Ibrahim Alrekhais, Radiation Oncology Fellow

Juliet Maina, Radiation Oncology Fellow

Sarah Bowen Jones, STARS21 Scholar

Antonio Diego de la Pena Villarreal, Radiation

Supervisor: Rebecca Wong

Supervisor: Kathy Han

Supervisor: Faivre-Finn

Supervisor: Fei-Fei Liu

Oncology Fellow





Program Agenda			
Time	Session	Speakers	
8:30 – 9:00	Registration (30 mins)	N/A	
9:00 – 9:15	Cody Hall Land Acknowledgement + Welcome Remarks	Laura Dawson, UTDRO Chair Anne Koch/Shane Harding, Co-Directors of STARS21	
Cody Hall	Oral Presentations 1 (5 mins talk + 2 mins Q&A)		
Judges: Anne Koch, Benjamin Lok Moderator: Scott Bratman			
Oral# & Time	Oral# & Time Presenters		
	Identifying Intermediate-Risk Prostate Cancer Patients Appropriate for Active Surveillance using Recursive Partitioning Analysis and Long-Term Follow-Up #01 Cognitive Outcomes Following Proton VS Photon	Ruben Del Castillo, Radiation Oncology Fellow Supervisor: Andrew Loblaw	
	Radiotherapy for CNS Non-Germinomatous Germ Cell Tumors: A Children's Oncology Group Study	David Mak, Radiation Oncology Resident Supervisor: Derek Tsang	

#01-06 9:15 - 9:57

#02

Systemic Therapies

#O3 MRI-Guided Interstitial Brachytherapy for Vaginal Recurrence of Endometrial Cancer Using 2 VS 3 or

More Fractions **#04** Toxicity and Survival Following Lung Radiotherapy in

Patients with Interstitial Lung Abnormalities and

Efficacy of ¹⁷⁷Lu-DOTATATE in Neuroendocrine Cancer of the Cervix Resistant to Conventional

Interstitial Lung Disease **#**05 Dosimetric Impact of Excluding Internal Mammary Node Coverage on Musculoskeletal Tissues in Breast Radiotherapy **#**06

Poster Discussion 1 (3 mins talk + 2 mins Q&A)

Poster# & Time	Title, Screen # – Poster #	Presenters	Judges
Session 1.1 #P1-6 10:00 – 10:05	Beam Characteristics of a Proposed Dielectric Wall Proton Accelerator Design S1 – #P1	Chau Giang Bui, Graduate Student Supervisor: Jan Seuntjens	Jay Detsky Scott Bratman
	Outcomes and Toxicities Following Conventional Radiation Therapy for Pituitary Neuroendocrine Tumours (PitNETs) S2 – #P2	Inhwa Kim (present on behalf of Brandon Craig, Medical Student) Supervisor: Michael Yan	Alex Vitkin Stanley Liu
	Radiotherapy for the Management of Bone Metastases in Differentiated Thyroid Cancer \$3 - #P3	Colin Faulkner, Radiation Oncology Resident Supervisor: Jelena Lukovic	David Shultz Alexandra Rink





	Assessing the Safety of Delayed Elective Nodal Irradiation Through Pre-Treatment Nodal Kinetics in High-Risk OPSCC S4 – #P4	George Li, Radiation Oncology Resident Supervisor: Andrew McPartlin	Jennifer Croke Kathy Han
	Evaluating Cardiac Substructure Exposure and Auto- Contouring Feasibility in Paediatric Patients Treated with Proton Beam Therapy \$5 - #P5	Love Goyal, STARS21 Scholar Supervisor: Marianne Aznar	Anthony Lausch Jennifer Kwan
	Evaluation of Normal Tissue and Organ-at-Risk Sparing for Glioblastoma Patients Using a Small- Margin Weekly Adaptive Protocol on a 1.5T MR-Linac \$6 - #P6	Thomas Mann, Physics Resident Supervisor: Mark Ruschin	David Hodgson Catherine Coolens
	Safety and Efficacy of External Beam Radiotherapy in the Management of Differentiated Thyroid Cancer \$1 – #P7	Dana Bartolucci, Radiation Oncology Resident Supervisor: Aruz Mesci	Jay Detsky Scott Bratman
	Review of a Proton Therapy Consultation Service for Radiation Oncologists in Canada \$2 - #P8	Inhwa Kim, Radiation Oncology Resident Supervisor: Derek Tsang	Alex Vitkin Stanley Liu
	Patterns of Failure for Patients With Thymoma Treated With Post Operative Radiation Therapy \$3 - #P9	Oded Icht, Radiation Oncology Fellow Supervisor: Andrew Hope	David Shultz Alexandra Rink
Session 1.2 #P7-12 10:10 – 10:15 Session 1.3 #P13-18 10:20 – 10:25	Outcomes of Palliative Hypofractionated Radiotherapy with 50 Gy in 20 Fractions with or without a Treatment Break in Head and Neck Cancer Patients S4 – #P10	Aarthi lyer, Radiation Oncology Fellow Supervisor: Andrew McPartlin	Jennifer Croke Kathy Han
	Radiation Therapy for Gynaecological Cancers: Effects of Sense of Coherence on Outcomes and Patient Experience S5 – #P11	Anita Vloet, STARS21 Scholar Supervisor: Michael Velec and Yat Tsang	Anthony Lausch Jennifer Kwan
	Off-Protocol Radiotherapy in Prospective Systemic Therapy Trials for Metastatic Non-Small Cell Lung Cancer S6 – #P12	Kara Ruicci, Radiation Oncology Resident Supervisor: Alex Louie	David Hodgson Catherine Coolens
	Leveraging Hybrid PET/MR Imaging to Distinguish Progression From Radionecrosis Post-Radiosurgery \$1 - #P13	Michael Maddalena, STARS21 Scholar Supervisor: Catherine Coolens	Jay Detsky Scott Bratman
	Moderate Hypofractionated Boost to the Prostate With Pelvic Radiotherapy in High-Risk Prostate Cancer (MOB-RT): Early Outcomes From a Non-Randomized Phase II Trial \$2 - #P14	John Mohan Mathew, Radiation Oncology Fellow Supervisor: Rachel Glicksman	Alex Vitkin Stanley Liu
	Evaluating Dose Accumulation, Gastrointestinal Toxicity, and Clinical Outcomes in MR-Guided Pancreatic SABR \$3 – #P15	Rekaya Shabbir, STARS21 Scholar Supervisor: Cynthia Eccles	David Shultz Alexandra Rink





	Impact of Breast Irradiation On Long-Term Risk of Cardiac Events Following Breast-Conserving Surgery for DCIS: a Population-Based Analysis S4 – #P16	Fasila Johri, Radiation Oncology Resident Supervisor: Eileen Rakovitch	Jennifer Croke Kathy Han
	Investigation of a Novel Methodology To Select Patients for PTV Margin Reduction via Daily Adaptive Radiotherapy for Head and Neck Cancer \$5 - #P17	Alec Hughes, Radiation Oncology Resident Supervisor: Andrew McPartlin	Anthony Lausch Jennifer Kwan
	Optimal Apparent Diffusion Coefficient (ADC) Thresholds for Predicting Geographic Recurrence in Glioblastoma During Chemoradiation (CRT) S6 – #P18	Daniel Palhares, Radiation Oncology Fellow Supervisor: Hany Soliman	David Hodgson Catherine Coolens
10:25 – 10:55	Morning Break (30 minutes)		

Cody Hall

Oral Presentations 2 (5 mins talk + 2 mins Q&A)

Judges: Mike Milosevic, May Tsao Moderator: Tom Purdie

# & Time	Title	Presenters	
#07-012 10:55 – 11:37	Prospective Study on Head and Neck Stereotactic Body Radiotherapy: A Tolerance Analysis #07	Stephan Tran, Radiation Oncology Fellow Supervisor: Irene Karam	
	Automated Case Prioritization in Breast Radiation Therapy Peer Review Rounds #08	Christy Wong, STARS21 Scholar Supervisor: Tom Purdie	
	Assessing Diffuse Optical Spectroscopy and Magnetic Resonance Imaging for Quantification of Multimodal Gadolinium-Incorporated Porphysomes for Theranostic Guidance of Oral Cancer Resection #09	Theodore Husby, Graduate Student Supervisor: Robert Weersink	
	Patterned Air Hole Defects in Dielectric Radial Waveguide Structures to Increase the Power Transmission Efficiency in Dielectric Wall Accelerators #O10	Jason Yuan, Graduate Student Supervisor: Jan Seuntjens	
	Investigation of survival and non-cancer death following lung stereotactic body radiation therapy using machine learning-based auto-segmentation #O11	lymad Mansour, Physics Resident Supervisor: Tony Tadic	
	Pipeline for Characterizing (Dosimetric) Impact of Respiratory Motion on Cardiac SBRT #012	Sarah Aubert, Physics Resident Supervisor: Leigh Conroy, Tony Tadic	
11:40 – 12:25 (35 mins talk + 10 mins Q&A)	Keynote Address Improving Clinical Evidence Driven Discovery with Large Scale Comprehensive Analytics	Speaker Charles Mayo, University of Michigan Medical School (Introduction: Dr. David Hodgson)	
12:25 – 1:25	Great Hall Lunch (60 minutes)		





Poster Discussion 2 (3 mins talk + 2 mins Q&A)				
# & Time	Title	Presenters	Judges	
Session 2.1 #P19-24	Liquid Biopsy-Based Mass Spectrometry Metabolomics for Early Detection and Radiotherapy Monitoring of Gliomas S1 – #P19	Irene Rebollido Pedrido, STARS21 Scholar Supervisor: Petra Hamerlik	May Tsao Alex Louie	
	Innovative Patient-Derived Glioblastoma Models for Assessing Radiation-Activated Photodynamic Therapy Effectiveness \$2 - #P20	Manjusha Muralidharan, Research Fellow Supervisor: Deepak Dinakaran	Yat Tsang Robert Weersink	
	Methylome Plasticity as a Biomarker of Treatment Response in Small Cell Lung Cancer \$3 – #P21	Danielle Benedict Sacdalan, Graduate Student Supervisor: Benjamin Lok	Patricia Lindsay Tom Purdie	
1:25 – 1:30	Investigating Micro-Environmental Changes in a Syngeneic Radio-Recurrent Prostate Cancer Model S4 – #P22	Stephanie White, STARS21 Scholar Supervisor: Stanley Liu	Shane Harding Dana Keilty	
	Immune Landscape of Radiation Necrosis VS Local Failure in Melanoma Brain Metastases Treated with Stereotactic Radiosurgery \$5 - #P23	Maleeha Qazi, Radiation Oncology Resident Supervisor: David Shultz	Anne Koch Derek Tsang	
	PARP and Autophagy Inhibition Synergy in Small Cell Lung Cancer \$6 - #P24	Tony Yu, Graduate Student Supervisor: Benjamin Lok	Mike Milosevic Danielle Rodin	
Session 2.2 #P25-30 1:35 – 1:40	SPECT/CT Imaging, Safety and Dosimetry of Electron-Emitting ¹⁹⁷ Hg-Labeled Gold Nanoparticles Administered by Convection-Enhanced Delivery to NRG Mice with U-251-Luc Human GBM Tumours in the Brain S1 – #P25	Madeline Brown, STARS21 Scholar Supervisor: Raymond Reilly	May Tsao Alex Louie	
	Investigating Predictive Biomarkers for Inhibitor of Apoptosis Proteins Antagonists in Squamous Cell Carcinoma of the Upper Aerodigestive Tract S2 – #P26	Danae Rin Chen, Research Technician Supervisor: Scott Bratman	Yat Tsang Robert Weersink	
	Radiation Driven Alterations in Cell Cycle Progressions \$3 - #P27	Vanessa Giglio, STARS21 Scholar Supervisor: Shane Harding	Patricia Lindsay Tom Purdie	
	Deciphering Small Cell Lung Cancer Heterogeneity through Cell-to-Cell Communication by Single-cell Resolution Spatial Transcriptomic Analysis S4 – #P28	Victoria Gao, STARS21 Scholar Supervisor: Benjamin Lok	Shane Harding Dana Keilty	
	Evaluating the Synergistic Effects of Antiangiogenic Therapy and Stereotactic Body Radiation Therapy in Pancreatic Cancer Using Optical Coherence Tomography \$5 - #P29\$	Hector Contreras Sanchez, STARS21 Scholar Supervisor: Alex Vitkin, Edward Taylor	Anne Koch Derek Tsang	
	Targeting the Cell's Nucleolus to Fight Breast Cancer S6 – #P30	Tamari Chkuaseli, STARS21 Scholar Supervisor: Razq Hakem, Karim Mekhail	Mike Milosevic Danielle Rodin	





Session 2.3 #P31-36 1:45 – 1:50 Session 2.4 #P37-40 1:55 – 2:00	FBXO11 Mediates PARP Inhibitor Resistance in Small-Cell Lung Cancer \$1 - #P31	Jiaqi Xiong , STARS21 Scholar Supervisor: Benjamin Lok	May Tsao Alex Louie
	Investigating the Role of SFRP4 in Breast Cancer-Related Lymphedema \$2 - #P32	Mandi Ma , <i>STARS21 Scholar</i> Supervisor: Jennifer Kwan	Yat Tsang Robert Weersink
	Monte Carlo Derived Correction Factors for Ion Chambers Used in the Calibration of Gamma Knife Perfexion Model: Impact of Phantom Materials and Chamber Orientation on Dosimetric Accuracy \$3 - #P33	Tasnim Rahman, Graduate Student Supervisor: Catherine Coolens and Jan Seuntjens	Patricia Lindsay Tom Purdie
	Innovation and Investigation of Radiochromic Crystals for Real-Time Self-Calibrating Fiber-Optic Dosimetry S4 – #P34	Rohith Kaiyum, Graduate Student Supervisor: Alexandra Rink	Shane Harding Dana Keilty
	An Adaptable Permeable Gel Phantom Bio-Mimetic for Realistic Tumor Representation and Tracer Pharmacokinetic Simulation Under Elevated Interstitial Fluid Pressure Conditions S5 – #P35	Brendan Samaroo, Graduate Student Supervisor: Catherine Coolens	Anne Koch Derek Tsang
	Clinical Implementation of a Film Based PSQA System for SBRT on a 1.5T MR-Linac S6 – #P36	Mark D'Souza, Physics Resident Supervisor: Lee Chin, Brian Keller	Mike Milosevic Danielle Rodin
	Metabolic Imaging in Cervical Cancers Using GlucoCEST MRI S1 – #P37	Madeline Rapley, Graduate Student Supervisor: Alexandra Rink	May Tsao Alex Louie
	Improving Deep Learning-based HR-CTV Segmentation in Cervical HDR Brachytherapy Using Vaginal Involvement Information from Clinical Notes \$2 - #P38	Ruiyan Ni, Graduate Student Supervisor: Alexandra Rink	Yat Tsang Robert Weersink
	A Population-Based Open-Cohort Microsimulation Model for Projecting Long-Term Adverse Effects of Photon VS Proton Radiotherapy in CNS Cancer Patients \$3 - #P39	Federico Keszti, STARS21 Scholar Supervisor: Jan Seuntjens	Patricia Lindsay Tom Purdie
	Lineage Tracing to Study Mechanisms of Radiation Resistance in Meningioma \$\mathbf{S4} - \#P40\$	Chloe Gui, STARS21 Scholar Supervisor: Gelareh Zadeh	Shane Harding Dana Keilty





Cody Hall	Oral Presentations 3 (5 mins t	talk + 2 mins Q&A)		
Judges: David Hodgson, Derek Tsang Moderator: Alex Louie				
# & Time	Title	Presenters		
#013-18 2:05 – 2:47	Real-Time MRI-Guided Brachytherapy: A Series of Unique Applications #013	John Mohan Mathew, Radiation Oncology Fellow Supervisor: Rachel Glicksman, Peter Chung		
	Dosimetric Comparison between Delivered External Beam Radiotherapy and Simulated High Dose Rate Brachytherapy in Head & Neck Cancers #014	Dustin Newton , Radiation Oncology Resident Supervisor: Nauman Malik		
	Does Dose Avoidance of Uninvolved Skin/Subcutaneous Tissues Reduce Morbidity in Preoperative Intensity-Modulated Radiation Therapy for Soft Tissue Sarcomas of the Lower Extremity? #015	Siyer Roohani, Radiation Oncology Resident Supervisor: Peter Chung		
	Efficacy of Administering Pentoxifylline, Tocopherol, with or without Clodronate, to Irradiated Head and Neck Cancer Patients with Osteoradionecrosis #O16	Dustin Jan Cruz, Radiation Oncology Fellow Supervisor: Philip Wong		
	Outcomes of Staged Frameless Stereotactic Radiosurgery for Previously Irradiated Brain Metastases #017	Daniel Tong, Radiation Oncology Fellow Supervisor: Hanbo Chen		
	The Role of Stereotactic Body Radiotherapy in Oligoprogressive Prostate Cancer: A Site-Specific Analysis of the Prospective, Phase II Radiant Trial #O18	Kara Ruicci, Radiation Oncology Resident Supervisor: Rachel Glicksman		
2:47 – 3:17	Afternoon Bre	eak (30 minutes)		
Cody Hall	Oral Presentations 4 (5 mins t	calk + 2 mins Q&A)		
Judges: Shane Harding, David Shultz Moderator: Rachel Glicksman				
# & Time	Title	Presenters		
#019-25 3:20 – 4:09	Development of Multivariable Risk Models for Breast Cancer-Related Lymphedema: Interferon-Alpha-2A as a Potential Predictor for Lymphedema Occurrence #O19	Alison Wu, Medical Student Supervisor: Jennifer Kwan		
	Investigating NRF2-Mediated Radioresistance in HPV-Negative Head and Neck Squamous Cell Carcinoma Preclinical Models #O20	Aakshi Puri, STARS21 Scholar Supervisor: Scott Bratman		
	Automated CBCT-Based Tumour Volume Tracking is Prognostic in Virally-Mediated Head & Neck Cancer #021	Eric Stutheit-Zhao, Radiation Oncology Resident Supervisor: Scott Bratman		





	Disrupting Redox Homeostasis in Pancreatic Ductal Adenocarcinoma Initiates Anti-Tumour Immune Responses #022	Vishal Pandya, STARS21 Scholar Supervisor: Marianne Koritzinsky
	Enhanced MR-Guided Radiotherapy and Tumor Hypoxia Reduction with Manganese Dioxide Nanoparticles #023	Rachel Yang, STARS21 Scholar Supervisor: Michael Milosevic
	Temozolomide Co-Encapsulation with Radiation- Activated Photodynamic Therapy (RadioPDT) is an Effective Strategy for Sustained Release of the Drug #024	Muhammad Rafiq, Post Doc Research Fellow, Sunnybrook Supervisor: Deepak Dinakaran
	Investigating the Impact of Radiotherapy on the Sensitivity of Cancer Cells to Lysis by Pore-Forming Proteins #025	Adesewa Adebisi, STARS21 Scholar Supervisor: Jamie Honeychurch
4:10 – 4:25	Closing Remarks	Dr. David Hodgson, UTDRO Vice-Chair of Research
4:30 - 6:00	Great Hall Wine and Cheese Social + Award Presentation	