

Duke University Medical Center

*Curriculum Vitae
For
Permanent Record
And the
Appointments, Promotions and Tenure Committee*

November 25, 2005

FULL NAME: Cynthia K. Shortell, M.D.

ACADEMIC APPOINTMENT: Chief, Vascular Surgery

ACADEMIC DEPARTMENT: Department of Surgery

PRESENT ACADEMIC RANK/TITLE: Associate Professor of Surgery,
Duke University Medical Center

DATE/RANK OF FIRST DUKE APPOINTMENT: August, 2005

MEDICAL LICENSE: State of North Carolina #2005-01544, 02/17/2006
State of New York #164663, 11/04/1985

BOARD CERTIFICATION:

American Board of Surgery, General Surgery	1990
Recertification	1999
American Board of Surgery, Vascular Surgery (Certificate of Added Qualification)	

EDUCATION:

High School:	Phillips Exeter Academy
College:	Dartmouth College 1976 - 1980 AB, Biology, AB Religion
Professional:	Cornell University Medical College 1980 - 1984 M.D.

LOCAL PROFESSIONAL SOCIETY MEMBERSHIPS:

Rochester Vascular Society	1993
Monroe County Medical Society	1993

NATIONAL/STATE PROFESSIONAL SOCIETY MEMBERSHIPS:

Association for Academic Surgery	1990
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Association of Women Surgeons	1992
Peripheral Vascular Surgery Society	1996
American College of Surgeons, Fellow	1997
Upstate Chapter, American College of Surgeons, Councilor	1998
Eastern Vascular Surgery Society	1998
International Society for Cardiovascular Surgery	1999
Central Surgical Society	2002
Society for Vascular Surgery	2003
Society for Vascular Society, Distinguished Member	2004
New York Chapter, American College of Surgeons, Treasurer	2004

PROFESSIONAL TRAINING:

Internship: University of Rochester/Strong Memorial Hospital
1984-1985

Residency: University of Rochester/Strong Memorial Hospital
1985-1989

Research Fellow (Divisions of Vascular Surgery and Hematology):
University of Rochester/Strong Memorial Hospital
1989-1991

Vascular Fellowship: University of Rochester/Strong Memorial Hospital
1991-1993

Academic Positions:

Duke University Medical Center:	
Associate Professor of Surgery	2005-present
University of Rochester:	
Assistant Professor of Surgery	1993-1999
Associate Professor of Surgery	1999-2005
Assistant Professor of Hematology	1993-1999
Associate Professor of Hematology	1999-2000

PUBLICATIONS:

Refereed Journals:

1. Shortell CK, Schwartz SI. Hepatic adenoma and focal nodular hyperplasia. Surg, Gynecol, Obstet 1991;173:426-31.
2. Shortell CK, Andrus CH, Phillips CE, Schwartz SI. Parathyroid carcinoma: a

30 year experience. *Surgery* 1991;110(4):704-8.

3. Shortell CK, Ouriel K, Geary KJ, Condemi JJ: Involvement of aortic bifurcation and lower extremity vessels in Takayasu's Arteritis. *Res in Surg* 1991;3:157-161.
4. Rhee RY, Donayre CE, Ouriel K, Neschis D, Shortell CK. Low dose heparin therapy: In vitro verification of antithrombotic effect. *J Vasc Surg* 1991;14:628-634.
5. Ouriel K, Green RM, Donayre CE, Shortell CK, Cimino CD, Donnelly JA, Oxley DJ, Green RM. The hemodynamics of thrombus formation in arteries. *J Vasc Surg* 1991;14:757-763.
6. Shortell CK, DeWeese JA, Ouriel K, Green RM. Popliteal artery aneurysms: A 25 year surgical experience. *J Vasc Surg* 1991;14:771-779.
7. Marder VJ, Shortell CK, Fitzpatrick P, Kim C, Oxley D. An animal model of fibrinolytic bleeding based on the rebleed phenomenon: Application to a study of vulnerability of hemostatic plugs of different age. *Thromb Res* 1992;67:31-40.
8. Shortell CK, Ouriel K, DeWeese JA, Green RM. Peroneal artery bypass: A multifactor analysis. *Ann Vasc Surg* 1992 ;6:15-19.
9. Ouriel K, Green R, Donayre C, Shortell C, Elliott J, DeWeese J. An evaluation of new methods of expressing aortic aneurysm size: Relationship to rupture. *J Vas Surg* 1992;15:12-20.
10. Shortell C, Ouriel K, Green R, Condemi J, DeWeese J. Vascular disease in the antiphospholipid syndrome: A comparison with the patient population with atherosclerosis. *J Vasc Surg* 1992;15:158-66.
11. Donayre C, Ouriel K, Rhee R, Shortell C. Future alternatives to heparin: Low molecular weight heparin and hirudin. *J Vasc Surg* 1992;15:675-682.
12. Ouriel K, Shortell CK, Green RM, DeWeese JA. Intraoperative autotransfusion in aortic surgery. *J Vasc Surg* 1993;18:16-22.
13. Stoughton J, Ouriel K, Shortell CK, Cho J-S, Marder V. Plasminogen acceleration of urokinase thrombolysis. *J Vasc Surg* 1994;19:298-305.

14. Ouriel K, Shortell CK. Thrombolysis in acute peripheral arterial occlusion: Predictors of immediate success. *Ann Vasc Surg* 1994;8:59-6.
15. Ouriel K, Shortell C, DeWeese JA, Green RM, Francis C, Azodo M, Gutierrez O, Manzione J, Cox C, Marder V. A Comparison of Thrombolytic Therapy with Operative Revascularization in the Initial Treatment of Acute Peripheral Arterial Ischemia. *J Vasc Surg* 1994;19:1021-1030.
16. Ouriel K, Shortell CK, Azodo MVU, Gutierrez OH, Marder VJ. Predictors of success in catheter-directed thrombolytic therapy of acute peripheral arterial occlusion. *Radiology*, 1994;193:561-566.
17. Ouriel K, Shortell CK, Green RM, DeWeese JA. Differential mechanisms of failure of autogenous and non-autogenous bypass conduits: an assessment following successful graft thrombolysis. *Cardiovascular Surgery*, 1995;3:469-473.
18. Ouriel K, Welch EL, Shortell CK, Geary K, Fiore WM, Cimino C. Comparison of streptokinase, urokinase, and recombinant tissue plasminogen activator in an in vitro model of venous thrombolysis. *Journal of Vascular Surgery*, 1995;22:593-597.
19. Shortell CK, Welch EL, Ouriel K, Green RM, De Weese JA. Operative management of coexistent aortic disease and horseshoe kidney. *Ann Vasc Surg*, 1995 ;9(1):123-8.
20. Illig KA, Eagleton MJ, Shortell CK, Ouriel K, DeWeese JA, Green RM. Ruptured popliteal aneurysm. *J Vasc Surg* 1998;27: 783-7.
21. Illig KA, Ouriel K, DeWeese JA, Shortell CK, Green RM. A condemnation of subcutaneous fasciotomy. *Military Medicine* 1998;163 (11): 794-6.
22. Shortell CK, Illig KA, Ouriel K, Green RM. Fetal internal iliac artery: Case report and embryologic review *J Vasc Surg* 1998;28: 1112-4.
23. Ouriel KO, Green RM, Waldman D, Greenberg RK, Shortell CK, Illig KA. A model for merging vascular surgery and interventional radiology: Clinical and economical implications. *J Vasc Surg* 1999;29(1)82-89.
24. Shortell CK, Francis C. Thrombolytic therapy for arterial thrombosis. *Current Opinion in Hematology* 1999;6(5), 309-13.

25. Eagleton MJ, Ouriel K, Shortell CK, Green R. Femoral-infrapopliteal bypass with prosthetic grafts. *Surgery* 1999;126(4): 759-65.
26. Kaufman D, Haas C, Jones CE, Reiss W, Burnstein A, Shaw-Stiffel TA, Shortell CK, Illig KA. Altered hepatic cytochrome P450 activity following surgical stress. *Crit Care Med* 1999;27(12suppl):A145 (abstract).
27. Illig KA, Soni A, Williams J, Shortell C, Green RM. Clinical review: Irradiation for lower extremity arterial occlusive disease. *Cardiovascular Radiation Medicine* 1999;1(3):288-96.
28. Illig KA, Shortell CK, Greenberg RK, et al. Photoplethysmography and calf muscle pump function after subfascial endoscopic perforator ligation. *J Vasc Surg* 1999;30:1067.
29. Ouriel K, Shortell CK, Illig KA, et al. Intracerebral hemorrhage after carotid endarterectomy: incidence contribution to neurologic morbidity and predictive factors. *J Vasc Surg* 1999;29(1):82.
30. Illig KA, Soni AB, Williams J, Shortell CK, Okunieff P, Schell M, Rubin P, Green RM. Irradiation for intimal hyperplasia: implications for peripheral arterial bypass. *J Am Coll Surg* 2000;190 (3): 364-70.
31. Green RM, Greenberg RK, Illig KA, Shortell CK, Ouriel K. Eversion endarterectomy of the carotid artery: Technical considerations and recurrent stenoses. *J Vasc Surg* 2000;32(6):1052-61.
32. Illig KA, Moran S, Serletti J, Ouriel K, Orlando G, Smith A, Shortell C, Green RM. Combined free tissue transfer and infrainguinal bypass: An alternative to major amputation in selected patients. *J Vasc Surg* 2001;33(1):17-23.
33. Lyden SP, Shortell CK, Illig KA. Reperfusion and compartment syndromes : Strategies for prevention and treatment. *Sem Vasc Surg* 2001 ;14(2) :107-13.
34. Illig KA, Rhodes JM, Sternbach YS, Shortell CK, Davies MG, Green RM. Reduction in wound morbidity rate following endoscopic saphenous vein harvest. *Ann Vasc Surg* 2001;15(1):104-9.
35. Illig KA, Eagleton M, Kaufman D, Lyden SP, Shortell CK, Waldman D, Green RM. Alcohol withdrawal after open aortic surgery. *Ann Vasc Surg* 2001;15(3):332-7.

36. Shortell CK, Quierroz R, Johansson M, Waldman D, Illig K, Ouriel K, Green RM. Safety and efficacy of limited-dose tissue plasminogen activator in acute vascular occlusion. *J Vasc Surg* 2001;34(5):854-9
37. Sternbach Y, Illig KA, Zhang R, Shortell CK, Rhodes JM, Davies MG, Lyden SP, Green RM. Hemodynamic benefits of regional anesthesia for carotid endarterectomy. *J Vasc Surg* 2002;35(2):333-9.
38. Illig KA, Sternbach Y, Zhang R, Burchfiel J, Shortell CK, Rhodes JM, Davies MG, Lyden SP, Green RM. EEG changes during awake carotid endarterectomy. *Ann Vasc Surg* 2002;16(1):6-11
39. Shortell CK, Johansson M, Green RM, Illig KA. Optimal operative strategies in the repair of juxtarenal abdominal aortic aneurysms. *Ann Vasc Surg* 2003; 17:60-65.
40. Illig KA, Shortell CK, Zhang R, Sternbach Y, Rhodes JM, Ouriel K, Tanski W, Johansson M, Green RM: Carotid endarterectomy then and now. *Surgery* 2003; 134(4):705-11.
41. Lauterbach SR, Farber A, Shortell CK: Acute aortic dissection presenting as rupture of the femoral artery. *Ann Vasc Surg* 2004;18(1):11-13.
42. Almov DM, Elad S, Shortell CK: The role of panoramic radiographs in the medical surveillance of a patient at risk for stroke: Case report. *General Dentistry*, 2004;52(6):514-16.
43. Surowiec SM, Davies MG, Illig KA, Shortell CK, Waldman D. Percutaneous angioplasty and stenting of the superficial femoral artery. *J Vasc Surg*, submitted.
44. Hsu JH, Younan D, Pandalai S, Gillespie BT, Jain RA, Schippert DW, Narins, CR, Surowiec SM, Khanna A, Davies MG, Shortell CK, Rhodes JM, Waldman DL, Green RM, Illig KA. Use of computer simulation for determining endovascular skill levels in a carotid stenting model. *J Vasc Surg*; 2004;40(6):1118-25.
45. Shortell CK, Rhodes, JR, Johansson M, Sura C. Radiofrequency Ablation for Superficial Venous Reflux: Improved Outcomes in a High Volume University Setting (In press, *J Vasc Surg*).
46. Wolford HY, Surowiec SM, Hsu, J, Rhodes JM, Singh MJ, Shortell CK, Illig

KA, Green RM, Waldman DL, Davies MD. Stacked proximal aortic cuffs: An “off-the-shelf” solution for treating focal thoracic aortic pathology. J. Endovasc Ther. 2005; 12:574-578.

CHAPTERS IN BOOKS:

1. Strandness D, Marder V, Shortell C, Salzman E, “Management of Peripheral Arterial Disease”, **IN** Hemostasis and Thrombosis, 3rd Ed, (R Coleman, J Hirsh, V Marder, E Salzman, eds) Lippincott, Philadelphia, PA, 1993.
2. DeWeese J, Shortell C, Green R & Ouriel K, "Operative Repair of Popliteal Aneurysms: Twenty-Five Years Experience", **IN** Long-Term Results in Vascular Surgery, (J. Yao, WH Pearce, Ed), Appleton & Lange pp 287-293, 1993.
3. Ouriel K & Shortell C, "Popliteal and Femoral Aneurysms", **IN** Vascular Surgery, 4th ed. (RR Rutherford, Ed.), W.B. Saunders Company, Orlando, FL, Chapt 79, 1994.
4. Green R & Shortell C, “The Antiphospholipid Syndrome and Peripheral Arterial Occlusion”, **IN** The Ischemic Extremity, Advances in Treatment, (J Yao, WH Pearce, eds), Appleton and Lange, pp141-151, 1995.
5. Shortell C, “Pulmonary Embolism and Vena Caval Interruption”, **IN** Lower Extremity Vascular Disease, (K Ouriel, ed), W.B. Saunders Company, Orlando, FL, Chapt 29, 1996.
6. Shortell C, “Peripheral Vascular Disease”, **IN** Primary Care of Women, (P Leppert & F Howard, eds), W.B. Saunders Company, Orlando, FL, Chapt 44, 1997.
7. Shortell C, Illig K, Ouriel K, “Perioperative Hemorrhage,” **IN** Vascular Surgery, (Rutherford, ed) 5th edition, W.B Saunders Company, Philadelphia, 666-688, 1999.
8. Shortell C, Green R, DeWeese J, “Antiplatelet Agents”, **IN** Vascular Surgery: Principles and Practice, (R Hobson, F Veith, S Wilson, eds), Quality Medical Publishing, St. Louis, MO, 2002.
9. Shortell C, Ouriel K. “Perioperative Hemorrhage”, **IN** Decision Making in Vascular Surgery, (J Cronenwett, RB Rutherford, eds), W.B. Saunders Company, Orlando, FL (in press), 2002.

10. Shortell, CK, Pamoukian VN:4 The Pulseless Extremity and Atheroembolism. 4Vascular System. ACS Surgery Online. Souba WW, Fink MP, Jurkovich GJ et al, Eds WebMD Inc., New York 2004

BOOK REVIEWS:

1. Thrombin, Thrombomodulin, and the Control of Hemostasis, John C. Giddings, ed, 1994, J Vasc Surg.

ABSTRACTS :

1. Toombs CF, Ouriel K, Shortell CK, Cravets M, Stead RB. Serum alpha-2 macroglobulin determines NAT binding capacity in patients with peripheral vascular disease. Presented at American Society of Hematologists (ASH) meeting, San Francisco, 11/00

PRESENTATIONS:

1. Hepatic adenoma. Surgical Grand Rounds, Strong Memorial Hospital, Rochester, NY, May, 1989.
2. Involvement of the lower extremity in a patient with Takayasu's arteritis. Upstate NY Vascular Society, Syracuse, NY, November 1989.
3. Clinical and laboratory investigation of thrombolysis. Surgical Grand Rounds, Strong Memorial Hospital, Rochester, NY, November, 1990.
4. Carcinoma of the parathyroid gland: A 30 year experience. Central Surgical Association, Indianapolis, IN, March 1991.
5. Popliteal artery aneurysm: A 25 year surgical experience. Eastern Vascular Society, Pittsburgh, PA, May 1991.
6. The antiphospholipid syndrome: A comparison with the atherosclerotic population. International Society of Cardiovascular Surgery, Boston, MA, June, 1991.
7. Peroneal bypass: A multifactorial analysis. Peripheral Vascular Surgery Society, Boston, MA, June, 1991
8. Comparison of thrombolytic therapy vs. nonthrombolytic therapy in acute ischemia of the lower limb. Symposium on the Role of Thrombolysis in Peripheral Vascular Disease, Rochester, NY, October, 1991.
9. Thrombogenicity of vessels after catheter thrombectomy versus urokinase clot removal. Peripheral Vascular Surgery Society, Breckenridge, CO, January, 1992.
10. Thrombus formation on arterial and venous surfaces. American Venous Forum, Lake Buena Vista, FL, February, 1993.

11. Urokinase vs. operation as the initial treatment of acute arterial occlusion. Vascular Fellows Competition, New York, New York, April, 1993.
12. Predictors of success using thrombolytic therapy for acute arterial occlusion: A multivariate analysis. Peripheral Vascular Surgery Society, Washington, DC, June 1993.
13. Operative management of coexistent aortic disease and horseshoe kidney. Peripheral Vascular Surgery Society, Seattle, WA, June, 1994.
14. A multicenter randomized trial of intravenous iloprost for ischemic ulcerations of the lower extremity. (poster) The International Society for Cardiovascular Surgery, New Orleans, LA, June, 1995.
15. Management of varicose veins and related venous disorders. Symposium on Primary Care for Women, Rochester, NY, November 1997.
16. Persistent sciatic artery: an unusual variant. Peripheral Vascular Surgery Society, Breckenridge, CO, January, 1998.
17. Thrombolysis vs. operation in the treatment of peripheral arterial occlusion. Association of Vascular and Interventional Radiographers of Western New York, Rochester, NY, October 16, 1998.
18. Treatment of acute arterial occlusion, "Then and Now", a comparison of approaches 25 years ago and today. Department of Surgery Grand Rounds, University of Rochester School of Medicine and Dentistry, November 7, 1998
19. Advances in Vascular Disease in the Elderly. Monroe Community Hospital Grand Rounds, November 17, 1998.
20. The Future of Thrombolysis in Vascular Disease. Vascular Grand Rounds, Massachusetts General Hospital, Boston MA, April 27, 2000
21. Thrombolysis in the Post-Urokinase Era. Surgical Symposium, Upstate Chapter American College of Surgeons Annual Meeting, Rochester NY, May 20, 2000
22. New Directions in Thrombolysis. AVIR, Rochester NY, 9/00
23. Optimal operative strategies in repair of juxtarenal abdominal aortic aneurysms. 27th Annual Spring Meeting, Peripheral Vascular Surgical Society, Boston MA, 6/8/02.
23. Carotid endarterectomy, then and now. Presented at the 60th Annual meeting of the Central Surgical Association, Toronto, Canada, March 21, 2003.
24. Optimal Clamp Position in Juxtarenal Aortic Aneurysm Repair. Presented at the first Annual Aortic Summit, Cleveland Clinic Foundation, Cleveland OH, September 5, 2003.
25. New Horizons for Thrombolytic Therapy. Florida Vascular Society, Sarasota FL., April 23, 2004
26. New Horizons in Thrombolytic Therapy for Deep Venous Thrombosis. Annual Veith Symposium on Vascular and Endovascular Surgery, New York, New York, November 18, 2004
27. Fibrinolytic Therapy for Acute DVT. Vascular Grand Rounds, SUNY Upstate Health Sciences Center, Syracuse, New York, April 28, 2005

28. Stacked Proximal Aortic Cuffs: An “Off-the-Shelf” Solution for Treating Focal Thoracic Aortic Pathology. Annual Meeting of the Eastern Vascular Society, Philadelphia, PA, April 29, 2004.

EDITORIAL POSITIONS:

Regular reviewer for Journal of Vascular Surgery, with special expertise in aortic surgery and thrombolysis
Reviewer for the Lancet on vascular surgical topics

AWARDS AND HONORS:

Daniel Webster Scholarship, Dartmouth College	1976-1980
Cum Laude, with distinction in Biology, Dartmouth College	1980
Jacobius Prize for Excellence in Pathology	1983
Young Surgeon, Upstate Chapter American College of Surgeons	1998

ORGANIZATIONS:

Clinical Investigation Committee, Rochester General Hospital	1993-1996
Transfusion Committee, Rochester General Hospital	1996-2003
Rochester Community IPA, Vascular Subcommittee	1997-2001
Society for Vascular Surgery, Committee on Womens’ Issues	2004

AREAS OF RESEARCH INTERESTS:

Thrombolytic therapy for acute vascular occlusion
Therapies for venous reflux
Complex aneurysm repair
Use of antiplatelet agents in stroke prevention during carotid surgery

ONGOING TRIALS AS PRINCIPAL INVESTIGATOR PROJECTS AND FUNDED RESEARCH:

1. Use of ultrasound to assess adequacy of thrombolysis in DVT (FDA IND #, Phase 1 Trial, Genentech, \$75,000)
2. Stroke prevention in carotid endarterectomy (FDA #, Phase 1 Trial, Lilly, \$290,000)
3. Advanced Closure Technique with 90⁰ C Treatment Temperature (Local PI), (\$10,000)
4. MRX-815 Enhanced Sonothrombolysis of Peripheral Arterial Occlusions in Bypass Grafts (Local PI)
5. Medtronic Small Anuerysm Trial, PIVOTAL (Local PI)

RESEARCH DATABASES MAINTAINED

1. Patients receiving catheter-directed thrombolytic therapy for acute arterial or venous occlusion
2. Patients undergoing radiofrequency ablation of greater and lesser saphenous vein

MULTICENTER TRIAL PARTICIPATION:

Institutional Principal Investigator, TOPAS Trial	113 centers	1993-1996
Institutional Principal Investigator, PURPOSE Trial	40 centers	1997-1998

CLINICAL ACTIVITY:

General vascular surgery, including aortic pathology (open and endovascular), lower extremity revascularization (operative and endoluminal), carotid endarterectomy and stenting, venous anti-reflux procedures.

PARTICIPATION IN ACADEMIC AND ADMINISTRATIVE ACTIVITIES:

Site program director, vascular surgery rotation, Rochester General Hospital
Supervisor/mentor for research fellowship year, Amit Khanna, MD
Lecturer, Bed and Bench curriculum (medical student clerkship)
Lecturer, General Surgery Basic Science curriculum
Associate Program Director, Vascular Surgery Fellowship, University of Rochester