



Fred M Baik, MD

Assistant Professor of Otolaryngology - Head & Neck Surgery (OHNS)
Otolaryngology (Head and Neck Surgery)

 Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Otolaryngology Head and Neck Surgery**

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Dr. Baik is Assistant Professor of Otolaryngology – Head & Neck Surgery at Stanford University. He provides comprehensive surgical care for patients with head and neck cancer, both as an ablative and reconstructive surgeon. His clinical interests include oral cavity cancer, complex skin cancer, microvascular reconstruction and the diagnosis and management of nodal metastasis. With his background in fluorescence imaging, Dr. Baik's research focuses on surgical navigation using targeted agents to improve tumor margin assessment and the detection of nodal metastasis, and he currently leads several clinical trials to translate novel imaging techniques.

Dr. Baik graduated with honors in Biology at the University of Pennsylvania and received his medical degree at UC San Diego. After completing his Otolaryngology residency at the University of Washington, he pursued advanced training in Head and Neck Oncology & Reconstructive Surgery at Mount Sinai Beth Israel Hospital in New York City. He is a board-certified by the American Board of Otolaryngology, and a member of the American Head and Neck Society, American Academy of Otolaryngology – Head and Neck Surgery, and a fellow of the American College of Surgeons.

CLINICAL FOCUS

- Head and Neck cancer
- Microvascular Reconstruction of the Head and Neck
- Skin cancer
- Melanoma
- Otolaryngology/Facial Plastic Surgery

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Otolaryngology (Head and Neck Surgery)
- Member, Wu Tsai Human Performance Alliance

PROFESSIONAL EDUCATION

- Medical Education: University of California San Diego School of Medicine (2011) CA
- Board Certification: Otolaryngology, American Board of Otolaryngology (2018)
- Fellowship, Mount Sinai Beth Israel Hospital, New York , Head and Neck Oncologic & Reconstructive Surgery (2018)
- Residency, University of Washington , Otolaryngology - Head and Neck Surgery (2017)
- MD, University of California, San Diego , Medicine (2011)
- MAS, University of California, San Diego , Clinical research (2010)
- BA, University of Pennsylvania , Biology (2005)

LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>
- Google Scholar: <https://scholar.google.com/citations?hl=en&user=HYwuckkAAAAJ>

Research & Scholarship

CLINICAL TRIALS

- Intratumoral Delivery of Viral Replicon (saRNA) Particles Expressing IL-12 in Head and Neck Cancer, Recruiting
- Phase II/III Sentinel LymphNode Biopsy vs Elective Neck Dissection in Early-Stage Oral Cavity Cancer, Recruiting
- Phase I Study Evaluating 111In Panitumumab for Nodal Staging in Head and Neck Cancer, Not Recruiting
- Phase II Panitumumab IRDye800 vs. Sentinel Node Biopsy and (Selective) Neck Dissection for Metastati, Not Recruiting
- Phase II 89Zr-Panitumumab for Assessment of Suspected Metastatic Lesions on 18F-FDG-PET/CT in HNSCC, Not Specified

Publications

PUBLICATIONS

- **Alphavirus replicon expressing IL-12 reprograms tumor-associated macrophages and neutrophils and induces anti-tumor immunity**
Bowling, F., Ishikawa, M., Nambiar, D., Sastri, J., Ishimoto, K., Tao, F., Takahashi, K., Stepanek, I., Cao, H., Leitner, D., Matsuda, K., Baik, F., Sunwoo, et al
AMER ASSOC CANCER RESEARCH.2026
- **Tumor and Flap Reconstruction Volumes and Functional Outcomes after Glossectomy.** *JAMA otolaryngology-- head & neck surgery*
Wu, S. S., Jetly, A. S., Starmer, H. M., Finegersh, A., Holsinger, F. C., Chen, M. M., Divi, V., Pham, N., Baik, F. M.
2026
- **Cost Comparison of Sentinel Lymph Node Biopsy Versus Elective Neck Dissection in Early-Stage Oral Cavity Squamous Cell Carcinoma.** *Head & neck*
Wu, S. S., Ayoub, N. F., Chen, M. M., Finegersh, A., Sunwoo, J. B., Holsinger, F. C., Divi, V., Baik, F. M.
2026
- **Automated Detection of Benign and Malignant Skin Lesions from Reflectance Confocal Microscopy Images Using Deep Learning.** *JID innovations : skin science from molecules to population health*
Omiye, J. A., Rao, B. K., Razi, S., Chuchvara, N., Baik, F. M., Daneshjou, R., Zaba, L. C.
2025; 5 (6): 100404
- **Multimodal Shortwave Infrared Imaging for Visualization of Injection Laryngoplasty.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*
Park, R. K., Lee, M. C., Härtl, S., Arús, B. A., Nuyen, B., Sung, C. K., Baik, F. M., Bruns, O. T., Valdez, T. A.
2025
- **Correction: Validation of the Melanoma Institute of Australia's Sentinel Lymph Node Biopsy Risk Prediction Tool for Cutaneous Melanoma.** *Annals of surgical oncology*

- Maddineni, S., Dizon, M. P., Muralidharan, V., Young, L. A., Sunwoo, J. B., Baik, F. M., Swetter, S. M.
2025
- **Localization of sentinel lymph nodes using augmented-reality system: a cadaveric feasibility study.** *European journal of nuclear medicine and molecular imaging*
Duan, H., Yang, Y., Niu, W. L., Anders, D., Dreisbach, A. M., Holley, D., Franc, B. L., Perkins, S. L., Leuze, C., Daniel, B. L., Baik, F. M.
2025
 - **Comparison of Technetium-99m Tilmanocept to Technetium-99 Sulfur Colloid Radiotracer for Sentinel Lymph Node Biopsy in Head and Neck Melanoma.** *The Annals of otology, rhinology, and laryngology*
Maddineni, S., Tosoni, S. M., Sunwoo, J. B., Baik, F. M.
2025: 34894251322661
 - **VR MRI Training for Adolescents: A Comparative Study of Gamified VR, Passive VR, 360° Video, and Traditional Educational Video**
Yang, Y., Guo, M., Wu, Y., Niu, W., Corona, E., Daniel, B., Leuze, C., Baik, F.
2025
 - **Comorbid Depression in Patients With Head and Neck Cancer Compared With Other Cancers.** *JAMA otolaryngology-- head & neck surgery*
Martinez, M. C., Finegersh, A., Baik, F. M., Holsinger, F. C., Starmer, H. M., Orloff, L. A., Sunwoo, J. B., Sirjani, D., Divi, V., Chen, M. M.
2024
 - **Infrared Fluorescence-guided Surgery for Tumor and Metastatic Lymph Node Detection in Head and Neck Cancer.** *Radiology. Imaging cancer*
White, H. W., Naveed, A. B., Campbell, B. R., Lee, Y. J., Baik, F. M., Topf, M., Rosenthal, E. L., Hom, M. E.
2024; 6 (4): e230178
 - **PET/MRI Mixed Reality for Intraoperative Localization of Sentinel Lymph Nodes in Head and Neck Melanoma**
Duan, H., Daniel, B., Baik, F., Anders, D., Holley, D., Franc, B.
SOC NUCLEAR MEDICINE INC.2024
 - **How far are we off? Analyzing the accuracy of surgical margin relocation in the head and neck.** *Head & neck*
Miller, A., Wang, V., Jegede, V., Necker, F., Curry, J., Baik, F. M., Verma, A., Holsinger, F. C., Tuluc, M., Rahman, M., Lewis, J. S., Rosenthal, E., Topf, et al
2024
 - **3D Printing for the Development of Palatal Defect Prosthetics.** *Federal practitioner : for the health care professionals of the VA, DoD, and PHS*
Calderon, C., Golzar, A., Marcott, S., Gifford, K., Napel, S., Fleischmann, D., Baik, F. M., Osborne, T. F., Finegersh, A., Sirjani, D.
2024; 41 (Suppl 2): S3-S7
 - **ASO Visual Abstract: Validation of the Melanoma Institute of Australia's Sentinel Lymph Node Biopsy Risk Prediction Tool for Cutaneous Melanoma.** *Annals of surgical oncology*
Maddineni, S., Dizon, M. P., Muralidharan, V., Young, L. A., Sunwoo, J. B., Baik, F. M., Swetter, S. M.
2024
 - **Validation of the Melanoma Institute of Australia's Sentinel Lymph Node Biopsy Risk Prediction Tool for Cutaneous Melanoma.** *Annals of surgical oncology*
Maddineni, S., Dizon, M. P., Muralidharan, V., Young, L. A., Sunwoo, J. B., Baik, F. M., Swetter, S. M.
2024
 - **Fluorescent guided surgery for sinonasal tumors** *MINI-INVASIVE SURGERY*
Chang, M., Baik, F.
2024; 8
 - **Toll-like Receptor Agonists Are Unlikely to Provide Benefits in Head and Neck Squamous Cell Carcinoma: A Systematic Review and Meta-Analysis.** *Cancers*
Maddineni, S., Chen, M., Baik, F., Divi, V., Sunwoo, J. B., Finegersh, A.
2023; 15 (17)
 - **ASO Visual Abstract: Augmented Reality Surgery to Guide Head and Neck Cancer Re-resection: A Feasibility and Accuracy Study.** *Annals of surgical oncology*
Prasad, K., Miller, A., Sharif, K., Colazo, J. M., Ye, W., Necker, F., Baik, F., Lewis, J. S., Rosenthal, E., Wu, J. Y., Topf, M. C.

2023

- **Augmented-Reality Surgery to Guide Head and Neck Cancer Re-resection: A Feasibility and Accuracy Study.** *Annals of surgical oncology*
Prasad, K., Miller, A., Sharif, K., Colazo, J. M., Ye, W., Necker, F., Baik, F., Lewis, J. S., Rosenthal, E., Wu, J. Y., Topf, M. C.
2023
- **Virtual Resection Specimen Interaction Using Augmented Reality Holograms to Guide Margin Communication and Flap Sizing.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*
Necker, F. N., Chang, M., Leuze, C., Topf, M. C., Daniel, B. L., Baik, F. M.
2023
- **Complications of pectoralis major myo-cutaneous flap, anterolateral thigh flap and radial forearm free flap after total laryngectomy with partial pharyngectomy: A systematic review and network meta-analysis.** *Microsurgery*
Costantino, A., Festa, B. M., Kim, S., Baik, F. M., Wang, C., Pirola, F., Malvezzi, L., Spriano, G., Mercante, G., De Virgilio, A.
2022
- **The Evolution of Fluorescence-Guided Surgery.** *Molecular imaging and biology*
Van Keulen, S., Hom, M., White, H., Rosenthal, E. L., Baik, F. M.
2022
- **⁸⁹Zr-panitumumab combined with ¹⁸F-FDG-PET improves detection and staging of head and neck squamous cell carcinoma.** *Clinical cancer research : an official journal of the American Association for Cancer Research*
Lee, Y., van den Berg, N. S., Duan, H., Azevedo, E. C., Ferri, V., Hom, M., Raymundo, R. C., Valencia, A., Castillo, J., Shen, B., Zhou, Q., Freeman, L., Koran, et al
2022
- **Fluorescent molecular imaging can improve intraoperative sentinel margin detection in oral squamous cell carcinoma.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
Krishnan, G., van den Berg, N. S., Nishio, N., Kapoor, S., Pei, J., Freeman, L., Lee, Y., van Keulen, S., Fakurnejad, S., Condon, J., Back, F., Martin, B., Rosenthal, et al
1800
- **Landscape of innate lymphoid cells in human head and neck cancer reveals divergent NK cell states in the tumor microenvironment.** *Proceedings of the National Academy of Sciences of the United States of America*
Moreno-Nieves, U. Y., Tay, J. K., Saumyaa, S., Horowitz, N. B., Shin, J. H., Mohammad, I. A., Luca, B., Mundy, D. C., Gulati, G. S., Bedi, N., Chang, S., Chen, C., Kaplan, et al
2021; 118 (28)
- **Metastatic and sentinel lymph node mapping using intravenously delivered Panitumumab-IRDye800CW.** *Theranostics*
Krishnan, G., van den Berg, N. S., Nishio, N., Juniper, G., Pei, J., Zhou, Q., Lu, G., Lee, Y. J., Ramos, K., Iagaru, A. H., Baik, F. M., Colevas, A. D., Martin, et al
2021; 11 (15): 7188-7198
- **Metastatic and sentinel lymph node mapping using intravenously delivered Panitumumab-IRDye800CW THERANOSTICS**
Krishnan, G., van den Berg, N. S., Nishio, N., Juniper, G., Pei, J., Zhou, Q., Lu, G., Lee, Y., Ramos, K., Iagaru, A. H., Baik, F. M., Colevas, A. D., Martin, et al
2021; 11 (15): 7188-7198
- **Effect of Formalin Fixation for Near-Infrared Fluorescence Imaging with an Antibody-Dye Conjugate in Head and Neck Cancer Patients.** *Molecular imaging and biology*
Kapoor, S., Lu, G., van den Berg, N. S., Krishnan, G., Pei, J., Zhou, Q., Martin, B. A., Baik, F. M., Rosenthal, E. L., Nishio, N.
2020
- **Oral squamous carcinoma: Aggressive tumor pattern of invasion predicts direct mandible invasion.** *Head & neck*
Yue, L. E., Sharif, K. F., Sims, J. R., Sandler, M. L., Baik, F. M., Sobotka, S., Everest, S., Brandwein-Weber, M., Khorsandi, A. S., Likhterov, I., Urken, M. L.
2020
- **Molecular profiling of a primary cutaneous signet-ring cell/histiocytoid carcinoma of the eyelid.** *Journal of cutaneous pathology*
Raghavan, S., Clark, M., Louie, C., Jensen, K. C., Dietrich, B., Beadle, B. M., El-Sawy, T., Baik, F., Kunder, C. A., Brown, R. A.
2020

- **Positive Lymph Node Counts in American Thyroid Association Low-Risk Papillary Thyroid Carcinoma Patients.** *World journal of surgery*
Griffin, M. J., Baik, F. M., Brandwein-Weber, M., Qazi, M., Yue, L. E., Osorio, M., Urken, M. L.
2020
- **Where Dysphagia Begins: Polypharmacy and Xerostomia.** *Federal practitioner : for the health care professionals of the VA, DoD, and PHS*
Marcott, S. n., Dewan, K. n., Kwan, M. n., Baik, F. n., Lee, Y. J., Sirjani, D. n.
2020; 37 (5): 234–41
- **Radiographic surveillance of abdominal free fat graft in complex parotid pleomorphic adenomas: A case series.** *Heliyon*
Lee, Y. J., Fischbein, N. J., Megwalu, U. n., Baik, F. M., Divi, V. n., Kaplan, M. J., Sirjani, D. B.
2020; 6 (5): e03894
- **Multifocal Parotid Oncocytic Cystadenomatosis: A Rare Process that Can Mimic Malignancy.** *Head and neck pathology*
Yue, L. E., Spaulding, S. L., Baik, F. M., Khorsandi, A. n., Brandwein-Weber, M. n., Urken, M. L.
2020
- **Endoscopic Fluorescence-Guided Surgery for Sinonasal Cancer Using an Antibody-Dye Conjugate.** *The Laryngoscope*
Hart, Z. P., Nishio, N., Krishnan, G., Lu, G., Zhou, Q., Fakurnejad, S., Wormald, P. J., van den Berg, N. S., Rosenthal, E. L., Baik, F. M.
2019
- **Ten patients with high-grade transformation of acinic cell carcinomas: Expression profiling of beta-catenin and cyclin D1 is useful.** *Pathology, research and practice*
Yue, L. E., Samankan, S., Liu, X., Sharif, K. F., Everest, S., Singh, T., Dhorajiya, P., Baik, F. M., Khorsandi, A., Stevens, T. M., Brandwein-Weber, M., Urken, M. L.
2019: 152767
- **Combined mandibular and maxillary reconstruction: Managing sinus secretions and preventing infection** *LARYNGOSCOPE*
Baik, F. M., Yue, L. E., Sharif, K. F., Sims, J. R., Urken, M. L.
2019; 129 (11): 2475–78
- **Fluorescence molecular imaging for identification of high-grade dysplasia in patients with head and neck cancer.** *Oral oncology*
Fakurnejad, S., van Keulen, S., Nishio, N., Engelen, M., van den Berg, N. S., Lu, G., Birkeland, A., Baik, F., Colevas, A. D., Rosenthal, E. L., Martin, B. A.
2019; 97: 50–55
- **Acinic Cell Carcinoma with High-Grade Transformation: beta-Catenin and Cyclin D1 Data**
Everest, S., Yue, L., Qazi, M., Stevens, T., Sharif, K., Baik, F., Dhorajiya, P., Liu, X., Brandwein-Weber, M.
NATURE PUBLISHING GROUP.2019
- **Acinic Cell Carcinoma with High-Grade Transformation: beta-Catenin and Cyclin D1 Data**
Everest, S., Yue, L., Qazi, M., Stevens, T., Sharif, K., Baik, F., Dhorajiya, P., Liu, X., Brandwein-Weber, M.
NATURE PUBLISHING GROUP.2019
- **Combined mandibular and maxillary reconstruction: Managing sinus secretions and preventing infection.** *The Laryngoscope*
Baik, F. M., Yue, L. E., Sharif, K. F., Sims, J. R., Urken, M. L.
2019
- **Reconstructive and prosthodontic outcomes after multiple palatomaxillary reconstructions.** *The Laryngoscope*
Sharif, K. F., Sims, J. R., Yue, L. E., Baik, F. M., Kiplagat, K. J., Buchbinder, D. n., Okay, D. J., Chai, R. L., Urken, M. L.
2019
- **Intraoperative Molecular Imaging for ex vivo Assessment of Peripheral Margins in Oral Squamous Cell Carcinoma.** *Frontiers in oncology*
Fakurnejad, S. n., Krishnan, G. n., van Keulen, S. n., Nishio, N. n., Birkeland, A. C., Baik, F. M., Kaplan, M. J., Colevas, A. D., van den Berg, N. S., Rosenthal, E. L., Martin, B. A.
2019; 9: 1476
- **Development of proficiency-based knot-tying and suturing curriculum for otolaryngology residents: A pilot study.** *Auris, nasus, larynx*
Sato, E. n., Mitani, S. n., Nishio, N. n., Kitani, T. n., Sanada, T. n., Ugumori, T. n., Christopher Holsinger, F. n., Baik, F. M., Hato, N. n.
2019

- **Gorilla endoscopic sinus surgery: a life-saving collaboration between human and veterinary medicine** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*
Davis, G. E., Baik, F. M., Liddell, R. M., Ayars, A. G., Branch, K. R., Pottinger, P. S., Hillel, A. D., Helmick, K., Collins, D.
2018; 8 (7): 857–62
- **Septic arthritis of the sternoclavicular joint: A unique late complication after tracheostomy.** *American journal of otolaryngology*
Sharif, K. F., Baik, F. M., Jategaonkar, A. A., Khorsandi, A. S., Urken, M. L.
2018; 39 (5): 646-648
- **A rare primary leiomyosarcoma of the parotid gland: A case report and literature review.** *American journal of otolaryngology*
Yue, L. E., Qazi, M., Kiplagat, K., Baik, F. M., Khorsandi, A., Brandwein-Weber, M., Urken, M.
2018; 39 (3): 345-348
- **Airway management for symptomatic benign thyroid goiters with retropharyngeal involvement: Need for a surgical airway with report of 2 cases** *Otolaryngology Case Reports*
Baik, F. M., Zhu, V., Patel, A., Urken, M. L.
2018; 7 (C): 10-12
- **Survival and Gastrostomy Prevalence in Patients With Oropharyngeal Cancer Treated With Transoral Robotic Surgery vs Chemoradiotherapy** *JAMA OTOLARYNGOLOGY-HEAD & NECK SURGERY*
Sharma, A., Patel, S., Baik, F. M., Mathison, G., Pierce, B. H. G., Khariwala, S. S., Yueh, B., Schwartz, S. M., Mendez, E.
2016; 142 (7): 691–97
- **Fluorescence Identification of Head and Neck Squamous Cell Carcinoma and High-Risk Oral Dysplasia With BLZ-100, a Chlorotoxin-Indocyanine Green Conjugate (vol 142, pg 330, 2016)** *JAMA OTOLARYNGOLOGY-HEAD & NECK SURGERY*
Baik, F. M., Hansen, S., Knoblauch, S. E., Sahetya, D., Mitchell, R. M., Xu, C., Olson, J. M., Parrish-Novak, J., Mendez, E.
2016; 142 (5): 505
- **Fluorescence Identification of Head and Neck Squamous Cell Carcinoma and High-Risk Oral Dysplasia With BLZ-100, a Chlorotoxin-Indocyanine Green Conjugate** *JAMA OTOLARYNGOLOGY-HEAD & NECK SURGERY*
Baik, F. M., Hansen, S., Knoblauch, S. E., Sahetya, D., Mitchell, R. M., Xu, C., Olson, J. M., Parrish-Novak, J., Mendez, E.
2016; 142 (4): 330–38
- **Identification of High-Risk Plaques by MRI and Fluorescence Imaging in a Rabbit Model of Atherothrombosis.** *PLoS one*
Hua, N., Baik, F., Pham, T., Phinikaridou, A., Giordano, N., Friedman, B., Whitney, M., Nguyen, Q. T., Tsien, R. Y., Hamilton, J. A.
2015; 10 (10): e0139833
- **Upper Aerodigestive Magnetic Foreign Bodies in Children** *LARYNGOSCOPE*
Brown, J. C., Baik, F. M., Ou, H. C., Otjen, J. P., Parish, H. G., Chan, D. K.
2014; 124 (6): 1481-1485
- **A Large Juvenile Xanthogranuloma within the Tongue** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Baik, F. M., Andeen, N. K., Schmechel, S. C., Futran, N. D.
2014; 150 (2): 332–33
- **In vivo fluorescence imaging of atherosclerotic plaques with activatable cell-penetrating peptides targeting thrombin activity.** *Integrative biology : quantitative biosciences from nano to macro*
Olson, E. S., Whitney, M. A., Friedman, B., Aguilera, T. A., Crisp, J. L., Baik, F. M., Jiang, T., Baird, S. M., Tsimikas, S., Tsien, R. Y., Nguyen, Q. T.
2012; 4 (6): 595-605
- **Inverting papilloma of the temporal bone: case report and meta-analysis of risk factors.** *Otology & neurotology : official publication of the American Otological Society, American Neurotology Society [and] European Academy of Otology and Neurotology*
Shen, J., Baik, F., Mafee, M. F., Peterson, M., Nguyen, Q. T.
2011; 32 (7): 1124-33
- **Comparative Case Series of Exostoses and Osteomas of the Internal Auditory Canal** *ANNALS OF OTOTOLOGY RHINOLOGY AND LARYNGOLOGY*
Baik, F. M., Nguyen, L., Doherty, J. K., Harris, J. P., Mafee, M. F., Nguyen, Q. T.
2011; 120 (4): 255–60
- **Exostoses and Osteomas of the Internal Auditory Canal**

Nguyen, L. T., Baik, F. M., Doherty, J. K., Harris, J. P., Nguyen, Q. T.
WILEY-BLACKWELL.2010: S215

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2007; 6: 149
- **Regulation of TNF mediated antiapoptotic signaling in human neutrophils: role of delta-PKC and ERK1/2.** *Journal of leukocyte biology*
Kilpatrick, L. E., Sun, S., Mackie, D., Baik, F., Li, H., Korchak, H. M.
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