**SCHEDULE**

**DAY 1 - Monday, October 14, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>07:00</td>
<td>Registration, Continental Breakfast, Visit Exhibits and Posters</td>
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<tr>
<td>07:45</td>
<td>Welcome and Opening Remarks</td>
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<tr>
<td>08:00</td>
<td>KEYNOTE LECTURE 1 - GI Oncology: An Emerging Frontier</td>
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<td>08:30</td>
<td>EDUCATIONAL SESSION 1 - Toxicity Is The Difference-Maker</td>
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<td></td>
<td>Moderator I Hesham Gayar</td>
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<td></td>
<td>Proton Therapy Is All About Reducing Late Toxicity</td>
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<td></td>
<td>▪ The Pediatric Experience</td>
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<td>▪ At the Heart of the Matter</td>
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<tr>
<td>09:30</td>
<td>Break, Visit Exhibits and Posters</td>
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<tr>
<td>10:00</td>
<td>Proton Therapy Is All About Reducing Acute Toxicities</td>
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<td></td>
<td>▪ Head and Neck</td>
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<td>▪ Bowel and GI Toxicities</td>
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<td>11:00</td>
<td>PANEL SESSION: Challenges of Incorporating Proton Therapy into Cooperative Group</td>
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<td>Clinical Trials and Practical Hurdles of Proton Studies</td>
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<td>Moderator I William Hartsell</td>
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<tr>
<td>12:00</td>
<td>Lunch, Visit Exhibits and Posters</td>
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<td>Industry Product Theater (30 minutes) - Optional session concurrent with lunch</td>
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**ORIGINAL CONTRIBUTION SESSION 1 – Breast and Genitourinary**

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<tr>
<th>Time</th>
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<tr>
<td>13:00</td>
<td>Should We Contour to the Skin? The Evaluation of Skin Dose During Pencil Beam Proton Therapy for the Chest Wall</td>
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<tr>
<td>13:10</td>
<td>Clinical Outcomes After Proton Partial Breast Radiotherapy for Early Stage, Hormone Receptor Positive Breast Cancer: Three-Year Outcomes of a Phase II Trial</td>
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<td>13:20</td>
<td>Insurance Coverage for Adjuvant Proton Therapy in the Definitive Treatment of Breast Cancer</td>
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<td>13:30</td>
<td>Patterns of Care and Referral for Proton Therapy in Breast, Lung and Prostate Cancer</td>
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<td>13:40</td>
<td>Initial Clinical Outcomes for Prostate Cancer Patients Undergoing Adjuvant or Salvage Post-Prostatectomy Proton Therapy (PT)</td>
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<td>13:50</td>
<td>Postoperative or Salvage Proton Radiotherapy for Prostate Cancer Following Radical Prostatectomy</td>
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<td>14:00</td>
<td>Ten-Year Outcomes from Three Prospective Clinical Trials of Image-Guided Proton Therapy in Prostate Cancer</td>
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<td>14:10</td>
<td>Evaluation of U-net Based Synthetic CT for MRI-only Treatment Planning of Prostate Cancer Proton Therapy</td>
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<td>14:20</td>
<td>The Impact of Dose Algorithms on Tumor Control Probability in Intensity-Modulated Proton Therapy for Breast Cancer</td>
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14:30  KEYNOTE LECTURE 2 – Improving Dosimetric Precision: Clinical Implementation of Dual Energy CT for PT Planning | Kevin Teo

15:00  INVITED LECTURE – Multi-Organ Toxicity Prediction Approach for Proton Planning | Soren Bentzen

15:30  Adjourn and Closing Remarks – Day 1 Educational Session | Michael Chuong

15:30  Break, Visit Exhibits and Posters

16:00  Mentor-led Poster Walk (Non-CME segment) | Charles Simone, Chris Beltran

17:00  Depart for Miami Cancer Institute (15 minute walk)

17:30 – 19:00  Reception and Tour – Miami Cancer Institute Proton Therapy Center

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**DAY 2 - Tuesday, October 15, 2019**

07:00  Registration, Continental Breakfast, Visit Exhibits and Posters

07:00  Industry Product Theater (30 minutes) - Optional session concurrent with breakfast

07:00  PTCOG-NA Executive Committee Meeting - by invitation only

07:55  Welcome and Opening Remarks | Craig McKenzie

08:00  RBE/LET Planning: A Realistic Assessment, Pros and Cons | Chris Beltran and Daniel Indelicato

**ORIGINAL CONTRIBUTION SESSION 2 – Other Topics**

Moderators | Eugen Hug, Soren Bentzen

08:45  Average Let of X-rays and Gamma Radiation for Radiobiological Modeling

08:55  Evaluating Proton Relative Biological Effectiveness for Spinal Cord Toxicity

09:05  Concurrent Pencil Beam Scanning Proton Therapy and Hyperthermia: Growing Experience with Promising Results

09:15  The Impact of Dual Energy CT Scans on TPS Calculated Dose Accuracies for Biological and Non-Biological Samples

09:25  Comparative Effectiveness of Proton Therapy Versus Photon Therapy as Part of Concurrent Chemo-Radiotherapy for Locally Advanced Cancer: Analysis of Patients with Private Health Insurance

09:35  Impact of Proton Technology Evolution on Patient Volumes at a Large Academic Medical Center

09:45  Treatment Planning Strategies to Mitigate the Relative Biological Effectiveness Uncertainty in Proton Therapy for Targets in the Brain

09:55  Improving Proton Plan Robustness Evaluation Standardization and Efficiency Through Scripting

10:05  Carbon Ion Dose Constraints for Organs at Risk at MedAustron

10:15  Break, Visit Exhibits and Posters

**EDUCATIONAL SESSION 2 - Emerging Clinical Data**

Moderator | Carl Rossi

10:45  Protons and Cognition | Rupesh Kotecha

11:15  Lung Cancer Conundrum | Charles Simone

11:45  Lunch, Visit Exhibits and Posters

Industry Product Theater (30 minutes) - Optional session concurrent with lunch
ORIGINAL CONTRIBUTION SESSION 3 – CNS and Pediatrics
Moderators I Matthew Hall, Chris Beltran
12:45 Outcomes After Proton Therapy for Skull-Base Chordoma: A Prospective Study
13:05 Routine Neurocognitive Testing of Patients Treated with Proton Therapy on a Prospective Registry Study - Feasibility and First Results
13:15 Outcomes of Intracranial High-Grade Glioma Treated with Proton Therapy
13:25 What’s Gone Wrong in Head and Neck Rhabdomyosarcoma?
13:35 Proton Therapy for Pediatric Bladder Rhabdomyosarcoma
13:45 Computer-Based Assessment of Neurocognitive Decline in Pediatric Patients Treated with Proton Therapy: A Prospective Study
13:55 Organ Sparing with Proton Radiation Therapy for Pediatric Hodgkin Lymphoma
14:05 Proton Irradiation Using Pencil Beam Scanning (PBS) Correlates with Taste/Odor Changes Identified by the Layer Defined Dose and Bragg Peak Delivery to the Olfactory Structure (OS) for Brain Tumors

14:15 Challenging Cases with Audience Participation – Miami Cancer Institute: Protons Are Not a Panacea | Michael Chuong, Marcio Fagundes, Alonso Gutierrez, Minessh Mehta, Craig McKenzie
Moderator I Minesh Mehta

15:00 Break, Visit Exhibits and Posters

ORIGINAL CONTRIBUTION SESSION 4 – Physics
Moderators I Mark Pankuch, Alonso Gutierrez
15:30 Clinical Sensitivity of a Prototype Proton Radiography System
15:40 Deep Learning Based Relative Stopping Power Mapping Generation for CBCT-Guided Adaptive Proton Radiotherapy
15:50 Clinical Workflow to Evaluate and Incorporate a High-Density Implant into Pencil Beam Scanning Proton Therapy Planning
16:00 Real-Time, Patient-Specific Quality Assurance
16:10 Evaluations of a Flat-Panel Based Compact Daily QA Device for Proton Pencil Beam Scanning (PBS) System
16:20 Status on Carbon Ion Commissioning at MedAustron Ion Therapy Center
16:40 A Sub-Cubic Millimeter Single Particle Sensor for In Vivo Dosimetry
16:50 Feasibility of Predicting Proton Stopping Power Ratio Using the MRI-Measured Material Hydrogen Density

17:00 INVITED LECTURE - Hyperthermia and Protons: Is This the Safe Way to Get the “Carbon Effect”? | Zeljko Vujaskovic

17:30 Adjourn and Closing Remarks – Day 2 Educational Session I Michael Chuong

18:00 Depart - City Night Miami (please arrive 15 minutes before departure time)

DAY 3 – Wednesday, October 16, 2019

07:00 Registration, Continental Breakfast, Visit Exhibits and Posters
07:25 Welcome and Opening Remarks I Anita Mahajan
07:30 KEYNOTE LECTURE 3 – FLASH | Jim Metz
08:00 PTCOG-NA General Assembly Meeting, All Members
ORIGINAL CONTRIBUTION SESSION 5 – Lung and Motion
Moderators I Jing Zeng, Paige Taylor
08:45  A University of Florida and Proton Collaborative Group Phase I/II Study of Hypofractionated Proton Therapy with Concurrent Chemotherapy for Stage II-III NSCLC
08:55  Interplay Evaluation of High-Frequency Percussive Ventilation (HFPV) for Motion Greater than 10 MM During Proton Beam Scanning
09:05  Image-Guided Hypofractionated Proton Therapy in the Management of Early Stage Non-Small Cell Lung Cancer
09:15  Using Breath Hold at the End of Exhale for Lung Treatment in Pencil Beam Scanning Proton Therapy
09:25  Clinical Outcomes Following Proton Beam Therapy for Locally Advanced Non-Small Cell Lung Cancer: Analysis of a Multi-Institutional Prospective Registry
09:35  Dual-Energy CT-Based Accurate Relative Stopping Power Mapping Using Deep Learning
09:45  Evaluation of the Gain in Using Higher Order Components of the Thoraco-Abdominal Surface to Estimate Volumetric Tidal Flow
09:55  Evaluation of Stopping Power Ratio Prediction of Lung Tissue from Dual-Energy CT
10:05  Effectiveness of Motion Interplay Effect Mitigation Using Spot-Scanning Proton Arc (SPArc) Therapy in Lung Stereotactic Body Radiotherapy (SBRT): A Quantitative Comparison Study Based on a Digital Phantom

10:15  Break, Visit Exhibits and Posters

ORIGINAL CONTRIBUTION SESSION 6 – Head & Neck and Gastrointestinal
Moderators I Adeel Kaiser, Jen Yu
10:30  Intensity Modulated Proton Therapy Using Dose-Painting Pencil Beam Scanning for High-Risk Hepatocellular Carcinomas
10:40  Re-irradiation with Proton Therapy for Recurrent Malignancies of the Esophagus and Gastroesophageal Junction: Results of the Proton Collaborative Group Multi-Institutional Prospective Registry Trial
10:50  Early Results of Re-irradiation for Rectal Cancer Using Pencil-Beam Scanning Proton Therapy Are Promising
11:00  Minimal Severe Acute Toxicity in Anal Cancer Patients Treated with Proton Beam Therapy
11:10  Estimating the Individual Quality of Life Benefit and Cost Effectiveness of Proton Therapy for Patients with Oropharyngeal Cancer
11:20  Quantification and Verification of Skin Dose for Patients with Head and Neck Cancer Receiving Intensity Modulated Proton Therapy
11:30  Spot-Scanning Proton Arc Therapy (SPArc) for Improved Optic Pathway Sparing in Paranasal Sinus and Nasal Cavity Cancer Treatment
11:40  The Importance of Verification Computed Tomography Quality Assurance Scans in Patients Treated with Spot-Scanning Intensity Modulated Proton Therapy for Head and Neck Cancers
11:50  Enhancing LET in Proton Beam Therapy for Pancreas Cancer

12:00  Closing Remarks and Adjourn I Eugen Hug

12:30  PTCOG-NA Post-Conference Executive Committee Meeting – by Invitation only