ARS 66th Annual Virtual Meeting – Program at a Glance

Thursday, September 10, 2020 – 6:50 pm-9:00 pm
Breakout Room 1

6:50 pm - 7:00 pm  Introduction – Robert Kern, MD, FARS – ARS President
Joseph Han, MD, FARS – President-Elect/Program Chair

Moderators:  Troy Woodard, MD, FARS; Naveen Bhandarkar, MD, FARS; Dana Crosby, MD, FARS; Waleed Abuzeid, MBBS

7:00 pm - 7:10 pm  Randomized trial on the effect of postoperative oral corticosteroids on QOL and biomarkers
Sarina Mueller, MD

7:10 pm - 7:20 pm  Mepolizumab for chronic rhinosinusitis with nasal polyps
Joseph Han, MD, FARS

7:20 pm - 7:30 pm  Prophylactic antibiotics after functional endoscopic sinus surgery: A randomized controlled trial
Ashton Lehmann, MD

7:30 pm - 7:40 pm  The cost of rhinitis
Lauren Roland, MD

7:40 pm - 7:50 pm  CRISP/Cas9 enables CFTR correction in the endogenous locus in airway stem cells
Dawn Bravo, PhD

7:50 pm - 8:00 pm  Questions and Discussion

8:00 pm - 8:10 pm  Inter Session Break

8:10 pm - 9:00 pm  Panel:  Nasal Polyp Management Algorithm
Moderator: Joseph Han, MD, FARS
Panelists: James Palmer, MD, FARS; Jivianne Lee, MD, FARS; Anju Peters, MD; Kent Lam, MD; Zachary Soler, MD, FARS; Christine Franzese, MD, FARS
Breakout Room 2

6:50 pm - 7:00 pm  Introduction – Robert Kern, MD, FARS – ARS President
Joseph Han, MD, FARS – ARS President-Elect/Program Chair

7:00 pm - 7:40 pm  David Kennedy Lectureship: “Moving Forward: Rhinology in the Post-COVID Era”
Guest Speaker: Peter Hwang, MD, FARS

7:40 pm – 7:50 pm  Scientific Awards
Presenters: Robert Kern, MD, FARS; Jean Kim, MD, FARS

7:50 pm - 8:00 pm  Inter Session Break

Moderators:  Jennifer Villwock, MD; Ian Humphreys, DO, FARS; Philip Chen, MD, FARS; Garrett Choby, MD, FARS

8:00 pm - 8:10 pm  IL-13 acts on human sinonasal epithelial basal cells to increase hypoxia-associated gene expression
Syed Khalil, PhD (Presented by Nicholas Rowan)

8:10 pm - 8:20 pm  Predictors of rhinorrhea response after posterior nasal nerve cryoablation for chronic rhinitis
Frederick Yoo, MD

8:20 pm - 8:30 pm  IL-17A levels are associated with increased prior ESS
Nikita Chapurin, MD, MHS

8:30 pm - 8:40 pm  A randomized clinical trial to evaluate mometasone lavage versus spray for management of CRS
Pawina Jiramongkolchai, MD

8:40 pm - 8:50 pm  DMBT1 is the endogenous carrier ligand for eosinophil death receptor Siglec-8 in nasal polyps
Jean Kim, MD, PhD, FARS

8:50 pm - 9:00 pm  Questions and Discussion
Saturday, September 12, 2020

Breakout Room A

11:50 am - 12:00 pm  Introduction – Robert Kern, MD, FARS – ARS President
Joseph Han, MD, FARS – ARS President-Elect/Program Chair

Moderators: Corinna Levine, MD, FARS; David Gudis, MD, FARS; Angela Donaldson, MD, FARS

12:00 pm - 12:10 pm  Submucosal gland morphology and secretory cell identities are aberrant in chronic rhinosinusitis
Onyekachi Nnabue, Medical Student

12:10 pm - 12:20 pm  Broad lipidomic analysis of patients with AERD undergoing aspirin desensitization
Adam DeConde, MD

12:20 pm - 12:30 pm  Cell adhesion molecule expression in chronic rhinosinusitis
Brennan Blight, BS

12:30 pm - 12:40 pm  Macrophages regulate olfactory regeneration through the IL-6/Stat3 pathway
Andrew Lane, MD, FARS (Presented by Kathleen Kelly, MD)

12:40 pm - 12:50 pm  A novel device combining acoustic vibration and expiratory pressure for nasal congestion
Rodney Schlosser, MD, FARS

12:50 pm - 1:00 pm  Questions and Discussion

1:00 pm - 1:10 pm  Inter Session Break

1:10 pm - 2:00 pm  Panel: Understanding the role, questions, and concerns of biologic in the management of NP
Moderator: Amber Luong, MD, PhD, FARS
Panelists: Lauren Roland, MD; Kent Lam, MD; Jean Kim, MD, FARS; Rodney Schlosser, MD, FARS; Christine Franzese, MD, FARS

2:00 pm - 2:10 pm  Inter Session Break

2:10 pm - 3:00 pm  Panel (Women in Rhinology): “Work-life Balance during COVID-19 Era”
Moderator: Elina Toskala, MD, FARS
Panelists: Timothy Smith, MD, FARS; Mindy Rabinowitz, MD, FARS; Ian Koszewski, MD; Jivianne Lee, MD, FARS; Lori Lemonnier, MD
Breakout Room B

11:50 am - 12:00 pm  Introduction – Robert Kern, MD, FARS – ARS President
Joseph Han, MD, FARS – ARS President-Elect/Program Chair

12:00 pm - 12:50 pm  Panel: Clinical Importance of Bench Research
Moderator: Andrew Lane, MD, FARS
Panelists: Justin Turner, MD, FARS; Benjamin Bleier, MD, FARS; Erin O’Brien, MD, FARS; Carol Yan, MD

12:50 pm - 1:00 pm  Inter Session Break

Moderators: Theodore Schuman, MD, FARS; Arthur Wu, MD, FARS; David Jang, MD, FARS; Alissa Kannan, MD

1:00 pm - 1:10 pm  SNOT-22 subdomain analysis of patients treated with Omalizumab for nasal polyposis
Joseph Han, MD, FARS

1:10 pm - 1:20 pm  Sinonasal inflammation impairs resting-state functional brain connectivity
Aria Jafari, MD

1:20 pm - 1:30 pm  Patient satisfaction with telemedicine clinical visits for chronic rhinosinusitis
Megan Morisada, MD

1:30 pm - 1:40 pm  Red ginseng aqueous extract improves markers of mucociliary clearance in the Cystic Fibrosis rat
Do Yeon Cho, MD

1:40 pm - 1:50 pm  Predictors of completion of sublingual immunotherapy
Sophia Song
Presented by Nanki Hura, BS

1:50 pm - 2:00 pm  Questions and Discussion

2:00 pm - 2:10 pm  Inter Session Break

2:10 pm - 3:00 pm  Panel: Utility of Pedicled Flap: Nose to Skull Base
Moderator: Eric Holbrook, MD, FARS
Panelists: Stacey Gray, MD, FARS; Zara Patel, MD, FARS; Troy Woodard, MD, FARS; Waleed Abuzeid, MBBS; Jonathan Ting, MD, FARS
Breakout Room C

11:50 am - 12:00 pm  **Introduction** – Robert Kern, MD, FARS – ARS President
Joseph Han, MD, FARS – ARS President-Elect/Program Chair

12:00 pm - 12:40 pm  **Panel:**  **Management of CRS: Perspective Around the World**
Moderator: Brent Senior, MD, FARS
Panelists: Marcio Nakanishi, MD; Renato Roithmann, MD; Peter Hellings, Professor; Claus Bachert, MD, Professor; Wytske Fokkens, Prof.dr.; Claire Hopkins, Professor; Martin Desrosiers, MD; Jannis Constantinidis, MD, PhD

12:40 pm – 12:50 pm  **Inter Session Break**

12:50 pm - 1:30 pm  **Panel:**  **Impact of COVID 19 in Rhinology: From Office to OR**
Moderator: Seth Brown, MD, FARS:
Panelists: Abtin Tabaee, MD, FARS: J. Pablo Stolovitzky, MD, FARS; Parul Goyal, MD, FARS; Arthur Wu, MD, FARS

1:30 pm – 1:40 pm  **Inter Session Break**

1:40 pm – 2:20 pm  **Panel:**  **New and Innovative Management: From Rhinitis to Sinusitis**
Moderator: Jeffrey Suh, MD
Panelists: Ashutosh Kacker, MD; Jose Gurrola, MD; Carol Yan, MD; Esther Kim, MD

2:20 pm – 3:00 pm  **Panel:**  **Evidence versus Myth: Management of Allergic Rhinitis**
Moderator: Stella Lee, MD
Panelists: Mike Tankersley, MD; Seong Cho, MD; Sarah Wise, MD, FARS; Gregory Capra, MD, FARS
ON DEMAND PRESENTATIONS

66TH Annual Oral Presentations

A comparison between anterior and lateral CSF leaks in meningocele patients
Rahul Alapati, BS

Adverse events with monoclonal antibodies
Mohamad Chaaban, MD, MSCR, MBA

Age-related changes in olfactory cleft anatomy and airflow using computational fluid dynamics
Ryan Little, MD

Antibody deficiencies in chronic rhinosinusitis
Chadi Makary, MD

Are rhinitis and eustachian tube dysfunction associated in United States adolescents?
Dara Adams, Dr.

Association of air pollutant exposure and sinonasal histopathology in chronic rhinosinusitis
Tirth Patel, MD

Association of nasopharyngeal inflammation in patients with eustachian tube dysfunction
Jeffrey Bergeron, MD

Automated 3D sinus CT evaluation
Vijay Ramakrishnan, MD, FARS

Azithromycin and ciprofloxacin inhibit IL-8 secretion without disrupting HSNEC integrity in vitro
Dong Jin Lim, PhD

Biologics in the management of CRSwNP
Ahmad Mirza, MBBS

Bone mineral density of the anterior skull base in spontaneous cerebrospinal fluid leak patients
Christopher Low, MD

Chemosensory dysfunction and diet quality
Christopher Roxbury, MD

Comparing CRS severity between Hispanics and non-Hispanics undergoing primary ESS
Corinna Levine, MD, FARS
Cost-effectiveness of antibiotic prophylaxis for nasal packing
Ximena Maul, MD

Delta neutrophil index in chronic sinusitis
Ki Il Lee, MD, PhD

Dupilumab efficacy in CRSwNP by NP surgery history in the SINUS-24 and SINUS-52 studies
Claire Hopkins, FRCS DM

Endoscopic repair of congenital basal encephaloceles decreases complications compared to open
Harrison Thompson, BS

Examination of SCL-90 subdomains in empty nose syndrome patients
Dayoung Kim

Gabapentin and postoperative pain after sinus surgery
David Lerner, MD

Gender-related differences in outcomes after FESS
Arthur Wu, MD, FARS

Health literacy in rhinology patients
Jakob Fischer, MD

Impact of novel CFTR modulator on sinonasal outcomes in patients with Cystic Fibrosis
Jennifer Douglas, MD

In vitro safety and efficacy of mitochondrially-targeted antioxidant mitoquinone after FESS
Michael Gouzos, MD

Intercarotid artery distance in the pediatric population: Implications for skull base approaches
Nyall London, MD, PhD

Medicare payment sex disparities for endoscopic sinus procedures
Jeremy Ruthberg, Medical Student

Microbiomics of irrigation with xylitol or Lactococcus lactis in chronic rhinosinusitis
Paul Lambert, MD

Mometasone irrigations compared to Budesonide irrigations
Peter Papagiannopoulos, MD

Mucin expression in allergic fungal sinusitis
Carly Clark, BA
Outcomes following exclusively endoscopic endonasal resection of benign orbital tumors
Aria Jafari, MD

Pain catastrophizing in chronic rhinosinusitis
Aasif Kazi, MD, PharmD

P-gp Inhibition with verapamil overcomes mometasone resistance in CRSwNP
Maie Taha, PhD

Practice of telemedicine in otolaryngology: Systematic review in the era of COVID-19
Jonathan Overdevest, MD, PhD

Predictors of revision surgery: An analysis of Draf 3 on index surgery and disease endotype
Tran Locke, MD

Predictors of survival outcomes in sinonasal squamous cell carcinoma
Nyssa Farrell, MD

Primary dural suturing via an endoscopic endonasal corridor: 3D printed model for training
Ivanna Nebor, MD

Psychometric properties of the brief version of the questionnaire of olfactory disorders
Jose Mattos, MD, MPH

Quality of life before and after ESS and ASA desensitization in AERD patients as measured by SF-12
Tran Locke, MD

Randomized trial of nasal theophylline irrigation for treatment of post-viral olfactory dysfunction
Jake Lee, MD

Readmission following inpatient functional endoscopic sinus surgery for chronic rhinosinusitis
Habib Khoury

Sinonasal mucin in aspirin exacerbated respiratory disease
Cameron Worden, BS

Socioeconomic factors affect stage at presentation and survival in sinonasal squamous cell carcinoma
Aria Jafari, MD

Surgical outcomes for endoscopic versus open skull base resection for malignant tumors
Nicholas Lenze, BS

The association of frailty and chemosensory dysfunction in older adults
Nicholas Rowan, MD
The ENS6Q used to distinguish patients with empty nose syndrome from primary nasal obstruction
Ameen Amanian, MD

Topical budesonide is associated with decreased Nrf2
Murugappan Ramanathan, MD, FARS

Type 2 biologics versus aspirin desensitization with aspirin maintenance therapy
Auddie Sweis, MD

Type 2 inflammatory mediators decrease after ESS
Samuel Racette, MD

Vascular pathophysiology characterization in chronic rhinosinusitis
Nitish Khurana
2020 COSM ORAL Presentations

Beta-amyloid plaques in murine olfactory bulbs during chronic olfactory inflammation
Andrew Lane, MD, FARS (Presented by Omar Ahmed, MD)

Academic rhinologists’ online rating and perception, scholarly productivity, and industry payments
Khodayar Goshtasbi, BS

Asthma control in patients with and without nasal polyps on biologic therapy
Prachi Patel, BA

Can frail patients safely undergo TNTS?
Jordan Sukys, MD

Chronic rhinosinusitis’ impact on transsphenoidal surgery complications
Jake Lee, MD

Clinical correlation of 15LO1 and CCL26 in CRSwNP
Nadeem Kolia, MD

Clinical effectiveness of Benralizumab in severe asthma and chronic rhinosinusitis with nasal polyps
Chandala Chitguppi, MD

Complications of aspirin desensitization in aspirin-exacerbated respiratory disease
Auddie Sweis, MD

Denatonium benzoate bitter taste perception in chronic rhinosinusitis (CRS)
Alyssa Civantos, BA

Educational informed consent video non-inferior to standard verbal consent for FESS: A RCT
Rohit Nallani, MD (Presented by Joseph Penn, BS)

Electrical stimulation of olfactory neurons may improve regeneration after damage
Zara Patel, MD

Elevated urine leukotriene E4 levels associated with worsened objective asthma and CRS markers
Garret Choby, MD

Evaluating the safety of mometasone nasal lavage for patients with CRS
Pawina Jiramongkolchai, MD

Gender and age differences in aspirin-exacerbated respiratory disease
Tran Locke, MD

Histopathologic markers are not associated with QOL or olfactory function in patients with CRS
Nyssa Farrell, MD
IMPA redirects airflow and improves ENS symptomology: A CFD study
Jennifer Malik

Long-term follow up of nasal nitric oxide in chronic rhinosinusitis
Daniel Lee, MD

Machine learning of biomarkers and clinical observation to predict eosinophilic CRS
Ryan Thorwarth, MD

Mechanisms governing NSD symptoms
Jennifer Malik

Mepolizumab in eosinophilic chronic rhinosinusitis
Sophie Walter, Medical Student

Natural language processing phenotype algorithm in CRS
Robert Tuliszewski, MD

Non-sponsored evaluation of cryosurgical ablation device for rhinitis
Rohit Garg, MD, MBA

Olfactory function after surgical treatment of CRS
Jose Mattos, MD, MPH

On-demand sclerotherapy for HHT-related epistaxis
Andrew Peterson

Otologic outcomes after sinus surgery for chronic rhinosinusitis
Michael Chang, MD

Outcomes in ENT assisted and unassisted anterior skull base surgeries
Chris Choi, BS

Predictors of objective olfactory dysfunction following sinus surgery
David S. Lehmann

Prevalence of olfactory and neurocognitive dysfunction in patients with subjective smell disorder
Justin Morse, MD

Quantification of biomarker heterogeneity in control specimens used for analysis in CRS
Taylor Carle, MD

Sinonasal inflammatory gene expression correlates with sleep dysfunction in CRSwNP
Katherine Lees, MD
Solitary chemosensory cells and its relation to cholinergic innervation
Jie Deng, MD

Surgeon cost feedback reduces cost in sinonasal surgery
Amarbir Gill, MD

Surgical outcomes in aspirin-exacerbated respiratory disease without aspirin desensitization
Elysia Grose, MD(c)

Synechia incidence after primary and revision FESS
William Yao, MD

Systematic review: Objective smell and taste in eating disorders
Evelyn Leland, BS

The detrimental effects of olfactory dysfunction as a non-motor symptom of Parkinson’s Disease
Patrick Kim

The effect of pre-operative steroids on surgical field visibility during sinus surgery
Sen Ninan, BA

Treatment outcomes in patients with chronic rhinosinusitis and immunodeficiency: A systematic review
Shireen Samargandy, MBBS

TSLP and type 2 inflammatory cytokines in CRS, emerging endotypes
Joel Franco, MD

Unbiased measure of health-related qol in CRS reveals dominant modifiers in qol
Madison Epperson, MD

Under pressure: Differentiating CRS from non-rhinologic facial pain with facial and nasal symptoms
Thomas Higgins, MD, MSPH

Validation of sinus drug delivery CFD modeling with in vitro gamma scintigraphy
Kathryn Kudlaty, MD
POSTER PRESENTATIONS

ARS 66th Annual Posters

A drug release and pharmacokinetic evaluation of novel mometasone furoate eluting matrices
Changcheng You, PhD

A prospective prevalence study of chronic rhinosinusitis associated with inflammatory bowel disease
India Dhillon, BScH

Adjunctive techniques to dacryocystorhinostomy: an evidence-based review with recommendations
Michael Yim, MD

Allergen sensitization patterns in chronic rhinosinusitis subtypes
Heather Ungerer, BA

An atypical, asymptomatic case of life-threatening rhino-cerebral mucormycosis
Agamemnon Pericleous, MBBCh, MRCS (ENT)

Analysis of public search queries relating to anosmia in the novel coronavirus-2019 pandemic
Humzah Quereshy, BA

Anosmia Google search and COVID-19 in the US
Christopher Xiao, MD

Antibiotic use following functional endoscopic sinus surgery
Mackenzie O'Connor, BS

Anxiety and opioid use after ESS
Brian Scott, MD

Are routine type and screens cost-effective in transsphenoidal surgery?
Aviv Spillinger, BS

Assessing the academic influence of otolaryngologists on sinus and allergy research
Zachary Grace

Assessing use and popularity of publicly available online videos in rhinology
Benjamin Bitner, MD

Assessing web-based audiovisual multimedia for patient education in skull base surgery
Amarbir Gill, MD
Association of environmental factors with allergic rhinitis
Victoria Lee, MD

Association of quality of life measures and otolaryngologic care in Cystic Fibrosis patients
Stephen Leong

Awareness and understanding of empty nose syndrome
Angela Yang, BS

BRAF V600E and KRAS gene expression in human nasal polyposis
Gul Acar, MD

Calvarium thinning in spontaneous cerebrospinal fluid leak patients
Dhruv Sharma, MD

Cardiovascular comorbidities and the anterior skull base
Aksha Parray

Cardiovascular comorbidities and the posterior skull base
Aakash Shah, BS

Centralization of care and patient travel for transsphenoidal surgery of the pituitary
Aisosa Omorogbe, BS

Characterization of AERD at a single institution
Uche Nwagu, BS

Chronic rhinosinusitis in patients with spontaneous cerebrospinal fluid leak
Emily Barrow, MD

Comorbidities in chronic rhinosinusitis
Amarbir Gill, MD

Comorbidities of chronic alcohol use and the anterior skull base
Aksha Parray

Complications from CSF leak repairs
Rashiqah Syed, BS

Current practices regarding middle turbinate resection among otolaryngologists
Andrea Ziegler, MD

Development of CFD methodology appropriate for EDS performance evaluation
Marit Kleven
Diabetes as a risk factor for complications following ventral skull base surgery
Dongmin Kim

Diagnosis of anosmia: A systematic review
Abdul Saltagi, BS

Diet modification in AERD
Rijul Kshirsagar, MD

Differentiation of chronic rhinosinusitis and primary headache disorder via analysis of SNOT-22
Kolin Rubel, MD

Disease control after surgery for CRS: Prospective, multi-institutional validation of the SCT
Ryan Little, MD

Disease recurrence in the central compartment in eosinophilic chronic rhinosinusitis
Chadi Makary, MD

Disparities in access to care and outcomes following rhinoplasty
Aisosa Omorogbe, BS

Distant metastasis to the clivus: The University of Arizona experience
John Richards, MD

Dupilumab improved smell outcomes in severe CRSwNP patients regardless of NP history
Joaquim Mullol, MD, PhD

Dupilumab improves pan-sinus opacification in patients with CRSwNP in SINUS-52
Stella Lee, MD

Dupilumab rapidly improves and sustains smell in CRSwNP
Joaquim Mullol, MD, PhD

Duration of frontal sinusotomy
Philip Chen, MD, FARS

Ectopic silent gonadotroph adenoma in the sphenoid sinus
Rachel Jonas, MD

Efficacy of adenoidecctomy for chronic rhinosinusitis in children older than 7 Years of Age
Chengetai Mahomva, MD

Empty nose syndrome following endoscopic skull base surgery
Katie Melder, MD
Endoscopic approaches to the pterygopalatine fossa and infratemporal fossa: A systematic review
Max Newby, MD

Endoscopic endonasal repair of a sphenoid meningoencephalocele
Rafael Hijano, MD, PhD

Endoscopic endonasal surgery after maxillectomy and midface free flap reconstruction
Peter Filip, MD

Endoscopic fluorescein in the immediate post-operative period for evaluation of skull base leaks
Micah Timen, MD, MSc

Endoscopic outcomes in AERD patients treated with topical antibiotics and intranasal steroids
Jhon Martinez Paredes, MD

Endoscopic reconstruction of skull base defects using tutoplast allografts
Ghassan Alokby, MD, FARS

Endoscopic vidian canal landmarks: An anatomic relationship
Alice Liu

Ethmoid-to-maxillary inflammation ratio: A predictor of postoperative outcomes in nasal polyposis
Daniel Beswick, MD

Evaluating inflammation in an obstruction-based chronic rhinosinusitis model in rabbits
Stella Lee, MD

Evaluating the SNOT-22’s “one most important symptom” over time
Michela Borrelli

Evaluation of chronic sinonasal tract inflammation as a potential risk factor for COVID-19
Michael Marino, MD, FARS

Evaluation of outcomes in patients with comorbid OSA following FESS
Leonard Estephan

Evaluation of the NEUROMARK™ system (Rhinitis Neurolysis Therapy™) in patients with chronic rhinitis
Douglas Reh, MD, FARS

Evidence-based recommendations for middle turbinate medialization in endoscopic sinus surgery
Ximena Maul, MD

Exploring adverse events in steroid-eluting stents using a FDA database
Chengetai Mahomva, MD
Extent of endoscopic sinus surgery
Yasuyuki Hinohira, MD, PhD

Extranodal NK/T cell lymphoma–nasal type mimicking chronic rhinosinusitis
Annick Aubin-Pouliot, MD

Frontal sinus delivery in Draf III by EDS confirmed with novel CFD
Narinder Singh

Functional status and posterior skull base procedures
Aakash Shah, BS

Fungal sinusitis: A spectrum of disease?
Ashleigh Halderman, MD

Granulomatous chronic invasive fungal sinusitis: A case report and review of literature
Derek Kong, MD

Hemiplegia and posterior skull base procedures
Aakash Shah, BS

IgG-4 related disease in the paranasal sinuses–an underrecognized pathology
Brett Comer, MD

Impact of postoperative budesonide irrigations after endoscopic sinus surgery on clinical outcomes
Jenna Bergman, Medical Student

Impact of preoperative dehydration in endoscopic transphenoidal pituitary surgery
Dongmin Kim

Impact of prolonged steroid delivery by LYR-210 on four cardinal symptoms of CRS
Yina Kuang, PhD

Impact of sinusitis symptoms among the Latino population in Los Angeles
Erick Garcia

Improved CRS control with higher mometasone irrigation dose
Peter Papagiannopoulos, MD

Improving readability in patient targeted educational materials
Lori Lemonnier, MD

Insight into cervical lymph node metastases of sinonasal mucosal melanoma
Christopher Tseng, BS
Intracranial complications associated with cerebrospinal fluid leaks
Lauren Luk, MD, FARS

Laser vs microdebrider eustachian tuboplasty - A systematic review
Waqs Jamil, MBBS, MRCS ENT, Mch ENT

Locally recurrent solitary fibrous tumor with skull base reconstruction: A case report
Sydney Sachse

LYR-210 reduces sinonasal type 2 inflammation in chronic rhinosinusitis
Atsushi Kato, PhD

Management of a unique sinonasal undifferentiated carcinoma subtype in the Era of COVID-19
Jennifer Douglas, MD

Management of anosmia: A systematic review
Amit Nag, BS

Management of epistaxis during Covid-19 crisis
Abigail Walker, MBChB, MSc, MRCCS, DOHNS

Microbiology and histopathology of silent sinus syndrome
Henry Zheng, BA

Modern treatment of sinonasal melanoma
Abigail Walker, MBChB, MSc, MRCCS, DOHNS

Mometasone versus fluticasone in treatment of chronic sinusitis
Rajesh Havaldar, MS

Nasal cavity squamous cell carcinoma outcomes
Jordan Teitelbaum, DO

Nasal nitric oxide emission is driven by ethmoid sinuses and diffusion: A computational study
Kai Zhao, PhD

Nationwide trends in treatment and survival for sinonasal extramedullary plasmacytoma
Jeff Gao, BS

Neurologic comorbidities and the posterior skull base
Aakash Shah, BS

Odontogenic sinusitis: Clinical characteristics, treatments, and outcomes
Erik Risa, MD
Olfactory training for post-viral olfactory dysfunction
Edward McCoul, MD, FARS

Outcomes of skull base procedures in association with wound complication
Aksha Parray

Outcomes of skull base procedures in emergency settings
Aakash Shah, BS

Outcomes of skull base procedures in obese patients
Aakash Shah, BS

Outcomes of skull base procedures in patients with disseminated cancer
Aksha Parray

Paraganglioma of the nasal septum
Aasif Kazi, MD, PharmD

Patient satisfaction after chin fillers
Aakash Shah, BS

PDT to reduce post-operative infection after sinonasal surgery
Claire Hopkins, FRCS DM

Perioperative management of aspirin in AERD
Hannah Wangberg, MD

Perioperative opioid use in patients undergoing endoscopic sinus surgery based on OSA status
Glen D’Souza, MD

Posterior skull base outcomes in stroke patients
Aakash Shah, BS

Postoperative complications in CSF leak repairs
Rashiqah Syed, BS

Postoperative length of stay after elective CSF leak repair: Costs and outcomes
Davis Aasen, BS

Post-operative outcomes in posterior skull base procedures by immunosuppressant use and subspecialty
Aksha Parray

Posttraumatic cerebrospinal fluid fistula - Surgical management
John Symms, MD
Potential costs of dental treatment and endoscopic sinus surgery for odontogenic sinusitis
Haley Sibley, MD

Preoperative screening for obstructive sleep apnea in endoscopic skull base surgery: NASBS survey
Ryan Rimmer, MD

Preoperative smell changes as predictors of post FESS clinical difference in SNOT-22 scores
Emily Sagalow, BS

Prevalence of specific antibody deficiency in recurrent acute sinusitis and chronic rhinosinusitis
Anna Bareiss, MD

Prevention of the frontal sinus ostium restenosis
Naruo Shoji, MD, PhD

Psychosocial improvements in CRS patients after FESS
Michela Borrelli

Pulmonary comorbidities and the anterior skull base
Aksha Parray

Pulmonary comorbidities and the posterior skull base
Aakash Shah, BS

Quality of life instruments in endoscopic endonasal skull base surgery – A systematic review
Aishwarya Shukla, MD, MPH

Radiographic Differences in Skull Base Height and Anterior Ethmoid Artery Location in AFRS
Dylan Erwin

Reducing intraoperative bleeding in endoscopic sinus surgery
Yoichiro Narikawa, MD

Regional peak mucosal cooling predicts outcomes of radiofrequency treatment of nasal obstruction
Zhenxing Wu, PhD

Relationship between target registration error (TRE) and fiducial registration error (FRE)
Amin Javer, MD, FARS

Renal cell-like adenocarcinoma (SNRCLA) of the nasal cavity: Case report and literature review
Ellen Tokarz, MD

Responder analyses dupilumab NC and LoS scores
Claus Bachert
Role of ER stress in TGF-β1-induced EMT in airway epithelium
Heung-Man Lee, MD, PhD

Role of zileuton in treatment of aspirin exacerbated respiratory
Chadi Makary, MD

Salvage endoscopic nasopharyngectomy
Kerolos Shenouda, MD

SARS-CoV-2 viral inactivation using low dose povidone-iodine via sinonasal and oral cavity
Samantha Frank, MD

Sinonasal extranodal natural killer/t cell lymphoma: National analysis of a rare lymphoma
Jordon Grube, DO

Sinonasal mucormycosis: Revisited
Annanya Soni, MS

Sinonasal outcomes using oral steroids in patients with CRSwNP and positive sinonasal cultures
Jhon Martinez Paredes, MD

Sinonasal schwannoma: Case series and literature review
Rosalie Machado

Sinus surgery and perceptions in social media
Prachi Patel, Research Fellow

SINUS-24 and SINUS-52 dupilumab smell recovery in asthma or N-ERD
Joaquim Mullol, MD, PhD

Skull base osteoradionecrosis
Kerolos Shenouda, MD

Skull base outcomes in septic patients
Aakash Shah, BS

Sleep subdomain of SNOT-22 is a useful screening tool for obstructive sleep apnea
Chandala Chitguppi, MD

Spectrum of tissue loss associated with empty nose syndrome
Sachi Dholakia, BS

Spindle cell sinonasal rhabdomyosarcoma in a 73-year-old man: A case report
Bronson Wessinger
Structured histopathologic comparisons of sinonasal tumors
Auddie Sweis, MD

Subjective smell & taste in skull base surgery
Nanki Hura, BS

The effect of diabetes mellitus on post-operative outcomes following endoscopic sinus surgery
Kolin Rubel, MD

The effects of burn pit exposure on the respiratory tract: A systematic review
James McLean, MD

The infratemporal fossa sign
Edward McCoul, MD, FARS

The role of anesthesia on intraoperative outcomes during endoscopic sinus surgery: A meta-analysis
David Moffatt

The turbinate pump: Targeted inferior turbinate decongestion in sinonasal surgery
Ashton Lehmann, MD

Three cases of sinonasal organized hematoma
Sei Kobayashi, Associate Professor

Treatment of PVOD: Evidence-based review
Nanki Hura, BS

Treatment patterns and survival of sinonasal diffuse large b-cell lymphoma in the United States
Gregory Barinsky, PharmD

Unfolded protein response in sinonasal inverted papilloma
Paul Lee, MS

Unique hemostasis in JNA
Anupam Mishra, MBBS, MS, DNB

Use of balloon sinuplasty in the management of secondary complications to acute frontal sinusitis
Agamemnon Pericleous, MBBCh, MRCS (ENT)

Utilization trends of surgical and endovascular management of refractory epistaxis
Matt Lelegren, MD

Validating starling resistor model of airway collapse in patients with sleep disorder breathing
Michael Schlewet, MD
Validation of intranasal fluorescein for cerebrospinal fluid detection: An in-vitro analysis
Christopher Pool, MD

Xhance for ETD
Arthur Wu, MD, FARS

COSM 2020 Posters

A case of orbital mucocele after endoscopic sinus surgery
Daniel Arkfeld, MD

A rare case of basaloid squamous cell carcinoma arising from the anterior nasal septum
Macaulay Ojeaga

**Acute frontal sinusitis in a child presenting with acute ischemic stroke**
Wesley Davison, MD

**African rhinoplasty versus Asian rhinoplasty average patient satisfaction**
Chris Choi, BS

**Allergic rhinitis in an active duty population**
Danielle Anderson, DO

**An elderly patient with bilateral, progressively growing, symptomatic nasolabial cysts**
Asad Haider, BA

**Assessment of clinical patterns associated with diagnosis of rhinologic disease**
Sean Parsel, DO

**Association of surgeon USNWR medical school rankings with outcomes after pituitary surgery**
Christopher Park, BA

**Atypical meningioma of the sinonasal tract**
Linnea Fechtner, MD/MS

**Automated skull base segmentation with atlas-based segmentation**
Neeraja Konuthula, MD

**Career patterns of Women in Rhinology**
Kristen Echanique, MD

**Centralization of care and patient travel for transsphenoidal surgery of the pituitary**
Aisosa Omorogbe, BS

**CF infection prevention protocol**
Meghan Norris, MS

**CHEER radiology**
Aria Jafari, MD

**Clinical characteristics and cost of surgically managed nasal polyps patients**
Krista Schladweiler, PhD

**Clinical factors distinguishing orbital invasive fungal sinusitis from orbital cellulitis**
Jeffrey Bernstein, MD

**Complications after endoscopic sinus surgery in sinonasal cancer patients with mental illness**
Gregory Barinsky, PharmD
Computational analysis of nose-to-brain drug delivery after nasal midvault reconstruction
Hannah Martin, BS

Contemporary diagnosis of primary ciliary dyskinesia
Erin Lopez, MD

Control of carotid bleed with nasoseptal flap
Matthew Kim, MD

CSF leaks due to electric scooter injury
Jeehong Kim, MD

Demographic predictors of complications in endoscopic sinus surgery in national database
Sonam Dodhia, MD

Determining population-wide interest in different sinus procedures using Google trends
David S. Lehmann, MD

Disparities in access to care and outcomes following rhinoplasty
Aisosa Omorogbe, BS

Distinct histopathologic features of sinusitis complicated by orbital or intracranial extension
Hannah Brown, BS

Effect of nasal fluticasone exhalation delivery system on eustachian tube dysfunction
Arthur Wu, MD, FARS

Effects of smoking on post-operative outcomes in skull base procedures comparing ENT assisted and Unassisted Surgeries
Aakash Shah, BS

Empty nose syndrome
Macaulay Ojeaga

Endoscopic endonasal resection of a carcinoma ex-pleomorphic adenoma of the skull base
Tara Wu, MD

Endoscopic muscle graft to right carotid artery blowout
Shravani Pathak, BA

Endoscopic olfactory anatomy
Roberto Soriano, MD

Environmental exposure and histopathologic findings in WTC relief workers with CRS undergoing FESS
Rohini Bahethi, BS
Epithelial remodeling alters PAR-2 polarization
Ryan Carey, MD

Eustachian tube balloon dilation
Jose Alonso, MD

Exclusively endoscopic surgical resection of esthesioneuroblastoma: A systematic review of outcomes
Daniel Spielman, MD

Extrasinus recurrence of inverting papilloma following previous Caldwell-Luc
Andy Chua, MBBS

Gender representation at national rhinology meetings
Kathryn Kreicher, MD

Hydraulic dissection technique during endoscopic sinus surgery using a novel balloon sinus dilation
Isaac Schmale, MD

Hypoalbuminemia in anterior skull base procedures
Chris Choi, BS

Impact of prophylactic antibiotics on healthcare utilization following endoscopic sinus surgery
Ashoke Khanwalkar, MD

Increased prevalence of sinusitis in Gulf War veterans
Kenric Tam, MD, MM

Inter-pathologist agreement on CRS structured histopathology
Ashwin Ganti, BA

Intranasal drug delivery to the ostiomeatal complex and maxillary sinus in chronic rhinosinusitis
Hannah Martin, BS

Invasive mucorales infection of the nasopharynx
Abel David, MD

Ki-67 as a marker for recurrence in pituitary adenoma
Kent Tadokoro, MD

Long term efficacy of interior turbinate outfracture in CRS patients
Gina Trinh, MD

Lymph node metastasis in maxillary sinus squamous cell carcinoma
Tapan Patel, MD

Metastasis to the sinuses
Nardin Derias, MS3

**Middle turbinate concha bullosa osteoma**  
Rakhna Araslanova, MD

**Modified endoscopic Denker’s approach for management of anterior maxillary sinus tumors**  
Taylor Carle, MD

**Nasoseptal flap for reconstruction of hard and soft palate defect**  
Anas Eid, MD

**Nasoseptal rescue flap approach for endoscopic surgery of the clivus and upper cervical spine**  
Chetan Safi, MD

**Nitric oxide nanotherapeutics to combat candida auris**  
Kevin Li, bs

**Non-opioid vs. opioid analgesics for pain control after endoscopic sinus surgery for CRS**  
Jenna Bergman, Medical Student

**Opioids after endoscopic skull base surgery**  
Alexander Kovacs

**Ostial patency measurement analysis after endoscopic sphenoidotomies and frontal sinusotomies**  
Thomas Higgins, MD, MSPH, FARS

**Outcomes in ENT assisted and unassisted anterior skull base surgeries for high risk patients**  
Chris Choi, BS

**Outcomes of anti-hypertensive therapy in skull base procedures**  
Aakash Shah, BS

**Patient satisfaction after septoplasty**  
Aakash Shah, BS

**Patient satisfaction after surgical or nonsurgical rhinoplasty**  
Aakash Shah, BS

**Perioperative management of spontaneous CSF leak repair**  
Justin McCormick, MD

**Post-op outcomes in ENT assisted and unassisted surgeries for patients with steroid use**  
Aakash Shah, BS

**Potential costs of dental treatment and endoscopic sinus surgery for odontogenic sinusitis**  
Haley Sibley
Practice patterns in the medical and surgical management of traumatic optic neuropathy
Megan Morisada, MD

Prelacrimal approach in managing sinonasal diseases
Yu-Hsuan Lin, MD

Quality of life outcomes 10 years after endoscopic sinus surgery
Kent Tadokoro, MD

Quantification of nasal cavity and sinuses in patients with and without chronic rhinosinusitis
Anisha Singh, BSE

Race, insurance, and facility affect treatment modality in SNSCC
Jesse Qualliotine, MD

Radiologic algorithm for identification of maxillary and sphenoid sinus natural ostia
Julia Comer, MD

Real world attributes of patients on anti-asthma biologic therapy that have concurrent CRS
Devyni Lal, MD, FARS

Recurrent nasal hamartoma in DICER1
Lara Reichert, MD, MPH

Responsiveness and convergent validity of the CRS-PRO in CRS patients undergoing sinus surgery
Katherine Lin, BS

Revision frontal sinus surgery
Mohamed Elsayed, MD, PhD

Sinonasal angiomatous polyp: Case report and review of imaging features
Eliezer Kinberg, MD

Sinonasal small cell neuroendocrine carcinoma – Case series of a rare malignancy
Nikita Chapurin, MD, MHS

Sinonasal symptoms in hospitalized patients
Kirsten Meenan, MD

Sinus irrigation penetration after a Draf IIA vs modified Draf IIA in a cadaveric model
Khalil Issa, MD

Skull base COREAH: Case report and literature review
Anna Flaherty, MD
Sleep outcomes lack association with mucosal eosinophilia or neutrophilia in patients with CRS
Nyssa F. Farrell, MD

Sociodemographic factors impact adjuvant treatment and survival in sinonasal mucosal melanoma
Sarek Shen, MS

Squamous cell carcinoma and pituitary adenoma, a collision tumor of the cavernous sinus
Lindsay Olinde, MD

Structured histopathologic comparisons of benign and malignant sinonasal tumors
Auddie Sweis, MD

Subacute IFS, a distinct entity from acute fulminant and chronic IFS
Thomas Edwards, MD

Surgical extent increases risk of post-operative epistaxis in outpatient sinus surgery in Florida
Jeffrey Bernstein, MD

Surgical management of world trade center relief workers with chronic rhinosinusitis
Lauren Williams

Surgical versus endovascular ligation for epistaxis in the anticoagulated patient population
Sarek Shen, MS

Survival outcomes by treatment modality in HPV+ sinonasal squamous cell carcinoma
Vivian Wung

Survival outcomes in patients with acute invasive sinusitis with intracranial extension
Nancy Wang, MD

Survival outcomes in sinonasal neuroendocrine carcinoma: An NCDB analysis
Khalil Issa, MD

Symptom scores and CT findings in CF sinusitis
Lindsey Ryan, MD

The case of a solitary fibrous tumor of the nasal cavity with expansion into the intracranial fossa
Randall Bloch, BS

The diagnostic utility of sinonasal pathology in systemic vasculitides
Ashton Lehmann, MD

The effects of sinus surgery and aspirin desensitization on sleep in AERD
Tran Locke, MD
The effects of site-specific metastases on nasopharyngeal squamous cell carcinoma survival
Christopher Tseng, BS

The impact of head position on sinonasal drug delivery via actuated nasal sprays
Joseph Conduff, MD

The impact of inspiration on sinonasal drug delivery via actuated nasal sprays
Joseph Conduff, MD

The impact of nasal steroid irrigations on the management of chronic rhinosinusitis
Auddie Sweis, MD

The impact of sinus surgery and aspirin desensitization on psychological burden in AERD
Theodore Lin

The influence of population density on survival in sinonasal cancer
Rushi Patel, BA

The role of anesthesia on intraoperative outcomes during endoscopic sinus surgery: A meta-analysis
David Moffatt

The role of CT and endoscopy in the evaluation of patients referred for intranasal cryoablation
Isaac Schmale, MD

Topical anesthesia for scope exams
Matthew Naunheim, MD, MBA

Transorbital sinonasal trauma due to Impalement with a felt tip marker
Habib Zalzal, MD

Treatment and clinical outcomes in acute orbital invasive fungal sinusitis
Bridget MacDonald, BA

Understanding nasopharyngeal lymphoepithelial carcinoma: A national analysis
Jeff Gao, BS

Utility of an ultrasonic aspirator in performing a frontal sinus osteoplastic flap
Dominic Catalano, MD

Utility of preoperative phone calls for endoscopic sinus surgery
Mallory McKeon, BA

Value of inferior meatal flap as an adjuvant approach in managing maxillary sinus lesions
Ahmed Mahmoud El Batawi, MD
Vitamin D level is inversely associated with Lund-Mackay score in AERD
Kevin Ig-Izvbekhai, MD

Woakes' Syndrome: A case series
Alexander Dickie, MD

YouTube as a surgical instructional tool for endoscopic transsphenoidal pituitary tumor removal
Victoria Lee, MD