

BIOGRAPHICAL SKETCH

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NAME: Wang, Tony

eRA COMMONS USER NAME (credential, e.g., agency login): tjcwang

POSITION TITLE: Associate Professor of Radiation Oncology (in Neurological Surgery)

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
University of Missouri - Kansas City, Kansas City, MO	BA	05/2005	Liberal Arts
University of Missouri - Kansas City School of Medicine, Kansas City, MO	MD	05/2007	Medicine
National Institutes of Health, Bethesda, MD	Postdoctoral Fellow	2006	Clinical Research Training Program Fellow
Flushing Hospital Medical Center, Flushing, NY	Resident	06/2008	Transitional Medicine
Columbia University Medical Center/New York Presbyterian Hospital, New York, NY	Resident	06/2012	Radiation Oncology

A. Personal Statement

I am an Associate Professor of Radiation Oncology (in Neurological Surgery) at Columbia University, College of Physicians and Surgeons (Columbia P & S). My clinical and research focus is on the management of brain tumors. Since joining the faculty, I have developed a comprehensive brain malignancy database at our institution for primary and secondary brain tumors. This has led to a number of retrospective studies all with the aim to understand and to refine treatment paradigms. I have maintained strong collaborations with both clinical and laboratory investigators at our institution, both in the multidisciplinary brain tumor group at Columbia P & S and at the Neuro-Oncology Program at the Herbert Irving Comprehensive Cancer Center (HICCC). My research aims are to investigate novel agents for the treatment of primary brain malignancies as well as to assess strategies to improve clinical trial recruitment, enrollment and design, especially as it pertains to historically under-enrolled participants such as minority patients.

1. Kinslow CJ, Garton ALA, Rae AI, Marcus LP, Adams CM, McKhann GM, Sisti MB, Connolly ES, Bruce JN, Neugut AI, Sonabend AM, Canoll P, Cheng SK, Wang TJC. Extent of resection and survival for oligodendroglioma: a U.S. population-based study. *J Neurooncol*. 2019 Aug 12; PubMed PMID: [31407129](#).
2. Vulpe H, Save AV, Xu Y, Elliston CD, Garrett MD, Wu CC, Cheng SK, Jani AH, Bruce JN, McKhann GM, Wang TJC, Sisti MB. Frameless Stereotactic Radiosurgery on the Gamma Knife Icon: Early Experience From 100 Patients. *Neurosurgery*. 2019 Aug 2; PubMed PMID: [31375826](#).
3. Wang TJC, Wu CC, Jani A, Estrada J, Ung T, Chow DS, Soun JE, Saad S, Qureshi YH, Gartrell R, Saadatmand HJ, Saraf A, Garrett MD, Grubb C, Isaacson SR, Cheng SK, Sisti MB, Bruce JN, Sheth SA, Lassman AB, Iwamoto FM, McKhann GM 2nd. Hypofractionated radiation therapy versus standard fractionated radiation therapy with concurrent temozolomide in elderly patients with newly diagnosed glioblastoma. *Pract Radiat Oncol*. 2016 Sep-Oct;6(5):306-314. PubMed PMID: [26952813](#).
4. Wang TJ, Jani A, Estrada JP, Ung TH, Chow DS, Soun JE, Saad S, Qureshi YH, Gartrell R, Isaacson SR, Cheng SK, McKhann GM 2nd, Bruce JN, Lassman AB, Sisti MB. Timing of Adjuvant Radiotherapy in Glioblastoma Patients: A Single-Institution Experience With More Than 400 Patients. *Neurosurgery*. 2016 May;78(5):676-82. PubMed PMID: [26440447](#).

B. Positions and Honors

Positions and Employment

- 2012 - 2016 Assistant Professor of Radiation Oncology, Columbia University College of Physicians and Surgeons, New York, NY
- 2012 - 2016 Assistant Attending Radiation Oncologist, New York Presbyterian Hospital, New York, NY
- 2016 - Associate Attending Radiation Oncologist, New York Presbyterian Hospital, New York, NY
- 2016 - Associate Professor of Radiation Oncology (in Neurological Surgery), Columbia University College of Physicians and Surgeons, New York, NY
- 2017 - Co-Director, Center for Radiosurgery/Gamma Knife Center, Columbia University Medical Center, New York, NY

Other Experience and Professional Memberships

- 2008 - Member, American Society of Clinical Oncology
- 2008 - Member, American Society for Radiation Oncology
- 2013 - Member, Society for Neuro-Oncology
- 2013 - 2017 Member, NRG Oncology
- 2015 - Radiation Oncology Committee Member, SWOG
- 2017 - Brain Tumor Core Committee Member, NRG Oncology
- 2017 - Member, American Radium Society
- 2017 - Member, American Radium Society-American College of Radiology Appropriateness Criteria Brain Committee, American Radium Society
- 2018 - Member, Adult Central Nervous System and Pediatric Cancer Committee, American Board of Radiology
- 2018 - Editorial Board, Neurosurgery
- 2018 - Temporary Member, NIH Clinical Oncology Study Section (CONC)

Honors

- 2001 Inductee, Phi Beta Delta International Honor Society
- 2001 Inductee, Mortar Board Senior Honor Society
- 2001 Inductee, Golden Key International Honour Society
- 2001 Inductee, Omicron Delta Kappa National Leadership Honor Society
- 2001 Inductee, Alpha Lambda Delta National Honor Society for First Year Students
- 2005 Inductee, Gold Humanism Honor Society
- 2005 Awardee, Chinese American Medical Society Scholarship Award
- 2006 Awardee, Sarah Morrison Medical Student Research Award
- 2009 Awardee, American Society for Radiation Oncology IGRT Symposium Travel Grant
- 2010 Awardee, American Society for Radiation Oncology Advocacy Day Travel Grant
- 2010 Awardee, American College of Radiation Oncology Annual Meeting Travel Grant
- 2010 Awardee, American College of Radiology William T. Moss Award
- 2010 Awardee, Overseas Compatriot Affairs Commission, Overseas Young Medical Professionals Program
- 2011 Awardee, Seattle Prostate Institute, Prostate Brachytherapy LDR Course scholarship
- 2011 Awardee, Radiological Society of North America Roentgen Resident/Fellow Research Award
- 2011 Awardee, American Society for Radiation Oncology Annual Meeting Radiation and Cancer Biology Poster Award
- 2011 Chief Resident, Columbia University Department of Radiation Oncology
- 2011 Awardee, NCCN Fellows Recognition Program - NCCN Travel Grant
- 2017 New York Magazine: Top Doctors, Castle Connolly
- 2017 - 2019 Top Doctors New York Metro Area, Castle Connolly
- 2017 - 2019 New York Rising Stars, Super Doctors

C. Contribution to Science

1. My work is primarily on central nervous system (CNS) malignancies for both primary and secondary diseases. As a high-volume referral center, a significant portion of my research is focused on stereotactic radiosurgery management of brain metastases. I lead the establishment of databases to examine and report outcomes in brain metastases patients stratified by specific primary cancers and molecular markers for personalized medical decision making.
 - a. Yanagihara TK, McFaline-Figueroa JR, Giacalone NJ, Lee AW, Soni V, Hwang ME, Hsieh KT, Saraf A, Wu CC, Yang D, Wen PY, Ashamalla H, Aizer AA, Wang TJC, Huang RY. A low percentage of metastases in deep brain and temporal lobe structures. *Neuro Oncol*. 2019 May 6;21(5):640-647. PubMed PMID: [30715520](#); PubMed Central PMCID: [PMC6502494](#).
 - b. Smith DR, Bian Y, Wu CC, Saraf A, Tai CH, Nanda T, Yaeh A, Lapa ME, Andrews JIS, Cheng SK, McKhann GM, Sisti MB, Bruce JN, Wang TJC. Natural history, clinical course and predictors of interval time from initial diagnosis to development of subsequent NSCLC brain metastases. *J Neurooncol*. 2019 May;143(1):145-155. PubMed PMID: [30874953](#).
 - c. Wang TJ, Saad S, Qureshi YH, Jani A, Nanda T, Yaeh AM, Rozenblat T, Sisti MB, Bruce JN, McKhann GM, Lesser J, Halmos B, Stoopler MB, Lassman AB, Cheng SK, Isaacson SR. Does lung cancer mutation status and targeted therapy predict for outcomes and local control in the setting of brain metastases treated with radiation?. *Neuro Oncol*. 2015 Jul;17(7):1022-8. PubMed PMID: [25910841](#); PubMed Central PMCID: [PMC5762012](#).
 - d. Wang TJ, Saad S, Qureshi YH, Jani A, Isaacson SR, Sisti MB, Bruce JN, McKhann GM 2nd, Lesser J, Cheng SK, Clifford Chao KS, Lassman AB. Outcomes of gamma knife radiosurgery, bi-modality & tri-modality treatment regimens for patients with one or multiple brain metastases: the Columbia University Medical Center experience. *J Neurooncol*. 2015 Apr;122(2):399-408. PubMed PMID: [25687652](#).
2. In addition to studying brain metastases, I established databases on patient outcomes for primary brain malignancies including glioblastomas and astrocytomas. The high volume of patients allowed us to examine many questions posed by our patients including timing of radiotherapy and hypofractionation. Due to our work, I have received and completed intramural pilot grants: a phase I feasibility study to examine to role of palliative cannabis treatment in the setting of patients with glioblastoma receiving chemoradiation and highly diffusion-weighted imaging: a predictive marker in glioblastoma.
 - a. Wang TJC, Mehta MP. Low-Grade Glioma Radiotherapy Treatment and Trials. *Neurosurg Clin N Am*. 2019 Jan;30(1):111-118. PubMed PMID: [30470398](#).
 - b. Smith DR, Wu CC, Saadatmand HJ, Isaacson SR, Cheng SK, Sisti MB, Bruce JN, Sheth SA, Lassman AB, Iwamoto FM, Wang SH, Canoll P, McKhann GM 2nd, Wang TJC. Clinical and molecular characteristics of gliosarcoma and modern prognostic significance relative to conventional glioblastoma. *J Neurooncol*. 2018 Apr;137(2):303-311. PubMed PMID: [29264835](#).
 - c. Wang TJC, Wu CC, Jani A, Estrada J, Ung T, Chow DS, Soun JE, Saad S, Qureshi YH, Gartrell R, Saadatmand HJ, Saraf A, Garrett MD, Grubb C, Isaacson SR, Cheng SK, Sisti MB, Bruce JN, Sheth SA, Lassman AB, Iwamoto FM, McKhann GM 2nd. Hypofractionated radiation therapy versus standard fractionated radiation therapy with concurrent temozolomide in elderly patients with newly diagnosed glioblastoma. *Pract Radiat Oncol*. 2016 Sep-Oct;6(5):306-314. PubMed PMID: [26952813](#).
 - d. Wang TJ, Jani A, Estrada JP, Ung TH, Chow DS, Soun JE, Saad S, Qureshi YH, Gartrell R, Isaacson SR, Cheng SK, McKhann GM 2nd, Bruce JN, Lassman AB, Sisti MB. Timing of Adjuvant Radiotherapy in Glioblastoma Patients: A Single-Institution Experience With More Than 400 Patients. *Neurosurgery*. 2016 May;78(5):676-82. PubMed PMID: [26440447](#).
3. I am involved in the National Cancer Institute's National Clinical Trials Network (NCTN) as the institutional principal investigator of NRG Oncology at Columbia University and involved with both NRG and SWOG Clinical Trials Group. My interests are in the design of clinical trials for brain tumors, pooling of multi-center data, and active enrollment of patients into clinical trials. This has led to several publications in the understanding and prognostication of brain tumors.

- a. Kruser TJ, Bosch WR, Badiyan SN, Bovi JA, Ghia AJ, Kim MM, Solanki AA, Sachdev S, Tsien C, Wang TJC, Mehta MP, McMullen KP. NRG brain tumor specialists consensus guidelines for glioblastoma contouring. *J Neurooncol.* 2019 May;143(1):157-166. PubMed PMID: [30888558](#); PubMed Central PMCID: [PMC6483830](#).
 - b. Sperduto PW, Fang P, Li J, Breen W, Brown PD, Cagney D, Aizer A, Yu J, Chiang V, Jain S, Gaspar LE, Myrehaug S, Sahgal A, Braunstein S, Sneed P, Cameron B, Attia A, Molitoris J, Wu CC, Wang TJC, Lockney N, Beal K, Parkhurst J, Buatti JM, Shanley R, Lou E, Tandberg DD, Kirkpatrick JP, Shi D, Shih HA, Chuong M, Saito H, Aoyama H, Masucci L, Roberge D, Mehta MP. Survival and prognostic factors in patients with gastrointestinal cancers and brain metastases: have we made progress?. *Transl Res.* 2019 Jun;208:63-72. PubMed PMID: [30885538](#); PubMed Central PMCID: [PMC6527460](#).
 - c. Okunieff P, Casey-Sawicki K, Lockney NA, Hoppe BS, Enderling H, Pinnix C, Welsh J, Krishnan S, Yothers G, Brown M, Knox S, Bristow R, Spellman P, Mitin T, Nabavizadeh N, Jaboin J, Manning HC, Feng F, Galbraith S, Solanki AA, Harkenrider MM, Tuli R, Decker RH, Finkelstein SE, Hsu CC, Ha CS, Jagsi R, Shumway D, Daly M, Wang TJC, Fitzgerald TJ, Laurie F, Marshall DT, Raben D, Constine L, Thomas CR Jr, Kachnic LA. Report from the SWOG Radiation Oncology Committee: Research Objectives Workshop 2017. *Clin Cancer Res.* 2018 Aug 1;24(15):3500-3509. PubMed PMID: [29661779](#).
 - d. Gittleman H, Lim D, Kattan MW, Chakravarti A, Gilbert MR, Lassman AB, Lo SS, Machtay M, Sloan AE, Sulman EP, Tian D, Vogelbaum MA, Wang TJC, Penas-Prado M, Youssef E, Blumenthal DT, Zhang P, Mehta MP, Barnholtz-Sloan JS. An independently validated nomogram for individualized estimation of survival among patients with newly diagnosed glioblastoma: NRG Oncology RTOG 0525 and 0825. *Neuro Oncol.* 2017 May 1;19(5):669-677. PubMed PMID: [28453749](#); PubMed Central PMCID: [PMC5464437](#).
4. In addition to my clinical research focus, I collaborate with radiation biologists from Columbia University's Center for Radiological Research (CRR) and radiation physicists. I studied bystander/abscopal effects of heavy ions in collaboration with the National Institute of Radiological Sciences in Chiba, Japan. With the help from the CRR, we were able to test and design devices to help a pregnant glioblastoma patient through treatment while protecting fetal dose.
- a. Ivanov VN, Wu J, Wang TJC, Hei TK. Inhibition of ATM kinase upregulates levels of cell death induced by cannabidiol and γ -irradiation in human glioblastoma cells. *Oncotarget.* 2019 Jan 25;10(8):825-846. PubMed PMID: [30783513](#); PubMed Central PMCID: [PMC6368233](#).
 - b. Wu CC, Chaudhary KR, Na YH, Welch D, Black PJ, Sonabend AM, Canoll P, Saenger YM, Wang TJC, Wu CS, Hei TK, Cheng SK. Quality Assessment of Stereotactic Radiosurgery of a Melanoma Brain Metastases Model Using a Mouselike Phantom and the Small Animal Radiation Research Platform. *Int J Radiat Oncol Biol Phys.* 2017 Sep 1;99(1):191-201. PubMed PMID: [28816146](#); PubMed Central PMCID: [PMC5675116](#).
 - c. Wang TJ, Wu CC, Chai Y, Lam RK, Hamada N, Kakinuma S, Uchihori Y, Yu PK, Hei TK. Induction of Non-Targeted Stress Responses in Mammary Tissues by Heavy Ions. *PLoS One.* 2015;10(8):e0136307. PubMed PMID: [26317641](#); PubMed Central PMCID: [PMC4552651](#).
 - d. Horowitz DP, Wang TJ, Wu CS, Feng W, Drassinower D, Lasala A, Pieniazek R, Cheng S, Connolly EP, Lassman AB. Fetal radiation monitoring and dose minimization during intensity modulated radiation therapy for glioblastoma in pregnancy. *J Neurooncol.* 2014 Nov;120(2):405-9. PubMed PMID: [25096798](#).

Complete List of Published Work in My Bibliography:

https://www.ncbi.nlm.nih.gov/myncbi/1XysvtqPn_MAO/bibliography/public/

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

P30CA013696 (Rustgi)
NIH/NCI

07/01/2014-06/30/2020

Cancer Center Support Grant

This grant supports the NIH-designated Herbert Irving Comprehensive Cancer Center (HICCC) at Columbia University.

Role: PRMC member

Completed Research Support

Awarded, RTOG Foundation

Lassman (PI)

09/01/15-08/31/18

A Randomized, Placebo Controlled Phase 3 Study of ABT-414 With Concurrent Chemoradiation and Adjuvant Temozolomide in Subjects With Newly Diagnosed Glioblastoma (GBM) With Epidermal Growth Factor Receptor (EGFR) Amplification (Intelligence1)

Role: Co-Investigator

Awarded, Department of Radiation Oncology, Columbia University Medical Center / Radiation Oncology RFA

Wang, Tony J. C. (PI)

07/01/18-06/30/19

Radiosensitization of glioblastoma by cannabinoids.

The main objective of this pilot grant is to obtain preliminary data on the efficacy of cannabinoids (CB) on survival of GBM bearing animals with or without concurrent radiotherapy (RT). The central hypothesis of this application is that CB and RT can interact in a supra-additive manner in suppressing GBM growth. We will determine the survival of GBM bearing C57BL/6 mice exposed to intra-cranial irradiation with or without concurrent treatment with either the psychogenic Δ^9 -9-tetrahydrocannabinol (THC) or the non-psychogenic cannabidiol (CBD). These proposed studies will provide critical new information essential for the successful re-submission of an NIH R01 application and in the design of future clinical trials to evaluate efficacy of CB in the management of GBM

Role: PI

Awarded, Irving Institute for Clinical and Translational Research / CTO Pilot Grant

Wang, Tony J. C. (PI)

11/01/15-10/31/16

Phase I feasibility trial for the role of cannabis in patients with glioblastoma treated with radiation and temozolomide

This study is a Phase I study. Our aim is to perform a single arm phase I feasibility study to investigate the tolerability of cannabis with concurrent chemoradiation in the treatment of glioblastoma. We will test a strain of cannabis that has a high concentration of non-psychoactive CBD and relatively low concentration of THC in order to minimize the potential for side effects in this medically ill population.

Role: PI

Awarded, Irving Institute for Clinical and Translational Research / Imaging Pilot Award

Wang, Tony J. C. (PI)

07/01/15-06/30/16

Highly diffusion-weighted imaging: a predictive marker in glioblastoma

This study is to collect highly diffusion-weighted imaging (HDWI) data on a cohort of glioblastoma patients recently resected prior to the start of chemoradiation and again after three weeks of therapy. The aim of this study is to determine the sensitivity of HDWI to predict the interval to disease progression of glioblastoma using pre-treatment and mid-treatment MRI acquisitions.

Role: PI