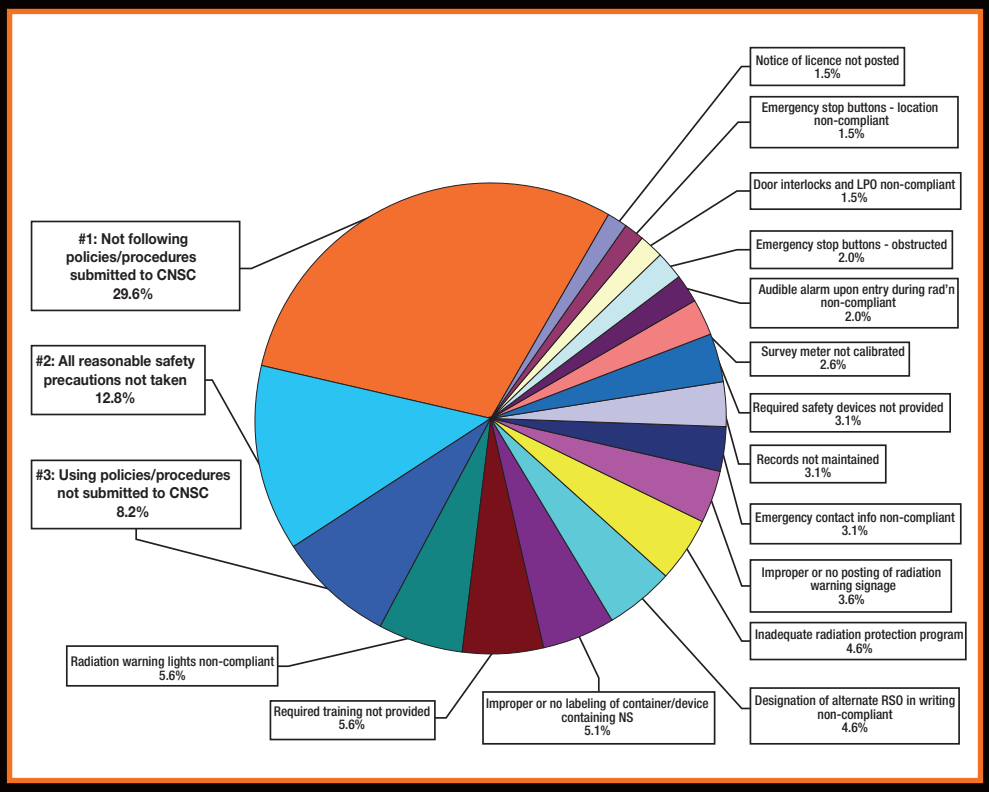
InterACTIONS

CANADIAN MEDICAL PHYSICS NEWSLETTER
Le BULLETIN CANADIEN de PHYSIQUE MÉDICALE



FREQUENCY OF NON-COMPLIANCE BY REGULATION FOUND DURING INSPECTION OF CLASS II FACILITIES

PUBLICATIONS MAIL AGREEMENT NO. 40049361

RETURN UNDELIVERABLE CANADIAN ADDRESSES TO:
COMP/CCPM Office
PO Box 72024
Kanato North RPO
OTTAWA, ON K2K 2P4
CANADA

COMP OCPM

A publication of the Canadian Organization of Medical Physicists and the Canadian College of Physicists in Medicine

http://www.medphys.ca

ISSN 1488-6839

THE CANADIAN COLLEGE OF PHYSICISTS IN MEDICINE
LE COLLÈGE CANADIEN DES PHYSICIENS EN MÉDECINE

60 (2) April/avril 2014

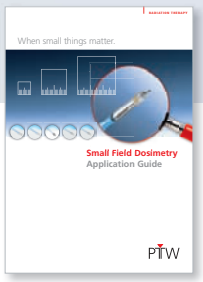
Nearly as good as water.

microDiamond

True Innovation

First commercially available synthetic single crystal diamond detector for clinical dosimetry

- Nearly water equivalent for all beam energies
- Extremely small sensitive volume (0.004 mm³), ideal for small field dosimetry
- One single detector for all field sizes up to 40 cm x 40 cm
- Precise, accurate measurements in photon and electron fields
- Minimal energy, temperature and directional dependence



More information on small field dosimetry? Contact your local PTW representative for a free copy of our application guide Small Field Dosimetry or download it from our website.

PTW

Knowing what responsibility means

WWW.PTWNY.COM USA | LATIN AMERICA | CHINA | ASIA PACIFIC | INDIA | UK | FRANCE | IBERIA | GERMANY

COMP OCPM
THE CANADIAN COLLEGE OF PHYSICISTS IN MEDICINE
LE COLLÈGE CANADIEN DES PHYSICIENS EN MÉDECINE

InterACTIONS

Volume 60, Number 2 – April/avril 2014

Contents

Cover Image

Plot provided by Mike Heimann (CNSC Inspector).

COMP BOARD

President:
Luc Beaulieu, PhD
CHUQ—Hôtel-Dieu de Québec
Québec, QC
Tel: (418) 525 4444 ext 15315
beaulieu@phy.ulaval.ca

Past President:
Peter McGhee, Ph.D., FCCPM
Thunder Bay Regional HS Centre
Thunder Bay, ON
Tel: (807) 684-7325
mcgheep@tbh.net

Vice President:
Marco Carlone PhD, MCCPM
Princess Margaret Hospital
Toronto, ON
Tel: (416) 946-4501 ext: 2409
marco.carlone@rmp.uhn.on.ca

Secretary:
Emilie Soisson, MCCPM
McGill University Health Centre
Montreal, QC
Tel: (514) 934-1934 ext. 44152
esoisson@mephys.mcgill.ca

Treasurer:
Crystal Angers, MSc, MCCPM
The Ottawa Hospital Cancer Centre
Ottawa, ON
Tel: (613) 737-7700 ext 70030
cangers@ottawahospital.on.ca

Directors:
Parminder Basran, Ph.D., FCCPM
BC Cancer Agency — Vancouver Island Centre
Victoria, BC
Tel: (250) 519-5624
pbasran@bccancer.bc.ca

Craig Beckett, MSc, FCCPM, dABR
Allan Blair Cancer Centre
Regina, SK
Tel: (306) 766-2682
craig.beckett@saskcancer.ca

Jean-Pierre Bissonnette, PhD, MCCPM, FCOMP
Princess Margaret Hospital
Toronto, ON
Tel: (416) 946-4501 ext 2151
jean-pierre.bissonnette@rmp.uhn.on.ca

Stephen Breen PhD, MCCPM
Princess Margaret Hospital
Toronto, ON
Tel: (416) 946-4501 ext 5421
stephen.breen@rmp.uhn.on.ca

Daniel Rickey, PhD, MCCPM
CancerCare Manitoba
Winnipeg, MB
Tel: (204) 787-1764
daniel.rickey@cancercare.mb.ca

CCPM BOARD

President:
Matthew G. Schmid, M.Sc., FCCPM
BC Cancer Agency — Southern Interior
Kelowna, BC
Tel: (250) 712-3917
mschmid@bccancer.bc.ca

Vice-President:
Clément Arsenault, PhD, FCCPM
Centre d'oncologie Dr. Léon-Richard
Moncton, NB
Tel: (506) 862-4151
clement.arsenault@vitalitenb.ca

Registrar:
Horacio Patrocinio, MSc, FCCPM
McGill University Health Centre
Montreal, QC
Tel: (514) 934-1934 ext. 45387
registrar@ccpm.ca

Chief Examiner:
Boyd McCurdy, Ph.D., FCCPM
CancerCare Manitoba
Winnipeg, MB
Tel: (204) 787-1966
chiefexaminer@ccpm.ca

Deputy Chief Examiner:
Renée Larouche, MSc, FCCPM
CHUM - Hôpital Notre-Dame
Montreal, QC
Tel: (514) 890-8000 ext 24860
deputyexaminer@ccpm.ca

Secretary-Treasurer:
Glenn Wells, PhD, FCCPM
Ottawa Heart Institute
Ottawa, ON
Tel: (613) 798-5555 ext 18175
gwells@ottawaheart.ca

General Board Members:
Wendy Smith, PhD, FCCPM
Tom Baker Cancer Centre
Calgary, AB
Tel: (403) 521-3422
wendy.smith@albertahealthservices.ca

Darcy Mason, MSc, FCCPM
Durham Regional Cancer Centre
Oshawa, ON
Tel: (905) 576-8711 ext 2816
damason@lakeridgehealth.on.ca

COMP/CCPM Office
P.O. Box 72024
Kanata North RPO
Ottawa, ON, K2K 2P4 Canada
Telephone:(613) 599-3491
Facsimile: (613) 435-7257
E-mail: admin@medphys.ca
Website: www.medphys.ca

The Canadian Medical Physics Newsletter, which is a publication of the Canadian Organization of Medical Physicists (COMP) and the Canadian College of Physicists in Medicine (CCPM) is published four times per year on 1 Jan., 1 April, 1 July, and 1 Oct. The deadline for submissions is one month before the publication date. Enquiries, story ideas, images, and article submissions can be made to:

Christopher Thomas, Ph.D., MCCPM
Nova Scotia Cancer Centre
Medical Physics Dept.
5820 University Avenue
Halifax, NS B3H 1V7
Email: chris.thomas@cdha.nshealth.ca
Phone: (902) 473-1302

Members of the Editorial Board include:
Idris Elbakri
Luc Beaulieu
Parminder Basran

Please submit stories MS Word or ASCII text format. Images in Tiff format at 300 dpi resolution are preferred.

ADVERTISING (both corporate and job)
Enquiries can be made to:
COMP/CCPM Office
P.O. Box 72024
Kanata North RPO
Ottawa, ON, K2K 2P4
Canada
Telephone:(613) 599-3491
Facsimile: (613) 435-7257
E-mail: admin@medphys.ca
Website: www.medphys.ca

Job Advertising Options

OPTION 1 ($240): Job posting on COMP/CCPM website only (active for 2 months)
OPTION 2 ($360): Job posting on COMP/CCPM website AND in InterACTIONS (single page)
OPTION 3 ($400): Job posting is immediately e-mailed to COMP/CCPM members (no website or InterACTIONS posting)

Message from the COMP President

This year marks two major milestones in the history of our community: the Annual Scientific Meeting (ASM) in Banff will be the 60th ASM and 2014 is the 25th anniversary of COMP. We should be proud of our continued commitment to scientific excellence, to our graduate students and residents and to promoting the highest standard of quality toward patient care. The medical physics community is extremely dynamic, involved and vibrant. You are allowed to (and should) use 2014 to promote the medical physics profession in your hospitals and make medical physics research endeavours (and its practical applications!) known at your university.

2014 est une année de célébration, une année pour promouvoir notre profession ainsi que nos activités de recherche (et leurs applications bien réelles) aussi bien dans nos hôpitaux que dans nos universités. En effet, cette année marque le 60e anniversaire de la réunion scientifique annuelle des physiciens médicaux et le 25e anniversaire de la création de officielle de l'OCPM. Notre communauté en est une dédié à la recherche de pointe, à la formation de la relève et donner des services cliniques de la plus haute qualité à la population canadienne. Durant les quatre dernières années au bureau de direction de l'OCPM, j'ai pu prendre toute la mesure du dynamisme et de l'implication de nos membres dans l'ensemble des missions de l'OCPM.

Over the years, COMP has changed and evolved. Imaging is now an important part of COMP activities. CAMRT, CAR and others are now asking COMP to take positions on subjects for which COMP is the competent partner. This is an opportunity for COMP to grow and better represent the breadth of activities of its members. We have been asked to be partners with other associations on joint activities, such as the imaging team (www.imagingteam.ca), and routinely participate in stakeholder meetings. However, with the profiling of the imaging team in the Toronto Star, we realized that COMP was one of the only associations with a logo that did not clearly indicate who we were; our name is not explicitly displayed.

In the wake of the Not-For-Profit Act, COMP has modernized its way of doing business with new bylaws and, soon, policies and procedures (mandatory with the new Act). At the same time, we are hard at work on a new website that will have a fresh and modern look, seamlessly integrate social media, and provide the needed advanced features for future development, e.g. online education services to our members and an accessible source of information for our partners and the public. We will be asking our members to provide comments with regard to establishing a fresh look for COMP for the next 25 years: a new logo, one that will better identify us and our profession.

Durant la dernière année, il nous est apparu évident au travers différentes activités, et en particulier lors de la publication d'un volet d'information provenant de l'Imaging Team dans le Toronto Star que l'OCPM avait un problème de reconnaissance vis-à-vis son logo. En parallèle, l'OCPM a déjà entreprit un vaste programme de modernisation d'une part de ses statuts et règlements et d'autre part de son site web. Nous pensons qu'il y a là une opportunité de rafraichir l'image de l'OCPM, en lui offrant pour son 25e anniversaire un tout nouveau logo. Vous serez donc contacté pour donner vos commentaires et suggestions sur de nouveaux designs de l'image de marque de l'OCPM. Au terme de l'exercice, l'aspect graphique adopté sera aussi utilisé par le nouveau site web de l'association.

In the previous issue of InterACTIONS, we discussed at length COMP efforts to have medical physicists with proper credentials (CCPM certification) to be recognized as radiation protection officers (RPO) under the Healing Arts Radiation

Luc Beaulieu

Protection Act (HARP). A group lead by Marco Carlone and Ting Lee, with the continued participation of Martin Yaffe, Gord Mawdsley, Craig Beckett, and myself, have recently obtained a letter of support from the Ontario Medical Association (OMA), completing the necessary support needed to petition the Ministry. In the meantime, COMP is looking for any sign, either of a positive reception of the request or as evocated in a meeting of COMP with the Ministry, the possibility that medical physicists will be asked as members of a Task Force charged to do a revision (and potentially a major re-writing) of HARP. The latter is a major endeavour, which will need a strong commitment from the Ontario medical physics community. COMP has already contacted the Ontario medical physicists to organize an information session. It is crucial to have the participation of as many Ontario medical physicists as possible. COMP, as a national organization, will continue to play an active role and further support provincial medical physicists. If you become aware of any major issue affecting medical physics practice, do not hesitate to contact COMP.

There are a few repeated requests made to COMP that we have been implementing in

continued on page 67

Message from the CCPM President

In my last column, I briefly mentioned the CCPM Mammography certification program. This is an important program of the CCPM, but it doesn't often get much attention outside of the mammography community. There are a few reasons why I thought this would be a good time to raise its profile a little.

This program was established in response to a need to provide a recognized certification program for those persons involved in the physics component of the accreditation requirements for mammography facilities.

The mammography certification program is run by the Committee on Physics of Mammography Certification (CPMC). This committee, which reports to the Board of the CCPM, is responsible for all aspects of the mammography certification program, including setting and administering the certification exam, recertification, and revocation of certification. The committee is made up of a number of experienced physicists who are certified in the physics of mammography.

The mammography certification program is fundamentally different from the CCPM membership certification in that persons obtaining certification in mammography do not become members of the College. There are currently 31 people who hold CCPM Mammography Certification. A little more than one third of the persons certified in mammography physics are also members of the College.

For many years, Health Canada's Canadian Mammography Quality Guidelines have explicitly stated that medical physicists conducting surveys of mammography facilities must "be accredited in medical physics of mammography by the Canadian College of Physicists in Medicine (CCPM) or its equivalent, or any relevant provincial/territorial licence."

Health Canada has recently released a new safety code pertaining to mammography. This document is titled "Radiation Protection and Quality Standards in Mammography" and is referred to as Safety Code 36. This safety code applies to persons employed in Federal Public Service departments.

This safety code states "All medical physicists conducting surveys of mammography facilities and providing oversight of the facility quality assurance program must meet the following requirements: (a) possess qualifications required by any relevant federal and provincial/territorial statutes and regulations; and (b) be certified in Physics of Mammography by the Canadian College of Physicists in Medicine (CCPM) and be registered with the provincial regulatory body for medical physicists such as the Association des physiciens et ingénieurs biomédicaux du Québec, if applicable."

The document further describes the requirements for certification by the CCPM as well as the requirements that must be met to maintain CCPM certification. The document also provides a long list of the responsibilities of medical physicists at mammography installations.

In order to be eligible for certification in mammography, candidates must possess at least a Bachelor's degree in physics or a related field. They must also possess at least a year of experience in surveying medical imaging systems and have carried out a number of surveys under the supervision of a mammography certified physicist. If they meet the eligibility requirements, they are then allowed to sit the exam, which is an oral exam administered by members of the CPMC. Like all CCPM exam fees, the fee for this exam is set so as to be cost neutral to the CCPM.

The CPMC is currently chaired by Gord Mawdsley and is made up of the following members: Gord Mawdsley (chair), Dr. Rasika Rajapakshe (past chair), Michelle Cottreau, Alain Gauvin, Dr. Idris Elbakri,

Matthew G. Schmid

and Brent Long. I would like to take this opportunity to thank the committee members for their time and effort. I would especially like to thank Dr. Rajapakshe for the tremendous effort he has put in as chair of the committee over the past seven years, and Alain Gauvin, who chaired the committee for a number of years previous to that. Of course, I would also like to thank Gord Mawdsley for recently taking on this important role. It is hard to overstate the amount of effort that the committee members put in to keep the certification program running. The hard work of the committee over the past many years has led to a well-established and respected certification program. The committee is now involved in updating the mammography section of the regulations of the College to align them with the new CCPM bylaws. This work, along with the routine business of certifying new applicants, which has seen a relative increase in the past couple of years, will keep the committee busy for some time.

In other business, the Board has been dealing with a request from CAMPEP to consider the eligibility of graduates of programs accredited by the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) for certification by

continued on page 58

Executive Director Report

Even though the winter has seemed very long this year, there is so much happening with COMP that time is still passing far too quickly! 2014 has started off with a bang with COMP and CCPM Board meetings and a very successful Winter School at the historic Fairmont Chateau Frontenac in Quebec City. Congratulations to Beibei Zhang, Chair of the Winter School planning committee, who not only lead a very successful program which included some new speakers and fresh content, she did so while 8 months pregnant – quite an accomplishment! Thank you to the planning committee and also to our very supportive Winter School sponsors: Varian Medical Systems, Elekta, and the Canadian Nuclear Safety Commission. We are already looking forward to the 2015 program and are very pleased that John Kildea has agreed to take on the challenge of leading the planning committee.

Planning for the 2014 ASM is well underway. The theme of the meeting: Mountain Air, Fresh Ideas is perfect for both the spectacular location of Banff, Alberta and the efforts being made to build on the successes of past meetings while keeping it fresh. We have a new and expanded planning committee this year with members from across the country. We are also pleased to include Michael Balderson, Chair of the COMP Student Council on the team. This is a meeting you won't want to miss so register today and get the early bird rate!

As you are aware, COMP is very supportive of graduate students and as a result has an active and engaged Student Council. Not only will COMP continue its tradition of offering students subsidized registration fees for the ASM, the Board has also decided to continue offering Student Travel Awards. Six $500.00 awards will be granted to student members who are COMP members in good standing and are the first author on an abstract that has been accepted for presentation at the ASM. Winners will be selected by a random draw of those who are eligible.

We are working with a web design company to develop new websites for COMP and CCPM. This is an exciting and much needed project, and we are looking for your help to ensure that the design is reflective of the medical physics community. The Communications Committee is looking for fresh images for display on our new website - images of medical physicists working in the field, collaborating with clinical or research staff, manipulating instrumentation, or in teaching or administrative activities. We are also interested in unique and interesting images of your research, equipment, or special procedures.

At its recent meeting in Quebec City, the Board reviewed the strategic priorities it agreed upon in 2012 to ensure that they were still relevant. This was a very useful exercise because as our profile is increasing we are being invited to participate in and support many more new initiatives. We

Ms Nancy Barrett

can look to the priorities as a guide for decision-making to ensure that time and resources are being allocated to activities that are in line with our priorities and are best for the medical physics profession.

Serving on the Board is a great opportunity to contribute to your profession, share your ideas, and develop new skills. There will be four openings on the Board for terms that will commence at the July AGM. If you are interested in volunteering or would like more information, please feel free to contact me.

Gisele and I consider it a privilege to work with such high-quality volunteers who are dedicated to the success of COMP and CCPM and seem to enjoy themselves in the process. Thank you for all of your support - happy spring!

COMP and CCPM Boards make History in the historic Rose Room of the Fairmont Chateau Frontenac

The COMP and CCPM Boards had the good fortune of holding their recent Board meetings in the historic Rose Room at the Fairmont Chateau Frontenac. Formerly a Tea Room, the Rose Room served for several meetings during the Second World War's Quebec Conferences in 1943 and 1944. William Lyon Mackenzie King, Prime Minister of Canada, played host to these historic meetings, welcoming the British Prime Minister, Sir Winston Churchill, and US President Franklin D. Roosevelt. In addition to being a lovely, spacious room overlooking the St. Lawrence River, the room made the Board meetings seem a little more special because we all knew that we were in a space where important discussions and decisions happened.

While it may not have an impact on national security, COMP and CCPM also made history recently by signing an agreement which clearly defines how the two groups will work together and share resources. Over the past many years, the various Boards of both organizations, starting with the Trinity Accord, have worked to clarify the relationship and in doing so laid the foundation for the current agreement which was unanimously adopted by the current Board of both organizations. To celebrate this accomplishment and in the spirit of the Rose Room, COMP President, Luc Beaulieu, and CCPM President, Matt Schmid, took part in a ceremonial signing of the "Rose Accord".

COMP President, Luc Beaulieu, and CCPM President, Matt Schmid, sign the "Rose Accord".

THE CANADIAN COLLEGE OF PHYSICISTS IN MEDICINE

LE COLLÈGE CANADIEN DES PHYSICIENS EN MÉDECINE

Questions, questions, looking for CCPM questions

Renée Larouche

Deputy Examiner CCPM

The CCPM is requesting help from the membership in expanding our bank of multiple-choice questions for Part I (general) and Part II (Radiation Safety for Radiation Oncology, Diagnostic Radiological Imaging and Nuclear Medicine Imaging specialty, or Magnetic Resonance Imaging Safety for the Magnetic Resonance Imaging specialty) of the membership exam. In recognition for your efforts, three credits that can be applied to maintaining your CCPM certification will be granted when 10 or more questions are submitted.

If you are willing to help, please contact me at deputyexaminer@ccpm.ca and I will send you a question-writing guide. Deadline to submit 10 or more questions is Friday September 26th 2014.

Questions, questions, cherchons questions pour le CCPM

Renée Larouche

Examinatrice principale adjointe du CCPM

Le CCPM demande l'aide de ces membres afin d'augmenter le nombre de questions à choix multiples pour les parties I (générale) et II (Radioprotection pour les spécialités de radio-oncologie, imagerie radiodiagnostique et imagerie en médecine nucléaire; et sécurité en matière d'imagerie par résonance magnétique pour la spécialité d'imagerie par résonance magnétique) de l'examen d'adhésion des membres du CCPM. En reconnaissance de vos efforts, 3 crédits sont alloués afin de maintenir votre certification au CCPM lorsque 10 questions ou plus sont soumises.

Si vous êtes prêts à nous aider, veuillez communiquer avec moi au deputyexaminer@ccpm.ca et je vous ferai parvenir un guide sur l'écriture des questions. La date limite pour soumettre 10 questions ou plus est le vendredi 26 septembre 2014.

CNSC Feedback Forum

The Most Common Non-Compliances Found During Inspection of Class II Facilities

Mike Heimann
CNSC Inspector

As a CNSC inspector traveling to various cancer treatment centres across Canada, one of the questions I hear most often from licensees is "Isn't it difficult living in Ottawa with all those politicians running around?" Another common question I hear is "Are the inspection findings at my centre typical of others you've inspected?"

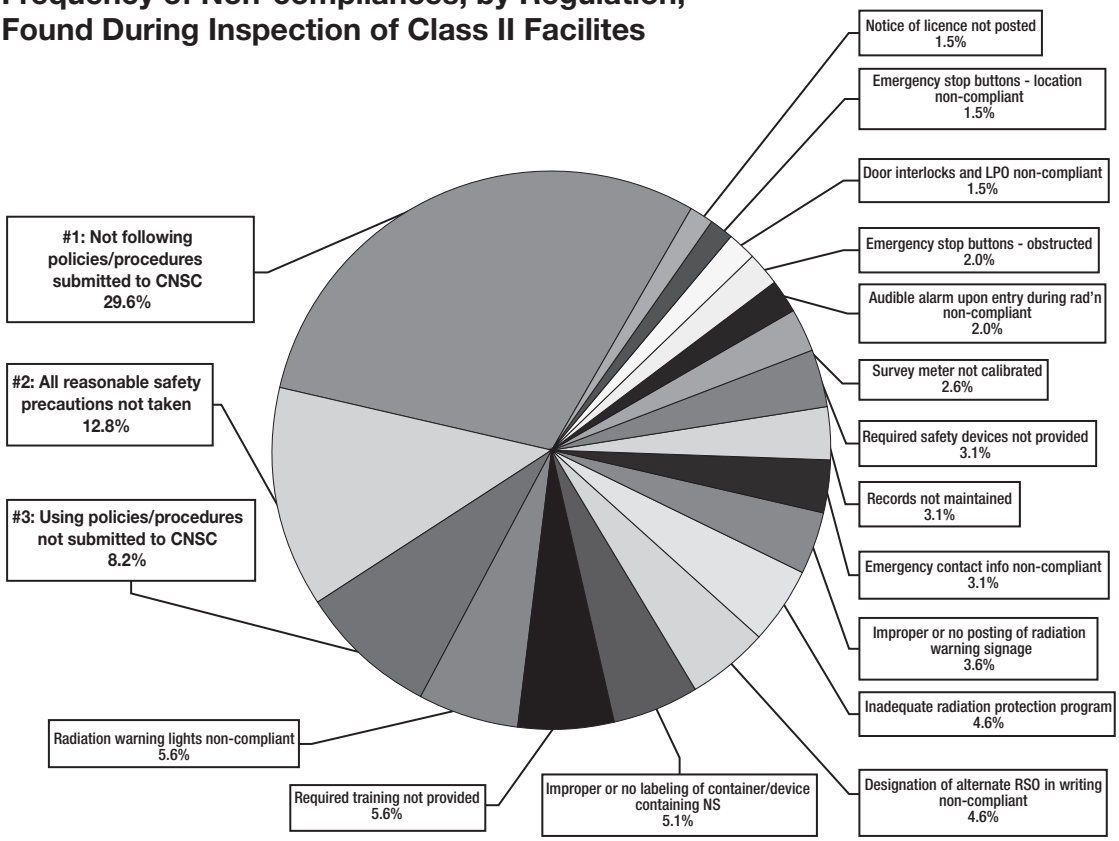
While the first question is quite easy to answer, the second can be extremely difficult. Being a physicist, I hate trying to define abstract things like "typical". So instead, I asked our student, Ms. Nivedita Menon, to look through a bunch of inspection reports to gather data with the end goal of perhaps being able to define the most common non-compliances. This won't necessarily show if your program is "typical", but perhaps it will let you know if you are facing the same challenges as your colleagues. If nothing else, it may give you some hints on where to focus any internal review of your radiation protection program. It IS giving us hints on where to focus our regulatory enforcement program. Hint hint.

As well as being a physicist, I'm also an inspector. So did I look at every single inspection report ever generated by the Accelerators and Class II Facilities Division? Of course not. I took a representative sample, and looked at that instead.

Here are some parameters of the sample set:

- Only inspection reports generated between January 2011 and December 2013 were included.
- Results from Class IB facilities (such as TRIUMF, etc) were not included.
- Recommendations issued as a result of the inspection were not included.
- Only the most common non-compliances are listed. The threshold is a frequency of 1.5% during the study period.
- A total of 274 unique non-compliances makes up the original data set. A total of 78 did not meet the frequency threshold, meaning the total number of non-compliances represented in the chart is 196.

Frequency of Non-compliances, by Regulation, Found During Inspection of Class II Facilites



Regulatory Reference	Regulation	Frequency (%)
LC 2917	Not following policies/procedures submitted to CNSC	29.6
GN 12(1)(c)	All reasonable safety precautions not taken	12.8
LC 2920	Using policies/procedures not submitted to CNSC	8.2
CII 15(05)	Radiation warning lights non-compliant	5.6
GN 12(1)(b)	Required training not provided	5.6
RP 20(1)	Improper or no labeling of container/device containing NS	5.1
RP 4	Inadequate radiation protection program	4.6
CII 15.1	Designation of alternate RSO in writing non-compliant	4.6
RP 21	Improper or no posting of radiation warning signage	3.6
GN 12(1)(d)	Required safety devices not provided	3.1
CII 21(2)	Records not maintained	3.1
CII 15(11)	Emergency contact info non-compliant	3.1
CII 18(1)	Survey meter not calibrated	2.6
CII 15(09)	Emergency stop buttons - obstructed	2.0
CII 15(06)(b)	Audible alarm upon entry during rad'n non-compliant	2.0
GN 14(1)	Notice of licence not posted	1.5
CII 15(08)	Emergency stop buttons - location non-compliant	1.5
CII 15(02)	Door interlocks or LPO non-compliant	1.5

NOTE: LC = Licence Condition / GN = General Nuclear Safety and Control Regulations / CII = Class II Nuclear Facility and Prescribed Equipment Regulations / RP = Radiation Protection Regulations

Now, to the layperson, the life of a CNSC inspector may seem like all caviar and champagne (or is that fish-sticks and beer?), but the truth is, there is a lot of paperwork, much of which is generated during our inspections. This is part of the reason I always prefer to give licensees as much help as I can before going on inspection – less paperwork for me afterwards. Of course, there are also the added benefits of having licensees that are operating as safe as reasonably achievable, social and economic factors being taken into account.

In order to facilitate my paperwork reduction strategy (as well as the safety aspect), I will do my best to describe each of the top three non-compliances, and give you some hints on how they can be avoided. For more information on all the non-compliances in the chart, and for a chance to meet the author, please visit the CNSC booth and posters at the COMP AGM this summer in Banff.

Types of non-compliances

Before starting, I should just give a quick explainer on the main types of non-compliances. Basically, there are two: the first is a non-compliance with a regulation; this will usually result in a Directive being issued to the licensee. The second type is a non-compliance with one of your licence conditions (which are always listed in Section V of your licence, usually on the first page); this will usually result in the issuance of an Action Notice. In both cases, corrective action by the licensee to address the issue is mandatory. People sometimes ask me what the difference is between a directive and an action notice, and I usually say that directives and action notices are like gamma rays and x-rays… they are both essentially the same, they just come from different places.

1. LC-2917: Not following policies/procedures submitted to the CNSC (29.6%)

This is by far the most common non-compliance we observe during our inspections. One of the main questions inspectors ask themselves during an inspection is "Is the licensee doing what they told us they were going to do?" If the answer at any time is "no", then chances are the licensee will be in violation of Licence Condition (LC) 2917.

Regulatory reference:

LC-2917 states that *"Subject to any other condition of this licence and unless otherwise permitted by the prior written approval of the Commission or a person authorized by the Commission, the licensee shall carry out the licensed activities in accordance with the documents or parts thereof referred to in the Appendix: Licence Document(s)."*

Our inspection expectation:

Follow your own policies and procedures, which you submitted to the CNSC. Remember that any document referenced in the Appendix of Licence Documents in your licence becomes part of the licence, and LC-2917 essentially makes adhering to those documents mandatory.

Examples of common non-compliances:

- During observation of morning QA, the person performing the QA either skipped a step, or did not perform it according to the procedure. This often happens when personnel performing the procedure find a "better way" to do it, or a way that they find works better for them.
- During review of records, it was found that minutes for Radiation Safety Committee meetings only exist for three meetings over the past four years, even though the terms of reference state that a meeting will be held quarterly.
- Additional shielding, which was supposed to be added to a facility during construction or renovation, was not in fact added.

How to avoid being in non-compliance

Licensees are often very surprised to hear that we've found examples of their own policies and procedures not being followed by staff. The best way to avoid this is to have periodic self-audits. Pick a procedure from the Appendix of Licence Documents on your licence that is in common use (e.g. daily QA procedures), and follow through the procedure while the person who usually does the test is performing it. It may also be worthwhile to poll staff during regular meetings as to whether they feel the procedures they use are working for them, or if they have suggestions for improvement or streamlining.

2. GN-12(1)(c): All reasonable safety precautions not taken (12.8%)

The frequency of non-compliance with this regulation is high because it is typically used by inspectors as a "catch-all" regulation, i.e. when we notice someone doing something unsafe, but for which there is no specific regulation, then Section 12(1)(c) of the General Nuclear Safety and Control Regulations usually comes into play. Additionally, it may be used in a case where a new situation or technology exists which is not addressed by any current regulation or licence condition.

Regulatory reference:

GN-12(1)(c) states that *"Every licensee shall take all reasonable precautions to protect the environment and the health and safety of persons and to maintain the security of nuclear facilities and of nuclear substances."*

Our inspection expectation:

Its difficult to come up with specific expectations for such a broad regulation, other than to say perhaps that we expect licensees to always do things in as safe a manner as possible, without cutting corners.

Examples of common non-compliances:

(I feel it necessary to say that for this regulation, it may not be accurate to call them "common")

- Safety systems required by the regulations are not tested on each day that the equipment is used.
- A licensee attempts to unpack a sealed source with no instructions from the manufacturer on how to open the specially-secured package, and resorts to banging it on the ground in the parking lot.
- An emergency stop button is located on the wall as part of a group of other buttons which look similar to the ESB and are not labelled to describe their function.

How to avoid being in non-compliance

Since there's no specific situation here to avoid, probably the best thing to do is ask yourself "Would I do this if there was a CNSC inspector standing here looking over my shoulder right now?" Common sense is key to avoiding non-compliance with this regulation.

3. LC-2920: Using policies/procedures not submitted to CNSC (8.6%)

Where LC-2917 asks the question "Are you doing what you told us you were going to do?", this LC may be summed up in the question "Are you doing something you didn't tell us about but should have?" Probably the single most common reason for this non-compliance is the use of procedures that are not the same (or the same revision) as those appearing in your Appendix of Licence Documents.

Regulatory reference:

LC-2920 states that *"The licensee shall report to the Commission or a person authorized by the Commission, as soon as is practicable, the discovery of any inaccuracy or incompleteness in the documents referred to in the Appendix: Licence Document(s)."*

Our inspection expectation:

Documents in use by the licensee must match those listed in the Appendix of Licence Documents. It is important to realize that this applies not only to policies and procedures, but also to engineering drawings submitted at the construction phase, which are typically referenced in the Appendix of Licence Documents. This means that not just changes to your documentation, but changes to your facility design, will also be captured by this licence condition.

Examples of common non-compliances:

- Daily QA procedures were updated and a new revision issued to staff, but the changes were never communicated to the CNSC for inclusion in the Appendix of Licence Documents.
- An emergency stop button (or other safety system) was relocated without informing the CNSC.
- Licensee personnel use unwritten "everyone just knows" procedures to complete a process required by the CNSC, but this process has never been formalized or submitted to the CNSC.

How to avoid being in non-compliance

The best bet is to periodically review the Appendix of Licence Documents on your licence, and ensure that everything is up to date and matches the reality of your operations. Most Class II licences have been updated to a new structure for the Appendix of Licence Documents, one which places documents that form the appendix into discrete "bins" or headings, allowing for easy identification. In most cases, the title given to the document by the licensee when it is submitted to the CNSC is used to refer to the document in the appendix, making it easier for licensees to recognize their own documents. The revision level, or revision date, is also listed directly in the appendix for easy comparison to the revision level of your own documents. If there's a document in your appendix which you absolutely cannot identify, feel free to contact your licensing officer and ask for a copy of the document – the CNSC document identifier is also printed in the appendix ("CNSC Document No. #######"), which will make it very easy for CNSC staff to find.

Summary

It may be considered telling that two of the top three non-compliances are related to documents and procedures. Many of our licensees are very busy, and often the paperwork that goes along with the job is one of the first tasks to fall through the cracks as people get on

continued on page 51

News from the Student Council in 2014

Jason R Crawford, Michael J Balderson, Sarah G Cuddy-Walsh, Olga M Dona, Emilie Gaudin, Nadia Octave

About the COMP Student Council: Since its formation in 2009, the COMP Student Council (SC) has provided an important bridge between COMP and medical physics students in Canada. As a sub-committee of the COMP Science and Education Committee (SEC), it is the SC's responsibility to:

- Assist COMP in attracting and retaining student members.
- Help develop high quality educational resources and training activities that will promote the highest standards of practice within the medical physics field.
- Bring issues of importance to student members to the attention of COMP through the SEC.
- Provide student input to the SEC on relevant issues relating to the undergraduate and graduate training of medical physicists by Canadian institutions.
- Promote and coordinate activities that are of value to COMP student members.
- Organize an annual student lunch as well as a student night out during the ASM.

Each year, the SC hosts a student-oriented meeting at the COMP ASM where experts in their field are invited to speak candidly with students about matters related to COMP and the profession of medical physics. The meeting also provides a consistent forum for students to raise matters of interest or concern. The SC is currently composed of two co-chairs (Jason Crawford and Michael Balderson) and four members (Nadia Octave, Sarah G. Cuddy-Walsh, Olga M Dona, and Emilie Gaudin).

SC co-chair nominations: New co-chairs will be elected by COMP student members during our general student assembly at this year's ASM, and this year's nominees are Olga M. Dona and Sarah G. Cuddy-Walsh. This year the nominees for chair will run unopposed. In accordance with the council's Terms of Reference, students can only be nominated for chair if they have been SC members for at least six months prior to the election, a condition met only by these nominees. For the last two years, Olga and Sarah have been dedicated and productive contributors to the student council by developing and promoting student-oriented programs and events. As these members take on their roles as co-chairs, we encourage more students to volunteer for the SC to keep our council fresh and to potentially become strong leaders for the SC moving forward.

Olga M. Dona is a PhD student at McMaster University. Her primary areas of research are magnetic resonance imaging, radiofrequency coils, and the effects of chemotherapy in the brain and sodium imaging of skin cancer. She completed her MSc in Medical Physics and Applied Radiation Sciences from McMaster University. Olga joined the Student Council in 2012 while attending the annual scientific meeting. She has been working as a volunteer organizing and advertising the student exchange program. She has contributed to the design of recent student surveys as well as organizing student activities for the 2013 CARO-COMP Scientific Meeting. Her main goal within this organization consists of building a bridge between the students and the medical physics departments to facilitate student access to residency and working positions.

Sarah G. Cuddy-Walsh is a PhD candidate in the Medical Physics program at Carleton University in Ottawa, Ontario. Her research at the University of Ottawa Heart Institute focuses on cardiac-dedicated imaging with SPECT. She has been a member of the Canadian Organization of Medical Physics since 2009 and volunteered for the Student Council during the 2012 COMP ASM in Halifax. For the past two years as a member of the SC, she has helped COMP to keep its student members informed, organized speakers for the student meeting at the ASM, and brought fresh ideas to the council. She hopes that in her time with the SC, she can identify and continue to advocate for issues near and dear to COMP student members' hearts. Sarah holds an MSc in Medical Biophysics from the University of Toronto (2011), and a BSc in Biophysics from the University of Guelph (2008). After completing her MSc, Sarah interned as a research physicist at the Thunder Bay Regional Research Institute in the field of detector development. Outside of academia, Sarah loves hiking with her husband and hound. She is also an avid cross-country skier, cyclist, and bookworm.

CITATION AWARD 2013

Submitted by Michael S. Patterson

Juravinski Cancer Centre and McMaster University, Hamilton, Ontario

Once upon a time I wrote an article for *InterACTIONS* (Vol. 50, pp. 29-32) in which I suggested that the ground rules for the Sylvia Fedoruk Award should be changed. I argued that it is laborious and inevitably subjective to try to identify the "best" paper published in our field each year. Many papers are never even considered because the range of journals in which medical physicists publish is so broad. I proposed a simple, objective solution that would recognize the paper published in a given year that was cited most often over the next ten years. My plea has been to no avail but, nevertheless, I have announced a winner in *InterACTIONS* for ten years. The rules (invented by this author) are simple and similar to those established for the Sylvia Fedoruk Award: the work must have been performed mainly at a Canadian institution, only papers in peer-reviewed journals are considered, review or popular articles are not eligible, and the paper must be "medical physics" – for example, articles dealing with clinical application of a mature imaging technology are not included, even if medical physicists are co-authors. The winner is determined from data in the Web of Science maintained by the Institute of Scientific Information (ISI) including citations from all databases.

For 2013, we had another very close race with the winner cited 194 times from publication until the end of 2013:

S. C. L. Deoni, B. K. Rutt and T. M. Peters, Rapid combined T-1 and T-2 mapping using gradient recalled acquisition in the steady state, Magnetic Resonance in Medicine 49: 515-526 (2003).

Abstract: A novel, fully 3D, high-resolution T-1 and T-2 relaxation time mapping method is presented. The method is based on steady state imaging with T-1 and T-2 information derived from either spoiling or fully refocusing the transverse magnetization following each excitation pulse. T-1 is extracted from a pair of spoiled gradient recalled echo (SPGR) images acquired at optimized flip angles. This T-1 information is combined with two refocused steady-state free precession (SSFP) images to determine T-2. T-1 and T-2 accuracy was evaluated against inversion recovery (IR) and spin-echo (SE) results, respectively. Error within the T-1 and T-2 maps, determined from both phantom and in vivo measurements, is approximately 7% for T-1 between 300 and 2000 ms and 7% for T-2 between 30 and 150 ms. The efficiency of the method, defined as the signal-to-noise ratio (SNR) of the final map per voxel volume per square root scan time, was evaluated against alternative mapping methods. With an efficiency of three times that of multipoint IR and three times that of multi-echo SE, our combined approach represents the most efficient of those examined. Acquisition time for a whole brain T-1 map (25 x 25 x 10 cm) is less than 8 min with 1 mm(3) isotropic voxels. An additional 7 min is required for an identically sized T-2 map and postprocessing time is less than 1 min on a 1 GHz Pill PC. The method therefore permits real-time clinical acquisition and display of whole brain T-1 and T-2 maps for the first time.

The runner-up from down the hall was cited 192 times from publication until the end of 2013:

D. A. Steinman, J. S. Milner, C. J. Norley, S. P. Lownie and D. W. Holdsworth, Image-based computational simulation of flow dynamics in a giant intracranial aneurysm, American Journal of Neuroradiology 24: 559-566 (2003).

Abstract:

BACKGROUND AND PURPOSE: Blood flow dynamics are thought to play an important role in the pathogenesis and treatment of intracranial aneurysms; however, hemodynamic quantities of interest are difficult to measure in vivo. This study shows that computational fluid dynamics (CFD) combined with computed rotational angiography can provide such hemodynamic information in a patient-specific and prospective manner.

METHODS: A 58-year-old woman presented with partial right IIIrd cranial nerve palsy due to a giant carotid-posterior communicating artery aneurysm that was subsequently coiled. Computed rotational angiography provided high resolution volumetric image data from which the lumen geometry was extracted. This and a representative flow rate waveform were provided as boundary conditions for finite element CFD simulation of the 3D pulsatile velocity field.

RESULTS: CFD analysis revealed high speed flow entering the aneurysm at the proximal and distal ends of the neck, promoting the formation of both persistent and transient vortices within the aneurysm sac. This produced dynamic patterns of elevated and oscillatory wall shear stresses distal to the neck and along the sidewalls of the aneurysm. These hemodynamic features were consistent with patterns of contrast agent wash-in during cine angiography and with the configuration of coil compaction observed at 6-month follow-up.

CONCLUSION: Anatomic realism of lumen geometry and flow pulsatility is essential for elucidating the patient-specific nature of aneurysm hemodynamics. Such image-based CFD analysis may be used to provide key hemodynamic information for prospective studies of aneurysm growth and rupture or to predict the response of an individual aneurysm to therapeutic options.

For the record, here are the winners from previous years:

Year of publication	Winner	Citations in 10 years	Current total
1994	R. M. Henkelman, G. J. Stanisz, J. K. Kim and M. J. Bronskill, Anisotropy of NMR properties of tissues, Magnetic Resonance in Medicine 32: 592-601.	129	250
1995	D. W. O. Rogers, B. A. Faddegon, G. X. Ding, C.-M. Ma, J. Wei and T. R. Mackie, BEAM: A Monte Carlo code to simulate radiotherapy treatment units, Medical Physics 22: 503-524.	310	813
1996	A. Kienle, L. Lilge, M. S. Patterson, R. Hibst, R. Steiner and B. C. Wilson, Spatially resolved absolute diffuse reflectance measurements for noninvasive determination of the optical scattering and absorption coefficients of biological tissue, Applied Optics 35: 2304-2314.	125	298
1997	J. S. Gati, R. S. Menon, K. Ugurbil and B. K. Rutt, Experimental determination of the BOLD field strength dependence in vessels and tissue, Magnetic Resonance in Medicine 38: 296 – 302.	196	303
1998 (Tie)	J. H. Siewerdsen, L. E. Antonuk, Y. El-Mohri, J. Yorkston, W. Huang and I. A. Cunningham, Signal, noise power spectrum, and detective quantum efficiency of indirect-detection flat-panel imagers for diagnostic radiology, Medical Physics 25: 614 – 628.	121	158
	A. Kienle, M. S. Patterson, N. Dognitz, R. Bays, G. Wagnieres and H. van den Bergh, Noninvasive determination of the optical properties of two-layered turbid media, Applied Optics 37: 779 – 791.	121	180
1999	D. H. Simpson, C. T. Chin and P. N. Burns, Pulse inversion Doppler: a new method for detecting nonlinear echoes from microbubble contrast agents, IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control 46: 372-382 (1999).	201	305
2000	I. Kawrakow, Accurate condensed history Monte Carlo simulation of electron transport. I. EGSnrc, the new EGS4 version, Medical Physics 27: 485-498.	333	455
2001	J. G. Sled and G. B. Pike, Quantitative imaging of magnetization transfer exchange and relaxation properties *in vivo* using MRI, Magnetic Resonance in Medicine 46: 923-931.	121	146
2002	M. Niedre, M. S. Patterson and B. C. Wilson, Direct near-infrared luminescence detection of singlet oxygen generated by photodynamic therapy in cells in vitro and tissues in vivo, Photochemistry and Photobiology 75: 382-391.	192	219

CNSC Feedback Forum

continued from page 49

with other important business, like treating cancer patients. Some may think that these administrative lapses are not as important as, say, green glowing goo dripping from the ceiling. The fact is though, that programs that start off by having these types of issues sometimes continue to degrade, and can easily spill over into other business and impact the safety culture of an organization.

More information

As mentioned earlier in the article, a broader and deeper analysis of the non-compliance data will be presented as a poster at the upcoming COMP AGM in Banff. As always, if you have any questions about licensing or compliance at the CNSC, please contact your licensing officer.

UTILIZE YOUR WEALTH OF KNOWLEDGE. UNLOCK A WEALTH OF POSSIBILITIES.

Introducing RapidPlan™ knowledge-based treatment planning.

Imagine a world where you can unlock the knowledge of your best plans to create the right plan. That's the power of RapidPlan. Innovative software that helps clinics leverage existing clinical knowledge to create quality plans—quickly and consistently. That means moving beyond templates to create fully customized plans to help you provide the best care for your patients.

Learn more about the benefits of RapidPlan at varian.com/RapidPlan

VARIAN
medical systems
A partner for **life**

CURRENT CORPORATE MEMBERS
2014

Best Medical Canada

Phone: 877-668-6636
www.mosfet.ca

Contact: Lisa Schoenhofer
lisa@teambest.com

CDR Systems Inc.

Phone: 1-855-856-7035 (ext 3)
www.cdrsys.ca

Contact: Mike Wallace
mikewallace@cdrsys.ca

Donaldson Marphil Medical Inc

Phone: 1-888-933-0383
www.donaldsonmarphil.com

Contact: M. Michel Donaldson
md@donaldsonmarphil.com

Elekta Canada

Phone: 770-670-2592
www.elekta.com

Contact: Doris AuBuchon
Doris.AuBuchon@elekta.com

Harpell Associates Inc.

Phone: 1-800-387-7168
www.harpell.ca

Contact: Ron Wallace
info@harpell.ca

Landauer Inc

Phone: 708-755-7000
www.landauerinc.com

Contact: Amy Cosler
sales@landauerinc.com

LAP of America

Phone: 561-416-9250
www.lap-laser.com

Contact:: Martin Clay
mic@lap-laser.com

Modus Medical Devices Inc

Phone: 519-438-2409
www.modusmed.com

Contact: John Miller
jmiller@modusmed.com

NELCO

Phone: 781-933-1940
www.nelcoworldwide.com

Contact: Cliff Miller
cmiller@nelcoworldwide.com

Philips Healthcare

Phone: 1-877-744-5633
www.philips.com/healthcare

Contact: Michel Brosseau
Michel.brosseau@philips.com

PTW

Phone: 516-827-3181
www.ptwny.com

Contact: Elizabeth Algoo
Elizabeth@ptwny.com

Standard Imaging Inc

Phone: 1-800-261-4446
www.standardimaging.com

Contact: Ed Neumueller
ed@standardimaging.com

Sun Nuclear

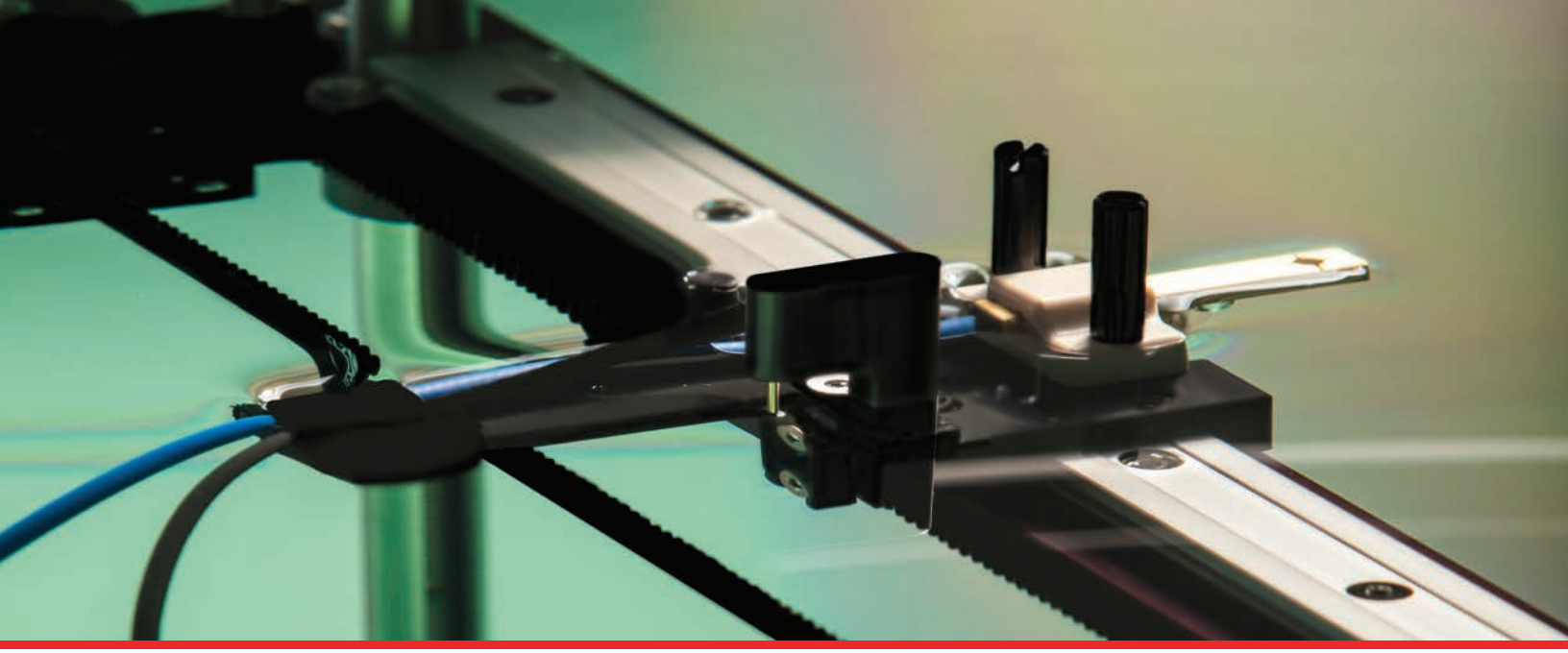
Phone: 321-259-6862 ext 251
www.sunnuclear.com

Contact: Konstantin Zakaryan
konstantinzakaryan@sunnuclear.com

Varian Medical Systems

Phone: 650-424-5801
www.varian.com

Contact: Lucy Huerta
lucy.huerta@varian.com



U.S. Patent No. 8,321,179

Do DOSIMETRY

3D SCANNER™

Different by Design

The patented cylindrical design of the 3D SCANNER introduces an improved scanning experience. Over 200 installations are proving that 3D SCANNER can offer more accurate and efficient beam data collection than traditional square phantoms.

- AutoSetup™ – Eliminates setup subjectivity and saves time
- No Tank Shifts – Setup the tank once for all required scans
- Ring Drive – Consistent 3D detector orientation for all scans, up to 65cm in length, including off-axis scans

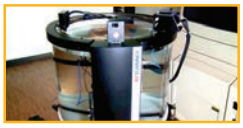
The system includes SNC Dosimetry™ software, providing advanced analytical tools with a database for effective data management.

3D SCANNER

Now Live!

Visit **www.sunnuclear.com**

View our 3D SCANNER Video Series Online to learn what is new in the latest release of SNC Dosimetry software.



DONALDSON MARPHIL Medical

SUN NUCLEAR corporation

Your Most Valuable QA and Dosimetry Tools

Quality Matters - Travaillons Ensemble!

Notes from the 5th Canadian Winter School on Quality and Safety in Radiation Oncology

John Kildea
Medical Physicist

McGill University Health Centre, Montreal, Quebec

The 5th annual Canadian Winter School on Quality and Safety in Radiation Oncology took place January 26-30th 2014 in the Fairmont Chateau Frontenac in Quebec City. This year's meeting was chaired by Dr. BeiBei Zhang and was attended by 100 students and 12 faculty from across Canada, the US, and the UK. As reflected by the slogan of the school (*Quality Matters - Travaillons Ensemble !*), the faculty and participants were multi-professional (therapists, radiation-oncologists, academics, lawyers, administrators, physicists) and the quality and safety curriculum was presented from multiple perspectives. In a break with tradition, this year's school was held rather far from a ski slope. Nevertheless, the beautiful *Vieux-Québec* did not disappoint and many attendees stayed on after their week of study to enjoy the city's famous *Carnaval* and drink its feisty *Caribou*.

The scene for the winter school was set with a relaxed Sunday evening meet-and-greet in the impressive Cellar Room of the Chateau Frontenac. It was not a late night however, as it was down to business first thing on Monday morning. This year's keynote lecture was entitled *Making Decisions in Healthcare* and was delivered by Dr. Pat Croskerry, professor in Emergency Medicine and in the Division of Medical Education at Dalhousie University, Halifax. With seven thought-provoking questions, Dr. Croskerry introduced the dual process theory of rational and intuitive decision making and showed how we spend most of our time in the comfortable and easy but potentially dangerous intuitive world. Dr. Croskerry referenced two books in his lecture, a trend that was repeated often during school. A list of books and articles referred to during the winter school is provided below.

With the words of Dr. Croskerry's last slide - "Stop and Think" - at the back of everyone's mind the main business of the school got underway. The formula that proved so successful at the previous winter schools was followed - faculty lectures focusing on an area of interest followed by lively moderated workshops engaging faculty and delegates. This year's school welcomed back a number of veteran faculty members and introduced some new faces. The format was more practical and engaging than previously and audience participation was excellent. Meals and coffee breaks were incorporated into the school program and discussions frequently continued on beyond the lecture hall.

The program included eight moderated sessions by the faculty spread out over the four days. Each session focused on a particular quality and safety theme: team performance and process mapping, legal and ethical issues, software in healthcare, implementation of new techniques, human performance, medical error disclosure, and quality in the clinic. In addition to the workshop at the end of each session, some sessions were very hands-on and included group exercises, such as process mapping, root cause analysis, or an analysis of case studies. Three sessions of round-table project galleries provided a chance for the delegates to present and learn from each other. Unfortunately, there were too many presentations and too little time to attend them all. However, each participant was given two minutes to pitch his/her presentation at the beginning of the project galleries making it possible for the audience to focus on the projects that interested them the most.

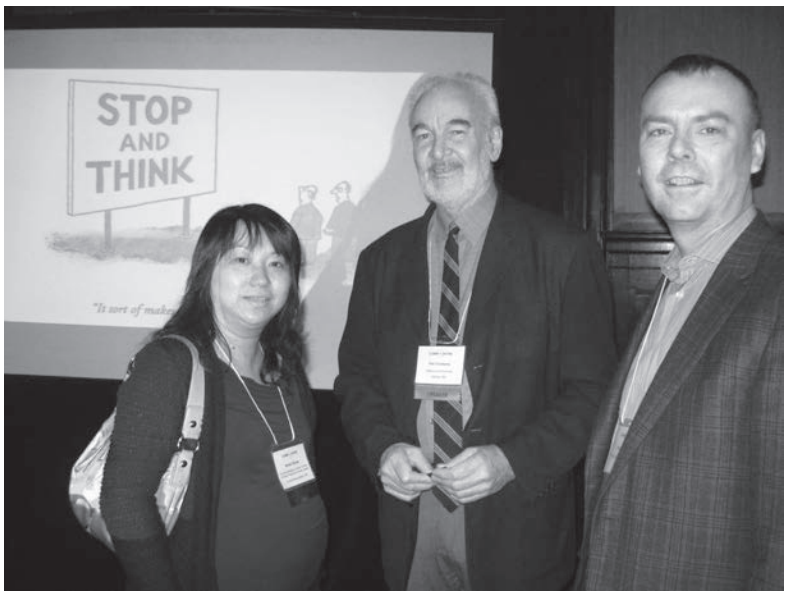
It was quite inspiring to look around the auditorium during the hands-on workshops and project galleries; faculty and delegates could be seen huddled together around tables and engaged in lively discussions. Many email addresses were exchanged and no doubt many inter-centre and multi-professional collaborations will result.

Quebec city may not have a ski slope but it is not without its charms. The grand halls and the Cellar Room of the Chateau Frontenac were majestic (although somewhat tempered by renovations) and the food was delicious. The Wednesday evening banquet, held in the *Chapelle du Musée de l'Amerique francophone,* provided for a relaxed retreat from modernity in the company of a concert pianist and amongst new friends and potential future collaborators.

Overall, the 5th annual Canadian Winter School on Quality and Safety in Radiation Oncology lived up to its slogan - a multi-professional group of faculty and delegates got together, engaged each other in lively discussions, and went home inspired to improve the quality and safety of patient treatments at their centres across Canada and beyond. Let's hope that they inspire their multi-professional colleagues to make the trip next year and so continue the cycle of Canadian winter schools on Quality and Safety in Radiation Oncology that no doubt continue to improve our practice.

Books and articles cited during the 2014 Canadian Winter School

Book/Ttle	Author / Citation	Cited by	Context
Thinking Fast and Slow	Daniel Kahneman	Dr. Pat Croskerry	Dual process theory of thinking
The Art of Thinking Clearly	Rolf Dobelli	Dr. Pat Croskerry	Cognitive bias
A Review of Flightcrew-involved Major Accidents	US National Transportation Safety Board Report SS-94-01	Dr. Svetlena Taneva	75% of commercial aviation accidents happen on the first day of a crew flying together.
To Err is Human	US Institute of Medicine	Dr Kerry Bowman	How to define error
After Harm: Medical Error and the Ethics of Forgiveness	Nancy Berlinger	Dr Kerry Bowman	How to apologize in the event of an adverse medical event
Common Terminology Criteria for Adverse Events (CTCAE)	US Department of Health and Human Services	Dr Marie-Andrée Fortin MD	Reviewing patients receiving treatment
The Build Master: Microsoft's Software Configuration Management Best Practices	Vincent Maraia	Dr. Alan Wassyng	Software complexity
Emotions as Bio-cultural Processes	Birgitt Röttger-Rössler, Hans Jürgen Markowitsch	Ms. Mona Udowicz	Team leadership in implementing new techniques
Fatigue, Alcohol and Performance Impairment	Dawson and Reid, Nature, vol. 388, 1997, p. 236	Dr. Jean-Yves Fiset	The effect of fatigue on human performance
Readability index calculator	www.standards-schmandards.com/exhibits/rix/index.php	Dr. Jean-Yves Fiset	An online to tool check if your policy or procedure is readable
Do It By Design - An Introduction to Human Factors in Medical Devices	US Food and Drug Administration	Dr. Jean-Yves Fiset	Incorporating human factors into software design
Hazard Analysis Techniques for System Safety	Clifton A. Ericson II	Dr. Alan Wassyng	A practical guide to undertaking hazard analyses
Medical Error - The Second Victim	Albert W Wu	Dr. Sue Evans MD	The emotional impact of medical errors on the health care providers involved
Talking with Patients about Other Clinicians' Errors	Gallagher et al., 2013 N Engl J Med 369:1752-175	Dr. Sue Evans MD	Managing error disclosure



Dr. BeiBei Zhang, chair of the Canadian Winter School 2014 organising committee, with keynote speaker Dr. Pat Crosskerry, and Dr. Stephen Breen, COMP Councillor for Science & Education

The Canadian Winter School 2014 organising committee. Left to right: Derek Brown, BeiBei Zhang, Gisele Kite, Todd Pawlicki, Scott Karnas, John Kildea, Kathryn Moran, Nancy Barrett. Missing from photo: Woody Wells, Hannah Carolan

The Canadian Winter School 2014 banquet at the Chapelle du Musée de l'Amerique francophone in Quebec City

One of the Project Gallery presentations

Faculty fishbowl with some of the Winter School Faculty. Left to right on the panel: Dr. Kerry Bowman, Ms. Sharon Rogers, Ms. Mona Udowicz, Dr. Marie-Andrée Fortin, Dr. Jean-Yves Fiset, Dr. Todd Pawlicki, Dr. Derek Brown

Message from the CCPM President

continued from page 42

the CCPM. This followed a determination by CAMPEP that the ACPSEM graduate and residency educational programs were comparable in content and expectations to CAMPEP requirements. Taking this into consideration, the Board came to the decision at our recent mid-year meeting that ACPSEM-accredited education programs would be deemed equivalent to CAMPEP-accredited programs for the purpose of fulfilling the eligibility requirements necessary to apply for membership in the College. As I mentioned in my last column, this is not at all equivalent to granting certification to ACPSEM members in any form of reciprocal arrangement, nor is there any intention to do so.

One last note. The Board is in the final stages of enacting our new regulations. We hope to have the new regulations approved in the near future, after which they will be sent for translation. The new regulations should be available on our website soon.

COMP OCPM

COMP Photo Contest / Concours d'images pour l'OCPM

Attention COMP Members!

The Communications Committee is seeking fresh images for display on our new website as well as for our membership for use.

We want to have images of medical physicists working in the field. These could be images of medical physicists collaborating with clinical staff or research staff, manipulating instrumentation, or in teaching or administrative activities.

We are also interested in unique and interesting images of your research, equipment, or special procedures.

Images should have a minimum resolution of 300 pixels/square inch and must be cleared for publication if acquired at your institution. Individuals photographed must agree to having their pictures taken for public use.

We are seeking categories of images that fit at least 3 keywords noted below:

medical physicist, physicist, medicine, health, safety, radiation, collaboration, teaching, research, administration, education, instrumentation, imaging, x-ray, CT, Nuclear Medicine, MRI, Ultrasound, Radiation, Isotope, cancer, radiation therapy, diagnostic, clinical, meetings, presentations.

When?
Deadline for submissions: **May 1, 2014**

How?
Tweet them to @medphysca with the hashtag #COMPPhotoContest

Post them on our Facebook page under the subject "Photo Contest"

Email them to admin@medphys.ca with subject "COMP Photo Contest"

If possible include at least 3 keywords for each image (or collection of images) submitted, along with your name and Institution (if you would like that information viewable to the public)

Why?
The opportunity to be digitally immortalized on our new website! Plus the chance to help your colleagues by contributing to our image gallery for use by our members. Plus, public recognition of your research or clinical work place. And it's easy! Just tweet/facebook or email your images. Finally, we will post some of the top entries into our Newsletter in the April Edition of InterACTIONS.

How Many?
As many as you like!

Oyez, oyez. À tous les membres de l'OCPM!

Le Comité des communications de l'Organisation canadienne des physiciens médicaux (OCPM) est à la recherche d'images fraîches à afficher sur le nouveau site Web de l'OCPM. Des images que nos membres pourront également utiliser.

Nous voulons des images de physiciens médicaux au travail sur le terrain. Il peut s'agir de physiciens médicaux collaborant avec du personnel clinique ou de recherche, en train de manipuler des instruments, d'enseigner ou de faire des activités administratives.

Nous voulons aussi des images particulières et intéressantes de vos recherches, de votre matériel ou de vos procédures spéciales.

La résolution minimale des images présentées doit être de 300 pixels par pouce carré et leur publication doit être autorisée si vous les avez acquises de votre établissement. Les personnes qui apparaissent sur vos images doivent consentir à la diffusion publique des images.

Nous sommes à la recherche de catégories d'images conformes à au moins trois des mots clés qui suivent :

physicien médical, physicien, médecine, santé, sécurité, radiation, collaboration, enseignement, recherche, administration, éducation, instrumentation, imagerie médicale, rayons X, tomographie par ordinateur (CT), médecine nucléaire, imagerie par résonance magnétique (IRM), ultrason, radiation, isotope, cancer, radiothérapie, diagnostic, clinique, réunions, présentations.

Quand?
Date limite pour la présentation de vos images : ***1er mars 2014***

Comment?
Par Twitter à @medphysca avec le mot-clic #COMPPhotoContest

En les affichant sur votre page Facebook sous le thème « Photo Contest »

Par courriel à admin@medphys.ca en indiquant « COMP Photo Contest »

Incluez si possible au moins trois mots clés par image (ou collection d'images) que vous présentez, avec votre nom et celui de votre établissement (si vous désirez que le public puisse voir cette information)

Pourquoi?
La chance d'accéder à l'immortalité numérique sur notre nouveau site Web! Et pour aider vos collègues en faisant votre part pour garnir notre galerie d'images à l'intention de nos membres. Sans oublier la reconnaissance publique de vos recherches ou de votre milieu de travail clinique. Et c'est facile! Utilisez simplement Twitter, Facebook ou votre logiciel de courriel pour transmettre vos images. En terminant, nous afficherons quelques-unes des meilleures images dans notre Bulletin présenté dans le numéro d'avril d'InterACTIONS.

Combien?
Autant que vous en avez envie!

COMP Winter School Project Gallery on Improving Communication between the Canadian Nuclear Safety Commission and Licensees in the Clinic

L. John Schreiner

Cancer Centre of Southeastern Ontario at the Kingston General Hospital

The fifth annual COMP Winter School, titled "Quality Matters", was held this past January in Quebec City. As usual the meeting was a great success, bringing radiation oncology team members from the clinic together with safety and ethics professionals from other fields. Such diverse attendance enabled many excellent exchanges during and between sessions. In particular, unique opportunities for discussion and debate among the attendees were provided in three *project gallery* sessions during the school. In these sessions, attendees interacted in various round table discussions on specific topics lead by expert facilitators. These sessions have become high points of the winter schools, and this year was no different.

A specific gallery that was repeated in four sessions on two separate days in Quebec City was entitled *Improving Communication between the Canadian Nuclear Safety Commission and Licensees in the Clinic.* The intent of the gallery was to promote communication between the Canadian radiation regulator and folk in the clinic by making attendees of the winter school aware of various initiatives driven by the CNSC, by COMP (individually and together), and by seeking some feedback to improve communication.

As a facilitator for this gallery, I started each session by briefly describing the work of COMP's Quality and Radiation Safety Advisory Committee (QARSAC). Attendees were likely aware of QARSAC through its work with the Canadian Partnership for Quality Radiotherapy (CPQR) in developing and maintaining Technical Quality Control (TQC) Guidelines designed to assure optimal performance of radiation treatment equipment and software in Canadian cancer clinics. But while very important, this initiative reflects only one role of QARSAC as its mandate extends further into other safety issues. In particular, QARSAC reviews and comments for COMP on existing and proposed radiation safety regulations, advises COMP and the Canadian College of Physicists in Medicine on matters relating to radiation safety practice and training, and acts as a repository for radiation safety standards. In this role, it has lately been working with the CNSC to enhance communication in a common desire to advance the effective radiation safety practices required to provide safe environments for patients, workers, and the general public in Canadian cancer centres.

The project galleries then moved to a review of CNSC initiatives to enhance exchange with the Canadian public and to better inform the COMP membership of issues of common interest. Kavita Murthy (CNSC, Director, Accelerators and Class II Facilities Division) described various initiatives from the CNSC to improve communication, such as the regular Feedback Forum articles in InterActions (see the very nice article by Mike Heimann in this issue). On the second day, Kavita was accompanied by Wayne Gratton (Senior Regulatory Framework Officer, CNSC Regulatory Framework Division) who reviewed the various tools the commission uses to engage Canadian stakeholders as it develops regulatory documents and reflects on radiation safety policy. Wayne noted that the CNSC's regulatory document development process incorporates five key steps: analyzing the issue being addressed, developing a draft document for public comment, consulting with Canadians, revising the draft document for approval and publication, and finally publishing the regulatory document. He reviewed the various stages during which Canadians could provide feedback, and then went over issues such as timing, how reviews are analysed, and such. Wayne stressed that the CNSC strives to continuously improve its consultation practices and is interested in feedback in this area, since it considers stakeholder engagement a critical part of the development of radiation safety policy. This review initiated considerable discussion amongst all gallery participants. A point of discussion was whether it was better for individual hospitals and interest groups to reply or to have consolidated comments from organizations. It was suggested that both are important, particularly if a document under discussion may have significant impact on work in hospitals and cancer centres. Kavita noted

that while some groups, such as the Association Québécoise des Physiciens Médicaux Cliniques and select hospitals in some provinces, have commented on recent documents, the CNSC has not traditionally received the level of feedback from clinical licensees that it may get from industrial players or public interest groups. This could be interpreted as a lack of concern on regulatory issues from our sector.

One factor that came up in the session was that many folk were not aware of how they could get themselves and their organizations involved, or what COMP and QARSAC were doing to help the community get involved. The project galleries were seen as a good mechanism to start informing the community. A number of other suggestions came up during the sessions to move communications and interactions forward, including:

- Sending out a notice to all COMP members, and particularly to radiation safety officers, to register themselves on the CNSC's email subscription centre. By subscribing they will receive news and updates from the CNSC such as: commission meeting notices and agendas, hearing documents, recent commission decisions, CNSC news releases, regulatory document comment periods and updates, notices of CNSC presentations to various groups and organizations, and CNSC Web site updates. Those interested can subscribe through the CNSC home page by going to the Stay Connected/Subscribe links at the very bottom of the page, which will bring them to: http://www.nuclearsafety.gc.ca/eng/stay-connected/get-involved/subscribe/new-subscription.cfm).
- Creating a registry of all Class II cancer clinic radiation safety officers with COMP and increasing the volunteers 'membership' of the COMP/CNSC liaison working group within QARSAC so that projects can be supported and communication maintained beyond just a handful of volunteers.
- Using members of the liaison group to triage CNSC documents, perhaps working with CNSC officers, to better advertise documents of interest (from initial documents to later documents including comments from the community), to facilitate response from interested parties and to serve as a repository of responses.
- Using various COMP communication tools, such as the InterActions magazine, the COMP website, and central email announcements, to communicate news and to highlight initiatives from the point above.
- Supporting regular phone, and perhaps in person, meetings of Canadian radiation safety officers (some provinces do this to some degree already) and extend cooperation with other groups, such as the Canadian Radiation Protection Association.

This article is an initial attempt to initiate some of the communication improvements recommended by the Winter School project gallery participants. There is a great desire from COMP, the CNSC, QARSAC, the COMP membership, and others in the community, as indicated by the excellent participation at the Winter School gallery, to improve communications both ways. It is clear the CNSC has upped their commitment for public involvement over the last few years and we believe it is important that we clinic licensees now respond to their initiatives. We hope this article will generate some interest and some support in the community. If you are at all interested in these endeavors and want to know how you may get involved, please contact John Schreiner at john.schreiner@krcc.on.ca.

Acknowledgements: I thank Kavita Murthy and Wayne Gratton from the CNSC and Normand Frenière from the Centre de Santé et de Services Sociaux de Trois-Rivières for their participation and important contributions to the project gallery and for their helpful reviews of this article.

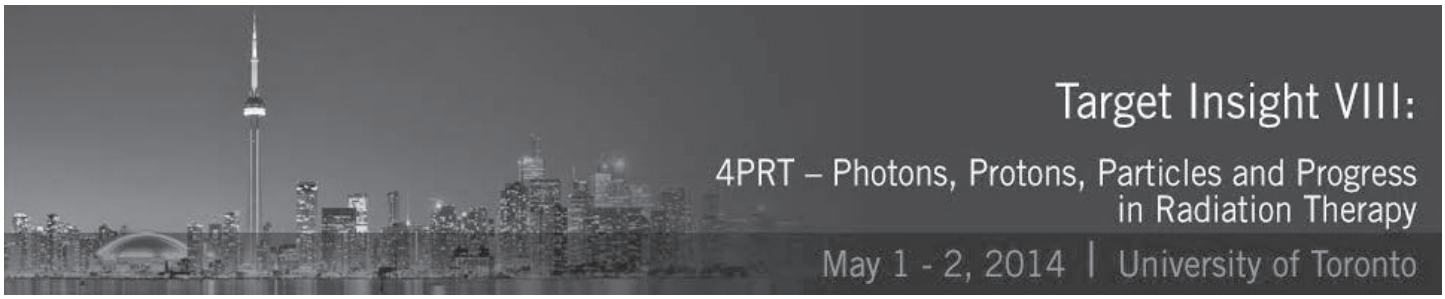
New CNSC Website

The CNSC has launched a new website sporting a different look and simplified structure (based on the main activities it regulates). While the most visited sections were kept intact, some new sections on popular topics were added, along with new features such as an A-to-Z index, a featured video, and quick links to the most-visited pages. Take a virtual tour of the new website to find out more. Your feedback is welcome.

Take a virtual tour of CNSC's new website:
http://www.nuclearsafety.gc.ca/eng/resources/media/index.cfm?videoid=tour

Visit the new website: **http://www.nuclearsafety.gc.ca/eng/**

Send feedback: **http://www.nuclearsafety.gc.ca/eng/contact-us/tell-us-what-you-think.cfm**



Registration is now open!

Target Insight VIII: 4PRT
Photons, Protons, Particles and Progress in Radiation Therapy

May 1 - 2, 2014
Chestnut Conference Centre
University of Toronto

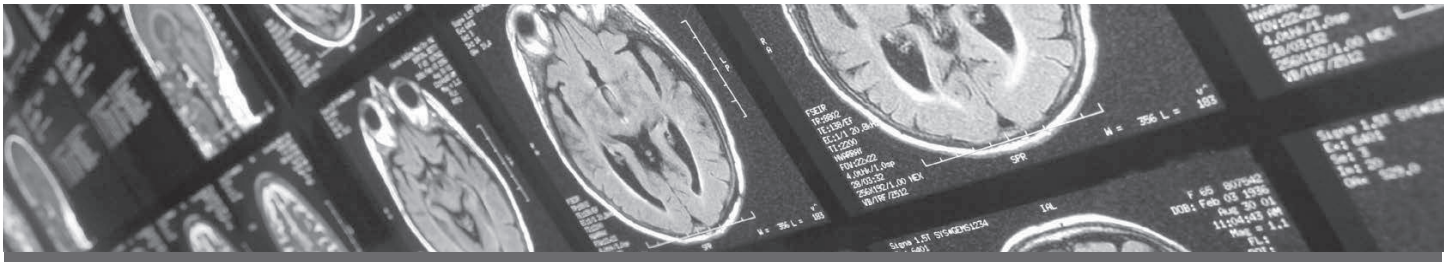
Target Insight VIII promises to showcase targeted information to radiation oncologists, radiation physicists, and radiation therapists. This year, the University of Toronto, the Hospital for Sick Children, Odette Cancer Centre, and Princess Margaret Cancer Centre are partnering together to bring the topic of Particle Therapy to the forefront of discussion for the radiation medicine community.

Join us and our keynote speakers, Dr. Steve Hahn from the University of Pennsylvania, and Dr. Wolfgang Sauerwein from Essen University Hospital, for this year's Target Insight.

Learning Objectives

1. Explain what the advantages and disadvantages of protons and particle based radiotherapy vs photons
2. Understand the clinical and research indications for advanced hadron treatments
3. Describe what are the organizational, socio-economic and ethical challenges of proton therapy in Canada

For more information and full agenda, please visit:
uoft.me/TargetInsightVIII



Radiation Oncology
UNIVERSITY OF TORONTO

www.uoft.me/TargetInsightVIII
@UofTDRO or #4PRT
radiation.oncology@utoronto.ca

COMP OCPM

CALL FOR NOMINATIONS – Due 30 April 2014

The COMP Awards and Nominations Committee is responsible for presenting a slate of nominations for the COMP Board of Directors to ensure that the organization is governed with excellence and vision. There will be three openings on the Board of Directors as of the 2014 Annual General Meeting.

Vice-President

The Vice-President serves a two-year term and has the following responsibilities:

1. To work in conjunction with other Board members in the best interest of the organization.
2. To prepare for, attend, and actively participate in all Board meetings and relevant committee meetings. In-person meetings take place in November and at the Annual Scientific Meeting and there may be up to 4 teleconferences.
3. To oversee projects and assume responsibilities as required.
4. To represent the President in his/her absence.

While certainly not necessary, there is an expectation that the Vice-President would be willing to stand for the position of President when that position becomes available.

Treasurer

The Treasurer has the following responsibilities:

1. In collaboration with the Board and committee members, develop a budget for presentation to the Board for approval.
2. Inform the Board of the financial status at Board meetings.
3. Inform the membership of financial results and present the auditor's report at the AGM.
4. Assist in the development of financial policies and procedures in collaboration with the Board.
5. Oversee and monitor all financial transactions in collaboration with the management service.
6. To prepare for, attend, and actively participate in all Board meetings and relevant committee meetings. In-person meetings take place in November and at the Annual Scientific Meeting and there may be up to 4 teleconferences.
7. Oversee projects and assume other responsibilities as required.

Directors-at-Large (2)

There will be two openings for Directors-at-large. Directors-at-large serve for a term of three years and have the following responsibilities:

1. To work in conjunction with other Board members in the best interest of the organization.
2. To prepare for, attend, and actively participate in all Board meetings and relevant committee meetings. In-person meetings take place in November and at the Annual Scientific Meeting and there may be up to 4 teleconferences.
3. To be prepared and willing to Chair a committee or lead special projects as required.

On the last point, at present Chairs are being sought for the Quality Assurance and Radiation Safety Advisory Committee (QARSAC) and the Imaging Task Force (ITF).

The nomination **must be accompanied** by a duly signed *Expression of Interest and Nomination Form* endorsed by no fewer than two (2) voting members of COMP. To access the nomination form, please visit www.medphys.ca or contact the COMP office at admin@medphys.ca. Nominations are due **Wednesday 30 April 2014.**

THE CANADIAN COLLEGE OF PHYSICISTS IN MEDICINE

LE COLLÈGE CANADIEN DES PHYSICIENS EN MÉDECINE

Harold Johns Travel Award Announcement

Deadline for Application: 11th April 2014

The Board of the Canadian College of Physicists in Medicine is pleased to honour the Founding President of the College by means of the Harold Johns Travel Award for Young Investigators.

H.E. Johns – Officer of the Order of Canada, Ph.D., LL.D., D.Sc., Emeritus University Professor and Professor Emeritus in the Department of Medical Biophysics and Radiology, University of Toronto.

Dr. Johns was born of missionary parents while in West China. During his scientific career, he published over 200 peer-reviewed papers, trained over 100 graduate students, many of whom hold key positions in the field of Medical Physics across Canada and around the world. He has won many prestigious awards and has published four editions of "The Physics of Radiology", the premiere textbook in the field.

His developments in the late 1940s of the Cobalt "bomb" led to a career in the pioneering field of Medical Biophysics. This in turn led to international reputation among scientists. His many awards and accolades reflect the respect and admiration in which he was held by academics and scientists around the world. He was inducted into the Canadian Medical Hall of Fame in 1998. Dr. Johns passed away on August 23, 1998.

The award is given annually by the Canadian College of Physicists in Medicine to an outstanding CCPM Member proposing to visit one or more medical physics centres or to attend specialized training courses such as an AAPM summer school. It is intended to assist the CCPM Member in extending his or her knowledge by travelling to another centre or institution with the intent of gaining further experience in his or her chosen field, or, alternately, to embark on a new field of endeavour in medical physics. Its ultimate goal of the award is to enhance medical physics practice in Canada.

Applicants may travel either inside Canada or elsewhere. Applicants must have passed the CCPM membership exam within the previous three years, be less than 35 years of age and should not have previously taken a similar course or have spent a significant amount of time at the proposed institutions. The award is for $2,000 and will be paid upon receipt of a satisfactory expense claim. Recipients need not be Canadian citizens but must be working in Canada.

The deadline for application this year is April 11, 2014.

Applicants must submit a one-page proposal indicating the course they wish to attend or the name(s) of the institutions they would visit and the reasons for their choice. They should also submit an estimate of the costs involved and letters from their present employer indicating that they are in agreement with the proposal. If their proposed expenses exceed the value of the award, then they should also indicate the source for the additional funds required. For a visit to an institution the candidate must have that institution write to the Registrar in support of the visit. The candidate should also provide their curriculum vitae and the names and phone numbers of two references that the selection committee can contact. No reference letters are required. The selection committee reserves the right to contact additional individuals or institutions.

A panel appointed by the Board of the College will choose the award recipient. Their choice will be based upon 1) the written proposal submitted by the candidate, 2) references obtained by the committee and 3) membership exam results. The award will be announced at the Annual General Meeting of the College. Recipients will have two years after their application deadline to complete their travel and will be required to submit a short report to the InterACTIONS newsletter.

Applicants who are unsuccessful in any one year and still eligible in subsequent years may have their applications considered again by writing to the Registrar and providing any necessary updated information.

Applications should be sent to the Registrar of the Canadian College of Physicists in Medicine at:

Mr. Horacio Patrocinio
McGill University Health Centre,
Medical Physics Department,
1650 Ave Cedar
Montreal, QC H3G1A4
horacio.patrocinio@mcgill.ca

www.medphys.ca 2.0: Time for a fresh start?

Parminder S. Basran, PhD, FCCPM
Chair- Communications Committee
BC Cancer Agency-Vancouver Island Centre

COMP is always striving to improve communication between COMP members, it's executive, and administration. And as a consequence of our strategic planning exercise several years ago, one of the messages you made loud and clear to the Board was the need for a new and improved website. We've heard, digested, and pondered.

Last year, our web-site redevelopment team was given a budget to start this process and I'm pleased to say that as of today, this process is well under way. Mid 2013 we reviewed COMPs needs, with representation from CCPM (who will also embark on this project with us). In late 2013 the team formulated and circulated a Request For Proposals. From thet RFP, we received serious interest from a handful of companies from whom the committee whittled down to a short list of three.We had presentations from these three companies and have since made a decision to move forward with one company who we feel provides the best value for money for services rendered. Shortly, we will start the exciting design-phase for our new website. Fingers crossed, our new website will be launched this year. A great deal of thanks goes to Nancy Barrett and Gisele Kite for helping us stick-handle this process.

Obviously, a new website will mean a new look, feel, and – hopefully – a better user experience. The website re-development team is really looking forward to introducing some 'freshness' to our new website. This experience has also opened the door for us (COMP) to think more about what 'COMP' should look like over the next 5-10 years, and what kind of services should the new website be able to handle over that time. We've also considered changes to our website address from its current www.medphys.ca to something that embraces our bilingual nature and in keeping with similar professional organizations.

Our website needs to be dynamic, evolving, and flexible. It also needs to reflect our membership. We're particularly interested in the questions "What does Medical Physics look like" and "What *should* Medical Physics look like?" To this end, we've introduced a photo contest where we are hoping that YOU (our COMP members) can help define what "Medical Physics" looks like. To me, I think of things like 'collaboration', or 'cancer diagnosis', or 'medical specialist'. I challenge you to think on this question, send us images and/or multimedia (maybe not selfies). We hope to be able to include some of this media on our new website (see our ad in this edition of InterACTIONS).

As you've made perfectly clear to us, it is time for a fresh start. We look forward to our new website and changes in visual presence of COMP to our communities. As always, if you have questions or comments, please contact me.

COMP Student Travel Fund

The Canadian Organization of Medical Physicists is committed to supporting it student members and funds have been set aside to support student travel to the COMP Annual Scientific Meeting. Six $500.00 awards will be granted to student members and winners will be selected by a random draw of those who are eligible.

To participate in the draw, students must meet the following criteria:

1. Recipients must be COMP student members in good standing.
2. The applicants must be the first author on an abstract that has been accepted for presentation at the COMP Annual Scientific Meeting.

If you are interested in having your name submitted for the draw, please provide your name and contact information to Gisele Kite at admin@medphys.ca by May 20th , 2014.

New COMP Members

Please welcome the following new members who have joined COMP since our last issue:

Last Name	First Name	Institute/Employer	Membership Type
Baker	Mark	University of Victoria	Student
Courneyea	Lorraine	Mayo Clinic	Full
Desouza	Elstan	McMaster University	Student
Gaudreault	Mathieu	Université Laval	Student
Granville	Dal	Carleton University	Student
Guillot	Mathieu	Centre Hospitalier Universitaire de Sherbrooke	Full
Keyvanloo	Amirmohamad	Cross Cancer Institute	Full
Khosravi	Hamid Reza		Associate
Lalonde	Michel	Cancer Centre of Southeastern Ontario	Full
Lemire	Matthieu	Hôpital Maisonneuve-Rosemont	Full
Lindsay	Clay	University of Victoria	Student
Martel	Narine	Health Canada	Full
Mashouf	Shahram	University of Toronto	Student
Moore	Michael	Ryerson University	Student
Omotayo	Azeez	CancerCare Manitoba	Associate
Prior	Paul	Carleton University	Student
Rodriguez Herrera	Diego	University of Manitoba	Student
Sadeghi	Parisa	University of Calgary	Student
Schellengerg	Graham	University of Manitoba	Student
Schoenhofer	Lisa	Best Medical Canada	Corporate
Seslija	Petar	Vancouver Coastal Health	Full
Siciarz	Pawel	CancerCare Manitoba	Student
Varfalvy	Nicolas	CHU de Québec	Full
Venugopal	Niranjan	Saskatchewan Cancer Agency	Full
Zhang	Geng	CancerCare Manitoba	Student

Congratulations to our past student COMP members who are now full members:

Last Name	First Name	Institute/Employer
Johnston	Holly	UT Southwestern Medical Center
Karan	Tania	Stronach Regional Cancer Centre
Lee	Dong Chang	CancerCare Manitoba
Poirier	Yannick	CancerCare Manitoba
Quirk	Sarah	Tom Baker Cancer Centre
Sattarivand	Mike	Nova Scotia Cancer Centre

Dates to Remember

Harold Johns Travel Award application deadline
April 11th

Deadline for COMP nominations
April 30th

Early bird exhibitor registration deadline
April 30th

Nominations due for COMP Volunteer positions
April 30th

Notification of authors of accepted abstracts
May 1st

Early bird delegate registration deadline
May 16th

Applications due for COMP Student Travel Fund
May 20th

Deadline for July issue of InterACTIONS
June 1st

Banff Centre Hotel room block cut-off.
June 6th

5th International Workshop on Monte Carlo Techniques in Medical Physics
June 17th – 20th

60th Annual Scientific Meeting, The Banff Centre, Banff, Alberta.
July 9th–12th

8th International Conference on 3D Radiation Dosimetry, Ystad, Sweden
Sept 4th – 7th

Message from the COMP President

continued from page 41

the past few years. Two of them are worth mentioning. The first one was a greater support to students. Of course to support students, they have to become and stay members and the students have to further become more involved within COMP. To help first the very first step, COMP has already waived the first year fee for any student to become a member. We have further kept the student member fees at a very low level (while other categories have seen increased during the same period) and increased the level of support to student lead initiatives. This strategy worked very nicely and the students have formed a Student Council, organized numerous activities, and increased communication among the students across Canada. During the last Board meeting, COMP has agreed to increase its support for student activities within COMP. We will now waive the ASM registration fees for a maximum of eight Student Council members and reimburse the Council Co-Chairs' expenses to participate at the ASM. The Board further agreed to continue the Salsa Award (given last year). Six awards of $500 each will be given out to students who are COMP members in good standing and who are the first author for an abstract for the ASM that has been accepted. Those who meet the criteria will be selected for the prize via random draw. Of course, we are keeping all the other student activities intact.

The second request COMP repeatedly has is to help provide low-cost, close-to-home continuing education (CE) opportunities. To achieve this, COMP first planned on relying on existing regional organizations, such as WESCAN and AQPMC, and favouring similar initiatives from the Maritimes and Ontario. COMP has set aside $10,000 (on a yearly basis) to help achieve at least four smaller regional CE meetings (one day, high quality and focused) every year. We found out that for 2013, only AQPMC has taken this opportunity and offer a completely free 1-day CE to all of its medical physicists. There are possibly many reasons for this disconnect between members' requested CE and failure to deliver them. COMP is certainly looking at ways to make them these CE meetings a reality. You can expect further communication between the SEC Chair, Stephen Breen, and the ASM 2014 organizers for a special "regional" event in Banff.

It is important to conclude by reminding COMP members that our organization relies heavily on volunteer support. A number of positions need to be filled at the ASM this summer, namely that of Vice-President (previously named President Elect), Treasurer, and two boards of director positions (previously named Councillor or Committee Chair).

Les réalisations de l'OCPM se font grâce en grande partie au travail de bénévoles. Je vous invite donc à considérer une participation active dans votre association. À cet égard, plusieurs postes seront à combler au comité de direction dont celui de vice-président (anciennement président élu), trésorier et deux postes de directeur (anciennement responsable de comité).

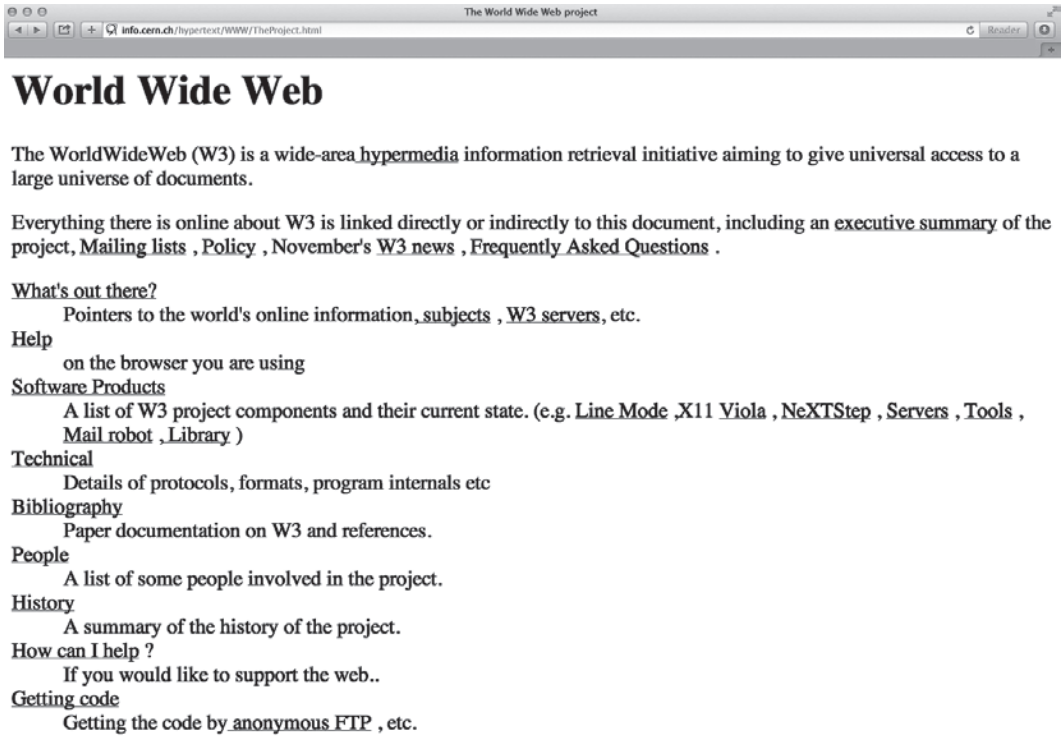
Message from the Editor

Christopher Thomas, PhD, MCCPM
Nova Scotia Cancer Centre

Hello all! Winter is slowly leaving us I hope. Hopefully by the time you read this it will be sunny wherever you are.

All I really want to say in this issue is that COMP and InterACTIONS depend on you, our readership, and the contributions you send in. If you have never sent anything, think if there is anything you could. Wrote some cool software? Went to a great meeting? Tell us about it.

Also, I know Parminder has mentioned it in his article earlier in the issue and we have an announcement for it as well, but I'll hype it some more too: our photo contest. We NEED new photos to put up on the new COMP website. To date, we've received one. Poor Parminder has been beside himself and is inconsolable over this. Now is the time for you or your centre or your research to be immortalized! Please don't let our website look this:



Take care and see you next issue!

International Workshop on Monte Carlo Techniques in Medical Physics
June 17-20th 2014, Quebec City

The fifth International MC Workshop attempts to bring together developers of MC technologies with users from clinical, industry and academic backgrounds. Topics discussed will be code development, variance reduction, clinical implementation and evaluation, parallel processing, GPUs, planning and correlation studies, applications in adaptive radiation therapy, imaging and dosimetry as well as integration of MC techniques with non-MC related applications involving machine learning and radiation biology modelling.

Invited Speakers (confirmed):

Anna Celler, PhD	University of British Columbia, Canada
George X. Ding, PhD	Vanderbilt University, USA
Xun Jia, PhD, DABR	University of California, San Diego, USA
Harald Paganetti, PhD	Harvard Medical School, USA
Tony Popescu, PhD	University of British Columbia, Canada
Sébastien Incerti, PhD	Université Bordeaux 1, France
Bas Raaymakers, PhD	UMC Utrecht, The Netherlands
David W O Rogers, PhD	Carleton University, Canada
Frank Verhaegen, PhD	MAASTRO Clinic, The Netherlands

Abstract submission deadline: April 15th 2014
Early bird registration deadline: May 15th 2014
Details at: http://www.mcw2014.phy.ulaval.ca
(Continuing education credits will be available at the time of the meeting)

BC Cancer Agency
CARE & RESEARCH
An agency of the Provincial Health Services Authority

Volumetric Modulated Arc Therapy (VMAT) Course
May 1 - 3, 2014

Vancouver, British Columbia, Canada

The BC Cancer Agency is pleased to announce the guest faculty line-up for the May 2014 course: **Dr. Luca Cozzi** (Oncology Institute of Southern Switzerland) and **Dr. Karl Otto** (British Columbia, Canada).

This innovative course on the clinical use of Volumetric Modulated Arc Therapy (VMAT) draws on expertise developed at the BC Cancer Agency since 2007. The two and a half day course follows the patient's progress through the radiation department from simulation to treatment planning and treatment delivery. Practical planning methods and strategies developed over several years are applied to a range of treatment sites. Quality assurance and commissioning of VMAT is also a focus of this course.

The VMAT course:

- Focuses on implementation and considerations of using VMAT in a clinical setting
- Leads from patient immobilization and CT simulation to planning and treatment with VMAT
- Includes "hands on" treatment planning on Varian Eclipse™ stations focusing on set up parameters and planning strategies used for VMAT
- Discusses unusual treatment cases, demonstrates optimization methods and teaches you how to evaluate VMAT plans
- Discusses and demonstrates commissioning and quality assurance processes, equipment and procedures including gated VMAT and FFF VMAT
- Discusses current protocols used at the BC Cancer Agency, with particular emphasis on SBRT sites
- Describes resources in terms of equipment as well as the staffing required to start up a VMAT program
- Provides opportunity for participants to observe treatment delivery on a Varian TrueBeam® treatment unit

Target audiences for this course are medical radiation physicists and residents, radiation oncologists and residents, and radiation therapists and dosimetrists.

Continuing Education credits from this course can be used to fulfill CME requirements for the following: RCPSC, CAMPEP, CAMRT, CMD

For more information please see our website: http://www.bccancer.bc.ca/HPI/CE/radiation-therapy/VMAT/

LINAC QA Solutions by PTW

The Right Choice – Any Day, Any Time.

Whether you need a simple test device or a turnkey solution for linear accelerator QA, PTW provides you with versatile, easy-to-use tools to help you complete all relevant TG-142 QA tests in less time and with high accuracy. Day after day, throughout the year.

When will you test us?

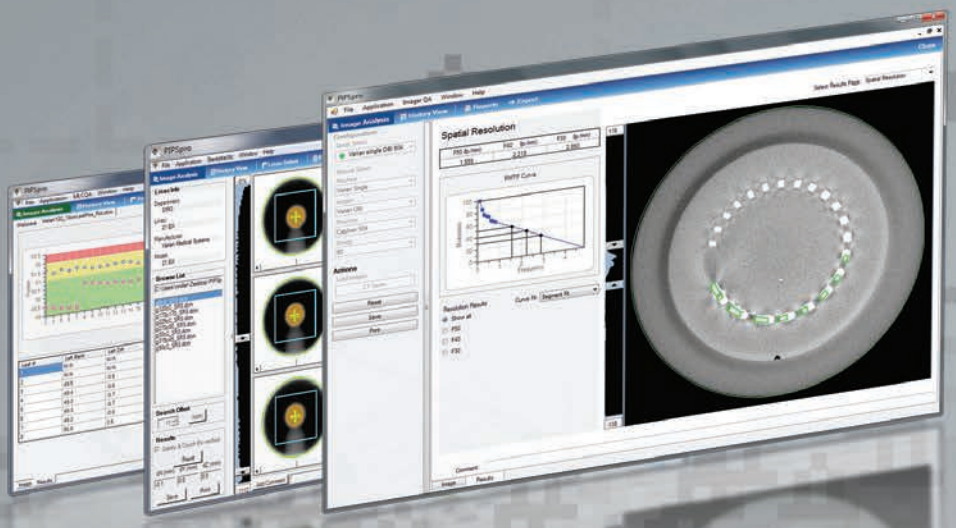
TG-142 testing
made safe
and simple!

Scan the QR code to see what PTW has to offer for machine QA.

WWW.PTWNY.COM USA | LATIN AMERICA | CHINA | ASIA PACIFIC | INDIA | UK | FRANCE | IBERIA | GERMANY

PTW

Knowing what responsibility means



PIPSPRO SOFTWARE

NEW VERSION 5.0

IMAGER AND LINAC QA IN SECONDS

After **20** ***YEARS*** *in the field,*

and having been validated

by over **100** ***PUBLICATIONS,***

PIPSpro's user base spans

over **600** ***CLINICS*** *across the globe.*

VISIT

www.standardimaging.com/PIPSpro

TO FIND OUT WHY.

STANDARD IMAGING