

Patrick J. Getty, M.D.

Department of Orthopaedic Surgery
Case Western Reserve University School of Medicine
University Hospitals Case Medical Center
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CURRENT POSITIONS:

Assistant Professor, Department of Orthopaedics, Case Western Reserve University

Section Chief, Orthopaedic Oncology, Department of Orthopaedics, University Hospitals Case Medical Center

Director, Musculoskeletal Oncology, University Hospitals Ireland Cancer Center

Section Chief, Orthopaedics, Cleveland Veterans Administration Medical Center

EDUCATION:

Undergraduate	University of Michigan, Ann Arbor, Michigan 1983-1984, Microbiology
	University of Illinois, Champaign/Urbana, Illinois 1984-1987, Bachelor of Science - Microbiology
Graduate	University of Chicago Pritzker School of Medicine 1987-1991, Doctor of Medicine

POSTGRADUATE TRAINING:

Internship	University of Chicago Medical Center Surgery Internship, 1991-1992
Residency	University of Chicago Medical Center Orthopaedic Surgery, 1992-1996
Fellowship	University of Chicago Medical Center Orthopaedic Oncology, 1996-1997

Research Fellowship University of Chicago Medical Center
Orthopaedic Oncology, Molecular Oncology, 1997-1999

PROFESSIONAL APPOINTMENTS: Assistant Professor
Department of Orthopaedics
Case Western Reserve University
1999 – Present

Section Chief, Orthopaedic Oncology
Department of Orthopaedics
University Hospitals Case Medical Center
1999 – Present

Director, Musculoskeletal Oncology
University Hospitals Ireland Cancer Center
2000 – Present

Section Chief, Orthopaedics
Cleveland Veterans Administration Medical Center
2006 – Present; Attending Physician 1999 – Present

LICENSURE: State of Ohio

EXAMINATIONS: National Boards - Part I (6/89) - Passed
National Boards - Part II (9/90) - Passed
National Boards - Part III (3/92) - Passed
A.B.O.S. - Part I (7/96) - Passed
A.B.O.S. - Part II (7/01) - Passed

BOARD CERTIFICATION: American Board of Orthopaedic Surgery, 2001

**HONORS
AND AWARDS:** 1984 - 1987 - Dean's List (6 of 8 semesters)
1987 - Departmental Distinction (Microbiology)
1987 - Cum Laude
1997 - American Orthopaedic Association C. Howard
Hatcher Fellowship
2006 - Among "Top Docs"—as rated by other MDs—in
Cleveland Magazine
2007 - Among "Top Docs"—as rated by other MDs—in
Cleveland Magazine
2008 - Among "Top Docs"—as rated by other MDs—in
Cleveland Magazine
2008 – Educator of the Year Award, Department of
Orthopaedics, Case Medical Center

PROFESSIONAL SERVICE:

National Service: Medical Board of Trustees, Musculoskeletal Tissue Foundation, 2002 – Present

Member of American Board of Orthopaedic Surgery (ABOS) Written Examination Question-Writing Task Force, 2003 – Present

Hospital Committees: Consultant to the University of Chicago Hospitals Transformation Committee, 1993 - 1994

Member of the University of Chicago Patient Care Committee, 1994 - 1996

Quality Assurance Director, Department of Orthopaedic Surgery, University Hospitals of Cleveland, October 2001- October 2002

Academic Service: Director of Graduate Orthopaedic Education, Department of Orthopaedic Surgery, Case Western Reserve University, September 2002 - Present

Case School of Medicine Faculty Council Representative from the Department of Orthopaedic Surgery, July 1, 2003 – June 30, 2005

TEACHING ACTIVITIES:

Orthopaedic Residency Leadership: Director of Graduate Orthopaedic Education, Department of Orthopaedic Surgery, Case Western Reserve University, September 2002 – Present

RESEARCH EXPERIENCE:

1985 - 1986 University of Illinois, Department of Agronomy
Dr. Joseph Stucki
Bacterial Reduction of Iron in Soil

1986 - 1987 University of Illinois, Department of Microbiology
Dr. Carol Muster
Transposition Immunity in Tn3 and Related Bacterial Transposons

1988 - 1989 University of Chicago, Department of Medicine
Section of Infectious Disease, Dr. Paul Arnow
Subtyping of *Aspergillus* Species

- 1994 - 1996 University of Chicago, Department of Surgery
Section of Orthopaedic Surgery, Dr. John Martell
- 1) A Computerized Radiographic Analysis of Femoral Neck Trabecular Bone Texture As a Prediction of Bone Strength
 - 2) Development of a Confocal Microscopic Technique for Non-Destructive Histomorphometric Analysis
- 1997 - 1999 University of Chicago, Department of Surgery
Section of Orthopaedic Surgery, Dr. Michael Simon
Department of Medicine, Section of Hematology and Oncology, Dr. Michelle LeBeau
- 1) Delineation and Characterization of Commonly Deleted Portion of Chromosome Arm 20q in Myeloid Leukemias
 - 2) Identification of Putative Tumor Suppressor Genes in Osteosarcoma
 - 3) Evaluation of MAGE Expression in Osteosarcoma
- Grants:**
- 1) Research Fellow, NIH/NCI Training Grant T32 CA 095676-10
 - 2) Bear Necessities Pediatric Cancer Foundation (Identification of Putative Tumor Suppressor Genes in Osteosarcoma)

BIBLIOGRAPHY:

Peer-Reviewed Articles

1. Brage ME, Bennett CR, Whitehurst JB, **Getty PJ**, Toledano A: Observer Reliability in Ankle Radiographic Measurements. *Foot & Ankle International*, 18:324-329, 1997.
2. **Getty PJ**, Peabody TD: Complications and Functional Outcomes of Osteoarticular Allograft Reconstruction After Intra-Articular Resection of the Proximal Humerus. *Journal of Bone and Joint Surgery*, 81A:1138-1146, 1999.
3. Lange CG, **Getty PJ**, Morrissey AB, George AL, Young PC, Armitage KB: Destructive osteoarthritis after delayed diagnosis of tuberculosis. *Infection*, 30:46-49, 2002.
4. Kunos C, Colussi V, **Getty P**, Kinsella T: Intraoperative radiotherapy sequelae and prognostic factors for extremity sarcomas. *Case Orthopaedic Journal*, 2:18-27, 2005.
5. Kunos C, Colussi V, **Getty P**, Kinsella T: Intraoperative electron radiotherapy for extremity sarcomas does not increase acute or late morbidity. *Clinical Orthopaedics and Related Research*, 446:247-252, 2006.
6. Wera GD, Friess DM, **Getty PJ**, Armstrong DG, Lacey SH, Baele HR: Fracture of the proximal humerus with injury to the axillary artery in a boy aged 13 years. *Journal of Bone and Joint Surgery Br*, 88:1521-1523, 2006.
7. Anderson JR, **Getty PJ**: Case Report: Aggressive digital papillary adenocarcinoma. *Case Orthopaedic Journal*, 3:24-25, 2006.

8. Wera GD, **Getty PJ**, Armstrong DG, Lacey SH, Baele HR, Friess DM: Fracture of the proximal humerus with injury to the axillary artery in a boy aged 13 years. *Case Orthopaedic Journal* 4:90-92, 2007 [published with permission from *J Bone Joint Surg*, 88B:1521-1523, 2006].
9. Messerschmitt PJ, Rettew AN, **Getty PJ**, Greenfield EM: Targeting tyrosine kinase signaling in the treatment of osteosarcoma. *Case Orthopaedic Journal*, 4:93-95, 2007.
10. Messerschmitt PJ, Rettew AN, Brookover RE, Garcia RM, **Getty PJ**, Greenfield EM: Specific tyrosine kinase inhibitors regulate human osteosarcoma cells in vitro. *Clinical Orthopaedics and Related Research*, 466:2168-2175, 2008.
11. Canacci AM, Nunez C, **Getty P**, Abdul-Karim F: Diagnosis of malignant granular cell tumor metastatic to bone by fine needle aspiration cytology: a case report. *Acta Cytologica*, accepted 2008.
12. Messerschmitt P, Garcia R, Abdul-Karim F, Wiersma S, Greenfield E, **Getty P**: Osteosarcoma. *Journal of the American Academy of Orthopaedic Surgeons*, in press, 2009.

Non-Peer Reviewed Articles

1. Simon MA, Peabody TD, **Getty PJ**: Letter to the Editor. *Journal of Bone and Joint Surgery*, 81A:893-895, 1999.

Book Chapters

1. **Getty PJ**, Awan A, Peabody TD: Metastatic Disease of the Distal Femur. In: *Management of Metastatic Disease to the Musculoskeletal System*, Heiner JP, Kinsella T, Zdeblick TA (eds). Quality Medical Publishing, Inc., St. Louis, MO, 2002.
2. **Getty PJ**, Overmoyer BA, Robbin MR, Huff T, Nielsen JL: Metastatic Cancer to Bone. In: *Oncology: An Evidence-Based Approach*, Chang AE, Ganz PA, Hayes DF, Kinsella TJ, Pass HI, Schiller JH, Stone RM, Strecher VJ (eds). Springer, New York, NY, pp 1655-1679, 2005.

Abstracts

1. Stucki J, **Getty P**: Microbial Reduction of Fe in Nontronite. *1986 Agronomy Abstracts*, p. 279.
2. **Getty P**, Martell J: Confocal Microscopic Imaging of Trabecular Bone: A New, Non-Destructive Method of Histomorphometry. *Orthopaedic Transactions*, 19:712, 1996.
3. **Getty P**, Martell J: Comparison of New, Non-Destructive Method of Bone Histomorphometry to Current Standard Techniques. *Orthopaedic Transactions*, 20:882, 1997.
4. **Getty PJ**, Peabody TD, Simon MA: Osteoarticular Allograft Reconstruction of the Proximal Humerus. *1997 Transactions of the International Society of Limb Salvage*, p. 28.

5. Kunos C, Colussi V, **Getty P**, Domanovic MA, Vinkler R, Kinsella T: Sequelae of Intraoperative Electron Radiotherapy During Limb-Sparing Surgery Before or After External-Beam Radiotherapy for High Grade Extremity Soft Tissue Sarcomas. Radiological Society of North America (RSNA) 91st Scientific Assembly and Annual Meeting, November 27-December 2, 2005.
6. Akhavan S, Marcus R, **Getty P**, Rowbottom J: Is Preoperative Medical Evaluation in Hip Fracture Patients Indicated? Poster, P481, 74th Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego, California, February 14-18, 2007.
7. Marcus RE, Akhavan S, Rowbottom JR, **Getty PJ**, Stevenson R: Is Preoperative Medical Evaluation in Hip Fracture Patients Indicated? Paper Presentation, 59th Annual Meeting of the Association of Bone and Joint Surgeons, Lexington, Kentucky, April 14, 2007.
8. Messerschmitt PJ, Rettew AN, Brookover RE, **Getty PJ**, Greenfield EM: 3,4-Methylenedioxy- β -nitrostyrene (MNS) Reduces the Motility and Colony Formation of Osteosarcoma Cells. Poster 1146, Presented at the 54th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, March 2-5, 2008.
9. Messerschmitt PJ, Rettew AN, Brookover RE, Garcia RM, **Getty PJ**, Greenfield EM: Specific Tyrosine Kinase Inhibitors Reduce Motility and Colony Formation by Osteosarcoma Cells. Poster 1148, Presented at the 54th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, March 2-5, 2008.
10. Young PC, Raife S, **Getty P**: Pediatric Vascular Lesions of the Musculoskeletal System: A Review of Imaging Characteristics. Poster, Presented at the 45th Annual Meeting of the European Society of Pediatric Radiology, Edinburgh, Scotland, June 4-7, 2008.
11. Messerschmitt PJ, Rettew AN, Brookover RE, Garcia RM, **Getty PJ**, Greenfield EM: Specific tyrosine kinase inhibitors reduce motility, colony formation, and invasiveness by osteosarcoma cells. Accepted for presentation at the 14th Annual Connective Tissue Oncology Society (CTOS) Meeting, London, UK, November 13-15, 2008.
12. Messerschmitt PJ, Rettew AN, Brookover RE, Jakatdar AP, **Getty PJ**, Greenfield EM: 3,4-methylenedioxy- β -nitrostyrene (MNS) reduces the motility and colony formation of osteosarcoma cells. Accepted for presentation at the 14th Annual Connective Tissue Oncology Society (CTOS) Meeting, London, UK, November 13-15, 2008.

Manuscript Review for Journals

Journal of Pediatric Orthopaedics

Clinical Orthopaedics and Related Research

PRESENTATIONS:

National Presentations

1. Getty P, Martell J: Confocal Imaging of Trabecular Bone: A New, Non-Destructive Method of Histomorphometry. Presented at AOA Resident's Conference, Pittsburgh, Pennsylvania, March 1995.

2. Getty P, Martell J: Comparison of New, Non-Destructive Method of Bone Histomorphometry to Current Standard Techniques. Presented at AOA Resident's Conference, Baltimore, Maryland, March 1996.
3. Getty P, Peabody T, Simon M: Osteoarticular Allograft Reconstruction of the Proximal Humerus. Presented at the Ninth International Symposium of the International Society of Limb Salvage, New York, New York, September 1997.
4. Patel MM, Hoang BH, Getty PJ: Treatment of Fibrous Dysplasia with Oral Alendronate: A Preliminary Report. Presented at the 25th Annual Meeting of the Musculoskeletal Tumor Society, Toronto, Ontario, April 25-27, 2002.
5. Robbin M, Getty PJ, Young PC, Kirkham J, Malguria N, Lewin J: CT-Guided Radiofrequency Thermal Ablation of Osteoid Osteoma. Poster presented at the Annual Meeting of the Radiological Society of North America (RSNA), Chicago, Illinois, November 30-December 5, 2002.
6. Robbin M, Getty PJ, Patel DL, Kirkham JA, Young PC, Lewin JS: Radiofrequency Ablation of Osteoid Osteoma. Paper presentation at the Society of Skeletal Radiology SSR, March 2-5, 2003.
7. Cystic Lesions of Bone and Soft Tissue—How Can You Be Sure? Presentation at Symposium: Oncologic Pitfalls and Solutions for the General Orthopaedics, American Academy of Orthopaedic Surgeons, San Francisco, California, March 12, 2004.

Regional and Local Presentations

1. Orthopaedic Molecular Oncology. Department of Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, November 1999.
2. Limb Salvage Surgery in Children. Department of Pediatrics Grand Rounds, University Hospitals of Cleveland, January 27, 2000.
3. Pediatric Malignant Bone Tumors. Pediatric Grand Rounds, Trumbull Memorial Hospital, Warren, Ohio, June 2, 2000.
4. Metastatic Disease to Bone—Basic Science. Department of Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, October 23, 2000.
5. Limb Salvage Surgery in Children. Pediatric Surgery Grand Rounds, University Hospitals of Cleveland, October 31, 2000.
6. Limb Salvage Surgery in Children. Department of Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, September 8, 2001.
7. Fibrous Lesions of Bone. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 11, 2002.
8. Cystic Lesions of Bone. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 11, 2002.

9. Benign Bone Tumors in Children. Department of Pediatrics Grand Rounds, University Hospitals of Cleveland, October 24, 2002.
10. Lumps and Bumps. Pediatric Hematology-Oncology . . . A 21st Century Approach, University Hospitals of Cleveland, December 3, 2002.
11. Bone and Joint Neoplasm. School of Medicine (second-year class), Case Western Reserve University, December 4, 2002.
12. Limb Salvage Surgery for Malignant Pediatric Bone Tumors. Orthopaedic Grand Rounds, University of Cincinnati, April 2, 2003.
13. Bone-Forming Lesions. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 17, 2003.
14. Permeative Lesions of Bone. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 17, 2003.
15. Bone and Joint Neoplasm. School of Medicine (second-year class), Case Western Reserve University, December 3, 2003.
16. Management of Common Musculoskeletal Tumors. UHHS Grand Rounds, University Hospitals Health System, May 19, 2004.
17. Malignant Tumors of Bone. Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, May 6, 2004.
18. Bone-Forming Lesions. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 15, 2004.
19. Permeative Lesions of Bone. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 15, 2004.
20. Benign Tumors of Bone. Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, October 20, 2004.
21. Bone and Joint Neoplasm. School of Medicine (second-year class), Case Western Reserve University, December 2, 2004.
22. Pediatric Bone Tumors. Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, July 13, 2005.
23. Metastatic Disease to Bone. Orthopaedic Surgery Grand Rounds, University Hospitals of Cleveland, July 27, 2005.
24. Pediatric Bone and Soft Tissue Tumors. Family Medicine Orthopaedic Lecture, University Hospitals of Cleveland, October 6, 2005.
25. Bone-Forming Lesions. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 14, 2005.
26. Permeative Lesions of Bone. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 14, 2005.

27. Bone and Joint Neoplasm. School of Medicine (second-year class), Case Western Reserve University, November 16, 2005.
28. Lumps and Bumps. Orthopaedic Update for Primary Care Physicians, Case Western Reserve University School of Medicine and University Hospitals of Cleveland, November 19, 2005.
29. Growth and Metastasis of Musculoskeletal Tumors. Orthopaedic Surgery Grand Rounds, University Hospitals Case Medical Center, February 15, 2006.
30. Bone and Joint Neoplasm. School of Medicine (second-year class), Case Western Reserve University, April 24, 2006.
31. Bone Tumors. Orthopaedic Update for Primary Care Physicians, Case Western Reserve University School of Medicine and University Hospitals of Cleveland, September 16, 2006.
32. Framing Lecture for Thigh Anatomy. Case School of Medicine [Surgical Anatomy: Musculoskeletal], September 25, 2006.
33. Bone-Forming Lesions. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 13, 2006.
34. Permeative Bone Lesions. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 13, 2006.
35. Fibrous Lesions of Bone. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 14, 2006.
36. Malignant Tumors of Bone. Orthopaedic Surgery Grand Rounds, University Hospitals Case Medical Center, May 2, 2007.
37. Metastatic Cancer to Bone. Cancer Conference, St. John West Shore Hospital, Westlake, Ohio, May 10, 2007.
38. Benign Tumors of Bone. Orthopaedic Surgery Grand Rounds, University Hospitals Case Medical Center, October 3, 2007.
39. Growth and Metastasis of Musculoskeletal Tumors. Orthopaedic Surgery Grand Rounds, University Hospitals Case Medical Center, April 16, 2008.
40. Bone-Forming Lesions. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 10, 2008.
41. Benign Soft Tissue Tumors. Musculoskeletal Pathology Review Course, SUMMA Health Systems, Akron, Ohio, October 10, 2008.
42. Bone and Cartilage Neoplasm. School of Medicine (second-year class), Case Western Reserve University, December 1, 2008.
43. Review: Bone and Cartilage Neoplasm. School of Medicine (second-year class), Case Western Reserve University, December 1, 2008.