

Curriculum Vitae

CHRISTOPHER M. BONFIELD, M.D.
Assistant Professor
Department of Neurological Surgery
Vanderbilt University Medical Center

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CITIZENSHIP: United States

EDUCATION

High School	North Hills High School Pittsburgh, Pennsylvania	1999
Undergraduate	Bachelor of Arts Summa Cum Laude with Honors Biological Basis of Behavior and Classical studies University of Pennsylvania Philadelphia, Pennsylvania	2003
Graduate	M.D. Cum Laude University of Pittsburgh School of Medicine Pittsburgh, Pennsylvania	2007
Clinical Training	Internship in General Surgery Residency in Neurological Surgery University of Pittsburgh Medical Center Pittsburgh, Pennsylvania	2007-2008 2008-2014
Advanced Clinical Training	Pediatric Craniofacial Surgery Department of Plastic Surgery University of Pittsburgh Medical Center Children's Hospital of Pittsburgh Pittsburgh, Pennsylvania	2012-2013

Pediatric Spine Surgery 2014-2015
Department of Orthopaedics
University of British Columbia
BC Children's Hospital
Vancouver, British Columbia, Canada

Fellowship

Fellowship in Spine Surgery 2011
Department of Neurosurgery
University of Pittsburgh Medical Center
Pittsburgh, Pennsylvania

Fellowship in Pediatric Neurosurgery 2014-2015
Division of Neurosurgery
University of British Columbia
BC Children's Hospital
Vancouver, British Columbia, Canada

LICENSURE

Pennsylvania 2007
Vancouver, BC 2014
Tennessee 2015

BOARD CERTIFICATION

American Board of Neurological Surgery
Written exam 2012

PROFESSIONAL EXPERIENCE

Vanderbilt University Medical Center

Assistant Professor of Neurological Surgery 2015

Instituto Nacional de Salud del Niño, Peru

Komedyplast
Neurosurgeon 2013, 2015

Muhimbili Institute, Bugando Hospital, Haydom Hospital, Tanzania

Madaktari Africa
Neurosurgeon 2012

CURRENT RESEARCH INTERESTS

Craniofacial surgery outcomes
Minimally-invasive craniofacial deformity correction
Spinal deformity correction
Chiari malformation and scoliosis
International neurosurgery

PROFESSIONAL ACTIVITIES

Professional Associations

Congress of Neurological Surgeons	2007-present
American Association of Neurological Surgeons	2007-present
Pittsburgh Penguins NHL Hockey Club	2009-2014
Assistant neurosurgeon	

AWARDS, HONORS AND LEADERSHIP RECOGNITION

The Brinton Prize with highest honors	2007
AOA Medical Honor Society	2006
The Charles Claude Guthrie Award	2003
Gertrude & Amy P. Frank Scholarship	2003
Phi Beta Kappa	
Benjamin Franklin Scholar	1999-2003
Dean's List	1999-2003
Golden Key International Honour Society	

JOURNAL REVIEWER

1. Child's Nervous System
2. Physician and Sportsmedicine

BIBLIOGRAPHY

MANUSCRIPTS

1. Gobbel G, **Bonfield C**, Carson-Walter EB, Adelson PD. Diffuse alterations in synaptic protein expression following focal traumatic brain injury in the immature rat. Childs Nerv Syst. 2007 Oct;23(10):1171-9.
2. Tormenti MJ, Maserati MB, **Bonfield CM**, Okonkwo DO, Kanter AS. Complications and Radiographic Correction in Adult Scoliosis Following Combined Transposas Extreme Lateral Interbody Fusion and Posterior Pedicle Screw Instrumentation. Neurosurgical Focus. 2010 Mar;28(3):E7.
3. Maserati MB, Tormenti MJ, Panczyowski DM, **Bonfield CM**, Gerszten PG. The use of a hybrid dynamic stabilization and fusion system in the lumbar spine: preliminary experience. Neurosurgical Focus. 2010 Jun;28(6):E2.
4. **Bonfield CM**, Levi AD, Arnold PM, Okonkwo DO. Surgical Management of Post-Traumatic Syringomyelia. Spine (Phila Pa 1976). 2010 Oct 1;35(21 Suppl):S245-58.
5. **Bonfield CM**, Amin DV, Hamilton RL, Gerszten, PG. Case Report: Extramedullary Ependymoma Near Conus Medullaris with Lumbar Nerve Root Attachment. Neurosurgery. 2011 Mar;68(3):E831-4.
6. **Bonfield CM**, Gardner PA. Posterior communicating artery aneurysm rupture mimicking apoplexy. Surg Neurol Int. 2011;2:169.
7. Tormenti MJ, Maserati MB, **Bonfield CM**, Gerszten PC, Moossy JJ, Kanter AS, Spiro RM, Okonkwo DO. Perioperative surgical complications of transforaminal lumbar interbody fusion: a single-center experience. J Neurosurg Spine. 2012 Jan;16(1):44-50.

8. **Bonfield CM**, Engh JA. Pregnancy and brain tumors. *Neurol Clin.* 2012 Aug;30(3):937-46.
9. **Bonfield CM**, Tamber MS, Losee JE. Blindness from Late Presenting Undiagnosed Pancraniosynostosis Mimicking Pseudotumor Cerebri. *J Child Neurol.* 2013 Jul 17. [Epub ahead of print].
10. Grandhi R, Kanaan H, Shah A, Harrison G, **Bonfield C**, Jovin T, Jankowitz B, Horowitz M. Safety and efficacy of percutaneous femoral artery access followed by Mynx closure in cerebral neurovascular procedures: a single center analysis. *J Neurointerv Surg.* 2013 Jul 18. [Epub ahead of print]
11. **Bonfield CM**, Shabani HK, Kanumba ES, Ellegala DB, Nicholas J. The use of IV-tubing as a closed-suction drainage system during neurosurgical cases in Tanzania. *Surg Neurol Int.* 2013;4:76.
12. **Bonfield CM**, Lam S, Lin Y, Greene S. The Impact of Attention Deficit Hyperactivity Disorder on Recovery From Mild Traumatic Brain Head Injury. *J Neurosurg Pediatr.* 2013 Aug;12(2):97-102
13. **Bonfield CM**, Lee PS, Adamo MA, Pollack IF. Examining the Utility of Extended Strip Craniectomy for the Treatment of Sagittal Synostosis: Cranial Index, Nasofrontal Angle, and Reoperation Rate. *J Craniomaxillofac Surg.* 2014 Jan 21. [Epub ahead of print].
14. **Bonfield CM**, Kumar AR, Gerszten PC. The History of Military Cranioplasty. *Neurosurg Focus.* 2014 Apr;36(4):E18.
15. Tempel ZJ, Gandhoke GS, **Bonfield CM**, Okonkwo DO, Kanter AS. Radiographic and Clinical Outcomes Following Combined Lateral Lumbar Interbody Fusion and Posterior Segmental Stabilization in Patients with Adult Degenerative Scoliosis. *Neurosurg Focus.* 2014 May;36(5):E11.
16. **Bonfield CM**, Naran S, Adetayo OA, Pollack IF, Losee JE. Pediatric skull fractures: the need for surgical intervention, characteristics, complications, and outcomes. *J Neurosurg Pediatr.* 2014 Jun 6:1-7.
17. **Bonfield CM**, Wecht DA, Lunsford LD. Concussion in ice hockey. *Prog Neurol Surg.* 2014;28:161-70.
18. **Bonfield CM**, Grandhi R, Okonkwo DO. Charcot Spine after Remote Cervical Spine Injury. *J Trauma Treat.* 2014;3:191.
19. **Bonfield CM**, Grandhi R, Jankowitz BT, Tyler-Kabara EC. Traumatic intracranial aneurysm after penetrating brain trauma. *BMJ Case Reports* 2014 Nov 14.
20. Grandhi R, **Bonfield CM**, Newman WC, Okonkwo DO. Surgical management of traumatic brain injury: a review of guidelines, pathophysiology, neurophysiology, outcomes, and controversies. *J Neurosurg Sci.* 2014 Dec;58(4):249-59.
21. **Bonfield CM**, Weiner GM, Bradley MS, Engh JA. Vaginal extrusion of a ventriculo-peritoneal shunt catheter in an adult. *J Neurosci Rural Pract.* 2015 Jan;6(1):97-9.
22. Gandhoke, GS, Tempel ZJ, **Bonfield CM**, Madhok R, Okonkwo DO, Kanter AS. Technical nuances of the minimally invasive extreme lateral approach to treat thoracolumbar burst fractures. *Eur Spine J.* 2015 Mar 24 [Epub ahead of print].
23. **Bonfield CM**, Sharma J, Dobson S. Pediatric intracranial abscesses. *J Infect.* 2015 Apr 24 [Epub ahead of print].
24. **Bonfield CM**, Shin SS, Kanter AS. Helmets, Head Injury, and Concussion in Sport. *Phys Sportsmed.* 2015 Apr 27 [Epub ahead of print].
25. **Bonfield CM**, Foley LM, Kundu S, Fellows-Mayle W, Hitchens TK, Rohde GK, Grandhi R, Mooney MP. The Influence of Surgical Correction on White Matter Microstructural Integrity in Rabbits with Familial Coronal Suture Craniosynostosis. *Neurosurg Focus.* 2015 May;38(5):E3.

26. Sharma J, **Bonfield CM**, Singhal A, Hukin J, Steinbok P. Intracystic interferon- α treatment leads to neurotoxicity in craniopharyngioma: A case report. *J Neurosurg Pediatr.* 2015 May 29:1-4.

SUBMITTED MANUSCRIPTS

27. **Bonfield CM**, Steinbok P. Pediatric cerebellar astrocytoma: A review. Accepted to *Childs Nerv Syst* October 2015 issue.
28. **Bonfield CM**, Cochrane DD, Singhal A, Steinbok P. Pre-operative ultrasound localization of lambda in patients with scaphocephaly: A technical note for minimally invasive craniectomy. Accepted to *J Neurosurg Pediatr.*
29. **Bonfield CM**, Kondziolka D. Beyond the game: The legacy of Bill Masterton. Accepted to *Neurosurg Focus* July 2016 issue.

BOOK CHAPTERS

1. Kanter AS, Uribe JS, **Bonfield CM**, Mosely Y, Tayler WR. (2013). Extreme Lateral Interbody Fusion Corpectomy: Clinical Experience and Outcomes. In JA Goodrich and IJ Volcan (eds.), *Extreme Lateral Interbody Fusion* (2nd ed.). St. Louis: Quality Medical Pub.
2. **Bonfield CM**, Tyler-Kabara E. (2013). Unusual Presentations of the Chiari I Malformation. In RS Tubbs and WJ Oakes (eds.) *The Chiari Malformations*. New York: Springer Science + Business Media.

ORAL PRESENTATIONS

1. Tormenti MJ, **Bonfield CM**, Kanter AS, Spiro RM, Okonkwo DO. Intraoperative CT-Based Image Guidance for Thoracolumbar Pedicle Screws and Iliac Instrumentation in Spinal Deformity. Oral Presentation, Pennsylvania Neurosurgical Society Annual Meeting, Hershey, PA, 2009
2. **Bonfield CM**, Tormenti MJ, Maserati MB, Okonkwo DO, Kanter AS. Curve correction in Adult Scoliosis Utilizing Extreme Lateral Interbody Fusion (XLIF) and Posterior Pedicle Screw Instrumentation. Oral presentation, 4th World Congress for Endoscopic Surgery of Brain, Skull Base, and Spine, Pittsburgh, PA, 2010
3. **Bonfield CM**, Greene S. The Impact of Attention Deficit-Hyperactivity Disorder on Recovery From Closed Head Injury. Oral presentation, AANS/CNS Section on Pediatric Neurosurgery, Cleveland, OH, 2010
4. **Bonfield CM**, Maserati MB, Tormenti MJ, Okonkwo DO, Kanter AS. Stand-alone XLIFs for the Treatment of Adult Degenerative Scoliosis. Oral presentation, Latin American Society for Advancement of Spine Surgery annual Meeting, Rio de Janeiro, Brazil, 2011
5. **Bonfield CM**, Okonkwo DO, Kanter AS. Correlation Between the Thoracolumbar Injury Classification and Severity Score (TLICS) and Delayed Surgery for Acute Thoracolumbar Compression and Burst Fractures in Patients Without Neurologic Injury. Oral presentation, CNS, Chicago, IL, 2012
6. **Bonfield CM**, Rottgers SA, MacIsaac Z, Pollack IF, Tamber MS, Kumar AR. Examining the Utility of Dynamic Cranioplasty for the Treatment of Sagittal Synostosis: A Retrospective Cohort Comparison Study Between Reverse Pi Cranioplasty and Extended Strip Cranioplasty. Oral presentation, International Society of Craniofacial Surgery annual meeting, Jackson Hole, WY, 2013

7. **Bonfield CM**, Grandhi R, Foley LM, Kundu S, Fellows-Mayle W, Hitchens TK, Rohde GK, Mooney MP. The Influence of Suturoctomy on Cortical Blood Flow in Rabbits with Familial Coronal Craniosynostosis. Oral presentation, AANS/CNS Section on Pediatric Neurosurgery, Jacksonville, FL, 2014

POSTER PRESENTATIONS

1. Tormenti MJ, Maserati MB, **Bonfield CM**, Okonkwo DO, Kanter AS. Changes in Lumbar Lordosis and Foraminal Height following Extreme Lateral (XLIF) and Transforaminal (TLIF) Lumbar Interbody Fusion. Poster, AANS/CNS Section on Disorders of the Spine and Peripheral Nerve, Orlando, FL, 2010
2. Tormenti MJ, **Bonfield CM**, Lam SK, Chang YF, Greene S. Putative Relationship Between Chiari I Malformation and Obesity in Teenagers. Poster, AANS/CNS Section on Pediatric Neurosurgery, Cleveland, OH, 2010
3. **Bonfield CM**, Lee PS, Adamo MA, Pollack IF. Examining the Utility of Extended Strip Craniectomy for the Treatment of Sagittal Synostosis: Cranial Index, Nasofrontal Angle, and Reoperation Rate. Oral poster, CNS, San Francisco, CA, 2013
4. **Bonfield CM**, Grieves M, Tamber MS, Kumar AR. The PITT Protocol for Decreasing Morbidity in High Risk Trans-cranial Frontofacial Advancement (Monobloc) and Le Fort III Facial Advancement. Poster, AANS/CNS Section on Pediatric Neurosurgery, Toronto, ON, 2013
5. **Bonfield CM**, Naran S, Adetayo OA, Pollack IF, Losee JE. Pediatric skull fractures: the need for surgical intervention, characteristics, complications, and outcomes. Poster, AANS, San Francisco, CA, 2014
6. **Bonfield CM**, Sharma J, Singhal A, Cochrane DD, Steinbok P. Minimizing Blood Transfusions in the Surgical Correction of Craniosynostosis: a Single Center Experience. Poster, AANS/CNS Section on Pediatric Neurosurgery, Jacksonville, FL, 2014

LECTURES

Intramural

1. Invited Speaker: Dr. Bonfield, I presume? Neurosurgery in East Africa 2012
Department of Neurosurgery Grand Rounds.
University of Pittsburgh Medical Center Pittsburgh, PA
2. Invited Speaker: Craniosynostosis and the Neurosurgeon 2013
Department Neurosurgery Grand Rounds.
University of Pittsburgh Medical Center. Pittsburgh, PA
3. Invited Speaker: Pearls from Residency 2014
Department of Neurosurgery Grand Rounds
University of Pittsburgh Medical Center. Pittsburgh, PA
4. Invited Speaker: From East to West: Neurosurgery Residency 2014
Division of Neurosurgery Grand Rounds
University of British Columbia. Vancouver, BC
5. Invited Speaker: A rare cervical tumor in an infant. 2014
Department of Surgery Rounds
British Columbia Children's Hospital. Vancouver, BC
6. Invited Speaker: Endoscopic craniectomies for sagittal craniosynostosis 2015
Division of Neurosurgery Grand Rounds

University of British Columbia. Vancouver, BC

National

7. Invited Speaker: Unique Characteristics in Pediatric Spine Trauma 2014
Department of Neurosurgery Grand Rounds
Washington University. St. Louis, MO

MEDIA

1. Concussions May Cause More Brain Damage in Kids With ADHD 2013
TIME Heathland (online)
2. ADHD May Be Tied to Longer-Lasting Head Injury 2013
U.S. News & World Report Health Day (online)