



The purpose of the *Radiation Treatment Program (RTP) Newsletter* is to provide updates on RTP quality projects and highlight current provincial initiatives.

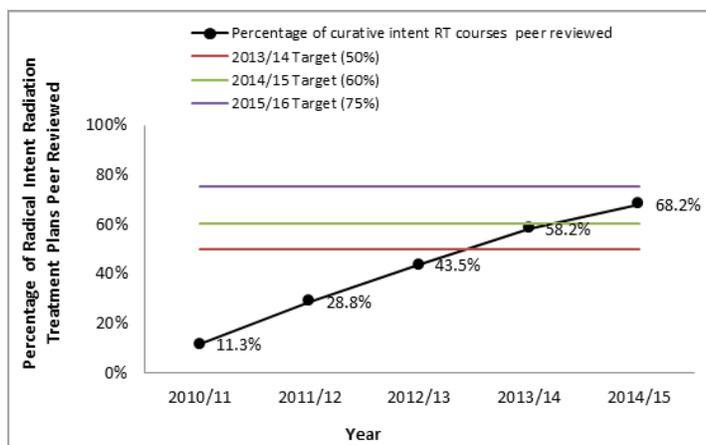
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## Radiation Oncology Peer Review Quality Assurance (PRQA) Project Update

### How are we currently performing?

For the past two years, CCO provincial targets for the percentage of radical intent radiation treatment courses to be peer reviewed have been exceeded on an aggregate level across centres. However, considerable variation in performance exists between regional cancer centres (RCCs) (38% to 99% in 2014/15). There is a need to better understand and devise approaches to address this variation.



### What comes next?

CCO is working in collaboration with RCC stakeholders to identify priorities for the PRQA Project in 2015/16 and beyond. Some potential future directions that are under consideration include:

- Developing general and **site-specific guidance** for conducting peer review
- Enhancing the **roles of MRT(T)s and physicists** in peer review
- Expanding plan review to include **complex palliative cases**
- **Reducing regional variation**
- **Ensuring peer review is timely** to ensure maximum benefit to patients
- Identifying and piloting technology to support **inter-centre peer review**

### What did we accomplish this year?

- **August 2014:** Data collection phase of the outcomes pilot study was completed
- **May 2014:** Public reporting of radiation treatment peer review commenced through the [CSQI](#)
- **November 2014:** Qualitative interviews began with RO Heads and RT Managers to better understand barriers and facilitators to peer review, and to gain input on future directions for the project
- **April 2015:** Peer Review Project Meeting in Toronto was held with RCC PRQA project partners to share preliminary findings from the outcomes pilot study and to solicit input on next steps for the project

### To share questions or comments regarding the PRQA initiative

Please contact Lindsay Reddeman,  
Senior Specialist, Radiation Treatment Program  
([Lindsay.Reddeman@cancercare.on.ca](mailto:Lindsay.Reddeman@cancercare.on.ca))

# Centre Spotlight: *The Odette Cancer Centre*

## ***Towards MR Guided Radiotherapy at the Odette Cancer Centre***

The Odette Cancer Centre (OCC) treats more than 250 prostate cancer and 140 gynecological cancer patients each year, making it one of the larger brachytherapy programs in the province. As such, OCC has decided to invest in its brachytherapy program by embarking on a major construction project to update its supporting infrastructure.



As part of this infrastructure update, a brand new OR will be created and outfitted with a Philips 1.5 T Ingenia MR scanner. This suite will not only support external beam treatment planning, but will also provide interventional guidance during brachytherapy procedures with general anesthesia capabilities. The brachytherapy renovations including installation of the MR system is slated for completion by the end of 2015. Due to the proximity of these renovations with other construction projects within the centre, all work must occur contemporaneously.

This large undertaking has been made possible through the support of CCO and the cohesive team effort of senior

leadership, medical physicists, radiation oncologists, radiation therapists and architectural/engineering consultants. It is with great anticipation that we look forward to the completion of this project; thereby, increasing the access to MR imaging for radiation oncology patients in Ontario.

### ***How can I highlight the activities taking place at my centre?***

If you would like to submit articles for the RTP Newsletter, please contact Elizabeth Lockhart, Team Lead for the RTP at [Elizabeth.Lockhart@cancercare.on.ca](mailto:Elizabeth.Lockhart@cancercare.on.ca)

Ananth Ravi, PhD, MCCPM

Deputy Head, Medical Physics, & Lead Brachytherapy,  
Sunnybrook Odette Cancer Centre

Assistant Professor, Department of Radiation Oncology, University of Toronto

## ***A New Management Model at Odette Cancer Centre in Radiation Therapy***

With the retirement of our long-standing manager **Ms. Sheila Robson** (after more than 25 years of service at the Odette Cancer Centre), the senior leadership team harnessed an opportunity to review the organizational structure within the Radiation Therapy Department.

As we move towards a more interprofessional and collaborative delivery of care, it was decided that an operational and practice partnership model would align with the broader organizational priorities. In particular, this would bridge the strategic priorities of the radiation treatment program to the broader organization.

**Mr. Stephen Russell** has been appointed as the new manager of radiation therapy to oversee the operational processes of the radiation therapy department as we implement new innovative treatment delivery services. He will work in close partnership with **Ms. Lisa Di Prospero**, the newly appointed professional leader for radiation therapy who will oversee the professional practice. Together this partnership will ensure that as new technologies are introduced, clinical implementation will be closely tied to practice, education and research to ensure that all efficiency and quality standards are met.



Lisa Di Prospero, M.R.T.(T.), BSc., MSc.,

Professional Leader, Radiation Therapy Department & Manager, Research and Education, Radiation Therapy  
Odette Cancer Centre at Sunnybrook

Assistant Professor, Department of Radiation Oncology, University of Toronto

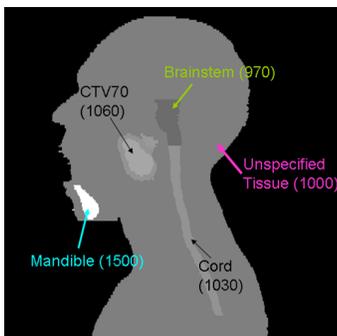
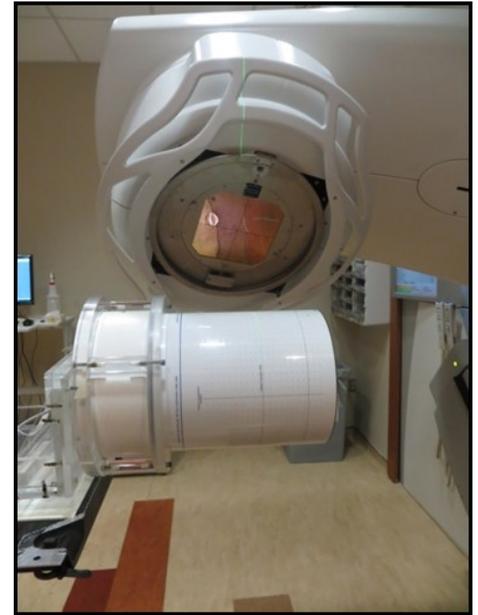
Associate Member, Institute of Medical Sciences, School of Graduate Studies, University of Toronto



# The Collaborative Quality Assurance (CQA) Program

In 2009, the Intensity Modulated Radiation Therapy (IMRT) Collaborative Quality Assurance (CQA) program was developed by physicists **Daniel Létourneau**, **Andrea McNiven** and **David Jaffray**, with the goal of developing an IMRT quality assurance program that would ensure high quality treatment delivery of IMRT across the province.

With the collaboration of regional cancer centres (RCCs) across the province, the CQA Program aimed to verify and evaluate the external planning and delivery process across institutions. The process used by the CQA Program includes an end-to-end test, which covers all steps of the radiotherapy process including CT imaging, image segmentation using automated tools, treatment planning, setup and dose delivery. This is achieved by using a single case dataset which is sent to each centre for planning and delivery in advance of a site visit from the CQA team. Each centre uploads the dataset into their own treatment planning system, and plans for treatment for the case presented. After planning, the CQA team conducts a site visit and the treatment plan is delivered onto a dosimetry verification phantom, which measures the amount of variation in the treatment delivery.

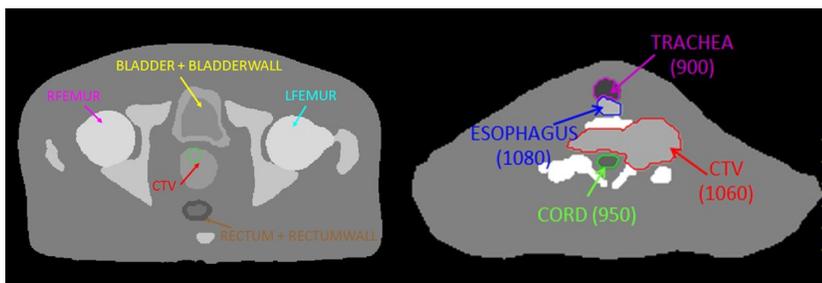


*Sagittal slice illustrating the contours that are required*

During the first year of this program, a head and neck (H&N) case was presented, and planned-to-delivered dose agreement (pass rates) for 3%/3-mm gamma evaluation were greater than 90% (92.6%-99.6%) ([Létourneau et al., 2013](#)). Despite all centres having acceptable results, variations in planned-to-delivered dose agreement for the same planning and delivery platforms were noted. During the second and third years of the CQA Program, new treatment sites were introduced for the treatment planning exercise (prostate and spine Stereotactic Body Radiation Therapy (SBRT) respectively) while also redelivering the H&N plan from Year 1 where possible.

Going forward, the CQA program will provide centres the opportunity to re-plan previous sites in Year 4 due to many site changes in delivery technique and infrastructure. This may assist in determining the effect of these changes on the quality of the treatment delivery.

Further diagnostic testing has also been introduced to the site visits each year in order to help identify factors contributing to the variations among centres and provide more specific feedback to the participating RCCs.



*Axial slices illustrating the contours that are required*

The CQA program continues to provide an intensive IMRT QA service for all RCCs across the province. Results from this program are continuously shared with centres and the Physics Professional Advisory Committee (PPAC) and the CQA Advisory Committee at CCO in hopes to reduce overall variability in delivered care.

## **To share questions or comments regarding the CQA initiative**

Please contact Daniel LéTourneau ([Daniel.Letourneau@rmp.uhn.on.ca](mailto:Daniel.Letourneau@rmp.uhn.on.ca)) or Andrea McNiven ([Andrea.McNiven@rmp.uhn.on.ca](mailto:Andrea.McNiven@rmp.uhn.on.ca))

# Updates from our Centres

## Staffing News

- **Jenna King** joined the Physics department (Oct 2014) and **Sheila Sze** commenced as a Palliative CSRT (Nov 2014). **Julie Stanford**, Radiation Therapy Supervisor, started a temporary role as the Manager of Outpatient Clinics (Oct 2014—June 2015). **Julia Brown** has assumed the Radiation Therapy Supervisor role for this period of time. (*Simcoe Muskoka*)
- **Dr. Christiaan Stevens** started as Interim Head of the Radiation Treatment Program and Clinical Director of the Cancer Program. Many thanks **Dr. Gerard Morton** for his leadership as Interim Head over the past 2 years. (*Simcoe Muskoka*)
- **Dr. Medhat El-Mallah** assumed the role of Head of Radiation Oncology and CCO Regional Radiation Clinical Lead (Oct 2014) and **Carrie Laverigne** started in the new role of Palliative CSRT (March 2015). Recruitment of a RO is underway. (*Durham*)
- **Dr. Miller MacPherson** started as the new Chief of Medical Physics in Summer 2014. **Kelly Linden** started in the new role of Palliative CSRT in Fall 2014 and is focusing on the implementation of a rapid palliation clinic. (*Ottawa*)
- **Maitry Patel** joined the cancer program as a Physician Assistant, working with Dr. Richard Tsang (Nov 2014). (*PMH*)
- **Dr. Scott Bratman** was appointed as the new Staff Radiation Oncologist – Clinician Scientist at the department of Radiation Oncology and scientist at the Princess Margaret Cancer Centre Research Institute (Sept 2014). Dr. Bratman’s clinical practice is in Head & Neck cancer and his research focus is the further evaluation/characterization of circulating DNA in human malignancies. (*PMH*)

## Awards and Academic Achievements

- The following individuals presented at the RTi3 conference (Mar 2015): **Amanda Marrone, Abby Cole, Adam Michalak, Janice Kim, Michelle Grieg** (*Simcoe Muskoka*); **Krista Bota** (*London*); **Yasir Khalid, Asma Ali, Zafir Yousuf, Charmainne Cruje** (*Peel*); **Jason Martel, Renee Roy** (*North East*) Conference abstracts can be viewed [here](#).
- **Helen Butlin**, Spiritual Care Specialist, delivered a keynote address at RTi3 and spoke about Practice CALM, a joint project of the radiation therapy and spiritual care programs. (*London*) RTi3 Award for Best Poster went to **Raj Ravi** - “Comparison of immobilization devices used for radical lung treatment” (*Peel*)
- The following individuals presented at the COMP Winter School (Jan 2015): **Cassandra Costello, Muoi N Tran, Kyle Malkoske** (*Simcoe Muskoka*); **Lisa Tarini** (*North East*)
- **Kasey Etrene** presented at the 6th International Conference on Patient and Family Centred-Care: Partnerships for Quality & Safety and the 39th American Society of Radiologic Technologists. (*North West*)
- **Allison Walker** received the United Way Labour Appreciation Award, recognizing her fundraising efforts in 2014. (*London*)
- **Dr. Pdraig Warde** was named an Honorary Fellow of the Faculty of Radiologists of the Royal College of Surgeons in Ireland. The Fellowship is the College’s highest distinction. He was recognized for outstanding achievements in radiation oncology. (*PMH*)
- The late **Dr. Pam Catton**, together with **Audrey Friedman**, Patient and Family Education and Cancer Survivorship program, received the **20 Faces of Change** award from The Change Foundation. This award honors individuals that have led significant positive changes to Ontario’s health care system. **Dr. Catton** also received the 2014 American Association for Cancer Education’s Margaret Hay Edwards Achievement Medal. (*PMH*)
- **Dr. John Waldron** was nominated for the Gerald Kirsh Humanitarian Awards which recognizes the exemplary and compassionate patient care provided by staff and volunteers. **Kevin LeNeve** won the Michale Kamin Hart Award for Excellence in Adolescent and Young Adult Oncology Care in March 2015. **Dr. Laura Dawson** was awarded the CCSRI Quality of Life Research Grant in February 2015 that will provide 3-year funding for her research. (*PMH*)

## CCO RTP Updates

- Congratulations to **Dr. John Kim** on his appointment as the CCO Ontario Head and Neck Cancers Lead and to **Dr. Lisa Barbera** on her appointment as the CCO Clinical Lead of Patient Reported Outcomes (PROs).
- **Dr. Pdraig Warde** was reappointed as Provincial Head of the CCO RTP. Dr. Warde has served as the Provincial Head since 2009 and has demonstrated outstanding leadership in advancing the quality and safety of radiotherapy in Ontario.
- **Dr. Michael Brundage and Margaret Hart** presented on their provincial peer review work at COMP Winter School (Jan 2015).

# Updates from our Centres *(Cont.)*

## Staff/Program Impact and Updates

- The Simcoe Muskoka Regional Cancer Centre commenced use of **IV contrast during CT simulation** and use of **SBRT for lung cancer**. The centre will also be upgrading Varian IX linear accelerators with flattening filter free mode this spring. *(Simcoe Muskoka)*
- **Radiation Oncology (RO) Care Plans** were introduced for all treatment sites (Mar 2015) and will facilitate coordination of the RT process from CT simulation to treatment delivery on a single platform (MosaiQ). Especially beneficially for patients receiving concurrent chemotherapy, the RO care plans will allow for greater transparency of care with medical oncology partners. *(Southlake)*
- The **SBRT program** for early stage tumours of the lung was launched (July 2014). To date, 17 patients have been treated successfully, with the 18th patient scheduled to start treatment in spring 2015. *(Southlake)*
- Multi-disciplinary **Diagnostic Assessment Programs** have been established for rapid access to RT for lung and prostate patients. *(WFCC)* An **inter-centre peer review system** for lung and GU cases has been developed using a shared Pinnacle virtual network client. *(JCC/WFCC)* Installation of a **MR Sim** was completed; on-site training and test scanning is underway. *(JCC)*
- **Julie Downes** and **Allison Walker** organized Cuts for Cancer (March 2015), an event where staff donated their hair for the fabrication of wigs for cancer patients. This event also raised over \$6,500 for the Canadian Cancer Society. *(London)*
- Installation of the 3rd **TrueBeam replacement linac** is underway; complementing the two installed in 2014. *(Peel)*
- The 2nd **Elekta Infinity** treatment unit went live (Sept 2014). The **lung stereotactic ablative radiotherapy program** was expanded to the Algoma District Cancer Program and now treats palliative patients at both cancer program sites. As a LEAN initiative, sustained use of a Staff IDEA board has resulted in the completion of over 150 process improvement ideas. A "Patient Story" video has been developed and patient interviews will be used to identify opportunities for improvement. *(North East)*
- **Dr. Libni Eapen** will be the Principal Investigator for the **NRG GU001 trial**: "Randomized Phase II Trial of Postoperative Adjuvant IMRT Following Cystectomy for pT3/pT4 Urothelial Bladder Cancer". Three Ottawa procedures were cited in the Canadian Nuclear Safety Commission article in the **Canadian Medical Physics Newsletter** on "**Practices That Go Beyond Expectations**": environmental dosimeters, QAttrack+ software for tracking QC test results, and internal audit practices. *(Ottawa)*
- An agreement has been reached regarding the purchase of the first Canadian dedicated stereotactic unit for breast cancer, the **GammaPod**. Licensing installation and commissioning is expected to take 1 year, with the goal of treating the first patient in Spring 2016. For additional information, please contact **Dr. Jean-Michel Caudrelier** at [jcaudrelier@toh.on.ca](mailto:jcaudrelier@toh.on.ca) *(Ottawa)*
- Landmark research on tumour genomic and microenvironmental heterogeneity for predicting recurrence risk of prostate cancer, conducted by **Dr. Rob Bristow** and his research team, was published in **Lancet Oncology** in December 2014. This study was also selected as one of the Canadian Cancer Society's top 10 research stories of 2014. *(PMH)*
- **Dr. Daniel Létourneau**, **Dr. David Jaffray** and team received an Honourable Mention in Innovation at the [Cancer Quality Council of Ontario's 8th Annual Quality and Innovation Awards](#) for developing and implementing the **AQUA (Automated QUality Assurance) system** - a centralized quality management tool for managing, analyzing, documenting and storing QA tests and results in real time. *(PMH)*

**We want to hear from you! Please send your ideas for RTP Newsletter Spotlights and Updates and your feedback to [RTP@cancercare.on.ca](mailto:RTP@cancercare.on.ca)**

If you have any questions about the content of this newsletter or about the RTP, don't hesitate to contact us. You can reach us by sending an email to our general mailbox ([rtp@cancercare.on.ca](mailto:rtp@cancercare.on.ca)) or contacting us individually.

**Dr. Padraig Warde**  
RTP Provincial Head

[Padraig.Warde@cancercare.on.ca](mailto:Padraig.Warde@cancercare.on.ca)

**Eric Gutierrez**  
RTP Program Manager

[Eric.Gutierrez@cancercare.on.ca](mailto:Eric.Gutierrez@cancercare.on.ca)

**Elizabeth Lockhart**  
RTP Team Lead

[Elizabeth.Lockhart@cancercare.on.ca](mailto:Elizabeth.Lockhart@cancercare.on.ca)

**Lindsay Reddeman**  
RTP Senior Specialist

[Lindsay.Reddeman@cancercare.on.ca](mailto:Lindsay.Reddeman@cancercare.on.ca)

**Michelle Ang**  
RTP Specialist

[Michelle.Ang@cancercare.on.ca](mailto:Michelle.Ang@cancercare.on.ca)

**Helene Buwalda**  
Executive Secretary

[Helene.Buwalda@cancercare.on.ca](mailto:Helene.Buwalda@cancercare.on.ca)