

# MICHAEL ROBERT ZENN, M.D., F.A.C.S.

## Hospital Address

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## Current Position

Vice Chief, Division of Plastic and Reconstructive Surgery  
Duke University Medical Center, 2009 to present  
Associate Professor, Division of Plastic and Reconstructive Surgery  
Duke University Medical Center, 2005 to present  
Program Director of Plastic Surgery Residency  
Duke University Medical Center, 2003 to present  
Director, Human Tissue Laboratory  
Duke University Medical Center, 2009 to present

## Past Positions

Assistant Professor, Division of Plastic and Reconstructive Surgery  
Duke University Medical Center, 2000 to 2005  
Assistant Professor, Division of Plastic and Reconstructive Surgery  
University of North Carolina at Chapel Hill, 1995 to 2000

## Education

Cornell University Medical College, New York, NY M.D. 1988  
University of Pennsylvania, Philadelphia, PA B.A. 1984  
Natural Science Major, *summa cum laude*

## Postgraduate Training

Memorial Sloan-Kettering Cancer Center, New York, NY  
Microsurgery Fellow, July 1995 - December 1995  
Massachusetts General Hospital, Boston, MA  
Plastic Surgery Resident, 1993-1995  
The New York Hospital-Cornell Medical Center, New York, NY  
General Surgery Resident, 1988-1992  
Chief Surgical Resident, 1992-1993

## Awards and Honors

Pathways to Leadership Program. American Society of Plastic Surgeons  
leadership training program, January 2007 – October 2007.

### **Awards and Honors(cont.)**

The North Carolina Medical Society Tobacco Control Award, Winner Physician Category, 1999

Teaching Scholars Program. University of North Carolina School of Medicine, 1997-1999.

Cornell University Medical College

**Alpha Omega Alpha**, 1987

A.M.A. Scholarship in Clinical Nutrition, Fall 1988

Joseph Collins Foundation Scholarship, 1984-1988

George N. Papanicolaou Fellow in Clinical Anatomy, Fall 1988

University of Pennsylvania

**Phi Beta Kappa**, 1984

Dean's List, 1980-1984

### **Certification**

American Board of Plastic Surgery, September 1998 (recertified 4/09)

American Board of Surgery, May 1994

### **Professional Society Memberships**

American Society of Plastic Surgeons

American Society of Aesthetic Plastic Surgeons

American Association of Plastic Surgeons

American Society for Reconstructive Microsurgery

World Society for Reconstructive Microsurgery

Plastic Surgery Research Council

American College of Surgeons, Fellow

North Carolina Society of Plastic and Reconstructive Surgeons,

Vice-President 2001-2002, President 2002-2003

Southeastern Society of Plastic and Reconstructive Surgeons

North Carolina Medical Society

Nathan A. Womack Surgical Society

American Medical Association

### **Publications**

*"Unilateral nipple reconstruction with nipple sharing- time for a second look."* Zenn M.R., Garofalo J. (accepted for publication Plastic and Reconstructive Surgery)

*"Pyoderma Gangrenosum following free TRAM breast reconstruction: a case report."* Schoemann M.B. , Zenn M.R. (accepted for publication Annals of Plastic Surgery)

**Publications (cont.)**

- "Soft tissue defects and exposed hardware: a review of indications for soft-tissue reconstruction and hardware preservation."* Viol A, Zenn M.R., et al. Plastic and Reconstructive Surgery 123(4): 1256-1263, 2009.
- "Early experience with fluorescent angiography in free tissue transfer reconstruction."* Pestana I, Levin L.S., Zenn M.R., et al. Plastic and Reconstructive Surgery 123(4): 1239-1244, 2009.
- "Strategy for reoperative free flaps after failure of a first flap."* Baumeister S, Zenn M.R., et al. Plastic and Reconstructive Surgery 122(3): 962-71, 2008.
- "Extended applications of vascularized preauricular and helical rim flaps in reconstruction of nasal defects."* Zhang Y, Zenn M.R., et al. Plastic and Reconstructive Surgery. 121(5): 1589-1597, 2008.
- "Efficacy of ethyl nitrite in reversing surgical vasospasm."* Baccarani A., Zenn M.R., et al. Journal of Reconstructive Microsurgery 23: 257-262. 2007
- "Free flap reconstruction of the scalp and calvaria of major neurosurgical resections in cancer patientsL lessons learned closing large, difficult wounds of the dura and skull."* Wang H.T., Erdmann D, Olbrich K.C., Friedman A.C. Levin L.S., and Zenn M.R. Plastic and Reconstructive Surgery. 119(3): 865-872, 2007
- "Inferior gluteal flap harvest with sparing of the posterior femoral cutaneous nerve."* Zenn M.R., Millard J.A. Journal of Reconstructive Microsurgery 22: 509-512, 2006.
- "Insetting of the superficial inferior epigastric artery (SIEA) flap in breast reconstruction."* Zenn M.R. Plastic and Reconstructive Surgery. 117(5): 1407-1411, 2006.
- "Restoration of fecal continence after functional gluteoplasty: longterm results, technical refinements, and donor site morbidity."* Hultman S.C., Zenn M.R., Baker C., et al. Annals of Plastic Surgery 56(1): 65-70, 2006.
- "Breast necrosis following use of the internal mammary artery for Coronary Artery Bypass."* Gonyon D.L., Zenn M.R., Milano C. and Levin L.S. Annals of Plastic Surgery 54: 88-91, 2005
- "Closure techniques for large pelvic wounds."* Zenn M.R. Seminars in Colon and Rectal Surgery. Vol. 15(1) pp. 59-67, 2004.
- "A randomized placebo controlled comparison of electroacupoint stimulation, ondansetron vs. placebo for prevention of postoperative nausea and vomiting."* Gan T.J., Jiao K.R., Zenn M.R., Georgiade G. Anesthesia and Analgesia. 99: 1070-1075, 2004
- "Salvage of the failed breast reconstruction."* Zenn, M.R. Breast Disease. Vol 16, 157-161, 2002
- "Control of Breast Contour by the Use of Z-plasty in the Irradiated Breast Reconstruction."* Zenn, M.R. Plastic and Reconstructive Surgery 112(1) 210-214, 2003
- "A simple approach to the radiated scalp wound using Integra skin substitute."* Gonyon D, Zenn, M.R. Annals of Plastic Surgery 50(3) 315-320, 2003
- "Extended TRAM flap (eTRAM): a feasibility study on fresh human cadavers."* Heitmann C, Zenn, M.R. Annals of Plastic Surgery 50(3) 256-262, 2003
- "Functional unilateral gluteoplasty for fecal incontinence: technical refinements, donor site morbidity, and longterm outcome."* Plastic Surgery Forum 26: 247-248, 2003.

**Publications (cont.)**

- "Introital Stenosis Requiring Pelvic Resection and Soft Tissue Reconstruction: a Case Report."* Zenn, M.R., Fowler, W.C., Jr., Bos, G.D. Obstetrics & Gynecology 98(5): 972-974, 2001.
- "Treatment of Fibrous Dysplasia of the Mandible with Radical Excision and Immediate Reconstruction: a Case Report."* Zenn, M.R. and Zuniga, J.R. Journal of Craniofacial Surgery 12(3): 259-263, 2001
- "Principles of Microsurgery."* Zuniga, J., Zenn, M.R. Oral and Maxillofacial Clinics of North America 13(2): 331-342, May 2001.
- "Microvascular Reconstruction of the Lower Extremity."* Zenn, M.R., Levin, L.S. Seminars in Surgical Oncology 19(3): 272-281, 2000
- "Replantation of the Penis: A Patient Report"* Zenn, M.R., Carson, C.C., and Patel, M.P. Annals of Plastic Surgery 44(2): 214-220, 2000
- "Helical Advancement with Posterior Auricular Pull-through Flap: a technique for reconstruction of combined helical and scaphal defects."* Zenn, M.R. Aesthetic Plastic Surgery 23: 131-133, 1999.
- "Severe Granulomatous Reaction to Injected Liquid Silicone Mimicking Inflammatory Cancer of the Breast: a case report."* Zenn, M.R. and Fakhry, S.M. Contemporary Surgery 54(2): 105-108, 1999.
- "The Role of the Radial Forearm Free Flap in Mandibular Reconstruction."* Zenn, M.R., Hidalgo, D.A., Cordeiro, P.C., Shah, J.P., Strong, E.W., and Kraus, D.H. Plastic and Reconstructive Surgery 99(4): 1012-1017, April 1997.
- "Subciliary Malar Augmentation and Cheek Advancement: A Six Year Study in 22 Patients Undergoing Blepharoplasty."* May, J.W., Jr. and Zenn, M.R. Plastic and Reconstructive Surgery 96(6): 1553-1559, 1995.
- "Aesthetic Reconstruction of Tikhoff-Linberg Shoulder Defects with a Dual Pedicle TRAM Free Flap."* Hidalgo, D., Zenn, M., and Marcove, R. Plastic and Reconstructive Surgery 91(7): 1340 - 1343, 1993.
- "Variations in Digital Nerve Anatomy."* Zenn, M., Hoffman, L., Latrenta, G. and Hotchkiss, R. The Journal of Hand Surgery. Vol. 17, No. 6, pp. 1033-1036, November, 1992.
- "Preparation of Small Caliber Intestine for Anastomosis with the E.E.A. Stapler."* Fong, Y., Zenn, M., and Barie, P. Surgery, Gynecology, and Obstetrics, Vol. 174, pp. 525-526.
- "Hypertrophic Pyloric Stenosis in the Newborn: A Case Report."* Zenn, MR and Redo, SF. The Journal of Pediatric Surgery, 28(12): 1577-1578, December, 1993

**Book Chapters**

- "Trunk Reconstruction."* Walsh M, Zenn MR, Levin LS in PLASTIC AND RECONSTRUCTIVE SURGERY. Edited by Maria Siemionow, M.D. Springer (in print)
- "Current Concepts of Breast Reconstruction."* Tahernia A, Erdmann D, Zenn MR in MANAGEMENT OF BREAST DISEASES. Edited by Ismail Jatoi, M.D. Springer (in print)

### **Book Chapters(cont.)**

- “Gynecomastia.” Zenn MR. in COSMETIC AND RECONSTRUCTIVE BREAST SURGERY. Edited by Maurice Nahabedian, M.D. et al. Saunders Elsevier, Philadelphia 2009.
- “Skull Base Reconstruction.” Zenn MR. in PLASTIC SURGERY: INDICATIONS AND PRACTICE. Edited by Bahman Guyuron, M.D. et al. Saunders Elsevier, Philadelphia 2009.
- “Breast Reconstruction.” Zenn, MR in FIRST EXPOSURE – GENERAL SURGERY. Edited by Danny O. Jacobs, M.D., M.P.H. McGraw-Hill, New York. 2006
- “Multiple Digit Replantation.” Zenn, M.R. and Levin, L.S. in THE MUTILATED HAND. edited by Norman and Jeffrey Weinzweig, M.D. Elsevier Mosby, Philadelphia, 2005.
- “Breast Reconstruction: the Free TRAM Flap,” (eMedicine Journal, November 5, 2001 Volume 2, Number 11); revised December 2004
- “Breast Reconstruction: the Bipedicled TRAM Flap,” (eMedicine Journal, August 7, 2001 Volume 2, Number 8); revised January 2005
- “Breast Reconstruction: the Unipedicled TRAM Flap,” (eMedicine Journal, February 15, 2001 Volume 2, Number 2); revised January 2005
- “TRAM Flap Reconstruction: The Single Pedicle, Whole Muscle Technique.” Zenn, M. R. and May, J.W. Jr. in SURGERY OF THE BREAST: PRINCIPLES AND ART. edited by Scott Spear. M.D. Lippincott-Raven, 1998(first edition); 2006 (second edition)

### **Educational Courses**

- Co-Director, *Annual Fresh Cadaver Flap Dissection Course for Reconstructive Surgery*, Duke University Medical Center, Durham N.C., August 2003-2009
- Co-Director, *Duke Facial Nerve Symposium*, Duke University Medical Center, Durham N.C., September 2008

### **Editorial Boards**

- Journal of Reconstructive Microsurgery* 2003-present  
*Annals of Plastic Surgery* 2007-present  
*Head and Neck* 2008-present

### **Committee Memberships**

- DUMC – ICGME – voting member, 2005 to present  
ASPS – Program Committee, Microsurgery, 2006 to present  
ASPS – Curriculum Development Committee, 2009 to present  
ASRM – Executive Council, Senior Member at Large, 2008 to present  
ASRM – Education representative to ASPS 2008 to present

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ASRM – Ad-hoc Breast Committee, 2006 to present

**Committee Memberships (cont.)**

ASRM – Audit Committee, 2005 to present

ASRM – CPT/RUC Committee, 2004 to present

ASRM – Buncke Lectureship Committee, 2006 to present

ASRM – Program Committee (Chairperson), 2007

**Community Service**

Board Member, *Race for the Cure*, Susan Komen Foundation, NC Triangle Affiliate, 2001 to 2004

*“Saving Face: Reconstruction of Head and Neck Cancers and Their Prevention.”*

An outreach program started in 1997 targeted at teens in North Carolina to reduce high risk behaviors of chewing tobacco, smoking, and excessive sun bathing. The one hour program depicts graphically plastic surgical procedures required to reconstruct defects from head and neck cancer resections. Suggestions to reduce cancer risk are provided.

**Presentations**

“Breast Reduction and Breast Reconstruction – a personal evolution.” Plastic Surgical Association Republic of China Annual Meeting. Taipei, Taiwan. November, 2008.

“Facial Reanimation- The Joy of a Smile” ASPS Annual Meeting. Chicago, IL. October, 2008

“Facial Reanimation” ACPA Annual Meeting. Philadelphia, PA. April, 2008

“Facial Reanimation.” Facial Nerve and Reanimation Symposium. Durham, NC. September, 2008.

“Facial Reanimation” Surgery Grand Rounds, Rochester University Medical Center, Rochester, NY, August, 2008.

“Microsurgical Reconstruction of Mohs Defects.” 22<sup>nd</sup> Annual Workshop in Plastic Surgery. St. Johns, USVI. January, 2008.

“Microsurgical Salvage of Breast Reconstruction.” 22<sup>nd</sup> Annual Workshop in Plastic Surgery. St. Johns, USVI. January, 2008.

“Microsurgical Tips in Free Flap Breast Reconstruction.” 22<sup>nd</sup> Annual Workshop in Plastic Surgery. St. Johns, USVI. January, 2008.

**Presentations(cont.)**

- "Breast Reconstruction- What Has Evolved as the Clinical Standard." American Society of Reconstructive Microsurgery. Beverly Hills, C.A. January, 2008.
- "Abdominal Wall Hernia Repair after TRAM Breast Reconstruction." Breast Surgery and Body Contouring Symposium; Santa Fe, N.M. August, 2007.
- "Revisional Breast Surgery using Myocutaneous Flaps." World Society of Reconstructive Surgery. Athens, Greece. July 2007
- "Revisional Surgery in Breast Reconstruction- Perfecting Shape." Annual Meeting. American Society of Plastic Surgery. San Francisco, CA. October 2006
- "Breast Reconstruction Salvage with Microsurgery." Breast Surgery and Body Contouring Symposium; Santa Fe, N.M. August, 2006.
- "Anatomic Relationship Between the Inframammary Fold and the Pectoralis Major Origin." Southeastern Society of Plastic and Reconstructive Surgeons 47<sup>th</sup> Annual Meeting. Sea Island, GA. June, 2006.
- "Breast Reconstruction in the New Millennium." AORN Annual Meeting. Chapel Hill, N.C. February, 2006.
- "Insetting of the superficial inferior epigastric artery (SIEA) flap in breast reconstruction." Annual Meeting. American Society of Reconstructive Microsurgery; Puerto Rico January, 2005
- "Functional Unilateral Gluteoplasty for Fecal Incontinence: Technical Refinements, Donor Site Morbidity, and Long-term Outcome." 72nd Annual Scientific Meeting of the American Society of Plastic Surgeons; San Diego, CA October, 2004.
- "Autogenous Alternatives to TRAM Flap Reconstruction of the Breast." 18<sup>th</sup> Annual Breast Surgery Symposium. Southeastern Society of Plastic and Reconstructive Surgeons/ PSEF; Atlanta, GA January, 2002
- "Chest Wall Reconstruction." 18<sup>th</sup> Annual Breast Surgery Symposium. Southeastern Society of Plastic and Reconstructive Surgeons/ PSEF; Atlanta, GA January, 2002
- "Treatment of Hernias After TRAM Flap Reconstruction." 18<sup>th</sup> Annual Breast Surgery Symposium. Southeastern Society of Plastic and Reconstructive Surgeons/ PSEF; Atlanta, GA January, 2002
- "Breast Reconstruction in the New Millennium." Living Beyond Breast Cancer. Rex Healthcare's Ninth Annual Survivor Program. Raleigh, N.C. October, 2001

**Presentations(cont.)**

- "Breast Reconstruction." Living Beyond Breast Cancer. Rex Healthcare's Eighth Annual Survivor Program. Raleigh, N.C. October, 2000.
- "Breast Reconstruction." Women's Cancers. UNC/Duke. The Grandover, Greensboro, N.C. October, 2000.
- "Breast Reconstruction." Hampton Roads Fall Cancer Conference; Virginia Beach, VA. October, 2000.
- "Fellowship in Plastic Surgery." North Carolina Society of Plastic and Reconstructive Surgeons annual meeting; Asheville, N.C. September, 2000.
- "Facial Reconstruction after Trauma." 11<sup>th</sup> Annual New Hanover Medical Center Trauma Symposium; Wilmington, N.C. February, 2000.
- "Melanoma in the New Millennium" Greensboro Rotary Club; Greensboro, N.C. July, 1999.
- "New Developments in Head and Neck and Breast Reconstruction." Nathan Womack Society; Chapel Hill, NC. May, 1999.
- "Breast Reconstruction." Body and Soul '98: A symposium about breast cancer for women and their families. A UNC/Duke sponsored symposium. October, 1998.
- "Microsurgical Breast Reconstruction" Reconstructive Surgery: The State of the Art Symposium, Durham N.C. June, 1998.
- "Mandible Reconstruction and Dental Implants" Reconstructive Surgery: The State of the Art Symposium, Durham N.C. June, 1998.
- "Avoiding Complications in Microsurgery." Southeastern Society of Plastic and Reconstructive Surgeons Annual Meeting; Boca Raton, FL. June, 1998
- "Microsurgical Considerations in Replantation of the Penis." Southeastern Society of Plastic and Reconstructive Surgeons Annual Meeting; Boca Raton, FL. June, 1998
- "Breast Reconstruction." American Society of Plastic and Reconstructive Surgical Nurses Annual Meeting. Chapel Hill, N.C. February, 1998.
- "Breast Reconstruction." Body and Soul '97: A symposium about breast cancer for women and their families. A UNC/Duke sponsored symposium. October, 1997.
- "Replantation of the Penis." Southeastern Society of Plastic and Reconstructive Surgeons Annual Meeting. Boca Raton, FL. June, 1999.

**Presentations(cont.)**

- "Ambulatory Surgery: Lessons from Plastic and Reconstructive Surgery." American College of Surgeons Annual Meeting. Chicago, IL October, 1997.
- "Microsurgical Reconstruction" Surgery Grand Rounds/Visiting Professor. New Hanover Regional Medical Center, Wilmington, NC. September, 1997.
- "Cheek Reconstruction Utilizing a Free TRAM Flap." Nathan Womack Society; Chapel Hill, NC. February, 1997.
- "Breast TRAM Flap, Gluteus Flap, and other Free Flaps." American Society for Reconstructive Microsurgery Annual Meeting; Boca Raton, FL January, 1997
- "The role of the radial forearm free flap in mandibular reconstruction." The 65th Anniversary Scientific Meeting of the American Society of Plastic and Reconstructive Surgeons, Dallas, TX. November, 1996.
- "Breast Reconstruction." Body and Soul '96: A symposium about breast cancer for women and their families. A UNC/Duke sponsored symposium. October, 1996.
- "Cheek Reconstruction Utilizing a Free TRAM Flap." New England Society of Plastic and Reconstructive Surgeons 36th Annual Meeting; Boston, MA June, 1995.
- "Correction of Tip Asymmetry in the Cleft Lip Nose." Biannual Meeting of the Harvard Plastic Surgical Residencies; Boston, MA June, 1995.
- "Subciliary Malar Augmentation and Cheek Advancement: A Six Year Study in 22 Patients Undergoing Blepharoplasty." American Association of Plastic Surgeons; St. Louis, MO May, 1994.