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Indian River Radiology

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EDUCATION:

College:	University of Virginia Charlottesville, Virginia	9/1966 - 6/1969	B.A. Biology
Medical School:	West Virginia University School of Medicine Morgantown, West Virginia	9/1969-5/1973	M.D.

POSTGRADUATE TRAINING:

Internship:	University of Cincinnati Medical Center Cincinnati General Hospital Cincinnati, Ohio	6/1973 – 6/1974	Internal Medicine
Residency:	University of Kentucky Medical Center Lexington, Kentucky	7/1974 – 6/1977	Diagnostic Radiology
	Armed Forces Institute of Pathology AFIP Washington, DC	3/1976 - 4/1976	Radiologic Pathology
Fellowship:	Massachusetts General Hospital Harvard Medical School Boston, Massachusetts	6/1977 - 8/1978	Neuroradiology

STATE MEDICAL LICENSES:

Alabama	Massachusetts	Pennsylvania
Florida	Mississippi	Tennessee
Georgia	North Carolina	Texas
Kentucky	Oklahoma	West Virginia
South Carolina		

HONORS AND POSITIONS:

American Society of Neuroradiology (ASNR)	Senior Member 1981
Southeastern Neuroradiological Society	President 1986-1987
Southeastern Radiology Associates (SERA)	President 1994-1995

PRACTICE:

Presbyterian Hospital Charlotte, North Carolina	9/78-12/89	Senior Partner
Duke University Medical Center Durham, North Carolina	1/90-4/91	Acting Head Neuroradiology
Radiology Associates of Birmingham Birmingham, Alabama	4/91-6/97	Senior Partner
Virtual Radiology Nashville, Tennessee	7/97-12/98	Senior Partner
Radiology Associates of Dallas Dallas, Texas	1/99-5/99	Senior Partner
Indian River Radiology Vero Beach, Florida	5/99-Present	Senior Partner

BOARD CERTIFICATION:

American Board of Radiology Certificate of Added Qualifications Re-Certified	Diagnostic Radiology Neuroradiology CAQ	June 11, 1977 November 5, 1995 June 14, 2004 March 4, 2013
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AMERICAN COLLEGE of RADIOLOGY (ACR)

Accreditation Reviewer:

- MRI scan facilities
- CT scan facilities

PUBLICATIONS:

1. **Hatten HP Jr**, Chuang VP, Rosenbaum HD: When is biopsy necessary in pelvic lipomatosis? *Urology* 9: 333-336, March, 1977.
2. **Hatten HP Jr.**, Mostowycz L, Hagihara PF: Retrograde prolapse of the ileocecal valve. *American Journal of Roentgenology* 128: 755-757, March, 1977.
3. **Hatten HP Jr**, Lorman JG, Rosenbaum HD: Pulmonary sling in the adult. *American Journal of Roentgenology* 128: 919-921, June, 1977.
4. Ropper AH, **Hatten HP Jr**, Davis KR: Computed tomography in Wilson disease: report of two cases. *Annals of Neurology* 5: 102-103, January, 1979.
5. Roberson GH, **Hatten HP Jr**, Hesselink JH: Epidurography: selective catheter technique and review of 53 cases. *American Journal of Roentgenology* 132: 787-793, May, 1979.
6. **Hatten HP Jr**, Kim EE, DeLand FH, Jameson MD: Acute hemiplegia of childhood. *ACTA Radiological Diagnosis* 20: 273-281, 1979.
7. **Hatten HP Jr**, Davis KR, Adair L, Taveras JM: Compression and obliteration of cortical sulci: a CT sign of convexity mass effect. *Applied Radiology* 8: 66-68, May-June 1979.
8. **Hatten HP Jr**, Guest commentation-lumbar epidurography. *Practical Reviews in Roentgenology*, Volume 5, June, 1979.
9. Werthammer JW, **Hatten HP Jr**, Blake WB Jr: Upper thoracic extralobular pulmonary sequestration presenting with respiratory distress in a newborn. *Pediatric Radiology* 9: 116-177, 1980.
10. **Hatten HP Jr**: Metrizamide lumbar epidurography with Seldinger technique through the sacral notch and selective nerve root injection. *Neuroradiology* 19: 19-25, 1980.
11. Clark WM, **Hatten HP Jr**: Ultrasonographic features of pelvic lipomatosis. *Urologic Radiology* 1: 183-186, 1980.
12. **Hatten HP Jr**: Lumbar epidurography with metrizamide: review of 65 cases employing a pure Seldinger technique with caudal approach through the sacral notch and selective nerve root sheath injection. *Radiology* 137: 129-136, October, 1980.

PUBLICATIONS:

13. Clark WM, **Hatten HP Jr**: Noninvasive screening of extracranial carotid disease: duplex sonography with angiographic correlation. *American Journal of Neuroradiology* 2: 443-447, September-October, 1981.
14. **Hatten HP Jr**: Routine arch aortography in the angiographic evaluation of patients with cerebrovascular disease. *Postgraduate Radiology* 1: 327-333, October, 1981.
15. **Hatten HP Jr**, Walker ME, Covington MC: Range highlight facility within region of interest for air-CT cisternography and canalography. *Radiologic Technology* 54: 353-367, September-October, 1982.
16. **Hatten HP Jr**: Routine cervical myelography with overhead oblique projections and Pantopaque. *Spine* 7: 512-514, September-October, 1982.
17. Robertson HJ, **Hatten HP Jr**, Keating JW: False-positive CT gas cisternogram. *American Journal of Neuroradiology* 4: 474-477, May-June, 1983.
18. Kirk WS Jr, **Hatten HP Jr**: Disc derangements of the temporomandibular joint; definitive diagnosis with arthrography. *North Carolina Dental Gazette*: 6-9, September-October, 1983.
19. **Hatten HP Jr**: Lumbar epidurography. In: Shapiro R. *Myelography*. Chicago: New York Medical Publishers, Inc., 1984: 628-636.
20. Rhodes RE, Friedman HS, **Hatten HP Jr**, Hockenberger B, Oakes WJ, Tomita T: Contrast enhanced MR imaging of neurocutaneous melanosis. *American Journal of Neuroradiology* 12: 380-382, March-April, 1991.
21. Friedman HS, Touri SL, **Hatten HP Jr**, Hockenberger B, Vandersteenhoven JJ, Oakes WJ: Inflammatory lesion mimicking a metastatic ependymoma. *Neurosurgery* 29: 617-620, October, 1991.
22. **Hatten HP Jr**: Dysmyelinating leukodystrophies: "LACK Proper Myelin". *Pediatric Radiology* 21: 477-482, 1991.
23. Rhodes RE, **Hatten HP Jr**, Ellington KS: Walker-Warburg syndrome. *American Journal of Neuroradiology* 13: 123-126, January-February, 1992.
24. Young JN, Oakes WJ, **Hatten HP Jr**: Dorsal third ventricular cyst: an entity distinct from holoprosencephaly. *Journal of Neurosurgery* 77: 556-561, October, 1992.

PUBLICATIONS:

25. Strong JA, **Hatten HP Jr**, Brown MT, Debatin JR, Friedman HS, Oakes WJ, Tien R: Pilocytic astrocytoma: correlation between the initial imaging features and clinical aggressiveness. *American Journal of Roentgenology* 161: 369-372, August, 1993.
26. Schifter T, Hoffman JM, **Hatten HP Jr**, Hanson MW, Coleman RE, DeLong GR: Neuroimaging in infantile autism. *Journal of Child Neurology* 9: 155-161, April, 1994.
27. Rockey DC, Paulson E, Niedzwiedki D, Davis W, Bosworth HB, Sanders L, Yee J, Henderson J, **Hatten HP Jr**, et al. Analysis of air contrast barium enema, computed tomographic colonography, and colonoscopy: prospective comparison. *The Lancet* 365: 305-311, 22 January 2005.
28. **Hatten HP Jr**: Strong Bones. Building on Our Core Strengths, Our Diagnostic Imaging Center Launched a New Revenue Center Around Treatment of Osteoporosis. *Imaging Economics* 24:24-25, June 2011.
29. **Hatten HP Jr**, Voor MJ: Bone Healing Using a Bi- Phasic Ceramic Bone Substitute Demonstrated in Human Vertebroplasty and with Histology in a Rabbit Cancellous Bone Defect Model. *Interventional Neuroradiology* 18: 105-113, March 2012.
30. Bae H, **Hatten HP Jr**, et al: A Prospective Randomized FDA-IDE Trial Comparing Cortoss™ to PMMA for Vertebroplasty: A Comparative Effectiveness Research Study with 24-Months Follow-Up. *Spine* 37, Issue 7: 544-550, April 1, 2012.

PRESENTATIONS:

1. *Pulmonary sling in the adult.* Presented to the 61st Annual Meeting of the Radiological Society of North America (RSNA), McCormick Place, Chicago, Illinois. 30 November - 5 December 1975.
2. *Retrograde prolapse of the ileocecal valve.* Presented to the Second Annual Homecoming Symposium of the Department of Diagnostic Radiology, University of Kentucky Medical Center, Lexington, Kentucky. 5-6 November 1976.
3. *Acute hemiplegia of childhood.* Presented to the Spring Meeting of the Kentucky Chapter of the American College of Radiology, Berea, Kentucky. 30 October 1978.
4. *Epidurography.* Presented to the Second Annual Meeting of the Southeastern Neuroradiological Society, Kiawah Island, Charleston, South Carolina. 12-14 October 1978.
5. *Epidurography: selective catheter technique and review of 53 cases.* Presented to the 79th Annual Meeting of the American Roentgen Ray Society, Toronto, Ontario, Canada. 26-30 March 1979.
6. *Technique of Amipaque epidurography.* Presented to the 17th Annual Meeting of the American Society of Neuroradiology, Toronto, Ontario, Canada. 20-24 May 1979.
7. *Lumbar epidurography.* Presented as Guest Commentator for Practical Reviews in Roentgenology: Volume 5, June 1979.
8. *Epidurography.* Presented to the Annual Meeting of the North Carolina Chapter of the American College of Radiology, Charlotte, North Carolina. 1-2 March 1980.
9. *Routine arch aortography in the angiographic evaluation of patients with cerebrovascular disease.* Presented to the 4th Annual Meeting of the Southeastern Neuroradiological Society, The Greenbriar, White Sulphur Springs, West Virginia. 15-19 October 1980.
10. *Noninvasive screening of extracranial carotid disease: duplex ultrasound with angiographic correlation.* Presented to the 19th Annual Meeting of the American Society of Neuroradiology, Chicago, Illinois. 5-9 April 1981.
11. *Noninvasive screening of extracranial carotid disease: duplex ultrasound with angiographic correlation.* Presented to the 14th Annual Conference of Radiology in Otolaryngology and Ophthalmology sponsored by the American Society of Head and Neck Radiology, Century Plaza Hotel, Los Angeles, California. 28-31 May 1981.

PRESENTATIONS:

12. *Analog intra-venous angiography with conventional angiography equipment, conventional film screen systems, and first order subtraction technique.* Presented to the 67th Annual Meeting of the Radiologic Society of North America, Chicago, Illinois, 15-20 November 1981.
13. *Venous Angiography.* Presented to the 6th Annual Meeting of the Southeastern Neuroradiological Society, The Cloister, Sea Island, Georgia. 27-30 May 1982.
14. *CNS inflammatory processes and white matter diseases.* Presented to Duke Radiology Review Course, Sheraton Imperial Hotel, Research Triangle Park, North Carolina. 7-11 April 1991.
15. *Fatal and/or aggressive pilocytic astrocytomas.* Presented to the 15th Annual Meeting of the Southeastern Neuroradiologic Society, Kingsmill Resort and Conference Center, Williamsburg, Virginia. 2-5 October 1991.
16. *Network Organization.* Presented to the 1st Annual Network Symposium, The Brown Palace, Denver, Colorado. 17-18 September 1994.
17. *Horizontal vs. vertical integration.* Presented to the 2nd Annual National Network Symposium, The Brown Palace, Denver, Colorado. 21-22 October 1995.
18. *Market-based positioning under managed care.* Presented to the American Hospital Association-Refocusing the Image of Radiology Services, Sheraton Crescent Hotel, Phoenix, Arizona. 22 February 1996.
19. *Survival strategies in the '90's.* Presented as a round table discussion at the 82nd Annual Meeting of the Radiologic Society of North America (RSNA), McCormick Place, Chicago, Illinois. 30 November - 6 December 1996. Round table discussion published in *Diagnostic Imaging* 19: 29-47, March 1997.
20. *Consolidation in radiology: shelter from the storm?* Presented to the Diagnostic Imaging Healthcare Conference '97, Grand Hyatt on Union Square, San Francisco, California. 28-30 April 1997.
21. *Consolidation and integration of radiology-prospering under managed care.* Presented to the International Business Communications Group Conference, The Adolphus Hotel, Dallas, Texas. 18-19 September 1997.

PRESENTATIONS:

22. *Vertebroplasty in a Small U.S. Town; Clinical Experience, Evolution of Practice and Future Direction.* Poster Presentation. Presented to XXX Annual Congress of European Society of Neuroradiology (ESNR), Hotel Fira Palace, Barcelona, Spain. 15-18 September 2005.
23. *A Preliminary Evaluation of the Efficacy of a Reduced Volume Bowel Cleansing Preparation for Same Day Virtual Colonoscopy (VC) and Conventional Colonoscopy (CC).* Presented to the 6th International Symposium on Virtual Colonoscopy, Fairmont Copley Plaza Hotel, Boston, Massachusetts. 17-18 October 2005.
24. *Prospective Randomized Trial of CORTOSS Versus PMMA in the Treatment of Vertebral Compression Fractures.* Presented to the 2006 Annual Symposium of American Society of Spine Radiology (ASSR), The Venetian Resort, Hotel, Casino, Las Vegas, Nevada. 23-26 February 2006.
25. *Vertebral Augmentation with CORTOSS (Cortoplasty) for the Treatment of Vertebral Compression Fractures.* Presented to the XXXI Annual Congress of European Society of Neuroradiology (ESNR), Hotel President Wilson, Geneva, Switzerland. 13-16 September 2006.
26. *Prospective Randomized Trial of CORTOSS Versus PMMA in the Treatment of Vertebral Compression Fractures: Preliminary Results at a Single Institution.* Presented to the 92nd Annual Meeting of the Radiological Society of North America (RSNA), McCormick Place, Chicago, Illinois. 26 November through 01 December 2006.
27. *Percutaneous Treatment of Insufficiency Fractures.* Presented as e-poster to the 92nd Annual Meeting of the Radiological Society of North America (RSNA), McCormick Place, Chicago, Illinois. 28 November through 01 December 2006.
28. *Cortoplasty - Treatment of Vertebral Compression Fractures with CORTOSS for Vertebral Augmentation: Preliminary Results of Prospective Randomized Trial.* Presented to the 2007 Annual Symposium of American Society of Spine Radiology (ASSR), Marco Island Marriott Resort, Marco Island, Florida. 22-25 February 2007.
29. *Treatment of Vertebral Compression Fractures with CORTOSS: Preliminary Results of Prospective Randomized Clinical Trial.* Presented to 32nd Annual Meeting of the Society of Interventional Radiology (SIR), Washington State Convention Center, Seattle, Washington. 01-06 March 2007.

PRESENTATIONS:

30. *Cortoplasty – Using CORTOSS for the Treatment of Osteoporotic Vertebral Compression Fractures, Randomized Clinical Trial at a Single Institution.* Poster Presentation. Presented to the 7th International Symposium on Osteoporosis, Marriott Wardman Park Hotel, Washington, DC. 18-22- April 2007.
31. *Cortoplasty for Treatment of Vertebral Compression Fractures – Vertebral Augmentation with CORTOSS, Preliminary Results of Prospective Randomized Clinical Trials.* Presented to Global Symposium of Motion Preservation Technology (SAS7), Hotel Maritim Berlin, Berlin, Germany. 01-04 May 2007.
32. *Cortoplasty – Treatment of Osteoporotic VCF with CORTOSS: Preliminary Biomechanical Considerations from the First Prospective, Randomized Clinical Trial at a Single Institution.* Presented to the 45th Annual Meeting of the American Society of Neuroradiology (ASNR), Hyatt Regency Hotel, Chicago, Illinois. 09-14 June 2007.
33. *Prospective Randomized Clinical Trial of 57 Patients Treated at a Single Institution: Preliminary Results Comparing Vertebroplasty with CORTOSS Bone Augmentation Material & PMMA.* Presented to 31st Annual Meeting of the Southeastern Neuroradiological Society (SENRS), The Westin at Our Lucaya Beach & Golf Resort, Freeport, Grand Bahamas. 25-27 October 2007.
34. *Vertebroplasty with CORTOSS & PMMA: Results of Fifty-Seven (57) Patients Involved in a Prospective Clinical Trial – Effect of Biomechanical & Flow Characteristics on Fill Volume.* Presented to 93rd Annual Meeting of the Radiological Society of North America (RSNA), McCormick Place, Chicago, Illinois. 25–30 November 2007.
35. *Bioceramic Vertebral Augmentation: A Biological Alternative for the Treatment of Vertebral Compression.* Presented to 32nd Annual Meeting of the Southeastern Neuroradiological Society (SENRS), The Mansion on Forsyth Park, Savanna, Georgia. 23-25 October 2008.
36. *Clinical Efficacy of CERAMENT, a Bi-Phasic Bone Substitute for the Treatment of Vertebral Compression Fractures: Early Clinical Results and Technique.* Presented to 2009 Annual Symposium of the American Society of Spine Radiology (ASSR), Disney’s Contemporary Resort, Lake Buena Vista, Florida. 19-22 February 2009.
37. *The Biomechanical and Clinical Efficacy of CERAMENT, a Bi-Phasic Bone Substitute for the Treatment of Vertebral Compression Fractures:* Presented to the 34th Annual Scientific Meeting of the Society of Interventional Radiology (SIR), San Diego Convention Center, San Diego, California, 07-12 March 2009.

PRESENTATIONS:

38. *Percutaneous Delivery of a Bi-Phasic Bone Substitute for the Treatment of Vertebral Compression Fractures: Early Clinical Results.* Poster Presentation. Presented to the 8th International Symposium on Osteoporosis, Marriott Wardman Park Hotel, Washington, DC. 01-05 April 2009.
39. *Clinical Efficacy of a Bi-Phasic Ceramic Bone Substitute for the Treatment of Vertebral Compression Fractures:* Presented to the 10th Congress of the World Federation of Interventional and Therapeutic Neuroradiology (WFITN), Montreal Convention Center, Montreal, Quebec, Canada, 29 June - 03 July 2009.
40. *A Bi-Phasic Ceramic Bone Substitute for the Treatment of Vertebral Compression Fractures: Early Clinical Results:* Presented to the 34th Annual Meeting of the European Society of Neuroradiology (ESNR), Hilton Hotel, Athens, Greece, 17-20 September 2009.
41. *Bone Healing with Cerament: The Way Forward in Vertebroplasty:* Presented to Rome Spine 2009, Hotel Ergife Centro Congressi, Rome, Italy, 02-03 December 2009.
42. *CERAMENT Vertebroplasty: Long Term Follow-Up and Results:* Presented to the 2010 Annual Symposium of the American Society of Spine Radiology (ASSR), Wynn Las Vegas Resort, Las Vegas, Nevada, 18-21 February 2010.
43. *Bone Healing with CERAMENT Vertebroplasty: Long Term Follow Up and Clinical Results:* Digital Poster Presented to European Congress of Radiology (ECR 2010), Vienna Convention Center, Vienna, Austria, 04-08 March 2010.
44. *Bone Healing in Vertebroplasty:* Poster Presentation. Presented to the 35th Annual Scientific Meeting of the Society of Interventional Radiology (SIR), Tampa Convention Center, Tampa, Florida, 13-18 March 2010.
45. *Bone Healing Using a Bi-Phasic Ceramic Bone Substitute Demonstrated in Human Vertebroplasty and Histology in a Rabbit Cancellous Bone Defect Model.* Presented to the 48th Annual Meeting of the American Society of Neuroradiology (ASNR), Hynes Convention Center, Boston, Massachusetts, 15-20 May 2010.

PRESENTATIONS:

46. *"Primary Care" Vertebroplasty Clinic in a Free-Standing, Radiologist Owned Diagnostic Imaging Center - Diagnosis, Treatment, Prevention, and Follow-Up of VCFs.* Presented to the XIX Symposium Neuroradiologicum, Bologna, Italy, 04-09 October 2010.
47. *Kyphoplasty & Vertebroplasty Paradigm Shift in USA Market – Opportunities for Spine Radiologists (Neuroradiologists, Interventional Neuroradiologists, Interventional Radiologists).* Presented to The 2011 Annual Symposium of American Society of Spine Radiology (ASSR), Edition Hotel, Waikiki Beach, Honolulu, Hawaii. 23-26 February 2011.
48. *Bone Healing Demonstrated in Human Vertebroplasty Using a Bi-Phasic Ceramic Bone Substitute with Supporting Histology in a Rabbit Cancellous Bone Defect Model.* presented to 36th Annual Meeting of the Society of Interventional Radiology (SIR), McCormick Place, Chicago, Illinois. 26-31 March 2011.
49. *Clinical Performance & Bone Healing Demonstrated in Human Vertebroplasty Using a Bi-Phasic Ceramic Bone Substitute with Supporting Histology in a Rabbit Cancellous Bone Defect Model.* Presented to 35th Annual Meeting of European Society of Neuroradiology (ESNR), Universiteit Antwerpen, Antwerp, Belgium. 22-25 September 2011.
50. *The Blazer Vertebral Augmentation System for Minimally Invasive Treatment of Spinal Compression Fractures.* Presented to the 2012 Annual Symposium of American Society of Spine Radiology (ASSR), Fontainebleau Miami Beach, Miami Beach, Florida. 16-19 February 2012.
51. *The Blazer Vertebral Augmentation System: a Novel Treatment for Vertebral Compression Fractures:* ePoster Presented to 50th Annual Meeting of American Society of Neuroradiology (ASNR), Hilton New York, New York, New York, 21-26 April 2012

PRESENTATIONS:

52. *Prospective Evaluation of the Blazer Vertebral Augmentation System for Minimally Invasive Treatment of Painful Vertebral Compression Fractures.* ePoster Presented to Cardiovascular Interventional Radiological Society of Europe (CIRSE) 2012, Centro de Congressos de Lisboa, Lisbon, Portugal, 15-19 September 2012.

53. *Pain Relief in VCF Patients after Treatment with a Novel Device: Study Results.* Submitted to Cardiovascular & Interventional Radiological Society of Europe (CIRSE) 2014, Scottish Exhibition & Conference Centre, Glasgow, Scotland, UK, 13-17 September 2014.

PRINCIPAL INVESTIGATOR - CLINICAL PROTOCOL STUDIES:

1. *An Open Label Clinical Study of the Safety and Efficacy of Iodinated Contrast Media in the Enhancement of Computed Tomography (CT)*. Sponsored by Mallinckrodt Pharmaceuticals, Inc. September, 1977 through November, 1977
2. *Amipaque: Phase 3 Protocol for Lumbar Epidurography*. Sponsored by the Sterling Winthrop Research Institute. May 1979 through September 1980.
3. *Duke University Medical Center Colon Imaging Study*. Sponsored by National Cancer Institute (NCI) and Duke University Medical Center. December 2000 through September 2003.
4. *A Preliminary Evaluation of the Efficacy of HalfLytely® and Bisacodyl Tablets Bowel Prep Kit For Bowel Cleansing Before Virtual Colonoscopy and Conventional Colonoscopy*. Sponsored by Braintree Laboratories, Inc. October 2004 through July 2005.
5. *A Randomized, Controlled Clinical Study to Evaluate the Safety and Effectiveness of Cortoss Synthetic Cortical Bone Void Filler in Vertebral Augmentation*. Sponsored by Orthovita, Inc. March 2005 through February 2007.
6. *USA Pilot Study – Cerament for Vertebroplasty*. Sponsored by Bone Support, Lund, Sweden, May, 2008 to July, 2009.
7. *Pain Relief in Vertebral Compression Fracture Patients After Treatment with a Novel Channel Creation Device*. Sponsored by Benvenue Medical, Inc. September 2011 to December 2012.