cyprus Tel: 357 99 646410 / 357 22 604105 www.aktinografia.com.cy / www.psetaa.com Email: psetaa.cy@hotmail.com / psetaa.cy@gmail.com	<i>Council Member</i>	Fiji Fiji Society of Radiographers P.O. Box 4307, Samabula, Suva, Fiji Islands Tel: 679 3215548 Email: jsalabuco@govnet.gov.fj Mr Jone Salabuco address as Society Email: jsalabuco@govnet.gov.fj
<i>Council Member</i>	Mr Thasos Athanasiou, address as Society Email: kalaidjis@logos.cy.net	<i>Council Member</i>	Finland The Society of Radiographers in Finland PO Box 140, 00060 Tehy, Finland Tel: 358 9 54227 521 Fax: 358 9 61500 267 Email: tomisto@sorf.fi Website: www.sorf.fi Tiina Nousiainen, Email: tiina.nousiainen@suomenrontgenhoitajaliitto.fi
Czech Republic	Czech Radiographers Society Sekretariat SRLA CR, Na Zlate Stoce 14 370 05 Ceske Budejovice, Czech Republic Email: info@srla.cz Website: www.srla.cz	<i>Council Member</i>	France Association Francaise du Personnel Paramedic d'Electroradiologie 47 Avenue de Verdier, 92120 Montrouge Tel: 33-1-49-121320 Fax 33-1-49-121325 Email: webmaster@afppe.com Website: www.afppe.com Agnès Antoine Cadre Supérieur du Pôle MTTC Hôpital de Lagny Lagny-Marne la Vallée Paris France 01 64 30 74 85 Email: aantoine@ch-lagny77.fr
<i>Council Member</i>	Mr Cestmir David address as society Email: cestmir.david@medicon.cz	<i>Council Member</i>	Gabon Association du Personnel Paramedical d'Electroradiologie du Gabonais BP 13326 Libreville Mr Apollinaire Mberagana, address as Society Email: samuelrokossa@yahoo.fr
Denmark	Foreningen af Radiografer i Danmark H. C. Orstedes Vej 70, 2. tv. DK 1879 Frederiksberg C Tel: 45 3537 4339 Fax: 45 3537 4342 Email: frd@radiograf.dk Website: www.radiograf.dk	<i>Council Member</i>	The Gambia The Gambia Association of Radiographers and Radiographic Technicians c/o X-Ray Department, Royal Victoria Hospital Banjul, The Gambia Mr Abdou Colley, address as Society
<i>Council Member</i>	Ms Charlotte Graungaard Bech, Dragebakken 289, 5250 Odense SV Email: charlotte@radiograf.dk	<i>Council Member</i>	Germany Dachverband für Technologen/-innen und Analytiker/-innen in der Medizin Deutschland e.V. Spaldingstrasse 110 B, D-20097 Hamburg, Tel: 0049 40 2351170 Fax: 0049 40 233373 Email: info@dvta.de Website: www.dvta.de Susanne Huber Email: susanne.huber@dvta.de
El Salvador	Asociación Salvadoreña de Técnicos en Radiología e Imágenes Diagnósticas 6a calle poniente y 6a ave. sur reparto 6a calle, 3-8 bis #4, Santa Tecla Email: oc.astrid_es_rad@yahoo.com.mx Mrs Elizabeth Ventura, address as Society Email: oc.astrid_es_rad@yahoo.com.mx	<i>Council Member</i>	Ghana Ghana Society of Radiographers PO Box a602, Korle-Bu Teaching Hospital, Accra Tel: 685488 Email: info.ghsor@gmail.com or info@ghsor.org Mr Steven Boateng, address as society Email: stboateng2000@yahoo.com
Estonia	Estonian Society of Radiographers Sillutise 6, Pärnu 80010 Tel: 372 44 7312 Fax: 372 44 73 102 Website: www.eroy.ee Ms Piret Vahtramäe Sillutise 6, Pärnu 80010, Estonia Email: piretva@ph.ee	<i>Council Member</i>	
Ethiopia	Ethiopian Radiographers and Radiologic Technologists Association Churchill Street, Addis Ababa, Ethiopia Inside ERP, Office number 303 PO Box 20486 Code 1000, Addis Ababa Tel: +251913013983/+251925917753 Email: errta2006@gmail.com	<i>Council Member</i>	

Greece	The Panhellenic Society of Radiotechnologists, 85-87 Aristomenous Str, 2nd Floor Athens 104 46 Tel/Fax: 30 2 105 228081; Email: egadakos@gmail.com Website: www.aktinotechnologia.gr	India	Indian Association of Radiological Technologists, Department of Radiodiagnosis & Imaging PGIMER, Chandigarh 160012, India Tel: 91 172 27476389 Fax: 91 172 2745768 Email: iatindia@yahoo.co.in Website: www.iart.org.in
<i>Council Member:</i>	Euthimios Agadakos Miriofitoy 59 Egaleo 12242, Athens, Greece Mob: 30 6 97657467 Ph (BH): 30 2 107456482 Ph (AH): 30 2 105989797 Email: egadakos@gmail.com	<i>Council Member</i>	Dr S.C. Bansal No. 388, Sector 38A, Chandigarh 160014, India Email: scbansal38@gmail.com
Guyana	Guyana Association of Medical Imaging Practitioners The Senior Radiographer's Office Georgetown Public Hospital Corporation New Market Street, N/C Burge Georgetown, Guyana	Indonesia	Radiografer Indonesia (PARI) Indonesian Society of Radiographers Daerah Jawa Tengah Akta Notaris No. 36 Tanggal 19 Maret 2008 Tel: +62 24 7471258 Email: pari-jateng@hotmail.com Website: http://pari-jateng.com
Hong Kong	Hong Kong Radiological Technicians Association, PO Box 73549 Kowloon Central Post Office Kowloon, Hong Kong Tel: 852 3517 5451 Fax: 852 3517 5199 Email: hkrtal965@yahoo.com Website: www.hkrtal.50g.com Mr Apollo Wong, The Department of Radiology, Kwong Wah Hospital, 25 Waterloo Road, Kowloon Email: wongpl@ha.org.hk	Ireland	Irish Institute of Radiography and Radiation Therapy (IIRRT) 28 Millbrook Court, Kilmainham, Dublin 8 Tel (m): +353 87 1313795 Fax: +353 1 6790433 Email: info@iirrt.ie Website: www.iirrt.ie
Hong Kong	Hong Kong Radiographers Association Dept. of Radiology, Tuen Mun Hospital, Tuen Mun, NT Tel: 852 22911161 Fax: 852 25747557 Email: info@hkra.org.hk Website: hkra.org.hk	<i>Council Member</i>	Shane Foley Email: shane.foley@ucd.ie
<i>Council Member</i>	Mr Edward Chan Email: chairman@hkra.org.hk	Italy	AITRI – Associazione Italiana Tecnici di Radiologia Interventistica via della Commenda 28, 20122 Milano, Italia Tel: +39 340 2773464 Email: info@aitri.it Certificated mail: aitri@pec.it Website: www.aitri.it
Hungary	Society of Hungarian Radiographers National Health Institute Department of Radiology 1135 Budapest, Szabolcs u. 33 - 35. Tel: 06 1 350 4764 Fax: 06 1 350 4765 Email: hungarian_radiographers@yahoo.com Website: www.mrae.hu	<i>Council Member</i>	Diego Catania, Presidente AITRI Email: cataniadiago@hotmail.com
<i>Council Member</i>	Ms Katalin Lukovich Email: klukovich@ogyik.hu	Ivory Coast	Association Nationale des Techniciens d'Imagerie Médicale de Côte d'Ivoire 21 BP 854 Abidjan 21 Email: antim_civ@yahoo.fr
Iceland	Icelandic Society of Radiographers Felag Geislafræðinga, Borgartúni 6, 105, Reykjavík, Iceland Tel: +354 595 5186; Fax: +354 595 5101 Email: geislar@bhm.is Website: www.sigl.is	<i>Council Member</i>	Position vacant
<i>Council Member</i>	Mrs Katrin Sigurdardottir, address as Society Email: katrinsig2@simnet.is	Jamaica	Society of Radiographers (Jamaica) PO Box 38, Kingston 6 Tel: 809 977 2388 Fax: 809 977 2388 Email: societyofradiographers@yahoo.com
		<i>Council Member</i>	Ms Carlene Rankine
		Japan	Japan Association of Radiological Technologists 31st Floor, World Trade Center Bldg. 2-4-1 Hamamatsu-cho Minato-ku, Tokyo 105-6131 Tel: 3-5405-3612 Fax: 3-5405-3613 Email: kimura@jart.or.jp Website: www.jart.jp
		<i>Council Member</i>	Dr Yasuo Nakazawa, address as Society Email: y_nakazawa@jart.or.jp

Kenya	Kenya Association of Radiographers Golf Course Commercial Centre Off Mbagath Way, Kenyatta Market Nairobi. 1st Floor Room 1.14 Tel: +254 272 0607, +254 272 0607 M: +254 724 319582 / +254 726 160562 Email: kenyaradiographers@yahoo.com	Tel: 03-2906674 Fax: 03-2989845 Email: ms_radiographer@yahoo.com www.groups.yahoo.com/group/ms_radiographers
<i>Council Member</i>	Mr Charles Omondi PO Box 90231 Mombasa Kenya Tel: +254 725848273/254 314201 Ext. 3219 Email: comok2004@yahoo.com	Ms Chan Lai Kuan address as society Email: clkmsr2011@yahoo.com
Korea	Korean Radiological Technologist Association, 18, Mabang-ro 4-gil, Seocho-gu Seoul, 06778, Rep. of Korea Tel: 82 70 8797 7914; M: 82 10 3957 3175 Email: krta@krta.or.kr Website: www.krta.or.kr	
<i>Council Member</i>	Mr Youngmoon Lee address as Society	
Latvia	Latvian Society of Radiographers Institute of Radiology 13 Pilsonu Street, Riga, LV 1002 Latvia Tel: 371 714 4635 Fax: 371 714 4635 Email: nms@parks.lv	
<i>Council Member</i>	Ms Elita Rutka, address as society Email: elitaru@hotmail.com	
Lebanon	Lebanon Society of Radiographers The American University of Beirut-Medical Centre, School of Radiography PO Box 11-0236, Beirut 1107-2020 Tel: 01961 1 35000 ext: 5070 Email: moufidaassi@hotmail.com	
<i>Council Member</i>	Mr Moufid Abou Assi Email: moufidaassi@hotmail.com	
Macao	Macao Radiology Association PO Box No. 9013, Macau Email: mra@macau.ctm.net www.home.macao.ctm.net/~mra	
<i>Council Member</i>	Ms Cora Ng Email: coranks@gmail.com	
Macedonia	Macedonian Society of Radiological Technologists c/o Miroslav Kostadinov, Institut za Radiolgija Klinichki Centar Vodnjanska 17, 1000 Skopje, Macedonia Tel: 389 2 115069; Fax: 389 2 1 66974 Email: rentgen@vnet.com.mk Email: mariokostadinov@yahoo.co.uk	
<i>Council Member</i>	Mr Zdravko Damjanovski, 32 Victor Villas, Great Cambridge Road London N9 9VP, United Kingdom Email: zak@zdravko.freeserve.co.uk	
Malaysia	Malaysian Society of Radiographers c/o Department of Diagnostic Imaging Hospital Kuala Lumpur, 50586 Kuala Lumpur	
Malta	Society of Medical Radiographers 127, The Professional Centre, Sliema Road, Gzira, GZR 1633, Malta M: 00356 79326219 Email: srm.malta@gmail.com www.radiographersmalta.com	
<i>Council Members</i>	Ms Ivana Pace and Ms Daniella Zammit Email: srm.malta@gmail.com	
Mauritius	Mauritius Association of Radiographers 131c Murray Avenue, Quatre-Bornes Tel: 464-2790 Email: rboolkah@intnet.mu	
<i>Council Member</i>	Mr Dooshiant Jhboolall 41 Rue des Fauvelles, 92400 Courberioe, France	
Mexico	Federacion Mexicana de profesionales Tecnicos en Radiologia e Imagen, Asociaion Civil, Juan Badiano No. 21, Colonia Seccion XVI, Delegacion Tlapan, C.P. 14080 Tel: 52 55 73 29 11, Ext.1236 Fax: 52 55 73 09 94 Email: fmprimex@yahoo.com.mx Website: www.fmptri.org.mx	
<i>Council Member</i>	Mr Bernardo Santin Meza address as society	
Myanmar	MSMRT Radiology Department Asia Royal Hospital No.14, Baho Street, Sanchaung Township Yangon , Myanmar Email: msmrt2012@gmail.com or khinmgtin.radiationhealth@gmail.com Website: to be built	
<i>Council Member</i>	Khin Maung Tin Email: xray@asiaroyal.com.mm	
Nepal	Nepal Radiological Society PO Box 5634, Maharajgunj Kathmandu, Nepal Email: Soc: radiologynepal@hotmail.com General Secretary: Neyaj Ahmed Ganesh Bahadur Pokhare Email: g_pokharel@hotmail.com	
<i>Council Member</i>		
The Netherlands	Nederlandse Vereniging Medische Beeldvorming en Radiotherapie, Catharijnesingel 73, 3511 GM Utrecht Tel: 31-302318842 Fax: 31-302321362 Email: info@nvmbnr.nl Website: www.nvmbnr.nl	
<i>Council Member</i>	Ms Sija Geers, address as Society Email: s.geers@nvmbnr.nl	

New Zealand	New Zealand Institute of Medical Radiation Technology PO Box 16, Oakura, New Plymouth 4345, New Zealand Tel: 0646 752 7040 Fax: 0646 752 7040 Email: nzimrt@nzimrt.co.nz Website: www.nzimrt.co.nz	Datong District, Taipei 103, Taiwan Tel: 886 2 2550 5181 - 2 Fax: 886 2 2550 8402 Email: artroc@mail2000.com.tw service@twstr.org.tw Website: www.twstr.org.tw
<i>Council Member</i>	Ms Kathy Colgan Email: kathy.colgan@lakesdnhb.govt.nz Website: www.nzimrt.vo.nz	<i>Council Member:</i> Stenver Lin Email: jslin@ctust.edu.tw
Nigeria	The Association of Radiographers of Nigeria, 2-4 Taylor Drive, Medical Compound, P.M.B. 1068, Yaba, Lagos Tel: Sec: Elizabeth Balogun 01 017430682, 08023226160 Email: info@the-arn.com Website: www.the-arn.com	Republique Democratique Du Congo Conseil national Des Techniciens Radiologues Republic Democratique Du Congo B.P. 12.956, Kinshasa 1
<i>Council Member</i>	Dr Mark Chukudi Okeji Tel: +2348039472126, +2348084923707 Email: markokeji@yahoo.com	<i>Council Member</i> Mr Franck Bisumbula address as Society Email: franckbisumbula@yahoo.fr
Norway	The Norwegian Society of Radiographers Raadhugst 4, oppg.A, 0151 Oslo, Norway Tel: 47 23 10 04 70 Email: nrf@radiograf.no Website: www.radiograf.no	Republic of Singapore Singapore Society of Radiographers Ang Mo Kio Central Post Office PO Box 765, Singapore 915609 Email: ssrexco@mail.com Website: www.ssr.org.sg
<i>Council Member</i>	Mr Bent Ronny Mikalsen , address as society Email: bent.r.mikalsen@radiograf.no	<i>Council Member</i> position vacant
Peru	Asociación Peruana de Técnicos Radiólogos Av. Grau 383 Dpto., 603 Lima 1, Lima Tel: 427-0578	Senegal Association des Manipulateurs et Techniciens d'Imagerie du Senegal, BP 3270 Dakar
<i>Council Member</i>	Mr Magno F. Arias Jiménez Mz E-1 Lt.3 Ciudad del Pescador - Bellavista, Callao 2	<i>Council Member</i> Mr Amadou Tidjani Ball Email: amadoutidiane143@hotmail.com
The Philippines	Rm 5&6 Medical Arts Bldg. Martinez Memorial Hospital, 198 A.Mabini St., Caloocan City Tel: (02) 285 13 93 Email: part_inc@yahoo.com Website: www.part_inc.info/	Serbia The Society of Radiological Technicians and Nuclear Medicine Technicians of Serbia Pasterova 14 Street, Institute of Radiology and Oncology of Serbia, 11000 Belgrade Serbia Tel: 38 135 472347 Email: caca2@snet.yu Website: www.radteh.org.yu
<i>Council Member</i>	Mr Rolando Banares, Chief Radiologic Technologist Martinez Memorial Medical Centre 198A Mabini St, Caloocan City, The Philippines Email: part_inc@yahoo.com	<i>Council Member:</i> Ms Slavica Pavlovic Email: cacapavlovic@yahoo.com
Portugal	Associação Portuguesa dos Tecnicos de Radiologia Radioterapia e Medicina Nuclear, Av Miguel Bombarda, n.º36 - 9ºH, 1050 - 165, Lisboa Tel: 351 217 959 539 Fax: 351 217 959 592 Email: geral@atarp.pt Website: www.atarp.pt	Seychelles Seychelles Radiological Association c/o Radiology Section, Ministry of Health, P.O. Box 52, Victoria, Mahee
<i>Council Member:</i>	Dr Graciano Paulo Email: graciano@estescoimbra.pt	<i>Council Member</i> Mrs Sabina Panovska Email: sabinapanovska@yahoo.com
Republic of China	Taiwan Society of Radiological Technologists (TWSRT) Department of Radiology, 6F-1, No 35, Sec 2, Chongcing N. Rd,	Slovenia Slovenian Society of Radiological Engineers Društvo Radiloskih Inzenirjev Slovenije Zaloska cesta 7, S1-1000 Ljubljana Tel: 386 1 5431536; Fax: 386 1 5431 321 Email: ohanuna@onko-i.si Website: www.dri-drustvo.si
		<i>Council Member</i> Mr Dean Pekarovik Institute of Radiology, Clinical Center Zaloska cesta 7, S1-1000 Ljubljana Email: dean.pekarovik@kclj.si
		South Africa Society of Radiographers of South Africa Physical Address: Unit B44 Pinelands Business Park, New Mill Road Pinelands, South Africa 7405 PO Box 505 Howard Place, South Africa 7450

	<p>Tel: +27 21 531 1231 Fax: +27 21 531 1233 Email: sorsa.admin@iafrica.com Website: www.sorsa.org.za Hesta Friedrich-Nel Email: hfried@cut.ac.za</p>		
<i>Council Member</i>			
Spain	<p>Asociacion Española de Técnicos en Radiología, C/ Reyes Magos 18, Bajos Dcha, 28009 Madrid Tel: 00 34 91-552 99 00 - 3105 Fax: 00 34 91-433 55 04 Email: aetr.nacional@infonegocio.com Website: www.aetr.org</p>		
<i>Council Member:</i>	<p>Ms Marta Soto Garcia, address as Society Email: martasoto@inicia.es</p>		
Sri Lanka	<p>The Society of Radiological Technologists – Sri Lanka 16A Kurunduwatte, Mahabage, Ragama, Sri Lanka Website: srtsl.weebly.com Tel: +94 112957126</p>		
<i>Council Member</i>	<p>Mr VG Wimalasena School of Radiography, National Hospital of Sri Lanka, Colombo 10, Sri Lanka Email: vgwimalasena@gmail.com</p>		
Sweden	<p>Swedish Society of Radiographers, International Secretariat Email: international@swedrad.com Website: www.swedrad.se</p>		
<i>Council Member</i>	<p>Bodil Andersson Email: Bodil.Andersson@swedrad.se</p>		
Tanzania	<p>Tanzania Association of Radiographers (TARA) School of Radiography, Muhimbili National Hospital, PO Box 65005, Dar es Salaam, Tanzania Tel: 255-714-273 111</p>		
<i>Council Member</i>	<p>Mr Stephen Samson Mkoloma Ocean Road Cancer Institute (ORCI) PO Box 3592 Dar es Salaam, Tanzania Email: stephenmkoloma@hotmail.com</p>		
Thailand	<p>Society of Radiological Technologists of Thailand, Dept. of Radiological Technology Faculty of Medical Technology Siriraj Hospital, Bangkok 10700 Tel: 622 419 7173 Website: www.tsrt.or.th</p>		
<i>Council Member</i>	<p>Mr Sala Ubolchai Email: sala1950@hotmail.com</p>		
Togo	<p>Association Togolaise Des Techniciens De Radiologie et D'Imagerie Medicale S/CM AMIDOU Houdou, BP 30284, Lome Tel: (228) 25 25 91; Fax: (228) 25 25 91 Email: arrtim@yahoo.fr</p>		
<i>Council Member</i>	<p>Amidou Houdou TSRIM, Chu-Campus Service de Radiologie (Pavillon Scanner), BP 30284, Lome Email: houdou.amidou@syfed.tg.refr.org</p>		
		Trinidad and Tobago	<p>Society of Radiographers-Trinidad & Tobago, General Hospital, Radiology Department, Port of Spain Tel: 868-672-5136 Fax: 868-658-0225 Email: soradtt@yahoo.com</p>
		<i>Council Member</i>	<p>Mr Aleth Bruce Email: abruce66@yahoo.ca</p>
		Turkey	<p>Turkish Society of Medical Radiological Technologists, Department of Radiology Ankara University Sıhhiye-Ankara, Turkey Tel: :+905333010745 or +905325967282 Website: www.tmrtdr.org.tr Email: tmrtdr@hotmail.com</p>
		<i>Council Member:</i>	<p>Mrs Nezaket Ögür Email: nezaketozgur@yahoo.com</p>
		Uganda	<p>Uganda Radiographers Association School of Radiography, Mulago Hospital PO Box 7051, Kampala Tel: 256 041 530137</p>
		<i>Council Member</i>	<p>Kalende Rogers, address as Society</p>
		Ukraine	<p>Ukrainian Society of Radiographers and Radiological Technologists, Lamouosov Str. 33/43, Kiev 03022 Tel: 38044 213 0763/483-61-26 Fax: 380 44 258 9726 Email: babiy@aruk.kiev.ua</p>
		<i>Council Member</i>	<p>Dyemin Valentin Email: uarctmri@ukr.net</p>
		United Kingdom	<p>Society and College of Radiographers 207 Providence Square Mill Street, London SE1 2EW Tel: 44-207 740 7200 Fax: 44-207 740 7204 Email: info@sor.org Website: www.sor.org</p>
		<i>Council Member</i>	<p>Pam Black Email: PamB@sor.org</p>
		USA	<p>American Society of Radiologic Technologists 15000 Central Avenue SE, Albuquerque, New Mexico 87123-3917 Tel: 505-298-4500; Fax: 505-298-5063 Website: www.asrt.org</p>
		<i>Council Member</i>	<p>Donna Thaler Long Email: dlong2@iuhealth.org</p>
		Vietnam	<p>Ho Chi Minh City Association of Radiological Technologists – HART 201 Nguyen Chi Thanh, Ward 12, District 5, HCMC, Vietnam Tel: +84 8 39551352; +84 983 371 798 Email: Vietnam.art.2014@gmail.com</p>
		<i>Council Member</i>	<p>Mr Thai Van Loc Email: thaivanloc@hotmail.com Website: in the building process</p>



www.isrirt.org