Dental Oncology: Why Oral Health Matters in the Treatment of Oral and Head and Neck Cancer

Dennis M. Abbott, DDS

April is Oral and Head and Neck Cancer Awareness Month - a time to raise awareness about the risk factors and symptoms of oral and head and neck cancers, a month to focus on research that will lead to advancements in treatment, improved outcomes, and a time to recognize the lives of those who have been touched by these maladies. While setting a month aside to promote awareness is beneficial, the fact remains that for individuals battling oral and head and neck cancer each and every day is an inescapable moment of awareness. Oral and head and neck cancers continue to leave an indelible mark on virtually all of life’s shores; crashing waves between health, personal image, emotions, nutrition, and finances. Yet in the midst of the storm, a strong cancer care team can act as an anchor, providing necessary care and support. For those touched by oral and head and neck cancers, the dental team committed to systemic and oral health, well-being, and quality of life before, during, and after cancer treatment should serve as an integral member of this team.

What is dental oncology and why is it important?
Dental oncology is an area of care that combines aspects of dentistry and oral medicine with an understanding of cancer therapy. The result is not simply dentistry, nor is it only oral medicine that meets the unique oral health care needs of people battling cancer. Having a dental oncologist on your care team means having someone who understands that dry mouth after head and neck radiation is more than just a feeling you get when you’ve had one too many glasses of wine...that dry mouth reduces your quality of life when you can’t get your lips apart without water or when you wake up in the middle of the night with your tongue stuck to the roof of your mouth; that dry mouth makes it difficult to taste, or chew, or swallow and as such, affects nutrition; that dry mouth presents a health risk, making you more susceptible to dental decay and oral infections. But beyond simply understanding these results of treatment, the dental team is prepared to manage and care for not just dry mouth, but all the oral side effects that come with cancer treatment.

The relationship with the dental team is ideally formed as soon as possible following the diagnosis of cancer. The probability of experiencing an oral side effect that will diminish overall health or quality of life during treatment for oropharyngeal cancer is virtually 100%. Having a baseline assessment completed before the commencement of cancer treatment allows members of the dental team to have a pre-treatment reference point that can be important for the purpose of comparison at future visits. For the person with a newly diagnosed oral cancer who has not received regular dental care, a prompt visit will allow for immediate attention to previously unaddressed periodontal issues and pending dental needs before cancer treatment begins. Research has shown that the presence of unresolved dental and oral health issues before cancer treatment increases not only the incidence of oral complications during cancer treatments, but also their severity. A high concentration of intraoral bacteria elicits an inflammatory response and can increase the incidence of severe oral complications. During cancer treatments, bacterial components of dental plaque, calculus (tartar) and oral biofilm can easily become vehicles and serve as a portal of entry for bacteria to get into the bloodstream and become a source of infections. Properly addressing these oral health concerns at a pre-treatment stage can diminish their unwanted effects.

But what are these unwanted side effects of cancer therapy? Treatment for oropharyngeal cancer often includes surgery, radiation therapy, and chemotherapy or some combination thereof. When head and neck radiation is included in the mix, unwanted oral side effects are virtually inescapable. During treatment, these can include xerostomia (dry mouth), mucositis (mouth and throat sores), and oral infections that can be of a bacterial, fungal, or viral nature. Often, people undergoing treatment for oropharyngeal cancer experience taste alteration; inability to chew effectively; difficulty or an inability to swallow. 

DENTAL ONCOLOGY continued on page 2

“Like” SPOHNC on Facebook
What is Xerostomia?

Xerostomia, or dry mouth, is perhaps one of the most widespread oral complications affecting people undergoing treatment for many kinds of cancer. Severe dry mouth can sometimes occur as a direct effect of chemotherapeutic agents, but is almost always present as a direct effect of damage to the salivary glands in individuals receiving radiation therapy to the head and neck. Salivary glands are comprised of two types of secretory cells: one, known as serous, produces the watery component of saliva; and the other, known as mucous, makes the thicker, viscous part of saliva. Normally these two cells are in balance and produce a saliva which is neither too watery or too viscous. After being affected by ionizing radiation therapy there often is a change in the quality and later, a diminishing in the quantity of saliva.

Saliva is critical for normal oral function, and the repercussions of its absence are quickly noticed. Saliva promotes the healing of damaged oral tissue. It contains antimicrobial factors that protect against many bacteria and fungi, buffers the oral pH to keep the acid by-products of bacteria from decaying the teeth and contains calcium and phosphate to help remineralize the teeth. The chemical process of digestions begins with enzymes in the saliva that helps to break down starchy carbohydrates we eat. Even swallowing is facilitated by the presence of saliva. Without saliva, many other oral complications are exacerbated including dental caries which advances more rapidly and on surfaces of the teeth normally not affected by decay. Rampant caries can lead to pain, infections, and even systemic illness, especially in the person whose immune system has already been weakened by chemotherapy. Salivary loss can also lead to tongue discomfort, difficulty speaking, bad breath, oral soreness and burning, and an inability to wear dentures. The effects of xerostomia can extend from the annoyance of slight cotton mouth sensation to dealing with such severe oral dryness that nutrition, systemic health, oral health, well-being, and quality of life are all greatly impacted.

Depending on the dose of radiation received by the salivary glands, the duration of xerostomia can be either short-lived or long-term in people who have received head and neck radiation. For those whose salivary gland function is only temporarily affected, concurrent side effects such as susceptibility to dental decay or chronic bad breath may resolve with returned salivary flow. For others who experience long-term effects, chronic xerostomia often means a change in lifestyle with regard to eating certain foods and oral hygiene practices. Regardless of the longevity of the effect of dry mouth, those affected should know that xerostomia is manageable. A dental oncologist, and an aware family dentist can be a valuable health care provider in dealing with dry mouth and its effects.

What is Mucositis?

Mucositis is an inflammatory process that results from tissue damage secondary to chemotherapy or head and neck radiation.
therapy. Damage is done to the bottom cell layer of the oral mucosa, the result of which is a very deep and often profoundly painful sore. Mucositis will present as redness or ulcerations on the lining of the cheeks, the tongue, the hard and soft palate, or throat. Because of the ulceration, the risk for systemic infection is increased by the microbial assault combined with simultaneous immunosuppression.

The severity of chemotherapy-induced mucositis is correlated to the concentration of white blood cells present. When white blood cell counts are at their lowest, the individual is at the greatest risk for developing mouth and throat sores. As the number of white blood cells rebound, the mucositis will resolve and the risk for infection diminish. Oral mucositis typically shows up about 5 - 10 days following the initiation of the head and neck radiation treatment regimen and usually lasts for up to one month.

Some personal parameters are believed to influence the incidence and severity of oral mucositis: age and gender; other diseases present in addition to cancer such as AIDS, diabetes, and kidney disease; preexisting periodontal disease (gum disease); genetic factors; nutritional status; and alcohol and/or tobacco use. In mucositis, the person may actually be able to feel the effects of the condition before ulcerations are actually visible in the mouth or throat. These ulcers can become painful and debilitating where the patient may become unable to eat or drink, thus risking systemic nutritional deficiencies or dehydration. Symptoms can even become so severe that it may become necessary to alter the cancer treatment schedule until the mucositis is resolved. Survivors state that mucositis is the one oral problem associated with cancer therapy that most affected their quality of life.

Mucositis is not a condition that simply must be endured. There is much that can be done to prevent the occurrence and minimize the severity of mucositis; and if mucositis does occur, it can be managed and treated by a dental oncologist who understands the causative factors and knows how to minimize the health risks associated with it. People battling oral and oropharyngeal cancers should know that treatment options beyond the often-ineffective so-called Miracle Mouthwash exist - options that often bring about comfort and an accelerated resolution of oral lesions to those affected.

**Osteonecrosis of the Jaw**

Osteonecrosis of the jaw is a condition of bone death that is brought about by an impaired capacity for the jawbone to heal. Two oncology therapies are most often associated with osteonecrosis: radiation therapy that involves the jaw bones and a type of IV drug therapy - known as bisphosphonates – which are used to treat metastases to the bone from a variety of cancers.

When osteonecrosis occurs subsequent to head and neck radiation therapy, the condition is known as osteoradionecrosis. Osteoradionecrosis is a late effect of radiation therapy, that is, one in which the risk increases over time. Osteoradionecrosis is a relatively rare event that most often happens when bone that has received radiation therapy is later traumatized, for example when a tooth is extracted. It is a complex process that stems from changes to small blood vessels and tissue death that is brought about by an impaired capacity for the jawbone to heal. The result of osteoradionecrosis is an exposed area of bone, around which the tissue is often inflamed and painful. If the osteonecrosis is caused by a dental extraction, the result is usually an open wound where the socket will not heal. Necrotic bone in the jaw presents a serious infection risk, in addition to causing bad breath and sometimes pain. Osteoradionecrosis of the jaw can be managed although it is difficult to do so. Healing is often slow and management requires regular visits with the dental oncologist or oral surgeon. Ideally, actions that could cause an incidence of necrotic bone should be avoided.

In almost all cases, the benefit received by the head and neck radiation or IV drug therapy far outweighs the risk of developing an occurrence of osteoradionecrosis of the jaw. Often, osteoradionecrosis can be avoided if the person explains his or her cancer treatment history to the dentist. If the dentist does not understand the risks associated with the treatment, the individual should seek the service of a dental oncologist or a dentist knowledgeable in the care for individuals who have received head and neck radiation.

Because osteoradionecrosis is a late term effect of radiation therapy, the person must be vigilant to avoid dental procedures that would traumatize the jaw bones for the remainder of his or her life.

**Conclusion**

In all cases, individuals affected by oral and head and neck cancers must make a renewed commitment to oral hygiene for the remainder of their lives. Even for those who must have all teeth removed before undergoing cancer treatment, issues with the bone and soft tissues of the mouth still demand life-long attention and care. All must understand that oral health is not independent of overall health, and that the two are intertwined through well-being, nutrition, and quality of life. For those affected by oral and head and neck cancers, the mouth becomes an acutely important area of the body. Disease and treatment can wreak havoc on the normal state of oral health. Having someone on your side who understands the risks, who can manage the conditions, and who can help navigate through the storm is important. An aware dental provider or dental oncologist who can manage oral health, meet dental needs, and mitigate the risk of complications should be a member of every oral, head and neck cancer survivor’s health team from the time of diagnosis for the remainder of his or her life.

Thus, as we take a month to focus on oral and head and neck cancers, listen to what your mouth is telling you: Commit to fight oral and head and neck cancers! Recommit to oral hygiene! Connect with your dental team who understands your fight and reconnect with your well-being and quality of life! Additionally, commit to an annual oral cancer screening examination. It just might save your life...again!

---

Editors Note: Dennis M. Abbott, DDS is the founder & CEO of Dental Oncology Professionals of North Texas, an oral medicine practice dedicated to meeting the unique dental & oral health needs of patients battling cancer. He holds a Bachelor of Arts in biology from Rice University in Houston, an honor graduate of Baylor College of Dentistry, & studied immunology, microbiology & oral medicine at the School of Dental Medicine, SUNY Buffalo. He is a member of the dental oncology medical staff at Baylor Charles A. Sammons Cancer Center & Baylor University Medical Center in Dallas, & serves as a consultant to the American Cancer Society in the development of oral monitoring guidelines for post-treatment cancer survivors & as a trustee on the board of the Jack T. Clark Foundation.

---

“Like” SPOHNC on Facebook
A TIME FOR SHARING... “My Story”

Why me? Isn’t that what every cancer survivor asks themselves? So, why me? Sometimes the answer is fairly obvious: People who are smokers are more prone to get lung, throat, and mouth cancer, drinkers are more likely to get liver cancer, persons with a family history of certain cancers may be genetically disposed to getting cancer as well as those who work with certain hazardous materials. But none of these scenarios apply to me.

So, why did I get laryngeal cancer at age 52? I am a healthy, active man who until my cancer diagnosis, never had anything worse than a pulled hamstring or chicken pox, with one notable exception which I will explain in a moment. I have always been confident about my health. Getting sick was not in my plans and I couldn’t fathom the journey I was about to take.

In looking back on my life, I think my vocal cord problems could have started at puberty. I was known for my unusual voice and in looking at my high school yearbook, a number of my classmates made note of my “distinctive” voice. Could it be that I had a pre-cancerous condition since around age 12 and this was the beginning of my journey through cancer? While this can’t be proven now, I believe there is a good chance that this theory is true.

At age 40, I lost my voice. I went to an ENT doctor who advised me that I would need a procedure to scrape and biopsy my vocal cords. Well, having never had an operation of any kind, this freaked me out. This would be the first of 6 biopsies to take place until age 52. Every few years, I would lose my voice and that would be the indicator that I needed to have another scraping. I considered these procedures to be little more than an annoyance and could not fathom that it would turn out to be cancerous. I remember one doctor telling me that this would likely turn cancerous at some point and my reaction was, “Yeah, sure!” I did not believe him.

In 2010, the biopsy came back malignant. I then consulted a number of doctors and chose the course of treatment which would be 6 weeks of radiation therapy. I asked my radiation oncologist about the side effects and she told me that I might get what would be the equivalent of a sunburn on my neck. OK, not so bad, right? Ha, I was in for a big surprise!!

First, the infamous mask!! I am claustrophobic and having that hot stuff poured on my face was torture!! Then getting used to it the first week was pretty rough. Nonetheless, I went for a 35 mile bike ride that weekend and felt great. On the following Tuesday, I told my nurse what I had done, and she scolded me, saying, you can’t be doing that!!! What a party pooper!! Well, I soon found out why. By the third week, I was absolutely sick. I told my assistant at my job that we better prepare for me not being in for a while. After that day, I was out for several weeks.

Radiation therapy on the neck is a rough experience – there is no sugar coating it. It gets worse before it gets better and the feeling of being sick can last a few months after the final treatment. I lost 80 pounds. Yes, I had been overweight, but I sure didn’t need to lose that much weight. I remember going out with the family one day and not quite realizing how much I lost around my waist, all of my pants fell down to the floor!!! I had to borrow a pair of pants from my Dad.

So, time marched on and I figure I am cured and for a year or so, I was. Then my doctor started seeing some growths again. They were removed and biopsied and the results were indicative of cancer. In August, 2011 my doctor recommended a laryngectomy. Well, I was totally freaked out and resisted this. I went to several doctors for second opinions and they all concurred with my doctor. I went to a laryngectomy support group to see how these survivors coped with their surgery and life thereafter. One man showed me his stoma. Well, I might as well have been looking at the Grand Canyon!!! I just broke down in tears. This man was so nice – he came over and comforted me.

In December, 2011, I met with my doctor and agreed to go ahead with the laryngectomy. On January 11, 2012, I had the surgery. I was in the hospital for 14 days. I could not believe how well things went. While in some minor discomfort, with one exception, I experienced very little pain. I wasn’t hungry either. Between the nose feeding tube and eating liquid and pureed food towards the end of my stay, I was well nourished. Also, by the second day, I was up doing a half mile lap around the hospital floor and a few days later, I had worked up to a mile. Nothing was going to keep me down!! A few weeks later, I participated in a fundraising event which involved riding on a stationary bicycle. My wife and I didn’t know how much riding I’d be able to do and we figured it would be rather limited. Instead, I did 2 hours on the bike!!!

2012, was mostly a great year. I was very active, I went back to all my activities: Bike rides of up to 50 miles, volleyball, jogging, weight lifting, ice skating, dancing, etc. After some speech therapy, I was able to talk again. I can no longer go swimming, but I am able to go into a pool up to my chest. Life was good.

Unfortunately, I ended up taking another turn in this adventure. I started having swallowing issues. In August, 2012, I had a growth removed and biopsied. The biopsy was benign but my doctor cautioned me that we couldn’t get too excited about this given my history. My swallowing started to improve and by October, I was eating everything. However, come November, my swallowing problems came back worse than ever. I went back to my doctor and he saw a large growth. Once again, I would need a procedure to remove and biopsy it.

On November 21, I underwent a procedure. The biopsy was negative but given these repeated growths, my doctor recommended further surgery to remove the “bad” section of my food passage and replace it with a skin graft. This was very disappointing news but there was no better option. I told my doctor that I must live a normal life and he assured me that everything I am doing now, I would be able to do after surgery.
On January 9, 2013, I underwent a 16-hour operation to remove my pharynx and re-create a new one from a skin graft from my left arm. I also had skin grafted from my right leg onto the left arm and skin from my left shoulder added to my neck. My wife expected that after such a long operation, I would pretty much be knocked out the following day. However, by 11 A.M., I was up watching TV, to my wife’s surprise. Within 2 days of the operation, I started doing laps around the hospital floor and was soon doing as much as 2.5 miles a day!! The medical staff was very pleased with my progress. I was very popular with the nurses who took pleasure in my progress and my positive outlook. In fact, one nurse said I was “the best patient ever!!”

One funny story: The doctor wanted me to have a CAT scan because there were some elevated levels in my liver (which turned out to be fine). They took me downstairs in a gurney and then brought me back up to the 17th floor. The staff member then made a call for lifting assistance. When the tech showed up, she saw it was me and had a big laugh by telling the guy, “Frank doesn’t need any lifting assistance!!” We both had a good chuckle!!

I was released from the hospital after 14 days. In a little more than 3 weeks, I again participated in a cancer fundraising event and spent 90 minutes on the spin cycle. The following Monday, February 4th, I returned to work, not even a month after my surgery. I have also returned to a normal exercise routine: jogging on my treadmill, walking, ice skating, shoveling snow, dancing, and playing volleyball. When the weather gets warmer, I will return to cycling and expect to have a stellar season.

At the time of this writing, I still have some swallowing issues but my doctor explained to me that I am still swollen and it will take time for the swelling to subside. This also affects the strength of my voice. But within these temporary limitations, I am functioning normally and as my doctor promised, I am doing everything now, that I did before the surgery.

Cancer is a bad disease, but my experience has not been all-bad. What good things has this journey brought me? Lots of love from family and friends. Re-kindling of old acquaintances. Getting to a more desirable weight. Lowering my blood pressure from slightly elevated to what is now very good levels. Getting into the best shape I’ve been in for quite some time. Making new friends through my support groups. Talking about support groups, I don’t know what I would have done without SPOHNC. I have certainly needed emotional support and advice through this journey and SPOHNC has been there for me. I have also met many inspiring persons and made friendships through our SPOHNC group. I have had the honor and privilege through SPOHNC to counsel those who seek my advice and insight.

I pledge to continue to live the life I aspire to and to help those who may face the challenges that I have confronted.

Frank Marcovitz
Frank@Queensvw.com
gmarc@aol.com

“Thanks for your March newsletter. Bob Brecht’s article nearly brought me to tears -- if I weren’t male, I’d admit to crying. Where do you get these fabulous stories?”

“Your newsletter has the right mix of those informational, medical, and technical articles for the brain, and human-interest stories for the heart.”

~ Mike S.
A Survivor’s Reflections of SPOHNC

No man is an island, no man stands alone.
Each man’s joy is joy to me. Each man’s grief is my one.
We need one another, so I will defend.
Each man as my brother, each man as my friend........Joan Baez

As a teenager, I often heard these words sung by Joan Baez. For some reason they stuck with me and never left. Then when I was diagnosed with oral cancer, they came back to me and I finally understood the full meaning.

Anyone diagnosed with cancer suddenly feels alone; feels that no one understands their problems and feelings and perhaps feels that they are on an island by themselves. But I soon found that there is no reason to “stand alone” as there are many others who have similar problems who are willing to share and support one another - to share their joys and their grief and to help one another. Little did I know that the lyrics from a song I had heard so many years before were describing the feelings of so many people prior to them becoming part of a support group; a support group of people with similar experiences and concerns and who could provide emotional and moral support for one another.

Prior to 1991, there were very few support groups, if any, specifically for oral, head, and neck cancer survivors, yet, there were many survivors in need of support. I was one of them. I knew the merits of support groups, having been involved in other groups. With this in mind, I set out to develop a support group dedicated to meeting the needs of oral and head and neck cancer patients and their families and friends.

On September 10, 1991, nine survivors met in a circle to share their “stories”. None of us knew one another and all of us were a bit nervous. But as we went around the circle sharing our stories, we soon found out that we had a lot in common. It was a wonderful feeling of camaraderie and understanding of one another’s needs. Yes, there were some tears, but when we parted; nine survivors had become friends who no longer felt alone.

This was the first meeting of a local SPOHNC support group.
That same group meets today, but with original as well as new members. Last month, fourteen survivors sat in the same room looking to one another for guidance and support. A husband shared his pride about his wife and her strength to go forward. A daughter shared her own personal journey while her mother was struggling with the treatments associated with this disease. A survivor’s son shared his feelings of apprehensiveness, worry and concern surrounding the many uncertainties of his Mom’s diagnosis. Here again, so many years later, those feelings of camaraderie and empathy prevailed.

Today SPOHNC, a 501 (c) (3) not-for-profit organization, serves a national population of cancer patients and their families and friends providing information, encouragement, and support. It is the center for all SPOHNC support groups providing whatever is necessary to help facilitators and survivors develop and maintain their groups. From its headquarters in Locust Valley, NY, the staff has helped to develop more than 120 local support groups throughout the United States and is presently in the process of helping to develop groups in Europe. However, SPOHNC is much more than support groups. This organization is the only one of its kind in the United States.

Whereas there was very little information about oral, head and neck cancer when I was diagnosed, SPOHNC now offers a great deal of information to the newly diagnosed and to their families and friends. Meeting the Challenges of Oral and Head and Neck Cancer, A Guide for Survivors and Caregivers is a book filled with information from diagnosis to survivorship and more. There is also a very unique book of recipes and resources for those who are coping with eating challenges. SPOHNC is now working on the Second Volume of Eat Well, Stay Nourished, A Recipe and Resource Guide for Coping with Eating Challenges which should be available in a couple of months. All of this and more information can be found on our website at www.spohnc.org.

In addition, there are more than 200 volunteers who participate in the National Survivor Volunteer Network (NSVN). The staff of SPOHNC is on the phone daily responding to patient’s needs and matching them with survivors in the NSVN. These members respond directly to patient inquiries regarding different aspects of diagnosis and treatment based on the similarity of their own survivorship experiences to that of the new patient. The staff also responds to patient callers regarding financial and dental concerns, insurance issues, etc. Sometimes callers just need someone to listen.

And to keep constituents informed of the latest developments in the diagnosis and treatment of oral, head, and neck cancer, SPOHNC offers a newsletter published 8 times a year. News From SPOHNC includes original feature articles, sharing stories by survivors, human-interest stories and Head & Neck cancer news.

Until ways are found to profoundly reduce the occurrence and severity of oral and head and neck cancer, a patient support organization, such as SPOHNC, is a vital component of the healing process for these patients. Such an organization can have an enormous positive impact on meeting the psychosocial needs of oral and head and neck cancer survivors as well as preserving, restoring, and promoting their physical and emotional health.

Having been part of this ever growing organization has been the most challenging, rewarding and educational endeavor I have ever experienced. Through the years that I have been involved with SPOHNC, I have drawn strength and happiness from this organization during some very difficult times and truly feel, “we need one another, so I will defend. Each man as my brother, each man as my friend.”

I hope you will join me in continuing to support the many programs of SPOHNC, which make a difference for so many people.

With steadfast support,

Nancy E. Leupold
Survivor, 23 years

Visit the SPOHNC website at www.spohnc.org
HEAD AND NECK CANCER NEWS

Promising New Drug Treats and Protects Against Radiotherapy-Associated Oral Mucositis

Mar. 12, 2013 — In some cancer patients treated with radiation, the mouth sores known as oral mucositis become so severe that feeding tubes are required for nutrition and narcotics are needed for pain. In fact, 40-70 percent of patients treated with upper-body radiation develop the condition to some degree. Currently, there is no FDA approved treatment. A University of Colorado Cancer Center study published this week in the journal Nature Medicine takes an important step toward changing that.

“We developed a genetically engineered mouse that produces a protein called Smad7 in the surface layers of its mouth. With this protein expressed, mouse models were dramatically more resistant to the development of oral mucositis than were controls,” says Xiao-Jing Wang, PhD, CU Cancer Center investigator and John S. Gates endowed Chair of Cancer Stem Cell Biology at the Charles C. Gates Center for Regenerative Medicine and Stem Cell Biology.

Wang and collaborators including Qinghong Zhang, PhD, Yosef Refaeli, PhD, and radiation oncologist David Raben, MD, are pursuing further research with the goal of developing Smad7 as a therapeutic agent for human oral mucositis. For example, the group joined Smad7 in with a short peptide that allows the protein to cross through cell membranes, and produced this combination protein from cultured bacteria. When they applied the engineered compound directly to the mouse oral cavity, it both protected against the development of oral mucositis and worked to heal existing ulcers.

Importantly, it revived wounded normal cells but not cancer cells, avoiding a major problem of growth factors currently used to promote the cell growth that heals ulcers.

“It’s very reasonable to hope that this line of research will result in a drug that patients can self-administer topically to oral mucositis sores, or use to prevent them altogether, thus significantly improving the quality of life for many cancer patients,” Wang says.

Additionally, Wang points out that the mouse model engineered to develop human-like oral mucositis in the presence of radiation treatment is a useful tool for studying the disease -- offering opportunities to search for biomarkers and test experimental therapies.

###

HEAD AND NECK CANCER NEWS

Targeted Drugs No Help in Head and Neck Cancer

The addition of erlotinib to cisplatin and radiotherapy did not increase toxicity in patients with locally advanced head and neck cancer but failed to significantly increase efficacy. Similarly, in another study the addition of gefitinib to docetaxel was well tolerated but did not improve outcomes in poor prognosis patients with recurrent or metastatic head and neck cancer.

The addition of targeted agents to standard chemotherapy failed to improve efficacy in two different trials of advanced head and neck cancer.

In one trial, patients given gefitinib (Iressa) in addition to docetaxel lived about a month longer than those who received docetaxel plus placebo. In the other trial, adding erlotinib (Tarceva) to cisplatin-based chemoradiation did not improve response rate or progression-free survival.

However, neither regimen was associated with increased toxicity compared with standard chemotherapy, investigators reported online in the Journal of Clinical Oncology. Noting the lack of useful biomarkers to guide the use of targeted agents, the authors of an accompanying editorial said that experience to date suggests current strategies amount to “skimming the surface of a problem that is exceedingly complex.”

“It is unlikely that genomic sequencing alone will represent a panacea to the therapeutic challenges in squamous cell carcinoma of the head and neck,” said Aaron R. Hansen, MBBS, and Lillian L. Siu, MD, of Princess Margaret Cancer Center in Toronto. “Comprehensive characterization that encompasses a broader omics-based molecular evaluation, as well as immune function assessments, is urgently needed.”

The rationale for the gefitinib and erlotinib trials came from evidence that the drugs targeting epidermal growth factor receptors (EGFR) have synergism with conventional chemotherapeutic agents, have radiosensitizing properties, and have demonstrated modest activity as monotherapy in some clinical studies.

Cetuximab (Erbitux), another EGFR inhibitor, has been approved for use with radiation therapy or as monotherapy in selected patients with head and neck cancer.

Gefitinib-Docetaxel

Preliminary studies of the docetaxel-erlotinib combination showed considerable toxicity that required dose reductions. As a result, the investigators chose to evaluate gefitinib in combination with docetaxel.

“Our hypothesis was that the addition of gefitinib to docetaxel will be synergistic and improve outcomes of previously treated and/or compromised performance status patients with recurrent or metastatic squamous cell carcinoma of the head and neck,” Athanassios Argiris, MD, of the University of Texas Health Science Center at San Antonio, and co-authors wrote.

Eligible patients had recurrent or metastatic disease and Eastern Cooperative Oncology Group (ECOG) performance status 2 or ECOG 0 to 2 and previous exposure to chemotherapy. All patients received weekly docetaxel and were randomized to gefitinib or placebo. Treatment continued until disease progression, and the primary endpoint was overall survival.

The phase III trial had a patient-accrual goal of 330, but enrollment ended after 270 patients when an interim analysis suggested efforts to demonstrate improvement in the primary endpoint would prove futile.

The results showed a median overall survival of 6 months in the docetaxel-placebo arm and 7.3 months with the
docetaxel-gefitinib regimen. An unplanned analysis suggested that patients younger than 65 benefited from gefitinib (7.6 versus 5.2 months median overall survival, \( P=0.04 \)). Grade 3/4 toxicity occurred in a similar proportion of patients in both treatment arms, with the exception of diarrhea, which was more common with gefitinib.

**Erlotinib-Cisplatin**

The erlotinib trial involved 204 patients with locally advanced squamous cell carcinoma of the head and neck. All patients received cisplatin-based chemoradiation and were randomized to the EGFR inhibitor or no further therapy.

The primary endpoint was complete response rate, and progression-free survival (PFS) was the secondary endpoint, as reported by Renato G. Martins, MD, of the University of Washington in Seattle, and colleagues.

The results showed a complete response rate of 40% without chemoradiation and 52% with chemoradiation plus erlotinib, a difference that did not achieve statistical significance (\( P=0.08 \)). After a median follow-up of 26 months, PFS also did not differ significantly between the two treatment arms (HR 0.9, \( P=0.71 \)).

Investigators prospectively evaluated p16 status in 90 patients. A positive result was defined as “strong, diffuse nuclear and cytoplasmic staining in ≥70% of tumor cells.” Patients with p16-positive tumors had significant improvement in the hazard for progression when they received erlotinib (HR 0.39, \( P=0.04 \)).

Martins and colleagues also evaluated the relationship between development of rash and PFS in patients who received erlotinib. The analysis revealed rash as a significant predictor of improved PFS (HR 0.41 versus erlotinib-treated patients without rash, \( P=0.03 \)).

“Despite preclinical data suggesting that erlotinib could be synergistic with both chemotherapy and radiotherapy, erlotinib previously failed to improve outcome in metastatic non-small cell lung cancer,” Martins and colleagues noted in their discussion. “Here, erlotinib failed to improve the outcome of locally advanced squamous cell carcinoma of the head and neck when combined with cisplatin-radiotherapy.”

Although disappointing, the results do not represent the end of the line for investigation of targeted agents in head and neck cancer, Ellie Maghami, MD, of City of Hope in Duarte, Calif., told MedPage Today. Echoing the sentiments of Hansen and Liu, Maghami said the true potential of targeted agents in head and neck cancer will not be determined in the absence of accurate biomarkers to guide patient selection.

**Primary source:** Journal of Clinical Oncology

---

**AWARENESS NEWS**

Remember that SPOHNC has designated April as **ORAL AND HEAD AND NECK CANCER AWARENESS MONTH**

We know that several of our 120 Chapters are presenting some type of Awareness event. As of press time, we are aware of events in Chicago, Illinois, Cleveland, Ohio, Long Island, New York, Middletown, New York, Rochester, New York and Dallas, Texas. If you, or your Chapter is hosting an event, please let us know so we can post it on our website at www.spohnc.org, and on our facebook page. Feature stories will be in an upcoming Fall issue of News from SPOHNC, so send us your event flyers, photos and a story to share with our readers. Check our website at www.spohnc.org for event listings to see if there is one in your area.

---

**SURVIVOR NEWS**

**Bon Appetite!**

For a creative change to an ordinary evening out, survivor and SPOHNC New York - Syosset group member Ray Gambale, and Sunny Ling, enrolled in cooking classes at A La Carte Culinary Services in Rockville Centre.

Pictured here as they learned how to make homemade mozzarella with roasted red peppers (and lots of other fabulous fare!), they also enjoyed their delicious culinary creations for dinner with their classmates and met some new friends!

“**I am not afraid of tomorrow, for I have seen yesterday and I love today.”**

~ William Allen White

---

“**Like**” SPOHNC on Facebook
<table>
<thead>
<tr>
<th>ALABAMA-BIRMINGHAM</th>
<th>COLORADO-PUEBLO</th>
<th>FLORIDA-OCALA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARIZONA-CHANDLER</td>
<td>CONNECTICUT-NEW HAVEN</td>
<td>FLORIDA-PALM COAST/NORTHEAST</td>
</tr>
<tr>
<td>ARIZONA-PHOENIX/MESA</td>
<td>CONNECTICUT-NEW LONDON</td>
<td>FLORIDA-SARASOTA</td>
</tr>
<tr>
<td>ARIZONA-PHOENIX</td>
<td>CONNECTICUT-NORWICH</td>
<td>FLORIDA-TAVARES</td>
</tr>
<tr>
<td>ARIZONA-SCOTTSDALE</td>
<td>DC-GEORGETOWN</td>
<td>FLORIDA-W.VOLUSIA COUNTY (ORANGE CITY)</td>
</tr>
<tr>
<td>ARKANSAS-NORTHWEST</td>
<td>FLORIDA-BOCA RATON</td>
<td>GEORGIA-ATLANTA</td>
</tr>
<tr>
<td>CALIFORNIA-LOS ANGELES-UCLA</td>
<td>FLORIDA-FT MYERS</td>
<td>GEORGIA-ATLANTA-EMORY</td>
</tr>
<tr>
<td>CALIFORNIA- NEWPORT BEACH</td>
<td>FLORIDA-FTWALTONBEACH/NW FL</td>
<td>GEORGIA-AUGUSTA</td>
</tr>
<tr>
<td>CALIFORNIA-ORANGE-UCI</td>
<td>FLORIDA-GAINESVILLE</td>
<td>GEORGIA-COLUMBUS</td>
</tr>
<tr>
<td>CALIFORNIA-SAN DIEGO</td>
<td>FLORIDA-JACKSONVILLE</td>
<td>ILLINOIS-CHICAGO</td>
</tr>
<tr>
<td>CALIFORNIA-SANTA MARIA</td>
<td>FLORIDA-JACKSONVILLE</td>
<td>IL-EVANSTON/HIGHLAND PARK</td>
</tr>
<tr>
<td>CALIFORNIA-STANFORD</td>
<td>FLORIDA-LECANTO</td>
<td>ILLINOIS-MAYWOOD</td>
</tr>
<tr>
<td>CALIFORNIA-VENTURA</td>
<td>FLORIDA-MIAMI</td>
<td>INDIANA-FORT WAYNE</td>
</tr>
<tr>
<td>COLORADO-COLORADO SPRINGS</td>
<td>FLORIDA-MIAMI</td>
<td>INDIANA-INDY-NORTH</td>
</tr>
<tr>
<td>COLORADO-DENVER</td>
<td>FLORIDA-NAPLES</td>
<td>INDIANA-INDY-WEST</td>
</tr>
</tbody>
</table>

S•PO•H•N•C

http://www.spohnc.org

E-mail-- info@spohnc.org
## CHAPTERS OF SPOHNC

Contact SPOHNC at 1-800-377-0928 for Chapter information & Facilitator contact information

<table>
<thead>
<tr>
<th>Indiana-South Bend</th>
<th>Minnesota-Minneapolis</th>
<th>New York-Manhattan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana-Terre Haute</td>
<td>Missouri-St. Louis</td>
<td>New York-Manhattan</td>
</tr>
<tr>
<td>Iowa-Des Moines</td>
<td>Montana-Bozeman</td>
<td>New York-Middletown</td>
</tr>
<tr>
<td>Kansas-Kansas City</td>
<td>Nebraska-Omaha</td>
<td>New York-New Hyde Park</td>
</tr>
<tr>
<td>Louisiana-Baton Rouge</td>
<td>Nebraska-Omaha</td>
<td>New York-Rochester</td>
</tr>
<tr>
<td>Maine-Augusta/Central</td>
<td>New Jersey-Long Branch</td>
<td>New York-Stony Brook</td>
</tr>
<tr>
<td>Maryland-Baltimore-GBMC</td>
<td>New Jersey-Morristown</td>
<td>New York-Syosset</td>
</tr>
<tr>
<td>Maryland-Baltimore-JHMI</td>
<td>New Jersey-Princeton, UMC</td>
<td>New York-Westchester</td>
</tr>
<tr>
<td>Maryland-Libertytown</td>
<td>New Jersey-Somerville</td>
<td>North Carolina-Ashville</td>
</tr>
<tr>
<td>Massachusetts-Boston</td>
<td>New Jersey-Sparta</td>
<td>North Carolina-Durham/Chapel Hill</td>
</tr>
<tr>
<td>Massachusetts-Cape Cod</td>
<td>New Jersey-Toms River</td>
<td>North Carolina-Charlotte</td>
</tr>
<tr>
<td>Massachusetts Mid-Cape on Cape Cod</td>
<td>New Mexico-Albuquerque</td>
<td>Ohio-Cincinnati</td>
</tr>
<tr>
<td>Massachusetts-Danvers</td>
<td>New York-Albany</td>
<td>Ohio-Cleveland</td>
</tr>
<tr>
<td>Massachusetts-Newton Michigan-St. Joseph</td>
<td>New York-Buffalo</td>
<td>Ohio-Dayton</td>
</tr>
<tr>
<td>Michigan-St. Joseph</td>
<td>New York-Manhattan</td>
<td>Ohio-Lima</td>
</tr>
</tbody>
</table>

SPOHNC
P.O. Box 53 Locust Valley, NY 11560-0053 1-800-377-0928
## CHAPTERS OF SPOHNC

Contact SPOHNC at 1-800-377-0928 for Chapter information & Facilitator contact information

<table>
<thead>
<tr>
<th>Oklahoma-Tulsa</th>
<th>South Carolina-Of the Upstate</th>
<th>Virginia-Charlottesville</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon-Medford</td>
<td>South Dakota-Rapid City</td>
<td>Virginia-Fairfax</td>
</tr>
<tr>
<td>Pennsylvania-Dunmore</td>
<td>Tennessee-Chattanooga</td>
<td>Virginia-Norfolk</td>
</tr>
<tr>
<td>Pennsylvania-Harrisburg</td>
<td>Tennessee-Nashville</td>
<td>Virginia-Richmond</td>
</tr>
<tr>
<td>Pennsylvania-Monroeville</td>
<td>Texas-Dallas</td>
<td>Washington-Seattle</td>
</tr>
<tr>
<td>Pennsylvania-New Castle</td>
<td>Texas-Dallas</td>
<td>Washington-Seattle</td>
</tr>
<tr>
<td>Pennsylvania-Philadelphia</td>
<td>Texas-Fort Worth</td>
<td>Wisconsin-Madison</td>
</tr>
<tr>
<td>Pennsylvania-Philadelphia</td>
<td>Texas-McAllen</td>
<td>Wisconsin-Eau Claire</td>
</tr>
<tr>
<td>Pennsylvania-York</td>
<td>Texas-Plano</td>
<td>Wisconsin-Milwaukee</td>
</tr>
</tbody>
</table>

### SPOHNC Chapter Group Member Testimonial...

“I just wanted to let everyone know who was there today at our monthly meeting what it meant to me. It was so great. To learn new things about nutrition and to laugh a bit!!! I haven’t been out of the house much… so today was special just to be with old and new friends!!!!!! Thanks to you all.”

~ Dave N.

### SPOHNC Chapter Facilitator Testimonial...

“Being part of SPOHNC and facilitating our local head and neck cancer support group in Nashville is a great blessing to me. It has been an incredibly humbling, rewarding, and inspiring experience. I have learned so much about oral, head & neck cancer, but more importantly I have learned so much about life and living! I am honored to be even a small part of helping people cope with head and neck cancer.”

~ Carmin B.
Become a MEMBER OF SPOHNC & Receive

ALL 8 ISSUES of News from SPOHNC

Call us today at 1-800-377-0928 or visit our website at www.spohnc.org