

Curriculum Vitae

Date Prepared: October 2, 2024

Name: Gabriel Dan Duda (publishing as Dan G. Duda)

Office Address: Massachusetts General Hospital (MGH)
CNY 3.407, 149 Thirteenth Street, Charlestown, MA 02129

Home Address: 52 Unity Avenue, Belmont, MA 02478, USA

Work Phone: 1 (617) 726-4648

Work Email: gduda@mgh.harvard.edu, duda@iasgo.org

Work FAX: 1 (617) 726-1962

Place of Birth: Iasi, Romania

ORCID: 0000-0001-7065-8797

Education:

09/93	D.M.D.	Dentistry	University of Medicine Iasi, Romania
03/01	Ph.D.	Medical Science (Gastrointestinal Surgery) Thesis advisor: Makoto Sunamura, MD, PhD	Tohoku University Graduate School of Medicine, Japan

Postdoctoral Training:

05/01- 06/04	Fellow	Tumor Biology (Mentor: Rakesh K. Jain, PhD)	Steele Laboratories for Tumor Biology, Department of Radiation Oncology, MGH/HMS, Boston, MA
-----------------	--------	--	--

Faculty Academic Appointments:

09/95- 03/01	University Preparatory	Dental Prosthetics	University of Medicine Iasi, Romania
06/04- 04/07	Instructor	Radiation Oncology	HMS, Boston, MA
05/07- 09/12	Assistant Professor	Radiation Oncology	HMS, Boston, MA
10/12- 11/23	Associate Professor	Radiation Oncology	HMS, Boston, MA

12/23–	Professor	Radiation Oncology	HMS, Boston, MA
--------	-----------	--------------------	-----------------

Appointments at Hospitals/Affiliated Institutions:

02/94-01/95	Physician-in-training	Rotations in Orthodontics, Dental Prosthetics, and Oral Surgery	St. Spiridon University Hospital, Iasi, Romania
02/95-09/95	Staff Physician	Oral Surgery	Harlau Municipal Hospital, Romania
10/95-09/97	Resident in Dentistry	Department of Dental Prosthetics	University Hospital Dental Clinic, Iasi, Romania
05/01-05/04	Research Fellow	Department of Radiation Oncology	MGH, Boston, MA
06/04-06/07	Assistant in Biology	Department of Radiation Oncology	MGH, Boston, MA
07/07–02/12	Assistant Biologist	Department of Radiation Oncology	MGH, Boston, MA
03/12–09/16	Associate Investigator	Department of Radiation Oncology	MGH Research Institute, Boston, MA
09/16–present	Investigator	Department of Radiation Oncology	MGH Research Institute, Boston, MA

Other Professional Positions:

2007	Consultant	Takeda Pharmaceuticals, Chicago, IL	N/A
2009	Consultant	Bridge Scientific Consulting LLC	N/A
2009	Think Tank Participant	Forbeck Forum “The Biology and Treatment of Primary Brain Tumors”, Hilton Head Island, SC	N/A
2012	Expert Panel Member	Renal Cell Carcinoma Expert Summit, Washington, DC (Angiogenesis Foundation)	N/A
2013	Advisory Board Member	Hexal-Sandoz (Novartis), Zurich, Switzerland	2% (5.3 days/year)
2015	Advisory Board Member	The Antibody-Drug Conjugates Conference, Boston	N/A
2015–	Secretary General	IASGO	2% (5.3 days/year)
2016	Advisory Board Member	Bayer Medical Affairs Oncology Advisory	N/A
	2016–2017		

		Board for Cancer Immunotherapy	
2017	Advisory Board Member	Tilos Therapeutics, Inc., Cambridge, MA	N/A
2017	Consultant	twoXAR, Inc., San Francisco, CA	N/A
2018	Consultant	Sophia Biosciences, Inc., Atlanta, GA	N/A
2018	Meeting Chair	The 1st Scientific Data Education Steering Committee (SDESC) Meeting, Bayer, San Francisco, CA	N/A
2019	Consultant	Simcere Pharma, Inc., Nanjing, China	
2020	Advisor/KOL (unpaid)	Olink, Watertown, MA	
2021	Consultant	Innocoll Biotherapeutics, Newtown Square, PA	

Major Administrative Leadership Positions:

Local

2016	Chair of the Organizing Committee	The Special Scientific Symposium in honor of Professor Rakesh K. Jain, Laureate of the US National Medal of Science
2016–	Director of Translational Research in GI Radiation Oncology	Massachusetts General Hospital, Department of Radiation Oncology
2024	Chair	The 23rd “Boston Angiogenesis Meeting” (BAM 2024), Boston, MA

National

2011	Leader, Workshop: Tumor angiogenesis as a therapeutic target	2011 Biorbis World Anti-Angiogenesis Summit, Boston, MA
2013	Chair Mini-Symposium: Novel Mediators of Tumor Angiogenesis	The 104th AACR Annual Meeting, Washington, DC
2019–	Course Co-Director 2019–2024	Mayo Clinic Pancreatic and Hepato-Biliary Cancer Symposium, Mayo Clinic, Las Vegas, NV
2019	Advisory Board Member 2019–2024	MD Anderson Cancer Center Hepatocellular Carcinoma SPORE, Houston, TX

2023	SWOG Cancer Research Network, Translational Medicine GI Committees 2023–	SWOG Chair
------	--	---------------

International

2013	Workshop Co-Director	International Workshop “ <i>Translational imaging in gastroenterology and surgery</i> ”, Craiova, Romania
2013	Head, Cancer Research section 2013–	IASGO
2017	ESF College of Expert Reviewers Member	European Science Foundation
2017	Conference Co-Chair	The 1st CME IASGO International Symposium, Luzhou, China
2019	Conference Director	The 1st CME IASGO International Course, Braga, Portugal
2019	Conference Do-Chair	The 2nd CME IASGO International Symposium, Luzhou, China
2020	Conference Chair	Webinar: “ <i>HCC – What’s Next?</i> ” Onco-Surgery Days Webinar Series, Istanbul, Turkey - IASGO
2021	Conference Co-Chair	The 2021 IASGO GI Summit, Taipei, Taiwan
2021	Conference Co-Chair	The 9th IASGO Onco-Surgery Days International Symposium, Istanbul, Turkey
2023	Workshop Coordinator	International Workshop “ <i>Novel applications of high-power lasers in medicine</i> ” at the conference "Smart Diaspora 2023 – higher education, science, innovation and entrepreneurship" Timisoara, Romania
2023	Workshop Coordinator	International Workshop “ <i>Interdisciplinary interactions at the frontier of personalized medicine</i> ”, at the conference "Smart Diaspora 2023 – higher education, science, innovation and entrepreneurship" Timisoara, Romania
2023	Chair	Forbeck Forum “ <i>The Biology and Treatment of Hepatocellular Carcinoma</i> ”, Pacific Grove, CA

2023	Course Director	The 2nd CME IASGO International Course, “Spotlight on Pancreas” Braga, Portugal
------	-----------------	---

Committee Service:

Local

2016	The One Hundred Selection Committee Member 2016–2017	MGH Cancer Center
2017	Committee Member 2017–	Radiation Oncology Immuno-Oncology Working Group, MGH
2017	Organizing Committee Member and Chair of Session: Immunotherapy 2017	19th Boston Angiogenesis Meeting (BAM)
2018	Organizing Committee Member 2018	Vascular Biology Seminar Series, Harvard Medical School
2023	Honors Exam Committee Member 2023	Harvard Medical School

National

2010	RTOG 0837 / ACRIN 6689 Study Planning (weekly teleconference) 2010–2012	RTOG, USA Committee Member
2016–	NRG Oncology / NRG-GI003 Phase III Study (weekly teleconference) 2016–2021	NRG Oncology, USA Translational Co-Chair
2017–2022	NCI Pancreatic Cancer Microenvironment Network (PaCMEN) (monthly teleconference) 2017–2022	US NIH, NCI Associate member
2019–	Professorial promotion referee	MD Anderson Cancer Center (2019) Johns Hopkins University (2022) Fred Hutchinson Cancer Center (2023)
2020–2022	NCI Hepatobiliary Task Force for Immuno-Oncology Biomarkers, 2020–2022	US NIH, NCI Member
2022–	SWOG Cancer Research Network, GI and Translational Medicine GI Committees 2022–	SWOG Member
2025	Angiogenesis Section of the Tumor Biology Subcommittee of the Program Committee for the AACR Annual Meeting 2025	AACR Chair

International

2015	PhD Defense, Annique MMJ Pieters Duyverman, Mentor, Prof. Borel Rinkes January 2015	Assessment Committee Member and co- Mentor, University of Utrecht, The Netherlands
2015	PhD Defense, Elizabeth Kuczynski, Mentor, Prof. Robert Kerbel October 2015	Oral Examination Committee Member, School of Graduate Studies, University of Toronto, Canada
2018–	Professorial promotion referee	Hong Kong Polytechnic Univ. (2018) Duke-NUS Singapore (2021)
2020–	University of Medicine Iasi, Council of Doctoral Studies Member 2020-2024	University of Medicine Iasi, Romania
2021	PhD Defense, Lingling Zhu 2019-2021	Co-Mentor, Sichuan University, Chengdu, China
2022	PhD Defense, Zhangya Pu, Mentor, Prof. Xuegong Fan and Dan G. Duda 2019-2021	Co-Mentor, Central South University, Changsha, China
2024	PhD Defense, Rakesh R. Ramjiawan, Mentors, Prof. Arjan Griffioen and Dan G. Duda 2012-2018 (pending)	Assessment Committee Member and Mentor, VU University, Amsterdam, The Netherlands
2024	PhD Defense, Nisha Gupta, Mentors, Prof. Prof. Victor van Hinsbergh and Dan G. Duda 2014-2017 (pending)	Assessment Committee Member and Co- Mentor, VU University, Amsterdam, The Netherlands

Professional Societies:

2000–	American Association for Cancer Research 2000–2024 2013 2025	Active member Organizer and Chair, Mini-Symposium: <i>Novel Mediators of Tumor Angiogenesis</i> , 104 th AACR Annual Meeting, Washington, DC Chair, TB01 Subcommittee of the Program Committee for the AACR Annual Meeting 2025, Chicago, IL
2005–	International Society for Stem Cell Research 2005–2008	Active member
2006–	American Society of Clinical Oncology	

	2006–2025	Active-allied member
	2010	Discussant (<i>Developmental / Experimental Therapeutics Track</i>), 2010 ASCO Annual Meeting, Chicago, IL
2007–	North America Vascular Biology Organization	
	2007–2010	Member
2007–	International Association of the Surgeons, Gastroenterologists and Oncologists	
	2007–2023	Permanent Member
	2013–2023	Head, Research Section
	2014–2023	Coordinator, Educational Programs
	2023	Elected as 2023 IASGO Fellow (FASGO)
	2015	Scientific Committee Member, 4 th IASGO International Meeting, Moscow, Russia
	2015	Scientific Committee Member, the 25 th World Congress of IASGO, Fuzhou, China
	2015–present	Secretary General
	2016	Organizing Committee Member, 26 th World Congress of IASGO, Seoul, Korea
	2017	Organizing Committee Member, 27 th World Congress of IASGO, Lyon, France
	2017	The 1 st CME IASGO Symposium, “Current and Future Perspectives in Primary Liver Tumors”, Rotterdam, The Netherlands
	2018	Organizing Committee Member, 28 th World Congress of IASGO, Moscow, Russia
	2019	Organizing Committee Member, 29 th World Congress of IASGO, Bangkok, Thailand
	2021	Organizing Committee Member, 32 nd World Congress of IASGO, Taipei, Taiwan
	2022	Organizing Committee Member, 33 rd World Congress of IASGO, Istanbul, Turkey
	2023	Organizing Committee Member, 34 th World Congress of IASGO, Verona, Italy
	2023	Elected Fellow of IASGO (FASGO)
	2024	Organizing Committee Member, 35 th World Congress of IASGO, Cairo, Egypt
2009–	DF/HCC Angiogenesis Invasion and Metastasis	

	2009–2017	Member
2009–	Harvard Catalyst Tumor Microenvironment Research Group	
	2009–2024	Member
	2012	Harvard Catalyst Program Grant Reviewer
2011–	The New York Academy of Sciences	
	2011–2015	Active Member
2012–	American Association for the Study of Liver Diseases	
	2012–2024	Member
	2019–2021	Liver Fibrosis Special Interest Group (SIG), Global Outreach Subcommittee
2016–	American Gastroenterological Association	
	2016–2017	Member
2017–	American Association for the Advancement of Science	
	2017–2024	Member
	2021	Elected as 2021 AAAS Fellow
2017–	Microcirculation Society	
	2017–2021	Member
2017–	European Society for Medical Oncology	
	2017–2018	Member
2019–	American Institute for Medical and Biological Engineering	
	2019–2023	Member
	2020	Inducted in the AIMBE College of Fellows Class of 2020 Chair, International Committee Evaluation
2020–	Society for Immunotherapy of Cancer	
	2020–2024	Member
2023–	Radiation Research Society	
	2023	Member
2023–	Academy of Europe (Academia Europaea)	
	2023–	Member Elected as Foreign Member of Academia of Europe, Class of 2023

Grant Review Activities:

2006–	Cancer Research Section	Hong Kong Research Council
-------	-------------------------	----------------------------

2006–	2006, 2018, 2021, 2024 Cancer Research Section 2006	Ad hoc grant reviewer United Kingdom Research Council Ad hoc grant reviewer
2008–	Cancer Research Section 2008–2024	Italian Association for Cancer Research (AIRC) Ad-hoc grant reviewer
2008–	Cancer Research Section 2008 2016 2022 2024	Cancer Research UK (CRUK) Ad hoc grant reviewer Ad hoc grant reviewer Immunology Expert Review Panel Member RadNet Review Panel Member
2009–	ARRA RC1 Challenge Grant – ZRG1 OTC-K (58) Section 2009	NIH Ad hoc member
2009–	SBIR/STTR – Cancer Drug Development and Therapeutics [CDDT] Study Section 2009–2024	NIH Ad hoc member
2010–	Drug Discovery and Molecular Pharmacology [DMP] Study Section 2010–2011 2012-2018 2013, 2018	NIH Ad hoc member Permanent member Co-Chair
2010–	Biomedical Research Program 2010	Institut National du Cancer France Ad hoc reviewer
2011–	Austrian Science Fund 2011	Austria Ad hoc grant reviewer
2011–	Med4 Study Section 2011–2023 2015–2020 2019–2020	Research Foundation Flanders (FWO), Belgium Ad hoc grant reviewer Permanent member Chair
2011–	Pennsylvania Department of Health 2011–2022	State of Pennsylvania Ad hoc grant reviewer
2012–	Romanian National Development and Innovation Council 2012-2013	Romania
2012–	Membrane Biology and Protein Processing [MBPP] Study Section 2012	NIH Ad hoc member
2012–	Grant Review Panel 2012	US-Israel Binational Science Foundation Ad hoc grant reviewer
2012–	National Institute of Social Care and Health Research 2012	Wales Ad hoc grant reviewer
2012–	Institutional grants 2012	Duke University Medical Center/VARIAN Medical Systems Ad hoc grant reviewer

2013–	SwissTransMed 2013	Switzerland Ad hoc grant reviewer
2013–	Joint Research Actions 2013 2015	Liège University, Belgium Ad hoc grant reviewer Ad hoc grant reviewer
2014–	Tumor Biology and Genomics (TBG) Section 2014–2015 2016-2020	American Cancer Society Ad hoc member Permanent member
2014–	SBIR – Small Business: Molecular Analysis Technology Study Section 2014–2015 2014–2015	NIH Ad hoc member Co-Chair
2014–	Clinical Trial Planning Grant Study Section 2014 2016	NIH Ad hoc member Ad hoc member
2014–	Special Emphasis Panel [SEP #12] R03 and R21 Omnibus 2014–2016	NIH Ad hoc member
2014	Research Grants 2014 2018	Swiss National Science Foundation Ad hoc member Ad hoc member
2014–	Florida Bankhead-Coley Cancer Research Program 2014–2023	State of Florida Ad hoc member
2015–	Breast Cancer Now 2015	UK Ad hoc grant reviewer
2016–	National Cancer Institute Special Emphasis Panel 2016	NIH Ad hoc member
2016–	SPORE Special Emphasis Panels 2016–2021, 2023, 2024	NIH Ad hoc member Discussion Leader (2021, 2024)
2017–	Cancer Research Section 2017–2021	European Science Foundation Ad hoc grant reviewer
2017–	Merit Review Oncology C Panel (ONCC) 2017 2020 2023	US Department of Veterans Affairs Ad hoc member Ad hoc member Ad hoc member
2018–	Research Competitiveness Program 2018–2020	American Association for the Advancement of Science Ad-hoc grant reviewer
2018–	Research Project 2018	University of Sharjah, UAE Ad hoc grant reviewer
2018–	Research Project	Italian Ministry for University and Research (MUR)

	2018, 2021	Ad hoc grant reviewer
2019–	Innovative Molecular and Cellular Analysis Technologies for Basic and Clinical Cancer Research (R21) Panel 2019	NIH
		Ad hoc member
2019–	US-China Program for Biomedical Collaborative Research Study Section 2019	NIH
		Ad hoc member
2019–	Interim Support Funding Program 2018–2023	MGH ECOR
		Ad hoc member
2019–	Research Grants 2019	Dutch Cancer Society
		Ad hoc reviewer
2019–	Research Council 2019	KU Leuven, Belgium
		Ad hoc reviewer
2019–	Loeffler Team Science Seed Funding Program 2019–2022	MGH Radiation Oncology
		Ad hoc member
2019–	SEP U01 Grant Review Panel 2019	NIH
		Ad hoc member
2019–	Cancer Biotherapeutics Development [CBD] Study Section 2019–2020	NIH
	2019	Ad hoc member
	2020	Co-Chair
		Chair
2019–	ACS Institutional Grant Pilot Funding Program 2019–2020	MGH
		Ad hoc member
2020–	StandUp2Cancer Pediatric Cancer Review Panel 2020	Research Foundation Flanders (FWO), Belgium
		Ad hoc reviewer
2020–	Development Research Project (DRP) Award Review Panel 2020	MD Anderson Cancer Center SPORE
		Ad hoc member
2020–	Rare Cancers Research Program (RCRP) Review Panel 2020-2021	Department of Defense
		Ad hoc member
2021–	Peer Reviewed Cancer Research Program (PRCRP) Career Development/ Translational Team Science/Liver Cancer (CTT-LivC) Peer Review Panel 2021-2024	Department of Defense
		Ad hoc member
2019–	Cancer Diagnostics and Treatments [CDT] Study Section 2022-2024	NIH
		Chair
2023	Research Grants Review Committee	Swiss Cancer Research Foundation & Swiss Cancer League

	2023	Ad hoc reviewer
2023	NCI Cancer Moonshot Scholars Diversity Program Study Section	NIH
	2023	Ad hoc member
2024–	Peer Reviewed Cancer Research Program (PRCRP) Career Development/ Programmatic Review Panel	Department of Defense
	2024–	Ad hoc member

Editorial Activities:

- **Ad hoc Reviewer**

1. *Angiogenesis*
2. *Anticancer Therapy*
3. *ASCO Annual Meeting and ASCO Educational Book*
4. *Biochimica et Biophysica Acta*
5. *BioMedCentral Cancer*
6. *Blood*
7. *British Journal of Cancer*
8. *British Journal of Surgery*
9. *Cancer Cell*
10. *Cancer Drug Resistance*
11. *Cancer Research*
12. *Cancer Research Communications*
13. *Cancers*
14. *Cancer Treatment Reviews*
15. *Carcinogenesis*
16. *Cell Biochemistry & Function*
17. *Cell Communication and Signaling*
18. *Cell Cycle*
19. *Cell Reports Medicine*
20. *Cellular & Molecular Immunology*
21. *Clinical Cancer Research*
22. *Clinica Chimica Acta*
23. *Current Opinion in Investigational Drugs*
24. *CNS Drugs*
25. *Clinical & Translational Radiation Oncology*
26. *Cytokine*
27. *EMBO*
28. *EMBO Medicine*
29. *EBioMedicine*
30. *Endothelium*
31. *European Journal of Cancer*
32. *Experimental and Molecular Pathology*
33. *Expert Opinion on Drug Safety*
34. *Expert Review of Anticancer Therapy*
35. *Gastroenterology*
36. *Gut*

37. *Hepatology*
38. *Hepatoma Research*
39. *International Journal of Cancer*
40. *International Journal of Radiation Biology*
41. *International Journal of Radiation Oncology Biology & Physics*
42. *Investigational New Drugs*
43. *JHEP Reports*
44. *Journal of Cellular and Molecular Medicine*
45. *Journal of Clinical Investigation*
46. *Journal of Clinical Oncology*
47. *Journal of Experimental & Clinical Cancer Research*
48. *Journal of Hepatology*
49. *Journal of Hepatology Reports*
50. *Journal of ImmunoTherapy for Cancer*
51. *Journal of Pathology*
52. *Journal of Vascular Research*
53. *Molecular Cancer Therapeutics*
54. *Nanomedicine*
55. *Nature Communications*
56. *Nature Immunology*
57. *Nature Reviews Cancer*
58. *Nature Reviews Clinical Gastroenterology and Hepatology*
59. *Nature Reviews Clinical Oncology*
60. *NEJM Evidence*
61. *NPJ Breast Cancer*
62. *NPJ Precision Oncology*
63. *Neuro-Oncology*
64. *Oncogene*
65. *Oncologist*
66. *Oncotarget*
67. *Pancreatology*
68. *Pharmacology and Therapeutics*
69. *PLoS Genetics*
70. *PLoS One*
71. *Proceedings of the National Academy of Science U S A*
72. *Regenerative Medicine*
73. *Science*
74. *Scientific Reports*
75. *Surgical Oncology*
76. *Translational Oncology*
77. *Trends in Endocrinology and Metabolism*

• **Other Editorial Roles**

2010–	Editorial Board Member	<i>American Journal of Cancer Research</i>
2013–2015	Editorial Board Member	<i>Hepatogastroenterology</i>
2013–	Senior Editor	<i>Discoveries</i>

2015–	Founding Editor	<i>Surgery, Gastroenterology and Oncology</i>
2015	Guest Editor Theme Issue: “ <i>Tumor Microenvironment</i> ”	<i>The Cancer Journal</i>
2016–	Consultant Editor	<i>Digestive Surgery</i>
2016–	Editorial Board Member	<i>Clinical & Translational Radiation Oncology</i>
2017–	Editorial Board Member	<i>Journal of Hepatocellular Carcinoma</i>
2018	Guest Editor Theme Issue: “ <i>Cholangiocarcinoma</i> ”	<i>Surgery, Gastroenterology and Oncology</i>
2019–2022	Associate Senior Editor	<i>International Journal of Radiation Oncology*Biology*Physics</i>
2020–	Editorial Board Member, <i>Tumor Microenvironment</i> Section Editor	<i>Cancers</i>
2022	Editors: M. Makuuchi, N. Kokudo, I. Popescu, J. Belghiti, H.-S. Han, K. Takaori, and D. G. Duda	<u>IASGO Textbook of Multi-Disciplinary Management of Hepato-Pancreato-Biliary Diseases</u> . 1 st Edition; Springer-Nature.
2023	Guest Editor for Special Issue: “ <i>Hepatocellular Carcinoma</i> ”	<i>Journal of Personalized Medicine</i>
2024	Editors: M.-T. Lin, Y. Obama, G. Manzoni, A. Guner, K. Takaori, and D. G. Duda	<u>IASGO Textbook of Upper Gastrointestinal Diseases</u> . 1 st Edition; Springer-Nature (in preparation)
2024	Invited Editor	<i>PNAS</i>

Honors and Prizes:

1997-2001	<i>Monbusho Fellowship</i>	Japan's Ministry of Education, Culture, Sports, Science and Technology	Research
1998	<i>Young Investigator Award</i>	International Association of Pancreatology	Research
2001	<i>Scholar-in-Training Award</i>	Ito-En and American Association for Cancer Research (AACR)	Research
2006	<i>Scholarship</i>	European Commission Marie Curie Actions Programme	Research
2007	<i>Team Science Award</i>	MGH Clinical Research	Research
2007	<i>Keynote Speaker</i>	The 5 th IBC Life Sciences Meeting on Anti-Angiogenesis, Boston	Research
2007	<i>Research Team Award</i>	Douglass Family Foundation, MA	Research
2008	<i>Junior Investigator Award Finalist</i>	North America Vascular Biology Organization	Research

2009	<i>Early Career Oncologists / Scientists (ECOS) Award</i>	EORTC-NCI-ASCO	Research
2010	<i>Lucien J. Rubinstein Team Award</i>	American Association of Pathologists	Research
2012–	<i>Honorary Member</i>	Academy of Medical Sciences of Romania	Research and service
2014	<i>Gerritsen Award</i>	The Microcirculatory Society	Research
2014	<i>Capussotti Award</i>	IASGO	Research
2014	<i>Keio University Lecture</i>	Keio University Tokyo, Japan	Research
2014-16	<i>Andrew L. Warshaw, M.D., Institute for Pancreatic Cancer Research Fellow</i>	Massachusetts General Hospital	Research
2015	<i>Keynote Speaker</i>	The 14 th International Wolfsberg/ ESTRO Radiation Biology Meeting	Research
2015	<i>Tohoku Medical Society Lecture</i>	Tohoku University Sendai, Japan	Research
2015	<i>Keynote Lecture</i>	Neuroononcology Group (NOA) Winterschool Freiburg, Germany	Research
2015	<i>Honoree of the One Hundred</i>	Mass General Cancer Center	Research and service
2016	<i>Heroes of Hope Award</i>	Granara-Skerry Trust	Research and service
2016	<i>State-of-the-art Lecture</i>	IASGO World Congress, Korea	Research
2017	<i>Plenary Lecture</i>	Hong Kong International Oncology Forum 2017 (HKIOF 2017)	Research
2017	<i>Partners HealthCare Innovator Award</i>	Partners HealthCare, Boston	Research
2017	<i>Keio Medical Society Lecture</i>	Keio University Tokyo, Japan	Research
2018	<i>IASGO Achievement Award</i>	30 th Anniversary World Congress of the IASGO	Research
2018	<i>Excellence Award</i>	Romania-USA Chamber of Commerce	Research and service
2019	<i>Partners HealthCare Innovator Award</i>	Partners HealthCare, Boston	Research
2020	<i>Induction into the College of Fellows – Class of 2020</i>	American Institute for Medical and Biological Engineering (AIMBE)	Research and service
2020	<i>2020 Excellence Award – World Ambassador of Romanian Medicine</i>	Romanian Academy and Medica Academica, Tarus Media	Research and service

2021	<i>Doctor Honoris Causa</i>	University of Medicine Iasi, Romania	Research
2022	<i>Elected as 2021 AAAS Fellow</i>	American Association for the Advancement of Science (AAAS)	Research
2022	<i>Keio Medical Society Lecture</i>	Keio University Tokyo, Japan	Research
2022	<i>Seiki Matsuno State-of-the-Art Lecture</i>	Joint Congress – 26 th IAP and 53 rd JSP Meetings, Kyoto, Japan	Research
2022	<i>Team Science – Honorable Mention</i>	MGH Clinical Research Day 2022	Research
2022-23	<i>Andrew L. Warshaw, M.D., Institute for Pancreatic Cancer Research Fellow</i>	Massachusetts General Hospital	Research
2022	<i>Erudite Scholar-in-Residence</i>	Kerala State Higher Education Council (KSHEC), India	Research
2023	<i>Induction into the College of Fellows Class of 2023 (FASGO)</i>	IASGO	Research and service
2023	<i>Foreign Member</i>	Academia Europaea (The Academy of Europe)	Research and service
2024	<i>Honorary Master of Arts (AM) Degree</i>	Harvard University	Research and service

Report of Funded and Unfunded Projects

Past

- 2003–2005 *Angiogenic Profile of Rectal Cancer* (PI, Willett)
National Cancer Institute / R21CA099237
Co-Investigator
The major goal of this study was to evaluate changes in tumor vasculature and in angiogenic markers after antiangiogenic therapy with bevacizumab in rectal cancer patients.
- 2005–2007 *Characterization of Circulating Endothelial Cells and Progenitor Cells as a Surrogate Marker for Progression and Treatment of Solid Tumors* (PI, Duda)
AACR-Genentech BioOncology Career Development Award
PI (\$102,000)
The goal of the study was to identify the origin and phenotype of endothelial and progenitor cells in tumor-bearing mice and study their kinetics after antiangiogenic therapies.
- 2005–2009 *Identification and Validation of Surrogate Markers for Response and Vascular Normalization after VEGF Blockade in Colorectal Cancer Patients* (PI, Jain)
National Foundation for Cancer Research / Research Award
Co-Investigator
The goals of the proposed studies were to determine the mechanism of action and identify biomarkers for bevacizumab in rectal cancer patients

- 2005–2007 *Phase II study of AZD2171 in patients with recurrent glioblastoma* (PI, Batchelor)
National Cancer Institute / R21CA117079
Co-Investigator
The goal of this study was to assess the efficacy and safety of AZD2171 in rGBM patients.
- 2006–2008 *Phase II trial of AZD2171 monotherapy in recurrent head-and-neck cancer* (PI, Rocco)
National Cancer Institute / R21CA099237
Co-Investigator
The major goal of this study was to evaluate changes in tumor vasculature and in angiogenic markers after antiangiogenic therapy with bevacizumab in rectal cancer patients
- 2006–2018 *Integrative Pathophysiology of Solid Tumors* (PI, Jain)
National Cancer Institute / P01CA080124
Project Co-Leader (2006-2011) and Project Leader (2012-2017) (\$767,294)
The overall goal of this program project is to identify common and disease-specific tumor stroma-mediated pathways of resistance to standard therapies in glioma (Project 1), colorectal cancer (Project 2), HCC (Project 3), and pancreatic cancer (Project 4). Project 3 is dedicated to studies of the role of CXCR4 and ERK in HCC evasion from sorafenib.
- 2006–2011 *Role of BMDCs in Solid Tumor Growth and Relapse* (PI, Jain)
National Cancer Institute / R01CA115767
Co-Investigator
The goal of this grant was to characterize the kinetics, phenotype and function of bone marrow-derived cells and the roles of VEGFR1 and CXCR4 in growing and treated tumors.
- 2007–2019 *Angiogenesis-targeting Therapy for Glioblastoma* (PI, Batchelor)
National Cancer Institute / 2R01CA129371
Co-Investigator
The goal of this project is to assess biomarkers of response and escape of standard antiangiogenic therapy with bevacizumab in glioblastoma patients.
- 2008–2009 *Bone Marrow Stromal Cell Characterization for Immunotherapy for Tumors* (PI, Duda)
National Cancer Institute / Federal Share Proton Beam Income Program Grant
PI (\$77,220)
The major goals of this study characterize a population of precursors cells that can be expanded, modified genetically, and then adoptively transferred to tumors to enhance anti-tumor immune responses
- 2008–2010 *A Phase II Study of Blood Circulating Cells and Plasma Angiogenic Proteins as Biomarkers of Anti-VEGF Therapy with Bevacizumab in Sarcoma Patients* (PI, Duda)
MGH / Ira J. Spiro Translational Research Award
PI (\$50,000)
The goal of this study is to provide strong candidate biomarkers of response – to be evaluated in future randomized trials of antiangiogenic agents in sarcoma patients.
- 2008–2013 *Murine Circulating Endothelial Precursors (CEPs) and Lung Capillary Repair* (PI, Jones)
NHLBI / R01 HL089252
Co-Investigator
The major goals of this study are to evaluate the roles of circulating precursor cells in lung capillary repair after hyperoxia-induced damage in mice. The emphasis is on detecting the CEP origin and the role of VEGF and SDF1 α signaling
- 2008–2013 *Probing Tumor Microenvironment Using Nanotechnology* (PI, Jain)
National Cancer Institute / R01CA126642
Co-Investigator (Project 3 Leader)
This Bioengineering Research Partnership (BRP) is exploiting emerging advances in semiconductor nanocrystal-based biomedical imaging to probe the tumor

- microenvironment.
- 2009–2013 *Cellular and Molecular Biomarkers of GBM Resistance to Antiangiogenic Therapy* (PI, Jain)
National Foundation for Cancer Research/Research Award
Co-Investigator
The goal of these clinical correlative studies is to explore in patients with glioblastoma the cellular and molecular determinants of resistance to antiangiogenic treatment
- 2009–2010 *Visualizing Immune Responses In Vivo: A Systems Biology Approach* (PI, Duda)
MGH Executive Committee on Research (ECOR) / Formulaic Bridge Funding Grant
PI (\$50,000)
The goal of this study is to establish and utilize targeted nanocrystal immuno-constructs for *in vivo* cytometric analyses of immune cells in tumors during immunotherapy
- 2009–2011 *Visualizing Immune Responses In Vivo: A Systems Biology Approach* (PI, Duda)
National Cancer Institute / R21CA139168
PI (\$242,000)
The goal of this study is to establish and utilize targeted nanocrystal immuno-constructs for *in vivo* cytometric and functional analyses of immune cells in tumors during immunotherapy.
- 2010–2012 *A Study of SDF1 α -CXCR4 as a Potential Mechanism of Distant Progression in Pancreatic Cancer after Neoadjuvant Chemoradiation* (PI, Duda)
MGH / Ira J. Spiro Translational Research Award – NCI/Proton Beam Program
PI (\$50,000)
The goal of this study is to provide strong candidate for anti-metastasis therapy in neoadjuvant setting in pancreatic carcinoma patients.
- 2010–2016 *Strategies for Personalized Treatment of Metastatic Breast Cancer* (PI, Jain)
Department of Defense / Innovator Award (Breast Cancer Program) W81XWH-10–1-0016
Co-Investigator
The goal of this grant is to improve antiangiogenic therapy in metastatic breast cancer by optimizing the schedule of therapy, and identifying new targets and biomarkers of response
- 2011–2014 *CXCR4 Blockade as a Sensitizer in Bone Metastatic Prostate Cancer* (PI, Duda)
American Cancer Society / Research Grant 120733-RSG-11-073-01-TBG
PI (\$600,000)
The goal of this proposal is to study the effects of CXCR4 blockade combined with radiation or chemotherapy and anti-VEGF therapy in bone metastatic prostate cancer models.
- 2011–2017 *Role of SDF1 α in Prostate Cancer Relapse and Metastasis Post-radiotherapy* (PI, Duda)
National Cancer Institute / R01CA159258
PI (\$933,750)
The aim of this R01 grant is to study the role of SDF1 α /CXCR4 vs /CXCR7 pathway in prostate cancer after irradiation. The hypothesis tested is that blockade of SDF1 α pathway in locally advanced prostate cancer will increase local control and inhibit metastasis.
- 2011–2012 *Role of PIGF, VEGF and Ang2 in Medulloblastoma and Glioblastoma* (PI, Jain)
Roche-sponsored / Research Grant
Co-Investigator
The goal of this study is to provide efficacy data and further mechanistic insight for PIGF inhibition in medulloblastoma and VEGF and Ang2 blockade in glioblastoma
- 2011–2013 *Role of SDF1 α in Prostate Cancer Relapse and Metastasis Post-radiotherapy* (PI, Duda)
MGH / Ira J. Spiro Translational Research Award
PI (\$50,000)
The aim of this grant is to explore the role of SDF1 α pathway and inflammatory bone

- marrow-derived cells in prostate cancer patients after irradiation
- 2011–2013 *An Exploratory Study of SDF1 α /CXCR4 Pathway as a Potential Mechanism of Disease Progression in Patients with Liver Cancer after Proton Beam Therapy* (PI, Duda)
National Cancer Institute / Proton Beam Federal Share Individual Grant
PI (\$112,606)
The goal of this study is to provide further rationale for CXCR4 inhibition as a radiosensitizer for the treatment of hepatocellular carcinoma patients with proton therapy.
- 2011–2013 *Novel Approaches to Anti-metastasis Therapy in Breast Cancer* (PI, Jain)
National Cancer Institute / Proton Beam Federal Share Umbrella Grant
Project 1 PI (\$636,504)
The goal of this study is to study novel mechanisms of breast cancer metastasis and identify and test new targets for therapy. Project 1 will test the role of endothelial Fak/Src.
- 2013–2015 *Targeting HGF/c-MET Pathway to Improve Outcomes in Patients with PDAC* (PI, Zhu)
Cummings Foundation – OneWorld Boston / Research Grant
Co-Investigator
The aim of this pilot grant is to target HGF/c-MET pathway with small molecule inhibitors to sensitize PDA to radiation, inhibit distant metastasis and improve outcomes.
- 2014–2016 *Cellular and Molecular Biomarkers of GBM Resistance to Antiangiogenic Therapy* (PI, Jain)
National Foundation for Cancer Research Fellow / Award
Co-Investigator
The goal of these clinical correlative studies is to explore in patients with glioblastoma the cellular and molecular determinants of resistance to antiangiogenic treatment
- 2014–2017 *Specific roles of KRASG12D versus KRASG12R in pancreatic ductal adenocarcinoma progression and resistance to cytotoxics* (PI, Duda)
Andrew L. Warshaw, M.D. Institute for Pancreatic Cancer Research / Pilot Grant
PI (\$100,000)
The aim of this pilot grant is to study the specific roles of KRASG12D versus KRASG12R mutations in pancreatic ductal adenocarcinoma.
- 2014–2017 *Blocking HGF to Overcome Radio- and Chemo-Resistance in pancreatic ductal adenocarcinoma* (PI, Duda)
Merrimack Pharmaceuticals, Inc. / Sponsored Research Agreement
PI (\$330,376)
The aim of this pilot grant is to target HGF pathway with a dual c-MET/EpCAM antibody as a strategy to sensitize pancreatic ductal adenocarcinoma to cytotoxics.
- 2015–2018 *Translational Phase I studies of DKN-01 in refractory esophageal cancer and in cholangiocarcinoma patients* (PI, Duda)
Leap Tx / Research Support
PI (\$212,243)
The goal of these correlative studies is to explore biomarkers of response and mechanisms of action for DKN-01, a humanized monoclonal antibody that targets the Dickkopf-1 (DKK1).
- 2016–2017 *Using dasatinib to target tumor growth and cirrhosis in HCC* (PI, Duda)
MGH ECOR / Deliberative Interim Research Support
PI (\$75,000)
The goal of these studies is to examine the mechanism of action and efficacy of dasatinib in models of hepatocellular carcinoma and liver cirrhosis in mice.
- 2016–2019 *Using anti-CXCR4 antibodies to facilitate anti-PD1 immunotherapy in HCC models* (PI, Duda)
Bristol Myers Squibb / Sponsored Research Agreement
PI (\$225,033)

- 2017–2018 The focus of this grant is on the use orthotopic murine models of HCC to examine the therapeutic benefit of antibody blockade of PD-1 with or without CXCR4 blockade.
Redirected Immunotherapy with Ra223 for Metastatic Prostate Cancer (MPIs, Duda/Cobbold)
MGH ECOR / Deliberative Interim Support Funding
PI (\$75,000)
The aim of this grant is to develop a new immunotherapy approach for bone metastatic prostate cancers using antibody-peptide conjugates (APEC) with radium treatment.
- 2017–2018 *Development, Characterization & Commercialization of a Viable Frozen Patient-Inclusive Hepatocellular Carcinoma Tumor Bank* (PI, Duda/Briggs)
National Cancer Institute / R41CA213678
MPI (\$60,556)
The aim of this Phase I STTR grant is to develop in collaboration with Woodland Pharma a viable frozen patient-inclusive hepatocellular carcinoma tumor bank for in vivo and in vitro testing of new therapeutic agents.
- 2018–2019 *Biomarkers of response to cabozantinib in patients with NET* (MPIs, Chan/Duda)
Neuroendocrine Tumor Research Foundation / Pilot Project Award
MPI (\$100,000)
The aims of this grant are to identify blood biomarkers that may predict efficacy of treatment with cabozantinib in neuroendocrine tumor (NET) patients.
- 2019–2020 *Vascularized tumor explants for drug testing* (MPIs, Duda/Munn)
MGH ECOR / Formulaic Interim Support Funding
MPI (\$75,000)
The aim of this grant is to develop a new ex vivo tissue biomimetic methodology for drug testing for pancreatic ductal adenocarcinoma patients.
- 2019–2020 Therapeutic modulation of the immune response in IDH mutant liver cancer (MPIs, Duda/Willers)
MGH ECOR / Deliberative Interim Support Funding
PI (\$37,500)
The aim of this grant is to leverage synergistic interdisciplinary expertise and complementary pre-clinical liver cancer models to deliver critically needed data that will validate the existence of increased biological effects of proton beam therapy in vivo, link increased proton RBE to a clinically relevant and testable tumor genotype, and facilitate the design of rational proton beam therapy combinations with immunotherapy.
- 2016–2021 Alpharadin with anti-PD-1 therapy in metastatic prostate carcinoma models (PI, Duda)
Bayer / Sponsored Research Agreement
PI (\$415,159)
The focus of this grant is on the use orthotopic murine models of bone metastatic prostate cancer to examine the therapeutic benefit of alpharadin using antibody blockade of PD-1.
- 2018–2021 *Developing Novel Approaches to Detect and Treat Early Pancreatic Cancer* (PI, Ryan)
AACR / SU2C-Lustgarten Foundation Pancreatic Cancer Interception Dream Team
Co-Investigator
The aim of this grant is to conduct a randomized phase II and biomarker study of an anti-fibrotic agent with or without immune checkpoint blockade to enhance the efficacy of cytotoxics for borderline and locally advanced PDAC.
- 2019–2021 *Combination of p53 mRNA Nanotherapy with Immunotherapy for HCC Treatment* (PI, Shi)
DoD PRCRP / W81XWH1910482
Subaward PI (\$148,971)
The goal of this project is to use p53 mRNA nanotherapy to promote antitumor immunity against p53-deficient HCCs.
- 2015–2021 *Dissecting pediatric brain tumor microenvironment to improve treatment* (PI, Jain)

- National Cancer Institute / R35 CA197743
Co-Investigator
The goal of this project is to gain new insights into pediatric TME to develop a program to further explore underlying mechanisms as well as other therapeutic opportunities to improve the outcome of chemo-radiation, targeted therapies, and immunotherapies.
- 2016–2021 Combining copanlisib with anti-PD1 immunotherapy in HCC models in mice (PI, Duda)
Bayer / Sponsored Research Agreement
PI (\$317,618)
The focus of this grant is on the use orthotopic (grafted and genetically engineered) murine models of HCC to examine the therapeutic benefit of copanlisib with PD-1 blockade.
- 2017–2021 Using cabozantinib to modulate anti-tumor immunity and enhance the efficacy of immunotherapy in metastatic breast cancer and HCC models in mice (PI, Duda)
Exelixis / Sponsored Research Agreement
PI (\$351,835 total)
The aim of this grant is to use cabozantinib as an immuno-modulator – in addition to anti-angiogenic and anti-metastatic agent – to potentiate the efficacy of immune checkpoint-based immunotherapy for metastatic breast cancer and HCC.
- 2016–2022 Rationally combining regorafenib with anti-PD1 immunotherapy in hepatocellular carcinoma models in mice with cirrhosis (PI, Duda)
Bayer / Sponsored Research Agreement
PI (\$309,583)
The aim of this grant is to use orthotopic (grafted and genetically engineered) murine of HCC to examine the therapeutic benefit of regorafenib with PD-1 blockade.
- 2017–2022 Reprogramming PDAC microenvironment to improve immunotherapy (MPI, Jain/Boucher)
National Cancer Institute / U01CA224348
Co-Investigator
The aim of this grant is to develop anti-fibrotic agents to reprogram tumor microenvironment and enhance the efficacy of cytotoxics and immunotherapy for locally advanced PDAC.
- 2020–2023 Enhancing the Efficacy of dual PD-1/VEGFR2 Inhibition in HCC (PI, Duda)
Bristol Myers Squibb / Sponsored Research Agreement
PI (\$181,743) (NCE)
The focus of this grant is on the use orthotopic murine models of HCC to examine the therapeutic benefit of immunomodulating agents with dual anti-VEGFR/PD-1 therapy.
- 2019–2023 Role and biomarker value for plasma HGF in susceptibility to high-dose radiation-induced liver dysfunction (PI, Duda)
DoD PRCRP Impact Award / W81XWH-19-1-0284
PI (\$1,000,000) (NCE)
The goal of this project is to validate plasma HGF as a biomarker of susceptibility to radiation induced liver dysfunction in liver cancer patients, and to gain new insights into how HGF/Met pathway mediates liver damage after radiation using mouse models.
- 2022–2023 Establishing the Role of MET as a Predictive Biomarker and Target for Sensitization to FOLFIRINOX in Early Pancreatic Ductal Adenocarcinoma (PI, Duda)
Andrew L. Warshaw, M.D. Institute for Pancreatic Cancer Research / Pilot Grant
PI (\$60,000)
The aim of this pilot grant is to uncover the causal role of HGF/MET axis in PDAC progression to liver metastasis and chemoresistance, and the mediators of MET expression.
- 2021–2023 Enhancing the Efficacy of dual PD-1/VEGFR2 Inhibition in Hepatocellular Carcinoma Using IL-27 Abs (PI, Duda)
Surface Oncology / Sponsored Research Agreement
PI (\$144,642) (NCE)

The focus of this grant is on the use orthotopic murine models of HCC to examine the therapeutic benefit of IL-27 blockade with dual anti-VEGFR/PD-1 therapy.

Current

- 2014–2024 Targeted Therapy of Pancreatic Cancer (PI, Duda)
The Samuel Singer Brown Fund for Pancreatic Ductal Adenocarcinoma Research
PI (\$238,500)
The aim of this pilot grant is to target the MET pathway as a strategy to sensitize PDAC to cytotoxics to inhibit distant metastasis and improve outcomes.
- 2021–2026 Dual blockade of VEGF and PD-L1 pathway in resectable HCC (MPI, Kaseb/Duda/Amin)
NCI / 1R01CA260872-03
MPI (\$726,250, subcontract to MDACC)
The goal of the proposed research is to demonstrate the activity and investigate the mechanism of action of dual VEGF/PD-L1 blockade in resectable HCC patients.
- 2021–2026 Multiplexed time domain fluorescence tomography of tumor biomarkers during immunotherapy (MPI, Kumar/Duda)
NCI / 1R01CA260857-03
MPI (\$1,355,835)
The goal of the proposed research is to optimize and investigate the detection of PD-L1 expression in TNBC models in mice during immunotherapy.
- 2021–2026 Reprogramming the tumor microenvironment to improve immunotherapy of glioblastoma by co-targeting VEGF and Ang2 (MPI, Fukumura/Jain)
NINDS / 1R01NS118929-03
Co-Investigator
This R01 grant will test the hypothesis that the abnormal vasculature within the unique environment of brain tumors and the resulting immunosuppression cause resistance to the novel immunotherapies.
- 2021–2026 Vascularized tumor explants for drug testing (MPIs, Munn/Duda)
NCI / 1R01CA247441-02
MPI (\$228,750)
The aim of this grant is to develop a new ex vivo tissue biomimetic methodology for drug testing for pancreatic ductal adenocarcinoma patients.
- 2021–2024 Radiation and CSPG4-specific CAR-T cell based combinatorial therapy for the in vivo treatment of TNBC (PI, Duda)
NCI / 1R03CA256764-02 (NCE)
PI (\$50,000)
The goal of the proposed research is to demonstrate increased efficacy of novel CAR-T cells using radiotherapy and anti-PD-1 therapy in metastatic triple negative breast cancer.
- 2021–2024 Mechanisms Mediating the Immune Responses after Proton versus Photon Radiotherapy in IDH Mutant Liver Cancer (PI, Duda)
DoD PRCRP / W81XWH-21-1-0738
PI (\$133,333)
The aim of this grant is to use liver cancer models to validate the increased biological effects of proton therapy in vivo and link the increased efficacy with to a clinically testable tumor genotype and facilitate the design of combinations with immunotherapy.

- 2021–2026 Integrating patient-specific clinical and biological factors towards individualizing utilization of proton and photon radiation therapy (PDs, Hong/Mohan)
 NCI / 1P01CA261669-02
 Core 2 Director (\$73,000)
 The PPG is investigating normal tissue toxicity by proton and photon therapy (Project 1), biological susceptibility of cancers to proton therapy (Project 2), and immunomodulatory effects of proton therapy (Project 3). The three projects will be supported by four shared resource cores, the Administrative Core (Core A), the Data Management and Computational Support Core (Core 1), the Biospecimens and Imaging Biomarkers Support Core (Core 2), and the Biostatistics Core (Core 3).
- 2023–2028 Defining Optimal Radiotherapy Dose and Fractionation in Combination with Preoperative Immuno-Chemotherapy in Early-Stage Triple Negative Breast Cancer (Ho/Gupta/Duda)
 NCI / 1R01CA274254-01
 MPI (\$35,464)
 The purpose of this application is to investigate the effect of pre-operative RT boost dose (0Gy, 9Gy or 24Gy) tumor in combination with pembrolizumab, on the induction of a systemic response in node-positive TNBC patients who will subsequently receive standard-of-care pembrolizumab, chemotherapy and surgery.
- 2023–2027 Combining p53 mRNA Nanotherapy with Standard Antiangiogenic/Immuno-Therapy for HCC (PI, Shi)
 DoD / PRCRP Impact Award CA220079
 Subaward PI (\$241,495)
 The goal of this project is to use p53 mRNA nanotherapy to promote enhance standard anti-VEGF/PD-L1 therapy for HCCs.
- 2023-2024 A novel dual-carrier ultrasmall nanomedicine for the treatment of stroma-rich pancreatic cancer (PI, Eichinger)
 NCI / 1R41CA285174-01
 Subcontract Co-PI
 The goal of this grant is to use a VTE platform to test increasing concentrations of the polymer conjugated gemcitabine prodrug, PGEM. We will evaluate tumor cytotoxicity and send conditioned media samples to Duo Oncology for further analyses. This data will be instrumental in optimizing the ratio of gemcitabine and CCR2 antagonist to be used in the DUO-307 formulation for pancreatic cancer treatment.

Projects Submitted for Funding

- 2025–2030 Inhibiting B-cell-mediated Immunosuppression to Enhance the Efficacy of STING Agonism in Hepatocellular Carcinoma (PI, Duda)
 DOD / PRCRP Impact Award
 PI (\$333,333)
 NCI / 1R01CA297294-01 (in revision for resubmission)
 PI (\$499,979)
 We aim to elucidate the role of B cells in HCC resistance to immunotherapy. Furthermore, we will assess the effectiveness of a strategy targeting B cells in orthotopic HCC models, differentiating between those with fibrotic and steatotic livers, to enhance immunotherapy.
- 2025–2030 Development of Novel Targeted Therapy for Hepatocellular Carcinoma (MPI, Duda/Oyelere)

- NCI / 1R01CA300644 (pending review)
 MPI (\$499,034)
 Develop liver-selective HDAC inhibitors and test them in combination with immunotherapy-based treatments in state-of-the-art animal models of liver cancer.
- 2024-2027 Intranasal mRNA Delivery for TNBC Immunotherapy (Partnering PIs, Shi/Duda)
 DoD / BCRP Breakthrough Award Level 1
 Subaward PI (\$300,000)
 The goal of this project is to use intranasal p53 mRNA nanotherapy to promote enhance standard PD-L1 therapy for TNBC.
- 2025–2030 Increasing the feasibility and efficacy of radioimmunotherapy for liver cancer using FLASH (MPI, Duda/Schuemann)
 NCI / 1R01CA300656-01 (pending review)
 PI (\$499,683)
 Irradiation with extreme dose rates (FLASH) has been shown to considerably spare healthy tissue while not affecting tumor control, promising to improve radiation therapy (RT) significantly. However, the effects on tumor response when combining FLASH-RT with current standard treatments, such as immune checkpoint inhibitors, are not yet understood. We propose investigating this combination therapy's tumor and immune response using mechanistic models guided by experimental data.

Training Grants and Mentored Trainee Grants

- 2006–2007 *Role of VEGFR1 in cancer metastasis* (PI, Michelle Dawson, PhD)
 Ford Foundation Diversity Research Fellowship
 Mentor
 The aim of this grant was to dissect the role of VEGFR1 in myeloid cells during spontaneous metastasis in mouse models.
- 2006–2007 *Role of primary tumor stroma in metastasis* (PI, Annique Pieters, MD, PhD)
 Department of Defense Pre-doctoral Award
 Co-Mentor
 The aim of this grant was to dissect the role of carcinoma-associated fibroblasts from the primary tumor in spontaneous metastasis in mouse models.
- 2008–2010 *Mechanisms mediating cancer metastasis to the lungs* (PI, Sachie Hiratsuka, MD, PhD)
 Scholarship Fund to Study Abroad Fellowship, Shiseikai, Japan
 Co-Mentor
 The aim of this grant was to dissect the role of vascular permeability in spontaneous metastasis in mouse models.
- 2014–2015 *Role of VEGF blockade in HCC* (PI, Tai Hato, MD, PhD)
 Astellas Research Fellowship, Japan
 Mentor
 The aim of this grant was to dissect the mechanisms of response and resistance to VEGFR2 inhibition in hepatocellular carcinoma models.
- 2015–2017 *New combined therapy approaches for advanced prostate cancer* (PI, Daniel H. Schanne, MD)
 Humboldt Foundation Feodor Lynen Research Fellowship, Germany
 Mentor

- The aim of this grant was to test the combination of CXCR4 with radiotherapy to treat bone metastasis in mouse models.
- 2016–2017 *Project title: Combination therapy using regorafenib and immunotherapy for HCC* (PI, Kohei Shigeta, MD, PhD)
Uehara Foundation Research Fellowship, Japan
Mentor
The aim of this grant was to dissect the mechanisms of response and resistance to regorafenib and PD1 blockade in hepatocellular carcinoma models.
- 2018–2019 *Role of PIGF/Nrp1 pathway in intrahepatic cholangiocarcinoma cell survival, tumor-associated fibrosis and abnormal vasculature* (PI, Shuichi Aoki, MD, PhD)
Cholangiocarcinoma Foundation 2018 Tommy J. West Memorial Research Fellowship
Mentor
The aim of this grant was to dissect the role of PIGF in cholangiocarcinoma progression and treatment resistance in mouse models.
- 2018–2021 *Immunotherapy combinations for intrahepatic cholangiocarcinoma* (PI, Jiang Chen, MD, PhD)
China Scholarship Council Project Postdoctoral Fellowship
Mentor
The aim of this grant is to test the mechanism and efficacy of the combination of chemotherapy with immunotherapy in cholangiocarcinoma mouse models.
- 2019–2021 *New therapy approaches to hepatocellular carcinoma* (PI, Lingling Zhu, MD)
China Scholarship Council Project Predoctoral Scholarship
Mentor
The aim of this grant was to test the mechanism and efficacy of the combination of radiotherapy with immunotherapy in HCC mouse models.
- 2019–2021 *Combination therapy using an immunomodulator (NLPR3 agonist) with immune checkpoint blockade for liver cancers* (PI, Zhangya Pu, MD)
China Scholarship Council Project Predoctoral Scholarship
Mentor
The aim of this grant is to test the mechanism and efficacy of the combination of an NPLR3 agonist with anti-VEGF and immune therapy in HCC mouse models.
- 2019–2021 *Combination therapy using a new oncolytic virus (VSV) with immune checkpoint blockade for liver cancers* (PI, Zhiping Ruan, MD, PhD)
China Scholarship Council Project Fellowship
Mentor
The aim of this grant is to test the mechanism and efficacy of the combination of VSV therapy with immunotherapy in HCC mouse models.
- 2019–2021 *Combination therapy using an immunomodulator (STING agonist) with immune checkpoint blockade for liver cancers* (PI, Zelong Liu, MD, PhD)
China Scholarship Council Project Fellowship
Mentor
The aim of this grant is to test the mechanism and efficacy of the combination of a STING agonist with anti-VEGF and immune therapy in HCC mouse models.
- 2019–2021 *Role of HGF pathway in radiation-induced liver damage* (PI, Franziska Hauth, MD)
German Cancer Aid DAAD Fellowship
Mentor

- The aim of this grant is to test circulating HGF as a biomarker of susceptibility to radiotherapy-induced liver damage in humans and in mouse models.
- 2020–2021 *Tomographic fluorescence lifetime multiplexing to quantify receptor expression* (PI, Rahul Pal, PhD)
 Jeane B. Kempner Scholarship
 Research mentor
 The goal of this work is to establish multiplexed imaging of PD-1 and VEGFR2 receptors during anti-angiogenic therapy in HCC models.
- 2021–2023 *Novel treatments for liver cancer* (PI, Satoru Morita, MD, PhD)
 Japan Society for the Promotion of Science Fellowship, Japan
 Mentor
 The aim of this grant was to test the mechanism and efficacy of the combination of systemic therapies with immunotherapy in HCC mouse models.
- 2021–2022 *New combination therapies for liver cancers* (PI, Hajime Taniguchi, MD, PhD)
 NextSurgery Foundation Fellowship, Japan
 Mentor
 The aim of this grant was to test the mechanism and efficacy of the combination of immunotherapy with other therapies in primary and metastatic models of liver cancers.
- 2022–2024 *Combination therapy using immunomodulators with immune checkpoint blockade for liver cancers* (PI, Xin Liu, MD, PhD)
 Sun-Yat Sen University, Guangzhou, China Fellowship
 Mentor
 The aim of this grant is to test the mechanism and efficacy of the combination of immune modulators with immunotherapy in HCC and ICC models.
- 2022–2024 *Combination therapy using immunomodulators with immune checkpoint blockade for liver cancers* (PI, Yue Shi, MD, PhD)
 Sun-Yat Sen University, Guangzhou, China Fellowship
 Mentor
 The aim of this grant is to test the mechanism and efficacy of the combination of immune modulators with immunotherapy in ICC models.
- 2023–2024 *Combination therapy using immunomodulators with immune checkpoint blockade for liver cancers* (PI, Jianguo Wang, MD, PhD)
 Zhejiang University, Hangzhou, China Fellowship
 Mentor
 The aim of this grant is to test the mechanism and efficacy of the combination of immune modulators with immunotherapy in HCC models.
- 2023–2027 *Novel treatments for liver cancer* (PI, Tomofumi Ando, MD, PhD)
 Takeda Science Foundation Fellowship, Japan
 Mentor
 The aim of this grant was to test the mechanism and efficacy of the combination of systemic therapies with immunotherapy in HCC mouse models.
- 2023–2024 *The reprogramming of dendritic cells by CXCR4 inhibition and immune checkpoint blockade elicits host immune reaction against HCC* (PI, Satoru Morita, MD, PhD)
 MGH ECOR Fund for Medical Discovery (FMD) Fundamental Research Fellowship Award
 Mentor

The aim of this grant was to establish the mechanism and efficacy of the combination of anti-CXCR4 therapy with immunotherapy in HCC mouse models.

- 2023–2024 Combination therapy using immunomodulators with immune checkpoint blockade for liver cancers (PI, Dandan Yuan, MD, PhD)
Shandong Cancer Hospital, China Fellowship
Mentor
The aim of this grant is to test the mechanism and efficacy of the combination of immune modulators with immunotherapy in HCC and ICC models.
- 2023–2024 Combination therapy using immunomodulators with immune checkpoint blockade for liver cancers (PI, Min Li, MD, PhD)
Anhui Medical University, China Fellowship
Mentor
The aim of this grant is to test the mechanism and efficacy of the combination of immune modulators with immunotherapy in HCC models.

Unfunded Current Projects

- 2024–2029 Increasing T cell infiltration and amplifying the efficacy of immune checkpoint blockade therapy in hepatocellular carcinoma (PI, Duda)
NCI / R01 (in preparation for new submission)
PI (\$250,000)
The goal of this project is to establish the mechanism of benefit of the combination of standard anti-hepatocellular carcinoma (HCC) drugs with the experimental use of immune checkpoint therapy in models of fibrosis or steatosis.

Report of Local Teaching and Training

Teaching of Students in Courses:

- | | | |
|-----------|--|---|
| 2002–2024 | <i>Methods in Biomedical Engineering and Immunology</i> (annual)
10-30 postdoctoral fellows, graduate students, and technologists | Massachusetts General Hospital, HMS

3 hours of contact time with learners (Course Director and Faculty) |
| 2005–2024 | <i>Tumor Pathophysiology and Transport Phenomena</i> HST 525J Course (biennial)

30 graduate students and postdoctoral fellows | HMS / Massachusetts Institute of Technology (MIT) HST Program

2 hours contact time with learners (Faculty) |
| 2011 | <i>Tumor Angiogenesis as a Therapeutic Target: Current Progress and Future Directions</i>

Workshop at the 2011 Biorbis World Anti-Angiogenesis Summit, Boston, MA
8 MDs and PhDs | Hansonwade Life Sciences

3 hours of contact time with learners (Workshop Leader) |
| 2011 | <i>MGH - Chinese Oncologist Visiting Program</i> HMS Course, Boston, MA (annual) | Massachusetts General Hospital, HMS |

	12-15 leading Chinese surgeons / oncologists	1-2 hours of contact time with learners (Faculty)
2018–2024	<i>Mayo Clinic Pancreatic and Hepato-Biliary Cancer Symposium</i> (annual) 100+ surgeons, gastroenterologists, oncologists, and scientists	<i>Mayo Clinic</i> , Phoenix, AZ 1-2 hours of contact time with learners (Course Co-Director and Faculty)

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2001–2024	Project advisor for undergraduate students in the biannual HST 525J Course on Tumor Pathophysiology / HMS-MIT (30+ students since 2001)	Mentorship for 1-2 days/year
-----------	---	------------------------------

Research Supervisory and Training Responsibilities:

2002–2008	Co-mentor of graduate research student Josh Tam (MIT) / Steele Labs	Twice weekly mentorship for 6 years
2002–2008	Co-mentor of graduate research student Patrick Au/ (MIT) (AHA Award) / Steele Labs	Twice weekly mentorship for 6 years
2003–2005	Co-supervision of postdoctoral research fellow Mitsutomo Kohno (Keio University, Japan) / Steele Labs	Twice weekly mentorship for 2.5 years
2004	Supervision of summer research student Swaroop Vedula (HSPH) / Steele Labs	Daily mentorship for 1 month
2004	Supervision of summer research student Abraham Wei (HMS) / Steele Labs	Daily mentorship for 3 weeks
2004	Supervision of summer research student Margaret J. Kim (MIT) / Steele Labs	Daily mentorship for 3 weeks
2005–2008	Supervision of postdoctoral research fellow Michelle Dawson (Johns Hopkins University) (Ford Foundation Grant)/ Steele Labs	Daily mentorship for 3.5 years
<i>Michelle Dawson, PhD, Assistant Professor of Molecular Pharmacology, Physiology, and Biotechnology at Brown University, Providence, RI. She received a Ford Foundation Postdoctoral Minority Fellowship and published 4 original reports under the mentorship of Dr. Duda (1 in Nature).</i>		
2005	Supervision of summer research student Nooshin Hosseini (Wellesley College/MIT) / Steele Labs	Daily mentorship for 4 weeks
2006–2010	Co-supervision of postdoctoral research fellow Annique Pieters Duyverman (Univ. of Utrecht, The Netherlands)/ Steele Labs	Daily mentorship for 4.5 years
<i>Annique Duyverman, MD, PhD, received a Predoctoral Fellowship from the US Department of Defense and published 7 original reports (3 Nature Protocols; 1 in PNAS; Journal of Clinical Oncology; Hepatology; Scientific Reports) under the mentorship of Dr. Duda. She is currently a staff surgeon, University of Utrecht, The Netherlands.</i>		
2007	Supervision of summer research student Rehan Quadri (University of Maryland)/Steele Labs	Daily mentorship for 2 weeks
2007	Supervision of summer research student Roberto Velazquez (MIT)/Steele Labs	Daily mentorship for 6 months
2007	Supervision of summer research student Ernst Steller (University of Utrecht, The Netherlands)/Steele Labs	Daily mentorship for 2 months

2007– 2010	Co-supervision of postdoctoral research fellow Sachie Hiratsuka (Tokyo University, Japan)/Steele Laboratories	Daily mentorship for 3 years
<i>Sachie Hiratsuka, MD, PhD, received a Research Fellowship from Scholarship Fund to Study Abroad, Shiseikai, Japan and Published 2 original reports, both in the PNAS under the mentorship of Dr. Duda. She is currently a Professor at Sinsyu University School of Medicine, Japan.</i>		
2008– 2009	Co-supervision of postdoctoral research fellow Yuhui Huang (Vanderbilt University)/Steele Lab	Twice weekly mentorship since October 2008
2009– 2011	Supervision of research student Lotte Hiddingh (University of Utrecht, The Netherlands)/Steele Labs	Daily mentorship for 6 months
2009– 2011	Co-supervision of postdoctoral research fellow Rekha Samuel (India) (Indian Government Grant)/Steele Labs	Twice weekly mentorship for 2 years
2009– 2012	Co-mentor of graduate research student Shom Goel (University of Sydney, Australia) / Steele Laboratories	Twice weekly mentorship since July 2009
2009– 2012	Co-supervision of clinical research fellow Matija Snuderl (MGH Pathology) / Steele Labs	Twice weekly mentorship since January 2009
2010	Supervision of student Pedro Valencia (MIT) / Steele Labs	Daily mentorship for 3 months
2010– 2013	Supervision of postdoctoral research fellow Yunching Chen (University of North Carolina)/Steele Labs	Daily mentorship since June 2010
<i>Yunching Chen, PhD, published 6 original reports (2 Hepatology, PNAS; Nature Protocols; Scientific Reports; Theranostics) under the mentorship of Dr. Duda. Currently, she is a Professor / Lab Director at the Institute of Biomedical Engineering at National Tsing Hua University, Taiwan.</i>		
2010– 2013	Co-supervision of clinical research fellow Christine Lu (MGH)/Steele Labs	Twice weekly mentorship since September 2010
2012– 2013	Supervision of postdoctoral research fellow Cristina Karp (University of Cincinnati)/Steele Labs	Daily mentorship since November 2012
2012– 2014	Supervision of postdoctoral research fellow Hiroki Ochiai (Keio University, Japan)/Steele Labs	Daily mentorship since June 2012
2012– 2018	Supervision of MSc and PhD graduate research student Rakesh Ramjiawan (VU University Amsterdam, The Netherlands)/Steele Labs	Daily mentorship for 6 years since January 2012
2013– 2017	Supervision of postdoc Daniel Schanne (Freiburg University, Germany) Humboldt Fellow/Steele Labs	Daily mentorship since September 2013
2013– 2016	Supervision of postdoctoral research fellow Tai Hato (Keio University, Japan)/Steele Labs	Daily mentorship since September 2013
<i>Tai Hato, MD, PhD, received a Postdoctoral Fellowship from Astellas Foundation for Research on Metabolic Disorders, Japan, and published 9 articles (3 in Hepatology, 2 in Clinical Cancer Research, 1 in Gut, Red Journal, Scientific Reports and Immunotherapy) under the mentorship of Dr. Duda. He is currently a staff surgeon and director of translational research in the Dept. of General Thoracic Surgery, Saitama Medical Center, Saitama Medical University, Japan.</i>		
2013– 2014	Supervision of undergraduate research student Toshiya Miyauchi (Tohoku University, Japan)/Steele Labs	Daily mentorship since November 2013
2014	Supervision of postdoctoral research fellow Yoshinori Hoshino (Keio University, Japan)/Steele Labs	Daily mentorship from Feb to Aug 2014
2014– 2016	Supervision of postdoctoral fellow Sen Li (Luzhou College) (China Science Council Grant)/Steele Labs	Daily mentorship from April 2014
2014–	Supervision of undergraduate research student	Daily mentorship since November 2014

2015	Takuya Suematsu (Tohoku Univ., Japan)/Steele Labs	
2014–	Supervision of postdoctoral fellow Shuji Kitahara	Daily mentorship from July 2014
2017	(Tokyo Women’s Med Univ, Japan)/Steele Labs	
	<i>Shuji Kitahara, DDS, PhD, published 5 original reports (2 in Hepatology, 1 in Gut, Scientific Reports and Cancers) under the mentorship of Dr. Duda. He is a Senior Lecturer at the Institute of Advanced Biomedical Engineering and Science and an Associate Professor at Tokyo Women’s Medical University, Japan.</i>	
2014–	Supervision of undergraduate research student	Daily mentorship for 10 months from
2015	Sebastian Klein (University of Munster, Germany)	November 2014
	(Alex Lemonade Stand Grant)/Steele Labs	
2014–	Supervision of PhD graduate research student Nisha	Daily mentorship for 3 years since
2017	Gupta (VU Amsterdam, The Netherlands)/Steele	November 2014
	Labs	
2015	Supervision of undergraduate research student	Daily mentorship for 3 months (June-
	Matthew Boulanger (University of Rochester,	Aug 2015)
	NY)/Steele Labs	
2015	Supervision of MSc graduate student Monique de	Daily mentorship for 6 months since
	Beijer (VU, The Netherlands)/Steele Labs	January 2015
2015	Supervision of undergraduate research student Paulo	Daily mentorship for 3 months (June-
	Moreira (University of Piauı, Brazil) Brazilian	Aug 2015)
	Scientific Mobility Program/Steele Labs	
2015–	Supervision of undergraduate research student Glenn	Daily mentorship for 12 months from
2016	Geidel (University of Munster, Germany) (René	October 2015
	Touraine Foundation Award)/Steele Labs	
2016–	Supervision of postdoctoral research fellow Kohei	Daily mentorship since April 2016
2018	Shigeta (Keio University, Japan)/Steele Labs	
	<i>Kohei Shigeta, MD, PhD, received a Fellowship from the Uehara Foundation and published 4 original reports (Hepatology, JITC, Clinical Cancer Research, Nature Biotechnology, Gut) under the mentorship of Dr. Duda. He is a physician-scientist and an Assistant Professor of Surgery, Keio University, Tokyo, Japan.</i>	
2016–	Supervision of postdoctoral research fellow Shuichi	Daily mentorship since April 2016
2019	Aoki (Tohoku University, Japan)/Steele Labs	
	<i>Shuichi Aoki, MD, PhD, received a research grant from Tohoku University and a Fellowship from the Cholangiocarcinoma Foundation and published 4 articles (2 in Hepatology and 1 in Gut and Nature Biotechnology) under the mentorship of Dr. Duda. He is currently a staff surgeon, Tohoku University, Sendai, Japan.</i>	
2016	Supervision of undergraduate research student Halil	Weekly mentorship for 3 months (June-
	Ibrahim Corbali (Fatih University, Turkey)	Aug 2016)
2016–	Postdoctoral research fellow Emilie Mamessier	Daily mentorship Nov 2016-Oct 2017
2017	(University of Aix-Marseille, France)/Steele Labs	
2016–	Supervision of undergraduate research student Kevin	Daily mentorship for 12 months from
2017	Koch (University of Munster, Germany) (Boehringer	Aug 2016-July 2017
	Ingelheim Fonds Foundation for Basic Research in	
	Medicine)/Steele Labs	
2017	Supervision of undergraduate research student Sonia	Weekly mentorship for 2 months (June-
	Radu (Boston College)	Aug 2017)
2017–	Supervision of postdoctoral research fellow Mi Na	Daily mentorship from July 1, 2017-
2018	Kim (CHA University, Korea)/Steele Labs	May 31, 2018
2017	Supervision of undergraduate research student Max	Daily mentorship for 2 months from
	Traeger (University of Munster, Germany)	Aug-Oct 2017
	(Boehringer Ingelheim Fonds Foundation for Basic	
	Research in Medicine)/Steele Labs	
2017–	Supervision of postdoctoral research fellow Aya	Daily mentorship April, 2017-April
2022	Matsui (Tokyo Women University, Japan)/Steele	2022

	Labs	
2018– 2021	Supervision of postdoctoral research fellow Hiroto Kikuchi (Keio University, Japan)/Steele Labs	Daily mentorship April 2018-March 2021
	<i>Hiroto Kikuchi, MD, PhD, published 6 articles (Hepatology, SGO, JITC, Gut, Nature, and JNCI) and has 2 manuscripts in preparation under the mentorship of Dr. Duda. He is currently a physician-scientist and a staff surgeon, Keio University, Tokyo, Japan.</i>	
2018– 2021	Supervision of postdoctoral research fellow Koetsu Inoue (Tohoku University, Japan)/Steele Labs	Daily mentorship since May 2018-February 2021
2018– 2019	Supervision of undergraduate research student Mie Yamanaka (Tohoku University, Japan)/Steele Labs	Daily mentorship since October 2018
2018– 2019	Supervision of undergraduate research student Masako Miyamoto (Tohoku Univ., Japan)/Steele Labs	Daily mentorship since October 2018
2018– 2021	Supervision of postdoctoral research fellow Jiang Chen (Zhejiang University, China)/Steele Labs	Daily mentorship Oct 2018-May 2021
2018– 2019	Supervision of research fellow Yoon-Sun Choi (Inje University Busan, Korea)/Steele Labs	Daily mentorship Oct 2018-Sept 2019
2019– 2021	Supervision of undergraduate research student Daniel Staiculescu (U Mass)/Steele Labs	Daily mentorship Mar 2019-June 2021
2019	Supervision of undergraduate research student Shiho Hirose (Univ. of Tokyo, Japan)/Steele Labs	Daily mentorship May-Aug 2019
2019– 2020	Supervision of postdoctoral research fellow Kazumichi Kawakubo (Hokkaido University, Japan)/Steele Labs	Daily mentorship June 2019-Apr 2020
2019– 2020	Supervision of undergraduate research student Masaaki Iwasaki (Tohoku University, Japan)/Steele Labs	Daily mentorship Sept 2019-Jan 2020
2019– 2020	Supervision of undergraduate research student Kanshiro Suzuki (Tohoku Univ., Japan)/Steele Labs	Daily mentorship Sept 2019-Jan 2020
2019– 2020	Supervision of undergraduate research student Tyge Schmidt (Univ. of Munster, Germany)/Steele Labs	Daily mentorship Sept 2019-Apr 2020
2019– 2021	Supervision of graduate research student Lingling Zhu (University of Sichuan, China)/Steele Labs	Daily mentorship Nov 2019-Jan 2021
2019– 2021	Supervision of postdoctoral research fellow Zhiping Ruan (X'ian University, China)/Steele Labs	Daily mentorship Oct 2019-Sept 2021
2019– 2021	Supervision of graduate research student Zhangya Pu (Central South University, China)/Steele Labs	Daily mentorship Dec 2019-Nov 2021
2019– 2022	Supervision of postdoctoral research fellow Ze-Long Liu (Sun-Yat Sen University, China)/Steele Labs	Daily mentorship from Dec 2019-June 2022
2019– 2022	Supervision of postdoctoral research fellow Franziska Hauth (Tubingen University, Germany)/Steele Labs	Daily mentorship from Mar 2020-July 2022
2021–	Supervision of postdoctoral research fellow Satoru Morita (Keio University, Japan)/Steele Labs	Daily mentorship from April 2021-March 2024
2021– 2024	Supervision of postdoctoral research fellow Hajime Taniguchi (Tohoku University, Japan)/Steele Labs	Daily mentorship from April 2021-March 2024
2021– 2022	Supervision of undergraduate research student Max Meyer (Univ. of Munster, Germany)/Steele Labs	Daily mentorship from Aug 2021-July 2022
2021– 2022	Supervision of postdoctoral research fellow Evelin Krajnc (ETH, Switzerland)/Steele Labs	Daily mentorship from Dec 2021-Dec 2022

2022–	Supervision of postdoctoral research fellow Tatsuya Kobayashi (Tokyo Women Medical University, Japan)/Steele Labs	Daily mentorship since Jan 2022
2022–	Supervision of postdoctoral research fellow Xin Liu (Sun-Yat Sen University, China)/Steele Labs	Daily mentorship since May 2022
2022– 2023	Supervision of undergraduate research student Lennard Weide (Univ. of Munster, Germany)/Steele Labs	Daily mentorship from Aug 2022-July 2023
2022– 2023	Supervision of undergraduate research student Maxence Galvan (Univ. of Munster, Germany)/Steele Labs	Daily mentorship from Aug 2022-Mar 2023
2022– 2023	Supervision of postdoctoral research fellow Yue Shi (Sun-Yat Sen University, China)/Steele Labs	Daily mentorship from Oct 2022-Aug 2023
2023– 2024	Supervision of postdoctoral research fellow Jianguo Wang (Zhejiang University, China)/Steele Labs	Daily mentorship from Feb 2023-Jan 2024
2023–	Supervision of postdoctoral research fellow Tomofumi Ando (Keio University, Japan)/Steele Labs	Daily mentorship from Apr 2023
2023–	Supervision of postdoctoral research fellow Dandan Yuan (Shandong Cancer Hospital, China)/Steele Labs	Daily mentorship since June 2023
2023-2024	Supervision of PhD graduate student Franciele Cimino (Federal University of Viçosa, Brazil)/Steele Labs	Daily mentorship from July 2023 to July 2024
2023– 2024	Supervision of undergraduate research student Marc Höll (Univ. of Munster, Germany)/Steele Labs	Daily mentorship from Aug 2023 to Aug 2024
2023– 2024	Supervision of undergraduate research student Noel-Adrian Hollosi (Univ. of Munster, Germany)/Steele Labs	Daily mentorship from Aug 2023 to Sept 2024
2023–	Supervision of postdoctoral research fellow Min Li (Anhui Medical University, China)/Steele Labs	Daily mentorship since Aug 2023
2023–	Supervision of MD undergraduate student Koki Tokida (Tohoku University, Japan)/Steele Labs	Daily mentorship from Aug 2023-Jan 2024
2023–	Supervision of MSc graduate student Ahmed Al-Azzam (Harvard Medical School)/Steele Labs	Daily mentorship for since Oct 2023
2024–	Supervision of postdoctoral research fellow Kento Miyazaki (Tohoku University, Japan)/Steele Labs	Daily mentorship from April 2024
2024– 2025	Supervision of undergraduate research student Noel-Rieke Schleinhege (Univ. of Munster, Germany)/Steele Labs	Daily mentorship since Sept 2024
2024–	Supervision of postdoctoral research fellow Ken Kojo (Kitasato University, Japan)/Steele Labs	Daily mentorship since Nov 2024

Formally Mentored Harvard Medical, Dental and Graduate Students:

2015 PhD Qualifying Exam Committee Member for Ph.D. Candidate Morad Golnaz, in the Program in Biological Sciences in Dental Medicine, Harvard University, class of 2020. Successfully defended thesis: “*The role of breast cancer-derived extracellular vesicles in brain metastasis*” in 2020.

2023– Mentor of Ahmed Al-Azzam, MD, enrolled in the Master of Medical Sciences in Clinical Investigation (MMSCI) Program at Harvard Medical School, class of 2025.

Other Mentored Trainees and Faculty:

- 2012– Janet E. Murphy, MD, MPH / Instructor of Medicine, MGH, HMS.
2019 *Career stage:* junior faculty. *Mentoring role:* research advisor. *Accomplishments:* received a K12 grant from the NCI (Proton Beam Federal Share Program) and published 1 article as first author in *JAMA Oncology* (2019) (top 1% rated paper per Thomson and Altmetric).
- 2017– Clemens Grassberger, PhD / Associate Professor of Radiation Oncology, University of Washington.
Career stage: junior faculty. *Mentoring role:* research advisor. *Accomplishments:* received an R21 grant from the NIH (one R01 grant pending), was promoted to Assistant Professor at MGH and HMS in 2019 and Assistant Program Director (Radiation Biology) in 2021 and published 4 articles with Dr. Duda as co-mentor (3 in *Int J Radiat Oncol Biol Phys* and 1 in *NPJ Precision Oncology*). He is now an independent faculty member at Fred Hutchinson Cancer Center in Seattle, WA.
- 2019– Hanny Al-Samkari, MD / Instructor of Medicine, MGH, HMS.
Career stage: junior faculty. *Mentoring role:* research advisor. *Accomplishments:* received a grant from the CureHHT foundation (2021) and a K23 grant (2022) for his correlative studies of VEGF blockade in hereditary hemorrhagic telangiectasia (HHT) patients, and was promoted to Associate Director, Hereditary Hemorrhagic Telangiectasia Center at MGH in 2020.
- 2020– Anwaar Saeed, MD / Assistant Professor of Oncology, University of Kansas Medical Center.
Career stage: junior faculty. *Mentoring role:* research advisor. *Accomplishments:* successfully designed a clinical trial, approved by the SWOG consortium; SWOG grant pending.
- 2020– Mehmet Akce, MD / Assistant Professor of Oncology, Emory University.
Career stage: junior faculty. *Mentoring role:* research advisor. *Accomplishments:* K08 grant pending.
- 2020– Ali Ajdari, PhD / Instructor of Radiology, MGH, HMS.
Career stage: junior faculty. *Mentoring role:* research advisor. *Accomplishments:* K99/R00 grant pending; Dr. Ajdari reported 1 biomarker study as first author in *JCO Clinical Cancer Informatics* (2021).
- 2020– Rahul Pal, PhD / Instructor of Radiation Oncology, MGH, HMS.
Career stage: junior faculty. *Mentoring role:* research co-mentor (with Dr. Kumar) since his postdoctoral fellowship. *Accomplishments:* Jeane B. Kempner Postdoctoral Fellowship in 2020; K01 grant pending.
- 2023– Kai Bao, PhD / Assistant Professor in Radiology, MGH, HMS.
Career stage: junior faculty. *Mentoring role:* research co-mentor (with Dr. Choi). *Accomplishments:* R01 grant pending.

Formal Teaching of Peers (e.g., CME and other continuing education courses):

No presentations below were sponsored by 3rd parties/outside entities

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

2009	“Pursuing potential biomarkers of response and resistance to antiangiogenic therapy: Which ones and why?” / Invited seminar speaker The weekly DFCI and BWH Neuro-Oncology Fellowship Conference	1 talk, Boston
2012	“Correlative Studies in Clinical Trials of Antiangiogenics” / Faculty The weekly MGH/DFCI/BWH Neuro-oncology Fellowship Conference, Pappas Center for Neuro-Oncology at MGH	1 talk, Boston
2012	"Angiogenesis and antiangiogenesis in tumors of the central nervous system"/Invited speaker The monthly MGH Pathology InterLaboratory Conference	1 talk, Boston
2013	“Targeting inflammatory pathways as a sensitization approach” / Invited seminar speaker MGH GI Group Research Meeting	1 talk, Boston
2014	“Correlative Studies in Clinical Trials of Antiangiogenics” / Faculty The weekly MGH/DFCI/BWH Neuro-oncology Fellowship Conference, Pappas Center for Neuro-Oncology at MGH	1 talk, Boston
2015	“Role of correlative studies in trials of antiangiogenics in brain tumors: What have we learned?” / Faculty The weekly DFCI/BWH Neuro-oncology Fellowship Conference, DFCI Neuro-Oncology Dept.	1 talk, Boston
2016	“The role of circulating biomarkers in improving upper GI cancer treatment” / Speaker MGH GI Multidisciplinary Research Meeting, MGH Cancer Center	1 talk, Boston
2021	“Impact of radiation on the immune TME of breast cancer and CAR-T cell efficacy” / Speaker MGH Radiation Science Tuesdays: IO Workshop Spring Series Meeting	1 talk, Boston

Local Invited Presentations:

No presentations below were sponsored by 3rd parties/outside entities

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

2009	“A phase II study of blood circulating cells and plasma angiogenic proteins as biomarkers of anti-VEGF therapy with bevacizumab in sarcoma patients” / 2008 Ira J. Spiro Translational Research Award Presentation The 2nd Research Retreat of the Department of Radiation Oncology at MGH	
------	--	--

- 2009 “Potential circulating biomarkers for antiangiogenic therapy in HCC” / Invited speaker
The DF/HCC Hepatocellular Research Day
- 2009 “On and off target with antiangiogenic therapies” / Grand Rounds in Oncology
Department of Hematology/Oncology DF/HCC, Harvard Medical School
- 2010 "On and off target with antiangiogenic therapies" / Invited seminar speaker
Boston Romanian Biomedical Scientists Group Seminar Series, HMS
- 2011 “Work-In-Progress Meeting” / Invited seminar speaker
DF/HCC Angiogenesis Invasion and Metastasis (AIM): Children's Hospital Vascular
Biology Program, Boston, MA
- 2011 “A study of SDF1/CXCR4 as a potential mechanism of distant progression in pancreatic
cancer after neoadjuvant chemoradiation” / 2010 Ira J. Spiro Translational Research
Award Presentation and Session Moderator
The 4th Research Retreat of the Department of Radiation Oncology at MGH
- 2013 “Correlative Studies of Circulating Biomarkers in Clinical Trials” / Invited seminar
speaker
MGH QTIM Neuro-Oncology Program
- 2015 “Prevention of development of liver tumors in a pre-malignant field” / Speaker
DF/HCC Liver Cancer Grant Incubator, DFCI
- 2017 “Cancer biology” / Invited speaker
MIT NIH P41 Laser Biomedical Research Center Site Visit, MIT
- 2017 “Using biomarkers to understand the role of the tumor microenvironment in treatment
resistance” / Speaker
MGH Radiation Oncology Immuno-Oncology Working Group Meeting
- 2019 “Rapidly evolving strategies for liver cancer treatment” / Seminar speaker
Vascular Biology Seminar, Children's Hospital & Harvard Medical School
- 2021 “Impact of radiation on the immune TME of breast cancer and CAR-T cell efficacy” /
Invited Speaker
MGH Radiation Oncology Immuno-Oncology Working Group Spring Meetings
- 2021 “Rad Onc Showcase” / Invited speaker and panelist
The 2021 Research Retreat of the Department of Radiation Oncology at MGH
- 2021 “Evolving therapies for liver cancer: Combine and Conquer” / Invited speaker
Inaugural MGH Cancer Forum
- 2022 “Rationally integrating radiotherapy for liver cancers by leveraging multidisciplinary
translational studies” / Invited speaker
The MGH Physics Seminar, Department of Radiation Oncology at MGH

Report of Regional, National and International Invited Teaching and Presentations

- No presentations below were sponsored by 3rd parties/outside entities*
- Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.*

Regional

- 2005 “Marker specificity, cell viability, and origin of circulating endothelial cells (CECs):
Implications for the use of CECs as biomarker for antiangiogenic therapy” / Speaker
(abstract)

- The AACR Special Conference Anti-Angiogenesis and Drug Delivery to Tumors: Bench to Bedside and Back, Waltham, MA
- 2006 “Contribution of bone marrow-derived endothelial cells to tumor vessels and potential use of circulating endothelial cells (CECs) as a biomarker of anti-VEGF therapy” / Invited speaker
Strategic Research Institute 4th Angiogenesis Drug Discovery and Development, Boston, MA
- 2007 “The Role of Circulating Endothelial and Progenitor Cells in Cancer” / Keynote talk
The 5th IBC Life Sciences Meeting on Anti-Angiogenesis, Boston, MA
- 2010 “Pursuing biomarkers of response and resistance to antiangiogenic therapy” / Invited speaker
Center of Cancer Systems Biology Seminar Series, TUFTS University, Boston, MA
- 2011 “Translational studies for angiogenesis biomarkers” / Invited speaker
The 9th International M. Judah Folkman Conference Antiangiogenesis: New Frontiers in Therapeutic Development, Cambridge, MA
- 2011 “VEGF: Natural target” / Invited speaker
13th Annual Boston Angiogenesis Meeting (BAM 2011), MIT, Cambridge, MA
- 2014 “Potential Circulating Biomarkers of Response to Targeted Therapy” / Invited speaker
Annual “Circulating Cancer Biomarkers”, Boston, MA (HansonWade)
- 2015 “Circulating biomarkers to evaluate cancer response and resistance to targeted therapies” / Invited speaker
Cambridge Biomedical Seminar Series, Cambridge, MA
- 2015 “Role of anti-angiogenesis in the immunotherapy era” / Invited speaker
17th Annual Boston Angiogenesis Meeting (BAM 2015), Schepens Eye Institute, Boston, MA
- 2016 “Antiangiogenesis for cancer therapy” / Plenary invited talk
World Congress of Interventional Oncology, Boston
- 2016 “Facilitating immune checkpoint blockade in HCC” / Invited speaker
Chair of Session: GI Cancer Therapy and Chemotherapy/anti-PD-1 Combinations
Cancer Immunotherapy and Combinations, 15th annual World Preclinical Congress, Boston
- 2020 “Rapidly evolving strategies for liver cancer treatment” / Seminar speaker
Surface Oncology Seminar, Cambridge, MA (Surface Oncology)
- 2021 “Multiple Obstacles Need to be Overcome to Prevent Resistance to CAR T Cell Therapy of Solid Tumors” / Invited speaker
Panelist: Combinatorial Approaches Using Radiotherapy and Immunotherapy
Moderator: Breakout Session – Barriers in the Tumor Microenvironment
Cambridge Healthtech Institute’s 11th Annual Antibodies for Cancer Therapy/Driving Breakthrough Therapies, PEGS Boston (virtual)
- 2022 “Using LNPs for mRNA-based therapy of liver cancer” / Invited speaker
1st LNP Formulation & Process Development Summit, Boston, MA (HansonWade)
- 2023 “Combining antiangiogenics with immunotherapy for liver cancer: Rationale, progress and challenges” / Invited speaker
Chair of Session: Angiogenesis in Health and Disease
22nd Boston Angiogenesis Meeting (BAM 2023), Boston Children’s Hospital
- 2024 “Combining p53 mRNA nanotherapy with immune checkpoint blockade for liver cancer” / Invited speaker
3rd LNP Formulation & Process Development Summit, Boston, MA (HansonWade)

National

- 1999 “Interleukin 12 gene therapy for pancreatic cancer” / Speaker (abstract)
The 42nd Symposium of the Japanese Microcirculation Society, Yokohama, Japan
- 1999 “In vivo analysis of IL-12 antiangiogenic gene therapy for pancreatic cancer” / Invited speaker
The 24th Annual Meeting of Japanese College of Surgeons, Kobe, Japan
- 2001 “Effects of SMAD4 gene therapy in pancreatic adenocarcinoma” / Speaker (abstract)
The 92nd Meeting of the American Association for Cancer Research, New Orleans, LA (Ito-En-AACR Travel award)
- 2004 “Paracrine regulation of angiogenesis and adipogenesis: A potential link with cancer” / Speaker (abstract)
The 95th Meeting of the American Association for Cancer Research, Orlando, FL
- 2005 “Evaluation of circulating precursor cells as surrogate markers for antiangiogenic therapies of cancer” / Speaker (abstract)
The 3rd Meeting of the International Society for Stem Cell Research, San Francisco, CA
- 2006 “Antivascular agents: Anti-VEGF therapy for cancer” / Speaker (Faculty)
The 2nd ASTRO Annual Translational Research in Radiation Oncology: Physics and Biology Meeting, Boston (ASTRO)
- 2006 “Measurement of CECs as a biomarker for antiangiogenic therapy: Surface marker specificity, cell viability, and origin of circulating endothelial cells” / Speaker (abstract)
The 97th Meeting of the American Association for Cancer Research, Washington, DC
- 2006 “Evidence for bone marrow-derived endothelial cells incorporation into perfused blood vessels in tumors” / Speaker (abstract)
The 97th Meeting of the American Association for Cancer Research, Washington, DC
- 2007 “Phenotypic characterization of circulating cells” / Invited speaker
The 1st Avastin Diagnostic Summit, Washington, DC (NCI/Genentech)
- 2007 “Antiangiogenesis for solid tumors: bench to bedside and back” / Invited speaker
Takeda Global Experts Meeting, Chicago, IL (Takeda)
- 2008 “Circulating endothelial cells and their potential role in tumor progression and treatment” / Invited speaker
The RTOG Translational Research Program, Stem Cell symposium, San Diego, CA (RTOG)
- 2008 “Evaluation of changes in blood angiogenic markers as biological markers for treatment” / Invited speaker
Brain Tumor Translational Research Program, RTOG Semi-Annual Meeting, San Diego, CA
- 2008 “The Role of Circulating Progenitor Cells in Solid Tumors” / Invited seminar
Lerner Research Institute, Cleveland Clinic, Cleveland, OH (Cleveland Clinic)
- 2008 “Phenotypic and functional characterization of pro-angiogenic monocytes / Speaker (abstract)
The 2008 Experimental Biology Meeting (FASEB), San Diego, CA
- 2009 “Antiangiogenic therapy for cancer patients: Mechanisms of action and potential predictive biomarkers or response and resistance” / Grand rounds
Greenebaum Cancer Center, University of Maryland, Baltimore (Univ. of Maryland)
- 2009 “Pursuing potential biomarkers of response and resistance to antiangiogenic therapy: Which ones and why?” / Invited seminar
Division of Oncology, Cancer Biology Research Seminar, Madison (Univ. of Wisconsin)
- 2009 “A “Vascular Normalization Index” as a mechanistic biomarker to predict survival after a single dose of cediranib in recurrent glioblastoma patients” / Plenary Talk
The 100th Meeting of the AACR, Denver, CO (AACR)
- 2009 “Role of vascular normalization in brain tumors” / Invited speaker and discussant

- The 2009 Forbeck Forum “The Biology and Treatment of Primary Brain Tumors”, Hilton Head Island, SC (Forbeck Foundation)
- 2009 “Role of circulating progenitor cells in tissue repair and tissue engineering: Lessons from tumor studies” / Invited seminar
Cardiovascular Research Center Seminar, Madison, WI
- 2009 “Role of circulating progenitor cells in tissue repair and tissue engineering: Lessons from tumor studies” / Invited seminar
CT Division Educational Conference, Madison, WI (University of Wisconsin)
- 2011 “Future Directions: Predictive Biomarkers of Response and Resistance to Anti-Angiogenic Therapy” / Invited speaker and discussant
Angiogenesis: Breakthroughs in Basic Science and Therapeutic Applications Symposium, The New York Academy of Sciences, New York, NY (Johnson & Johnson)
- 2012 “Biomarkers of Antiangiogenic Therapy” / Invited speaker and panelist
“Circulating Cancer Biomarkers: Practical Applications to Drive Drug Development and Personalized Medicine in the Clinic”, Washington, DC (HansonWade)
- 2013 “Clinical translation of mouse model data in cancer” / Invited speaker
American Society for Clinical Pharmacology and Therapeutics, Indianapolis, IN (ASPCT)
- 2014 “Does vascular normalization improve delivery of cancer therapeutics?” / Speaker
Chair of Session: Biomarkers for Anti-angiogenic Cancer Treatment
“Targeting VEGF-mediated Tumor Angiogenesis in Cancer Therapy” Symposium, The New York Academy of Sciences, New York, NY (NYAS)
- 2014 “Determinants of HCC resistance to sorafenib treatment” / Invited seminar
Department of GI Oncology, MD Anderson Cancer Center, Houston, TX (University of Texas)
- 2015 “Biomarkers of response and resistance to anti-angiogenic therapy” / Invited speaker
The AACR Special Conference on Tumor Angiogenesis and Vascular Normalization, Orlando
- 2016 “Role of targeted therapies in hepatocellular carcinoma: Choosing the right combinations” / Invited Translational Research Conference
Johns Hopkins University Cancer Center, Baltimore, MD
- 2016 “Finding the Right Therapeutic Combinations: Lessons from Translational Studies in Clinical Trials and Preclinical Models” / Invited Seminar
Bristol Myers Squibb, San Francisco, CA (BMS)
- 2016 “Lessons from translational studies of targeted therapy and radiotherapy in clinical trials and preclinical models” / Invited seminar
Department of Radiation Oncology, Duke Univ. Medical Center, Durham, NC (Duke Univ.)
- 2016 “Preclinical sorafenib immune modulation and anti-tumor activity in combination with IO in HCC models” / Invited speaker
Bayer Cancer Immunotherapy Advisory Board Meeting, New York, NY (Bayer)
- 2017 “Angiogenesis and tumor microenvironment” / Invited speaker
2017 Society of Interventional Radiology Annual Scientific Meeting, Washington, DC (SIR)
- 2017 “Systemic therapy for liver cancer” / Grand Rounds in Oncology
Mayo Clinic, Scottsdale, AZ (Mayo Clinic)
- 2017 “Role of CXCR4 in Reprogramming the Tumor Microenvironment for Radiation or Immuno-therapy” / Invited Seminar
Bristol Myers Squibb, San Francisco, CA (BMS)
- 2018 “Reprogramming the HCC Microenvironment for Immunotherapy” / Invited seminar
Department of GI Oncology, MD Anderson Cancer Center, Houston, TX (University of Texas)

- 2018 “How to take advantage of the biology of cancer?” / Invited speaker
35th “Medical Surgical Gastroenterology: A Multidisciplinary Approach” Course, Avon, CO
- 2018 “How to take advantage of the biomarker for GI cancer treatment?” / Invited speaker
2018 Mayo Clinic Hepato-Pancreato-Biliary Cancers Symposium, Phoenix, AZ (Mayo Clinic)
- 2019 “State of the Science in HCC” / Faculty and Chair of Session – Systemic therapy advances in HCC
2019 Mayo Clinic Hepato-Pancreato-Biliary (HPB) Cancers Symposium, Las Vegas, NV (Mayo Clinic)
- 2020 “Rapidly evolving strategies for the treatment of liver cancer” / Grand Rounds
Fred Hutchinson Cancer Center/University of Washington, Seattle, WA (UW)
- 2021 “Reprogramming tumor microenvironment to enhance immunotherapy for HCC” / Invited seminar
SPORE Program, MD Anderson Cancer Center, Houston, TX (University of Texas)
- 2021 “New insights into the rapidly evolving treatment paradigms for liver cancers” / Invited Visiting Professor seminar
Seminar at University of Michigan. Host: Dr. M. Morgan, Associate Chair for Radiation and Cancer Biology, Lawrence-Krause Research Professor of Radiation Oncology (University of Michigan Medical School)
- 2022 “Targeting tumor microenvironment in GI cancers: Rationale, current progress and future perspective” / Invited speaker
SWOG GI Committee Spring Meeting, Seattle
- 2022 “Targeting tumor microenvironment in GI cancers: Rationale, current progress and future perspective” / Invited speaker
NCI Esophagogastric Taskforce Monthly Meeting, Washington, DC
- 2023 “Enhancing the efficacy of immunotherapy in liver cancers by reprogramming the tumor micro-environment using pharmacologic and genetic approaches” / Invited seminar
Molecular Microbiology and Immunology Department (MMI), University of Southern California Keck School of Medicine, Los Angeles, CA
- 2023 “Enhancing the efficacy of immunotherapy in liver cancers by reprogramming the tumor micro-environment using pharmacologic and genetic approaches” / Invited seminar
Cancer Center Support Grant (CCSG) Seminar Series, MD Anderson Cancer Center, Houston, TX
- 2023 “Enhancing the efficacy of immunotherapy by reprogramming the HCC microenvironment” / Forum Chair and Speaker
Forbeck Forum on *The Biology and Treatment of Hepatocellular Carcinoma* (Forbeck Research Foundation), Pacific Grove, CA
- 2023 “Enhancing the Efficacy of Immunotherapy for GI Cancers by Reprogramming the Tumor Micro-environment Using Pharmacologic and Genetic Approaches” / Grand Rounds Speaker
University of Pittsburgh Medical Center (UPMC), Pittsburgh, PA
- 2024 “Enhancing the Efficacy of Immunotherapy for GI Cancers by Reprogramming the Tumor Micro-environment Using Pharmacologic and Genetic Approaches” / Grand Rounds Speaker
Department of Radiation Oncology, University of South Florida (USF), Tampa, FL
- 2024 “Preclinical Models of HCC: Advantages and Limitations” / Faculty Speaker
The 2024 HCC-LIVE Conference, Huntington Beach, CA
- 2024 “Novel immune checkpoint targets” / Invited Speaker
The 2024 Spring SWOG Conference, GI Translational Medicine Committee, Seattle, WA

- 2024 “Enhancing the Efficacy of Immunotherapy for GI Cancers by Reprogramming the Tumor Micro-environment” / MCCCC Enterprise Distinguished Lecture
Mayo Clinic Comprehensive Cancer Center (MCCCC), Scottsdale, AZ
- 2024 “Enhancing the Efficacy of Immunotherapy for Liver Cancers by Reprogramming the Tumor Microenvironment” / Forum Seminar Speaker
Winthrop P. Rockefeller Cancer Institute, Little Rock, AK (University of Arkansas for Medical Sciences)

International

- 1998 “Antiangiogenic gene therapy with IL-12 in pancreatic cancer” / Speaker (abstract)
The 8th Meeting of the International Association of Pancreatology, Tokyo, Japan
- 2000 “Direct in vitro evidence and in vivo analysis of the anti-angiogenesis effects of Interleukin 12” / Speaker (abstract)
The 2nd Roche International Symposium on Tumor Angiogenesis and Matrix, Tokyo, Japan
- 2004 “Effects of anti-VEGF therapy in cancer patients” / Invited special seminar
Evidence-Based Medicine Symposium, Sendai, Japan (Chugai Pharmaceutical)
- 2004 “Restoration of SMAD4 by gene therapy reverses the invasive phenotype in pancreatic adenocarcinoma” / Speaker (abstract)
The 11th Meeting of the Intl Association of Pancreatology, Sendai, Japan (Travel Award)
- 2005 “Effects of bevacizumab in rectal cancer patients” / Invited speaker and Chair of Session: Cancer-Basic
The 11th Annual Taishotoyama International Symposium, Shimoda, Japan (Taishotoyama)
- 2006 “Contribution of bone marrow-derived endothelial cells to tumor neovascularization and potential use of circulating endothelial cells as a biomarker” / Speaker (abstract)
The 6th EuroConference on Angiogenesis, Mandelieu, France (European Union Scholarship)
- 2006 “Rational basis for combination of chemotherapy and antiangiogenic drugs” / Invited speaker
The 3rd Intl Symposium on Angiogenesis and Cancer, Malaga, Spain (University of Malaga)
- 2007 “The role of circulating endothelial and progenitor cells in disease” / Plenary talk
The 13th Annual Meeting of the International Society for Cell Therapy (ISCT), Sydney, Australia (ISCT)
- 2007 “Antiangiogenesis for solid tumors: bench to bedside and back” / Invited speaker
Chair: Session – Molecular Biology
The 17th World Congress of the International Association of Surgeons, Gastroenterologists and Oncologists (IASGO), Bucharest, Romania (IASGO)
- 2007 “Potential for integration of antiangiogenic therapy with chemoradiation in solid cancers” / Invited speaker
The 2nd Langendorff Congress for Radiobiological Research, Germany (Univ. of Freiburg)
- 2008 “Deciphering tumor patho-physiology in preclinical models: Impact on the integration of new biological agents in cancer treatment” / Invited speaker
Chair: Session – Role of Tumor Microenvironment for Radiotherapy
Connecting Diaspora with the Romanian Scientific Community, Bucharest (Romanian Govt)
- 2008 “The role of circulating precursor cells in adult neovascularization” / Invited speaker

- Ramon Areces Foundation's 1st International Symposium on Angiogenesis and Cancer: From Basic Mechanisms to Therapeutic Applications, Malaga, Spain (University of Malaga)
- 2008 "Potential predictive factors for efficacy in anti-angiogenic therapy" / Invited speaker
Chair: Session – New Concepts: New Therapeutic Strategies
 The 4th International Symposium on Angiogenesis and Cancer, Spain (University of Malaga)
- 2009 "Functional imaging of tumor vasculature after antiangiogenic therapy" / Invited speaker
 The 3rd Langendorff Symposium, Freiburg, Germany (University of Freiburg)
- 2010 "Antiangiogenic therapy for cancer: from concept confirmation towards individualized treatment" / Invited speaker
 The 5th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2010 "Visualization of tumor vasculature after antiangiogenic therapy" / Invited speaker
Chair: Session – Potential advantages and pitfalls of anti-vascular and anti-angiogenic treatments
 The 29th European Society for Radiotherapy & Oncology (ESTRO) Annual Meeting, Barcelona, Spain (ESTRO)
- 2011 "Metastasis: Seed and soil hypothesis revisited" / Invited speaker
 Seminar at Keio University Medical School, Tokyo, Japan. Host: Dr. Makoto Suematsu, Dean of School of Medicine, Keio University
- 2011 "Antiangiogenic therapy and metastasis" / Invited speaker
 The 6th Cajal Symposium on Translational Research, Bucharest, Romania
- 2011 "Antiangiogenic therapy for cancer: How does it work and how does it fail?" / Invited speaker
 Seminar at Duke-National University of Singapore (NUS) Medical School. Host: Professor David M. Virshup, Director of the Cancer & Stem Cell Biology Program, NUS, Singapore
- 2011 "Metastasis: Seed and soil hypothesis revisited" / Invited speaker
 Seminar at Barts & the London, Queen Mary's School of Medicine & Dentistry, London, UK
- 2012 "Antiangiogenic therapy for HCC" / Invited speaker
 The 7th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2012 "Tumor biology and metastasis" / Invited speaker
 The 7th International Symposium of Institute Network, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan (Tohoku University)
- 2012 "Targeted therapy of colorectal and liver cancer" / Invited speaker
 Seminar at Kitakami Hospital, Department of Surgery, Kitakami, Japan (Kitakami Hospital)
- 2012 "Antiangiogenesis in liver cancer" / Invited speaker
 Queen Mary Hospital, Li Ka Shing Faculty of Medicine, Hong Kong University, China
- 2012 "On and Off-target with Antiangiogenic Therapy for Cancer" / Invited speaker
 Area of Excellence Seminar at Centre for Cancer Research, Hong Kong University (Bayer)
- 2012 "Challenges in clinical research" / Invited speaker and panelist
 Connecting Diaspora with the Romanian Scientific Community Conference, Bucharest, Romania (Romanian Government)
- 2013 "Translational imaging in animal models" / Invited speaker
 International Workshop Translational imaging in gastroenterology and surgery, Craiova, Romania (University of Medicine Craiova)

- 2013 “Translational imaging in clinical trials” / Invited speaker
International Workshop Translational imaging in gastroenterology and surgery, Craiova, Romania (University of Medicine Craiova)
- 2013 “New directions in advanced HCC therapy with targeted agents” / Invited speaker
Chair: Session – Cancer Genomics
The 8th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2013 “Metastatic colonization: Evolving paradigms” / Invited speaker
Seminar at the VU University Medical Center, Amsterdam, The Netherlands
- 2013 “The challenge of integrating molecularly targeted therapies against cancer stroma: Different degrees of treatment personalization” / Invited speaker
Chair: Session – Novel Diagnostic and Tools for Cancer Treatment
The 23rd Annual IASGO World Congress, Bucharest, Romania (IASGO)
- 2013 “Combining radiation with targeted therapies: Why, how and when?” / Guest speaker
The 5th Langendorff Symposium on Personalized Medicine, Germany (University of Freiburg)
- 2013 “Combining stroma-targeted therapies with radiation to prevent resistance” / Invited speaker
New Cancer Targets Symposium, Integrative Radiation Oncology session, Heidelberg, Germany (National Center for Tumor Disease and German Cancer Research Center)
- 2014 “Antiangiogenic strategy for colorectal cancer” / Invited speaker
Workshop on Colorectal Cancer, IASGO Educational Program, Pordenone, Italy (IASGO)
- 2014 “Targeted immunotherapy for rectal cancer: New perspectives” / Invited speaker
Workshop on Colorectal Cancer, IASGO Educational Program, Pordenone, Italy (IASGO)
- 2014 “Impact of the inflammatory tumor microenvironment on radiation response of cancers” / Invited speaker
The 33th European Society for Radiotherapy & Oncology (ESTRO) Annual Meeting, Vienna, Austria (ESTRO)
- 2014 “Determinants of HCC resistance to anti-VEGF therapy” / Invited speaker
Host: Professor Markus Peck, UniMedWien Cancer Center, Austria (University of Vienna)
- 2014 “Role of tumor microenvironment in radiation response” / Invited speaker
Host: Professor Michael Baumann, University of Dresden, Germany (University of Dresden)
- 2014 “Mechanism-based combination therapy approaches for intractable cancers” / Invited speaker
The 9th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2014 “Mechanism-based targeting of tumor stroma in intractable cancers” / Invited speaker
Invited Seminar, Keio University, Tokyo, Japan (Keio University)
- 2014 “Rationally exploiting antiangiogenesis for improving HCC therapy” / Invited speaker
International Symposium on Vascular Biology, Sendai, Japan (Tohoku University)
- 2014 “Translational Studies in Clinical Trials of Targeted Therapies for Cancer” / Invited speaker
Workshop on GI Cancer, IASGO Educational Program of the, Moscow, Russia (IASGO)
- 2014 “GI cancer therapy with antiangiogenics: Lessons from translational studies” / Invited speaker
The 24th Annual World Congress of the IASGO, Vienna, Austria (IASGO)
- 2014 “Role of Multidisciplinary Translational Studies of Agents Targeting the Cancer Vasculature and the Immune System” / Invited speaker
The 24th Annual World Congress of the IASGO, Vienna, Austria (IASGO)

- 2015 “Mechanisms of Treatment Evasion for Antiangiogenic Therapy” / Visiting Professor Seminar
University of Freiburg, Germany (University of Freiburg)
- 2015 “Rationally Combining Antiangiogenic Therapy with Checkpoint Inhibitors in Hepatocellular Carcinoma” / Plenary Speaker (Short talk)
Keystone Symposium on Tumor Immunology: Multidisciplinary Science Driving Combination Therapy (J7), Banff, Canada
- 2015 “Antiangiogenic Therapy: Quo Vadis” / Visiting Professor Seminar
University of Freiburg, Germany (University of Freiburg)
- 2015 “Translation of anticancer efficacy from non-clinical models to the clinic using biomarkers” / Keynote speaker
The 14th International Wolfsberg Meeting on Molecular Radiation Biology/Oncology, Wolfsberg Castle, Lake Konstanz, Switzerland (ESTRO)
- 2015 “Personalizing targeted therapies for cancer: Current progress”/ Invited speaker
The 10th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2015 “IASGO Postgraduate Study Center Plans” / Plenary speaker
The 6th Congress of Kazakhstan Surgeons, Almaty, Kazakhstan (IASGO)
- 2015 “Systemic therapy for hepatocellular carcinoma: Challenges and promise” / Seminar speaker
Seminar, Tohoku University Sendai, Japan. Host: Professor Michiaki Unno (Tohoku Univ.)
- 2015 “Biomarkers of cancer response and resistance to anti-angiogenic therapy” / Invited speaker
Workshop on GI Cancer, IASGO Educational Program, Jikei University School of Medicine, Tokyo, Japan (IASGO)
- 2015 “Translation of anticancer efficacy from non-clinical models to the clinic using biomarkers” / Seminar speaker
Radiation Oncology Colloquium Seminar. Hosts: Professors Peter Rodemann and Daniel Zips, University of Tübingen, Germany (University of Tuebingen)
- 2015 “Development of Systemic Therapies for Liver Cancer” / Invited speaker
Workshop on Hepatobiliary Surgery, IASGO Educational Program, Haikou, China (IASGO)
- 2015 “Development of Novel GI Cancer Therapies” / Seminar speaker
Institute of Biomedical Engineering, NTHU, Taiwan (Tsing Hua University)
- 2015 “Development of Novel Gastrointestinal Cancer Therapies” / Seminar speaker
Academia Sinica, Taipei, Taiwan. Host: Dr. Han-Chung Wu (Academia Sinica)
- 2015 “Translation of Targeted Agents for GI Cancer Therapy” / State-of-the-Art Lecture
Chair: Session – Pancreatic Neoplasms
The 25th Annual World Congress of the IASGO, Fuzhou, China (IASGO)
- 2015 “Translational Studies in Clinical Trials of Targeted Therapies for Cancer” / Invited speaker
Workshop on GI Cancer, Educational Program of the IASGO, Moscow, Russia (IASGO)
- 2015 “Angiogenesis and immunology” / Invited speaker
The 6th Langendorff Symposium in Radiation Oncology, Germany (University of Freiburg)
- 2015 “Biomarkers in pancreatic cancer and in hepatocellular cancer” / Invited speaker
The 6th Langendorff Symposium Imaging in Radiation Oncology, Germany (Univ. of Freiburg)
- 2015 “Lessons from translational studies in clinical trials and preclinical models” / Seminar speaker

- Sunnybrook Research Institute, Toronto, Canada. Host: Dr. Robert Kerbel (Toronto University)
- 2015 “Lessons from translational studies in clinical trials and preclinical models” / Seminar speaker
University of Ulm, Germany (University of Ulm) Host: Dr. Doris Henne Bruns
- 2015 “Going beyond antiangiogenesis in brain tumors” / Keynote Lecture
Neurooncology Group Winterschool, Freiburg, Germany (University of Freiburg)
- 2016 “Pancreatic cancer: Determinants of metastasis”/ Invited speaker
Chair: Session – GI Cancer Therapy
The 11th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2016 “Hepatocellular carcinoma: Role of circulating biomarkers”/ Invited speaker
The 11th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2016 “Translational oncology: From increased understanding to better outcomes” / Invited speaker
Humanitas University, School of Medicine, Milan, Italy
- 2016 “Biomarkers for optimization of novel radiotherapy-drug combinations” / Invited faculty
ESTRO 35 Pre-Meeting Course, Turin, Italy (ESTRO)
- 2016 “Therapeutic Vascular Normalization” / Plenary speaker
5th Metronomics and Anti-Angiogenesis Meeting in Mumbai, India (Tata Medical Center)
- 2016 “Identifying new targets and biomarkers of cancer response through correlative clinical studies” / Invited speaker
71st Meeting of Japanese Society of Gastroenterological Surgery, Tokushima, Japan (JSGS)
- 2016 “Overcoming resistance to systemic therapies in liver cancer” / Invited seminar
University of Nagasaki, Japan. Host: Professor Susumu Eguchi (University of Nagasaki)
- 2016 “Role of translational studies in multidisciplinary trials of anti-cancer agents” / Invited seminar
University of Kyoto, Japan. Host: Professor Masazaku Toi
- 2016 “Exploiting biomarkers of cancer response and resistance” / Special Lecture
Workshop on GI Cancer, IASGO Educational Program, Tohoku University School of Medicine, Sendai, Japan (Tohoku University)
- 2016 “Role of Radiotherapy in Treatment for Hepatocellular Carcinoma” / Invited speaker
Chair: Session – Multidisciplinary Approaches in Liver Cancer
The 26th Annual World Congress of the IASGO, Seoul, Korea (IASGO)
- 2016 “GI Cancer Therapy with Targeted Agents: Lessons from Translational Studies” / State-of-the-Art Plenary Lecture
The 26th Annual World Congress of the IASGO, Seoul, Korea (IASGO)
- 2016 “Chemotherapy strategy for colorectal liver metastases” / Invited speaker
The E-AHPBA/IASGO Joint Postgraduate Course, Lyon, France (University of Lyon)
- 2016 “HBP Cancer Therapy: Lessons from Translational Studies” / Invited speaker
The 2016 HBPSurG Meeting, Lyon, France
- 2017 “Improving outcomes in oncology using biomarkers” / Invited speaker
GI Oncology Days, Istanbul, Turkey (IASGO/University of Marmara School of Medicine)
- 2017 “New directions in liver cancer treatment” / State-of-the-Art Lecture
GI Oncology Days, Istanbul, Turkey (IASGO/University of Marmara School of Medicine)
- 2017 “GI cancer therapy with targeted agents: Lessons from translational studies” /Keynote speaker

- 2017 IASGO Symposium “Gastrointestinal Tumors – What is New?” Rijeka, Croatia
 “New systemic therapies for hepatocellular and cholangiocarcinomas” / Invited speaker
 The 12th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2017 “HCC treatment at the intersection between antiangiogenic therapy and immunotherapy” /
 Keynote Speaker
 The 1st Hong Kong International Oncology Forum, Hong Kong (HKIOF)
- 2017 “Using biomarkers to guide antiangiogenic, radiation and immuno-therapies for liver
 cancers” / Visiting Professor Seminar
 University of Freiburg, Germany (University of Freiburg)
- 2017 “Role of translational studies in GI oncology” / Invited speaker
Chair: Session – Medical intervention for GI cancer
 7th CME Course of IASGO, Seoul, Korea
- 2017 “Lessons from Translational Studies in Liver Cancers” / Invited speaker
Chair: Session – Innovations in Liver Tumor Diagnostics
 IASGO Symposium “Current and Future Perspectives in Primary Liver Tumors”,
 Rotterdam, The Netherlands (Erasmus University, Rotterdam)
- 2017 “New perspectives on the treatment of intractable GI cancers: Role of combination
 therapies” / Invited speaker
 The Keio Medical Society Lecture, Keio University, Tokyo, Japan (Keio University)
- 2017 “New perspectives on the treatment of intractable liver cancers” / Invited speaker
 Invited Seminar, Tohoku University, Sendai, Japan (Tohoku University)
- 2017 “New perspectives on the treatment of liver cancers” / Invited speaker
 Grand Rounds, Sir Run Run Shaw Hospital, Hangzhou, China (Zhejiang University)
- 2017 “The role of translational studies in clinical trials in liver cancers” / Invited speaker
 IASGO PostGraduate Course, “Spinal and GI Surgery and Research”, Luzhou, China
- 2017 “Multidisciplinary approaches to PDAC therapy” / Invited speaker
 IASGO PostGraduate Course, “Spinal and GI Surgery and Research”, Luzhou, China
- 2017 “Updates of clinical trials of systemic treatments for PDA” / Invited speaker
 The 2017 E-AHPBA/IASGO Joint Postgraduate Course, Lyon, France (University of
 Lyon)
- 2017 “Developing new combination therapies for liver cancers” / Invited Speaker
 The 27th Annual World Congress of the IASGO, Lyon, France (IASGO)
- 2018 “Using phase I and II clinical studies to define mechanisms and personalize GI cancer
 therapy” / Invited speaker
 The 13th Cajal Symposium on Translational Research, Bucharest, Romania (Cajal
 Foundation)
- 2018 “Using biomarkers to guide antiangiogenic, radiation and immuno-therapies for GI
 cancers” /Seminar speaker
 Cologne Cancer Club, University of Cologne, Germany
- 2018 “New combination therapies for liver cancers” / Invited speaker
 University of Marmara School of Medicine Onco-Surgical Days, Istanbul, Turkey
 (IASGO/ University of Marmara School of Medicine)
- 2018 “Intercepting pancreatic cancer” / Invited speaker
 University of Marmara School of Medicine Onco-Surgical Days, Istanbul, Turkey
 (IASGO/ University of Marmara School of Medicine)
- 2018 “Biomarkers in cholangiocarcinoma therapy” / Invited speaker
 12th International “Minimal Invasive Surgery” Symposium and 8th CME Course of
 IASGO, Seoul, Korea (Seoul National University)
- 2018 “Lessons from translational oncology studies” / Invited Faculty
 University of Medicine Titu Maiorescu, Bucharest (Romanian Government)

- 2018 “New combination therapies for liver cancers” / Invited Speaker
The 28th Annual World Congress of the IASGO, Moscow, Russia (IASGO)
- 2018 “New combination therapies for liver cancers” / Invited speaker
2nd Annual Meeting of the IASGO Egyptian Chapter, Cairo, Egypt (IASGO/ University of Mansoura)
- 2019 “A New Era in the Systemic Therapy of HCC: What is the Scientific Basis?” Invited speaker
7th International Onco-Surgical Days, Istanbul, Turkey (IASGO/ University of Marmara School of Medicine)
- 2019 “Beyond surgery and chemotherapy for PDAC treatment” / Invited speaker
7th International Onco-Surgical Days, Istanbul, Turkey (IASGO/ University of Marmara School of Medicine)
- 2019 “Beyond surgery and cytotoxics: Targeting stromal vulnerabilities for gastrointestinal cancer treatment” / Invited speaker
Chair: Round Table III - Colo-rectal cancers – updates
8th Congress of the Romanian Society of Coloproctology with International Participation, Iasi, Romania (RSCP/IASGO)
- 2019 “Biomarkers in lung cancer” / Invited speaker
8th Langendorff Symposium “Lung Cancer: Innovative Diagnosis and Treatment”
Freiburg, Germany (University of Freiburg)
- 2019 “The Promise and Perils of Combination Therapies Involving Immunotherapy: A Liver Cancer Perspective” / Seminar speaker
Cells-in-Motion Lecture Series, University of Münster, Germany (University of Münster)
- 2019 “Stromal vulnerabilities in liver cancers” / Keynote speaker
Chair: Session – Hallmarks of Cancer
3rd Stop Cancer Symposium, Bucharest, Romania
- 2019 “The role of translational studies in clinical trials in liver cancers” / Invited speaker
2nd IASGO PostGraduate Course, “Surgery and Research: Osteoporosis, Trauma, Spinal and Hepatobiliary and Pancreatic Diseases”, Luzhou, China
- 2019 “Rapidly evolving strategies for the treatment of liver cancer” / Invited speaker
The Keio Medical Society Lecture, Keio University, Tokyo, Japan (Keio University)
- 2019 “Targeting stromal vulnerabilities to improve chemotherapy and immunotherapy for liver cancers” / Seminar speaker
Seminar, Tohoku University Sendai, Japan. Host: Professor Michiaki Unno (Tohoku Univ.)
- 2019 “Intercepting HBP cancers” / Invited speaker (Special Lecture)
IASGO Postgraduate Course on Hepato-Pancreatico-Biliary Surgery and Oncology, Tokyo, Japan (IASGO/Dokkyu University of School of Medicine)
- 2019 “Rapidly evolving strategies for the treatment of primary liver cancers” / Invited speaker
The 10th Asia-Pacific Primary Liver Cancer Expert Meeting Sapporo, Japan (APPLE)
- 2019 “New approaches to early intervention in pancreatic cancer” / Invited speaker
IASGO Verona Expert International Meeting on Evolving Strategies in the Management of Liver Metastases, Verona, Italy (University of Verona Medical School)
- 2019 “Rapidly evolving strategies for liver cancer treatment” / Invited faculty
1st IASGO PostGraduate Course, “Tips and Tricks in HPB surgery”, Belgrade, Serbia
- 2019 “The Role of Correlative Studies in Clinical Trials in Improving Outcomes in HBP Malignancies” / Invited faculty
1st IASGO PostGraduate Course, “HBP Surgery and Research”, Iasi, Romania
- 2019 “Rapidly evolving strategies for liver cancer treatment” / Invited speaker
Congress of the Romanian Association Hepato-Bilio- Pancreatic Surgery and Liver Transplantation, Iasi, Romania

- 2019 “Using translational studies to improve outcomes in liver and pancreatic cancers” / Faculty
MiMT Program, Luohe Hospital, Louhe, China (MiMT)
- 2019 “Using biomarkers to guide antiangiogenic, radiation and immuno-therapies for intractable GI cancers” / Invited speaker
Seminar at Simcere Pharma, Nanjing, China (Simcere)
- 2019 “Rapidly evolving strategies for liver cancer treatment” / Invited speaker
Seminar in the Department of Liver Surgery, Sun Yat-sen University, Guangzhou, China (Sun Yat-sen University) (Host: Prof. Kuang)
- 2019 “Anticancer treatments of tomorrow in GI Oncology” / Keynote Speaker
The 29th Annual World Congress of the IASGO, Bangkok, Thailand (IASGO)
- 2019 “New trends in systemic treatment of gastric cancer” / Faculty
The 1st IASGO CME HBP Course, Braga, Portugal (University of Braga)
- 2019 “Liver metastases from colorectal cancer” / Faculty
The 1st IASGO CME HBP Course, Braga, Portugal (University of Braga)
- 2019 “Using translational studies to achieve earlier interception of aggressive GI cancers” / Invited speaker
The XXVIII Latin-American Congress on Surgery – FELAC 2019 and the LXX Uruguayan Congress on Surgery, Montevideo, Uruguay (FELAC)
- 2020 “New combination therapies for liver cancers and their scientific basis” / Invited speaker
The 120th Meeting of the Japanese Society of Surgery, Yokohama, Japan (virtual)
- 2020 “Rapidly evolving strategies for cholangiocarcinoma treatment” / Invited speaker
The IASGO and the Korean Society of Gastrointestinal Cancer (KSGC) Joint Symposium IK2020 (virtual)
- 2020 “Rapidly evolving therapies in liver cancers” / Invited Speaker
4th Stop Cancer Symposium (webinar), Romania
- 2020 “How do we make progress in PDAC therapy?” / Invited faculty
Onco-Surgical Days Webinar Series – PDAC (IASGO/ University of Marmara School of Medicine, Turkey)
- 2020 “Modelling human disease in preclinical models to improve the efficacy of immunotherapy in cancer patients” / Invited Webinar
Department of Zoology, Mar Ivanios College and Kerala State Higher Education Council, India
- 2020 “New treatments for liver cancers” / Keynote Speaker
IASGO Egyptian Chapter “International Live Webinars - Advanced Approach”, Egypt (IASGO)
- 2020 “Rapidly evolving strategies for the treatment of liver cancer” / Invited Speaker
CONFER 2020, Regional Institute of Oncology, Iasi, Romania (virtual)
- 2020 “Revisiting the century-old “Seed and Soil” theory on tumor metastasis” / Invited Speaker
4th Stop Cancer Symposium, Romania (virtual)
- 2020 “The evolution of translational oncology studies in the era of molecular targeted therapies” / State-of-the-art Lecture
10th Congress of the Romanian Society of Coloproctology with International Participation, Bucharest, Romania (RSCP/IASGO) (virtual)
- 2020 “New insights into the rapidly evolving treatment paradigms for HCC” / Invited faculty & Chair
Onco-Surgical Days Webinar Series – HCC “What’s next?” (IASGO/ University of Marmara School of Medicine, Turkey) (webinar)
- 2021 “Rapidly evolving strategies for liver cancer treatment” / Invited faculty
Chair: Session – Liver Cancer

- 2nd IASGO Belgrade Congress, “Tips and Tricks in Multidisciplinary Management of HPB Cancers”, Belgrade, Serbia (webinar)
- 2021 “Accelerating translation of liver cancer research to clinical practice” / Invited speaker
The 9th Onco-Surgery Days, IASGO Istanbul Congress, Turkey (online)
- 2021 “New liver cancer treatments: Rationale and Progress” / Invited speaker
The 2021 IASGO GI Summit, Taipei, Taiwan (online meeting)
- 2021 “Leveraging Translational Studies in GI Cancer Clinical Trials to Improve Treatment Personalization and Outcome” / Invited Speaker
The 5th Stop Cancer Symposium (hybrid meeting), Romania
- 2021 “New liver cancer treatments: Rationale and Progress” / Invited speaker
The 2021 IASGO CME Advanced Post-Graduate Course, Nagasaki, Japan (hybrid meeting)
- 2021 “Evolving strategies for the treatment of liver cancers” / Invited speaker
The 32nd Congress of the Romanian Society of Radiotherapy and Medical Oncology and the 7th Congress of the Romanian Federation of Cancer Societies, Cluj, Romania (hybrid meeting)
- 2021 “Current and emerging paradigms in liver cancer treatment” / Invited speaker
The 9th Congress of the Croatian Society of Gastroenterology with International Participation (online meeting)
- 2021 “Leveraging the potential of combining existing and new therapies for liver cancers” / Invited Speaker
The 5th Meeting of the IASGO Egyptian Chapter, Egypt (IASGO)
- 2021 “Liver cancer treatment: from translational research to clinical practice” / Invited speaker
The 2021 HBPSurG Meeting, Lyon, France (online meeting)
- 2021 “Rapidly Evolving Treatment Paradigms in Liver Cancer – Promise and challenges” / Invited speaker
The 2021 IASGO World Congress, Taipei, Taiwan (hybrid meeting)
- 2021 “New Approaches for HCC Therapy: Promise, Reality and Challenges” / Invited Speaker
CONFER 2021, Regional Institute of Oncology, Iasi, Romania (virtual meeting)
- 2021 “Rapidly Evolving Treatment Paradigms in Liver Cancer” / Invited speaker
The 14th International Congress of the Romanian Association of Hepato-Bilio-Pancreatic Surgery and Liver Transplantation (ARCHBPTH)/IASGO, Poiana Brasov, Romania (virtual meeting)
- 2021 “Rapidly Evolving Treatment Paradigms in HCC: Promise and Challenges” / Keynote speaker
Guandong Medical Association, 6th Academic Conference on Hepatocellular Carcinoma, Guangzhou, China (hybrid meeting)
- 2022 “Promise and challenges for the rapidly changing treatment paradigms in liver cancers: The view of a scientist” / Invited speaker
The 18th Annual Conference of Indian Chapter of IHPBA at PGIMR, Chandigarh, India (online meeting)
- 2022 “Bridging the bench to bedside chasm in GI oncology” / State-of-the-art Lecture
The 11th Congress of the Romanian Society of Coloproctology with International Participation, Bucharest, Romania (RSCP/IASGO) (hybrid meeting)
- 2022 “Early intervention in pancreatic cancer: Theory and practice” / Invited faculty
“*The value of resection and alternative ablative treatments in malignant pancreatic tumors*” Course at the Annual Congress of the Romanian Society of Surgery, Sinaia, Romania (online)
- 2022 “Targeting tumor microenvironment in liver cancers: Rationale, current progress, and future perspective” / Keio Medical Society Lecture
Seminar at Keio University, Tokyo, Japan (Keio University)

- 2022 “Lessons learned from two decades of translational research in oncology” / Invited speaker
Seminar at Saitama Medical University, Saitama, Japan (Saitama University)
- 2022 “Overcoming the tumor microenvironment barrier in PDAC for effective therapy: What is the target?” / Seiki Matsuno State-of-the-art Lecture
Chair of Session: Symposium 20 – Managements of pancreatic cancer around the world
The 26th International Association of Pancreatology (IAP)/The 53rd Annual Meeting of Japan Pancreas Society (JPS) meeting, Kyoto, Japan (hybrid meeting) (JPS)
- 2022 “IASGO Clinical trials for the multidisciplinary approaches to HPB diseases” / Invited speaker
Chair of Session: UEG/IASGO Joint Symposium on Multidisciplinary Approaches for Diseases, the 2022 IASGO World Congress, Istanbul, Turkey (IASGO)
- 2022 “New concepts and strategies for liver cancer treatment” / Invited speaker
The 2022 IASGO World Congress, Istanbul, Turkey (IASGO)
- 2022 “Moving the needle in pancreatic cancer treatment” / Invited speaker
Chair of Session: Pancreatic Cancer - Challenges and Future Directions, the 2022 IASGO World Congress, Istanbul, Turkey (IASGO)
- 2022 “Promise and challenges for the rapidly changing treatment paradigms in liver cancers” / Invited speaker
Chair of Session: Liver Cancers/HCC, National Congress of Medical Oncology, Poiana Brasov, Romania
- 2022 “How can we predict biological behavior?” / Invited lecture
4th Verona Expert International Meeting – Updates in HBP Surgery, Verona, Italy (University of Verona Medical School/IASGO)
- 2022 “New approaches to HCC therapy” / Invited lecture
The 6th Meeting of the IASGO Egyptian Chapter, Egypt (IASGO)
- 2022 “Leveraging recent developments in liver cancer biology and therapy to improve treatment: Combine and conquer” / Special seminar
Seoul National University (SNU), host: Dr. Keehoon Jung (SNU)
- 2022 “Expanding the benefits of immunotherapy for cancer: Combine and conquer” / Invited speaker
2022 KALC (Korean Association for Lung Cancer) Meeting (KALC)
- 2022 “New liver cancer treatments: Rationale and Progress” / Invited speaker
The 1st Meeting of the IASGO Chapter in the Gulf Area “*Bridging Gaps in the Management of Colorectal and Hepato-biliary Cancers*” Jeddah, Saudi Arabia (Saudi German Hospital/IASGO)
- 2022 “HCC biology and treatment” / Keynote Lecture
The 2nd Jaipur Surgical Festival (JSF), Mahatma Gandhi Medical College & Hospital (MGMCH), Jaipur, India
- 2022 “Leveraging recent developments in liver cancer biology and therapy to improve treatment: Combine and conquer” / Erudite Scholar-in-Residence Lectures
The Erudite Scholar-in-Residence Programme, Kerala State Higher Education Council, India (KSHEC) – 3 lectures in Trivandrum, Kottayam, and Kochi, India (KSHEC)
- 2022 “Multidisciplinary clinical studies in the perioperative setting: A new IASGO initiative” / Special seminar
Istanbul University Cerrahpasa, Faculty of Medicine, Turkey
- 2022 “Promise and challenges for the rapidly changing treatment paradigms in liver cancers” / Special seminar
Center of Excellence in Translational Medicine (CEMT), Fundeni Clinical Institute, Bucharest, Romania
- 2023 “Intersections at the Frontier of Personalized Medicine” / Invited speaker

- 2023 Workshop Coordinator: Applications of High Power Lasers in Medicine, Smart Diaspora Meeting 2023, Romanian Presidency and Government, Timisoara, Romania
“Role of Translational Studies in GI Oncology” / Invited speaker
- 2023 Workshop Coordinator: Personalized Medicine in Oncology, Smart Diaspora Meeting 2023, Romanian Presidency and Government, Timisoara, Romania
“Strategies to Enhance the Benefits of Immunotherapy in Liver Cancers” / Invited seminar speaker
"Prof. Dr. I. Chiricuta" Oncology Institute, Cluj, Romania
- 2023 “The Long Road to Clinical Translation in Oncology” / Invited speaker
Chair of Session: Liver treatments, 15th Conference of the Romanian Association of HPB Surgery and Liver Transplantation (ARCHBPTH) / Romanian Chapter of IASGO, Bucharest, Romania (ARCHBPTH)
- 2023 “Promises and Perils of New Combination Therapies for Hepatocellular Carcinoma” / Invited speaker
Chair of Session: GI Cancer (II): HCC, the 7th Stop Cancer Symposium, Bucharest, Romania (Stop Cancer Foundation)
- 2023 “Strategies to Enhance the Benefits of Chemotherapy and Immunotherapy in Intrahepatic Cholangiocarcinoma” / Invited speaker
The 7th Stop Cancer Symposium, Bucharest, Romania (Stop Cancer Foundation)
- 2023 “Radio-immunotherapy for cancers: Promise, challenges and potential solutions” / Invited seminar speaker
Department of Radiation Oncology, University of Freiburg, Germany. Host: Professor Eleni Gkika
- 2023 “Leveraging new concepts in oncology to design more effective multi-modality treatments in liver cancers” / Invited faculty
3rd IASGO PostGraduate Course, Health Council of Serbia, Belgrade
- 2023 “Combine and conquer: Enhancing the benefits of immunotherapy for liver cancers” / Invited seminar speaker
Comprehensive Cancer Center, University of Graz, Austria. Host: Professor Thomas Brunner
- 2023 “Enhancing the efficacy of immunotherapy by reprogramming the micro-environment using genetic and pharmacologic approaches” / Invited speaker
"Personalizing therapy for gastric cancer" / Invited speaker
Chair of Session: Consortium hepatocellular carcinoma
Chair of Session: Multidisciplinary approach to pancreatic surgery
Multidisciplinary Panel Discussion member: Consortium Pancreas Cancer
The 34th IASGO World Congress, Verona Italy (IASGO)
- 2023 “Combination therapies for liver cancers: How do we achieve synergy while maintaining a favorable therapeutic ratio?” / Invited speaker
National Congress of Medical Oncology, Poiana Brasov, Romania
- 2023 “Genetic and pharmacologic approaches to reprogram the immune microenvironment of liver cancers to enhance immunotherapy” / Invited speaker
Advanced Post Graduate Course (IASGO CME) 2023, Kobe, Japan (IASGO)
- 2023 “Genetic and pharmacologic approaches to reprogram the immune microenvironment of liver cancers to enhance immunotherapy” / Special Lecture
The 27th General Meeting of the Japan Society of Hepatology, Japan Digestive Disease Week (JDDW) 2023, Kobe, Japan (JDDW)
- 2023 “Promises and Perils of New Combination Therapies for Hepatocellular Carcinoma” / Invited speaker
The 34th Congress of the Romanian Society of Radiotherapy and Medical Oncology / 9th National Congress of the Romanian Cancer Societies Federation, Cluj, Romania (online)

- 2023 “Strategies to Enhance the Benefits of Chemotherapy and Immunotherapy in Intrahepatic Cholangiocarcinoma” / Invited speaker
The 34th Congress of the Romanian Society of Radiotherapy and Medical Oncology / 9th National Congress of the Romanian Cancer Societies Federation, Cluj, Romania (online)
- 2023 “Future treatment prospects in CRLM” / Invited faculty
HBPSurG Virtual Meeting 2023, Lyon, France (online)
- 2023 “Rationale for Combination Therapy of Liver Cancer” / Keynote Speaker
The 10th Canton Intervention Forum on “The Treatment and Targeted Therapy of Liver Cancer”, Guangzhou, China (online) (Roche China)
- 2023 “Neoadjuvant treatment: State of the art and future prospects” / Faculty and Course Director
Chair of Session: Grand Rounds in Pancreatic Surgery
Spotlight on Pancreas, IASGO Course, Braga, Portugal
- 2023 “Progress in translational medicine: The challenges of pancreatic cancer” / Invited faculty
University of the Republic (UdeLAR), Hospital Maciel & Pasteur Institute of Montevideo, Uruguay (online)
- 2024 “Enhancing the Efficacy of Immunotherapy for Liver Cancers by Reprogramming the Tumor Microenvironment” / Seminar Speaker
Charité University of Medicine, Berlin, Germany
- 2024 “Revisiting Antiangiogenic Multikinase Inhibitors in the Era of Immune Checkpoint Blockade” / Keynote Speaker
The 36th German Cancer Congress (DKK 2024), Berlin, Germany (DKK 2024)
- 2024 “Combination therapies for liver cancers” / Meet the Expert Webinar Speaker
IASGO Academy, Romanian Chapter (online)
- 2024 “Revisiting Antiangiogenic Multikinase Inhibitors in the Era of Immune Checkpoint Blockade” / Guest Professor (Global) at Keio University
Keio University, Tokyo, Japan (Keio University)
- 2024 “Next-Generation Personalized Therapy for Gastrointestinal Cancers: A Translational Personalized Perspective”/ Invited speaker
The Cajal Symposium on Translational Research, Bucharest, Romania (Cajal Foundation)
- 2024 “Next-Generation Personalized Therapy for Gastrointestinal Cancers: A Translational Perspective”/ Invited speaker
2024 International Multidisciplinary Fusion Forum on Digestive Diseases, Hangzhou, China (Zhejiang University)
- 2024 “Reprogramming the immune microenvironment of liver cancers to enhance immunotherapy”/ Invited speaker
Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, China
- 2024 “Reprogramming the immune microenvironment of liver cancers to enhance immunotherapy”/ Invited speaker
The 3rd Guangdong-Hong Kong-Macao Greater Area Bay International Forum on Liver Cancer and the 8th Guangdong Medical Association Academic Conference on HCC, Guangzhou, China (Sun Yat-sen University)
- 2024 “Antiangiogenesis and immunotherapy for HCC: Why, when, and how?”/ Keynote speaker
The 17th Annual Meeting of Chinese College of Surgeons (CCS2024), Shanghai, China (Fudan University)
- 2024 “Reprogramming the immune microenvironment of GI cancers to enhance immunotherapy”/ Forum Seminar Speaker
Soochow CC Tan Forum, Suzhou, China (Soochow University)
- 2024 “Reprogramming the immune microenvironment of liver cancers to enhance immunotherapy”/ Invited speaker

- 2024 The First Affiliated Hospital of the University of Science and Technology of China (USTC), Hefei, China (USTC)
 “Reprogramming the immune microenvironment of liver cancers to enhance immunotherapy”/ Invited speaker
 The First Affiliated Hospital of the Anhui Medical University, Hefei, China (Anhui University)
- 2024 “Liver cancer treatment: From resignation to hope”/ Keynote speaker
 The Romanian National Psycho-Oncology Conference
- 2024 “Antiangiogenesis and immunotherapy for HCC: Why, when, and how?”/ Keynote speaker
 The Croatian Society of Gastroenterology Conference, Opatija, Croatia
- 2024 “Enhancing the efficacy of immunotherapy in liver cancers by reprogramming the micro-environment” / Invited speaker
 The 35th IASGO World Congress, Cairo, Egypt (IASGO)
- 2024 “Personalizing therapy for gastric cancer”/ Keynote Speaker
 ASSMN 2024, Taipei, Taiwan (ASSMN)

Report of Technological and Other Scientific Innovations

- 2015 *“Anti-CXCR4 As a Sensitizer to Cancer Therapeutics”*
 US Patent No. 9,155,723, Oct 13, 2015
 As a member of the Steele Laboratories for Tumor Biology, my colleagues and I identified and demonstrated the use of CXCR4 pathway inhibition as a sensitizer for anti-cancer treatments such as radiation, chemotherapy, and targeted therapies. This use of these agents has since been used/validated by multiple labs in the US and abroad.
- 2017 *“Triple Negative Breast Cancer Treatment Method”*
 US Patent WO2017184597A1
 Dr. Tolaney and I identified cabozantinib as an immune-modulator in triple-negative breast cancer patients, as demonstrated by increased fractions of T and NK cells in the blood circulation.
- 2019 *“Classification and Treatment of Gastric Cancer”*
 US Patent 2019 49 453A1
 As a member of the “Esophago-gastric Cancer Interest Group” at MGH, my colleagues and I identified and demonstrated the use of a simplified protein and mRNA-based signature to classify gastric cancers.
- 2021 *“Lipid-based Composition and Methods Thereof”*
 Application Number: PCT/US22/52158, filed on December 7, 2022.
 Dr. Shi and I identified and demonstrated the efficacy of mRNA to restore p53 in cancer and enhance the efficacy of immunotherapy in cancers with p53 loss.

Report of Education of Patients and Service to the Community

- No presentations below were sponsored by 3rd parties/outside entities
- Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

Activities

- 2011 Relay for Life Training Program / Invited Speaker
Training of volunteers in North Attleboro, MA, Massachusetts American Cancer Society (ACS)
- 2011 Relay for Life of Billerica / Invited Speaker
Guest speaker at the Fight Back Ceremony at the Relay For Life of Billerica, Billerica, MA, Massachusetts ACS Organization
- 2013 Bicycles Battling Cancer ride / Invited Speaker
Guest speaker, Fundraisers/Participants, Marlboro, MA, ACS New England Division
- 2014 American Cancer Society Boston research Dinner / Participant
Fundraisers/Participants, Boston, MA, ACS New England Division
- 2015 1st Kathy's Gala of Hope / Participant
Fundraisers/Participants, Woburn, MA, Granara-Skerry Trust
- 2015 Pancreatic Cancer Action Network (PanCan) Breakfast / Participant
Fundraisers/Participants, Cambridge, MA, PanCan
- 2016 2nd Kathy's Gala of Hope / Participant and Awardee Speaker
Fundraisers/Participants, Burlington, MA, Granara-Skerry Trust

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. Motoi F, Sunamura M, Ding L, **Duda DG**, Yoshida Y, Zhang W, Matsuno S, Hamada H. Effective gene therapy for pancreatic cancer by cytokines mediated by restricted replication-competent adenovirus. *Human Gene Therapy* 2000; 11: 223-35.
2. **Duda DG**, Sunamura M, Lozonschi L, Kodama T, Egawa S, Matsumoto G, Shimamura H, Shibuya K, Takeda K, Matsuno S. Direct in vitro evidence and in vivo analysis of the anti-angiogenesis effects of Interleukin 12. *Cancer Research* 2000; 60: 1111-6.
3. Sunamura M, Son L, Lozonschi L, **Duda DG**, Kodama T, Matsumoto G, Shimamura H, Takeda K, Kobari M, Hamada H, Matsuno S. The anti-angiogenesis effect of IL-12 during the early growth of human pancreatic cancer in SCID mice. *Pancreas* 2000; 20: 227-33.
4. Ding L, Sunamura M, Kodama T, Yamauchi J, **Duda DG**, Shimamura H, Shibuya K, Takeda K, Matsuno S. In vivo evaluation of the early events associated with liver metastasis of circulating cancer cells. *British Journal of Cancer* 2001; 85: 431-8.
5. Sunamura M, **Duda DG**, Shimamura H, Motoi F, Yatsuoka T, Shibuya K, Takeda K, Matsuno S. Tumor dormancy therapy using genetically engineered drug delivery system. *Japanese Journal of Gastroenterology and Surgery* 2001; 34: 425-30.
6. **Duda DG**, Sunamura M, Lozonschi L, Yokoyama T, Yatsuoka T, Motoi F, Horii A, Tani K, Asano S, Nakamura Y, Matsuno S. Overexpression of the p53-inducible Brain Angiogenesis Inhibitor 1 suppresses efficiently tumor angiogenesis *British Journal of Cancer* 2002; 85: 490-7.
7. Lefter LP, Furukawa T, Sunamura M, **Duda DG**, Takeda K, Kotobuki N, Oshimura M, Matsuno S, Horii A. Silencing the tumorigenic phenotype by Chromosome 18 transfer into pancreatic cancer cell lines. *Genes Chromosomes Cancer* 2002; 34: 234-42.
8. Hoshida T, Sunamura M, **Duda DG**, Egawa S, Miyazaki S, Shineha R, Hamada H, Ohtani H, Satomi S, Matsuno S. Gene therapy for pancreatic cancer using an adenovirus vector encoding soluble flt-1 VEGFR. *Pancreas* 2002; 25: 111-21.

9. Sunamura M, **Duda DG**, Ghattas MH, Lozonschi L, Motoi F, Yamauchi J, Matsuno S, Shibahara S, Abraham NG. Heme Oxygenase-1 accelerates tumor angiogenesis of human pancreatic cancer. *Angiogenesis* 2003; 6: 25-30.
10. **Duda DG**, Sunamura M, Lefter LP, Furukawa T, Yokoyama T, Yatsuoka T, Abe T, Inoue H, Motoi F, Egawa S, Matsuno S, Horii A. SMAD4 restoration by gene therapy reverses the invasive phenotype in pancreatic cancer cells. *Oncogene* 2003; 22: 6855-62.
11. Fukumura D*, Ushiyama A*, **Duda DG***, Xu L, Tam J, Chatterjee VKK, Garkavtsev I, Jain RK. Paracrine regulation of angiogenesis and adipocyte differentiation during in vivo adipogenesis. *Circulation Research* 2003; 93: e88-97. * Equal first authors.
12. Sunamura M, Lefter LP, **Duda DG**, Morita R, Inoue H, Yokoyama T, Yatsuoka T, Abe T, Egawa S, Furukawa T, Fukushima S, Oshimura M, Horii A, Matsuno S. The role of chromosome 18 abnormalities in the progression of pancreatic adenocarcinoma. *Pancreas* 28, 2004; 28: 311-6.
13. Willett CG, Boucher Y*, di Tomaso E*, **Duda DG***, Munn LL*, Tong RT*, Chung DC, Sahani DV, Kalva SP, Kozin SV, Mino M, Cohen KS, Scadden DT, Hartford AC, Fischman AJ, Clark JW, Ryan DP, Zhu AX, Blaszkowsky LS, Chen HX, Shellito PC, Lauwers GY, Jain RK. Direct evidence that the VEGF-specific antibody bevacizumab has antivasular effects in human rectal cancer. *Nature Medicine* 2004; 10: 145-7. PMID: PMC2693485. * Equal contribution.
14. **Duda DG**, Fukumura D, Munn LL, Booth MF, Brown EB, Huang P, Seed B, Jain RK. Differential transplantability of tumor-associated stromal cells. *Cancer Research* 2004; 63, 5920-4.
15. Willett CG, Boucher Y, **Duda DG**, di Tomaso E, Munn LL, Tong RT, Chung DC, Sahani DV, Kalva SP, Kozin SV, Cohen KS, Petit L, Scadden DT, Fischman AJ, Clark JW, Ryan DP, Zhu AX, Blaszkowsky LS, Shellito PC, Mino-Kenudson M, Lauwers GY, Jain RK. Surrogate markers for antiangiogenic therapy and dose-limiting toxicities for bevacizumab with radio-chemotherapy: Continued experience of a phase I trial in rectal cancer patients. *Journal of Clinical Oncology* 2005; 23: 8136-9.
16. Stroh M, Zimmer JP, **Duda DG**, Levchenko TS, Cohen KS, Scadden DT, Torchilin VP, Bawendi MG, Fukumura D, Jain RK. Quantum Dots spectrally distinguish multiple species within the tumor milieu in vivo. *Nature Medicine* 2005; 11: 678-82.
17. Saito Y, Sunamura M, Motoi F, Abe H, Egawa S, **Duda DG**, Hoshida T, Fukuyama S, Hamada H, Matsuno S. Oncolytic replication-competent adenovirus suppresses tumor angiogenesis through preserved E1A region. *Cancer Gene Therapy* 2006; 13: 242-52.
18. Kisucka J, Butterfield CE, **Duda DG**, Eichenberger SC, Saffaripour S, Ware J, Ruggeri ZM, Jain RK, Folkman J, Wagner DD. Platelets and platelet adhesion support angiogenesis while preventing excessive hemorrhage. *Proceedings of the National Academy of Science USA* 2006; 103:855-60.
19. **Duda DG**, Cohen KS, Kozin SV, JY Perentes, Fukumura D, Scadden DT, Jain RK. Evidence for bone marrow-derived endothelial cells incorporation into perfused blood vessels in tumors. *Blood* 2006; 107: 2774-6. PMID: PMC1895376.
20. **Duda DG***, Cohen KS, di Tomaso E, Au P, Klein RJ, Scadden DT, Willett CG, Jain RK. Differential CD146 expression on circulating versus tissue endothelial cells: Implications for circulating endothelial cells as biomarker for antiangiogenic therapy. *Journal of Clinical Oncology* 2006; 24: 1449-53. * Corresponding author.
21. Batchelor TT[#], Sorensen AG[#], di Tomaso E*, Zhang W-T*, **Duda DG***, Cohen KS, Kozak KR, Cahill DP, Chen P-J, Zhu M, Ancukiewicz M, Mrugala MM, Plotkin S, Drappatz J, Louis DN, Ivy P, Scadden DT, Benner T, Loeffler JS, Wen PY, Jain RK. AZD2171, a pan-VEGF receptor tyrosine kinase inhibitor, normalizes tumor vasculature and alleviates edema in glioblastoma patients. *Cancer Cell* 2007; 11: 83-95. PMID: PMC2748664. [#] and * Equal contribution.
22. **Duda DG**, Cohen KS, Scadden DT, Jain RK. A protocol for detection and enumeration of circulating endothelial cells and circulating progenitor cells in human blood. *Nature Protocols* 2007; 4:805-10.

23. Au P, Daheron LM, **Duda DG**, Cohen KS, Tyrrell JA, Fukumura D, Scadden DT, Jain RK. Differential in vivo potential of human endothelial progenitor cells from human umbilical cord blood and adult peripheral blood to form functional long-lasting vessels. *Blood* 2008; 111: 1302-5.
24. Jones R, Capen D, Petersen B, Jain RK, **Duda DG**. A protocol for a lung neovascularization model in rodents. *Nature Protocols* 2008; 3: 378-87.
25. Jones R, Capen D, Cohen KS, Munn LL, Jain RK, **Duda DG**. A protocol for phenotypic detection and characterization of vascular cells in a lung neovascularization model in rodents. *Nature Protocols* 2008; 3: 388-97.
26. Huang P, **Duda DG**, Jain RK, Fukumura D. Histopathologic findings and establishment of novel tumor lines from spontaneous tumors in FVB/N mice. *Comparative Medicine* 2008; 58: 253-63.
27. Tam J*, **Duda DG***, Perentes JY*, Quadri RS, Fukumura D, Jain RK. Blockade of VEGFR2 and not VEGFR1 can limit diet-induced fat tissue expansion: Role of local versus bone marrow-derived endothelial cells. *PLoS One* 2009; 4: e4974. * Equal first authors.
28. Kamoun W, Ley CD, Farrar C, Duyverman A, Lacorre D, Lahdenranta J, di Tomaso E, **Duda DG**, Munn L, Fukumura D, Sorensen G, Jain RK. Edema control by anti-VEGF therapy prolongs survival despite persistent brain tumor growth in mice. *Journal of Clinical Oncology* 2009; 27: 2542-52.
29. Jones R, Capen D, Jacobson M, Cohen KS, Scadden DT, **Duda DG**. VEGFR2⁺PDGFRβ⁺ circulating precursor cells participate in lung capillary repair after hyperoxia-induced lung injury (HALI). *Journal of Cellular and Molecular Medicine* 2009; 13: 3720-9.
30. Zhu AX*, Sahani DV*, **Duda DG***, di Tomaso E, Ancukiewicz M, Catalano O, Sindhvani V, Blaszkowsky LS, Yoon SS, Meyerhardt J, Clark JW, Kwak EL, Hezel AF, Miksad R, Abrams TA, Enzinger PC, Fuchs CS, Ryan DP, Jain RK. Efficacy, safety, and potential biomarkers of sunitinib monotherapy in advanced hepatocellular carcinoma: a phase II study. *Journal of Clinical Oncology* 2009; 27: 3027-35. PMID: PMC2702235. * Equal first authors.
31. Willett CG*, **Duda DG***, di Tomaso E*, Boucher Y, Ancukiewicz M, Sahani DV, Lahdenranta J, Chung DC, Fischman AJ, Lauwers GY, Shellito PC, Czito BG, Wong TZ, Paulson E, Poleski M, Vujaskovic Z, Bentley R, Chen HX, Clark JW, Jain RK. Efficacy, safety and biomarkers of neoadjuvant bevacizumab, radiation therapy and 5-Fluorouracil in rectal cancer: A multidisciplinary phase II study. *Journal of Clinical Oncology* 2009; 27: 3020-6. * Equal first authors.
32. Au P, Tam J, **Duda DG**, Fukumura D, Jain RK. Paradoxical effects of PDGF-BB overexpression in endothelial cells on engineered blood vessels *in vivo*. *American Journal of Pathology* 2009; 175: 294-302.
33. Sorensen AG, Batchelor TT, Zhang W-T, Chen P-J, Yeo P, Wang M, Jennings D, Wen PY, Ancukiewicz M, Lahdenranta J, di Tomaso E, **Duda DG**, Jain RK. A “Vascular Normalization Index” as potential mechanistic biomarker to predict survival after a single dose of cediranib in recurrent glioblastoma patients. *Cancer Research* 2009; 69: 5296-300.
34. Dawson MR, **Duda DG**, Fukumura D, Jain RK. VEGFR1-activity-independent metastasis formation. *Nature* 2009; 461: E4-5. PMID: PMC3065241.
35. Dawson MR*, **Duda DG***, Chae S-S, Fukumura D, Jain RK. VEGFR1 activity modulates myeloid cell infiltration in growing lung metastases but is not required for spontaneous metastasis formation. *PLoS One* 2009; 4: e6525. * Equal first authors.
36. Xu L*, **Duda DG***, di Tomaso E*, Ancukiewicz M, Chung DC, Lauwers GY, Samuel R, Shellito PC, Czito B, Poleski M, Bentley R, Clark JW, Willett CG, Jain RK. Direct evidence that bevacizumab, an anti-VEGF antibody, upregulates SDF1α, CXCR4, CXCL6 and neuropilin 1 in tumors in rectal cancer patients. *Cancer Research* 2009; 69: 7905-10. PMID: PMC2859041. * Equal first authors.
37. Batchelor TT, **Duda DG**, di Tomaso E, Ancukiewicz M, Plotkin SR, Eichler A, Gerstner ER, Chea H, Hochberg FH, Louis DN, Cohen KS, Ivy P, Drappatz J, Exarhopoulos A, Moses MA, Wen PY, Sorensen AG, Jain RK. Phase II study of cediranib, an oral pan-VEGF receptor tyrosine kinase

- inhibitor, in patients with recurrent glioblastoma. *Journal of Clinical Oncology* 2010; 28: 2817-23. PMID: PMC2903316.
38. **Duda DG**, Willett CG, Ancukiewicz M, di Tomaso E, Shah M, Czito BG, Bentley R, Poleski M, Lauwers GY, Carroll M, Tyler D, Mantyh C, Shellito PC, Clark JW, Jain RK. Plasma soluble VEGFR1 is a potential dual biomarker of response and toxicity for bevacizumab with chemoradiation in locally advanced rectal cancer. *Oncologist* 2010; 15: 577-83. PMID: PMC3061828.
 39. Kozin SV, Kamoun W, Huang Y, Dawson MR, Jain RK, **Duda DG**. Recruitment of myeloid but not endothelial precursor cells facilitates tumor re-growth after local irradiation. *Cancer Research* 2010; 70: 5679-85. PMID: PMC2918387.
 40. Willett CG*, **Duda DG***, Ancukiewicz M*, Shah M, Czito BG, Bentley R, Poleski M, Fujita H, Lauwers GY, Carroll M, Tyler D, Mantyh C, Shellito PC, Chung DC, Clark JW, Jain RK. A safety and survival analysis of neoadjuvant bevacizumab with standard chemoradiation in a phase I/II study compared to standard chemoradiation in locally advanced rectal cancer. *Oncologist* 2010b; 15: 845-51. * Equal first authors.
 41. **Duda DG**, Duyverman AMMJ, Kohno M, Steller EJA, Fukumura D, Jain RK. Malignant cells facilitate lung metastasis by bringing their own soil. *Proceedings of the National Academy of Science U S A* 2010; 107: 21677-82.
 42. Dawson MR, Chae S-S, Jain RK, **Duda DG**. Direct evidence for lineage-dependent effects of bone marrow stromal cells on tumor progression. *American Journal of Cancer Research* 2011; 1:144-54.
 43. di Tomaso E*, Snuderl M*, Kamoun W*, **Duda DG**, Auluck PK, Fazlollahi L, Andronesi OC, Frosch MP, Wen PY, Plotkin SR, Hedley-Whyte T, Sorensen AG, Batchelor TT, Jain RK. Glioblastoma recurrence after cediranib therapy in patients: Lack of "rebound" revascularization as mode of escape. *Cancer Research* 2011; 71: 17-28. PMID: PMC3074948. * Equal first authors.
 44. Hiratsuka S*, **Duda DG***, Huang Y, Goel S, Sugiyama T, Nagasawa T, Fukumura D, Jain RK. C-X-C receptor type 4 promotes metastasis by activating p38 mitogen-activated protein kinase in myeloid differentiation-antigen (Gr-1) positive cells. *Proceedings of the National Academy of Science U S A* 2011; 108: 302-7. PMID: PMC3017172. * Equal first authors.
 45. Gerstner ER, Eichler AF, Plotkin SR, Drappatz J, Doyle CL, Xu L, **Duda DG**, Wen PY, Jain RK, Batchelor TT. Phase I trial with biomarker studies of vatalanib (PTK787) in patients with newly diagnosed glioblastoma treated with enzyme inducing anti-epileptic drugs and standard radiation and temozolomide. *Journal of Neuro-oncology* 2011; 103: 325-32.
 46. Zhu AX*, **Duda DG***, Ancukiewicz M, di Tomaso E, Clark JW, Miksad RA, Fuchs CS, Ryan DP, Jain RK. Exploratory analysis of sunitinib toxicity in advanced hepatocellular carcinoma: Kinetics and potential biomarker value. *Clinical Cancer Research* 2011; 17: 918-27. PMID: PMC3023846. * Equal first authors.
 47. Hiratsuka S, Goel S, Kamoun W, Fukumura D, **Duda DG***, Jain RK*. Endothelial focal adhesion kinase mediates cancer cell homing to discrete foci in lungs. *Proceedings of the National Academy of Science U S A* 2011; 108: 3725-30. * Corresponding authors.
 48. Horowitz NS*, Penson RT*, **Duda DG***, di Tomaso E*, Boucher Y, Ancukiewicz M, Cohen KS, Berlin S, Krasner C, Moses MA, Jain RK. Safety, efficacy and biomarker exploration in a phase II study of bevacizumab, oxaliplatin and gemcitabine in recurrent Müllerian carcinoma. *Clinical Ovarian Cancer* 2011; 4: 26-33. * Equal first authors.
 49. Yoon SS, **Duda DG**, Karl DL, Kim T-M, Kambadakone AR, Chen Y-L, Rothrock C, Rosenberg AE, Nielsen GP, Kirsch DG, Choy E, Harmon DC, Hornicek FJ, Dreyfuss J, Ancukiewicz M, Sahani DV, Park PJ, Jain RK, DeLaney DF. Phase II study of neoadjuvant bevacizumab and radiation therapy for resectable soft tissue sarcomas. *International Journal of Radiation Oncology, Biology and Physics* 2011; 81: 1081-90.
 50. Saylor PJ, Kozak RK, Smith MR, Ancukiewicz M, Efstathiou JA, Zietman AL, Jain RK, **Duda DG**.

Changes in biomarkers of inflammation and angiogenesis during androgen deprivation therapy for prostate cancer. *Oncologist* 2012; 17: 212-9. PMID: PMC3286170.

51. Raut CP*, Boucher Y*, **Duda DG***, Morgan JA, Quek R, Ancukiewicz M, Lahdenranta J, Eder JP, Demetri GD, Jain RK. Effects of sorafenib on intra-tumoral interstitial fluid pressure and circulating biomarkers in patients with refractory sarcomas (NCI Protocol 6948). *PLoS ONE* 2012; 7: e26331. PMID: PMC3274514. * Equal first authors.
52. Duyverman AMMJ, Kohno M, Roberge S, Fukumura D, **Duda DG**, Jain RK. An isolated tumor perfusion model in mice. *Nature Protocols* 2012; 7: 749-55. PMID: PMC3375334.
53. Duyverman AMMJ, Steller JA, Fukumura D, Jain RK, **Duda DG**. Studying primary tumor-associated fibroblast involvement in cancer metastasis in mice. *Nature Protocols* 2012; 7: 756-62. PMID: PMC3380105.
54. Duyverman AMMJ, Kohno M, **Duda DG**, Jain RK, Fukumura D. A transient parabiosis skin transplantation model in mice. *Nature Protocols* 2012; 7: 763-70. PMID: PMC3375333.
55. Meyerhardt JA, Ancukiewicz M, Abrams TA, Schrag D, Enzinger PC, Chan JA, Kulke MH, Wolpin BM, Goldstein M, Blaszkowsky L, Elliott M, Regan E, Jain RK, **Duda DG**. Phase I study of cetuximab, irinotecan, and vandetanib (ZD6474) as therapy for patients with previously treated metastatic colorectal cancer. *PLoS One* 2012; 7: e38231. PMID: PMC3373492.
56. Dima SO, Tanase C, Albulescu R, Herlea V, Chivu-Economescu M, Purnichescu-Purtan R, Dumitrascu T, **Duda DG**, Popescu I. An exploratory study of inflammatory cytokines as prognostic biomarkers in patients with ductal pancreatic adenocarcinoma. *Pancreas* 2012; 41: 1001-7.
57. Huang Y, Yuan J, Righi E, Kamoun WS, Ancukiewicz M, Nezivar J, Santosuosso M, Martin JD, Vianello F, Leblanc P, Munn LL, Huang P, **Duda DG**, Fukumura D, Jain RK, Poznansky MC. Vascular normalizing dose of antiangiogenic treatment reprograms the immunosuppressive tumor microenvironment and potentiates a vaccine therapy. *Proceedings of the National Academy of Science USA* 2012; 109: 17561-6. PMID: PMC3491458.
58. Zhu AX, Ancukiewicz M, Supko JG, Sahani DV, Blaszkowsky LS, Meyerhardt JA, Abrams TA, McCleary NJ, Bhargava P, Muzikansky A, Sheehan S, Regan E, Vasudev E, Knowles M, Fuchs CS, Ryan DP, Jain RK, **Duda DG**. Efficacy, safety, pharmacokinetics and biomarkers of cediranib monotherapy in advanced hepatocellular carcinoma: A phase II study. *Clinical Cancer Research* 2013; 19: 1157-66. PMID: PMC3609423.
59. Snuderl M, Batista A, Kirkpatrick ND, Ruiz de Almodovar C, Riedemann L, Walsh EC, Anolik R, Huang Y, Martin JD, Kamoun W, Knevels E, Schmidt T, Vakoc BJ, Mohan N, Chung E, Roberge S, Peterson T, Niemeyer E, **Duda DG**, Fukumura D, Xu L, Carmeliet P, Jain RK. Placental growth factor/neuropilin 1 signaling is required for medulloblastoma growth. *Cell* 2013; 152: 1065-76. PMID: PMC3587980
60. Lu-Emerson C, Snuderl M, Kirkpatrick ND, Goveia J, Davidson C, Huang Y, Riedemann L, Ivy P, **Duda DG**, Ancukiewicz M, Plotkin SR, Chi AS, Gerstner ER, Eichler AF, Dietrich J, Stemmer-Rachamimov A, Batchelor TT, Jain RK. Increase in tumor-associated macrophages after antiangiogenic therapy is associated with poor survival in recurrent glioblastoma patients. *Neurooncology* 2013; 15: 1079-87. PMID: PMC3714160.
61. Sahani DV, Jiang T, **Duda DG**, Catalano OA, Ancukiewicz M, Jain RK, Zhu AX. Magnetic resonance imaging biomarkers in hepatocellular carcinoma: Association with response and circulating biomarkers after sunitinib therapy. *Journal of Hematology & Oncology* 2013; 6: 51. PMID: PMC3722053.
62. Samuel R, Daheron L, Liao S, Kamoun WS, Vardam T, Batista A, Buecker C, Schäfer R, Han X, Au P, Scadden DT, **Duda DG**, Fukumura D, Jain RK. Generation of functionally competent durable engineered blood vessels from human induced pluripotent stem cells. *Proceedings of the National Academy of Science USA* 2013; 110: 12774-9. PMID: PMC3732948.
63. Goel S, Gupta N, Walcott BP, Snuderl M, Kirkpatrick ND, Heishi T, Huang Y, Kesler C, Martin JD,

- Ager E, Samuel R, Wang S, Yazbek J, Vakoc BJ, Peterson RT, Padera TP, **Duda DG**, Fukumura D, Jain RK. Tie-2 activation by a Vascular-Endothelial Protein Tyrosine Phosphatase Inhibitor normalizes breast cancer vasculature and delays metastatic progression. *Journal of the National Cancer Institute* 2013; 105: 1188-201. PMID: PMC3748004.
64. Zhu AX, Finn RS, Mulcahy M, Gurtler J, Sun W, Schwartz JD, Dalal RP, Joshi A, Hozak RR, Xu Y, Ancukiewicz M, Jain RK, Nugent FW, **Duda DG**, Stuart K. A phase II and biomarker study of ramucirumab, a fully human monoclonal antibody targeting the vascular endothelial growth factor receptor-2, as first-line monotherapy in patients with advanced hepatocellular carcinoma. *Clinical Cancer Research* 2013; 19: 6614-23. PMID: In process.
65. Chan-on W, Nairismägi M-L, Ong CK, Dima SO, Pairojkul C, Lim KH, McPherson JR, Lim WK, Cutcutache I, Heng HL, Ooid L, Chung A, Chow P, Cheow PC, Yee LS, Huat ITB, **Duda D**, Nastase A, Myint SS, Wong BH, Gan A, Yu W, Rajasegaran V, Ng CCY, Huang DC, Yongvanit P, Wongkham S, Khuntikeo N, Bhudhisawasdi V, Popescu I, Rozen SG, Tan P, Teh BT. Distinct mutational patterns of infection and non-infection-related bile duct cancers revealed by exome sequencing. *Nature Genetics* 2013; 45: 1474-8. PMID: 24185513. PMID: In process.
66. Batchelor TT*, Gerstner ER*, Emblem KE*, **Duda DG***, Kalpathy-Cramer J, Snuderl M, Ancukiewicz M, Polaskova P, Pinho M, Jennings D, Plotkin SR, Chi AS, Eichler AF, Dietrich J, Hochberg FH, Lu-Emerson C, Bo-Moon C, Iafrate AJ, Rosen B, Loeffler JS, Wen PY, Sorensen AG, Jain RK. Improved perfusion and oxygenation due to vascular normalization improves survival in glioblastoma patients treated with cediranib and chemoradiation. *Proceedings of the National Academy of Science U S A* 2013; 110: 19059-64. PMID: PMC3839699. *Equal first authors.
67. Chen Y, Huang Y, Reiberger T, Duyverman AM, Huang P, Samuel R, Hiddingh L, Roberge S, Koppel C, Lauwers GY, Zhu AX, Jain RK, **Duda DG**. Differential effects of sorafenib on liver versus tumor fibrosis mediated by SDF1 α /CXCR4 axis and Gr-1⁺ myeloid cell infiltration in mice. *Hepatology* 2014; 59: 1435-1447. PMID: PMC3966948.
68. Cucu D, Chiritoiu G, Petrescu S, Babes A, Stanica L, **Duda DG**, Horii A, Dima SO, Popescu I. Characterization of functional transient receptor potential melastatin 8 channels in human pancreatic ductal adenocarcinoma cells. *Pancreas* 2014; 43: 795-800. PMID: In process.
69. Hong TS, Ryan DP, Borger DR, Blaszkowsky LS, Yeap BY, Ancukiewicz M, Deshpande V, Wo J-Y, Boucher Y, Wadlow RC, Kwak EL, Allen JN, Clark JW, Zhu AX, Ferrone C, Mamon HJ, Adams J, Winrich B, Grillo T, Jain RK, DeLaney TF, Fernandez-del Castillo C, **Duda DG**. A phase I/II and biomarker study of preoperative short course chemoradiation with proton beam therapy and capecitabine followed by early surgery for resectable pancreatic ductal adenocarcinoma. *International Journal of Radiation Oncology, Biology and Physics* 2014; 89: 830-8.
70. Chen Y, Ramjiawan RR, Reiberger T, Ng MR, Hato T, Huang Y, Ochiai H, Kitahara S, Unan EC, Reddy TP, Fan C, Huang P, Bardeesy N, Zhu AX, Jain RK, **Duda DG**. CXCR4 inhibition in tumor microenvironment facilitates anti-PD-1 immunotherapy in sorafenib-treated HCC in mice. *Hepatology* 2015; 61: 1591-602. PMID: PMC4406806.
71. Kambadakone A, Yoon SS, Kim T-M, Karl DL, **Duda DG**, DeLaney TF, Sahani DS. CT perfusion as an imaging biomarker in monitoring response to neoadjuvant bevacizumab and radiation in soft-tissue sarcomas: Comparison with tumor morphology, circulating and tumor biomarkers, and gene expression. *American Journal of Roentgenology* 2015 204: W11-8. PMID: PMC4479405.
72. Botezatu A, Bleotu C, Nastase A, Anton G, Bacalbasa N, **Duda D**, Dima SO, Popescu I. Epigenetic silencing of GNMT gene in pancreatic adenocarcinoma. *Cancer Genomics Proteomics* 2015; 12: 21-30.
73. Han H-S, Niemeyer E, Huang Y, Kamoun WS, Martin J, Bhaumik J, Chen Y, Roberge S, Cui J, Martin MR, Fukumura D, Jain RK, Bawendi M, **Duda DG**. Novel quantum dot/antibody conjugates for *in vivo* cytometric imaging in mice. *Proceedings of the National Academy of Science U S A* 2015; 112: 1350-5. PMID: PMC4321304.

74. Heist RS*, **Duda DG***, Sahani DV, Ancukiewicz M, Fidias P, Sequist LV, Temel JT, Shaw A, Pennell NA, Neal JW, Gandhi L, Lynch TJ, Engelman JA, Jain RK. Improved rather than impaired tumor vasculature after anti-VEGF therapy with carboplatin and nab-paclitaxel associates with survival in non-small cell lung cancer. *Proceedings of the National Academy of Science U S A* 2015; 112: 1547-52. PMID: PMC4321320. *Equal first authors.
75. Hayano K, Tian F, Kambadakone AR, Yoon SS, **Duda DG**, Ganeshan B, Sahani DV. Texture analysis of non-contrast enhanced CT for assessing angiogenesis and survival of soft tissue sarcoma. *Journal of Computer Assisted Tomography* 2015; 39: 607-12. PMID: PMC4504795.
76. Lee EQ, Kaley TJ, **Duda DG**, Schiff D, Lassman AB, Wong ET, Mikkelsen T, Purow BW, Muzikansky AM, Ancukiewicz MA, Huse JT, Ramkissoon S, Drappatz J, Norden AD, Beroukhi R, Weiss SE, Alexander BM, McCluskey CS, Gerard M, Smith KH, Jain RK, Batchelor TT, Ligon K, Wen PY. A multicenter, phase II, randomized, non-comparative clinical trial of radiation and temozolomide with or without vandetanib in newly diagnosed glioblastoma patients. *Clinical Cancer Research* 2015; 21: 3610-8.
77. Gerstner ER, Ye X, **Duda DG**, Levine MA, Mikkelsen T, Kaley TJ, Olson JJ, Nabors BL, Ahluwalia M, Wen PY, Jain RK, Batchelor TT, Grossman S. A phase I study of cediranib in combination with cilengitide in patients with recurrent glioblastoma. *Neurooncology* 2015; 17: 1386-92. PMID: PMC4578584.
78. Jeong H-S, Jones D, Liao S, Wattson DA, Cui C, **Duda DG**, Willett CG, Jain RK, Padera TP. Investigation of the lack of angiogenesis in the formation of lymph node metastases. *Journal of the National Cancer Institute* 2015; 107: pii: djv155.
79. Lemon C, Karnas E, Han X, Bruns O, Fukumura D, Bawendi M, Jain RK, **Duda DG**, Nocera D. Micelle-encapsulated quantum dot-porphyrin assemblies as ratiometric two-photon oxygen sensors. *Journal of the American Chemical Society* 2015; 37: 9832-42.
80. Reiberger T, Chen Y, Ramjiawan RR, Hato T, Fan C, Samuel R, Huang P, Lauwers GY, Zhu AX, Bardeesy N, Jain RK, **Duda DG**. A model of orthotopic hepatocellular carcinoma in mice with underlying liver cirrhosis. *Nature Protocols* 2015; 10: 1264-74.
81. Tolaney SM*, Boucher Y*, **Duda DG***, Martin JD*, Seano G, Ancukiewicz M, Barry WT, Goel S, Lahdenrata J, Isakoff SJ, Yeh E, Jain SR, Golshan M, Brock J, Snuderl M, Winer EP, Krop IE, Jain RK. Role of vascular density and normalization in response to neoadjuvant bevacizumab and chemotherapy in breast cancer patients. *Proceedings of the National Academy of Science U S A* 2015; 112: 14325-14330. *Equal first authors.
82. Askoxylakis V, Ferraro GB, Kodack DP, Badeaux M, Seano G, Kloepper J, Vardam T, Martin JD, Shankaraiah RC, Bezwada D, Qi X, **Duda DG**, Fukumura D, Engelman JA, Jain RK. Ado-Trastuzumab emtansine (T-DM1) is effective against established HER2-positive breast cancer brain metastases in mice. *Journal of the National Cancer Institute* 2016; 108: pii: djv3.
83. Incio J, Tam J, Rahbari NN, Suboj P, McManus D, Chin SM, Vardam-Kaur T, Batista A, Babykutty S, Jung K, Khachatryan A, Hato T, Ligibel J, Krop IE, Puchner SB, Schlett CL, Hoffmann U, Ancukiewicz M, Shibuya M, Carmeliet P, Soares R, **Duda DG**, Jain RK, Fukumura D. PlGF/VEGFR-1 signaling promotes macrophage polarization and accelerated tumor progression in obesity. *Clinical Cancer Research* 2016; 22: 2993-3004.
84. Hayano K, Kulkarni NM, **Duda DG**, Heist RS, Sahani DV. Exploration of imaging biomarkers for predicting survival in advanced non-small cell lung cancer patients treated with anti-angiogenic chemotherapy. *American Journal of Roentgenology* 2016; 2:1-7.
85. Peterson TE, Kirkpatrick ND, Huang Y, Farrar CT, Marijt K, Kloepper J, Datta M, Amoozgar Z, Seano G, Jung K, Kamoun WS, Batista A, Vardam T, Snuderl M, Goveia J, Chatterjee S, Muzikansky A, Leow CC, Xu L, Batchelor TT, **Duda DG**, Fukumura D, Jain RK. Dual targeting of Ang-2 and VEGF receptors prolongs survival in glioblastoma by normalizing tumor vessels and reprogramming

- macrophages. *Proceedings of the National Academy of Science U S A* 2016; 113: 4470-75.
86. Kloepper J, Riedemann L, Amoozgar Z, Seano G, Susek KH, Yu V, Dalvie N, Amelung RL, Datta M, Song JW, Askoxylakis V, Taylor JW, Lu-Emerson C, Batista A, Kirkpatrick ND, Jung K, Snuderl M, Muzikansky A, Stubenrauch KG, Krieter O, Wakimoto H, Xu L, Munn LL, **Duda DG**, Fukumura D, Batchelor TT, Jain RK. Dual angiopoietin-2/VEGF inhibition in glioblastoma prolongs survival through reprogramming of macrophages. *Proceedings of the National Academy of Science USA* 2016; 113: 4476-81.
 87. Blakeley JO, Ye X, **Duda DG**, Halpin C, Bergner AL, Muzikansky A, Merker VL, Gerstner ER, Fayad L, Ahlawat S, Jacobs M, Jain RK, Zalewski C, Dombi E, Widemann B, Plotkin SR. Efficacy and biomarker study of bevacizumab for hearing loss due to neurofibromatosis type 2 associated vestibular schwannomas. *Journal of Clinical Oncology* 2016; 34: 1669-75.
 88. Nastase A, Dima S, Heng HL, Ng CCY, Myint SS, Loh JL, Ong CK, Teh BT, Herlea V, **Duda DG**, Popescu I. Evaluation of KRAS mutational status in pancreatic ductal adenocarcinoma. *Surgery Gastroenterology and Oncology* 2016; 21: 102-8.
 89. Setia N, Agoston AT, Han HS, Mullen JT, **Duda DG**, Clark JW, Deshpande V, Mino-Kenudson M, Srivastava A, Lennerz JK, Hong TS, Kwak E, Lauwers GY. A protein and mRNA expression-based classification of gastric cancer. *Modern Pathology* 2016; 29: 772-84.
 90. Chng KR, Chan SH, Li C, Jusakul A, Ng A, Wilm A, Tan D, Lim KH, Soetinko R, Chow P, Kiat OC, The BT, **Duda DG**, Dima S, Popescu I, Wongkham C, Yongvanit P, Wongkham S, Bhudhisawasdi V, Khuntikeo N, Tan P, Pairojkul C, Nagarajan N, Ngeow J. Tissue microbiome profiling identifies an enrichment of specific enteric microbes in Opisthorchis Viverrini associated cholangiocarcinoma. *EBioMedicine* 2016; 8:195-202.
 91. Dima SO, Chivu-Economescu M, Purnichescu-Purtan R, Nastase A, Bacalbaşa N, Florea R, Bleotu C, Diaconu C, **Duda DG**, Herlea V, Popescu I. MAP4K4 expression is selectively upregulated and increases cell invasion in pancreatic ductal adenocarcinoma. *Surgery Gastroenterology and Oncology* 2016; 21: 32-7.
 92. Rahbari NN, Kedrin D, Incio J, Liu H, Ho WW, Nia HT, Edrich CM, Jung K, Daubriac J, Chen I, Heishi T, Martin JD, Huang Y, Maimon N, Reissfelder C, Weitz J, Boucher Y, Clark JW, Grodzinsky AJ, **Duda DG**, Jain RK, Fukumura D. Anti-VEGF therapy induces ECM remodeling and mechanical barriers to therapy in colorectal cancer liver metastases. *Science Translational Medicine* 2016; 8: 360ra135.
 93. Nastase A, Dima S, Tica V, Florea R Sorop A, Ilie V, Eftimie M, Paslaru L, Herlea V, Bacalbasa N, Ivan L, Uyy E, Suica VI, Antohe F, Iancu IV, Plesa A, Botezatu A, **Duda DG**, Diaconu CC. S100A4 and ERBB2 as Co-Factors in Pancreatic Cancer. *Surgery Gastroenterology and Oncology* 2016; 21: 259-66.
 94. Batchelor TT, Gerstner ER, Ye X, Desideri S, **Duda DG**, Peereboom D, Lesser GJ, Chowdhary S, Wen PY, Grossman S, Supko JG. Feasibility, phase I, and phase II studies of tandutinib, an oral platelet-derived growth factor receptor- β tyrosine kinase inhibitor, in patients with recurrent glioblastoma. *Neuro-Oncology* 2017; 19: 567-75.
 95. Tolaney SM, Ziehr DR, Guo H, Ng MR, Barry WT, Higgins MJ, Isakoff SJ, Brock JE, Ivanova EV, Pawletz CP, Demeo MK, Ramaiya NH, Overmoyer BA, Jain RK, Winer E, **Duda DG**. Phase 2 and biomarker study of cabozantinib in metastatic triple-negative breast cancer patients. *Oncologist* 2017; 22: 25-32.
 96. Kalpathy-Cramer J, Chandra V, Da X, Ou Y, Emblem KE, Muzikansky A, Cai X, Douw L, Evans JG, Dietrich J, Chi AS, Wen PY, Stufflebeam S, Rosen B, **Duda DG**, Jain RK, Batchelor TT, Gerstner ER. Phase II study of tivozanib, an oral VEGFR inhibitor, in patients with recurrent glioblastoma. *Journal of Neuro-Oncology* 2017; 131: 603-10.
 97. Goyal L, Zheng H, Yurgelun MB, Abrams TA, Allen J, Cleary JM, Knowles M, Regan E, Reardon A,

- Khachatryan A, Jain RK, Nardi V, Borger DR, **Duda DG***, Zhu AX*. A phase II and biomarker study of cabozantinib in patients with advanced cholangiocarcinoma. *Cancer* 2017; 123: 1979-88. *Senior authors.
98. Nastase A, YaoTeo J, Heng HL, Ng CCY, Myint SS, Rajasegaran V, Loh JL, Lee SY, Ooi LL, Chung AYW, Chow PKH, Cheow PC, Wan WK, Azhar R, Khoo A, Xiu SX, Alkaff SMF, Cutcutache I, Lim JQ, Ong CK, Herlea V, Dima S, **Duda DG**, Teh BT, Popescu I, Lim TKH. Genomic and proteomic characterization of ARID1A chromatin remodeller in ampullary tumors. *American Journal of Cancer Research* 2017; 7: 484-502.
99. Chen Y, Liu Y-C, Sung Y-C, Ramjiawan RR, Lin T-T, Chang C-C, Jeng K-S, Chang C-F, Liu C-H, Gao D-Y, Hsu F-F, Duyverman AM, Kitahara S, Huang P, Dima S, Popescu I, Flaherty KT, Zhu AX, Bardeesy N, Jain RK, Benes CH, **Duda DG**. Overcoming sorafenib evasion in hepatocellular carcinoma using CXCR4-targeted nanoparticles to co-deliver MEK-inhibitors. *Scientific Reports* 2017; 7: 44123.
100. Kodack DP, Askoxylakis V, Ferraro GB, Sheng Q, Badeaux M, Goel S, Qi X-L, Shankaraiah R, Cao AZ, Ramjiawan RR, Bezwada D, Patel B, Song Y, Costa C, Naxerova K, Wong C, Kloepper J, Das R, Tam A, Tanboon J, **Duda DG**, Miller RC, Siegel MB, Anders CK, Sanders M, Estrada VM, Schlegel R, Arteaga CL, Brachtel E, Huang A, Fukumura D, Engelman JA, Jain RK. The brain microenvironment mediates resistance in luminal breast cancer to PI3K inhibition through HER3 activation. *Science Translational Medicine* 2017; 9(391). pii: eaal4682.
101. Andronesi O, Esmaili M, Borra R, Emblem K, Gerstner E, Pinho M, Plotkin S, Chi A, Eichler A, Dietrich J, Ivy P, Wen PY, **Duda DG**, Jain RK, Rosen B, Sorensen AG, Batchelor TT. Early changes in glioblastoma metabolism measured by MR Spectroscopic Imaging during combination of antiangiogenic cediranib and chemoradiation therapy are associated with survival. *npj Precision Oncology* 2017; 1: 20.
102. Jusakul A, Yong CH, Cutcutache I, Lim JQ, Huang MN, Padmanabhan N, Nellore V, Kongpetch S, Ng A, Ng LM, Choo SP, Myint SS, Thanan R, Nagarajan S, Lim WK, Ng CCY, Boot A, Liu M, Ong CK, Rajasegaran V, Lie S, Lim AS-T, Lim TH, Tan J, Liang MJ, Mcpherson J, Khuntikeo N, Bhudhisawasdi V, Yongvanit P, Wongkham S, Totoki Y, Nakamura H, Arai Y, Yamasaki S, Chow P, Chung AYW, Ooi LLPJ, Lim T, Dima S, **Duda DG**, Popescu I, Broet P, Hsieh S-Y, Yu M-C, Scarpa A, Lai J, Luo D, Carvalho AL, Vettore A, Rhee H, Park YN, Alexandrov L, Gordan L, Rozen S, Shibata T, Pairojkul C, Teh BT, Tan P. Whole-Genome and Epigenomic Landscapes of Etiologically Distinct Subtypes of Cholangiocarcinoma. *Cancer Discovery* 2017; 7: 1116–35.
103. Askoxylakis V, Badeaux M, Roberge S, Batista A, Kirkpatrick N, Snuderl M, Amoozgar Z, Seano G, Ferraro G, Chatterjee S, Xu L, Fukumura D, **Duda DG**, Jain RK. A cerebellar window for intravital imaging of normal and disease states in mice. *Nature Protocols* 2017; 12: 2251–62.
104. Pinter M, Weinmann A, Worns M-A, Hucke F, Bota S, Marquardt JU, **Duda DG**, Jain RK, Galle PR, Trauner M, Peck-Radosavljevic M, Sieghart W. Use of inhibitors of the renin–angiotensin system is associated with longer survival in patients with hepatocellular carcinoma. *United European Gastroenterology Journal* 2017; 5: 987–96.
105. Reardon DA, Lassman A, Schiff D, Yunus S, Gerstner ER, Cloughesy T, Quant Lee E, Gaffey SC, Barrs J, Bruno J, Muzikansky A, **Duda DG**, Jain RK, Wen PY. Phase II and biomarker study of trebananib, an angiopoietin blocking peptibody, with and without bevacizumab for recurrent glioblastoma patients. *Cancer* 2017; 124: 1438–48.
106. Sung Y-C, Liu Y-C, Chao P-H, Chang C-C, Lin T-T, Lin J-A, Cheng H-T, Wang J, Lai CP, Chen L-H, Jin P, Wu AY, Chiang T, Gao D-Y, **Duda DG**, Chen Y. Combined delivery of sorafenib and a MEK inhibitor using CXCR4-targeted nanoparticles reduces hepatic fibrosis and prevents tumor development. *Theranostics* 2018; 8: 894–904.
107. Incio J, Ligibel JA, McManus DT, Suboj P, Jung K, Kawaguchi K, Pinter M, Babykutty S, Chin

- SM, Vardam TD, Huang Y, Rahbari NN, Roberge S, Wang D, Gomes-Santos IL, Puchner SB, Schlett CL, Hoffman U, Ancukiewicz M, Tolaney SM, Krop IE, **Duda DG**, Boucher Y, Fukumura D, Jain RK. Obesity promotes resistance to anti-VEGF therapy in breast cancer by up-regulating IL-6 and potentially FGF-2. *Science Translational Medicine* 2018; (10): eaag0945.
108. Grassberger C, Hong TS, Hato T, Yeap B, Wo J, Tracy M, Bortfeld T, Wolfgang J, Eyler C, Goyal L, Clark JW, Crane CH, Koay EJ, Cobbold M, DeLaney TF, Jain RK, Zhu AX, **Duda DG**. Differential Association between circulating lymphocyte populations with outcome of radiotherapy in subtypes of liver cancer. *International Journal of Radiation Oncology, Biology and Physics* 2018; 101: 1222-5.
109. Quant Lee E*, **Duda DG***, Muzikansky A, Gerstner ER, Kuhn JG, Reardon DA, Nayak L, Norden AD, Doherty L, LaFrankie D, Stefanik J, Vardam T, Smith KH, McCluskey C, Gaffey S, Batchelor TT, Jain RK, Wen PY. Phase I and biomarker study of plerixafor and bevacizumab in recurrent high-grade glioma. *Clinical Cancer Research*; 2018; 24: 4643-9. *Equal first authors.
110. Hong TS, Grassberger C, Yeap B, Jiang W, Wo JY, Goyal L, Clark JW, Crane CH, Koay EJ, Dima S, Eyler C, Popescu I, DeLaney TF, Zhu AX, **Duda DG**. Pretreatment plasma hepatocyte growth factor as biomarker for susceptibility to radiation-induced liver dysfunction in liver cancer patients treated with radiotherapy. *NPJ Precision Oncology* 2018; 2: 22.
111. Goyal L, Zheng H, Abrams TA, Miksad R, Bullock AJ, Allen JN, Yurgelun MB, Clark JW, Knowles M, Galway A, Afflitto A, Dinicola JF, Maurer JR, Regan E, Jain RK, Mamessier-Birnbaum E, **Duda DG***, Zhu AX*. A phase II and biomarker study of sorafenib combined with FOLFOX in patients with advanced hepatocellular carcinoma. *Clinical Cancer Research* 2019; 25: 80-89. *Co-Senior authors.
112. Ly KI, Vakulenko-Lagun B, Emblem KE, Ou Y, Da X, Betensky RA, Kalpathy-Cramer J, **Duda DG**, Jain RK, Chi AS, Plotkin SR, Batchelor TT, Sorensen AG, Rosen BR, Gerstner ER. Probing tumor microenvironment in patients with newly diagnosed glioblastoma during chemoradiation and adjuvant temozolomide with functional MRI. *Scientific Reports* 2018; 8: 17062.
113. Li S, Li W, Leung C-H, Kitahara S, Liu Y, Klein S, Fukumura D, Loeffler JS, Jain RK, **Duda DG***, Huang P*. Combining the Angiotensin Receptor Blocker Losartan and the CXCR4 Inhibitor AMD3100 Increases the Efficacy of Radiotherapy in a Metastatic Osteosarcoma Mouse Model. *Journal of Cancer Science & Therapy* 2018; 10: 351-65.
114. Askoxylakis V, Ferraro GB, Badeaux M, Kodack DP, Kirst I, Shankaraiah RC, Wong CSF, **Duda DG**, Fukumura D, Jain RK. Dual endothelin receptor inhibition enhances T-DM1 efficacy in brain metastases from HER2-positive breast cancer. *NPJ Breast Cancer* 2019; 5:4
115. Richter C, Andronesi OC, Borra RJH, Voigt F, Löck S, **Duda DG**, Guimaraes A, Hong TS, Bortfeld TR, Seco J. Inter-patient variations of radiation-induced normal-tissue changes in Gd-EOBDTPA-enhanced hepatic MRI scans during fractionated proton therapy. *Clinical and Translational Radiation Oncology* 2019; 18:113-9.
116. Kaseb AO, Dima S, Carmagnani Pestana R, Ancukiewicz A, Cucu D, Sorop A, Florea R, Bacalbasa N, Tomescu D, Herlea V, Tanase C, Popescu I, **Duda DG**. An observational study of circulating plasma and serum insulin-like growth factor 1 as prognostic biomarker in surgical hepatocellular carcinoma patients. *Surgery, Gastroenterology and Oncology* 2019; 24: 73-9.
117. Cleary JM, Horick NK, McCleary NJ, Abrams TA, Yurgelun MB, Azzoli CG, Rubinson DA, Brooks G, Chan JA, Blaszkowsky LS, Clark JW, Goyal L, Meyerhardt JA, Ng K, Schrag D, Savarese DMF, Graham C, Gibb KA, Boucher Y, **Duda DG**, Jain RK, Fuchs CS, Enzinger PC. FOLFOX plus ziv-aflibercept or placebo in first-line metastatic esophagogastric adenocarcinoma (ZAMEGA): a double blind randomized multi-center phase 2 trial. *Cancer* 2019; 125: 2213-21.
118. Murphy JE, Wo JY, Ryan DP, Clark JW, Jiang W, Yeap BY, Drapek LC, Blaszkowsky LS, Ferrone CR, Parikh A, Weekes CD, Nipp R, Kwak EL, Allen JN, Corcoran RB, Ting DT, Faris JE, Zhu AX, Goyal L, Lillemoe KD, Jain RK, DeLaney TF, **Duda DG**, Boucher Y, Fernandez-del Castillo C,

- Hong TS. A phase II study of neoadjuvant FOLFIRINOX in combination with losartan followed by chemoradiotherapy in locally advanced pancreatic cancer: R0 resection rate and clinical outcomes. *JAMA Oncology* 2019; 5: 1020-7.
119. Saftoiu A, Bhutani MS, Itoi T, Arcidiacono PG, Bories E, Cazacu IM, Constantin A, Coronel E, Dietrich CF, **Duda DG**, Garcia JI, Hocke M, Ignee A, Jenssen C, Jinga M, Khor C, Oppong KW, Pereira S, Petrone MC, Santo E, Seicean A, Seo DW, Siyu S, Vilmann P, Waxman I, Yeaton P. Changes in tumor vascularity depicted by contrast-enhanced EUS as a predictor of prognosis and treatment efficacy in patients with unresectable pancreatic cancer (PEACE): A study protocol. *Endoscopic Ultrasound* 2019; 8: 235-40.
120. Lee EQ, Muzikansky A, **Duda DG**, Gaffey S, Reardon DA, Dietrich J, Nayak L, Chukwueke UN, Beroukhi R, Doherty L, Kane C, LaFrankie D, Fontana B, Stefanik J, Ruland S, Caruso V, Bruno J, Ligon K, Wen PY. Phase II trial of ponatinib in patients with bevacizumab-refractory glioblastoma. *Cancer Medicine* 2019; 8: 5988-94.
121. Plotkin SR, **Duda DG**, Muzikansky A, Allen J, Blakeley J, Rosser T, Campian JL, Clapp DW, Fisher MJ, Tongsgard J, Ullrich N, Thomas C, Cutter G, Korf B, Packer P, Karajannis MA. Multicenter prospective phase II and biomarker study of high dose bevacizumab as induction therapy in neurofibromatosis type 2 patients with progressive vestibular schwannoma. *Journal of Clinical Oncology* 2019; 37: 3446-54.
122. Kong N, Tao W, Ling X, Wang J, Xiao Y, Shi S, Ji X, Shajii A, Gan ST, Kim NY, **Duda DG**, Xie T, Farokhzad OC, Shi J. Synthetic mRNA nanoparticle-mediated restoration of p53 tumor suppressor sensitizes p53-deficient cancers to mTOR inhibition. *Science Translational Medicine* 2019; 11, eaaw1565.
123. Shigeta K, Datta M, Hato T, Kitahara S, Chen IX, Matsui A, Kikuchi H, Mamessier E, Aoki S, Ramjiawan RR, Ochiai H, Bardeesy N, Huang P, Cobbold M, Zhu AX, Jain RK, **Duda DG**. Dual PD-1 and VEGFR-2 blockade promotes vascular normalization and enhances anti-tumor immune responses in HCC. *Hepatology* 2020; 71: 1247-61.
124. Leone JP, **Duda DG**, Hu J, Barry WT, Trippa L, Gerstner ER, Jain RK, Tan S, Lawler E, Winer EP, Lin NU, Tolaney SM. A Phase II study of cabozantinib alone or in combination with trastuzumab in breast cancer patients with brain metastases. *Breast Cancer Research* 2020; 179: 113-23.
125. Gerstner ER, Emblem KE, Chang K, Vakulenko-Lagun B, Yen Y-F, Beers A, Dietrich J, Plotkin SR, Catana C, Hooker J, **Duda DG**, Rosen B, Kalpathy-Cramer J, Jain RK, Batchelor TT. Bevacizumab reduces permeability and concurrent temozolomide delivery in a subset of patients with recurrent glioblastoma. *Clinical Cancer Research* 2020; 26: 206-12.
126. Millar DG, Ramjiawan RR, Kawaguchi K, Gupta N, Chen J, Zhang S, Nojiri T, Ho, WW, Aoki S, Jung K, Chen I, Shi F, Heather JM, Shigeta K, Morton LT, Sepulveda S, Wan L, Joseph R, Minogue E, Khatri A, Bardia A, Ellisen LW, Corcoran RB, Hata A, Pai SI, Jain RK, Fukumura D, **Duda DG**, Cobbold M. Reprogramming antigenicity through selective delivery of peptide payload corrects antigen-repertoire mismatch in cancer. *Nature Biotechnology* 2020; 38: 420-5.
127. Mpekrisa F, Voutouria C, Baish JW, **Duda DG**, Munn LL, Stylianopoulos T, Jain RK. Combining normalization strategies to improve cancer immunotherapy. *Proceedings of the National Academy of Science USA* 2020; 117: 3728-37.
128. Kongpetch S, Jusakul A, Lim JQ, Ng CCY, Chan JY, Rajasegaran V, Lim TH, Lim KH, Choo SP, Dima S, Popescu I, **Duda DG**, Kukongviriyapan V, Khuntikeo N, Pairojkul C, Rozen SG, Tan P, Teh BT. Lack of Targetable FGFR2 Fusions in Endemic Fluke-Associated Cholangiocarcinoma. *JCO Global Oncology* 2020; 6: 628-38.
129. **Duda DG**, Dima SO, Cucu D, Sorop A, Klein S, Ancukiewicz M, Kitahara S, Iacob S, Bacalbasa N, Tomescu D, Herlea V, Tanase C, Croitoru A, Popescu I. Potential Biomarkers of Recurrence after Hepatic Resection or Liver Transplantation in Hepatocellular Carcinoma Patients. *Cancers* 2020; 12:

1275.

130. Nagalo BM, Breton CA, Zhou Y, Arora M, Bogenberger JM, Barro O, Steele MB, Jenks NJ, Baker AT, **Duda DG**, Roberts LR, Russell SJ, Peng KW, Borad MJ. Oncolytic Virus with Attributes of Vesicular Stomatitis Virus and Measles Virus in Hepatobiliary and Pancreatic Cancers. *Molecular Therapy: Oncolytics* 2020; 18: 546-55.
131. Goyal L, Sirard C, Schrag M, Kagey M, Eads J, Stacey S, El-Khoueiry A, Gulam M, Abrams T, Alok KA, Rebecca M, Devalingam M, Zhu AX, **Duda DG**. Phase 1 and Biomarker Study of the Wnt Pathway Modulator DKN-01 in Combination with Gemcitabine/Cisplatin in Advanced Biliary Tract Cancer. *Clinical Cancer Research* 2020; 26: 6158-67.
132. Abdel-Wahab R, Hassan MM, Xiao L, Lacin S, Yalcin S, Shalaby AS, Al-Shamsi HO, Raghav K, Wolff RA, Yao JC, Girard L, **Duda DG**, Dima S, Popescu I, Elghazaly HA, Vauthey J-N, Aloia TA, Conrad C, Chun YS, Tzeng C-W, Rashid A, Link JT, Sen S, George B, Amin HM, Morris JS, Kaseb AO. Impact of Integrating IGF-1 into MELD Score on Survival Prediction in Hepatocellular Carcinoma patients. *Oncology* 2020; 98: 836-46.
133. Shigeta K, Matsui A, Kikuchi H, Klein S, Mamessier M, Chen I, Aoki S, Kitahara S, Inoue K, Shigeta A, Hato T, Ramjiawan RR, Staiculescu D, Zopf D, Fiebig L, Quass A, Dima S, Popescu I, Huang P, Munn LL, Cobbold M, Goyal L, Zhu AX, Jain RK, **Duda DG**. Regorafenib increases T-cell infiltration when combined with PD1 blockade by inducing CXCL10 expression in HCC in mice. *Journal of ImmunoTherapy for Cancer* 2020; 8(2): e001435.
134. Gerstner ER, Emblem KE, Yen Y-F, Dietrich J, Jordan JT, Catana C, Wenchin KL, Hooker J, **Duda DG**, Rosen BR, Kalpathy-Cramer J, Jain RK, Batchelor TT. Vascular dysfunction promotes regional hypoxia after bevacizumab therapy in recurrent glioblastoma patients. *Neuro-Oncology Advances* 2020; (2)1: vdaa157.
135. Nayak L, Peters K, Clarke J, Jordan J, de Groot J, Nghiumphu L, Kaley T, Colman H, McCluskey C, Smith TR, Severgnini M, **Duda DG**, Muzikansky A, Molinaro A, Jain RK, Wen PY, Reardon DA. Phase II and biomarker study of pembrolizumab or pembrolizumab plus bevacizumab for recurrent glioblastoma patients. *Clinical Cancer Research* 2021; 27: 1048-57.
136. Li W, Li S, Liu Y, Ramjiawan RR, Leung C-H, Gerweck LE, Fukumura D, Loeffler JS, Jain RK, **Duda DG**, Huang P. Combining Losartan with Radiotherapy Increases Tumor Control and Inhibits Metastases from HER2/neu-positive Orthotopic Breast Cancer Model. *Radiation Oncology* 2021; 16: 48.
137. Ajdari A, Xie Y, Richter C, Niyazi M, **Duda DG**, Hong S, Bortfeld T. Towards Personalized Radiation Therapy of Liver Metastasis: Added Predictive Value of Serial Blood Biomarkers. *JCO Clinical Cancer Informatics* 2021; 5: 315-25.
138. Pfister D, Núñez NG, Pinyol R, Govaere O, Pinter M, Szydłowska M, Gupta R, Qiu M, Deczkowska A, Weiner A, Müller F, Sinha A, Friebel E, Engleitner T, Lenggenhager D, Moncsek A, Stirn K, Kosla J, Kotsiliti E, Leone V, Dudek V, Youssuf S, Inverso D, Singh I, Teijeiro A, Castet F, Montironi C, Haber PK, Tiniakos D, Bedossa P, Cockell S, Younes R, Vacca M, Marra F, Schattenberg JM, Allison M, Bugianesi E, Ratzu V, Pressiani T, D'Alessio A, Personeni N, Rimassa L, Daly AK, Scheiner B, Pomej K, Kirstein MM, Vogel A, Peck-Radosavljevic M, Hucke F, Finkelmeier F, Waidmann O, Trojan J, Schulze K, Wege H, Koch S, Weinmann A, Bueter M, Rössler F, Siebenhüner A, De Dosso S, Mallm J-P, Umansky V, Jugold M, Luedde T, Schietinger A, Schirmacher P, Augustin HG, Billeter A, Müller-Stich B, Kikuchi H, **Duda DG**, Kütting F, Waldschmidt D-T, Ebert MP, Rahbari N, Wolter K, Zender L, Mei HE, Schulz AR, Ringelhan M, Malek N, Spahn S, Bitzer M, Ruiz de Galarreta M, Lujambio A, Dufour J-F, Marron TU, Kaseb A, Kudo M, Huang Y-H, Djouder N, Marche PN, Decaens T, Pinato DJ, Rad R, Mertens JC, Weber A, Unger K, Meissner F, Roth S, Jilkova ZM, Claassen M, Anstee QM, Amit I, Knolle P, Becher B, Llovet JM, Heikenwalder M. NASH precludes anti-tumor surveillance in HCC-immunotherapy. *Nature* 2021; 592: 450-6.

139. Mohamed Y, Lee S, Xiao L, Hassan M, Qayyum A, Hiattia R, Carmagnani Pestana R, Amin H, Haque A, George B, Rashid A, **Duda DG**, Elghazaly H, Wolff R, Morris J, Yao J, Kaseb A. Insulin-like growth factor 1/Child-Turcotte-Pugh composite score as a predictor of treatment outcomes in patients with advanced hepatocellular carcinoma treated with sorafenib. *Oncotarget* 2021; 12: 756-66.
140. Ferraro GB, Ali A, Luengo A, Kodack DP, Deik A, Abbott K, Bezwada D, Blanc L, Prideaux B, Possada J, Chen J, Chin C, Amoozgar Z, Ferriera R, Chen I, Naxerova K, Jin X, Ng C, Westermarck A, Davidson S, Lyssiotis C, Nielsen J, Housman D, **Duda DG**, Brachtel E, Gollub TR, Engelman JA, Cantley LC, Asara J, Fukumura D, Dartois V, Clish CB, Jain RK, Vander Heiden MG. Fatty acid synthesis is required for breast cancer brain metastasis. *Nature Cancer* 2021; 2: 414–28.
141. Boucher Y, Kumar AS, Posada JM, Gjini E, Pfaff K, **Duda DG**, Rodig S, Hodi FS, Jain RK. Bevacizumab improves tumor infiltration by mature dendritic cells and effector T-cells in triple-negative breast cancer patients. *NPJ Precision Oncology* 2021; 5: 62.
142. Barroso-Sousa R, Keenan TE, Li T, Tayob N, Trippa L, Pastorello RG, Richardson III ET, Dillon D, Overmoyer B, Amoozgar Z, Schnitt SJ, Winer EP, Mittendorf EA, Van Allen E, **Duda DG***, Tolaney SM*. Nivolumab in combination with cabozantinib for metastatic triple-negative breast cancer: A phase II and biomarker study. *NPJ Breast Cancer* 2021; 7: 110. *Co-senior authors.
143. Ho WW, Gomes-Santos IL, Aoki S, Datta M, Kawaguchi K, Talele NP, Roberge S, Ren J, Liu H, Chen IX, Chatterjee S, Andersson P, Kumar AS, Amoozgar Z, Zhang Q, Huang P, Ng MR, Chauhan VP, Xu L, **Duda DG**, Clark JW, Pittet MJ, Fukumura D, Jain RK. Dendritic cell paucity in mismatch repair-proficient colorectal cancer liver metastases limits the efficacy of immune checkpoint blockade. *Proceedings of the National Academy of Science U S A* 2021; 118(45): e2105323118.
144. Gkika E, Adebahr S, Brenner A, Schimek-Jasch T, Radicioni G, Exner J-P, Rühle A, Spohn SKB, Popp I, Zamboglou C, Sprave T, Firat E, Niedermann G, Nicolay NH, Nestle U, Grosu A-L, **Duda DG**. Changes in blood biomarkers of angiogenesis and immune modulation after radiation therapy and their association with outcomes in thoracic malignancies. *Cancers* 2021; 13(22): 5725.
145. Aoki S, Inoue K, Klein S, Halvorsen S, Chen J, Matsui A, Nikmaneshi MR, Kitahara S, Hato T, Chen X, Kawakubo K, Nia HT, Chen I, Schanne DH, Mamessier E, Shigeta K, Kikuchi H, Ramjiawan RR, Schmidt TC, Iwasaki M, Yau T, Hong TS, Quaas A, Plum PS, Dima S, Popescu I, Bardeesy N, Munn LL, Borad MJ, Sassi S, Jain RK, Zhu AX, **Duda DG**. Placental growth factor promotes tumour desmoplasia and treatment resistance in intrahepatic cholangiocarcinoma. *Gut* 2022; 71(1): 185-193.
146. Xiao Y, Chen J, Zhou H, Zeng X, Ruan R, Pu Z, Jiang X, Matsui A, Zhu L, Amoozgar Z, Chen DS, Han X, **Duda DG***, Shi J*. Combining CXCR4-Targeted p53 mRNA Nanotherapy with Immune Checkpoint Blockade Reprograms the Immune Microenvironment for Effective Immunotherapy in p53-null Liver Cancer. *Nature Communications* 2022; 13(1): 758. *Joint senior authors.
147. Chamseddine I, Kim Y, De B, El Naqa I, **Duda DG**, Wolfgang J, Pursley J, Paganetti H, Wo J, Hong TS, Koay EJ, Grassberger C. Predictive Modeling of Survival and Toxicity in Hepatocellular Carcinoma Patients After Radiotherapy. *JCO Clinical Cancer Informatics* 2022; 6: e2100169.
148. How J, Ren S, Lombardi-Story J, Bergeron M, Foster J, Amrein PC, Brunner AM, Fathi AT, Hock H, Khachatryan A, Kikuchi H, Ng MR, Moran J, Narayan R, Neuberg D, Ramos A, Som T, Vartanian M, Chen Y-B, **Duda DG***, Hobbs G*. A Non-Randomized Phase I and Biomarker Trial of Regorafenib in Advanced Myeloid Malignancies. *eJHaem* 2022; 3: 434-442. *Co-Senior authors.
149. Kikuchi H, Matsui A, Amoozgar Z, Inoue K, Ruan Z, Staiculescu D, Morita S, Huang P, Yau T, Jain RK, **Duda DG**. Increased CD8⁺ T-cell infiltration and efficacy for multikinase inhibitors after PD-1 blockade in HCC. *Journal of the National Cancer Institute* 2022; 114(9): 1301-1305.
150. Pu Z, **Duda DG**, Zhu Y, Pei S, Wang X, Huang Y, Yi P, Huang Z, Peng F, Hu X, Fan X. VCP Interaction with HMGB1 promotes hepatocellular carcinoma progression by activating PI3K/AKT/mTOR Pathway. *Journal of Translational Medicine* 2022; 20: 212.
151. Lanning RM, Martin JD, Chauhan VP, Martin MR, Mousa AS, Kamoun W, Han H-S, Lee H,

- Stylianopoulos T, Bawendi MG, **Duda DG**, Brown EB, Padera TP, Fukumura D, Jain RK. Multiphoton phosphorescence quenching microscopy reveals kinetics of tumor oxygenation during anti-angiogenesis and angiotensin signaling inhibition. *Clinical Cancer Research* 2022; 28: 3076-90.
152. Muñoz NM, Dupuis C, Williams M, Dixon K, McWatters A, Zhang J, Pavuluri S, Rao A, **Duda DG**, Kaseb A, Sheth RA. Immune modulation by molecularly targeted photothermal ablation in a mouse model of advanced hepatocellular carcinoma and cirrhosis. *Scientific Reports* 2022; 12(1): 14449.
153. Saulnier Sholler G, **Duda DG**, Bergendahl G, Ebb D, Snuderl M, Laetsch T, Michlitsch J, Hanson D, Isakoff M, Bielamowicz K, Kraveka J, Ferguson W, Carmeliet P, De Deene A, Gijzen L, Jain RK. A Phase I Trial of TB-403 in Relapsed Medulloblastoma, Neuroblastoma, Ewing Sarcoma, and Alveolar Rhabdomyosarcoma. *Clinical Cancer Research* 2022; 28: 3950-7.
154. Sasaki T, Shigeta K, Kitahara S, Suzuki Y, Matsui S, Seishima R, Okabayashi K, Duda DG, Kitagawa Y. Inhibition of STAT3 promotes effector T cell infiltration but also immunosuppression in the HCC tumor microenvironment. *Anticancer Research* 2022; 42: 5205-15.
155. Mohamed YI, **Duda DG**, Awiwi MO, Lee SS, Altameemi L, Xiao L, Morris JS, Wolff RA, Elsayes KM, Hatia RI, Qayyum A, Chamseddine SM, Rashid A, Yao JC, Mahvash A, Hassan MM, Amin HM, Kaseb AO. Plasma Growth Hormone is a Potential Biomarker of Response to Atezolizumab and Bevacizumab in Advanced Hepatocellular Carcinoma Patients. *Oncotarget* 2023; 13: 1314-21.
156. Nagalo BM, Zhou Y, Loeuillard EJ, Dumbauld C, Barro O, Elliott NM, Baker AT, Arora M, Bogenberger JM, Meurice N, Petit J, Serrano Uson Jr PL, Aslam F, Chamcheu JC, Simoes CC, Cannon MJ, Basnakian A, Post SR, Buetow K, Barrett MT, **Duda DG**, Jacobs B, Vile R, Barry MA, Roberts LR, Ilyas S, Borad MJ. Characterization of Morreton Virus (MORV) as a novel oncolytic virotherapy platform for liver cancers. *Hepatology* 2023; 77(6): 1943-57.
157. Chen S, Huang C, Liao G, Sun H, Xie Y, Liao C, Wang J, He M, Hu H, Dai Z, Ren X, Zeng X, Lin Z, Zhang G-P, Xie W, Shen S, Li S, Peng S, Kuang D-M, Zhao Q*, **Duda DG***, Kuang M*. Distinct Single-cell Immune Ecosystems Distinguish True and De Novo HBV-related Hepatocellular Carcinoma Recurrences. *Gut* 2023; 72(6): 1196-210. *Co-Senior authors.
158. Gupta N, Ochiai H, Hoshino Y, Klein S, Zustin J, Ramjiawan RR, Kitahara S, Maimon N, Bazou D, Chiang S, Li S, Schanne DH, Jain RK, Munn LL, Huang P, Kozin SV, **Duda DG**. Inhibition of CXCR4 Enhances the Efficacy of Radiotherapy in Metastatic Prostate Cancer Models. *Cancers* 2023; 15(4): 1021.
159. Boucher Y, Posada JM, Subudhi S, Kumar AS, Rosario S, Gu L, Kumra H, Mino-Kenudson M, Talele N, **Duda DG**, Fukumura D, Wo JY, Clark JW, Ryan DP, Fernandez-Del Castillo C, Hong TS, Pittet MJ, Jain RK. Addition of losartan to FOLFIRINOX and chemoradiation reduces immunosuppression-associated genes, Tregs and FoxP3+ cancer cells in locally advanced pancreatic cancer. *Clinical Cancer Research* 2023; 29(8): 1605-19.
160. Gkika E, Firat E, Adebahr S, Graf E, Popp I, Radicioni G, Lo SS, Nestle U, Nicolay NH, Niedermann G, **Duda DG***, Grosu A-L. Dose- and time-dependent systemic immune modulation by radiotherapy in early-stage lung cancer. *NPJ Precision Oncology* 2023; 7: 24. *Corresponding author.
161. Chamseddine I, Kim Y, De B, El Naqa I, **Duda DG**, Wolfgang JA, Pursley J, Wo JY, Hong TS, Paganetti H, Koay EJ, Grassberger C. Predictive Model of Liver Toxicity to Aid the Personalized Selection of Proton vs Photon Therapy in Hepatocellular Carcinoma. *International Journal of Radiation Oncology, Biology and Physics* 2023; 116(5): 1234-43.
162. McCullum L, Shin J, Xing S, Beekman C, Schuemann J, Hong TS, **Duda D**, Mohan R, Lin S, Correa-Alfonso SM, Domal S, Withrow J, Bolch W, Paganetti H, Grassberger C. Predicting Severity of Radiation Induced Lymphopenia in Individual Proton Therapy Patients for Varying Dose Rate and Fractionation Using Dynamic 4D Blood Flow Simulations. *International Journal of Radiation Oncology, Biology and Physics* 2023; 116(5):1226-33.

163. Chamseddine SM, Mohamed YI, Lee SS, Yao JC, Hu Z, Tran Cao H, Sun R, Xiao L, Morris JS, Hatia RI, Hassan MM, **Duda DG**, Diab M, Mohamed A, Nassar A, Datar S, Amin HM, Kaseb AO. Clinical and Prognostic Biomarker Value of Blood Circulating Inflammatory Cytokines in Hepatocellular Carcinoma. *Oncology* 2023; 101(11): 730-737.
164. Chivu-Economescu M, Herlea V, Dima S, Sorop A, Pechianu C, Procop A, Kitahara S, Necula L, Matei L, Dragu D, Neagu A-I, Bleotu C, Diaconu CC, Popescu I, **Duda DG**. Soluble PD-L1 as a diagnostic and prognostic biomarker in resectable gastric cancer patients. *Gastric Cancer* 2023; 26(6): 934-946.
165. Kashiwagi R, Funayama, R, Aoki S, Matsui A, Klein S, Sato Y, Suzuki T, Murakami K, Inoue K, Iseki M, Masuda K, Mizuma M, Naito H, **Duda DG**, Unno M, Nakayama K. Collagen XVII regulates tumor growth in pancreatic cancer through interaction with the tumor microenvironment. *Cancer Science* 2023; 114(11): 4286-4298.
166. Mu H-Y, Ngoc Ta Y-N, Tham MJR, Hsu F-F, Li Y-C1, Huang H-C, Sung Y-C, Huang C-I, Wu C-L, Chang C-H, Yang S, Lee T-Y, Wan D, Wang J, **Duda DG**, Boucher Y, Huang J-H, Ang WH, Chen Y. A chemoimmunotherapy nanogel enables efficient delivery of interleukin-2 and induction of immunogenic cell death for effective cancer therapy. *Advanced Functional Materials* 2024; 34(1): 2303033.
167. Saylor P, Kozin SV, Matsui A, Goldberg S, Kim D, Lei P-J, Aoki S, Shigeta K, Mamessier E, Smith MR, Michaelson D, Lee RJ, **Duda DG**. The radiopharmaceutical radium-223 has immunomodulatory effects in patients and facilitates anti-programmed death receptor-1 therapy in murine models of bone metastatic prostate cancer. *Radiotherapy and Oncology* 2024; 192:110091.
168. Chamseddine S, LaPelusa M, Xiao L, Mohamed YI, Lee SS, Hu ZI, Hatia RI, Hassan M, Yao JC, **Duda DG**, Datar S, Amin HM, Kaseb AO. Plasma Growth Hormone as a Prognostic Biomarker to Durvalumab and Tremelimumab in Patients with Advanced Hepatocellular Carcinoma. *Journal of Hepatocellular Carcinoma* 2024; 11: 455-461.
169. Chen J, Amoozgar X, Liu X, Aoki S, Liu Z, Shin SM, Matsui A, Hernandez A, Pu Z, Halvorsen S, Lei P, Datta M, Zhu L, Ruan Z, Shi L, Staiculescu D, Inoue K, Munn LL, Fukumura D, Huang P, Sassi S, Bardeesy N, Ho W-J, Jain RK, **Duda DG**. Reprogramming Intrahepatic Cholangiocarcinoma Immune Microenvironment by Chemotherapy and CTLA-4 Blockade Enhances Anti-PD1 Therapy. *Cancer Immunology Research* 2024; 12(4):400-412.
170. Dogra P, Shinglot V, Ruiz-Ramírez J, Cave J, Butner JD, Schiavone C, **Duda DG**, Kaseb AO, Chung C, Koay EJ, Cristini V, Ozpolat B, Calin GA, Wang Z. Translational modeling-based evidence for enhanced efficacy of standard-of-care drugs in combination with anti-microRNA-155 in non-small cell lung cancer. *Molecular Cancer* 2024; 23(1): 156.
171. Mohamed YI, Lee SS, Demir T, Chamseddine S, Hu ZI, Xiao L, Elsayes K, Morris JS, Wolff RA, Hatia R, Qayyum A, Rashid A, **Duda DG**, Yao JC, LaPelusa M, Koay EJ, Mahvash A, Al Azzam A, Dumbrava EE, Hassan M, Amin HM, Kaseb AO. Circulating tumor DNA (ctDNA) as a biomarker of response to therapy in advanced Hepatocellular carcinoma treated with Nivolumab. *Cancer Biomarkers* 2024;41(1):83-91
172. Sivanand S, Gultekin Y, Winter PS, Vermeulen SY, Tchourine K, Danai LV, Do BT, Crowder K, Kunchok T, Lau AN, Darnell AM, Morita S, **Duda DG**, Aguirre A, Wolpin BM, Lewis CA, Vitkup D, Shalek AK, Vander Heiden MG. Cancer tissue of origin constrains the growth and metabolism of metastases. *Nature Metabolism* 2024; ePub on Aug 19, 2024 as doi: 10.1038/s42255-024-01105-9.
173. Wu B, Tapadar S, Ruan Z, Sun CQ, Arnold RA, Gaul DA, Petros JA, Kobayashi T, **Duda DG***, Oyelere AK*. A Novel Liver Cancer-Selective Histone Deacetylase Inhibitor Is Effective Against Hepatocellular Carcinoma and Induces Durable Responses with Immunotherapy. *ACS Pharmacology & Translational Science* 2024; ePub on Sept 5, 2024 as doi: 10.1101/2024.03.27.587062. *Co-Senior authors. *Featured on the cover.*

174. Ho AY, Shiao S, Kobald SA, Chen J, **Duda DG**, Ly A, Bossuyt V, Cho HL, Arnold B, Knott S, Gupta GP, McAndrew P, Karlan S, Tighiouart M, Muzikansky A, Basho R, McArthur H. A Phase Ib/II Biomarker Study of Adding Radiotherapy to Pembrolizumab Prior to Neoadjuvant Chemotherapy in HER2-Negative Breast Cancer. *Journal of Clinical Oncology* 2024; ePub on Sept 19, 2024 as doi: 10.1200/JCO.24.00003.
175. Chamseddine S, Yavuz BG, Mohamed YI, Lee SS, Yao JC, Hu ZI, LaPelusa M, Xiao L, Sun R, Morris JS, Hatia RI, Hassan M, Duda **DG**, Diab M, Mohamed A, Nassar A, Amin HM, Kaseb AO. Circulating Galectin-3: A Prognostic Biomarker in Hepatocellular Carcinoma. *Journal of Immunotherapy and Precision Oncology* 2024 (in press).
176. Morita S, Lei P-J, Shigeta K, Ando T, Kobayashi T, Kikuchi H, Matsui A, Huang P, Pittet M, **Duda DG**. Combined blockade of CXCR4 and PD-1 reprograms intratumoral dendritic cells and elicits potent immune responses against hepatocellular carcinoma. *bioRxiv* preprint posted on November 6, 2023, as doi: 10.1101/2023.11.06.564640. *Cancer Immunology Research* (in press).
177. Pal R, Murali K, Matsui A, Morita S, Taniguchi H, Kobayashi T, Morita A, Kang H, Choi HS, **Duda DG***, Kumar ATN*. In vivo quantification of programmed death-ligand-1 expression heterogeneity in tumors using fluorescence lifetime imaging. Posted on *ResearchSquare* on October 23, 2023, as doi: 10.21203/rs.3.rs-3222037/v1. *Co-senior authors. *Cancer Research* (in review).
178. Ren J, Amoozgar Z, Zhao Y, Lei P-J, Ho WW, Roberge S, Huang P, **Duda DG**, Xu L, Jain RK. Targeting EPHB2/ABL1 restores anti-tumor immunity in a preclinical model of ependymoma. *Proceedings of the National Academy of Science U S A* (in review).
179. Chen M, Li S, Shan Y, Lu Z, Topatana W, Su R, Hou L, Chen J, Jia Z, Chen T, Sun Y, Xie T, Cao J, Zhang B, Chen P, Jiang Z, Hu J, Juengpanich S, **Duda DG**, Cai X. IL-1 β as Synthetic Lethal Target in KRAS Mutant Biliary Tract Cancers. *Cell Reports Medicine* (in review).
180. Pu Z, Liu Z, Chen J, Inoue K, Ruan Z, Zhu L, Kikuchi H, Matsui A, Huang P, **Duda DG**. Inflammasome targeting with an NLRP3 agonist therapy is feasible but ineffective in murine hepatocellular carcinoma models with liver damage. *bioRxiv* preprint posted on June 23, 2022 as doi: 10.1101/2022.06.23.497362. *Cancer Science* (in review).
181. Park RJ, Parikh M, Pappas L, Sade-Feldman M, Bi L, Galway A, Kuhlman C, Sommer K, Blaszkowsky LS, Yurgelun MB, Meyerhardt J, Enzinger PC, Biller L, Allen JN, **Duda DG**, Hacohen N, Zhu AX, Abrams TA, Ting DT, Mehta A, Goyal L. Molecular subtyping and characterization of the tumor microenvironment of biliary tract cancers. *Cell Reports Medicine* (in review).

In preparation for submission

182. Morita S, Kikuchi H, Morita A, Kobayashi T, Birch G, Ando T, Tanaka R, Matsui A, Ruan Z, Huang P, Hernandez A, Coyne EM, Shin SM, Yarchoan M, Halvorsen S, Sassi S, Romee R, Mino-Kenudson M, Demehri S, Ho WJ, **Duda DG**. Treatment-induced liver-resident NK cell activation is a therapeutic target for achieving efficacy of anti-PD-1 therapy with a kinase inhibitor in hepatocellular carcinoma. *bioRxiv* preprint posted on October 23, 2023, as doi: 10.1101/2023.10.20.563378. *Nature Cancer* (in preparation for submission).
183. Inoue K, Schanne DH, Matsui A, Lei PJ, Klein S, Aoki S, Taniguchi H, Kikuchi H, Chen J, Liu Z, Tsai SQ, Schmidt TCE, Iwasaki M, Geide G, Koch A, Huang P, Fukumura D, Shioda T, Munn LL, Fernandez-del Castillo C, Hong TS, Jain RK, Liss A, Bardeesy N, **Duda DG**. IFNA pathway drives the more aggressive phenotype of KRASG12D-mutant pancreatic ductal adenocarcinomas via IFNAR1/STAT3 activation. *bioRxiv* preprint posted on July 1, 2022 as doi: 10.1101/2022.06.29.497540. *Science Signaling* (in revision for invited resubmission).
184. Dima SO, Sorop A, Kitahara S, Setia N, Chivu-Economescu M, Matei L, Herlea V, Pechianu NC, Inomata T, Matsui A, Khachatryan A, Aoki S, Lauwers GY, Popescu I, **Duda DG**. A tumor microenvironment-based classification of gastric cancer for more effective diagnosis and treatment. Posted on *ResearchSquare* on August 1, 2023, as doi: 10.21203/rs.3.rs-3089359/v1. *Gastric Cancer*

(in preparation for initial submission).

185. Ramjiawan RR, Gupta N, Saha SK, Kawakubo K, Mammesier E, Chen J, Setia N, Hato T, de Beijer MTA, Aoki S, Shigeta K, Maimon N, Chatterjee S, Inoue K, Chen Y, Griffioen AW, Benes CH, Ferrone CR, Jain RK, Zhu AX, Bardeesy N, **Duda DG**. YES1/Hippo/YAP pathway mediates response and FGFR pathway mediates resistance to SRC family kinase inhibition in hepatocellular carcinoma. *Science Signaling* (in preparation for initial submission).

Non-peer reviewed scholarship in print or other media:

Proceedings of meetings or other non-peer reviewed scholarship

186. **Duda DG**. Anti-angiogenesis and drug delivery in tumors: Bench to bedside and back. *Cancer Research*. 2006; 66: 3967-70.
187. Woodward WA, Bristow RG, Clarke MF, Coppes R, Cristofanilli M, **Duda DG**, Fike JR, Hambarzumyan D, Hill R, Jordan CT, Milas L, Pajonk F, Curran W, Dicker A, Chen Y. Radiation therapy Oncology Group Translational Research Program Stem Cell Symposium: Incorporating stem cell hypothesis into clinical trials. *International Journal of Radiation Oncology, Biology and Physics* 2009; 74: 1580-91.
188. Stroh M, **Duda DG**, Takimoto CH, Yamazaki S, Vicini P. Translation of anticancer efficacy from nonclinical models to the clinic. *Clinical Pharmacology and Therapeutics: Pharmacometrics and Systems Pharmacology* 2014; 3: e128.
189. Pantziarka P, Hutchinson L, André N, Benzekry S, Bertolini F, Bhattacharjee A, Chiplunkar S, **Duda DG**, Gota V, Gupta S, Joshi A, Kannan S, Kerbel R, Kieran M, Palazzo A, Parikh A, Pasquier E, Patil V, Prabash K, Shaked Y, Saulnier Sholler G, Sterba J, Waxman D, Banavali S. Next Generation Metronomic Chemotherapy – Report from the 5th Biennial International Metronomic and Anti-angiogenic Therapy Meeting, 6th – 8th May 2016, Mumbai. *Ecancermedalscience*. 2016; 10: 689.

Reviews, chapters, monographs, and editorials

190. Son L, Sunamura M, **Duda DG**, Lozonschi L, Matsuno S. The antiangiogenesis effect of IL-12 on human pancreatic cancer. In: *Carcinoma of the Pancreas and Biliary Tract* Sendai: Tohoku University Press. Wakui A, Yamauchi H, Ouchi K, editors. 1999; 273-9.
191. Sunamura M, **Duda DG**, Lozonschi L, Son L, Takeda K, Matsuno S. Controlling tumor microenvironment by the antiangiogenesis strategy. In: *Trends in Gastroenterology and Hepatology* Tokyo: Springer-Verlag. Asakura H, Aoyagi Y, Nakazawa S, editors. 2001; 287-9.
192. Sunamura M, Yatsuoka T, Motoi F, **Duda DG**, Kimura M, Abe T, Yokoyama T, Inoue H, Oonuma M, Takeda K, Matsuno S. Gene therapy for pancreatic cancer based on genetic characterization of the disease. *Journal of Hepatobiliary and Pancreatic Surgery* 2002; 9: 32-8.
193. Jain RK, **Duda DG**. Role of bone marrow-derived cells in tumor angiogenesis and treatment. *Cancer Cell* 2003; 3:515-6.
194. **Duda DG**, Fukumura D, Jain RK. Role of eNOS in neovascularization: NO for endothelial progenitor cells. *Trends in Molecular Medicine* 2004; 10:143-5.
195. Jain RK, Au P, Tam J, **Duda DG**, Fukumura D. Engineering vascularized tissue. *Nature Biotechnology* 2005; 23: 821-3.
196. **Duda DG**, Jain RK. Pleiotropy of tissue-specific growth factors: from neurons to vessels via the bone marrow. *Journal of Clinical Investigation* 2005; 115: 596-8.
197. Jain RK, **Duda DG**, Clark JW, Loeffler JS. Lessons from Phase III clinical trials of anti-VEGF therapy for cancer. *Nature Clinical Practice Oncology* 2006; 3: 24-40.
198. Willett CW, Kozin SV, **Duda DG**, di Tomaso E, Kozak KR, Boucher Y, Jain RK. Combined

- Vascular Endothelial Growth Factor–targeted therapy and radiotherapy for colorectal cancer: Theory and clinical practice. *Seminars in Oncology* 2006; 33: S35-S40.
199. Willett CG, **Duda DG**, Jain RK. Surrogate biomarkers for anti-angiogenic therapy for advanced colorectal cancer. *Current Colorectal Cancer Reports* 2007; 3: 94-8.
 200. **Duda DG**, Willett CG, Jain RK. The current progress, hurdles and future prospects in anti-VEGF targeted cancer therapy strategies. *Trends in Molecular Medicine* 2007; 13: 223-30. PMID: PMC2686126.
 201. Jain RK, Tomaso E, **Duda DG**, Sorensen AG, Loeffler JS, Batchelor TT. Angiogenesis in brain tumors. *Nature Reviews in Neuroscience* 2007; 8: 610-22.
 202. Willett CG, **Duda DG**, Czito BG, Bendell J, Clark JF, Jain RK. Targeted therapy in rectal cancer. *Oncology* (Williston Park) 2007; 21: 1055-65.
 203. **Duda DG**, Jain RK, Willett CG. Antiangiogenics: The potential role of integrating this novel treatment modality with chemoradiation for solid cancers. *Journal of Clinical Oncology* 2007; 25: 4033-42.
 204. Gerstner ER, **Duda DG**, di Tomaso, E, Sorensen AG, Jain RK, Batchelor TT. Angiogenesis-targeting agents for the treatment of glioblastoma. *Expert Opinion on Investigational Drugs* 2007; 16: 1895-908.
 205. Perentes JY, **Duda DG**, Jain RK. Visualizing anti-tumor immune responses in vivo. *Disease Models and Mechanisms* 2009; 2: 107-10.
 206. Gerstner ER, **Duda DG**, di Tomaso E, Ryg PA, Loeffler JS, Sorensen AG, Ivy P, Jain RK, Batchelor TT. The potential utility of anti-VEGF agents to normalize tumor vasculature and alleviate edema in brain and spinal cord tumor patients. *Nature Reviews Clinical Oncology* 2009; 6: 229-36.
 207. Jain RK, **Duda DG**, Willett CG, Sahani DV, Zhu AX, Loeffler JS, Batchelor TT, Sorensen AG. Biomarkers of response and resistance to antiangiogenic therapy in cancer. *Nature Reviews Clinical Oncology* 2009; 6: 327-38. PMID: PMC3057433.
 208. Zhu AX, **Duda DG**, Sahani DV, Jain RK. Development of sunitinib in hepatocellular carcinoma: Rationale, early clinical experience and correlative studies. *Cancer Journal* 2009; 15: 263-8.
 209. Fukumura D, **Duda DG**, Munn LL, Jain RK. Tumor microvasculature and microenvironment: Novel insights through intravital imaging in pre-clinical models. *Microcirculation* 2010; 17: 1-19.
 210. **Duda DG**, Jain RK. Pre-metastatic lung “niche”: Is VEGFR1 activation required? *Cancer Research* 2010; 70: 5670-3.
 211. **Duda DG***, Kozin SV, Kirkpatrick N, Xu L, Fukumura D, Jain RK*. CXCL12 (SDF1 α) pathway inhibition: A new sensitizer for anti-cancer therapies? *Clinical Cancer Research* 2011; 17: 2074-80. PMID: PMC3079023. * Corresponding authors.
 212. Zhu AX, **Duda DG**, Sahani DS, Jain RK. HCC and angiogenesis: possible targets and future directions. *Nature Reviews Clinical Oncology* 2011; 8: 292-301.
 213. Goel S, **Duda DG**, Xu L, Munn LL, Boucher Y, Fukumura D, Jain RK. Normalization of the vasculature for treatment of cancer and other diseases. *Physiological Reviews* 2011; 91: 1071–121.
 214. Kozin SV, **Duda DG**, Munn LL, Jain RK. Neovascularization after irradiation: What is the source of newly formed vessels in recurring tumors? *Journal of the National Cancer Institute* 2012; 104: 899-905. PMID: PMC3379722.
 215. Huang Y, Goel S, **Duda DG**, Fukumura D, Jain RK. Vascular normalization as an emerging strategy to enhance cancer immunotherapy. *Cancer Research* 2013; 73: 2943-8.
 216. Hato T, Goyal L, Greten TF, **Duda DG***, Zhu AX*. Immune checkpoint blockade in hepatocellular carcinoma: Current progress and future directions. *Hepatology* 2014; 60: 1776-82. *Corresponding authors.

217. Richter C, Seco J, Hong TS, **Duda DG**, Bortfeld T. Radiation-induced changes in hepatocyte-specific Gd-EOB-DTPA enhanced MRI: Potential mechanism. *Medical Hypotheses* 2014; 83: 477-81.
218. Lu-Emerson C*, **Duda DG***, Emblem KE, Taylor JW, Gerstner ER, Batchelor TT, Jain RK. Lessons from antiangiogenesis trials in glioblastoma patients. *Journal of Clinical Oncology* 2015; 33: 1197-213. * Equal contribution.
219. Setia N, Clark JW, **Duda DG**, Hong TS, Kwak E, Mullen JT, Lauwers GY. Familial gastric cancers. *Oncologist* 2015; 20: 1365-77.
220. Samuel R, **Duda DG**, Fukumura D, Jain RK. Vascular diseases await translation of blood vessels engineered from stem cells. *Science Translational Medicine* 2015; 7: 309rv6.
221. Gupta N, **Duda DG**. Role of Stromal Cell-Derived Factor 1 α Pathway in Bone Metastatic Prostate Cancer. *Journal of Biomedical Research* 2016; 30: 181-185.
222. Hato T, Zhu AX, **Duda DG**. Rationally combining anti-VEGF therapy with checkpoint inhibitors in hepatocellular carcinoma. *Immunotherapy* 2016; 8: 299-313.
223. Popp I, Niedermann G, Grosu AL, **Duda DG**. Immune modulation by hypofractionated stereotactic radiation therapy: Therapeutic implications. *Radiotherapy and Oncology* 2016; 120: 185-94.
224. Ali M, Lacin S, Ali R, Uemura M, Hassan M, Rashid A, **Duda DG**, Kaseb A. Nonalcoholic steatohepatitis-related hepatocellular carcinoma: Is there a role of the androgen receptor pathway? *OncoTargets and Therapy* 2017; 10: 1403-1412.
225. Ramjiawan RR, Griffioen AW, **Duda DG**. Anti-angiogenesis for cancer revisited: Is there a role for combinations with immunotherapy? *Angiogenesis* 2017; 20: 185-204.
226. Yokoda R, Nagalo BM, Vernon B, Oklu R, Albadawi H, DeLeon T, Zhou Y, Egan J, **Duda DG**, Borad MJ. Oncolytic virus delivery: from nanopharmacodynamics to enhanced oncolytic effect. *Oncolytic Virotherapy* 2017;6 1–11.
227. Fukumura D, Kloepper J, Amoozgar Z, **Duda DG**, Jain RK. Enhance cancer immunotherapy using antiangiogenics: opportunities and challenges. *Nature Reviews Clinical Oncology* 2018; 15: 325-40.
228. **Duda DG**, Aoki S, Dima S, Popescu I, Borad MJ. Novel biomarkers in cholangiocarcinoma. *Surgery, Gastroenterology and Oncology* 2018; doi: 10.21614/sgo-23-4-259.
229. Jain RK, **Duda DG**. Angiogenesis in solid tumors. In: *Antiangiogenic Cancer Therapy*, CRC Press, Boca Raton. Abbruzzese JL, Davis DW, Herbst RS, editors. 2007; pp: 43-90.
230. Willett CG, **Duda DG**. Combined modality therapy of rectal cancer. In: *Antiangiogenic Cancer Therapy*, CRC Press. Abbruzzese JL, Davis DW, Herbst RS, editors. 2007; pp: 549-57.
231. Jain RK, **Duda DG**. Normalization of tumor vasculature and microenvironment by antiangiogenic therapy. In: *Tumor Angiogenesis: Mechanisms and Cancer Therapy*, Springer-Verlag. Marmé D, Fusenig NE, editors. 2007; pp: 577-92.
232. **Duda DG**. [Commentary] Angiogenesis and anti-angiogenesis in cancer. *iDrugs*. 2007; 10: 366-9.
233. Jain RK, Batchelor TT, **Duda DG**, Willett CG. Normalization of tumor vasculature and microenvironment, In: *Antiangiogenic Agents In Cancer Therapy*. Second Edition, Humana Press. Teicher B and Ellis L, editors. 2007; pp. 261-76.
234. **Duda DG**. [Editorial] Endothelial cell-based therapy for hematopoiesis. *Blood* 2007;109: 2272-3.
235. Jain RK, **Duda DG**, Batchelor TT, Sorensen AG, Willett CG. Normalization of tumor vasculature and microenvironment. In: *Angiogenesis: An Integrative Approach from Science to Medicine* Springer. Figg WD and Folkman J, editors. 2008; pp. 267-75.
236. Jain RK, **Duda DG**. Vascular and interstitial biology of tumors. In: *Clinical Oncology* Fourth Edition, Elsevier, Philadelphia. Abeloff M, Armitage J, Niederhuber J, Kastan M, McKenna WG, editors. 2008; pp. 105-24.
237. **Duda DG**. Antiangiogenesis. In: *Encyclopedia of Cancer*. Second Edition, Springer-Verlag.

Schwab M, editor. 2008; Part 1; pp. 184-8.

238. Jain RK, **Duda DG**, Sorensen AG. Emerging paradigms and potential biomarkers of response and resistance in antiangiogenic therapy of cancer. *ASCO Educational Book* 2009; pp 716-21.
239. **Duda DG**, Ancukiewicz MA, Jain RK. Biomarkers of antiangiogenic therapy: How do we move from candidate biomarkers to valid biomarkers? *Journal of Clinical Oncology* 2009; 28: 183-5.
240. **Duda DG**. Targeting Tumor Angiogenesis: Biomarkers of Angiogenesis and Antiangiogenic Therapy in Cancer. e-publication, Angiogenesis Foundation, 2011 (CME, August 30, 2011).
241. **Duda DG**. Antiangiogenesis. In: *Encyclopedia of Cancer*. Third Edition, Springer-Verlag. Schwab M, editor; (2012).
242. **Duda DG** and Willett CG. [Editorial] Going beyond systemic fluoropyrimidine with radiation therapy for rectal cancer: What should be the priority? *Oncology* (Williston Park) 2012; 26: 741-3.
243. Jain RK and **Duda DG**. Molecular Pathophysiology of Tumors. In: *Principles and Practice of Radiation Oncology*, 6th Edition (Editors: E. C. Halperin, C. A. Perez, L. W. Brady), Lippincott, Williams & Wilkins, New York, Chapter 4 (2013), pp 102-117.
244. **Duda DG**. Molecular biomarkers of response to antiangiogenic therapy for cancer. *ISRN Cell Biology*; 2012, Article ID 587259, doi:10.5402/2012/587259.
245. **Duda DG** and Willett CG. [Expert Editorial] Reassessing priorities in the management of locally advanced rectal cancer: The need for new biomarkers and targets. *Gastrointestinal Cancers Symposium Daily News* Thursday, January 24, 2013: pp 22-23.
246. **Duda DG**. Biomarkers of response and resistance to antiangiogenic treatment. In: *Angiogenesis Modulations in Health and Disease*, First Edition, Springer. Mousa, SA, Davis PJ, editors. 2013; Chapter 15, pp 181-198.
247. **Duda DG**, Munn LL, Jain RK. [Editorial] Can we identify predictive biomarkers for antiangiogenic therapy of cancer using mathematical modeling? *Journal of the National Cancer Institute* 2013; 105: 762-765.
248. Jain RK, Chauhan V, **Duda DG**. Vascular and interstitial biology of tumors. In: *Clinical Oncology* Fifth Edition, Elsevier, Philadelphia. Abeloff M, Armitage J, Niederhuber J, Kastan M, McKenna WG, editors. 2013; pp 108-126.
249. Bucur O, Almasan A, Nikolajczyk BS, Nicolson GL, Lawler J, Velculescu VE, Leabu M, Avram D, Bucur I, Calin GA, Carbonetto S, Chauhan SC, Ciubotaru M, Constantinescu SN, Datta D, Draghici S, **Duda DG**, Friedman MT, Galardy PJ, Harris BT, Huarte M, Khalil AM, Marchetti D, Movileanu L, Nat R, Nucera C, Popa-Wagner A, Stancu AL, Zhu S, Liehn AL. [Editorial] Discoveries: an innovative platform for publishing cutting-edge research discoveries in medicine, biology and chemistry. *Discoveries* 2013; 1: e1.
250. Jain RK, Fukumura D, **Duda DG**. Modes of neovascularization in tumors and clinical translation of antiangiogenic therapy. In: *Pathobiology of Human Disease: A Dynamic Encyclopedia of Disease Mechanisms*. First Edition, San Diego: Elsevier Inc. McManus LM and Mitchell RN, editors. 2014; p. 2926-2957.
251. **Duda DG** and Hong TS. [Expert Editorial] Perioperative use of radiation therapy in localized pancreatic adenocarcinoma. *Gastrointestinal Cancers Symposium Daily News* Friday, January 17, 2014, Issue 2: pp 1, 6, 13.
252. **Duda DG**, Ancukiewicz MA, Isakoff SJ, Krop IE, Jain RK. [Editorial] Seeds and Soil: Unraveling the Role of Local Tumor Stroma in Distant Metastasis. *Journal of the National Cancer Institute* 2014; 1; 106: pii: dju187.
253. Jain RK, Fukumura D, **Duda DG**. [Editorial] Lessons from thirty years of teaching about the microenvironment of tumors. *Cancer Journal* 2015; 21: 137.
254. Chen Y, **Duda DG**. [Commentary] Targeting immunosuppression after standard sorafenib

- treatment to facilitate immune checkpoint blockade in hepatocellular carcinoma – an auto-commentary on clinical potential and future development. *Oncoimmunology* 2015; 9:4, e1029703.
255. Jain RK, Fukumura D, **Duda DG**. [Introduction] Role of tumor microenvironment in tumor progression and treatment response: A 30-years journey. *Cancer Journal* 2015; 21: 235-6.
 256. Goyal J, Ye X, **Duda DG**, Zhu AX. [Commentary] Chemotherapy and antiangiogenics in biliary tract cancer. *Lancet Oncology* 2015; 16: 882-3.
 257. Duda DG, Takaori K, Makuuchi M. A new beginning. *Journal of Translational Medicine and Research* 2016; 21: 5-6.
 258. Martin JD, Fukumura D, **Duda DG**, Boucher Y, Jain RK Reengineering the tumor microenvironment to alleviate hypoxia and overcome cancer heterogeneity. *Cold Spring Harbor Laboratory Perspectives in Medicine*; 2016; pii: a027094.
 259. Shigeta K, Hato T, Chen Y, **Duda DG**. Anti-VEGFR therapy as a partner for immune-based therapy approaches in HCC. In: *Immunotherapy of Hepatocellular Carcinoma*. First Edition, Springer Inc. Greten T, editor. 2017; 85-102.
 260. Aoki S, Cobbold M, Zhu AX, **Duda DG**. [Editorial] Can smart nanomedicine deliver effective targeted cytotoxic treatments to hepatocellular carcinomas while reducing the liver damage? *Hepatology* 2017; 67: 826–8.
 261. Rahbari NN, **Duda DG**, Borad MJ, Han H-S. Need for Consensus Statement for Cholangiocarcinoma Diagnosis, Prognostication and Treatment: An IASGO Initiative. *Surgery, Gastroenterology and Oncology* 2018; doi: 10.21614/sgo-23-4-217.
 262. Jain RK, Martin JD, Chauhan VP and **Duda DG**. Molecular Pathophysiology of Tumors. In: *Principles and Practice of Radiation Oncology*, 7th Edition (Editors: E. C. Halperin, C. A. Perez, L. W. Brady), Lippincott, Williams & Wilkins, New York, Chapter 4 (2019).
 263. Schanne D, Grosu A-L, **Duda DG**. Anti-Angiogenics and Radiation Therapy. In: *Tumor Angiogenesis: A Key Target for Cancer Therapy*. First Edition, Springer. Marme D, editor. 2019; pp 349-358.
 264. Amoozgar Z, Jain RK, **Duda DG**. Role of apelin in glioblastoma vascularization and invasion after anti-VEGF therapy: What is the impact on the immune system? *Cancer Research* 2019; 79: 2104-6.
 265. Chen J, **Duda DG**. Overcoming sorafenib treatment-resistance in hepatocellular carcinoma: A future perspective at a time of rapidly changing treatment paradigms. *EBioMedicine* 2020; 52: 102644.
 266. Ho AY, Wright JL, Blitzblau RC, Mutter RW, **Duda DG**, Norton L, Bardia A, Spring L, Isakoff SJ, Chen JH, Grassberger C, Bellon JR, Beriwal S, Khan AJ, Speers C, Dunn SA, Thompson A, Santa-Maria CA, Krop IE, Mittendorf E, King TA, Gupta GP. Optimizing Radiotherapy to Boost Systemic Immune Responses in Breast Cancer: A Critical Review for Breast Radiation Oncologists. *International Journal of Radiation Oncology, Biology and Physics* 2020; 108: 227-41.
 267. Martin JD, **Duda DG**, Jain RK. Going beyond VEGF pathway inhibition for antiangiogenic cancer therapy: Is inhibition of the PP2A/B55 α complex the answer? *Circulation Research* 2020; 127: 724-6.
 268. Pinter M, Jain RK, **Duda DG**. The current landscape of immune checkpoint blockade in hepatocellular carcinoma: A Review. *JAMA Oncology* 2021; 7: 113-23.
 269. Hauth FD, Ho A, Ferrone S, **Duda DG**. Use of Radiotherapy to Enhance Chimeric Antigen Receptor T-Cell Therapeutic Efficacy of Solid Tumors: A Narrative Review. *JAMA Oncology* 2021; 7: 1051-9.
 270. Klein S, **Duda DG**. Machine Learning for future subtyping of the tumor microenvironment of gastro-esophageal adenocarcinomas. *Cancers* 2021; 13: 4919.
 271. Hauth FD, Roberts HJ, Hong TS, **Duda DG**. Leveraging Blood-based Diagnostics to Predict Tumor Biology and Extend the Application and Personalization of Radiotherapy in Liver Cancers. *International Journal of Molecular Sciences* 2022; 23(4): 1926.

272. **Duda DG**, Hauth FD. Use of radiotherapy alone and in combination with other therapies for hepatocellular carcinoma: Rationale and future directions. In: *IASGO Textbook of Multi-Disciplinary Management of Hepato-Pancreato-Biliary Diseases*. First Edition, Springer-Nature. Makuuchi M, Kokudo N, Popescu I, Belghiti J, Han H-S, Takaori K, **Duda DG**, editors. **Springer Nature**. 2022; pp: 153-64.
273. Dima SO, Dumitrascu T, Popescu I, **Duda DG**. Using molecular subtyping of pancreatic ductal adenocarcinoma for multimodal treatment selection in resectable disease. *Chirurgia* 2022; 117(4):407-414.
274. **Duda DG**, Jain RK. [Cancer Research Landmarks] Revisiting Antiangiogenic Multikinase Inhibitors in the Era of Immune Checkpoint Blockade: The Case of Sorafenib. *Cancer Research* 2022; 82(20): 3665-7.
275. Morita S, **Duda DG**. Refining genetic and molecular classifications to facilitate breakthrough treatments in intrahepatic cholangiocarcinoma: Are we there yet? *Gut* 2023; 72(4): 608-610.
276. Martin JD, **Duda DG**, Jain RK. Molecular Pathophysiology of Tumors. In: *Principles and Practice of Radiation Oncology*, 8th Edition (Editors: E. C. Halperin, C. A. Perez, L. W. Brady), Lippincott, Williams & Wilkins, New York, Chapter 4 (2023).
277. Gok Yavuz B, Datar S, Chamseddine S, Mohamed YI, LaPelusa M, Lee SS, Hu ZI, Koay EJ, Tran Cao HS, Jalal PK, Daniel-MacDougall C, Hassan M, Duda DG, Amin HM, Kaseb AO. The Gut Microbiome as a Biomarker and Therapeutic Target in Hepatocellular Carcinoma. *Cancers* (Basel). 2023; 15(19): 4875.
278. Franses JW, **Duda DG**. Scirrhou HCC: Another ‘omic’ thread in the HCC tapestry. *Hepatology* 2024; Apr 1; 79(4): 747-8.
279. Liu X, **Duda DG**. Involuting TLS as a harbinger of regressed HCC. *Nature Immunology* 2024; (in press).
280. Al-Azzam A, **Duda DG**. Antiangiogenic Treatment for Gastric Cancers. In: *IASGO Textbook of Upper Gastrointestinal Diseases*. First Edition, **Springer-Nature**. M.-T. Lin, Y. Obama, G. Manzoni, A. Guner, K. Takaori, **D. G. Duda**, editors. 2024 (in press).

Case reports

281. Willett CG*, **Duda DG***, di Tomaso E, Boucher Y, Czito BG, Bendell J, Cohen KS, Hurwitz HI, Bentley R, Wong TZ, Paulson E, Jain RK. Complete pathological response in T4 locally advanced rectal cancer after treatment with bevacizumab and standard radio-chemotherapy. *Nature Clinical Practice Oncology* 2007; 4: 316-21. * Equal contribution.
282. Hagendoorn J, Padera TP, Yock TI, Nielsen GP, di Tomaso E, **Duda DG**, Delaney TF, Gaissert HA, Pearce J, Rosenberg AE, Jain RK, Ebb DH. Platelet derived growth factor β in Gorham’s disease. *Nature Clinical Practice Oncology* 2006; 3: 693-7.

Letters to the Editor

283. Willett CG, **Duda DG**, Fischman A, Jain RK. [Correspondence] Reply to: PET concerns in bevacizumab treatment. *Nature Medicine* 2004; 10: 561.
284. **Duda DG**, Cohen KS, Au P, Scadden DT, Willett CG, Jain RK. [Correspondence] Reply to: Detection of circulating endothelial cells: CD146-based magnetic separation enrichment or flow cytometric assay? *Journal of Clinical Oncology* 2007; 25: e3-e5.
285. Zhu AX, Sahani DV, **Duda DG**, Jain RK. [Correspondence] Reply to S.J. Faivre *et al.*: Sunitinib in hepatocellular carcinoma: Redefining appropriate dosing, schedule, and activity endpoints. *Journal of Clinical Oncology* 2009; 27: e251-2.
286. Kozin SV, **Duda DG**, Munn LL, Jain RK. [Correspondence] Is vasculogenesis crucial for the

regrowth of irradiated tumours? *Nature Reviews Cancer* 2011; 11: 532.

287. **Duda DG**, Heist RS, Sahani DV, Stylianopoulos T, Engelman JA, Jain RK. [Correspondence] Reply to Ciccolini et al.: Using mathematical modeling to predict response to antiangiogenic therapy in cancer patients. *Proceedings of the National Academy of Science U S A* 2015; 112: E3454.
288. Huang Y, Stylianopoulos T, **Duda DG**, Fukumura D, Jain RK. [Letter] Benefits of vascular normalization are dose- and time-dependent. Re: Bevacizumab hampers antibody uptake. *Cancer Research* 2013; 73: 7144-7146.

Thesis:

Duda DG. Analysis of the pancreatic adenocarcinoma-related angiogenesis and evaluation of the effectiveness of antiangiogenic gene therapy. [Dissertation]. *Tohoku University Graduate School of Medicine Press*, Sendai, Japan, April 2001.

Narrative Report

My area of investigation is liver cancer biology and therapy. I became passionate about basic and translational research during my PhD in GI Surgery at Tohoku University in Japan after completing medical training in Romania (D.M.D. 1993, residency 1997). I chose a career path in research and pursued postdoctoral studies at MGH/Harvard Medical School. The focus of my current studies is overcoming treatment resistance in primary and metastatic liver cancers, an unmet need in oncology. My group is studying new combinatorial approaches using immunotherapy with systemic therapies or radiotherapy in preclinical models that faithfully reproduce features of human liver cancers. We are using mouse models of primary hepatocellular carcinoma (HCC), intrahepatic cholangiocarcinoma (ICC), and liver metastatic pancreatic ductal adenocarcinoma (PDAC). In parallel, we are conducting correlative studies on cancer patients in close collaboration with clinicians. My work in the field has led to many findings on primary and metastatic liver cancers, reported in 180 original articles and presented at nearly 300 local, national, and international meetings, including Grand Rounds at major US institutions (Harvard, Mayo Clinic, Yale, Fred Hutch, UPMC, USF), and state-of-the-art, plenary, and keynote lectures at international meetings. I was appointed Professor of Radiation Oncology at Harvard Medical School in 2023 and Director of Translational Research in GI Radiation Oncology at MGH in 2016. I am a Founding Editor of IASGO's journal *Surgery, Gastroenterology and Oncology*, and served as a Senior Associate Editor of ASTRO's official journal *Red Journal*, among other editorial roles. I have been serving as Secretary General of the IASGO since 2015. In addition, I was a member of the AASLD Global Outreach Committee, NCI's Hepatobiliary Task Force for Immuno-Oncology Biomarkers, and SWOG's GI section. I have been serving as ad-hoc (11 sections at NCI, TBG at American Cancer Society, Cancer Research UK) and chartered (NCI DMP) panel member, and Chair [DMP, IMCT, CBD, CDT at NCI, and Research Foundation Flanders (FWO Tumor Biology)] expert panels since 2012, and as an ad-hoc reviewer for 20+ agencies from 12 countries. I served in expert advisory roles for Pharma, Liver Cancer Expert meetings in Korea, Italy, and Japan, and the MD Anderson SPORE Programs for HCC and ICC. I chaired the Forbeck Forum on "*The Biology and Treatment of Hepatocellular Carcinoma*" (2023), the 23rd Boston Angiogenesis Meeting (BAM 2024), and the TB1 subcommittee of the organizing committee of AACR 2025, Chicago.

Over the last two decades, I built a vibrant and dynamic Liver Cancer Research Program within the Steele Laboratories for Tumor Biology at MGH. True to my passion for research and to my medical training, I have enjoyed participating in multidisciplinary research efforts with my postdoctoral mentor Dr. Jain, and clinician-scientists at MGH and other institutions. Since 2008, I directed my research efforts on liver tumor interaction with its microenvironment and its impact on resistance to immune, antiangiogenic, and cytotoxic therapies. The translational goal of this program is to increase the durability of response to the most effective available molecular and cellular therapies. The research goal is to identify new cellular and molecular mechanisms of local and metastatic tumor progression and treatment resistance and validate them as new targets for treatment. For this independent research, I received grants from the NCI (R21, R01, Proton Beam Federal Share, and PPG/BRG Projects) and the ACS (Research Scholar Grant). Since 2002, I have received continuous funding as PI through diverse research mechanisms, including 4 active R01 grants from the NIH, 2 active Department of Defense Awards, and sponsored research agreements with Industry, totaling more than \$20M. For my discoveries, I received several awards and honors. I became an honorary member of the Academy of Medical Sciences of Romania; I was elected to the 2020 College of Fellows of AIMBE, considered the top 2% of the most accomplished leaders in medical and biological engineering; I was elected as 2021 American Association for the Advancement of Science (AAAS) Fellow and as 2023 IASGO Fellow (FASGO). In 2023, I was elected a Foreign Member of the Academy of Europe. In 2024, I received an honorary AM degree from Harvard University.

When I began studying liver cancer, no systemic therapy was available for patients with advanced disease. Radiotherapy was rarely used due to concerns about liver toxicity and unclear mechanisms. Patients with advanced HCC, the most frequent liver cancer, received best supportive care and lived 6 months on average. Preclinical data were severely limited by the lack of cancer models with underlying liver damage, the typical presentation of HCC in patients. Today, liver cancer therapy has become one of the most active and exciting areas of research, with seven antiangiogenic drugs and six immune checkpoint

blocking drugs approved by the US FDA for HCC treatment and with proton radiotherapy being tested in a pivotal phase III trial led by our MGH team (NCT03186898). My contribution to this effort has been in clinical translational and preclinical studies. Inspired by the studies published in the *Journal of Clinical Oncology* (2009)—the first report of biomarkers of response to standard anti-VEGF receptor therapy in HCC—I postulated that treatment-induced modulation of inflammatory factors and vascular function may be responsible for treatment resistance in HCC. These findings—along with 4 subsequent clinical reports on VEGF inhibitors published in *Clinical Cancer Research*—shaped the research direction of my lab.

First, I established models of spontaneous HCC in mice with underlying liver damage that reproduced hallmarks of human disease (*Nature Protocols* 2015) and used them to reveal the mechanisms underlying anti-VEGFR treatment response and resistance. My work defined the role of myeloid cells and SDF1 α /CXCR4 chemokine pathway in mediating resistance to sorafenib treatment via enhanced tumor fibrosis and inflammation in HCC (*Hepatology* 2014). At that time, studies in melanoma suggested that immune checkpoint blockade may transform cancer therapy. I conducted the first study of an anti-VEGFR/anti-PD-1 combination in HCC models, which revealed that its successful implementation in HCC requires appropriate inhibition of immunosuppression in the microenvironment to allow cytotoxic T lymphocytes to infiltrate and function in the tumor (*Hepatology* 2015). Recently, in a study reported in *Hepatology* (2020), my group uncovered an unexpected mechanism of synergy for this combination therapy: PD-1 blockade led to “productive”, normal new vessel formation in the regressing tumors, and the normalized vasculature enhanced the anti-tumor immune responses. Subsequently, a pivotal randomized phase III study demonstrated the efficacy of dual VEGF/PD-L1 blockade in HCC patients by showing unprecedented benefits over the standard of care sorafenib (Finn *et al.*, *NEJM* 2020). The FDA approved this antibody-based combination therapy as the first line of treatment for HCC in 2020. In 2021, I received an R01 grant to study the role of dual VEGF/PD-L1 blockade in early-stage HCC. Another example is the discovery that plasma HGF is a potential biomarker of susceptibility to radiation-induced liver damage. Based on my work, plasma HGF is now being evaluated as an integrated biomarker in the randomized phase III trial of proton therapy. In parallel, we are studying the role of HGF/MET pathway in radiation-induced toxicity with support through a DOD Impact Award. These studies led to other projects on new approaches to overcoming treatment resistance in HCC (with NIH R01, DOD and Industry support, e.g., *Science Transl Med* 2019, *Nature Biotechnol* 2020, *Nature* 2021, *Nature Commun* 2022, *JNCI* 2022, *Gut* 2023), cholangiocarcinoma (with DOD Idea Award support; *Nature Genetics* 2013, *Cancer Discovery* 2016, *Clinical Cancer Research* 2021, *Gut* 2022, *Clinical Immunology Research* 2024), and liver metastatic PDAC (with NIH R01 and MGH support; *Red Journal* 2014, *JAMA Oncology* 2019).

I teach tumor biology and translational oncology through daily supervision of postdoctoral research fellows, and graduate and undergraduate students. As an enthusiastic supporter of IASGO’s mission to globalize the best medical practice and knowledge worldwide, I have been coordinating, teaching, and directing Postgraduate Courses in 30 countries in Asia, Europe, Africa, and the Americas, since 2014. I have also taught nationally in ASTRO, RTOG, and SWOG meetings for residents and clinicians and locally in the MIT-HMS HST Program since 2005. I have been coordinating a research exchange student program with the University of Münster, Germany since 2015, and I have been directing the Annual Course titled “*Methods in Biomedical Engineering, Tumor Biology and Immunology*” for trainees at MGH since 2004. In addition to teaching students, I have continuously advocated for increased support for research in the treatment of advanced cancers and cancer awareness in the community at large. My community outreach efforts included volunteering as a speaker for several Fundraisers for the Massachusetts ACS Division and the Granara-Skerry Trust. In recognition of my achievements in research, teaching, leadership, and advocacy, I received several awards. In 2015, I was selected as an Honoree of The One Hundred, one of the highest forms of recognition awarded by Mass General Cancer Center.

I am dedicated to the pursuit of impactful translational research at the forefront of liver cancer therapy. While recent progress of immunotherapy has rapidly changed the treatment landscape, the mechanisms of benefit are incompletely characterized and achieving durability of treatment response in these dreadful diseases remains a challenge. To address these unmet needs, I remain passionate about engaging scientist and clinician collaborators and continuing my strong commitment to educate the next generation of thought leaders through mentoring and multidisciplinary training at MGH, Harvard-wide, and worldwide.