CURRICULUM VITAE

Fenghai Duan, Ph.D.
Associate Professor of Biostatistics
Brown University School of Public Health

OFFICE ADDRESS
Department of Biostatistics
Center for Statistical Sciences
Brown University School of Public Health
Box G-S121-7
121 S. Main St., 7th Fl
Providence, RI 02912
Phone: (401) 863-2175
FAX: (401) 863-9182
Email: fduan@stat.brown.edu

EDUCATION

1995   BS   Biochemistry   Fudan University (Shanghai, China)

1998   MS   Molecular Biology   Institute of Biophysics, Academia Sinica (Beijing, China)
Thesis: The Cloning of Glial Cell Line-Derived Neurotrophic Factor cDNA Holosequence and the Studying of Its Biological Activities
Advisor: Prof. Yan Chen

2005   PhD   Biostatistics   Yale University (New Haven, CT)
Dissertation: Analysis of DNA Microarrays
Advisor: Prof. Heping Zhang

HONORS AND AWARDS

1998   Graduate Fellowship, University of Alabama at Birmingham
2000   Graduate Fellowship, Yale University

ACADEMIC APPOINTMENTS

2005-2008   Assistant Professor, Department of Biostatistics, University of Nebraska Medical Center, Omaha, NE
2006-2008   Courtesy Assistant Professor, Department of Statistics, University of Nebraska, Lincoln, NE
2008-2017   Assistant Professor of Biostatistics (Research), Department of Biostatistics and Center for Statistical Sciences, Brown University School of Public Health, Providence, RI
2017–   Associate Professor of Biostatistics, Department of Biostatistics and Center for Statistical Sciences, Brown University School of Public Health, Providence, RI

OTHER APPOINTMENTS

1998-1999	Graduate Research Assistant, Cellular and Molecular Biology, University of Alabama at Birmingham, Birmingham, AL
1999-2001	Statistical Consultant, Chronic Disease Epidemiology, School of Public Health, Yale University, New Haven, CT
2000-2002	Graduate Teaching Assistant, Biostatistics, School of Public Health, Yale University, New Haven, CT
2004 Summer	Intern, Vaccine Biometric Research, Merck Research Laboratories, West Point, PA
2002-2005	Graduate Research Assistant, Biostatistics, School of Public Health, Yale University, New Haven, CT
2005	Biometrician, Vaccine Biometric Research, Merck Research Laboratories, West Point, PA
2005-2008	Senior Statistician, Statistics and Data Center in the Children's Oncology Group
2006-2008	Bioinformatician of the RNAi Global Initiative, Eppley Cancer Center at the University of Nebraska Medical Center, Omaha, NE
2007-2008	Member, Center for Molecular Genetics and Genomics, University of Nebraska Medical Center, Omaha, NE
2008–	Faculty Statistician, ECOG-ACRIN Cancer Research Group

PROFESSIONAL SERVICE

Brown University

2020–	Member, Scientific Review and Monitoring Committee (SRMC), Brown Cancer Center and Lifespan Cancer Institute

National Committees

2012-2014	Member, Nomination and Election Committee of ICSA (International Chinese Statistical Association)

Review, Advisory Panels

2015–	Reviewer (ad hoc), National Cancer Institute's NCTN Core Correlative Science Committee
2018	Reviewer, National Institute of Diabetes and Digestive and Kidney Diseases Special Emphasis Panel
2018	Reviewer, 2018 RSNA Radiology Trainee Grant Study Section
2019	Reviewer (ad hoc), Biomedical Informatics, Library and Data Sciences Review Committee, National Library of Medicine
2020	Reviewer (ad hoc), Biomedical Informatics, Library and Data Sciences Review Committee, National Library of Medicine
2021	Reviewer, NIH Post-Acute Sequelae of SARSCOV-2 Infection (PASC) Initiative
2021	Reviewer (ad hoc), Biomedical Informatics, Library and Data Sciences Review Committee, National Library of Medicine
2022	Reviewer (ad hoc), Institutional Training Grants in Biomedical Informaticsand Data Science (T15 Continuing Education Training Grants), National Library of Medicine
2022	Reviewer, NIH Post-Acute Sequelae of SARSCOV-2 Infection (PASC) Initiative

Steering Committee

2015–   Member, Steering Committee of NCI's Consortium for Molecular and Cellular Characterization of Screen-Detected Lesions (NCI)

Data Safety and Monitoring Board

2019–   Member, Partnership to Establish a Practice Based Network to Assess for Head and Neck Cancers Using a Low-cost Portable Flexible Nasopharyngoscop, National Institute of Dental and Craniofacial Research (NIDCR)

PROFESSIONAL AFFILIATIONS

American Statistical Association
International Biometric Society/Eastern North American Region
International Chinese Statistical Association

SCIENTIFIC COMMITTEE ASSIGNMENTS

2006	Reviewer, 2006 Midwest Student Biomedical Research Forum
2007	Reviewer, 2007 Midwest Student Biomedical Research Forum
2008	Member, Gynecologic Disease Site Committee, American College of Radiology Imaging Network (ACRIN)
2008-2012	Member, Abdominal Disease Site Committee, American College of Radiology Imaging Network (ACRIN)
2008-2011	Member, Head/Neck/Neuro Disease Site Committee, American College of Radiology Imaging Network (ACRIN)
2008-2012	Member, Informatics Committee, American College of Radiology Imaging Network (ACRIN)
2008-2012	Member, Thoracic Disease Site Committee, American College of Radiology Imaging Network (ACRIN)
2009-2012	Member, Experimental Imaging Sciences Committee, American College of Radiology Imaging Network (ACRIN)
2012-Present	Member, ECOG-ACRIN Experimental Imaging Science Committee
2012-2016	Member, ECOG-ACRIN Melanoma Committee
2008-2016	Member, NLST-ACRIN Biorepository Tissue Bank and Biomarker Oversight Committee (TBBmOC)
2012-2018	Member, NLST-ACRIN Biorepository Research Evaluation Panel (REP)
2012-2016	Member, ECOG-ACRIN Pathology/Informatics Committee
2012-Present	Member, ECOG-ACRIN GU Committee
2012-Present	Member, ECOG-ACRIN Leukemia Committee
2012-Present	Member, ECOG-ACRIN Biomarker Committee
2015-Present	Member, ECOG-ACRIN Head & Neck Cancer Committee
2018-Present	Member, ECOG-ACRIN Thoracic Committee
2018-Present	Member, ECOG-ACRIN Radiomics Working Group

EDITORIAL POSITIONS

Editorial Board Member, *Journal of Molecular Diagnostics (2020 Impact Factor: 5.553)*
Editorial Board Member, *Scientific Reports (2020 Impact Factor: 4.379)*
Editorial Board Member, *Journal of Biometrics & Biostatistics (2018 Impact Factor: 2.05)*

REVIEWER POSITIONS
Reviewer, *Nature Medicine (2016/2017 Impact Factor: 29.89)*
Reviewer, *JAMA Oncology (2018 Impact Factor: 22.42)*
Reviewer, *Science Translational Medicine (2016/2017 Impact Factor: 16.80)*
Reviewer, *Journal of the American Heart Association (2016/2017 Impact Factor: 4.86)*
Reviewer, *Annals of the American Thoracic Society (2015/2016 Impact Factor: 2.94)*
Reviewer, *BMC Cancer (2016/2017 Impact Factor: 3.29)*
Reviewer, *Cancer Imaging (2016/2017 Impact Factor: 2.40)*
Reviewer, *Bioinformatics (2016/2017 Impact Factor: 7.31)*
Reviewer, *Journal of Nuclear Medicine (2016/2017 Impact Factor: 6.65)*
Reviewer, *Oncotarget (2016/2017 Impact Factor: 5.17)*
Reviewer, *PLOS One (2016/2017 Impact Factor: 2.81)*
Reviewer, *Academic Radiology (2016/2017 Impact Factor: 2.13)*
Reviewer, *Statistics in Medicine (2016 Impact Factor: 1.85)*
Reviewer, *Wiley*
Reviewer, *Chapman & Hall/CRC*

BIBLIOGRAPHY

a) Peer-Reviewed Journal Articles

1. **Duan F**, Zhang Y, Xia L, Qiu R, Deng W, Li J, Chen Y. The Cloning of Glial Cell Line-Derived Neurotrophic Factor cDNA Holosequence and the Studying of Its Biological Activities. *Chinese Journal of Biochemistry and Molecular Biology.* 1999; 15(3):642.
2. Zou N, Lin BY, **Duan F**, Lee KY, Jin G, Guan R, Yao G, Lefkowitz EJ, Broker TR, Chow LT. The hinge of the human papillomavirus type 11 E2 protein contains major determinants for nuclear localization and nuclear matrix association. *J Virol.* 2000 Apr;74(8):3761-70. doi: 10.1128/jvi.74.8.3761-3770.2000. PMID: 10729151; PMCID: PMC111885.
3. **Duan F**, Zhang H. Correcting the loss of cell-cycle synchrony in clustering analysis of microarray data using weights. *Bioinformatics.* 2004 Jul 22;20(11):1766-71. doi: 10.1093/bioinformatics/bth169. Epub 2004 May 27. PMID: 15166015.
4. Jones BA, Kasl SV, Howe CL, Lachman M, Dubrow R, Curnen MM, Soler-Vila H, Beeghly A, **Duan F,** Owens P. African-American/White differences in breast carcinoma: p53 alterations and other tumor characteristics. *Cancer.* 2004 Sep 15;101(6):1293-301. doi: 10.1002/cncr.20500. PMID: 15368321.
5. Liao JJ, **Duan F**. Calibrating the Concentration from a Serial Dilution Process. *Journal of Chemometrics*. 2006; 20(6-7):294-301.
6. **Duan F,** Spindel ER, Li YH, Norgren RB Jr. Intercenter reliability and validity of the rhesus macaque GeneChip. *BMC Genomics.* 2007 Feb 28;8:61. doi: 10.1186/1471-2164-8-61. PMID: 17328815; PMCID: PMC1819383.
7. Sugiura H, Liu X, **Duan F,** Kawasaki S, Togo S, Kamio K, Wang XQ, Mao L, Ahn Y, Ertl RF, Bargar TW, Berro A, Casale TB, Rennard SI. Cultured lung fibroblasts from ovalbumin-challenged "asthmatic" mice differ functionally from normal. *Am J Respir Cell Mol Biol.* 2007 Oct;37(4):424-30. doi: 10.1165/rcmb.2007-0089OC. Epub 2007 Jun 15. PMID: 17575074; PMCID: PMC2176123.

8. Laspiur JP, Anderson ER, Ciborowski P, Wojna V, Rozek W, **Duan F,** Mayo R, Rodríguez E, Plaud-Valentín M, Rodríguez-Orengo J, Gendelman HE, Meléndez LM. CSF proteomic fingerprints for HIV-associated cognitive impairment. *J Neuroimmunol.* 2007 Dec;192(1-2):157-70. doi: 10.1016/j.jneuroim.2007.08.004. Epub 2007 Oct 22. Erratum in: J Neuroimmunol. 2008 Dec 15;205(1-2):161. PMID: 17950469; PMCID: PMC2248223.

9. Chaudhuri A, **Duan F,** Morsey B, Persidsky Y, Kanmogne GD. HIV-1 activates proinflammatory and interferon-inducible genes in human brain microvascular endothelial cells: putative mechanisms of blood-brain barrier dysfunction. *J Cereb Blood Flow Metab.* 2008 Apr;28(4):697-711. doi: 10.1038/sj.jcbfm.9600567. Epub 2007 Oct 17. PMID: 17940540.

10. Buescher JL, **Duan F,** Sun J, Price RW, Ikezu T. OTK18 levels in plasma and cerebrospinal fluid correlate with viral load and CD8 T-cells in normal and AIDS patients. *J Neuroimmune Pharmacol.* 2008 Dec;3(4):230-5. doi: 10.1007/s11481-008-9125-3. Epub 2008 Sep 5. PMID: 18773297; PMCID: PMC2581637.

11. Luciano-Montalvo C, Ciborowski P, **Duan F,** Gendelman HE, Meléndez LM. Proteomic analyses associate cystatin B with restricted HIV-1 replication in placental macrophages. *Placenta.* 2008 Dec;29(12):1016-23. doi: 10.1016/j.placenta.2008.09.005. Epub 2008 Oct 31. PMID: 18951626; PMCID: PMC3867668.

12. Toro-Nieves DM, Rodriguez Y, Plaud M, Ciborowski P, **Duan F,** Pérez Laspiur J, Wojna V, Meléndez LM. Proteomic analyses of monocyte-derived macrophages infected with human immunodeficiency virus type 1 primary isolates from Hispanic women with and without cognitive impairment. *J Neurovirol.* 2009 Jan;15(1):36-50. doi: 10.1080/13550280802385505. Epub 2008 Dec 26. PMID: 19115125; PMCID: PMC2947716.

13. García K, García V, Pérez Laspiur J, **Duan F,** Meléndez LM. Characterization of the placental macrophage secretome: implications for antiviral activity. *Placenta.* 2009 Feb;30(2):149-55. doi: 10.1016/j.placenta.2008.10.014. Epub 2008 Dec 12. PMID: 19070362; PMCID: PMC2947718.

14. Wiederin J, Rozek W, **Duan F,** Ciborowski P. Biomarkers of HIV-1 associated dementia: proteomic investigation of sera. *Proteome Sci.* 2009 Mar 17;7:8. doi: 10.1186/1477-5956-7-8. PMID: 19292902; PMCID: PMC2666658.

15. Barr FG, **Duan F,** Smith LM, Gustafson D, Pitts M, Hammond S, Gastier-Foster JM. Genomic and clinical analyses of 2p24 and 12q13-q14 amplification in alveolar rhabdomyosarcoma: a report from the Children's Oncology Group. *Genes Chromosomes Cancer.* 2009 Aug;48(8):661-72. doi: 10.1002/gcc.20673. PMID: 19422036; PMCID: PMC2739400.

16. Coleman RE, Hillner BE, Shields AF, **Duan F,** Merlino DA, Hanna LG, Stine SH, Siegel BA. PET and PET/CT reports: observations from the National Oncologic PET Registry. *J Nucl Med.* 2010 Jan;51(1):158-63. doi: 10.2967/jnumed.109.066399. Epub 2009 Dec 15. PMID: 20008997.

17. **Duan F,** Pauley MA, Spindel ER, Zhang L, Norgren RB Jr. Large scale analysis of positional effects of single-base mismatches on microarray gene expression data. *BioData Min.* 2010 Apr 29;3(1):2. doi: 10.1186/1756-0381-3-2. PMID: 20429935; PMCID: PMC2877042.

18. Patz EF Jr, Caporaso NE, Dubinett SM, Massion PP, Hirsch FR, Minna JD, Gatsonis C, **Duan F,** Adams A, Apgar C, Medina RM, Aberle DR. National Lung Cancer Screening Trial American College of Radiology Imaging Network Specimen Biorepository originating from the Contemporary Screening for the Detection of Lung Cancer Trial (NLST, ACRIN 6654): design, intent, and availability of specimens for validation of lung cancer biomarkers. *J Thorac Oncol.* 2010 Oct;5(10):1502-6. doi: 10.1097/JTO.0b013e3181f1c634. PMID: 20871260; PMCID: PMC2963472.

19. National Lung Screening Trial Research Team*, Aberle DR, Adams AM, Berg CD, Clapp JD, Clingan KL, Gareen IF, Lynch DA, Marcus PM, Pinsky PF. Baseline characteristics of participants in the randomized national lung screening trial. *J Natl Cancer Inst.* 2010 Dec 1;102(23):1771-9. doi: 10.1093/jnci/djq434. Epub 2010 Nov 22. Erratum in: J Natl Cancer Inst. 2011 Oct 19;103(20):1560. PMID: 21119104; PMCID: PMC2994863. (*: **Duan F** in the National Lung Screening Trial Research Team)

20. National Lung Screening Trial Research Team*, Aberle DR, Berg CD, Black WC, Church TR, Fagerstrom RM, Galen B, Gareen IF, Gatsonis C, Goldin J, Gohagan JK, Hillman B, Jaffe C, Kramer BS, Lynch D, Marcus PM, Schnall M, Sullivan DC, Sullivan D, Zylak CJ. The National Lung Screening Trial: overview and study design. *Radiology.* 2011 Jan;258(1):243-53. doi: 10.1148/radiol.10091808. Epub 2010 Nov 2. PMID: 21045183; PMCID: PMC3009383. (*: **Duan F** in the NLST research team)

21. Hillner BE, Siegel BA, Shields AF, **Duan F,** Gareen IF, Hanna L, Coleman RE. Impact of dedicated brain PET on intended patient management in participants of the national oncologic PET Registry. *Mol Imaging Biol.* 2011 Feb;13(1):161-5. doi: 10.1007/s11307-010-0427-5. PMID: 21080232; PMCID: PMC3023024.

22. Reichek JL*, **Duan F*,** Smith LM*, Gustafson DM, O'Connor RS, Zhang C, Dunlevy MJ, Gastier-Foster JM, Barr FG. Genomic and clinical analysis of amplification of the 13q31 chromosomal region in alveolar rhabdomyosarcoma: a report from the Children's Oncology Group. *Clin Cancer Res.* 2011 Mar 15;17(6):1463-73. doi: 10.1158/1078-0432.CCR-10-0091. Epub 2011 Jan 10. PMID: 21220470; PMCID: PMC3060277. (*: co-first author)

23. 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. doi: 10.1056/NEJMoa1102873. Epub 2011 Jun 29. PMID: 21714641; PMCID: PMC4356534. (*: **Duan F** in the National Lung Screening Trial Research Team)

24. Liu L, Yannam GR, Nishikawa T, Yamamoto T, Basma H, Ito R, Nagaya M, Dutta-Moscato J, Stolz DB, **Duan F,** Kaestner KH, Vodovotz Y, Soto-Gutierrez A, Fox IJ. The microenvironment in hepatocyte regeneration and function in rats with advanced cirrhosis. *Hepatology.* 2012 May;55(5):1529-39. doi: 10.1002/hep.24815. Epub 2012 Apr 4. PMID: 22109844; PMCID: PMC3700584.

25. Hillner BE, Siegel BA, Hanna L, Shields AF, **Duan F,** Gareen IF, Quinn B, Coleman RE. Impact of 18F-FDG PET used after initial treatment of cancer: comparison of the National Oncologic PET Registry 2006 and 2009 cohorts. *J Nucl Med.* 2012 May;53(5):831-7. doi: 10.2967/jnumed.112.103911. Epub 2012 Mar 23. PMID: 22448033.

26. **Duan F,** Smith LM, Gustafson DM, Zhang C, Dunlevy MJ, Gastier-Foster JM, Barr FG. Genomic and clinical analysis of fusion gene amplification in rhabdomyosarcoma: a report from the Children's Oncology Group. *Genes Chromosomes Cancer.* 2012 Jul;51(7):662-74. doi: 10.1002/gcc.21953. Epub 2012 Mar 23. PMID: 22447499; PMCID: PMC3348443.

27. Park ER, Gareen IF, Jain A, Ostroff JS, **Duan F,** Sicks JD, Rakowski W, Diefenbach M, Rigotti NA. Examining whether lung screening changes risk perceptions: National Lung Screening Trial participants at 1-year follow-up. *Cancer.* 2013 Apr 1;119(7):1306-13. doi: 10.1002/cncr.27925. Epub 2012 Dec 20. PMID: 23280348; PMCID: PMC3604047.

28. National Lung Screening Trial Research Team, Church TR, Black WC, Aberle DR, Berg CD, Clingan KL, **Duan F,** Fagerstrom RM, Gareen IF, Gierada DS, Jones GC, Mahon I, Marcus PM, Sicks JD, Jain A, Baum S. Results of initial low-dose computed tomographic screening for lung cancer. *N Engl J Med.* 2013 May 23;368(21):1980-91. doi: 10.1056/NEJMoa1209120. PMID: 23697514; PMCID: PMC3762603.

29. Aberle DR, DeMello S, Berg CD, Black WC, Brewer B, Church TR, Clingan KL, **Duan F,** Fagerstrom RM, Gareen IF, Gatsonis CA, Gierada DS, Jain A, Jones GC, Mahon I, Marcus PM, Rathmell JM, Sicks J; National Lung Screening Trial Research Team. Results of the two incidence screenings in the National Lung Screening Trial. *N Engl J Med.* 2013 Sep 5;369(10):920-31. doi: 10.1056/NEJMoa1208962. PMID: 24004119; PMCID: PMC4307922.

30. Machtay M, **Duan F,** Siegel BA, Snyder BS, Gorelick JJ, Reddin JS, Munden R, Johnson DW, Wilf LH, DeNittis A, Sherwin N, Cho KH, Kim SK, Videtic G, Neumann DR, Komaki R, Macapinlac H, Bradley JD, Alavi A. Prediction of survival by [18F]fluorodeoxyglucose positron emission tomography in patients with locally advanced non-small-cell lung cancer undergoing definitive chemoradiation therapy: results of the ACRIN 6668/RTOG 0235 trial. *J Clin Oncol.* 2013 Oct 20;31(30):3823-30. doi: 10.1200/JCO.2012.47.5947. Epub 2013 Sep 16. PMID: 24043740; PMCID: PMC3795891.

31. Walovitch R, Girardi V, **Duan F**, A Simulation Study to Evaluate Accuracy and Precision of Blinded Independent Central Reviews of Progression-free Survival in Cancer Clinical Trials, *Journal of Clinical Trial,* 2013, 3(142): 1-6.

32. Zhang Z, Wang Y, **Duan F.** An AUC-like index for agreement assessment. *J Biopharm Stat.* 2014;24(4):893-907. doi: 10.1080/10543406.2014.901345. PMID: 24697741.

33. Hillner BE, Siegel BA, Hanna L, **Duan F,** Shields AF, Coleman RE. Impact of 18F-fluoride PET in patients with known prostate cancer: initial results from the National Oncologic PET Registry. *J Nucl Med.* 2014 Apr;55(4):574-81. doi: 10.2967/jnumed.113.130005. Epub 2014 Feb 27. PMID: 24578240.

34. Machtay M, Siegel BA, **Duan F,** Snyder BS. Reply to J.-S. Ryu et al and A.T. Berman et al. *J Clin Oncol.* 2014 May 20;32(15):1632-3. doi: 10.1200/JCO.2013.54.6176. Epub 2014 Apr 21. PMID: 24752050.

35. Hillner BE, Siegel BA, Hanna L, **Duan F,** Shields AF, Quinn B, Coleman RE. Impact of (18)F-Fluoride PET on Intended Management of Patients with Cancers Other Than Prostate Cancer: Results from the National Oncologic PET Registry. *J Nucl Med.* 2014 Jul;55(7):1054-61. doi: 10.2967/jnumed.113.135475. Epub 2014 May 12. PMID: 24819422.

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38. Black WC, Gareen IF, Soneji SS, Sicks JD, Keeler EB, Aberle DR, Naeim A, Church TR, Silvestri GA, Gorelick J, Gatsonis C; National Lung Screening Trial Research Team*. Cost-effectiveness of CT screening in the National Lung Screening Trial. N Engl J Med. 2014 Nov 6;371(19):1793-802.

doi: 10.1056/NEJMoa1312547. PMID: 25372087; PMCID: PMC4335305. (*: **Duan F** in the National Lung Screening Trial Research Team)

39. Hillner BE, Siegel BA, Hanna L, **Duan F,** Quinn B, Shields AF. 18F-fluoride PET used for treatment monitoring of systemic cancer therapy: results from the National Oncologic PET Registry. *J Nucl Med.* 2015 Feb;56(2):222-8. doi: 10.2967/jnumed.114.150391. Epub 2015 Jan 15. PMID: 25593113.

40. Ohri N, **Duan F,** Machtay M, Gorelick JJ, Snyder BS, Alavi A, Siegel BA, Johnson DW, Bradley JD, DeNittis A, Werner-Wasik M. Pretreatment FDG-PET metrics in stage III non-small cell lung cancer: ACRIN 6668/RTOG 0235. *J Natl Cancer Inst.* 2015 Feb 16;107(4):djv004. doi: 10.1093/jnci/djv004. PMID: 25688115; PMCID: PMC4402361.

41. Yu EY, **Duan F,** Muzi M, Deng X, Chin BB, Alumkal JJ, Taplin ME, Taub JM, Herman B, Higano CS, Doot RK, Hartfeil D, Febbo PG, Mankoff DA. Castration-resistant prostate cancer bone metastasis response measured by 18F-fluoride PET after treatment with dasatinib and correlation with progression-free survival: results from American College of Radiology Imaging Network 6687. *J Nucl Med.* 2015 Mar;56(3):354-60. doi: 10.2967/jnumed.114.146936. Epub 2015 Jan 29. PMID: 25635138; PMCID: PMC4410847.

42. Chiles C, **Duan F,** Gladish GW, Ravenel JG, Baginski SG, Snyder BS, DeMello S, Desjardins SS, Munden RF; NLST Study Team. Association of Coronary Artery Calcification and Mortality in the National Lung Screening Trial: A Comparison of Three Scoring Methods. *Radiology.* 2015 Jul;276(1):82-90. doi: 10.1148/radiol.15142062. Epub 2015 Mar 9. PMID: 25759972; PMCID: PMC5137795.

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44. Markovina S, **Duan F,** Snyder BS, Siegel BA, Machtay M, Bradley JD. Regional Lymph Node Uptake of [(18)F]Fluorodeoxyglucose After Definitive Chemoradiation Therapy Predicts Local-Regional Failure of Locally Advanced Non-Small Cell Lung Cancer: Results of ACRIN 6668/RTOG 0235. *Int J Radiat Oncol Biol Phys.* 2015 Nov 1;93(3):597-605. doi: 10.1016/j.ijrobp.2015.04.026. PMID: 26461002; PMCID: PMC4648358.

45. Kostakoglu L, **Duan F,** Idowu MO, Jolles PR, Bear HD, Muzi M, Cormack J, Muzi JP, Pryma DA, Specht JM, Hovanessian-Larsen L, Miliziano J, Mallett S, Shields AF, Mankoff DA; ACRIN 668 Investigative Team. A Phase II Study of 3'-Deoxy-3'-18F-Fluorothymidine PET in the Assessment of Early Response of Breast Cancer to Neoadjuvant Chemotherapy: Results from ACRIN 6688. *J Nucl Med.* 2015 Nov;56(11):1681-9. doi: 10.2967/jnumed.115.160663. Epub 2015 Sep 10. PMID: 26359256; PMCID: PMC4737647.

46. Young RP, **Duan F,** Chiles C, Hopkins RJ, Gamble GD, Greco EM, Gatsonis C, Aberle D. Airflow Limitation and Histology Shift in the National Lung Screening Trial. The NLST-ACRIN Cohort Substudy. *Am J Respir Crit Care Med.* 2015 Nov 1;192(9):1060-7. doi: 10.1164/rccm.201505-0894OC. PMID: 26199983; PMCID: PMC4642202.

47. Hopkins RJ, **Duan F,** Young RP. Lung Cancer Susceptibility, Ethnicity, and the Benefits of Computed Tomography Screening. *Am J Respir Crit Care Med.* 2015 Dec 1;192(11):1394-6. doi: 10.1164/rccm.201507-1469LE. PMID: 26623689.

48. Ohri N, **Duan F,** Snyder BS, Wei B, Machtay M, Alavi A, Siegel BA, Johnson DW, Bradley JD, DeNittis A, Werner-Wasik M, El Naqa I. Pretreatment 18F-FDG PET Textural Features in Locally Advanced Non-Small Cell Lung Cancer: Secondary Analysis of ACRIN 6668/RTOG 0235. *J Nucl Med.* 2016 Jun;57(6):842-8. doi: 10.2967/jnumed.115.166934. Epub 2016 Feb 11. PMID: 26912429; PMCID: PMC4987286.

49. Subramaniam RM, Shields AF, Sachedina A, Hanna L, **Duan F,** Siegel BA, Hillner BE. Impact on Patient Management of [18F]-Fluorodeoxyglucose-Positron Emission Tomography (PET) Used for Cancer Diagnosis: Analysis of Data From the National Oncologic PET Registry. *Oncologist.* 2016 Sep;21(9):1079-84. doi: 10.1634/theoncologist.2015-0364. Epub 2016 Jul 8. PMID: 27401896; PMCID: PMC5016059.

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smoking intensity in a prospective study of high-risk smokers. *Thorax*. 2021 Mar;76(3):272-280. doi: 10.1136/thoraxjnl-2020-214839. Epub 2021 Jan 8. PMID: 33419953.

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https://www.ncbi.nlm.nih.gov/sites/myncbi/1Ny2ypzTuJTkw/bibliography/47418304/public/?sort=date&direction=ascending)

b) Opinion Article

78. **Duan F**, The Use of Molecular and Imaging Biomarkers in Lung Cancer Risk Prediction, *J Biom Biostat.* 2016 Aug, 7:3.

c) Book Chapter

79. **Duan F** and Zhang H, 2006, Statistical Methodologies for Analyzing Genomic Data, in Springer Handbook of Engineering Statistics, (editor) Hoang Pham, ISBN: 1852338067

80. Jason L, **Duan F,** Meng Y, Zhao Q. Selecting an appropriate dose-response curve in bioassay development. *Frontiers in Drug Design & Discovery*. 2010; 5.

d) Abstracts, Posters, Presentations and Preliminary Communications

i. Organized Invited Sessions

1) Organized the invited session "Statistical Methods In Cancer Signature's Discovery Using Some Emerging High-throughput Technology", The Second Joint Chinese-North American Biostatistics Symposium, Renmin University, Beijing, China, July 8-9, 2012

2) Organized the invited session "Risk Prediction Modeling in Clinical Trials", The 2015 ICSA/Graybill Joint Conference, Fort Collins, CO, June 14-17, 2015

ii. Invited Presentations

1. **Fenghai Duan**, Incorporating Microarray Data into Risk Stratification, Children's Oncology Group Meeting in Los Angeles, CA, October 5, 2006 **(invited)**

2. **Fenghai Duan**, Introduction to the Microarray Data Analysis, Department of Statistics, University of Nebraska-Lincoln, October 18, 2006 **(invited)**

3. **Fenghai Duan**, Statistical Analysis of SELDI-TOF MS and Microarray Data, RCMI Clinical Proteomics Discovery Core Facility and the Depts. of Biochemistry, Physiology, Microbiology, and the SNRP-NeuroAIDS Program, University of Puerto Rico, San Juan, Puerto Rico, April 2, 2008 **(invited)**

4. **Fenghai Duan**, Addressing Reliability Issues in Cancer Signatures Discovery, School of Public Health (Biostatistics), Yale University, May 6, 2008 (**invited**)

5. **Fenghai Duan**, Reliability Analysis in Clustering Microarrays, The first Joint Chinese-

North American Biostatistics Symposium, Renming University, Beijing, China, July 17-18, 2010 **(invited)**

6. **Fenghai Duan**, Statistical Issues in the Discovery of MicroRNA's Markers in the Pediatric Soft Tissue Cancer Alveolar Rhabdomyosarcoma, The Second Joint Chinese-North American Biostatistics Symposium, Renming University, Beijing, China, July 8-9, 2012 (**invited**)

7. **Fenghai Duan,** Joint Modeling of Longitudinal and Time-to-event Data in NLST, Northwest University, Xi'an, Beijing, China, June 24, 2013 **(invited)**

8. **Fenghai Duan,** Joint Modeling of Longitudinal and Time-to-event Data in NLST, Xi'an Jiaotong University, Xi'an, Beijing, China, June 25, 2013 **(invited)**

9. **Fenghai Duan,** A Simulation Study to Evaluate Accuracy and Precision of Blinded Independent Central Reviews of Progression-free Survival in Cancer Clinical Trials, 2013 Joint Statistical Meetings, Montreal, Quebec, Canada, August 4, 2013 **(invited)**

10. **Fenghai Duan**, Risk Prediction Modeling in the National Lung Screening Trial, Joint 24th ICSA Applied Statistics Symposium and 13th Graybill Conference, Fort Collins, CO, June 14-17, 2015 (**invited**)

11. **Fenghai Duan**, Modeling Risk Predictions in the National Lung Screening Trial (NLST), Sixth Annual International Symposium on the Evaluation of Clinical Trials (Methodologies and Application), Beijing, China, July 11-12, 2015 (**invited**)

12. **Fenghai Duan**, Risk Prediction Modeling in the National Lung Screening Trial, Department of Mathematics, University of Massachusetts Dartmouth, April 19, 2016 (**invited**)

13. **Fenghai Duan**, Integration of High-dimensional Genomic and Imaging Features for Risk Prediction of Lung Cancers, 2016 ICSA Applied Statistics Symposium, Atlanta, GA, June 12-15, 2016 (**invited**)

14. **Fenghai Duan**, Integration of High-dimensional Genomic and Imaging Features for Risk Prediction of Lung Cancers, The 10th 2016 ICSA International Conference, Shanghai Jiao Tong University, Shanghai, China, December 19-22, 2016 (**invited**)

15. **Fenghai Duan,** COPD Radiogenomics in DECAMP, ECOG-ACRIN Cancer Research Group, Spring 2018 Group Meeting, Chicago, IL, May 3-5, 2018

16. **Fenghai Duan,** LASSO Classifiers from Radiomic Analysis of Benign versus Malignant Screen-detected Pulmonary Nodules, 2018 ICSA China Conference with the Focus on Data Science, Qingdao, China, July 2-5, 2018 (**invited**)

17. **Fenghai Duan,** Comparisons and Validation of the Three Pulmonary Nodule Malignancy Risk Models (Brock, Radiomics, Deep Learning): A Secondary Analysis of Data from the National Lung Screening Trial, The 11th ICSA International Conference, Zhejiang University, China, Dec 20-22, 2019 (**invited**)

iii.   Posters

i. **Fenghai Duan**, WA Franklin, WE Grizzle, NE Caporaso, R Medina, DA Aberle, NLST-ACRIN Biomarker Repository, 2011 Biospecimen Research Network Symposium, March 28-29, 2011

ii. Menghan Hu, **Fenghai Duan**, Prediction of Lung Cancer Risk in the CT Arm of the National Lung Screening Trial, 2016 Joint Statistical Meetings, Chicago, Illinois, July 30

– August 4, 2016 (E-poster)

iv.   Other Presentations (including submitted)

18. **Fenghai Duan**, Probe-level Correction of Affymetrix GeneChip®, 2005 Eastern North American Region/International Biometric Society Spring Meeting, Austin, Texas, March 20-23, 2005

19. Xu Luo, David L. Kelly, **Fenghai Duan**, James Lynch, Robert Lewis, Michael Hollingsworth, Kenneth Cowan, Genome-wide siRNA Screening Facility at the UNMC Eppley Cancer Center, Genome-Wide RNAi Global Initiative Meeting, Washington DC, April 6-7, 2006

20. **Fenghai Duan,** Evaluating the Position Effect of Single-Base-Pair Mismatch Probes in Affymetrix GeneChip®, 2007 Eastern North American Region/International Biometric Society Spring Meeting, Atlanta, Georgia, March 11-14, 2007

21. Robert Norgren, **Fenghai Duan**, Patrick Allibone, Gene-specific SNPs, Improving Genetic Resources for the Rhesus Macaque Workshop (NCRR workshops), Bethesda, MD, May 23, 2007

22. **Fenghai Duan,** Transformation for the Additive Effect on the Affymetrix Probe Data, 2007 Joint Statistical Meetings, Salt Lake City, Utah, July 29 – August 2, 2007

23. Toro Nieves D, Ciborowski P, Perez Laspiur J, **Duan F**, Wojna V, Gendelman, HE, and Meléndez LM, Proteome changes in macrophages infected with primary isolates from women with cognitive impairment, Mini-Symposium on Proteomics: Applications to Clinical and Biotechnology Developments, University of Puerto Rico Medical Science Campus, San Juan, Puerto Rico, August 2, 2007

24. **Fenghai Duan**, James R. Anderson, Betty Schaub, Tim J. Triche, Rhabdomyosarcoma Cancer Signatures Study Using IRS-IV Patients, 2007 Strategic Partnering to Evaluate Cancer Signatures Investigator Meeting, Washington University School of Medicine, St. Louis, Missouri, October 11-12, 2007

25. **Fenghai Duan**, Finding the Optimum Number of Probes to Interrogate Transcripts Using Affymetrix GeneChip, 2008 Eastern North American Region/International Biometric Society Spring Meeting, Arlington, Virginia, March 18, 2008

26. Nietzell Vázquez, Juliana Pérez, Loyda Meléndez, **Fenghai Duan**, Nilsa Rivera, Alejandra Torres, Yarely Rullan, Eduardo Ruiz, Maria Sosa, Differential Expression of Prawn Brain Proteins in the Context of Dominance Hierarchies, 2009 Experimental Biology Annual Meeting, New Orleans, Louisiana, April 18-22, 2009

27. Gerald D. Dodd, III, **Fenghai Duan**, Benjamin Herman, Vincent Girardi, Jeremy Gorelick, Donna Hartfeil, Tina Taylor, ACRIN 6673: Multicenter Feasibility Study of Percutaneous Radiofrequency Ablation of Hepatocellular Carcinoma (HCC) In Cirrhotic Patients, 2009 Radiological Society of North America (RSNA) Annual Meeting, Chicago, Illinois, November 29 – December 4, 2009

28. Gerald D. Dodd, III, **Fenghai Duan***, Benjamin Herman, Vincent Girardi, Jeremy Gorelick, Donna Hartfeil, Tina Taylor, ACRIN 6673: Multicenter Feasibility Study of Percutaneous Radiofrequency Ablation of Hepatocellular Carcinoma (HCC) In Cirrhotic Patients, 2010 American College of Radiology Imaging Network (ACRIN) Annual Meeting (Abdominal Committee), Arlington, Virginia, September 29 – October 1, 2010

(*: presenter)

29. Barbara McComb, Reggie Munden, **Fenghai Duan**, Amanda Adams, Patricia Fox, Caroline Chiles, Thoracic Aortic Diameter in American College of Radiology Imaging Network/National Lung Screening Trial Participants, Society of Thoracic Radiology Annual Meeting, Bonita Springs, Florida, March 6 - 9, 2011

30. **Fenghai Duan**, Wilbur Franklin, William Grizzle, Neil Caporaso, Rosa Medina, Denise Aberle, NLST-ACRIN Biomarker Repository, The 4th Annual Biospecimen Research Network (BRN) Symposium by The National Cancer Institute Office of Biorepositories and Biospecimen Research, North Bethesda, Maryland, March 28-29, 2011

31. Nitin Ohri, **Fenghai Duan**, Barry Siegel, Mitchell Machtay, Maria Werner-Wasik, Predictors of Residual FDG-PET/CT Activity in Non-small Cell Lung Cancer Lesions following Chemoradiotherapy: A Secondary Analysis of ACRIN 6668 / RTOG 0235, ASTRO-RSNA Cancer Imaging and Radiation Therapy Symposium, Atlanta, Georgia, April 29 – April 30, 2011

32. M. Machtay, **F. Duan**, B. Snyder, J. Gorelick, A. S. DeNittis, C. Chiles, I. Mahon, A. Alavi, B. A. Siegel, J. D. Bradley, Can Tumor FDG-PET Scan Uptake (SUV) Predict Local Control in Stage III NSCLC: Preliminary Results from ACRIN 6668/RTOG 0235, the 2011 American Society for Radiation Oncology (ASTRO) annual meeting, Miami, Florida, October 2 – 6, 2011

33. Mark Muzi, Adam Opanowski, J. Peter Muzi, George Obsekov, Benjamin A. Herman, **Fenghai Duan,** Robert K. Doot, David A. Mankoff, Development of an Advanced PET Imaging Analysis Laboratory for the American College of Radiology Imaging Network, The SNM 2012 Annual Meeting, Miami Beach, Florida, June 9-13, 2012

34. Evan Yu, **Fenghai Duan**, Mark Muzi, Jeremy Gorelick, Bennett Chin, Joshi Alumkal, Mary-Ellen Taplin, Robert Doot, Phillip Febbo, David Mankoff, Effects of dasatinib on prostate cancer bone metastases and normal bone measured by18F-fluoride PET: Preliminary results from ACRIN 6687, The SNM 2013 Annual Meeting, Vancouver, BC, Canada, June 8-12, 2013

35. Evan Y. Yu, **Fenghai Duan**, Mark Muzi, Jeremy Gorelick, Bennett Chin, Joshi J. Alumkal, Mary-Ellen Taplin, Ben Herman, Celestia S. Higano, Robert K Doot, Donna M Hartfeil, Phillip G. Febbo, David A. Mankoff, Correlation of 18F-fluoride PET response to dasatinib in castration-resistant prostate cancer bone metastases with progression-free survival: Preliminary results from ACRIN 6687, 2013 ASCO Annual Meeting, Chicago, Illinois, May 31-June 4, 2013

36. C. Chiles, **F. Duan,** G.W. Gladish, J.G. Ravenel, S.G. Baginski, B. Snyder, S. DeMello, S. Smith, R.F. Munden, Coronary Artery Calcification As a Predictor of Mortality in the National Lung Screening Trial, , 2013 Radiological Society of North America (RSNA) Annual Meeting, Chicago, Illinois, December 1 – 6, 2013

37. Muzi M, **Duan F**, Opanowski A, Muzi JP, Kostakoglu L, Gabrielli G, Mallett S, Cormack J, Mankoff DA, ACRIN 6688: Initial Report On a Multi-Center Clinical Trial Using FLT Uptake for Response Assessment to Neoadjuvent Therapy in Locally Advanced Breast Cancer Patients, The Society of Nuclear Medicine 2014 Annual Meeting

38. Lale Kostakoglu, **Fenghai Duan**, Michael O Idowu, Paul R Jolles, Harry Douglas Bear, Mark Muzi, Jean Cormack, Daniel A. Pryma, Jennifer M. Specht, Linda Hovanessian

Larsen, John Miliziano, Sharon Mallett, Anthony Frank Shields, David A. Mankoff, Phase II study of 3'-deoxy-3'-18F fluorothymidine PET/CT (FLT-PET) in the assessment of early response in locally advanced breast cancer (LABC): Preliminary results of ACRIN 6688, The 2014 American Society of Clinical Oncology (ASCO) Annual Meeting

39. N. Ohri, **F. Duan**, M. Machtay, J. J. Gorelick, B. S. Snyder, A. Alavi, B. Siegel, D. W. Johnson, J. D. Bradley, A. S. DeNittis, M. Werner-Wasik, Metabolic Tumor Volume on FDG-PET Predicts Clinical Outcomes Following Chemoradiotherapy for Locally-Advanced Non-small Cell Lung Cancer: A Secondary Analysis of ACRIN 6668 / RTOG 0235, The 2014 American Society for Radiation Oncology (ASTRO) annual meeting

40. Stephanie Markovina, **Fenghai Duan**, Bradley S. Snyder, Barry Siegel, Mitchell Machtay, Jeffrey Bradley, Residual Post-treatment FDG-avidity in Regional Lymph Nodes Impacts Local-Regional Control in Patients Receiving Definitive Chemoradiation for Non-Small Cell Lung Cancer; a Secondary Analysis of ACRIN 6668/RTOG 0235, The 2014 American Society for Radiation Oncology (ASTRO) annual meeting

41. J. G. Bazan, **F. Duan**, B. S. Snyder, D. Horng, E. E. Graves, B. A. Siegel, M. Machtay, B. W. Loo, Metabolic Tumor Volume Predicts Overall Survival In Patients With Stage III Non-small Cell Lung Cancer Treated on ACRIN 6668/RTOG 0235, 2014 Chicago Multidisciplinary Symposium in Thoracic Oncology.

42. F. Maldonado, **F. Duan**, S. Raghunath, S. Rajagopalan, R. Karwoski, K. Garg, E. Greco, H. Nath, R. Robb, B. Bartholmai, T. Peikert; Stratification of Lung Adenocarcinomas in the National Lung Screening Trial, Oral Presentation at the 16th World Conference on Lung Cancer (WCLC 2015) taking place in Denver, Colorado, USA from September 6 – 9, 2015.

43. P M Boiselle, **F. Duan**, S Chysanthopoulou S DeMello, D R Aberle, C Chiles, Lung Nodule Consistency and Relative Risk of Future Lung Cancer Diagnosis: Does Sex Matter? (accepted as an oral presentation at 2015 RSNA)

44. C Chiles, **F. Duan**, J K Amorosa, S Chysanthopoulou, S DeMello, M Tammemagi, et al. Sex- and gender-linked differences in baseline characteristics of the National Lung Screening Trial (accepted as an oral presentation at 2015 RSNA)

45. A Salavati, **F. Duan**, S Houshmand, B Khiewvan, A Opanowski, B S Snyder, et al. The Prognostic Value of Volumetric FDG PET/CT Parameters and Partial Volume Effect Correction in Patients with Locally Advanced Non-Small Cell Lung Cancer: A secondary analysis of ACRIN 6668/RTOG 0235 Trial (accepted as an oral presentation at 2015 RSNA)

46. E. Billatos, M. Muse, A. Jiwani, I. Mahon, E. Maple, C.W. Atwood, C. Apgar, J.T. Battaile, R. Browning, E. Garshick, R.H. Goldstein, R.L. Keith, K. More, M. Morris, J.S. Parrish, M. Reid, C. Gatsonis, D. Elashoff, **F. Duan**, S.M. Dubinett, M. Lenburg, P.P. Massion, D. Remick, I.I. Wistuba, M. Schnall, A. Vachani, A. Spira. Diagnostic Evaluation of the Indeterminate Pulmonary Nodule Among Military and Veteran Personnel with Suspect Lung Cancer: The DECAMP Consortium. Oral Presentation presented at: American Thoracic Society; 2016 May 13-18; San Francisco, CA.

47. Menghan Hu, **Fenghai Duan**, Prediction of Lung Cancer Risk in the CT Arm of the National Lung Screening Trial, 2016 Joint Statistical Meetings, Chicago, Illinois, July 30 – August 4, 2016

48. Ali Salavati, **Fenghai Duan**, Sina Houshmand, Bo Wei, Bradley Snyder, Benjapa Khiewvan, Adam Opanowski, Barry Siegel, Mitchell Machtay, Abass Alavi, Optimum FDG PET/CT Volumetric Parameters in Patients with Locally Advanced Non-Small Cell Lung Cancer: Results from ACRIN 6668/RTOG 0235 trial, 2016 Radiological Society of North America (RSNA) Annual Meeting, Chicago, Illinois, Nov. 27 – Dec. 2, 2016

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50. G. Radin, **F. Duan**, E. Billatos, B. Snyder, C. Stevenson, C. Gatsonis, G. O'Connor, M. Lenburg, G Washko *, A. Spira* on behalf of the DECAMP investigators, Characterizing clinical and imaging phenotypes of COPD within the DECAMP consortium, American Thoracic Society 2017, Washington, DC, May 19 – 24, 2017 (poster)

51. Brendan C Stack, **Fenghai Duan**, JoRean Sicks, Justin Romanoff, Adam Opanowski, Dunstan Horng, Irene Mahon, Christopher S. Hollenbeak, The negative predictive value (NPV) of FDG-PET/CT in the Head and Neck Squamous Cell Carcinoma (HNSCC) N0 patient, the first report of the ACRIN 6685 trial, 2017 American Society of Clinical Oncology (ASCO) Annual Meeting, Chicago, IL, June 2-6, 2017

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54. E. Billatos, E. Moses, **F. Duan,** H. Marques, C. Stevenson, M. Lorenzi, M.E. Lenburg, A. Spira, G.R. Washko, DECAMP Consortium, Quantitative Imaging of the Indeterminate Pulmonary Nodule and Surrounding Parenchyma for Lung Cancer Diagnosis within the DECAMP Consortium, American Journal of Respiratory and Critical Care Medicine 2018;197: A4417

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57. Kircher SM, **Duan F**, Gareen IF, Underwood E, Sicks J, Suga JM, Kehn H, Mehan PT, Acoba JD, Taylor MA, Wagner LI, Carlos RC. Baseline and short-term financial burden (FB) in colorectal cancer (CRC)treated with curative intent: Early results of ECOG-ACRIN EAQ162CD. J Clin Oncol. 2021; 39(15). ABSTRACT 4518 [EAQ162CD]

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59. Adami, **F. Duan**, R. Calmelat, Z. Chen, R. Casaburi, H.B. Rossiter. Impaired Spirometry and Older Age Predict Skeletal Muscle Oxidative Capacity in COPD. 2022 ATS International Conference, which is scheduled to be held May 13-18, 2022 in San Francisco.

60. Kircher S, **Duan F**, Underwood E, Gareen IF, Sicks J, Sadigh G, Suga JM, Kehn H, Mehan PT, Bajaj R, Yasar DG, Hanson DA, Dalia S, Acoba DJ, Taylor MA, Wagner L, Carlos RC. Longitudinal financial burden in patients with colorectal cancer treated with curative intent: Primary results of ECOG-ACRIN EAQ162CD. 2022 American Society of Clinical Oncology (ASCO) Annual Meeting, Chicago, IL, June 3-7, 2022

61. Aarti Bhatia, Yael Flamand, Jennifer M Johnson, Jeffrey Ishizuka, **Fenghai Duan,** Mei Tang, Vidhya Karivedu, Rathan M. Subramaniam, Barbara Burtness. ECOG-ACRIN EA3202: A Phase II/III Trial of Chemotherapy (C) + Cetuximab (E) vs. C + Bevacizumab (B) vs. Atezolizumab (A) + B Following Progression on Immune Checkpoint Inhibition (ICI) in Recurrent/Metastatic Head and Neck Cancers (R/M HNSCC). 2022 American Society of Clinical Oncology (ASCO) Annual Meeting, Chicago, IL, June 3-7, 2022

62. Neha Vapiwala, Yu-Hui Chen, Steve Y. Cho, Fenghai Duan, Christos Kyriakopoulos, Daniel H. Shevrin, Rana R. McKay, Bridget F. Koontz, Evan Y. Yu, Jonathan McConathy, Glenn Liu, David A. Mankoff, Terence Z. Wong, Michael Anthony Carducci, Phase III Study of Local or Systemic Therapy INtensification DIrected by PET in Prostate CAncer Patients with Post-ProstaTEctomy Biochemical Recurrence (INDICATE): EA8191, ASCO GU 2023 Trial in Progress Poster (pending)

63. A. Adami, Z. Chen, F. Duan, R. Casaburi, H. B. Rossiter; Association Between Muscle Oxidative Capacity And Mortality In Humans With And Without COPD, ATS 2023, Washington, DC May 19 – 24, 2023.

e) **Technical Reports and Proceedings Summaries**

   iii. **Fenghai Duan,** James C Lynch, Design and Analysis of Microarray Experiments, A Children's Oncology Group Statistics and Data Center Position Paper, 2007

RESEARCH GRANTS AND CONTRACTS

ONGOING RESEARCH SUPPORT

2U10 CA180794 (Gray and Gatsonis)   04/29/14-02/28/25   3.00 calendar

NCI/Dana Farber Cancer Institute $9,254,000

ECOG-ACRIN Network Group Statistics and Data Management Center (Statistical Core subaward #1800006)

This subcontract covers support for the operations of Brown office of the Statistics and Data Management Center (SDMC) of ECOG-ACRIN Cancer Research Group. The SDMC is organized and operated jointly by the Department of Biostatistics and Computational Biology at the Dana-Farber Cancer Institute (DFCI), the Department of Biostatistics at Brown University, the Frontier Science and Technology Research Foundation (FSTRF) and the American College of Radiology (ACR), under the direction of the Group Statisticians.

Role: Faculty Statistician

2UG1CA189828-06-BRWN3 (Schnall, Sub PI Gatsonis)   08/01/17-07/31/25   0.60 calendar
EAMRF/NCI $10,291,710

ECOG-ACRIN Tomosynthesis Mammographic Imaging Screening Trial (TMIST)

The project lead and team will assist with the oversight and implementation of TIST; preparation of protocol and data collection forms; NCI review, study opening, monitoring of accrual and data quality; data cleaning and analysis; performance of interim and final data analyses; preparation of reports to the study team and Data Safety Monitoring Committee; preparation of manuscripts; addressing methodologic issues as they arise in the design and conduct of the study; development of statistical methodology for the evaluation of imaging.

Role: Faculty Statistician

4500003194 (Billaltos, Sub PI Duan)   03/01/19-02/28/23   0.90 calendar
Johnson & Johnson/Boston University $517,039

Detection of Early Lung Cancer Among Military Personnel (DECAMP) 1 Plus

This subcontract provides support for operating a Biostatistics Core for the DECAMP 1 PLUS. DECAMP 1 PLUS will develop and validate molecular biomarkers that can serve as tools for the early detection of lung cancer.

(Sedivy)   10/01/20-03/31/23   0.90 calendar
Alzheimer's Association $84,097

Repurposing necleoside reverse transcriptase inhibitors for treatment of AD

Alzheimer's Disease (AD) is a devastating and increasingly frequent neurological disorder whose onset is strongly correlated with advanced age. In spite of immense research and clinical efforts spanning several decades, cures have been elusive. One such direction is inflammation: Aging and many age-associated diseases are believed to be causally linked with a chronic inflammatory state. The brain is no exception, and the presence of inflammation in the AD brain establishes an environment that is hostile for the function and survival of neurons. While it is not yet clear whether inflammation is the root cause of AD, it is increasingly believed that alleviating these inflammatory processes might slow down the progression of the disease.

Role: Co-Investigator

R01 HL151452 (Rossiter and Adami, Sub PI: Duan)   02/01/20-01/31/24   0.60 calendar Yr1 & 4
NHLBI/LA BioMed $153,803   0.90 Yr 2 & 3

Determinants of 5-year Progression of Muscle Dysfunction and Inactivity in COPDGene Participants

The proposal will conduct follow-up measurements of muscle oxidative capacity and physical activity concomitantly with the COPDGene parent study Phase 3 visit (at Los Angeles Biomedical Research Institute) on a group of 245 smokers with and without COPD, who participated in the Muscle Health Study and underwent these assessments at COPDGene Phase 2 visit. The overarching objective of this proposal is to identify the determinants of the progression in skeletal muscle oxidative capacity and

physical inactivity.

UG1CA189828 (Salsman)   08/01/20-07/31/23   0.90 calendar
Wake Forest/NCI $347,246
ECOG-ACRIN NCORP Research Base- CT - AYA Supplement
This application will expand ECOG-ACRIN's infrastructure to support administration of PROMIS computer adaptive tests (CATs) using EASEE-PRO, thereby improving efficiency and measurement precision of PROs collected from Adolescents and young adults (AYAs).   We will use this tool to conduct a pilot randomized controlled trial with AYAs treated at NCORP sites to determine the feasibility and acceptability of completing PROs with CAT.
Role: Co-Investigator

1R02518031 CA (Specht)   07/15/2021-06/30/2026   0.90 calendar
NIH/EAMRF $409,346
Role of ctDNA changes as a response measure in the EA1183 patient population and how ctDNA changes correlate with metabolic response by serial FDG PET/CT
This subcontract provides support for operating a Biostatistics Core for the EA1183 substudy to evaluate the performance of using circulating DNA (ctDNA) to predict progression-free survival/time to SRE/overall survival, and the temporal association between the change in ctDNA and time of clinical or radiographic progression of disease in patients with bone-dominant metastatic breast cancer.
Role: Co-Investigator

1R21AG074153-01 (Alber, Sub PI: Duan)   09/01/21-08/31/23   0.40 calendar
NIH/URI $93,187
Developing retinal biomarkers in Autosomal Dominant Alzheimer's Disease: A Pilot Study
This proposal provides support for establishing and operating a Biostatistics Core for the proposed study in response to Alzheimer's Drug Discovery Foundation's funding opportunity: diagnostics accelerator: peripheral biomarkers program. The objective of this study is to examine retinal changes in DIAN-Observational participants and to determine the utility of retinal biomarkers in the detection and staging of ADAD.

1R01 CA261752 (Zebrack, Sub PI: Duan)   07/01/21-06/30/26   0.90 calendar
NCI/ Regents of the University of Michigan $1,532,384   effort begins 09/01/21
Social Genomic Mechanisms of Health Disparities among Adolescent and Young Adult (AYA) Cancer Survivors
The proposed study intends to identify and define functional genomic pathways through which psychosocial and social environmental risk and resilience factors influence gene regulation in AYAs, and thus contribute to a greater understanding of health disparities in post-treatment survivorship.

R01 (Sadigh, Sub PI: Duan)   08/01/22-07/31/27   1.20 calendar
NCI/Emory University $955,099   effort starts 08/01/22
Improving medication adherence using a CONnected CUstomized Treatment Platform (CONCURxP)
This project intends to test an mHealth intervention to improve Palbociclib adherence by conducting a randomized controlled trial (RCT) of a CONnected CUstomized Treatment Platform (CONCURxP) vs. enhanced usual care.

R01 AG079241-01 (Alber, Sub PI: Duan)   09/15/2022 – 08/31/2027   1.20 calendar
National Institute on Aging/ University of Rhode Island $677,532
Longitudinal validation of retinal biomarkers against cerebral biomarkers in the Atlas of Retinal

Imaging in Alzheimer's Study (ARIAS)
This subcontract provides support for establishing and operating a Biostatistics Core for the proposed study in response to a R01 opportunity "Research on Current Topics in Alzheimer's Disease and Its Related Dementias". The objective of this study is to develop a multi-site, longitudinal study to validate retinal biomarkers of Alzheimer's disease against reference standard brain imaging biomarkers (amyloid PET, MRI).

R01 (Sadigh, Sub PI: Duan)   12/01/22-11/30/27   1.20 calendar
Emory/NCI $1,110,813
Effectiveness of Out-of-Pocket Cost COMmunication and Financial Navigation (CostCOM) in Cancer patients
We propose a hybrid effectiveness-implementation study of OOP **Cost COM**munication and financial navigation (CostCOM intervention) vs. enhanced usual care in 1200 newly diagnosed cancer patients from 24 community cancer clinics using a design, where sites are randomized sequentially to initiate the intervention.

COMPLETED RESEARCH SUPPORT

(Below list the completed Research Grants/Contracts from Brown University in reverse chronological order)

(PI Billatos, Subcontract PI Duan)   01/21/20-07/15/22   0.90 calendar
Novartis Institutes for BioMedical Research/Boston University $76,282
Detection of Early Lung Cancer Among Military Personnel (DECAMP)
This research project involves supporting the establishment and operation of a Biostatistics Core for a proposed consortium that will develop and validate molecular biomarkers that can serve as tools for early detection of lung cancer. The Biostatistics Core based at Brown University will provide methodological expertise and leadership in the design, development and implementation of the DECAMP studies.

(Gatsonis)   06/01/15-06/30/20
ACR
Imaging Dementia-Evidence for Amyloid Scanning (IDEAS) Study
The Center for Statistical Sciences (CSS), Brown University will be responsible for overseeing all data collection, review and analysis efforts associated with the IDEAS Study.
Role: Biostatistician

(Duan/Gatsonis)   08/01/16-07/31/19
Blue Earth Diagnostics
Blue Earth Diagnostics Multi-Center Trial of FACBC
The Center for Statistical Sciences (CSS), Brown University was responsible for providing methodological expertise in the design, development, and implementation of the study.

U10 CA180820 (Duan)   03/01/17-02/28/19
EAMRF/NCI
ECOG-ACRIN Network Group Statistics and Data Management Center
This subcontract provided support for mapping the NLST data elements to the CTSP data elements for the participants in the NLST-ACRIN biorepository, and provided the mapped data to our ECOG-ACRIN colleagues.

U01 CA196408 (PI Dubinett, Subcontract PI Duan)   09/16/15-08/31/18

UCLA/NCI
Integrated Molecular, Cellular and Imaging Characterization of Screen-Detected Lung Cancer
This subcontract provided support for establishing and operating a Biostatistics Core. This proposal 1) identified molecular, cellular and imaging profiles that distinguish screen detected from non-screen detected lung cancers using the clinical, imaging and specimens data from the DECAMP studies and the UC, BU and Lahey Clinic screening programs, and 2) Identified molecular, cellular and imaging profiles that distinguished screen-detected lung cancers with indolent versus aggressive clinical courses from a previously collected screening cohort (NLST collected tumor tissues), and 3) Identified molecular, cellular and imaging profiles that distinguished screen-detected lung cancers with indolent versus aggressive clinical courses from a prospectively collected screening cohort.

(Duan and Gareen- MPI)   01/01/17-12/31/17
World Molecular Imaging Society
NOPR NaF CMS Collaboration
The primary endpoint of this study is to conduct the confirmatory analyses of the NOPR data and administrative claims data for NOPR patients. Specifically, this study intends to examine the similarities and differences between physicians' intended patient management as reported on case report forms for the registry and actual management inferred from their claims data. The BC is integrated closely with the investigators and Operations Centers (HQ) to manage and oversee the conduct of the study.

W81XWH-15-1-00110 (PI Maldonado, CSS PI Duan)   09/30/15-09/29/17
DOD/Vanderbilt
Non-invasive Characterization of indeterminate pulmonary nodules detected on chest high-resolution computed tomography
This proposal characterized the radiological characteristics of benign and malignant pulmonary nodules using the developed effective stratified medicine approach, and ultimately develop a multi-variant radiological and/or radiological/demographic prediction tool using the NLST dataset and independently validate the tool in a military population.

W81XWH-11-2-0161(PI: Gatsonis)   10/30/11-09/29/17

USRMC/DOD
Detection of Early Lung Cancer Among Military Personnel (DECAMP)
This research project involved supporting the establishment and operation of a Biostatistics Core for a proposed consortium that will develop and validate molecular biomarkers that can serve as tools for early detection of lung cancer. The Biostatistics Core based at Brown Universitywill provided methodological expertise and leadership in the design, development and implementation of the DECAMP studies.
Role: Faculty Statistician

U10 CA180794-02 (PIs Gray, Gatsonis; CSS PI: Duan)   03/01/15-02/29/16
Dana Farber/NCI
ECOG-ACRIN Network Group Statistics and Data Management Center Supplement
This subcontract covers support for the operations of Brown office of the Statistics and Data Management Center (SDMC) of ECOG-ACRIN Cancer Research Group.

(PI: Hanna)   01/01/14-12/31/15
WMIS
National Oncologic PET Registry (NOPR)

The Center for Statistical Sciences (CSS) provides biostatistics, epidemiologic, and data management expertise for the National Oncologic PET Registry (NOPR).

(PI: Duan)   01/01/15-12/31/15
Synergenz Bioscience, Inc.
Validation of a DNA-based lung cancer risk stratification model and its ability to improve the overall performance of NLST-based CT screening through improved preselection of highest risk individuals – Extension Cohort study (N=10,164)
This contract provides support for establishing and operating a Biostatistics Core. This study plans to extend the previous pilot case-control study to further validate their developed lung cancer risk model in the full cohort study of 10,164 participants in the ACRIN-biomarker sub-study where results from the proposed analysis will be combined with those of the previous case-control study.

U10 CA 079778 (Gatsonis)   03/02/99 – 12/31/14
NCI
Biostatistics Data Management Center for ACRIN
The American College of Radiology Imaging Network (ACRIN) is a national cooperative group, organized and funded by the National Cancer Institute in 1999 to conduct multi-center, interdisciplinary clinical evaluations of diagnostic imaging in the early detection and diagnosis, staging, and treatment of cancer. ACRIN's ultimate goal was to develop and disseminate scientific knowledge that will help reduce cancer-related mortality and morbidity and improve the quality of life of cancer patients.
Role: Faculty Statistician

U10 CA 079778 (Gatsonis)   01/01/02 – 12/31/14
NCI
Biostatistics Data Management Center (NLST)
This research project involved methodologic leadership and biostatistics and data management support for the development, implementation and analysis of the National Lung Screening Trial, a multi-center national study comparing helical CT to x-ray in screening for lung cancer (ACRIN protocol 6654).
Role: Faculty Statistician

(No Project Number) (Duan)   06/01/12-05/31/13
Synergenz BioScience, Inc.
Subcontract for the Project "Validation of a DNA based Lung Cancer Risk Stratification Tool and Its Ability to Improve Lung Cancer Detection Rates Through Improved Pre-selection of NLST Participants at Highest Risk of Lung Cancer"
We will respond to the need for biostatistical support and methodologic leadership in the project.
Role: PI

U24 CA114737-07 (Comis)   09/01/12 – 03/31/13
Dana Farber/NCI
Cooperative Group Banking (CGB) Informatics Supplement
The CGB Informatics supplement will be supporting the bioinformatics enhancement necessary for the tissue banks and core laboratories of ECOG-ACRIN to become federated within a virtual bank network.
Role: Co-investigator

(No Project Number) (Gatsonis)   05/01/06-12/31/13
WMIS
Biostatistics Data Management Center (NOPR)
The Center for Statistical Sciences (CSS) will provide biostatistics, epidemiologic, and data management expertise for the National Oncologic PET Registry (NOPR) and will have a representative in the Steering Committee.
Role: Faculty Statistician

CA 79778-11S2 (Gatsonis)   07/01/09-06/30/13
NCI
Early Phase Imaging in Therapeutic Clinical Trials: Cancer Imaging Program
ACRIN 6687: A Phase II multicenter evaluation of 18F- Flouride PET as a pharmacodynamic biomarker for Dasatinib, an SRC kinase inhibitor, in men with castration-resistant prostate cancer and bone metastases (BMS #180-279). The BDMC will provide support and methodologic leadership to ACRIN investigators in the design, development and implementation of the studies.
Role: Faculty Statistician

CA 79778-11S2 (Gatsonis)   07/01/09-06/30/12
NCI
Early Phase Imaging in Therapeutic Clinical Trials: Cancer Imaging Program
ACRIN 6688: Phase II study of 3- 18F fluorothymidine (FLT) in invasive breast cancer. The BDMC will provide support and methodologic leadership to ACRIN investigators in the design, development and implementation of the studies.
Role: Faculty Statistician

(No Project Number) (Gatsonis)   05/01/09-09/30/09
Virginia Commonwealth University
ACRIN 6688: Phase II Study of 3'-deoxy-3'-18F Fluorothymidine (FLT) in Invasive Breast Cancer
This proposal addresses the need for data management and statistical support to carry out the protocol "Phase II Study of FLT in Invasive Breast Cancer."
Role: Faculty Statistician

(Gray and Gatsonis)   03/01/20-02/28/21   0.60 calendar
NCI/Dana Farber Cancer Institute $90,631
ECOG-ACRIN Network Group Statistics and Data Management Center (CDISC Implementation Supplement)
Conforming to CDISC standards allows the cooperative group system to have a uniform standards structure that allows sharing of data across agencies, including the FDA. This project aims to support our continue work training staff and implementing of CDISC standards related to image collection, acquisition and analysis in our clinical trials.
Role: Faculty Statistician

U54 GM115677 (Schmid)   07/01/16-04/30/21   1.20 calendar
NIGMS $2,045,902

RI-Center for Clinical and Translational Science
The Brown Institute for Translational Sciences, and a statewide consortium of collaborators, hospitals, universities, and government agencies will use the IDeA Clinical Translational Research Award to build infrastructure and support for clinical and translational research.
Role: Co-Investigator

4500002382 (PI Spira, Subcontract PI Duan)   09/01/17-12/31/20   1.20 calendar
Janssen/Trustees of Boston University $314,376
Detection of Early Lung Cancer Among Military Personnel (DECAMP)
This research project involves supporting the establishment and operation of a Biostatistics Core for a proposed consortium that will develop and validate molecular biomarkers that can serve as tools for early detection of lung cancer. The Biostatistics Core based at Brown University will provide methodological expertise and leadership in the design, development and implementation of the DECAMP studies.
Role: Principal Investigator

(Below list the completed Research Grants/Contracts from University of Nebraska Medical Center)

No project number (Triche)   06/01/07 – 09/30/08

Children's Hospital Los Angeles
Diagnostic and Prognostic Sarcoma Signatures
Summary: The aim of this project is to identify, evaluate and validate tumor gene expression profiles, or "cancer signatures" (CS's), in order to provide unprecedented diagnostic and prognostic information about newly diagnosed, pre-treatment sarcoma patients that may precisely define their risk and therefore appropriate therapy.
Role: Co-Investigator

R01-CA014896 (Barr)   12/01/04 – 09/30/08

University of Pennsylvania
COG Studies of Gene Amplification in Rhabdomyosarcoma
Summary: The aims of this project are to define the major targets of the 12q13-15 ad 1024 amplification events in alveolar rhabdomyosarcoma (ARMS); Analyze the clinical significance of 12q13-15 and 2p24 amplification in ARMS; Elucidate the major amplicons and investigate the clinical significance of amplification associated with anaplasia in embryonal rhabdomyosarcoma (ERMS).
Role: Co-Investigator

1 U01 CA114778-01 (Chan)   06/01/05 – 09/30/08
National Institutes of Health

Molecular Signatures to Improve Diagnosis and Outcome Prediction in NHL
Summary: The goal of this project is to develop and validate a DNA microarray that can accurately classify lymphomas into important diagnostic and prognostic subgroups and determine if the addition of genetic predictors to the gene expression prognosticators will allow construction of better models for predicting survival.
Role: Statistician

5 R24 RR017444-06 (Norgren) 08/01/08 – 09/30/08
National Institutes of Health
Gene-Targeted SNP Discovery in Rhesus Macaques
Summary: The overall goal of this proposal is to discover gene-linked SNPs in rhesus macaques
(Macaca mulatta) and to make these SNPs easily accessible to the non-human primate research
community.
Role: Co-Investigator

No project number (Boska) 01/01/07 – 09/30/08
National Institutes of Health
Lithium-7 MR Studies of Rat Brain at 7Tesla
Summary: We will develop spectroscopic imaging of Li nucleus and measure Li intensities in the rat
brain using the most optimal method.
Role: Statistician

No project number (Boska) 05/01/08 – 09/30/08
Creighton University
**MRS Brain Changes in Methamphetamine Dependent Individuals with Clinical Symptoms of
Apathy**
Summary: We propose a cross-sectional study of 10 methamphetamine dependent individuals and 10
age matched controls with clinical symptoms of apathy. They will receive MRS-imaging to determine
the level of N-acetyl aspartate (NAA), creatine (Cre) choline (Cho), myoinostitol (ml) and glutamine plus
glutamate (Glx) in frontal and temporal cortex.
Role: Statistician

No project number (Shull) 07/01/08 – 09/30/08
National Institutes of Health
Genetic Susceptibility of Estrogen Induced Mammary Cancer
Summary: The objectives of this research are to identify genes residing with Emca1, Emca4 and
Emca8 that determine breast cancer risk and to define better the molecular mechanisms through which
estrogens contribute to breast cancer development.
Role: Statistician

5 U54 NS43011 (Gendelman) 09/28/01 – 09/30/08
National Institutes of Health
Immunopathogenesis of HIV Neurological Disorders: Project 2
Summary: The goal of this project is to investigate the epidemiology, neurobiology and
neuroimmunology of HIV-1 infected Hispanic women with, or at risk of, HIV-1 associated dementia
(HAD).
Role: Co-Investigator

5 R24 RR017444-04 (Norgren)   06/18/03 – 04/30/08
National Center for Research Resources (NCRR)
Construction of a Targeted Macaque Microarray
Summary: The objective of this research is to construct a targeted rhesus expression gene chip for the non-human primate community.
Role: Statistician
Role: Co-Investigator

3 R24 RR017444-04S1 (Norgren)   05/01/06 – 04/30/08
National Center for Research Resources (NCRR)
Construction of Targeted Rhesus Macaque Microarray - (Supplement)
Summary: The aim of this project is to perform additional experiments related to the work proposed in the funded grant entitled "Construction of Targeted Rhesus Macaque Microarray", and to study the relationship between the probe performance and the identified single nucleotide polymorphisms (SNPs).
Role: Statistician
Role: Co-Investigator