CARO 2017 • IMPROVING CARE THROUGH EDUCATION, ADVOCACY, QUALITY OF LIFE AND BEYOND

WEDNESDAY SEPTEMBER 13, 2017

PRECONFERENCE

7:15–8:00  REGISTRATION AND BREAKFAST

RESIDENT REFRESHER COURSE  Convention Level – Toronto I

8:00–4:00  Facilitator: Meredith Giuliani

OBJECTIVES: Upon completion of this refresher course, attendees should be able to:

- Give an evidence-based overview of the indications for brachytherapy for prostate, cervix, lung and esophageal cancers.
- Review the normal tissue tolerances, and acute and late side effects associated with various brachytherapy techniques.
- Explore emerging frontiers for the use of brachytherapy in cancer care.
- Develop skills in IMRT plan review and solving challenging image-guidance problems in clinical practice.

8:00–8:10  WELCOME AND INTRODUCTIONS  Meredith Giuliani

8:15–9:15  LDR PROSTATE BRACHYTHERAPY  Mira Keyes

9:15–10:15  HDR BRACHYTHERAPY  Gerard Morton

10:15–10:30  Break

10:30–11:30  CERVIX BRACHYTHERAPY  Israel Fortin

11:30–12:30  HDR LUNG AND ESOPHAGEAL BRACHYTHERAPY  Ranjun Sur

12:30–1:30  Lunch

1:30–2:30  PLAN LITERACY AND PRINCIPLES OF REVIEWING RT PLANS  John Kim

2:30–4:00  CHALLENGING IGRT CASES AND HOW TO SOLVE THEM  Douglas Moseley, James Loudon

5:00  Resident Social (off site)

EVOLVING TRENDS IN CANADIAN RADIATION ONCOLOGY  Toronto II

9:30–4:00  Facilitator: Jennifer Croke

OBJECTIVES: For radiation oncologists to update and refresh their knowledge or skills in site-specific topics, particularly with Canadian content. It is important for maintenance of continuing education and lifelong learning. At the end of this session, participants will have reviewed:

- Current treatment techniques and planning, including contouring, specific margins, standard doses and fractionation.
- Latest in clinical trials.
- Effects of the combination of radiation therapy and new immunotherapy agents.
- Tips and tricks on how to solve challenging cases in IGRT.

9:30–9:40  WELCOME AND INTRODUCTIONS  Jennifer Croke

9:40–10:10  CNS- A NEW ERA OF RADIATION FOR SPINE AND BRAIN METASTASES  Arjun Sahgal, Mark Rushin

10:10–10:40  BREAST  Anne Koch

10:40–11:00  Break

11:00–11:30  PROSTATE  Andrew Loblaw

11:30–12:00  TEACHING AN OLD DOG NEW TRICKS: HOW SHOULD RADIOTHERAPY BE COMBINED WITH IMMUNOTHERAPY DRUGS?  Scott Bratman

12:00–12:30  SBRT  Laura Dawson

12:30–1:30  Lunch

1:30–2:00  SARCOMA  Peter Chung

2:00–2:30  Break (after break move to Toronto I)

2:30–4:00  CHALLENGING IGRT CASES AND HOW TO SOLVE THEM  Douglas Moseley, James Loudon

6:00–9:00  CARO BOARD MEETING  Governor General
THURSDAY SEPTEMBER 14, 2017

7:00–8:00  **MEET AND GREET** (invitation only)  Governor General

**REGISTRATION AND BREAKFAST**  Convention Level

8:00–8:15  **WELCOME AND INTRODUCTIONS** – Fabio Cury, Eric Vigneault  *Toronto I/II*

8:15–10:15  **THEME SYMPOSIUM** Moderator: Meredith Giuliani

**Coming Soon! Competence by Design – What You Need to Know**

**OBJECTIVES:** At the end of this session, the participants will be able to:

| **I** Demonstrate an understanding of the context and rationale for competency based medical education (CBME).  
| **I** Introduce what has been done in Radiation Oncology for Competence By Design (CBD).  
| **I** Identify opportunities and challenges related to the implementation of CBD.  
| **I** Identify assessment strategies in competency-based education.  
| **I** Explore strategies to facilitate training in the CBD era.

8:15-8:30  **WELCOME AND OVERVIEW OF CBME**  Meredith Giuliani

8:30-9:00  **WHAT HAS BEEN DONE IN RADIATION ONCOLOGY**  Theresa Trotter, Barbara-Ann Millar

9:00-9:20  **OPPORTUNITIES AND CHALLENGES**  Brock Debenham

9:20-10:00  **PANEL AND STRATEGIES ON IMPLEMENTING COMPETENCE BY DESIGN**  Joanne Alfieri, Sue Glover Takahashi, Paris-Ann Ingledew

10:00-10:15  **CLOSE AND NEXT STEPS**  Meredith Giuliani, Barbara-Ann Millar

10:15 – 10:45  **Break**

10:45–11:45  **CARO LECTURE**  Introduction: Eric Vigneault

**Unlocking the Potential of Patient-Reported Outcomes**

**Claire Snyder**

**OBJECTIVES:** At the end of this session, the participants will be able to discuss the important, and somewhat unrealized, potential of patient-reported outcomes to improve the quality of cancer care at multiple levels, including at the patient-clinician interface, in clinical research, and for performance improvement.

11:45–1:45  **Lunch Break**

**COMMITTEE MEETINGS**  *Please refer to the Committee Meetings Schedule for exact times*

1:45-2:45  **ORAL SESSION 1 – BREAST CANCER**  *Toronto I*

**Moderators:** Sarah Hamilton, Alan Nicol

**OBJECTIVES:** At the end of this session, the participants will be able to:

| **I** Recognize important aspects of treatment planning and delivery for breast cancer.  
| **I** Review current practices and outcomes of radiation therapy for breast tumours.

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**1**  **HEMATOPOETIC STEM CELL AND INFLAMMATORY CYTOKINE LEVELS ARE ASSOCIATED WITH FATIGUE AND INSOMNIA IN BREAST CANCER PATIENTS TREATED WITH ADJUVANT RADIATION THERAPY**  
Fei-Fei Liu, Willa Shi, Megan McCusker, Justin Williams, J (Susie) Su, Tara Spence, Madeline Li, Wei Xu, Laleh S Ghoraine, Kathy Han, Scott Bratman, Kenneth Yip; Princess Margaret Cancer Centre, Toronto, ON

**2**  **LONG-TERM OUTCOMES OF MICROINVASIVE BREAST CANCER IN THE CANADIAN HYPOFRACTIONATION TRIAL**  
Mira Goldberg¹,  
Sameer Parpia², Eileen Rakovitch³, Laval Grinard⁴, Julie Bowen⁵, Himanshu Lukka⁶, Francisco Perera⁷, Anthony Fyles⁷, Timothy Whelan⁸; ¹Juravinski Cancer Centre, Hamilton, ON; ²McMaster University, Hamilton, ON; ³Odette Cancer Centre, Toronto, ON; ⁴University of Ottawa, Ottawa, ON; ⁵Northeastern Ontario Regional Cancer Centre, Sudbury, ON; ⁶London Health Sciences Centre, London, ON
3 SIMPLE IMPLEMENTATION OF A DIBH TANGENTIAL IMRT TECHNIQUE FOR LEFT-SIDED BREAST CANCER 
Dominique Mathieu, Nicolas Côté, Andrée-Anne Bernard, Noémie Lahaie, Stéphane Bedwani, Jean-François Aubry, David Roberge, Sophie Lavertu, Pierre Rousseau, Toni Vu; Université de Montréal, Montréal, QC

5 ARE WE MISSING THE POST-OPERATIVE CAVITY IN WHOLE BREAST RADIOTHERAPY? 
Grace Lee1, Felix Tsui1, Anne Koch1, Anthony Fyles1, Robert Dinniwel1; 1Princess Margaret Cancer Centre, Toronto, ON; 2University of Western Ontario, London, ON

4 ELEKTA FELLOWSHIP RADIATION THERAPY PRESCRIBING PATTERNS ACROSS 6 BREAST CANCER SCENARIOS 
Theodora A Koulis, Caroline Speers2, Jeremy Hammi2, Alexa Dang1, Josh Power1, Alan Nicholl2, Scott Tyldesley2, Robert Olson2; 1British Columbia Cancer Agency, Prince George, BC; 2British Columbia Cancer Agency, Vancouver, BC

6 SECOND CONSERVATIVE TREATMENT FOR BREAST CANCER LOCAL RECURRENCE USING HDR INTERSTITIAL BRACHYTHERAPY: COSMETIC OUTCOME AND QUALITY OF LIFE 
Marjory Jolicoeur1, Aly-Thiêman Diakité1, Talar Derashodian1, Maryse Mondat2; 1Hôpital Charles LeMoyne CICM, Montréal, QC; 2University of Sherbrooke, Longueuil, QC

1:45-2:45 ORAL SESSION 2 – PALLIATIVE CARE Toronto II
Moderators: Rashid Dar, Ericka Wiebe

OBJECTIVES: At the end of this session, the participants will be able to describe several important aspects involved in the decision-making process by radiation oncologists treating patients in need for palliative treatment.

7 PALLIATIVE THORACIC RADIOTHERAPY IN ASYMPTOMATIC CENTRALLY LOCATED NON SMALL CELL LUNG CANCER (NSCLC) – TO TREAT OR TO DEFER 
Anil Tibdewal1, Andrea Bezjak1, Lisa Le1, Kathy Pope1, Sarika Gill1, Joseph Nachman1, Andrew Hope1, Laura Dawson1, Rebecca Wong1; 1Princess Margaret Cancer Centre, Toronto, ON; 2Peter MacCallum Cancer Centre, Melbourne, Victoria, Australia

8 ASSESSING THE UTILITY OF A PROGNOSTICATION MODEL TO PREDICT 1-YEAR MORTALITY IN PATIENTS RECEIVING RADIATION THERAPY FOR SPINAL METASTASES 
Diana Shi1, Yu-Hui Chen1, Tai Chung Lam3, Dana Leonard2, Andrew Schoenfeld2, Tracy Balboni2, Sonia Skamene2, John Chi2, Marco Ferrone2, Charles Cho2, Mitchell Harris2, Lauren Hertan2; 1Harvard Medical School, Boston, MA; 2Brigham and Women’s Hospital/Dana-Farber Cancer Institute, Boston, MA; 3The University of Hong Kong, Hong Kong

9 BARRIERS TO REFERRAL FOR PALLIATIVE RADIOTHERAPY: A SYSTEMATIC REVIEW 
Jonathan Klein1, Jonathan Livergant2; 1University of Toronto, Toronto, ON; 2British Columbia Cancer Agency, Victoria, BC

10 BEHAVIOURAL DETERMINANTS OF CANADIAN RADIATION ONCOLOGISTS’ USE OF SINGLE FRACTION PALLIATIVE RADIATION THERAPY FOR UNCOMPlicated BONE METASTASES 
Kristopher Dennis1, Janet Squires1, Sarah Asad2, Kristin Dorrance3, Alysa Fairchild3, Edward Chow4, Rebecca Wong5, Ian Graham1, Jeremy Grimshaw1; 1University of Ottawa, Ottawa, ON; 2Ottawa Hospital Research Institute, Ottawa, ON; 3University of Alberta, Edmonton, AB; 4University of Toronto, Toronto, ON

11 ASSESSING THE UTILITY OF THE SPINAL INSTABILITY IN NEOPLASIA (SINS) SCORE TO PREDICT FRACTURE AFTER CONVENTIONAL RADIATION THERAPY (RT) FOR SPINAL METASTASES 
Diana Shi1, Lauren Hertan2, Tai Chung Lam3, Sonia Skamene2, John Chi2, Charles Cho2, Marco Ferrone2, Mitchell Harris2, Yu-Hui Chen2, Tracy Balboni2; 1Harvard Medical School, Boston, MA; 2Brigham and Women’s Hospital/Dana-Farber Cancer Institute, Boston, MA; 3The University of Hong Kong, Hong Kong

12 ARE PHYSICIANS FOLLOWING GUIDELINES? A REVIEW OF RADIATION ONCOLOGY PRACTICE IN PATIENTS WITH UNCOMPlicated BONE METASTASES 
Vanessa Di Lalla1, Bernard Fortin2, Catherine Pembroke1, Carolyn Freeman1, Michael Yassa2, Tarek Hijal1; 1McGill University, Montreal, QC; 2Hôpital Maisonneuve Rosemont, Montreal, QC
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors and Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Objective Evaluation of a Structured Didactic Radiation Oncology Clerkship Curriculum: A Report from the Radiation Oncology Education Collaborative Study Group</td>
<td>Daniel Golden¹, Greg Kauffmann¹, Ryan McKillip¹, Alan Schwartz², Jeanne Farnan¹, Yoon Soo Park³, Radiation Oncology Education Collaborative Study Group³; ¹University of Chicago, Chicago, IL; ²University of Illinois at Chicago, Chicago, IL; ³University of Illinois at Chicago, Chicago, IL</td>
</tr>
<tr>
<td>14</td>
<td>A New Frontier: The Use of Virtual Simulation for Radiation Therapy Education for Breast Cancer Patients</td>
<td>Jenny Soo¹, Christina Parsons¹, Christine Rodgerson¹, Jenny Seow¹, Paris-Ann Ingledew¹; ¹University of British Columbia, Vancouver, BC</td>
</tr>
<tr>
<td>15</td>
<td>Prospective Longitudinal Assessment of Quality of Life and Symptoms in Patients with Oligometastatic Cancer Treated with Stereotactic Body Radiation Therapy (SBRT): Analysis of a Phase II Trial</td>
<td>Pablo Munoz-Schuffenecker, Tony Panzarella, Laura Dawson, Andrea Bezikj, Patricia Lindsay, Peter Chung, Andrew Hope, Meredith Giuliani, Anne Koch, Bernard Cummings, Zahra Kassam, Mojgan Taremi, Jolie Ringash, Rebecca Wong; University of Toronto, Toronto, ON</td>
</tr>
<tr>
<td>16</td>
<td>Patient-Reported Sexual Health After Definitive Chemoradiotherapy and MR-Guided Brachytherapy for Cervix Cancer</td>
<td>Jennifer Croke, Rachel Gerber, Kathy Han, Jason Xie, Haiyan Jan, Akbar Beiki-Ardakani, Anthony Fyles, Michael Milosevic; Princess Margaret Cancer Centre, Toronto, ON</td>
</tr>
<tr>
<td>17</td>
<td>Treatment Planning Evaluation of Volumetric Modulated Arc Therapy (VMAT) for Craniospinal Irradiation (CSI)</td>
<td>Salwa Fathy, Tagreed Alalawi, Nasser Al-Dhaibani; King Abdullah Medical City, Saudi Arabia, Jeddah, Saudi Arabia</td>
</tr>
<tr>
<td>18</td>
<td>Automated Contouring of the Proximal Bronchial Tree Using Open Source Tools for SBRT Treatment of the Lung</td>
<td>Niranj Venugopal, Vijayananda Kundapur; University of Saskatchewan, Saskatoon, SK</td>
</tr>
<tr>
<td>19</td>
<td>Online Advertising and Marketing Claims by Providers of Proton Beam Therapy: Are They Guideline Based?</td>
<td>Mark Corkum¹, Wei Liu¹, David Palma¹, Robert Dinniwell¹, Glenn Bauman¹, Andrew Warner¹, Mark Mishra¹, Alexander Louie²; ¹University of Western Ontario, London, ON; ²London Health Sciences Centre, London, ON; ³University of Maryland School of Medicine, Baltimore, MD</td>
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<tr>
<td>20</td>
<td>Assessing Hazard of Tobacco-Related Cancers Among Individuals with Psychiatric Disorders in British Columbia</td>
<td>Mary McClay¹, Robert Olson¹, Russ Callaghan¹; ¹University of British Columbia, Vancouver, BC; ²University of Northern British Columbia, Prince George, BC</td>
</tr>
<tr>
<td>21</td>
<td>Population-Based Standardized Symptom Screening: Cancer Care Ontario’s Expanded Prostate Cancer Index Composite for Clinical Practice (EPIC-CP) Provincial Implementation Approach</td>
<td>Lisa Barbera¹, Farzana Haji², Michael Brundage², Colleen Bedford², Doris Howell³, Brett Nicholls³; ¹Odette Cancer Centre, Toronto, ON; ²Cancer Care Ontario, Toronto, ON; ³University Health Network, Toronto, ON</td>
</tr>
<tr>
<td>22</td>
<td>Radiotherapy for Lung Cancer in the Intensive Care Unit – A Population Based Analysis</td>
<td>Alexander Louie¹, Lihua Li², Krista Bray Jenkyn¹, Britney Allen¹, Andrew Warner¹, George Rodrigues¹, David Palma¹, Salimah Shairiff¹; ¹London Regional Cancer Program, London, ON; ²University of Western Ontario, London, ON; ³London Health Sciences Centre, London, ON</td>
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OBJECTIVES: At the end of this session, the participants will be able to discuss a variety of projects and research being conducted across the country in radiation oncology.

23 PATTERNS OF RADIATION THERAPY TECHNOLOGY USE IN THE TREATMENT OF BONE METASTASES Matthew Chan1, Robert Olson2, Shilo Lefesne2, Michael McKenzie2; 1British Columbia Cancer Agency, Vancouver, BC; 2University of British Columbia, Vancouver, BC

24 MULTICENTER EVALUATION OF THE TOLERABILITY OF COMBINED TREATMENT WITH PD-1 AND CTLA-4 IMMUNE CHECKPOINT INHIBITORS AND PALLIATIVE RADIOTHERAPY Andrew Bang1, Tyler Wilhite2, Luke Pike2, Daniel Cagney2, Ayal Aizer1, Allison Taylor2, Alexander Spektor2, Monica Krishnan3, Patrick Ott4, Tracy Balboni2, Stephen Hodi2, Jonathan Schoenfeld5; 1University of Ottawa, Ottawa, ON; 2Harvard University, Boston, MA; 3University of Maryland School of Medicine, Baltimore, MD; 4London Health Sciences Centre, London, ON

25 INFORMAL CAREGIVER QUALITY OF LIFE IN A PALLIATIVE ONCOLOGY POPULATION Adele Duimering, Jill Turner, Karen Chu, Fleur Huang, Diane Severin, Sunita Ghosh, Don Yee, Ericka Wiebe, Nawaid Usmani, Zsolt Gabos, Samir Patel, Brita Danielson, John Amanie, Wilson Roa, Alysia Fairchild; Cross Cancer Institute, Edmonton, AB


27 MYXOFIBROSARCOMA CHARACTERISTICS AND CLINICAL OUTCOMES AT A LARGE CANADIAN TERTIARY CANCER REFERRAL CENTRE Gaurav Bhattacharya, Matthew Tsang, Horia Marginean, Samey El Sayed; The University of Ottawa, Ottawa, ON

28 A SYSTEMATIC REVIEW OF CLINICAL OUTCOMES FOLLOWING CHEMO-RADIOThERAPY FOR ANAL CANCER IN HIV-POSITIVE PATIENTS ON HIGHLY-ACTIVE ANTI-RETROVIRAL THERAPY (HAART) Rohann Correa1, Robert Dinnwille2, Boris Virine1, Adeel Kaiser2, Mark Mishra3, Alexander Louie3; 1University of Western Ontario, London, ON; 2University of Maryland School of Medicine, Baltimore, MD; 3London Health Sciences Centre, London, ON

29 NEOADJUVANT SBRT FOR PANCREATIC DUCTAL ADENOCARCINOMA: A SYSTEMATIC REVIEW Rahul Arora1, Jan Grendi2, Petra Grendarova1, Zeljka Jutric1, Richie Sinha1; 1University of Calgary, Calgary, AB; 2Providence Portland Medical Center, Portland, OR; 3City of Hope National Medical Center, Duarte, CA

30 FACTORS AFFECTING POST-OPERATIVE CAVITY VOLUME AND SURFACE AREA DYNAMICS SPECIFIC TO BRAIN METASTASES Yaser Hasan1, Luluel Khan1, Todd Mainprize1, Sunit Das1, Mark Ruschin1, Fiona Lochray2, Young Lee2, May Tso2, Arjun Salghat3, Hany Soliman3; 1University of Toronto, Toronto, ON; 2Sunnybrook Health Sciences Centre, Toronto, ON

31 OUTCOMES OF HYPOFRACTIONATED STEREOTACTIC RADIOTHERAPY FOR INTRACRANIAL MENINGIOMA: A SYSTEMATIC REVIEW OF THE LITERATURE Timothy Nyguen1, Eric Nguyen1, Hanbo Chen1, R Gabe Boldt1, Alexander Louie1, Glenn Bauman1; 1London Health Sciences Centre, London, ON; 2Juravinski Cancer Centre, Hamilton, ON

32 CHECKPOINT SLIPPAGE AFTER DNA DOUBLE STRAND BREAKS UNDERLIES ACTIVATION OF IR-INDUCED INFLAMMATORY SIGNALING Shane Harding, Joseph Benci, Jerome Irianto, Dennis Discher, Andy Minn, Greenberg Roger; University of Pennsylvania, Philadelphia, PA

3:45-4:00 Break
**FELLOW COMPETITION**  
*Toronto I/II*

Moderators: Michael Brundage, Gerard Morton

**OBJECTIVES:** At the end of this session, the participants will be able to review Canadian Radiation Oncology Fellow Research Projects.

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**ELEKTA FELLOWSHIP**  
**33**  
**DOSSIMETRIC IMPACT OF RE-PLANNING DURING A COURSE OF CURATIVE INTENT HEAD AND NECK RADIATION TREATMENT**  
Theodora A Koulis¹, Quinn Matthews¹, Nick Chng¹, Bronwen Engel¹, Boris Valev¹, Robert Olson²; ¹British Columbia Cancer Agency, Prince George, BC; ²University of British Columbia, Vancouver, BC

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**PLERIXAFOR IMPROVES PRIMARY TUMOUR RESPONSE AND REDUCES NODAL METASTASIS IN CERVICAL CANCER TREATED WITH RADIOCHEMOTHERAPY**  
Magali Lecavalier-Barsoum¹, Naz Chaudary², Pratibha Tapa², Meegan Larsen³, Melania Pintilie¹, Ri Wang¹, Kathy Han¹, Laura Caporicciò, Richard Hill¹, Michael Milosevic¹; ¹Princess Margaret Cancer Centre, Toronto, ON; ²Ontario Cancer Institute and Campbell Family Institute for Cancer Research, Toronto, ON; ³Mbed Pathology, Toronto, ON

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**PATTERNS OF IPSILATERAL REGIONAL NODAL RELAPSE IN BREAST CANCER: A REVIEW OF THE RTOG BREAST CANCER ATLAS**  
Laura Beaton¹, Luminita Nica², Gareth Ayre², Kenny Sek², Maria Aparicio², Lovedeep Gondara², Caroline Speers², Scott Tydesley², Alan Nichol²; ¹British Columbia Cancer Agency, Vancouver, BC; ²University of British Columbia, Vancouver, BC

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**LONG TERM QUALITY OF LIFE AND LATE TOXICITY ASSESSMENT FOLLOWING IMAGE-GUIDED INTENSITY-MODULATED RADIATION THERAPY AND CONCURRENT CHEMOTHERAPY FOR ANAL CANCER**  
Ali Hosni¹, Kathy Han¹, Haiyan Jiang¹, Jolie Ringash¹, James Brierley¹, Rebecca Wong¹, Robert Dinniwell², Anthony Brade³, Laura Dawson¹, Bernard Cummings¹, Monika Krzyzanowska¹, Eric Chen¹, David Hedley¹, Jennifer Knox¹, Alexandra Easson¹, Patricia Lindsay¹, Tim Craig¹, John Kim¹; ¹Princess Margaret Cancer Centre, Toronto, ON; ²University of Western Ontario, London, ON; ³Credit Valley Hospital, Mississauga, ON

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**RISK-ADAPTED LUNG SBRT FOR CENTRAL AND ULTRA-CENTRAL TUMOURS**  
Alexis Lenglet, Dominique Mathieu, Marie-Pierre Campeau, Houda Bahig, Toni Vu, David Roberge, Laurent Bilodeau, Edith Filion; Université de Montréal, Montréal, QC

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**PARTIAL BREAST RADIOTHERAPY WITH PD-103 PERMANENT BREAST SEED IMPLANT: APPLICABILITY AND PATIENT ACCEPTANCE**  
Martin Korzeniowski, Laurie Pilote, Deidre Batchelor, Michelle Hiltts, Marie-Pierre Milette, Janet Yanchuk, Eleanor Garcia, Juanita Mary Crook; British Columbia Cancer Agency, Kelowna, BC
**FRIDAY SEPTEMBER 15, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 7:30-8:30 | REGISTRATION AND BREAKFAST  
Convention Level          |
| 8:30-8:45 | WELCOME AND INTRODUCTIONS  
Fabio Cury  
Toronto VII     |
| 8:45-9:45 | GORDON RICHARDS LECTURE  
Moderator: Padraig Warde 
Advocating for Quality...  
Michael Brundage  
OBJECTIVES: At the end of this session, the participants will be able to:  
1. Reflect on advocacy for quality in a number of dimensions, both past and present.  
2. Discuss links between the CanMEDS educational roles framework and advocacy for quality of care in radiation oncology. |
| 9:45-10:45 | RESIDENT COMPETITION  
Moderator: Claire Snyder  
OBJECTIVES: At the end of this session, the participants will be able to review Canadian Radiation Oncology Resident Research Projects. |
| 10:45-11:30 | Break/Exhibitor Showcase |

**SESSIONS**

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>PREDICTING THE FAILURE OF RANDOMIZED CONTROLLED TRIALS IN RADIATION ONCOLOGY: WHAT CAN WE LEARN?</td>
<td>Timothy Nguyen1, Eric Nguyen2, Andrew Warner1, Alexander Louie1, David Palma1; 1. London Health Sciences Centre, London, ON; 2. Juravinski Cancer Centre, Hamilton, ON</td>
</tr>
<tr>
<td>40</td>
<td>STEREOTACTIC ABLATIVE RADIOTHERAPY VERSUS SURGERY IN EARLY LUNG CANCER: A META-ANALYSIS OF PROPENSITY SCORE-ADJUSTED COMPARATIVE EFFECTIVENESS STUDIES</td>
<td>Hanbo Chen1, Joanna Laba2, Robert Gabriel Boldt3, Christopher Goodman1, David Palma2, Suresh Senan1, Alexander Louie2; 1. University of Western Ontario, London, ON; 2. London Health Sciences Centre, London, ON; 3. VU University Medical Center, Amsterdam, North Holland, Netherlands</td>
</tr>
<tr>
<td>42</td>
<td>CBCT DERIVED RADIOSensitivity MARKER ASSOCIATED WITH RADIATION PNEUMONITIS</td>
<td>Pencilla Lang1, Douglas Moseley2, Uffe Bernchou3, Carsten Brink4, Andrew Hope1; 1. University of Toronto, Toronto, ON; 2. Princess Margaret Cancer Centre, Toronto, ON; 3. Odense University Hospital, Odense, Denmark</td>
</tr>
<tr>
<td>43</td>
<td>STEREOTACTIC BODY RADIOTHERAPY FOR OLIGOMETASTATIC AND OLIGOPROGRESSIVE DISEASE</td>
<td>Catherine Pembroke, Neil Kopek; McGill University, Montreal, QC</td>
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**FRIDAY SEPTEMBER 15—7—**
At the end of this session, the participants will be able to:

I Understand modern approaches in the treatment of lung cancer using SBRT.

I Discuss risk stratification, quality of life, and current practice of treatment of lung cancer.

**OBJECTIVES:**

45 **METABOLIC TUMOUR VOLUME IS PROGNOSTIC OF OUTCOMES IN PATIENTS WITH NON-SMALL CELL LUNG CANCER TREATED WITH STEREOTACTIC ABLATIVE RADIOTHERAPY**
Maryam Dosani¹, Rob Olson¹, Ruobing Yang¹, Don Wilson¹, Mitchell Liu¹, Charlotte J Yong-Hing¹, Jeremy Hammi¹, Chad R Lund¹, Devin Schellenberg¹; ¹British Columbia Cancer Agency, Vancouver, BC

46 **CENTRAL3D: A CLINICIAN TOOL FOR ROBUST CHARACTERIZATION OF CENTRALLY LOCATED NON-SMALL CELL LUNG CANCER**
Dominique Mathieu, Vincent Cousineau Daoust, Laurence Bilodeau, Stéphane Bedwani, Édith Filion, Alexis Lenglet, Houda Bahig, David Roberge, Marie-Pierre Campeau; Université de Montréal, Montréal, QC; Centre hospitalier de l’Université de Montréal, Montréal, QC

47 **FUNCTIONAL LUNG AVAIDANCE FOR INDIVIDUALIZED RADIOTHERAPY (FLAIR): RESULTS OF A RANDOMIZED, DOUBLE-BLIND CLINICAL TRIAL**
Brian Yaremko¹, Dante Capaldi¹, Khadija Sheikh¹, A Rashid Dar¹, Edward Yu¹, Alexander Louie¹, George Rodrigues¹, Stewart Gaede¹, Jeff Chen¹, Abigail Erickson¹, Andrew Warner¹, Brian Dingle¹, Mark Landis¹, Mark Vincent¹, Michael Sanatani¹, Jawaid Younus¹, M Sara Kuruvilla¹, David Palma¹, Grace Parraga¹; ¹University of Western Ontario, London, ON; ²London Health Sciences Centre, London, ON

48 **IS STEREOTACTIC ABLATIVE RADIOTHERAPY (SABR) SAFE FOR THE TREATMENT OF ULTRA-CENTRAL LUNG TUMOURS? A SYSTEMATIC REVIEW**
Joanna Laba¹, Hanbo Chen¹, R Gabriel Boldt¹, David Palma¹, Alexander Louie²; ¹University of Western Ontario, London, ON; ²London Health Sciences Centre, London, ON

49 **CARO ELEKTA CONDITIONAL SURVIVAL PROBABILITIES FOLLOWING SABR IN EARLY-STAGE NON-SMALL CELL LUNG CANCER**
Alexander Louie¹, Mark Mishra¹, Frank Lagerwaard³, Cornelis Haasbeek¹, Ben Slotman¹, Suresh Senan³; ¹London Regional Cancer Program, London, ON; ²University of Maryland School of Medicine, Baltimore, MD; ³VU University Medical Center, Amsterdam, Netherlands

50 **DEFINING THE NEED FOR PALLIATIVE LUNG CANCER RADIOTHERAPY IN THE GENERAL POPULATION: A CRITERION-BASED BENCHMARKING APPROACH**
Chunzi Jenny Jin, Weidong Kong, William Mackillop; Queen’s University, Kingston, ON

11:30-12:30 **ORAL SESSION 4 – GENITOURINARY CANCER, RADIATION TREATMENT DELIVERY**

Moderators: Juanita Crook, Guila Delouya

**OBJECTIVES:** At the end of this session, the participants will be able to:

I Understand predicting factors, toxicities and outcomes of prostate cancer treatment with radiation therapy.

I Understand important concepts in treatment planning and delivery of modern radiation therapy.

51 **MRI VALIDATION OF POST – PROSTATECTOMY RADIOTHERAPY CONTOURING GUIDELINES**
Mo Manji, Juanita Crook, Leigh Bartha, Rasika Rajapakshe; British Columbia Cancer Agency, Kelowna, BC

52 **RADIATION THERAPY FOLLOWING ACTIVE SURVEILLANCE FOR LOW – AND INTERMEDIATE – RISK LOCALIZED PROSTATE CANCER**
Ali Hosni, Ardalan Ahmad, Melvin Chua, Jure Murgic, Hamid Raziee, Fabio Moraes, Narhari Timilshina, Andrew Bayley, Peter Chung, Robert Bristow, Antonio Finelli, Alejandro Berlin; Princess Margaret Cancer Centre, Toronto, ON

53 **RANDOMIZED STUDY OF QUALITY OF LIFE IN PATIENTS WITH HIGH-RISK PROSTATE CANCER UNDERGOING RADIOTHERAPY: ROLE OF PELVIC NODAL IMRT**
Julie Arsenault, Sameer Parpia, Himanshu Lukka, Thomas B Corbett, Maltibein Patel, Theodorus Tsakiridis, Ian Dayes; McMaster University, Hamilton, ON

54 **A SET OF QUALITY ASSURANCE TESTS FOR 3D PRINTED BOLUS USED IN RADIOTHERAPY**
Philip McGeachy¹, David Sasaki², Chad Harris¹, Ankur Sharma¹, Arbind Dubey¹; ¹CancerCare Manitoba, Winnipeg, MB; ²University of Manitoba, Winnipeg, MB
55 Factors Associated with In-Field Recurrence in Patients Treated with Liver SBRT

Emilly Hubley1, Sarah Quirk1, Richie Sinha1, Shaun Loewen1, Petra Grendarova2;
1 University of Calgary, Calgary, AB; 2 Tom Baker Cancer Centre, University of Calgary, Calgary, AB

56 Progressive Hypo Fractionated IGRT Regimens: Toxicity, Acceptability and Efficiency of Delivery Compared to a Standard Fractionation Regimen, Both with HDR Brachytherapy Boost

Andre-Guy Martin1, Khaly Mbojji2, William Foster3, Eric Vigneault1, Philippe Despré3, Marie-Claude Lavallée1, Frederic Lacroix1, Nadia Octave1;
1 Centre Hospitalier Universitaire de Québec – L’Hôpital-Dieu de Québec, Québec, QC; 2 Centre de Recherche du Centre Hospitalier Universitaire de Québec, Québec QC

12:30-2:30 Lunch Break

2:30-3:30 Canadian Brachytherapy Group Oral Session Toronto I

Moderator: Marc Gaudet, Gerard Morton

Objectives: At the end of this session, the participants will be able to:
- Recognize the most recent advances on brachytherapy research for prostate and cervical cancer.
- Discuss the results of a Phase III trial on brachytherapy for lung cancer.

57 Toxicity and Health-Related Quality of Life Results of 2-Fraction HDR Brachytherapy As Monotherapy for Low and Intermediate Risk Prostate Cancer

Marc Gaudet1, Mathieu Pharand-Charbonneau2, Debbie Wright2, Marie-Pierre Desrosiers2, Alain Haddad1;
1 The Ottawa Hospital, Ottawa, ON; 2 CISSS de l’Outaouais, Gatineau, QC

58 Us-Planned HDR Prostate Brachytherapy Boost: Acute and Late Toxicity

Laurie Pilote1, Juanita Crook1, Miren Gatzanaaga2, Ana Ot3, Jasbir Jaswal4, Tim Haddad2, Audrey Tetreault Lafliamme1, Cynthia Araujo1, Batchelor Deidre1, Marie-Pierre Millette1, Schmid Matthew1, Martin Korzeniowski1, Francois Bachand1;
1 British Columbia Cancer Agency, Vancouver, BC; 2 Department of Oncology, Radioterapia, Madrid, Spain; 3 University of Ottawa, Ottawa, ON

59 Electromagnetic Reconstruction of Catheter Paths in Multi-Catheter Interstitial Brachytherapy: A Phantom Model

Harry C Bratianus1, Thomas Vaughan1, Andras Lasso1, Tamas Ungi1, Mary Westerdale1, James Gooding1, Gabor Fichtinger1, Conrad Falkson1, Queen’s University, Kingston, ON; 2 Kingston General Hospital, Kingston, ON

60 A Phase III, Multi-Centre, Randomized Trial to Evaluate the Symptomatic and Quality of Life Improvements in Lung Cancer Patients Receiving External Beam Radiation with or Without High Dose Rate Intraluminal Brachytherapy

Ranjan Sur1, Conrad Falkson2, Ming Pan3, Greg Pond1, Jim Wright4, Andrea Bezjak5, Anne Dagnault6, Robert Hunter1, Edward Yu6, Maha Almahmudi6, Sundeep Shahi7, Serhij Psuka1, Daren Gopal1, Theodorus Tsakiridis1, Anand Swaminathan1, Peter Ellis1, Kathryn Kline1, Catherine Bucci1, Sheikh Nisar Ahmed6, Timothy Whelan1;
1 Princess Margaret Cancer Centre, Toronto, ON; 2 Queen’s University, Kingston, ON; 3 Windsor Regional Cancer Centre, Windsor, ON; 4 University of Western Ontario, London Regional Cancer Centre, London, ON; 5 British Columbia Cancer Agency, Abbotsford, BC; 6 British Columbia Cancer Agency, Vancouver, BC; 7 Princess Margaret Cancer Centre, Toronto, ON; 8 Hotel-Dieu de Quebec, CHUQ Quebec City, QC; 9 University of Western Ontario, London Regional Cancer Centre, London, ON; 10 British Columbia Cancer Agency, Vancouver, BC; 11 Grand River Regional Cancer Centre, Kitchener, ON

61 The Current Landscape of Quality Assurance Practices for Cervical Brachytherapy in Canada

Jocelyn Moore1, Peter Lim1, Jennifer Croke2, Corinne Dool3, Fleur Huang4, Teri Stickless5, Maroie Barkati6, Christina Parsons7, 1 British Columbia Cancer Agency, Vancouver, BC; 2 Princess Margaret Cancer Centre, Toronto, ON; 3 Tom Baker Cancer Centre, Calgary, AB; 4 Cross Cancer Institute, Edmonton, AB; 5 Dr H Bliss Murphy Cancer Centre, St John’s, NL; 6 Centre hospitalier de l’Université de Montréal, Montreal, QC

62 A Cost-Utility Analysis Comparing Mr-Guided Brachytherapy to 2D Brachytherapy for Management of Locally Advanced Cervical Cancer in Ontario, Canada

Julia Skliarenko1, Johnna Perdrizet1, Michelle Ang1, Lisa Barbera, Eric Gutierrez, Ananth Ravi, Kari Tanderup, Padraig Warde1, David D’Souza2, Kelvin Chan3, Wanruudee Isaranuwatchai2, Michael Milosевич2, 1 Simcoe Muskoka Regional Cancer Program, Barrie, ON; 2 St Michael’s Hospital, Toronto, ON; 3 CancerCare Ontario, Toronto, ON; 4 University of Toronto, Toronto, ON; 5 Aarhus University Hospital, Aarhus, Denmark; 6 London Health Sciences Centre, London, ON; 7 Odette Cancer Centre, Toronto, ON

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2:30-3:30

Canadian Brachytherapy Group Oral Session Toronto I

Moderator: Marc Gaudet, Gerard Morton

Objectives: At the end of this session, the participants will be able to:
- Recognize the most recent advances on brachytherapy research for prostate and cervical cancer.
- Discuss the results of a Phase III trial on brachytherapy for lung cancer.

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CARO2017 • IMPROVING CARE THROUGH EDUCATION, ADVOCACY, QUALITY OF LIFE AND BEYOND

3:30-4:30  ORAL SESSION 5 – RADIATION TREATMENT, RADIOSURGERY  Toronto I

Moderator: Francois Bachand, David Palma

OBJECTIVES: At the end of this session, the participants will be able to:

I Discuss important factors related to quality of treatment planning and delivery.
I Understand the most recent advances in radiosurgery and its impact on treatment outcomes.

63 SURVIVAL IMPACT OF CARDIAC DOSE IN LUNG STEREOTACTIC BODY RADIOTHERAPY
Olive Wong1, Vivian Yau1, Julie Kang1, Daniel Glick2, Patricia Lindsay2, Lisa Le1, Alexander Sun1, Andrea Bezjak1, John Cho2, Andrew Hope3, Meredith Giuliani3, 1Princess Margaret Cancer Centre, Toronto, ON; 2British Columbia Cancer Agency, Vancouver, BC; 3University of Toronto, Toronto, ON

64 ASSESSMENT OF DOSIMETRIC PREDICTORS AND IMPACT OF WHOLE-BRAIN RADIOTHERAPY ON THE INCIDENCE OF RADIONECROSIS AFTER STEREOTACTIC RADIOTHERAPY FOR BRAIN METASTASIS
Hamid Razie1, Fabio Y Moraes1, Young-Bin Cho1, Manjula Magnati2, David Shultz2, Barbara-Ann Millar2, Normand Laperriere1, Caroline Chung1, Alejandro Berlin2, 1University of Toronto, Toronto, ON; 2Princess Margaret Cancer Centre, Toronto, ON; 3MD Anderson Cancer Center, University of Texas, Houston, TX

65 EXTREME HYPOFRACTIONATION FOR HIGH RISK PROSTATE CANCER: DOSIMETRIC CORRELATIONS WITH RECTAL BLEEDING
Glenn Bauman1, Jeff Chen2, George Rodrigues2, Kristina Commissio2, Alexandre Mamedov4, Hima Musunuru5, Melanie Davidson6, Tristan Mills1, Andrew Warner5, Andrew Loblaw4, 1London Regional Cancer Program, London, ON; 2University of Western Ontario, London, ON; 3Sunnybrook Odette Cancer Centre, Toronto, ON; 4University of Toronto, Toronto, ON; 5University of Wisconsin School of Medicine and Public Health, Madison, WI

66 OUTCOMES FOR IMAGE-GUIDED FRAMELESS LINEAR ACCELERATOR-BASED HYPOFRACTIONATED STEREOTACTIC RADIOTHERAPY IN FIVE DAILY FRACTIONS TO THE SURGICAL CAVITY AFTER RESECTION OF BRAIN METASTASES
Hamid Razie1, Sten Myrehaug2, May Tsaol3, Chia-Lin Tseng1, Ahmed Hashmi2, Mark Ruschin1, Young Lee1, Arjun Sahgal2, 1Odette Cancer Centre, University of Toronto, Toronto, ON; 2Clatterbridge Cancer Centre, Merseyside, UK

67 POST-SURGICAL CLIPS AS FIDUCIALS FOR TREATMENT OF STEREOTACTIC BODY RADIOTHERAPY OF THE LIVER
Muhammad Faisal Jalaluddin1, Kuriyan Joseph2, Diane Severin2, Joel St Aubin3, Adele Duijmering4, Shannah Murland5, Zsolt Gabos6, Keith Tinkle7, 1British Columbia Cancer Agency, Vancouver, BC; 2University of Alberta, Edmonton, AB

68 ESOPHAGEAL TOXICITY IN THORACIC STEREOTACTIC RADIOTHERAPY
Vivian Yau1, Patricia Lindsay1, Andrew Hope1, Lisa Le1, Daniel Glick2, Anthea Lau2, John Cho2, Andrea Bezjak1, Alex Sun2, Meredith Giuliani3, 1Princess Margaret Cancer Centre, Toronto, ON; 2British Columbia Cancer Agency, Victoria, BC

3:30-4:30  ORAL SESSION 6 – GYNECOLOGIC CANCER  Toronto II

Moderators: Joanne Alfieri, Jennifer Croke

OBJECTIVES: At the end of this session, the participants will be able to:

I Discuss treatment planning, quality of life, and outcomes of radiotherapy for gynecological tumours.
I Review possible factors that can be associated with improved treatment outcomes in the management of gynecologic malignancies.

69 PRECLINICAL ASSESSMENT OF ACUTE AND LATE GASTROINTESTINAL TOXICITY WITH THE ADDITION OF PLERIXAFOR TO RADIO- CHEMOTHERAPY FOR CERVICAL CANCER
Naz Chaudary1, Magali Lecavalier-Barsoum1, Pratibha Thapa1, Meegan Larsen1, Melanie Pintile1, Kathy Han2, Richard Hill1, Michael Milosevic1, 1Princess Margaret Cancer Centre, Toronto, ON; 2Mt. Sinai Pathology, Toronto, ON

70 VALIDATION OF PATIENT REPORTED OUTCOME MEASURES IN PATIENTS RECEIVING HIGH DOSE PELVIC RADIATION THERAPY FOR GYNECOLOGIC MALIGNANCIES
Matthew Chan1, Vincent Lapointe1, Robert Olson2, Caroline Holloway3, Francois Bachand4,Peter Lim1, Christina Parsons1, 1British Columbia Cancer Agency, Vancouver, BC; 2University of British Columbia Cancer Agency, Vancouver Island, BC; 3British Columbia Cancer Agency, Kelowna, BC

71 ADJUVANT CHEMO-RADIATION FOR CLEAR CELL CARCINOMA OF THE OVARY: A POPULATION BASED STUDY OF PELVIC VERSUS WHOLE ABDOMINAL RADIATION THERAPY
Soumyajit Roy1, Anna Tinker2, Paul Hoskins2, Francois Bachand3, Caroline Holloway4, Christina Parsons4, Peter Lim2, Gaurav Bahl1, 1British Columbia Cancer Agency, Abbotsford, BC; 2British Columbia Cancer Agency, Vancouver, BC; 3British Columbia Cancer Agency, Kelowna, BC; 4British Columbia Cancer Agency, Vancouver Island, BC
**WORKSHOPS**

**WORKSHOP 1  Toronto II**

**QUALITY ASSURANCE IN PALLIATIVE RADIATION THERAPY AND SYMPTOM CONTROL**  
Kristopher Dennis

**OBJECTIVES:** At the end of this workshop, the participants will be able to:

- Appreciate the need for, and the complexity of providing quality assurance for non-stereotactic palliative radiation therapy and symptom control.
- Understand the current state of peer review practices in Canada for non-sterotactic palliative radiation therapy.
- Be aware of best practice resources for non-stereotactic palliative radiation therapy and symptom control.
- Be aware of potential future metrics for measuring quality within this environment.

**WORKSHOP 2  Jackson**

**WHY WOULDN’T YA? A WIN/WIN STRATEGY USING ADVANCED PRACTICE RADIATION THERAPISTS**  
Nicole Harnett, Robert Dinniwell, Padraig Warde, Grace Lee

**OBJECTIVES:** At the end of this workshop, the participants will be able to:

- Describe what an Advanced Practice Radiation Therapist (CSRT) is and provide examples of the work that CSRTs are currently doing in Ontario.
- Discuss the pressures currently facing the radiation medicine domain and how CSRTs could play a role in alleviating these pressures.
- Identify opportunities to permanently integrate CSRTs into the radiation medicine team.

**WORKSHOP 3  Tom Thomson**

**PAN-CANADIAN PRO COLLECTION: WORKING TOGETHER TO ADVANCE PATIENT CARE**  
Robert Olson, Lisa Barbera, Amanda Caisse, Michael Milosevic, Erika Brown

**OBJECTIVES:** At the end of this workshop, the participants will be able to:

- Learn about what patient reported outcomes are and how they can help improve clinical care, symtom control and patient outcomes.
- Learn about the British Columbia Cancer Agency’s Prospective Outcomes and Support Initiative (POSI) and Cancer Care Ontario’s Patient Reported Outcome Program.
- Discuss how standardizing PRO collection models in specific disease sites can advance quality of care in patient populations across the country and how the Canadian Partnership for Quality Radiotherapy is helping facilitate and drive pan – Canadian alignment.
- Learn ways to increase the utility of PRO within practice.

**DINNER AND AWARDS CEREMONY**

**THE RED CARPET AFFAIR**

Grand Banking Hall, One King West

**FRIDAY SEPTEMBER 15**
SATURDAY SEPTEMBER 16, 2017

7:15-8:15  PAMELA CATTON MEMORIAL FUN RUN/WALK
Meet at the University Avenue Lobby Door at 7:00 am.

8:30-9:30  COMMITTEE MEETINGS  Please refer to the Committee Meetings Schedule for exact times

8:30-9:30  REGISTRATION AND BREAKFAST

9:30-10:30  Jean Roy Lecture  Toronto I
Moderator: Eric Vigneault

Brachytherapy Education in an Era of High Technology
Gerard Morton

OBJECTIVES: At the end of this session, the participants will be able to:
I Identify limitations of current training in brachytherapy.
I Describe how Royal College Area of Focused Competency (AFC) Diploma programs might address these needs.

10:30-11:30  ORAL SESSION 7 – HEAD AND NECK CANCER  Toronto I
Moderators: Daniel Glick, David Petrik

OBJECTIVES: At the end of this session, the participants will be able to:
I Describe important factors associated with the improvement of treatment outcomes for patients with head and neck malignancies.
I Review possible methods to decrease toxicity during radiation therapy for head and neck cancers.

75  STEREOTACTIC BODY RADIOTHERAPY (SBRT) PROVIDES AN EXCELLENT LOCAL CONTROL WITH ACCEPTABLE TOXICITIES IN MEDICALLY UNFIT HEAD AND NECK CANCER PATIENTS
Hossam AL-Assaf, Ian Poon, Justin Lee, Irene Karam, Kevin Higgins, Danny Enepekides; University of Toronto, Toronto, ON

76  EARLY (90-DAY) MORTALITY AFTER RADICAL RADIOTHERAPY FOR HEAD & NECK SQUMOUS CELL CARCINOMA: A POPULATION-BASED ANALYSIS
Sarah Hamilton1, Eric Tran1, Eric Berthelet1, Jonn Wu2, Robert Olson; 1British Columbia Cancer Agency, Vancouver, BC; 2University of British Columbia, Vancouver, BC

77  DISTANT METASTASES RISK-GROUP DEFINITION OF ORAL SQUMOUS CELL CARCINOMA PATIENTS TREATED WITH POSTOPERATIVE INTENSITY MODULATED RADIOTHERAPY
Ali Hosni, Kevin Chiu, Shao Hui Huang, Wei Xu, Jie Su, Li Tong, Andrew Bayley, Scott Bratman, John Cho, Meredith Giuliani, John Kim, Jolie Ringash, John Waldron, John de Almeida, Douglas Chepeha, David Goldstein, Brian O’Sullivan, Andrew Hope; Princess Margaret Cancer Centre, Toronto, ON

78  A RADIOMIC PROGNOSTIC INDEX REFINES RISK MODELS FOR DISTANT METASTASIS IN HPV-RELATED OROPHARYNGEAL CANCER
Jennifer Kwan1, Jie Su1, Shao Hui Huang2, Wei Xu1, Kenneth Yip1, Meredith Giuliani1, Andrew Bayley1, John Kim1, Andrew Hope1, Jolie Ringash1, John Cho1, Andrea McNiven1, Aaron Hansen1, David Goldstein1, Hugo Aerts4, John Waldron1, Benjamin Haibe-Kains1, Brian O'Sullivan1, Scott Bratman1, Fei-Fei Liu1;
1University of Toronto, Toronto, ON; 2University Health Network, Toronto, ON; 3Princess Margaret Cancer Centre, Toronto, ON; 4Dana-Farber Cancer Institute, Boston, MA

79  EVALUATION OF DIFFERENCES BETWEEN ESTIMATED DELIVERED DOSE AND PLANNED DOSE IN NASOPHARYNX PATIENTS USING DEFORMABLE IMAGE REGISTRATION AND DOSE ACCUMULATION
Olive Wong1, Andrea McNiven2, Blu Chan1, Joanne Moseley1, Jenny Lee1, Lisa Le1, Cijian Ren1, John Waldron1, Jean-Pierre Bissonnette1, Meredith Giuliani1, Beibei Zhang2;
1Princess Margaret Cancer Centre, Toronto, ON; 2University of Toronto, Toronto, ON

80  TREATMENT OUTCOMES IN OROPHARYNX CANCER PATIENTS WHO RECEIVED LESS THAN THE PLANNED CURATIVE RADIOTHERAPY DOSE
Fatimah Alfaraj1, Shao Hui Huang2, Brian O'Sullivan1, Jie Su1, Andrew Bayley1, Scott Bratman1, John Cho1, Meredith Giuliani1, John Kim1, Jolie Ringash1, John Waldron1, Aaron Hansen1, Ana Spreafico1, John de Almeida1, Bayardo Perez-Ordenez2, Ilan Weinreb2, Li Tong2, Wei Xu1, Andrew Hope3;
1University of Toronto, Toronto, ON; 2University Health Network, Toronto, ON; 3Princess Margaret Cancer Centre, Toronto, ON
### ORAL SESSION 8 – CNS, EXPERIMENTAL THERAPEUTICS  Toronto II

**Moderators:** Valerie Panet-Raymond, John Thoms

**OBJECTIVES:** At the end of this session, the participants will be able to:
- Review important aspects associated with treatment delivery and outcomes of patients undergoing treatment for CNS tumours.
- Describe relevant biomarkers for effectiveness and toxicity of cancer therapy.

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<tr>
<th>Presentation</th>
<th>Title</th>
<th>Authors</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>CLINICAL OUTCOMES OF 24 GY IN 2 DAILY FRACTIONS FOR PATIENTS WITH DE NOVO SPINAL METASTASES TREATED WITH SPINE STEREOTACTIC BODY RADIOTHERAPY (SBRT)</td>
<td>Chia-Lin Tseng, Mikki Campbell, Hany Soliman, Sten Myrehaug, Mark Ruschin, Young Lee, Eshetu Atanafu, Arjun Sahgal; University of Toronto, Toronto, ON</td>
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</tr>
<tr>
<td>82</td>
<td>PROGNOSTIC FACTORS IN ATYPICAL MENINGIOMA</td>
<td>Luis Souhami, Shakir Shakir, Kevin Petrecca, Jose Joao Mansure, George Shenuouda, Valerie Panet-Raymond, Bassam Abdulkarim, Marie Christine Guiot; McGill University Health Centre, Montréal, QC</td>
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<td>83</td>
<td>CANADIAN PATTERNS OF PRACTICE FOR INTRACRANIAL GERM CELL TUMOURS IN ADOLESCENTS AND YOUNG ADULTS</td>
<td>Andrea Lo1, Normand Lapenerrie1, David Hodgson1, Eric Boufflet1, James Nicholson2, Michael McKenzie1, Juliette Hukin3, Karen Goddard4; 1University of Toronto, Toronto, ON; 2Cambridge University, Cambridge, United Kingdom; 3University of British Columbia, Vancouver, BC</td>
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</tr>
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<td>84</td>
<td>IMPROVING RADIATION RESPONSE IN HORMONE SENSITIVE AND RESISTANT PROSTATE CANCER WITH COMBINED METFORMIN AND SALICYLATE TREATMENT – MODULATION OF THE AMPK PATHWAY AND LIPOGENESIS</td>
<td>Lindsay A Broadfield1, Katarina Marcinko1, Carrie Gerdes2, Danitra Maharaj2, Thomas Farrell1, Gregory R Steinberg1, Theodoros Tsakiridis2; 1McMaster University, Hamilton, ON; 2Juravinski Cancer Centre, Hamilton, ON</td>
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<td>85</td>
<td>PLASMA HPV DNA AS A BIOMARKER OF RESPONSE IN PATIENTS WITH LOCALLY ADVANCED CERVICAL CANCER TREATED WITH DEFINITIVE CHEMORADIATION</td>
<td>Eric Leung, Scott Bratman, Kathy Hart; University of Toronto, Toronto, ON</td>
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<td>86</td>
<td>DATA-MINING TCGA PATHOLOGY REPORTS FOR PAN-CANCER GENOTYPE-HISTOLOGIC PHENOTYPE RELATIONSHIPS THAT INFORM PROGNOSIS</td>
<td>Jonathan So1, Stanley Liu2; 1University of Toronto, Toronto, ON; 2Odette Cancer Centre, Toronto, ON</td>
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11:30-12:15 Lunch

12:15-1:45 **WORKSHOPS**

**WORKSHOP 4 Governor General**

CHEST TUMOURS: CHALLENGES IN PRACTICE

Patricia Tai, Conrad Falkson, Arjun Sahgal, Meredith Giuliani

**OBJECTIVES:** At the end of this workshop, the participants will be able to:
- Be competent on the application of various radiation treatment techniques, with respect to target volume definition and doses for different tumors in the chest, including mesothelioma and thymoma.
- Be familiar with re-irradiation treatment planning, and tolerance doses.
- Be aware of challenges in post-treatment imaging.

**WORKSHOP 5 Toronto III**

STEREOTACTIC BODY RADIATION THERAPY (SBRT) FOR SPINAL METASTASES

Majed Alghamdi, Arjun Sahgal, Young Lee, Laura Masucci

**OBJECTIVES:** At the end of this workshop, the participants will be able to:
- Understand the indications, outcomes and toxicities of Spine SBRT.
- Know the surgical innovations in combination with SBRT.
- Describe target volumes, prescription dose and constraints for OARs.
- Evaluate SBRT plan.
- Know the QA process for spine SBRT.
- Understand SC24- Canadian Randomized Trial (20Gy /5 vs SBRT 24 Gy/2).
WORKSHOP 6  Tom Thomson

BUILDING A COMMUNITY OF PRACTICE THROUGH CARO TO PROMOTE QUALITY RADIOTHERAPY
Amanda Caissie, Michael Brundage, Brian Liszewski, Christina Parsons, Gunita Mitera

OBJECTIVES: At the end of this workshop, the participants will be able to:

I Understand what quality and best practice means for radiotherapy (RT).
I Discuss examples of key quality improvement initiatives currently underway across Canadian RT centres and promoted through national organizations/ initiatives such as the Canadian Partnership for Quality Radiotherapy (CPQR) or National Peer Review Study.
I Identify to the CARO Quality and Standards Committee for rationale for its creations.
I Discuss how both academic and community Canadian RT centres could benefit from the committee as a community of practice (COP) driving RT QI initiatives.

1:45-2:45 REVIEWERS’ CHOICE  Toronto I

Moderators: Marc Gaudet, Paris-Ann Ingledew

OBJECTIVES: At the end of this session, the participants will be able to:

I Understand a variety of interesting and select topics of radiation therapy innovations, quality of care, and quality of life measurements and how these
I Impact our cancer population.

87  INDIVIDUAL PATIENT DATA META-ANALYSIS OF KIDNEY SBRT: A REPORT FROM THE INTERNATIONAL RADIOSURGERY ONCOLOGY CONSORTIUM FOR KIDNEY (IROCK) Alexander Louie1, Alexander Muacevic2, Michael Staehler2, Andrew Warner1, Senthilkumar Gandhinasan3, Lee Ponsky3, Rodney Ellis3, Irving Kaplan3, Anand Mahadevan3, William Chu3, Hiroshi Onishi3, Simon Lo4, Bin Teh4, Anand Swaminath3, 1London Regional Cancer Program, London, ON; 2University of Munich, Munich, Germany; 3London Health Sciences Centre, London, ON; 4University of Melbourne, Melbourne, Australia; 5Case Western Reserve University, Cleveland, OH; 6Harvard University, Boston, MA; 7University of Toronto, Toronto, ON; 8University of Yamanashi, Yamanashi, Japan; 9University of Washington, Seattle, WA; 10Weil Cornell Medical College, Houston, TX; 11McMaster University, Hamilton, ON; 12University of Western Ontario, London, ON

88  A PROSPECTIVE PHASE II TRIAL OF TRANSPERINEAL ULTRASOUND GUIDED BRACHYTHERAPY FOR LOCALLY RECURRENT PROSTATE CANCER AFTER EXTERNAL BEAM RADIOTHERAPY (NRG/RTOG 0526) Juanita Crook1, Peixin Zhang2, Thomas Pisansky3, Edouard Trabulis4, Mahul Amin5, William Bice6, Gerard Morton7, Nadeem Pervez8, Eric Vigneault9, Jeff Michalski10, Charles Catt11, Mack Roach12, David Beyer13, Peter Rossi13, Eric Horitz14, Viroon Donavanik15, Chistiana Care15, Howard Sandler16, 1University of British Columbia, Kelowna, BC; 2New Jersey Institute of Technology, Philadelphia, PA; 3University of Rochester, Rochester, MN; 4Thomas Jefferson University, Philadelphia, PA; 5Cedars-Sinai Medical Center, Los Angeles, CA; 6John Muir Health Systems, Walnut Creek, CA; 7University of Toronto, Toronto, ON; 8University of Calgary, Calgary, AB; 9Centre Hospitalier Universite de Quebec, Quebec, QC; 10Washington University, St Louis, MO; 11UCSF, San Francisco, CA; 12Cancer Center of Northern Arizona, Scottsdale, AZ; 13Emory University, Atlanta, GA; 14Fox Chase, Philadelphia, PA; 15Newark, DE
89 A PILOT STUDY OF SALVAGE HDR BRACHYTHERAPY IN PATIENTS WITH RECURRENT PROSTATE CANCER AFTER PRIMARY RADIATION: TOXICITY PROFILE AND OUTCOMES

William Foster1, Eric Vigneault2, Marie-Claude Lavallée3, André-Guy Martin3;
1CHUQ Hotel-Dieu de Quebec, Quebec, QC; 2Université Laval, Quebec, QC

90 THE USE OF CHEMOTHERAPY IN PLACE OF RADIOTHERAPY DOES NOT RESULT IN A LOWER INCIDENCE OF SECOND CANCERS IN PATIENTS WITH EARLY STAGE SEMINOMA: A POPULATION BASED STUDY IN BRITISH COLUMBIA

Gaurav Bahl1, Rima Pathak1, Jenny Ko1, Michael Sia1, Christian Kollmannsberger2, Scott Tyldeley2;
1British Columbia Cancer Agency, Abbotsford, BC; 2British Columbia Cancer Agency, Vancouver, BC

91 RADIOTHERAPY QUALITY ASSURANCE OF CONCURRENT CHEMOTHERAPY AND RADIOTHERAPY IN PROCLAIM PHASE III TRIAL

Anthony Brade1, Frederik Wenz2, Friederike Koppe3, Yolande Lievens4, Belen San Antonio5, Neill Iscoe6, Anwar Hossain7, Nadia Chouaki8, Suresh Senan9;
1Peel Regional Cancer Centre, Mississauga, ON; 2University Hospital Mannheim, Mannheim, Germany; 3Institute Verbeeten, Tilburg, Netherlands; 4Ghent University Hospital, Ghent, Belgium; 5Lilly España, Madrid, Spain; 6Eli Lilly Canada Inc., Toronto, ON; 7Eli Lilly and Company, Indianapolis, IN; 8Eli Lilly and Company, Neuilly-sur-Seine, France; 9VU University Medical Center, Amsterdam, Netherlands

2:45-3:00 Keynote Toronto I

Introduction: Fabio Cury

Beyond Medicine – The Human Touch, Life of Professionals!

Shelly Dev

3:00-3:15 CLOSING REMARKS Toronto I