

IMPACT

Influencing Models of Practice with
Advanced Competency in Therapeutic Radiation

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Spring 2021

Greetings from the Editor in Chief

Kitty Chan

Co-Chair, CSRT Community of Practice (CoP)



Welcome to the 7th edition of the IMPACT newsletter. At the time of writing, we marked the one-year anniversary of the first COVID-19 presumptive case reported in Ontario, Canada. A year ago, we were presented with one of the most difficult challenges in our lifetime. Radiation therapists stepped up, adapted to the rapidly changing environment and showed the world why we had chosen this career in the first place. I would like to express my deepest respect and gratitude to all frontline healthcare workers for working selflessly over the past year during the COVID-19 pandemic.

Despite a tough year, CSRTs continued to thrive and commit to leadership positions beyond our roles. A big shout out to our CSRT CoP members **Darby Erler** (Odette Cancer Centre) and **Grace Lee** (Princess Margaret Cancer Centre), co-chairs of the RTi3 Conference, for making the difficult decision to cancel the conference in 2020 and reformatting it for the virtual world in 2021.

In this issue, a few of our CSRTs will share their role adaptations during this pandemic. You will read:

- Feature: The CSRT impact on Ontario's cancer care system during the COVID-19 pandemic
- Expanding the Advanced Practice role to the global stage
- A celebration and highlight of two of our members

We hope you enjoy!

Please email impact.RTCoP@gmail.com to subscribe to our bi-annual newsletter. Access previous IMPACT Newsletters [here](#).

About Us

The Clinical Specialist Radiation Therapist (CSRT) role was introduced by HealthForce Ontario in 2006. Subsequently, the CSRT Community of Practice (CoP) was formed in 2015 to facilitate initiatives to ensure cancer patients in Ontario, Canada receive the highest quality of care and to advocate for a collective CSRT/APRT identity. There are currently 22 CSRTs employed in 10 cancer centres in the province of Ontario, Canada.

Feature:

The CSRT impact on Ontario's cancer care system during the COVID-19 pandemic



Nicole Harnett
Advisor, CSRT Community of Practice

Practitioners in advanced practice roles are expected to possess the competencies that position them to be able to pivot and adjust to new and changing pressures in the health care system. This has likely never been, nor may ever be again, more evident than over the past 12 months as the world faced the COVID-19 pandemic. The impact of COVID-19 resonated from our home and personal lives, to much broader domains, including how and when patients sought out medical care AND what care was available to them if they did seek it. Below are some tales from the trenches recounting how some of our CSRTs responded to the shifts in their local practices because of COVID-19.

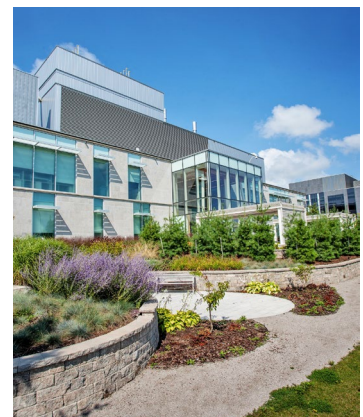


Sheila Sze
Palliative CSRT, Royal Victoria Regional Health Centre

The impact of the COVID-19 pandemic was felt widely through all practices at the Simcoe Muskoka Regional Cancer Program. At the beginning of the pandemic, all referrals for radiation oncology (RO) were prioritized by urgency and a subpopulation of patients were delayed. From May to June 2020, the overall number of RO referrals declined.

The CSRT role was leveraged for the consultation and planning of a record number of 24-hour turnaround urgent cases. This included a new protocol of same-day consultation and treatment regimen. Sheila also completed contours for patients beyond those that are seen in the palliative clinic.

New patient consultations, review appointments, and follow-up appointments were shifted to virtual interactions (phone or video) whenever feasible. A pre-new patient consultation phone assessment was conducted by Sheila to gather the patient's medical history. This assessment minimized the patient's time spent in the hospital and provided an opportunity to identify patients that may not require an in-person appointment.



Simcoe Muskoka Regional Cancer Centre



Michele Cardoso
Breast Site CSRT, Juravinski Cancer Centre (JCC)

Michele was involved in three pandemic related initiatives at the JCC. Firstly, she led a project to enhance access to patient education materials to support the shift of in-person clinics to virtual care. Her team optimized patients' access to electronic health care records, especially their COVID-19 test results.

Secondly, as the Breast Site CSRT and the Chair of the Breast Technology Team, Michele monitored the uptake of the new five-fraction treatment protocol for whole breast, partial breast, loco-regional and VMAT techniques.

She provided oversight for this new treatment protocol and created treatment and imaging guidelines. All radiation oncology consults migrated to a virtual platform. Prior to the patient's in-person CT-simulation appointment where the first physical examination would be performed, Michele would call selected patients to explain any special planning and/or treatment considerations. Then, during the initial phase of implementation, Michele would also attend the first treatment to review images per the established medical directive.

Finally, Michelle has created a weekly Resiliency newsletter for the JCC Radiation Therapy department that incorporates wellness resources and celebrates the team during this difficult time.



Weekly Radiation Therapy Resiliency Newsletter at JCC



Emilia Timotin
Brachytherapy CSRT, Juravinski Cancer Centre (JCC)

In JCC, brachytherapy is administered for symptom relief to patients with esophageal cancer. The COVID-19 pandemic caused the suspension of endoscopic procedures in the brachytherapy program, gastroenterology/bronchoscopy clinics and also outpatient consultation because these appointments all involved aerosol generating medical procedures (AGMPs). In March 2020, all thoracic brachytherapy procedures were cancelled.

Patients with esophageal cancer were offered external beam radiation therapy (EBRT) instead of brachytherapy. Emilia was designated as the main point of contact for physicians and patients from March to June of 2020. She was responsible for organizing urgent virtual consultations between the multidisciplinary team of surgeons, radiologists, medical oncologists, and radiation oncologists. Being the key member of the brachytherapy team on site at that time, she discussed treatment decisions with patients. Emilia was also the pivot person in bone metastases clinic (triage, rapid access palliative radiotherapy) and the gynecology brachytherapy interdisciplinary team.

To minimize staff and patients' risk exposure to COVID-19, more telephone consultations were conducted, especially for review appointments during EBRT. Emilia's most important responsibility was addressing patients' fear and anxiety about changes in treatment, to ensure a positive patient experience during this difficult time.

A Message from CAMRT: Momentum for Expanding Advanced Practice

Laura Zychla

Project Manager, Canadian Association of Medical
Radiation Technologists (CAMRT)

Simply said, the importance of advanced practice radiation therapy (APRT) roles is on the rise. I won't dive into how the pandemic contributes to showcasing the value of APRT(T)* positions – let's look beyond this moment (vaccines are on their way) and discuss what happens next in the advanced practice world...

In conducting a review of the literature, CAMRT has been able to conceptualize the trajectory of advanced practice and construct a framework that demonstrates the major steps from conceptualization to expanding the APRT(T) phenomenon to the global stage (see Figure 1). In Canada, there are many well-referenced articles on role construction and validation, a certification process for advanced practice has been implemented by CAMRT, and some provinces beyond ground zero have started to assess the viability of RT roles with advanced practice duties. Thus, we have moved beyond evaluation and development of our foundational infrastructure to ensure that advanced practice is here to stay.

From my perspective, we are formally and collectively working to build up national naturalization, the replication and expansion of roles beyond those considered early adopters.

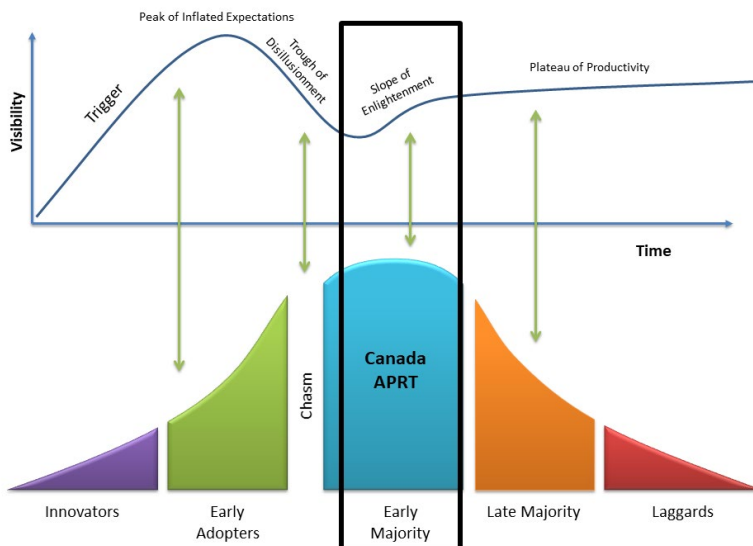


Figure 2: Canadian APRT –
Adoption and Productivity Curves



Figure 1: Canadian APRT Construction Framework

We have surpassed the hurdles of balancing expectations with practicality and moved on from the pivotal moment encountering the trough of disillusionment, and are well situated to continue piquing the interest of the early majority through the evidence-based knowledge gathered to date (see Figure 2).

This begs the question as to how we can move to creating APRT(T) roles in other provinces / territories and complete this national naturalization stage. The APRT Committee in conjunction with CAMRT has created our next phase of projects, fondly called, “APRT Utopia.” This idea comes from the notion that we have built our foundation well and, now, there is space to elevate it. All of the wish-list projects, the brainstorming ideas, and what-if scenarios now have a place for discussion. Ultimately, the goal is to create advanced practice in Canada through an idealistic lens to stretch our thinking and goals.

In 2021, without giving away too much detail, we look forward to polishing our validated certification processes and documentation to increase efficiency and allow for more candidates to enroll, further building the image of advanced practice in Canada, contributing to products that support implementing advanced practice roles, and continuing to network and publicize the benefits of APRT adoption in large scale (Canada and internationally). These are exciting times in the evolution of APRT in Canada. We are creating our gold standard and welcome your opinion of what “APRT Utopia” looks like to you and your facility. Please submit any comments you may have to Laura Zychla, Manager of Professional Practice and Research at CAMRT (lzychla@camrt.ca).

*Advanced Practice Registered Technologists, (Radiation Therapy)

Our People

Recognizing our new APRT(T)s and CSRTs



Congrats to the newest APRT(T)!

Joanna Javor, Palliative CSRT, Princess Margaret Cancer Centre

Joanna graduated from the Medical Radiation Sciences Program in 2006 and subsequently obtained her Masters of Health Science degree in 2017. Her passion has always been palliative radiotherapy and she became the palliative CSRT in 2017. In this role, she sees palliative patients in consultation and helps to expedite their care from clinic to the treatment unit. Her role also involves research, leadership, and education. Her most recent research project looked at improving the quality of care palliative radiotherapy patients receive by showing that advancements in technology allow improved dose distributions and reduced treatment times with VMAT with similar planning time to conventional field based plans. This research project showed that utilizing these advancements led to better quality plans, reducing dose to normal tissues — which could potentially reduce acute side effects of treatment — and improve their quality of life. She worked with a radiotherapy student on this project and received a University of Toronto Excellence in Research Education Award (2019).

Joanna has recently taken on the role of Radiotherapy Lead for the implementation of an oligometastases program to help facilitate SABR-COMET10 international clinical trial her institution. Her team was the recipient of the Clinical Award for Innovation (2020), Radiation Medicine Program, Princess Margaret Cancer Centre for this exciting venture.



CSRT Spotlight

Hon Biu Chan, Head & Neck CSRT, Princess Margaret Cancer Centre

Hon Biu Chan is one of the first CSRTs in Ontario. He graduated in 1987 in Hong Kong, came to Canada, and joined Princess Margaret Hospital in 1990. He became a Certified Medical Dosimetrist in 1997 and obtained Magnetic Resonance Imaging registration in 2004. Biu completed his Master of Medical Radiation Science degree in 2011. His interest has always been providing better disease localisation through advanced imaging. Seeing the opportunity to help patients in a new way through the CSRT pilot project in 2007, Biu successfully applied for the Target Visualisation and Delineation CSRT position in the Head and Neck site group. As a CSRT in the Head & Neck team, Biu helps the Radiation Oncologist in contouring and more accurately delineating disease using multi-modality imaging. To help with knowledge transfer, Biu runs a one week mandatory treatment planning course for PGY4 residents of the University of Toronto, in which he also teaches image registration and OAR contouring. Biu's current research interest is in treatment dose accumulation and radiomics to support the strategy of personalised radiation medicine. Biu currently serves as a member of the imaging committee at the Radiation Medicine Program at Princess Margaret Cancer Centre and recently joined as an editorial board member of the *Journal of Medical Imaging and Radiation Sciences*.

“ I mostly appreciate the opportunity to help patients through my career in precision treatment planning and imaging. Looking back, being a CSRT was a challenging, but certainly amazing and rewarding journey. ”

Our Achievements

Period: June 2020 - February 2021

Advanced Practice Certification:

- **Joanna Javor (2020)** Advanced Practice Registered Technologist (Radiation Therapy) APRT(T) Certification, CAMRT

Awards and Appointments:

- **Julie Blain (2020)** Excellence in Interprofessional Practice Collaboration (Team) Award, Niagara Health, Ontario
- **Joanna Javor (2020)** Clinical Award for Innovation, Radiation Medicine Program, Princess Margaret Cancer Centre
- **Hon Biu Chan (2020)** Editorial Board Member, Journal of Medical Imaging and Radiation Science
- **Vickie Kong (2020)** Best Lecture Award, Medical Radiation Science Program, University of Toronto
- **Carrie Lavergne (2021)** Outstanding Reviewer of the Year, Journal of Medical Imaging and Radiation Sciences

Publications:

- Fitzpatrick, C., **Javor, J.**, Zywine, C., Job, M., Gram, V. (2020) Advancing Roles of Healthcare Professionals in Palliative Radiotherapy. *Clinical Oncology* 32(11).
- **Javor, J.**, Robbins, M., Rosewall, T., Craig, T., Villafuerte, C.J., Cummings, B., Dawson, L. (2020) Can volumetric modulated arc therapy (VMAT) improve conformity, dose homogeneity and speed of delivery in radiation therapy treatments for spinal metastases compared to conventional techniques? *JMIRS* 51(3).
- **Kong V.**, Rosewall T., Catton C., Chung P., Warde P., Craig T., Bayley A. (2020) Prostate or bone? Comparing the efficacy of image guidance surrogates for Pelvis & Prostate radiotherapy using accumulated delivered dose. *Journal of Medical Imaging and Radiation Sciences*. [In press]
- **Lee G.**, Koch CA. Interprofessional Collaboration in Radiation Therapy. *J Med Imaging Radiat Sci*. Volume 51, Issue 4, Supplement, December 2020, Pages S112-S113.
- Misra S, **Lee G.**, Korzets Y, Wang L, Lau A, Koch CA, Croke JM, Helou J. Patient-reported Acute Fatigue in Elderly Breast Cancer Patients Treated with and without Regional Nodal Radiation. *Breast Cancer Res Treat*. 2020 Jul 10. doi: 10.1007/s10549-020-05781-5. [Epub ahead of print]
- Koch CA, **Lee G.**, Liu ZA, Liu F-F, Fyles A, Han K, Barry A, Croke J, Rodin D, Helou J, Hahn E, Isfahanian N, DeRocchis J, Lofgren S, Purdie T. Rapid adaptation of breast radiotherapy utilization during the COVID-19 pandemic at a large academic cancer centre in Canada. *Adv Radiat Oncol*. 2020 Jun 19;5(4):749-756. doi: 10.1016/j.adro.2020.06.002
- **Roanec, N., Lavergne C., Harnett N.** (2021). A Canadian Experience of Palliative Advanced Practice Radiation Therapy TIPS: Training, Implementation, Practice and Sustainability. *Technical Innovations*

Presentations:

- **Chan K.** COVID Impact on a Brachytherapy (BT) Program in Toronto, Ontario. RTi3 March 2021.
- **Javor J.** Can Conformity-Based Volumetric Modulated Arc Therapy Improve Dosimetry and Speed of Delivery in Radiation Therapy to Lumbosacral Spine Compared with Conventional Techniques? RTi3 March 2021.
- **Kong V.** Spacing it out – Assessing the effect of Hydrogel Spacer on Rectal Dosimetry in Prostate Stereotactic Radiotherapy using MRI-based contours. RTi3 March 2021.
- **Lavergne C., Niglas M., Fulton A., Youssef A., Fathima A., Youssef Y.** (September 2020) Outcomes From A Single Institution Cohort of 248 Patients with Stage I-III Esophageal Cancer Treated with Radiotherapy. *CARO* September 2020. *Radiotherapy & Oncology*. 150(1) S27.
- **Lavergne C.** Outcomes from a Single Institution Cohort of 248 Patients with Stage I-III Esophageal Cancer Treated with Radiotherapy: Comparison of the Younger and Elderly Populations. RTi3 March 2021.
- **Linden K.** Preparing for bereavement: A qualitative exploration of information and support for primary caregivers of patients with terminal cancer undergoing palliative radiation therapy. RTi3 March 2021.
- **Roanec N.** From Da Vinci to Dose Painting: The Art of Inquiry-Based Travels in Radiotherapy. RTi3 March 2021
- **Roanec, N., Lavergne, C., Linden, K.** (2020) A Tale of three Cities: Implementation, Establishment and Impact of Rapid Access Radiation Therapy Programs in Ontario (Webinar, CAMRT)

Posters:

- **Chan K, Chan, B., Linden, K., Kong, V., Simniceanu, C., Harnett, N.** Outcome Measurement – Developing standardized advanced practice workload measurement tools across the province with workload codes. RTi3 March 2021.
- **Galapin M.** Developing Human Papillomavirus Education Material for HPV-Positive Oropharyngeal Cancer Patients with an Interprofessional Health Care Team and Patient Representatives. RTi3 March 2021.
- **Javor J.** Implementing an Oligometastases Program in a Radiotherapy Department: A Radiation Therapist's Perspective. RTi3 March 2021.

Abstracts:

- **Javor J.**, Robbins M., Rosewall T., Craig T., Villafuerte C.J., Cummings B., Dawson L. Can Conformity-Based Volumetric Modulated Arc Therapy Improve Dosimetry and Speed of Delivery in Radiation Therapy to Lumbosacral Spine Compared to Conventional Techniques? *J Med Imaging Radiat Sci*. 2020 Sept; 51(3): S37.
- **Lee G.**, Silver L, Cashell A, Koch CA. Implementation of Breast Specific Radiotherapy Follow-Up Care Pamphlet. *J Med Imaging Radiat Sci*. 2020 Sep;51(3S):S3. doi: 10.1016/j.jmir.2020.07.013.
- **Timotin E., Abbas M., Sur M., Farrell T., Sur R.** (September 2020). The Role of Brachytherapy in Saving Hospital Resources in Esophageal Cancer. *Radiotherapy and Oncology*. 150: S42-S43.
- **Darvish-Molla S., Timotin E., Skoczny J., Farrell T., Sur R.** (September 2020). Radiation Dose to Organs At Risk After High Dose Rate Brachytherapy for Esophageal Cancer Patients. *Radiotherapy and Oncology*. 150: S41.



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