CURRICULUM VITAE

Barbara Stewart Schwartzberg, MD

(Barbara Ann Stewart, MD)

Address: 10103 Ridgegate Parkway, Suite 350

Lone Tree, Colorado 80124

303-320-7826

Education:

1975 Franklin and Marshall College

Lancaster, Pennsylvania

BA, Chemistry

Barbara Stewart Schwartzberg, MD

1978 Purdue University

School of Pharmacology

West Lafayette, Indiana

MS, Pharmaceutical Chemistry

1985 George Washington University

School of Medicine

Washington, D.C.

Doctor of Medicine

1985-1986 University of Colorado

School of Medicine

Denver, Colorado

Internship – General Surgery

1986-1990 University of Colorado

School of Medicine

Denver, Colorado

Residency – General Surgery

Barbara Stewart	Schwartzberg.	MD
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1989	University of Colorado
	School of Medicine
	Denver, Colorado
	Fellowship – Pediatric Surgery, Transplant Surgery
Honors and Awards:	
1984	Alpha Omega Alpha
1985	The Howard F. Kane AFA King Obstetrical Society
1988	Young Investigator's Award
	National Digestive Disease Advisory Board

Barbara Stewart Schwartzberg, MD

1988 John Gramlich Traveling Surgeon's Scholar Award

University of Colorado School of Medicine

1989 Ben Eiseman Surgical Resident Research Award

University of Colorado School of Medicine

1999 Trailblazer Award

American Association of University Women

2001 Susan Miller Award

AMC Annual Day of Caring

2017 Lifetime Achievement Award

Susan Miller Day of Caring

State Licensure: Colorado 29668, 1989

California G149269, 2017

Barbara Stewart	Schwartzberg.	MD
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Board Certification:	
	American Board of Surgery 1993
	Recertification 2001, 2013
Hospital Affiliations:	
	Rose Medical Center
	4567 East Ninth Avenue
	Denver, Colorado 80220
Academic Appointmen	ts:
	Associate Clinical Professor of General Surger
	University of Colorado, Denver, Colorado
Teaching Responsibiliti	es:
1975-1978	Co-Instructor in Pharmaceutical Chemistry

Purdue University

Co-Instructor in Surgery

1989

University of Colorado School of Medicine

`1991 – Present Associate Clinical Professor of Surgery

University of Colorado School of Medicine

1991 – Present Instructor in Surgery

Rose Medical Center

1996-2000 Instructor, Advanced Breast Biopsy Instrumentation (ABBI)

Schwartzberg Center for Minimally Invasive Breast Surgery (SCMIBS)

1997 SAGES Resident Workshop, January 1997

2016 Hidden Scar Surgery, May 2016

Medical Posts:

1989 Reviewer, Pediatric Surgery International

1991 – Present Co-Director, Breast Center, Rose Medical Center

1991	Co-Chairperson, AMC Cancer Research Program - Program Committee
1995-1996	Managing Director, Colorado Endoscopic Surgical Education and Research Institute, Rose Medical Center
1996-2003	Co-Chairperson, SAGES Educational Program Committee
1996-2000	Instructor, Rural Outreach Program for Colorado, Wyoming and Nebraska
	New Techniques in Breast Surgery
1996	Founder, Schwartzberg Center for Minimally Invasive Breast Surgery
1999	Reviewer, Breast Diseases: A Yearbook Quarterly
1999-2009	Colorado Health Foundation, Board of Directors
2000-2009	National Commission on Cancer, American College of Surgeons
2000-2002	Chairman of Credentials Committee, Rose Medical Center
2000-2002	President – Elect of Medical Staff, Rose Medical Center
2002-2004	President of Medical Staff, Rose Medical Center
2005-2007	Chairman of Quality Committees, Rose Medical Center

Barbara Stewart Schwartzberg, MD

2006-2009 HCA, HealthONE Division, Board of Directors

2008-2012 Chairman of Cancer Committee, Rose Medical Center

2011-2015 Sarah Cannon Research Institute, Denver Division, Board of Directors

Special Advisory Panels:

1996 FDA Panel, New Breast Biopsy Mechanical Devices

2009, 2017 FDA Panel, Interstitial Laser Ablation of Breast Cancer

Industry Consultant:

1996-2000 Breast Division, United States Surgical Corporation, Norwich, Connecticut

2008-Present Consultant, Novian Health, Inc., Chicago, Illinois

2012 – Present Xoft, a subsidiary of iCAD, Inc., Nashua, New Hampshire

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Society Affiliations:

American College of Surgeons, Fellow

American Society of Breast Surgeons

Association of Women Surgeons

Colorado Medical Society (Board of Directors – 1991)

Chairman, Women's Section - 1999

Denver Academy of Surgeons

International Society of Intraoperative Radiation Therapy

National Commission on Cancer, Cancer Liaison Physician (Rose Medical Center

1998-2012)

Research:

1978-1982

Solid and aqueous degradation of cephamandole nafate, cefaclor, and moxalactam using new analytical techniques (x-ray diffraction). New product development for physicians and pharmacologists (team approach).

Eli Lilly and Company

1982-1985	Hepatitis B precautions of 200 physicians and dentists in the Washington D.C. area
	George Washington University
1985-1990	Pediatric hepatobiliary diseases with emphasis on biliary atresia, portal hypertension and liver transplantation
	University of Colorado
1991- Present	Minimally invasive techniques in breast surgery
2001- Present	Interstitial laser ablation of benign and cancerous breast lesions
2005 – Present	Surgical treatment of atypical mycobacterium soft tissue infections
2011- Present	Intraoperative radiation therapy of early stage breast cancer
	Sarah Cannon Research Institute

Research Trials:

2011 – present HealthONE IRB: Intra-operative Radiation Therapy (IORT) for Treatment of Early

Stage Breast Cancer

- 2012 present HealthONE IRB: A Safety and Efficacy Study of Intra-Operative Radiation Therapy (IORT)

 Using the Xoft® Axxent® eBx™ System at the Time of Breast Conservation Surgery for

 Early-Stage Breast Cancer
- 2016 present HealthONE IRB: A Safety and Efficacy Study of Intra-Operative Radiation Therapy (IORT)

 Using the Xoft Axxent eBx System at the Time of Breast Conservation Surgery for Early

 Stage Breast Cancer Single Institution Study at Rose Medical Center, Denver, Colorado
- 2012 present WIRB: A Multicenter "Ablate and Resect" Study of Novilase Interstitial Laser Therapy for the Ablation of Small Breast Cancers
- 2019 present WIRB: Prospective, Multicenter Confirmatory Clinical Evaluation of Novilase® Interstitial

 Laser Therapy for the Focal Destruction of Malignant Breast Tumors <15 mm
- 2018 present Alliance: AFT-25: Comparison of operative to monitoring and endocrine therapy

 (COMET) trial for low risk DCIS: a phase III prospective randomized trial

Invited Lectures and Seminars:

- (1) Transplantation and the Kasai Operation in Biliary Atresia. Am Academy of Pediatrics 56th Annual Meeting, New Orleans, Louisiana, November 1987
- (2) Prognostic Factors in Biliary Atresia. Pediatric Clinical Research Center, University of Colorado School of Medicine, Denver, Colorado, October 1987
- (3) Biliary Atresia Registry. Pediatric Clinical Research Center, University of Colorado School of Medicine, Denver, Colorado, October 1987
- (4) Hepatic Zinc, Copper and Manganese in Extra-hepatic Biliary Atresia, Pediatric Clinical Research Center, University of Colorado School of Medicine, Denver, Colorado, October 1987
- (5) Prognostic Factors in Biliary Atresia. Eight Annual Pediatric Surgery Resident's Conference, Toronto, Ontario, September 1987\Efficacy of Computed Tomography in Evaluating Abdominal Injuries in Children with Major Head Trauma. American Pediatric Surgical Association, South Carolina, May 1987
- (6) Adenomatous Polyps are Premalignant. Horizons in Surgery, Winter Park, Colorado, March 1987
- (7) Biliary Atresia: Early Determination and Prognosis, American Pediatric Surgical Association, Tucson, Arizona, May 1988
- (8) Prophylaxis of Deep Vein Thrombosis. Horizons in Surgery, Winter Park, Colorado, March 1988
- (9) Multiple Organ Failure is not Preventable. Halsted Society Meeting, Grand Tetons, Wyoming, September 1988
- (10)Biliary Appendico-duodenostomy (BAD); An Antireflux Conduit for Biliary Construction.

American Academy of Pediatrics, San Francisco, California, October 1988

- (11)Multiple Organ Failure is not Preventable. Horizons in Surgery, Breckenridge, Colorado, March 1990
- (12) The Blind Loop Syndrome in Children. American Academy of Pediatrics, Chicago, Illinois, October 1989
- (13) Parental Versus Enteral Nutrition. Horizons in Surgery, Breckenridge, Colorado, March 1990
- (14)Splenic Embolization in Children. American College of Surgeons, Colorado Chapter, Colorado Springs, Colorado, May 1990
- (15)Special Techniques in Vascular Surgery. American College of Surgeons, Colorado Chapter, Colorado Springs, Colorado, May 1991
- (16)Endorectal Pull-through Operation for Massive Rectal Trauma. American College of Surgeons, Colorado Chapter, Colorado Springs, Colorado, May 1992
- (17)Screening Mammograms for Breast Cancer Detection in Women in their 40's. Channel 4 News Special, February 1994
- (18)Breast Conservation as Treatment for Breast Cancer. AMC Day of Caring, Denver, Colorado, April 1995
- (19)Breast Cancer Statistics in Conjunction with Breast Cancer Awareness Month. Channel 7 News Special, October 1995

- (20)Treatment of Varicose Veins, Rocky Mountain Society of Vascular Technologists. Denver, Colorado, November 1995
- (21)First Trimester of Pregnancy Laparoscopic Procedures. SAGES Scientific Meeting, Philadelphia, Pennsylvania, March 1996
- (22) "Breast Cancer: Diagnosis and Treatment Options", and "Breast Cancer: Surgical Treatment Procedures". AORN Meeting RNFA Forum, Las Vegas, Nevada, June 1997
- (23) "ABBI" Advanced Breast Biopsy Instrumentation. AMC Day of Caring, Denver, Colorado, November 1996
- (24) ABBI Results. FDA Panel, Washington, D.C. June 1996
- (25) ABBI Course. Cleveland, Ohio, September 1996
- (26) ABBI Course. Atlanta, Georgia, October 1996
- (27) ABBI Course. Little Rock, Arkansas, November 1996
- (28) SAGES Meeting-Moderator Scientific Session. San Diego, March 1997
- (29)Current and Future Applications of the ABBI Procedure. American Society of Breast Disease Annual Breast Conference. Seattle, Washington, April 1997
- (30) Faculty, Resident's Workshop SAGES "Laparoscopic Suturing", January 1997

- (31) Channel 7 News Special "New Breast Surgical Technique ABBI", October 1996
- (32) Channel 4 News Special "Mammograms for Women under 40". January 1997
- (33) Channel 4 News Special "Mammograms for Women under 40 a Follow-up". February 1997
- (34)New Breast Biopsy Techniques. CME Dinner Symposium, Rose Medical Center, Denver, Colorado, November 1996
- (35)Teleconference with Australia ABBI Technique. November 1996
- (36)Teleconference Live ABBI Demonstration American College of Surgeons, October 1996
- (37)Image-guided Biopsy of the Breast Whose Realm? Annual Roentgen Ray Society Meeting, Boston, Massachusetts. 1997
- (38)New Techniques in Breast Cancer. American College of Surgeons, Colorado Chapter, Breckenridge, Colorado. 1997
- (39)Minimal Access Applications to Breast Surgery. American College of Surgeons, New Orleans, Louisiana. 1997
- (40)Image-guided Therapy and Surgery. The Society for Minimally Invasive Therapy. London, England. 1998
- (41)Advanced Breast Biopsy Instrumentation: The Denver Experience. 6th World Congress of Endoscopic Surgery, Rome, Italy 1998

- (42)New Stereotactic Breast Biopsy Devices. New South Wales Breast Cancer Institute, Sydney, Australia. 1999
- (43)Technological Innovations and New Directions in Breast Cancer. New Mexico Society of Clinical Oncology, Albuquerque, New Mexico. 1999
- (44)Sentinel Lymph Nodes for Breast Cancer. Western Nebraska Autumn Surgical Symposium, Scottsbluff, Nebraska, 2000
- (45)Sentinel Lymph Node Biopsy in Breast Cancer Patients Enrolled in the NSABP B-27 Neoadjuvant Chemotherapy Clinical Trial. Poster Session. Sentinel Node 2000. John Wayne Cancer Center, Santa Monica, California. December 2000
- (46)Inclusion to Impact: Insights and Inspiration from the Legacy of Women at Franklin and Marshall College Medical Panel. The Legacy of Women at F&M, 40 Years of Coeducation Conference, Lancaster, Pennsylvania. 2009
- (47)Interstitial Laser Ablation of Breast Cancer. Denver Academy of Surgeons. Denver, Colorado. 2009
- (48)Early Results of Novel Laser Technology to Ablate Breast Fibroadenomas. Poster Session. Miami Breast Conference. South Beach, Florida. 2010
- (49)Intraoperative Radiation Therapy for Early Stage Breast Cancer. American Society of Breast Surgeons Annual Meeting. Poster Session. Orlando, Florida, 2013
- (50)IORT and Laser Ablation in Treatment for Breast Cancer. Colorado Cancer Registrars Association.

 Denver, Colorado. 2013

- (51)IORT Lunch Symposium. Miami Breast Conference. South Beach, Florida. 2014
- (52)Advances in the Treatment of Early Stage Breast Cancer. Association of perioperative Nurses Educational Seminar. Denver, Colorado. 2014
- (53)Intraoperative Radiation for Early Stage Breast Cancer in Denver, Colorado, USA. 8th
 International Society of Intraoperative Radiation Therapy Congress. Cologne, Germany 2014
- (54)IORT Lunch Symposium. Miami Breast Conference. South Beach, Florida 2015
- (55)Intraoperative Radiotherapy. American College of Surgeons. Clinical Congress. Chicago, Illinois. 2015
- (56)Radiotherapia intraoperatoria no cancro da mama. Conferencias CUF. Lisbon, Portugal. 2015
- (57)Multicenter clinical trial of percutaneous laser ablation for early stage primary breast cancer. Results of 49 cases with clinical and pathological correlation. San Antonio Breast Conference. Poster Session. San Antonio, Texas. 2015
- (58)Intraoperative Radiation Therapy for Treatment of Early Stage Breast Cancer. 24th International Wu Ho-Su Memorial Congress. Taipei, Taiwan. 2016
- (59) Phase II Open-Label Trial Investigating Percutaneous Laser Ablation for Treatment of Early Stage Breast Cancer: MRI, Pathology and Outcome Correlations. 19th Annual Meeting of the American Society of Breast Surgeons. Poster Session. Orlando, Florida. 2018.
- (60)Intraoperative Radiation Therapy for Treatment of Early Stage Breast Cancer. Trinidad and Tobago. 2018.

- (61)Percutaneous Ablation of Breast Cancer. 20th Annual Meeting of the American Society of Breast Surgeons. Dallas, Texas. 2019.
- (62)Ablative Therapies in Breast Disease. Murtha Cancer Center Breast Cancer Summit. Walter Reed National Military Medical Center, Bethesda, Maryland. 2019.

Publications:

- (1) Indelicato JM, Stewart BA, Engel GL: Formylation of glucose by cephamandole nafate at alkaline pH. J Pharm Sci 69: 1183, 1980
- (2) Stewart BA, Midland SI, Byrn SR: Degradation of crystalline ergocalciferol (Vitamin D2; (3B, 5Z, 22E)-9, 10 Secoergoster-5,7, 10 (19), 22 Tetraen 3-01). J Phar Sci 73:1322, 1984.
- (3) Sherman KE, Ku W, Sherman S, Stewart BA, Povar G: Hepatitis B prevention: Practices and attitudes of physician and dentists. Am J Prevent Med 2:290, 1986.
- (4) Stewart BA, discussant: Beaver BL, Colombani PM, Fal A, et al. The efficacy of computed tomography in evaluating abdominal injuries in children with major head trauma. J Pediatric Surg 22:1117-1122, 1987.
- (5) Stewart BA, Vasquez-Estevez JJ, Hall RJ, Lilly JR: Prognostic factors in biliary atresia (abst), Proc Eight Ann Pediatric Surg Res Cong. 9:27, 1987.
- (6) Stewart BA, Hall RJ, Lilly JR: Liver transplantation and the Kasai operation in biliary atresia. J Pediatric Surg 23:623-626, 1988.
- (7) Vasquez ZE, Estevez JJ, Stewart BA, Hall RJ, Shikes RH, Lilly JR: Biliary atresia: Early determination

- of prognosis. J Pediatric Surg 24:48-51, 1989.
- (8) Stewart BA, Hall RJ, Lilly JR: Liver transplantation and the Kasai operation in biliary atresia (abst). Pediatric Dig 3: 21-22, 1989.
- (9) Stewart BA, discussant: Crombleholme TM, Harrison MR, Langer LC, et al: Biliary appendicoduodenostomy: a nonrefluxing conduit for biliary reconstruction. J Pediatric Surg 24:655-667, 1989.
- (10)Stewart BA, Hall RJ, Lilly JR: Liver transplantation and the Kasai operation in biliary atresia (abst). Current Surg 47:73-74, 1990.
- (11)Stewart BA, Hall RJ, Karrer FM, Lilly JR: Long-term survival after Kasai's operation for biliary atresia. Pediatric Surg Int 5:87-90, 1990.
- (12)Goss CH, Stewart BA, Hambridge KM, Lilly JR: Plasma manganese levels in children with extrahepatic atresia (abst). Clinical Research 38:156A, 1990.
- (13)Stewart BA, Karrer FM, Hall RJ, Lilly JR: The blind loop syndrome in children. J Pediatric Surg 25:905-908, 1990.
- (14)CH, Stewart BA, Hambridge KM, Lilly JR: Plasma manganese levels in children with extrahepatic biliary atresia (abst). The FASEB Journal 4:A526, 1990.
- (15)Karrer FM, Lilly JR, Stewart BA, Hall RJ: Biliary atresia registry (1976-1989). J Pediatric Surg 25:1076-1081, 1990.
- (16) Karrer FM, Stewart BA, Hall RJ, Lilly JR. Congenital biliary tract diseases. Surgical Clinics of North

America 70:1043-1418, 1990.

- (17)Schwartzberg BS, Conyers JA, Moore JA. First trimester of pregnancy laparoscopic procedures. Surgical Endoscopy , 1997
- (18)People to Watch. Colorado Homes and Lifestyles Magazine, March/April 1997.
- (19)ABBI will replace other biopsy methods. Health Consultants Women's Help Management., July 1996.
- (20)Rose physician performs new breast surgery. Columbia Health One news release, May 1996.
- (21)New Techniques in breast surgery. Women's Day Magazine. April 1997
- (22)Georgian-Smith D, Lyons RD, Schwartzberg BS, et al. A smorgasbord of Interventional phantoms. Seminars in Interventional Radiology 14: 377-387, 1997
- (23)McIntyre RC, Montrey JS, Stewart BA. Angiolipoma: A new tumor of the breast. Surgical Rounds 8:380-385. 1998
- (24)Kelley WE, Bailey R, Bertelsen C, et al. Stereotactic automated surgical biopsy using the ABBI biopsy device: A multicenter study. The Breast Journal 4:302-308, 1998
- (25)Schwartzberg BS. Advanced breast biopsy instrumentation: the Denver experience. 6th World Congress of Endoscopic Surgery. Editor: Monduzzi. Bologna, Italy 511-515. 1998
- (26)Heimbach JK, Biffl WL, Mitchell EL, et al. Breast conservation therapy in affiliated county, university and private hospitals. Am J Surg 178:466-469, 1999

(27)Schwartzberg BS, Goates JJ, Keeler SA, et al. Use of Advanced Breast Biopsy Instrumentation while performing stereotactic breast biopsies: Review of 150 consecutive biopsies. JACS 191: 9-15, 2000

(28)Schwartzberg BS, Goates JJ, Kelley WE. Minimal access breast surgery. Surgical Clinics of North America 80:1383-1398, 2000

(29)Carson C, Paul D, Schwartzberg BS, et al. An informational guide to breast cancer. HCA Cancer Care. 2000

(30)Dowlatshahi K, Robinson D, Schwartzberg BS, et al. Image-guided percutaneous breast cancer ablation. Am J Surg 182:429-433, 2001

(31)Dowlatshahi K, Francescatti DS, Bloom KJ, et al. Image-guided surgery of small breast cancers. Am J Surg 182:419-425, 2001

(32)Schwartzberg BS, Miller SA. "The role of stereotactic breast biopsy in the management of breast disease". Current Surgical Therapy, 8th Edition. Editor: Cameron. Philadelphia. 615-617, 2001

(33)Schwartzberg B, Chin D, Howell K, et al. Use of the 21 gene recurrence score (RS) assay results in patients (pts) treated with intraoperative radiation therapy (IORT) for early stage (ES) breast cancer. J Clinical Oncol. 34: (suppl abstract 12537) 2016

(34)Schwartzberg B, Abdelatif O, Lewin J. Multicenter phase II open-label trial of percutaneous laser ablation (PLA) for 61 patients (pts) with early-stage (ES) primary breast cancer: Radiographic (MRI) and pathological correlation. J Clinical Oncol. 34: (suppl abstract 12525) 2016

(35)Schwartzberg B. The value of intraoperative radiation therapy. Imaging Technology News. Online. P 31-32. June 2016.

(36)Schwartzberg B, Chin D, Dorn P. Application of 21-gene recurrence score results and ASTRO suitability criteria in breast cancer patients treated with intraoperative radiation therapy (IORT). Am J Surg 216 (4):289-693, 2018

(37)Schwartzberg B, Lewin J, Abdelatif O. Phase 2 open-label trial investigating percutaneous laser ablation for treatment of early-stage breast cancer: MRI, pathology, and outcome correlations. Ann Surg Oncol 25(10):2958-2964, 2018

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1996 ABBI Training Manual