

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Richard J. Barth, Jr. MD		POSITION TITLE Associate Professor of Surgery	
eRA COMMONS USER NAME (credential, e.g., agency login) RJBARTH01			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Princeton University	AB	1981	
Harvard Medical School	MD	1985	Medicine
New England Deaconess, Harvard Medical		1985-1988	Surgery Resident
National Cancer Institute		1988-1990	Surgical Oncology Fellow
New England Deaconess, Harvard Medical		1991-1992	Surgery Resident

A. Personal Statement: I am a Surgical Oncologist with interests in the use of new technology for tumor resection and delineation of margins, intraoperatively. I have worked with faculty at the Thayer School on research associated with the detection, diagnosis, therapy monitoring and removal of breast cancer. The proposed COBRE for the Center for Surgical Innovation will open many doors for additional collaborations such as these to explore novel technology and intraoperative imaging to improve surgical oncology. I am particularly interested in the use of intraoperative fluorescence to indentify surgical margins for tumor resection. We have begun to develop a protocol for breast surgery. In addition, I am investigating the use of image-guidance to improve completeness of resection in breast lumpectomy. The availability of intraoperative MRI will significantly help us develop and validate other more cost-effective approaches as well as to determine the accuracy of intraoperative MR. I am delighted to serve as a mid-career mentor for junior faculty led projects in the COBRE but I also see it as a vehicle that will significantly enhance my own research opportunities. I was also PI of an NCI funded clinical trial which utilized a dendritic cell vaccine to immunize patients after resection of colorectal cancer metastatic to the liver (ref 14). I have also been an investigator in several clinical trials in pancreatic cancer (ref 6,7).

B. Positions:

Dartmouth Medical School Hanover, New Hampshire	Assistant Professor of Surgery	1993-1998
Dartmouth Medical School Chief, Division of Surgical Oncology	Associate Professor of Surgery Dartmouth-Hitchcock Medical Center	1999-2012 2001-2012
Chief, Section of General Surgery	Dartmouth-Hitchcock Medical Center	2003-2012

Honors:

Princeton University:

Academic Excellence Award, Biochemical Sciences	1981
Freshman First Honor Prize (awarded to the student with the highest GPA in the class after Freshman year)	1981

Harvard Medical School:

Administrative Chief Resident Deaconess-Harvard Surgical Service	1992
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Dartmouth Medical School:

American Cancer Society Career Development Award	1995
Surgery Chief Residents' Award for Teaching Excellence	1998
Alma Hass Milham Award (for clinical excellence and compassion in patient care)	1998
Alpha Omega Alpha	1999

Society of University Surgeons	1999
Surgery Chairman's Award (for combining excellence in clinical care, research and teaching)	2000
The Arthur Naitove Distinguished Teaching Award	2001
The Dartmouth-Mosenthal Surgical Fellowship	2002
Finalist, Leonard Tow Humanism in Medicine Award	2005, 2006
Editorial Board, J. of Immunotherapy	1997-2013
Editorial Board, Annals of Surgical Oncology	2003-2009
Leading Physician, Breast Surgery, NH Magazine	2008

C. Selected Peer-reviewed Publications (from 61)

1. **Barth RJ**, Danforth DN, Venzon DJ, et al. Level of axillary involvement by lymph node metastases in breast cancer is not an independent predictor of survival. *Arch Surg* 1991, 126:574-577. *Pub Med* 20213309
2. Camp BJ, Dyhrman ST, Memoli VA, Mott LA and **Barth RJ**. In situ cytokine production by breast cancer tumor infiltrating lymphocytes. *Annals of Surgical Oncology* 1996, 3:176-84. *Pub Med* 8646519
3. **Barth RJ**. Histologic features predict local recurrence after breast conserving therapy of phyllodes tumors, *Breast Cancer Research and Treatment* 1999, 57:291-5. *Pub Med* 10617306
4. Gibson G, Lesnikoski B, Yoo J, Mott L, Cady B, **Barth RJ**. A comparison of ink directed and traditional whole cavity re-excision for breast lumpectomy specimens with positive margins, *Annals of Surgical Oncology* 2001, 8:693-704. *Pub Med* 11597009
5. **Barth RJ**, Gibson G, Carney P, Mott L, Becher R, Poplack S. Detection of breast cancer by screening mammography allows patients to be treated with less toxic therapy, *Am J Roentgenology* 2005, 184: 324-9. *Pub Med* 15615996
6. Pipas, JM, **Barth RJ**, Zaki B, Tsapakos M, Bettmann M, Cates J, Suriawinata A, Ripple G, Sutton J, Gordon S, McDonnell C, Perez R, Redfield N, Meyer L, Marshal J, Cole B, Colacchio T. Docetaxel/gemcitabine followed by Gemcitabine and external beam radiotherapy in patients with pancreatic adenocarcinoma, *Ann Surg Onc* 2005, 12: 1-10. *Pub Med* 16252135
7. Greer S, Pipas J, Sutton J, Zaki B, Tsapakos M, Colacchio T, Gibson J, Wiener, D, Ripple,G, **Barth RJ**. Effect of neoadjuvant therapy on local recurrence after resection of pancreatic adenocarcinoma. *J Am Coll Surg* 2008, 206: 451-7. *Pub Med* 18308215
8. Gorechlad J, McCabe E, Higgins J, Likosky D, Lewis P, Rosenkranz K, **Barth RJ**. Screening for Recurrences in Patients Treated with Breast Conserving Surgery: Is there a Role for MRI? *Annals of Surgical Oncology* 2008, 15:1703-9. *Pub Med* 18266039
9. Collins E, Moore C, Clay K, Kearing S, O'Connor A, Llewellyn-Thomas H, **Barth RJ**, Sepucha K. Can women with early stage breast cancer make an informed decision for mastectomy?, *J Clin Oncology* 2009, 27:519-25. *Pub Med* 19114703
10. Halter R, Zhou T, Meaney P, Hartov A, **Barth RJ**, Rosenkranz K, Wells W, Kogel C, Borsic A, Rizzo E, Paulsen K. Correlation of in vivo and ex vivo tissue dielectric properties to validate electromagnetic breast imaging: initial clinical experience. *Physiological Measurement* 2009, 30: S121-36. *Pub Med* 19491436
11. **Barth RJ**, Wells W, Mitchell S, Cole B. A prospective, multi-institutional study of adjuvant radiation therapy after resection of malignant phyllodes tumors, *Ann Surg Onc* 2009, 16:2288-94. *Pub Med* 19424757
12. Bauman, L, **Barth RJ**, Rosenkranz K. Breast conservation in women with multifocal-multicentric breast cancer: is it feasible?, *Ann Surg Onc* 2010, 17 Suppl. 3: 325-329. *Pub Med* 20853054
13. Wang, J, Jiang S, Li Z, diFlorio-Alexander R, **Barth R**, Kaufman P, Pogue B, Paulsen K. *In vivo* quantitative imaging of normal and cancerous breast tissue using broadband diffuse optical tomography, *Medical Physics* 2010, 37(7) 3715-24. *Pub Med* 20831079
14. **Barth RJ**, Fischer D, Wallace P, Channon J, Noelle R, Gui J, Ernstoff M. A randomized trial of ex vivo CD40L activation of a dendritic cell vaccine in colorectal cancer patients: tumor-specific immune responses are associated with improved survival, *Clin Cancer Res* 2010, 16:5548-56. *Pub Med* 20884622

15. Davis, K, **Barth R**, Gui J, Dann E, Eisenberg B, Rosenkranz K. The use of MRI in the pre-operative planning for women with newly diagnosed DCIS: risk or benefit? *Annals of Surgical Oncology* 2012, 19: 3270-4.
16. Laughney A, Krishnashwamy v, Rizzo E, Schwab M, **Barth R**, Pogue B, Paulsen K, Wells W. Spectroscopic imaging distinguishes morphological patterns that inform pathology in tissues relevant to surgical margin assessment, *Clinical Cancer Research*, in press.
17. Rosenkranz K, Tsui E, McCabe E, Gui J, Underhill K, **Barth R**. Increased rates of long term complications after MammoSite brachytherapy compared to whole breast radiation therapy, *J Am Coll Surg*, in press.

D. Research Support, current

Dartmouth Center for Clinical and Translational Science Grant.

“A study to evaluate the use of supine MRI images in breast conserving surgery”.

Principal Investigator, 12/1/10-12/1/13.

This study is designed to determine if an image obtained from a supine MRI can be transformed in the Operating Room setting to localize and excise breast cancer more accurately than wire localization.

Norris Cotton Cancer Center Clinical Research Grant

“A randomized phase II study of the effect of a low calorie diet on patients undergoing liver resection”,

Principal Investigator, 1/1/12-1/1/14.

This prospective randomized study is designed to confirm beneficial results we obtained from a cohort study of the effect of a pre-operative diet on hepatic steatosis and blood loss.

Research Support, recent past

2 PO1 CA080139-06A1 (Paulsen, Keith, PI) Alternative Breast Cancer Imaging Modalities,

Co-investigator, 5% effort, 9/05-4/31/12.

This project evaluated the use of infrared, microwave and electrical impedance in the diagnosis of breast cancer.

Norris Cotton Cancer Center Research Grant.

“A pilot study of US guided cryoablation of small unifocal invasive ductal breast cancer using MRI to evaluate tumor viability and immunologic assays to identify and characterize a cryoablation induced immune response.”

Principal Investigator, 5/1/07-5/1/08.

This study evaluated whether cryoablation of breast cancer in patients induced an anti-tumor immune response.

2 P30 CA023108-27 (Israel, Mark A., P.I.) Norris Cotton Cancer Center Support Grant

Co-investigator, 10% effort, 12/1/2003-12/1/2009.

This supported my work as Co-Director of the Immunotherapy Research Program of the Cancer Center.