

## CURRICULUM VITAE

**NAME** **Alexander Ching, M.D.**

**DATE** **December 13, 2021**

### PRESENT POSITION AND ADDRESS

**Professional Address:**

Oregon Spine Care  
19255 SW 65<sup>th</sup> Ave, Suite 200  
Tualatin, OR, 97062

## II. EDUCATION

### Undergraduate and Graduate:

1993 - 1997      Yale University  
New Haven, CT  
Bachelor of Arts, History

1997 - 2001      Columbia University  
College of Physicians and Surgeons  
New York, NY  
Doctor of Medicine

### Postgraduate:

2001-2002      Thomas Jefferson University Hospital  
Department of Orthopaedic Surgery  
Philadelphia, Pennsylvania  
Internship

2002- 2006      Thomas Jefferson University Hospital  
Department of Orthopaedic Surgery  
Philadelphia, Pennsylvania  
Residency

2006 - 2007      Oregon Health & Sciences University  
Department of Orthopaedics & Rehabilitation  
Adult Spine Surgery  
Portland, Oregon  
Fellowship

### **Certifications:**

2009 American Board of Orthopaedic Surgeons, Board Certified; exp. 12/31/2019

2017 American Board of Orthopaedic Surgeons, Re-Certified; exp. 12/31/2029

### **Licenses:**

2004 Medical Physician & Surgeon, Commonwealth of Pennsylvania (lapsed)

2006 State of Oregon Medical License

## **III. PROFESSIONAL EXPERIENCE**

### **Academic:**

2006-2008 Instructor, Department of Orthopaedics & Rehabilitation, Oregon Health & Science University; Portland, OR.

2008-January 2015 Assistant Professor, Department of Orthopaedics & Rehabilitation, Oregon Health & Science University; Portland, OR.

February 2015-present Spine Surgeon, Oregon Spine Care, Tualatin, OR

### **Administrative (Include Year, Position, and Institution):**

### **Other**

1998-1999 Tutor, Student Success Network, Columbia University

1996-1997 Freshman Counselor, Yale University

1995 Intern, National Cancer Institute, National Institutes of Health

## **IV. SCHOLARSHIP**

### **Area(s) of Research/Scholarly Interest:**

Spinal Trauma

Spinal Tumors

Patient Safety

The Degenerative Spine

### **Grants and Contracts:**

#### Federal

“Examining Complications and Reoperations after Surgery for Spinal Stenosis”, NIH/NIAMS, PI: Richard Deyo, 9/09-9/11, 5%, NIH grant number R01AR054912-02

#### State and Local

“Post-Traumatic Stress Disorder after Spine Trauma”, Medical Research Foundation of Oregon, PI: Alexander Ching, 9/09-8/10

**Publications/Creative Work:**

Peer-reviewed

Ragel, BR, Klimo, P, Hart, R, Yoo, J, Ching, AC, “Life expectancy and metastatic scoring systems: and academic institutional experience,” *Clinical Spine Surgery*, 2017.

Munch, JL, Zusman, NL, Lieberman, EG, Stucke, RS, Bell, C, Philpp, TC, Smith, S, Ching, AC, Hart, RA, Yoo, JU, “”A scoring system to predict postoperative medical complications in high-risk patients undergoing elective thoracic and lumbar arthrodesis,” *The Spine Journal*, 16(6):694-699, 2016.

Mohamend, AS., Yoo, J., Hart, R., Ragel, BT., Hiratzka, JR., Ching, A., “Intraoperative Neurophysiological Monitoring In Anterior Lumbar Interbody Fusion Surgery.” *Journal of Clinical Neurophysiology: Official Publication of the American Electroencephalographic Society*; 31(4): 352-5, 2014.

Ching, A., “Posterior Fixation Without Debridement For Vertebral Body Osteomyelitis And Discitis.” *Neurosurgical FOCUS*; 37(2):E6, 2014.

Zusman, NL, Ching, AC, Hart, RA, Yoo, JU, “Incidence of second cervical vertebral fractures far surpassed the rate predicted by the changing age distribution and growth among elderly persons in the United States,” *Spine* 2013.

Khaki, F, Zusman, NL, Nemecek AN, Ching, AC, Hart, RA, ... “Post-operative prevertebral soft tissue swelling does not affect the development of chronic dysphagia following anterior cervical spine surgery,” *Spine*, 2013.

Hiratzka, JR, Yoo JU, Ko JW, Hiratzka SL, Zusman NL, Ching AC. “Traditional Thresholds for Retropharyngeal Soft Tissue Swelling are Poorly Sensitive for the Detection of Cervical Spine Injury on Computed Tomography in Adult Trauma Patients.” *Spine* 2013; 38(4):E211-6.

Deyo, RA., Ching, A., “Surgical Trials for Pain Relief: In Search of Better Answers,” *Pain*, in press.

Soroceanu, A., Ching, A., Abdu, W., McGuire, K., “Relationship Between Pre-Operative Expectations, Satisfaction and Functional Outcomes in Lumbar and Cervical Spine Patients: a Multi-Center Study,” *Spine*, 37(2): 103-108, 2012.

Deyo, R.A., Ching, A., Matsen, L., Martin, B.I., Kreuter, W., Jarvik, J.G., Angier, H., Mirza, S.K., “Use of Bone Morphogenetic Proteins in Spinal Fusion Surgery for Older Adults with Lumbar Stenosis: Trends, Complications, Repeat Surgery, and Charges,” *Spine*, 37(3): 222-230, 2012.

Rust C.L., Ching A.C., Hart R.A, “Dropped-Head Syndrome Resulting from Injury to the Central Spinal Cord at the Upper Cervical Level,” *Journal of Bone and Joint Surgery, British*, 93-B(4): 503-506, 2011.

Ching A.C., "Concomitant traumatic spinal cord and brachial plexus injuries: do they affect outcome?" *J Bone Joint Surg Am.* Dec 21 2011;93(24):e153.

Tatsumi, R.L., Ching, A.C., Byrd, G.D., Hiratzka, J.R., Threlkeld, J.E., Hart, R.A., "Predictors and Prevalence of Patients Undergoing Additional Kyphoplasty Procedures After an Initial Kyphoplasty Procedure," *The Spine Journal*, 10(11): 979-986, 2010.

Ching, A.C., and Birkenmaier, C., Hart R.A., "Short Segment Coronal Plane Deformity After Two-Level Lumbar Total Disk Replacement," *Spine*, 35(1):44-50, 2009.

Daniels, A.H., Riew, K.D., Yoo, J.U., Ching, A., Birchard, K.R., Kranenburg, A.J., Hart, R.A., "Adverse Events Associated with Anterior Cervical Spine Surgery." *J Am Acad Orthop Surg.* Dec 2008;16(12):729-738.

Raikin S.M., Ching A.C., "Bioabsorbable Fixation in Foot and Ankle." *Foot Ankle Clin.* Dec 2005;10(4):667-684, ix.

#### Non-peer-reviewed

Ching, A.C., "How Do We Interpret National Inpatient Sample Data About Complications?: Commentary on an article by Amit Jain, MD, et al.: "rhBMP Use in Cervical Spine Surgery: Associated Factors and In-Hospital Complications." *J Bone Joint Surg Am*, 2014 Apr 16;96(8):e67.

Hiratzka, J., Ching, A., Hart, R., "Degenerative Cervical Kyphosis: Treatment, Complications, and Outcomes," *Seminars in Spine Surgery*, 23(3):165-169, 2011.

Hiratzka, J., Ching, A., Hart, R., "Degenerative Cervical Kyphosis: Anatomy, biomechanics, and Etiology," *Seminars in Spine Surgery*, 23(3):169-172, 2011.

Breen, N., Ching, A., "Race, Class, Gender, and Cancer" Proceedings 25th Public Health Conference on Records and Vital Statistics (Washington, DC, 1995).

#### Chapters

Ching, A.C., Albert, T.J., Hart, R.A., "Esophageal Perforation," *The Cervical Spine, 5<sup>th</sup> Edition* E. Benzel, ed., Lippincott, Williams, &Wilkins, in press.

Wagner, J.L., Tunis, S., Brown, M., Ching, A., Almeida, R., "Cost Effectiveness of Colorectal Cancer Screening in Average-Risk Adults," Prevention and Early Detection of Colorectal Cancer, G. Young and B. Levin (eds.), (London: W.B. Saunders Company, 1996).

#### Reviews

"The Effect Of The Use Of Pedicle Screws At The Fracture Level Through The Paraspinal Approach Without Fusion In Spinal Burst Fractures," *Spine Journal*, Ms. No. SPINE 140641.

“The Outcomes Of Thoracolumbar Burst Fractures Treated By Minimally Interventional Surgery (MIS), Open Surgical Techniques or Conservative Methods,” *Spine Journal*, Ms. No. SPINE 140310.

“Bilateral Decompression via Microscopic Tubular Crossing Laminectomy (MTCL) for Lumbar Spinal Stenosis: Report of Eight Cases,” *Spine Journal*, Ms. No. SPINE 140089.

“Traumatic diaphragm hernia after thoracolumbar fracture in a patient with Ankylosing spondylitis,” *Spine Journal*, Ms. No. SPINE 131094.

“A Prospective Comparative Study of Two Minimally Invasive Decompression Procedures for Lumbar Spinal Canal Stenosis-Unilateral Laminotomy for Bilateral Decompression (ULBD) versus Muscle-preserving Interlaminar Decompression (MILD),” *Spine Journal*, Ms. No. SPINE 130972.

“Contralateral Motor Deficits Following Lateral Lumbar Interbody Fusion,” *Spine Journal*, Ms. No. SPINE 130233.

“An in vitro Evaluation of Fracture Reduction Achieved by Inflatable Bone Tamps under Simulated Physiological Load,” *Spine Journal*, Ms. No. SPINE 121554.

“Direct Intrabody Grafting Reconstruction via Anterior Mini-open Approach Combined with Short-segment Percutaneous Pedicle Screw Fixation for Treatment of Thoracolumbar Fractures: A Preliminary Report of 14 Patients with A new Minimally Invasive Technique,” *Spine Journal*, Ms. No. SPINE 121333.

“Heterotopic ossification complicating a lumbar burst fracture,” *Spine Journal*, Ms. No. SPINE 121064.

“Sacroiliac Joint Arthrodesis-MIS Technique with Titanium Implants: Report of the First 50 Patients and Outcomes,” *Spine Journal*, Ms. No. SPINE 120833.

“Fully endoscopic transnasal anterior C1 arch reconstruction as a function preserving surgical option in a type II atlas fracture,” *Spine Journal*, Ms. No. SPINE 120224.

“Morphometric Analysis of the YESS and TESSYS Techniques Of Percutaneous Transformational Endoscopic Lumbar Discectomy,” *Spine Journal*, Ms. No. SPINE 120074.

“Pediatric Lateral Distraction Injury of the Lumbar Spine: a case report,” *Spine Journal*, Ms. No. SPINE 111427.

“The Effects of Cement Volume Distribution Ratio of Percutaneous Kyphoplasty in Thoracolumbar Vertebra,” *Spine Journal*, Ms. No. SPINE 111167.

“Outcomes of a less invasive lumbar fusion technique in recurrent radiculopathy patients,” *Spine Journal*, Ms. No. SPINE 111006.

“Spinous Process Splitting Open Pedicle Screws Fusion Reduces Low Back Pain and Discomfort Compared to the Conventional Open Technique Over One Year after Lumbar Surgery,” *Spine Journal*, Ms. No. SPINE 110809.

“Neuronavigation for Minimally Invasive Transforaminal Lumbar Interbody Fusion Surgery. Radiographic and Clinical Results,” *Spine Journal*, Ms. No. SPINE 110616.

“Spinous Process Splitting Open Pedicle Screw Fusion Reduces Low Back Pain and Discomfort Compared to the Conventional Open Technique Over One Year after Lumbar Surgery,” *Spine Journal*, Ms. No. SPINE 110141.

“Comparison of four airway devices on cervical spine alignment in a cadaver model with global ligamentous Instability at C5-6,” *Spine Journal*, Ms. No. SPINE 101381.

“Spinal fracture caused by hypoglycemic convulsion; beware of the distracted injury,” *Spine Journal*, Ms. No. SPINE 101136.

“Early Recurrent Fractures of Target Vertebrae after Percutaneous Kyphoplasty- Case Reports and Review of Literature,” *Spine Journal*, Ms. No. SPINE 100930.

“A Clinical Study Of Intra-Operative Myelography Assisted Microendoscopic Decompressive Laminotomy (MEDL) For Lumbar Spinal Stenosis” *Spine Journal*, Ms. No. SPINE 100791.

“Reliability Classification System for Subaxial Cervical Injuries” *Spine Journal*, Ms. No. SPINE 100686.

“Analysis of the Sterilization Costs of Consignment Implants: Formulization with Pilot Spinal Set” ” *Spine Journal*, Ms. No. SPINE 100395.

“Bone Morphogenetic Protein Use in Cervical Spine Surgery: Associated Factors and In-Hospital Complications,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-13-00666.

“Venous Thromboembolic Events in Spine Surgery Patients; which patients are high risk?” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-12-01602.

“Symptom Duration in Correlation to Surgical Outcomes in Patients with Cervical Spondylotic Myelopathy: An Analysis of 248 Cases,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-11-01409.

“Reshaping Orthopaedic Resident Education in Systems-Based Practice,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-11-00638.

“Concomitant Spinal Cord Injuries in Adults Patients with Traumatic Brachial Plexus Injuries,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-10-00922R1.

“Spinal osteotomy with anterior opening and posterior closing correction for severe focal kyphosis” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-10-01664.

“Concomitant Spinal Cord Injuries in Adult Patients with Traumatic Brachial Plexus Injuries” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-10-00922.

“Proximal tibiofibular synostosis as a possible cause of a pseudoradicular syndrome; a case report,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-10-00585.

“Bilateral Chylothorax Associated with Thoracolumbar Fracture-Dislocation in Ankylosing Spondylitis: A Case Report,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-10-00471.

“Risk Factors for Postoperative Infection Following Posterior Lumbar Instrumented Arthrodesis” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-10-00039.

“Lumbar fusion in Octogenarians; The Promise of Minimally Invasive Surgery” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-09-01488.

“Debating the Value of Spine Surgery” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-9-01439.

“Severing normal S1 anterior root to reconstruct the atonic bladder function: Preliminary clinical observation,” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-08-01155.

“The mandibular angle as a landmark for identification of cervical spinal level” *The Journal of Bone & Joint Surgery*, Ms. No. JBJS-D-08-00156.

“Is Unilateral Kyphoplasty as Effective and Safe as Bilateral Kyphoplasty for Osteoporotic Vertebral Compression Fracture,” *Clinical Orthopaedics and Related Research*, Ms. No. CORR-D-13-01581.

“Anterior cervical discectomy and fusion with zero-profile devices for two noncontiguous levels of cervical spondylosis,” *Clinical Orthopaedics and Related Research*, Ms. No. CORR-D-13-01124.

“Cervical anthroplasty with Discover artificial disc for two noncontiguous levels of cervical spondylosis,” *Clinical Orthopaedics and Related Research*, Ms. No. CORR-D-13-00580.

“Does Minimally Invasive Transsacral Fixation Provide Anterior Column Support for Adult Scoliosis?” *Clinical Orthopaedics and Related Research*, Ms. No. CORR-D-13-00580.

“Age changes in bony anatomic landmarks of lumbar spine: A postmortem study of 1072 cadaveric human specimens,” *Clinical Orthopaedics and Related Research*, Ms. No. CORR-D-13-0071.

## Abstracts

### *Podium Presentations by Mentored Students/Residents:*

The Thoracolumbar Fusion Risk Score: Predicting Postoperative Morbidity and Mortality, American Academy of Orthopaedic Surgeons, Chicago, IL, 2012 (Jacqueline Munch).

Prevertebral Soft Tissue Swelling Does Not Affect the Development of Chronic Dysphagia Following Anterior Cervical Surgery, Cervical Spine Research Society, Chicago, IL, 2012 (Natalie Zusman).

Psychosocial Factors That Influence the Development of Chronic Dysphagia After Anterior Cervical Spine Surgery, Cervical Spine Research Society, Chicago, IL, 2012 (Farbod Khaki).

The Relationship of Levels Fused and Perioperative Complications in Elective Thoracolumbar

Fusions, North American Spine Society, Chicago, IL, 2012 (Jacqueline Munch).

Changing Demographic Characteristics of Second Cervical Vertebral Fractures in the Elderly (2005-2008), Cervical Spine Research Society, Phoenix, AZ, 2011, (Natalie Zusman).

Traditional Cutoffs for Retropharyngeal Soft Tissue Swelling Have Poor Sensitivity for the Detection of Cervical Spine Injury: Computed Tomography in Adult Trauma Patients, Cervical Spine Research Society, Phoenix, AZ, 2011 (Jayme Hiratzka).

Complication Rates for Spinal Fusion are Associated with a Number of Perioperative Factors, but Their Influences are Dependent on ASA Classification, North American Spine Society, Dallas, TX, 2012 (Best Poster Award, Jacqueline Munch).

*Podium Presentations:*

Blizzard S.R., Wessler L.M, Zusman N.L, Yoo J.U, Ching A.C. “The Relation between Depression, PTSD and the Likelihood of returning to Work after Spine Trauma.” North American Spine Society, San Francisco, CA, Nov. 12-15, 2014

Ching A.C., Marshall L.M., Hart R.A., Zusman N.L., Darnall B.D., Ragel B.T., Nemecek A.N., Lanning K., Watson K.M., Yoo J.U. “Early Prevalence of Post-Traumatic Stress Disorder in Spinal Trauma Patients,” North American Spine Society, Dallas, TX, Oct 24-27, 2012.

Ching A.C., Zusman N.L., Darnall B.D., Marshall L.M., Lanning K., Nemecek A.N., Ragel B.T., Hart R.A., Yoo J.U. “Post-Traumatic Stress Disorder Symptoms are Common with Cervical Spine Injuries but Independent of Physical Well-Being,” Cervical Spine Research Society, Chicago, IL, Dec 6-8, 2012.

*Poster Presentations:*

Ching, A.C., and Hart, R.A., “Coronal Plane Deformity After Two-Level Lumbar Disc Replacement,” ISSLS, Spineweek, Geneva, Switzerland, May 26-31, 2008.

Rust, C.L., Hart, R.A., and Ching, A.C., “Dropped Head Syndrome Resulting from Central Spinal Cord Injury of the Upper Cervical Spine,” Cervical Spine Research Society, Charlotte, NC, Dec 2-4, 2010.

Other

**Invited Lectures, Conference Presentations or Professorships:**

International and National

“Co-Morbidity Considerations in Elderly Patients and Their Impact on Outcomes and Complications,” Aging & Complex Spine Summit, San Diego, CA, October 3, 2008.

“The Management of Metastatic Spine Disease,” Aging & Complex Spine Summit, San Diego, CA, October 3, 2008.

“The Lateral Approach,” The Latest Techniques in Less-Invasive Spine Surgery: A Hands-On Cadaver Workshop, Practical Anatomy & Surgical Education, St. Louis, MO, April 15-17, 2010.



“Management of Cervical Non-Union,” American College of Spine Surgery, Newport Beach, CA, June 10-12, 2010.

“Post-Operative Spinal Infection,” Federation of Spine Associations, American Academy of Orthopaedic Surgeons, San Diego, CA, February 19, 2011.

“Indications for Inter-Spinous Process Spacers,” The Latest Techniques in Less-Invasive Spine Surgery: A Hands-On Cadaver Workshop, Practical Anatomy & Surgical Education, St. Louis, MO, March 3-5, 2011.

#### Regional and Local

Lumbar Spine small groups workshop. School of Medicine Continuity Curriculum for third year medical students, Oregon Health & Science University, Portland, OR September, 2013.

“Minimally Invasive Spine Surgery,” Traveling CME program, Oregon Health and Science University, Columbia Memorial Hospital, Astoria, OR; April, 2013.

“Memory Lane: My Steps to a MIS Practice,” OHSU Orthopaedic Visiting Professorship, Portland, OR, October 7, 2011.

“The Management of Metastatic Spine Disease,” OHSU Metastatic spine Review, Portland, OR, September 9, 2011.

“The Evaluation and Management of Spinal Pain,” MCMC Grand Rounds, The Dalles, OR, July 20, 2011.

“Mechanical Low Back Pain, To Fuse,” OHSU Orthopaedic and Rheumatology Annual Review, Bend, OR, March 26, 2010.

“Lumbar Radiculopathy and Cauda Equina Syndrome,” OHSU Orthopaedic and Rheumatology Annual Review, Bend, OR, March 26, 2010.

“Lumbar Radiculopathy and Cauda Equina Syndrome,” OHSU Family Medicine Review, Portland, OR, February 12, 2009.

“The Management of Metastatic Spine Disease,” Josephine County Medical Society, Grant’s Pass, OR, September 10, 2008.

“The Acute Management of Spinal Cord Injury,” Josephine County Medical Society, Grant’s Pass, OR, September 10, 2008.

“The Evaluation and Management of Spinal Pain,” Oregon Association of Orthopaedics Pain Management Course, Bend, OR, April 5, 2008.

## **V. SERVICE**

### **Membership in Professional Societies:**

American Academy of Orthopaedic Surgeons  
North American Spine Society  
Oregon Association of Orthopaedics  
American Spinal Injury Association  
Society for Minimally Invasive Spine Surgery  
Cervical Spine Research Society

### **Editorial and Ad Hoc Review Activities:**

Reviewer, *Journal of Bone and Joint Surgery*  
Reviewer, *Spine*  
Reviewer, *Clinical Orthopedics and Related Research*  
Reviewer, *Journal of Spinal Disorders and Techniques/Clinical Spine Surgery*  
Reviewer, *Journal of the American Academy of Orthopedic Surgery*

### **Committees:**

#### Institutional

Oregon Health & Science University; Trauma Committee (former)

Oregon Health & Science University; Education Committee (former)

Legacy Meridian Park, Surgery Department, Chair (former)

#### Departmental

Oregon Health & Science University; Orthopaedic Department Research Committee (former)  
Oregon Health & Science University; Orthopaedic Quality Improvement Committee (former)

## **VI. TEACHING**

### **Teaching**

Volunteer Instructor, Anatomy, OHSU School of Medicine, 2007-2008  
Faculty Advisor, First Year Medical Students, OHSU School of Medicine, 2008  
Instructor, Depuy Pre-Fellows Anatomy Course, Denver CO, April, 2008  
Instructor, Depuy Pre-Fellows Anatomy Course, Denver CO, May, 2009  
Faculty, The Latest Techniques in Less-Invasive Spine Surgery, Practical Anatomy & Surgical Education, St. Louis, MO, April 15-17, 2010  
Instructor, Depuy Pre-Fellows Anatomy Course, Las Vegas, NV, May 2010  
Continuity Preceptor, Principles of Clinical Medicine, OHSU School of Medicine, 2010-2014  
Faculty Coach, MedNet Program, OHSU School of Medicine, 2010-2014