

## CURRICULUM VITAE

Date Prepared: February 1, 2015

### GENERAL INFORMATION

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**Name:** JENNIFER L. PRETZ

**Office Address:** Department of Radiation Oncology, Brigham and Women's Hospital  
ASB-1 L2, 75 Francis Street, Boston, MA 02115

**Home Address:** 235 W. Newton Street, Apt 1, Boston, MA 02116

**Telephone:** (513) 312-2463

**Email:** jpretz@lroc.harvard.edu

**Citizenship:** USA

### EDUCATION

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8/1998-6/2002 **Cornell University**, Sibley School of Mechanical and Aerospace Engineering (Ithaca, NY): B.S. in Mechanical Engineering, minor in Biological Engineering

8/2002-8/2003 **Cornell University**, Department of Biological and Environmental Engineering (Ithaca, NY): M.Eng. in Biological Engineering

8/2006-6/2010 **Stanford University School of Medicine** (Stanford, CA): M.D. with concentration in Biomedical Ethics and Medical Humanities

### POSTDOCTORAL TRAINING

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6/2010-6/2011 **Massachusetts General Hospital** (Boston, MA): Internship, Internal Medicine

7/2011-6/2015 **Harvard Radiation Oncology Program** (Boston, MA): Residency, Radiation Oncology

### ACADEMIC APPOINTMENTS

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7/2011-6/2015 **Clinical Fellow**, Harvard Medical School (Boston, MA)

8/2015- **Dana Farber/Brigham and Women's Cancer Center** (Boston, MA): Clinical Instructor, Department of Radiation Oncology

## **OTHER TRAINING**

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- 9/2005-4/2006      **Harvard Extension School**, Division of Continuing Education (Boston, MA): Post-baccalaureate pre-medical coursework
- 6/2008-7/2008      **Tibetan Medical Hospital** (Xining, Qinghai, China): Month-long clinical rotation practicing Traditional Tibetan Medicine
- 7/2013-8/2013      **Harvard School of Public Health**, Program in Clinical Effectiveness (Boston, MA): Six-week course in epidemiology and medical statistics

## **TECHNICAL SKILLS**

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Software/Hardware: MIMvista (MIM Software), Eclipse (Varian Medical Systems), GE workstation (GE healthcare), MOSAIQ, ARIA

Techniques: External beam radiation therapy, intensity modulated radiation therapy, image guided radiation therapy, stereotactic radiosurgery, CyberKnife radiosurgery, stereotactic body radiation therapy, proton beam radiotherapy, low dose-rate brachytherapy, high dose-rate brachytherapy, and intraoperative radiation therapy

## **ADMINISTRATIVE POSITIONS**

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- 2014-2015      **Chief Resident**, Radiation Oncology, Harvard Radiation Oncology Program (Boston, MA)

## **CURRENT LICENSURE AND BOARD CERTIFICATION**

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- 2012-present      Massachusetts, Permanent State License
- 2012-present      Massachusetts Controlled Substance License
- 2012-present      Federal DEA License

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

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- 2011-present      American Society for Therapeutic Radiology and Oncology
- 2011-present      American College of Radiology
- 2011-present      Association of Residents in Radiation Oncology

## **HONORS AND DISTINCTIONS**

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- 2000      Pi Tau Sigma (Mechanical Engineering Honor Society)

- 2000 National Society of Collegiate Scholars
- 2003 Alpha Epsilon (Biological Engineering Honor Society)
- 2014 Chief Resident, Harvard Radiation Oncology Program

**COMMITTEE SERVICE**

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- 2001-2002 **Publicity Chair**, American Society of Mechanical Engineers, Cornell University (Ithaca, NY)
- 2006-2007 **Secretary**, Women and Medicine, Stanford University School of Medicine (Stanford, CA)
- 2007-2008 **M.D. Admissions Panel**, Stanford University School of Medicine (Stanford, CA)
- 2012-2013, 2014-2015 **Resident Selection Committee**, Harvard Radiation Oncology Program (Boston, MA)

**TEACHING**

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- 1999-2000 Society of Women Engineers, Cornell University (Ithaca NY)  
Taught science and engineering to local elementary school children to generate interest in science-based careers
- 2003-2006 Broad Institute of MIT and Harvard (Boston, MA)  
Mentored undergraduate students considering a career in science; taught basic laboratory techniques and data analysis to summer interns and new employees
- 2006-2007 49ers Academy, Stanford University (Stanford, CA)  
Promoted academic success of 6-8th grade students from low-income and minority communities
- 2006-2007 Fit For Learning (Santa Clara County, CA)  
Designed and led teaching sessions for a health and nutrition education program for 3rd grade level children in Palo Alto schools
- 2007-2008 Teaching Assistant, Stanford University School of Medicine (Stanford, CA): Surgery 101, Regional Study of Human Structure  
Directed cadaver laboratory dissections, held review sessions, and provided organizational support for undergraduates taking a premedical gross anatomy course

- 2007-2008 Teaching Assistant, Stanford University School of Medicine (Stanford, CA): INDE 210, The Healer's Art  
Customized course curriculum, coordinated logistics of each session, and gathered and compiled feedback
- 2014-present Medical Student Lecturer, Harvard Medical School (Boston, MA)  
Organize and provide weekly lectures for medical students during their Radiation Oncology clerkship

## RESEARCH EXPERIENCE

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- 1999-2000 Neuromuscular Biomechanics Laboratory, Cornell University (Ithaca, NY)  
Mentor: Francisco Valero-Cuevas, Ph.D.  
Collected data on hand function and the debilitating effects of arthritis
- 2001-2002 Laboratory for Pregnancy and Newborn Research, Cornell University (Ithaca, NY)  
Mentor: Peter W. Nathanielsz, M.D., Ph.D.  
Studied the effects of antenatal glucocorticoids on cardiovascular health in adult sheep
- 2002-2003 Analytical Microsystems and Biosensors Laboratories, Cornell University (Ithaca, NY)  
Mentor: Antje J. Baeumner, Ph.D.  
Designed and developed a Universal Biosensor for use in detecting multiple specified environmental pathogens in one sample
- 2003-2006 Dana-Farber Cancer Institute and the Broad Institute of MIT and Harvard (Boston, MA)  
Mentors: Todd R. Golub, M.D. and Benjamin Ebert, M.D., Ph.D.  
Identified the gene within the critically deleted region of Chromosome 5 that causes 5q- Syndrome using loss-of-function RNA interference (RNAi) techniques
- 2007-2009 Department of Biomedical Ethics, Stanford University School of Medicine (Stanford, CA)  
Mentor: David Magnus, Ph.D.  
Investigated the intersection of emergency research and innovative surgery, focusing on the ethical principles related to the protection of human research subjects
- 2013-2014 Department of Radiation Oncology, Brigham and Women's Hospital/Dana Farber Cancer Institute (Boston, MA)  
Mentor: Tracy Balboni, M.D.

Optimized the Supportive and Palliative Radiation Oncology database for patients with bone metastases

2013-2015

Department of Radiation Oncology, Brigham and Women's Hospital/Dana Farber Cancer Institute (Boston, MA)

Mentor: Elizabeth Baldini, M.D., M.P.H.

Investigated institutional survival outcomes and prognostic factors in adult patients with Ewings sarcoma

## REPORT OF SCHOLARSHIP

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### Publications, peer reviewed:

1. Baeumner AJ, **Pretz J**, Fang S. A universal nucleic acid sequence biosensor with nanomolar detection limits. *Analytical Chemistry*. 2004;76(4):888-894.
2. Ebert BL, Lee MM, **Pretz JL**, Subramanian A, Mak R, Golub TR, Sieff CA. An RNA interference model of RPS19 deficiency in Diamond Blackfan Anemia recapitulates defective hematopoiesis and rescue by dexamethasone: identification of dexamethasone responsive genes by microarray. *Blood*. 2005;105(12):4620-4626.
3. Ebert BL, **Pretz J**, Bosco J, Chang CY, Tamayo P, Galili N, Raza A, Root DE, Attar E, Ellis SR, Golub TR. Identification of RPS14 as a 5q- syndrome gene by RNA interference screen. *Nature*. 2008;451(7176):335-339.
4. Ebert BL, Galili N, Tamayo P, Bosco J, Mak R, **Pretz J**, Tanguturi S, Ladd-Acosta C, Stone R, Golub TR, Raza A. An erythroid differentiation signature predicts response to lenalidomide in myelodysplastic syndrome. *PLoS Medicine*. 2008;5(2):e35.
5. Lu J, Guo S, Ebert BL, Zhang H, Peng X, Bosco J, **Pretz J**, Schlanger R, Wang JY, Mak RH, Dombkowski DM, Preffer FI, Scadden DT, Golub TR. MicroRNA-mediated control of cell fate in megakaryocyte-erythrocyte progenitors. *Developmental Cell*. 2008;14(6):843-853.
6. Haining WN, Ebert BL, Subrmanian A, Wherry EJ, Eichbaum Q, Evans JW, Mak R, Rivoli S, **Pretz J**, Angelosanto J, Smutko JS, Walker BD, Kaech SM, Ahmed R, Nadler LM, Golub TR. Identification of an evolutionarily conserved transcriptional signature of CD8 memory differentiation that is shared by T and B cells. *Journal of Immunology*. 2008;181(3):1859-1868.
7. **Pretz J**, Medeiros BC. Thalidomide-induced pneumonitis in a patient with plasma cell leukemia: no recurrence with subsequent lenalidomide therapy. *American Journal of Hematology*. 2009;84(10):698-699.

8. **Pretz JL**, Magnus D, Spain DA. Emergency innovation: implications for the trauma surgeon. *Journal of Trauma*. 2009;67(6):1443-1447.
9. **Pretz JL**, Wo JY, Mamon HJ, Kachnic LA, Hong TS. Chemoradiation therapy: localized esophageal, gastric, and pancreatic cancer. *Surgical Oncology Clinics of North America*. 2013;22(3):511-524.
10. Expert Panel on Radiation Oncology – Rectal/Anal Cancer, Hong TS, **Pretz JL**, Herman JM, Abdel-Wahab M, Azad N, Blackstock AW, Das P, Goodman KA, Jabbour SK, Jones WE 3rd, Konski AA, Koong AC, Rodriguez-Bigas M, Small W Jr, Thomas CR Jr, Zook J, Suh WW. ACR appropriateness criteria – anal cancer. *Gastrointestinal Cancer Research*. 2014;7(1):4-14.
11. Damato AL, Townamchai K, Albert M, Bair RJ, Cormack RA, Jang J, Kovacs A, Lee LJ, Mak KS, Mirabeau-Beale KL, Mouw KW, Phillips JG, **Pretz JL**, Russo AL, Lewis JH, Viswanathan AN. Dosimetric consequences of interobserver variability in delineating the organs at risk in gynecologic interstitial brachytherapy. *International Journal of Radiation Oncology, Biology, Physics*. 2014;89(3):674-681.
12. Rampal R, Al-Shahrour F, Abdel-Wahab O, Patel J, Brunel JP, Mermel CH, Bass AJ, **Pretz J**, Ahn J, Hricik T, Kilpivaara O, Wadleigh M, Busque L, Gilliland DG, Golub TR, Ebert BL, Levine R. Integrated genomic analysis illustrates the central role of JAK-STAT pathway activation in myeloproliferative neoplasm pathogenesis. *Blood*. 2014;123(22):e123-133.
13. **Pretz J**, Barysaukas C, Raut CP, Hornick JL, Morgan JA, Butrynski JE, Marcus KJ, Devlin PM, Ready JE, Ferrone ML, George S, Baldini EH. Localized Adult Ewing Sarcoma (ES): Improved Outcomes With Ifosfamide and Etoposide (IE) added to Cyclophosphamide, Doxorubicin, and Vincristine (CAV) Chemotherapy (CT). *In Preparation*.

Publications, non-peer reviewed:

1. **Pretz J**, Whitaker K. Understanding Tibetan Medicine: A Case of Esophageal Cancer in Xining, China. *H&P: The Stanford Medical Student Clinical Journal*. Winter 2008;13:4-6.

Abstracts:

1. Ebert BL, Lee M, **Pretz J**, Golub TR, Sieff C. An RNA Interference Model of RPS19 Deficiency in Diamond Blackfan Anemia Recapitulates Defective Erythropoiesis and Rescue by Dexamethasone: Identification of Dexamethasone Responsive Genes by Microarray. Oral Session, ASH Annual Meeting 2004. *Blood*. 2004;104:721.

2. Ebert BL, Mak R, **Pretz JL**, Peck D, Haggerty S, Tolliday N, Golub TR. High Throughput Screen To Identify Small Molecules That Differentially Regulate Expression of the Globin Genes. Poster Session, ASH Annual Meeting 2005. *Blood*. 2005;106:3632.
3. Ebert BL, Levine RL, Wadleigh M, Brunet JP, **Pretz JL**, Buque L, Lee SJ, Gilliland DG, Golub TR. Characterization of Distinct Molecular Signatures in Myeloproliferative Diseases with the JAK2V617F Mutation and Wild Type JAK2. Oral Session, ASH Annual Meeting 2005. *Blood*. 2005;106:119.
4. Haining WN, Ebert B, Subramanian A, Wherry EJ, Evans J, Mak R, Rivoli S, Angelosanto J, **Pretz J**, Kaech S, Ahmed R, Nadler LM, Golub TR. All Memory Lymphocytes Share a Common Differentiation Program. Oral Session, ASH Annual Meeting 2006. *Blood*. 2006;108:865.
5. Ebert BL, Galili N, Tamayo P, Mak R, **Pretz J**, Ladd-Acosta C, Stone R, Golub TR, Raza A. An Erythroid Differentiation Gene Expression Signature Predicts Response to Lenalidomide in Myelodysplasia. Poster Session, ASH Annual Meeting 2006. *Blood*. 2006;108:2668.
6. Ebert BL, **Pretz J**, Bosco J, Chang CY, Tamayo P, Galili N, Raza A, Root D, Attar E, Ellis SR, Golub TR. Identification of RPS14 as the 5q-Syndrome Gene by RNA Interference Screen. Plenary Session, ASH Annual Meeting 2007. *Blood*. 2007;110:1.
7. **Pretz J**, Barysaukas C, Raut CP, Hornick JL, Morgan JA, Butrynski JE, Marcus KJ, Devlin PM, Ready JE, Ferrone ML, George S, Baldini EH. Localized Adult Ewing Sarcoma (ES): Improved Outcomes With Ifosfamide and Etoposide (IE) added to Cyclophosphamide, Doxorubicin, and Vincristine (CAV) Chemotherapy (CT). Poster Session, ASTRO Annual Meeting 2014.

Presentations/Posters:

1. **Pretz J**, Webster J, Nelson S, Kalani M. Fit for Learning. 24th Annual Stanford Medical Student Research Symposium. Stanford, CA. May 2007.
2. **Pretz J**, Whitaker K, Forfota C. Traditional Tibetan Medicine Clerkship, Summer 2008. Fall Forum on Community Health and Public Service. Stanford, CA. October 2008.
3. **Pretz J**. Emergency Innovation. Biomedical Ethics and Medical Humanities Breakout Session. Stanford, CA. April 2009.