Stanford



Jafi Alyssa Lipson

Clinical Associate Professor, Radiology

CLINICAL OFFICE (PRIMARY)

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**
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Bio

BIO

Dr. Lipson is a clinical faculty member in the Stanford University School of Medicine Department of Radiology, Breast Imaging Division. A graduate of Harvard College in 1995, she received her MD degree from UCSF School of Medicine, prior to completing a preliminary medicine internship year at St. Mary's Medical Center in San Francisco. She went on to complete a diagnostic radiology residency program at UCSF and was ABR board-certified in June 2009. She came to Stanford for a 1 year fellowship program in Breast Imaging in July 2009 before joining the faculty in August 2010.

Her clinical work includes screening and diagnostic mammography, diagnostic breast ultrasound, screening and diagnostic breast MRI, and minimally-invasive breast biopsy and wire localization guided by x-ray, ultrasound, and MRI.

Prior research activities focused on mammographic density and breast cancer risk assessment; early breast cancer detection and extent of disease evaluation using contrast enhanced mammography and MRI; novel blood and imaging biomarkers of breast cancer burden and neoadjuvant treatment response; and image-guided wireless localization techniques for breast surgery.

CLINICAL FOCUS

- Cancer > Breast Cancer
- Diagnostic Radiology
- Breast Imaging
- Medical Informatics

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Radiology
- Member, Stanford Cancer Institute

HONORS AND AWARDS

- Junior Faculty of the Year Award, Stanford University School of Medicine Department of Radiology (2011-2012)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American College of Radiology (2005 - present)
- Member, Radiological Society of North America (2005 - present)
- Member, Society of Breast Imaging (2009 - present)
- Member, American Society of Clinical Oncology (2014 - present)

PROFESSIONAL EDUCATION

- Internship: UCSF Health St Mary's Hospital (2005) CA
- Residency: UCSF Dept of Radiology (2009) CA
- Fellowship: Stanford University Radiology Fellowships (2010) CA
- Medical Education: University of California at San Francisco School of Medicine (2003) CA
- Board Certification: Diagnostic Radiology, American Board of Radiology (2009)

COMMUNITY AND INTERNATIONAL WORK

- California Breast Density Information Group (CBDIG)

LINKS

- Integrative Biomedical Imaging Informatics at Stanford (IBIIS): http://ibiis.stanford.edu/
- The Squeeze: Why Breast Compression is So Important for Breast Cancer Detection: http://stanford.io/1DIsd3N

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Lipson's prior research activities focused on radiation dose with CT and the associated risk of cancer. As an NIH-funded T32 Research Fellow under the mentorship of Dr. Rebecca Smith-Bindman, Dr. Lipson conducted a study of four Bay Area hospitals in which she reviewed 1,200 CT examinations and CT radiation dose reports; estimated the effective dose from each examination; and calculated the associated risk of cancer attributable to that effective dose. Her study culminated in an article entitled "Radiation Dose Associated with Common Computed Tomography Examinations and the Associated Lifetime Attributable Risk of Cancer" (Arch Intern Med. 2009 Dec 14;169(22):2078-86), which is one of the early articles that raised national attention regarding the issue of medical radiation and the need for clinical practice guidelines to track and reduce dose.

Dr. Lipson's current research interests include breast density and breast cancer risk assessment; informatics applications in breast imaging; early breast cancer detection and extent of disease evaluation using contrast enhanced mammography, digital breast tomosynthesis, and high resolution breast MRI; novel blood and imaging biomarkers of breast cancer burden and neoadjuvant treatment response; and image-guided wireless localization techniques for breast surgery.

CLINICAL TRIALS

- Genetic & Pathological Studies of BRCA1/BRCA2: Associated Tumors & Blood Samples, Recruiting
- Breast Density and the Role of Preoperative Mammography, Ultrasound, Elastography and MRI, Not Recruiting
- Contrast-Enhanced Digital Mammography(CEDM) vs Contrast-Enhanced Breast MRI(CE-MRI) in Breast Cancer, Not Recruiting
- Radiofrequency-Guided Localization in Patients With Abnormal Breast Tissue Undergoing Lumpectomy, Not Specified

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Data Science (Masters Program)
- Biomedical Data Science (PhD Program)
- Oncology (Fellowship Program)

Publications

PUBLICATIONS

- **The GENIE Data Model: A Solid Tumor, Person-Centric Framework for Scalable, Harmonized Precision Oncology Data Collection.** *Cancer research communications*
  Hoppe, J. N., Lee, J., Akinyemiju, T. F., Bitterman, D. S., Brudno, M., Green, M. F., Huser, V., Lipson, J. A., Mishra, S., Nussbaum, D. P., Patel, J. N., Petkov, V. I., Rasmussen, et al
  2026

- **A multisite survey on patient perspectives of breast cancer risk assessment and supplemental breast cancer screening tools.** *Clinical imaging*
  Light, L., Pena, M., Pittman, S. M., Liang, T., Lipson, J. A., Rosen, E. L., Dashevsky, B. Z.
  2026; 139: 110911

- **Diagnostic Axillary US: How Indication and Breast Cancer Status Impact Diagnostic Outcomes.** *Journal of breast imaging*
  Yan, H. Z., Liang, T., DeMartini, W. B., Pittman, S. M., Dashevsky, B. Z., Rosen, E. L., Ikeda, D. M., Waheed, U., Lipson, J. A., Poplack, S. P.
  2026

- **Examination of fully automated mammographic density measures using LIBRA and breast cancer risk in a cohort of 21,000 non-Hispanic white women.** *Breast cancer research : BCR*
  Habel, L. A., Alexeeff, S. E., Achacoso, N., Arasu, V. A., Gastounioti, A., Gerstley, L., Klein, R. J., Liang, R. Y., Lipson, J. A., Mankowski, W., Margolies, L. R., Rothstein, J. H., Rubin, et al
  2023; 25 (1): 92

- **The PATHFINDER Study: Assessment of the Implementation of an Investigational Multi-Cancer Early Detection Test into Clinical Practice.** *Cancers*
  Nadauld, L. D., McDonnell, C. H., Beer, T. M., Liu, M. C., Klein, E. A., Hudnut, A., Whittington, R. A., Taylor, B., Oxnard, G. R., Lipson, J., Lopatin, M., Shaknovich, R., Chung, et al
  2021; 13 (14)

- **Shear Wave Elastography of Invasive Ductal Carcinoma: Correlations between Shear Wave Velocity and Histological Prognostic Factors.** *Current medical science*
  Hu, X., Peng, L., Wintermark, M., Lipson, J. A., Zhang, Y., Gao, Y.
  2021; 41 (1): 173–79

- **Identification of 31 loci for mammographic density phenotypes and their associations with breast cancer risk.** *Nature communications*
  Sieh, W., Rothstein, J. H., Klein, R. J., Alexeeff, S. E., Sakoda, L. C., Jorgenson, E., McBride, R. B., Graff, R. E., McGuire, V., Achacoso, N., Acton, L., Liang, R. Y., Lipson, et al
  2020; 11 (1): 5116

- **Prognostic values of quantitative and morphological parameters of dbPET in patients with luminal-type breast cancer: A pilot study**
  Miyake, K., Nakamoto, Y., Ikeda, D., Iagaru, A., Daniel, B., Lipson, J., Pal, S., Mittra, E., Guo, H., Kanao, S., Kataoka, M., Toi, M., Togashi, et al
  SOC NUCLEAR MEDICINE INC.2020

- **Alcohol and tobacco use in relation to mammographic density in 23,456 women.** *Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology*
  McBride, R. B., Fei, K., Rothstein, J. H., Alexeeff, S. E., Song, X., Sakoda, L. C., McGuire, V., Achacoso, N., Acton, L., Liang, R. Y., Lipson, J. A., Yaffe, M. J., Rubin, et al
  2020

- **Pretreatment Tattoo Marking of Suspicious Axillary Lymph Nodes: Reliability and Correlation with Sentinel Lymph Node** *ANNALS OF SURGICAL ONCOLOGY*
  Patel, R., MacKerricher, W., Tsai, J., Choy, N., Lipson, J., Ikeda, D., Pal, S., De Martini, W., Allison, K. H., Wapnir, I. L.
  2019; 26 (8): 2452–58

- **Reproductive Factors and Mammographic Density: Associations Among 24,840 Women and Comparison of Studies Using Digitized Film-Screen Mammography and Full-Field Digital Mammography** *AMERICAN JOURNAL OF EPIDEMIOLOGY*
  Alexeeff, S. E., Odo, N. U., McBride, R., McGuire, V., Achacoso, N., Rothstein, J. H., Lipson, J. A., Liang, R. Y., Acton, L., Yaffe, M. J., Whittemore, A. S., Rubin, D. L., Sieh, et al
  2019; 188 (6): 1144–54

- **Assessing treatment response in triple-negative breast cancer from quantitative image analysis in perfusion magnetic resonance imaging.** *Journal of medical imaging (Bellingham, Wash.)*
  Banerjee, I. n., Malladi, S. n., Lee, D. n., Depeursinge, A. n., Telli, M. n., Lipson, J. n., Golden, D. n., Rubin, D. L.
  2018; 5 (1): 011008

- **Age at Menarche and Late Adolescent Adiposity Associated with Mammographic Density on Processed Digital Mammograms in 24,840 Women** *CANCER EPIDEMIOLOGY BIOMARKERS & PREVENTION*
  Alexeeff, S. E., Odo, N. U., Lipson, J. A., Achacosol, N., Rothstein, J. H., Yaffe, M. J., Liang, R. Y., Acton, L., McGuire, V., Whittemore, A. S., Rubin, D. L., Sieh, W., Habel, et al
  2017; 26 (9): 1450–58

- **Mammographic Density: Is There a Public Health Significance Linked to Published Relative Risk Data? Response** *RADIOLOGY*
  Sieh, W., Lipson, J. A., Whittemore, A. S., Rubin, D. L.
  2017; 284 (3): 919

- **Association of morphological and quantitative parameters on dedicated breast PET with the expression status of hormone receptors, HER2 and Ki-67 in breast cancers**
  Miyake, K., Ikeda, D., Lagaru, A., Quon, A., Daniel, B., Lipson, J., Pal, S., Mittra, E., Guo, H., Nakamoto, Y., Nishimatsu, K., Kanao, S., Kataoka, et al
  SOC NUCLEAR MEDICINE INC.2017

- **Breast Cancer Risk and Mammographic Density Assessed with Semiautomated and Fully Automated Methods and BI-RADS.** *Radiology*
  Jeffers, A. M., Sieh, W., Lipson, J. A., Rothstein, J. H., McGuire, V., Whittemore, A. S., Rubin, D. L.
  2017; 282 (2): 348-355

- **Impact of Breast Density Legislation on Breast Cancer Risk Assessment and Supplemental Screening: A Survey of 110 Radiology Facilities.** *breast journal*
  Nayak, L., Miyake, K. K., Leung, J. W., Price, E. R., Liu, Y. I., Joe, B. N., Sickles, E. A., Thomas, W. R., Lipson, J. A., Daniel, B. L., Hargreaves, J., Brenner, R. J., Bassett, et al
  2016; 22 (5): 493-500

- **CT-Guided Wire Localization for Involved Axillary Lymph Nodes After Neo-adjuvant Chemotherapy in Patients With Initially Node-Positive Breast Cancer** *BREAST JOURNAL*
  Long Trinh, L., Miyake, K. K., Dirbas, F. M., Kothary, N., Horst, K. C., Lipson, J. A., Carpenter, C., Thompson, A. C., Ikeda, D. M.
  2016; 22 (4): 390-396

- **Case-control study of mammographic density and breast cancer risk using processed digital mammograms** *BREAST CANCER RESEARCH*
  Habel, L. A., Lipson, J. A., Achacoso, N., Rothstein, J. H., Yaffe, M. J., Liang, R. Y., Acton, L., McGuire, V., Whittemore, A. S., Rubin, D. L., Sieh, W.
  2016; 18

- **The Milky Way Sign: A New Diagnostic Finding of Ductal Carcinoma in situ on Digital Breast Tomosynthesis** *BREAST JOURNAL*
  Xu, Y., Miyake, K. K., Liu, Y. I., Downey, J. R., Lipson, J. A., Allison, K. H., Ikeda, D. M.
  2016; 22 (3): 349-351

- **Phase II Study of Gemcitabine, Carboplatin, and Iniparib As Neoadjuvant Therapy for Triple-Negative and BRCA1/2 Mutation-Associated Breast Cancer With Assessment of a Tumor-Based Measure of Genomic Instability: PrECOG 0105.** *Journal of clinical oncology*
  Telli, M. L., Jensen, K. C., Vinayak, S., Kurian, A. W., Lipson, J. A., Flaherty, P. J., Timms, K., Abkevich, V., Schackmann, E. A., Wapnir, I. L., Carlson, R. W., Chang, P., Sparano, et al
  2015; 33 (17): 1895-1901

- **Correlation of percutaneously biopsied axillary lymph nodes marked with black tattoo ink prior to neoadjuvant chemotherapy with sentinel lymph nodes in breast cancer patients**

Choy, N., Lipson, J., Pal, S., Ikeda, D., Trinh, L., Allison, K., Ozawa, M., Wheeler, A., Wapnir, I.
AMER ASSOC CANCER RESEARCH.2015

- **Impact of breast density notification laws on radiology practices: A survey of 110 radiology facilities**
  Nayak, L., Miyake, K. K., Liu, Y., Thomas, W. R., Sickles, E. A., Joe, B. N., Lindfors, K., Brenner, R. J., Feig, S., Bassett, L. W., Leung, J. W., Ojeda-Fournier, H., Hargreaves, et al
  AMER ASSOC CANCER RESEARCH.2015

- **Automatic abstraction of imaging observations with their characteristics from mammography reports.** *Journal of the American Medical Informatics Association*
  Bozkurt, S., Lipson, J. A., Senol, U., Rubin, D. L., Bulu, H.
  2015; 22 (e1): e81-92

- **Rim Sign in Breast Lesions on Diffusion-Weighted Magnetic Resonance Imaging: Diagnostic Accuracy and Clinical Usefulness** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Kang, B. J., Lipson, J. A., Planey, K. R., Zackrisson, S., Ikeda, D. M., Kao, J., Pal, S., Moran, C. J., Daniel, B. L.
  2015; 41 (3): 616-623

- **Patient awareness of breast density and interest in supplemental screening tests: comparison of an academic facility and a county hospital.** *Journal of the American College of Radiology*
  Trinh, L., Ikeda, D. M., Miyake, K. K., Trinh, J., Lee, K. K., Dave, H., Hanafusa, K., Lipson, J.
  2015; 12 (3): 249-255

- **Initial results with preoperative tattooing of biopsied axillary lymph nodes and correlation to sentinel lymph nodes in breast cancer patients.** *Annals of surgical oncology*
  Choy, N., Lipson, J., Porter, C., Ozawa, M., Kieryn, A., Pal, S., Kao, J., Trinh, L., Wheeler, A., Ikeda, D., Jensen, K., Allison, K., Wapnir, et al
  2015; 22 (2): 377-382

- **Variable spatiotemporal resolution three-dimensional Dixon sequence for rapid dynamic contrast-enhanced breast MRI.** *Journal of magnetic resonance imaging*
  Saranathan, M., Rettmann, D. W., Hargreaves, B. A., Lipson, J. A., Daniel, B. L.
  2014; 40 (6): 1392-1399

- **Breast Density Categorization Creep Response** *RADIOLOGY*
  Price, E. R., Hargreaves, J., Lipson, J. A., Sickles, E. A., Brenner, J., Lindfors, K. K., Joe, B. N., Leung, J. W. T., Feig, S. A., Ojeda-Fournier, H., Kurian, L. W., Love, E., Ryan, et al
  2014; 271 (3): 927–28

- **Initial Results With Black Ink Tattooing of Biopsied Axillary Lymph Nodes**
  Choy, N. S., Lipson, J., Kieryn, A., Porter, C., Ikeda, D., Pal, S., Trinh, L., Ozawa, M., Allison, K., Jensen, K., Wapnir, I.
  SPRINGER.2014: 35–36

- **3D T2-Weighted Spin Echo Imaging in the Breast** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Moran, C. J., Hargreaves, B. A., Saranathan, M., Lipson, J. A., Kao, J., Ikeda, D. M., Daniel, B. L.
  2014; 39 (2): 332-338

- **The california breast density information group: a collaborative response to the issues of breast density, breast cancer risk, and breast density notification legislation.** *Radiology*
  Price, E. R., Hargreaves, J., Lipson, J. A., Sickles, E. A., Brenner, R. J., Lindfors, K. K., Joe, B. N., Leung, J. W., Feig, S. A., Bassett, L. W., Ojeda-Fournier, H., Daniel, B. L., Kurian, et al
  2013; 269 (3): 887-892

- **Why Are Patients Noncompliant With Follow-Up Recommendations After MRI-Guided Core Needle Biopsy of Suspicious Breast Lesions?** *AJR. American journal of roentgenology*
  Thompson, M. O., Lipson, J., Daniel, B., Harrigal, C., Mullarkey, P., Pal, S., Thompson, A. C., Ikeda, D.
  2013; 201 (6): 1391-1400

- **A picture is worth a thousand words: needs assessment for multimedia radiology reports in a large tertiary care medical center.** *Academic radiology*
  Nayak, L., Beaulieu, C. F., Rubin, D. L., Lipson, J. A.
  2013; 20 (12): 1577-1583

- **Dynamic contrast-enhanced MRI-based biomarkers of therapeutic response in triple-negative breast cancer.** *Journal of the American Medical Informatics Association*
  Golden, D. I., Lipson, J. A., Telli, M. L., Ford, J. M., Rubin, D. L.
  2013; 20 (6): 1059-1066

- **A clinical trial of lovastatin for modification of biomarkers associated with breast cancer risk.** *Breast cancer research and treatment*
  Vinayak, S., Schwartz, E. J., Jensen, K., Lipson, J., Alli, E., McPherson, L., Fernandez, A. M., Sharma, V. B., Staton, A., Mills, M. A., Schackmann, E. A., Telli, M. L., Kardashian, et al
  2013; 142 (2): 389-398

- **Image quality and diagnostic performance of silicone-specific breast MRI.** *Magnetic resonance imaging*
  Kim, S. H., Lipson, J. A., Moran, C. J., Shimakawa, A., Kuo, J., Ikeda, D. M., Daniel, B. L.
  2013; 31 (9): 1472-1478

- **Updates and revisions to the BI-RADS magnetic resonance imaging lexicon.** *Magnetic resonance imaging clinics of North America*
  Edwards, S. D., Lipson, J. A., Ikeda, D. M., Lee, J. M.
  2013; 21 (3): 483-493

- **PrECOG 0105: Final efficacy results from a phase II study of gemcitabine (G) and carboplatin (C) plus iniparib (BSI-201) as neoadjuvant therapy for triple-negative (TN) and BRCA1/2 mutation-associated breast cancer**
  Telli, M. L., Jensen, K. C., Kurian, A. W., Vinayak, S., Lipson, J. A., Schackmann, E. A., Wapnir, I., Carlson, R. W., Sparano, J. A., Head, B., Goldstein, L. J., Haley, B. B., Dakhil, et al
  AMER SOC CLINICAL ONCOLOGY.2013

- **Qualitative and quantitative image-based biomarkers of therapeutic response in triple-negative breast cancer.** *AMIA Summits on Translational Science proceedings AMIA Summit on Translational Science*
  Golden, D. I., Lipson, J. A., Telli, M. L., Ford, J. M., Rubin, D. L.
  2013; 2013: 62-?

- **The California Breast Density Information Group: A Collaborative Response to the Issues of Breast Density, Breast Cancer Risk, and Breast Density Notification Legislation** *RADIOLOGY*
  Price, E. R., Hargreaves, J., Lipson, J. A., Sickles, E. A., Brenner, R. J., Lindfors, K. K., Joe, B. N., Leung, J. W., Feig, S. A., Bassett, L. W., Daniel, B. L., Kurian, A. W., Love, et al
  2013: 887–92

- **Breast MRI without gadolinium: utility of 3D DESS, a new 3D diffusion weighted gradient-echo sequence.** *European journal of radiology*
  Daniel, B. L., Granlund, K. L., Moran, C. J., Alley, M. T., Lipson, J., Ikeda, D. M., Kao, J., Hargreaves, B. A.
  2012; 81: S24-6

- **Automatic classification of mammography reports by BI-RADS breast tissue composition class** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
  Percha, B., Nassif, H., Lipson, J., Burnside, E., Rubin, D.
  2012; 19 (5): 913-916

- **Breast cancer risk factors differ between Asian and white women with BRCA1/2 mutations** *FAMILIAL CANCER*
  de Bruin, M. A., Kwong, A., Goldstein, B. A., Lipson, J. A., Ikeda, D. M., McPherson, L., Sharma, B., Kardashian, A., Schackmann, E., Kingham, K. E., Mills, M. A., West, D. W., Ford, et al
  2012; 11 (3): 429-439

- **Utilizing a PACS-integrated Ultrasound-guided Breast Biopsy Simulation Exercise to Reinforce the ACR Practice Guideline for Ultrasound-Guided Percutaneous Breast Interventional Procedures During Radiology Residency** *ACADEMIC RADIOLOGY*
  Meng, K., Lipson, J. A.
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  Meng, K., Lipson, J. A.
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- **Freehand MRI-Guided Preoperative Needle Localization of Breast Lesions After MRI-Guided Vacuum-Assisted Core Needle Biopsy Without Marker Placement** *JOURNAL OF MAGNETIC RESONANCE IMAGING*

van de Ven, S. M., Lin, M. C., Daniel, B. L., Sareen, P., Lipson, J. A., Pal, S., Dirbas, F. M., Ikeda, D. M.
2010; 32 (1): 101-109

- **Radiation Dose Associated With Common Computed Tomography Examinations and the Associated Lifetime Attributable Risk of Cancer** *ARCHIVES OF INTERNAL MEDICINE*
  Smith-Bindman, R., Lipson, J., Marcus, R., Kim, K., Mahesh, M., Gould, R., de Gonzalez, A. B., Miglioretti, D. L.
  2009; 169 (22): 2078-2086

- **Subtle renal duplication as an unrecognized cause of childhood incontinence: diagnosis by magnetic resonance urography.** *Journal of pediatric urology*
  Lipson, J. A., Coakley, F. V., Baskin, L. S., Yeh, B. M.
  2008; 4 (5): 398-400

- **CT and MRI of hepatic contour abnormalities** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  Lipson, J. A., Qayyum, A., Avrin, D. E., Westphalen, A., Yeh, B. M., Coakley, F. V.
  2005; 184 (1): 75-81