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NRAD MEDICAL ASSOCIATES, P.C.
LONG ISLAND RADIATION THERAPY

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INSPIRATION

CANCER AWARENESS:
THE IMPORTANCE OF SCREENING

The American Cancer Society predicts that over 1.5 million Americans will be diagnosed with cancer in 2011. An additional 1 million individuals are diagnosed with basal or squamous cell tumors of the skin. Effective strategies for detecting many tumors exist; yet, many individuals do not undergo routine screening.

Screening is testing asymptomatic individuals for the presence of a particular problem or disease. Common cancer screening tests include mammography for breast cancer, PAP tests for cervical carcinoma, sigmoidoscopy and colonoscopy for colorectal cancer, PSA (prostate specific antigen) testing for prostate cancer, and dermatologic exams for skin cancer. "Some of these tests remain controversial; however, there are many 'standard' recommendations that all patients should follow", said Dr. Anne Vinokur, senior radiation oncologist with NRAD. There is general agreement that screening is beneficial in the detection of breast cancer, cervical cancer, and colorectal cancer. "I routinely encourage my patients to review the role of screening tests with their primary care physicians", added Dr. Vinokur. Breast cancer remains the second most lethal female malignancy in this country, with nearly 40,000 women succumbing to this disease annually. "Taking the time to undergo periodic breast self exam and annual mammography is a logical way to help reduce the death rate from this disease", commented Dr. Vinokur. Screening tests are performed at varying intervals based upon the disease being assessed and the results of prior screening studies. Mammography is performed annually; however, other tests (e.g. PAP exams) are typically advised at 3 year intervals. Colonoscopy, which evaluates the bowel is often performed at intervals of 5-10 years. If you have specific questions about screening, talk with your physician, or email us at TomoTherapy@nrad.com

APRIL
NATIONAL ORAL, HEAD & NECK CANCER AWARENESS MONTH

"Cancers of the Head and Neck region continue to be an important health issue for many Americans," said Dr. Jed Pollack senior radiation oncologist, and NRAD partner. We are seeing an increasing number of patients diagnosed with early stage tumors of the oral cavity (i.e. tongue, floor of mouth, etc.) and of the pharynx (i.e. tonsils, base of tongue, etc). "What has changed", reports Dr. Pollack, "is the nature of the risk factors". For years, patient who were diagnosed with tumors of the upper aerodigestive tract were primarily those with a history of tobacco and/or alcohol use. There is an increasing number of patients diagnosed with pharyngeal tumors (e.g. tonsil) that have a form of the human papilloma virus (HPV) seen within the specimen. Infectious agents have been associated with the genesis of several tumors including the following: Epstein Barr virus and Hodgkin's' disease; H. pylori (bacteria) and gastric tumors; HPV and cervical cancer, as well as others. "Seeing HPV in the context of H&N tumors raises important questions about how we may screen patients in the future", reports Dr. Pollack. At the present time, all healthcare professionals are becoming more vigilant with screening efforts. Dentists and dental hygienists will routinely assess patients for mucosal abnormalities, while performing their work. Despite the new information about the importance of HPV, Dr. Pollack cautions patients to remember the potential harms of tobacco use.

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"Why Do I Need So Many Doctors?"

The science of medicine continues to evolve. At the present time, the American Board of Medical Specialties (ABMS) oversees 24 specialties. Within many of these disciplines are further delineated subspecialties. It's no secret that science is rapidly advancing. Taking information that has been gathered in a research setting or through clinical trials has allowed the most modern strategies to reach the greatest number of patients.

The rate at which new information is being generated, both in medicine and our everyday lives, is astounding. Two economists from UC Berkley (Hal Varian and Richard Lyman) recently calculated the amount of new information generated in 2000 and 2003. Their results include information from all forms of media (print, film, audio, data files, etc.). The results are quite profound. In 2000, the total amount of new information was estimated to be 1.5 exabytes (1 Exabyte is 1 x 10^18). Most home computers have data storage capabilities in the range of gigabytes, 1 x 10^9). To give Varian and Lyman's information perspective, they offer the following: 1.5 exabytes is 37,000 times the volume of information contained within the Library of Congress. Three years later (2003), the number was estimated at 3.5 exabytes. This is a 66% rate of growth. Staggering!! Similar estimates have been made for the rate of growth of scientific knowledge. In this instance, a surrogate for the rate of knowledge growth is presumed to be the number of peer reviewed scientific papers published each year. The number of new papers has been doubling every 15 years since 1900. Clearly, the days of one physician possessing the knowledge to practice in all fields of medicine have ended. This surge in knowledge, more than any other variable is the primary reason that we have so many specialties and, in turn, so many doctors.

A more complex question regarding the need for more than one physician often arises for patients. Most are familiar with their primary care physician and will often have experienced visits to specialists. When the diagnosis of cancer arises, it is not uncommon that patients will be asked to visit with multiple specialists for the same problem. The "why" to this question can be answered with the following illustration.

A fictitious patient, Mrs. Jones, notes a "lump" in her right breast. She contacts her gynecologist for an evaluation, but remembers that she missed her mammography exam several months ago. Mrs. Jones sees her gynecologist (Doctor 1). He confirms the abnormality felt by Mrs. Jones and refers her to a mammographer (Doctor 2) for further evaluation. The mammographer notes a mammographic and sonographic abnormality in the region of the "lump" described by the patient. Mrs. Jones is asked to see the mammographer for a biopsy, which is done and confirms the presence of a breast cancer. Mrs. Jones is informed that she needs to see a breast surgeon. She is given the names of two. Mrs. Jones sees the first surgeon (Doctor 3). This surgeon orders additional imaging and concludes that Mrs. Jones should consider a mastectomy; although, a lumpectomy is possible. Mrs. Jones elects to see the second surgeon, whom she hopes will recommend lumpectomy. She visits the second surgeon (Doctor 4), who agrees with Doctor 3. Mrs. Jones consents to mastectomy, but is asked to visit a plastic surgeon (Doctor 5), as immediate reconstruction is planned, following the mastectomy. Mrs. Jones undergoes her surgery. Her final pathology reports that two of the regional lymph nodes are involved with metastatic tumor. Based upon these findings, she is referred to an oncologist (Doctor 6). She sees the oncologist who suggests that the patient also see a radiation oncologist, as tumor cells were found outside of the lymph nodes. Mrs. Jones sees the radiation oncologist (Doctor 7). He agrees with the medical oncologist and following chemotherapy, the patient receives a course of post-op radiotherapy.

Wow!! Why do I need so many doctors? The answer to this question is simple, quality. Medical literature is replete with examples that correlate the outcomes of patients with the expertise of the treating physician and healthcare team. This expertise comes from focused practice. When physicians become "experts" in a particular area, they bring information and therapy to patients that might otherwise have been excluded.

Modern medicine is truly multi-disciplinary in nature. Patients should expect and receive state of the art care. This is particularly true in the specialty of oncology. Understanding that specialization within the medical community has allowed physicians to become "experts" in their fields of practice makes the process of dealing with many referrals easier. When your physician recommends that you see a specialist, please remember that this is being done to heighten the level of care provided.

If you have questions, when making choices about your healthcare, always discuss these concerns with your existing doctors, including your primary care physician.

Easing Treatment Side Effects: **HEAD & NECK ISSUES**

Patients undergoing radiation treatments to the head and neck region, may experience side effects, which are related to the temporary irritation of the normal tissues, adjacent to the target areas (tumor). Common complaints can include dryness of the mouth and throat, impaired taste, sores within the oral cavity or pharynx, and pain upon swallowing. Not all patients experience these side effects, particularly in an era of modern radiation therapy (IMRT/IGRT). Limiting irritations begins before therapy starts. Your oncologist will likely have you visit your dentist to have your teeth cleaned and to have any simple restorative work addressed (e.g. cavity). As treatment begins, you may be asked to use a fluoride rinse or gel, which can help protect the teeth from decay (often seen in the setting of a chronic dry mouth). Frequent sips of water can help restore the moisture which may be lost due to impaired salivary gland function. Alternatives include prescription medications which can help stimulate the flow of saliva. Dealing with impaired taste sensation can be a challenge. Despite the diminished taste sensation, maintaining your weight is critical to your wellness. Good oral hygiene is stressed and patients are encouraged to use oral rinses which often include salt and bicarbonate. Limiting side effects is possible. As always, discuss any questions you may have with your radiation oncologist.

Good oral hygiene is important during radiation treatment. If pain develops, speak with your physician on coping strategies.

Cancer Awareness in the Minority Community

Perhaps the most challenging situation that faces oncologists is the treatment of locally advanced cancer. Many cancers remain undetected until the patient presents with a particular pain or complaint; however, many tumors can be detected in their infancy, using screening tests. Screening is a process that allows asymptomatic patients to undergo testing which detects the presence of a particular illness or problem. Screening can be used for non-cancer related health issues (e.g. PPD testing for tuberculosis). They are commonly used in the detection of cancers, as well. Tumors for which screening tests are offered include skin cancers, breast cancer, gynecological malignancies, lung cancer, prostate cancer, and others.

"Primary care physicians serve an integral role in the education of patients; however, it is the challenge of all healthcare

providers to present this information to patients on a regular basis", said Dr. Aral, Board Certified Radiation Oncologist and NRAD physician.

Traditional motivators used to promote screening, may not be effective in all patient populations. A recent public health study conducted at St. Louis University (Cancer, Epidemiology, Biomarker & Prevention, 2008) has shown that reporting the "negative" disparities in outcomes for minority patients may result in less individuals seeking to undergo screening tests. This paradoxical response should be a focal point of all minority healthcare initiatives, not the least of which is cancer screening. The study, by Nicholson, suggests that a general mistrust of medicine exists in minority communities. If exposed to "negative" information (e.g. minority patients have worse outcomes when compared to Caucasian counterparts), patients may be less likely to undergo screening procedures. "This data has always troubled me", reports Dr. Aral. It suggests that before we can begin to educate people about the potential benefits of screening, we need to win their trust. History suggests that we have been less than completely transparent in matters of patient research and testing (e.g. Tuskegee experiment). "Moving forward, we must first rebuild a bridge of trust with our patients. Then we can educate them regarding the benefits of screening," said Dr. Aral.

For more information on cancer care and screening, please visit our website.

www.nrad.com

Medical Journal Spotlight

"New Study Suggests that Soy May Not Be Harmful to Breast Cancer Patients"

A recent abstract was presented at the annual American Association for Cancer Research. The lead author, Dr. Xiao-Ou Shu, Professor of Medicine at Vanderbilt University, reported on his findings from a review of nearly 10,000 women treated for breast cancer in both the US and China. The study followed the consumption of soy products (plant based estrogens) in women for 1 1/2 years following the diagnosis of breast cancer. Thereafter, the women were monitored to determine if higher amounts of soy consumption were associated with increased risk of recurrence. At a mean follow-up time, in excess of 7 years, a harmful effect was not shown. To the contrary, the report suggests that there was a reduction in risk for women who consumed increased amounts of soy products. "Our results indicate it may be beneficial for women to include soy food as part of a healthy diet, even if they have had breast cancer," Shu said. This cannot be directly generalized to soy supplements, however, as supplements may differ from soy foods in both the type and amount of isoflavones. Women can get the level of soy isoflavones that is similar to the highest consumption level found in the U.S. study population by consuming a cup of soy milk or two ounces of tofu per day. Before one regularly consumes soy products, they should discuss the potential health benefits with their physicians.

Technical Corner

Sal Campo, RTT

ATTITUDE: EMOTIONAL WELLNESS

The diagnosis of cancer presents any individual with both physical and emotional challenges. The physical challenges can be limitations due to disease or those due to temporary effects from treatment. The physical challenges of therapy can vary from person to person and are certainly affected by the site receiving treatment. Many of the commonly seen issues are discussed in the "Easing Treatment Side Effects", which appears each quarter in our newsletter. Following the suggestions of your healthcare team will likely result in a limited number of physical issues, while undergoing therapy.

This month, I would like to briefly touch upon the "softer" side of therapy, the emotional component of wellness while receiving treatment. Physical wellness is the goal of all patients receiving cancer therapy. During periods of stress, one may have difficulty remaining focused on that goal. While feeling physically challenged, it is easy to experience emotional duress and fatigue, as well. How we approach each day and the tasks we face, our attitude, can affect our outcome. Medical literature is beginning to address the importance of emotional healing for cancer patients. Having a strong support network (family, friends, etc) is an important component to emotional wellness. Regularly "connecting" with those individuals who are important to us, reframes the context of our existence. Many patients will also choose to become involved with support groups, which are readily available in the community. The NRAD team is focused on your total recovery, both physical and emotional. For more information call

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RADIATION SAFETY ISSUES

On March 10, 2011, Japan experienced its greatest natural disasters. A magnitude 9.0 earthquake occurred and within a short period of time, one of the nations worst tsunamis ensued. The devastation of both natural disasters has affected the lives of thousands of individuals. Perhaps most challenging is the resultant damage that occurred to one of Japans' nuclear power plants in Fukushima. Full control over the ongoing nuclear reactors is imminent; however, many questions have arisen regarding the health concerns to citizens abroad. The use of potassium iodide (KI) has been reported to help "protect" the individual from the radiation. The general concept is correct; however, it is NOT recommended that people prophylactically take this medication. KI should be used for those who will definitely be exposed to radioactive iodine (e.g. emergency workers, etc). The medication does not convey a "whole body" protective effect. Those with greater interest in this matter should visit the Nuclear Regulatory Commission (NRC) fact sheet on their website: http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-053.pdf

Radiation Oncology: Understanding the RT Jargon

Like many other fields of medicine, radiation oncology has evolved to include its own lexicon of words and expressions that may not be familiar to patients. Each quarter, we will share a few of these terms in an effort to improve communication with our patients.

Simulation: The process whereby a patient is placed in the planned treatment position and imaging (typically CT scan) are obtained of the region scheduled for treatment. The images acquired at simulation are used by the physician to create a plan. The process is painless and typically takes 30 minutes. Patients leave the simulation room with permanent marks that will be used for daily setup.

MLC: Multi-leaf collimator: Internal device located in the treatment machine that shapes the radiation beam. This allows the optimal radiation dose to be delivered to the target region and reduce the radiation dose to neighboring normal tissues.

Upcoming News and Events

CT (Computerized Tomography) Screening for Lung Cancer is Now Available at NRAD's Diagnostic Facilities

- Lung Cancer is the most lethal form of cancer in the US
- Those patients with a "significant history" of smoking are most likely to benefit (i.e. smoking 1 pack per day for 30 years, or more) from lung cancer screening tests
- Unscreened patients typically present with locally advanced disease (average 5 year survival less than 15%). Patients diagnosed using CT based screening (reported in NEJM, October 2006) are often diagnosed with Stage I disease, (5 year survival 80% and greater).
- Unlike conventional CT imaging, screening studies offer a reduced dose of radiation to the patient.

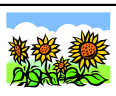
For more information about potentially life saving screening tests and treatment see our website: www.nrad.com

MAY IS NATIONAL SKIN CANCER DETECTION AND PREVENTION MONTH

- Approximately 2 million people will be diagnosed with basal cell or squamous cell skin cancer, this year
- Over 65,000 people will be diagnosed with the most serious form of skin cancer, melanoma
- Artificial solar radiation (Ultraviolet radiation) seen in suntan parlors is associated with increased cancer risk
- Other risk factors for skin cancers include:
  1) Fair Complexion
  2) Excessive or unprotected sun exposure
  3) Family History
  3) Severe sunburns as a child
- Patients should note changes on their skin. Moles that change in size, color, or appearance (e.g. crusting, oozing, etc) should be reported to your healthcare provider.
- For more information visit www.cancer.org

Look Good...Feel Better.

NRAD is pleased to announce a "Look Good Feel Better" Program, in partnership with the American Cancer Society. Meetings are in our Woodbury office on the first Tuesday of each month. All female patients are invited.




Look for more exciting information in our Summer issue, available late July 2011