

HEADWAY

SINCE 2007

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

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From every angle: a broadened approach to beating head and neck cancer

By Lisa A. Goldstein

Senior Writer and Editor, Eye & Ear Foundation

The Division of Head and Neck Surgery in the Department of Otolaryngology – Head & Neck Surgery at the University of Pittsburgh has a strategic plan to create a world-renowned center within UPMC Hillman Cancer Center. The vision is to accelerate finding a cure for head and neck cancer and mitigating treatment-related toxicities through survivorship.



Dr. Matthew Spector

Division Chief of Head and Neck Surgical Oncology & Microvascular Reconstruction, Dr. Matthew Spector, MD, FACS, called the HNS research initiatives diverse. “While the head and neck group work together to take care of patients with multidisciplinary care, each of us has our own area of research that we focus on to help bring the field forward,” he said.

The translational research program, anchored by UPMC Hillman Cancer Center and the Head and Neck Cancer SPORE (Specialized Program of Research Excellence) grant, has been one of the leading programs in the world for decades.

Dr. José P. Zavallos, MD, MPH, FACS, the Eugene N. Myers, MD Professor and Chair of the Department, and Interim Deputy Director of UPMC Hillman Cancer Center, and Dr. Heath Skinner, MD, co-lead this, which provides the basic infrastructure for tissue collection and biobanking.

The first main part of SPORE is the clinical trials, run by Dr. Dan Paul Zandberg, MD, Dr. Christopher Wilke, MD, and Dr. Kevin J. Contrera, MD, MPH. They are focused on bringing national trials to UPMC. Dr. Contrera’s main type of research is response adapted therapy, which looks into how patients respond to a neoadjuvant chemotherapy or immunotherapy, and how to adapt their treatment to the therapy they received.

The UPMC Survivorship Clinic is run by Marci Lee Nilsen, PhD, MSN, RN, CHPN, FAAN. She has a grant to examine the outcomes of patients after surgery, radiation, and chemotherapy for HNC, specifically looking at radiation-induced fibrosis – especially in the neck. She is looking at tailored treatments to improve quality of life and patient outcomes and is trying to broaden the clinic so patients can go to satellite locations.

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Attitude is not a platitude

By Rich Boguszewski
Cancer survivor since 2014 and "Let's Talk"
support group president



Rich before he was "reborn" as a survivor

"If you can't change your fate, change your attitude." I've had this quote, made famous by the author Amy Tan, sitting on my desk as a neat little decorative card, since 2014. It was part of a collection of quotable quotes, a small deck of cards filled with memorable, inspirational phrases by famous people, designed to be changed each day to reveal a new quote – a gift I received when I was in the hospital recovering from my surgery. In the past 10 years I have never changed my quote card. And the significance of 2014? That was the year of my rebirth, the year that I was rescued from an undeniably fatal outcome and reborn as a survivor. Saved from a fate that I definitely did not choose and would gladly have changed if only it had been physically possible.

My rebirth story began in the summer of 2014 with a little wheezing and a subtle change in my voice that I attributed to the wear and tear of aging or maybe a just seasonal allergy, but nothing that seemed extraordinary and nothing that signaled what was to follow. My PCP agreed with my self-diagnosis. He wrote me a prescription for five days of prednisone that he was sure would "knock it out" and sent me on my way. But his final words were "schedule an appointment with an ENT office if you're not feeling any better."

I completed the prescription, but my condition did not improve so I followed my doctor's advice and scheduled an appointment with a local Ear, Nose and Throat (ENT) office.

I didn't know it yet, but this was to be the first step towards my survivorship. It started out like any other exam, with a visual inspection of my throat that revealed that my left vocal cord was paralyzed and not moving normally. The doctor explained that this could be caused by a virus, or injury, and ordered a CT scan of my throat and chest to see if he could determine what the cause might be.

Two days later I was back in the ENT office to review the results of the scans. As the images of my throat began to appear on the video screen and the expression on my doctor's face went from pleasant to serious I knew that a dark cloud was suddenly moving overhead. We began a video inspection of my throat, which appeared normal until we stopped at my larynx, my voice box. There it was, a large white spot in my throat in a place that it should not have been. The doctor explained that this was a mass attached to my larynx that would need to be removed. Even he appeared to be surprised by the results and said that he hadn't seen this since 1982. I was also surprised by this and asked how this could be fixed. His simple reply was that it must be removed. He explained that removal meant having a laryngectomy, a major surgical procedure that would remove my larynx and rearrange the structures in my throat to create an opening, or stoma, that would allow me to breathe through my neck instead of through my nose or mouth. My simple reply was that I would like a second opinion.

Despite my hope for a better outcome, the appointment for the second opinion was much like the first. There was a mass on my larynx that must be removed. I asked for yet another opinion and was scheduled that same afternoon for an appointment at the UPMC Eye & Ear clinic.

Even during the third evaluation I held out the hope that someone would find something, anything, that would provide a simpler solution that would deliver me from this fate. But given the location of the tumor there were no other options. My questions to the surgeon were: "Would this tumor eventually kill me?–Yes." "Will the surgery change me?–Yes." "Will I be able to lead a normal life?–Yes, but with no more swimming." He told me I could take a month or two to wrap my head around all of this before scheduling the surgery but now that I knew that something had invaded my private space I just wanted to

have it evicted as soon as possible.

The next step was to tell my wife, my two adult children, my extended family, friends and co-workers. Everyone was so supportive and concerned, for which I will be eternally grateful. I actually felt a spiritual buoyancy from all of the support that I received from the many souls cheering on my recovery.

Two weeks after my first ENT appointment I was being prepped for surgery. There is an old adage that we're born alone and we die alone. I would add that we also have major surgery alone. There is no more isolating feeling than sitting in a hospital gown in a small room waiting to be wheeled into a life-changing surgical procedure – another numerical code added to the surgical status display. The prospect of being rolled into an operating room as "me" and being rolled out after the 7+ hour surgery as "me" minus my voice was beyond comprehension but that was the reality of the moment. And at that stage of the journey, I placed myself in the hands of my surgical team and trusted that their expertise and experience would meet the challenge.

I knew that the surgery would be removing my physical voice, but my greatest fear was that it would somehow affect my inner voice. My constant companion. The "voice" inside my head that speaks my thoughts to me, drives my ideas, allows me to contemplate the future, evaluate the present, and ponder my past. When I woke up in the recovery room, I was so grateful that I could still hear my inner voice and that it was still "me."

So for me, "If you can't change your fate, change your attitude" was never just another overly positive, Pollyanna platitude. It was a profoundly simple instruction for turning my response to an unavoidable situation into a positive outcome not only for me but for everyone around me. My cancer was removed, I was repaired, and I have been able to move on with the "new normal" version of my life. There are certainly some adjustments as well as physical and emotional challenges after any major surgery. But maintaining a positive attitude has allowed me to feel the emotional waves when they come, occasionally getting jostled and knocked down, but also being able to brush myself off and stand up again to face the next wave with humor and equanimity.

Contemporary management of head and neck skin cancer

By Shaum Sridharan, MD
*Associate Professor, Department of
Otolaryngology - Head and Neck Surgery*



Dr. Shaum Sridharan

Here at UPMC, the department of Otolaryngology - Head & Neck Surgery has extensive experience in the treatment of skin cancer of the head, face, and neck. Skin

cancers come in various forms including melanoma, squamous cell carcinoma, and basal cell carcinoma among others. The basis for treatment of skin cancer continues to be surgical excision despite significant advances in the field. Surgery for skin cancer must be tailored to the individual patient and to the extent of disease. What makes skin cancer of the head and neck so challenging is the complex anatomy just below the level of the skin and the potential for these cancers to invade or abut critical structures. Our team of trained head and neck oncologic and reconstructive surgeons is able to remove tumors of the head and neck, while preserving form and function when possible.

Surgical treatment can be simple or complex based on tumor location, size, stage, and imaging characteristics. Often, treatment can differ vastly based on cancer type as well. Malignant melanoma, for example, may require not only excision of the tumor but also sentinel lymph node biopsy. Sentinel node biopsy allows for small incisions to be made to sample high-risk lymph nodes in the face or neck in order to appropriately recommend treatment. In other common cancers such as squamous cell carcinoma, concerning regional lymph nodes must be excised with neck dissection or partial parotidectomy. Surgical plans are based on preoperative imaging studies and clinical exam.

All patients who present to the cancer clinic are evaluated in a multi-disciplinary approach. Here at UPMC we are very lucky to have world-class medical and radiation oncologists focused on skin cancer care. We are at the forefront of

medical advances especially in regards to immunotherapy. Immunotherapy and other agents can be used either in the pre-operative or post-operative setting (or both) depending on the clinical characteristics of the tumor. Several clinical trials born out of UPMC have shown remarkable benefit to these drugs especially when combined with surgical treatment. Recent studies have demonstrated complete elimination of cancer cells in roughly 50% of some high-risk tumors. Based on this data, new trials are now open with the hope of potentially reducing the extent of surgery and thereby improving quality of life.

Lastly, the head and neck cancer team, along with the facial plastics team, often work together to achieve the best possible cosmetic results. Local reconstruction can involve rotation or advancement of surrounding skin to close the wound. More extensive reconstruction could entail such modalities as free tissue transfer and nerve repair. As one of the busiest reconstructive surgery programs in the country, we place an emphasis on optimizing functional and cosmetic outcomes.

The future is bright for skin cancer treatment, and we aim to be at the forefront of innovation. Through our multi-disciplinary approach patients can get the benefit of novel treatment approaches aimed at treating skin tumors while maximizing form and function.

The Sweet Spot

By Ursula Bresnei
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Mrs. Claus Club recipient*
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Ursula with her sons Brock (left) and Bryce (right)

When I looked up the definition of "sweet spot" on Google, it was described as "the point or area on a bat, club, or racket

where it makes the most effective contact with the ball." That stopped me in my tracks as I sat on an early Monday morning before the world was awake. I thought about my boys and the tremendous amount of joy they get from that specific moment when they hit the sweet spot between their foot and the soccer ball or the moment that my oldest son reaches the center of a molten lava cake, the delicious gooey center. What about the moment on a dreamy vacation when the day is perfect, the sun is shining and kisses your skin, and the water in the ocean is crystal-clear.

What if I told you I found the sweet spot in my darkest moments in unshakable sadness? You see six years ago while I was pregnant with surrogate twins, I had no idea that I was going to lose my father to cancer. My father was my superhero, and I did all I could do to help him when he became sick. I ran the family business and helped my mom care for my dad, while raising my precious boys as a single mother, and carrying surrogate twins. During this time is when God carried me. This is when God held me in my bed at night. I felt so close to him that I could feel him near and feel his strength carrying me through this journey. I look back and I think about how I did all of that, but you see I did not. He did, God did. That is when I learned about the sweet spot with God, oh how I was so close to him, and I yearned for those moments in my day. My superhero died on Monday, February 4, 2019, and the beautiful twins were born Saturday, February 9, 2019. The twins were early, but they were perfect. The family was overjoyed, and I was able to lay in my hospital room healing from an emergency C-section and grieving the loss of my superhero. God's perfect timing! God cares so much about you and me.

Another sweet spot happened when I was diagnosed with breast cancer in August of 2022. I was going through chemotherapy and losing my hair. The doctor had said that I would lose my hair, but I really did not think it would bother me. I told myself, "it's just hair, it will grow back," but honestly it was traumatizing. I would stand in the shower as clumps would come out in my hand and there was no end in sight, just standing there as clumps and clumps came out. I asked my husband if he would please shave my head. He was happy to help, and he shaved his own head in support of me.

He tried to give me a shaved cut look and I smiled through the tears, but the emotions hit me hard. We did the shaving right before my youngest son would play in the moonlight madness soccer tournament. As I sat on the sidelines in a hat, feeling empty on the inside, even while other parents hugged me and encouraged me, I watched his close-knit team power through the tournament with win after win and unending excitement. The team won the championship that night. God knew I needed to watch a win happen right in front of me! A win that included my precious son!

The most profound sweet spot moment in my life and the last one I would like to tell you about came as an indescribable miracle. I was on a break between chemotherapy. I had received four rounds of what they call "red devil" chemotherapy and would begin twelve additional rounds in the weeks to come, then surgery, and radiation. It was going to be a long road. I went to an ultrasound appointment to see if the cancer had shrunk in size or if it had grown. I was laying on the examination table with the tech beside me, and she was getting the equipment ready. I felt God tell me it is gone, and I was like "really?" Then the tech began the ultrasound, and she could not find the cancer, so she had the radiologist come in and check. He found no sign of cancer. I praised God at that moment! How could I possibly be a walking miracle? You see, as a child and into adulthood I loved miracles, and I was always so interested in miracle stories and miracles in the bible, but I never thought I would ever be one. I then asked if I could go straight to surgery instead of the twelve rounds of additional chemotherapy and the doctor agreed. Three days before the new year 2023, I had lumpectomy surgery and a biopsy of my lymph nodes. The surgery went well, and everything was sent to pathology for review. My amazing surgeon called me the day before New Year's Eve and said the pathology results were back and there was no sign of cancer. The sweet spot of God! To this day I am a walking miracle, and I continue to look for the sweet spot of God.

Can breast cancer save your life?

By Katie Newham
Cancer Survivor



Katie Newham

I get my annual mammogram around my January birthday. In 2022, I got a call to repeat the mammogram because there was something abnormal showing in my left breast.

An appointment was made for two weeks later.

After the radiologist looked at the repeat x-ray, he did a biopsy of the suspicious area and told me he would call me with the results. Ten days later he confirmed that it was cancer. He reassured me that it was very small and probably would only require a lumpectomy and radiation.

The next step was a visit to the surgeon the following week. She repeated that it was small and probably didn't have a chance to metastasize. She did the lumpectomy and also removed a lymph node to be biopsied while in surgery.

The prognosis changed when she sent the lymph node to be examined. Cancer was found in the sentinel lymph node. Fortunately it was encapsulated – it had not traveled further than that one node. Unfortunately I would now require chemo before starting radiation.

My friends and family were very loving and supportive. One friend, Libby Schlenke, who is also a cancer survivor, requested on my behalf a basket of comfort from the Mrs. Claus Club. Jeana Watenpoole arrived at my door with a beautifully arranged gift basket that contained many things I didn't know that I would want or need. There were inspirational writings, information books, and practical things like a port pillow that covers a seat belt to protect the newly inserted port, ginger chews to combat nausea, herbal teas, etc. Jeana prayed with me and shared a hug.

My friend Karen gave me a short haircut to prepare me for hair loss, and when the time came, she came to my home to shave my head. Neighbors took walks with me. My nurse friends collaborated to make a quilt with a sunflower pattern and

signed it with "Flower Power for healing strength." I was finding that breast cancer was strangely a blessing.

As a further precaution to ensure that the cancer had not traveled beyond my lymph node, the oncologist ordered a CT scan of the rest of my body. The CT scan showed a 4mm growth in my main pancreatic duct. This was not a metastasis of my breast cancer, but a different beginning of cancer. It is called an incidental finding. It was presumed to be an IPMN-interductal pancreatic mucinous neoplasm.

During the twelve weeks while receiving chemo, I had an appointment with another surgeon for my pancreas. He then had a meeting at a pancreatic cancer conference to discuss my case. It was decided to monitor the growth with MRIs while I continued treatment for breast cancer.

After completing chemo and radiation at the end of summer, I had a six week break. But the pancreatic cancer had grown from 4mm to 11mm. In October, the doctor removed 80% of my pancreas. With the help of my friends and family, I slowly recovered.

It has been more than two years that I have been cancer free. I have residual problems – left arm lymphedema and diabetes, all manageable. In the two years since, I've been able to recommend Mrs. Claus Club for two friends who are going through treatment, and I have been able to reassure them that health can return.

Even if there are other issues found through testing and scans, there is always hope. And sometimes breast cancer can save your life.

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.



Dural invasion in olfactory neuroblastoma is associated with delayed recurrence

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



Anthony Tang

comprising only 6% of tumors of the nasal cavity and sinuses. ONB often presents with a nonspecific combination of symptoms including nasal obstruction, epistaxis, headache, rhinorrhea, anosmia, and/or visual disturbances. Unfortunately, due to this non-specificity, patients often present late, when their disease is already at an advanced stage. The standard treatment for ONB is surgery to remove all the diseased tissue. Surgery is commonly followed by either

Olfactory Neuroblastoma (ONB), also known as esthesioneuroblastoma, is a tumor of the olfactory epithelium in the nasal cavity. These are rare cancers,

radiotherapy or chemoradiotherapy. Five-year survival outcomes are relatively high for patients with ONB, with reported rates ranging between 69-94%. However, delayed recurrence, or the return of the cancer, is common. Recurrence can occur locally within the sinuses or nasal cavity, regionally in neck lymph nodes, or distant places in the body. For patients with ONB, many recurrences are observed more than five years after treatment. These recurrences impose a significant impact on both patient survival and patient quality of life after treatment.

My research aimed to investigate potential risk factors for delayed recurrence. The risk factor we wanted to study was pathologic evidence of dural invasion. This is when the surgeon removes tissue during surgery, looks at it under a microscope, and finds evidence that the disease has

spread into the dura. The dura is the outer layer of tissue that surrounds the brain and spinal cord. Previous studies in human cadavers and mice models have shown an anatomical relationship between the dura around the brain and the lymphatic system in the neck. This relationship is critical for cancers of the nasal cavity and sinuses like ONB because it provides a theory that tumor invasion of the dura could increase the likelihood of recurrence in the neck. With the support of my mentor, Dr. Garret Choby, at the UPMC Center for Cranial Base Surgery, we used a retrospective multi-institutional database of patients with ONB from nine North American institutions to answer our research question.

We found that patients with pathologic evidence of dural invasion at the time of

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From every angle: a broadened approach to beating head and neck cancer

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At Shadyside Hospital, Otolaryngology Unit Director, Seungwon Kim, MD, specializes in advanced skin cancer, oral cancer, and thyroid cancer. He is developing antiangiogenic and targeted therapy for head and neck cancer.

Dr. Spector and Dr. Shaum Sridharan, MD, conduct research in the functional outcomes program, such as determining the right flap for the right patient and ensuring that what is done during reconstruction is translatable for the future. Their goals are to maximize the functional outcome of surgery and afterwards, so patients can speak, swallow, and participate in society the way they want.

The epidemiology group looks at the broader picture of head and neck cancer, like exploring socio economic status and modifiable risk factors. Dr. Jessica Maxwell, MD, MPH, FACS, Chief of Otolaryngology at the VA, has publications looking at disparities at the VA and how they translate into care that is delivered. Dr. Angela Mazul, PhD, MPH, is in the clinic

doing samples with patients, looking at biomarkers as well as the bigger epidemiology of how HNC is treated. Dr. Zevallos is researching cancer biomarkers and HPV negative drain fluid to understand what cancers need to be escalated with therapy.

Dr. Raja Seethala, MD, Simion Chiosea, MD, and Diana Bell, MD, help run the biospecimen repository, which is part of SPORE. The organ-specific database has collected detailed clinical and pathologic information from more than 12,000 patients followed for over 30 years. This allows researchers to really understand the biomarker-based understanding of cancer and cancer genomics.

Dr. Spector has a RO1 grant looking at HPV genetic integration. "Sometimes these cancers become hard to treat based on where the genome is altered," he said. "My overarching project is to look at where those integration events are happening and how they predict the chance of cure."

Two surgeon scientists have recently been recruited. Dr. Joshua Smith's

research is focused on unraveling mechanisms of tumor immune evasion and discovery of translational biomarkers of response to immunotherapies in head and neck cancers. Dr. Steven Chinn's research is deeply translational, exploring the molecular genetics of head and neck cancers, including oral cavity cancer and HPV+ pharyngeal cancer and larynx cancer, with a particular emphasis on cancer plasticity, transdifferentiation, and deconstructing the tumor microenvironment through the integration of spatial-omics, digital pathology/virtual staining, and artificial intelligence.

Despite the current uncertainty of NIH funding, the HNS group is still extremely active and pursuing research from current grants and applying for new grants, both within the NIH and without. "We're using our foundation resources to help leverage other kinds of novel mechanisms of funding through philanthropy," Dr. Spector said. "Overall, we're still going full steam ahead to try to defeat head and neck cancer."

Dural invasion in olfactory neuroblastoma is associated with delayed recurrence

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surgery were statistically more likely to have delayed cancer recurrence in their neck lymph nodes compared to those without pathologic evidence of dural invasion. Interestingly, even when accounting for other factors such as cancer stage, tumor, patient age, and treatment method, pathologic evidence of dural invasion was still the strongest predictor of disease recurrence in the neck. Another notable finding of our study was with regard to the timing of recurrence. Our study demonstrated that differences in neck recurrence-free survival and any recurrence-free survival between patients with and without pathologic evidence of dural invasion were not significant at the 5-year mark but became statistically significant at the 10-year mark, indicating that neck recurrences occur in a delayed fashion. We believe these findings support the anatomical evidence linking the lymphatic systems of the dura and neck and the possibility of a direct pathway for cancer to spread from the dura to the neck. Altogether, these findings highlight the need for more frequent and long-term surveillance, for routine reporting of dural invasion on pathology reports, and for consideration of pathologic evidence of dural invasion as a factor in deciding which patients require prophylactic treatment of their neck with radiation or surgery. Future prospective studies of patients with pathologic evidence of dural invasion may help elucidate the utility of prophylactic treatment of ONB patients and further advance the management of this rare disease.

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.....	412-338-1919 <i>Counseling, support groups, health and wellness, family programs</i> 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.....	412-647-2811 <i>Research, clinical trials, referrals, patient resources, and support</i> 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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