WINTER 2025

UPMC | HILLMAN CANCER CENTER

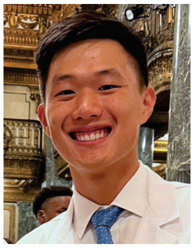
# HEADWAY

SINCE 2007

**NEWS ON ADVANCES IN THE PREVENTION, DETECTION, AND TREATMENT OF HEAD AND NECK CANCERS**

## Current utilizations and limitations of Augmented Reality applications in Otolaryngology-Head and Neck Surgery

By Anthony Tang, BS
*Medical Student, University of Pittsburgh School of Medicine*



Augmented reality (AR) is the process of visually overlaying digital information on top of the physical world. This can be done using a Head-mounted display (HMD) like the Apple Vision Pro or Microsoft HoloLens, or can be done with endoscopes, microscopes, and other devices. Mixed reality (MR) builds upon AR with the inclusion of interactions between the digital display and the physical world.

AR and MR have become increasingly studied in medicine. In medicine, this technology has the potential of changing care, by making procedures safer and more efficient, and improving medical and surgical education. Presently within the field of Otolaryngology-Head and Neck Surgery (OHNS), AR and MR have utilized patient CT or MRI imaging to aid preoperative surgical planning, intraoperative image guidance, and resident education by registering the imaging onto the patient's body. Working with the Augmented Reality (Surreality) lab led by Dr. Edward Andrews and Pediatric Otolaryngologist Dr. Noel Jabbour, we are putting together a review paper summarizing the current utilizations and limitations of AR and MR in OHNS.

Of the included studies, 66% of studies were intraoperative, with 17% on preoperative planning and 17% on surgical education. Otology/neurotology, rhinology, and head and neck surgery sub-specialties within OHNS have published the most research on AR or MR use. The majority of studies have been on intraoperative usage and have been with AR. Almost all of these studies were proof-of-concept or preclinical studies. *(See Figure 1 on page 5)*

Two recently published studies highlight the advancements that the utilization of AR and MR has brought to OHNS. Hussain et al. were able to transition from the laboratory preclinical phase to the clinical phase and implement their novel AR system in middle ear surgery on nine patients. Using their AR system, they were able to show consistent sub-millimetric accuracy during various middle ear surgeries. AR allowed them to integrate live microscopic surgical video with preoperative imaging of critical landmarks within the ear that the surgeon has to avoid such as important nerves and blood vessels. Linxweiler et al. conducted a prospective randomized control trial looking at the use of a novel AR system for navigation during endoscopic sinus surgery. Similar to the Hussain et al. study, the AR system provides the advantage of highlighting critical structures during surgery. Surgeons reported a significant benefit when the AR system was used, as it allowed them to also highlight a path for their surgical approach that avoids critical blood vessels and nerves while reaching their target. The system used in this study is now even being implemented in sinus surgery at UPMC.

*Continued on page 5*

# Finding purpose through the battle

By Sean Nolan
*Cancer survivor*

*Sean Nolan (left) with Joe Block (right).*

When I was in high school, I dreamed of being a sports broadcaster. I wanted to be the one calling a walk-off Pirates victory or who you're getting last night's highlights from on SportsCenter while you're drinking your coffee. However, after my cancer diagnosis, all of my plans changed.

I was diagnosed with Burkitt's lymphoma during my sophomore year of high school in 2016. Just a week after stressing over who to ask to the annual homecoming dance, I found myself sitting in our living room with my siblings, breaking the news to them that the lump on the side of my neck was more than just swollen lymph nodes. Immediately, I was pulled from school and began chemotherapy at Children's Hospital. At a time when I should have been studying for my algebra exam or preparing for the school play, I sat in a hospital room, bald, fighting nausea and fatigue. While I was confident I would survive physically and return to a "normal" teenager's life, I knew my life would never be what it was before I got sick.

One day when I was in the hospital, I was introduced to Connecting Champions, a local nonprofit organization that asks kids and young adults with cancer, "What do you want to be when you grow up?" and pairs them with a mentor in that field to help them achieve a brighter future. When I was asked that question, my eyes lit up; it was the first time that I met someone in the hospital that didn't want to discuss cancer. I smiled from ear to ear as I described my dream occupation. My smile was quickly reciprocated by Coy from Connecting Champions as he shared that he had just met Joe Block, the play-by-play announcer for the Pittsburgh Pirates, and that he thinks Joe would make a wonderful mentor to help pursue my dreams.

A few weeks later, Joe walked into my hospital room and we hung out for two hours, discussing everything there was to talk about. He walked me through his game day preparation, the statistics that he leans on throughout the games, and all of the stops that he made along his journey to becoming the Pirates' announcer. After that first visit, Joe visited me at my house, brought my family to the ballpark, and even let me sit with him during a game to listen to his broadcast live, allowing me to ask questions after every break in the action.

After I was declared cancer free in January 2017, my dreams changed. I realized that, while I loved talking about sports, I had a different purpose in my life. I knew that I wanted to work with kids and young adults like me who had been told those three words and seen their lives change: "You have cancer."

Following graduation, I attended Robert Morris University, receiving my Bachelor's degree in Communications with a focus on Journalism and minor in Photography and my Master's degree in Organizational Leadership with one goal in mind: working with and for young people who have been diagnosed with cancer. Following internships with a couple local nonprofits, I knew exactly where I was destined to end up: Connecting Champions. The idea of working with mentors like Joe, assisting kids and young adults in figuring out what their dream may, or may not, look like held such a special place in my heart. I officially joined the Connecting Champions team full-time in June 2023, and it has been a dream come true.

Every day, I get to work with kids and young adults just like me, asking them a question that changed my life eight years ago: "What are you passionate about?" Whether they hope to be a Broadway actor, baker, NASA engineer, or anything in between, I am proud of the path that I took. While my journey looks a lot different than I anticipated at 15 years old, I found my purpose, and I get to live my dream every single day.

# New devices optimize swallow rehabilitation at Swallowing Disorders Center

By Allison Hughes Bartholow, MS, MS, CCC-SLP
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Dysphagia, or difficulty swallowing, is a common and serious symptom experienced by those diagnosed with head and neck cancer who have undergone surgical resection, chemoradiation, or radiotherapy. Swallowing impairments include a weak palate, leading to nasal regurgitation, reduced elevation of the larynx, or voice box, impaired airway protection, reduced base of tongue retraction, and stiffening of the pharyngeal muscles, which prevents food from entering the esophagus, or food tube. These deficits can lead to penetration or aspiration, and residue patterns after the initial swallow[1].

Current treatment options for dysphagia include diet modifications, compensatory strategies, and strengthening exercises. Emerging studies into intensive swallow rehabilitation with integration of exercise principles and neuroplasticity have shown promising results. Examples of intensive swallow therapy approaches used at the UPMC Swallowing Disorders Center include device-driven protocols.

The Iowa Oral Performance Instrument, or IOPI, is a device that uses an air-filled bulb placed along the surface of the tongue. The individual then compresses the bulb with their tongue against the palate. This tool can then measure the overall tongue strength and endurance. High intensity exercise programs using the IOPI have shown favorable results. Van Den Steen et al. (2020) reported a correlation of increased tongue strength and an overall improvement in swallow function after an eight-week program[2]. Pavlidou et al. (2023) also reported similar findings in this population[3].

The Tongue-o-meter is a device designed to strengthen the muscles of the tongue.

It was created as a cost-effective option for the commonly used IOPI. Like the IOPI, the Tongue-o-meter utilizes an air-filled bulb that is placed along the tongue surface. Unlike the IOPI, it connects to a mobile application installed by the individual. The benefit of the Tongue-o-meter is the potential for the individual to engage in tongue strengthening exercises beyond the clinic setting, thus increasing the frequency of exercises performed. The device can provide measurements of the overall tongue strength, measured in kilopascal (kPA), and tongue endurance, or the duration in which the bulb is compressed at a specific tongue pressure. Based upon these measurements, the individual can undergo a high intensity exercise program. To target tongue strength, the individual will repeatedly compress the bulb against the palate (e.g., repetitive strength) at a select intensity level. To target tongue endurance, the individual will compress and hold the bulb against the palate for a set duration (e.g., three seconds).

Another emerging area in the dysphagia rehabilitation field is expiratory muscle strength training, or EMST. Research has suggested that head and neck cancer survivors are likely to present with decreased cough reflexes, which could make individuals susceptible to adverse pulmonary events such as pneumonia[4-5]. Expiratory muscle strength training is utilized by the EMST 150 device (Aspire Products, Gainesville, Florida). The EMST 150 is a device that strengthens the respiratory muscles that assist with the generation of subglottic air pressure, which in turn improves cough strength.

The EMST 150 is a pressure threshold device in which an individual takes a deep breath and blows into the device to release an internal valve. The EMST 150 ranges from 30 cmH2O to 150 cmH2O. The device is calibrated by a trained speech language pathologist weekly to adjust the exercise level. For best outcomes, it is recommended to calibrate the device to 75-80% of the maximal expiratory pressure, or MEP. Most recommended programs advise completing five sets of five repetitions, five days a week, for an eight-week program[6].

The IOPI, Tongue-o-meter, and EMST 150 are available for patient use for those undergoing intensive swallow rehabilitation at the UPMC Swallowing Disorders Center.

References:

1. Hutcheson KA, Lewin JS, Barringer DA, et al. Late dysphagia after radiotherapy-based treatment of head and neck cancer. *Cancer.* Dec 1 2012;118(23):5793-9. doi:10.1002/cncr.27631

2. Van den Steen L, Baudelet M, Tomassen P, Bonte K, De Bodt M, Van Nuffelen G. Effect of tongue-strengthening exercises on tongue strength and swallowing-related parameters in chronic radiation-associated dysphagia. *Head Neck*. Sep 2020;42(9):2298-2307. doi:10.1002/hed.26179

3. Pavlidou E, Kyrgidis A, Vachtsevanos K, Constantinidis J, Triaridis S, Printza A. Efficacy of High-Intensity Training in Patients with Moderate to Severe Dysphagia after Glossectomy. *J Clin Med.* Aug 28 2023;12(17) doi:10.3390/jcm12175613

4. Hutcheson KA, Barrow MP, Warneke CL, et al. Cough strength and expiratory force in aspirating and nonaspirating postradiation head and neck cancer survivors. *Laryngoscope.* Jul 2018;128(7):1615-1621. doi:10.1002/lary.26986

5. Fullerton A, Mou Y, Silver N, Chheda NN, Hitchcock K, Hegland K. Reflex vs. volitional cough differences amongst head and neck cancer survivors characterized by time since treatment and aspiration status. *Respir Physiol Neurobiol.* Nov 2021;293:103702. doi:10.1016/resp.2021.103702

6. Hutcheson KA, Barrow MP, Plowman EK, et al. Expiratory muscle strength training for radiation-associated aspiration after head and neck cancer: A case series. *Laryngoscope.* May 2018;128(5):1044-1051. doi:10.1002/lary.26845

## Let's Talk

By Rich Boguszewski

*Laryngectomy survivor (2014) and president of the Let's Talk Laryngectomy Support Group*

The Let's Talk Laryngectomy Support Group of Pittsburgh is a courageous local community of individuals and their families who have persevered through the mental and physical storms of diagnosis, pre-surgical treatment, surgery, post-surgical treatment, and recovery associated with the complete removal of their larynx (voice box) due to cancer or some other physical trauma. I can speak about the travails of this journey from personal experience, because I had my total laryngectomy surgery in August 2014. But reducing the experience of a total laryngectomy to a few words on a page may be a bit too clinical and simplistic and does not nearly describe the psychological and medical consequences of this procedure. Removing one's voice means losing a major part of an individual's personality and identity, and the physical and social challenges following the surgery can be overwhelming. This is where social support plays an important role in recovery. Peer support that provides acceptance, understanding, empathy, and encouragement to persons who now identify as laryngectomees and survivors. And yes, the laryngectomee's family, friends, and co-workers are also affected by the trauma of the diagnosis and surgery and also benefit from the social support.

Let's Talk is a not-for-profit, patient-directed, peer-to-peer, laryngectomy support group based in the Pittsburgh area, that provides information, education, and psychosocial support to patients and their families. Survivors connecting with survivors, sharing their common experience. A recent article in The Journal of the American Medical Association (JAMA) about life after laryngectomy surgery concluded that patients reported a more 'positive attitude' and lower levels of decision regret when offered counseling by members of patient associations.

*The Let's Talk Laryngectomy Support Group of Pittsburgh at their annual picnic in August 2024*

The Let's Talk group was formed in the early 1990s. The original membership was made up mainly of individuals who lived on the eastern side of Pittsburgh, where they met for many years on the first Tuesday of each month in a meeting room provided by Forbes Hospital in Monroeville. Over the years the group established a relationship with Dr. Lori Lombard at the Indiana University of Pennsylvania (IUP) and in June of each year the Let's Talk group would invite the current class of Dr. Lori's 'Speech-Language Pathology' (SLP) students to their meeting at Forbes. During this annual meeting the Let's Talk members gladly recounted their personal experiences and always included a question and answer session with the students which provided an excellent opportunity for the support group to covertly recruit future SLP's into the lary community! Many of the SLP students who we've met over the years have gone on to professional careers at local clinics, and we are so grateful that some have also made the choice to support our specific needs. For most laryngectomees after their surgery, our SLP becomes the most important medical person in our lives since they actually perform the hands-on procedures that maintain our new voice and speech.

The monthly meetings for the Let's Talk group, as well as our annual IUP meeting, have been virtual since the social isolation of COVID-19 in early 2020, but we still always look forward to connecting with Dr. Lori and her IUP class each year.

The members of the Let's Talk group share many years of experience. The surgery dates for our members range from 25+ years to within the past year for some of our newer members who have had recent surgeries. One of our all-star members had his surgery in 1994, a 30-year survivor and a positive example for anyone wondering about life on the recovery and survival side of laryngectomy surgery.

The Let's Talk laryngectomy support group meets virtually on Zoom on the first Tuesday of each month, except in August when we have our annual picnic.

For more information call or text Rich Boguszewski at 412-254-3323 or email at LetsTalkLaryGrp@gmail.com.

Laryngectomy Support sites: LetsTalkPgh.org (first Tuesday: Group meeting), CancerBridges.org (first Wednesday: Cancer Bridges-Head & Neck Cancer Support group), Webwhispers.org (website and Facebook page), LarysSpeakEasy.org (Lary's Speakeasy), AtosMedical.com, InHealth.com.

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# Health insurance and its impact on head and neck cancer survivorship

By Brandon Aguilar, BS; Jonas T. Johnson, MD, FACS; Marci Lee Nilsen, PhD, RN, CHPN, FAAN
*University of Pittsburgh School of Medicine Department of Otolaryngology, Survivorship Clinic*

Patients with head and neck cancer face a challenging journey that extends beyond medical treatment within the clinic. Patients must navigate the complex landscape of medical care, the emotional toll of the diagnosis and treatment, and the adjustments to everyday life activities and changes to their daily lives, all of which are impacted by health insurance. Understanding how health insurance affects head and neck cancer survivorship is important, as it can shape access to essential resources, ongoing care, and overall quality of life.

Comprehensive health insurance plans enable access to ongoing care, including regular follow-ups, rehabilitation, and psychological support, all of which are essential for managing survivorship challenges. Conversely, limited or no health insurance can hinder access to follow-up appointments, diagnostics, and therapy, delaying care and worsening outcomes. Studies show that early identification and treatment of head and neck cancer improve results. Delays in treatment can exacerbate the disease, making manageable conditions more advanced.

Although studies illustrate an association between health insurance status, quality of care, and the presentation of advanced disease in patients diagnosed with head and neck cancer, limited data assess the impact of health insurance on delays in diagnosis and treatment. The challenges associated with receiving timely treatment, stemming from insurance limitations, may intensify symptom severity and contribute to complications, thereby affecting survival rates. Therefore, it is essential to understand the differences between the health insurance plans available to individuals. State websites, like the Pennsylvania Insurance Department, provide resources to improve health insurance literacy and outline open and special enrollment periods for Pennsylvania residents.

Commercial health insurance, or private health insurance, is provided by private entities, often through employers, but individuals can purchase it directly. Coverage options and costs vary significantly, including inpatient, outpatient, preventive, and specialty services. Medicaid, a federal and state program, provides low-cost health coverage to low-income individuals, with eligibility based on the income and resource limits defined by each state.

Medicare is a federal health insurance program for those 65 and older and certain individuals under 65 with disabilities. It consists of Parts A, B, and D: Part A covers inpatient hospital stays and home health care; Part B covers outpatient care and preventive services; and Part D assists with prescription costs. Original Medicare includes Parts A and B, while Part D is available separately. Part A usually has no premium for those with an adequate work history, whereas Part B has a variable monthly premium based on income. Part D premiums vary by plan. Patients can see any provider or hospital that accepts Medicare and may not need

**Patients must navigate the complex landscape of medical care, the emotional toll of the diagnosis and treatment, and the adjustments to everyday life activities and changes to their daily lives, all of which are impacted by health insurance.**

*Continued on page 6*

## Mrs. Claus Club

### Pittsburgh North Chapter of Mrs. Claus Club, founded by Jeana Watenpool, is a local non-profit organization dedicated to bringing hope, encouragement and opportunity to pray for recipients who have been diagnosed with cancer.

Mrs. Claus Club is a ministry run by a board of volunteers providing cancer patients with a comfort basket and a personal visit or phone call. When someone is diagnosed, the first question that is typically asked is, "What can I do for this person?" Individuals can request that a basket be sent to someone they know. The basket is filled with items to aid in the battle against cancer and contains support literature, a cookbook, Mrs. Claus coffee mug, mouthwash, lip balm, hand sanitizer and much more. If the recipient needs a wig, we provide support with Creative Hair Solutions. A few special items included in our comfort baskets are a prayer shawl, pillow case, port pillow and rice bag which are made by women who donate their talents and time to this worthy cause. As the items are either knitted or sewn, prayers are said over each stitch and these intentions are continued throughout until the project is done.

*Mrs. Claus Club members and volunteers (left to right): Henny Weeden, Angela Sefscik, Mrs. Claus (Kathy Barton), Jeana Watenpool and Melissa Bradfield*

Our organization doesn't simply drop off the basket and move on to the next recipient. Forever friendships and connections often develop from these visits. When a basket is delivered, we visit the patient, sharing who referred their name to us and the purpose of our club. While visiting the patient, we have the opportunity to pray, and a change often takes place. The recipient's hope has been restored. I favor the personal visits, and each delivery or phone call is special, blessed and anointed and with tears. I know in my heart that we are making a difference.

The following is a Thank You note we recently received: *"I was not having a good day when I received your comfort box. I was so touched by your compassion for someone you don't even know. It filled my heart with joy to know someone cares. When our days are filled with chemotherapy and doctor appointments and endless testing, your package was a bright lifting up. I loved everything and can use all of it! Many Thanks, Cindy."*

For more information, or to knit/crochet prayer shawls, send an email to MrsClausClubNorth@gmail.com.

If you have a friend, family member or co-worker diagnosed with cancer, this is one way you can rally around them and provide hope for their journey by requesting a comfort basket by visiting our website: MrsClausClub.org.

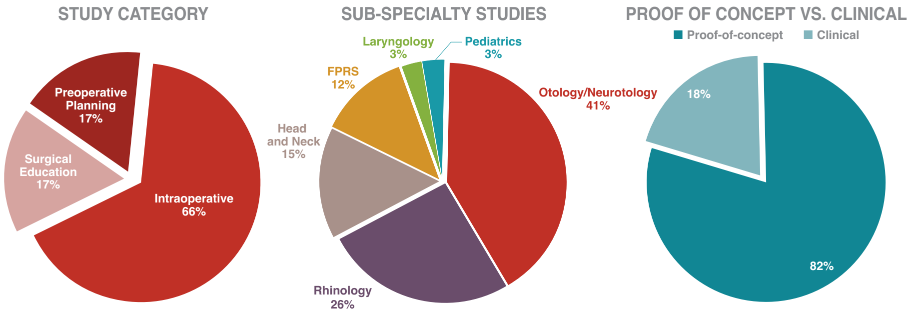
Together, we can make a difference.

## Current utilizations and limitations of augmented reality applications in Otolaryngology-Head and Neck Surgery

*continued from page 1*

Among the reviewed studies, commonly reported technical challenges that are limiting the widespread integration of AR or MR in OHNS include target registration error, inattentional blindness, increased mental workload, and the ergonomics and cost of current devices. Target registration error is a calculation of the accuracy of the alignment of the virtual elements with objects in the real world during AR or MR. The accuracy of this alignment is critical for the safety of using AR and MR during clinical cases. Promisingly, recent studies using more advanced AR technology have already been able to achieve improved registration supporting the safety of AR and MR use in specific surgeries.

FIGURE 1



STUDY CATEGORY

SUB-SPECIALTY STUDIES

PROOF OF CONCEPT VS. CLINICAL

To summarize, advancements in AR and MR have shown significant potential in enhancing the safety and efficacy of procedures in OHNS. Technological advancements are needed to continue to improve the precision of target registration. Otolaryngologists need to promote the transition of studies to the clinical phase, increase MR use, and increase intraoperative use.

## Health insurance and its impact on head and neck cancer survivorship

*continued from page 4*

a referral to see a specialist. Medicare Advantage (Medicare Part C) is an alternative to original Medicare provided by private companies, covering Parts A, B, and often D, along with extra benefits like vision and dental care. Out-of-pocket costs differ by plan, with some having no premium cost and coverage for a portion of the Part B premium. Most plans include Part D and a yearly out-of-pocket limit, after which services are fully covered. Patients usually must use their plan's network for healthcare services and may need a referral to see a specialist.

Health insurance is vital for ensuring access to medical care and support services for survivors of head and neck cancer as they transition to daily life. It is essential to understand the costs and coverage of available health insurance plans and to pursue ongoing reforms that enhance access and coverage by eliminating barriers to care. This commitment to equitable healthcare solutions significantly improves recovery outcomes and overall quality of life for head and neck cancer patients. The UPMC Head and Neck Survivorship Clinic establishes a patient-centered approach to address the diverse needs of survivors impacted by challenges that may have stemmed from insurance disparities.

SUMMER 2020

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SINCE 2007

NEWS ON ADVANCES IN THE PREVENTION, DETECTION, AND TREATMENT OF HEAD AND NECK CANCERS

PAGE 1
Enhancing patient-centered care

PAGE 2
Becoming a survivor

PAGE 3
Head and neck cancer patients continue treatment during COVID-19 with teletherapy
The relationship between reported quality of life symptoms and sleep quality in head and neck cancer patients

PAGE 4
Reiki in the treatment of cancer

PAGE 5
Closing the gap for young adult cancer survivors

PAGE 6
Contact information
Head and Neck Cancer Program website
Clinical trials

Enhancing patient-centered care

By Carrie Fogel, *Director of Development, Eye & Ear Foundation*

When Marci Nilsen, PhD, RN, Assistant Professor in the Department of Acute and Tertiary Care in the University of Pittsburgh School of Nursing, and Jonas T. Johnson, MD, Chairman of the Department of Otolaryngology at the University of Pittsburgh, began their work to establish the Head and Neck Cancer Survivorship Clinic in 2016, they knew that the list of side effects and symptoms related to their treatment was long. Now, having operated the clinic for more than three years, Drs. Johnson and Nilsen are beginning to understand the most common symptoms that patients deal with, and are beginning to turn the data they have collected from their patients into bench to bedside research initiatives.

Dr. Nilsen knew that an important element of the Survivorship clinic was the collection of data using 'Patient-reported outcomes' (PROs). According to Dr. Nilsen, "The utilization of PROs encourages the patient to be engaged in their health care and allows their voice to be heard. For providers, this is essential in order to provide high-quality care." These measures allow for systematic and standardized collection of symptoms and treatment-related effects. The utilization and real-time evaluation of PROs in clinical practice can enhance patient-centered care and help healthcare providers to identify interventions to optimize the results a patient sees in his or her health. The 'patient-reported outcomes' process of the clinic visits has provided tremendous insight into the struggles that head and neck cancer (HNC) patients have as they move through life post-treatment.

*Dr. Johnson and Dr. Nilsen with a patient.*

Drs. Johnson and Nilsen have identified three areas where research studies could provide important knowledge to the rapidly growing field of survivorship medicine: intensive symptoms management, cognitive decline in head and neck cancer patients, and the impact of caregiver burden.

*continued on the bottom of page 5*

For additional topics on the prevention, detection and treatment of cancer, including head and neck cancer, visit www.hillmanresearch.upmc.edu/about/news/publications for archived issues of Headway.

## Head and Neck Cancer Program website

Looking for more information about patient services, current research, clinical trials, news and events, and other valuable information pertaining to head and neck cancers? Check out the website for the Head and Neck Program of UPMC Hillman Cancer Center at UPMCHillman.com/headandneck.

## Contact information

| | | |
|---|---|---|
| American Cancer Society | 1-800-227-2345 | cancer.org |
| Breast Cancer Support Group – UPMC | 412-647-2811 | |
| Cancer Bridges<br>*Counseling, support groups, health and wellness, family programs* | 412-338-1919 | cancerbridges.org |
| Center for Counseling and Cancer Support – UPMC | 412-623-5888 | |
| Division of Sleep Surgery – UPMC | | |
| Mercy | 412-232-3687 | |
| Monroeville | 412-374-1260 | |
| Eye & Ear Foundation | 412-864-1300 | eyeandear.org |
| Face2Face Healing | 724-935-3580 | face2facehealing.org |
| Gumberg Family Library and Resource Center | 412-396-6130 | |
| Hillman Cancer Center – UPMC<br>*Research, clinical trials, referrals, patient resources, and support* | 412-647-2811 | hillman.upmc.com |
| Hopwood Library at UPMC Shadyside | 412-623-2620 | |
| Hyperbaric Oxygen Therapy – UPMC | 412-647-7480 | |
| Immunotherapy – Cancer Research Institute | 800-992-2623 | cancerresearch.org |
| Mrs. Claus Club of North Hills | 412-992-7339 | mrsclausclub.org |
| Nutrition – American Institute for Cancer Research | | aicr.org |
| Prostate Cancer Support Group – UPMC | 412-647-1062 | |
| Swallowing Disorders Center | | |
| UPMC Eye & Ear Institute (Oakland) | 412-647-6461 | |
| UPMC Shadyside | 412-621-0123 | |
| Young Adult Survivors United | 724-719-2273 | yasurvivors.org |

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