



AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

Advancing the Science, Education & Professional Practice of Medical Physics

PETER'S ENDURING IMPACT ON QUALITY MANAGEMENT IN RADIATION ONCOLOGY

Per Halvorsen

2019 AAPM Annual Meeting

Professional Symposium



My interactions with Peter

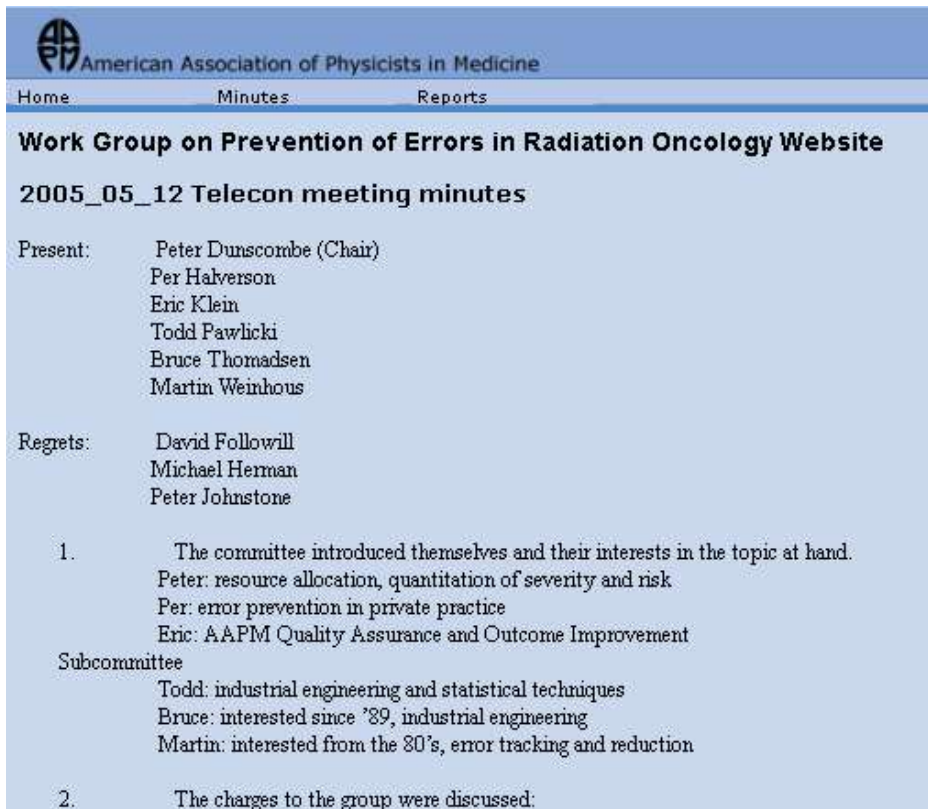
- WGPE 2005 to 2013
- Prior to TG-100 publication, as Prof Council Chair brought forward concern re. implementation
- Ad Hoc Comm for TG-100 Review 2014-2015
- WG-100 2016-



“Let’s think about it”

WGPE:

- Formed in 2005 with Peter as Chair
- Recognized the need to coordinate with TG-100 and with other societies

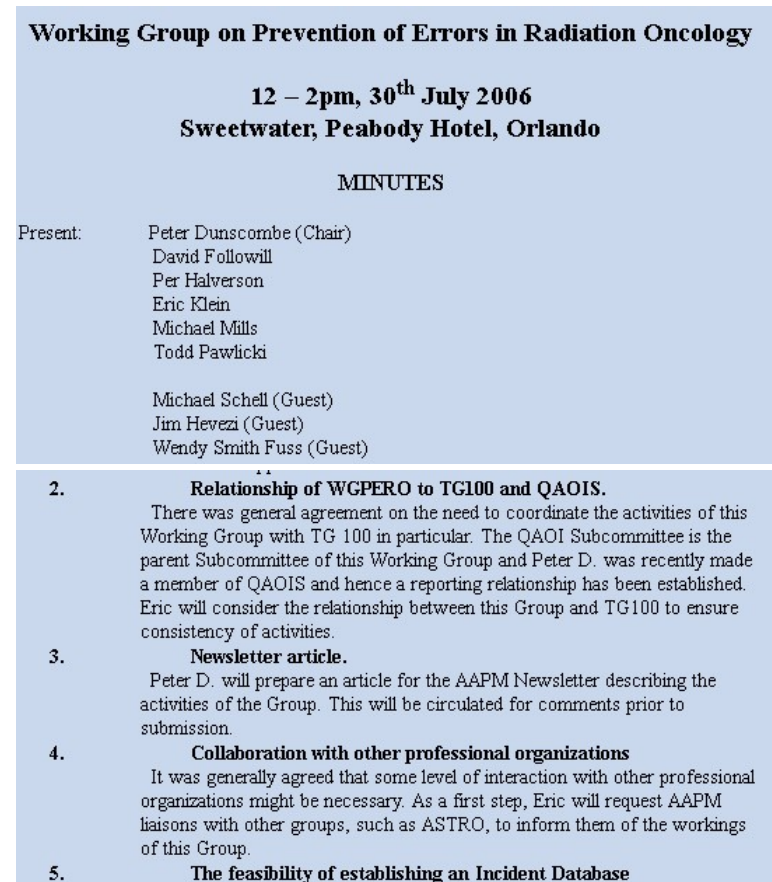


The screenshot shows the website for the Working Group on Prevention of Errors in Radiation Oncology (WGPE). The header includes the AAPM logo and navigation links for Home, Minutes, and Reports. The main content area is titled "Work Group on Prevention of Errors in Radiation Oncology Website" and "2005_05_12 Telecon meeting minutes".

Present: Peter Dunscombe (Chair)
Per Halverson
Eric Klein
Todd Pawlicki
Bruce Thomadsen
Martin Weinhaus

Regrets: David Followill
Michael Herman
Peter Johnstone

1. The committee introduced themselves and their interests in the topic at hand.
Peter: resource allocation, quantitation of severity and risk
Per: error prevention in private practice
Eric: AAPM Quality Assurance and Outcome Improvement
Subcommittee
Todd: industrial engineering and statistical techniques
Bruce: interested since '89, industrial engineering
Martin: interested from the 80's, error tracking and reduction
2. The charges to the group were discussed:



The screenshot shows the minutes for a meeting of the Working Group on Prevention of Errors in Radiation Oncology. The meeting took place on July 30th, 2006, from 12 to 2pm at the Sweetwater, Peabody Hotel in Orlando. The minutes list the attendees and discuss the relationship with TG100 and QAOIS, a newsletter article, collaboration with other organizations, and the feasibility of an incident database.

Working Group on Prevention of Errors in Radiation Oncology

12 – 2pm, 30th July 2006
Sweetwater, Peabody Hotel, Orlando

MINUTES

Present: Peter Dunscombe (Chair)
David Followill
Per Halverson
Eric Klein
Michael Mills
Todd Pawlicki

Michael Schell (Guest)
Jim Hevezi (Guest)
Wendy Smith Fuss (Guest)

2. **Relationship of WGPERO to TG100 and QAOIS.**
There was general agreement on the need to coordinate the activities of this Working Group with TG 100 in particular. The QAOI Subcommittee is the parent Subcommittee of this Working Group and Peter D. was recently made a member of QAOIS and hence a reporting relationship has been established. Eric will consider the relationship between this Group and TG100 to ensure consistency of activities.
3. **Newsletter article.**
Peter D. will prepare an article for the AAPM Newsletter describing the activities of the Group. This will be circulated for comments prior to submission.
4. **Collaboration with other professional organizations**
It was generally agreed that some level of interaction with other professional organizations might be necessary. As a first step, Eric will request AAPM liaisons with other groups, such as ASTRO, to inform them of the workings of this Group.
5. **The feasibility of establishing an Incident Database**

TG-100 implementation:

- Working Group on TG-100 implementation formed in 2016 with Peter as Chair

American Association of Physicists in Medicine
Work Group on the Implementation of TG 100
Telecon: Wednesday 16th March 2016 6 pm Eastern

Minutes

Members Present: Peter Dunscombe, Eric Ford, Per Halvorsen, Dan Low, Jean Moran, Jatinder Palta, Frank Rath, Bruce Thomadsen

Not Present: Saiful Huq

AAPM Staff: Lynne Fairbent

1. Welcome and Introductions – Peter Dunscombe

2. Review of Charge

To promote and facilitate the implementation of TG-100 methodology in a multidisciplinary radiotherapy environment.

- Jatinder: Basically 1.5 years ago Excom decided to create an Ad Hoc Committee for the Implementation of TG-100 under Dan Low. This group did preliminary work on how to disseminate TG-100 to AAPM members and the community at large. Last year, Excom decided once TG-100 was published it would be better to make it a Work Group under the Administrative Council. The goal is to create a cohesive approach for implementing TG-100.
- The final acceptance letter from Medical Physics was received Monday, March 14, 2016. Publication is pending.



WGPE enduring impact

- AAPM-ASTRO Safety Summit 2010 – Call to Action
- SPA – promote safety culture locally
- Taxonomy for incident learning
- RO-ILS
- Safety Checklists – MPPG 4

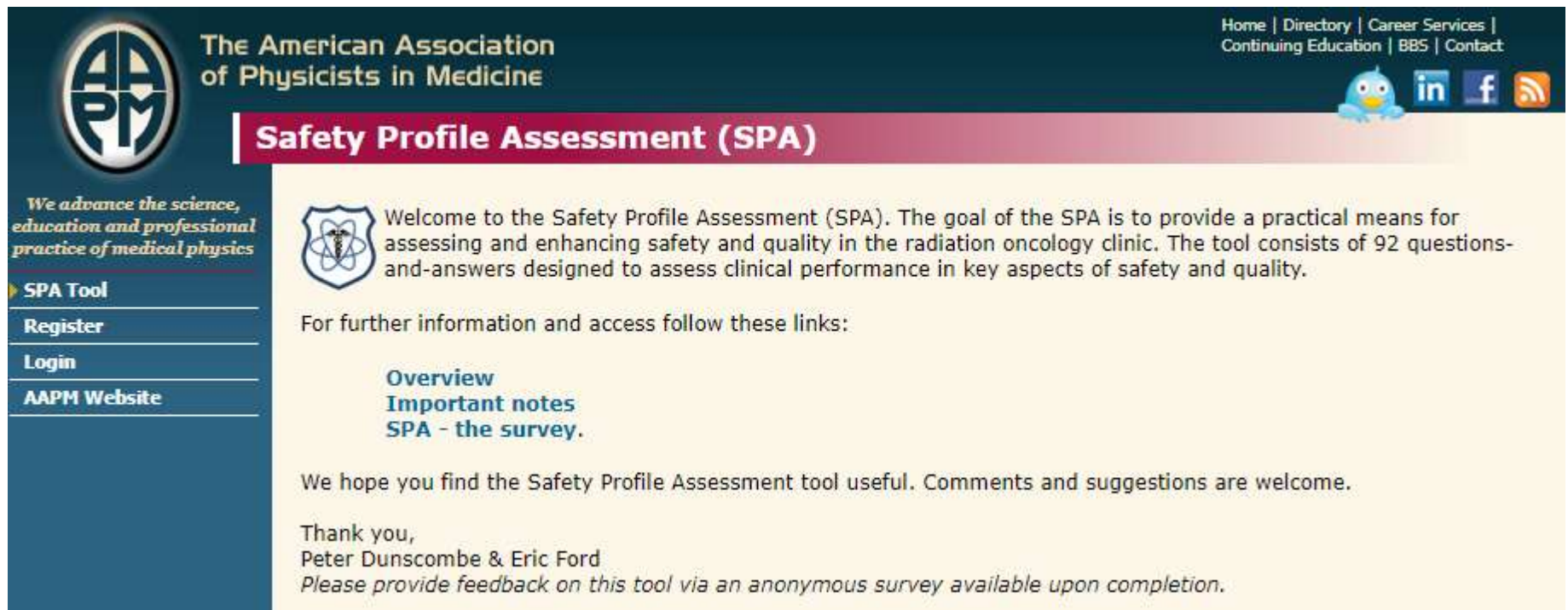
AAPM-ASTRO Safety Summit

- Program directors: Mike Herman & Bill Hendee
- WGPE contributed

All sessions take place in the Ashe Auditorium, 3rd Floor

THURSDAY, JUNE 24		
Time	Title	Speakers/participants
7:00am Registration Opens in the Ashe Lobby, 3rd Floor 7:15am-8:00am Continental Breakfast in the Ashe Lobby		
8:00am-8:15am	Welcome and Introduction	Hendee, Herman, Williams
8:15am-8:45am	The Complexity of Radiation Treatment	Herman, Marks
8:45am-9:30am	What Can Go Wrong in Radiation Treatment	Duncombe, Ibbott, Holmberg
9:30am-10:15am	Errors in Radiation Treatment: The Perspectives of Manufacturers	Guertin, Goldwein, Stein

SPA.aapm.org:



The screenshot shows the homepage for the Safety Profile Assessment (SPA) tool. At the top left is the AAPM logo and the text "The American Association of Physicists in Medicine". At the top right are navigation links: "Home | Directory | Career Services | Continuing Education | BBS | Contact" and social media icons for Twitter, LinkedIn, Facebook, and RSS. A red banner across the top reads "Safety Profile Assessment (SPA)". On the left sidebar, there is a navigation menu with "SPA Tool" selected, and links for "Register", "Login", and "AAPM Website". The main content area features a shield icon with a caduceus, followed by a welcome message: "Welcome to the Safety Profile Assessment (SPA). The goal of the SPA is to provide a practical means for assessing and enhancing safety and quality in the radiation oncology clinic. The tool consists of 92 questions-and-answers designed to assess clinical performance in key aspects of safety and quality." Below this is a link to "For further information and access follow these links:" and a list of links: "Overview", "Important notes", and "SPA - the survey.". A closing message states: "We hope you find the Safety Profile Assessment tool useful. Comments and suggestions are welcome. Thank you, Peter Dunscombe & Eric Ford. Please provide feedback on this tool via an anonymous survey available upon completion."

The American Association of Physicists in Medicine

Home | Directory | Career Services | Continuing Education | BBS | Contact

Safety Profile Assessment (SPA)

We advance the science, education and professional practice of medical physics

▶ SPA Tool

Register

Login

AAPM Website

Welcome to the Safety Profile Assessment (SPA). The goal of the SPA is to provide a practical means for assessing and enhancing safety and quality in the radiation oncology clinic. The tool consists of 92 questions-and-answers designed to assess clinical performance in key aspects of safety and quality.

For further information and access follow these links:

- Overview
- Important notes
- SPA - the survey.

We hope you find the Safety Profile Assessment tool useful. Comments and suggestions are welcome.

Thank you,
Peter Dunscombe & Eric Ford
Please provide feedback on this tool via an anonymous survey available upon completion.

Taxonomy for incident learning

Consensus recommendations for incident learning database structures in radiation oncology

E. C. Ford^{a)}

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P. Dunscombe

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(Received 29 June 2012; revised 16 August 2012; accepted for publication 15 October 2012;
published 26 November 2012)

RO-ILS

- Now >10,000 events logged for analysis



Latest in RO-ILS

10,000 Safety Events: In conjunction with the 5-year anniversary of the program's launch, RO-ILS has now collected over 10,000 safety events in a secure and protected environment! Studies have shown that increased event reporting and a strong safety culture are associated with fewer significant adverse events. Addressing near misses and operational issues helps reduce the likelihood of a major incident reaching a patient.

Safety Checklists

- Initiated by WGPE, became MPPG 4

JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS, VOLUME 16, NUMBER 3, 2015

Medical Physics Practice Guideline 4.a: Development, implementation, use and maintenance of safety checklists

Task Group Authors: Luis E. Fong de los Santos, Chair, Suzanne Evans, Eric C. Ford, James E. Gaiser, Sandra E. Hayden, Kristina E. Huffman, Jennifer L. Johnson, James G. Mechalakos, Robin L. Stern, Stephanie Terezakis, Bruce R. Thomadsen, Peter J. Pronovost, Lynne A. Fairobent, AAPM Staff

(Switching gears)





TG100/WG100 enduring impact

- Multiple training workshops on risk analysis
- Online repository of resources (WIP)
- Incorporated into SINA
- TG reports / MPPGs incorporate risk analysis
- Possible link to accreditation programs

Training

- Summer School 2013, SCM mini-workshop
- Currently working to build a pool of trainers who can run workshops in their local community



2013 AAPM Summer School
Quality and Safety in Radiotherapy: Learning the New Approaches in TG 100 and Beyond
June 16 - 20 · Colorado College · Colorado Springs, Colorado

Home General Information **Program Information** Registration & Housing Getting There Contact Us

Objectives & Outline **Faculty** Free Afternoon DVD Post-Meeting

Faculty

Course Director

Bruce Thomadsen, PhD, *University of Wisconsin*

Program Committee

Peter Dunscombe, PhD, *Tom Baker Cancer Centre*
Eric Ford, PhD, *University of Washington*
Saiful Huq, PhD, *University of Pittsburgh Medical Center*
Todd Pawlicki, PhD, *UCSD Medical Center*
Steven Sutlief, PhD, *VA Medical Center*

Training cont.



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Improving Health Through Medical Physics

My AAPM

AAPM

Public & Media

International

Medical Physicist

Members

Students

Meetings

Education

Quality & Safety

- TG100 Implementation Guide
- Radiation Oncology - Incident Learning System (RO-ILS)
- Safety Profile Assessment (SPA)

QUALITY & SAFETY RESOURCES

Quality & Safety Resources: This site highlights quality and safety tools developed by AAPM committees for use by our members.

- **Safety is No Accident: A Framework for Quality Radiation Oncology and Care**
- **Practical suggestions for dipping your toe in the TG-100 waters**
The Working Group on Implementation of TG-100 has developed this 'tip sheet' based on feedback from the community regarding early experiences with implementation of the risk analysis methodology described in the TG-100 report.
- **Tutorials on Integrating Formal Risk Management (TG-100) into your practice**
These short videos have been created by the Work Group on the Implementation of TG-100 to help AAPM members lead and participate in implementing formal risk management concepts into their clinics. Members are encouraged to use the videos with their teams.
- **Radiation Oncology - Incident Learning System (RO-ILS)**
ASTRO and AAPM sponsor the national RO-ILS system. All members of the public are welcome to access guides, quarterly, and annual reports. These reports can be helpful in identifying opportunities for improvement in individual clinics. (WGROILS, WGPE)

- Plus chapter workshops, EPSM conference Australia 2017, ICMP conference Chile 2019

Online repository (late 2019)

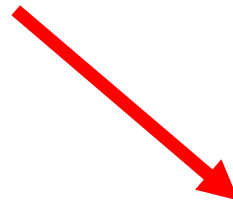
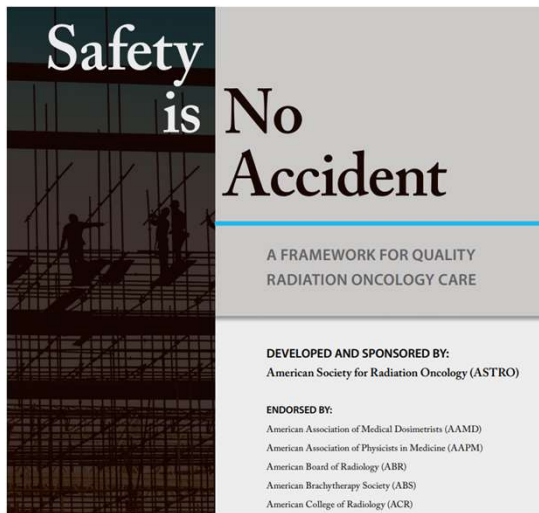
Purpose:

To provide practical resources to assist clinical physicists in implementation of TG-100 prospective risk analysis methods in their clinical practice

Overview:

- Hosted by AAPM on its Medical Physics Electronic Content platform: <http://mpec.aapm.org>
- Moderated by sub-group UN-37 of the Working Group on TG-100 implementation
- Content freely accessible to the public

SINA



3.4.5. Risk Analysis

AAPM's Task Group 100 described another structured framework within which the clinical team can analyze and mitigate risk to enhance the safety and quality of a clinical process.¹⁹ The Task Group 100 approach also starts with the clinical team developing a process map.

TG reports / MPPGs

Task Group No. 275 - Strategies for Effective Physics Plan and Chart Review in Radiation Therapy (TG275)

- [bookmark this page](#) (bookmarks show under "My AAPM" in the menu to left)

[Committee Website](#) | [Directory: Committee](#) | [Membership](#)

Email You may send email to this group now using [gmail](#) or [outlook](#).
- or -

You may save the address 2019.TG275@aapm.org to your local address book. This alias updates hourly from the AAPM Directory.

- | Charge |
|---|
| 1. To review existing data and recommendations that support the use of physics plan and chart review; and to review the current recommendations on the qualifications for performing these. |
| 2. To provide survey information on current practices in the community with respect to physics plan and chart review. |
| 3. To provide risk-based recommendations for the effective use of the following physics review: initial plan and chart check, weekly chart check and end-of-treatment chart check. |
| 4. To provide recommendations to software vendors for systems design and operations that best facilitate physics plan and chart review. |

Chair



Eric Ford
Task Group Chair

AAPM Medical Physics Practice Guideline 8.a.: Linear accelerator performance tests

Koren Smith¹ | Peter Balter² | John Duhon³ | Gerald A. White Jr.⁴ | David L. Vassy Jr.⁵ | Robin A. Miller⁶ | Christopher F. Serago⁷ | Lynne A. Fairobent⁸

¹Mary Bird Perkins Cancer Center, Baton Rouge, LA, USA

²MD Anderson Cancer Center, Houston, TX, USA

³e+ Oncologics, Lafayette, LA, USA

⁴Colorado Associates in Medical Physics, Colorado Springs, CO, USA

⁵Spartanburg Regional Healthcare System, Spartanburg, SC, USA

⁶Northwest Medical Physics Center, Lynnwood, WA, USA

⁷Mayo Clinic, Jacksonville, FL, USA

⁸AAPM Headquarters Staff, Alexandria, VA, USA

Abstract

Purpose: The purpose of this guideline is to provide a list of critical performance tests in order to assist the Qualified Medical Physicist (QMP) in establishing and maintaining a safe and effective quality assurance (QA) program. The performance tests on a linear accelerator (linac) should be selected to fit the clinical patterns of use of the accelerator and care should be given to perform tests which are relevant to detecting errors related to the specific use of the accelerator.

Methods: A risk assessment was performed on tests from current task group reports on linac QA to highlight those tests that are most effective at maintaining safety and quality for the patient. Recommendations are made on the acquisition of

Non-AAPM work

Journal of Medical Imaging and
RADIATION SCIENCES
Research Informing Practice



The Canadian Partnership for Quality Radiotherapy: Why us? Why now? And What About You?

Brian Liszewski, MRT(T), BSc, [Caitlin Gillan](#), MRT(T), BSc, MEd, [Gunita Milera](#), BSc, MRT(T), MBA, PhD(c), [John French](#), DCR(T) MSc, FCAMRT, CHE, [Suzanne Drodge](#), [Eve-Lyne Marchand](#), BSc, MD, PhD, FRCPC, [Jean-Pierre Bissonnette](#), PhD, MCCPM, FCOMP, [Erika Brown](#), [Michael Brundage](#), MD, [Peter Dunscombe](#), BSc, PhD



ELSEVIER

Contents lists available at [ScienceDirect](#)

Radiotherapy and Oncology

journal homepage: www.thegreenjournal.com

ESTRO-HERO survey

Guidelines for equipment and staffing of radiotherapy facilities in the European countries: Final results of the ESTRO-HERO survey



Peter Dunscombe^a, Cai Grau^b, Noémie Defourny^c, Julian Malicki^d, Josep M. Borrás^e, Mary Coffey^f, Marta Bogusz^g, Chiara Gasparotto^c, Ben Slotman^h, Yolande Lievens^{i,*}, on behalf of the HERO consortium¹

^aUniversity of Calgary, Calgary, Canada; ^bAarhus University Hospital, Denmark; ^cEuropean Society for Radiotherapy and Oncology, Belgium; ^dPoznan University of Medical Sciences and Greater - Poland Cancer Centre, Poland; ^eUniversity of Barcelona, Spain; ^fTrinity College Dublin, Ireland; ^gCancer Diagnosis and Treatment Center, Katowice, Poland; ^hVU University Medical Center, Amsterdam, The Netherlands; ⁱGhent University Hospital, Belgium



ELSEVIER

Contents lists available at [ScienceDirect](#)

Radiotherapy and Oncology

journal homepage: www.thegreenjournal.com



IAEA QUATRO audits in Europe

Improving the quality of radiation oncology: 10 years' experience of QUATRO audits in the IAEA Europe Region



Joanna Izewska^{a,*}, Mary Coffey^b, Pierre Scalliet^c, Eduardo Zubizarreta^a, Tania Santos^a, Ioannis Vouldis^a, Peter Dunscombe^d

Non-AAPM work

i.treatsafely

PRACTICAL LEARNING FOR RT PROFESSIONALS

Who are we?

Peter Dunscombe, Ph.D., FCCPM, FAAPM, FCOMP



In 2001, he moved to Calgary as Director of Medical Physics and Professor of Oncology at the Tom Baker Cancer Centre, where he is responsible for the medical physics support of the radiation treatment program as well as CAMPEP accredited graduate, certificate and residency programs.

His professional interests include error management, the economics of radiation treatment, objective approaches to quality assurance and the training and education of medical physicists. Peter also collaborated with Todd on the first textbook in radiotherapy that is dedicated to quality and safety.

Derek Brown, Ph.D., FCCPM



Derek is a Medical Physicist at the Tom Baker Cancer Centre and Adjunct Assistant Professor in the Departments of Oncology and Physics and Astronomy at the University of Calgary where he started in 2008. He is Co-Director of the University of Calgary CAMPEP accredited graduate specialization in Radiation Oncology Physics and continues to develop

on-line modules for advanced education of radiation medicine professionals in specialized techniques such as LDR prostate brachytherapy.

Derek also chairs the multidisciplinary Quality Improvement Committee in the Radiation Treatment Program at the Tom Baker Cancer Centre.

What is i.treatsafely?

i.treatsafely was created to provide easy access to high quality, practical learning videos. It's a vetted, peer-to-peer learning site dedicated to both general education as well as application-specific training. Because it's peer-to-peer, you get real clinical information from people who actually use the information clinically. This is good stuff!

What's our mission?

Our mission is to improve Quality and Safety in Radiation Therapy by offering high-quality learning videos that deliver practical clinical and QA skills.


Sasa Mutic, Ph.D., DABR, FAAPM



Sasa is currently a Professor and Co-Director of the Medical Physics Division at the Department of Radiation Oncology, Washington University School of Medicine, Mallinckrodt Institute of Radiology, St. Louis Missouri where he has been since 1996. Significant portions of Sasa's clinical and research activities are concentrated around patient safety, treatment quality and process improvement.

Sasa has also participated in numerous activities with AAPM, ASTRO, and IAEA on improving patient safety and treatment quality across the field. He actively participates in several formal radiation oncology education programs where he promotes these topics as well.

<https://i.treatsafely.org>

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5. **Committee meeting at AAPM: 7/14, 2:00-3:00**
 6. **Business Arising and not on the Agenda**