

Department of Otolaryngology
– Head and Neck Surgery
48th Annual
Residents' Research Day
Friday, April 28, 2023



In the Kenny Theatre
at the
Darryl J. King Student Life Centre
King's University College, Western University
266 Epworth Ave,
London, Ontario, N6A2M3

<https://www.schulich.uwo.ca/otolaryngology/cme/researchday/2023.html>

PROGRAM

OVERALL LEARNING OBJECTIVES

By the end of this program, participants will be able to:

1. Critically appraise the scientific presentations with respect to methodology and clinical applicability pertaining to Otolaryngology – Head and Neck Surgery.
2. Discuss the scientific presentations and reflect on their potential implications for patient care.

STUDY CREDITS

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, and approved by Continuing Professional Development, Schulich School of Medicine & Dentistry, Western University. You may claim a maximum of 4.5 hours (credits are automatically calculated).

Each participant should claim only those hours of credit that he/she actually spent participating in the educational program.

DISCLOSURES

* I have/ **have not had in the past 2 years a financial interest, arrangement, or affiliation with one or more organizations that could be perceived as a direct or indirect conflict of interest in the context or content of this education program.

Continuing Professional Development Planning Committee

- Dr. Lorne Parnes **
- Dr. Josée Paradis **
- Dr. Sumit Agrawal * MED-EL
- Dr. Leigh Sowerby * Sanofi-Genzyme, GlaxoSmithKline, Mylan, Astrazeneca, Medtronic, Freudenberg Medical

Session Chairs

- Dr. Peng You (AM)
- Dr. Elise Graham (PM)

At least 25% of this program is dedicated to participant interaction.

DISTINGUISHED VISITING PROFESSOR

Dr. Yi-Chun Carol Liu, MD, MS, FACS

Associate Professor of Pediatric Otolaryngology
Texas Children's Hospital / Baylor College of Medicine

"Management of Hearing Loss Related to Unilateral Aural Atresia"

By the end of this session, participants will be able to:

1. Review the development and anatomy of the pinna and ear canal
2. Summarize the unilateral aural atresia epidemiology and its associated anomalies
3. Discuss the various hearing aid options
4. Describe treatment options and the alternatives



Dr. Yi-Chun Carol Liu, MD, MS, is an Associate Professor in Pediatric Otolaryngology at Texas Children's Hospital/Baylor College of Medicine. Her clinical focus is on children with hearing loss, chronic ear diseases, and microtia/atresia repair. She is currently the Associate Director of the Microtia and Atresia Clinic at Texas Children's Hospital (TCH). In addition, she is also the co-director of the surgical subspecialty rotation. Her practice includes managing children with recurrent ear infections, chronic otitis media with effusions, and Eustachian tube dysfunction. Dr. Liu has been leading and actively participated in several clinical outcomes and human research projects and is familiar with appropriate protocols for safeguarding patient information, ensuring patient safety, and successfully completing research protocols. Her goal is to continually improve and develop specific diagnostic and therapeutic interventions for pediatric ear disorder.

DISTINGUISHED GUEST ALUMNUS

Dr. Simon Kirby, MD, FRCSC

Associate Professor
Departments of Lab Medicine and Surgery
Memorial University of Newfoundland

"In Case You Missed it - Medicine Has Changed – What Every MD Should Know About Managing Risk in the Era of Complexity"

By the end of this session, participants will be able to:

1. Describe the problem central to medical security
2. Review the essentials of "complexity science"
3. Illustrate the complex nature of technology and the accelerating rate of progression
4. Summarize the paradoxical "Peltzman Effect"
5. Review research exposing medical security problems
6. Describe the path forward - what are rational next steps?



Dr. Kirby completed an undergraduate degree in electrical engineering. Subsequently, Dr. Kirby completed medical school at Memorial University. Following graduation, he completed a residency in Otolaryngology- Head & Neck Surgery at the University of Western Ontario. Further surgical training took him to Philadelphia for a fellowship in microvascular reconstruction with Dr. Richard Hayden. Dr. Kirby then travelled to Los Angeles for facial plastic surgery training. In 1999 Dr. Kirby published award-winning pioneering work regarding the use of neural networks for prediction in the diagnosis of obstructive sleep apnea. This was one of the first clinical applications of artificial intelligence (AI). Dr. Kirby retrained as an anatomical pathologist. He is an Associate Professor in the Departments of Lab Medicine and Surgery, Memorial University of Newfoundland. Dr. Kirby is cross-appointed to the faculty of engineering. Dr. Kirby is founder and CEO of SimonKirbyMD Technologies Inc. Follow Dr. Kirby at twitter @SimonKirbyMD

ITINERARY

A.M. SESSION

08:00 – 08:25

Coffee in Exhibitor Area

08:25 – 08:35

Welcome

08:35 – 08:50

Educational Objectives and Call to Order

08:50 – 09:00

Dr. Emily Aleksa (Supervisor: Dr. Elise Graham)

Gender Differences in Domestic Responsibilities in Canadian Otolaryngologists – Does home life influence career advancement and burnout?

Background: Female surgeons continue to face unique challenges as a function of their gender identity. Career trajectories often differ, and gender differences in home life expectations may contribute, with women filling more of the traditional gender roles despite similar clinical responsibilities.

Methods: Through a mixed-methods approach, both qualitative surveys and interviews were completed. A RedCAP® survey was distributed to practicing Canadian Otolaryngology-Head and Neck Surgery staff in May of 2022 via the Canadian society listserv and social media. Questions examined the division of household labor, career stage, overall satisfaction, remuneration, and experiences of burnout. Respondents were invited to individual interviews, with questions exploring the above topics in further depth. Interview transcriptions were coded and analyzed by two independent, blinded reviewers.

Results: Surveys were completed by 153 Canadian Otolaryngologists, with mean age of 44.64 (SD=9.43). Fifty-eight (37%) self-identified as female, 93 (61%) as male, and 2 did not declare. Hours per week dedicated to clinical duties were not significantly different, however, female respondents reported performing a significantly larger percentage of domestic responsibilities within the household ($p<.005$). Additionally, females reported a larger impact of household responsibilities on their ability to do clinical work ($p<.005$) and take on additional leadership roles ($p<.005$). Female Otolaryngologists had significantly higher mean rates of emotional exhaustion ($p<.005$) and depersonalization ($p<.05$) on the Maslach burnout scale. Household responsibilities were reported to contribute significantly more to burnout in female compared to male respondents ($p<.005$). 27 interviews were completed (48% women), with main themes of division of labor and the impact of domestic responsibilities on career trajectory identified. Both personal preferences and societal impacts determined division of household roles, with a majority emphasizing the importance of outsourced supports in reducing burnout. Prioritizing childcare and family life was identified as a main reason for changes in career style, both hours worked, and additional leadership/career responsibilities acquired.

Conclusions: There is a gender difference in both the amount and impact of domestic responsibilities on career trajectory and burnout within Canadian Otolaryngologists. By designing supports for female Otolaryngologists, overall wellbeing and career satisfaction could be greatly improved.

Interactive Discussion

09:00 – 09:05

09:05 – 09:15

Dr. Zaid Al Mubarak (Supervisor: Dr. Leigh Sowerby)

Post-Covid Parosmia: An Exploratory Survey on Demographics and Attempted Therapies

Background: Post-COVID olfactory dysfunction is common, yet literature surrounding parosmia is scarce.

Methods: A 22-item online questionnaire was distributed to adult patients from AbScent and Facebook COVID anosmia group members to assess clinical features, interventions and their subjective efficacy.

Results: 209 participants (86% females) reported first parosmia symptoms 12 weeks post-infection. Respondents reported 10% loss of body weight and listed onion and garlic as significant triggers. Regarding quality of life, depression was the most cited item (54%). Smell training was trialled by 74%, followed by nasal corticosteroid spray (49%). Stellate Ganglion Block (SGB) trialled by 16% of respondents had the highest improvement reported (45%), with 21% reporting a sustained benefit- the highest rate amongst reported treatments.

Conclusions: Post-COVID parosmia impacts patients significantly and remains a challenging problem to treat. SGB appears to be successful relative to other reported treatments. Further research into the pathophysiology, efficacy and mechanism of SGB effect is warranted.

Interactive Discussion

09:15 – 09:20

09:20 – 09:30

Dr. Karan Gandhi (Supervisor: Dr. Leigh Sowerby)

Washing illness away: A systematic review of nasal irrigation to prevent and treat viral upper respiratory tract infections during the COVID-19 pandemic

Purpose: Nasal irrigation is a common treatment for symptomatic relief during a viral upper respiratory tract infection. It is currently unknown if nasal rinses reduce viral load and transmissibility in patients with upper respiratory tract infections including COVID-19.

Methods: A systematic review was completed with pre-defined search criteria using keywords related to nasal irrigation and viral illnesses from 1946 through August 2022. Common nasal irrigations include saline, corticosteroid, and povidone-iodine. Searches were conducted using MEDLINE, Embase, Web of Science, Cochrane, clinicaltrials.gov and the EU clinical trials register.

Results: Title and abstract screening was performed for 1267 unique results, 67 studies received full-text review and 13 were included in data extraction. Nine studies looked at COVID-19. Ten randomized controlled trials were identified. Seven studies used saline, 3 used povidone-iodine, and 1 used intranasal corticosteroids. Five out of 7 studies on nasal saline showed a reduction in symptoms. Two out of 4 studies on saline and 1 out of 3 studies on PVP-I showed reduced viral load. The most common side effect was nasal irritation or burning which was tolerable for most participants. Study methods were heterogeneous as was outcome data.

Conclusions: Nasal irrigation is well-tolerated in patients with viral upper respiratory tract infections with minimal risk. Saline irrigation may have efficacy in reducing viral load and symptoms. The data is limited and there are conflicting results. More studies are needed to identify if these interventions impact viral load, illness severity and transmissibility in patients with upper respiratory tract infections including COVID-19.

Interactive Discussion

09:30 – 09:35

Intermission

09:35 – 10:05

Call to Order

10:05 – 10:10

10:10 – 10:20

Dr. Nathan Farias (Supervisor: Dr. Elise Graham)

Can Overnight Pulse Oximetry be Used to Screen for Paediatric Vagal Nerve Stimulator Induced Obstructive Sleep Apnea: A Pilot Study

Background: Intermittent electrical stimulation of the vagus nerve, via an implanted vagal nerve stimulator (VNS), effectively terminates seizures in patients with intractable epilepsy. Since its approval in 1997 and has since been shown to reduce seizure frequency and intensity in epilepsy patients by at least 50%. However, the use of VNS is also associated with adverse effects related to laryngeal dysfunction such as dysphonia, sore throat, and VNS associated obstructive sleep apnea (VOSA). In paediatric patients, OSA has been shown to be a significant risk factor for maladaptive social behaviors and poor neuropsychological functioning. Even more concerning is the increase in breakthrough seizure frequency noted in children with OSA and epilepsy. Overnight pulse oximetry (OPO) is a cost-effective and accessible screening test that can reliably diagnose moderate to severe OSA in children. However, the underlying pathology causing VOSA is distinct from that of conventional OSA, the reliability of OPO in detecting VOSA has yet to be validated. Recently our multidisciplinary team at the LHSC Children's Hospital has identified a cluster of patients presenting with upper airway disturbances secondary to VNS. As the overall population of VNS patients is low, this provides us with a unique opportunity to assess how OPO compares to polysomnography (the gold standard) in testing for VOSA. Our case series will assess the feasibility, usability, and diagnostic utility of OPO compared to polysomnography in detecting VOSA in our high-risk VNS patients. If OPO proves to be a reliable screening tool for VOSA, the clinical impact would be promising for earlier diagnosis and management of patients with VOSA..

Interactive Discussion

10:20 – 10:25

10:25 – 10:35

Dr. Kylen Van Osch (Supervisor: Dr. Julie Strychowsky)

Reducing Unnecessary Instruments in Tonsil Hemorrhage Trays at LHSC: A Quality Improvement Project

Background: Common emergency department visits for tonsillar complaints include post-tonsillectomy hemorrhage and peritonsillar abscess (PTA). In the emergency department, there are pre-assembled tonsillar hemorrhage trays. These trays include the instruments commonly used to treat post-tonsillectomy bleeds or PTAs and help to streamline procedural efficiency. After use, all instruments in the tray are sent down to the Medical Device Reprocessing (MDR) department for decontamination, sterilization, and re-organization. This process requires person-power, electricity, water, and cleaning supplies, all at a significant cost to the hospital.

Purpose: The purpose of this project is to determine which instruments on the tonsil hemorrhage trays at LHSC are used regularly by staff and residents in the otolaryngology – head and neck surgery (OHNS) department as well as the emergency department (ED). Our goal is to reduce unnecessary instruments on the tonsil hemorrhage tray at LHSC by 30%, and report on the associated cost and carbon footprint savings. This will not only reduce our carbon footprint and decrease hospital costs, but also streamline procedural efficiency and improve patient care

Interactive Discussion

10:35 – 10:40

10:40 – 10:45

Introduction of Dr. Yi-Chun Carol Liu, Distinguished Visiting Professor

10:45 – 11:30

Dr. Carol Liu: Management of Hearing Loss Related to Unilateral Aural Atresia

By the end of this session, participants will be able to:

1. Review the development and anatomy of the pinna and ear canal
2. Summarize the unilateral aural atresia epidemiology and its associated anomalies
3. Discuss the various hearing aid options
4. Describe treatment options and the alternatives

Congenital aural atresia (CAA) is defined as a partial or complete lack of development of the external auditory canal, which results in varying degrees of middle ear malformation. In most cases CAA is accompanied by a congenital malformed pinna known as microtia. Reported prevalence of CAA varies with ranges between 1 in 10,000–20,000 births. In many cases it is part of a craniofacial microsomia or presents in association with other deficits such as in Goldenhar's syndrome, Treacher Collins, and trisomy 21. Levels of hearing loss differ, though, in most cases a purely conductive hearing loss is seen at the affected side by the deformities of the middle and/or outer ear. Current literature demonstrates that the impact of this loss on daily life is understudied with the majority of literature about consequences of unilateral hearing deficits based on cases with unilateral sensorineural hearing loss (SNHL). Patients subsequently suffer from the resulting impaired ability for speech perception in noise and sound localization abilities. In children this can result in difficulties in daily life and developmental disorders such as language delays. Regarding educational performance, unilateral SNHL in children is related to increased rates of grade failure, a need for speech therapy and additional educational assistance. Currently, only a few studies have investigated educational performance in children with aural atresia and a higher need for individualized education plans and speech therapy was seen. Though, evidence is lacking on hearing-related quality of life or the language, educational or social-emotional development of these children. As a result, there is an ongoing debate about whether the use of hearing amplification or guidance of children with unilateral congenital aural atresia needs to be considered to overcome the deficits in young life.

Interactive Discussion

11:30 – 11:45

11:45 – 13:05

Group Photo and Lunch in Labatt Hall

ITINERARY

P.M. SESSION

13:05 – 13:25

Welcome Back and Call to Order

13:25 – 13:35

Dr. Sarah Zahabi (Supervisor: Dr. Julie Strychowsky)

Surgical Site Infections Post-Thyroidectomy in Otolaryngology-Head & Neck Surgery at London Health Sciences Center: A Quality Improvement Project

Objective: The purpose of this quality improvement (QI) project is to decrease surgical site infections (SSI) post-thyroidectomy by 30% in one year in hopes of reaching targets similar to other institutions in Ontario. In order to achieve this goal, we identified risk factors for SSIs and preventative measures that can be instituted as standard protocol for all thyroidectomy patients based on a review of the literature and current practices at similar institutions across Canada.

Background: SSIs can occur post-operatively and can be associated increased pain to the patient, increased cost, risk of death and decreased patient satisfaction. The World Health Organization estimates that approximately half of all SSIs are preventable. Prevention methods include intervention bundles and protocols including the use of antiseptic prep solution prior to incision. A recent meta-analysis of 29 randomized controlled trials involving 15796 patients has shown that alcohol containing chlorhexidine prep solutions are superior to povidone-iodine in the prevention of superficial and deep SSIs. Thyroidectomy and parathyroidectomy surgery is considered a clean procedure with a relatively low incidence of SSIs. At LHSC, the SSI rate post thyroidectomy has been increasing since 2019. This increase is unique to this institution and the department of Otolaryngology-Head & Neck Surgery.

Methods: This QI project followed the Institute for Healthcare Improvement model. QI methodology was utilized to create a standardized infection prevention bundle for thyroidectomies at LHSC. This bundle included education of stakeholders, switch to use of chlorhexidine as pre-operative prep solution, selective use of pre-operative antibiotics, and partnering with nursing colleagues for implementation. Thereafter, a Plan-Do-Act-Study cycle was employed. The data was analyzed and used to modify our interventions in hopes of increasing compliance with suggested changes.

Results: Since November 2022, the start of infection prevention bundle and education of stakeholders, total thyroidectomy SSI rates have dropped to 0. Compliance with pre-op antibiotic guidelines has increased. 45.5% of patients in October 2022 received Ancef compared to only 16.7% in December 2022. Compliance with use of chlorhexidine prep instead of proviodine increased after the intervention took place. In September 2022, 8.3% of cases used Chlorhexidine prep compared to 50% of thyroidectomy cases in November 2022. This trend, however, was not maintained and a decline in use was noted in the following months evaluated.

Conclusions: A QI project employing a standardized infection prevention bundle including education of pertinent stakeholders may be useful in decreasing post-operative thyroidectomy surgical site infections at our institution. There is evidence that reminders and re-evaluation of both targets and interventions are critical to the success of a QI project.

Interactive Discussion

13:35 – 13:40

13:40 – 13:50

Dr. Abrar Al Jassim (Supervisor: Dr. Elise Graham)

Oral Feeding in Tracheostomy Dependent Infants

Background: Children with a tracheostomy have variable feeding outcomes, with some requiring supplemental feeds via nasogastric or gastrostomy tube, while others are able to fully feed orally. It may be difficult to predict which children will follow each nutritional path. The ability to predict which children may ultimately require gastrostomy tube feeds may allow both procedures to be performed concurrently.

Objective: This scoping review was designed to examine what is known about feeding in infants with tracheostomy, and to determine if there are any conditions or comorbidities that more commonly result in concomitant gastrostomy tube need.

Method: A scoping review was designed, including children 0-18 months with tracheostomy tube dependence. Included studies must have a description of feeding modality, be written in English, and be written between 2000 and 2022.

Results: Initially, 1113 studies were identified through our literature search. 173 full texts were evaluated for eligibility, with 130 included.

Conclusion and Implications: Our systematic review reveals a paucity of data addressing the unique feeding challenges children with tracheostomy face. Additional studies with larger sample sizes are needed to understand clinical course of tracheostomy dependent children from a feeding perspective and to help implement standardized protocols for advancing oral feeding throughout hospitalizations and early childhood. Additionally, studies should focus on predictors of gastrostomy tube use, as concurrent G-tube placement will reduce the number of general anesthetics needed in this complex population.

Interactive Discussion

13:50 – 13:55

13:55 – 14:05

Dr. Alexander Dickie (Supervisor: Dr. Leigh Sowerby)

How deep do you go? Clinical prediction of nasopharyngeal depth based on facial measurements

Introduction: As a reservoir of respiratory pathogens, the nasopharynx is a common target of diagnostic testing. Improper swab insertion depth can result in false negativity along with complications of swab misplacement. This multi-center study aimed to determine normative data on nasopharyngeal depth and its correlation to external facial measurements.

Methods: After obtaining demographic information, endoscopic distance along the nasal floor to the nasopharynx was assessed from 5 centers. Comparisons were made to measurements from the alar-facial groove along the face to the tragus and the distance from the tragus to a plane perpendicular to the alar-facial crease. Additionally, computed tomography measurement from the nasopharynx to nasal sill was performed when imaging was available.

Results: 371 patients participated in the study (41% female; mean age 51 ± 18). The average endoscopic depth was 94mm (± 8.6 mm) and 101mm (± 9 mm) for females and males, respectively ($p < 0.001$; 95% CI 8.6 to 4.9). Measurement from the tragus to a plane perpendicular to the alar-facial crease was strongly correlated to endoscopic measurement ($r = 0.775$; $p < 0.001$), with a mean difference of 1.3mm (± 6.5 mm; 95% CI 0.68 to 2). Distance from the tragus to alar-facial groove overestimated nasopharyngeal depth by 20.7 mm, and CT measurement underestimated depth by 12 mm. These relationships were unaffected by sex or ethnicity.

Conclusions: Appropriate nasopharyngeal swab insertion can be performed by approximating swab depth to that of the distance from the tragus to a plane perpendicular to the alar-facial crease on lateral view. This compliments training by personalizing the procedure technique to each patient, respecting their anatomy.

Interactive Discussion

14:05 – 14:10

14:10 – 14:20

Dr. Ryan Instrum (Supervisor: Dr. Danielle MacNeil)

Does Parathyroidectomy Reverse Mortality Risk in Patients With Primary Hyperparathyroidism?: A Systematic Review and Meta-analysis

Background: Parathyroidectomy is recommended for patients with symptomatic primary hyperparathyroidism (pHPT), however, the role of surgery in asymptomatic patients remains nebulous. Emerging evidence suggests

that pHPT patients may have an increased risk of cardiovascular and all-cause mortality. The extent to which parathyroidectomy mitigates mortality risk in patients with pHPT is unknown. Determining whether parathyroidectomy improves survival in pHPT may have a considerable impact on the way the disease is managed.

Methods: A systematic literature search was conducted wherein all studies that evaluated mortality and/or cardiovascular outcomes in pHPT patients who underwent parathyroidectomy were included. A meta-analysis was conducted of prospective observational studies reporting on the association between parathyroidectomy and mortality in pHPT patients. Mantel-Haenszel pooled estimates of relative risk (RR) and 95% confidence intervals for all-cause death were assessed as the primary endpoint; incident cardiac mortality was assessed as a secondary endpoint.

Results: We identified a total of 21 studies including an overall population of 29,162 patients, with a mean follow-up of 8.8 years. Patients undergoing parathyroidectomy for pHPT had a significantly increased risk of all-cause death (RR 1.33; 95%CI 1.17-1.51) and incident cardiac mortality (RR 1.69; 95%CI 1.47-1.94) compared to healthy controls. When compared to pHPT patients managed conservatively, parathyroidectomy yielded a reduction in all-cause mortality (RR 0.77; 95%CI 0.67-0.89).

Conclusion: Primary hyperparathyroidism is associated with a significantly increased risk of all-cause death even in patients who have undergone parathyroidectomy. Compared to pHPT patients who were observed, those who underwent parathyroidectomy had a decreased risk of all-cause mortality.

Interactive Discussion

14:20 – 14:25

14:25 – 14:55

Intermission

14:55 – 15:00

Call to Order

15:00 – 15:05

Introduction of Dr. Simon Kirby, Distinguished Guest Alumnus

15:05 – 15:50

Dr. Simon Kirby: In Case You Missed it - Medicine Has Changed – What Every MD Should Know About Managing Risk in the Era of Complexity

By the end of this session, participants will be able to:

1. Describe the problem central to medical security
2. Review the essentials of "complexity science"
3. Illustrate the complex nature of technology and the accelerating rate of progression
4. Summarize the paradoxical "Peltzman Effect"
5. Review research exposing medical security problems
6. Describe the path forward - what are rational next steps?

Clinical medicine has entered a new era – the era of complexity. Closely coupled to this complexity is the rapid pace of technological change. The culture produced by this new technological platform is one of growing challenge. Patients and physicians are functioning at the limit of comprehension. This presentation will dissect medical security and discuss innovative research which seeks to reduce risk.

15:50 – 16:05

Interactive Discussion

16:05 – 16:10

Residents Day Attendee Draw

16:10 – 16:15

Simon Kirby Most Caring Resident Award

16:15 – 16:20

Evaluation Form Completion

16:20 – 16:25

Closing Educational Remarks

AWARDS AND PRIZES

SIMON KIRBY MOST CARING RESIDENT AWARD

Presented to the resident who demonstrates excellence in compassionate care

OUTSTANDING RESIDENT TEACHER AWARD FOR POSTGRADUATE EDUCATION

Presented to a senior resident (PGY 4 or 5) who has provided consistently outstanding teaching experiences to their junior residents

CHESKI INNOVATIVE RESIDENTS RESEARCH FUND AWARD

Presented for the most novel research project

UNDERGRADUATE TEACHING AWARD

Presented to the resident with the highest teaching evaluation

EXCELLENCE IN UNDERGRADUATE MEDICAL EDUCATION AWARD

Presented to a faculty member who has demonstrated excellence in undergraduate medical education to all students

PETER CHESKI INNOVATIVE RESEARCH AWARD

Presented for the most innovative research project

C. A. THOMPSON SCIENTIFIC ACHIEVEMENT AWARD

Presented for the most impactful research project

DR. W. GREGORY CHERNOFF IMPACTFUL PRESENTATION AWARD

Presented for the most skillfully presented project

RESIDENT AWARDS

Presented to residents who did not receive one of the above awards

CLINICAL TEACHERS AWARD FOR RESIDENCY TEACHING

Presented to a faculty member who has provided consistently outstanding teaching experiences to all Residents

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