

- Patient Navigators answer questions and provide information about services and amenities offered at Hillman Cancer Center. For more information, call 412-623-4635.
- Nutrition services are available at Hillman Cancer Center from registered dietitians. If you would like to meet with a dietitian, ask your doctor or nurse to make a referral, or call 412-623-2421. **This service is available for a fee.**
- Behavioral Medicine Program provides a range of supportive care and psychological services to patients and families through traditional counseling and therapy for patients or families. For more information, or to make an appointment, call 412-624-4800.
- African American Cancer Care Partnership identifies and eliminates barriers that prevent African Americans from obtaining access to cancer diagnostic and treatment services. If you would like more information, call 412-647-1809.
- Support groups can help you find ways to deal with your stress, learn about new treatment methods, learn of better ways to manage the side effects of treatment, establish contacts, and make friends. To learn more, contact Kay Lowmaster at 412-647-1062.

Study Participants Needed

Roxann Diez Gross, PhD, and Ricardo Carrau, MD, are conducting a study to determine if fish oil can reduce or prevent swallowing problems that occur during or after the combination of chemotherapy and radiation therapy that is used to treat head and neck cancer. Individuals interested in participating in this study can call Dr. Gross at 412-647-6187.

In an effort to better understand head and neck cancer, we need your help. If you are 50 years of age or older with no history of cancer, please call 412-383-2083 to learn how you can participate in head and neck cancer studies.

“The success of the program depends on your participation in our research programs.”

If you would like to receive a copy of “We Have Walked in Your Shoes: A Guide to Living with Oral, Head and Neck Cancer” please contact Deborah Villanova at 412-647-2469.

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HEADWAY

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

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To Our Patients:

My name is Jennifer R. Grandis, MD, FACS, and I serve as the principal investigator of a Specialized Program of Research Excellence (SPORE) grant for head and neck cancer. The National Cancer Institute (NCI) established the SPORE program in 1992 to promote interdisciplinary research and speed the transition of basic research findings to clinical application. The program's goal is to bring into clinical care novel ideas that have the potential to reduce cancer incidence and mortality, improve survival, and enhance patients' quality of life. Laboratory and clinical scientists work collaboratively to plan, design, and implement research programs focused on cancer prevention and control, early detection, diagnosis, treatment, and survival.

There are four research projects and three cores supported by the SPORE in head and neck cancer at the University of Pittsburgh Cancer Institute. These include:

- an epidemiologic study of the genetic risk factors for developing head and neck cancer
- the design of a new way to target a critical protein that contributes to head and neck cancer growth
- the study of a vaccine designed to prevent recurrence of head and neck cancer
- the identification of biomarkers in the tumor that can predict which treatments a patient is most likely to respond to

The success of the program depends on your participation in our research programs. We are deeply grateful that you have entrusted us with your medical care, and we value the opportunity to work together to make a positive impact on this cancer. Thank you.

Sincerely,



Jennifer Rubin Grandis, MD, FACS
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UPMC Endowed Chair in Head and Neck Cancer Surgical Research
Department of Otolaryngology
Professor of Otolaryngology and Pharmacology
University of Pittsburgh School of Medicine
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A Progress Report for Our Patients

By *Martha DiMatteo*
SPORE Research Coordinator

Over the years, many of you have donated blood and tissue samples for research. Each quarter we will share with you the impact of these donations by featuring the research of one of our many SPORE investigators and their projects.

Robert Ferris, MD, PhD, associate professor of otolaryngology and immunology, University of Pittsburgh School of Medicine, leads a team, in collaboration with Albert DeLeo, PhD, studying a potential cancer vaccine.

Dr. Ferris explains that each of our bodies has an immune system that protects us from infections. He believes that we can use the immune system to recognize and kill cancer cells. The advantage to this is that unlike other cancer treatments, which damage cancer cells and healthy cells simultaneously, vaccines are able to single out the cancer cells exclusively.

“Adjuvant p53 peptide loaded DC-Based Therapy for Subjects with Squamous Cell Cancer of the Head and Neck” is the title

of Dr. Ferris’ current open clinical vaccine trial. “We have tried to identify things that are common among head and neck tumors,” said Dr. Ferris, “and a protein called p53 is the most commonly altered tumor protein known in all of the human cancers.”

In a healthy cell, p53 is known as the “guardian of the DNA.” Dr. Ferris compares it to a tracking device on a VCR, making sure the tape doesn’t get garbled up. He explains that a cell can live with this protein altered, but usually not with it gone completely.

Each month, Dr. Ferris and his staff collect blood and tissue samples donated by patients prior to surgery. Dr. Ferris looks at the degree to which the p53 protein is present in each tumor tissue and eventually administers a vaccine to participants that specifically targets this altered protein. If successful, any recurrence or new tumor expressing this commonly altered tumor protein should be quickly squashed by a newly armed immune response.

There are always challenges a vaccine study presents. According to Dr. Ferris, “vaccinating healthy people is different than vaccinating cancer patients. The immune system in head and neck patients is impaired, so we need to discover what is

wrong with the immune system that allowed the cancer to grow in the first place. We must be able to do this in order to make a vaccine.”

For this reason, years after a successful cancer treatment, patients are still periodically asked to donate blood samples. Dr. Ferris explains that by studying people two to 10 years from their treatment, it has been found that their immune systems actually still look like someone with cancer rather than a healthy person who has never had cancer.

In a recently published paper, Dr. Ferris and other investigators were able to accurately classify patients into three groups: active disease, 3-4 years out (cancer gone), and those with no history of cancer. This classification was accurate 92% of the time and was based solely on blood samples taken from these patients.

Dr. Ferris and his team are also attempting to use the immune system as a sensor for the presence of cancer. Much like a smoke alarm detects a growing fire, when the immune system responds to or tries to respond to the presence of cancer, certain proteins produced by the immune system can be found in the blood. When these proteins are not present the smoke alarm is silent. “If your smoke alarm is sounding off,” says Dr. Ferris, “you would run around the house looking for fire, hoping that you caught it in time.”

Dr. Ferris hopes in the coming years there will be a blood test available in clinics to aid in early detection. “It may not be the greatest, and it may not be the final test” he says, “but we will keep working to improve what is out there.” At the very least, Dr. Ferris believes there will be testing available

One of the four SPORE projects targets the tumor-suppressor protein, p53. P53 may hold the key to development of a vaccine that will decrease cancer recurrence and the formation of secondary tumors.

to bring the highest risk patients in earlier than ever before at the first threat of recurrence or second cancers-when it is most treatable.

As of January 2007, the Ferris lab has received 1219 serum samples from participating patients. Dr. Ferris and his fellow investigators thank you all for your extremely generous contributions. Research saves lives!

Managing Side Effects Stomatitis and Mucositis

Nearly all patients receiving chemotherapy and radiation therapy for head and neck cancer will experience mouth discomfort. This may range from a mild burning or tingling sensation to ulcers on the tongue, cheeks, and lips. Although there is no way to prevent stomatitis, there are ways you can minimize the symptoms.

Begin with a healthy mouth — Visit your dentist prior to beginning therapy. Follow his or her recommendations about filling or pulling any damaged teeth. Use fluoride treatments as ordered.

Good dental hygiene — Inspect your mouth daily. Make this part of your morning routine. Look for any reddened areas, ulcers, or white patches. Don’t forget to look inside your cheeks and under your tongue. Be sure to report changes to your health care team.

Keep your mouth and lips moist — Drink plenty of non-irritating fluids, avoid high acid juices or drinks such as lemon, orange, or tomato, and don’t forget your lips. Check with your radiation oncology team before using petroleum-based lip balm.

Prescription medications — Your doctor may prescribe medications to reduce your pain.

Good nutrition is VERY important — When your mouth is sore, the last thing that you may want to do is eat. However, your body needs protein and vitamins to help it to heal and fight infections.

Additional resources for cancer treatment and symptom management: www.upmc.com, click on Managing Your Health, then UPMC Patient Education Materials, then Cancer Miscellaneous Related Materials; www.cancersymptoms.org; www.caring4cancer.com.

Diet and Nutrition

Following treatment or surgery to your mouth and neck area, you may find it difficult to chew or swallow. However, it is crucial that you consume adequate nutrition. The amount of calories a person needs to consume to maintain their body weight is calculated by dividing weight in pounds by 2.2 then multiplying by 30. A person needs to consume 30 calories per kilogram body weight.

Example:

(based on a weight of 150 lbs.)
 $150 \text{ divided by } 2.2 = 68 \text{ kg.}$
(this is your weight in kilograms)
 $68 \times 30 = 2045 \text{ calories}$

A person with a weight of 150 pounds would need to consume roughly 2045 calories to maintain this weight.

Consuming an adequate amount of protein also is very important. Calculating protein intake also is based on individual weight and is generally 1.3 grams of protein per kilogram body weight. Convert your weight in pounds to kilograms by dividing by 2.2 then multiply by 1.3.

Example:

(based on 150 pound person)
 $150 \text{ divided by } 2.2 = 68 \text{ kg.}$
 $68 \times 1.3 = 88 \text{ grams protein}$

Based on a weight of 150 pounds, you would need approximately 88 grams of protein daily to promote healing.

Delicious High-Calorie Malt

½ cup whole milk
½ cup half and half
2 cups ice cream, any flavor
2 tablespoons Ovaltine
1 tablespoon malted milk powder
1 ounce package instant breakfast powder, any flavor

Mix all ingredients together in a blender or food processor. Blend until smooth. Drink immediately. Save any extra in the freezer. Serves 1. 1,100 calories, 26 grams of protein

For more information and to learn about easy to swallow, high calorie, and high protein recipes, go to <http://nutritionservices.upmc.com>.

Education and Patient Services at UPMC Cancer Centers

UPMC Cancer Centers offers patients an array of education and support services to supplement the information and care delivered by the cancer treatment team. These services are offered at no charge and include:

- Cancer Information and Referral Services Hotline (CIRS) is a free cancer information hotline staffed by oncology nurses. The service provides information to patients, the public, and professionals on a variety of cancer-related topics. To contact CIRS, call 412-647-2811 Monday through Friday from 8 a.m. to 4 p.m.
- The Patient and Family Education Center at Hillman Cancer Center’s Gumberg Family Library houses a collection of cancer-related educational materials that can be used to reinforce and supplement information provided to patients by their health care team. Hours are 8 a.m. to 4:30 p.m. Monday through Friday. For more information, call 412-623-4733.
- Social work services at UPMC Cancer Centers are provided by licensed, certified oncology social workers. For more information, or if you would like to meet with a social worker, ask your doctor or nurse for a referral.

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