

UNIVERSITY
TORONTO

Spine Program newsletter

Fall / Winter 2017-18

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Health
Sciences

ST. Michael's
Hospital

UHN

Toronto
Western
Hospital

Hospital for
Sick Children

MESSAGE from the CO-DIRECTORS

Dear Colleagues,

Our Program wrapped up 2017 with a successful Strategic Planning Summit which highlighted our accomplishments over the last decade with projected future goals and program strategies moving forward. We would like to acknowledge and thank all our local and external participants, panelists, and responders from the University and our affiliated hospitals, the MOHLTC, Ontario Brain Institute, Cancer Care Ontario, and CritiCall Ontario all of whom have contributed their time and valued input to our meeting. We also thank members of our Program Council, Research and Education Committees, for their strong support over many years. Special thanks also to the University Divisions of Neurosurgery and Orthopaedic Surgery, and Department of Surgery.

Our Annual SpineFEST 2017 received excellent feedback from participants. Dr. Gogawala gave an excellent keynote address entitled "The Search for Truth in Spinal Surgery". We invite you all to attend SpineFEST 2018 on June 11th and look forward to our esteemed speaker Dr. Sandy Emery who is a Professor and Chair of the Department of Orthopedic Surgery at West Virginia University. As a Past-President of key organizations such as the Cervical Spine Research Society and the American-Orthopaedic-Association, his perspectives and talk on leadership in spine surgery will resonate to many. We also invite you to our Hospital-Based Visiting Professorship Series, being held at Sunnybrook Health Sciences Centre on February 26th at 730am at the Harrison Hall, featuring our internationally recognized visiting professor Dr. Marcel Dvorak (Professor of Orthopedic and former Head of the Division of Spine Surgery at the University of British Columbia).



We are proud of our clinical and research fellows who graduated last summer and wish them all the best for great success in their career and future endeavors. As outreach to our Fellow Alumni, we are implementing various opportunities to continue to involve them in our journal clubs and Continuing Medical Education events. We welcome our 2017/18 City-Wide Spine Fellows who have joined us from across the globe and look forward towards hearing about their fellowship experiences.

Last Fall, our Program also jointly held a Focus Spine Oncology Symposium with the University Department of Surgery and Sunnybrook Odette Cancer Centre- Drs. Jim Rutka and Arjun Sahgal, Co-Chairs. There was a key opportunity for dialogue on regional Primary Spine Tumor triage and management, with an informative talks by leading international experts from the AO Spine Tumor Knowledge Forum (KF).

Finally, we welcome the new visuals of our Program website launched last Fall within the Department of Surgery website. We invite you all to visit our website at <http://surgery.utoronto.ca/landing-page/spine-program> and follow our program on twitter @UofT Spine.

Sincerely,

Michael and Albert



Surgery
UNIVERSITY OF TORONTO

Spine Program

Strategic Planning Summit

The University of Toronto Spine Program has marked its 10th academic year this year! A strategic Planning Summit was held on Dec 4, 2017 at the University Club of Toronto to reflect on our Program's accomplishments and plan future goals. The meeting went very well with excellent local and external community engagement. Professor Yee opened the education session showcasing our program's academic accomplishment with establishment of a robust academic calendar of educational events for our surgical and research trainees. Perspectives on our fellowship program presented by our former and current citywide spine fellows (Drs. Larouche and Ganau). Dr. Ferguson (Chair, Orthopaedic Surgery), provided opportunities and emerging trends in competency-based education

Professor Fehlings opened up the clinical session with a presentation and case study around optimizing clinical practice and care delivery in spine surgery. This and Dr Witiw's presentation on his award winning paper demonstrating the cost effectiveness of surgery for Degenerative Cervical Myelopathy set the stage for an insightful panel discussion provided by our panelists: Ms Fredrika Scarth from MOHLTC and Director, HQO Liaison and Program Development Branch, Health System Quality and Funding Division) updated us on Spine Surgery and the pertinent services being addressed in their program; from Cancer Care Ontario, Drs Gelareh Zadeh, the Regional Lead Toronto Central, and Robin Mcleod the VP Clinical Programs and Quality Initiatives – they both shared with us their input with regard to opportunities in access to spine care and funding, and for a better alignment of oncology and with spine activity; from Critical Ontario, Dr Des Bohn, the Provincial Medical Director discussed issues on improved access and addressed some of the challenges around human resources; Dr James Rutka, in his capacity as Chair-Provincial Neurosurgery Committee, shared his perspective on the topic from a provincial governance perspective.

Dr Tom Mikkelsen, President and Scientific Director, Ontario Brain Institute enlightened us with an interesting presentation on brain code and driven innovation in clinical neurosciences. He also presented the progress made and highlighted pertinent key opportunities.

The last session discussed strategies for advancing spine research and innovation. Our faculty: Dr Zabjek presented Spine informatics and the development of data management platform for the UofT Spine Program; and Dr Wilson explored the feasibility of a dedicated clinical research unit for our Program. The informed and well-rounded responses from Drs. Michael Julius VP Research- Sunnybrook Research Institute; Richard Hegel, Vice Dean Research - Faculty of Medicine; and Donald Weaver, Research Director for the Krembil resonated with a concise goals and strategies around leveraging support and moving research forward.

Proceedings of this meeting will be available to public on our website upon finalizing.

Photos from top (left to right):
Albert Yee & Michael Fehlings
James Rutka, Fredrika Scarth, Des Bohn, Gelareh Zadeh, and Robin Mcleod
Michael Julius, Richard Hegele, and Donald Weaver
Peter Ferguson (Podium)

Program EVENTS



Program EVENTS

SpineFEST 2017 (9th Annual Academic Day)

The University of Toronto Spine Program has marked its 9th and successful Annual Academic Day “SpineFEST”. The Day was held on Monday June 12th at MaRS Centre.

With its a unique and interactive platform SpineFEST brought together spine community across the University and its affiliated hospitals/research institutes. The program provided an in-depth review of current trends and innovations to managing spinal care and discussed updates on spine research spanning the spectrum from bench, to bedside to community.

This year, our world renowned keynote speaker and Tator-Hall Visiting Professor Lecturer Dr. Zohar Ghogawala featured “The Search for Truth in Spinal Surgery”. Dr Ghogawala is the Chair of Neurosurgery at Lahey Hospital and Medical Center and a Professor of Neurosurgery at Tufts University School of Medicine. He is active in the surgical treatment of patients with disorders of the spine, carotid vascular disease and pituitary brain tumors. His research focuses on comparative effectiveness, cost-effectiveness, and neurosurgical outcomes, exploring the effectiveness, benefits and sometimes harmful results of different treatment options.

The Day continued with interesting talks from our spine faculty members (Drs. Jefferson Wilson (New faculty), Michael Fehlings, Raja Rampersaud, Julio Furlan, Carlo Ammendolia, Joel Finkelstein, and Henry Ahn) and from our trainees (Drs. Allan Martin and Eric Crawford). In session I we discussed value-based spine surgery and spine quality. Session II focused on clinical trials/outcome measures in spine surgery while our PGY4 trainees from orthopedic surgery and neurosurgery (provided their research presentations in session III. We received 30 excellent abstracts of clinical and preclinical research this year which was vetted and reviewed by our faculty members. Winners of best abstracts (Robert Ravinsky PGY5 Orthopedic Surgery, Christopher Witiw PGY5 Neurosurgery, and Christopher Ahuja, PGY5 Neurosurgery) provided oral presentation in session III . All other successful abstracts were presented at the E-poster session. SpineFEST was concluded by award presentations to winners of Best Abstracts and winners of Best e-Poster Presentations Saeid Samiezadeh, Jean-Christophe Murray, and Chris Ahuja.

Save the date for our next year’s SpineFEST on Monday June 11, 2018 with our esteemed keynote speaker Professor Sanford Emery MD MBA, orthopedic Surgery from University of West Virginia featuring “Leadership Training for Surgeons: Filling the Pipeline”.

SpineFEST is an accredited group learning activity as defined by the Maintenance of Certification Program of The Royal College of Physicians & Surgeons of Canada (section I, 6.5 points). All faculty and trainees with interest in spine care and research are invited and welcomed to participate in this event. Onsite free registration, however early RSVP to uoft.spine@utoronto.ca is encouraged.



With Dr Ghogawala at SpineFEST

Program EVENTS cont'd



Faculty and trainees at SpineFEST 2017

SAVE THE DATE

 **Surgery**
UNIVERSITY OF TORONTO
Spine Program

SPINEFEST

MONDAY JUNE 11 2018
Full Day Program (7:00AM - 4:00PM)

MARS CENTRE
LOWER CONCOURSE
101 COLLEGE ST, TORONTO ON

KEYNOTE ADDRESS
Tutor-Hall Visiting Professor Lecture
8:00 - 9:15AM

KEYNOTE SPEAKER
Sanford E. Emery MD MBA
Professor & Chair, Department of Orthopaedics & Director of Surgical Services, West Virginia University


International world renowned invited speaker and former president of: the American Orthopaedic Association; the American Board of Orthopaedic Surgery; and the Cervical Spine Research Society. Dr Emery has over sixty publications, book chapters & textbooks.

"Leadership Training for Surgeons: Filling the Pipeline"

Full Day Program TBA
CALL FOR ABSTRACTS COMMING SOON IN FEB 2017


Accreditation: (R5) Royal College of Physicians and Surgeons of Canada - Section I
Contact: Nadia Ishaq at n.ishaq@utoronto.ca
Website: <http://www.surgery.utoronto.ca/abstracts/spine-program>
Twitter: @UofTSpine


UofT affiliated faculty, doctors, health professionals, and researchers who have interest in spine surgery and research are invited to attend. No fees. RSVP to uoft.spine@utoronto.ca



Marcel Dvorak MD
Professor of Orthopaedics, University of British Columbia
Spine surgeon, Vancouver General Hospital; Medical Director, Rick Hansen Spinal Cord Injury Registry

**"What is most likely to improve care for patients with acute SCI:
More RCT's, Registries, or Health Policy and Systems Research?"**

HOSPITAL-BASED VISITING PROFESSORSHIP
February 26, 2018 @ 7:30 AM
Sunnybrook 2075 Bayview Ave, Toronto, ON M4N 3M5
E-Wing, EG21 (Harrison Hall)

 **Surgery**
UNIVERSITY OF TORONTO
Spine Program

 **Sunnybrook**
HEALTH SCIENCES CENTRE



Fellows Graduations!

We are very proud of our citywide spine fellows (clinical and research) who have completed their fellowship at our affiliated adult and pediatric spine hospitals: The Toronto Western Hospital; Sunnybrook Health Sciences Centre; Saint Michaels' Hospital; and Hospital for Sick Children. We wish them a great success in their life and future endeavors.

Jean-Christophe Murray is from Quebec City, Canada. He completed his medical degree (MD) and a master degree (MSc) in clinical epidemiology from University of Sherbrooke, and then his residency training in orthopedic surgery in Laval University, Quebec City. After an additional year of fellowship in the University of Toronto Spine Program, he will be taking up position at the Enfant-Jésus Hospital in Quebec City as a staff orthopedic spine surgeon. His practice will include general orthopedic traumas, as well as spine traumas and elective degenerative spine.

So Kato graduated from the medical school at the University of Tokyo, Japan. Since 2014, he moved to Canada to start his fellowship at SickKids as a pediatric spine fellow and he received an intensive training of spinal deformity by Dr Reinhard Zeller and Dr Stephen Lewis. Subsequently he moved on to his second fellowship at Toronto Western Hospital in 2015. In the second year at TWH, he mainly focused on research while helping the staff surgeons from time to time as a senior fellow. So's main interest is in spinal deformity and cervical myelopathy. He won the awards from Cervical Spine Research Society and Scoliosis Research Society for his projects relating to AOSpine CSM studies and Scoli-RISK study. So will be taking a faculty spine surgeon position at the University of Tokyo starting from October 2017. He wishes to continue to collaborate with his mentors and colleagues in Toronto for future research projects. with his mentors and colleagues in Toronto for future research projects.

Mohammad Obeidat is from Amman, Jordan. He is an army officer (Major). He had completed his MD in the Jordan University of Science and Technology- Irbid, and then his Orthopedic residency program in King Hussein Medical Centre in Amman. Mohammad completed his two-year orthopedic spine fellowship at King Hussein Medical Centre, and has just completed his Adult spine fellowship program in TWH. Mohammed is currently taking his second year fellowship at SHSC. Upon his return, Mohammed will continue his career at the Jordanian Royal Medical Service as staff orthopedic spine surgeon.



Faculty and fellows at the Citywide Fellow Graduation



Mario, JC, Dr Fehlings, and So.

So, Amit S, Amit K, Mohammad , and JC



Program EVENTS cont'd

Amit Keren is from Israel. He completed his medical degree from the Amit Keren Technion - the Israeli institute of technology. Amit completed his first year of fellowship in spine surgery in 2015-16 at SBHS and SMH and now he is graduating a second year of Toronto citywide Spine surgery fellowship at SHSC, SMH, TWH, and HSC. Amit will be taking up positions at the Haemeq Medical Center in Israel as a staff spine surgeon.

Yi Yang is from Melbourne, Australia. He completed his medical degree from Monash University, Melbourne, Australia. Yi completed his fellowship in orthopaedic surgery (FRACS) in 2015 and has spent time in San Diego, California and Toronto, Canada learning more about Spine surgery. Yi would like to continue to further my interest in both adult and paediatric spinal surgery when he returns home to Melbourne after graduation in Toronto. He will be taking up positions at the Royal Melbourne and Royal Children's Hospital as a staff spine surgeon. His recent research includes how tethering changes vertebral body shape in AIS and biomechanics studies of pedicle screw insertion and anterior cervical plating constructs.

Amit Sigal is from Beit Hanania, Israel. He had completed his MD in the Technion, Haifa and his Orthopedic residency program in Rambam (Maimonides) hospital in Haifa. Amit continued with one year fellowship program in pediatric orthopedic in Tel Aviv medical center. Amit has just completed his pediatric spine fellowship program a SickKids. He will be taking a position in Tel Aviv medical center in the pediatric orthopedic department on the spine service. Amit is married with three children. "I've had a great year in Toronto" Amit said.

Kyle Stampe is from Peace River, Alberta. His completed his medical degree and his residency at University of Alberta in Edmonton. After finishing this fellowship in Toronto he will be heading to Vancouver for another year's fellowship in pediatric spine surgery and then will set off on the hunt for a job somewhere.

Gary Rosenberg is from West Bloomfield, Michigan. He completed his medical degree in Bradenton, Florida and his Orthopedic Surgical Residency in Toledo, Ohio. During his training he had additional spine training at Beaumont Health, Johns Hopkins University, and University of Toronto. He then completed training in spine surgery in Toronto at Sunnybrook Health Sciences Centre. Gary will continue his passion for orthopedics and spine surgery in Orange County, California in a private practice. His recent research includes improving the informed consent process and a review on new intervertebral disc therapies.

Dror Ofir is from Haifa Israel. He completed his medical degree from University of Pavia, Italy. Dror completed his residency in orthopedic surgery in 2016 At Rambam Hospital Haifa. He has completed his first year fellowship at Sunnybrook hospital and will continue his 2nd year in citywide spine surgery fellowship program at SHSC SMH TWH and HSC. Upon his return, Dror will continue to further his interest in adult and pediatric spinal surgery. Dror will be taking up positions at the Rambam Hospital at Haifa as a staff spine surgeon.



From left: Amit K, Dr Finkelstein, Kyle, Dr Yee, Dror, and Gary



From left: Amit K, Dr Ahn, Yi, and Robert



From left: Amit S and Dr Lewis

We also Congratulate **Shoichi Haimoto** (Neurosurgery), **Anupreet Bassi** (orthopedic surgery) and **Mario Ganau** (Neurosurgery) on their graduation and we wish them a prosperous career future.

Program EVENTS cont'd

Welcome!

Our Program this year has 13 fellows from orthopedic surgery and neurosurgery who have joined us from near and afar : from other provinces; from The US; The UK; Australia; and the Middle East.

We welcome all our new citywide fellows: Zachary Tan; Stephanie de Vere; Robert Ravinsky; Maheswara Akula; Vinay Kulkarni; Christopher Nielsen; Fan Jiang; Ralph Schaer, and Jamie Wilson. We also welcome back Jean-Christophe Murray, Mohammed Obeidat, Dror Ofir who are staying with us for their second year fellowship. We wish them all an enjoyable year in Toronto and we hope that their educational experience meet and exceed their expectations.

Lectures at the Surgical Skills Course



Welcome Dinner and Research Update meeting -August 14th



Surgical Skills Course

On August 14th the academic year of 2017-18 kicked off with a great attendance of fellows and residents at Dr Stephen Lewis' Surgical Skills Course. The trainees found the lectures and the hands-on sessions outstanding. The course each year aims to provide new trainees with an understanding of the anatomy of the spine and train them on spine surgical approaches, techniques, implantation, and instrumentations. Congratulations to Dr Lewis on his excellent training and teaching and many thanks to Dr Lewis on his excellent teaching and training and to all citywide staff members and former fellows who had assisted him in the course

Cadaver lab with Dr Lewis and trainees



Program EVENTS cont'd

Special Workshop on Management of Primary Spine Tumors

On Saturday Sep 23rd The U of T Spine Program jointly with the Department of Surgery and SHSC conducted a special workshop on primary spine tumors. The meeting provided the latest update on the surgical management of primary osseous spine tumors. Invited speakers were world recognized leaders in Spine tumor and oncology who are also members of AOSpine Knowledge Forum: Dr Ziya Gokaslan from Warren Alpert Medical School of Brown University provided a talk on the management of primary spine tumors of the mobile spine and role of en bloc resection; Dr Peter Varga from National Center for Spinal Disorders in Budapest- Hungary featured management of sacral chordoma and reconstruction techniques; Dr Larry Rhines joined us from MD Anderson Cancer Center in Houston - Texas to talk about wound closure and integration of plastic surgery; Dr Charles Fisher from the University of British Columbia shared with us the AOSpine Recommendations for the Management of Primary Spine Tumor; and Dr Arjun Sahgal from the Department of Radiation Oncology and SHSC Odette Cancer Centre featured Advanced Radiation Techniques.

We thank Dr Sahgal on taking the lead on this initiative and organizing this important workshop. We look forward to sharing recommendations with regard to streamlining the surgical management of primary spine tumor across the citywide hospitals.

GTA Spine Rounds

On Friday night Sep 22nd the U of T GTA Spine Rounds was held and organized jointly by our Program and the AOSpine. The rounds featured our esteemed visiting professor Dr Stefano Boriani from IRCCS Galeazzi Orthopedic Institute, Milano -Italy, who provided an interesting talk titled "Chordoma of the mobile spine: treatment and results along 25 years of experience". The rounds were well attended by our faculty, fellows and AOSpine Key Opinion Leaders on Spine (KOLs) who had convened in Toronto that week for the AOSpine Knowledge Forum Tumor Meeting.



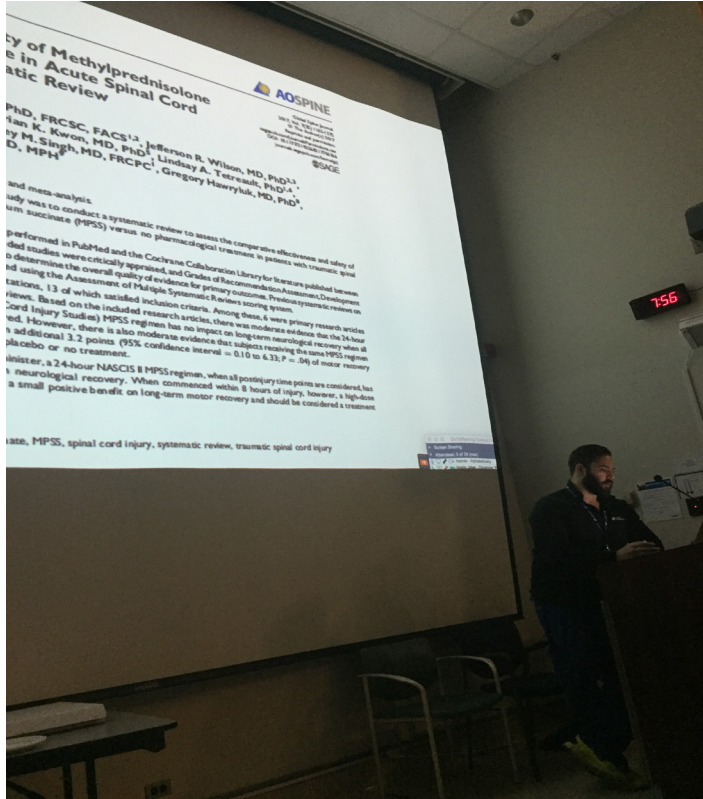
With our visiting KoLs at the U of T GTA Spine rounds



Dr Ziya Gokaslan at the Spine Tumor Workshop

CityWide Spine Fellow Journal Club

On Oct 16th our Fellows Journal Club discussed the newly published AOSpine Guidelines on Management of Degenerative Cervical Myelopathy and Spinal Cord Injury. Our fellows with Mario Ganua's lead presented systematic reviews and guidelines on DCM, ASCI surgery, ASCI Methylprednisolone, and DVT. We thank our citywide fellows who participated in presentations and discussions: Vinay Kulkarni; Fan Jiang; Christopher Nielsen; Robert Ravinsky; Maheswara Akula; Dror Ofir; and Jean-Christophe Murray. We also thank our remote participants former fellows and other fellows who joined the meeting online from Japan, Spain, Australia, The Netherland, Qatar, Brazil, and the US.



Robert Ravinsky at the Journal Club

Dr Dalton Dietrich between Drs Charles Tator (left) & Michael Fehlings



Tator-Turnbull SCI Symposium

On Nov 3rd the Program co-sponsored the 16th Annual Tator-Turnbull Spinal Cord Injury Symposium held jointly with the Toronto Western Hospital and the Collaborative Program In Neuroscience. Dr Fehlings organized this meeting and featured Dr Dalton Dietrich, the Scientific Director of Miami Project to Cure Paralysis, Florida, USA. Dr Dietrich provided an interesting keynote address and presented the current and future challenges of the translational studies for spinal cord injury.



Program FACULTY & Trainees

Professor Cari Whyne PhD



Dr Whyne is a Professor, Department of Surgery, Institute of Biomaterials & Biomedical Engineering, and Institute of Medical Science at the University. She is also a Director, Holland Musculoskeletal Research Program Director and Senior Scientist, Orthopaedic Biomechanics Laboratory Sunnybrook Research Institute at

Sunnybrook Health Sciences Centre.

Dr. Whyne's focus of research within the Orthopaedic Biomechanics Laboratory is clinically translational bioengineering research. Her research integrates biomechanical analyses with basic science, preclinical and clinical investigations, including extensive work in image analysis and finite element modeling techniques. Dr. Whyne's research program primarily focuses on cancer in bone, spinal/lower extremity biomechanics and the mechanics of thin bone structures and incorporates the design, implementation, evaluation and translation of novel minimally invasive surgical techniques and devices.

Selected Publications:

Burke M, Golaraei A, Atkins A, Akens M, Barzda V, **Whyne C**. Collagen fibril organization within rat vertebral bone modified with metastatic involvement. *J Struct Biol*. 2017 Aug;199(2):153-164.

Burke M, Atkins A, Kiss A, Akens M, Yee A, **Whyne C**. The impact of metastasis on the mineral phase of vertebral bone tissue. *J Mech Behav Biomed Mater*. 2017 May;69:75-84.

Choudhari C, Chan K, Akens MK, **Whyne CM**. μ FE models can represent microdamaged regions of healthy and metastatically involved whole vertebrae identified through histology and contrast enhanced μ CT imaging. *J Biomech*. 2016 May 3;49(7):1103-1110.



Anick Nater Neurosurgery PGY4



Anick was born in Montreal, Quebec. She has attended medical school in Sherbrooke University after her undergraduate studies in Biology and Psychology (Neuroscience). She was told she was the first female French-Canadian to apply to the Neurosurgery Residency Program at the University of Toronto. She is currently a fourth year resident and is completing her PhD under the supervision of Dr. Micheal Fehlings. Her thesis work is related to clinical outcome assessments and prediction modelling in patients with metastatic epidural spinal cord compression. She wishes to pursue a clinical-scientist career focusing on Spinal Oncology.

Awards:
Brian D. Silber Award 2018 (from AANS); CIHR poster competition - Silver award at the CSHRF. 2017; CIHR - fellowship award 2016 - 2017; Queen Elizabeth II/William K. Kerr Scholarship in Science and Technology 2015-2016.

Awards:

Selected Publications:
Nater A, Martin M, Saghal A, Choi D, Fehlings MG. Symptomatic Spinal Metastasis: A systematic literature review of the preoperative prognostic factors for survival, neurological, functional and quality of life in surgically treated patients and methodological recommendations for prognostic studies. *PLoS One*. 2017; 12(2):ee0171507.

Selected Publications:

Nater A, Murray JC, Martin AR, Nouri A, Tetreault L, Fehlings MG. The Need for Clinical Practice Guidelines in Assessing and Managing Perioperative Neurologic Deficit: Results from a Survey of the AOSpine International Community. *World Neurosurgery*, 2017.

Fehlings MG, **Nater A**, Tetreault LA et al. Survival and Clinical Outcomes in Surgically Treated Patients With Metastatic Epidural Spinal Cord Compression: Results of the Prospective Multicenter AOSpine Study. *J Clin Oncol*. 2016

Advertisement

Call for Abstract Open - Register Now at:

<http://www.neurotrauma2018.com/registration-accommodation/registrationfees/15,2018> - Abstract Submission Opens



The banner features the NeuroTrauma 2018 logo on the left, which includes a stylized brain icon. The main text reads "NeuroTrauma2018" and "The 3rd Joint Symposium of the International and National Neurotrauma Societies and AANS/CNS Section on Neurotrauma and Critical Care". On the right, it says "Translating research. Transforming lives" and "AUGUST 11-16, 2018 TORONTO, CANADA". Below the banner is a purple navigation menu with the following items: GENERAL INFORMATION, NEUROTRAUMA 2018 COMMITTEES, SCIENTIFIC PROGRAM, REGISTRATION, ACCOMMODATION & TRAVEL, EXHIBIT & SPONSOR, NETWORKING EVENTS, and PRESS & MEDIA.

The main content area features a night view of the Toronto skyline with the CN Tower. A callout box says "Conference Begins in 206 days" and "Registration & Abstract Submission is now open!" with a "READ MORE >" button.

Below the skyline are two promotional boxes: "Stay Connected" with a "Sign Up >" button and "Visiting Toronto" with a "View >" button.

At the bottom are four blue buttons with icons: "CONFERENCE REGISTRATION", "TRAVEL & ACCOM.", "SCHEDULE & PROGRAM", and "SPONSORSHIP & EXHIBITS".

Important Dates	
Registration & Accommodation	OPEN
Abstract Submission	OPEN
Abstract Submission Deadline	April 15, 2018
Early Registration Deadline	May 20, 2018
Regular Registration Deadline	June 30, 2018
Pre-Symposium Workshops	August 10, 2018
Symposium Dates	August 11 - 16, 2018

Important Dates

January 15, 2018 - Registration & Accommodation Opens

January 15, 2018 - Abstract Submission Opens

April 15, 2018 - Abstract Submission Deadline

May 20, 2018 - Early Registration Deadline

June 30, 2018 - Regular Registration Deadline

August 10, 2018 - Pre-Symposium Workshops

August 11 - 16, 2018 - Symposium Dates



The University of Toronto Spine Program acknowledges the strong support from the University of Toronto Department of Surgery, Division of Orthopaedic Surgery, and Division of Neurosurgery. The Program also acknowledges the continued support from our Industry Partners: Medtronic, DePuy Synthes; Ethicon; Stryker; and Zimmer Biomet.

Donations to the University of Toronto Spine Program support educational events, clinical and preclinical research and trainees. The funds also support ongoing programmatic collaborative initiatives set forth to advance spine care and research in Canada and worldwide.

Contact:

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(416)978 8468

 **@uoftspine**

website: <http://live-surgery.panth.discoverycommons.ca/landing-page/spine-program>