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

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UPMC Otolaryngology receives five more years of support from the National Cancer Institutes (NCI)

By Jonas T. Johnson, MD

Chair, Department of Otolaryngology, Eye and Ear Institute

Progress in medicine requires research. Careful study of patients with cancer, their treatment, and the resulting outcomes constitute research. Other kinds of research are undertaken entirely in the laboratory using test tubes and, sometimes, experimental animals. At the intersection between laboratory research and research done in the hospital is translational research. This reflects the opportunity to take ideas and findings from the laboratory and to actually begin to test them to determine if something new and meaningful has been discovered.

Cancer research requires a sustained commitment to a better understanding of human biology, factors influencing the development of cancer, and the factors which allow cancer to grow and spread. The Department of Otolaryngology at the University of Pittsburgh has been privileged to have sustained funding from the National Institutes of Health and the National Cancer Institute to support our research in cancer involving the mouth and throat (head and neck). An NIHsupported Center of Excellence for Oral Cancer was first funded in the Department of Otolaryngology in 1995. This original grant was succeeded by funding for a Specialized Program of Research Excellence (SPORE) in Head and Neck Oncology from the National Cancer Institute. The SPORE, now in its 10th year, requires renewal every five years. Funding at the NCI is competitive and is based upon the availability of funds and other deserving research currently being considered. We are pleased to announce that another five years of funding for head and neck oncology through the NCI mechanism of the SPORE is highly likely. The renewal application has received a very favorable and fundable score. Final notice of funding is expected to be received soon. We anticipate there will be no lapse in the research which is currently ongoing. Robert L. Ferris, M.D., Ph.D., currently is the leader of our SPORE activities.

Love beats cancer

By Glenn Brooks
Cancer Survivor
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It was around 2 o'clock in the morning, and I was walking around the track at Cathedral Prep School in Erie Pa., and a gentleman tapped me on the shoulder. He said "You know, you said something earlier that will stick with me forever." Not recalling specifically what I said, I inquired and he replied "You said, love beats cancer." And his proclamation of the impact of that statement has left a defined mark on me.

You may be asking why exactly were you walking on a track at 2 o'clock in the morning in Erie? The answer is simple. For the past two plus years, I have had the tremendous honor to serve as a Voice of Hope for the American Cancer Society, and in that role, my travels take me to the many Relay for Life events with the mission to share my cancer story with others, and offer words of encouragement.

And I guess that's where that sentiment "love beats cancer" was formed in my heart.

Lets face it, cancer is not a goal, and its not a curse. I imagine it is somewhere in between, depending on how your experience changes you – your outlook on life, your determination of the oftpondered WHY ME, and your personal revelation of what are you going to do about it.

When I look back to September of 2011 when those dreaded words were heard – you have squamous cell carcinoma originating in the base of your tongue, and it has travelled into your lymph node – it changed me. The excision of the lymph node, removal of the tonsils, the subsequent chemotherapy with Cisplatin, the radiation treatments, exclusive Peg Tube feedings, and the life-saving hydration sessions make for some challenging times.

Yet in the end, the experienced pain is barely a memory, the neuropathy is annoying but not debilitating, and some foods that can no longer be enjoyed remain as new normal. I guess in the long run, I was lucky, lucky indeed.

Lucky? Not so much. I'll give all of the

credit to love. Not love the emotion, rather love the action...from the good Lord above, my wife and daughters, my entire family, my friends from various sources, and those strangers from the Relay for Life community who were supporting me – even when I didn't know them, and they didn't know me. This support isn't just for me, it is for you, and every cancer survivor and caregiver out there. Embrace that friends.

And you can bet, when my wife was diagnosed with non-differentiating follicular thyroid cancer, that love was called upon once again, and my encouragement and hope message needed to be delivered just too close to home for my liking. Her treatments are completed, her new normal is being recognized, and that chapter of our story has turned a page...to the hope of a long, prosperous together – us two cancer survivors, lifting each other up, surrounded with love.

Get it...love beats cancer.

Having a voice in the fight against cancer

*By Marina Posvar*Patient Navigation Services Coordinator
Hillman Cancer Center

Pink is everywhere – I know! As a two time survivor of breast cancer, I am one of the first to admit that. But when I was diagnosed with cancer, all of the pink in the world could not take away my legitimate fears of having to leave my three- and five-year-old sons without a mother. And with the second diagnosis five years later, my life changed and I became a single mom, the fear only grew! But, I am here to talk about it— so I consider myself extremely blessed and thrilled to be here!

My cancer led me to wanting to give back somehow. I now work at the Hillman Cancer Center as a Patient Navigator, helping guide patients to education, services, and support within the center and in the community. I very quickly became aware of many more colors than pink. And with that, I became increasingly aware of the incredible lack of funds for cancer research for all cancers. We are talking about life-saving research that not only helps patients in their journey but has very real promise to eradicate the

disease. This revelation began my journey of being an advocate and speaking up not only for me and my boys, but for everyone and anyone who is touched by cancer, or will be.

I volunteer with the American Cancer Society (ACS) where I learned about their nonprofit and nonpartisan advocacy affiliate, the American Cancer Society Cancer Action Network (ACS CAN). I have never been politically inclined, or even interested, frankly, but through ACS CAN I learned that many of the most important decisions about cancer are not made in the doctor's office; instead they are actually made by your state legislature, in Congress, and in the White House. So I joined ACS CAN (it's a \$10 yearly membership fee – pretty good deal – less than a buck a month!), and now I can not only learn about what decisions are being made, or not being made, but I have a strong voice. I am actually being heard and making a difference.

What are some of these issues besides increasing funding for cancer research? Providing potentially life-saving cancer screenings for all people whether they can afford it or not, protecting everyone's right to breathe smoke-free air by passing and implementing smoke-free laws, adequately funding tobacco cessation programs, protecting our children from the manipulative marketing tactics used by the tobacco industry to addict kids to their deadly products, and improving the quality of life for patients and their families battling chronic diseases like cancer.

One very special ACS CAN campaign right now that is true to my heart is the quality of life initiative. This is federal legislation to improve the lives of cancer patients during and after treatment through palliative care. Palliative care programs provide relief from pain, stress, treatment side effects, and they help provide coordinated patient care. While many associate palliative care with endof-life decisions, the truth is that this type of care is appropriate for patients of all ages and at any stage of their illness. In fact, palliative care services may already be available where they are being treated. But of course, there are many facilities across the country that do not offer it, and we would like to change that. ACS CAN supports legislative efforts to teach more doctors about palliative care, invest

in research to improve patient quality of life, deliver high-quality palliative care services in hospitals, and eventually expand that to community sites. ACS CAN supports legislation that will make palliative care more easily available to those who need it. I truly believe that this is important.

ACS CAN educates me and hundreds of other grassroots volunteers across the country on what is happening in Washington, D.C. and Harrisburg in relationship to cancer. They also provide us with very easy tools to help make cancer a priority in our state and national capitol buildings – helping me schedule visits and send emails to lawmakers, and reach out to media to make a difference in the fight against cancer. It really works – elected officials do listen to their constituents.

Having the option to change the face of cancer empowers me! I now have a strong voice in the fight against cancer – they hear me roar – and to me, that feels great!

To learn more about The American Cancer Society Cancer Action Network visit www.acscan.org.

The importance of nutrition

By Jennifer Moy, MD Resident, Department of Otolaryngology University of Pittsburgh Medical Center

Food is a pleasure we all too easily take advantage of. That is until you can no longer have it, nor desire it. We were born to feed every two hours, and require a strict intake of vital nutrients. As we age, our bodies learn to store these nutrients and are able to survive for days without food. But when our metabolism outweighs our intake, then our nutrient stores, the body has no choice but to break down any available energy source to keep our vital organs alive. We start breaking down fat first, then muscles. Throw in a rapidly growing tumor that chews through these energy sources, and we are up for a good fight.

Malnutrition is seen in 50-70% of head and neck cancer patients. These cancers often affect the mouth, throat or voice box, each affecting the ability to swallow. Alcohol and tobacco, known

risk factors for head and neck cancer, frequently place patients at a baseline malnourished state. Alcohol is devoid of essential vitamins, proteins and fats, but requires certain nutrients to digest, further depleting nutrient stores. Adequate nutrition is even more vital to the cancer patient because of the destructive effects of treatment. No matter what route one chooses, whether surgery, radiation, chemotherapy or any combination, there is harm done. Anatomy is altered with surgery. Radiation and chemotherapy cause dry mouth, tender tissues, altered taste, nausea and vomiting. In order to recover from this damage, the body enters an energy consuming state to make new cells, new bonds, new tissue. And we need nutrients to do this.

Many studies have shown that poor nutrition portrays poorer outcomes and quality of life. Specifically, weight loss reduces immune function and increases susceptibility to post-operative complications, including wound healing. Studies have shown that improving nutritional status prior to treatment decreased morbidity by 50%, with decreased infections, as well as length of hospital and ICU stay.

Key nutrients known to improve healing and recovery after cancer treatment include protein, specifically arginine and glutamine, omega-3 fatty acids, vitamins A and C, and zinc. Arginine and glutamine are conditionally essential amino acids. Under normal conditions, our bodies do not require intake of these proteins. However, under stressful conditions, the stores are rapidly depleted and intake becomes necessary. These proteins play an important roll in cell growth for wound healing. Production of nitric oxide allows local vasodilation, leading to improved circulation at the surgical site, supporting the increased metabolic demand by wound healing and decreasing postoperative complications. It also improves immune function, enhancing cancer killing potency, improving overall survival and decreasing local

recurrence. Glutamine induces heat shock protein production, improving tolerance to treatment, and reduces inflammatory product formation, reducing the severity of treatment side effects, such as mucositis. Omega-3 fatty acids are converted into anti-inflammatory mediators and supplementation during treatment is associated with decreased wound infections, and an increase in the lean body mass. Lastly, vitamins and minerals, specifically vitamins A and C, and zinc have anti-oxidant functions and improve cellular stability with improved wound healing.

Head and neck cancer patients present a unique nutritional challenge. These patients are often malnourished at baseline due to swallowing difficulties. They go on to develop further swallowing problems as a result of surgical resection or radiation therapy, making efficient nutritional intake imperative in the peri-treatment period. Studies have shown that diets supplemented with arginine and glutamine, omega-3 fatty acids, vitamins A and C, and zinc improve outcomes.

Many supplemental drinks are loaded with these nutrients; however, you can find them in a variety of foods to add to any diet:

Arginine: Shellfish, soy protein, spinach, seaweed, turkey, fish

Glutamine: Beef, pork, chicken, fish, liver, dairy, eggs, red cabbage, nuts, beans and legumes

Omega-3: Seeds (flax, chia), fish, nuts, broccoli, spinach

Vitamin A: Sweet potatoes, carrots, dark leafy greens, winter squashes, romaine lettuce

Vitamin C: Bell peppers, guava, dark leafy greens, kiwi, broccoli, berries, oranges, cooked tomatoes

Zinc: Seafood, beef, lamb, wheat germ, spinach, pumpkin seeds, cashews, chocolate, mushrooms

References: Evans DC, Martindale RG, Kiraly LN, Jones CM. Nutrition Optimization Prior to Surgery. Nut Clin Practice. 2014;29:10-21. Gee AC, Kiraly LN, McCarthy MS. Nutrition Support and Therapy in Patients

with Head and Neck
Squamous Cell Carcinomas.
Curr Gastroenterol Rep.
2012;14:349-355.

Mrs. Claus Club of North Hills brings comfort to cancer patients year-round

By Jeana Watenpool Founder and President

The Mrs. Claus Club organization was founded by a group of women who have been friends since childhood. Over the years, their lives have taken many turns but with each path they chose, the road always

led back home. Now in adulthood, they share yet another bond. Each had a parent diagnosed with cancer. This began the journey of Mrs. Claus Club in Knox, Pennsylvania. Bentleyville Pa. was the second chapter and North Hills is the third chapter of the Mrs. Claus Club. Each of the clubs consist of a group of Godly women who are more than blessed to join in with this huge act of kindness, making a difference, and giving hope to the recipient.

The Pittsburgh North Chapter of Mrs. Claus Club is a non-profit organization founded six years ago. Our mission statement states that we are dedicated to bringing comfort to women and men undergoing cancer treatments, bringing hope, love and the opportunity to pray for each recipient. We are a group of Godly women dedicated to helping others during this battle for life. Each member of our board has seen someone close to them struggle with cancer. The organization provides a comfort basket to the recipient to aid in the battle against cancer containing support literature, a copy of Eating Well with Cancer cookbook, Mrs. Claus Club mug, a journal, Biotene mouthwash, mints, gift card, lip balms, note cards, tea, devotion, worship CD, chemo cap, hand sanitizer, and knitted items.

One truly special and unique item in each comfort basket is a prayer shawl, which is knitted by women who donate their talents and time to this worthy cause. As the shawls are knitted, prayers are said over each stitch for the future recipient who will be blessed with the shawl. We appreciate our many knitters who have donated prayer shawls. If you

would like to knit or crochet for our organization, please contact us.

Our organization doesn't simply drop off the baskets and move on to the next

recipient. Forever friendships and connections often develop from these visits. When a basket is delivered by Jeana Watenpool, founder, she visits with the patient, explaining the items in the basket and the purpose of the club. Often when we walk into a home or cancer center, the recipient looks

defeated. After receiving the basket, visiting together and the opportunity to pray, a change has taken place. The recipient's hope has been restored.

You can support the Mrs. Claus Club by attending our 6th annual fundraiser on Sunday, November 1st at noon at the Cumberland Woods Village Conference Center in Allison Park.

For more information, or to knit or crochet a prayer shawl, send an email to mrsclausclubnorth@gmail.com or call 412-367-8026.

When you have a friend, family member or co-worker diagnosed with cancer, this is one way you can rally around them by providing hope for their journey by requesting a comfort basket.

Together, we can make a difference.

HPV: a preventable cancer

By Susan E. Calderbank, DMD

HPV or the human papilloma virus is the most common sexually transmitted disease in the world. Every day in the U.S., about 12,000 people ages 15-24 are infected with this pathogen. The vast majority of them will clear this condition naturally and never know that they were exposed or had this infection. However, this virus is playing an increasingly important role in oral cancer. The incidence of HPV-positive oral squamous cell cancer (OPSCC) is increasing rapidly and it is not unusual to hear this referred to as an epidemic! From 1984 to 2004 there was a 224% population-level increase in HPV OPSCC. The HPVpositive oropharyngeal cancers have now

surpassed those caused by tobacco and alcohol use. HPV oral and oropharyngeal cancers are harder to detect than the tobacco related cancers because the symptoms are not always obvious to the person developing the disease and to the professionals who are looking for it.

The typical patient with HPV-positive OPSCC is a middle-aged non-smoking white male from a higher socio-economic status with a history of multiple sexual partners. Men are 4 times more likely to get this disease than women. The ongoing trend worldwide has shown a decrease in the age of initial sexual activity and an increase in the number of sexual partners, contributing to HPV exposure. Various surveys done in middle schools have illustrated the fact that young children in the fourth and fifth grades are experimenting with oral sex.

Patients with HPV-positive OPSCC present with small, asymptomatic primary tumors and more advanced nodal disease. Patients often seek medical attention due to a swelling or mass in the neck. Tobacco use and decreased immune status also play a role in this cancer's development.

At this juncture, it is important to review the signs and symptoms of oral cancer:

- an ulcer or sore that does not heal in 2-3 weeks
- difficult or painful swallowing
- a persistent sore throat or hoarse voice
- a swelling or lump in the mouth
- a neck lump which has been there for more than 2 weeks
- constant coughing
- an ear ache on one side which persists for more than a few days

Treatment modalities include both chemotherapy and head and neck radiation. As always, it is very important to have a complete dental evaluation prior to beginning treatment to minimize the oral side effects. In addition, it is essential to have good follow up dental care on a regular, life-long basis. This would include the daily use of fluoride trays, stretching exercises and having three month dental evaluations as opposed to the usual practice of 6 month dental visits. Your family dentist should be well equipped in dealing with the special needs of cancer patients.

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Offering head and neck cancer screening together with CT screening for lung cancer could be beneficial

By Brenda Diergaarde, PhD Assistant Professor of Epidemiology University of Pittsburgh Graduate School of Public Health and University of Pittsburgh Cancer Institute

Unfortunately, most head and neck cancers are currently diagnosed at a late stage when survival rates are low. When caught early, at the time that the cancer can still be successfully treated, survival rates are much better. Regular screening for head and neck cancer may result in earlier detection and diagnosis and, thus, in lower disease-related morbidity and mortality. However, to date, no effective screening strategy has been identified. Given that only a relatively small number of individuals will develop head and neck cancer, screening for this cancer in the general population, as for instance is done via regular colonoscopies for colorectal cancer, is impractical and ineffective. But, screening of only those at high risk of head and neck cancer may be more successful.

Recent results from a large national study on lung cancer screening showed that screening of subjects who smoke a lot of cigarettes with low-dose computed tomography (CT), a particular type of scan, reduces lung cancer mortality. Based on these results several organizations, including the U.S. Preventive Services Task Force and the American Cancer Society, are now recommending annual screening for lung cancer with low-dose CT in individuals aged 55 to 74 years who have a smoking history of at least 30 pack-years (an average of one pack a day for 30 years) and currently smoke or have quit within the past 15 years.

Since early February 2015, Medicare is

For additional topics on the prevention, detection and treatment of cancer, including head and neck cancer, visit http://www.upmccancercenters.com/portal_headneck/publications.cfm for archived issues of Headway.

Head & neck cancer support groups

Two cancer support groups, primarily for head and neck cancer patients, family members, and caregivers are available in the Pittsburgh area. The two locations are:

North Pittsburgh – Baierl Family YMCA Wexford/Franklin Park, 2565 Nicholson Road, Sewickley, Pa. Meets the fourth Saturday of the month. To register, call 412-864-2532.

South Pittsburgh – UPMC Cancer Center, Upper St. Clair 200 Oxford Drive, Suite 500, Bethel Park, Pa. Meets the first Wednesday of the month. To register, call 412-622-1212.

covering lung cancer screening with low-dose CT once per year for Medicare beneficiaries. Given that cigarette smoking is also one of the main risk factors for head and neck cancer, we hypothesized that it may be useful to screen right away for head and neck cancer those for whom annual lung cancer screening is now recommended. As a first step to determine if this would indeed be beneficial, we conducted a study to determine whether new head and neck cancer cases were more common among those targeted for lung cancer screening than in the general U.S. population. Results of this study, which was led by Dr. Brenda Diergaarde, were recently published in the journal Cancer (http://onlinelibrary.wiley.com/ doi/10.1002/cncr.29189/abstract). Other investigators involved were: Ronak Dixit, Joel L. Weissfeld, M.D., M.P.H., Paula Balogh, D.N.P., F.N.P., Pamela Sufka, and Jennifer R. Grandis, M.D., F.A.C.S., all of Pitt; and Jill M. Siegfried, Ph.D., of the University of Minnesota.

Using data from the so-called Pittsburgh Lung Screening Study (also known as PLuSS), a cohort of current and former cigarette smokers that has been followed for lung cancer since 2002, we found that head and neck cancer was significantly more often diagnosed among those targeted for lung cancer screening than in the general population. In the general U.S. population, 42.5 per 100,000 people would be expected to develop head and neck cancer annually. Among the PLuSS participants, the rate was 71.4 cases annually per 100,000 people. This suggests that it may indeed be useful to examine individuals who come in for lung cancer screening to also screen for head and neck cancer. In order to move forward, and before implementing offering head and neck cancer screening together with CT screening for lung

cancer, it will be important to determine whether such screening actually reduces mortality and/or morbidity among those at risk. Harms related to overdiagnosis and overtreatment, including unnecessary patient anxiety, may all present barriers to screening and should be evaluated first.

We are currently collaborating with other investigators to design a national trial that would determine if regular head and neck cancer screenings for people referred for lung cancer screenings would reduce mortality and/or morbidity.

HPV: a preventable cancer continued from page 4

There is no cure for the HPV virus. The good news is that there is now a vaccine which protects against the strains of HPV which cause cancer. Gardasil and Cervarix vaccines are most effective if given to children before they become sexually active. The National Advisory Committee on Immunization Practices recommends routine HPV vaccinations for females ages 11-26. The Oral Cancer Foundation has advocated to the CDC for vaccination of boys and men ages 9 through 26, to help protect the next generation from HPV caused cancers. To date the most prevalent side effect is slight soreness at the site of injection. Plain and simply put, the HPV vaccine is cancer prevention! Despite the almost non-existent risks and the highly effective nature of this vaccine, less than 38% of girls in this country are being vaccinated and less than 9% of boys. As a dentist, I have personally seen the side effects of treatment for head and neck cancers and would strongly advocate for parents and grandparents to make sure we work to reduce this risk in our children by utilizing this vaccine.

Swallowing Disorders Center

The UPMC Swallowing Disorders Center is dedicated in helping patients with swallowing problems as they undergo treatment for head and neck cancer. Early intervention with swallowing exercises has been linked to better quality of life outcomes. It is highly recommended that patients be seen by the swallowing team to begin a therapy program as soon as the plan for treatment has been identified.

The process begins with a swallowing evaluation to assess baseline swallowing function and to identify if posture changes, swallowing strategies, and/or diet modification will help the patient swallow better. While some patients require a feeding tube during the course of treatment, the ultimate goal is to return to eating and drinking as soon as possible. We provide assistance during the transition from a modified diet or tube feedings back to a regular diet. When returning to a regular diet is not possible, we help to develop an individualized plan to take certain foods or liquids safely.

We recently completed a study in which weekly questionnaires were given to eleven patients as they underwent chemo-radiation therapy to help us better understand what patients experience during the phases of treatment. This type of information is helping us tailor our therapy approaches to achieve better outcomes. For most, increased difficulty with swallowing occurs toward the end of treatment and may even last a few weeks after the completion of treatment. Once patients are feeling better, the goal is to re-establish the exercise program and begin aggressive intervention so patients can return to an oral diet safely. The team is also participating in a multi-center study involving a special device to exercise the tongue. The device measures baseline tongue pressures so patients can improve strength with practice and meet specific target goals. Grip strength assessments are also being used in the center to determine if there is a relationship between weakness and dysphagia (difficulty swallowing).

The UPMC Swallowing Disorders Center has two locations:

• UPMC Eye & Ear Institute (Oakland) 412-647-6461 • UPMC Shadyside 412-621-0123

Clinical trials

For more information about head and neck clinical trials, contact Amy at 412-864-1728 or Denise at 412-864-3759.

Contact information

Contact iniormation
American Cancer Society1-800-227-2345
Assistance with Coping412-623-5888
Cancer Caring Center412-622-1212
Cancer Information and Referral Services412-647-2811
Clinical Trials412-864-1728 or 412-864-3759
Eye & Ear Foundation
Family Care Giver Education and Support412-623-2867
Gumberg Family Library412-623-4733
Head and Neck Cancer Support Groups
North Pittsburgh (Wexford/Franklin Park)412-864-2532
South Pittsburgh (Bethel Park/Upper St. Clair)412-622-1212
Hopwood Library at UPMC Shadyside412-623-2620
Hyperbaric Oxygen Treatment412-647-7480
Our Clubhouse
Pain and Supportive Care412-692-4724
Project of Love (comfort pillows)724-266-8007
Prostate Cancer Support Group412-647-1062
Satchels of Caring Foundation412-841-1289
Swallowing Disorders Center
UPMC Eye & Ear Institute (Oakland)412-647-6461
UPMC Shadyside
UPMC Division of Sleep Surgery
Mercy412-232-3687
Monroeville412-374-1260
American Cancer Society websitewww.cancer.org
Head and Neck Cancer Program
websitewww.upmccancercenters.com/headneck
Hillman Cancer Institute websitewww.upci.upmc.edu

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 Cancer Program of UPMC Cancer Centers at www.upmccancercenters.com/headneck.

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