

RESEARCH



UNIVERSITY OF
CALGARY
SPINE PROGRAM



OCTOBER 7, 2023, VOL. 1, NO. 7

Dear Colleagues,

Welcome to the Fall 2023 edition of our University of Calgary Spine Program Research Newsletter. We aim to use this format to communicate updates about our collective ongoing research activities, and also to showcase our recent publications, presentations, and other research outputs. Moving forward, please consider sending information about any of your efforts, so that we can highlight and share your work. In future issues, we plan to feature specific research programs within our group and also include content from the many collaborative studies that we participate in.

Enjoy!

Nathan Evaniew
Tara Whittaker



Project Tracker

In lieu of zoom meetings, we present our tracker of research works in various stages progress here. Please reach out to Tara with any updates as needed. Tara will continue to liaise with individual PIs directly. There is a lot happening in our program!

Prospective RCTs enrolling			
Nerve Transfer after SCI Multi Center	Casha/Midha	enrolling/data collection	27
Immunotherapy for Acute SCI (Abbvie)	Jacobs	enrolling/data collection	5
MT-3921-A01 RCT SCI	Casha	enrolling/data collection	1
Epidural Stimulation in Cervical SCI (HEMO STIM)	Casha/Girgis/Phillips	enrolling/data collection	7
Prospective RCTs in follow-up			
CAPREG: i-FACTOR + Matrix Bone Graft Device in Spinal Fusion	Jacobs	in follow-up	60
Clinical Studies - Observational			
Cervical Myelopathy (CSM)	Cadotte/Jacobs/Evaniew	enrolling/data collection	559
Degenerative Spondy Cohort Study (CSORN)	Fisher/Thomas	in follow-up	42
Surgical Treatment of Adult Spinal Deformity (CSORN Deformity Module)	Soroceanu/Swamy	enrolling/data collection	226
Surgical Treatment of Adult Spinal Deformity (CSORN non-module)	Soroceanu/Swamy	enrolling/data collection	68
qMRI & cervical myelopathy (CSORN)	Cadotte	enrolling/data collection	158
Natural History of Mild DCM (CSORN)	Cadotte	enrolling/data collection	27
Mechanical difference in IVD of degenerative scoli and spondy (CSORN)	Swamy	enrolling/data collection	186
Analysis of the Implications of Lumbopelvic Alignment on the Alignment of the Cervical Spine	Nicholls	analysis	500/500
Normative EOS analysis of lower extremity alignment - acetabulum	Nicholls	under review	
Can Systemic inflammatory profiles predict Natural history of lumbar disc herniations	Swamy/Salo	enrolling/data collection	168
Quantifying In Vivo Cervical Spine Motion and Influence of Cervical Total Disc Arthroplasty	Swamy/Salo/Bouchard	enrolling/data collection	1
Quantifying chronic opioid use in adult spine deformity patients	Soroceanu	analysis	
Optimal timing of surgery for symptomatic lumbar disc herniation	Thomas/Ben-Israel/Spackman	manuscript prep	

Clinical Studies – Observational...

Effects of obesity on outcomes after degenerative lumbar spine surgery (CSORN)	Evaniew	analysis	
Outcomes of anterior lumbar disc replacement	Bouchard/Ludwig	enrolling/data collection	
Imaging Biomarkers in spinal cord injury-Imaging library of acute traumatic SCI	Cadotte	enrolling/data collection	75
Manage my pain (MMP)	Rasic/Lewkonja	complete	36
Association between poor postoperative pain control and length of hospital stay	Yang/Casha		
Intradiscal hydrogel failure leading to neurological injury- a case report	Yang		
Patient expectations of thoracolumbar deformity surgery	Soroceanu/Thomas /Singh	manuscript prep	
CSM anterior vs post	Evaniew	submission	
How pts who have had their preoperative expectations met vs those that have not differ from one another	Thomas/Singh	enrolling/data collection	

Prospective Data Collection

PRAXIS-Rick Hansen SCI database	Casha/Cadotte	enrolling/data collection	1080
PRAXIS- Non Traumatic patients	Casha/Cadotte	enrolling/data collection	605
ISSG - Deformity (UCAPONY pts)	Soroceanu	in follow-up	19
ISSG - Deformity (non-UCAPONY pts)	Soroceanu	in follow-up	32
CSORN	Soroceanu	enrolling/data collection	5369

Projects submitted to ethics

Ant vs post surgery for lumbar isthmic spondy: multicenter prospective cohort study	Thomas/Evaniew	CSM legal	
Indirect Decompression in the Surgical Treatment of Degenerative Spondylolisthesis	Thomas	CSM legal	
ERAS for lumbar fusion surgery - PROMS	Yang	ethics	
Impact of an outpatient group pain education and psychotherapy program in spine surgery patients	Eckenswiller/ Swamy	ethics	
Development of a patient Decision Aide in Adult Spinal Deformity	Swamy/Cates	AHS/CSM legal	

Worth mentioning...

There are a number of spinal cord injury trials underway, and some are time sensitive. If a SCI patient comes in while you're on call, please contact one of the following individuals right away:

Dr. Steve Casha pager 08799

Dr. Brad Jacobs pager 10208

Ish Bains, Research Coordinator pager 07846

Quantifying In Vivo Cervical Spine Motion and Influence of Cervical Total Disc Arthroplasty. Now that three normal/controls have been enrolled, Dr. Swamy is now looking for patients slated to have 1-level cervical TDA at C4-5 or C5-6. They need to be identified at least 6 weeks before surgery, and they will have a CT and dual-fluoro imaging (if they agree to participate). The dual-fluoro imaging will take place at the McCaig MOJO, and will be done before and after surgery. Contact Dr. Swamy for details

Development of a patient Decision Aide in Adult Spinal Deformity. Valerie will be reaching out to surgeons for their feedback on the v1 version of the decision aide.



Nationwide enrollment 2022

14,500
Over 14,500
patients enrolled

22
22 Participating
Centres Across
Canada

54
54 Publications

CSORN publications available at:
<https://www.csorncss.ca/publications/>

Local enrollment January to June 2023

Enrolled: 262
(2022=281)
3 mo follow-up rates: 91%, EOS 4%
12 mo follow-up rates: 93%, EOS 3%
24 mo follow-up rates: 85%, EOS 6%

End of Study (EOS): withdrew, lost-to-follow-up, deceased,
surgery cancelled, new surgery/different indication

Consent Update

If you obtain CSORN consents, a new version of the consent will be implemented soon. **One notable change is tick boxes (to be checked by the patient) have been added to the top of the signature page.** The intent is to highlight to participants that there may be future, CHREB-approved studies where their data may be accessed with a waiver of consent. The upcoming Isthmic Spondy sub study is an example of such usage. The new section reads:

USE OF DATA FOR FUTURE RESEARCH

It is your choice whether or not to let researchers share your data for research in the future. If you say “yes,” you can change your mind later, but your data might still be used if they have already been shared.

My de-identified research data may be kept for use in future research to learn about, prevent or treat other health-related problems.

- ☐ YES
☐ NO

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FELLOWS

Dr. Abdullah Alduwaisan

Acceptance and commitment therapy (ACT) for patients with degenerative spinal disorders: an observational study

Supervisor: Dr. Nathan Evaniew

Progress: Reviewing data from Dr. Eckenswiler and preparing ethics submission.

Effectiveness of a Formalized, Multidisciplinary, Subspecialty Driven Preoperative Weight Loss Program on Outcomes in Adult Spine Surgery

Supervisor: Dr Fred Nicholls

Progress: 26 AOC pts case matched in CSORN. Preparing protocol & ethics.

Dr. Michael Craig

Automated MRI detection and prediction of clinical worsening in mild CSM patients

Supervisor: Dr. David Cadotte

Progress: Analysis complete with a few phenotypes identified. Abstract to CSS.

National adverse event rates after cervical spine surgery for degenerative disorders, and impact on patient satisfaction.

Supervisor: Dr. Alex Soroceanu

Progress: presented at CSS in 2023, manuscript to be written.

Recovery of motor, bowel & bladder function in MRI – confirmed conus medullaris injuries

Supervisor: Dr. Naj Attabib through Praxis

Progress: Looking at MRIs, Praxis doing the analysis. Possible submission to CSS.

Curation & standardization of a nation-wide MRI library of acute SCI

PI: Dr. David Cadotte, Montreal group

Progress: Working with a grad student. Abstract to CSS

Dr. Amit Parekh

Effect of Forteo (Teriparatide) in reducing osteoporosis related complications in spine deformity patients

Supervisor: Dr. Fred Nicholls

Progress: Took over project from Dr. Wu, 30 patients identified. Beginning protocol and IRISS application.

Dr. Remi Pelletier-Roy

Normative Sagittal Alignment of the Spine: Description of the Inflection Pelvic Angles in Asymptomatic Individuals

Supervisor: Dr. Fred Nicholls

Progress: Lit review complete. Currently working on defining the coordinates in the normative database to extract the upper and lower inflection pelvic angles.

FEATURED ARTICLE

It is our pleasure to highlight a recent publication from our group. In this edition, we feature work from Dr. Yang and colleagues reporting on the Calgary Postoperative Pain after Spine Surgery Score (CAPPS). Great work Dr. Yang and team!

Can J Neurol Sci. 2023 Sep;50(5):687-693.

doi: 10.1017/cjn.2022.305. Epub 2022 Oct 24.

Validation of the Calgary Postoperative Pain after Spine Surgery Score for Poor Postoperative Pain Control after Spine Surgery

Michael M H Yang, Jay Riva-Cambrin, Jonathan Cunningham, Steven Casha

PMID: 36278829

DOI: [10.1017/cjn.2022.305](https://doi.org/10.1017/cjn.2022.305)

Abstract

Objective: The Calgary Postoperative Pain after Spine Surgery (CAPPS) score was developed to identify patients at risk of experiencing poorly controlled pain after spine surgery. The goal of this study was to independently validate the CAPPS score on a prospectively collected patient sample.

Methods: Poor postoperative pain control was defined as a mean numeric rating scale (NRS) for pain >4 at rest in the first 24 hours after surgery. Baseline characteristics in this study (validation cohort) were compared to those of the development cohort used to create the CAPPS score. Predictive performance of the CAPPS score was assessed by the area under the curve (AUC) and percentage misclassification for discrimination. A graphical comparison between predicted probability vs. observed incidence of poorly controlled pain was performed for calibration.

Results: Fifty-two percent of 201 patients experienced poorly controlled pain. The validation cohort exhibited lower depression scores and a higher proportion using daily opioid medications compared to the development cohort. The AUC was 0.74 [95%CI = 0.68-0.81] in the validation cohort compared to 0.73 [95%CI = 0.69-0.76] in the development cohort for the eight-tier CAPPS score. When stratified between the low- vs. extreme-risk and low- vs. high-risk groups, the percentage misclassification was 21.2% and 30.7% in the validation cohort, compared to 29.9% and 38.0% in the development cohort, respectively. The predicted probability closely mirrored the observed incidence of poor pain control across all scores.

Conclusions: The CAPPS score, based on seven easily obtained and reliable prognostic variables, was validated using a prospectively collected, independent sample of patients.

P R E S E N T A T I O N S

Abstracts from the 23rd Annual Scientific Conference of the Canadian Spine Society were published in the August edition of the Canadian Journal of Surgery. Representation from the University of Calgary Spine program was excellent. Please enjoy this a selection of papers that were led and/or supervised by Calgary investigators. Our group also contributed to a large number of papers led by our colleagues from across the country via CSORN.

CPSS-1

Abstract ID 108

Radiographic reporting in adolescent idiopathic scoliosis: Is there a discrepancy between radiologists' reports and surgeons' assessments? *Manjot Birk, Kara Sidhu, Marina Rosa Filezio, Vishwajeet Singh, Fabio Ferri-de-Barros.*

B-22

Abstract ID 49

Impact of preoperative insomnia on poor postoperative pain control after elective spine surgery and the Modified Calgary Postoperative Pain After Spine Surgery score. *Michael M.H. Yang, 1,2 Jay Riva-Cambrin, 1 Jonathan Cunningham, 1 Steven Casha. 1*

D-43

Abstract ID 16

The impact of specialized versus nonspecialized acute hospital care on survival among patients with acute incomplete traumatic spinal cord injuries: a population-based observational study from British Columbia, Canada. *Marcel F. Dvorak, 1 Nathan Evaniew, 2 Melody Chen, 3 Zeina Waheed, 3 Naama Rotem-Kohavi, 3 Nader Fallah, 3 Vanessa K. Noonan, 3 Charles G. Fisher, 1 Raphaële Charest-Morin, 1 Nicolas Dea, 1 Tamir Ailon, 1 John Street, 1 Brian K. Kwon. 1*

E-54

Abstract ID 11

Deterioration after surgery for degenerative cervical myelopathy: an observational study from the Canadian Spine Outcomes and Research Network. *Nathan Evaniew, 1 Lukas D. Burger, 1 Nicolas Dea, 2 David W. Cadotte, 1 Greg McIntosh, 3 Bradley Jacobs. 1*

F-63

Abstract ID 96

Economic impact of wait time in degenerative lumbar stenosis surgery: association with time away from work, chronic persistent opioid use and patient satisfaction. *Alex Soroceanu, Fred Nicholls, Ken Thomas, Nathan Evaniew, Peter Lewkonja, Jacques Bouchard, Brad Jacobs.*

F-64

Abstract ID 121

Optimal timing of surgery for symptomatic single-level lumbar disc herniation: a cost-effectiveness analysis. *David Ben-Israel, 1 Eric J. Crawford, 2 Charles Fisher, 3 Nicolas Dea, 3 Eldon Spackman, 1 Raja Rampersaud, 2 Kenneth C. Thomas. 1*

F-67

Abstract ID 43

Association between poor postoperative pain control and surgical outcomes after elective spine surgery. *Michael M.H. Yang,1,2 Rena Far,1 Tolulope Sajobi,1 Jay Riva- Cambrin,1 Steven Casha.1*

G-71

Abstract ID 15

Timing of recovery after surgery for patients with degenerative cervical myelopathy: an observational study from the Canadian Spine Outcomes and Research Network. *Nathan Evaniew,1 Matthew Coyle,1 Y. Raja Rampersaud,2 Christopher S. Bailey,3 W. Bradley Jacobs,1 David W. Cadotte,1 Kenneth C. Thomas,1 Najmedden Attabib,4 Jérôme Paquet,5 Andrew Nataraj,6 Sean D. Christie,7 Michael H. Weber,8 Philippe Phan,9 Raphaële Charest-Morin,10 Charles G. Fisher,10 Hamilton Hall,2 Greg McIntosh,11 Nicolas Dea.10*

G-77

Abstract ID 104

National adverse event rates after cervical spine surgery for degenerative disorders, and impact on patient satisfaction. *Alex Soroceanu, Fred Nicholls, Ken Thomas, Nathan Evaniew, Paul Salo, Jacques Bouchard, Brad Jacobs*

G-79

Abstract ID 102

Effect of compensation claim status on perioperative outcomes in patients with degenerative spine conditions. *Alex Soroceanu, Fred Nicholls, Ken Thomas, Nathan Evaniew, Jacques Bouchard, Paul Salo, Brad Jacobs.*

P-86

Abstract ID 103

Predictors of poor postoperative patient satisfaction in patients undergoing elective spine surgery with pre-existing compensation claims. *Alex Soroceanu, Fred Nicholls, Ken Thomas, Nathan Evaniew, Paul Salo, Jacques Bouchard, Brad Jacobs.*



We've set up a PubMed alert to identify primary and collaborative publications from members of our program. Here are some of our latest papers from 2023. Please let us know if we've missed anything!

Temporal analysis of complication rates of cervical spine surgery for degenerative spine disease between younger and older cohorts using the CSORN registry: Is age just a number? Ajoku U, Johnson MG, McIntosh G, Thomas K, Bailey CS, Hall H, Fisher CG, Manson N, Rampersaud YR, Dea N, Christie S, Abraham E, Weber MH, Charest-Morin R, Attabib N, le Roux A, Phan P, Paquet J, Lewkonja P, Goytan M. Eur Spine J. 2023 Aug 18. doi: 10.1007/s00586-023-07882-3. Online ahead of print.PMID: 37596474

Unexpected intraoperative positive culture (UIPC) in presumed aseptic revision spine surgery: a systematic review and meta-analysis. Aldahamsheh O, Burger LD, Evaniew N, Swamy G, Jacobs WB, Thomas KC, Nicholls F. Spine J. 2023 Apr;23(4):492-503. doi: 10.1016/j.spinee.2022.10.016. Epub 2022 Nov 4.PMID: 36336255 Review.

Does Ending a Posterior Construct Proximally at C2 Versus C3 Impact Patient Reported Outcomes in Degenerative Cervical Myelopathy Patients up to 24 months After the Surgery? Algarni N, Dea N, Evaniew N, McIntosh G, Jacobs BW, Paquet J, Wilson JR, Hall H, Bailey CS, Weber MH, Nataraj A, Attabib N, Rampersaud YR, Cadotte DW, Stratton A, Christie SD, Fisher CG, Charest-Morin R. Global Spine J. 2023 Mar 24:21925682231166605. doi: 10.1177/21925682231166605. Online ahead of print.PMID: 36960878 Free article.

Practice Variation between Salaried and Fee-for-Service Surgeons for Lumbar Surgery. Banaszek D, McIntosh G, Charest-Morin R, Abraham E, Manson N, Johnson MG, Bailey CS, Rampersaud YR, Glennie RA, Paquet J, Nataraj A, Weber MH, Christie S, Attabib N, Soroceanu A, Kelly A, Hall H, Thomas K, Fisher C, Dea N. Can J Neurol Sci. 2023 Jul;50(4):604-611. doi: 10.1017/cjn.2022.259. Epub 2022 Jun 16.PMID: 35705195

Cost consequence analysis of waiting for lumbar disc herniation surgery. Dandurand C, Mashayekhi MS, McIntosh G, Singh S, Paquet J, Chaudhry H, Abraham E, Bailey CS, Weber MH, Johnson MG, Nataraj A, Attabib N, Kelly A, Hall H, Rampersaud YR, Manson N, Phan P, Thomas K, Fisher C, Charest-Morin R, Soroceanu A, LaRue B, Dea N. Sci Rep. 2023 Mar 18;13(1):4519. doi: 10.1038/s41598-023-31029-5.PMID: 36934112 Free PMC article.

Patient, clinical, surgical, and institutional factors associated with length of stay in scheduled degenerative thoracolumbar spine surgery: National Multicenter Cohort Analysis from The Canadian Spine Outcomes and Research Network. Dandurand C, Mashayekhi MS, McIntosh G, Street JT, Fisher CG, Finkelstein J, Abraham E, Paquet J, Hall H, Wai E, Fournay DR, Bailey CS, Christie SD, Soroceanu A, Johnson M, Kelly A, Marion TE, Nataraj A, Santaguida C, Warren D, Hogan TG, Manson N, Phan P, Ahn H, Rampersaud YR, Blanchard J, Thomas K, Dea N, Charest-Morin R. J Neurosurg Spine. 2022 Dec 23;38(4):446-456. doi: 10.3171/2022.11.SPINE22662. Print 2023 Apr 1.PMID: 36681949

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Height Gain Following Correction of Adult Spinal Deformity. Diebo BG, Tatarzyn Z, Alsoof D, Lafage R, Hart RA, Passias PG, Ames CP, Scheer JK, Lewis SJ, Shaffrey CI, Burton DC, Deviren V, Line BG, Soroceanu A, Hamilton DK, Klineberg EO, Mundis GM, Kim HJ, Gum JL, Smith JS, Uribe JS, Kelly MP, Kebaish KM, Gupta MC, Nunley PD, Eastlack RK, Hostin R, Protopsaltis TS, Lenke LG, Schwab FJ, Bess S, Lafage V, Daniels AH; International Spine Study Group. J Bone Joint Surg Am. 2023 Jul 21. doi: 10.2106/JBJS.23.00031. Online ahead of print.PMID: 37478308

Patient satisfaction after multiple revision surgeries for adult spinal deformity. Durand WM, Daniels AH, DiSilvestro K, Lafage R, Diebo BG, Passias PG, Kim HJ, Protopsaltis T, Lafage V, Smith JS, Shaffrey CI, Gupta MC, Klineberg EO, Schwab F, Gum JL, Mundis GM, Eastlack RK, Kebaish K, Soroceanu A, Hostin RA, Burton D, Bess S, Ames CP, Hart RA, Hamilton DK; International Spine Study Group. J Neurosurg Spine. 2022 Aug 26;38(1):75-83. doi: 10.3171/2022.6.SPINE2273. Print 2023 Jan 1.PMID: 36029263

Impact of Specialized Versus Non-Specialized Acute Hospital Care on Survival Among Patients with Acute Incomplete Traumatic Spinal Cord Injuries: A Population-Based Observational Study from British Columbia, Canada. Dvorak MF, Evaniew N, Chen M, Waheed Z, Rotem-Kohavi N, Fallah N, Noonan VK, Fisher C, Charest-Morin R, Dea N, Ailon T, Street J, Kwon BK. J Neurotrauma. 2023 Aug 16. doi: 10.1089/neu.2022.0496. Online ahead of print.PMID: 37294210

Distal transradial access for targeted spinal angiography and embolization. Eesa M, Mitha AP, Lewkonja P. Interv Neuroradiol. 2023 Oct;29(5):498-503. doi: 10.1177/15910199221097489. Epub 2022 Apr 28. PMID: 35484816

Minimally Invasive Tubular Lumbar Discectomy Versus Conventional Open Lumbar Discectomy: An Observational Study From The Canadian Spine Outcomes and Research Network. Evaniew N, Bogle A, Soroceanu A, Jacobs WB, Cho R, Fisher CG, Rampersaud YR, Weber MH, Finkelstein JA, Attabib N, Kelly A, Stratton A, Bailey CS, Paquet J, Johnson M, Manson NA, Hall H, McIntosh G, Thomas KC. Global Spine J. 2023 Jun;13(5):1293-1303. doi: 10.1177/21925682211029863. Epub 2021 Jul 9.PMID: 34238046 Free PMC article.

Deterioration After Surgery for Degenerative Cervical Myelopathy: An Observational Study From The Canadian Spine Outcomes and Research Network. Evaniew N, Burger LD, Dea N, Cadotte DW, Bailey CS, Christie SD, Fisher CG, Rampersaud YR, Paquet J, Singh S, Weber MH, Attabib N, Johnson MG, Manson N, Phan P, Nataraj A, Wilson JR, Hall H, McIntosh G, Jacobs WB; Canadian Spine Outcomes and Research Network (CSORN). Spine (Phila Pa 1976). 2023 Mar 1;48(5):310-320. doi: 10.1097/BRS.0000000000004552. Epub 2022 Dec 1.PMID: 36730060

Timing of Recovery After Surgery for Patients with Degenerative Cervical Myelopathy: An Observational Study from the Canadian Spine Outcomes and Research Network. Evaniew N, Coyle M, Rampersaud YR, Bailey CS, Jacobs WB, Cadotte DW, Thomas KC, Attabib N, Paquet J, Nataraj A, Christie SD, Weber MH, Phan P, Charest-Morin R, Fisher CG, Hall H, McIntosh G, Dea N. Neurosurgery. 2023 Feb 1;92(2):271-282. doi: 10.1227/neu.0000000000002213. Epub 2022 Nov 15.PMID: 36637265

Minimally Invasive vs. Open Surgery for Lumbar Spinal Stenosis in Patients with Diabetes - A Canadian Spine Outcomes and Research Network Study.

Hathi K, Bigney E, Richardson E, Alugo T, El-Mughayyar D, Vandewint A, Manson N, Abraham E, Small C, Thomas K, Fisher CG, Rampersaud YR, Hall H, McIntosh G, Johnson MG, Bailey CS, Weber MH, Paquet J, Kingwell S, Nataraj A, Finkelstein J, Kelly A, Attabib N. Global Spine J. 2023 Jul;13(6):1602-1611. doi: 10.1177/21925682211042576. Epub 2021 Aug 31.PMID: 34463136 Free PMC article.

Beneficial Effects of Preoperative Exercise on the Outcomes of Lumbar Fusion Spinal Surgery.

Lawrence DC, Montazeripouragha A, Wai EK, Roffey DM, Phan KM, Phan P, Stratton A, Kingwell S, McIntosh G, Soroceanu A, Abraham E, Bailey CS, Christie S, Paquet J, Glennie A, Nataraj A, Hall H, Fisher C, Rampersaud YR, Thomas K, Manson N, Johnson M, Zarrabian M. Physiother Can. 2023 Feb 8;75(1):22-28. doi: 10.3138/ptc-2021-0030. eCollection 2023 Winter. PMID: 37250725

Identifying Subsets of Patients with Adult Spinal Deformity Who Maintained a Positive Response to Nonoperative Management.

Passias PG, Ahmad W, Tretiakov P, Krol O, Segreto F, Lafage R, Lafage V, Soroceanu A, Daniels A, Gum J, Line B, Schoenfeld AJ, Vira S, Hart R, Burton D, Smith JS, Ames CP, Shaffrey C, Schwab F, Bess S; International Spine Study Group. Neurosurgery. 2023 Aug 1;93(2):480-488. doi: 10.1227/neu.0000000000002447. Epub 2023 Mar 21.PMID: 36942962

Determining minimal clinically important difference estimates following surgery for degenerative conditions of the lumbar spine: analysis of the Canadian Spine Outcomes and Research Network (CSORN) registry.

Power JD, Perruccio AV, Canizares M, McIntosh G, Abraham E, Attabib N, Bailey CS, Charest-Morin R, Dea N, Finkelstein J, Fisher C, Glennie RA, Hall H, Johnson MG, Kelly AM, Kingwell S, Manson N, Nataraj A, Paquet J, Singh S, Soroceanu A, Thomas KC, Weber MH, Rampersaud YR. Spine J. 2023 Sep;23(9):1323-1333. doi: 10.1016/j.spinee.2023.05.001. Epub 2023 May 7.PMID: 37160168 Free article.

Clinical outcomes and proximal junctional failure in adult spinal deformity patients corrected to normative alignment versus functional alignment.

Protopsaltis TS, Ani F, Soroceanu A, Lafage R, Kim HJ, Balouch E, Norris Z, Smith JS, Daniels AH, Klineberg EO, Ames CP, Hart R, Bess S, Shaffrey CI, Schwab FJ, Lenke LG, Lafage V, Gupta MC. J Neurosurg Spine. 2023 Jul 21:1-8. doi: 10.3171/2023.5.SPINE221266. Online ahead of print.PMID: 37503890

Predictors of Recovery Following Lumbar Microdiscectomy for Sciatica: A Systematic Review and Meta-Analysis of Observational Studies.

Rehman Y, Bala M, Rehman N, Agarwal A, Koperny M, Crandon H, Abdullah R, Hull A, Makhdami N, Grodecki S, Wrzosek A, Lesniak W, Evaniew N, Ashoorion V, Wang L, Couban R, Drew B, Busse JW. Cureus. 2023 May 29;15(5):e39664. doi: 10.7759/cureus.39664. eCollection 2023 May. PMID: 37388594

L5-S1 Pseudoarthrosis Rate with ALIF Versus TLIF in Adult Spinal Deformity Surgeries: A Retrospective Analysis of 100 Patients.

Singh V, Oppermann M, Evaniew N, Soroceanu A, Nicholls F, Jacobs WB, Thomas K, Swamy G. World Neurosurg. 2023 Jul;175:e1265-e1276. doi: 10.1016/j.wneu.2023.04.113. Epub 2023 May 3.PMID: 37146876

How Good Are Surgeons at Achieving Their Preoperative Goal Sagittal Alignment Following Adult Deformity Surgery? Smith JS, Elias E, Sursal T, Line B, Lafage V, Lafage R, Klineberg E, Kim HJ, Passias P, Nasser Z, Gum JL, Eastlack R, Daniels A, Mundis G, Hostin R, Protosaltis TS, Soroceanu A, Hamilton DK, Kelly MP, Lewis SJ, Gupta M, Schwab FJ, Burton D, Ames CP, Lenke LG, Shaffrey CI, Bess S; International Spine Study Group. Global Spine J. 2023 Feb 23;21925682231161304. doi: 10.1177/21925682231161304. Online ahead of print.PMID: 36821516 Free article.

Impact of preoperative insomnia on poor postoperative pain control after elective spine surgery and the modified Calgary postoperative pain after spine surgery (MCAPPS) score. Yang MMH, Riva-Cambrin J, Cunningham J, Casha S. N Am Spine Soc J. 2023 Aug 6;16:100261. doi: 10.1016/j.xnsj.2023.100261. eCollection 2023 Dec. PMID: 37753373 Free PMC article.

Validation of the Calgary Postoperative Pain after Spine Surgery Score for Poor Postoperative Pain Control after Spine Surgery. Yang MMH, Riva-Cambrin J, Cunningham J, Casha S. Can J Neurol Sci. 2023 Sep;50(5):687-693. doi: 10.1017/cjn.2022.305. Epub 2022 Oct 24.PMID: 36278829

Distal junctional kyphosis in adult cervical deformity patients: where does it occur? Ye J, Rider SM, Lafage R, Gupta S, Farooqi AS, Protosaltis TS, Passias PG, Smith JS, Lafage V, Kim HJ, Klineberg EO, Kebaish KM, Scheer JK, Mundis GM, Soroceanu A, Bess S, Ames CP, Shaffrey CI, Gupta MC; International Spine Study Group (ISSG). Eur Spine J. 2023 May;32(5):1598-1606. doi: 10.1007/s00586-023-07631-6. Epub 2023 Mar 16.PMID: 36928488

Predictive role of global spinopelvic alignment and upper instrumented vertebra level in symptomatic proximal junctional kyphosis in adult spinal deformity. Ye J, Gupta S, Farooqi AS, Yin T, Soroceanu A, Schwab FJ, Lafage V, Kelly MP, Kebaish K, Hostin R, Gum JL, Smith JS, Shaffrey CI, Scheer JK, Protosaltis TS, Passias PG, Klineberg EO, Kim HJ, Hart RA, Hamilton DK, Ames CP, Gupta MC. J Neurosurg Spine. 2023 Aug 4;1-11. doi: 10.3171/2023.6.SPINE23383. Online ahead of print.PMID: 37542446

Use of multiple rods and proximal junctional kyphosis in adult spinal deformity surgery. Ye J, Gupta S, Farooqi AS, Yin TC, Soroceanu A, Schwab FJ, Lafage V, Kelly MP, Kebaish K, Hostin R, Gum JL, Smith JS, Shaffrey CI, Scheer JK, Protosaltis TS, Passias PG, Klineberg EO, Kim HJ, Hart RA, Hamilton DK, Ames CP, Gupta MC. J Neurosurg Spine. 2023 Jun 9;1-9. doi: 10.3171/2023.4.SPINE23209. Online ahead of print.PMID: 37327142

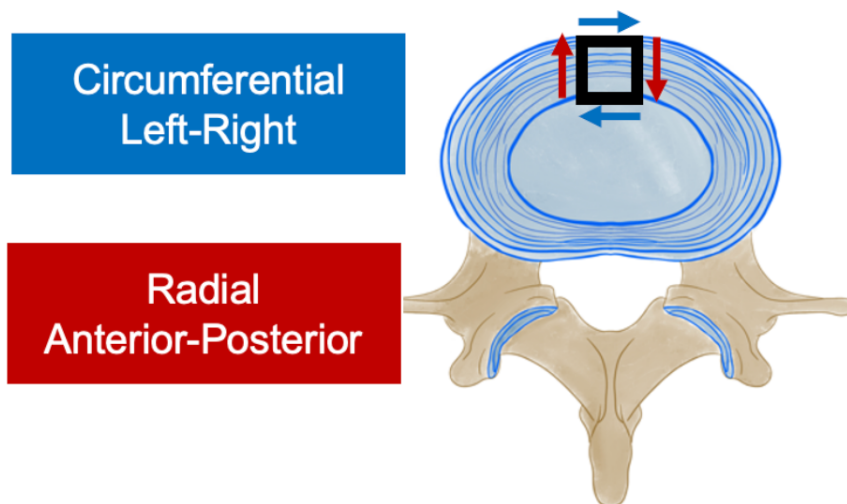
Spinopelvic sagittal compensation in adult cervical deformity. Ye J, Rider SM, Lafage R, Gupta S, Farooqi AS, Protosaltis TS, Passias PG, Smith JS, Lafage V, Kim HJ, Klineberg EO, Kebaish KM, Scheer JK, Mundis GM, Soroceanu A, Bess S, Ames CP, Shaffrey CI, Gupta MC; International Spine Study Group (ISSG). J Neurosurg Spine. 2023 Mar 24;39(1):1-10. doi: 10.3171/2023.2.SPINE221295. Print 2023 Jul 1.PMID: 36964727

Congratulations to Taylor Bader

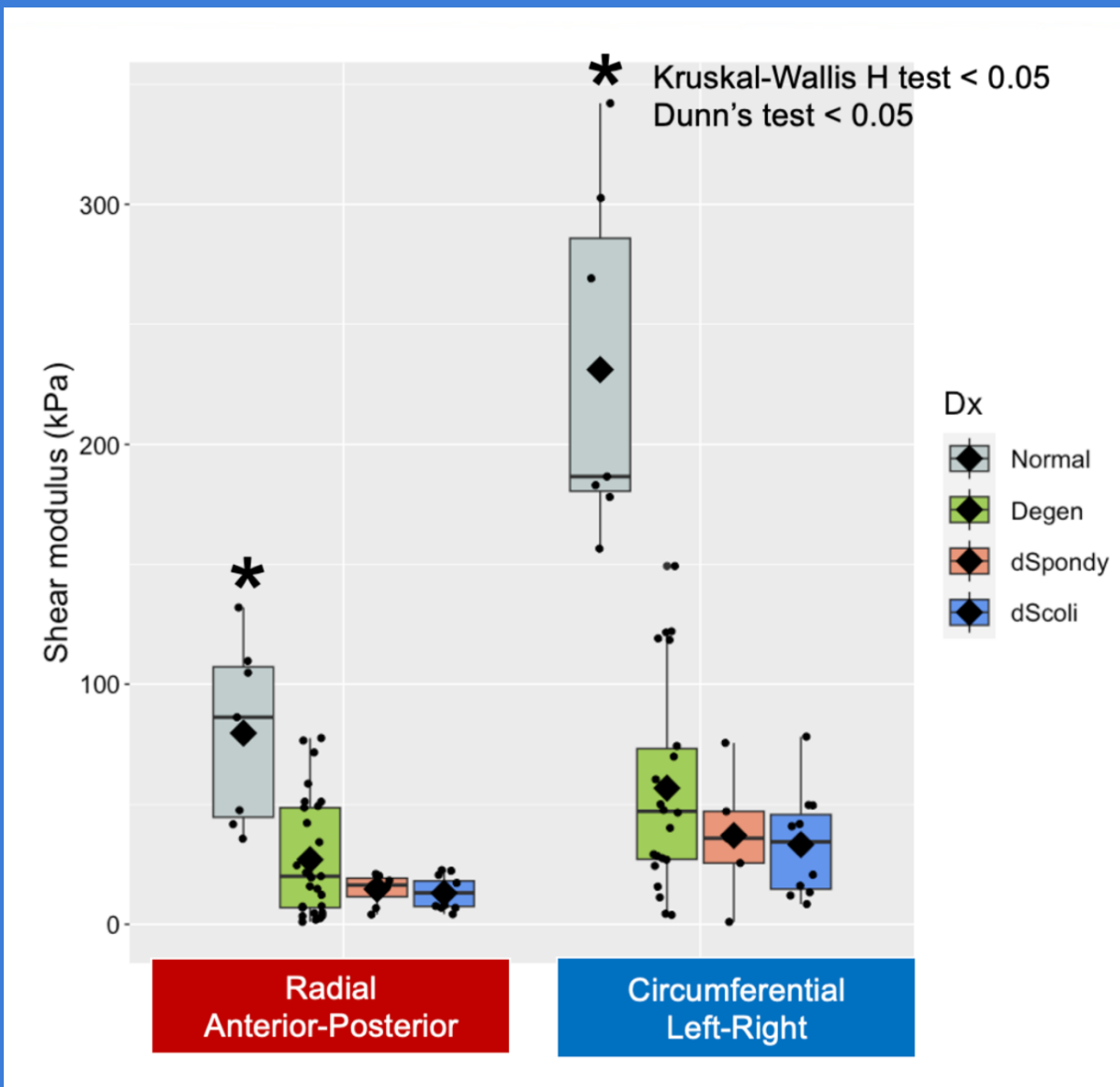
on the completion of his MSc in Medical Science under the supervision of Dr. Swamy and Dr. Hart. His MSc was titled “Do Mechanical and Structural Characteristics of Degenerated Intervertebral Discs Contribute to Development of Degenerative Scoliosis and Spondylolisthesis?”. They found significant differences in the shear modulus of degenerative and deformity annulus fibrosus compared to normal tissue. Deformity tissue displayed further reductions but was not significant.



	Normal	Degen	dSpondy	dScoli
Participants	7	29	7	14
Radial (10% Strain)	80 ± 38*	27 ± 24	32 ± 39	12 ± 6
Circumferential (10% Strain)	231 ± 73*	57 ± 43	36 ± 27	33 ± 21



ANNOUNCEMENTS



Taylor is now beginning his PhD under the supervision of Dr. Swamy and Dr. Dufour. They will continue working with the collected annulus fibrosus samples and explore tissue composition and degeneration.

Introducing OnCore

Alberta's Clinical Trial Management System

To continue to improve the efficiency and quality of clinical trials conducted in Alberta, the University of Calgary has partnered with the University of Alberta, the Cross Cancer Centre, and Alberta Health Services to invest in the OnCore Clinical Trial Management System (CTMS). The OnCore CTMS is a secure, web-based system that centralizes and streamlines the management of prospective clinical research studies.

Implementation of OnCore in Alberta commenced two years ago, and today the system is integrated with key platforms including the IRISS and ARISE ethics systems, the Connect Care clinical information system, and the UC PeopleSoft system, making it a central component of clinical research in Alberta.

Tara and Ish are currently being trained in OnCore. If you are the PI on an eligible trial, you may receive an email requesting that you set up an OnCore account. No training is required for PIs at this time. Our plan is to begin OnCore implementation with one current clinical trial and gradually onboard other studies, as required.

Which studies are eligible for OnCore?

- Connect Care In-system Studies

AND/OR

- Studies requiring UCalgary Accounts Receivables services (invoicing or receipt of automated payments)

Mandatory OnCore Use

- As of April 1, 2023, use of OnCore is mandatory for all NEW eligible clinical trials.
- Existing studies: At this stage OnCore use is highly encouraged but not mandatory for existing eligible studies.

The OnCore Support Team can be reached at oncoresupport@ucalgary.ca

IMPORTANT DEADLINES

MEETINGS	SUBMISSION DATES	MEETING DATES	LOCATION
Global Spine Congress (GCS)	Closed	Oct 8-11 th , 2023	Edinburgh, Scotland
SAS/ISASS International Society for the Advancement of Spine Surgery	TBD	TBD	TBD
SSA - Spine Society of Australia	Oct, 2023	Apr 5-7, 2024	Sydney, Australia
Canadian Neurological Sciences Federation	TBD	May 21-24 th , 2024	Toronto, Ontario, Canada
COA - Canadian Orthopaedic Association	TBD	TBD	TBD
SRS Scoliosis Research Society	TBD	TBD	TBD
Congress of Neurological Surgeons	TBD	TBD	TBD
EuroSpine	Closed	October 4-6, 2023	Frankfurt, Germany
Society of Minimally Invasive Spine Surgery	Closed	October 5-7, 2023	Las Vegas, Nevada
The International Spinal Cord Society Annual Scientific Meeting	Closed	October 8-11, 2023	Edinburgh, Scotland
NASS North American Spine Society	Closed	October 18-21, 2023	Los Angeles, CA
CSRS Cervical Spine Research Society	Closed	November 29, 2023	Las Vegas, Nevada
Britspine	TBD	TBD	TBD
AAOS American Academy of Orthopaedic Surgeons Meeting	Closed	February 12-16, 2024	San Francisco, California
CSS- 20th Annual Scientific Conference of the Canadian Spine Society	November 5, 2023	February 28-March 2, 2024	Whistler, British Columbia
International Society of Orthopaedic Centers (ISOC)	TBD for members only	March 17-20, 2024	Jerusalem, Israel
AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves	May 30 th to Nov 7 th , 2023	May 3-6, 2024	McCormick Place Chicago IL
ISSLS The International Society for the Study of the Lumbar Spine	Closed	May 27-31, 2024	Milan, Italy
Atlantic Canada Spine Meeting	TBD	Oct 12-15, 2023	Fox Harbour, NS, Canada

Job Posting: Clinical Research Coordinator

The University of Calgary Spine Surgery Program is a Neurosurgical/Orthopaedic Surgery integrated program active in basic science and clinical research, fellow/resident/medical student education and spine clinical care delivery planning. Currently we are seeking a highly skilled and efficient Clinical Research Coordinator to support our research.

This position requires multi-site work with time spent at the University of Calgary Foothills Campus and Caléo Health. Workdays may vary in length and may occasionally include early morning, evening or weekend hours depending on specific research protocols. This is an externally funded (non U of C) 0.5 FTE contractor position, expected to last six months with an intention to consider annual renewal thereafter.

Projected start date January 2024.

Full posting available at <https://calgaryspine.ca/about/careers>

Future Newsletters

If you have comments, ideas or submissions for a future newsletter, contact

Nathan Evaniew nathan.evaniew@ucalgary.ca

or

Tara Whittaker sri@ucalgary.ca