

**CURRICULUM VITAE**

**CYNTHIA M. KELLY, M.D.**

**Board Certified Orthopedic Surgeon**

Colorado Limb Consultants  
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Denver, Colorado 80218  
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**Medical Director**

Avascular Necrosis Clinic  
The Denver Clinic for Extremities at Risk  
(formerly The Institute for Limb Preservation)  
Presbyterian/St. Luke's Medical Center  
1601 E. 19<sup>th</sup> Avenue, Suite 3250  
Denver, CO 80218  
October 1998 - present

**Clinical Faculty**

University of Colorado School of Medicine  
Department of Orthopaedics  
Aurora, Colorado

**PERSONAL INFORMATION**

**Email Address:** cindykellymd@yahoo.com  
**Citizenship:** United States  
**Marital Status:** Married, 2 children

**EDUCATION**

1978 - 1983 The Ohio State University, Columbus, Ohio  
B.S., Pharmacy

1984 - 1986 Medical College of Ohio, Toledo, Ohio  
Two years basic science towards M.D. degree

1986 - 1987 Medical College of Ohio, Toledo, Ohio  
Pathology Student Fellowship

1987 - 1989 University of California Los Angeles School of Medicine  
Los Angeles, California  
M.D., June 1989

**POSTGRADUATE TRAINING**

1987 - 1994 Orthopaedic Surgery Post-Graduate Residency Training  
Harbor-UCLA Medical Center, Torrance, California

1994 - 1995 Orthopaedic Fellow in Oncology (Bone and Soft Tissue Tumors)  
University of California Los Angeles

**PROFESSIONAL CERTIFICATIONS**

1983 Ohio State Board of Registered Pharmacists

1986 National Board of Medical Examiners, Part I

1988 National Board of Medical Examiners, Part II

1989 National Board of Medical Examiners, Part III

1990 California Board of Medical Examiners [State Licensure G070614]

1992 AO/ASIF Basic Course

1992 Radiology Supervisor License

1994 Midas Rex Licensure

- 1994 American Board of Orthopaedic Surgery, Part I  
2000 American Board of Orthopaedic Surgery, Part II

**HONORS and AWARDS**

- 1978 Outstanding Athlete Scholarship  
1981 Archons National Honor Society  
1982 Alpha Phi National Sorority Academic Scholarship  
1982 Alpha Phi Sorority President, The Ohio State University  
1982 Outstanding Senior Finalist, The Ohio State University  
1982 Conway Chase Award – Outstanding Senior Sorority Woman  
1982 Roche Pharmaceutical Communications Award  
1986 Pathology Student Fellowship, Medical College of Ohio  
1987 Scientific Day Award, B-cell Lymphoma Research, Medical College of Ohio  
1988 Alpha Omega Alpha Honor Society  
1992 Outstanding Resident Research Project/Harbor-UCLA Medical Center Alumni Day  
1994 Vernon P. Thompson Award for Outstanding Resident Research, Western Orthopaedic Association  
1994 Visiting Surgeon, Redlands Community Hospital, Redlands CA  
1996 Guest Member, Round Table Discussion: Use of Calcium Sulfate Pellets as Bone Graft Substitute, Breckenridge CO  
1996 Instructor - Russell Taylor Trauma Course, Beaver Creek CO  
1996 Harbor-UCLA Orthopaedic Alumni Association Vice President, 1996-1998  
1998 Harbor-UCLA Orthopaedic Alumni Association President  
2000 Visiting Professor, Vanderbilt University  
2002 Consumer Research Council of America "TOP SURGEON"

### **PROFESSIONAL ORGANIZATIONS**

1983 - 1989	Ohio State Board of Pharmacy
1983 - 1988	National Board of Pharmacy
1984 - 1987	Ohio State Medical Association
1984 -1988	American Medical Student Association
1984 - 1999	American Medical Association
1989 - 1994	National Association of Interns & Residents
1989 - present	American Association of Orthopaedic Surgeons
1995 - 2005	The Institute for Limb Preservation
1998 - present	Western Orthopaedic Association
2002 - present	Musculoskeletal Tumor Society
2005 - present	The Denver Clinic for Extremities at Risk
2009-2012	AAOS Musculoskeletal Tumor and Diseases Evaluation Subcommittee
2010	Orthopaedic Knowledge Online – Editorial Manager

### **RESEARCH**

1. Bone Growth and Disease: Is There a Link Between Fluoride and Osteosarcoma? National Institute of Health RO1 Grant, 1995-1999.
2. Osteoset® Pellets Product Evaluation Study, Wright Medical Technology, Co-Investigator, 1998-99.
3. Osteoset T® Biodegradable Beads Small Group Access Treatment Arm, Wright Medical Technology, Co-Investigator, 1999-2000.
4. Allomatrix™ Injectable Putty Clinical Study, Wright Medical Technology, Participating Physician, 1999-2001.
5. Phenix "Growing" Prosthesis, FDA Compassionate Release Status, Co-Investigator, 1998-2003.
6. Use of Autoclaved Autograft for Reconstruction Following Tumor Resection, Co-Investigator, 2003-2008.
7. Genomic Assessment of Clinical Variability in OGS, Mayo Clinic & Foundation, Co-Investigator, 2003-2007.
8. Use of the Expandable Fixion® Intramedullary Nailing Systems for the Treatment of Skeletal Metastasis in the Lower and/or Upper Limbs, Disc Orthopaedic Technologies, Inc., Co-Investigator, 2004-2005.

9. Repiphysis™ Prosthesis, FDA Compassionate Release Status (for hip and shoulder applications), Co-Investigator, 2003-present.
10. Computerized Tomogram to Assess Bone Healing Following Grafting with PRODENSE Bone Graft, Wright Medical Technology, Participating Physician, 2007-present.
11. Use of the Distal Femoral Replacement in Non-Tumor Conditions, Co-Investigator, 2007-present.

### **PUBLICATIONS**

1. Stuart MJ, Grace JN, Ilstrup DM, Kelly CM, Adams RA, Morrey BF: Late recurrence of varus deformity after proximal tibial osteotomy. *Clin Orthop* 260:61-5, 1990.
2. Finkenberg JG, Hoffer E, Kelly CM Zinar DM: Diagnosis of occult scaphoid fractures by intrasound vibration. *J Hand Surg* 18:4-7, 1993.
3. Ward WG, Eckardt JJ, Dorey F, Eilber FR, Mirra JM, Kelly CM, Rosen G: Local recurrence following surgical treatment of 242 primary malignant bone tumors: An analysis of 39 cases. *Orthop Trans* 18:27, 1994.
4. Yang RS, Eckardt JJ, Eilber FR, Rosen G, Forscher CA, Dorey FJ, Kelly CM, al-Shaikh R: Surgical indications for Ewing's sarcoma of the pelvis. *Cancer* 76:1388-97, 1995.
5. Hegstad SJ, Smith AA, Patterson BM, Kelly CM, Meland NB: Functional lower limb salvage with an osteocutaneous filet flap of the foot. *Ann Plast Surg* 36:413-6, 1996.
6. Mirzayan R, Freedman EL, Kelly CM, Seeger LL, Eckardt JJ: Urethral carcinoma metastatic to bone: A case report and literature review. *Gynecol Oncol* 63:127-32, 1996.
7. Kelly CM: Bone tumors. *In* Bongard FS, Stamos MJ, Passaro E (eds.): *Surgery, A Clinical Approach*. Churchill Livingstone, New York, 1997, p. 529.
8. Asavamongkolkul A, Eckardt JJ, Eilber FR, Dorey FJ, Ward WG, Kelly CM, et al: Endoprosthetic reconstruction for malignant upper extremity tumors. *Clin Orthop* 360:207-20, 1999.
9. Wilkins RM, Kelly CM, Giusti DE: Bioassayed demineralized bone matrix and calcium sulfate: Use in bone grafting procedures. *Ann Chirurg Gynaecol* 88:180-85, 1999.
10. Eckardt JJ, Kabo JM, Kelly CM, Ward WG, Asavamongkolkul A, Wirganowicz PZ, Yang RS, Eilber FR: Expandable endoprosthesis reconstruction in skeletally immature patients with tumors. *Clin Orthop* 373:51-61, 2000.
11. Kelly CM, Wilkins RM, Gitelis S et al: The use of surgical grade calcium sulfate as a bone graft substitute: Results of a multi-center trial. *Clin Orthop* 382:42-50, 2001.

12. Wilkins RM, Kelly CM: Revision of the failed femoral replacement to allograft prosthetic composite. *Clin Orthop* 397:114-8, 2002.
13. Wilkins RM, Kelly CM: The effect of AlloMatrix injectable putty on the outcome of long bone applications. *Orthopedics* 26 suppl:s567-70, 2003.
14. Wilkins RM, Cullen JW, Odom L, Jamroz BA, Cullen PM, Fink K, Peck SD, Stevens SL, Kelly CM, Camozzi AB: Superior survival in treatment of primary non-metastatic pediatric osteosarcoma of the extremity. *Ann Surg Oncol* 10:498-507, 2003.
15. Neel MD, Wilkins RM, Rao BN, Kelly CM: Early multicenter experience with a noninvasive expandable prosthesis. *Clin Orthop* 415:1-10, 2003.
16. Kelly CM, Wilkins RM, Eckardt JJ, Ward WG: Treatment of metastatic disease of the tibia. *Clin Orthop* 415s:s219-29, 2003.
17. Eckardt JJ, Kabo M, Kelly CM, Ward WG, Cannon CP: Endoprosthetic reconstructions for bone metastases. *Clin Orthop* 415[suppl]:S254-262, 2003.
18. Cannon CP, Eckardt JJ, Kabo JM, Ward WG, Kelly CM, et al: Custom cross-pin fixation of 32 tumor endoprostheses stems. *Clin Orthop* 417:285-92, 2003.
19. Gitelis S, Neel MD, Wilkins RM, Rao BN, Kelly CM, Yao TK: The use of a closed expandable prosthesis for pediatric sarcomas. *Chir Organi Mov* 88:327-33, 2003.
20. Kelly CM, Wilkins RM: Treatment of benign lesions of bone with an injectable calcium sulfate-based bone graft substitute. *Orthopedics* 27(suppl):s131-5, 2004.
21. Wilkins RM, Kelly CM, Hahn DB: Use of a calcium sulfate-based bone substitute [abstract]. Symposium of the 15<sup>th</sup> Interdisciplinary Research Conference on Biomaterials. *J Med Biomech* 20[suppl]:10-11, 2005.
22. Cullen JW, BA Jamroz MD, SL Stevens MD, et al: The value of serial arteriography in osteosarcoma: delivery of chemotherapy, determination of therapy duration and prediction of necrosis. *J Vasc Interv Radiol* 16:1107-19, 2005.
23. Kelly CM: Extra-Abdominal Tumors. American Academy of Orthopaedic Surgeons, Your Orthopaedic Connection, December 2007 [www.orthoinfo.org].
24. Hugate RR, Wilkins RM, Kelly CM, Madsen W, Hinshaw I, Camozzi AB. Intraarterial Chemotherapy for Extremity Osteosarcoma and MFH in Adults. *Clin Orthop Relat Res.* 2008;466:1292-1301.

### **PRESENTATIONS**

1. Treatment of Post-Traumatic Reconstructive Disorders of the Adult Tibia with the Ilizarov Technique. Orthopaedic Trauma Association, Poster Presentation, Los Angeles, Ca., 1993.

2. Distal Femoral Endoprosthetic Replacement for Treatment of Supracondylar Fractures of the Femur. Western Orthopaedic Association, Santa Barbara CA, May 23-24, 1994.
3. Treatment of Post-Traumatic Reconstructive Disorders of the Adult Tibia with the Ilizarov Technique [poster]. American Academy of Orthopaedic Surgeons, Orlando FL, February 1995.
4. Treatment of Distal Femoral Fractures and Nonunions in Osteopenic Patients with Coexisting Gonarthrosis by Endoprosthetic Distal Femoral Replacement. Western Orthopaedic Association, Santa Barbara CA, April 29, 1995.
5. Extremity Sarcoma with Metastases to the Retroperitoneal Space [poster]. International Society of Limb Salvage, Florence, Italy, May 8, 1995.
6. Treatment of Post-Traumatic Reconstructive Disorders of the Adult Tibia with the Ilizarov Technique. UCLA Alumni Day, Los Angeles CA, May 16, 1995.
7. Proximal Tibial Reconstruction with Endoprostheses: The Initial UCLA Experience in 22 Patients. International Society of Limb Salvage, Florence, Italy, May 10, 1995.
8. Treatment of Post-Traumatic Reconstructive Disorders of the Adult Tibia with the Ilizarov Technique. Institute for Limb Preservation, Denver CO, April 17, 1996.
9. Treatment of Orthopedic Infections. Harbor-UCLA Alumni Day, Torrance CA, June 14, 1996.
10. The Use of Modular Endoprostheses for Non-Oncologic Limb Salvage Reconstruction. International Symposium on the Use of Mega-Endoprostheses, Chicago IL, Nov. 12-14, 1996.
11. Endoprosthetic Extramedullary Porous Coating and Restriction of Polyethylene Wear Debris Access to the Intramedullary Canal. International Society of Limb Salvage, New York NY, Sept. 10-12, 1997.
12. Lumps and Bumps in Orthopaedics, P/SL Medical Center Outreach Lecture Series, Eads CO, June, 1998.
13. Lumps and Bumps in Orthopaedics, P/SL Medical Center Outreach Lecture Series, La Junta CO, June, 1998.
14. Lumps and Bumps in Orthopaedics, P/SL Medical Center Outreach Lecture Series, Lamar CO, June, 1998.
15. Lumps and Bumps in Orthopaedics, P/SL Medical Center Outreach Lecture, Pueblo CO, June, 1998.
16. The Use of Surgical Grade Calcium Sulfate as a Bone Graft Substitute. Advances in Total Joint Arthroplasty, November, 1998.

17. The Use of Surgical Grade Calcium Sulfate as a Bone Graft Substitute. Advances in Total Joint Arthroplasty, Snowmass CO, January 13-15, 1999.
18. Lumps and Bumps in Orthopaedics. Colorado Association of Physician Assistants Annual Meeting, Breckenridge CO, January 18, 1999
19. Treatment of Avascular Necrosis of the Femoral Head with Vascularized Free Fibula Graft. Inservice, P/SL Medical Center Orthopaedic Ancillary Staff, Denver CO, March, 1999.
20. Treatment of Benign Tumors of Bone with Calcium Sulfate and Bone Marrow Aspirate as a Bone Graft Substitute. International Society for Limb Salvage, Cairns, Australia, April 11-14, 1999.
21. The Use of Surgical Grade Calcium Sulfate as a Bone Graft Substitute. Musculoskeletal Tumor Society Annual Meeting, Denver CO, May 13-15, 1999.
22. Lumps and Bumps in Orthopaedics. National Association of Orthopaedic Nurses Annual Meeting, Atlanta GA, May 1999.
23. The Use of Surgical Grade Calcium Sulfate as a Bone Graft Substitute. Wright Medical Technology, Advances in Joint Replacement Surgery Symposium, Los Angeles CA, July 10, 1999.
24. The Use of Surgical Grade Calcium Sulfate as a Bone Graft Substitute for Treatment of Benign Lesions of Bone. Western Orthopaedic Association Meeting, Corona Del Mar CA, July, 1999.
25. Radiographic Evaluation and Interpretation of Musculoskeletal Neoplasms, Denver Chapter of Radiology Technicians, Denver CO, September, 1999.
26. Current Concepts in Orthopedic Oncology, Visiting Professor Lecture Series. Vanderbilt University, Nashville TN, March, 2000.
27. The Use of Bone Graft Substitutes in Orthopaedic Reconstruction. North Florida Orthopaedic Society, Gainesville FL, June 2000.
28. Evolving Techniques in Treatment of Avascular Necrosis of the Femoral Head. Knees and Tees: Evolving Technologies and Techniques in Total Joint Replacement, Littleton CO, August 28, 2000.
29. The Use of Bone Graft Substitutes in Orthopaedic Reconstruction. West Florida Orthopaedic Society, Tampa FL, September 2000.
30. Diagnosis & Management of Extremity Tumors: Lumps & Bumps. Colorado Academy of Family Physicians. Vail CO, July 19, 2001.
31. Treatment of Osteonecrosis of the Femoral Head with Core Decompression & Back-Grafting with Bone Graft Substitutes. Orthopedic Hospital of Los Angeles, Joint Replacement Institute, Quebec City, Quebec, Canada, July 20-21, 2001.

32. The Use of Surgical Grade Calcium Sulfate as a Bone Graft Substitute: Results of a Multi-Center Trial. British Orthopaedic Association Annual Congress, Birmingham, England, September 12, 2001.
33. Diagnosis & Management of Extremity Tumors: Lumps & Bumps in Orthopaedics. Pediatric Orthopaedic Department, Fort Carson, CO, September 26, 2001.
34. The Use of Bone Graft Substitute Materials in Orthopaedic Surgery. Atlanta GA, September 27, 2001.
35. Osteonecrosis & CNS Injury. Colorado Neurological Institute Grand Rounds, Swedish Medical Center, May 8, 2002.
36. Lumps & Bumps in Orthopedics. Rocky Mountain Association of Orthopedic Technologists, Denver CO, May 24, 2002.
37. Potential Orthopedic Complications Following Trauma. Boulder Community Hospital CME, Boulder CO, June 13, 2002.
38. The Use of Bone Graft Substitutes in Orthopaedic Surgery. Early Summer Total Joint Symposium, The American Club, Kohler WI, June 20-21, 2002.
39. Advances in the Treatment of Osteonecrosis. Current Concepts in Orthopaedics, Swedish Medical Center, Denver, June 28, 2002.
40. Advances in the Treatment of Osteonecrosis. Annual Meeting of the Western Orthopaedic Association, Maui, Hawaii, August 1-4, 2002.
41. Lumps and Bumps. Presbyterian/St. Luke's Grand Rounds, Denver, August 9, 2002.
42. Osteonecrosis: Advances in Treatment. Western Orthopaedic Association, Ridgeway, CO, Oct. 28, 2002.
43. Tibial Metastasis: Treatment & Results. Association of Bone & Joint Surgeons, Tampa FL, Nov. 11, 2002.
44. The UCLA Experience with 205 Modular Endoprostheses [Poster]. Annual Meeting of International Society of Limb Salvage (ISOLS), 2001.
45. The UCLA Experience with 205 Modular Endoprostheses [Poster]. Annual Meeting of American Academy of Orthopaedic Surgeons, New Orleans LA, Feb. 5-8, 2003.
46. Advances in the Treatment of Osteonecrosis. University of Colorado School of Medicine, Orthopaedic Weekly Core Curriculum for orthopaedic residents. Denver CO, April 23, 2003.
47. Femoral Head AVN: Current Treatment Scenarios. Rocky Mountain Chapter of the Western Orthopaedic Association, Colorado Springs CO, August 1, 2003.

48. Lumps and Bumps. Annual Meeting of the Denver Chapter of the National Association of Orthopedic Nurses, Denver CO, August 22, 2003.
49. Lumps and Bumps. Grand Rounds, Wyoming Medical Center, Casper WY, October 14, 2003.
50. What's New in Limb Preservation? American Society of Radiology Technicians, Estes Park CO, April 28, 2004.
51. Lumps & Bumps: Diagnosis & Treatment of Extremity Tumors. Aurora North Grand Rounds, Aurora CO, May 14, 2004.
52. Recent Advances in the Treatment of Sarcomas. Annual CU Alumni Visiting Professorship, Fitzsimons Campus, University of Colorado Health Sciences Center, Aurora CO, June 17, 2004.
53. Advances in Limb Preservation. Continuing Medical Education, Regional West Hospital, Scottsbluff NE, July 14, 2004.
54. Management of Periprosthetic Fractures in TKA. Combined Meeting of the Rocky Mountain & Western Slope Chapters of the Western Orthopaedic Association, Beaver Creek CO, August 6-7. 2004.
55. Diagnosis and Treatment of Extremity Tumors: Lumps & Bumps in Orthopaedics. Colorado Cancer Coalition, Denver CO, August 9, 2004.
56. Osteonecrosis. Continuing Medical Education, Valley View Hospital, Glenwood Springs CO, October 6, 2004.
57. Osteonecrosis. Staff Education, P/SL Medical Center, Denver CO, November 3, 2004.
58. Iatrogenic Osteonecrosis: Diagnosis & Treatment. Institute for Limb Preservation Conference, Denver CO, November 15, 2004.
59. Distal Femoral Nonunions: The KISS Method. Institute for Limb Preservation Conference, Denver CO, November 15, 2004.
60. Use of an Injectable Calcium Sulfate-Based Bone Graft Substitute. American Academy of Orthopedic Surgeons, MSTS Specialty Day, Washington DC, February 26, 2005.
61. Treatment of Periprosthetic Distal Femur Fractures. Western Orthopaedic Association Annual Meeting, Honolulu, HI, July 21-24, 2005.
62. Osteonecrosis of the Femoral Head. Annual Conference of Denver Clinic for Extremities at Risk, Denver CO, December 2, 2005.
63. Tumors and Limb Salvage. 33<sup>rd</sup> Annual Spring Orthopedic Day, Panorama Research & Education Foundation. Westminster CO, April 7, 2006.

64. The Surgical Component of Managing Sarcomas. Continuing Medical Education, Longmont United Hospital, Longmont CO, August 4, 2006.
65. Assessment & Management of Extremity Tumors. Annual Winter Conference, The Denver Clinic for Extremities at Risk. Presbyterian/St. Luke's Medical Center, Denver CO, December 4, 2006.
66. Lumps and Bumps in Pediatric Orthopedics. CarePoint Pediatric Division, Aurora CO, March 6, 2007.
67. Updates in Osteonecrosis. Colorado Society of Radiologic Technologists, Estes Park CO, May 4, 2007.
68. Lumps and Bumps. The Denver Clinic for Extremities at Risk, Presbyterian/St. Luke's Medical Center, Denver CO, August 23, 2007.
69. Assessment and Management of Extremity Tumors. Grand Rounds, St. Joseph Hospital, Denver CO, February 5, 2008.
70. Humeral Nonunions: Use of the Pedicled Lateral Border of the Scapula. Annual Meeting of the Western Orthopaedic Association, Maui, Hawaii, July 23-26, 2008.
71. How to Keep Out of Trouble: Oncology and the General Orthopaedic Surgeon. Annual Meeting of the Western Orthopaedic Association, Maui, Hawaii, July 23-26, 2008.
72. Updates on Orthopedic Oncology. Denver Academy of Surgery, Denver, CO, September 15, 2008.

#### **MENTORSHIP**

1. Preceptor Physician Assistant Student, Kate Smith, June 2009.