

# Stanford

---



## Peter H. Hwang

Professor of Otolaryngology - Head and Neck Surgery (Rhinology) and, by courtesy, of Neurosurgery at the Stanford University Medical Center

Otolaryngology - Head & Neck Surgery Divisions

### CLINICAL OFFICES

- **Stanford Dept of Otolaryngology, Head and Neck Surgery**

801 Welch Rd

MC 5739

Stanford, CA 94305

**Tel** (650) 723-5281

**Fax** (650) 725-6685

### Bio

---

#### BIO

Dr. Hwang completed his undergraduate degree at Stanford University, and his MD and otolaryngology residency at the University of California, San Francisco. After completing a fellowship in rhinology at the University of Pennsylvania, Dr. Hwang served as Director of Rhinology at Oregon Health & Science University. He returned to Stanford in 2005 to lead the Division of Rhinology and Endoscopic Skull Base Surgery and currently serves as Vice Chair of Clinical Affairs for the Department of Otolaryngology-Head & Neck Surgery. Dr. Hwang has served in leadership of the American Rhinologic Society for over a decade, most recently as President of the society. Dr. Hwang also serves as Associate Editor of the International Forum of Allergy and Rhinology and Associate Editor of the World Journal of Otolaryngology. He co-edited the textbook "Rhinology: Diseases of the Nose, Sinuses, & Skull Base," which was awarded the Benjamin Franklin Award for Scientific & Technical Book of the Year. Dr. Hwang teaches on the latest advances in endoscopic sinus and skull base surgery at many national and international venues. He also trains future academic leaders in rhinology through the Stanford fellowship in rhinology and endoscopic skull base surgery. His research interests include clinical outcomes of endoscopic skull base surgery; development of innovative medical devices for treating sinus disease; and novel topical therapies for chronic rhinosinusitis.

#### CLINICAL FOCUS

- Cancer > Head and Neck Cancer
- Endoscopic Sinus Surgery
- Endoscopic Skull Base Surgery
- Otolaryngology
- Otolaryngology - Head & Neck Surgery (Ear, Nose and Throat)

#### ACADEMIC APPOINTMENTS

- Professor - Med Center Line, Otolaryngology - Head & Neck Surgery Divisions
- Professor - Med Center Line (By courtesy), Neurosurgery

#### ADMINISTRATIVE APPOINTMENTS

- Vice Chair, Department of Otolaryngology-Head & Neck Surgery, (2018- present)

- Vice Chair of Clinical Affairs, Department of Otolaryngology-Head & Neck Surgery, (2015-2018)
- Chief, Division of Rhinology & Endoscopic Skull Base Surgery, Stanford School of Medicine, (2005- present)
- Co-Director, Fellowship in Rhinology & Endoscopic Skull Base Surgery, Stanford University, (2005-2015)

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, American Rhinologic Society (2015 - 2016)
- President-Elect, American Rhinologic Society (2014 - 2015)
- Associate Editor, World Journal of Otolaryngology-Head & Neck Surgery (2015 - present)
- 1st Vice President, American Rhinologic Society (2013 - 2014)
- Associate Editor, International Forum of Allergy & Rhinology (2011 - present)

## PROFESSIONAL EDUCATION

- Board Certification: Otolaryngology, American Board of Otolaryngology (1997)
- Fellowship, Univ. of Pennsylvania , Rhinology & Sinus Surgery (1997)
- Residency, UC San Francisco , Otolaryngology (1996)
- MD, UC San Francisco (1991)
- BS, Stanford University , Biology (1987)

## Research & Scholarship

---

### CURRENT RESEARCH AND SCHOLARLY INTERESTS

- Clinical outcomes in patients with chronic rhinosinusitis undergoing endoscopic sinus surgery
- Development of innovative medical devices for treatment of sinus disorders
- Founder of CORSICA, a national research registry for sinus cancer

### CLINICAL TRIALS

- Identification and Characterization of Novel Proteins and Genes in Head and Neck Cancer, Recruiting
- Intranasal Bevacizumab for HHT-Related Epistaxis, Recruiting
- Pain Control Following Sinus Surgery, Not Recruiting

## Publications

---

### PUBLICATIONS

- **Workforce analysis of practicing rhinologists in the united states.** *The Laryngoscope*  
Heineman, T. E., Ramakrishnan, V., Hwang, P. H., Suh, J. D.  
2019
- **Outcomes of sinonasal inverted papilloma resection by surgical approach: an updated systematic review and meta-analysis**  
Peng, R., Thamboo, A., Choby, G., Ma, Y., Zhou, B., Hwang, P. H.  
WILEY.2019: 573–81
- **Topical Corticosteroid Pretreatment Mitigates Cellular Damage After Caustic Injury to the Nasal Upper Airway Epithelium** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Huang, Z., Velasquez, N., Nguyen, A., Ye, T., Le, W., Bravo, D. T., Hwang, P. H., Zhou, B., Nayak, J.  
2019; 33 (3): 277–85
- **Nasopharyngeal Angiofibroma Staging with a Novel Nominal Basis: An 18-Year Study in a Tertiary Center.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*

- Abdelwahab, M., Overdeest, J. B., Elmokadem, A., El-Sisi, H., El-Kholy, N. A., Zaki, H., Kamal, E., Khafagy, Y., Tawfik, A., Eldawood, H., Hwang, P., Rakha, A.  
2019: 194599819842155
- **Microcurrent technology for rapid relief of sinus pain: a randomized, placebo-controlled, double-blinded clinical trial**  
Maul, X. A., Borchard, N. A., Hwang, P. H., Nayak, J. V.  
WILEY.2019: 352–56
  - **Outcomes of sinonasal inverted papilloma resection by surgical approach: an updated systematic review and meta-analysis.** *International forum of allergy & rhinology*  
Peng, R., Thamboo, A., Choby, G., Ma, Y., Zhou, B., Hwang, P. H.  
2019
  - **Topical Corticosteroid Pretreatment Mitigates Cellular Damage After Caustic Injury to the Nasal Upper Airway Epithelium.** *American journal of rhinology & allergy*  
Huang, Z., Velasquez, N., Nguyen, A., Ye, T., Le, W., Bravo, D. T., Hwang, P. H., Zhou, B., Nayak, J. V.  
2019: 1945892418823305
  - **Transnasal endoscopic approach for pediatric skull base lesions: a case series.** *Journal of neurosurgery. Pediatrics*  
Quon, J. L., Kim, L. H., Hwang, P. H., Patel, Z. M., Grant, G. A., Cheshier, S. H., Edwards, M. S.  
2019: 1–12
  - **Validation of a rhinologic virtual surgical simulator for performing a Draf 3 endoscopic frontal sinusotomy.** *International forum of allergy & rhinology*  
Won, T. B., Cho, S. W., Sung, M. W., Paek, S. H., Chan, S., Salisbury, K., Blevins, N. H., Vaisbuch, Y., Hwang, P.  
2019
  - **Role of inferior turbinate reduction in the quality of life of patients undergoing endoscopic sinus surgery for chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Soudry, E., Mace, J., Smith, T. L., Hwang, P. H.  
2019
  - **Imaging predictors for malignant transformation of inverted papilloma.** *The Laryngoscope*  
Yan, C. H., Tong, C. C., Penta, M., Patel, V. S., Palmer, J. N., Adappa, N. D., Nayak, J. V., Hwang, P. H., Patel, Z. M.  
2018
  - **A multi-institutional review of outcomes in biopsy-proven acute invasive fungal sinusitis**  
Wandell, G. M., Miller, C., Rathor, A., Wai, T., Guyer, R. A., Schmidt, R. A., Turner, J. H., Hwang, P. H., Davis, G. E., Humphreys, I. M.  
WILEY.2018: 1459–68
  - **A call for mentorship in otolaryngology.** *Brazilian journal of otorhinolaryngology*  
Hwang, P. H.  
2018
  - **Moving slowly but surely toward more precise rhinologic care** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Hwang, P. H.  
2018; 8 (10): 1081–82
  - **Effect of Endoscopic Sinus Surgery on Bronchiectasis Patients With Chronic Rhinosinusitis** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Kanjanaumporn, J., Hwang, P. H.  
2018; 32 (5): 432–39
  - **Orbital Apex Lesions: A Diagnostic and Therapeutic Challenge** *JOURNAL OF NEUROLOGICAL SURGERY PART B-SKULL BASE*  
Cho, S., Lee, W., Ma, D., Kim, J., Han, D., Kim, H., Kim, D., Kim, S., Khwang, S., Kim, S., Paek, S., Rhee, C., Lee, et al  
2018; 79 (4): 386–93
  - **Correlations Between Cystic Fibrosis Genotype and Sinus Disease Severity in Chronic Rhinosinusitis** *LARYNGOSCOPE*  
Abuzeid, W. M., Song, C., Fastenberg, J. H., Fang, C. H., Ayoub, N., Jerschow, E., Mohabir, P. K., Hwang, P. H.  
2018; 128 (8): 1752–58
  - **Precision medicine: why surgeons deviate from "appropriateness criteria" in the management of chronic rhinosinusitis and effects on outcomes.** *International forum of allergy & rhinology*

- Thamboo, A., Rathor, A., Borchard, N. A., Nayak, J. V., Hwang, P. H., Patel, Z. M.  
2018
- **Surgical Management of Nonallergic Rhinitis.** *Otolaryngologic clinics of North America*  
Yan, C. H., Hwang, P. H.  
2018
  - **Building the Evidence for Corticosteroid Irrigation Therapy in Chronic Rhinosinusitis.** *JAMA otolaryngology-- head & neck surgery*  
Hwang, P. H.  
2018
  - **Porcine small intestine submucosal grafts improve remucosalization and progenitor cell recruitment to sites of upper airway tissue remodeling.** *International forum of allergy & rhinology*  
Nayak, J. V., Rathor, A., Grayson, J. W., Bravo, D. T., Velasquez, N., Noel, J., Beswick, D. M., Riley, K. O., Patel, Z. M., Cho, D., Dodd, R. L., Thamboo, A., Choby, et al  
2018
  - **Comparison of outcomes following culture-directed vs non-culture-directed antibiotics in treatment of acute exacerbations of chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Yan, C. H., Tangbumrungham, N., Maul, X. A., Ma, Y., Nayak, J. V., Hwang, P. H., Patel, Z. M.  
2018
  - **Risk Stratification for Postoperative Venous Thromboembolism after Endoscopic Sinus Surgery** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Beswick, D. M., Vaezaefshar, R., Ma, Y., Hwang, P. H., Nayak, J. V., Patel, Z. M.  
2018; 158 (4): 767-73
  - **Computed tomography analysis of frontal cell prevalence according to the International Frontal Sinus Anatomy Classification.** *International forum of allergy & rhinology*  
Choby, G., Thamboo, A., Won, T., Kim, J., Shih, L. C., Hwang, P. H.  
2018
  - **Evolution of the endoscopic modified Lothrop procedure: A systematic review and meta-analysis.** *The Laryngoscope*  
Shih, L., Patel, V. S., Choby, G. W., Nakayama, T., Hwang, P. H.  
2018; 128 (2): 317-26
  - **International Consensus Statement on Allergy and Rhinology: Allergic Rhinitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Wise, S. K., Lin, S. Y., Toskala, E., Orlandi, R. R., Akdis, C. A., Alt, J. A., Azar, A., Baroody, F. M., Bachert, C., Canonica, G., Chacko, T., Cingi, C., Ciprandi, et al  
2018; 8 (2): 108-352
  - **Early experience with a patient-specific virtual surgical simulation for rehearsal of endoscopic skull-base surgery** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Won, T., Hwang, P., Lim, J., Cho, S., Paek, S., Losorelli, S., Vaisbuch, Y., Chan, S., Salisbury, K., Blevins, N. H.  
2018; 8 (1): 54-63
  - **Sinonasal debridement versus no debridement for the postoperative care of patients undergoing endoscopic sinus surgery** *COCHRANE DATABASE OF SYSTEMATIC REVIEWS*  
Tzelnick, S., Alkan, U., Leshno, M., Hwang, P., Soudry, E.  
2018: CD011988
  - **Outcomes After Endoscopic Endonasal Resection of Craniopharyngiomas in the Pediatric Population** *WORLD NEUROSURGERY*  
Patel, V. S., Thamboo, A., Quon, J., Nayak, J. V., Hwang, P. H., Edwards, M., Patel, Z. M.  
2017; 108: 6-14
  - **Comparison of surgical outcomes between patients with unilateral and bilateral chronic rhinosinusitis**  
Beswick, D. M., Mace, J. C., Chowdhury, N. I., Alt, J. A., Hwang, P. H., DeConde, A. S., Smith, T. L.  
WILEY.2017: 1162-69
  - **Evidence for altered levels of IgD in the nasal airway mucosa of patients with chronic rhinosinusitis** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*

- Min, J., Nayak, J. V., Hulse, K. E., Stevens, W. W., Raju, P. A., Huang, J. H., Suh, L. A., Van Roey, G. A., Norton, J. E., Carter, R. G., Price, C. E., Weibman, A. R., Rshan, et al  
2017; 140 (6): 1562-+
- **Nasoseptal flap closure of the eustachian tube for recalcitrant cerebrospinal fluid rhinorrhea.** *The Laryngoscope*  
Patel, V. S., Choby, G. W., Thamboo, A., Blevins, N. H., Hwang, P. H.  
2017
  - **Biocompatibility and pharmacokinetics of fluticasone-eluting sinus implant in a rabbit model** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Patel, V. S., Walgama, E., Psaltis, A., Lavigne, F., Pletcher, S. D., Hwang, P. H.  
2017; 31 (6): 382-88
  - **Efficacy of endoscopic sinus surgery for chronic rhinosinusitis following primary radiotherapy and concurrent chemotherapy for nasopharyngeal carcinoma** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Ayoub, N., Walgama, E., Thamboo, A., Nayak, J. V., Hwang, P. H.  
2017; 7 (11): 1045-51
  - **Cryosurgical posterior nasal tissue ablation for the treatment of rhinitis**  
Hwang, P. H., Lin, B., Weiss, R., Atkins, J., Johnson, J.  
WILEY.2017: 952-56
  - **Radioanatomic Study of the Greater Palatine Canal Relevant to Endoscopic Endonasal Surgical Landmarks** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Ayoub, N., Thamboo, A., Hwang, P. H., Walgama, E. S.  
2017; 157 (4): 731-36
  - **Pediatric Chronic Rhinosinusitis Management in Rhinologists and Pediatric Otolaryngologists** *ANNALS OF OTOLOGY RHINOLOGY AND LARYNGOLOGY*  
Beswick, D. M., Messner, A. H., Hwang, P. H.  
2017; 126 (9): 634-39
  - **Cavernous Sinus Involvement by Pituitary Adenomas: Clinical Implications and Outcomes of Endoscopic Endonasal Resection** *JOURNAL OF NEUROLOGICAL SURGERY PART B-SKULL BASE*  
Ajlan, A., Achrol, A. S., Albakr, A., Feroze, A. H., Westbroek, E. M., Hwang, P., Harsh, G. R.  
2017; 78 (3): 273-81
  - **Emerging Roles of Coblation in Rhinology and Skull Base Surgery.** *Otolaryngologic clinics of North America*  
Choby, G. W., Hwang, P. H.  
2017; 50 (3): 599-606
  - **Central Serous Chorioretinopathy after Endoscopic Sinus Surgery** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Woo, H., Hwang, P. H.  
2017; 156 (4): 772-73
  - **Selective expansion of human regulatory T cells in nasal polyps, and not adjacent tissue microenvironments, in individual patients exposed to steroids.** *Clinical immunology*  
Edward, J. A., Sanyal, M., Le, W., Soudry, E., Ramakrishnan, V. R., Bravo, D. T., Nguyen, A. L., Zarabanda, D., Kingdom, T. T., Hwang, P. H., Garrison Fathman, C., Nayak, J. V.  
2017; 179: 66-76
  - **Impact of endoscopic sinus surgery on otologic symptoms associated with chronic rhinosinusitis.** *World journal of otorhinolaryngology - head and neck surgery*  
Teo, N. W., Mace, J. C., Smith, T. L., Hwang, P. H.  
2017; 3 (1): 24-31
  - **Determinants and outcomes of upfront surgery versus medical therapy for chronic rhinosinusitis in cystic fibrosis.** *International forum of allergy & rhinology*  
Ayoub, N., Thamboo, A., Habib, A., Nayak, J. V., Hwang, P. H.  
2017
  - **Surgical therapy vs continued medical therapy for medically refractory chronic rhinosinusitis: a systematic review and meta-analysis.** *International forum of allergy & rhinology*

- Patel, Z. M., Thamboo, A., Rudmik, L., Nayak, J. V., Smith, T. L., Hwang, P. H.  
2017; 7 (2): 119-127
- **Aspirin-Exacerbated Respiratory Disease** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Walgama, E. S., Hwang, P. H.  
2017; 50 (1): 83-?
  - **Comparing Surgeon Outcomes in Endoscopic Sinus Surgery for Chronic Rhinosinusitis** *LARYNGOSCOPE*  
Smith, T. L., Mace, J. C., Rudmik, L., Schlosser, R. J., Hwang, P. H., Alt, J. A., Soler, Z. M.  
2017; 127 (1): 14-21
  - **Endoscopic vs. Microscopic Resection of Sellar Lesions-A Matched Analysis of Clinical and Socioeconomic Outcomes.** *Frontiers in surgery*  
Azad, T. D., Lee, Y. J., Vail, D., Veeravagu, A., Hwang, P. H., Ratliff, J. K., Li, G.  
2017; 4: 33
  - **Comparison of surgical outcomes between patients with unilateral and bilateral chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Beswick, D. M., Mace, J. C., Chowdhury, N. I., Alt, J. A., Hwang, P. H., DeConde, A. S., Smith, T. L.  
2017; 7 (12): 1162-69
  - **Silicone Oil-Induced Nasal Polyposis: A Case Report.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*  
Patel, V. S., Hwang, P. H., Kossler, A. L., Choby, G.  
2017: 194599817728896
  - **Outcomes After Endoscopic Endonasal Resection of Craniopharyngiomas in the Pediatric Population.** *World neurosurgery*  
Patel, V. S., Thamboo, A., Quon, J., Nayak, J. V., Hwang, P. H., Edwards, M., Patel, Z. M.  
2017; 108: 6-14
  - **Nose blowing after endoscopic sinus surgery does not adversely affect outcomes.** *The Laryngoscope*  
Ayoub, N., Chitsuthipakorn, W., Nayak, J. V., Patel, Z. M., Hwang, P. H.  
2017
  - **Equivalence in outcomes between Draf 2B vs Draf 3 frontal sinusotomy for refractory chronic frontal rhinosinusitis.** *International forum of allergy & rhinology*  
Patel, V. S., Choby, G., Shih, L. C., Patel, Z. M., Nayak, J. V., Hwang, P. H.  
2017
  - **The prevalence of Eustachian tube dysfunction symptoms in patients with chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Tangbumrungham, N., Patel, V. S., Thamboo, A., Patel, Z. M., Nayak, J. V., Ma, Y., Choby, G., Hwang, P. H.  
2017
  - **Practice patterns in pediatric chronic rhinosinusitis: A survey of the American Rhinologic Society** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Beswick, D. M., Ramadan, H., Baroody, F. M., Hwang, P. H.  
2016; 30 (6): 418-423
  - **Response to: The "RACE" national database for recurrent acute rhinosinusitis may need a relook** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Jacobs, J., Bleier, B. S., Hopkins, C., Hwang, P., Poetker, D., Schlosser, R., Stewart, M., Varshney, R.  
2016; 6 (10): 1100
  - **Design and rationale of a prospective, multi-institutional registry for patients with sinonasal malignancy.** *Laryngoscope*  
Beswick, D. M., Holsinger, F. C., Kaplan, M. J., Fischbein, N. J., Hara, W., Colevas, A. D., Le, Q., Berry, G. J., Hwang, P. H.  
2016; 126 (9): 1977-1980
  - **The International Frontal Sinus Anatomy Classification (IFAC) and Classification of the Extent of Endoscopic Frontal Sinus Surgery (EFSS)** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Wormald, P., Hoseman, W., Callejas, C., Weber, R. K., Kennedy, D. W., Citardi, M. J., Senior, B. A., Smith, T. L., Hwang, P. H., Orlandi, R. R., Kaschke, O., Siow, J. K., Szczygielski, et al  
2016; 6 (7): 677-696
  - **Comparing surgeon outcomes in endoscopic sinus surgery for chronic rhinosinusitis.** *Laryngoscope*

- 
- Smith, T. L., Mace, J. C., Rudmik, L., Schlosser, R. J., Hwang, P. H., Alt, J. A., Soler, Z. M.  
2016
- **Management of rhinosinusitis during pregnancy: systematic review and expert panel recommendations** *RHINOLOGY*  
Lal, D., Jategaonkar, A. A., Borish, L., Chambliss, L. R., Gnagi, S. H., Hwang, P. H., Rank, M. A., Stankiewicz, J. A., Lund, V. J.  
2016; 54 (2): 99-104
  - **Safety analysis of long-term budesonide nasal irrigations in patients with chronic rhinosinusitis post endoscopic sinus surgery** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Soudry, E., Wang, J., Vaezaefshar, R., Katznelson, L., Hwang, P. H.  
2016; 6 (6): 568-572
  - **Outcomes of chronic frontal sinusitis treated with ethmoidectomy: a prospective study** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Abuzeid, W. M., Mace, J. C., Costa, M. L., Rudmik, L., Soler, Z. M., Kim, G. S., Smith, T. L., Hwang, P. H.  
2016; 6 (6): 597-604
  - **Productivity costs decrease after endoscopic sinus surgery for refractory chronic rhinosinusitis.** *Laryngoscope*  
Rudmik, L., Smith, T. L., Mace, J. C., Schlosser, R. J., Hwang, P. H., Soler, Z. M.  
2016; 126 (3): 570-574
  - **International Consensus Statement on Allergy and Rhinology: Rhinosinusitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Orlandi, R. R., Kingdom, T. T., Hwang, P. H., Smith, T. L., Alt, J. A., Baroody, F. M., Batra, P. S., Bernal-Sprekelsen, M., Bhattacharyya, N., Chandra, R. K., Chiu, A., Citardi, M. J., Cohen, et al  
2016; 6: S22-S209
  - **International Consensus Statement on Allergy and Rhinology: Rhinosinusitis Executive Summary.** *International forum of allergy & rhinology*  
Orlandi, R. R., Kingdom, T. T., Hwang, P. H.  
2016; 6: S3-S21
  - **Indications and outcomes for Draf IIB frontal sinus surgery** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Turner, J. H., Vaezaefshar, R., Hwang, P. H.  
2016; 30 (1): 70-73
  - **Design and rationale of a prospective multi-institutional registry for patients with sinusoidal malignancy** *The Laryngoscope*  
Beswick, D. M., Holsinger, F. C., Kaplan, M. J., Fischbein, N. J., Hara, W. Y., Colevas, A. D., Le, Q. T., Berry, G. J., Hwang, P. H.  
2016
  - **Reply to: In reference to: Medical therapy vs surgery for recurrent acute rhinosinusitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Hwang, P. H., Costa, M. L., Psaltis, A. J., Nayak, J. V.  
2015; 5 (12): 1186
  - **Giant Prolactinoma Presenting with Neck Pain and Structural Compromise of the Occipital Condyles.** *Journal of neurological surgery reports*  
Yecies, D., Ajlan, A., Ratliff, J., Ziskin, J., Hwang, P., Vogel, H., Katznelson, L., Harsh, G.  
2015; 76 (2): e297-301
  - **C Perioperative Management of Antithrombotic Therapy in Common Otolaryngologic Surgical Procedures: State of the Art Review** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Hsueh, W. D., Hwang, P. H., Abuzeid, W. M.  
2015; 153 (4): 493-503
  - **Avoiding Complications in Endoscopic Sinus Surgery** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Humphreys, I. M., Hwang, P. H.  
2015; 48 (5): 871-+
  - **Secretion rates of human nasal submucosal glands from patients with chronic rhinosinusitis or cystic fibrosis.** *American journal of rhinology & allergy*  
Jeong, J. H., Hwang, P. H., Cho, D., Joo, N. S., Wine, J. J.  
2015; 29 (5): 334-338
  - **Secretion rates of human nasal submucosal glands from patients with chronic rhinosinusitis or cystic fibrosis** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Jeong, J. H., Hwang, P. H., Cho, D., Joo, N. S., Wine, J. J.

2015; 29 (5): 334-338

- **Medical therapy vs surgery for recurrent acute rhinosinusitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Costa, M. L., Psaltis, A. J., Nayak, J. V., Hwang, P. H.  
2015; 5 (8): 667-673
- **Medical therapy vs surgery for recurrent acute rhinosinusitis.** *International forum of allergy & rhinology*  
Costa, M. L., Psaltis, A. J., Nayak, J. V., Hwang, P. H.  
2015; 5 (8): 667-673
- **The impact of diabetes mellitus on outcomes of endoscopic sinus surgery: a nested case-control study.** *International forum of allergy & rhinology*  
Hajjij, A., Mace, J. C., Soler, Z. M., Smith, T. L., Hwang, P. H.  
2015; 5 (6): 533-540
- **The impact of diabetes mellitus on outcomes of endoscopic sinus surgery: a nested case-control study** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Hajjij, A., Mace, J. C., Soler, Z. M., Smith, T. L., Hwang, P. H.  
2015; 5 (6): 533-540
- **Clinical predictors of neo-osteogenesis in patients with chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Huang, Z., Hajjij, A., Li, G., Nayak, J. V., Zhou, B., Hwang, P. H.  
2015; 5 (4): 303-309
- **The effects of topical agents on paranasal sinus mucosa healing: a rabbit study** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Jain, R., Kim, R., Waldvogel-Thurlow, S., Hwang, P., Cornish, J., Douglas, R.  
2015; 5 (4): 310-317
- **Clinical predictors of neo-osteogenesis in patients with chronic rhinosinusitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Huang, Z., Hajjij, A., Li, G., Nayak, J. V., Zhou, B., Hwang, P. H.  
2015; 5 (4): 303-309
- **Meningiomas of the tuberculum and diaphragma sellae.** *Journal of neurological surgery. Part B, Skull base*  
Ajlan, A. M., Choudhri, O., Hwang, P., Harsh, G.  
2015; 76 (1): 74-79
- **Meningiomas of the tuberculum and diaphragma sellae.** *Journal of neurological surgery. Part B, Skull base*  
Ajlan, A. M., Choudhri, O., Hwang, P., Harsh, G.  
2015; 76 (1): 74-79
- **Long-term outcomes of endoscopic maxillary mega-antrostomy for refractory chronic maxillary sinusitis.** *International forum of allergy & rhinology*  
Costa, M. L., Psaltis, A. J., Nayak, J. V., Hwang, P. H.  
2015; 5 (1): 60-65
- **Long-term outcomes of endoscopic maxillary mega-antrostomy for refractory chronic maxillary sinusitis.** *International forum of allergy & rhinology*  
Costa, M. L., Psaltis, A. J., Nayak, J. V., Hwang, P. H.  
2015; 5 (1): 60-65
- **Steroid-eluting sinus stents for improving symptoms in chronic rhinosinusitis patients undergoing functional endoscopic sinus surgery** *COCHRANE DATABASE OF SYSTEMATIC REVIEWS*  
Huang, Z., Hwang, P., Sun, Y., Zhou, B.  
2015
- **Complications associated with the pedicled nasoseptal flap for skull base reconstruction.** *Laryngoscope*  
Soudry, E., Psaltis, A. J., Lee, K. H., Vaezafshar, R., Nayak, J. V., Hwang, P. H.  
2015; 125 (1): 80-85
- **Air pollutants cause release of hydrogen peroxide and interleukin-8 in a human primary nasal tissue culture model.** *International forum of allergy & rhinology*  
Cho, D., Le, W., Bravo, D. T., Hwang, P. H., Illek, B., Fischer, H., Nayak, J. V.  
2014; 4 (12): 966-971



- **The effect of radiofrequency turbinoplasty vs two other methods in the management of polypoid changes of the middle turbinate: a randomized trial** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Saedi, B., Amali, A., Alizadeh, N., Hwang, P., Meisami, A.  
2014; 4 (12): 1030–34
- **Air pollutants cause release of hydrogen peroxide and interleukin-8 in a human primary nasal tissue culture model** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Cho, D., Le, W., Bravo, D. T., Hwang, P. H., Illek, B., Fischer, H., Nayak, J. V.  
2014; 4 (12): 966-971
- **SNOT-22 quality of life domains differentially predict treatment modality selection in chronic rhinosinusitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
DeConde, A. S., Mace, J. C., Bodner, T., Hwang, P. H., Rudmik, L., Soler, Z. M., Smith, T. L.  
2014; 4 (12): 972-979
- **SNOT-22 quality of life domains differentially predict treatment modality selection in chronic rhinosinusitis.** *International forum of allergy & rhinology*  
DeConde, A. S., Mace, J. C., Bodner, T., Hwang, P. H., Rudmik, L., Soler, Z. M., Smith, T. L.  
2014; 4 (12): 972-979
- **Endoscopic resection of a giant intradural retroclival echordosis physaliphora: surgical technique and literature review.** *World neurosurgery*  
Choudhri, O., Feroze, A., Hwang, P., Vogel, H., Ajlan, A., Harsh, G.  
2014; 82 (5): 912 e21-6
- **Endoscopic resection of a giant intradural retroclival echordosis physaliphora: surgical technique and literature review.** *World neurosurgery*  
Choudhri, O., Feroze, A., Hwang, P., Vogel, H., Ajlan, A., Harsh, G.  
2014; 82 (5): 912 e21-6
- **Management of frontal sinus fractures: treatment modality changes at a level I trauma center.** *journal of craniofacial surgery*  
Fox, P. M., Garza, R., Dusch, M., Hwang, P. H., Girod, S.  
2014; 25 (6): 2038-2042
- **Management of Frontal Sinus Fractures: Treatment Modality Changes at a Level I Trauma Center** *JOURNAL OF CRANIOFACIAL SURGERY*  
Fox, P. M., Garza, R., Dusch, M., Hwang, P. H., Girod, S.  
2014; 25 (6): 2038-2042
- **Spontaneous Sphenoid Wing Meningoencephaloceles with Lateral Sphenoid Sinus Extension: The Endoscopic Transpterygoid Approach** *JOURNAL OF NEUROLOGICAL SURGERY PART B-SKULL BASE*  
Ajlan, A., Achrol, A., Soudry, E., Hwang, P. H., Harsh, G.  
2014; 75 (5): 314-323
- **Long-term sinonasal outcomes of aspirin desensitization in aspirin exacerbated respiratory disease.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*  
Cho, K., Soudry, E., Psaltis, A. J., Nadeau, K. C., McGhee, S. A., Nayak, J. V., Hwang, P. H.  
2014; 151 (4): 575-581
- **Modification of the Lund-Kennedy endoscopic scoring system improves its reliability and correlation with patient-reported outcome measures.** *Laryngoscope*  
Psaltis, A. J., Li, G., Vaezaefshar, R., Cho, K., Hwang, P. H.  
2014; 124 (10): 2216-2223
- **Spontaneous sphenoid wing meningoencephaloceles with lateral sphenoid sinus extension: the endoscopic transpterygoid approach.** *Journal of neurological surgery. Part B, Skull base*  
Ajlan, A., Achrol, A., Soudry, E., Hwang, P. H., Harsh, G.  
2014; 75 (5): 314-323
- **Long-term Sinonasal Outcomes of Aspirin Desensitization in Aspirin Exacerbated Respiratory Disease** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Cho, K., Soudry, E., Psaltis, A. J., Nadeau, K. C., McGhee, S. A., Nayak, J. V., Hwang, P. H.  
2014; 151 (4): 575-581
- **Modification of the Lund-Kennedy Endoscopic Scoring System Improves Its Reliability and Correlation With Patient-Reported Outcome Measures** *LARYNGOSCOPE*

- Psaltis, A. J., Li, G., Vaezaefshar, R., Cho, K., Hwang, P. H.  
2014; 124 (10): 2216-2223
- **Medical management of allergic fungal rhinosinusitis following endoscopic sinus surgery: an evidence-based review and recommendations** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Gan, E. C., Thamboo, A., Rudmik, L., Hwang, P. H., Ferguson, B. J., Javer, A. R.  
2014; 4 (9): 702-715
  - **Frontal ostium neo-osteogenesis and patency after Draf III procedure: a computer-assisted study** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Ye, T., Hwang, P. H., Huang, Z., Huang, Q., Xian, J., Li, C., Zhou, B.  
2014; 4 (9): 739-744
  - **Productivity costs in patients with refractory chronic rhinosinusitis.** *Laryngoscope*  
Rudmik, L., Smith, T. L., Schlosser, R. J., Hwang, P. H., Mace, J. C., Soler, Z. M.  
2014; 124 (9): 2007-2012
  - **Update on evidence-based reviews with recommendations in adult chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Orlandi, R. R., Smith, T. L., Marple, B. F., Harvey, R. J., Hwang, P. H., Kern, R. C., Kingdom, T. T., Luong, A., Rudmik, L., Senior, B. A., Toskala, E., Kennedy, D. W.  
2014; 4: S1-S15
  - **Mucociliary clearance and submucosal gland secretion in the ex vivo ferret trachea.** *American journal of physiology. Lung cellular and molecular physiology*  
Jeong, J. H., Joo, N. S., Hwang, P. H., Wine, J. J.  
2014; 307 (1): L83-93
  - **Update on evidence-based reviews with recommendations in adult chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Orlandi, R. R., Smith, T. L., Marple, B. F., Harvey, R. J., Hwang, P. H., Kern, R. C., Kingdom, T. T., Luong, A., Rudmik, L., Senior, B. A., Toskala, E., Kennedy, D. W.  
2014; 4: S1-S15
  - **Mucociliary clearance and submucosal gland secretion in the ex vivo ferret trachea** *AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY*  
Jeong, J. H., Joo, N. S., Hwang, P. H., Wine, J. J.  
2014; 307 (1): L83-L93
  - **Commentary on "How to avoid mucocele formation under pedicled nasoseptal flap".** *American journal of otolaryngology*  
Vaezaefshar, R., Hwang, P. H., Turner, J. H.  
2014; 35 (4): 547-?
  - **Outpatient endoscopic sinus surgery in cystic fibrosis patients: predictive factors for admission.** *International forum of allergy & rhinology*  
Soudry, E., Mohabir, P. K., Miglani, A., Chen, J., Nayak, J. V., Hwang, P. H.  
2014; 4 (5): 416-421
  - **Outpatient endoscopic sinus surgery in cystic fibrosis patients: predictive factors for admission** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Soudry, E., Mohabir, P. K., Miglani, A., Chen, J., Nayak, J. V., Hwang, P. H.  
2014; 4 (5): 416-421
  - **Endoscopic reconstruction of surgically created skull base defects: a systematic review.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*  
Soudry, E., Turner, J. H., Nayak, J. V., Hwang, P. H.  
2014; 150 (5): 730-738
  - **Academic rhinology: a survey of residency programs and rhinology faculty in the United States.** *International forum of allergy & rhinology*  
Tabaee, A., Chen, L., Smith, T. L., Hwang, P. H., Schaberg, M., Raitathatha, R., Brown, S. M.  
2014; 4 (4): 321-328
  - **Human ethmoid sinus mucosa: a promising novel tissue source of mesenchymal progenitor cells** *STEM CELL RESEARCH & THERAPY*  
Cho, K., Park, H., Roh, H., Bravo, D. T., Hwang, P. H., Nayak, J. V.  
2014; 5
  - **Endoscopic Hydroxyapatite Augmentation for Patulous Eustachian Tube** *LARYNGOSCOPE*

- Vaezaefshar, R., Turner, J. H., Li, G., Hwang, P. H.  
2014; 124 (1): 62-66
- **Endoscopic Resection of a Giant Intradural Retroclival Ectodermoid Cyst: Surgical Technique and Literature Review** *World Neurosurgery*  
Choudhri, O., Feroze, A., Hwang, P., Vogel, H., Ajlan, A., Harsh IV, G.  
2014; 912.e21–6
  - **Otolaryngology, Head and Neck Surgery** *BIOMED RESEARCH INTERNATIONAL*  
Yang, T., Ferris, R. L., Ogawa, T., Hwang, P., Tong, M., Chen, M.  
2014; 625601
  - **Nasal Microenvironments and Interspecific Interactions Influence Nasal Microbiota Complexity and *S. aureus* Carriage.** *Cell host & microbe*  
Yan, M., Pamp, S. J., Fukuyama, J., Hwang, P. H., Cho, D., Holmes, S., Relman, D. A.  
2013; 14 (6): 631-640
  - **Pretreatment of sinus aspirates with dithiothreitol improves yield of fungal cultures in patients with chronic sinusitis.** *International forum of allergy & rhinology*  
Chisholm, K. M., Getsinger, D., Vaughan, W., Hwang, P. H., Banaei, N.  
2013; 3 (12): 992-996
  - **Pretreatment of sinus aspirates with dithiothreitol improves yield of fungal cultures in patients with chronic sinusitis** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Chisholm, K. M., Getsinger, D., Vaughan, W., Hwang, P. H., Banaei, N.  
2013; 3 (12): 992-996
  - **Systemic prednisone administration selectively alters granulocyte subsets in nasal polyps from aspirin-exacerbated respiratory disease and chronic rhinosinusitis patients.** *International forum of allergy & rhinology*  
Edward, J. A., Sanyal, M., Ramakrishnan, V. R., Le, W., Nguyen, A. L., Kingdom, T. T., Hwang, P. H., Nayak, J. V.  
2013; 3 (11): 866-876
  - **Systemic prednisone administration selectively alters granulocyte subsets in nasal polyps from aspirin-exacerbated respiratory disease and chronic rhinosinusitis patients.** *International forum of allergy & rhinology*  
Edward, J. A., Sanyal, M., Ramakrishnan, V. R., Le, W., Nguyen, A. L., Kingdom, T. T., Hwang, P. H., Nayak, J. V.  
2013; 3 (11): 866-876
  - **Patient-Centered Decision Making in the Treatment of Chronic Rhinosinusitis** *LARYNGOSCOPE*  
Soler, Z. M., Rudmik, L., Hwang, P. H., Mace, J. C., Schlosser, R. J., Smith, T. L.  
2013; 123 (10): 2341-2346
  - **REORGANIZATION OF LOCALIZATION OF DUOX1 AND DUOX2 IN CF PATIENT AIRWAYS**  
Hanna, B., Bravo, D., Illek, B., Cho, D. Y., Hwang, P., Nayak, J., Fischer, H.  
WILEY-BLACKWELL.2013: 261–62
  - **Characterization of human upper airway epithelial progenitors.** *International forum of allergy & rhinology*  
Bravo, D. T., Soudry, E., Edward, J. A., Le, W., Nguyen, A. L., Hwang, P. H., Sanyal, M., Nayak, J. V.  
2013; 3 (10): 841-847
  - **Characterization of human upper airway epithelial progenitors.** *International forum of allergy & rhinology*  
Bravo, D. T., Soudry, E., Edward, J. A., Le, W., Nguyen, A. L., Hwang, P. H., Sanyal, M., Nayak, J. V.  
2013; 3 (10): 841-847
  - **Distribution of topical agents to the paranasal sinuses: an evidence-based review with recommendations** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Thomas, W. W., Harvey, R. J., Rudmik, L., Hwang, P. H., Schlosser, R. J.  
2013; 3 (9): 691-703
  - **Survival outcomes in acute invasive fungal sinusitis: A systematic review and quantitative synthesis of published evidence.** *Laryngoscope*  
Turner, J. H., Soudry, E., Nayak, J. V., Hwang, P. H.  
2013; 123 (5): 1112-1118
  - **Expression of dual oxidases and secreted cytokines in chronic rhinosinusitis.** *International forum of allergy & rhinology*

- Cho, D., Nayak, J. V., Bravo, D. T., Le, W., Nguyen, A., Edward, J. A., Hwang, P. H., Illek, B., Fischer, H.  
2013; 3 (5): 376-383
- **Expression of dual oxidases and secreted cytokines in chronic rhinosinusitis.** *International forum of allergy & rhinology*  
Cho, D., Nayak, J. V., Bravo, D. T., Le, W., Nguyen, A., Edward, J. A., Hwang, P. H., Illek, B., Fischer, H.  
2013; 3 (5): 376-383
  - **Endoscopic endonasal anatomy of the nasopharynx in a cadaver model** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Becker, A. M., Hwang, P. H.  
2013; 3 (4): 319-324
  - **Basal lamella relaxing incision improves endoscopic middle meatal access** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Getz, A. E., Hwang, P. H.  
2013; 3 (3): 231-235
  - **Trends in incidence and susceptibility among methicillin-resistant Staphylococcus aureus isolated from intranasal cultures associated with rhinosinusitis.** *American journal of rhinology & allergy*  
Rujanavej, V., Soudry, E., Banaei, N., Baron, E. J., Hwang, P. H., Nayak, J. V.  
2013; 27 (2): 134-137
  - **Trends in incidence and susceptibility among methicillin-resistant Staphylococcus aureus isolated from intranasal cultures associated with rhinosinusitis.** *American journal of rhinology & allergy*  
Rujanavej, V., Soudry, E., Banaei, N., Baron, E. J., Hwang, P. H., Nayak, J. V.  
2013; 27 (2): 134-137
  - **Staph aureus has long been recognized as being more prevalent in cultures from patients with chronic rhinosinusitis(CRS) compared to those with acute rhinosinusitis.** *International forum of allergy & rhinology*  
Hwang, P. H.  
2013; 3 (2): 81-82
  - **Oral corticosteroids in the management of adult chronic rhinosinusitis with and without nasal polyps: an evidence-based review with recommendations** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Poetker, D. M., Jakubowski, L. A., Lal, D., Hwang, P. H., Wright, E. D., Smith, T. L.  
2013; 3 (2): 104-120
  - **The endoscopic-assisted trephination approach for repair of frontal sinus cerebrospinal fluid leaks** *LARYNGOSCOPE*  
Crozier, D. L., Hwang, P. H., Goyal, P.  
2013; 123 (2): 321-325
  - **Balloon Dilation of the Sinuses** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*  
Hwang, P. H.  
2012; 138 (11): 1077-1079
  - **Interrater agreement of nasal endoscopy in patients with a prior history of endoscopic sinus surgery** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
McCoul, E. D., Smith, T. L., Mace, J. C., Anand, V. K., Senior, B. A., Hwang, P. H., Stankiewicz, J. A., Tabaei, A.  
2012; 2 (6): 453-459
  - **Mucocele formation under pedicled nasoseptal flap** *AMERICAN JOURNAL OF OTOLARYNGOLOGY*  
Vaezaafshar, R., Hwang, P. H., Harsh, G., Turner, J. H.  
2012; 33 (5): 634-636
  - **Low-frequency pulsed ultrasound in the nasal cavity and paranasal sinuses: a feasibility and distribution study** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Patel, Z. M., Hwang, P. H., Chernomorsky, A., Bravo, D. T., Nguyen, B. L., Nesterova, K., Nayak, J. V.  
2012; 2 (4): 303-308
  - **Epigenetic modifications and improved regulatory T-cell function in subjects undergoing dual sublingual immunotherapy** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*  
Swamy, R. S., Reshamwala, N., Hunter, T., Vissamsetti, S., Santos, C. B., Baroody, F. M., Hwang, P. H., Hoyte, E. G., Garcia, M. A., Nadeau, K. C.  
2012; 130 (1): 215-?

- **Interrater agreement of nasal endoscopy for chronic rhinosinusitis** *Annual Scientific Meeting of the American-Rhinologic-Society*  
Raithatha, R., Anand, V. K., Mace, J. C., Smith, T. L., Schaberg, M. R., Nyquist, G. G., Hwang, P. H., Senior, B. A., Stankiewicz, J. A., Tabae, A.  
WILEY-BLACKWELL.2012: 144–50
- **Targeted endoscopic salvage nasopharyngectomy for recurrent nasopharyngeal carcinoma** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Ho, A. S., Kaplan, M. J., Fee, W. E., Yao, M., Sunwoo, J. B., Hwang, P. H.  
2012; 2 (2): 166-173
- **Nationwide incidence of major complications in endoscopic sinus surgery** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Ramakrishnan, V. R., Kingdom, T. T., Nayak, J. V., Hwang, P. H., Orlandi, R. R.  
2012; 2 (1): 34-39
- **Interrater reliability of endoscopic parameters following sinus surgery** *LARYNGOSCOPE*  
Smith, T. L., Hwang, P. H., Murr, A. H., Lavigne, F., Koreck, A.  
2012; 122 (1): 230-236
- **Xylitol Nasal Irrigation in the Management of Chronic Rhinosinusitis: A Pilot Study** *LARYNGOSCOPE*  
Weissman, J. D., Fernandez, F., Hwang, P. H.  
2011; 121 (11): 2468-2472
- **Novel effects of statins in enhancing efficacy of chemotherapy in vitro in nasopharyngeal carcinoma** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Wang, W., Le, W., Cho, D., Hwang, P. H., Upadhyay, D.  
2011; 1 (4): 284-289
- **Inhibition of Inflammatory Mediators: Role of Statins in Airway Inflammation** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Wang, W., Le, W., Ahuja, R., Cho, D., Hwang, P. H., Upadhyay, D.  
2011; 144 (6): 982-987
- **Correlation of Asymmetric Facial Growth with Deviated Nasal Septum** *LARYNGOSCOPE*  
Kim, Y. M., Rha, K., Weissman, J. D., Hwang, P. H., Most, S. P.  
2011; 121 (6): 1144-1148
- **The effectiveness of preemptive sphenopalatine ganglion block on postoperative pain and functional outcomes after functional endoscopic sinus surgery** *56th Annual Fall Scientific Meeting of the American-Rhinologic-Society (ARS)*  
Cho, D., Drover, D. R., Nekhendzy, V., Butwick, A. J., Collins, J., Hwang, P. H.  
WILEY-BLACKWELL.2011: 212–18
- **Oral corticosteroid therapy in chronic rhinosinusitis without polyposis: a systematic review** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Lal, D., Hwang, P. H.  
2011; 1 (2): 136-143
- **Correlations Between Symptoms, Nasal Endoscopy, and In-Office Computed Tomography in Post-Surgical Chronic Rhinosinusitis Patients** *Conference on Triological-Society/Combined Otolaryngology Spring Meeting/143rd Annual Meeting of the American-Otological-Society*  
Ryan, W. R., Ramachandra, T., Hwang, P. H.  
WILEY-BLACKWELL.2011: 674–78
- **Acid and base secretion in freshly excised nasal tissue from cystic fibrosis patients with Delta F508 mutation** *Annual Spring Meeting of the American-Rhinologic-Society (ARS) / Combined Meeting of the Society-of-Otolaryngology / COSM Meeting*  
Cho, D., Hwang, P. H., Illek, B., Fischer, H.  
WILEY-BLACKWELL.2011: 123–27
- **Systematic Review of Topical Vasoconstrictors in Endoscopic Sinus Surgery** *LARYNGOSCOPE*  
Higgins, T. S., Hwang, P. H., Kingdom, T. T., Orlandi, R. R., Stammberger, H., Han, J. K.  
2011; 121 (2): 422-432
- **Safety and efficacy of a novel bioabsorbable, steroid-eluting sinus stent** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*  
Murr, A. H., Smith, T. L., Hwang, P. H., Bhattacharyya, N., Lanier, B. J., Stambaugh, J. W., Mugglin, A. S.  
2011; 1 (1): 23-32

- **ACID AND BASE SECRETION IN FRESHLY EXCISED NASAL TISSUE FROM CYSTIC FIBROSIS PATIENTS WITH Delta F508 MUTATION**  
Cho, D., Illek, B., Hwang, P. H., Fischer, H.  
WILEY-BLACKWELL.2011: 241–242
- **Safety of a Preservative-Free Acidified Saline Nasal Spray A Randomized, Double-blind, Placebo-Controlled, Crossover Clinical Trial** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*  
Ryan, W. R., Hwang, P. H.  
2010; 136 (11): 1099-1103
- **Migration of regulatory T cells toward airway epithelial cells is impaired in chronic rhinosinusitis with nasal polyposis** *CLINICAL IMMUNOLOGY*  
Kim, Y. M., Munoz, A., Hwang, P. H., Nadeau, K. C.  
2010; 137 (1): 111-121
- **Characteristics of Chloride Transport in Nasal Mucosa From Patients With Primary Ciliary Dyskinesia** *LARYNGOSCOPE*  
Cho, D., Hwang, P. H., Illek, B.  
2010; 120 (7): 1460-1464
- **Outcomes After Middle Turbinate Resection: Revisiting a Controversial Topic** *LARYNGOSCOPE*  
Soler, Z. M., Hwang, P. H., Mace, J., Smith, T. L.  
2010; 120 (4): 832-837
- **Nicotine induces resistance to chemotherapy in nasal epithelial cancer** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Shen, T., Le, W., Yee, A., Kamdar, O., Hwang, P. H., Upadhyay, D.  
2010; 24 (2): E73-E77
- **Determinants of outcomes of sinus surgery: A multi-institutional prospective cohort study** *113th Annual Meeting of the American-Academy-of-Otolaryngology-Head-and-Neck-Surgery-Foundation-and-OTO-EXPO*  
Smith, T. L., Litvack, J. R., Hwang, P. H., Loehr, T. A., Mace, J. C., Fong, K. J., James, K. E.  
SAGE PUBLICATIONS LTD.2010: 55–63
- **Mechanistic Studies of Tolerance in sublingual immunotherapy (SLIT) patients with Dermatophagoides farinae and Timothy grass allergy** *10th Annual Meeting of the Federation-of-Clinical-Immunology-Societies*  
Reshamwala, N., Swamy, R., Berquist, S., Nguyen, T., Hoyte, E., Vissamsetti, S., Sivagnanasundaram, A., Saper, V., Hwang, P., Moss, R., Nadeau, K.  
ACADEMIC PRESS INC ELSEVIER SCIENCE.2010: S65–S65
- **Controlled steroid delivery via bioabsorbable stent: Safety and performance in a rabbit model** *Spring Meeting of the American-Rhinologic-Society/Rhinology World Conference 2009*  
Li, P. F., Downie, D., Hwang, P. H.  
OCEAN SIDE PUBLICATIONS INC.2009: 591–96
- **Integration of patient-specific paranasal sinus computed tomographic data into a virtual surgical environment** *54th Annual Fall Meeting of the American-Rhinologic-Society*  
Parikh, S. S., Chan, S., Agrawal, S. K., Hwang, P. H., Salisbury, C. M., Rafii, B. Y., Varma, G., Salisbury, K. J., Blevins, N. H.  
OCEAN SIDE PUBLICATIONS INC.2009: 442–47
- **A 51-Year-Old Woman With Acute Onset of Facial Pressure, Rhinorrhea, and Tooth Pain Review of Acute Rhinosinusitis** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*  
Hwang, P. H.  
2009; 301 (17): 1798-1807
- **Effect of L-ascorbate on chloride transport in freshly excised sinonasal epithelia** *54th Annual Fall Meeting of the American-Rhinologic-Society*  
Cho, D., Hwang, P. H., Illek, B.  
OCEAN SIDE PUBLICATIONS INC.2009: 294–99
- **Pathology Quiz Case 1 Glomangiopericytoma (sinonasal-type hemangiopericytoma [HPC])** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*  
Worden, B., Getz, A., Luo, R., Hwang, P. H.  
2009; 135 (5): 520-?
- **Endoscopic approach to the infratemporal fossa for treatment of invasive fungal sinusitis** *AMERICAN JOURNAL OF RHINOLOGY & ALLERGY*  
Goyal, P., Leung, M., Hwang, P. H.

2009; 23 (1): 100-104

- **Pathology Quiz Case Cholesterol granuloma (CG) of the left maxillary sinus** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*  
Parikh, S., Mattoch, I. W., Kong, C., Hwang, P. H.  
2008; 134 (11): 1233-1234
- **Results of endoscopic maxillary mega-antroostomy in recalcitrant maxillary sinusitis** *Spring Meeting of the American-Rhinologic-Society/Combined Otolaryngology Spring Meeting*  
Cho, D., Hwang, P. H.  
OCEAN SIDE PUBLICATIONS INC.2008: 658-62
- **The effects of retinoic acid on ciliary function of regenerated sinus mucosa** *AMERICAN JOURNAL OF RHINOLOGY*  
Erickson, V. R., Antunes, M., Chen, B., Cohen, N. A., Hwang, P. H.  
2008; 22 (3): 334-336
- **Effects of sinus surgery on lung transplantation outcomes in cystic fibrosis** *AMERICAN JOURNAL OF RHINOLOGY*  
Leung, M., Rachakonda, L., Weill, D., Hwang, P. H.  
2008; 22 (2): 192-196
- **Balloon catheter technology in sinus surgery** *AMERICAN JOURNAL OF RHINOLOGY*  
Hwang, P. H.  
2008; 22 (2): 105-105
- **Endoscopic septoplasty** *CURRENT OPINION IN OTOLARYNGOLOGY & HEAD AND NECK SURGERY*  
Getz, A. E., Hwang, P. H.  
2008; 16 (1): 26-31
- **Radiographic assessment of the sinuses in patients treated for nasopharyngeal carcinoma** *AMERICAN JOURNAL OF RHINOLOGY*  
Raviv, J., Downing, L., Le, Q., Hwang, P.  
2008; 22 (1): 64-67
- **Wegener's granulomatosis: current trends in diagnosis and management.** *Current opinion in otolaryngology & head and neck surgery*  
Erickson, V. R., Hwang, P. H.  
2007; 15 (3): 170-176
- **Rehabilitation of surgically traumatized paranasal sinus mucosa using retinoic acid** *52nd Annual Meeting of the American-Rhinologic-Society*  
Leung, M., Hwang, P. H.  
OCEAN SIDE PUBLICATIONS INC.2007: 271-75
- **Infraorbital nerve surgical decompression for chronic infraorbital nerve hyperesthesia** *OPHTHALMIC PLASTIC AND RECONSTRUCTIVE SURGERY*  
Bailey, K., Ng, J. D., Hwang, P. H., Saulny, S. M., Holck, D. E., Rubin, P. A.  
2007; 23 (1): 49-51
- **Image-guided frontal trephination: A minimally invasive approach for hard-to-reach frontal sinus disease** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Zacharek, M. A., Fong, K. J., Hwang, P. H.  
2006; 135 (4): 518-522
- **The utility of concurrent rhinoplasty and sinus surgery - A 2-team approach** *ARCHIVES OF FACIAL PLASTIC SURGERY*  
Marcus, B., Patel, Z., Busquets, J., Hwang, P. H., Cook, T. A.  
2006; 8 (4): 260-262
- **Retinoic acid improves ciliogenesis after surgery of the maxillary sinus in rabbits** *LARYNGOSCOPE*  
Hwang, P. H., Chan, J. M.  
2006; 116 (7): 1080-1085
- **Perioperative care for advanced rhinology procedures** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Orlandi, R. R., Hwang, P. H.  
2006; 39 (3): 463-?

- **The utility of bipolar electrocautery in hereditary hemorrhagic telangiectasia** *109th Annual Meeting of the American-Academy-of-Otolaryngology-Head-and-Neck-Surgery-Foundation*  
Ghaheri, B. A., Fong, K. J., Hwang, P. H.  
MOSBY-ELSEVIER.2006: 1006-9
- **Intranasal deposition of nebulized saline: A radionuclide distribution study** *50th Annual Meeting of the American-Rhinologic-Society*  
Hwang, P. H., Woo, R. J., Fong, K. J.  
OCEAN SIDE PUBLICATIONS INC.2006: 255-61
- **Endoscopic resection of sinonasal inverted papilloma: A meta-analysis** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Busquets, J. M., Hwang, P. H.  
2006; 134 (3): 476-482
- **Surgical revision of the post-Caldwell-Luc maxillary sinus** *Annual Meeting of the American-Rhinologic-Society*  
Han, J. K., Smith, T. L., Loehrl, T. A., Fong, K. J., Hwang, P. H.  
OCEAN SIDE PUBLICATIONS INC.2005: 478-82
- **Surgical revision of the failed obliterated frontal sinus** *49th Annual Fall Meeting of the American-Rhinologic-Society*  
Hwang, P. H., Han, J. K., Bilstrom, E. J., Kingdom, T. T., Fong, K. J.  
OCEAN SIDE PUBLICATIONS INC.2005: 425-29
- **Sagittal and coronal dimensions of the ethmoid roof: A radioanatomic study** *AMERICAN JOURNAL OF RHINOLOGY*  
Zacharek, M. A., Han, J. K., Allen, R., Weissman, J. L., Hwang, P. H.  
2005; 19 (4): 348-352
- **Surgical rhinology: recent advances and future directions** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Hwang, P. H.  
2004; 37 (2): 489-?
- **The office management of recalcitrant rhinosinusitis** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Zacharek, M. A., Hwang, P. H., Fong, K. J.  
2004; 37 (2): 365-?
- **Head and neck manifestations of Wegener's granulomatosis** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Gubbels, S. P., Barkhuizen, A., Hwang, P. H.  
2003; 36 (4): 685-?
- **Incidence, etiology, and management of cerebrospinal fluid leaks following trans-sphenoidal surgery** *Meeting of the Western-Section of the Triological-Society*  
Shiley, S. G., Limonadi, F., Delashaw, J. B., Barnwell, S. L., Andersen, P. E., Hwang, P. H., Wax, M. K.  
JOHN WILEY & SONS INC.2003: 1283-88
- **Effects of topically applied biomaterials on paranasal sinus mucosal healing** *AMERICAN JOURNAL OF RHINOLOGY*  
Maccabee, M. S., Trune, D. R., Hwang, P. H.  
2003; 17 (4): 203-207
- **Paranasal sinus mucosal regeneration: The effect of topical retinoic acid** *AMERICAN JOURNAL OF RHINOLOGY*  
Maccabee, M. S., Trune, D. R., Hwang, P. H.  
2003; 17 (3): 133-137
- **Radiologic correlates of symptom-based diagnostic criteria for chronic rhinosinusitis** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Hwang, P. H., Irwin, S. B., Griest, S. E., Caro, J. E., Nesbit, G. M.  
2003; 128 (4): 489-496
- **Contemporary use of image-guided systems.** *Current opinion in otolaryngology & head and neck surgery*  
Han, J. K., Hwang, P. H., Smith, T. L.  
2003; 11 (1): 33-36
- **Outpatient intravenous antibiotics for chronic rhinosinusitis** *Annual Meeting of the Western-Section of the Triological-Society*  
Gross, N. D., McInnes, R. J., Hwang, P. H.



JOHN WILEY & SONS INC.2002: 1758–61

- **Headset-related sensory and motor neuropathies in image-guided sinus surgery** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*  
Hwang, P. H., Maccabee, M., Lindgren, J. A.  
2002; 128 (5): 589-591
- **Bony abnormalities of the paranasal sinuses in patients with Wegener's granulomatosis** *Annual Meeting of the American-Rhinologic-Society*  
Yang, C., Talbot, J. M., Hwang, P. H.  
OCEAN SIDE PUBLICATIONS INC.2001: 121–25
- **Medical therapy of acute and chronic frontal rhinosinusitis** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Maccabee, M., Hwang, P. H.  
2001; 34 (1): 41-?
- **The five year experience with endoscopic trans-septal frontal sinusotomy** *OTOLARYNGOLOGIC CLINICS OF NORTH AMERICA*  
Lanza, D. C., McLaughlin, R. B., Hwang, P. H.  
2001; 34 (1): 139-?
- **Applications of in situ hybridization techniques in the diagnosis of chronic sinusitis** *AMERICAN JOURNAL OF RHINOLOGY*  
Hwang, P. H., Montone, K. T., Gannon, F. H., Senior, B. A., Lanza, D. C., Kennedy, D. W.  
1999; 13 (5): 335-338
- **Endoscopic trans-septal frontal sinusotomy: The rationale and results of an alternative technique** *AMERICAN JOURNAL OF RHINOLOGY*  
McLaughlin, R. B., Hwang, P. H., Lanza, D. C.  
1999; 13 (4): 279-287
- **Endoscopic septoplasty: Indications, technique, and results** *101st Annual Meeting of the American-Academy-of-Otolaryngology-Head-and-Neck-Surgery*  
Hwang, P. H., McLaughlin, R. B., Lanza, D. C., Kennedy, D. W.  
MOSBY-ELSEVIER.1999: 678–82
- **Facial nerve dysfunction associated with cystic lesions of the mastoid** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Hwang, P. H., Jackler, R. K.  
1998; 119 (6): 668-672
- **Correction of the twisted nose deformity: A surgical algorithm using the external rhinoplasty approach** *American-Rhinologic-Society Meeting, Combined Otolaryngological Spring Meeting*  
Hwang, P. H., Maas, C. S.  
OCEAN SIDE PUBLICATIONS INC.1998: 213–20
- **Histology and histomorphometry of ethmoid bone in chronic rhinosinusitis** *100th Annual Meeting of the American-Laryngological-Rhinological-and-Otological-Society*  
Kennedy, D. W., Senior, B. A., Gannon, F. H., Montone, K. T., Hwang, P., Lanza, D. C.  
JOHN WILEY & SONS INC.1998: 502–7
- **Lipoid meningitis due to aseptic necrosis of a free fat graft placed during neurotologic surgery** *LARYNGOSCOPE*  
Hwang, P. H., Jackler, R. K.  
1996; 106 (12): 1482-1486
- **Attitudes, knowledge, and practices of otolaryngologists treating patients infected with HIV** *Annual Meeting of the American-Academy-of-Otolaryngology-Head-and-Neck-Surgery*  
Hwang, P. H., Tami, T. A., Lee, K. C., Raven, R. B.  
MOSBY-YEAR BOOK INC.1995: 733–39
- **ENLARGEMENT OF THE COCHLEAR AQUEDUCT - FACT OR FICTION** *1992 ANNUAL MEETING OF THE AMERICAN ACADEMY OF OTOLARYNGOLOGY - HEAD AND NECK SURGERY*  
Jackler, R. K., Hwang, P. H.  
SAGE PUBLICATIONS LTD.1993: 14–25
- **Pediatric penetrating keratoplasty.** *Seminars in ophthalmology*  
Hwang, D. G., Hwang, P. H.  
1991; 6 (4): 212-218

- **COLLAGEN SHIELD ENHANCEMENT OF TOPICAL DEXAMETHASONE PENETRATION** *ARCHIVES OF OPHTHALMOLOGY*  
Hwang, D. G., STERN, W. H., Hwang, P. H., MACGOWANSMITH, L. A.  
1989; 107 (9): 1375-1380