



**S•P•O•H•N•C**

A PROGRAM OF SUPPORT  
FOR  
PEOPLE WITH ORAL  
AND  
HEAD AND NECK CANCER

## CARCINOMA OF THE PALATE

MARK PERSKY, MD

The palate is divided into the hard palate, representing an oral cavity structure and the soft palate, which is part of the oropharynx. The hard palate is adjacent to the inner aspect of the upper teeth. Its overlying mucosa is quite adherent to the underlying bone. Lying just above the hard palate is the floor of the nose and the floor of the maxillary sinus.

The soft palate, which has a different embryologic origin, is just behind the hard palate and represents a soft, muscular structure. In the mid portion of the free edge of this structure is the uvula, which hangs down in the back of the throat. The nasopharynx lies above the soft palate. The motion of the soft plate serves to close the communication between the oropharynx and the nasopharynx and thereby serves to prevent nasal regurgitation of food and fluids. A hypernasal voice quality also results from improper closure, known as velopharyngeal incompetence. The muscular insertion into the soft palate assists with opening the Eustachian tube, which allows the middle ear to equalize pressure and prevents fluid accumulation behind the ear drum.

Cancer of the palate is quite uncommon. It represents about 10% of malignant tumors that occur in the oral cavity and oropharynx. The most common type of cancer is squamous cell carcinoma. As with other cancers of the upper aerodigestive tract, cigarette smoking and alcohol have been identified as the most frequent cause of this type of cancer. The risk for developing the cancer is compounded if a patient has both of these habits. In certain eastern cultures, "reverse smoking" is practiced, where the lit end of the cigarette is inserted into the mouth and the incidence of palate carcinoma is especially high in these individuals.

The palate, especially the soft palate, is rich in minor salivary

glands. Malignancies developing from these glands are the second most common type of cancer to originate in this area. Several different types of cancers may develop from these glands, each one having its own characteristics relating to the aggressiveness of the tumor. A common type, adenoid cystic carcinoma, is characterized by early invasion of the adjacent nerves and is capable of spreading along these nerves, in a microscopic fashion, to relatively distant areas from the tumor origin, especially towards the skull base.

The signs of a developing palate cancer may vary. Early lesions may be noticed during a routine dental evaluation. Leukoplakia, which is a flat or minimally elevated white patch, may represent the earliest stage in the development of a squamous cell carcinoma. These lesions should be carefully evaluated by a specialist. Erythroplasia, a reddish, velvety lesion, usually of the soft palate, is even more suspicious for the presence of an early developing cancer. This warrants appropriate biopsies for evaluation.

A patient with a palate cancer may notice a discoloration of the plate, as mentioned earlier, or a mass of the plate which may be painful. Early palate cancer initially develops as a "small bump" either on or just below the surface. As the tumor enlarges, it may become ulcerated or occasionally assume a more superficial spreading character. If the tumor becomes large enough to involve adjacent muscles of mastication, trismus, which is discomfort on opening of the mouth, may be present. Neck masses may signal that the tumor has spread to regional lymph nodes and indicates a more serious situation. Blood tinged saliva may be noted as well as discomfort on swallowing or opening the mouth. Pain "referred" to the ear which is exacerbated by swallowing may be present.

When a cancer is suspected, biopsy can usually be performed in an office setting under local anesthesia. Thorough head and neck examination is necessary to evaluate the extent of the primary tumor site and the presence of any involved lymph nodes in the neck. Not infrequently, leukoplakia of the palate may be quite extensive and smaller areas of developing carcinoma may be difficult to distinguish with this lesion. The possibility of a second primary cancer must also be excluded since this may occur in up to 20-25% of squamous cell carcinomas of the oral cavity and oropharynx. A CT scan will give radiographic evidence of the local extent of the tumor, including the possibility of bony involvement, as well as potential neck lymph node disease. An MRI may also complement with additional soft tissue details.

Maxillary sinus and nasal carcinomas may extend to the hard palate and mimic hard palate primary cancers. These are readily distinguished on x-ray studies. Additional radiographic studies or scans may be performed to evaluate for possible sites of systemic metastases, especially to the lungs and liver. PET scans may define the presence of regional lymph node metastases or spread of tumor to more distant sites.

See PALATE on next page



SUPPORT FOR PEOPLE WITH  
ORAL AND HEAD AND NECK CANCER  
**S•P•O•H•N•C, INC.**  
P. O. BOX 53  
LOCUST VALLEY, NY 11560-0053

**BOARD OF DIRECTORS**  
Nancy E. Leupold, MS, **President**  
James J. Scubba, D.M.D., Ph.D., **Vice President**  
Jean O. Cashin, **Secretary**  
Walter E. Boehmler, **Treasurer**  
Louis Frillmann  
Karrie Zampini, **CSW**

**MEDICAL ADVISORY BOARD**

**David M. Brizel, M.D.**  
Duke University Medical Center  
**Linda K. Clarke, MS, RN, CORLN**  
Greater Baltimore Medical Center  
**David W. Eisele, M.D.**  
University of California San Francisco  
**Keith Heller, M.D., F.A.C.S.**  
North Shore-LIJ Health System  
**Alex Keller, M.D., F.A.C.S.**  
North Shore-LIJ Health System  
**Jesus E. Medina, MD**  
University of Oklahoma Health Sciences  
**Eugene N. Myers, M.D., F.A.C.S.**  
University of Pittsburgh School of Medicine  
**David Myssiorek, M.D.**  
North Shore-LIJ Health System

**Herman Oliver, M.D., F.A.P.A.**  
North Shore-LIJ Health System  
**David G. Pfister, M.D.**  
Memorial Sloan-Kettering Cancer Center  
**Jed Pollack, M.D.**  
North Shore-LIJ Health System  
**James J. Scubba, D.M.D., Ph.D.**  
Johns Hopkins Medicine  
**Elliot W. Strong, M.D., F.A.C.S., Emeritus**  
Memorial Sloan-Kettering Cancer Center  
**Denise M. Vey Voda, M.A., D.D.S**  
North Shore-LIJ Health System  
**Everett E. Vokes, M.D.**  
University of Chicago Medical Center  
**David P. Wolk, M.D., F.A.C.S.**  
North Shore-LIJ Health System

Karrie Zampini, CSW

**NEWSLETTER EDITOR**

Nancy E. Leupold, MS

**WEBMASTER**

Barry Sebastian

*News From SPOHNC* is a publication of  
Support for People with Oral and Head and Neck Cancer, Inc.  
Copyright ©2004–2005

DISCLAIMER: Support for People with Oral and Head and Neck Cancer, Inc. does not endorse any treatments or products mentioned in this newsletter. Please consult your physician before using any treatments or products.

**IN THIS ISSUE**

A Time for Sharing.....	4
UCLA Cancer Researchers Use Saliva.....	5
OHN Cancer in Patients Under 45 Year of Age.....	6

**COMING IN SUMMER, 2005**

“Virtual Endoscopy and Surgical Simulation  
for Head and Neck Cancer”

Marvin P. Fried, MD, F.A.C.S. and Babak Sadoughi, MD

**PALATE continued from page 1**

Most physicians stage the extent of the cancer after evaluating all the clinical studies. The most common staging system is that developed by the American Joint Commission on Cancer Staging. This involves the TNM system which indicates the size of the primary tumor (T), the extent of neck node metastases (N), and the status of the systemic spread of tumor (M). These indices are used to determine the T staging from I to IV respectively, with increasing extent of disease. The various modalities of treatment and the ultimate prognosis are related to the stage of disease.

The treatment and subsequent rehabilitation differ for cancers of the hard and soft palate. Very early hard palate cancer may be excised with traditional methods or laser surgery. The surgical defect may heal by secondary intention (allowing healing without closing the wound), application of skin grafts, or mobilizing local mucosal flaps for coverage. Since the hard palate mucosa is firmly attached to the palate bone, there is early erosion and involvement of this bone which may be noted on CT scanning. Resection of these lesions results in a communication between the oral cavity and the nasal cavity and/or the maxillary sinus. Proper pre-operative planning and anticipation of this resulting defect requires a multidisciplinary approach for proper post operative rehabilitation.

The expertise of a prosthodontist is indicated early in the course of evaluating the patient. Upper dental impressions are made and a palatal prosthesis is fashioned. This is inserted at the time of resection and maintaining its position may be accomplished by hooks to the adjacent remaining teeth or wires to surrounding bone. Intra-operative insertion of this device results in immediate normal or near normal post operative speech production and oral food intake, depending on the extent of resection. The prosthesis also aids in skin grafting of the surgical cavity for proper healing. The intra-operative prosthesis will be modified by the prosthodontist over the ensuing months with healing of the surgical site and subsequent radiation therapy effects. The final prostheses may have teeth similar to a denture, and can usually be easily removed and cleaned by the patient as necessary. Larger defects may require fixation to metal posts that are inserted into adjacent bone which ultimately undergo fusion with this bone to form a well tolerated point of stabilization (osseo-integrated implants). A surgical oncologist may prefer to keep this surgically created cavity open for easy examination to rule out the possibility of recurrent carcinoma. Recent developments in reconstruction report closure of this defect with flaps and bone grafts which would eliminate the need for a prosthesis, but direct inspection of the surgical site for evaluation of possible tumor recurrence is made more difficult.

More extensive surgical resection of the hard palate requires removal of the portion of the lower nasal cavity structures and the maxillary sinus. The palatal prosthesis protects the nasal and paranasal sinuses from contamination with saliva, food and fluids. The prosthesis not only provides normal function, but it also serves to augment the contour of the pre-operative upper dental area which is lacking after resection of the anterior hard palate and associated teeth and gum structure.

Removal of the soft palate involves no change in cosmesis, but does present some functional consequences. Nasal regurgitation results from soft palate resection as well as hypernasality of the voice. Similar palate prostheses with extension more posteriorly into the soft palate defect, will often effectively provide closure. The soft

PALATE continued on page 7

PALATE continued from page 2

palate may also be reconstructed with adjacent tissue. A flap can be fashioned from the posterior wall of the oropharynx and sutured to the remaining free edge of the soft or hard palate. This procedure may not be performed with major palate resection but it may provide excellent function for appropriate patients. Post operative difficulty with swallowing, nasal regurgitation, and hypernasality may be improved with swallowing and speech therapy which provides important support and therapeutic expertise that many patients undergoing treatment for head and neck cancers require.

More extensive soft palate tumors may require resection of certain muscles of mastication, such as the medial or lateral pterygoids. These muscles assist in the chewing action and surgery in this area may cause discomfort during chewing and restriction in the ability to open the mouth widely. Jaw exercise can improve the function of the remaining jaw muscles and also provide for increased post-operative jaw mobility.

As previously mentioned, muscles in the soft palate serve to open the eustachian tube, and thereby allow equalization of pressure in the middle ear (behind the eardrum). Sacrifice of these muscles predisposes to the accumulation of fluid in the middle ear (serous otitis media). To alleviate this problem, ventilating tubes are placed through a small incision in the eardrum.

Small tumors of the palate without evidence of bony involvement may be treated with curative radiation therapy. Side effects of radiation include sore throat, loss of taste, dry mouth and acceleration of dental disease. The patient and his physician should have a thorough discussion concerning the benefits, risks, long and short term effects and ultimate prognosis of any mode of treatment.

If radiation therapy is chosen as a form of therapy, either alone or in combination with surgery and/or chemotherapy, a thorough dental evaluation is necessary. The patient's dental status must be optimized before starting radiation. Immediate dental restoration is performed or dental extraction is required. The patient is instructed in the use of fluoride gel trays, baking soda solution as oral rinses, and artificial saliva products to promote continuing oral hygiene. Future oral surgery must be performed with the knowledge that radiated tissues are

predisposed to infection including osteomyelitis (bone infection). Surgical trauma must be kept to a minimum and appropriate antibiotic coverage is important. Occasionally, hyperbaric oxygen therapy is used to improve healing after radiation therapy.

Other than the presence of systemic metastases, the presence of tumor spread into the regional draining lymph nodes is the single most important prognostic factor. Pre-operative evaluation should include evaluation of the lymph nodes by CT or MRI. Treatment of suspicious lymph nodes is an integral part of patient care. The soft palate has profuse lymphatics which drain to both sides of the neck and there is a high rate of metastases with this tumor. A certain percentage of these metastases may be "occult," representing microscopic disease that is undetectable by physical or radiographic examination. Various forms of neck dissections may be performed to remove lymph nodes that are either clinically or potentially involve with metastases from plate carcinomas. After surgery, radiation therapy is often recommended as additional treatment if cervical node metastases are documented by microscopic examination of the remove lymph nodes.

Advanced palate carcinoma, often with extensive cervical node metastases, may be treated with preoperative radiation or combined chemotherapy and radiation therapy in an effort to reduce tumor size and thereby, theoretically, allowing for better tumor response to surgery. Other advances include treatment with altered fractionation of radiation therapy which involves variation in the amount of radiation dosage and the number and frequency of radiation treatments.

The proper treatment of patients with head and neck carcinoma often involves a multidisciplinary approach to obtain the best result in prognosis and post-treatment rehabilitation. Physicians and patients should be encouraged to participate in newly evolving treatment protocols. Additionally, multi-institutional evaluation of patients can better identify effective modes of treatment.

*Editor's Note: Mark Persky, MD is presently Professor of Clinical Otolaryngology at Albert Einstein College of Medicine and Vice-Chairman, of the Department of Otolaryngology-Head and Neck Surgery at Beth Israel Medical Center in New York.*

\*\*\*\*\*

**MEMORIAL GIFTS**

*have been received  
In Loving Memory of*

**Linda Bradford**

*Career Systems Development Corp.  
West Henrietta, NY*

\*\*\*\*\*

**Robert A. Califano**

*by*

*Michele & Michael Acito  
Marianne & Thomas Conte  
Eileen Hickey, Robert Seiwel,  
Holy Name Hospital/Hospice Staff  
Marie & John King & Mary Rossi  
Oradell, NJ Board of Health  
Pauline & John Perina  
Vincent & Marie Radice  
Elizabeth Santangelo & Robert Seiwel*

\*\*\*\*\*

**Suzanne Colbert**

*by*

*Rachel Fass and Family*

\*\*\*\*\*

**Thomas Ducker**

*by*

*Kevin Campbell, Raymond Totleben,  
Mr. & Mrs. Robert Indermaur,  
Mr. & Mrs. Raymond Maurice,  
Mary Lou & John MacDonald,  
Terry Mehan, Cathy Powell,  
Warren & Cloe Ohr,  
Mr. & Mrs. Donald Rados,  
Gerald Rados, Donna Schmehl,  
Mr. & Mrs. Norman Rados,  
Mr. & Mrs. Thomas Rados,  
Mr. and Mrs. James Tonkovich,  
Whiting Post Office Employees*

\*\*\*\*\*

**Janet Katz**

*Dale & Regina Spoor*

\*\*\*\*\*

**Stella Sumner**

*Reed & Laverna Cox*

\*\*\*\*\*

**Selma Tepper**

*Gail Fass*

\*\*\*\*\*

# A TIME FOR SHARING

10+ years and counting

It is hard to believe that it has been over 10 years since my major oral cancer surgery, over 11 years since my first diagnosis at age 49.

I have a long history of having canker sores in my mouth, so when I noticed a small sore on my tongue, I thought it was just another canker sore. I forgot about the sore and just went on as usual. The sore didn't heal, but I didn't pay much attention. One night while watching TV my son, who is challenged with autism, changed the channel and I found myself watching the medical channel. They were showing sores in your mouth that should be checked by a doctor, and they sure looked like the "canker sore" that I had on my tongue!!! Called the doctor the next day and the rest is history.

I originally had a small squamous cell tumor on my tongue that was treated only with surgery. There was some suspicion that lymph nodes on the right side of my neck might also have been involved, so I also had the neck dissection – gratefully no sign of cancer in the lymph. At my three-month check-up my doctor was concerned because I had developed some strange looking scar tissue where the cancer had been removed. This tissue was removed and checked – no cancer. My next three-month check-up was uneventful, and I was feeling pretty good. By the next three-month check-up, I was noticing another sore area on my tongue. This was right before Christmas of 1993. My doctor prescribed an anti-biotic and a "magic mouthwash" and told me to come back in early January to re-check the tongue. In my mind and heart I knew the cancer was back, but I tried to enjoy the holiday season and quiet my thoughts.

January 1994 brought the bad news that not only was the cancer back, it was back with a vengeance. I had the major surgery that took out over half of my tongue with reconstruction using the arm-flap. Another neck dissection was also performed. This time several of the lymph nodes were cancerous. As the eleven-hour surgery was being completed, the blood supply to the

reconstructed tongue failed. Another ten hours of surgery was needed to take a blood vessel from my leg to repair the failed blood supply. The surgery was followed a month later by the usual course of radiation, with all of the familiar side effects including chronic dry-mouth and a hypothyroid condition requiring medication. Speech and swallowing therapy followed the radiation and was very helpful.

As I was healing and getting some of my functioning back, I noticed that my mouth was doing strange things. When I ate the mid-line of my lower jaw moved up and down with every chewing motion. Several trips to the doctor and the dentist found that this problem was caused by a

*In spite of the challenges, life is great. I continue to work part-time at a job I love. My husband is retired and we take trips, volunteer and have a great time working in our yard.*

non-union in the lower jaw where it was cut through back when the major surgery to remove the tumor and reconstruct my tongue was done.

I needed a bone graft to my jaw to correct the non-union. In order to do this type of surgery on an area that had been radiated, I needed hyperbaric oxygen therapy. I had 30 sessions in the hyperbaric chamber followed by the extraction of four (perfectly healthy) front lower teeth followed by 10 more hyperbaric treatments. Then I had the bone-graft to the jaw. To allow the jaw to heal, my mouth was wired shut for 8 weeks.

Now, since my major surgery, eating had been a challenge. I could only chew on one side of my mouth and had to place the food in that spot with a fork. I also had lost my ability to suck liquid through a straw. So, here I was wired shut with no sucking

ability. I was able to sip from a spoon through my wired-shut jaw. My diet consisted of shakes made with whole milk, ice cream, Carnation Instant Breakfast and fruit. My blender became my best friend! Broth was also a staple of this diet. To try and keep my weight from falling too far, I was sipping these concoctions throughout the day.

When all of this was behind me, I was left with a mouth that was reasonably functional, but missing four front teeth. At first I had a bridge made. This was very problematic for me as no matter how hard I worked on oral hygiene, sores developed under the bridge area. Not wanting this problem to continue for the rest of my life, I opted for dental implants. Of course anything classified as dental is not covered by insurance, so this was the costly option. The results are great and I am very happy that I had the implants.

Around this time my son's autism became more of a challenge as his aggressive behaviors escalated. Combined with my weakened condition, life really didn't seem worth living. I contemplated suicide but luckily realized that would be no solution. I found a great therapist and with her help and the help of medication I was soon back on track. I took the medication for about three years. Now when I feel myself on the "slippery slope" I listen to my relaxation tapes, make a date with friends for lunch, and take time to pamper myself.

About three years ago I was experiencing a greater difficulty swallowing which was especially noticeable when I tried to swallow pills and vitamin tablets. Tests showed that the scar tissue at the back of my tongue was interfering with swallowing. I went back for another round of swallowing therapy sessions. I learned how to tilt my head when swallowing to keep from choking when trying to swallow medications. I was also given mouth and head exercises to keep things a bit more limber. This has had a very positive effect

and any time I feel my mouth and neck tightening up I know it is time to get back to my exercises.

My journey continues. As with most oral cancer survivors, there are lasting differences that continue to provide challenges. My speech is quite good, but at times hard to understand over the phone. Eating continues to be an adventure, as I do not have the ability to move food around my mouth without a fork. If food gets in an awkward position, I end up coughing, choking, etc. Biting into a crisp apple or snacking on freshly popped popcorn are cherished memories from the past. Regulating the medication for the low thyroid is an ongoing issue. Dry mouth is

an ever-present problem and my water bottle is my constant companion. I have yet to find a lipstick or any type of make-up that does not cause rashes and/or sores on my face and mouth, but I'm thankful for products such as Vanicream lotion and Aclovate ointment to help alleviate my dry skin and dry lip problems. Mouth sores and oral yeast infections sprout up with great regularity and my doctor's "magic mouthwash" is always present in my home. Dental concerns are ongoing so I have my teeth cleaned and checked every three months. My dentist praises my efforts and assures me that with continued hard work I will be able to have my natural teeth throughout my life.

In spite of the above challenges, life is

great. I continue to work part-time at a job I love. My husband is retired and we take trips, volunteer and have a great time working in our yard. Both of our sons are doing great. Dan has worked very hard to control his behavior and he now has two jobs and lives in a small group home with three other people. Our younger son, John, is an actuary and is engaged to a wonderful gal.

I often wonder what would have happened to me if my son Dan had not flipped through the channels and ended up with that medical show!

*Patti Meerschaert*  
Franklin, WI

## **UCLA Cancer Researchers Use Saliva To Detect Head And Neck Cancer; Opening Door For New Diagnostic And Detection Tools**

In one of the first studies using the RNA in saliva to detect cancer, researchers at UCLA's Jonsson Cancer Center were able to differentiate head and neck cancer patients from a group of healthy subjects based on biomarkers found in their spittle. The study provides a first proof of principle that may result in new diagnostic and early detection tools and will lead to further studies using saliva to detect other cancers.

Published in the Dec. 15, 2004, issue of the peer-reviewed journal *Clinical Cancer Research*, the study used four RNA biomarkers to detect the presence of head and neck cancer with 91 percent sensitivity and accuracy, said Dr. David Wong, professor and chairman of Oral Biology and Medicine, director of the UCLA School of Dentistry, Dental Research Institute, and a Jonsson Cancer Center researcher.

"This is a new direction, using a non-invasive fluid for disease diagnostics, particularly in cancer," said Wong. "This is our proof of principle. We now hope to demonstrate the utility of saliva for systemic diagnosis of other diseases such as breast cancer."

Typically, cancer researchers use blood serum and urine to look for cancer signatures. Saliva contains the same biomarkers for disease that are found in the blood, but they are present at much lower levels of magnitude. The emergence of nanotechnology allowing scientists to manipulate materials on an atomic or molecular scale helped researchers uncover the components of saliva, Wong said, and "changed the whole scene" for UCLA scientists. "It gave us the clue to look at what else is in saliva," Wong said.

Of the 3,000 RNA biomarkers found in saliva, Wong and his team discovered that a combination of four provided a detectable signature for head and neck cancer. That signature was identified in cancer patients with 91 percent accuracy.

"This paper explores the translational utility of using saliva for cancer diagnosis," Wong said. "The work is good, but not good enough. Although we were able to identify the head and neck cancer patients with 91 percent sensitivity and accuracy, we missed one out of ten. With a larger study, we will move that specificity and accuracy closer to 100 percent."

In the study, Wong and his colleagues enrolled 32 subjects with head and neck cancers - cancers of the mouth, tongue, larynx and pharynx. They also enrolled 32 age and gender matched subjects without cancer but with the same smoking history to act as a control group. Using their saliva, researchers were able to discriminate the cancer patients from the control group, Wong said.

"We tested the hypothesis that distinct RNA expression patterns can be identified in cancer patients, and the differentially expressed transcripts can serve as biomarkers for cancer detection," the study states. "Moreover, using saliva as a diagnostic fluid meets the demands for inexpensive, non-invasive and accessible diagnostic methodology."

Dr. Judith C. Gasson, director of the Jonsson Cancer Center and a professor of biological chemistry and medicine, called Wong's work exciting.

"This is a perfect example of the type of groundbreaking research the Jonsson Cancer Center encourages and supports," Gasson said.

See SALIVA on page 7

## Oral and Head and Neck Cancer in Patients Under 45 Years of Age

James J. Sciubba, DMD, PhD

As the fifth most common world wide malignancy, oral / head and neck cancer has a distinct relationship to the use of alcohol and tobacco with these two components serving as the major risk factors.

While much is known about oral and head and neck cancer within the older adult population, much controversy remains relevant to the development of this disease in younger patients and remains a disputed topic within the literature with many studies providing conflicting evidence regarding the incidence and prognosis based on patient age. While some studies have shown that younger patients, that is those under 45 years of age, have a worse prognosis compared to older adults, others indicate that age is not a risk factor for disease severity, nor is it a factor in changing our management approach to such. Unfortunately, however, many of these studies have included only small numbers of patients with no single institution having the large numbers necessary to state a definitive conclusion regarding head and neck cancer in those under 45 years of age, in particular cancer of the tongue. Overall, it seems that the disease-specific outcome is generally similar to oral cancer patients across the age spectrum

There is a trend in the current literature suggesting that oral and head and neck cancer, in particular tongue cancer, is increasing among young adults across the world. Tongue cancer within young Americans ranks second only to salivary gland cancers among all head and neck cancers and has increased by 62% when comparing the statistics between 1985 and 1997 to those from 1973 to 1984. A recent clinical report from the MD Anderson Cancer Center indicated that the percentage of young adults with tongue cancer increased from 4% in 1971 to 18% in 1993.

Because rates of incidence for all overall head and neck cancer have remained stable, the contrasting increase in young adult patients has become a cause for increasing concern in many parts of the world. The specific factors to explain this may not be fully known, however, some

cases may be explained by the increased use of smokeless tobacco, various forms of drug abuse, cancer-producing viruses, in particular the human papilloma virus, as well as host susceptibility factors such as those individuals in an immunocompromised state. Much attention has been paid to the use of smokeless tobacco within the child and adolescent male population both in the United States as well as in Asia and India. Stated is the increased risk of many oral conditions including gum disease, tooth loss and the development of leukoplakia with a direct correlation to an increased risk of the development of cancer of the oral cavity, larynx, pharynx and esophagus. The regional or geographic variation in the use of smokeless tobacco fails to adequately explain the increased oral cancer incidence overall, however. To date, no clear evidence exists to support any single determinant or factor relative to the development of oral, and head and neck cancer within this young patient population, with many of these cancers arising in the absence of known risk factors. Finally, with regard to the issue of early use of smokeless tobacco, is the potential of "graduation" to or a gateway into cigarette smoking, if other products are deemed socially unacceptable. The relatively short duration of exposure to risk factors in the young also support the notion that factors other than alcohol and tobacco may therefore be at play in the development of oral cancer in the younger patient population.

A recent study published in abstract form from the Johns Hopkins University School of Medicine, Department of Otolaryngology Head and Neck Surgery suggests an increased or improved level of survival in younger patients when compared to older patients. This is at odds with some papers in the literature where the opposite conclusion is stated. We also found that younger patients were less likely to have used alcohol and tobacco further confounding the issue of cause and effect.

The issue of tongue cancer in younger

patients therefore has raised the question of whether or not tongue cancer or oral cancer in general in young patients represents a different entity. In many studies there is a female predominance that has become a risk factor supporting the notion that this could be a different disease. One study reported that specific genetic mutations known as p53 mutations are less common in tongue cancers in that these mutations appear in young patients without a history of alcohol usage and in older patients. This contrasts with other studies, where this same mutation as well as other mutations in young versus older patients, were studied, with no significant differences found. A study published in 2000 has demonstrated high levels of P53 mutations in younger individuals who are non-smokers with the potential cause of this mutation in this patient group being different and therefore leading to a unique disease behavior compared to older adults. Mutation events resulting from free radical-induced oxidative damage and the inability to repair such mutational events appears more common in younger patients, however, no specific genetic abnormality specific to young patients has been identified.

It is clear therefore, that while the world wide incidence of oral tongue malignancy, compared to base of tongue cancers is on the rise in individuals under 45 with no specific risk factors, there is no unanimity among experts as to why this may be occurring. We continue to search for factors other than tobacco, cannabis (marijuana) and alcohol that may be implicated in the development of oral cancer in our younger patients. Although there is an absence of association with alcohol and tobacco consumption in many younger people with oral and head and neck cancer, there remains a need for continued aggressive promotion of tobacco cessation and moderate use of alcohol amongst the general public and in particular young individuals given the alarming statistics concerning the number of adolescents initiating smoking each day. Secondly, it has clearly been demonstrated

CANCER Continued on next page

SALIVA continued from page 5

Wong and other researchers next will attempt to validate the study's findings in a much larger study of about 200 oral cancer patients conducted at UCLA's Jonsson Cancer Center and at four other national centers. The study is now recruiting early and late stage head and neck cancer patients to participate. Study volunteers will need to provide saliva and blood serum to participate.

More than 1.3 million new cases of cancer will be diagnosed in the United States this year alone, resulting in more than 563,000 deaths – one person every minute. The goal of any cancer screening program is to detect tumors at an early stage, when they are most treatable. And the best new screening tools should be inexpensive and non-invasive, so they'll be widely used. The results of Wong's study will open new research directions that may prove saliva is a suitable tool for the development of non-invasive diagnostic, prognostic and follow-up tests for cancer.

This study was funded by the Jonsson Cancer Center and the National Institute of Dental and Craniofacial Research.

\*\*\*\*\*

CANCER continued from page 6

that a diet rich in antioxidants contained in fresh fruits and vegetables over the long term, consumption of fish oils, and health promotion and education should also emphasize the potential advantages of increasing intake of these factors in cancer prevention.

Finally, the incidence pattern of oral cancer is clearly changing world wide and it is no longer a safe assumption to place oral cancer within the subset of the heavy smoker and drinker in their 50's and 60's from a lower or social economic status. Health care professionals in both the dental and medical professions must be more aware of this shift in oral cancer development and consider this in their routine daily practices. Emphasizing this to our health care providers will allow an index of suspicion to be developed concerning the younger patient which in turn would lead to earlier referral for evaluation of any suspicious lesions that heretofore may have been assumed to be of little significance, thus delaying diagnosis, the ultimate treatment ,and its impact on the ultimate prognosis.

*Editor's Note: James J. Sciubba, D.M.D., Ph.D. is Director of Dental and Oral Medicine, Department of Otolaryngology Head and Neck Surgery at Johns Hopkins School of Medicine.*



**S•P•O•H•N•C**

Helping to Raise Awareness of  
Oral and Head and Neck Cancer  
1-9 pins: \$6.50 each  
10 or more pins: \$6.00 each  
including shipping and handling



We Have Walked In Your Shoes,"  
a three part resource for  
Oral and Head and Neck  
Cancer Patients  
and their families

To order in English or Spanish  
Call  
1-800-377-0928

Visa, Mastercard and American Express  
accepted by phone and mail  
Visa and Mastercard online

**MEMBERSHIP APPLICATION**  
**SUPPORT FOR PEOPLE WITH ORAL AND HEAD AND NECK CANCER, INC.**

Membership includes subscription to nine issues of *News From SPOHNC*

Name \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please Check: Survivor \_\_\_ Friend \_\_\_ Health Professional (Specialty) \_\_\_\_\_

**ANNUAL MEMBERSHIP**

- \$25.00 individual     \$30.00 family
- \$30.00 Foreign (US Currency)

**CONTRIBUTIONS**

- Booster, \$10+     Donor, \$50+     Sponsor, \$100+
- Patron, \$500+     Benefactor, \$1,000+     Founder, \$5,000+
- Leaders Circle, \$10,000+

Call 1-800-377-0928

to become a member and make a contribution by credit card or order on line at [www.spohnc.org](http://www.spohnc.org)

480-832-5436  
 480-838-5194  
 310-825-5707  
 714-456-5235  
 760-751-2109  
 415-353-7982  
 303-798-3041  
 202-444-3755  
 561-395-7100  
 352-265-0680  
 786-596-6951  
 305-243-4952  
 561-737-3699  
 404-284-8045  
 404-778-2369  
 708-327-2042  
 773-834-2470  
 617-731-1703  
 313-916-7578  
 586-228-2309  
 314-569-6569  
 704-355-7283  
 402-559-4676  
 973-586-3522  
 856-722-5574  
 732-557-8270  
 505-681-1971  
 631-444-7678  
 212-844-8775  
 516-759-5333  
 614-293-7042  
 717-691-3235  
 412-647-9127  
 972-373-9599  
 214-820-2608  
 281-401-5900  
 434-982-4091

Keri Winchester  
 Bette Denlinger  
 Sabah Qasim, MSW  
 Jennifer Higlins, MSW  
 Valerie D. Targia  
 Michele Francis, LCSW  
 Henry V. Holdridge  
 Joanne Assarson, MSW  
 Darci Lipson-McNally  
 Gail Adorno, LCSW  
 Annie Garcia-Montes  
 786-596-6951  
 Penny Fisher, RN  
 Carmine Puleo  
 Harmon Grotsky  
 Arlene Kehir, RN  
 Jenny Abrams, LSW  
 Robyn Eagan  
 Valerie Goldstein  
 Amy Orwig, MSW  
 Suzanne Frantz  
 Carol Murphy, SW  
 Meg Turner  
 Susan Stensland  
 Howard Sakolsky  
 Micki Naimoli  
 Sherry Laniado, SW  
 Anita Bryan  
 Fran Tanzella  
 Jackie Mojica  
 Nancy Leupold  
 Vicki Heinke, MSW  
 Debra Witwer, RN  
 Marilyn Hudak, RN  
 Dan Stack  
 Travis Maxwell  
 Marti Hosford, RN  
 Vikko Bravo

ARIZONA-PHOENIX  
 ARIZONA-SCOTTSDALE (new)  
 CALIFORNIA-LOS ANGELES-UCLA  
 CALIFORNIA-ORANGE-UCI  
 CALIFORNIA-SAN DIEGO  
 CALIFORNIA-SAN FRANCISCO-UCSF  
 COLORADO-DENVER  
 DC-WASHINGTON-LCC  
 FLORIDA-BOCA RATON  
 FLORIDA-GAINESVILLE (new)  
 FLORIDA-MIAMI  
 FLORIDA-MIAMI-Mort Silverblatt Head and Neck  
 FLORIDA-PALM BEACH (new)  
 GEORGIA-ATLANTA, GA  
 GEORGIA-ATLANTA-Emory  
 ILLINOIS-MAYWOOD  
 ILLINOIS-CHICAGO (new)  
 MASSACHUSETTS-BOSTON  
 MICHIGAN-DETROIT-HFHS  
 MICHIGAN-TROY  
 MISSOURI-ST LOUIS (new)  
 NORTH CAROLINA-CHARLOTTE  
 NEBRASKA-OMAHA  
 NEW JERSEY-MORRISTOWN  
 NEW JERSEY-PENNSYLVANIA  
 NEW JERSEY-TOMS RIVER  
 NEW MEXICO-ALBUQUERQUE, (new)  
 NEW YORK-LONG ISLAND EAST  
 NEW YORK-MANHATTAN, NY Beth Israel  
 NEW YORK-SYOSSET  
 OHIO-COLUMBUS  
 PENNSYLVANIA-HARRISBURG (new)  
 PENNSYLVANIA-PITTSBURGH-UPMC  
 TEXAS-DALLAS-Irving  
 TEXAS-DALLAS-Baylor/Sammons  
 TEXAS-HOUSTON/TOMBALL  
 VIRGINIA-CHARLOTTESVILLE (new)

SUPPORT FOR PEOPLE WITH ORAL AND HEAD AND NECK CANCER (SPOHNC)  
 SPONHC CHAPTER COORDINATOR/FACILITATOR PHONE



SUPPORT FOR PEOPLE WITH  
 ORAL AND HEAD AND NECK CANCER  
**S•P•O•H•N•C, Inc.**  
 P. O. Box 53  
 LOCUST VALLEY, NY 11560-0053

NON-PROFIT  
 ORGANIZATION  
 U.S. POSTAGE  
 PAID  
 LOCUST VALLEY, NY  
 PERMIT NO. 28

\*\*\*\*\*  
*“One’s strength comes from  
 sharing experiences and  
 giving hope to others.”*  
 Share your cancer journey with  
 others through information,  
 support and encouragement.  
 Contact SPOHNC  
 Phone: 1-800-377-0928  
 email: [info@spohnc.org](mailto:info@spohnc.org)  
 \*\*\*\*\*