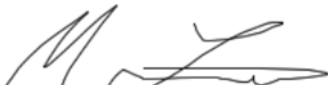


Curriculum Vitae of Michael Lim  
The Johns Hopkins University School of Medicine



---

MICHAEL LIM, M.D.

July 1, 2018

## DEMOGRAPHIC INFORMATION

### Current Appointment

Professor of Neurosurgery, Oncology, Otolaryngology, Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

### Personal Data

Departments of Neurosurgery, Oncology, and Radiation Oncology  
Phipps Building Room 123  
600 N. Wolfe Street  
Baltimore, MD 21287  
Phone 410-614-1627  
Fax 410-502-4954  
Email mlim3@jhmi.edu

### Education and Training

#### *Undergraduate*

1995 B.S., Biochemistry, University of New Hampshire, Durham, NH

#### *Doctoral/Graduate*

2000 M.D., The Johns Hopkins University School of Medicine, Baltimore, MD

#### *Postdoctoral*

2000-01 Intern, General Surgery, Stanford University Medical Center, Stanford, CA

2001-07 Resident, Neurosurgery, Stanford University Medical Center, Stanford, CA

### Professional Experience

2007-2013 Assistant Professor of Neurosurgery, Oncology, and Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

2013-2017 Associate Professor of Neurosurgery, Oncology, and Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

2017-Present Professor of Neurosurgery, Oncology, Otolaryngology, and Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

## PUBLICATIONS:

### Peer Reviewed Original Science Publications: \*Co-Authors,

1. Khimani AH, **Lim M**, Graf TG, Smith TF, Ruprecht RM. Complete Genome of Rauscher Murine Leukemia Virus and its Phylogenetic Relationship with Other Murine Leukemia Viruses. *Virology*.1997;(238);64-67.
2. Simons JW, Mikhak B, Chang JF, DeMarzo AD, Carducci MA, **Lim M**, Weber CE, Baccala AA, Goemann MA, Clift SM, Ando DG, Levitsky HI, Cohen LK, Sanda MG, Mulligan RC, Partin AW, Carter HB, Piantadosi S, Marshall FF, Nelson WG. Induction of Immunity to Prostate Cancer Antigens: Results of a Clinical Trial of Vaccination with Irradiated Autologous Prostate Tumor Cells Engineered to Secrete GM-CSF using *Ex Vivo* Gene Transfer. *Cancer Res*. 1999; Oct 15;59(20):5160-8.
3. Zhong H, DeMarzo AM, Laughner E, **Lim M**, Hilton DA, Zagzag D, Puechler P, Isaacs WB, Semenza GL, Simons JW. Overexpression of Hypoxia-Inducible Factor 1 Alpha in Common Human Cancers and Their Metastases. *Cancer Res*. 1999; Nov 15;59(22):5830-5.
4. **Lim M**, Gibbs I, Adler JR, Martin D, Chang S. The Efficacy of Linear Accelerator Radiosurgery In Treating Glomus Jugulare Tumors. *Technol Cancer Res Treat*. 2003; Jun;2(3):261-266.

5. **Lim M**, Gibbs I, Adler JR, Chang S. The Efficacy and Safety of Stereotactic Radiosurgery for Glomus Jugulare Tumors. *Neurosurgical Focus*. 2004; Aug;17(2): 68-72.
6. **Lim M**, Haddix T, Harsh GR, Vogel H, Steinberg G, Guccione S. Characterization of the Integrin  $\alpha\beta 3$  in Arteriovenous Malformations and Cavernous Malformations. *Cerebrovasc Dis*. 2005 May 30;20(1):23-27.
7. **Lim M**, Villavicencio A, Burneikiene S, Chang SD, Romanelli P, McNeely L, McIntyre M, Thramann JJ, Adler JR. Cyberknife Radiosurgery for Idiopathic Trigeminal Neuralgia. *Neurosurg Focus*. 2005; May;18(5):E9.
8. **Lim M**, Guccione S, Haddix T, Sims L, Cheshier SH, Chu P, Vogel H, Harsh GH.  $\alpha\beta 3$  Integrin in Central Nervous System Tumors. *Hum Pathol*. 2005; Jun;36(6):665-9.
9. Sinclair J, Marks MP, Levy RP, Adler JR, Chang SD, Lopez JR, Do HM, Bell-Stephens TE, **Lim M**, Steinberg GK. Visual Field Preservation Following Curative Multi-modality Treatment of Occipital Lobe Arteriovenous Malformations. *Neurosurg*. 2005; Oct 57(4): 655-67.
10. **Lim M**, Cotruz C, Romanelli P, Schaal D, Gibbs I, Chang SD, Adler JR. Stereotactic Radiosurgery Using CT Cisternography and Non-Isocentric Planning for the Treatment of Trigeminal Neuralgia. *Computer Aided Surgery* 2006; Jan 11(1):11-20.
11. Simons JW, Carducci MA, Mikhak B, **Lim M**, Biedrzycki B, Borrellini F, Clift SM, Hege KM, Ando DG, Piantadosi S, Mulligan R, Nelson WG. Phase I/II Trial of an Allogeneic Cellular Immunotherapy in Hormone-Naïve Prostate Cancer. *Clin Cancer Res*. 2006; Jun 1;12(11 Pt 1):3394-401.
12. **Lim M**, Bower R, Nangiana JS, Chang SD. Radiosurgery for Glomus Jugulare Tumors. *Technol Cancer Res Treat*. 2007; Oct;6(5):419-23.
13. Patil CG, Veeravagu A, Bower R, Li G, Chang SD, **Lim M**, Adler JR. Cyberknife Radiosurgery for the Treatment of Atypical Trigeminal Pain. *Neurosurg Focus*. 2007;23(6):E9.
14. Villavicencio A\*, **Lim M**\*, Burneikiene S, Romanelli P, Chang SD, McNeely L, Fariselli L, McIntyre M, Bower R, Broggi G, Thramann JJ, Adler JR. CyberKnife Radiosurgery for Trigeminal Neuralgia: A Multicenter Experience. *Neurosurg*. 2008; Mar(62)3:647-55.
15. Ford E, Purger D, Tryggestad E, McNutt T, Christodouleas J, Rigamonti D, Shokek O, Won S, Zhou J, **Lim M**, Wong J, Kleinberg L. A Virtual Frame System for Stereotactic Radiosurgery Planning. *Int J Radiat Oncol Biol Phys*. 2008;Nov 15;72(4):1244-9.
16. Adler JR, Bower R, Gupta G, **Lim M**, Efron A, Gibbs IC, Chang SD, Soltys SG. Nonisocentric Radiosurgical Rhizotomy for Trigeminal Neuralgia. *Neurosurg*. 2009; 64(2 suppl): A84-90.
17. Raza SM, Garzon-Muvdi T, Boahene K, Olivi A, **Lim M**, Subramanian P, Quinones-Hinojosa A. The Supraorbital Craniotomy for Access to the Skull Base and Intraaxial Lesions: A Technique in Evolution. *Minim Invasive Neurosurg*. 2010;Feb;53(1):1-8.
18. Frazier JL, Batra S, Kapur S, Gandhi R, Carson K, Shokek O, **Lim M**, Kleinberg L, and Rigamonti D. Stereotactic Radiosurgery in the Management of Brain Metastases: an institutional retrospective analysis of survival. *Int J Radiat Oncol Biol Phys*. 2010;Apr;76(5):1486-92.
19. Sun DQ, Cheng J, Frazier JL, Batra S, Wand G, Kleinberg LR, Rigamonti D, Quinones- Hinojosa A, Salvatori R, **Lim M**. Treatment of pituitary adenomas using radiosurgery and radiotherapy: A single center experience and review of literature. *Neurosurg Review*. 2010;Apr;34(2):181-9.
20. Boahene K, Chu E, **Lim M**, Quinones-Hinojosa A. Transpalpebral Orbitofrontal Craniotomy: A Minimally Invasive Approach to Anterior Cranial Vault Lesions. *Skull Base*. 2010; 20(4): 237-244.
21. Albesiano E, Davis M, See AP, Han JE, **Lim M**, Pardoll DM, Kim Y. Immunologic Consequences of Signal Transducers and Activators of Transcription 3 Activation in Human Squamous Cell Carcinoma. *Cancer Research*. 2010;Aug 15;70(16):6467-76. 2010.
22. Grossman R, Mukherjee R, Purtell M, **Lim M**, Brem H, Quinones-Hinojosa A. Predictors of Inpatient Death and Complications among Post-Operative Elderly Patients with Metastatic Brain Tumors. *Ann Surg Oncol*. 2011;Feb;18(2):521-8.
23. See AP\*, Zeng J\*, Tran P, **Lim M**. Acute Toxicity of Second Generation HIV Protease-Inhibitors in Combination With Radiotherapy: a Retrospective Case Series. *Radiat Oncol*. 2011; Mar 17;6:25.
24. Sun DQ, Carson KA, Raza SM, Batra S, Kleinberg LR, **Lim M**, Huang J, Rigamonti D. The radiosurgical treatment of arteriovenous malformations: obliteration, morbidities, and performance status. *Int J Radiat Oncol Biol Phys*. 2011;Jun 1;80(2):354-61.
25. Chan JYK, Li RJ, **Lim M**, Quinones A, Boahene K. Endoscopic Transvestibular Paramandibular Exploration of the Infratemporal Fossa and Parapharyngeal Space: A Minimally Invasive Approach to the Middle Cranial Base. *Laryngoscope*. 2011; Oct;121(10):2075-80.

26. Nguyen T, Hsu W, **Lim M**, Naff N. Stereotactic Radiosurgery: A Cross-Platform Comparison. *Neurol Res.* 2011; Oct;33(8):787-91.
27. Zeng J\*, See AP\*, Aziz K, Thiyagarajan S, Salih T, Gajula RP, Armour M, Phallen J, Terezakis S, Kleinberg L, Redmond K, Hales RK, Salvatori R, Quinones-Hinojosa, Tran PT\*, **Lim M\***. Nelfinavir Induces Radiation Sensitization in Pituitary Adenoma Cells. *CB&T.* 2011;Oct 1;12(7):657-63.
28. Guss ZG, Batra S, Limb CJ, Li G, Sughrue ME, Redmond K, Rigamonti DR, Parsa AT, Chang SD, Kleinberg L, **Lim M**. Radiosurgery of Glomus Jugulare Tumors: A Meta- Analysis. *Int J Radiat Oncol Biol Phys.* 2011,Nov 15;81(4):e497-502.
29. Bender MT, Pradilla G, James C, Raza S, **Lim M**, Carson BS. Surgical Treatment of Pediatric Trigeminal Neuralgia: Case Series and Review of the Literature. *Childs Nerv Syst.* 2011;Dec;27(12):2123-9.
30. Bender MT, Pradilla G, Batra S, See AP, Bhutiani, James C, Carson BS, **Lim M**. Effectiveness of Repeat Glycerol Rhizotomy in Treating Recurrent Trigeminal Neuralgia. *Neurosurg.* 2012;May;70(5):1125-33.
31. **Lim M\***, Bower R\*, Wang Y, Sims L, Cheshier S, Harsh GR, Steinberg GK, Guccione S. The Predictive Value of Serum Myeloperoxidase in Vasospasm in Patients with Aneurysmal Subarachnoid Hemorrhage. *Neurosurg Rev.* 2012;Jul;35(3):413-9.
32. Raza S, See AP, **Lim M**. Real-Time Imaging with the O-Arm for Skull Base Applications: A Cadaveric Feasibility Study. *J Neurol Surg B* 2012; 73(05): 293-301.
33. Jain A, Amin A, Jain P, Burger P, Jallo G, **Lim M**, Bettegowda C. Subependymoma: Clinical Features and Surgical Outcomes. *Neurological Research.* 2012 Sep;34(7):677-84.
34. Chaichana KL, Jackson C, Patel A, Miller NR, Subramanian P, **Lim M**, Gallia G, Olivi A, Weingart J, Brem H, Quiñones-Hinojosa A. Predictors of Visual Outcome Following Surgical Resection of Medial Sphenoid Wing Meningiomas. *J Neurol Surg B Skull Base.* 2012 Oct;73(5):321-6.
35. Chaichana KL, Pendleton C, Xaidi H, Olivi A, Weingart JD, Gallia GL, **Lim M**, Brem H, Quinones-Hinojosa A. Seizure Control for Patients Undergoing Meningioma Surgery. *World Neurosurg.* 2013 Mar-Apr;79(3-4):515-24.
36. Amin AG, Ng J, Hsu W, Pradilla G, Raza S, Quinones-Hinojosa A, **Lim M**. Postoperative Anticoagulation in Patients with Mechanical Heart Valves Following Surgical Treatment of Subdural Hematomas. *Neurocrit Care.* 2013 Aug;19(1):90-4.
37. Raza SM, Quinones-Hinojosa A, **Lim M**, Boahene KD. The Transconjunctival Transorbital Approach: A Keyhole Approach to the Midline Anterior Skull Base. *World Neurosurg.* 2013 Dec;80(6):864-71.
38. See AP, Han J, Phallen J, Binder Z, Gallia G, Pan F, Jinasena D, Jackson C, Belcaid Z, Jeong SJ, Gottschalk C, Zeng J, Ruzevick J, Nicholas S, Kim Y, Albesiano E, Pardoll DM, **Lim M**. The Role of STAT3 Activation in Modulating the Immune Microenvironment of GBM. *J Neurooncol.* 2012;110:359-68
39. Bender M, Pradilla G, Batra S, See AP, James C, Pardo C, Carson BS, **Lim M**. Glycerol Rhizotomy and Radiofrequency Thermocoagulation for Trigeminal Neuralgia in Multiple Sclerosis. *J Neurosurg.* 2013 Feb;118(2):329-36.
40. Chaichana KL, Pendleton C, Jackson C, Martinez-Gutierrez JC, Diaz-Stransky A, Aguayo J, Olivi A, Weingart J, Gallia G, **Lim M**, Brem H, Quinones-Hinojosa A. Deep Venous Thrombosis and Pulmonary Embolisms in Adult Patients Undergoing Craniotomy for Brain Tumors. *Neurol Res.* 2013;35(2):206-211.
41. Chaichana KL, Zadnik P, Weingart JD, Olivi A, Gallia GL, Blakeley J, **Lim M**, Brem H, Quinones-Hinojosa A. Multiple Surgical Resections for Patients with Glioblastoma: Prolonging Survival. *J Neurosurg.* 2013 Apr;118(4):812-20.
42. Zeng J, See AP, Phallen J, Jackson CM, Belcaid Z, Ruzevick J, Durham N, Meyer C, Harris TJ, Albesiano E, Pradilla G, Ford E, Wong J, Hammers HJ, Mathios D, Tyler B, Brem H, Tran PT, Pardoll D, Drake CG, **Lim M**. Anti-PD-1 blockade and stereotactic radiation produces long term survivors in mice with intracranial glioma. *Int J Radiat Oncol Biol Phys.* 2013 Jun 1;86(2):343-9.
43. Chaichana KL, Martinez-Gutierrez JC, De la Garza-Ramos R, Weingart JD, Olivi A, Gallia GL, Lim M, Brem H, Quinones-Hinojosa A. Factors associated with survival for patients with glioblastoma with poor pre-operative functional status. *J Clin Neurosci.* 2013 Jun;20(6):818-23.
44. Chen L, Guerrero-Cazares H, Ye X, Ford E, McNutt T, Kleinberg L, **Lim M**, Chaichana K, Quinones-Hinojosa A, Redmond K. Increased Subventricular Zone Radiation Dose Correlates with Survival in Glioblastoma Patients After Gross Total Resection. *Int J Radiat Oncol Biol Phys.* 2013 Jul 15;86(4):616-22

45. Chaichana KL, Flores M, Acharya S, Sampognaro P, Bettegowda C, Rigamonti D, Weingart JD, Olivi A, Gallia GL, Brem H, **Lim M**, Quinones-Hinojosa A. Survival and Recurrence for Patients Undergoing Surgery of Skull Base Intracranial Metastases. *J Neurol Surg B Skull Base*. 2013 Aug;74(4):228-35.
46. Chaichana KL, Pendleton C, Chambless L, Camara-Quintana J, Nathan JK, Hassam-Malani L, Li G, Harsh GR 4th, Thompson RC, **Lim M**, Quinones-Hinojosa A. Multi-Institutional Validation of a Preoperative Scoring System Which Predicts Survival for Patients with Glioblastoma. *J Clin Neurosci*. 2013 Oct;20 (10):1422-1426.
47. Zhou J, Zhu H, **Lim M**, Blair L, Quinones-Hinojosa A, Messina SA, Eberhart CG, Pomper MG, Lateral J, Barker PB, van Zijl PC, Blakeley JO. Three-dimensional amide proton transfer MR imaging of gliomas: Initial experience and comparison with gadolinium enhancement. *J Magn Reson Imaging*. 2013 Nov;38(5):1119-28.
48. Chaichana KL, Gadkaree S, Rao K, Link T, Rigamonti D, Purtell M, Browner I, Weingart J, Olivi A, Gallia G, Bettegowda C, Brem H, **Lim M**, Quinones-Hinojosa A. Patients Undergoing Surgery of Intracranial Metastases have Different Outcomes Based on their Primary Pathology. *Neurol Res*. 2013;35(10):1059-1069
49. Goodwin CR, Yang JX, Bettegowda C, Hwang B, James C, Biser A, Raza S, Bender M, Carson B, Lee JY, **Lim M**. Glycerol Rhizotomy via a Retrosigmoid Approach as an Alternative Treatment for Trigeminal Neuralgia. *Clin Neurol Neurosurg*. 2013. Dec;115(12):2454-6.
50. Chaichana KL, Rao K, Gadkaree S, Dangelmajer S, Bettegowda C, Rigamonti D, Weingart J, Olivi A, Gallia GL, Brem H, **Lim M**, Quinones-Hinojosa A. Factors Associated with Survival and Recurrence for Patients Undergoing Surgery of Cerebellar Metastases. *Neurol Res*. 2014 Jan;36(1):13-25.
51. Chaichana KL, Jusue-Torres I, Navarro-Ramirez R, Raza SM, Pascual-Gallego M, Ibrahim A, Hernandez-Hermann M, Gomez L, Ye X, Weingart JD, Olivi A, Blakeley J, Gallia GL, **Lim M**, Brem H, Quinones-Hinojosa A. Establishing percent resection and residual volume thresholds affecting survival and recurrence for patients with newly diagnosed intracranial glioblastoma. *Neuro Oncol*. 2014 Jan;16(1):113-22.
52. Bettegowda C, Sausen M, Leary RJ, Kinde I, Wang Y, Agrawal N, Bartlett BR, Wang H, Lubner B, Alani RM, Antonarakis ES, Azad NS, Bardelli A, Brem H, Cameron JL, Lee CC, Fecher LA, Gallia GL, Gibbs P, Le D, Giuntoli RL, Goggins M, Hogarty MD, Holdhoff M, Hong SM, Jiao Y, Juhl HH, Kim JJ, Siravegna G, Laheru DA, Lauricella C, **Lim M**, Lipson EJ, Marie SK, Netto GJ, Oliner KS, Olivi A, Olsson L, Riggins GJ, Sartore-Bianchi A, Schmidt K, Shih IM, Oba-Shinjo SM, Siena S, Theodorescu D, Tie J, Harkins TT, Veronese S, Wang TL, Weingart JD, Wolfgang CL, Wood LD, Xing D, Hruban RH, Wu J, Allen PJ, Schmidt CM, Choti MA, Velculescu VE, Kinzler KW, Vogelstein B, Papadopoulos N, Diaz LA Jr. Detection of circulating tumor DNA in early- and late-stage human malignancies. *Sci Transl Med*. 2014 Feb 19;6(224):224ra24.
53. Hansen TM, Batra S, **Lim M**, Gallia GL, Burger PC, Salvatori R, Wand G, Quinones-Hinojosa A, Kleinberg L, Redmond KJ. Invasive Adenoma and Pituitary Carcinoma: a SEER Database Analysis. *Neurosurg. Rev*. 2014 Apr;37(2):279-85.
54. Sengupta S, Weeraratne SD, Sun H, Phallen J, Rallapalli SK, Teider N, Kosaras B, Amani V, Pierre-Francois J, Tang Y, Nguyen B, Yu F, Schubert S, Balansay B, Mathios D, Lechpammer M, Archer TC, Tran P, Reimer RJ, Cook JM, **Lim M**, Jensen FE, Pomeroy SL, Cho YJ.  $\alpha 5$ -GABAA receptors negatively regulate MYC-amplified medulloblastoma growth. *Acta Neuropathol*. 2014 Apr;127(4):593-603.
55. Walker AJ, Ruzevick J, Malayeri AA, Rigamonti D, **Lim M**, Redmond KJ, Kleinberg L. Postradiation Imaging Changes in the CNS: How Can We Differentiate Between Treatment Effect and Disease Progression? *Future Oncol*. 2014 May;10(7):1277-97.
56. Gordon CR, Fisher M, Liauw J, Lina I, Puvanesarajah V, Susarla S, Coon A, **Lim M**, Quinones-Hinojosa A, Weingart J, Colby G, Olivi A, Huang J. Multidisciplinary Approach for Improved Outcomes in Secondary Cranial Reconstruction: Introducing the Pericranial-onlay Cranioplasty Technique. *Neurosurgery*. 2014 Jun;10 Suppl 2:179-89.
57. Belcaid Z, Phallen JA, Zeng J, See AP, Mathios D, Gottschalk C, Nicholas S, Kellett M, Ruzevick J, Jackson C, Albesiano E, Durham NM, Ye X, Tran PT, Tyler B, Wong JW, Brem H, Pardoll DM, Drake CG, **Lim M**. Focal radiation therapy combined with 4-1BB activation and CTLA-4 blockade yields long-term survival and protective antigen-specific memory response in a murine glioma model. *PLOS One*. 2014. July;9(7):e101764.
58. Jurse-Torres I, Recinos PF, Quinones-Hinojosa, **Lim M**. Technical Nuances of Microvascular Decompression of the Posterior Fossa Cranial Nerves: 3-D Operative Video. *Neurosurg*. 2014 Jun 30;62.

59. Chaichana KL, Acharya S, Flores M, Wijesekera O, Rigamonti D, Weingart JD, Olivi A, Bettegowda C, Gallia GL, Brem H, **Lim M**, Quinones-Hinojosa A. Identifying Better Surgical Candidates Among Recursive Partitioning Analysis Class 2 Patients who Underwent Surgery for Intracranial Metastases. *World Neurosurg*. 2014 Jul-Aug;82(1-2):e267-75.
60. Herrmann A, Cherryholmes G, Schroeder A, Phallen J, Alizadeh D, Xin H, Wang T, Lee H, Lahtz C, Swiderski P, Armstrong B, Kowolik C, Gallia GL, **Lim M**, Brown C, Badie B, Forman S, Kortylewski M, Jove R, Yu H. TLR9 Is Critical for Glioma Stem Cell Maintenance and Targeting. *Cancer Res*. 2014 Sep 15;74(18):5218-28.
61. Chen CW, Puvanesarajah V, Lo SF, Cheng TJ, Cheng CY, **Lim M**, Lin HJ. Selective Cerebral Hypothermia Induced via Hypothermic Retrograde Jugular Vein Saline Flush in a Porcine Model. *Neurol Res*. 2014 Oct;36(10):897-902.
62. Kang J, Huang J, Gailloud P, Rigamonti D, **Lim M**, Bernard V, Ehtiati T, Ford EC. Planning Evaluation of C-arm Cone Beam CT Angiography for Target Delineation in Stereotactic Radiation Surgery of Brain Arteriovenous Malformations. *Int J Radiat Oncol Biol Phys*. 2014 Oct 1;90(2):430-7.
63. Mathios D, Ruzevick J, Jackson CM, Xu H, Shah S, Taube JM, Burger PC, McCarthy EF, Quinones-Hinojosa A, Pardoll DM, **Lim M**. PD-1, PD-L1, PD-L2 Expression in the Chordoma Microenvironment. *J Neurooncol*. 2015 Jan;121(2):251-9.
64. Ruzevick J, Raza SM, Recinos PF, Chaichana K, Pradilla G, Kim JE, Olivi A, Weingart J, Evans J, Quinones-Hinojosa A, **Lim M**. Technical note: Orbitozygomatic Craniotomy Using an Ultrasonic Osteotome for Precise Osteotomies. *Clin Neurol Neurosurg*. 2015 Apr 13;134:24-27.
65. Chaichana KL, Kone L, Bettegowda C, Weingart JD, Olivi A, **Lim M**, Quinones-Hinojosa A, Gallia GL, Brem H. Risk of Surgical Site Infection in 401 Consecutive Patients with Glioblastoma with and without Carmustine Wafer Implantation. *Neurol Res*. 2015 Apr 28;1743132815.
66. Berli JU, Thomaier L, Zhong S, Huang J, Quinones A, **Lim M**, Weingart J, Brem H, Gordon CR. Immediate Single-Stage Cranioplasty Following Calvarial Resection for Benign and Malignant Skull Neoplasms Using Customized Craniofacial Implants. *J Craniofac Surg*. 2015 Jul;26(5):1456-62.
67. Mathios D, Park CK, Marcus WD, Alter S, Rhode PR, Jeng EK, Wong HC, Pardoll DM, **Lim M**. Therapeutic Administration of IL-15 Superagonist Complex ALT-803 Leads to Long-Term Survival and Durable Antitumor Immune Response in a Murine Glioblastoma Model. *Int Journal of Cancer*. 2015 Jul 14.
68. Wang Y, Springer S, Zhang M, McMahon KW, Kinde I, Dobbyn L, Ptak J, Brem H, Chaichana K, Gallia GL, Gokaslan ZL, Groves ML, Jallo GI, **Lim M**, Olivi A, Quinones-Hinojosa A, Rigamonti D, Riggins GJ, Sciubba DM, Weingart JD, Wolinsky JP, Ye X, Oba-Shinjo SM, Marie SK, Holdhoff M, Agrawal N, Diaz LA Jr, Papadopoulos N, Kinzler KW, Vogelstein B, Bettegowda C. Detection of Tumor-Derived DNA in Cerebrospinal Fluid of Patients with Primary Tumors of the Brain and Spinal Cord. *Proc Natl Acad Sci U S A*. 2015 Jul 20. pii: 201511694
69. Puvanesarajah V, Lo SF, Aygun N, Liauw JA, Jusué-Torres I, Lina IA, Hadelsberg U, Elder BD, Bydon A, Bettegowda C, Sciubba DM, Wolinsky JP, Rigamonti D, Kleinberg LR, Gokaslan ZL, Witham TF, Redmond KJ, **Lim M**. Prognostic Factors Associated with Pain Palliation in Spine Stereotactic Body Radiation Therapy. *JNS Spine*. 2015 Jul 31:1-10.
70. Eseonu CI, Goodwin CR, Zhou X, Theodros D, Bender M, Mathios D, Bettegowda C, **Lim M**. Reduced CSF Leak in Complete Calvarial Reconstructions of Microvascular Decompression Craniectomies using Calcium Phosphate Cement. *JNS*. 2015 Jul 31:1-4.
71. Ringkamp M, Wooten M, Carson BS Sr, **Lim M**, Hartke T, Guarnieri M. Laser Speckle Imaging to Improve Clinical Outcomes for Patients with Trigeminal Neuralgia Undergoing Radiofrequency Thermocoagulation. *J Neurosurg*. 2015 Aug 14:1-7.
72. Chettiar ST, Malek R, Annadanam A, Nugent KM, Kato Y, Wang H, Cades JA, Taparra K, Belcaid Z, Ballew M, Manmiller S, Proia D, **Lim M**, Anders RA, Herman JM, Tran PT. Ganetespib radiosensitization for liver cancer therapy. *Cancer Biol Ther*. 2016 Mar 16:0.
73. Jackson CM, Kochel CM, Nirschl CJ, Durham NM, Ruzevick J, Alme A, Francisca BJ, Elias J, Daniels A, Dubensky TW, Lauer P, Brockstedt DG, Baxi EG, Calabresi PA, Taube JM, Pardo CA, Brem H, Pardoll DM, **Lim M\***, Drake CG\*. Systemic Tolerance Mediated by Melanoma Brain Tumors is Reversible by Radiotherapy and Vaccination. *Clin Cancer Res*. 2016 Mar 1;22(5):1161-72. Cover Article.
74. Binder ZA, Wilson KM, Salmasi V, Orr BA, Eberhart CG, Siu IM, **Lim M**, Weingart JD, Quinones-Hinojosa A, Bettegowda C, Kassam AB, Olivi A, Brem H, Riggins GJ, Gallia GL. Establishment and

- Biological Characterization of a Panel of Glioblastoma Multiforme (GBM) and GBM Variant Oncosphere Cell Lines. *PLoS One*. 2016 Mar 30;11(3):e0150271.
75. Shen CJ, Kummerlowe MN, Redmond KJ, Rigamonti D, **Lim MK**, Kleinberg LR. Stereotactic Radiosurgery: Treatment of Brain Metastasis Without Interruption of Systemic Therapy. *Int J Radiat Oncol Biol Phys*. 2016 Jun 1;95(2):735-42.
  76. Narang AK, Chaichana KL, Weingart JD, Redmond KJ, **Lim M**, Olivi A, Quinones-Hinojosa A, Kleinberg LR. Progressive low-grade glioma: Assessment of Prognostic Importance of Histologic Reassessment and MRI findings. *World Neurosurg*. 2016 Apr 19. pii: S1878-8750(16)30157-7.
  77. Patel MA\*, Kim JE\*, Theodros D, Tam A, Velarde E, Kochel CM, Francica B, Nirschl TR, Ghasemzadeh A, Mathios D, Harris-Bookman S, Jackson CC, Jackson C, Ye X, Tran PT, Tyler B, Coric V, Selby M, Brem H, Drake CG, Pardoll DM, **Lim M**. Agonist anti-GITR Monoclonal Antibody and Stereotactic Radiation Induce Immune-Mediated Survival Advantage in Murine Intracranial Glioma. *J Immunother Cancer*. 2016 May 17;4:28.
  78. Kim JE\*, Patel MA\*, Mangraviti A, Kim ES, Theodros D, Velarde E, Liu A, Sankey EW, Tam A, Xu H, Mathios D, Jackson CM, Harris-Bookman S, Garzon-Muvdi T, Sheu M, Martin AM, Tyler B, Tran P, Ye X, Olivi A, Taube J, Burger P, Drake CG, Brem H, Pardoll DM, **Lim M**. Combination Therapy with anti-PD-1, anti-TIM-3, and Focal Radiation Results in Regression of Murine Gliomas. *Clin Cancer Res*. 2017 Jan 1;23(1):124-136.
  79. Northcutt BG, Seeburg DP, Shin J, Aygun N, Herzka DA, Theodros D, Goodwin CR, Bettgowda C, **Lim M**, Blitz AM. High-Resolution MRI Findings Following Trigeminal Rhizotomy. *AJNR Am J Neuroradiol*. 2016 Jun 30.
  80. Maxwell R, Garzon-Muvdi T, Lipson EJ, Sharfman WH, Bettgowda C, Redmond KJ, Kleinberg LR, Ye X, **Lim M**. BRAF-V600 Mutational Status Affects Recurrence Patterns of Melanoma Brain Metastasis. *Int J Cancer*. 2016 Jun 25.
  81. Salzberg SL, Breitwieser FP, Kumar A, Hao H, Burger P, Rodriguez FJ, **Lim M**, Quiñones-Hinojosa A, Gallia GL, Tornheim JA, Melia MT, Sears CL, Pardo CA. Next-generation Sequencing in Neuropathologic Diagnosis of Infections of the Nervous System. *Neurol Neuroimmunol Neuroinflamm*. 2016 Jun 13;3(4):e251.
  82. Theodros D, Rory Goodwin C, Bender MT, Zhou X, Garzon-Muvdi T, De la Garza-Ramos R, Abu-Bonsrah N, Mathios D, Blitz AM, Olivi A, Carson B, Bettgowda C, **Lim M**. Efficacy of Primary Microvascular Decompression Versus Subsequent Microvascular Decompression for Trigeminal Neuralgia. *J Neurosurg*. 2016 Jul 15:1-7.
  83. Ung N, Mathur M, Chung LK, Cremer N, Pelargos P, Frew A, Thill K, Mathur I, Voth B, **Lim M**, Yang I. A Systematic Analysis of the Reliability of Diffusion Tensor Imaging Tractography for Facial Nerve Imaging in Patients with Vestibular Schwannoma. *J Neurol Surg B Skull Base*. 2016 Aug;77(4):314-8.
  84. Rong X, Yang W, Garzon-Muvdi T, Caplan JM, Hui X, **Lim M**, Huang J. Influence of Insurance Status on Survival of Adults with Glioblastoma Multiforme: A Population-Based Study. *Cancer*. 2016 Aug 8.
  85. Mian OY, Thomas O, Lee JJ, Le Y, McNutt T, **Lim M**, Rigamonti D, Wolinsky JP, Sciubba DM, Gokaslan ZL, Redmond K, Kleinberg L. Timely Stereotactic Body Radiotherapy (SBRT) for Spine Metastases Using a Rapidly Deployable Automated Planning Algorithm. *Springerplus*. 2016 Aug 11;5(1):1337.
  86. Roxbury CR, Saavedra T, Ramanathan M Jr, **Lim M**, Ishii M, Gallia GL, Reh DD. Layered sellar reconstruction with avascular free grafts: Acceptable Alternative to the Nasoseptal Flap for Repair of Low-Volume Intraoperative Cerebrospinal Fluid Leak. *Am J Rhinol Allergy*. 2016 Sep;30(5):367-71.
  87. Shen C, Lin DD, Redmond KJ, Link K, Kummerlowe M, Douglass J, Lipson EJ, Sharfman W, Bettgowda C, **Lim M**, Kleinberg LR. Imaging and Clinical Profile Following Concurrent Stereotactic Radiation and Immune Therapy for Melanoma Brain Metastases: Preliminary Results. *Int J Radiat Oncol Biol Phys*. 2016 Oct 1;96(2S):E134.
  88. Shen CJ, Rigamonti D, Redmond KJ, Kummerlowe MN, **Lim M**, Kleinberg LR. The Strategy of Repeat Stereotactic Radiosurgery without Whole Brain Radiation Treatment for New Brain Metastases: Outcomes and Implications for Follow-up Monitoring. *Pract Radiat Oncol*. 2016 Nov - Dec;6(6):409-416.
  89. Mathios D, Kim J, Mangraviti A, Phallen J, Park CK, Jackson CM, Garzon-Muvdi T, Kim E, Theodros D, Polanczyk M, Martin AM, Suk I, Ye X, Tyler B, Bettgowda C, Brem H, Pardoll DM, **Lim M**. Anti-PD-1 Mediated Anti-Tumor Immune Response in GBM is Enhanced by Local Chemotherapy and Abrogated by Systemic Chemotherapy. *Sci Transl Med*. 2016 Dec 21;8(370):370ra180.



90. Kessler RA, Garzon-Muvdi T, Yang W, Weingart J, Olivi A, Huang J, Brem H, **Lim M**. Metastatic Atypical and Anaplastic Meningioma: A Case Series and Review of the Literature. *World Neurosurg*. 2017 May;101:47-56.
91. Wu A, Weingart JD, Gallia GL, **Lim M**, Brem H, Bettgowda C, Chaichana KL. Risk Factors for Preoperative Seizures and Loss of Seizure Control in Patients Undergoing Surgery for Metastatic Brain Tumors. *World Neurosurg*. 2017 May 13. pii: S1878-8750(17)30716-7.
92. Garzon-Muvdi T, Yang W, **Lim M**, Brem H, Huang J. Atypical and Anaplastic Meningioma: Outcomes in a Population Based Study. *J Neuroonc*. 2017. Jun;133(2):321-330.
93. Marciscano AE, Huang J, Tamargo RJ, Hu C, Khattab MH, Aggarwal S, **Lim M**, Redmond KJ, Rigamonti D, Kleinberg LR. Long-term Outcomes With Planned Multistage Reduced Dose Repeat Stereotactic Radiosurgery for Treatment of Inoperable High-Grade Arteriovenous Malformations: An Observational Retrospective Cohort Study. *Neurosurgery*. 2017 Jul 1;81(1):136-146.
94. Bloch O, **Lim M**, Sughrie ME, Komotar RJ, Abrahams JM, O'Rourke DM, D'Ambrosio A, Bruce JN, Parsa AT. Autologous Heat Shock Protein Peptide Vaccination for Newly Diagnosed Glioblastoma: Impact of Peripheral PD-L1 Expression on Response to Therapy. *Clin Cancer Res*. 2017 Jul 15;23(14):3575-3584.
95. Jiang S, Eberhart CG, Zhang Y, Heo HY, Wen Z, Blair L, Qin H, **Lim M**, Quinones-Hinojosa A, Weingart JD, Barker PB, Pomper MG, Laterra J, van Zijl PCM, Blakeley JO, Zhou J. Amide Proton Transfer-Weighted Magnetic Resonance Image-Guided Stereotactic Biopsy in Patients with Newly Diagnosed Gliomas. *Eur J Cancer*. 2017 Jul 10;83:9-18.
96. Chen L, Shen C, Redmond KJ, Page BR, Kummerlowe M, McNutt T, Bettgowda C, Rigamonti D, **Lim M**, Kleinberg L. Use of Stereotactic Radiosurgery in Elderly and Very Elderly Patients With Brain Metastases to Limit Toxicity Associated With Whole Brain Radiation Therapy. *Int J Radiat Oncol Biol Phys*. 2017 Jul 15;98(4):939-947.
97. Jiang S, Eberhart CG, Zhang Y, Heo HY, Wen Z, Blair L, Qin H, **Lim M**, Quinones-Hinojosa A, Weingart JD, Barker PB, Pomper MG, Laterra J, van Zijl PCM, Blakeley JO, Zhou J. Amide Proton Transfer-Weighted Magnetic Resonance Image-Guided Stereotactic Biopsy in Patients with Newly Diagnosed Gliomas. *Eur J Cancer*. 2017 Sep;83:9-18.
98. Weller M, Butowski N, Tran DD, Recht LD, **Lim M**, Hirte H, Ashby L, Mechtler L, Goldlust SA, Iwamoto F, Drappatz J, O'Rourke DM, Wong M, Hamilton MG, Finocchiaro G, Perry J, Wick W, Green J, He Y, Turner CD, Yellin MJ, Keler T, Davis TA, Stupp R, Sampson JH. Rindopepimut with Temozolomide for Patients With Newly Diagnosed, EGFRvIII-Expressing Glioblastoma (ACT IV): a Randomised, Double-blind, International Phase 3 trial. *Lancet Oncol*. 2017 Aug 22. pii: S1470-2045(17)30517.
99. Patel MA, Marciscano AE, Hu C, Jusúé-Torres I, Garg R, Rashid A, Francis HW, **Lim M**, Redmond KJ, Rigamonti D, Kleinberg LR. Long-term Treatment Response and Patient Outcomes for Vestibular Schwannoma Patients Treated with Hypofractionated Stereotactic Radiotherapy. *Front Oncol*. 2017 Sep 4;7:200.
100. Omuro A, Vlahovic G, **Lim M**, Sahebjam S, Baehring J, Cloughesy T, Voloschin A, Ramkissoon SH, Ligon KL, Latek R, Zwirter R, Strauss L, Paliwal P, Harbison CT, Reardon DA, Sampson JH. Nivolumab with or without ipilimumab in patients with recurrent glioblastoma: results from exploratory phase 1 cohorts of CheckMate 143. *Neuro Oncol*. 2017 Oct 28. Epub ahead of print.
101. Ehresman JS, Garzon-Muvdi T, Rogers D, **Lim M**, Gallia GL, Weingart J, Brem H, Bettgowda C, Chaichana KL. The Relevance of Simpson Grade Resections in Modern Neurosurgical Treatment of World Health Organization Grade I, II, and III Meningiomas. *World Neurosurg*. 2017 Oct 16. Epub ahead of print.
102. Ehresman JS, Garzon-Muvdi T, Rogers D, **Lim M**, Gallia GL, Weingart J, Brem H, Bettgowda C, Chaichana KL. The Relevance of Simpson Grade Resections in Modern Neurosurgical Treatment of World Health Organization Grade I, II, and III Meningiomas. *World Neurosurg*. 2017 Oct 16. pii: S1878-8750(17)31755-2.
103. Roxbury CR, Magruder JT, Ramanathan M, **Lim M**, Gallia GL, Ishii M, Reh DD. Postoperative Sinonasal Morbidity in Sellar Reconstruction: Mucosal Autograft versus Acellular Dermal Allograft. *Int Forum Allergy Rhinol*. 2017 Dec;7(12):1178-1185.
104. Omuro A, Vlahovic G, **Lim M**, Sahebjam S, Baehring J, Cloughesy T, Voloschin A, Ramkissoon SH, Ligon KL, Latek R, Zwirter R, Strauss L, Paliwal P, Harbison CT, Reardon DA, Sampson JH. Nivolumab with or without ipilimumab in patients with recurrent glioblastoma: results from exploratory phase 1 cohorts of CheckMate 143. *Neuro Oncol*. 2017 Oct 28. *In Press*.

105. Stone ML, Chiappinelli KB, Li H, Murphy LM, Murphy LM, Travers ME, Topper, M, Mathios D, **Lim M**, Shih IM, Wang TL, Hung CF, Bhargava V, Wiehagen KR, Cowley GS, Bachman KE, Strick R, Strissel PL, Baylin SB, Zahnow CA. Epigenetic Therapy Activates Type I Interferon Signaling in Murine Ovarian Cancer to Reduce Immunosuppression and Tumor Burden. *Proc Natl Acad Sci U S A*. 2017 Dec 19;114(51):E10981-E10990.
106. Chen L, Douglass J, Kleinberg L, Ye X, Marciscano AE, Forde PM, Brahmer J, Lipson E, Sharfman W, Hammers H, Naidoo J, Bettegowda C, **Lim M\***, Redmond KJ\*. Concurrent Immune Checkpoint Inhibitors and Stereotactic Radiosurgery for Brain Metastases in Non-Small Cell Lung Cancer, Melanoma, and Renal Cell Carcinoma. *Int J Radiat Oncol Biol Phys*. 2018 Mar 15;100(4):916-925.
107. Wolff A, Santiago GF, Belzberg M, Huggins C, **Lim M**, Weingart J, Anderson W, Coon A, Huang J, Brem H, Gordon C. Adult Cranioplasty Reconstruction With Customized Cranial Implants: Preferred Technique, Timing, and Biomaterials. *J Craniofac Surg*. 2018 Feb 27. Epub ahead of print.
108. Martin A, Nirschl C, Polanczyk M, Bell W, Nirschl T, Harris-Bookman S, Phallen J, Hicks J, Martinez D, Ogurtsova A, Xu H, Sullivan L, Meeker A, Raabe E, Cohen K, Eberhart C, Burger P, Santi M, Taube JM, Pardoll D, Drake C, **Lim M**. PD-L1 Expression in Medulloblastoma: an Evaluation by Subgroup. *Oncotarget*. 2018 Apr 10;9(27):19177-19191.
109. Garzon-Muvdi T, Theodros D, Luksik A, Maxwell R, Kim E, Jackson C, Belcaid Z, Ganguly S, Tyler B, Brem H, Pardoll DM, Lim M. Dendritic Cell Activation enhances anti-PD-1 Mediated Immunotherapy against Glioblastoma. *Oncotarget*. 2018 Apr 17;9(29):20681-20697
110. Hung A, Maxwell R, Theodros D, Belcaid Z, Mathios D, Luksik A, Kim E, Wu A, Xia Y, Jackson C, Garzon-Muvdi T, Ye X, Tyler B, Selby M, Korman A, Barnhart B, Park SM, Youn JI, Chowdhury T, Park CK, Brem H, Pardoll D, **Lim M**. TIGIT and PD-1 Dual Checkpoint Blockade Enhances Antitumor Immunity and Survival in a Murine Glioma Model. *Onco-Immunol*. In Press.
111. Harris S, Mathios D, Martin A, Xia Y, Kim E, Xu H, Belcaid Z, Polanczyk M, Barberi T, Theodros D, Kim J, Taube J, Burger P, Selby M, Taitt C, Korma A, Ye X, Drake C, Pardoll DM, **Lim M**. Expression of LAG-3 in Human Glioblastoma and Efficacy of Combination Treatment with anti-LAG-3 and anti-PD-1 Monoclonal Antibodies in a Murine Glioblastoma Model. *IJC*. In Press.
112. Barberi T, Martin A, Suresh R, Barakat DJ, Harris-Bookman S, Drake CG, **Lim M**, Friedman AD. Absence of Host NF-kB p50 Induces Murine Glioblastoma Tumor Regression, Increases Survival, and Decreases T Cell Induction of Tumor-Associated Macrophage M2 Polarization. *Cancer Immunol. Immunoth*. In Press.
113. Wu A, Doshi T, Hung A, Garzon-Muvdi T, Bender MT, Bettegowda C, **Lim M**. Immediate and Long-term Outcomes of Microvascular Decompression for Mixed Trigeminal Neuralgia. *World Neurosurg*. 2018 Jun 12. pii: S1878-8750(18)31230-0.

\*- co-first of co-senior

### Review Articles

1. **Lim M** Simons JW. Emerging concepts in GM-CSF Gene Transduced Tumor Vaccines for Human Prostate Cancer. *Current Opinion in Molecular Therapeutics* 1999; (1):64-71.
2. Sims L, **Lim M**, Harsh GH. Management of Brain Abscesses. *Operative Techniques in Neurosurgery* 2004; Dec;7(4):176-181.
3. Ryu S, **Lim M**, Harsh GH. Management of Epidural Abscesses and Subdural Empyemas. *Operative Techniques in Neurosurgery* 2004; Dec;7(4):182-187.
4. **Lim M\***, Cheshier SH\*, Steinberg GK. New Vessel Formation in the Central Nervous System During Tumor Growth, Vascular Malformations, and MoyaMoya. *Neurovasc Research*. 2006; Aug (3):237-245.
5. Lad SP, Guzman R, Kelly ME, Li G, **Lim M**, Lovbald K, Steinberg GK. Cerebral Perfusion Imaging in Vasospasm: an Overview. *Neurosurgical Focus*. 2006; Sep 21 (3):E7.
6. Bower R, **Lim M**, Harsh GR. Current State of Immunotherapy for Gliomas – Part I. *Contemporary Neurosurgery*. 2007; Jul(1):1-6.
7. Bower R, **Lim M**, Harsh GR. Current State of Immunotherapy for Gliomas – Part II. *Contemporary Neurosurgery*. 2007; Jul(2):1-8.
8. Li G, Chang SD, Adler JR, **Lim M**. Irradiation of Glomus Jugulare Tumors: a Historical Perspective. *Neurosurgical Focus*. 2007;23(6):E13.
9. Nangiana JS, **Lim M**, Silva R, Guzman R, Chang SD. Vein of Galen Malformations Part I. *Contemporary Neurosurgery*. 2008;30(4):1-8.



10. Nangiana JS, **Lim M**, Silva R, Guzman R, Chang SD. Vein of Galen Malformations Part II. *Contemporary Neurosurgery*. 2008;30(5):1-8.
11. Cheshier SH, Kalani MYS, **Lim M**, Ailles L, Huhn SL, Weissman IL. A Neurosurgeon's Guide to Stem Cells, Cancer Stem Cells, and Brain Tumor Stem Cells. *Neurosurgery*. 2009;Aug;65(2):237-49.
12. Guss ZD, Batra S, Li G, Chang SD, Parsa AT, Rigamonti D, Kleinberg L, **Lim M**. Radiosurgery of Glomus Jugulare: History and Recent Progress. *Neurosurg Focus*. 2009; Dec;27(6):E5.
13. Albesiano E, Han J, **Lim M**. Mechanisms of Local Immuno-resistance in Gliomas. *Neurosurg Clin N Am*. 2010; Jan;21(1):17-29.
14. Han SJ, Kaur G, Yang I, **Lim M**. Biologic Principles of Immunotherapy for Glioma Immunotherapy. *Neurosurg Clin N Am*. 2010; Jan;21(1):1-16.
15. Frazier J, **Lim M**, Olivi A. Immunotherapy Combined with Chemotherapy in the Treatment of Tumors. *Neurosurg Clin N Am*. 2010; Jan;21(1):187-94.
16. Hsu W, Nguyen T, Kretzer R, Kleinberg L, Ford E, Rigamonti D, Gokasalan Z, **Lim M**. Stereotactic Radiosurgery for Spine Tumors: Review of Current Literature. *Stereotactic and Functional Neurosurgery*. 2010;88(5):315-21.
17. See AP, Pradilla G, Yang I, Han S, Parsa AT, **Lim M**. Heat Shock Protein-Peptide Complex (HSPPC-96, Oncophage) in the Treatment of Glioblastoma. *Expert Review of Vaccines*. 2011;Jun 10(6);721-731.
18. Jackson C, Jallo G, **Lim M**. Clinical Outcomes After Treatment of Germ Cell Tumors. *Neurosurg Clin N Am*. 2011;Jul;22(3):385-94.
19. Jackson C, Ruzevick J, Phallen J, Belcaid Z, **Lim M**. Challenges in Immunotherapy Presented by the Glioblastoma Multiforme Microenvironment. *Clin and Dev Immunol*. 2011; 2011:732413.
20. See AP, Raza S, Tamargo R, **Lim M**. Stereotactic Radiosurgery for AVMs. *Neurosurg Clin N Am*. 2012; Jan;23(1):133-46.
21. Ruzevick J, **Lim M**. Clinical Trials with Immunotherapy. *Neurosurg Clin of N Am*. 2012 Jul;23(3):459-70. Epub 2012 Jun 8.
22. Jackson C, Ruzevick J, Amin A, **Lim M**. Potential Role for STAT3 Inhibitors in Glioblastoma. *Neurosurg Clin of N Am*. 2012 Jul;23(3):379-89. Epub 2012 Jun 5.
23. Han SJ, Zygorakis C, **Lim M**, Parsa AT. Immunotherapy for glioma: promises and challenges. *Neurosurg Clin N Am*. 2012 Jul;23(3):357-70.
24. Jackson C, Ruzevick J, Brem H, **Lim M**. Vaccine strategies for Glioblastoma: Progress and Future Directions. *Immunotherapy*. 2013 Feb;5(2):155-67.
25. Nicholas S, Mathios D, Jackson C, **Lim M**. Metastatic Melanoma to the Brain: Surgery and Radiation is Still the Standard of Care. *Curr Treat Options Oncol*. 2013 Mar 14(2): 264-279.
26. Nicolas S, Mathios D, Ruzevick J, Jackson C, Yang I, **Lim M**. Current Trends in Glioblastoma Multiforme Treatment: Radiation Therapy and Immune Checkpoint Inhibitors. *Brain Tumor Res Treat*. 2013 Apr :1:2-8.
27. Zeng J, Harris TJ, **Lim M**, Drake CG, Tran PT. Immune Modulation and Stereotactic Radiation: Improving Local and Abscopal Responses. *BioMed Research International*. 2013; In Press
28. Kim JE, Patel M, Ruzevick J, Jackson CM, **Lim M**. STAT3 Activation in Glioblastoma: Biochemical and Therapeutic Implications. *Cancers (Basel)*. 2014 Feb 10;6(1):376-95.
29. Ooi YC, Tran P, Ung N, Thill K, Trang A, Fong BM, Nagasawa DT, Lim M, Yang I. The Role of Regulatory T-cells in Glioma Immunology. *Clin Neurol Neurosurg*. 2014 Jan 3. pii: S0303-8467(13)00508-8.
30. Jackson CM, **Lim M**, Drake CG. Immunotherapy for Brain Cancer: Recent Progress and Future Promise. *Clin Cancer Res*. 2014; 20(14):3651-9.
31. Patel MA, Kim JE, Ruzevick J, Li G, **Lim M**. The Future of Glioblastoma Therapy: Synergism of Standard of Care and Immunotherapy. *Cancers (Basel)*. 2014 Sep 29;6(4):1953-85.
32. Kim JE, **Lim M**. Neurocytoma of the Spinal Cord. *Neurosurg Clin N Am*. 2015 Jan;26(1):109-15.
33. Kim JE, **Lim M**. The Role of Checkpoints in the Treatment of GBM. *J Neurooncol*. 2015 Mar 7. 123 (3), 413-423
34. Chow KK, Hara W, **Lim M**, Li G. Combining Immunotherapy with Radiation for the Treatment of Glioblastoma. *J Neurooncol*. 2015 Apr 17.
35. Sharabi AB, Tran PT, **Lim M**, Drake CG, Dewese TL. Stereotactic Radiation Therapy Combined With Immunotherapy: Augmenting the Role of Radiation in Local and Systemic Treatment. *Oncology*. 2015 May 15;29(5).

37. **Lim M** Immunotherapy for Glioblastoma: Are We Finally Getting Closer? *Neuro Oncol.* 2015 Jun;17(6):771-772.
38. **Lim M**, Liao LM. Introduction: Brain Tumor Immunotherapy. *J Neurooncol.* 2015 Jul;123(3):321-2.
39. Perng P, **Lim M**. Immunosuppressive Mechanisms of Malignant Gliomas: Parallels at Non-CNS Sites. *Front Oncol.* 2015 Jul 6;5:153.
40. Preusser M, **Lim M**, Hafler DA, Reardon DA, Sampson JH. Prospects of Immune Checkpoint Modulators in the Treatment of Glioblastoma. *Nat. Reviews Neurology.* 2015 Aug 11.
41. Curry WT, **Lim M**. Immunomodulation: Checkpoint Blockade et al. *Neuro Oncol.* 2015 Nov;17 Suppl 7:vii26-vii31.
42. Xu L, Chow KH, **Lim M**, Li G. Current Vaccine Trials in GBM: a review. *J Immunol Res.* 2014.
43. Sharabi AB, **Lim M**, DeWeese TL, Drake CG. Radiation and Checkpoint Blockade Immunotherapy: Radiosensitisation and Potential Mechanisms of Synergy. *Lancet Oncol.* 2015 Oct;16(13):e498-509.
44. Kim ES, Kim JE, Patel MA, Mangraviti A, Ruzevick J, **Lim M**. Immune Checkpoint Modulators: An Emerging Antiglioma Armamentarium. *J Immunol Res.* 2016;2016:4683607
45. **Lim M**, Weller M, Chiocca EA. Current State of Immune-Based Therapies for Glioblastoma. *Am Soc Clin Oncol Educ Book.* 2016;35:e132-9.
46. Shen CJ, **Lim M**, Kleinberg LR. Controversies in the Therapy of Brain Metastases: Shifting Paradigms in an Era of Effective Systemic Therapy and Longer-Term Survivorship. *Curr Treat Options Oncol.* 2016 Sep;17(9):46.
47. Gordon CR, Murphy RJ, Armand M, Liacouras P, Weingart J, Huang J, Brem H, **Lim M**. Usefulness of an Osteotomy Template for Skull Tumorectomy and Simultaneous Skull Reconstruction. *J Craniofac Surg.* 2016 Aug 12.
48. Luksik AS, Maxwell R, Garzon-Muvdi T, **Lim M**. The Role of Immune Checkpoint Inhibition in the Treatment of Brain Tumors. *Neurotherapeutics.* 2017 Mar 3.
49. Hung AL, Garzon-Muvdi T, **Lim M**. Biomarkers and Immunotherapeutic Targets in Glioblastoma. *World Neurosurg.* 2017 Mar 11. pii: S1878-8750(17)30323-6.
50. Maxwell R, Luksik AS, Garzon-Muvdi T, **Lim M**. The Potential of Cellular- and Viral-Based Immunotherapies for Malignant Glioma-Dendritic Cell Vaccines, Adoptive Cell Transfer, and Oncolytic Viruses. *Curr Neurol Neurosci Rep.* 2017 Jun;17(6):50.
51. Sahebjam S, Sharabi A, **Lim M**, Kesarwani P, Chinnaiyan P. Immunotherapy and Radiation in Glioblastoma. *J Neurooncol.* 2017 May 31.
52. Maxwell R, Jackson CM, **Lim M**. Clinical Trials Investigating Immune Checkpoint Blockade in Glioblastoma. *Curr Treat Options Oncol.* 2017 Aug;18(8):51.
53. Hung AL, **Lim M**, Doshi TL. Targeting cytokines for treatment of neuropathic pain. *Scand J Pain.* 2017 Oct;17:287-293.
54. **Lim M**, Xia Y, Bettgowda C, Weller M. Current State of Immunotherapy for Glioblastoma. *Nat Rev Clin Onc.* In Press
55. Jackson CM, **Lim M**. Immunotherapy for glioblastoma: playing chess, not checkers. *Clin Cancer Res.* 2018 Apr 24.

\*- co-first of co-senior

### Case Reports

1. Moriarti J, **Lim M**, Beauchamp, NJ Jr, Olivi A. Reversible Posterior Leukoencephalopathy Occurring During Resection of a Posterior Fossa Tumor: Case Report and Review of the Literature. *Neurosurgery.* 2001; Nov;49(5):1237-9.
2. **Lim M** and Adler JR. Cyberknife Radiosurgery for Extremity Schwannomas: Technical Report and Case Report. *Stereotactic and Functional Neurosurgery.* 2006;84:60-63. Cover Article.
3. Sangoi A\*, **Lim M\***, Vogel H, Chang SD. Giant Cell Ependymoma Presenting in the Suprasellar Cistern: Case Report. *Human Pathology.* 2008;Sept 39(9):1396-401.
4. Ruzevick J, Nicholas S, Redmond K, Kleinberg L, Lipson EJ, **Lim M**. A Patient with HIV Treated with Ipilimumab and Stereotactic Radiosurgery for Melanoma Metastases to the Brain. *Case Rep Oncol Med.* 2013;2013:946392.

5. Theodros D, Goodwin CR, Crane GM, Liauw J, Kleinberg L, **Lim M**. Metastatic extrapulmonary small cell carcinoma to the cerebellopontine angle: a case report and review of the literature. *Case Rep Oncol Med*. 2015;2015:847058.
6. Khattab MH, Marciscano AE, Lo SS, **Lim M**, Lattera JJ, Kleinberg LR, Redmond KJ. Antiangiogenic Therapies and Extracranial Metastasis in Glioblastoma: A Case Report and Review of the Literature. *Case Rep Oncol Med*. 2015;2015:431819.
7. Yarchoan M, **Lim M**, Brahmer JR, Ettinger D. Oligometastatic Adenocarcinoma of the Lung: A Therapeutic Opportunity for Long-Term Survival. *Cureus*. 2015 Dec 16;7(12):e409.
8. Pross SE, Sharon JD, **Lim M**, Moghekar A, Rao A, Carey JP. Intracranial Hypotension after Vestibular Schwannoma Resection Due to an Unexpected Pathology: Tarlov Cysts. *Cureus*. 2017 May 19;9(5):e1261.

\*- co-first of co-senior

### Book Chapters, Monographs

1. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2004.
2. **Lim M**, Harsh GH. Neuro-Oncology: Overview. Rengachary SS, Wilkins RH. Principles of Neurosurgery. 2<sup>nd</sup> Ed. 2004; 25.2-2.22.
3. Lim M, Gibbs IC, **Chang SD**: Cyberknife Radiosurgery for Glomus Jugulare Tumors. Mould RF, Schulz RA, Bucholz RD, Gagnon GJ, Gerszten PC, Kresl JJ, Levendag PC (eds): Pioneering Techniques in Robotic Radiosurgery, vol 1, The Cyberknife Society, Sunnyvale, 2005;213-222
4. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2005.
5. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2006.
6. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2007.
7. **Lim M**, Guzman R, Kelly M, Steinberg GK. Arteriovenous Malformations in the Basal Ganglia and Thalamus. MacDonald RL, AANS Operative Atlas, 2<sup>nd</sup> ed: Vascular Neurosurgery. New York: Thieme 2007:142-155.
8. Frazier JL, **Lim M**, Weingart JD. Surgical Management of Intracranial Metastases. Intracranial Metastases. Kleinberg L. New York. Demos Medical. 2009:77-105.
9. **Lim M**. Stereotactic Biopsies: Superficial. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010: 253-254.
10. Pradilla G, **Lim M**. Stereotactic Biopsies: Deep. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010: 255-257.
11. **Lim M**. Parasagittal and Convexity Meningiomas. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:183-185.
12. **Lim M**, Frazier J. Foramen Magnum Meningiomas. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:186-188.
13. Bruce JN, **Lim M**. Tentorial Meningiomas. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:201-204.
14. **Lim M**. Stereotactic Biopsies: Superficial. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:253-254.
15. Pradilla G, Lim M. Stereotactic Biopsies: Deep. Fundamentals of Operative Techniques in Neurosurgery. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:255-257.
16. Li G, **Lim M**, Khan N, Steinberg GK. Cerebral Revascularization for Moya Moya Disease. Cerebral Revascularization: Techniques in Extracranial-to-Intracranial Bypass Surgery. Abdulrauf SI. Philadelphia. Elsevier. 2011:185-191.
13. Recinos P, Lim M. Parasagittal approach to midline deep tumors and arterio-venous malformations. Core Techniques in Operative Neurosurgery. Jandial R, McCormick PC, Black PM. Philadelphia. Elsevier. 2011:75-81.

14. Recinos PF, Nguyen T, Lim M. Stereotactic radiosurgery for trigeminal neuralgia. Quiñones-Hinojosa A (ed): Schmidek and Sweet Operative Neurosurgical Techniques, 6<sup>th</sup> Ed. Philadelphia: Elsevier: 2012;1167-1172.
15. Nguyen T, Recinos PF, Lim M. Trigeminal neuralgia and atypical facial pain. In Simpson D, McArthur J, Dworkin D (eds): Neuropathic Pain: Mechanisms, Diagnosis, and Treatment. New York: Oxford University Press. 2012:398-413.
16. Amin AG, Raza SM, Lim M. Posterior and Far-Lateral Approaches to the Craniovertebral Junction (Lateral Transcondylar Approach). Surgical Anatomy and Techniques to the Spine. Philadelphia: Elsevier/Saunders. 2013:54-59.
17. Jackson C, Liu JKC, Recinos PF, Lim M. Surgery Followed by Radiosurgery Boost for Metastases. Controversies in Neuro-Oncology. New York: Thieme Medical Publishers. 2013:225-232.
18. Sunshine J, Guss ZD, Pillai JJ, Lim M. Application of Nanotechnology in the Diagnosis and Treatment of Brain Metastases. Nanoneurosurgery. Boca Raton: CRC Press. 2014:395-401.
19. Hung AL, Lim M. History of Trigeminal Neuralgia: A Discussion of How the Understanding of Pathophysiology Guided Treatment. Effective Techniques for Managing Trigeminal Neuralgia. IGI Global. 2018:1-31.

\*- co-first of co-senior

#### Editor/Guest Editor

1. Isaac Yang, **Michael Lim.** Neurosurgery Clinics of North America: Immunotherapy Vol 21:1. Philadelphia, PA: W.B Saunders Co. 2010.
2. **Michael Lim,** Wesley Hsu, Daniele Rigamonti, Lawrence Kleinberg. Handbook of Radiosurgery in CNS Disease. New York, NY: Demos Medical Publishing, LLC. 2013.
3. **Michael Lim,** Linda Liau. Journal of Neuro-Oncology. Special Issue: Brain Tumor Immunotherapy. Vol 123:3. Springer. 2015.
4. John Lee, **Michael Lim.** Neurosurgery Clinics of North America: Trigeminal Neuralgia. Philadelphia, PA: W.B Saunders Co. 2016

#### Editorials

1. **Lim M,** Steinberg GK. Integrins in Arteriovenous and Cavernous Malformations: Comment. *Neurosurgery.* 2006;Jan; 58(1): 167.
2. **Lim M,** Chang SD. Recurrent Craniofacial Meningiomas: Comment. *Neurosurgery.* 2006; May; 58(5):880.
3. Lim M, **Chang SD:** Chained Lightning – Part III: Emerging technology, novel therapeutic strategies and new energy modalities for radiosurgery. **Neurosurgery,** 2007;61(6): 1129
4. Yang I, Cho JM, Colen CB, Li G, **Lim M,** Sherman JH, Wang VY. Neurosurgery Concepts. *Surg Neurol Int.* 2011;2:173. Epub 2011 Nov 30.
5. **Lim M,** Sherman JH, Wang VY, Smith ZA, Cho JM, Colen CB, Kim CY, Zada G, Li G, Yang I. Perspectives on Key Articles in Neurosurgery. Accepted *Surg Neurol Int.*

#### Other Media

- 2010 Wired Magazine. Toolkit: A Neurosurgeon's Must-Have
- 2011 Webinar – Trigeminal Neuralgia: Leave No One in Pain
- 2013 Readers Digest Article featuring my TN Patient Treated by a MVD
- 2016 Washington Post – Health and Science – March 14, 2016 – Article featuring my TN Patient Treated by MVD
- 2016 ABTA Webinar – Metastatic Brain Tumors: What Patients Need to Know
- 2017 Medscape-SITC – Online Video – Current State of Immunotherapy for GBM: Checkpoint Inhibitors
- 2017 Medscape – Online Interview – Immunotherapy for GBM- Checkpoint Inhibitors
- 2017 Medscape – Online Roundtable Discussion – Advanced in GBM – Checkpoint Inhibitors
- 2017 AERO Webinar – “Rationale Approaches to Immunotherapy”
- 2018 ABTA Webinar – Immunotherapy for Brain Tumors

#### Extramural Sponsorship

Current

- 7/1/09-7/31/17 Amide Proton Transfer (APT) MRI of Brain Tumors at 3T and 7T  
R01EB009731  
NIH  
Role: Co-investigator,
- 12/1/11-11/30/17 Subependymoma/Ependymoma Center  
Subependymoma/Ependymoma Center Grant  
Role: PI
- 11/3/14-11/2/18 Genetic Determinants of Response to Nivolumab or Nivolumab in Combination with  
Ipilimumab in Individuals with Glioblastoma  
Role PI
- 3/10/15-7/31/17 Anti PD-1 and HSPCC-96 Combination Therapy in Murine Glioblastoma  
Agenus Inc  
Role
- 9/15/16 – 4/30/17 Administrative supplement to support biomarker studies associated with NCI supported  
clinical trials of immunotherapy  
Adult Brain Tumor Consortium – NCI - 3UM1CA137443-07S1  
Role: Project Manager

Previous

- 3/1/09-2/28/11 Characterization of STAT3 in GBM: A Potential Mediator of Immune Evasion  
Academy of Academic Surgeons  
Role: PI
- 7/1/09-6/30/10 Immune Characterization of STAT3 in GBM with a Novel Transgenic Model  
Neurosurgery Research Education Foundation  
Role: PI
- 1/1/10-12/31/11 Characterization of STAT3's role in the Immune Microenvironment of GBMs  
Clinician Scientist Award  
Role: PI
- 1/1/11-10/31/12 A Novel Immunotherapy Approach Against GBM  
WW Smith Charitable Foundation  
Role: PI
- 11/1/11-10/31/12 Immunotherapy for Chordomas  
Chordoma Foundation  
Role: PI
- 11/14/11-11/13/12 Spine Metastases and Pain  
Johns Hopkins Neurosurgery Pain Institute  
Role: PI
- 2/1/14-1/31/15 Augmenting Immunotherapy with Chemotherapy  
Arbor Pharmaceuticals  
Role: PI
- 11/1/14-10/30/15 Creating a Humanized Immune Model for Chordomas  
Chordoma Foundation  
Role: PI

11/19/14-8/1/15      Cranioplasty Outcomes  
Stryker Corp  
Role PI

2/1/16-6/31/17      Checkpoint Inhibitors in GBM  
BMS  
Role: PI

4/1/16 – 3/31/17      Adoptive transfer of genetically polarized myeloid cells to favorably alter tumor associated  
macrophages in glioblastoma multiforme  
Role- co-investigator

### **Clinical Extramural Funding**

#### Current

2012-present      An International, Randomized, double-blind, controlled study of rindopepimut/Gm  
Celldex Therapeutics Inc  
Role: Site PI

6/1/12-present      Phase II/III Dendritic Cell Vaccine Trial  
Immunocellular  
Role: Site PI

1/14/14-present      A Pilot Study of Stereotactic Radiosurgery combined with Ipilimumab in Patients with  
Newly Diagnosed Melanoma Metastases in the Brain and Spine  
Investigator Initiated  
Accuray  
Role: PI

2/14/14-present      A Randomized Phase IIB Open Label Study of Nivolumab or Nivolumab in Combination  
with Ipilimumab vs Bevacizumab in Adult Subjects with Recurrent Glioblastoma  
Bristol-Myers Squibb  
Role: Site PI

2015-present      A Phase 2 Study to Evaluate the Clinical Efficacy and Safety of MEDI4736 in Patients  
With GBM  
Ludwig Institute for Cancer Research  
Role: Site PI

2016-present      A Phase I Trial of Anti-LAG-3 or Anti-CD137 Alone and in Combination with Anti-PD-1 in  
Patients with Recurrent GBM  
NCI – Adult Brain Tumor Consortium protocol 1501  
Role: PI

2016-Present      A Randomized Phase 3 Open Label Study of Nivolumab vs Temozolomide Each in  
Combination with Radiation Therapy in Newly Diagnosed Adult Subjects with  
Unmethylated MGMT (tumor O-6-methylguanine DNA methyltransferase)  
Glioblastoma CA209-498-0016  
Bristol Meyers Squibb  
Role: Site PI

2017-present      Phase I Safety study of Stereotactic Radiosurgery with Concurrent and Adjuvant PD-1  
Antibody Nivolumab (CA209-003) in Patients with Recurrent or Advanced Chordoma.  
Chordoma Foundation  
Role: PI

#### Previous

3/1/08-10/31/09      Phase II/III EGFRvIII Vaccine Clinical Trial

	CellDex Role: Site PI
4/1/12-2015	Phase II/III Heat Shock Protein Trial Agenus Role: Site PI
2/14/14-2015	ReACT: A Phase 2 Study of Rindopepimut (CDX-110) plus Bevacizumab in Relapsed Glioblastoma Celldex Role: Site PI

## CLINICAL ACTIVITIES

### Clinical Focus

1. Brain Tumors – One of my clinical focuses is on the treatment of brain tumors. A large part of my practice is dedicated to treating patients surgically with brain tumors. I offer patients the latest technologies (such as endoscopic, laser, stereotactic radiosurgery, and brachytherapy) the the surgical treatment of their brain tumors. I am currently the Director of Metastatic Brain Tumor Center and Director of Stereotactic Radiosurgery
2. Trigeminal Neuralgia – My other clinical focus is on the treatment of trigeminal neuralgia. I offer patients all the surgical options for the treatment of TN. We have one of the largest TN centers in the US.

### Certification

#### *Medical, other state/government licensure*

2001-Present California License #A76130  
2007-Present Maryland Medical License #D65890

#### *Boards, other specialty certification*

2001-Present DEA License  
2012-Present Board Certified by the American Board of Neurological Surgeons

### Clinical Draw

Nationally and Internationally

### Clinical Program Building / Leadership

2007-Present Brain Tumor Immunotherapy Program, Director  
2008-2009 Celldex Brain Tumor Vaccine (Phase II), Site PI  
2009-Present Metastatic Brain Tumor Center, Director  
2011-Present Ependymoma/Subependymoma Center, Director  
2012-Present Antigenics Heat Shock Protein Vaccine Clinical Trial, Site PI  
2012-Present Immunocellular Vaccine Clinical Trial, Site PI  
2012-Present Celldex Vaccine Clinical Trial (Phase III), Site PI  
2013-Present Trigeminal Neuralgia Center, Director  
2014-Present SRS + Ipilimumab for Melanoma Metastases to the Brain and Spine – Investigator Initiated PI  
2015-Present Stereotactic Radiosurgery, Director

### Clinical Demonstration Activities to external audience, on or off campus

2014 – Observership of Dr. Chih-Wei Chen from Taiwan for Surgery  
2015 - Observership of Dr. Chul-Kee Park from South Korea for Surgery  
2014 – Observership of Dr. Xu Wu from China for Surgery  
2017 – Observership of Dr. Tao Zhang from China for Surgery

**Development of Nationally/Internationally Recognized Clinical Standard of Care - None**

## EDUCATIONAL ACTIVITIES

### Teaching



*Classroom Instruction* None

*Clinical Instruction*

2007-Present Faculty for Resident Teaching in clinics, operating rooms, and wards; Johns Hopkins Hospital  
2007-Present Faculty for Medical Student Teaching in clinics, operating rooms, and wards; Johns Hopkins Hospital

*CME Instruction*

9/08 Faculty for International Neuro-Oncology Updates, Speaker, Baltimore, MD; Immunotherapy for Brain Tumors  
10/08 Faculty for CNS Tumor Course, Speaker, Orlando, FL; Immunotherapy for Brain Tumors  
10/09 Faculty for CNS Tumor Course, Speaker, New Orleans, LA; Immunotherapy for Brain Tumors  
4/10 Hopkins CME, Speaker, Rockville, MD; Metastatic Brain Tumors  
5/10 Johns Hopkins Spine CME: Speaker, Baltimore, MD; Stereotactic Radiosurgery for Spine Tumors  
10/10 Faculty for CNS Tumor Course, Speaker, San Francisco, CA; Immunotherapy for Brain Tumors  
10/11 Faculty for CNS Tumor Course, Speaker, Washington, DC; Immunotherapy for Brain Tumors  
10/12 Faculty for CNS Tumor Course, Speaker, Chicago, IL; Immunotherapy for Brain Tumors  
10/13 Faculty for CNS Tumor Course, Speaker, San Francisco, CA; Immunotherapy for Brain Tumors  
10/14 Faculty for CNS Tumor Course, Speaker, Boston, MA; Immunotherapy for Brain Tumors  
5/15 Faculty for AANS Tumor Course, Speaker, Washington, DC; Management of Brain Metastases  
10/15 Faculty for CNS Tumor Course, Speaker, New Orleans, LA; Immunotherapy for Brain Tumors  
10/17 Faculty for CNS Tumor Course, Speaker, Boston, MA; Checkpoint Inhibitors for Brain Tumors

*Workshops/Seminars*

6/09 Faculty for Hopkins Sinus and Skull Base Course: Speaker; Endoscopic Approaches to the Sella, Baltimore, MD  
9/09 Faculty for Hopkins: Combined Approach for Skull Base Tumors: Speaker; Radiosurgery for Skull Base Tumors: Faculty, Baltimore, MD  
6/10 Faculty for Hopkins Sinus and Skull Base Course: Speaker; Approaches to the Sella, Baltimore MD  
7/10 Faculty for Senior Society – Boot Camp for Neurosurgery Interns: Speaker; Neurotrauma, Philadelphia, PA  
12/10 Faculty for Hopkins: Combined Approach for Skull Base Tumors: Speaker; Radiosurgery for Skull Base Tumors, Baltimore, MD  
3/11 Webinar: Speaker; Treatment of Trigeminal Neuralgia  
11/11 Faculty for Skull Base Session at Society for Neuro-Oncology: Speaker; Acoustic Neuromas, Orange County, CA  
6/12 Webinar: Speaker; Management of Cerebral Brain Metastases

**Mentoring**

*Advisees*

2008 Jennifer Cheng, MD, Research Elective as a medical student - currently a Neurosurgery Resident at Johns Hopkins Hospital  
2008-09 Trang Nguyen, MD, Doris Duke Fellowship– currently a General Surgery Resident at Cleveland Clinic,  
2008-10 James Frazier, MD, NREF Fellowship recipient – currently a Neurosurgeon in Private Practice,  
2008-11 Alfred See, MD, Dean’s Medical Student Fellowship and Summer Research Fellowship recipient - currently – a Neurosurgery Resident at Brigham and Women’s Hospital,  
2008-12 Matthew Bender, Summer Research Fellowship - currently a Neurosurgery Resident at Johns Hopkins Hospital,  
2009-12 Jake Ruzevik, Doris Duke Fellowship and Summer Research Fellowship – currently a Neurosurgery Resident at University of Washington Hospital  
2009-12 Christopher Jackson, Howard Hughes Medical Student Fellowship and Summer Research Fellowship – currently a Neurosurgery Resident at Johns Hopkins Hospital  
2009-12 Zachary Guss, Summer Research Fellowship – currently a Radiation Oncology Resident at Johns Hopkins Hospital

2010	Julie Ng, Summer Research Fellowship – currently a Medicine Resident at Johns Hopkins Hospital
2010-12	Jing Zeng, MD, Post-Doctoral Fellow – currently an Assistant Professor in Radiation Oncology at University of Washington
2011-12	Anu Amin, Dean’s Medical Student Fellowship and Summer Research – currently a Neurosurgery Resident at New York Medical College
2012-15	Dimitrios Mathios, Post Doctoral Fellow – currently a Neurosurgery Resident at Johns Hopkins Hospital.
2012-13	Sarah Nicholas, Doris Duke Fellowship – currently a Radiation Oncology Resident at Johns Hopkins Hospital
2011-Present	Allison Martin, T32 NIH Fellowship – currently a Pediatric Hematology and Oncology Instructor at Johns Hopkins Hospital
2014-2015	Jennifer Kim, Howard Hughes Medical Student Fellowship – currently a Neurosurgery Resident at Johns Hopkins University School of Medicine
2014-2015	Mira Patel, Howard Hughes Medical Student Fellowship – currently a Radiation Oncology Resident at Memorial Sloan Kettering
2015-Present	Debebe Theodros, Dean’s Medical Student Fellowship – currently in Lab
2015-Present	Tomas Garzon-Muvdi, Post-Doctoral Fellowship – currently in his Chief Year in Residency
2015-Present	Alice Hung, Medical Student Research Year – matched into Neurosurgery Residency at the Johns Hopkins University School of Medicine
2015-Present	Adela Wu, Medical Student Research Year – matched into Neurosurgery Residency at Stanford University School of Medicine
2015-Present	Russell Maxwell, Medical Student Research Year – matched into Radiation Oncology Residency at the University of Pennsylvania School of Medicine
2015-Present	Andrew Luksik, Medical Student Research Year – matched into Neurosurgery Residency at the Johns Hopkins University School of Medicine
2016-Present	Yuan Xia, Howard Hughes Medical Student Fellowship – currently in Lab

### **Educational Program Building Leadership**

3/11	International Lecture Series for South Korea, Co-Director of Course
3/12	International Lecture Series for China, Co-Director of Course

### **Educational Extramural Funding**

2010-1011	Stryker Unrestricted Educational Grant
-----------	--

## **RESEARCH ACTIVITIES**

### **Research Focus:**

### **Research Program Building/ Leadership**

2007-present	Director, Brain Tumor Immunotherapy Program Laboratory Efforts – studying the immune microenvironment of Gliomas Clinical –PI for several clinical trials
2009-present	Director, Metastatic Brain Tumor Center Laboratory – studying the effect of metastatic tumors of the brain on systemic Immunity Clinical – Outcomes center
2013-present	Director, Trigeminal Neuralgia Center Clinical Director
2011-present	Director, Ependymoma/Subependymoma Center Laboratory – studying epigenetics and immune microenvironment of Ependymomas and Subependymomas
2015-present	Director, Stereotactic Radiosurgery Program Clinical Director

### **Inventions, Patents, Copyrights**

8/14/15	P11601-04 issued; Inventors Jing Zeng, Charles Drake, Drew Pardoll, <b>Michael Lim</b> . Patent for Technique: Using Focused Radiation to Augment Immune Based Strategies Against Cancer.
---------	---

## Provisional Patents

- C13093 Inventors Jason Liauw, Larry Lo, Betty Tyler, Henry Brem, and Michael Lim, Provisional Patent: Intraoperatively Placed Markers for Post-surgical Imaging.
- C13155 Inventors Dimitrios Mathios, Tae-Ahn Jahng, Chul-Kee Park, Patrick Ha, Chetan Bettegowda, and Michael Lim. ZMIZ1, is a Key Gene in the Progression and Prognosis of Advanced Tumors Including Advanced Breast Ca, Advanced Cystadenocarcinoma, Cervical Cancer, Lung Adenocarcinoma, Gliomas and is an Accurate Predictor of Long Term Survivorship in Glioblastomas
- C13320 Inventors Christopher Jackson, Drew Pardoll, Charles Drake, and Michael Lim. Polyfunctional lymphocytes as a biomarker of antitumor activity
- C13490 Inventors Dimitrios Mathios, Drew Pardoll, Betty Tyler, Henry Brem, and Michael Lim. Combination of Immunotherapy with local chemotherapy for the treatment of malignancies
- C13547 Inventors Juvenal Reyes and Michael Lim. Universal Microport

## SYSTEM INNOVATION and QUALITY IMPROVEMENT ACTIVITIES

None

## ORGANIZATIONAL ACTIVITIES

### Institutional Administrative Appointments

- 2010-2014 Department Liason for Compliance
- 2010-Present Physician Advisor for Credentialing

### Editorial Activities

#### *Editorial Board Appointments*

- 2009 Co-Editor for Neurosurgery Clinics of North America edition on Immunotherapy for Brain Tumors
- 2011-Present Academic Editor for *PLOS One*
- 2010-Present Board Member, Society of Brain Mapping and Therapeutics (SBMT)
- 2011-Present Editorial board – Current Surgery Reports
- 2016-2018 Editorial board – Annals of Surgical Oncology
- 2018-Present Editorial board – Journal of Neuro-Oncology

#### *Journal Reviewer*

- 2010-Present *Journal of Neuro-Oncology*
- 2011-Present *Surgical Neurology International*
- 2011-Present *Neuro-Oncology*
- 2016 *Nature Medicine*
- 2016 *JAMA*
- 2017 *Science Translation Medicine*

### Advisory Committees, Review Groups/Study Sections

- 2007-09 Scientific Committee of the American Society for Clinical Oncology (ASCO)
- 2007-10 Young Neurosurgeons Committee
- 2013-Present Tumor Section (AANS-CNS) Executive Committee member
- 2013-Present Immunotherapy Working Group for Brain Malignancy Steering Committee (NCI)
- 2013-Present Executive Committee for the Joint Tumor Section of American Association of Neurological Surgeons (AANS) and Congress of Neurological Surgeons (CNS)
- 2018-Present Bylaws Committee Chair for the Society for Neuro-Oncology

### Professional Societies

- 2007-Present Congress of Neurological Surgeons (CNS)
- 2007-Present American Association of Neurological Surgeons (AANS)
- 2007-Present Society for Neuro-Oncology (SNO)
- 2008-Present American Society for Clinical Oncology (ASCO)

### Conference Organizer, Session Chair

- 4/08 Platform Chairman, American Society for Clinical Oncology (ASCO), CNS Session
- 4/09 Platform Chairman, American Society for Clinical Oncology (ASCO), CNS Session
- 5/09 Moderator and Discussant, American Association of Neurological Surgeons, Tumor Session
- 6/12 Moderator, Brain Tumor Biotech Summit, Immunotherapy Session
- 9/12 Moderator, International Updates in Neuro-Oncology, Immunotherapy and Other Novel Therapies Session
- 2/13 Moderator, Intraoperative Imaging Society, Abstract Presentations
- 6/13 Moderator, Brain Tumor Biotech Summit, Immunotherapy Session
- 9/13 Moderator, Glioma Clinical Research I, 15<sup>th</sup> World Congress of Neurosurgery, Seoul, Korea
- 9/13 Moderator, Glioma Clinical Research III, 15<sup>th</sup> World Congress of Neurosurgery, Seoul, Korea
- 6/14 Tumor Section Organizer for Congress of Neurological Surgeons (CNS) 2015 meeting
- 6/14 Moderator, Brain Tumor Biotech Summit, Scientific Barriers Session, New York, NY
- 9/15 Moderator, Congress of Neurological Surgeons Meeting, Tumor Session, New Orleans, LA
- 11/15 Organizing co-Chair for Education Day on Immunotherapy for Society for Neuro-Oncology (SNO) Meeting, San Antonio, TX
- 11/15 Moderator, Education Day for Society for Neuro-Oncology (SNO) Meeting, San Antonio, TX
- 9/16 Moderator, Immunotherapy Session, Christopher Davidson Foundation Meeting, St. Louis, MO
- 11/16 Moderator, Clinical Trials Session II, Rapid Reports, Society for Neuro-Oncology (SNO) Meeting, Scottsdale, AZ
- 11/16 Chair and Organizer, “Future Directions for Immunotherapy,” New Considerations for the Management of Glioblastoma, SNO meeting, Scottsdale, AZ
- 2/17 Moderator, “Immunotherapy in GBM,” International Immuno-Oncology Network (II-ON) BMS Meeting, London, England
- 5/17 Moderator, “Meet the Expert Session 1 – Immuno-Oncology,” Zurich, Switzerland
- 6/17 Organizing Committee, SITC-ASTRO Immunotherapy Workshop, Bethesda, MD

### **Consultantships/Speaker**

- 2010-2014 Stryker Corporation – 2 days/year. Part of a Neurotechnical Committee who provides input on companies cranial products to improve patient care
- 2013-2014 Accuray Corporation – 2 days/year. Consultant
- 2014-2015 Izi Medical – 1 day/year. Consultant
- 2014-Present BMS – 2 days/year. Consultant
- 2015-Present Scientific Advisory Board - BMS
- 2016 Scientific Advisory Board – Oncorus
- 2016 Scientific Advisory Board – Merck
- 2016 Scientific Advisory Board – Agenus
- 2016 Scientific Advisory Board – Boston Biomedical
- 2017 Scientific Advisory Board – Baxter
- 2017 Scientific Advisory Board – Tocagen
- 2018 Scientific Advisory Board – SQZ

### **RECOGNITION**

#### **Awards and Honors**

- 1991 Harry Evans Honors Program Scholarship, University of New Hampshire
- 1992 Phi Beta Kappa Honor Society, University of New Hampshire
- 1993 Alpha Zeta Honors Fraternity for Biological Sciences, University of New Hampshire
- 1993 Mortar Board Honor Society, University of New Hampshire,
- 1994 Premedical Committee Scholarship, University of New Hampshire
- 1991-1995 Presidential Scholar, University of New Hampshire
- 1991-1995 Governor's Success Grant Scholar – 4 year Scholarship, University of New Hampshire
- 1991-1995 Granite State Scholar, University of New Hampshire
- A full tuition 4 year merit scholarship given to 12 students
- 1995 John McConnell Scholarship, University of New Hampshire
- 1995 Valedictorian, University of New Hampshire
- 1996 Dean's Grant Award for Research, The Johns Hopkins University School of Medicine

1998-1999 Howard Hughes Medical Student Fellowship, Johns Hopkins University School of Medicine  
 2008 Richard Otenasek Jr. Faculty Teaching Award, Johns Hopkins University School of Medicine  
 2010-2011 Department of Surgery Outstanding Faculty Teacher Award for the Basic Surgery Clerkship, Johns Hopkins University School of Medicine  
 2016 Service Excellence Award, Health Network Foundation

**Invited Talks, Panels**

10/06 Speaker, University of Utah Grand Rounds, “Blood Vessel Pathologies in CNS Diseases,” Salt Lake City, UT  
 11/06 Speaker, Dartmouth College Grand Rounds, “Blood Vessel Pathologies in CNS Diseases,” Hanover, NH  
 11/06 Speaker, Mayo Clinic Grand Rounds, “Blood Vessel Pathologies in CNS Diseases,” Rochester, MN  
 11/06 Speaker, JHU Neurosurgery Grand Rounds, “Blood Vessel Pathologies in CNS Diseases,” Baltimore, MD  
 10/07 Speaker, JHU Neurosurgery Grand Rounds, “1p19q Deletion in Oligodendrogliomas,” Baltimore,  
 12/07 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Trigeminal Neuralgia,” Baltimore,  
 3/08 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Glomus Jugulare Tumors,” Baltimore, MD  
 5/08 Speaker, Blaustein Pain Conference, “Radiosurgery for Trigeminal Neuralgia,” Baltimore, MD  
 6/08 Speaker, JHU Oncology Grand Rounds, “Radiosurgery for Metastatic Brain Tumors,” Baltimore,  
 7/08 Speaker, JHU Neurosurgery Grand Rounds, “Stereotactic Spinal Radiosurgery,” Baltimore, MD  
 7/08 Speaker, JHU Neurosurgery Grand Rounds, “Management of Cerebral Brain Metastases,” Baltimore, MD  
 9/08 Speaker, 3<sup>rd</sup> Annual International Updates in Neuro-Oncology, “Immunotherapy for Brain Tumors,” Baltimore, MD  
 10/08 Speaker, Southern Maryland Hospital Grand Rounds, “Pituitary Tumors,” Clinton, MD  
 10/08 Speaker, Thomas Jefferson Hospital Grand Rounds, “Management of Cerebral Brain Metastases,” Philadelphia, PA  
 12/08 Speaker, York Wellspan Hospital Grand Rounds, “Head Trauma,” York PA  
 1/09 Speaker, Wilmington VA Medical Center Grand Rounds, “Management of Brain Metastases,” Wilmington, DE  
 1/09 Honored Guest Speaker, Caribbean Neurosciences Symposium, “Image Guided Surgery,” Montego Bay, Jamaica  
 3/09 Speaker, JHU Medicine Grand Rounds, “Management of Cerebral Brain Metastases,” Baltimore,  
 3/09 Speaker, JHU Radiation Oncology Resident Teaching Rounds, “Management of Cerebral Brain Metastases,” Baltimore, MD  
 4/09 Speaker, Johns Hopkins Undergraduate Research Conference, “Technology in Neurosurgery,” Baltimore, MD  
 6/09 Speaker, The Johns Hopkins Hospital Otolaryngology Grand Rounds, “Radiosurgery for Skull Based Tumors,” Baltimore, MD  
 7/09 Speaker, St. Matthews School of Medicine, “Technology in Neurosurgery,” Grand Cayman Islands  
 7/09 Speaker, Korean American Spine Society (KASS), “Stereotactic Spinal Radiosurgery,” San Diego  
 7/09 Speaker, JHU Neurosurgery Grand Rounds, “Evaluation of Head Trauma,” Baltimore, MD  
 7/09 Speaker, JHU Neurosurgery Grand Rounds, “Integration of Functional Imaging with Image Guidance,” Baltimore, MD  
 9/09 Speaker, Neuro-Oncology Congress, “Open versus Endoscopic Resection of Pituitary Tumors,” Santiago, Chile  
 9/09 Speaker, Neuro-Oncology Congress, “Management of Cerebral Brain Metastases,” Santiago, Chile  
 9/09 Speaker, Neuro-Oncology Congress, “Cerebral Brain Mapping,” Santiago, Chile  
 9/09 Speaker, Neuro-Oncology Congress, “Immunotherapy for Gliomas,” Santiago, Chile  
 9/09 Speaker, Baltimore Life Sciences Association, “Immunotherapy for GBMs,” Baltimore, MD  
 10/09 Speaker, MedTronics Annual Meeting, “Skull Base Surgery Techniques,” Denver, CO  
 11/09 Speaker, Suburban Hospital, “Management of Cerebral Brain Metastases,” Bethesda, MD  
 12/09 Speaker, University of California at San Francisco, “Immunotherapy for Gliomas,” San Francisco,  
 12/09 Speaker, Sinai Hospital, “Management of Cerebral Brain Metastases,” Baltimore, MD

- 5/10 Speaker, 3<sup>rd</sup> Annual European Workshop on Whole Body Radiosurgery and Stereotactic Radiation Therapy, “Radiosurgery for Glomus Jugulare Tumors,” Universite Catholique de Louvain, Brussels, Belgium
- 5/10 Speaker, JHU Oncology Grand Rounds, “Stereotactic Radiosurgery for the Spine,” Baltimore,
- 6/10 Speaker, JHU Oncology Fellows Lecture, “Management of Cerebral Brain Metastases,” Baltimore,
- 7/10 Speaker, JHU Neurosurgery Grand Rounds, “Postoperative Management of GBMs,” Baltimore,
- 7/10 Speaker, Korean American Spine Society (KASS), “Local Delivery Vehicles for Spine Tumors,” Washington, DC
- 9/10 Speaker, Inha University, “Management of Cerebral and Spine Metastases,” Seoul, South Korea
- 9/10 Speaker, Seoul National University, “Management of Cerebral and Spine Metastases,” Seoul, South Korea
- 9/10 Speaker, ASIA Spine Meeting, “Stereotactic Radiosurgery for Spinal Tumors,” Incheon, South Korea
- 10/10 Speaker, JHU Neurosurgery Grand Rounds, “Immunotherapy for GBMs,” Baltimore, MD
- 11/10 Speaker, JHU Neurosurgery Grand Rounds, “Management of Brain Metastases,” Baltimore, MD
- 11/10 Speaker, University of New Hampshire, “Surgical and Molecular Therapies against GBM,” Durham, NH
- 3/11 Speaker, 1<sup>st</sup> Annual Joint Symposium on the Progress of Neurosurgery, “Stereotactic Radiosurgery for Spinal Tumors,” Seoul, South Korea
- 3/11 Speaker, 1<sup>st</sup> Annual Joint Symposium on the Progress of Neurosurgery, “Stereotactic Radiosurgery for Skull Base Tumors,” Seoul, South Korea
- 3/11 Speaker, 1<sup>st</sup> Annual Joint Symposium on the Progress of Neurosurgery, “Immunotherapy for Brain Tumors,” Seoul, South Korea
- 5/11 Speaker, St. Matthews School of Medicine, “Low Back Pain,” Grand Cayman Islands
- 5/11 Speaker, Neuro Nursing Workshop, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 5/11 Speaker, Neurology Grand Rounds, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 6/11 Speaker, International Brain Mapping and Intraoperative Surgical Planning Society (IBMISPS), “Immunotherapy for Brain Tumors,” San Francisco, CA
- 6/11 Speaker, Stanford University Grand Rounds, “Immunotherapy for Brain Tumors,” Palo Alto, CA
- 8/11 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Skull Base Tumors,” Baltimore,
- 8/11 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Meningiomas,” Baltimore, MD
- 12/11 Speaker, JHU Neurosurgery Grand Rounds, “Immunotherapy for GBMs,” Baltimore, MD
- 12/11 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Pituitary Adenomas,” Baltimore,
- 3/12 Speaker, Top of America Meets the Top of China Conference, “Immunotherapy for Brain Tumors,” Xi’An, China
- 4/12 Speaker, JHU Neurosurgery Grand Rounds, “Trigeminal Neuralgia,” Baltimore, MD
- 5/12 Speaker, Brain Mapping Day – United States Congress, “Augmenting Immunotherapy Strategies with Focused Radiation,” Washington, DC
- 6/12 Speaker, Society for Brain Mapping and Therapeutics Annual Meeting (SBMT), “Immunotherapy for Brain Tumors,” Toronto, Canada
- 10/12 Speaker, FasterCures Foundation, “Immunotherapy for Brain Tumors,” Los Angeles, CA
- 10/12 Speaker, Multidisciplinary Meeting for “Impact of MRI Imaging for Neurosurgical Planning and Treatment of Patients with Brain Metastases: Neurosurgeon’s Perspective,” Vienna, Austria.
- 12/12 Speaker, Molecular Image-Guided Interventions Symposium, “Nanomedicine for Neurosurgery,” Baltimore, MD
- 1/13 Speaker, Trigeminal Neuralgia/Facial Pain Support Group Meeting, “Surgical Treatments for Trigeminal Neuralgia,” Columbia, MD
- 2/13 Speaker, Radiation Oncology Resident Conference, “Management of Cerebral Brain Metastases,” Baltimore, MD
- 5/13 Speaker, AANS Tumor Satellite Meeting, “Heat Shock Protein: Technology,” New Orleans, LA
- 5/13 Speaker, Society for Brain Mapping and Therapeutics Annual Meeting (SBMT), “Combining Anti-PD-1 Therapy with SRS for the Treatment of GBM,” Baltimore, MD
- 6/13 Speaker, ISRS (International Stereotactic Radiosurgery Society) Annual Meeting, “Linac Based Stereotactic Radiosurgery for the Treatment of Trigeminal Neuralgia,” Toronto, Canada
- 6/13 Speaker, Harbor Hospital Medicine Grand Rounds, “Surgical Treatments of Trigeminal Neuralgia,”

- Baltimore, MD
- 9/13 Speaker, Neuroradiology Fellows Conference, “Trigeminal Neuralgia,” Baltimore, MD
- 9/13 Speaker, World Federation of Neurological Societies. 15<sup>th</sup> World Congress of Neurosurgery, “Role of Anti-PD-1 Therapy for Immunotherapy in the Treatment of Glioblastoma,” Seoul, Korea
- 9/13 Speaker, World Federation of Neurological Societies. 15<sup>th</sup> World Congress of Neurosurgery, “Role of Immunotherapy for the Treatment of High Grade Gliomas,” Seoul, Korea
- 9/13 Speaker, World Federation of Neurological Societies. 15<sup>th</sup> World Congress of Neurosurgery, “Treating Metastatic Spine Tumors with Stereotactic Radiosurgery,” Seoul, Korea
- 9/13 Speaker, World Federation of Neurological Societies. 15<sup>th</sup> World Congress of Neurosurgery, “Role of Radiation in the Treatment of Brain Metastases,” Seoul, Korea
- 10/13 Speaker, Radiation Oncology Resident Conference, “Surgical Considerations for the Management of Brain Metastases,” Baltimore, MD
- 10/13 Speaker, Neurosurgery Grand Rounds, “Immunology of Metastatic Melanoma Brain Metastases,” Baltimore, MD
- 11/13 Speaker, EANS (European Association of Neurosurgical Societies) Annual Meeting, “Combining Anti-PD-1 with SRS as a Novel Therapy Against Glioblastoma,” Tel Aviv, Israel
- 12/13 Speaker, The Future of Neuroscience: Novel Research Avenues for the Treatment of Epilepsy, Pain, and Brain Tumors, Milan, Italy.
- 1/14 Speaker, Investigators Meeting for BMS Cohort I, “Preclinical Results of anti-CTLA-4 and anti-PD-1 therapy against GBM,” New York, NY
- 3/14 Speaker, Neurosurgery Grand Rounds, “Flavors of Radiation for the Brain,” Baltimore, MD
- 3/14 Speaker, Updates in Stereotactic Radiosurgery, “Using Local Therapy to Treat Systemic Melanoma,” Spokane, WA
- 4/14 Speaker, American Society of Neuroradiology (ASNR), “Value of Presurgical Functional Mapping in Neurosurgery,” Montreal, Canada
- 6/14 Speaker, Invited Lecture at the National Hospital, “Immunotherapy for Brain Tumors, and Surgical Management of Trigeminal Neuralgia” Oslo, Norway
- 7/14 Speaker, Radiation Oncology Grand Rounds, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 8/14 Speaker, Invited Lecture, “Management of Recurrent GBM,” Current Trends in the Management of Malignant Glioma Meeting, Tokyo, Japan
- 8/14 Speaker, Invited Lecture, “Vaccines Treatments for Brain Tumors,” Current Trends in the Management of Malignant Glioma Meeting, Tokyo, Japan
- 9/14 Speaker, Invited Lecture, “Immunotherapy,” 13<sup>th</sup> Annual International Neuro-Oncology Updates, Boston, MA
- 9/14 Speaker, Radiology Fellows Conference, “Trigeminal Neuralgia,” Baltimore, MD
- 9/14 Speaker, Invited Lecture, BMS Investigator Meeting, “Rationale for Checkpoint Inhibitors Against GBM, Preclinical Studies,” Philadelphia, PA
- 10/14 Speaker, Invited Lecture, BMS Investigator Meeting, “Rationale for Checkpoint Inhibitors Against GBM, Preclinical Studies,” Turin, Italy
- 10/14 Speaker, Invited Lecture, Japan Neurosurgical Society, “Management of Brain Metastases and Implications Towards Immunotherapy,” Tokyo, Japan
- 11/14 Speaker, Neurosurgery Grand Rounds, “Immunotherapy for CNS Tumors,” Baltimore, MD
- 11/14 Invited Panel Speaker, Society for Neuro-Oncology Immunotherapy Symposium, “Preclinical Data for the Use of Checkpoint Molecules in GBM,” Miami, FL
- 12/14 Invited Speaker for Translational Research Conference, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 2/15 Speaker, Invited Lecture, Neurosurgery Grand Rounds, “Immunotherapy for Brain Tumors,” Hong Kong, China
- 3/15 Speaker, Society for Brain Mapping and Therapeutics Annual Meeting (SBMT), “Immunotherapy for Brain Tumors,” Los Angeles, CA
- 5/15 Invited Speaker, Neuro-Oncology Clinical Trials Symposium, “Immunotherapy for Brain Tumors,” Greenvale, NY
- 5/15 Keynote Speaker, Biotech Summit, “PD-1 and CTLA-4 for GBM,” New York, NY
- 7/15 Invited Speaker, BMS Advisory Board Meeting, “Preclinical Data for Checkpoint Inhibitors in GBM,” Vienna, Austria



- 7/15 Invited Speaker, 14<sup>th</sup> International Updates in Neuro-Oncology, “Checkpoint Inhibitors for Glioblastoma,” Cortona, Italy
- 7/15 Invited Speaker, Center for Bioengineering, Innovation, and Design (CBID), “Opportunities for Innovation in Neurosurgery,” Baltimore, MD
- 8/15 Invited Speaker, 41<sup>st</sup> Annual Hanbery Meeting, “Checkpoint Inhibitors for Glioblastoma,” Cape Cod, MA
- 8/15 Speaker, Neurosurgery Grand Rounds, “Checkpoint Inhibitors for Glioblastoma,” Baltimore, MD
- 9/15 Invited Speaker, Selected Topics in Craniomaxillofacial Surgery Conference, “Single Stage Cranioplasty Skull Tumors,” Boston, MA
- 10/15 Invited Speaker, Neuroradiology Fellows Conference, “Management of Brain Metastases,” Baltimore, MD
- 10/15 Invited Speaker, University of Maryland Grand Rounds, “Management of Trigeminal Neuralgia,” Baltimore, MD
- 11/15 Invited Speaker, Immune Checkpoint Inhibitors Conference (ICI), “Combining Radiation with Checkpoint Inhibitors for the Treatment of GBM,” Frankfurt, Germany
- 11/15 Invited Speaker, Society for Neuro-Oncology Education Day, “Checkpoint Inhibitors for Gliomas,” San Antonio, TX
- 12/15 Invited Speaker, Blaustein Pain Conference, “Management of Trigeminal Neuralgia,” Baltimore, MD
- 2/16 Invited Speaker, NCCU Conference, “Brain Tumor Immunotherapy in an Inpatient Setting,” Baltimore, MD
- 2/16 Invited Speaker, Regeneron Speaker Series, “Checkpoint Inhibitors for Gliomas,” Tarrytown, NY
- 3/16 Speaker, Neurosurgery Grand Rounds, “Basics of Radiation for Brain Tumors,” Baltimore, MD
- 3/16 Invited Speaker, BMS Investigators Meeting, “Preclinical Data on Checkpoint Inhibitors for Radiation and Immunotherapy Leadership Summit, “Effective Combinations of Gliomas,” Atlanta, GA
- 3/16 Invited Speaker, 22<sup>nd</sup> Annual Blood-Brain Barrier Consortium Meeting, “Pseudoprogression After Immunotherapy,” Stevenson, OR
- 3/16 Invited Speaker, Radiation and Immunotherapy Leadership Summit, “Effective Combinations of Radiation and Immunotherapy,” Bethesda MD
- 4/16 Invited Speaker, American Academy of Neurology (AAN), “Initial Treatment, Including Scenarios Requiring Urgent and Multidisciplinary Management for Primary Brain Tumors,” Vancouver Canada
- 4/16 Invited Speaker, American Academy of Neurology, “Modern Surgical Approaches, Including Efficacy, Toxicity, and Emerging Roles from the Perspective of Meningiomas and Gliomas,” Vancouver, Canada
- 5/16 Invited Speaker, Stryker Innovation Dinner, “Single Stage Skull Reconstruction for Skull Tumors,” Chicago, IL
- 5/16 Invited Speaker, Neuroradiology Fellows Conference, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 6/16 Invited Speaker, American Society for Clinical Oncology (ASCO), “Vaccines and Checkpoint Inhibitors for GBM,” Chicago, IL
- 6/16 Invited Speaker, First International Summit on Biomarkers and Therapeutic Advances in Radiation Oncology and International Summit in Radiation Oncology (ISRO), “Combining Focused Radiation with Checkpoint Inhibitors in GBM,” Montreal, Canada
- 7/16 Invited Speaker, Fifth Annual Chordoma Research Workshop, “Checkpoint Inhibitors for Chordomas,” Boston, MA
- 7/16 Invited Speaker, Fifth Annual Chordoma Research Workshop, “A Phase I Combination SRS plus Nivolumab Clinical Trial for Recurrent Chordomas,” Boston MA
- 8/16 Invited Speaker, Current Trends in Malignant Gliomas, “Advances in Surgery for Gliomas,” Tokyo, Japan
- 8/16 Invited Speaker, Current Trends in Malignant Gliomas, “Understanding Immunotherapy in Gliomas,” Tokyo Japan
- 9/16 Invited Speaker, 4<sup>th</sup> Annual Immuno-Oncology Summit, “Checkpoint Inhibitors for Gliomas,” Boston, MA
- 9/16 Invited Speaker, Neurology Grand Rounds, “Immunotherapy for Brain Tumors,” Baltimore, MD

- 9/16 Invited Speaker, Oncology Grand Rounds, "Checkpoint Inhibitors for Brain Tumors," Baltimore
- 9/16 Invited Speaker, Asia Spine, "Immunotherapy for Spinal Tumors," Seoul, Korea
- 9/16 Invited Speaker, American Association of Neurological Surgeon/Congress of Neurological Surgeons Tumor Satellite Section, "Clinical Trials for Neurological Surgeons," San Diego, CA
- 9/16 Invited Speaker, Congress of Neurological Surgeons, "Checkpoint Inhibitors for Gliomas," San Diego, CA
- 10/16 Distinguished Speaker, Samuel C. Smith Visiting Professor, "Immunotherapy for Brain Tumors," University of New Hampshire, Durham, NH
- 10/16 Distinguished Speaker, Research Seminar, "Trigeminal Neuralgia," University of New Hampshire, Durham, NH
- 11/16 Invited Speaker, Selected Topics in Craniomaxillofacial Surgery/ An International Cranioplasty Symposium, "Single Stage Cranioplasty for Skull Tumors," Baltimore, MD
- 11/16 Invited Speaker, 34<sup>th</sup> Annual Chemotherapy Foundation Symposium, "Targeting the Tumor Microenvironment and Immune Pathways for GBM," New York, NY
- 11/16 Invited Speaker, Neurosurgery Updates CME, "Trigeminal Neuralgia," Suburban Hospital, Baltimore, MD
- 11/16 Invited Speaker, SNO: Neuro-Oncology Review Course, "Neurosurgical Management of Brain Tumors," Scottsdale, AZ
- 11/16 Chair and Invited Speaker, New Considerations for the Management of Glioblastoma, "Future Directions for Immunotherapy," SNO meeting, Scottsdale, AZ
- 2/17 Invited Roundtable Speaker, American Society of Clinical Oncology, Society for Immunotherapy of Cancer (ASCO-SITC) Meeting "Immunotherapy in Clinical Practice – GBM," Orlando, FL
- 3/17 Invited Speaker, American College of Radiation Oncology Meeting "Radiation to Kickstart an Immune Response to Metastases," Orlando, FL
- 3/17 Invited Speaker, Seoul National University Grand Rounds, "Management of Brain Metastases," Seoul, Korea
- 3/17 Invited Plenary Speaker, Korean Society for Neuro-Oncology "Immunotherapy for Brain Tumors," Seoul, Korea
- 4/17 Speaker, JHU Neurosurgery Grand Rounds, "State of Immunotherapy in Brain Tumors," Baltimore, MD
- 4/17 Invited Speaker, Advanced Clinical Topics in Neuroscience Nursing, "Practical Aspects of Immunotherapy for Brain Tumors," – Baltimore, MD
- 5/17 Invited Speaker, World Federation of Neuro-Oncology Societies, "Preclinical Rationale for I-O Based Treatment Strategies," Zurich, Switzerland
- 5/17 Invited Speaker, 3<sup>rd</sup> Annual NeuroSpine Summit, "Immunotherapy for Brain Tumors," Beirut, Lebanon
- 5/17 Invited Speaker, 3<sup>rd</sup> Annual Neurospine Summit, "Radiosurgery for Brain Metastases," Beirut, Lebanon
- 5/17 Invited Speaker, 3<sup>rd</sup> Annual Neurospine Summit, "Nuances of Vestibular Schwannoma Resection," Beirut, Lebanon
- 5/17 Invited Speaker, Molecular and Clinical Radiobiology Workshop 3<sup>rd</sup> Edition, "Creating a Systemic Immune Response with Local Therapies," Montreal, Canada
- 5/17 Invited Speaker, Nursing Inservice, "Trigeminal Neuralgia," Baltimore, MD
- 6/17 Invited Speaker, Brain Tumor Biotech Summit, "Kindling an Immune Response for Brain Tumors," New York, NY
- 6/17 Invited Speaker, Neurology Resident Lecture, "Trigeminal Neuralgia," Baltimore, MD
- 6/17 Invited Speaker, SITC-ASTRO Immunotherapy Workshop, "Kindling a Systemic Immune Response with Local Therapies," Bethesda, MD
- 6/17 Invited Speaker, International Gamma Knife Radiosurgery Foundation, "Immune Checkpoints and Radiosurgery," Philadelphia, PA
- 7/17 Speaker, JHU Neurosurgery Grand Rounds, "Trigeminal Neuralgia," Baltimore, MD
- 7/17 Speaker, Hanbery Society Meeting, "Immunotherapy for Brain Tumors," Park City, UT
- 9/17 Invited Speaker, Stanford Neurosurgery Grand Rounds, "Trigeminal Neuralgia," Stanford, CA
- 9/17 Invited Speaker, LINK Symposium, "Surgical Management of Brain Tumors," Beijing, China
- 10/17 Invited Speaker, BMS II-ON Symposium, "Combination Immunotherapy Approaches for GBM,"

- Redwood City, CA
- 10/17 Speaker, Neurosurgery Grand Rounds, “Low Grade Gliomas,” Baltimore, MD
- 10/17 Invited Speaker, National Brain Tumor Society (NBTS) Scientific Meeting, “Novel Immunotherapy Combination Approaches for GBM,” Boston, MA
- 10/17 Invited Speaker, American Society for Plastic Surgery (ASPS), “Single Stage Cranioplasty for Skull Tumors,” Orlando, FL
- 10/17 Invited Speaker, Christopher Davidson Forum, “Removing the Handcuffs for Brain Tumor Immunotherapy,” St. Louis, MO
- 11/17 Invited Speaker, Selected Topics in Craniomaxillofacial Surgery/ An International Cranioplasty Symposium, “Kindling a Systemic Immune Response Against GBM,” Boston, MA
- 11/17 Invited Speaker, Memorial Sloan Kettering Brain Tumor Series, “Kindling a Systemic Antitumor Immune Response for Brain Tumors,” New York, NY
- 11/17 Invited Speaker, Korean Association of Immunologists, “Reassessing the Role of Chemotherapy for Brain Tumor Immunotherapy,” Seoul, Korea
- 11/17 Invited Speaker, SNO: Neuro-Oncology Review Course, “Neurosurgical Management of Brain Tumors,” San Francisco, CA
- 11/17 Invited Speaker, SNO Sunrise Session, “Checkpoint Inhibitors for GBM,” San Francisco, CA
- 11/17 Invited Speaker, Novalis Circle Symposium, “Combining Focused Radiation with Immunotherapy,” San Francisco, CA
- 12/17 Invited Speaker, Translational Research Conference, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 12/17 Invited Speaker, Brigham & Women’s Hospital Neurosurgery Grand Rounds, “Rationale Immunotherapy Strategies for GBM,” Boston, MA
- 3/18 Invited Speaker, International Leksell Gamma Knife Society Meeting, “Background on Immunotherapy,” Dubai, UAE
- 3/18 Invited Speaker, Chinese Society for Neuro-Oncology Meeting, “Immunotherapy for Brain Tumors,” Guangzhou, China
- 3/18 Invited Speaker, Chinese Society for Neuro-Oncology Meeting, “Tailoring Immunotherapy for GBM,” Guangzhou, China
- 3/18 Invited Speaker, Sixth Annual Chordoma Research Workshop, “Checkpoint Inhibitors for Chordomas,” Boston, MA
- 3/18 Invited Speaker, San Francisco Neurological Society Meeting, “Immunotherapy for Brain Tumors,” Napa, CA
- 4/18 Invited Speaker, JHI Neurosurgery Breakfast Seminar, “Novel Surgical Approaches for Brain Tumors,” Mexico City, Mexico
- 4/18 Invited Speaker, JHI Joint Symposium with Punta Pacifica, “Novel Techniques for Brain Tumor Surgery,” Panama City, Panama
- 5/18 Invited Speaker, 4<sup>th</sup> Annual Neurospine Summit, “Novel Techniques for Brain Tumor Resection,” Beirut, Lebanon
- 5/18 Invited Speaker, 4<sup>th</sup> Annual Neurospine Summit, “Immunotherapy for Brain Tumors,” Beirut, Lebanon
- 5/18 Invited Speaker, 4<sup>th</sup> Annual Neurospine Summit, “Management of Brain Metastases,” Beirut, Lebanon
- 5/18 Invited Speaker, 4<sup>th</sup> Annual Neurospine Summit, “Trigeminal Neuralgia,” Beirut, Lebanon
- 5/18 Invited Speaker, Chesapeake Bay Society of Perianesthesia Nursing (CBSPAN) Meeting, “Trigeminal Neuralgia,” Baltimore, MD
- 5/1 Speaker, Neurosurgery Grand Rounds, “Advances in Immunotherapy for Brain Tumors,” Baltimore, MD
- 6/18 Invited Speaker, XXVII Congreso Internacional De Neurologia Y Neurocirugia Meeting, “Novel Surgical Approaches to Brain Tumors,” Punta Cana, Dominican Republic
- 6/18 Invited Speaker, Neurology and Neurosurgery Research Retreat, “Immunotherapy for Gliomas,” Baltimore, MD
- 6/18 Invited Speaker, Internations Symposium on Pediatric Neuro-Oncology, “Strategies to Overcome Pediatric Brain Tumor Induced Systemic and Local Immunosuppression,” Denver, CO

## OTHER PROFESSIONAL ACCOMPLISHMENTS

### Oral Presentations

- 5/99 Howard Hughes Medical Institute, Washington DC; **Lim M**, Carducci MA, Mikhak B, Biedrzycki B, Borrellini F, Clift SM, Hege KM, Ando DG, Piantadosi S, Mulligan R, Nelson WG, Simons JW. Characterization of the Human Th-2 Effector Response with *ex vivo* GM-CSF Gene Transduced Prostate Cancer Vaccines.
- 8/04 Hanbery Society, Palo Alto, CA; **Lim M**, Guccione S, Sims L, Azok J, King L, Bednarski M, Harsh G. Serum Markers for Glioblastoma Multiforme.
- 8/06 Hanbery Society, Whistler, Canada; **Lim M**, Bower R, Choi S, Sims L, Wang Y, Yang Y, Cheshier S, Haddix T, Vogel H, Tse V, Harsh G, Guccione S. An Antiangiogenic Approach to Treating Glioblastoma Multiforme.
- 9/07 Western Neurosurgical Society – 53<sup>rd</sup> Annual Meeting, Kohala Coast, HI; **Lim M**, Villavicencio A, Burneikiene S, Romanelli P, Chang SD, McNeely L, Fariselli L, McIntyre M, Bower R, Broggi G, Thramann JJ, Adler JR. Multicenter Experience of Treating Trigeminal Neuralgia with the CyberKnife.
- 6/09 Neurosurgical Society of America (NSA), Homestead, VA; Albesiano E, Han J, See A, Frazier J, Parker S, Cheng J, Pardoll D, **Lim M**. Role of STAT3 activation in the GBM Microenvironment.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Bender M, Pradilla G, Batra S, See A, James C, Carson B, **Lim M**. Effectiveness of Repeat Glycerol Rhizotomy in Treating Trigeminal Neuralgia.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Bender M, Pradilla G, Batra S, See A, Bhutani N, James C, Carson B, **Lim M**. Effectiveness of Repeat Radiofrequency Thermocoagulation in the Treatment of Recurrent Trigeminal Neuralgia.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Pradilla G, Bhutani N, Batra S, Bender M, See A, Garzon-Muvdi T, James C, Carson B, **Lim M**. Safety and Efficacy of Secondary Microvascular Decompression as Treatment for Recurrent Trigeminal Neuralgia.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Bender M, Pradilla G, Batra S, See A, Bhutani N, James C, **Lim M**, Carson B. Surgical treatment of Trigeminal Neuralgia in Patients with Multiple Sclerosis.
- 10/11 American Society for Therapeutic Radiology and Oncology (ASTRO), Miami, FL; Zeng J, See A, Phallen J, Jackson C, Belcaid Z, Hammers H, Meyer C, Tyler B, Ford E, Wong J, Brem H, Pardoll DM, Drake C, **Lim M**. Combining Anti-PD-1 (B7-H1) Immunotherapy with Stereotactic Radiosurgery in a Mouse Orthotopic Glioblastoma Model.
- 11/11 Society for Neuro-Oncology (SNO), Orange County, CA; Zeng J, See A, Phallen J, Jackson C, Belcaid Z, Hammers H, Meyer C, Tyler B, Ford E, Wong J, Brem H, Pardoll DM, Drake C, **Lim M**. Combining Anti-PD-1 (B7-H1) Immunotherapy with Stereotactic Radiosurgery in a Mouse Orthotopic Glioblastoma Model.
- 3/12 International Conference on Translational Research in Radiation Oncology-Physics for Health in Europe (ICTR-PHE), Geneva, Switzerland; Zeng J, See A, Phallen J, Jackson C, Belcaid Z, Hammers H, Meyer C, Tyler B, Ford E, Wong J, Brem H, Pardoll DM, Drake C, **Lim M**. Combining Anti-PD-1 (B7-H1) Immunotherapy with Stereotactic Radiosurgery in a Mouse Orthotopic Glioblastoma Model.
- 10/12 Congress of Neurological Surgeons, Chicago, IL; Chaichana K, Weingart JD, Olivi A, Gallia GL, **Lim M**, Brem H, Quinones-Hinojosa A. Multiple Surgical Resections for Patients with Glioblastoma: Prolonging Survival.
- 10/12 American Neurological Association, Boston MA. Soma S, Weeraratne SD, Sun H, Phallen J, Kosaras B, Mathios D, Lechpammer M, Amani V, Cook JM, Rallapalli S, Teider N, Francois JP, Archer T, **Lim M**, Pomeroy SL, Jensen F, Cho YJ. Leveraging  $\alpha 5$ -GABA-A receptor subunit (GABRA5) expression in clinically aggressive medulloblastomas as a novel therapeutic approach.
- 9/13 Jusue-Torres I, Recinos PE, Quinones-Hinojosa, **Lim M**, World Federation of Neurological Societies. 15<sup>th</sup> World Congress of Neurosurgery, “Technical Nuances of Microvascular Decompression of the Posterior Fossa Cranial Nerves,” Seoul, Korea

- 9/14 American Society for Therapeutic Radiology and Oncology (ASTRO), San Francisco, CA; Belcaid Z, Phallen JA, Zeng J, See AP, Mathios D, Gottschalk C, Nicholas S, Kellet M, Ruzevick J, Jackson C, Albesiano E, Durham NM, Tyler B, Wong J, Brem H, Pardoll DM, Drake CG, **Lim M** Stereotactic Radiation Combined with 4-1BB Activation and CTLA-4 Blockade Yields Long-Term Survival and a Protective Antigen-Specific Memory Response in a Murine Glioma Model.
- 5/15 American Association of Neurological Surgeons (AANS), Washington, DC; Mathios D, Phallen JA, Tyler B, Jackson C, Brem H, Pardoll DM, **Lim M**. Local and Not Systemic Chemotherapy Synergizes with PD-1 Blockade Enhancing Antigen Specific Tumor Immune Response, Survival and Long-term Memory in a Murine Glioblastoma Model.
- 9/15 Congress of Neurological Surgeons, New Orleans, LA; Kim JE, Patel MA, Mangraviti A, Velarde E, Theodros D, Mathios D, Jackson CM, Tyler B, Ye X, Brem H, Pardoll D, **Lim M**. The Combination of anti-TIM-3 and anti-PD-1 Checkpoint Inhibitors with Focused Radiation Resulted in a Synergistic Anti-Tumor Immune Response in a Preclinical Glioma Model.
- 10/15 American Society for Therapeutic Radiology and Oncology (ASTRO), San Antonio, TX; Maxwell R, Ye X, Bettgowda C, Sharfman W, Redmond K, Kleinberg L, **Lim M**. *BRAF*-V600 Mutational Status is a Significant Associate of Brain Metastases Recurrence in Patients with Melanoma: A Retrospective Study
- 9/17 European Society for Medical Oncology (ESMO), Madrid Spain; **Lim M\***, Omuro A\*, Vlahovic G, Reardon DA, Sahebjam S, Cloughsey T, Baehring J, Butowski NA, Potter V, Zvirtes R, Paliwal P, Carleton M, Sampson J, Brandes AA. Nivolumab in Combination With Radiotherapy ± Temozolomide: Updated Safety Results From CheckMate 143 in Patients With Methylated or Unmethylated Newly Diagnosed Glioblastoma
- 9/17 American Academy of Neurological Surgeons, Santa Barbara CA, **Lim M**, Mathios D, Kim J, Kim E, Tyler B, Brem H, Pardoll D. Kindling a Systemic Immune Response.