



Heads Up

Living the Dream

by Adam M. Zanation, MD



Dr. Zanation in the main hospital surgical suites.

Dr. Adam Zanation joined the faculty on July 7, 2008. A couple of months later, the editor of Heads Up approached him in clinic and asked how he was doing. He smiled broadly and replied, "I'm just living the dream!"

Growing up on a farm in rural Cabarrus County, NC, I was exposed early to hard work and working with my hands. My parents also instilled a thirst and desire for learning and education. After graduating from Mount Pleasant High School in 1994, I matriculated to the University of North

Carolina at Chapel Hill along with my high school girlfriend, Jennifer. We went through college together, both graduating with Biology degrees in 1997. During our senior year, she was accepted to the UNC School of Pharmacy Doctorial Program and I was accepted to the UNC School of Medicine.

I distinctly remember the first time I was exposed to Otolaryngology and Drs. Pillsbury and Shockley. It was during the first year anatomy course. I was impressed with two things: first, the complexity of head and neck anatomy, and second,

how Drs. Pillsbury and Shockley were approachable, professional, intelligent and charismatic. It was on my third year surgery rotation, during an open craniofacial resection with Dr. Weissler, that I realized for sure that I wanted to specialize in Otolaryngology. Later that week I met Dell (Wendell) Yarbrough (now at Vanderbilt), and we started talking about Otolaryngology research. After two years in his lab, I graduated from UNC with Highest Honors as a Distinguished Medical Research Scholar and as a Doris Duke Clinical Research Fellow. Dell fostered my interest in research and taught me how to think about research questions, and to design and implement controlled studies. To this day, I owe a lot of my success to Dell. During medical school and my time in the lab, I came to love the UNC Department of Otolaryngology, the residents, and caring for the patients of North Carolina. So when I had a chance to stay at UNC for my residency, it was a "no brainer" decision.

I started my general surgery internship in 2002 and graduated from residency in 2007. During my residency, I learned from the best in regards to operative skills, taking care of patients, how to conduct research, and how to be an academician. Drs. Weissler and Shores taught me the complexities of head and neck cancer surgery. They also taught me that you must support that patient and their family during the good and bad parts of cancer care. Drs. Buchman and Pillsbury taught me the art and the patience required to be a great ear surgeon. And Dr. Senior showed me what was possible with an endoscope and complete understanding of sinonasal anatomy. I thank all my UNC attendings and fellow residents for shaping my surgical path.

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In 2007, I took all I learned from my residency and traveled to the University of Pittsburgh Medical Center for a Skull Base Oncology and Endoscopic Skull Base Surgery Fellowship. My mentors there were Drs. Carl Snyderman, Ricardo Carrau, and Amin Kassam. My first case was a recurrent craniopharyngioma. After drilling away the clivus, moving the pituitary gland, exposing and dissecting the basilar artery, we removed the tumor...**ENDOSCOPICALLY THROUGH THE NOSE!** As crazy as brain surgery through the nose sounds, my Pittsburgh mentors were crazier (and innovative, technically excellent, and fearless). These traits allowed them to combine open skull base surgical techniques with the endoscope to completely change and advance skull base tumor surgery. After doing over 500 cases at Pittsburgh, I learned how to be a complete skull base surgeon and made three new friends.

So why come back to UNC? Well, three reasons. First, the Department is very supportive in advancing what we can offer patients via minimally invasive surgical approaches. Second, we have a great team approach to patient care. Having Drs. Weissler, Pillsbury, Senior, Buchman, Ewend (Neurosurgery), and Germanwala (Neurosurgery) to help with complex and combination approach cases is invaluable. Lastly, North Carolina is my home, I grew up here, my family is from here, and I was completely educated in the NC public school and university system. Giving back to the people of North Carolina by working at the state hospital and the flagship university just makes good sense.

So what about that Jennifer girl in the story above? Well, that story has a happy ending also. Jenny and I got married in 2002, and we had our first child, Brody, born January 16, 2008, during my fellowship. Jenny is a Clinical Assistant Professor at the UNC School of Pharmacy and practices pediatric clinical pharmacy at UNC Hospitals. Jenny and I enjoy spending time with family and friends, skiing (Vail this year!!!) and biking.

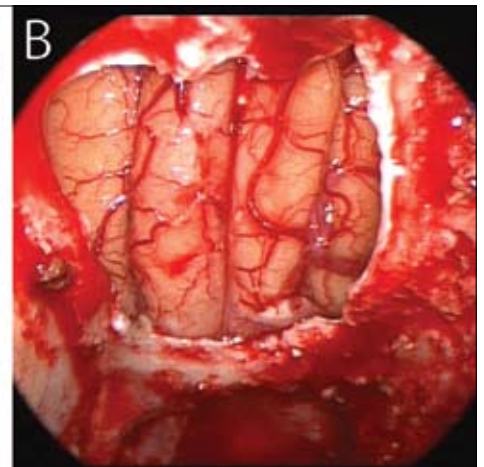
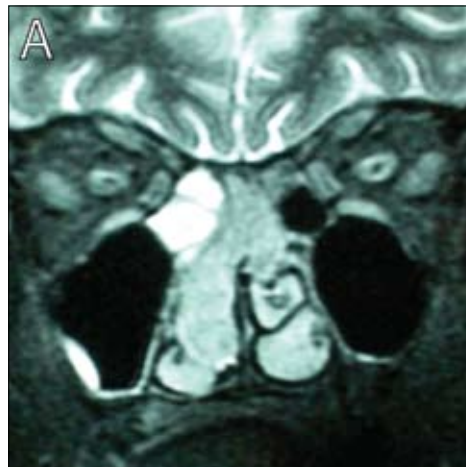
In my first 6 months at UNC, we have been busy: over 40 skull base surgeries, 28 via an extended endoscopic minimally invasive approach, and 21 skull base cancer surgeries. My research goals involve molecular diagnostics of head and neck tumors, robotic head and neck surgery development, skull base anatomic studies to continue to push

Chair's Corner



Harold C. Pillsbury, MD
Department Chair

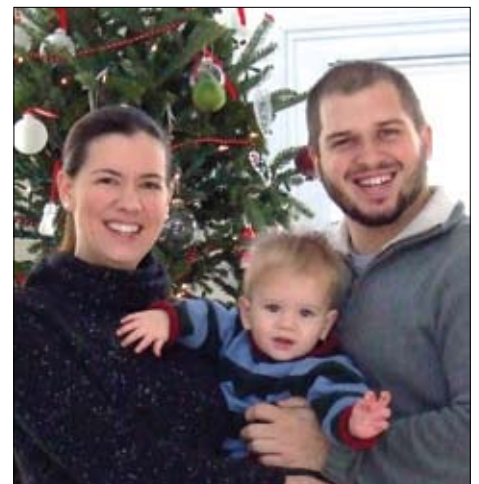
It is not hard to see why a career in academic medicine can be so rewarding. The articles by our faculty and residents in this particular issue of *Heads Up* are really heartwarming to me as I consider how privileged I am to be involved in their training and how inspiring it is to bear witness to their outstanding achievements. It was wonderful to find out this week that one of our finest past residents, Andy Lane, just won the Fowler Award from the Triological Society. Beyond all the awards and accolades, however, is the fabulous care that these men and women have rendered to so many patients across the country. I cannot possibly thank them enough for what they have given back to the University of North Carolina at Chapel Hill by being so outstanding in their professional careers!



One of Dr. Zanation's many fascinating cases: Esthesioneuroblastoma. A. T1 MRI Preop, B. Intraoperative image of endoscopic resection with negative margins.

how far we can go, and quality of life/clinical outcomes studies of skull base patients.

The UNC Skull Base Center offers a comprehensive and multidisciplinary treatment team for all types of skull base tumors. We offer traditional open and minimally invasive endoscopic skull base approaches, utilize intraoperative radiation, Cyberknife Radiosurgery, and more traditional radiation and chemotherapy treatments. We are one of only a few centers in the country that offers open, endoscopic and Cyberknife skull base treatment options from a single surgical team. For skull base tumor referrals, call the Head and Neck Oncology Program at 919-966-9717.



Christmas 2008: Jennifer, Brody (11 months), and Adam Zanation

The Theme for the Future of CCCDP:

Collaboration, Commitment, Cooperation, Determination, and Progress

by Holly Fryauf-Bertschy Teagle, AuD

Change brings opportunities to re-focus, refresh and re-organize. With the retirement of Carolyn Brown as director of the CCCDP, the Department of Otolaryngology/Head and Neck Surgery welcomes a new generation to visualize future goals and create ideas for continued growth of the program. The last edition of *Heads Up* paid tribute to Carolyn and her years of service to the Department. The future of the CCCDP and CASTLE begins with the passing of leadership roles to Holly Teagle and Hannah Eskridge. Craig Buchman continues to serve as Medical Director to the program. Along with the capable and committed staff of the CCCDP and CASTLE, this team will continue to provide excellent clinical care, and focus on opportunities for more growth in the areas of research and education.

The number of pediatric cochlear implant surgeries has grown exponentially every year since the CCCDP began tracking in 1993, making it one of the largest pediatric implant centers in the country. Excellent clinical care begins with collaboration and communication among team members. Early identification of hearing loss, a thorough medical work up, followed by intensive audiological management are critical aspects of patient care that make eventual success with a cochlear implant possible. The pediatric audiologists of UNC Hospitals provide the important groundwork in diagnosis and hearing aid management of the child. When the referral for cochlear implantation is imminent, the pediatric cochlear implant team strives to identify the unique strengths and needs of each patient during the evaluation process. Counseling and plans for subsequent intervention are aimed at enabling each child the opportunity to reach his or her full potential to communicate. The relationship between the patient and the program is long term, so collaboration must continue. The UNC CCCDP team is committed to monitoring each patient's performance as well as staying abreast of technological changes and state of the art methods to ensure the best possible result for each child.

The diverse characteristics of the large clinical population of cochlear implant

candidates are the impetus for many of the research projects the team has undertaken, or plans to pursue. Study of special populations of children contributes to our overall understanding of the many variables affecting outcomes. Currently, projects underway include studies of children with a common etiology or characteristic of hearing loss, such as auditory neuropathy, cochlear malformation, CMV, or a genetic marker. Management issues also provide questions for study, including outcomes for children who have undergone revision surgery, the performance of children with bilateral cochlear implants, or children who use a hearing aid in addition to a cochlear implant.

Funded research includes the NIH-sponsored Childhood Development after Cochlear Implantation (CDaCI), a multi-center project that is in its sixth year of study. This study promises to be a landmark project, which will affect the direction of future cochlear implant patient management. Thirty children and their parents were enrolled in this study at UNC; they have been followed to document spoken language, psychosocial and academic development. With continued funding, we hope to follow this cohort of children into adulthood.

Additionally, affiliations with the cochlear implant manufacturers to conduct research have resulted in a project with Med El to norm test materials, a post-market performance study with Cochlear Corporation and a bilateral cochlear implant study with Advanced Bionics Corporation. Our program is recognized for its depth of experience and expertise not



New roles for two team members of the Carolina Children's Communicative Disorders Program: Holly Teagle, AuD, CCC-A (CCCDP Program Director), and Hannah Eskridge, MSP, CCC-SLP, LSLS Cert. AVT (CASTLE Director)

only among patients and professionals, but also in the industry.

The mission of CCCDP to support children with hearing loss in North Carolina led to the development of the CASTLE program in 2001, which focuses on providing direct services to children who are deaf and hard of hearing and training to students and professionals in the field. CASTLE is embarking on new ways to provide training in order to reach more individuals as well as reduce the cost to school systems and Early Intervention. We are collaborating with other state and private agencies to make the most of resources. CASTLE along with BEGINNINGS, Department of Public Instruction, East Carolina University Project EAR and the Office of Education Services, is offering free workshops to school professionals on topics such as cochlear implants, auditory verbal therapy and language facilitation. We are also in the process of expanding our mentoring program to include web-based training. This will allow us to mentor professionals in even the most rural areas of our state and increase the number of professionals we can support. The CASTLE program continues to provide model services in both our Wilmington and Durham locations for children and their families.

Medical Education in an Electronic Age

by Oliver F. Adunka, MD

Every winter UNC is inundated with applications for the following year of study. The Medical School, for example, receives 4100 applications for 160 spots in the MD program, and this year the Department of Otolaryngology received 330 applications for just 4 positions in the residency program. As an institution we are very fortunate to have so many excellent candidates – with good grades and test scores, compelling personal stories, impressive records of public service, interesting research interests and accomplishments – all interested in coming to UNC to learn about medicine. Most medical professionals would agree that teaching responsibilities signify one of the most critical elements of academic medicine; however, the definition of “teaching” may be viewed differently from one clinician to the next. The primary objective is always to provide the next generation of medical professionals with the knowledge, skill, and intuition necessary to excel in the practice of medicine.

One key feature of medical education is to ensure a basic understanding of the scientific underpinnings of our field, such as anatomy, physiology and chemistry. While textbooks still hold value to all medical students in training, the inception of the Internet has certainly changed quite a few things. Today, information on literally every clinical problem and procedure can be easily accessed online. Also, computers and hand-held Internet devices are available virtually everywhere in the hospital, thus providing ubiquitous access to data. The preceptor’s role has therefore changed from someone who predominately provides information to someone who not only supplements knowledge that is available from other sources, but also who helps to manage and prioritize this flood of information.

Medical education is not just about providing knowledge and synthesizing data, however. The key to a becoming a good physician cannot be distilled in terms of chemical reactions or risk factors



In the ENT Clinic, Dr. Adunka (left) and third-year resident Mitchell Gore, MD, PhD, share thoughts on the best course of treatment for a patient.

of disease. There are many aspects of this work that are best conveyed in one-on-one interactions. These intangibles include the contagious enthusiasm we all put into our life work, the moral values that motivate us, and the interpersonal compassion that underlies the “bedside manner.” New technologies available to today’s student, such as online lecture scripts and video recordings, aim at simulating this person-to-person teaching experience. Those tools may play some role in medical education, but they can certainly not reproduce the clinical experience of real preceptor-learner interaction or the benefit of watching an experienced physician work with a patient. This may be particularly true in a surgical field like Otolaryngology, which requires manual dexterity to perform delicate surgical procedures, as well as skill in clinical diagnosis.

In thinking about the teaching mission of the Department, we often focus on the benefits to the students and residents, and even on the long-term vitality of the

field of Otolaryngology in general. There are benefits to the teacher, as well. For example, the specter of an upcoming lecture can also motivate us to read the latest literature with much more attention, and discussion with students and residents can often cast an old problem in a new light. Another factor that motivates academics of all disciplines is that teaching also represents the end-stage in our own education. Undergraduates and medical students watch lectures given by the more experienced physicians and researchers they hope to one day emulate. With more experience and knowledge, they take on preliminary teaching roles, tutoring and mentoring younger students. For those who choose a path of academic medicine, this process culminates in teaching the next generation of academic physicians not just about medicine, but also the art of teaching itself. This is a perfect example of “watch one, do one, teach one,” where teaching itself is the new skill being learned, and the process spans an entire career.

Help People Hope

by Aneil K. Mishra, PhD

One of the most important gifts leaders can give their followers, and physicians their patients, is hope. Dr. Brent Senior and his partner, Nurse Barbara Esterly, have given me and my family hope many times, and often when we most needed it.

I first came to Dr. Senior six years ago, in 2002. This was three years after I'd had sinus surgery performed by another otolaryngologist, a surgery that had left me far worse off than before. That surgery had resulted in several symptoms which I'd never had before, including a severely dried-out nose, constant sinus pressure, and over time, chronic daily headache.

Before seeing Dr. Senior, I had seen several different ENTs, and had even traveled to the Mayo Clinic, but no one was able to help me get better. Finally, an ENT who had tried his best but was stumped recommended that I travel to Chapel Hill see Dr. Senior, of whom he thought very highly. In desperation, I made an appointment with him and sent him my detailed history that I had written.

I teach my MBA students that effective leaders have to be courageous, humble, and authentic. These three characteristics in turn allow leaders to develop the trust with others that is essential to creating lasting change. I have found this to be true with physicians as well, and Dr. Senior is one of those physicians who has helped to teach us this. My wife Karen is also a patient of his. It takes courage as a physician to assume responsibility for treating patients who have failed to improve under the care of other healers. It also takes a great deal of humility on his part as well, for he has had to try a great deal of ideas out over the years as we work to repair my damaged nasal passages, and when some of these ideas don't achieve our desired outcomes, new ones have to be developed. Finally, his authenticity is apparent, as he acknowledges his own disappointment when my progress is not what we'd like, he reaffirms his determination to keep working with me, and he demonstrates his good humor, not only when I complain about my nose, but also when



Aneil drives from his office where he teaches at Duke to see Dr. Senior and nurse Barbara Esterly at the UNC ENT clinic at Carolina Pointe.

our beloved Michigan Wolverine football team disappoints us the previous Saturday afternoon.

In our ongoing research involving over a hundred organizations and thousands of individuals, my wife and I have found trust to be based on four fundamental components: Reliability, Openness, Competence, and Compassion, or what we call the ROCC of Trust. Dr. Senior and Nurse Esterly are nothing if not reliable. In the countless appointments I have had with them over the past six years, they can both be depended upon to be efficient, thorough, and respectful, and to be available for follow-up questions if need be. While doing everything he possibly can on my behalf, Dr. Senior has also been open and honest about the challenges of dealing with what is basically unknown territory for both of us. I have benefited many times from his surgical skill and diagnostic expertise, but as I prevail upon him to help me alleviate my condition, Dr. Senior has reminded me more than once that he will first do no harm. Nurse Esterly's quiet professionalism is actually quite amazing. I have rarely seen someone work so hard, so humbly, and so generously. She actually blushes when I thank her. Finally, both Dr. Senior and Nurse Esterly have demonstrated

compassion that I have typically only seen with loved ones. During one of my lowest moments, Dr. Senior said to me, "It is *my* job to be *your* optimist." Nurse Esterly has also always been there for me as well, returning my phone calls promptly and reassuring me when she senses that I am anxious. I am truly blessed to have these healers in my midst.

Dr. Aneil Mishra is a Visiting Associate Professor of Management at Duke University's Fuqua School of Business. He earned his PhD from the University of Michigan (where Dr. Senior graduated medical school). His research and teaching focuses on how leaders build trust and create transformational change in their organizations. His wife, Dr. Karen Mishra, earned her MBA also from the University of Michigan, and her PhD from the UNC School of Journalism and Mass Communication. She now teaches at Meredith College, focusing on how organizations create integrative marketing communications as they interact with consumers and other stakeholders. "Help People Hope" is the title of a chapter in their recent book, Trust is Everything: Become the Leader Others Will Follow. For more information on their work, go to their website: www.totaltrust.wordpress.com.

5 questions for Keith Ladner, MD



Dr. Ladner is a fourth-year resident who will complete his training in 2010.

1 What do you remember most about your interviews with faculty when you were applying to the residency program at UNC?

I was lucky enough to spend a month at UNC during my 4th year of medical school, so I knew the program pretty well by the time I came back to interview. I was most impressed throughout by the collegiality, the enthusiasm, and the skill level of the residents and faculty. I think the two things that sealed the deal, though, were the brown sugar ribs at Spanky's during the resident dinner and watching the Heels at Midnight Madness with Zanation and Ebert.

2 What has been your greatest challenge so far during your residency?

Finding the time to develop my golf game to compete with Dr. Pillsbury. Despite my best efforts, he keeps getting better and I keep getting worse. It hasn't boded well. Beyond that, however, I think the greatest challenge has been to set and achieve reasonable goals for myself. Residency can be very humbling because you are surrounded by people who are not only smarter but also have far greater experience than you.

3 What was the most interesting case you've been involved in?

Without a doubt, the most interesting case that I have been involved in occurred when I was a PGY-3. Drs. Buckmire, LaCour, and I removed a 17 cm fibrovascular polyp from a middle-aged gentleman's esophagus. It required a combined endoscopic and external approach. The polyp originated from the post-cricoid space (just above the esophagus) and extended nearly to the GE junction (stomach). Unfortunately, we did not have a sterile scale to weigh the mass at the time.

4 How has your knowledge of Spanish language and Latino culture been helpful in the clinic?

When I was 15, I lived in San Luis Potosi, Mexico, for the summer with a local family. My mom, who was a Spanish teacher and had already taught me a fair amount of Spanish, thought this would be a good way for me to learn about another culture and expand my conversational skills. I think both proved true. Since that

time, I have had no better opportunity than in residency to practice my Spanish and to reach across cultural boundaries. Latino patients are always grateful when you speak to them in their native language, even if they are fluent in English. I think all patients, Spanish speaking or not, are concerned that the meaning of the conversation will be lost in translation. For this reason, they seem to be comforted when you can speak their language, understand their idioms, and relate to their cultural norms.

5 What do you enjoy doing in your spare time?

I basically enjoy doing all outdoor activities, but skiing is my passion. Growing up in Boulder, Colorado, I have skied all my life. It has been a personal struggle watching my number of ski days dwindle from close to 100 in a season to less than 10 each year. I like playing golf and running too. I am also a huge college football fan and like to travel to watch games. During residency, I have seen games at Georgia, Tennessee, LSU, Colorado, ASU, my alma mater Washington, Ohio State, and, of course, UNC.

Save the Dates!

The **Newton D. Fischer Society Meeting** will be held on Saturday, June 6, 2009, at the Paul J. Rizzo Conference Center in Chapel Hill. We anticipate 5.5 hours of Type I CME credit. If interested in presenting, please contact the meeting coordinator, Dawn Wilson, at 919-966-8926. Stay tuned for more information!

Don't miss the **Great Human Race 5k CASTLE** fund raiser on March 21st. For information on how to participate or donate, go to: <http://www.med.unc.edu/earandhearing/news/the-great-human-race>

Welcome, Shuman!

by John H. Grose, PhD



Shuman He, MD, PhD

We are pleased to welcome Shuman He who began her Post-doctoral Fellowship in our department in November. Shuman He completed her MD and

residency training in ENT at the Medical School of Shandong University, Jinan, China. She then came to the US to pursue her doctorate at the University of Iowa where her dissertation focused on evoked potential testing in cochlear-implanted patients. (She worked with the *other* Carolyn Brown.) Shuman will split her time between two main projects. In one project, she works with Dr. Joe Hall on a study examining temporal processing in children. The goal of this project is to examine the development of the ability to use fine temporal, acoustical features to discriminate among – and recognize – sounds. In the other project, she works with Dr. Craig Buchman on a study dealing with evoked potentials in children with auditory neuropathy. One facet of this project is to determine whether the Acoustic Change Complex (a class of cortical evoked potentials) can provide a measure of perceptual discrimination in these children.

Shuman's link with UNC actually began long before she got here. Her husband,

Haitao Wen, joined UNC in 2007 as a post-doctoral fellow in the Lineberger Cancer Center. He works in the Immunology division. They have two girls (a 2 year old named Sonia and a 3 month old named Ellen). How do two busy post-docs cope with a family this young? Simple – they just asked their respective parents to come and visit for extended periods of time and dote on the grandkids.

Shuman has hit the ground running since joining us a few weeks ago. She has already started testing children on the temporal processing study and has learned the importance of *not* scheduling test sessions to coincide with home football or basketball games (her test families have trouble finding parking). Preliminary normative data on the acoustic change complex is also underway. So if you catch sight of a blur rushing between the Physicians Office Building (POB) and the research labs in MacNider, it's probably Shuman. Stop her and say hello.

More News

Mark Weissler, MD, gave a presentation entitled: "Oral Cancer: Risks, Diagnosis and Treatment" to a crowded auditorium at the UNC Wellness Center in Meadowmont on October 29, 2008. The presentation was part of an outreach effort within the division to better educate the public about Head and Neck Cancer. The UNC Wellness Center is sponsoring a series of cancer related talks this year. The presentation was followed by a lively question and answer period and by an oral cancer screening clinic staffed by Dr. Weissler and Chief Resident Dr. Allen Marshall. The division also runs another free oral screening clinic as part of the annual Yul Brenner Oral Cancer Awareness Day. Dr. Weissler said, "This program sponsored by the UNC Wellness Center is a good example of the kind of involvement we should all have in our communities to raise awareness about cancer risks and

prevention. I really credit the Wellness Center on their foresight in putting on these types of events."

Sherri Vernelson and Carolyn Brown have both just passed their LSLS Cert. AV Ed exam (this stands for Listening and Spoken Language Specialist Certified Auditory Verbal Educator). This is a very exciting accomplishment. This is a new certification given by the AG Bell Academy that was created to certify teachers and therapists that do not provide Auditory Verbal therapy exclusively. This certification recognizes their experience and wealth of knowledge in developing spoken language through listening. It is often a benefit for families that are looking for therapists with appropriate training to work with their children. With the addition of these certifications, CASTLE now has five employees with LSLS certification.



Dr. Harold Pillsbury and Madison Clark (former resident, 2000) teamed up in the Bud Brexler golf tournament held annually by UNC Hospitals. They scored a 62 the first day and a 65 the second day, to win first place in the championship flight!

Questions, comments, or suggestions about Heads Up? Contact Elizabeth Perry, eaperry@med.unc.edu, or 919-260-9002.

The Department of Otolaryngology/Head and Neck Surgery is proud of its skilled faculty and staff who are committed to providing patients with the highest quality health care. Get to know us!

The Department of Otolaryngology/Head and Neck Surgery

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