ImNO 2023 Symposium Program at a Glance

	March 23, 2023	
	Ballroom Centre	Ballroom East
08:30 - 08:45	Opening Remarks	
08:45 - 09:30	Keynote Session I — Using Implementation Science and AI approaches to Radically Improve Cervical Cancer Prevention Globally: Can the Outputs of a Global Effort be Protected as a Global Public Good? Karen Yeates, Queen's University	
09:30 - 09:45	Coffee Break	
09:45 - 10:45	Oral 1 Ultrasound Imaging	Oral 2 Neuroimaging I
10:45 - 11:15	Pitch 1 Ultrasound and Optical Imaging	Pitch 2 Neuroimaging
11:15 - 11:45	Meet-and-Greet Poster Viewing (Pitch Sessions 1 & 2 presenting) Lunch Pickup	
11:45 - 12:45	Panel Session — How Can Medical Imaging Contribute to Solving the Canadian Healthcare Crisis?	
12:45 - 13:00	Break	
13:00 - 14:00	Oral 3 Hyperpolarized MR Imaging	Oral 4 Image Guidance
14:00 - 14:30	Pitch 3 Hyperpolarized MR and Lung Imaging	Pitch 4 Image Guidance
14:30 - 15:00	Meet-and-Greet Poster Viewing (Pitch Sessions 3 & 4 presenting) Coffee Break	
15:00 - 16:00	Oral 5 Hardware Development	Oral 6 MR Imaging
16:00 - 16:30	Pitch 5 Image Processing and Machine Learning	Pitch 6 MR Imaging
16:30 - 17:00	Meet-and-Greet Poster Viewing (Pitch Sessions 5 & 6 presenting)	
17:00 - 19:00	Reception and ImNO Jeopardy	

	March 24, 2023	
	Ballroom Centre	Ballroom East
08:30 - 08:35	Opening Remarks	
08:35 - 09:35	Oral 7 Cancer Imaging	Oral 8 Cardiac and Lung Imaging
09:35 - 10:05	Pitch 7 Cancer Imaging	Pitch 8 Musculoskeletal and Vascular Imaging
10:05 - 10:35	Meet-and-Greet Poster Viewing (Pitch Sessions 7 & 8 presenting) Coffee Break	
10:35 - 11:35	Oral 9 MR and Magnetic Particle Imaging	Oral 10 Device Development
11:35 - 12:05	Pitch 9 Contrast Agents and Radiopharmaceuticals	Pitch 10 Device, Hardware and Software Development
12:05 - 12:35	Meet-and-Greet Poster Viewing (Pitch Sessions 9 & 10 presenting) Lunch Pickup	
12:35 - 13:35	Siemens Innovation Think Tank Presentations on Cost Containment for Healthcare Systems and Clinical Translation	
13:35 - 13:50	Break	
13:50 - 14:50	Oral 11 Deep Learning	Oral 12 Neuroimaging II
14:50 - 15:20	Pitch 11 Deep Learning	Pitch 12 Cellular and Molecular / Image Guidance
15:20 - 15:50	Meet-and-Greet Poster Viewing (Pitch Sessions 11 & 12 presenting) Coffee Break	
15:50 - 16:35	Keynote Session II — Embracing Failure Lena Maier-Hein, German Cancer Research Center	
16:35 - 17:00	Closing and Awards	

ImNO 2023 Program

Thursday, March 23, 2023

08:30 - 08:45	**Opening Remarks**	Ballroom Centre and East

Elvis Chen and Jessica Rodgers, ImNO 2023 Chairs

08:45 - 09:30	**Keynote Session I**	Ballroom Centre and East

Chairs: Gabor Fichtinger and Dilakshan Srikanthan

Using Implementation Science and AI approaches to Radically Improve Cervical Cancer Prevention Globally: Can the Outputs of a Global Effort be Protected as a Global Public Good?

Karen Yeates, Queen's University

09:30 - 09:45   **Coffee Break**

09:45 - 10:45

Oral 1 **Ultrasound Imaging** Ballroom Centre	Oral 2 **Neuroimaging I** Ballroom East
Chairs: Kalysta Makimoto and Daniel Milej	Chairs: Dana Broberg and Lucas Narciso
O1-1: Endobronchial Ultrasound (EBUS)-Enhanced Drug Delivery for Treatment of Lung Cancer	**O2-1: Structure-Function Coupling and Connectivity in Newly Diagnosed Pediatric Focal Epilepsy Patients**
Sean McGrath, University of Toronto	Mary Taylor, Western University
O1-2: Predicting Head & Neck Cancer Treatment Outcomes with Pre-Treatment Quantitative Ultrasound Texture Features & Optimizing Machine Learning Classifiers with Texture-of-Texture Features	**O2-2: Investigating Long-Term Microstructural Changes Following Repeated Mild Traumatic Brain Injury in Mice Using Advanced Diffusion MRI**
Aryan Safakish, Toronto Metropolitan University	Jake Hamilton, Robarts Research Institute
O1-3: Identification of Lung Sliding in a Clinical Ultrasound Dataset using Deep Learning	**O2-3: Imaging Dementia in African Populations: Closing the Gap on Challenges - A perspective**
Chris Yeung, Queen's University	Olujide Oyeniran, Western University
O1-4: Three-Dimensional Ultrasound for Investigating Synovial Blood Flow in Thumb Osteoarthritis	**O2-4: Non-invasive Quantification of [18F]SynVesT-1 for PET Studies of Synaptic Density in Parkinson's Disease**
Megan Hutter, Western University	Kelly Smart, Centre for Addiction and Mental Health

10:45 - 11:15	**Pitch 1**	**Pitch 2**
	Ultrasound and Optical Imaging	**Neuroimaging**
	Ballroom Centre	Ballroom East

Chairs: Kalysta Makimoto and Karen Yeates	Chairs: Farah Kamar and Benjamin Wilk
P1-1: A Hand-held Photoacoustic Imaging Probe for Breast Cancer Margin Assessment	**P2-1: Optimizing [11C]Butanol Radiosynthesis and Positron Emission Tomography Image Analysis for Assessing the Blood-Brain Barrier Integrity in Alzheimer's Disease**
Elina Rascevska, Lawson Health Research Institute	Olujide Oyeniran, Western University
P1-2: Quantitative Spatial-Frequency Fluorescence Imaging for Surgical Guidance: Pre-Clinical Nanoparticle Experiment	**P2-2: An Interpretable Alzheimer's Disease Dementia Risk Prediction Model**
Josephine La Macchia, University Health Network	Mason Kadem, McMaster University
P1-3: Double Exposure ESPI Method for Non-Contact Dynamic Photoacoustic Wave Detection	**P2-3: Simultaneous Estimation of a Model-Derived Input Function for Quantifying Cerebral Glucose Metabolism with [18F]FDG Positron Emission Tomography**
Hui Wang, Western University	Lucas Narciso, Lawson Health Research Institute
P1-4: The Ideal Composition of Tissue-Mimicking Phantoms for Near-Infrared Spectroscopy	**P2-4: CT Perfusion Monitored Selective Brain Cooling for Acute Brain Injuries**
Rasa Eskandari, Western University	Olivia Tong, Western University
P1-5: Extended Views for Gynecological Brachytherapy Using Three-Dimensional Ultrasound Fusion	**P2-5: Anatomical Features Predicting Outcome from Stereotactic Laser Amygdalohippocampotomy**
Tiana Trumpour, Western University	Chris Zajner, Western University
P1-6: Investigating Ultrasound Stimulated Microbubble Mediated Microvascular Disruption	**P2-6: Imaging Ocular Dominance Columns in Human Brain At High Magnetic Field**
Xiaoxiao Zhao, University of Toronto	Atena Akbari, Western University
P1-7: Self-Supervised Enhanced Ultrasound Thyroid Nodule Detection and Evaluation	**P2-7: Diffusion Tensor Imaging of Glioma Patients During Radiotherapy on a 1.5T MRI-Linear Accelerator**
Ningtao Liu, Robarts Research Institute	Liam Lawrence, University of Toronto
P1-8: Three-Dimensional Complementary Breast Ultrasound (CBUS) with Orthogonal Images to Improve Resolution	**P2-8: Sensitivity of Cerebral Blood Flow and Oxygenation to High-Intracranial Pressure**
Claire Park, Robarts Research Institute	Sule Karagulleoglu-Kunduraci, Western University
	P2-9: Effects of Drug Efflux and Sex Differences on the Novel p38 MAPK Radiotracer [11C]SCIO-469
	Melissa Chassé, University of Toronto

11:15 - 11:45	**Meet-and-Greet**	**Ballroom West**
	Poster Viewing (Pitch Sessions 1 & 2 presenting)	
	Lunch Pickup	

11:45 - 12:45	**Panel Session — How Can Medical Imaging Contribute to Solving the Canadian Healthcare Crisis?**	Ballroom Centre and East

Chairs: Liam Lawrence and Terry Peters

Karen Yeates, Queen's University

John Rudan, Queen's University

Golafsoun (Goli) Ameri, Cosm Medical

12:45 - 13:00	**Break**

13:00 - 14:00	**Oral 3**	**Oral 4**
	Hyperpolarized MR Imaging	**Image Guidance**
	Ballroom Centre	Ballroom East
	Chairs: Fatemeh Rastegar Jooybari and Sarah Svenningsen	Chairs: Aneesh Dhar and Miriam Hewlett
	O3-1: Hyperpolarized Chemical Exchange Saturation Transfer (HyperCEST) Maximization of Cucurbit[6]uril Imaging Biosensor in Blood for 3.0 T Clinical MRI	**O4-1: Learning-assisted 3D US-CT/MRI Registration for Liver Tumour Ablation**
	Viktoriia Batarchuk, Lakehead University	Shuwei Xing, Robarts Research Institute
	O3-2: Hyperpolarized 129Xe MRI Ventilation Textures Predict Short- and Long-term Response to Anti-IL-5Rα Biologic Therapy in Eosinophilic Asthma	**O4-2: Deep Learning-Enabled Fluorescence Imaging for Surgical Guidance: In Silico Tumour Models**
	Marrissa McIntosh, Robarts Research Institute	Natalie Won, University Health Network
	O3-3: 129Xe Gas-Exchange MRI and CT Pulmonary Vascular Abnormalities in GINA 4-5 Asthma	**O4-3: Automated Catheter Localization in Transrectal Ultrasound Images for High-Dose-Rate Prostate Brachytherapy**
	Alexander Matheson, Robarts Research Institute	Nicole Kitner, Queen's University
	O3-4: Accelerated 3D MRI with Inhaled Hyperpolarized 129Xe in Human Lungs: Troubleshooting	**O4-4: A Hybrid Augmented Multi-Baseline and Near-Referenceless MR Thermometry Pipeline to Reduce Motion Artifacts during Magnetic Resonance Guided High-Intensity Focused Ultrasound**
	Samuel Perron, Western University	Arthur Akbulatov, The Hospital for Sick Children

14:00 - 14:30	**Pitch 3**	**Pitch 4**
	Hyperpolarized MR and Lung Imaging	**Image Guidance**
	Ballroom Centre	Ballroom East
	Chairs: Corey Baron and Fatemeh Rastegar Jooybari	Chairs: Rasa Eskandari and Tamas Ungi
	P3-1: CT and MRI Measurements Uniquely Explain All-cause Mortality in Ex-smokers	**P4-1: Analysis of Cautery Trajectory for Evaluation of Resection Margins in Breast-Conserving Surgery**
	Maksym Sharma, Western University	Chris Yeung, Queen's University
	P3-2: Minimal Clinically Important Difference for 129Xe MRI Ventilation Defect Percent in Patients with Asthma	**P4-2: The CathPilot: First Preclinical Safety and Feasibility Assessment**
	Alexander Biancaniello, Western University	Mahdi Tahmasebi, Toronto Metropolitan University
	P3-3: Deep-Learning Based Segmentation of 3D Hyperpolarized 129Xe Lung MRI for Generating vADC for a Large Patient Population Studied with The Use of Transfer Learning	**P4-3: Electromagnetic Navigation for Residual Tumor Localization in Breast-Conserving Surgery**
	Ramtin Babaeipour, Western University	Olivia Radcliffe, Queen's University
	P3-4: Feasibility Study of in-Vivo Simultaneous Hyperpolarized 129Xe MRI and [15O]-water PET Measurements	**P4-4: Development and Evaluation of an Open-Source Virtual Reality C-Arm Simulator**
	Ramanpreet Sembhi, Western University	Daniel Allen, Western University
	P3-5: CT Imaging Measurements with Machine Learning for Predicting Progression to Chronic Obstructive Pulmonary Disease in At-Risk Smokers	**P4-5: Surgical Tool Detection in Open Hernia Repair Surgery Using Deep Neural Networks**
	Kalysta Makimoto, Toronto Metropolitan University	Rebecca Hisey, Queen's University
	P3-6: Serial Two-Photon Tomography of Fluorescently-Labelled Alveolar-Like Macrophages Instilled in Rat Lungs	**P4-6: Point-Of-Care Ultrasound Carotid Artery Volume Reconstruction Using Deep-Learning**
	Melanie Posiewko, The Hospital for Sick Children	Michellie Choi, Robarts Research Institute
	P3-7: Pulmonary Small Vessel Worsening in Ex-smokers with COPD	**P4-7: Evaluation of Tracked Optical Tissue Sensing for Tumor Bed Inspection**
	Vedanth Desaigoudar, Western University	David Morton, Queen's University
	P3-8: Sex Differences in CT Airway Measurements and their Relationship to Post-Acute COVID-19 Syndrome	**P4-8: Anthropomorphic Liver Phantom Development for Training and Validation of Surgical Navigation Systems**
	Harkiran Kooner, Robarts Research Institute	Joeana Cambranis-Romero, Robarts Research Institute
	P3-9: Radiomics Analysis of Ultrashort Echo-Time Lung MRI in Pediatric Cystic Fibrosis	**P4-9: The Development of an AI-based System for Training Percutaneous Nephrostomy in Senegal**
	Daniel Genkin, Toronto Metropolitan University	Rebecca Hisey, Queen's University

14:30 - 15:00	**Meet-and-Greet**	Ballroom West
	Poster Viewing (Pitch Sessions 3 & 4 presenting)	
	Coffee Break	

15:00 - 16:00

Oral 5	**Oral 6**
Hardware Development	**MR Imaging**
Ballroom Centre	Ballroom East
Chairs: Sarah Aubert and Ali Tavallaei	Chairs: Angus Lau and Peyman Tahghighi
O5-1: Evaluation of a Custom Scintillation Detector for a Focussed Gamma Probe	**O6-1: pH-Weighted Chemical Exchange Saturation Transfer (CEST) MRI Reproducibility in the Spinal Cord**
Sydney Wilson, Western University	Alicia Cronin, Western University
O5-2: Quantification of Mechanical Characteristics of Conventional Steerable Ablation Catheters for Treatment of Atrial Fibrillation Using a Heart Phantom	**O6-2: High-resolution µFA of the hippocampus at 3T**
Jacob Miller, Toronto Metropolitan University	Farah Mushtaha, Robarts Research institute
O5-3: Integrated MRI Coils and Restraints for Simultaneous fMRI and Fibre Photometry in Awake Mice	**O6-3: Wave-MP2RAGE at Ultra-High Field**
Sam Laxer, Western University	Gabriel Varela-Mattatall, Robarts Research Institute
O5-4: The Design and Construction of a Tx/Rx 31P Birdcage Head Coil and Feed Network at 3 Tesla	**O6-4: Iterative Point Spread Function Correction for T2 Mapping with Fast Spin Echo MRI**
Peter Truong, Sunnybrook Research Institute	Tristhal Parasram, University of Windsor

16:00 - 16:30	Pitch 5 Image Processing and Machine Learning Ballroom Centre	Pitch 6 MR Imaging Ballroom East
	Chairs: Michael Hardisty and Suzy Wong	Chairs: Sule Karagulleoglu Kunduraci and Heeseung Lim
	P5-1: Vessel Bifurcation-Based Rigid-Registration: A Preliminary Accuracy Assessment	P6-1: Decoupling CEST Solute Exchange Rate from Pool Size
	Joeana Cambranis-Romero, Robarts Research Institute	Siddharth Sadanand, Toronto Metropolitan University
	P5-2: Deep Learning for Placenta Accreta Spectrum Classification of Ultrasound Images	P6-2: Low-Heating B1+-Mapping of Subjects with Deep Brain Stimulation (DBS) Implants Using Optimized Radiofrequency (RF) Shimming Parallel Transmission (PTX)
	Dylan Young, Toronto Metropolitan University	Maryam Arianpouya, University of Toronto
	P5-3: Cautery Tool State Detection in Basal Cell Carcinoma Excision Surgery Videos	P6-3: Correction of Motion and Resulting Field Offsets for Susceptibility Weighted MRI Using Navigators
	Lucas March, Queen's University	Miriam Hewlett, Western University
	P5-4: Direct Continuous Optimization of Displacement Fields for Medical Image Registration	P6-4: Characterising Magnetic Field Drift in Rosette-MRSI Data In-Vivo
	Teodora Vujovic, University of Waterloo	Sneha Senthil, Sunnybrook Research Institute
	P5-5: Machine Learning Based Automated Canine Radiography Quality Control Tool	P6-5: PLA2 Inhibition Using Mepacrine Reduces MR Spectroscopy Measures of Total Choline in a Rat Model of Alzheimer's Disease
	Peyman Tahghighi, University of Guelph	Colleen Bailey, Sunnybrook Research Institute
	P5-6: Feasibility of Computational Realistic-Textured XCAT Phantoms for Assessing Radiomic Feature Stability	P6-6: Multimodal Connectivity Gradients of the Human Basal Forebrain
	Jaryd Christie, Western University	Sudesna Chakraborty, Western University
	P5-7: Anatomical Measuring of the Entire Cochlea at a Sub-Millimeter Resolution Using Synchrotron-Radiation Phase-Contrast Imaging	P6-7: Examining the Impact of Pediatric Arterial Ischemic Stroke on Cerebral Blood Flow within the Hippocampus and its Relationship with Observed Neurological Deficits
	Ashley Micuda, Western University	Ethan Luk, The Hospital for Sick Children
	P5-8: Thickness and Design Features of Clinical Cranial Implants – What Should Automated Methods Strive to Replicate?	P6-8: MRI Biomarkers of Neuroinflammation Across Neurodegenerative Diseases
	Zachary Fishman, Sunnybrook Research Institute	Vishaal Sumra, University of Toronto
	P5-9: Finite Element Modelling of the Human Middle Ear Using Synchrotron-Radiation Phase-Contrast Imaging	P6-9: Cortical Network Disruption in First-Episode Psychosis
	Caleb Thompson, Western University	Peter Van Dyken, Western University
16:30 - 17:00	Meet-and-Greet	Ballroom West
	Poster Viewing (Pitch Sessions 5 & 6 presenting)	
17:00 - 19:00	Reception and ImNO Jeopardy	Ballroom Centre and East

Friday, March 24, 2023

08:30 - 08:35	**Opening Remarks**	Ballroom Centre and East

Elvis Chen and Jessica Rodgers, ImNO 2023 Chairs

08:35 - 09:35

Oral 7	**Oral 8**
Cancer Imaging	**Cardiac and Lung Imaging**
Ballroom Centre	Ballroom East
Chairs: Elina Rascevska and Timothy Scholl	Chairs: Elizabeth Norman and Frank Prato
O7-1: Identification of Glioblastoma Using Rapid Evaporative Ionization Mass Spectrometry	**O8-1: Real Time Mitral Annulus Segmentation from 4D Transesophageal Echocardiography Using Deep Learning Regression**
Dilakshan Srikanthan, Queen's University	Patrick Carnahan, Robarts Research Institute
O7-2: Predicting the Dose Distribution of Multi-Lesion Lung Stereotactic Body Radiotherapy Plans using Generative Adversarial Networks	**O8-2: Accelerated 4D Flow MRI in Pediatric Patients with Congenital Heart Disease Using an Undersampled 3D Radial Acquisition, Double Golden Angle Sampling, and Compressed Sensing Reconstruction**
Edward Wang, Western University	Fatemeh Rastegar Jooybari, University of Toronto
O7-3: Deep-Learning-Based Auto-segmentation in Prostate Brachytherapy, with Implanted Needles	**O8-3: Progressive Airway Wall Thinning and Loss of Total Airway Count after Three-Years in COPD**
Prakash Hampole, Robarts Research Institute	Paulina Wyszkiewicz, Robarts Research Institute
O7-4: Prostate Cancer Detection using Multi-Scale Analysis of Micro-Ultrasound Imaging	**O8-4: Novel COPD Classification/Staging Technique Using Lung CT Data and Neural Network**
Paul Wilson, Queen's University	Halimah Alsurayhi, Western University

09:35 - 10:05	Pitch 7	Pitch 8
	Cancer Imaging	**Musculoskeletal and Vascular Imaging**
	Ballroom Centre	Ballroom East
	Chairs: Sarah Mattonen and Elina Rascevska	Chairs: Emily Lalone and Elizabeth Norman
	P7-1: Radiomics to Predict Local Progression of Non-Spine Bone Metastases Following Stereotactic Radiotherapy	**P8-1: Best Fit Sphere to Determine Femoral Head Centre and Radius from 3D CT Data**
	Lauren Zelko, Western University	Kenna Bartlett, Queen's University
	P7-2: Predicting the Need for a Replan in Oropharyngeal Cancer: A Radiomic, Clinical, and Dosimetric Model	**P8-2: Four-dimensional Computed Tomography and Ultrasonography for Assessing Thumb Biomechanics in Thumb Osteoarthritis Patients**
	Tricia Chinnery, Western University	Randa Mudathir, Robarts Research Institute
	P7-3: Prostate Stereotactic Body Radiation Therapy – Using 18 Fluorine Prostate Specific Membrane Antigen-1007 Positron Emission Tomography and Multiparametric Magnetic Resonance Imaging to Escalate the Dose to Dominant Intraprostatic Lesions – ARGOS-CLIMBER: A Phase I/II clinical Trial	**P8-3: The Relationship Between Kinematic Joint Loading and Depth-Specific Volumetric Bone Mineral Density**
	Aneesh Dhar, London Health Sciences Centre	Lauren Straatman, Western University
	P7-4: Quantitative Nuclear Grading to Improve Risk Stratification for Patients with Noninvasive Bladder Cancer	**P8-4: The Sensitivity of Bony Landmarks and the Scapholunate Interval to Wrist Malrotation in the Posteroanterior Radiograph**
	Katherine Lindale, Queen's University	Maxwell Campbell, Western University
	P7-5: Prediction Risk of Breast Cancer Development Using Breast Bilateral Asymmetry Analysis within a Machine Learning Framework	**P8-5: Remote Telemetry System for Monitoring Arthritis Rehabilitation**
	Xi Feng, Western University	Kyle Wilson, Western University
	P7-6: Radiomics-based Approach to Classify Benign and Malignant Solid Renal Masses on MRI	**P8-6: Synthetic-Mask x-ray Energy-Subtraction Angiography for Improved Cardiac-Stent Visualization**
	Rohini Gaikar, University of Guelph	Lisa Garland, Robarts Research Institute
	P7-7: Automatic Classification of Endometrial Pathology Slides	**P8-7: Dual-Energy X-ray Angiography with a Photon-Counting X-ray Detector**
	Daniel Sherman, Toronto Metropolitan University	Sarah Aubert, Toronto Metropolitan University
	P7-8: Horizontal Federated Learning in Kidney Cancer Disease Classification on Histopathology Images	**P8-8: A Polyacrylamide (PAA) Gel Phantom for Studying Catheter Ablation**
	Timothy Wong, A.I. VALI Inc.	Victor Chu, Western University
	P7-9: Deep Learning Method for Detection of Cancerous Lung Nodules from High-Dose and Low-Dose Computed Tomography Images	**P8-9: 2D/3D Image Registration for Guidance of Endovascular Interventions in Tibial Vessels**
	Jenita Manokaran, University of Guelph	Moujan Saderi, University of Toronto
10:05 - 10:35	**Meet-and-Greet** **Poster Viewing (Pitch Sessions 7 & 8 presenting)** **Coffee Break**	Ballroom West

10:35 - 11:35	Oral 9	Oral 10
	MR and Magnetic Particle Imaging	**Device Development**
	Ballroom Centre	Ballroom East

Chairs: Alicia Cronin and John Ronald	Chairs: Joeana Cambranis and Gabor Fichtinger
O9-1: Sodium (23Na) MRI of the Prostate using an External Butterfly Coil	**O10-1: Monitoring Cerebral Oxygenation and Metabolism with Time-Resolved Compressive Sensing Spectroscopy**
Josephine Tan, Western University	Natalie Li, Western University
O9-2: Quantitative Magnetization Transfer Imaging in Glioblastoma Patients using Balanced Steady-state Free Precession on a 1.5 T MR-Linac	**O10-2: A Photothermal Therapy Guidance Platform Based on Photoacoustic Thermometry, Diffuse Optical Tomography, and Nanotechnology**
Brandon Tran, University of Toronto	Ivan Kosik, University Health Network
O9-3: Imaging the Liver Uptake of Nanoparticles Tailored for Magnetic Particle Imaging	**O10-3: Assessing the Sensitivity of a Full-Head Coverage Near-Infrared Spectroscopy Device (NIRS) to Regional Cerebral Oxygenation Changes**
Nitara Fernando, Robarts Research Institute	Farah Kamar, Western University
O9-4: Deep Brain Stimulation Targeting Using an Open-Access Anatomical Fiducial Framework	**O10-4: Three-Dimensional Automated Breast Ultrasound (ABUS) System Toward Point-of-care Breast Cancer Screening**
Alaa Taha, Robarts Research Institute	Claire Park, Robarts Research Institute

11:35 - 12:05	**Pitch 9**	**Pitch 10**
	Contrast Agents and Radiopharmaceuticals	**Device, Hardware and Software Development**
	Ballroom Centre	Ballroom East

Chairs: Tricia Chinnery and Kelly Smart	Chairs: Michael Daly and Mohammad Khoobani
P9-1: PET/MRI of Microbial Therapy in the Pig: Autoradiography of 89Zr-Labelled Bacteria in the Gut	**P10-1: Image Quizzer: A Versatile and Customizable Tool for Education and Standardized Data Collection in Imaging Research**
Enzo Rabbath, Lawson Health Research Institute	Carol Johnson, London Regional Cancer Program
P9-2: SPAAC Incorporation of Fluorine into FC131 Analogues Towards Discovery of CXCR4 Radiopharmaceuticals	**P10-2: End-To-End Mass Spectrometry Imaging Analysis Software**
Julia Mason, Western University	Hanad Elmi, Queen's University
P9-3: A Monte Carlo Voxel Dose Calculation Method for Cancer Radiotheranostics	**P10-3: Comprehensive Review of Biomedical Software Tools for 3D Segmentation and Registration**
Thanh-Tai Duong, Western University	Ashley Mathialagan, Toronto Metropolitan University
P9-4: Radiometallation of Monoclonal Antibodies Relevant to Immune Checkpoint Therapy	**P10-4: SlicerTrack: an Open-source Research Toolkit for Target Tracking Verification in 3D Slicer**
Mojmír Suchý, Lawson Health Research Institute	Ha Phan Tran, Toronto Metropolitan University
P9-5: Automated Radiosynthesis of the L-isomer of Fluorodeoxyglucose (FDG)	**P10-5: A "Smart" Brain Retraction System Utilizing Photoplethysmography: Development of a Prototype System to Measure Applied Pressure with Optical Signals**
Ghazaleh Takalloobanafshi, Western University	Lee Sikstrom, Western University
P9-6: Integrating Tc-99m in Small Molecules for Improving Access to Alzheimer's Disease Imaging	**P10-6: Adapting Electromagnetic Tool Tracking for Ultrasound-Guided Oral Cavity Cancer Resection**
Ghazaleh Takalloobanafshi, Western University	Pavel-Dumitru Cernelev, Queen's University
P9-7: Radiotracer Development for Imaging the Endocannabinoid System with PET	**P10-7: Optical Position Tracking Fiducial Marker for High Performance Rigid Body Motion Parameter Estimation**
Anna Pees, Centre for Addiction and Mental Health	Marina Silic, University of Toronto
P9-8: Solid-supported Preparation of [18F]tetrafluoroborate ([18F]TFB) for Reporter Gene PET	**P10-8: Low-Cost Fourier Ptychographic Microscope for Malaria Diagnosis**
John Diemert, Western University	Justin Yang, Robarts Research Institute
P9-9: Comparison of [18F]FEOBV and [3H]VAT for Imaging VAChT in Neurodegenerative Diseases	**P10-9: Inducing Cavitation Within Hollow Cylindrical Transducers for Use in Intravascular Thrombolysis**
Faustine d'Orchymont, Centre for Addiction and Mental Health	Li Gong, University of Toronto

12:05 - 12:35	**Meet-and-Greet**	Ballroom West
	Poster Viewing (Pitch Sessions 9 & 10 presenting)	
	Lunch Pickup	

12:35 - 13:35	**Siemens Innovation Think Tank Presentations on Cost Containment for Healthcare Systems and Clinical Translation**	Ballroom Centre and East
	Chairs: Elvis Chen and Farah Kamar	
13:35 - 13:50	**Break**	

13:50 - 14:50	**Oral 11** **Deep Learning** Ballroom Centre	**Oral 12** **Neuroimaging II** Ballroom East
	Chairs: Ryan Au and Amir Moslemi	Chairs: Maryam Mozaffari and Jill Weyers
	O11-1: Predicting Tumour Mutational Burden from H&E Slides of Lung Squamous Cell Carcinoma: Observers vs a Neural Network Salma Dammak, Western University	**O12-1: Development of a Brain-Penetrating PET Radiotracer for Imaging 4R-Tauopathies** Anton Lindberg, Centre for Addiction and Mental Health
	O11-2: Improved Surgical Margin Detection in Mass Spectrometry Data Using Uncertainty Estimation Ayesha Syeda, Queen's University	**O12-2: Multiphase CT Angiography-based Prediction of Favourable Infarct-Penumbra Mismatch for Acute Ischemic Stroke Treatment Triage** Ting-Yim Lee, Robarts Research Institute
	O11-3: Deep Learning for Prostate Cancer Recurrence Prediction on T2W MR Images Negin Piran Nanekaran, University of Guelph	**O12-3: Choline Changes in the Primary Motor Cortex of People with Mild Cognitive Impairment are Predicted by Dual Task Gait Performance** Jack Elkas, Western University
	O11-4: Deep Learning-Enabled Fluorescence Imaging for Surgical Guidance: Optical Phantoms from Patient Imaging Stefanie Markevich, University Health Network	**O12-4: Metabolite Abnormalities in Epilepsy Patients with Malformations of Cortical Development Observed with 3T Magnetic Resonance Spectroscopy** Pierre Ibrahim, Robarts Research Institute

14:50 - 15:20	Pitch 11	Pitch 12
	Deep Learning	**Cellular and Molecular / Image Guidance**
	Ballroom Centre	Ballroom East
	Chairs: Ryan Au and Wenchao Han	Chairs: Amanda Hamilton and Maryam Mozaffari

	Pitch 11	Pitch 12
	P11-1: Federated Learning for Kidney Tumor Segmentation: Preliminary Findings	**P12-1: Tracking 89Zr-labelled Escherichia Coli Nissle 1917 Post-ingestion Using PET/MRI**
	Zachary Szentimrey, University of Guelph	Moayyad Nassar, Lawson Health Research Institute
	P11-2: MRI-degad: Conversion of Gadolinium-Enhanced T1w MRIs to Non-Contrast-Enhanced MRIs Using a Convolutional Neural Network	**P12-2: Activatable Reporter Imaging Systems for Visualization of New Genomic Medicines Called Adenine Base Editors**
	Feyifoluwa Ogunsanya, Western University	Shirley Liu, Western University
	P11-3: Artifact Detection Algorithm Using Deep Learning in Fetal MRI	**P12-3: Detecting in Vivo Cell-Cell Communication Using an Inducible Antigen-Dependent Synthetic Blood Biomarker**
	Adam Lim, Toronto Metropolitan University	Yanghao Fu, Robarts Research Institute
	P11-4: Background Parenchymal Enhancement Estimation on DCE Breast MRI using a Siamese Network	**P12-4: Visualizing Cytosine Base Editor Activity following Minicircle Delivery using an Activatable Reporter Gene System**
	Grey Kuling, University of Toronto	Melissa Evans, Robarts Research Institute
	P11-5: Placental MRI Segmentation Using a Novel Convolutional Neural Network	**P12-5: Magnetic Resonance Relaxation Rates of Bacteria: Magnetospirillum Magneticum AMB-1 Versus Lactobacillus Crispatus ATCC33820**
	Alejo Costanzo, Toronto Metropolitan University	Jonathan Yohans, Lawson Health Research Institute
	P11-6: Intracranial Hemorrhage Detection Using Machine Learning	**P12-6: Elucidating Factors That Contribute to Changes in Magnetic Particle Imaging (MPI) Signal for the Longitudinal Tracking of Iron-Labeled Therapeutic Cells**
	Navkiran Sohal, Western University	Samantha Flood, Robarts Research Institute
	P11-7: Creating Better Whole Slide Image Datasets: Quality Control Detection of Out-Of-Focus Patches in Digital Pathology	**P12-7: Margin Detection in Skin Cancer Surgery via 2D Representation of Mass Spectrometry Data**
	Phoenix Wilkie, University of Toronto	Laura Connolly, Queen's University
	P11-8: Classifying Points of Interest in FAST Ultrasound Videos Using Neural Networks	**P12-8: Open Source Video-Based Hand-Eye Calibration**
	Ilan Gofman, University of Toronto	Daniel Allen, Western University
	P11-9: Improving the Reliability of Video-Based Skill Assessment Metrics with Uncertainty Quantification	**P12-9: Comparing Methods of Identifying Tissues for Workflow Recognition of Simulated Open Hernia Repair**
	Catherine Austin, Queen's University	Elizabeth Klosa, Queen's University

15:20 - 15:50	**Meet-and-Greet**	Ballroom West
	Poster Viewing (Pitch Sessions 11 & 12 presenting)	
	Coffee Break	

15:50 - 16:35	**Keynote Session II**	Ballroom Centre and East
	Chairs: Sule Karagulleoglu Kunduraci and Jessica Rodgers	
	Embracing Failure	
	Lena Maier-Hein, German Cancer Research Center	

| 16:35 - 17:00 | **Closing and Awards** | Ballroom Centre and East |