

# Paula M. Jacobs, Ph.D.

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## Positions

### **National Cancer Institute, Division of Cancer Treatment & Diagnosis**

Office of the Director

Expert Advisor, 2020-present

### **National Cancer Institute, Center for Cancer Research**

Adjunct Investigator, Molecular Imaging Program, 2015-present

### **National Cancer Institute, Division of Cancer Treatment & Diagnosis**

Cancer Imaging Program

Expert Advisor, 2018-2020

Associate Director, 2012- 2018

Acting Associate Director, 2010 to 2011

Deputy Associate Director, 2009 to 2011

### **SAIC-Frederick, Frederick, MD**

Operations and Technical Support (OTS) Contractor for the National Cancer Institute at Frederick

Contracted to: Cancer Imaging Program/DCTD/NCI/ NIH

Director of Regulatory Affairs, 2006-2009

### **Advanced Magnetics, Inc, Cambridge, MA (Now AMAG Pharmaceuticals)**

Pharmaceuticals: MRI Contrast agents, iron therapy; US and International

Vice President Development, 1986–2005

### **Seragen, Inc., Boston, MA**

Research and Diagnostic Kits: Prostaglandins, cell separation

General Manager—Research Products 1983–1985

Director of Production and Manufacturing Development—1981–1983

### **Clinical Assays (Division of Baxter Travenol), Cambridge MA**

In Vitro Diagnostics: clinical test kits, solid phase immunoassay

Director Of Scientific Operations—1981-1982

Director Of Technical Support—1980-1981

Group Leader, Technical Support—1978-1980

### **Childrens Cancer Research Foundation**

Research Assistant—1968-1970: folate antagonists

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## Post-Doctoral Research

### Harvard Medical School

Associate In Radiology—1977-1979

### Peter Bent Brigham Hospital

Associate In Radiology—1977-1979

### Northeastern University

Research Associate—1976-1978

### The Massachusetts Institute Of Technology

Research Fellow—1975-1976

### Northeastern University

Research Associate—1973-1974

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## Education

### Ph.D., Organic Chemistry

Northeastern University—1973

### M.S., Organic Chemistry

Tufts University—1968

### S.B., Chemistry

The Massachusetts Institute of Technology—1966

National Merit Scholar

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## Professional Societies

American Chemical Society  
American Association for Cancer Research  
American Society of Clinical Oncology  
Society of Nuclear Medicine  
Radiological Society of North America  
Sigma Xi

### Inactive:

American Association for the Advancement of Science  
American Heart Association  
American Roentgen Ray Society  
American Society of Nephrology  
International Society for Magnetic Resonance Imaging in Medicine  
International Society of Nephrology  
National Kidney Foundation  
New York Academy of Sciences  
Society for Molecular Imaging  
Royal Chemical Society

## Committee Memberships

FDA Medical Imaging Drugs Advisory Committee, 2017-present  
Medical Imaging and Data Resource Center, Internal Advisory Board, 2020-present  
Integrated Canine Data Commons Steering Committee and Best Practices Subcommittee, NCI/DCTD, 2018-present  
SNMMI member Artificial Intelligence Task Force 6/2020-6/2022  
APOLLO Data Analysis Working Group, 2016 to present  
APOLLO Imaging Working Group, 2016- present  
NExT Development Committee, NCI/DCTD, 2009-2019  
NExT Senior Advisory Committee, NCI/DCTD, 2009-2019  
NExT Discovery Committee, NCI/DCTD, 2009-2018  
Imaging Drug Group, NCI/DCTD 2007-2010

## Editorial Boards

Editorial Board, Academic Radiology, 6/2022 to present  
Associate Editor, American Journal of Nuclear Medicine and Molecular Imaging

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<b>Reviewer</b>	Academic Radiology Annals of Surgery Cancer Research Clinical Cancer Research Journal of Nuclear Medicine Kidney International Molecular imaging and Biology Nature Reviews Oncology Radiology Radiology AI Radiology Cancer Imaging Science Translational Medicine World Journal of Surgery
<b>Awards</b>	NIH Merit Award, 2011, Leadership NIH Merit Award, 2014, Quantitative Imaging Network Team
<b>Trial Protocols</b>	NCT03206060 17C0087A Lu-177-DOTATATE (Lutathera) in Therapy of Inoperable Pheochromocytoma/Paraganglioma  NCT03181867 17C0109. 18F-DCFPyL PET/CT in High Risk and Recurrent Prostate Cancer  CTEP # 8826 Clinical Center 11-C-0061 Phase I Trial of Z-Endoxifen in Adults With Refractory Hormone Receptor–Positive Breast Cancer, Desmoid Tumors, Gynecologic Tumors, or Other Hormone Receptor–Positive Solid Tumors  NCT02190279. CTEP# 9622 14-C-0140 A Pilot Study of 18F-DCFBC PET/CT in Prostate Cancer. Completed  NCT02192541. CTEP #9605 Phase I Study of Ganetespib and Ziv-Aflibercept in Refractory Gastrointestinal Carcinomas, Non-Squamous Non-Small Cell Lung Carcinomas, Urothelial Carcinomas, and Sarcomas. Terminated  NCT02141490 , NCI 14-C-0107 Evaluation of Ferumoxytol Enhanced MRI for the Detection of Lymph Node Involvement in Genitourinary (Prostate, Bladder and Kidney) Cancers. Completed  CIP/NCI #: 7832 CC#: 07C0101 A Phase 0 Trial of 111-Indium CHX-A" DTPA trastuzumab Imaging in Cancer. Completed  NCT01296139 Evaluation of Ferumoxytol enhanced MRI for the detection of lymph node involvement in prostate cancer. Completed

**PUBLICATIONS & PRESENTATIONS**

ORCID ID: 0000-0002-9423-6473

As of 6/2023

1. Tatum, J.L., Kalen, J.D., Jacobs, P.M. *et al.* [3'-\[<sup>18</sup>F\]fluoro-3'-deoxythymidine \(\[<sup>18</sup>F\]FLT\) Positron Emission Tomography as an In Vivo Biomarker of inhibition of CDK 4/6-Rb pathway by Palbociclib in a patient derived bladder tumor.](#) *J Transl Med* **20**, 375 (2022). <https://doi.org/10.1186/s12967-022-03580-8>
2. Jacobs PM, Springfield SA. [Deep Disparities Persist in Lung Cancer Screening Eligibility.](#) *Radiology* 2021; 301:721–723 . doi: 10.1148/radiol.2021211632. Epub ahead of print Sept 21 2021
3. Kalen JD, Clunie DA, Liu Y, Tatum JL, Jacobs PM, Kirby J, Freymann JB, Wagner U, Smith KE, Suloway C, Doroshow JH. Design and Implementation of the Pre-Clinical DICOM Standard in Multi-Cohort Murine Studies. *Tomography*. 2021; 7(1):1-9. <https://doi.org/10.3390/tomography7010001>
4. Wheeler et al., Molecular Features of Cancers Exhibiting Exceptional Responses to Treatment, *Cancer Cell* 39:38-53 (2021), <https://doi.org/10.1016/j.ccell.2020.10.015> (epub ahead of print 19 November 2020)
5. Conley et al, The Exceptional Responders Initiative: Feasibility of a National Cancer Institute Pilot Study, *J Natl Cancer Inst* (2021): 113, 27-37 <https://doi.org/10.1093/jnci/djaa061> (epub ahead of print 4/27/2020)
6. Boxerman JL, et al., Consensus recommendations for a dynamic susceptibility contrast MRI protocol for use in high-grade gliomas *Neuro-Oncology*, Volume 22, Issue 9, September 2020, Pages 1262–1275, <https://doi.org/10.1093/neuonc/noaa141>
7. Tatum, J. L., Kalen, J. D., Ileva, L. V., Riffle, L. A., Keita, S., Patel, N., Jacobs, P. M., Sanders, C., James, A., Difilippantonio, S., Thang, L., Hollingshead, M. G., Phillips, J., Evrard, Y., Clunie, D. A., Liu, Y., Suloway, C., Smith, K. E., Wagner, U., Doroshow, J. H. (2020). *Imaging characterization of a metastatic patient derived model of adenocarcinoma colon: PDMR-997537-175-T* [Data set]. The Cancer Imaging Archive. <https://doi.org/10.7937/TCIA.2020.BRY9-4N29>
8. Tatum, J. L., Kalen, J. D., Ileva, L. V., Riffle, L. A., Jacobs, P. M., Hollingshead, M. G., Doroshow, J. H., Clunie, D. A., Smith, K. E., Wagner, U., Freymann, J. B. (2019). *Imaging characterization of a metastatic patient derived model of bladder cancer: BL0293F (PDMR-BL0293-F563)* [Data set]. The Cancer Imaging Archive. <https://doi.org/10.7937/tcia.2019.b6u7wmqw>
9. Tatum, J., Kalen, J., Ileva, L., R., S., K., N., P., Jacobs, P., Sanders, C., A, J., Difilippantonio, S., L, T., hollingshead, melinda, J, P., Y, E., Clunie, D., Y, L., Suloway, C., Smith, K., U, W., ... Doroshow, J. (n.d.). *Imaging characterization of a metastatic patient derived model of*

adenocarcinoma pancreas: PDMR-292921-168-R. The Cancer Imaging Archive.

<https://doi.org/10.7937/TCIA.2020.PCAK-8Z10>

10. Tatum, J., Kalen, J., Ileva, L., Riffle, L., Keita, S., Patel, N., Jacobs, P., Sanders, C., James, A., Difilippantonio, S., Thang, L., Hollingshead, M., Phillips, J., Evrard, Y., Clunie, D., Yanling, Smith, K., Wagner, U., Freymann, J., Doroshov, J. (2020). *Imaging tissue characterization of a patient derived xenograft model of adenocarcinoma pancreas: PDMR-833975-119-R* [Data set]. The Cancer Imaging Archive. <https://doi.org/10.7937/TCIA.0ECK-C338>
11. Tatum, J. L., Kalen, J. D., Jacobs, P. M., Ileva, L. V., Riffle, L. A., Keita, S., Patel, N., Sanders, C., James, A., Difilippantonio, S., Thang, L., Hollingshead, M. G., Phillips, J., Edmondson, E., Evrard, Y., Clunie, D. A., Liu, Y., Smith, K. E., Wagner, U., Doroshov, J. H. (2020). *Imaging characterization of a metastatic patient derived model of melanoma: PDMR-425362-245-T* [Data set]. The Cancer Imaging Archive. <https://doi.org/10.7937/TCIA.2020.7YRS-7J97>
12. Tatum, J., Kalen, J., Jacobs, P., Ileva, L., Riffle, L., Keita, S., Patel, N., Sanders, C., James, A., Difilippantonio, S., Thang, L., Hollingshead, M., Evrard, Y., Edmondson, E., Clunie, D., Liu, Y., Suloway, C., Smith, K., Wagner, U., Freymann, J. B., Kirby, J., Doroshov, J. (2022). *Imaging characterization of a metastatic patient derived model of adenocarcinoma pancreas: (PDMR-521955-158-R4) (Version 1) [Data set]*. The Cancer Imaging Archive. <https://doi.org/10.7937/q37d-vh79>
13. [Ferumoxytol-enhanced MR lymphography for detection of metastatic lymph nodes in genitourinary malignancies: A prospective study](#)  
Turkbey B., Czarniecki M., Shih J.H., Harmon S.A., Agarwal P.K., Apolo A.B., Citrin D.E., Gulley J.L., Harisinghani M., Madan R.A., Metwalli A.R., Paquette E., Pinto P.A., Rais-Bahrami S., Rowe L.S., Wood B.J., Jacobs P.M., Lindenberg L., Dahut W., Choyke P.L. *American Journal of Roentgenology* 2020 214:1 (105-113)
14. James L. Tatum; Joseph D. Kalen; Paula M. Jacobs; Lilia V. Ileva; Lisa A. Riffle; Melinda G. Hollingshead; James H. Doroshov A spontaneously metastatic model of bladder cancer: imaging characterization, *J Transl Med.* 2019 Dec 19;17(1):425. [doi:10.1186/s12967-019-02177-y](https://doi.org/10.1186/s12967-019-02177-y)
15. Basu A, Warzel D, Eftekhari A, Kirby, Freymann J, Knable J, Sharma A, Jacobs P, A Call for Data Standardization: Lessons Learned and Recommendations in an Imaging Study, *JCO Clin Cancer Inform.* 2019 Nov;3:1-11. <https://doi.org/10.1200/CCI.19.00056>
16. Gambhir SS, Shankar LK, Rosenthal E, Warram JM, Ghesani M, Hope TA, Jacobs PM, Jacobson GB, Wilson T, Siegel BA. [Proceedings: Pathways for Successful Translation of New Imaging Agents and Modalities-Phase III Studies.](#) *J Nucl Med.* 2019 Jun;60(6):736-744. doi: 10.2967/jnumed.118.219824. Epub 2019 Mar 8. No abstract available.
17. Young CR, Adler S, Early JF, Lindenberg ML, Jacobs PM, Collins J, Kummar S, Kurdziel KA, Choyke PL, Mena E. [Biodistribution, Tumor Detection, and Radiation Dosimetry of <sup>18</sup>F-5-](#)

- [Fluoro-2'-Deoxycytidine with Tetrahydrouridine in Solid Tumors.](#) J Nucl Med. 2019 Apr;60(4):492-496. doi: 10.2967/jnumed.118.216994. Epub 2018 Nov 2.
18. Srivastava S, Ghosh S, Kagan J, Mazurchuk R; National Cancer Institute's HTAN Implementation. [The Making of a PreCancer Atlas: Promises, Challenges, and Opportunities.](#) Trends Cancer. 2018 Aug;4(8):523-536. doi: 10.1016/j.trecan.2018.06.007. Epub 2018
19. McDonald RJ, Levine D, Weinreb J, Kanal E, Davenport MS, Ellis JH, **Jacobs PM**, Lenkinski RE, Maravilla KR, Prince MR, Rowley HA, Tweedle MF, Kressel HY. Gadolinium Retention: A Research Roadmap from the 2018 NIH/ACR/RSNA Workshop on Gadolinium Chelates. Radiology. 2018 Nov;289(2):517-534. doi: 10.1148/radiol.2018181151
20. Jaffray DA, Das S, **Jacobs PM**, Jeraj R, Lambin P. [How Advances in Imaging Will Affect Precision Radiation Oncology.](#) Int J Radiat Oncol Biol Phys. 2018 Jun 1;101(2):292-298. doi: 10.1016/j.ijrobp.2018.01.047
21. Harmon SA, Bergvall E, Mena E, Shih JH, Adler S, McKinney Y, Mehralivand S, Citrin DE, Couvillon A, Madan R, Gulley J, Mease RC, **Jacobs PM**, Pomper MG, Turkbey B, Choyke PL, Lindenberg ML. [A Prospective Comparison of <sup>18</sup>F-Sodium Fluoride PET/CT and PSMA-targeted <sup>18</sup>F-DCFBC PET/CT in Metastatic Prostate Cancer.](#) J Nucl Med. 2018
22. Mena E, Lindenberg ML, Shih JH, Adler S, Harmon S, Bergvall E, Citrin D, Dahut W, Ton AT, McKinney Y, Weaver J, Eclarinal P, Forest A, Afari G, Bhattacharyya S, Mease RC, Merino MJ, Pinto P, Wood BJ, **Jacobs P**, Pomper MG, Choyke PL, Turkbey B, [Clinical impact of PSMA-based <sup>18</sup>F-DCFBC PET/CT imaging in patients with biochemically recurrent prostate cancer after primary local therapy.](#) Eur J Nucl Med Mol Imaging. 2018 Jan;45(1):4-11. doi: 10.1007/s00259-017-3818-x. Epub 2017 Sep 11.
23. Shields AF, **Jacobs P**, Sznol M, Graham MM, Germain R, Lum L, Jaffee E, de Vries EGE, Nimmagadda S, Van den Abbeele AD, Leung D, Wu AM, Sharon E, Shankar LK. [Immune Modulation Therapy and Imaging: Workshop Report.](#) J Nucl Med. 2017 Aug 17. pii: jnumed.117.195610. doi: 10.2967/jnumed.117.195610. [Epub ahead of print]
24. [Lindenberg L, Adler S, Turkbey IB, Mertan F, Ton A, Do K, Kummar S, Gonzalez EM, Bhattacharyya S, Jacobs PM, Choyke P,](#) Dosimetry and first human experience with 89Zr-panitumumab. [Am J Nucl Med Mol Imaging.](#) 2017 Sep 1;7(4):195-203. eCollection 2017.
25. [Turkbey B, Mena E, Lindenberg L, Adler S, Bednarova S, Berman R, Ton AT, McKinney Y, Eclarinal P, Hill C, Afari G, Bhattacharyya S, Mease RC, Merino MJ, Jacobs PM, Wood BJ, Pinto PA, Pomper MG, Choyke PL.](#) <sup>18</sup>F-DCFBC Prostate-Specific Membrane Antigen-Targeted PET/CT Imaging in Localized Prostate Cancer: Correlation With Multiparametric MRI and Histopathology, [Clin Nucl Med.](#) 2017 Oct;42(10):735-740. doi: 10.1097/RLU.0000000000001804.

26. Willemieke S. Tummers, Jason M. Warram, Kiranya E. Tipirneni, John Fengler, Paula Jacobs, Lalitha Shankar, Lori Henderson, Betsy Ballard, Brian W. Pogue, Jamey P. Weichert, Michael Bouvet, Jonathan Sorger, Christopher H. Contag, John V. Frangioni, Michael F. Tweedle, James P. Basilion, Sanjiv S. Gambhir and Eben L. Rosenthal, [Regulatory Aspects of Optical Methods and Exogenous Targets for Cancer Detection](#), Cancer Res April 20 2017  
DOI:10.1158/0008-5472.CAN-16-3217
27. Jacobs, PM, " Overview of FDA approval paths optical surgical navigation ", *Proc. SPIE* 10049, Molecular-Guided Surgery: Molecules, Devices, and Applications III, 100490S (February 8, 2017); doi:10.1117/12.2257152; <http://dx.doi.org/10.1117/12.2257152>
28. Frank I. Lin, E. M. Gonzalez, S. Kummar, K. Do, J. Shih, S. Adler, K. A. Kurdziel, A. Ton. B. Turkbey, P. M. Jacobs, S. Bhattacharyya, A. P. Chen, J. M. Collins, J. H. Doroshov, P. L. Choyke, M. L. Lindenberg, Utility of 18F-fluoroestradiol (18F-FES) PET/CT imaging as a pharmacodynamic marker in patients with refractory estrogen receptor-positive solid tumors receiving Z-endoxifen therapy Eur J Nucl Med Mol Imaging. 2017 Mar;44(3):500-508. doi: 10.1007/s00259-016-3561-8
29. Rieves D and Jacobs P, [The Use of Published Clinical Study to Support the United States Food and Drug Administration Approval of Imaging Agents](#), J Nucl Med 2016: J Dec;57(12):2022-2026. online first July 21 2016 as doi: [10.2967/jnumed.116.178814](https://doi.org/10.2967/jnumed.116.178814)
30. Rosenthal EL, Warram JM, de Boer E, Basilion JP, Biel MA, Bogyo M, Bouvet M, Brigman BE, Colson YL, DeMeester SR, Gurtner GC, Ishizawa T, **Jacobs PM**, Keereweer S, Liao JC, Nguyen QT, Olson JM, Paulsen KD, Rieves D, Sumer BD, Tweedle MF, Vahrmeijer AL, Weichert JP, Wilson BC, Zenn MR, Zinn KR, van Dam GM. [Successful Translation of Fluorescence Navigation During Oncologic Surgery: A Consensus Report](#). J Nucl Med. 2016; **57**:144-150
31. Ellingson BM, Bendszus M, Boxerman J, Barboriak D, Erickson BJ, Smits M, Nelson SJ, Gerstner E, Alexander B, Goldmacher G, Wick W, Vogelbaum M, Weller M, Galanis E, Kalpathy-Cramer J, Shankar L, **Jacobs P**, Pope WB, Yang D, Chung C, Knopp MV, Cha S, van den Bent MJ, Chang S, Yung WK, Cloughesy TF, Wen PY, Gilbert MR; Jumpstarting Brain Tumor Drug Development Coalition Imaging Standardization Steering Committee. [Consensus recommendations for a standardized Brain Tumor Imaging Protocol in clinical trials](#). Neuro-Oncology 17(9), 1188–1198, 2015
32. Fahey F, Zukotynski K, Jadvar H, Capala J; organizing committee, contributors, and participants of the second NCI–SNMMI Workshop on Targeted Radionuclide Therapy. [Proceedings of the Second NCI-SNMMI Workshop on Targeted Radionuclide Therapy](#). J Nucl Med. 2015 Jul;56(7):1119-29.
33. K Do, L Cao, Z Kang, B Turkbey, ML Lindenberg, [A Phase II Study of Sorafenib Combined With Cetuximab in EGFR-Expressing, KRAS-Mutated Metastatic Colorectal Cancer](#). Clinical Colorectal Cancer, 2015, Clin Colorectal Cancer. 2015 Mar 7. pii: S1533-0028(15)00036-5. doi: 10.1016/j.clcc.2015.02.007. [Epub ahead of print]



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34. Turkbey B, Agarwal HK, Shih J, Bernardo M, McKinney YL, Daar D, Griffiths GL, Sankineni S, Johnson L, Grant KB, Weaver J, Rais-Bahrami S, Harisinghani M, **Jacobs P**, Dahut W, Merino MJ, Pinto PA, Choyke PL, [A Phase I Dosing Study of Ferumoxytol for MR Lymphography at 3 T in Patients With Prostate Cancer.](#), AJR 2015 Jul;205(1):64-9
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39. Farrell BT, Hamilton BE, Dósa E, Rimely E, Nasser M, Gahramanov S, Lacy CA, Frenkel EP, Doolittle ND, Jacobs PM, Neuwelt EA. [Using iron oxide nanoparticles to diagnose CNS inflammatory diseases and PCNSL.](#)Neurology. 2013 Jul 16;81(3):256-63.
40. National Lung Screening Trial Research Team, Aberle DR, Adams AM, Berg CD, Black WC, Clapp JD, Fagerstrom RM, Gareen IF, Gatsonis C, Marcus PM, Sicks JD. [Reduced lung-cancer mortality with low-dose computed tomographic screening.](#) N Engl J Med. 2011 Aug 4;365(5):395-409.
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## BOOK CHAPTERS

1. P. M. Jacobs and D. Rieves, "Bringing an Imaging Product into the Clinic," Chapter 4 in *Translational Research in Biophotonics: Four National Cancer Institute Case Studies*, R. J. Nordstrom, Ed., SPIE Press, Bellingham, Washington, pp. 67-81 (2014)
2. Daniel C. Sullivan and Paula M. Jacobs, Cost-Effectiveness Analysis/Economics of Probe Development, in *Molecular Imaging: Principles and Practice*. Weissleder, Ross, Rehemtulla, and Gambhir, ed. 2010, PMPH USA
3. John Pearson, Lawrence Tarbox, Gianluca Paladini, John G. Wolodzko, Paula M. Jacobs, and Zhenghong Lee, "Emerging Radiological Software Standards and Development Technologies: Impact on Clinical Translation and Trials" in *Imaging Tools in Cancer Research and Prevention*, James L. Mulshine and Thomas M. Baer, ed; 2008, Wiley

## PRESENTATIONS

1. Paula M. Jacobs; Yan Chen; Charles Kahn Jr; Katherine P. Andriole, Looking Beyond the Hype: A Scientific Perspective on AI in Imaging, Radiological Society of North America, 2021 Annual Meeting, November 2021
2. Paula M. Jacobs, James L. Tatum, Joseph D. Kalen, Lilia V. Ileva, Lisa A. Riffle, Keita Saito, Nimit L. Patel, Jessica Phillips, Melinda Hollingshead, Yvonne A. Evrard, Michelle Gottholm-Ahalt, Chelsea Sanders, Amy James, Simone Difilippantonio, Elijah F. Edmondson, James H. Doroshow Imaging Characterization of NCI Patient Derived Model Repository (PDMR) Xenografts Co-Clinical Imaging Research Resources Program, 2021 Annual Meeting, virtual June 2021
3. Paula M. Jacobs, PhD, James L. Tatum, MD, Joseph D. Kalen, PhD, Lisa A. Riffle, BS, Nimit L. Patel, MS, Jessica Phillips, Melinda Hollingshead, DVM, PhD, Yvonne A. Evrard, PhD, Michelle Gottholm-Ahalt, PhD, Chelsea Sanders, BS, Simone Difilippantonio, PhD, James H. Doroshow, MD. Baseline 18F fluorodeoxyglucose(FDG)-positron emission tomography (PET) in patient derived (PD) xenograft models from the National Cancer Institute Patient Derived Model Repository (PDMR). SNMMI 2021 Annual Meeting, virtual 6/2021; Journal of Nuclear Medicine May 2021, 62 (supplement 1) 1470
4. Paula M. Jacobs, James L. Tatum, Joseph D. Kalen, Lilia V. Ileva, Lisa A. Riffle, Keita Saito, Nimit L. Patel, Jessica Phillips, Melinda Hollingshead, Yvonne A. Evrard, Michelle Gottholm-Ahalt, Chelsea Sanders, Amy James, Simone Difilippantonio, Elijah F. Edmondson, James H. Doroshow. Imaging characterization of NCI patient derived model repository (PDMR) xenografts, AACR 2021 meeting, virtual 4/2021
5. S Kummar, SL Safgren, M Lindenberg, K Kurdziel... 591 Phase I Trial of Z-endoxifen with Estrogen Receptor Imaging in Adults with Refractory Hormone Receptor-positive Breast Cancer, Desmoid Tumors, Gynecologic Tumors, or...- European Journal of Cancer, 2012
6. Neuwelt EA, Hamilton BE, Várallyay CG, Rooney W, Edelman R, Jacobs PM, Watnick S USPIO: A future alternative magnetic resonance contrast agent for patients at risk for nephrogenic systemic fibrosis?, 46th Annual Meeting American Society of Neuroradiology, June 2008, New Orleans
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10. GreenJarvis BM, Jacobs PM, Lee H, Holburn G, Price R, Lin C, A technique for monitoring extracranial tumor angiogenesis with a MRI blood pool agent, ferumoxytol, Proc Amer Assoc Cancer Res 2005;46:3798
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23. Benderbous S, Corot C, Jacobs P, Bonnemain B, Superparamagnetic Agents: Physicochemical Characteristics and Pre-clinical Imaging Evaluations. Acad. Radiol, 1996: 3 Supple 2, S292-294
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25. Bonnemain B, Chachuat A, Benderbous S, Jacobs P, Dugit-Gros P. Superparamagnetic Agents (USPIO, SPIO) Characteristics and Application in Abdominal MRI. 5th Annual Meeting, ESGR 1994;Taormina, June 1-4 (Book of Abstracts):103.
26. Doucet D, Jacobs P, Engelstad BL. MR Imaging of the Liver with Particulate Agents: Pharmacology of AMI-25. 17th International Congress of Radiology (ICR) 1989;Paris, July 1-8:974 n.288.and Magnetic Resonance Imaging, 1989; 17 (Suppl. 1): 217; 89th Annual Meeting of The American Roentgen Ray Society, 1989; New Orleans, May 7-12: 143 n.126).
27. Doucet D, Bonnemain B, Stark DD, Engelstad BL, Jacobs P. Produits de Contraste Specifique ou Non dans le Diagnostic des Tumeurs Hepatiques Developpement d'un Agent Particulaire en IRM. 3eme Colloque Imagerie Medicale en Cancerologie 1988;Tokyo, October 3-8:97-105.
28. Jacobs PM, Goodwin HA, Rosenberg IH, and Meienhofer J, Synthesis of Peptide Homologs of Folic Acid, Presented at the 2nd Northeast Regional Meeting of the American Chemical Society, Providence, R. I., 20 October 1970

### **Invited Presentations**

1. Jacobs, PM, Imaging over the Horizon, Seeing is Believing, Advances in Medical Imaging, UC Davis, Sept 2019
2. Jacobs, PM. Sharing datasets for machine learning and AI in oncology, The 3rd Sanming Project Symposium on Specialist Education and Advances in Radiation Oncology & the 1st Program on Multicenter Clinical Trials Design Training, June 2019, Shenzhen China
3. Jacobs, PM, Moving PET Tracers from the Bench to FDA, Blood Brain Barrier Consortium, March 2019, Portland OR



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4. Jacobs, PM, The Cancer Imaging Archive TCGA projects: A model for research to individualize treatment care in radiation oncology, 4R symposium, Rutgers University, Feb 2017
5. Jacobs, PM, Overview of FDA approval paths optical surgical navigation, Biophotonics West, January 2017, San Francisco
6. Jacobs, PM, The Cancer Imaging Archive TCGA projects: A model for research to individualize treatment care in radiation oncology, June 2016, Precision Medicine in Radiation Oncology, Bethesda
7. Jacobs, PM, Supply of IND agents to Multicenter Trials, June 2016, SNMMI, San Diego
8. Jacobs, PM, The Cancer Imaging Archive, April 2016, AACR, Boston
9. Jacobs, PM, The NCI (formerly GE) IND for C-13 Pyruvate: A resource for the community. Fourth International Workshop on Hyperpolarized Carbon-13, February 2016, Philadelphia
10. Jacobs, PM, Supply of IND Agents to NCI-sponsored trials by Skilled Academic Sites, ECOG-ACRIN fall meeting, November 2015, Orlando FL
11. Jacobs, PM, The Cancer Imaging Archive, FNIH Biomarker Consortium Cancer Steering Committee Annual Meeting, October 2015, Rockville, MD
12. Jacobs, PM, NCI: New and Current Initiatives that Support Imaging in Precision Medicine, World Congress of Molecular Imaging, September 2015, Honolulu HI
13. Jacobs, PM, New and Current Initiatives that Support Imaging in Precision Medicine: Funding and Resources at NCI for Molecular Imaging Agents, World Congress of Molecular Imaging, September 2015, Honolulu HI
14. Jacobs, PM, Advancing Prostate Cancer Imaging: NCI Perspective, SNMMI Annual Meeting, June 2015 Baltimore MD
15. Jacobs, PM, Funding and Resources at NCI/NIH for Translation of Molecular Imaging Agents, SNMMI Annual Meeting, June 2015 Baltimore MD
16. Jacobs, PM, NCI Resources for Translational Molecular Imaging, 21<sup>st</sup> Blood Brain Barrier Meeting, March 2015 Skamania, WA
17. Jacobs, PM, Getting Your Drug into Early Trials - Clearing the Regulatory Hurdles, 21<sup>st</sup> Blood Brain Barrier Meeting, March 2015 Skamania, WA
18. Jacobs, PM NCI Resources for Translational Molecular Imaging, 3rd Theranostics World Congress on Gallium 68 and PRRT, March 2015, Baltimore, MD

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19. Jacobs, PM, Is validation and dissemination of imaging of interest for the NCI?, Definition of a New Paradigm for the Validation and Dissemination of Radiopharmaceuticals: Unmet Needs and Opportunities in Prostate Cancer in Washington, D.C., on February 15-16, 2015
20. Jacobs, PM and Rieves, RD, Obtaining an IND – FDA Regulatory Issues, Fluorescence Guided Surgery Symposium: Clinical Translation of Molecular Imaging for Surgical Navigation, American Society of Image Guided Surgery, Feb 2015, Eden Roc, Miami
21. Jacobs, PM, NCIs Quantitative Imaging Network (QIN): Progress and Impact on Clinical Trials, RSNA, Chicago , Nov 30- Dec 5, 2014
22. Jacobs, PM, Getting your Drug into Early Clinical Trials – Clearing the Regulatory Hurdles, Targeted Radionuclide Therapy, NIH campus, Oct 24-25, 2014
23. Jacobs, PM, The Cancer Imaging Archive, FNIH Biomarker Consortium, Annual Meeting, Rockville, Oct 24, 2014
24. Jacobs, PM, Clinical Translation of Molecular Imaging: the Role of NCI, International Symposium on Molecular Imaging and Translational Medicine, Beijing, Sept 13-15, 2014
25. Jacobs, PM, Getting your Drug into Early Clinical Trials – Clearing the Regulatory Hurdles, Gordon Research Conference, Metals in Medicine, June 22-25, 2014 Proctor Acaademy, Andover, NH
26. Jacobs, PM, Session moderator: FDA updates on diagnostic radiopharmaceuticals, SNMMI annual meeting, June 7-11, 2014, St. Louis
27. Jacobs, PM, Supply of IND Agents to ECOG-ACRIN by Skilled Academic Sites, ECOG-ACRIN Spring meeting, Chicago, May 8-10, 2014
28. Jacobs, PM, Translating Imaging Agents into Clinical Trials, University of Wisconsin Radiology Grand Rounds, Madison, WI, April 10, 2014
29. Jacobs, PM, BBB's 20<sup>th</sup> Meeting. Where has imaging been? Where is imaging going?, Blood Brain Barrier Consortium 20<sup>th</sup> annual meeting, Sunriver Oregon, March 19-23, 2014
30. Jacobs, PM, NCIs Quantitative Imaging Network (QIN): Progress and Impact on Clinical Trials, RSNA, Chicago , Dec 1- Dec 6, 2013
31. Jacobs, PM, NCI Resources for Translational Molecular Imaging Reseaqrch, Advanced Molecular Imaging and It's Clinical Translation, Univ. of Ala Comprehensive Cancer Center, Annual Retreat, Birmingham, Nov 5, 2013
32. Jacobs, PM, Supply of IND Agents, Experimental Imaging Science Committee ECOG-ACRIN Fall Meeting, Hollywood FL Nov 14-16, 2013

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33. Jacobs, PM, NCI Resources for Translational Molecular Imaging Research, Advanced Molecular Imaging and Its Clinical Translation, Oct 27-30, 2013
34. Jacobs, PM, NCI Programs in Translational Molecular Imaging Research, NIBIB Workshop on Clinical Translation of Molecular Imaging Probes and Technology Lister Hill Auditorium, National Institutes of Health, Bethesda, MD, August 2, 2013
35. Jacobs, PM, Moderator, FDA and NIH: Critical Concepts for Diagnostic Radiopharmaceutical Research. Society of Nuclear Medicine and Molecular Imaging, June 2013 Vancouver BC
36. Jacobs, PM Overcoming Regulatory Hurdles in Molecular Imaging: The NCI Experience, Society of Nuclear Medicine and Molecular Imaging June 2013 Vancouver BC
37. Jacobs, PM, Translational Molecular Imaging: Promises and Pitfalls, [6th Imaging in Drug Discovery and Development Conference](#), Boston MA **May 8-10, 2013**
38. Jacobs, PM, Moderator, NCI resources for Imaging Research, AACR Annual Meeting, Washington DC, April 6-10, 2013
39. Jacobs, PM, Facilitating Access to Investigational Imaging Agents, AACR Annual Meeting, Washington DC, April 6-10, 2013
40. Jacobs, PM, Lessons learned: NCI's PET INDs and F-18 NaF NDA, 34<sup>th</sup> Annual High Country Nuclear Medicine Conference, Vail, CO, March 2013
41. Jacobs, PM, New FDA Guidance: Investigational New Drug Applications (INDs) for Positron Emission Tomography (PET) Drugs, Bio/Pharmaceutical Imaging Forum, December 2012, Philadelphia, PA
42. Jacobs, PM, Translational Molecular Imaging: A View from the NCI, Radiological society of North America (RSNA), November 2012, Chicago, IL
43. Jacobs, PM, The National Cancer Institute's NExT Program, Molecular Imaging: Preclinical and Clinical Advances, Harvard Medical School, October 2012, Boston, MA
44. Jacobs, PM, Overcoming Regulatory Hurdles in Investigational Molecular Imaging: The NCI Experience, ADAPT Congress Session, September 2012, Washington, DC
45. Jacobs, PM, NCI's Initiative in INDs: Update on Investigational Radiopharmaceuticals, Society of Nuclear Medicine and Molecular Imaging, 2012 Annual Meeting, June 2012, Miami Beach, FL
46. Jacobs, PM, NCI Cancer Imaging Program Quantitative Imaging Network (QIN) & Network for Translational Research (NTR), Society of Nuclear Medicine and Molecular Imaging, 2012 Annual Meeting, June 2012, Miami Beach, FL

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47. Jacobs, PM, The Role of NIH/NCI in Molecular Imaging Trials. Society of Nuclear Medicine and Molecular Imaging, 2012 Annual Meeting, June 2012, Miami Beach, FL
48. Jacobs, PM, Axelrad J, Yang L, Gelovanni J, Challenges to Translational of Molecular Imaging and Therapy, Panel, 3<sup>rd</sup> Multimodality Cardiovascular Molecular Imaging Symposium, April 2012, Bethesda, MD
49. Jacobs, PM, Alternative Sources of Funding from the National Cancer Institute, 10<sup>th</sup> YHLC Business of Biotechnology, Yale University, March 2012, New Haven CO
50. Jacobs PM, Advances and opportunities in CNS imaging 18th Annual Neuro-Oncology and Blood-Brain Barrier Consortium Meeting, March 2012, Skamania WA
51. Jacobs, PM, Lessons learned: NCI's PET INDs and F-18 NaF NDA, 33<sup>rd</sup> Annual High Country Nuclear Medicine Conference, Steamboat Springs, CO, March 2012
52. Jacobs, PM, Translating Molecular Imaging into Phase 3 Trials, 5<sup>th</sup> EORTC-NCI-ASCO Annual Meeting on "Molecular Markers in Cancer", Brussels, Belgium, October 2011
53. Jacobs PM, Strategies and Pathways: Translating Molecular Imaging Agents into Phase 3 and Beyond, Society of Nuclear Medicine 2011 Annual Meeting, San Antonio, June 2011
54. Chair: Bioimaging and Other Applications for Disease And Treatment Evaluation; 2010 Second Annual American Society for Nanomedicine Conference – October 14-16 – Potomac, Maryland
55. Moderator: Industry Panel on the logistical and regulatory issues of experimental PET agents; ACRIN Fall meeting, October 3, 2010 in Pentagon City
56. Jacobs, PM, Navigating the Regulatory Shoals: Transitioning Your Imaging Agent to the Clinic, Society of Nuclear Medicine 2010 Annual Meeting, Salt Lake City, June 2010
57. Jacobs, PM, Lessons learned: NCI's FLT F-18 IND and F-18 NaF NDA, Two Topic Imaging Workshop: Standards For Imaging Endpoints And Manufacturing Of PET Radiopharmaceutical Products In Clinical Trials, Bethesda, MD
58. Jacobs, PM, Accessing NCI Resources: Imaging Imaging Agent Development, NCI Translational Science Meeting, November, 2009, Vienna, VA.
59. Jacobs, PM, What is an IND and How Does It Affect ACRIN Clinical Trials, ACRIN 2009 Fall Meeting, Pentagon City, VA, October 2009
60. Jacobs, PM, The NCI Cancer Imaging Program: Developing imaging tools for drug development, American Association for Cancer Research, 100<sup>th</sup> Annual Meeting, Denver, CO, April 2009

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61. Jacobs, PM, CMC Requirements in INDs, Society of Nuclear Medicine 2009 Winter Meeting, Clearwater, Florida, February 2009
62. Jacobs PM, Imaging Probes: Regulatory Guidelines, Availability, and Considerations for Research, ACRIN Fall Meeting, October 2008, Pentagon City VA
63. Jacobs PM, The IND Process: How to get your experimental drug into human trials, Fourteenth Annual Neuro-Oncology and Blood-Brain Barrier Consortium Meeting, March 2008, Skamania WA
64. Jacobs PM, Regulatory Considerations for Trials of Imaging Drugs and Devices: FDA, INDs, IDEs, RDRC, IRBs, DSMBs, CTEP, Radiological Society Of North America Clinical Trials Methodology Workshop, Scottsdale, Arizona January 5-11, 2008
65. Jacobs, PM, What's in an Investigational New Drug Application (IND)? Workshop: Clinical Development of Small Molecules National Cancer Institute, January 2008 Bethesda, Maryland
66. Jacobs, PM, Economics of Contrast Agent Development, The Molecular Imaging Biomarker Development and Clinical Trials, Clinical Pre-conference at AMI-SMI Joint Meeting September 2007, Providence Rhode Island
67. Jacobs, PM, The IND Process and the Exploratory IND for Molecular Imaging Agent, The Molecular Imaging Biomarker Development and Clinical Trials Clinical Pre-conference at AMI-SMI Joint Meeting September 2007, Providence Rhode Island
68. Jacobs, PM, Nuts and Bolts--You Too Can Prepare an IND, Workshop, Phase 0 Trials in Oncologic Drug Development, Division of Cancer Treatment and Diagnosis, National Cancer Institute, September 5, 2007, Bethesda, MD
69. Jacobs PM, What is an IND and How Does It Affect ACRIN Clinical Trials. Presented to at the American College of Radiology Imaging Network meeting October 5- 7, 2006 Pentagon City, VA
70. Jacobs PM, Use Of Imaging Agents In Pediatric Cancer Management: Regulatory Issues, at the Pediatric Oncology Imaging Frontiers Workshop, Oct 23-24, 2006 Washington, DC
71. Jacobs PM, The IND Process and the Exploratory IND for Molecular Imaging Agents Academy of Molecular Imaging Meeting, March 29, 2006, Orlando FL. Presented in Session: Translational Molecular and Biomarker Development
72. Jacobs PM, Economics of Contrast Agent Development Academy of Molecular Imaging Meeting, March 29, 2006, Orlando FL. Presented in Session: Translational Molecular and Biomarker Development

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73. Jacobs, PM, Iron Oxide Drugs: Medical Uses for Rust, Radiology Research Conference, October 14, 2005, U. Mass. Medical School, Worcester, MA. Emphasis on MR imaging uses of iron oxides
74. (Oral Presentation and session moderator). Jacobs, PM, Cell and Molecular Imaging in the CNS, Eleventh Annual Neuro-Oncology and Blood-Brain Barrier Consortium Meeting, March 2005, Portland, OR.
75. Short presentation on the economics of imaging agents at the 6<sup>th</sup> National Forum on Biomedical Imaging in Oncology, April 7-8, 2005, Bethesda, MD. .  
<http://www.cancer.gov/dctd/presentations05.html>
76. Confidential invited lecture September 2000 to FDA: "Iron Oxide Drugs: Medical Uses for Rust." Seminar presented at the FDA at the invitation of a reviewing chemistry group, emphasis on chemistry and manufacturing of nanoparticle iron oxide drugs.