As many of you may know we have changed the name of our Center from the Ted Mann Family Resource Center to the Simms/Mann — UCLA Center for Integrative Oncology in order to better capture our new and expanding services. Our new mission:

A center of integrative oncology . . . maintaining wellness, maximizing health, and complementing the best oncologic practices and scientific research through individualized care offered by a multidisciplinary team committed to enhancing the physical, psychological and spiritual well-being of people touched by cancer.

We believe this broad statement encompasses the range of existing and new services offered through the Center, and creates opportunities for further expansion. We also wanted to capture our work in a single phrase and settled on “Optimizing Wellness,” which can be seen in our new literature. I thought it might make sense to describe what we mean by this phrase and suggest the practicalities of how patients and family members might “optimize wellness” in the context of a cancer diagnosis.

Turning to the dictionary for assistance, I found the following definitions:

**Optimize**
- to make as perfect, effective or functional as possible
- to make the most of

**Wellness**
- the quality or state of being in good health especially as an actively sought goal
- the condition of good physical and mental health

By joining these words together we are affirming that our goal is to help patients and family members make the most of their current situation while striving to help all patients attain their most functional states of physical and mental health. I believe that there is an inherent process of preserving, strengthening, healing and optimizing physical, mental and spiritual health throughout the continuum of cancer care. While cancer may change life experiences, there is opportunity for each of us to try to make the most of the situation and in some circumstances, as I have discussed in other articles, there are opportunities for personal growth from the challenges of cancer and its treatments.

For many years there has been an emphasis on the biomedical aspects of cancer care to the exclusion of psychological, social or spiritual well-being. While I believe that treating cancer with the most advanced strategies of innovative Western medicine is the first step, there are many more components that are part of comprehensive human cancer care. The psychological impact of the diagnosis and treatment must be considered and, regardless of the physical state of the disease, people can strive to be emotionally healthy during the process. Emotional health allows each person to live to the fullest within the limitations imposed by the disease. Individuals can express feelings freely, actively cope with the symptoms, treatments and situations that arise and learn to manage anxiety, depression or loss. Ultimately, we are looking for pathways that improve each person’s quality of life — no matter the stage or state of physical wellness. There are many components of quality of life, such as social relations, physical health, mental well-being, symptom control, spiritual connection, activity, sexuality, work and family relations. The value placed on each of these components changes from person to person and, thus, quality of life can only be judged by the individual. Cultural factors influence how these components are weighted as well as how disease, illness and wellness are defined. Here at the Center we recognize the importance of helping each person find their individual pathway in order to optimize the individual’s perception and state of wellness.

At times there may be greater emphasis on one particular area of health and healing, but it is likely to be an ongoing process to find the optimal state of equilibrium within the context of cancer. Patients at all stages of the disease can optimize their wellness because care at the Center is tailored to focus on individual needs. We know the cancer continuum is an unknowable journey for patients in which the outcomes are often uncertain and variable. Thus, optimizing wellness is a goal for all patients with cancer whether they are patients who are just entering treatment, entering the survivorship phase, having a recurrence or even dealing with end of life issues. By focusing on optimizing wellness rather than a particular outcome, we create room for many different scenarios and opportunities for success in achieving individual goals. Consider each of these widely different situations and how strategies for optimizing wellness changes.

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1. A person is diagnosed with localized cancer and receives treatment. Strategies to optimize wellness might include getting information about disease state, decision making for treatment, managing the symptoms of treatment. The person may benefit from help adjusting to the new reality and is believed to be cancer free. We know that bringing about a sense of control and peace. Utilizing mind/body relaxation techniques to help with clarifying what one wants after death can help to plan for a dignified, pain-free death, and communicating with family and friends as the landscape of cancer changes. It may require nutritional strategies to support the body during frequent and regular cancer treatments.

2. A person is finished with treatment and is believed to be cancer free. Optimizing wellness might take the form of repairing and strengthening the body from the effects of treatment through diet, exercise, and nutritional supplementation. It may be important to learn how to live with the fear of recurrence and develop a plan to minimize anxiety when any ache and pain arise. Another important and proactive move at this stage is to develop new and specific nutritional and exercise strategies that are effective for illness prevention. In addition, there may be emotional processing of the cancer experience in a new way as the specific management of the disease is no longer so prominent, but the after effects and memories still need to be understood.

3. A person has a cancer that is progressing with intermittent periods of stabilization. Optimizing wellness might include addressing acute physical symptoms such as pain, fatigue, sleep difficulties, managing the anxiety and disruption of continuous cancer care, coping with the loss of specific activities, maintaining hope and learning to live each day to its fullest. It might also include developing short, medium and long term goals and developing good communication with family and friends as the landscape of cancer changes. It may require nutritional strategies to support the body during frequent and regular cancer treatments.

4. A person has aggressively progressing widespread cancer in which many treatments have been tried, none seem to be stopping the progression of the disease and end of life may be likely. Optimizing wellness might focus on management of symptoms, addressing the fears and concerns associated with end of life, providing information, finding strategies that bring comfort and spiritual peace, facilitating communication with family and friends and helping everyone express their needs. Establishing small short term goals for connection to family, having a plan for a dignified pain-free death, and communicating what one wants after death can help to bring about a sense of control and peace. Utilizing mind/body relaxation techniques to help with clarity and comfort can be very meaningful. Creating connections to spiritual leaders and communities who can provide comfort can also be part of optimizing wellness during end of life.

While each scenario is quite different with regard to the physical impact on the body, they all have opportunities for optimizing wellness of the body, mind, emotions and spirit. Our oncology social workers are able to identify specific resources that may be helpful in reducing some of the stress caused by particular problems. The Center offers a range of programs that can be individually tailored to help each patient and family member to optimize wellness. I invite you into the Simms/Mann -- UCLA Center for Integrative Oncology to learn more about our services including: Psychological Support and Counseling. Offered by psychologists and oncology social workers, we provide education, information, reassurance and problem-solving through one-on-one counseling or family counseling. Education about Nutrition, Dietary Supplements and Complementary Approaches. Through both individual integrative oncology assessments and groups, people can learn about enhancing their physical well-being both now and in the future from highly trained physicians who understand both Western and other complementary approaches. There are many strategies that can help you achieve greater physical and psychological wellness through nutrition, supplements and complementary approaches. Support groups. We offer a range of groups that address psychological and physical wellness such as meditation, art therapy, Qigong and specific groups oriented toward support from others who have similar types of cancer (see our listing in this newsletter). Mind/Body techniques to facilitate relaxation and stress reduction. Through group interventions or individual sessions, our clinicians can teach you specific relaxation, imagery, and stress management skills that help the mind, body and spirit to optimize stress reduction and well-being. Assistance with specific needs. Our oncology social workers are able to identify specific resources that may be helpful in reducing some of the stress caused by particular problems.

Advocacy in the medical environment. Because we operate within UCLA's comprehensive health system, we frequently work with teams of doctors and nurses to help you to identify and express your needs in the medical environment and to help the medical staff to better address your individual needs. Working together can assist in optimizing wellness. Assistance with advance directives and communication around end of life. While this is often the most difficult area about which to communicate, it is also one of the most important. Too often patients and family members live in fear of pain or suffering. In my mind, this is in opposition to optimizing wellness. Having a plan in place that is well-thought out, understood by everyone involved and truly expresses the wishes of the individual facing end of life can bring peace and comfort. Having a plan that focuses on symptom management, pain control and reduction of discomfort can bring a sense of peace. The first step in this process is communication. Educational resources. Having the right information to answer your questions can alleviate stress and improve the quality of your life. At the Center we can help you find accurate information on a wide range of relevant topics - everything from information about supplements, diet, specific treatments, management of symptoms to where to obtain information about financial options. We also offer a lecture series that presents many important issues and provides information. Join us for our Insights Into Cancer lecture series and bring your many questions (see the listing in this newsletter).

Optimizing wellness is about knowing what tools are available to you to bring about relief, increase knowledge and insight, reduce negative symptoms, increase positive growth and self-efficacy throughout the cancer experience. It is about making the most of the situation and actively seeking the best physical and mental health possible throughout the course of cancer. We look forward to meeting with you to achieve these goals. ANNE COSCARELLI, PhD Walls Annenberg Director’s Initiative in Psychosocial Oncology
The basic premise of mindfulness medita-
tion, which derives from Buddhism, is the
idea that looking at life with open and
nonjudgmental attention allows us to move
more easily through pain, fear, and
confusion. This was the Buddha’s basic
prescription for human suffering. Mind-
fulness is an inner discipline for learning
to pay attention in a special way which
can be very helpful in meeting the chal-
lenges of life-threatening illness.

Mindfulness may be most simply de-
fined as moment-to-moment awareness
of present experience. We sit down,
choose a focus of attention such as the
breath, and then do the best we can to
remain aware of what we are experienc-
ing, moment by moment. The concept of “mindfulness” is quite simple, in practice one quickly finds
that maintaining awareness in the pres-
ent moment is much more difficult than
it sounds. So, mindfulness is a skill which
must be deliberately cultivated, and this
is where meditation practice comes in.
Practicing mindfulness helps develop a
receptive, open, and spacious form of
awareness which has been described as
“opening the hand of thought.”

In a talk he gave recently2, Jack Kornfi eld,
our minds are generally any-

There is a rather humorous bumper
sticker which reads “meditation, it’s not
what you think.” This is very true. The
mind makes thoughts like water makes
waves, and the effort to empty the mind
of thoughts is misguided. Rather, mind-
fulness is about the ways of the mind.
A helpful metaphor is to think of mindful-
ness as a mirror, in which we redirect our
attention away from what we see in the
mirror to the surface on which the im-
ages appear. Turning our attention to how mindfulness
meditation can be helpful in coping with
cancer, let’s consider three different ways
that we can engage with the practice of
mindfulness: Behavioral; Psychological/
Existential; and Spiritual.

Behavioral Dimensions of Mindfulness
Mindfulness can be used as a stress-man-
gagement practice, to help us learn how
to remain calm in the face of challenging
circumstances and as a helpful adjunct in
maintaining emotional balance. It can
help in the management of anxiety and
fear; with sleep; and as a method for cop-
ing with pain.

Behavioral interventions based on
mindfulness skills include Mindfulness Based Stress Reduction (MBSR), Acceptance Commitment Therapy (ACT), and Mindfulness-Based Cognitive Therapy (MBCT).

Research supports that MBSR promotes
improved quality of life, sleep, and mood
in patients with cancer, and that it de-
creases symptoms of stress and anxiety.
Subjective measures are supported in
some studies by physiological measures
such as heart and respiratory rate, blood
pressure, and levels of stress hormones.
There is also some data which shows
improvement in certain measures of im-
mune function (cytokines such as inter-
feron gamma).

Psychological/Existential Dimen-
sions of Mindfulness
It is often useful to address fear and de-
pression in mindfulness-based individual
psychotherapy. At the very least, a cancer
diagnosis is a big shock; for most people
(if not everyone), it is quite traumatic,
although the degree of trauma depends
on many factors which include the spe-
cific medical picture as well as completely
interacting psychological factors such as
personality, resilience, and level of social
support.

Although from a medical point of view
many cancer patients can recover, the
psychological vulnerability may be more
long-lasting. Among the important psy-
chological dimensions of the challenge of
cancer are existential issues that come to
light when we are forced to confront our
mortality. Whereas before cancer we may
have had the luxury of forgetting about
the inevitability of our own death, the
diagnosis of cancer breaks that illusion
apart. Cancer is often an existential turn-

Spiritual Dimensions of Mindful-
fulness: Embracing The Moment
For those who are philosophically or spiritually inclined, Mindfulness can be a
doorway into a dimension of conscious-
ness which has been called The Now.

With or without a cancer diagnosis, each
of us is only Here For Now. The practice
of mindfulness can help create a new ap-
preciation of the fact that we are here,
now: on this day, we are alive and have
the opportunity to live.

When we face the challenge of cancer,
the invitation and opportunity of mindful-
ness is to embrace the moment of illness
in the spirit of healing not only our bodies
but our very life. From a space of mind-
fulness, we live in the question “on what
time level is my healing to be found?” In
this way, mindfulness invites us into a deeper seeing-into and participation with Life;
to the joy of making contact with the mo-
moment and with Life itself.

The spiritual teacher Stephen Levine said
it this way: “Healing is the growth that
each person seeks. It is what happens
when we come to our edge, to the un-
explored territory of mind and body, and
take a single step beyond into the un-
known, the space in which all growth oc-
curs. Healing is discovery. It goes beyond
life and death. Healing occurs not in the
tiny thoughts of who we think we are and
what we know, but in the vast undefini-
able spaciousness of being—of what we
essentially are—not whom we imagined
we shall become.”

REFERENCES
1. Marjorie Schuman, Ph.D. 2444 Wisteria Blvd. #202., Santa Monica, CA 90403. 310 264-1000. Center
4. MBRS classes in Los Angeles are offered through Insight LA (www.insightla.org) and elsewhere. See also: Rosebaum, E. Here For Now: Living Well With Cancer Through Mindfulness. Sangha House Publica-
Lymphomas, the most common hematological cancers, are on the rise in the Western World with a 50-75% increase over the last 30 years. Lymphomas are cancers of the immune system. They are separated into two large categories, Hodgkin lymphoma and all other lymphomas referred to as non-Hodgkin lymphoma (NHL). In 2006 there were 66,670 new cases of lymphoma with 11.7% of these being Hodgkin lymphoma and the rest NHL. It is not clear why there is an increase, but the increase appears to be steepest in individuals over the age of 60. There are over 40 different types of lymphoma. The most common are diffuse large B-cell (31%) follicular (22%) and composite lymphomas with a median survival of about 10 years. Some examples include small cell lymphocytic (6%), mantle cell (6%) peripheral T-cell (6%), marginal zone B-cell and mucosa-associated lymphatic tissue (MALI) (5%), marginal zone B-cell, nodal (1%) and lymphoplasmacytic (1%). There are many more with a smaller frequency of occurrence.

Follicular B-Cell Lymphoma
Follicular lymphoma is the most common low grade lymphoma in the Western world. One of the biggest issues in treatment is when to start - there is always a consideration about whether to wait and see versus treating. Follicular lymphomas are not curable with conventional chemotherapy and the median survival is about 10 years. Sometimes there are spontaneous regressions or histologic transformations to more aggressive lymphomas. When patients are treated for the first time, depending on the regimen used, they may have remissions of approximately three years, although this varies. The duration of a response often gets shorter over time with additional treatments. There are no surrogate markers of outcome.

Follicular lymphoma is a B-cell lymphoma. It is characterized by a specific chromosome abnormality which is a translocation between part of chromosomes 14 and 18. This causes the overexpression of a gene, BCL-2 which keeps the cells from dying as normal cells when they are no longer of use. This gene has been shown to improve survival in follicular lymphoma. Radioimmuno therapy can be given with one of two radioactive monoclonal antibodies, 90Y ibritumomab tiuxetan or 131I tositumomab. High-dose chemotherapy with transplantation support using the person’s own stem cells is another option (autologous transplant). Another option is an allelo genetic transplantation, which is a transplant with a donor’s stem cells. Investigational approaches are always underway and currently include options such as vaccination, proteasome inhibitors, bcl-2 antagonists, and novel antibodies.

In a meta-analysis that looks at all of the findings across a specific time period, rituximab has been shown to improve survival rates in previously untreated indolent NHL. Survival rates had not increased with single-agent and combination chemotherapy regimens during the period of 1960-1996. Single-agent rituximab has an overall response rate of 80% and a complete response rate of 41%. The “progression free survival” and “time to treatment failure” were longer than those seen with traditional chemotherapy. Toxicity is generally mild and related to the first infusion. The overall response rate of rituximab with chemotherapy has gone to 90%-100% and in general rituximab did not increase the toxicity of chemotherapy.

Similarly, in patients who had been previously treated, the addition of rituximab to the treatment strategy has produced positive results. For example, the combination of rituximab and chemotherapy had overall response rates of 90%-100%. Patients who received CHOP combined with rituximab, compared to CHOP alone, had longer progression free survivals. Patients who received rituximab combined with their high dose chemotherapy and autologous stem cell transplantation had overall response rates of up to 100% and complete response rates of 80%. There was an increased clearing of the circulating lymphoma cells with rituximab. While these results are promising, there is a need for novel drugs and drug combinations because indolent NHL is still not curable.

There are currently many trials that are investigating additional drugs for indolent NHL. Some of these are the next generation of anti-CD20 monoclonal antibodies. For example, there are currently trials underway with AME133 or Humax predicting evidence indicates that AIME133 binds its target CD20 10 fold better than rituximab. It is unknown however, if that leads to better clinical activity. Clinical trials will have to answer that question.

The role of rituximab and bortezomib are also being evaluated here at UCLA. There are other trials with rituximab combined with IL-2 which helps to activate the immune system and hopefully makes rituximab work better. The good news is that there are many exciting trials underway that are building upon the successes of rituximab and hopefully will lead to improvements in survival in B-cell lymphomas.

Diffuse Large B-Cell Lymphoma
This form of lymphoma is the most common NHL in the United States. In 30-40% of all cases the disease usually starts in the lymph nodes in the neck or abdomen with a localized presentation but tends to be extra-nodal, meaning that it presents outside of a node. The tumor masses are composed of large B lymphocytes and fever and sweating is a common symptom. There have been several types of diffuse large B-cell lymphoma characterized by genetic testing. It is an aggressive form of NHL, but it is also potentially curable with an 80% likelihood of cure for stage I and a 40% likelihood of cure with stages II-IV. Many different chemotherapy regimens have been tried, but CHOP has been the consistent winner. Rituximab combined with CHOP chemotherapy is the gold standard of care currently. Autologous stem cell transplantation will salvage 20-40% of relapsed patients. Researchers are investigating doing dose dense administration of CHOP plus rituximab, which means giving it every two weeks instead of every three weeks. Researchers are also trying to identify which of the diffuse B-cell lymphomas will be resistant to treatment and will need other treatments. Some of the subgroups are being identified in research settings using gene expression profiling, but this technology is not ready yet to be used in everyday clinical practice. In addition, there are new biologic agents being tested including proteasome inhibitors, HDAC inhibitors, PKC inhibitors and novel antibodies, such as an anti-CD40 antigen trial that is currently open at UCLA.

Mantle Cell Lymphoma
About 6% of NHL in the United States are mantle cell lymphomas (MCL). The lymphoma cells originate from lymphocytes in the mantle zone of a lymph node. It is characterized by a specific chromosome abnormality which is a translocation between part of chromosomes 11 and 14, resulting in a bcl-1 rearrangement in all cases and cyclin D1 protein over-expression. This was formally a “hidden” lymphoma among other low grade lymphomas. It is characterized by the worst characteristics which include the incurability of low grade NHL and the aggressive growth pattern of higher grade NHL. It is usually widely disseminated to the bone marrow, GI Tract (>90%) and oropharynx. The median survival is approximately three years. Treatments with hypercortisolation, cyclophosphamide, doxorubicin, and dexamethasone (hyper-CVAD) combined with rituximab have shown some promising results in patients under the age of 60. Until recently there have been no FDA approved agents for relapsed MCL. Bortezomib is the first drug that was approved for use in MCL for patients who had received at least one prior therapy. The trial showed an overall response rate of 31%. Clearly, there is a need for novel treatments. In 2005 a mTOR inhibitors such as CI-1040 showed combination with a response rate of 38%. Small molecules against bcl-2 are being tested, thalidomide analogs, flavopiridol, and novel CD20 antibodies are in development. A “biological” combination treatment is needed for MCL like the combination of CHOP used so successfully for other types of lymphoma. It is important that MCL patients who have relapsed consider participating in clinical trials testing the efficacy of novel drugs and combinations.

Hodgkin Lymphoma
Hodgkin lymphoma was named after Thomas Hodgkin in 1832 after he described several cases of a disease which represented a new malignant condition.
tion involving lymph nodes. There are about 7,500 cases diagnosed per year in the United States. The most common early signs are swelling of lymph nodes in the neck, upper chest, armpit, interior of the chest, abdomen or groin. Other symptoms include fever, sweating, weight loss, and itching. Hodgkin lymphoma has several subtypes. Characteristically when pathologists look at the tissue samples for Hodgkin lymphoma they see a particular rare type of cell, which has been named Reed-Sternberg cell, sitting in a background of normal appearing inflammatory cells. The Reed-Sternberg cell is a B-cell that is missing many of the characteristics that would make it look like a B-cell. There have been questions raised about the role of Epstein - Barr virus in Hodgkin development. Twenty to 40% of Hodgkin lymphomas have been found to contain monoclonal Epstein-Barr virus genomes. The Hodgkin cells also have CD30 and CD40 surface markers on the cell membranes which provide potential opportunities for novel treatment interventions.

The cure rates of patients diagnosed with Hodgkin lymphoma have steadily improved over the years; the majority of Hodgkin patients will be cured. Even with an advanced stage Hodgkin lymphoma there are 90% cure rates in a disease that was at one time fatal. In advanced Hodgkin lymphoma there is a subset of people that are more difficult to cure. Research is trying to understand more about this subset. There are alternative protocols to the standard ABVD, but they have also more side effects. Most people are cured with the ABVD regimen –Adriamycin® [doxorubicin], bleomycin, vinblastine, dacarbazine. There is some data to suggest that there may be a higher cure rate with BEACOPPesc (Bleomycin, Etoposide, doxorubicin, Cyclophosphamide, Vinristine, Procarbazine, Prednisone, Rituximab), but it is more toxic. An important research question is how to cure patients with the least toxic regimen and how to identify the patients that are destined to relapse early and treat them more aggressively in the hope to improve their survival. A possible way to distinguish these patients may be by the use of early PET scanning. UCLA will have a study that starts patients with the Reed-Sternberg cell, sitting in a background of normal appearing inflammatory cells.

If the disease is not responding well, then the patient is switched to the more aggressive protocol. Using this method the oncologist will be able to evaluate whether this improves response rates and survival rates. If this turns out to show improvement in survival then this would be an example of how PET scans can be used to tailor chemotherapy regimens in a more individualized way based upon early response. The goal of research is to develop less toxic treatments for patients who can be cured and to develop new and novel approaches for patients who are not cured by standard therapy. There currently are many new agents, which are not chemotherapeutics, which are in early clinical trials. Some of them have shown very promising results and may lead to novel combination regimen for Hodgkin lymphoma.

**T-Cell Lymphomas**

The T-cell lymphomas are about 10-12% of all lymphomas and are again divided into many different subtypes. These lymphomas have been categorized by the World Health Organization as listed below:

### T-cell and NK-cell neoplasm

- Precursor T-cell neoplasm
  - Precursor T-lymphoblastic lymphoma/leukemia (precursor T-cell Acute lymphoblastic leukemia)
- Mature (peripheral) T-cell neoplasm
  - T-cell prolymphocytic leukemia
  - T-cell granular lymphocytic leukemia
  - Aggressive NK-cell leukemia
  - Adult T-cell lymphoma/leukemia (HTLV-1)
  - Extramedullary NK-T-cell lymphoma, nasal type
  - Enteropathy-type T-cell lymphoma
  - Hepatosplenic gamma-delta T-cell lymphoma
  - Subcutaneous panniculitis-like T-cell lymphoma
  - Mycosis fungoides/Sezary syndrome
  - Anaplastic large-cell lymphoma, T/null cell, primary cutaneous type

### Peripheral T-cell lymphoma, not otherwise characterized

- Angioimmunoblastic T-cell lymphoma
- Anaplastic large-cell lymphoma, T/null cell, primary systemic type

There is considerable geographic and racial variation in the incidence of different subtypes. In some cases there is a causal association between a particular T-cell malignancy and viruses. Some of these are more common in the Far East. It is a highly heterogeneous group of lymphomas with clonal proliferation of mature post thymic lymphocytes. The clinical presentation is often at an advanced stage, IV (63%) and 40% have B symptoms and often are not doing well overall. The overall survival for T-cell lymphomas is not as good as in B-cell lymphomas and there is some evidence to suggest that stem cell transplantation when given up front as the first line treatment leads to the best outcome for patients. New ideas and treatment approaches are needed for the T-cell lymphomas. There are some new drugs that are interesting and may be particularly helpful including anti-CD 30 antibodies for ALCCL (anaplastic large-cell lymphoma), puraltate for all PTCLs (peripheral T-cell lymphomas), histone deacetylase inhibitors (depsipeptide) for all PTCLs and Bortezomib for MF (mucosis fungoides).

### Challenges

We need novel targeted therapies to combat lymphomas. These may include anti-bodies for surface markers and small molecules. The cause of relapsed disease may be cancer stem cells that survived the treatment and are replenishing and producing the disease again. It may be that with chemotherapy we are only killing the offspring but not the stem cells. We need to learn to target the cancer (lymphoma) stem cells with novel treatments; something we are currently working on in the laboratory. All of these new approaches will require that patients actively participate in clinical trials so we can determine which treatments are most successful and add them to the wide range of treatments already available. Overall, this is an exciting time in lymphoma research with many new opportunities and answers burgeoning on the horizon.
LUNG CANCER & ITS TREATMENTS

EDWARD GARON, MD, CLINICAL INSTRUCTOR, MEDICAL ONCOLOGIST AND RESEARCHER, UCLA’S JONSSON COMPREHENSIVE CANCER CENTER, DAVID GEFFEN SCHOOL OF MEDICINE

This is a summary of a lecture presented on September 25, 2007.

One of the first questions many patients with lung cancer are asked is whether they smoked. It is true that lung cancer often is related to smoking and there are many cancers that appear to be related to lifestyle issues, yet none of them carry the same stigma that lung cancer carries. The fact of the matter is, a diagnosis of cancer is devastating—no matter the cause—and everyone receiving this diagnosis should be treated with great care. People with lung cancer should not have to deal with guilt, shame, stigma or the incidence of a psychological distinctness that often accompanies the diagnosis when a history of smoking exists. Even though lung cancer rates would eventually decrease if everyone could end their addiction to tobacco and smoking, there would still be many cases of lung cancer. About 10% of smokers develop lung cancer and about 40% of lung cancer is diagnosed in people who are currently smokers. However, about 15% of new lung cancers are metastases (tumor that has spread to other organs). In the most simplistic terms, lung cancer is metastases (tumor that has spread to another organ other than the lung such as bone, liver or brain. Staging helps determine the goals of treatments; whether the disease can be operated on and the number of patients that are able to be cured. The other goals are to reduce and stabilize the disease.

Lung Cancer Screening and Prevention

Ideally, we would like to be able to prevent the development of lung cancer. UCLA has two trials that are oriented toward preventing the disease. These two trials involve “chemoprevention” agents, Celebrex at high doses and Iloprost. The idea behind these trials is to modulate the inflammatory process which may lead to cancer progression. There is a website that offers more information about these prevention trials for people that are at high risk for developing lung cancer, www.lungcancerprevention.com.

The other avenue of pursuit is to develop a screening methodology that detects cancer at the earliest stage and, therefore, when it is most treatable. No screening tool has had definitive research to support that it is effective in early detection for lung cancer. Researchers would like to find something that is like the Pap smear for cervical cancer, the mammogram for breast cancer, the colonoscopy for colon cancer or the PSA test for prostate cancer. Chest x-rays and sputum cytology (looking at the cells in mucus that are coughed up) have been looked at as potentially screening tools, but the research has not found them to be beneficial for mass screening. There has been some hope that spiral CT (computed tomography) scanning could be useful. One study indicated a benefit whereas another did not, thus leaving the medical community with contradictory findings. There is currently a research study going on called the National Lung Cancer Screening Trial that will answer this question more definitively. Screening studies are difficult because there are potentially many sources of bias. For example, screening studies may pick up a tumor slightly sooner than it would otherwise be found, but not early enough to make a difference in outcome. Sometimes fast growing tumors are missed in screening. As a result, slow growing tumors are picked up. RFA is the very important component of a screening test also has to be careful not to produce additional risks to the patient. A lot of CT scans can increase exposure to radiation and can also lead to diagnostic procedures that carry their own risks. These factors have to be considered in a cost-benefit analysis when screening otherwise normal healthy individuals.

Treatment for NSCLC

For Stage 1 disease the best therapy is surgery if the patient is able to undergo surgery. Not everyone is physically able to have surgery, and therefore, there are alternatives, radiation therapy, another newer technique called radiofrequency ablation (RFA). RFA puts a catheter into the tumor and heats it up until the cells die. There is no clear data that patients with stage 1 disease should get treated with additional therapy (e.g., radiation or chemotherapy), called adjuvant therapy, except possibly in situations where the original tumor is greater than 4cm.

For Stage 2 disease, surgery is also the primary treatment option; however, there also is a proven benefit to adjuvant chemotherapy. Many different regimens of chemotherapy showed no benefit so it was thought to be unhelpful, but regimens that contain cisplatin do show a benefit. Chemotherapy given as adjuvant treatment is aimed at trying to eradicate any remaining cells, and thus, reducing the likelihood of a recurrence or spread. There has also been some preliminary evidence that disease free survival can be improved with an anti-MAGE post-operative immunotherapy which combats a substance (MAGE) that is produced by some lung cancer cells. A more definitive study of this immunotherapy will soon be available at UCLA.

Stage 3 disease may be treated with surgery, but there are times when chemotherapy is given first rather than after the surgery. When chemotherapy is given first, it is called neo-adjuvant therapy. Again, the cisplatin-based regimens are the ones that have been shown to have the benefit at this stage of the disease. For patients with whom surgery is not an option, chemotherapy with radiation therapy is considered the optimal treatment. Unfortunately, toxicity is significant when chemotherapy and radiation therapy are combined. There have been efforts to identify the best ways to give these treatments, and one such study is currently available.

Stage 4 disease means that the disease has spread beyond the lung. In these cases, systemic treatment is the best approach. Chemotherapy is given, often with cisplatin-based regimens. The exception is patients who have lung tumors that are solitary metastases. In such cases, solitary adrenal metastases in which surgery may be used for these presentations of the disease. These single metastases with the right size tumor (less than 3 cm) in the lung can potentially be cured.

Many patients are upset when they are told that they cannot have surgery for their disease. It does not make sense to them that a tumor shouldn’t be removed from the body rather than being removed. Treatments are either to treat the local area or to treat the entire body (systemic). If there is evidence that the disease is not of the lung, then it is considered metastatic (systemic) and doing surgery would actually delay the much needed systemic therapy. Surgery causes disruption to the patient and requires recovery time; this recovery time delays the onset of much needed systemic therapy.

There have been many clinical trials in lung cancer comparing one chemotherapeutic drug to another. Many of these studies have been disappointing in that they do not show improving outcomes beyond the best outcomes we already have with cisplatin or carboplatin containing chemotherapy regimens. The combination of this frustration coupled with new ways of understanding the molecular biology of cells and cancer cells has led to different ways of thinking about treating lung cancer. Here at UCLA the teams are invested in these newer approaches. One recent mechanism has been to look at the cancer cell and evaluate specifically what it needs to survive and thrive. Through this process we’ve learned that large tumors need a blood supply of nutrients in order to keep growing. If the vascular supply to a tumor is restricted, it stops growing. Cancer cells create blood vessels to feed the cancer through a process called angiogenesis. It was discovered that bevacizumab (Avastin), an angiogenesis inhibitor, when combined with traditional chemotherapy (cisplatin and paclitaxel) improved survival compared to pa-
Another newer approach has been looking at epithelial growth factor receptors (EGFR) which sit on the surface of cancer cells. These receptors transmit signals to the cells which tell the cancer cells to grow and divide. EGFR is dysregulated in many tumors including lung, renal, bladder, prostate, head and neck cancers, brain tumors, breast, esophageal, gastric, pancreatic, ovarian and cervical cancers. When EGFR is dysregulated it creates a cascading effect that increases tumor growth, prevents tumors cells from dying (apoptosis) and promotes metastatic spread of the tumor. Research has been dedicated to understanding this process and to developing drugs that inhibit the dysregulation of EGFR, thus stopping the growth of the tumor. Erlotinib (Tarceva) is one of the new drugs that has been approved for use in NSCLC. While the overall magnitude of the benefit is small across all patients, there are about 10% of patients who get a really good response.

There is growing interest and many research studies underway using these initial findings to generate new questions and new research. UCLA has a significant dedication to research in lung cancer and has more than a dozen new trials that are either open or in the process of opening. Many of these trials involve new compounds, combining currently available targeted treatments with chemotherapy or other targeted treatments.

For example, the ATLAS trial looks at patients who receive standard chemotherapy plus bevacizumab, an angiogenesis inhibitor. After four cycles of therapy, patients are then randomly assigned to bevacizumab as a maintenance drug or receive bevacizumab and Erlotinib. Bevacizumab is being used in new populations of patients such as patients with squamous cell carcinoma (a type of NSCLC) and in patients that have already been treated for brain metastases. There are other studies that are using what has been learned in these trials and developing new combinations and new compounds. Some studies are looking at whether chemotherapy can be avoided altogether as part of the initial therapy for advanced lung cancer. For example, one trial asks, “Can Erlotinib be given as a first line therapy without chemotherapy, thus reducing the toxicity that patients experience from chemotherapy?” One trial tests ZD6474, a compound that inhibits EGFR and angiogenesis in the same drug. Another area of research has begun looking at estrogen receptors in NSCLC. Estrogen receptors alpha and beta are expressed in NSCLC in both men and women. One study looks at combining erlotinib with fulvestrant (Faslodex) in patients with advanced NSCLC.

It should also be noted that right now there are three approved second line chemotherapy agents: docetaxel (Taxotere), pemetrexed (Alimta) and erlotinib (Tarceva). Other approved agents for lung cancer include gemcitabine (Gemzar) and vinorelbine (Navelbine). There are additional treatments being studied such as vandetanib in addition to the aforementioned research.

Small Cell Lung Cancer

Small cell lung cancer is staged differently than NSCLC. It is divided into two categories, limited and extensive. Limited disease means that all disease is within one lung and the center of the chest, and thus, can be encompassed within one radiation port. Extensive disease cannot be encompassed within one radiation port. Surgery is not effective for small cell lung cancer, with the rare exception of an isolated solitary mass (less than 5% of cases). The treatment for extensive small cell lung cancer is a chemotherapy regimen containing cisplatin and Etoposide. In limited disease, the same chemotherapy is used; however, radiation therapy is started during the first or second cycle. Finally, prophylactic whole brain radiotherapy is given to patients with limited disease who have a complete response to the radiation and chemotherapy. Patients who receive the whole brain radiation have longer survival times than those who do not. Recent data has shown that even more patients than previously thought might benefit from prophylactic whole brain radiotherapy.

Brain Metastases

Brain metastases are a common problem in patients with lung cancer. There is a small amount of space in the skull and, therefore, no room if the disease is growing. It can crowd out healthy cells and exert pressure on the brain, thus affecting function. Brain metastases are usually treated as a first priority. Whole brain radiation is used when there are many tumors. Stereotactic radiation (specific beams of radiation to focal areas) is used when there are fewer lesions. In addition, in some situations neurosurgical removal is appropriate. The risks of these procedures include loss of cognitive and physical function, yet if left untreated these same risks are still present. A team of specialists is needed to evaluate the best treatments for the individual.

The Good News

While lung cancer treatments and outcomes are currently less than optimal, there is a tremendous amount of research going on at UCLA and other institutions. At the moment, there are over a dozen trials in the process of recruiting and/or being opened, and additional studies are in the planning stages. Although patients certainly do not need to participate in clinical studies, UCLA is committed to bringing the best possible studies to patients who want to participate. While not all studies lead to better treatments, they will all advance knowledge and over time they will improve outcomes overall.

When you are dealing with cancer and the effects of cancer treatment, the last thing you need to worry about is if you can afford the services that we provide. Also many insurance plans do not cover our services. We do them for you, for your friends, for your family and we are able to provide our services because individuals like you fund us with donations.

Voluntary donations of any and every size are our life-blood. Your gift plays a vital role in insuring the availability of high quality services for anyone who needs them. If you cannot make a substantial gift as you would like, there may be people within your network who might be able to help support us. You could be an important conduit to company giving, foundations or even a collection of caring and compassionate individuals. We are asking you to look for people you know and ask them to contribute with you or contribute on your behalf. The Simms/Mann UCLA Center for Integrative Oncology is not endowed and we depend on your generosity.

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You may designate your gift for general operational support or you may designate it to help underwrite the costs of support groups and classes, Insights Into Cancer lectures, newsletter production and mailing, educational materials for our patient library and/or Reflections.

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Gifts and pledges may come in the form of cash, checks, and securities. We also accept Visa, MasterCard and American Express as forms of payment. We gladly accept matching gifts from your place of employment.

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To make a gift to the Center, complete one of the gift envelopes available in the Center’s lobby or in Reflections, or send us a brief note stating the purpose of your gift (e.g., to support the Center’s operations) and your name and address. You will receive a letter of acknowledgement from the Resource Center.

Please make checks payable to the JCCF and The Simms/Mann UCLA Center for Integrative Oncology. If you wish to make a gift by credit card, please enclose the amount of the gift, the credit card number, expiration date and the name that appears on the card. Your credit card statement will reflect a gift made to the Jonsson Cancer Center Foundation.

If your gift is in memory or in honor of another person, please include the name and address of the person who should be notified. We will send a letter to that person stating that a gift has been received. The amount of the gift will not be disclosed. Our newsletter includes a list of the names of those who have made a donation of $25.00 or greater to our Center during the past fiscal year. The exact amount of the gift is not publicized.

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200 UCLA Medical Plaza, Suite 502
Los Angeles, CA 90095-6934

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SUMMARY OF GIFTS

Received Between January 2007 and March 2008. We wish to thank the following people and organizations for their financial support:

General Operations

Abraham Oncology
Sally Acree
Sally Aklal
Sara Asis
The Annenberg Foundation
Andaska Aronberg
Gent Arountch-Saffren
Lisa Ashok
Alan & Nancy Baer Foundation
Li Bailey
Mr. & Mrs. Jay Baier
Bettye Barclay
Howard Bass
Barry Beckerman
June Behar
Marta Benefits Yarato
H Louise Bernstein
Louise Blocker
William Borovoy
Steven Boreen
Helen Boswell
Frena Bienes
Denise Boskow
Corazon Bruton
Ed Camhi
Julie Carpenter
Itzeh E. Cartier
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Maria Chalik
Sheree Chen
Jannett Cizeng
Winnie Chung
Irene Crew
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Kathleen Clark
Dr. Lawrence Cohon
Evelyn Cohen
Grace Cohen
Carol & Steve Cohen
Jean Cotton
Theodore & Beth Cooper
Donna Cooper
Hugh CorWIN
Caroly & Gloria Coudia
Allan & Helen Cutter
Marjorie Danish
Henry De Burgo
Eileen De Leon
Florence & Clarence De Vos
Richard Delgado
Yvonne & Erza Dennis
Maria Dow-Parka
Luta Doppler
Russell Doughty
Sandra Edwards
Lotte Ehrlich
Dave & Frances Einhorn
Evelyn Elbaum
Marcia Ellision
Ginna Empl
The Esperanza Family Foundation
Debra Everett
Vera Fabri
Charles Fid
Judith Feld
Max Felder
Ross & Af. Fenc
Susan Fine
Victoria Foote
Roni Friedman
Rita & Monroe Friedman
Gary Friedman
Howard Futerman
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Lusie Goldklang
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Patricia Gould
Edith & Richard Grandi
Rick Grande
Sue & Susan Greielsen
Frank Guechich
Rudy Gutierrez Herrman
Zenia Gutkav
Pearl & Mark Gremett—??
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Vivian Hall
Lynn Hawkins
Norman & Yvonne Hawkins
Sharon Henry & Brian Nauroff
Warren Hechinger
Mark Heidmann & Nannette Anderson
Ann & Richard Henreich
Joel Heinz & Elaine Hulett
donora Glacia
Ann Hiller
Joey Heirgesheimer
Mary Hester
Arthur & Judith Hirschman
Lynn Horowitz
Robert & Caitlin Hudnutt
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Lea Ihan
Miranda Ihsan
Louise & Bernard Ijomah
Elizabeth Ann Kaiman
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Karen & Ken Kaufman
Agnes Kwan
Lee Kaufman
Yad Kudin
Dr. Thomas Kuehner
Dr. Lynn Kugih
Me. Kunay
The Kovarski: Family
Melissa Kravitz Memorial Foundation
Rosanne Kirshman
Fred Koko
Anna Kurucz Prisz
Felice Kurtzman
Lila & Lindbergh Kusumoto
Lynn Lakote
John Lam
Monica Lau
Marsha Lau
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De. And Ms. Harold Leventhal
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Mannathan Inc
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Sail Rosenfeld
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Doni Shima-Luks
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Geradine & Jack Wetschman
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Robert & Pearl Weiss
Walter & Margareta Wu
Lori Young
Wen Yi Yu
Rosario Zambrano
Diana Zimmerman & Michael Peczynski
Robert & Gloria Zuccarel

In Memory of:

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Rhody Block
HELEN ALANCRAIG
Susan Schilman
LYNN APINDALE
Lettie & Michelle Rish
HELEN BEYKIRCH
Susan Schilman
STACY SUMMERS BORDEN
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Susan Schilman
CORWIN DAVIS
Poorman - Hoyt - Stratford Foundation
ROBERT DASTEEL
Betty Dastiel
FRAN DE SENA
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SUZANNE DREWUS-LEEVY
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RUTH NOGUERIA DOS SANTOS
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Understanding nutrition can sometimes be difficult because of all the conflicting information presented by the media. It is important to stay informed yet remain skeptical about what you hear. There is a morass of misinformation on the Internet, however, much of it is misinformation or findings based on anecdotal reports, small studies, or studies that are not well controlled. The best sources of information are those that have been replicated and provide an objective picture and unlikely to play a major role in decreasing the risk of cancer or the risk of recurrence. Emphasis should always be on a varied healthy diet that includes physical activity and weight management.

There is a new field evolving called nutrigenomics. Nutrigenomics is the study of how foods affect the expression of genetic information in an individual. Each one of us is affected by the combination of our environment and our genetic make-up. It is important to remember that any particular dietary item is part of a complex picture and unlikely to play a major role in decreasing the risk of cancer or the risk of recurrence. Emphasis should always be on a varied healthy diet that includes physical activity and weight management.

CANCER & NUTRITION: LIFESTYLE MATTERS

KAREN DUVALL, MD, MPH, DIRECTOR PREVENTIVE MEDICINE PROGRAM IN THE DEPARTMENT OF FAMILY MEDICINE, DAVID GEFFEN SCHOOL OF MEDICINE AND INTEGRATIVE MEDICINE SIMMS/MANN – UCLA CENTER FOR INTEGRATIVE ONCOLOGY AND MARIE MURPHY, FITNESS INSTRUCTOR

This is a summary of a lecture presented on December 11, 2007.

LIFESTYLE MATTERS

CANCER & NUTRITION:

1. Understanding nutrition can sometimes be difficult because of all the conflicting information presented by the media. It is important to stay informed yet remain skeptical about what you hear. There is a morass of misinformation on the Internet, however, much of it is misinformation or findings based on anecdotal reports, small studies, or studies that are not well controlled. The best sources of information are those that have been replicated and provide an objective picture and unlikely to play a major role in decreasing the risk of cancer or the risk of recurrence. Emphasis should always be on a varied healthy diet that includes physical activity and weight management.

2. There is a new field evolving called nutrigenomics. Nutrigenomics is the study of how foods affect the expression of genetic information in an individual. Each one of us is affected by the combination of our environment and our genetic make-up. It is important to remember that any particular dietary item is part of a complex picture and unlikely to play a major role in decreasing the risk of cancer or the risk of recurrence. Emphasis should always be on a varied healthy diet that includes physical activity and weight management.

3. Fish

- In 2006, a study was published from the Nurses Health Study II with 90,000 premenopausal women suggested that eating more than 1.5 servings of red meat a day is associated with twice the risk for receptor positive breast cancer versus women who eat less than 3 servings per week. It is important to note that a serving of red meat is 3 ounces — about the size of a deck of cards. Most people eat considerably more red meat in their usual serving, so it is important to consider portion control in determining how much you eat of any item.

- Soy

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4. Free Fatty Acids and Inflammation

There is growing body of research into Omega 3 and Omega 6 fatty acids and their role in inflammation, which is thought to be a promoter of cancer. Omega 6 promotes pro-inflammatory cytokine formation while Omega 3 results in decreased formation of inflammatory cytokines. Early man had a ratio of 2 Omega 6 fatty acids to every 1 Omega 3 fatty acids (2:1). However, our diet has changed substantially from the plant-based diet of early man and the American diet has 20 Omega 6 to every 1 Omega 3 (20:1). In 1990, the Institute of Medicine (IOM) issued the first guidelines for the recommended intake of Omega 3 and 6. They recommend taking 1-2 grams per day of Omega 3 and 12 grams of Omega 6 per day. Sources of Omega 3 fatty acids include coldwater fish and plants such as walnuts, flaxseed and canola oil.

5. Fish

- It is recommended that Americans eat 2 servings per week of fish that are high in protein and low in fat. Eating fish reduces the risk of cardiovascular disease, arthritis, dementia, depression and macular degeneration. Their anti-inflammatory qualities also reduce the risk of cancer. It is recommended that Americans eat 2 serving per week of fish that are high in Omega 3 fatty acids and low in contaminants. The best choices include salmon (wild Alaskan or red sockeye), mussels, oyster, anchovies, rainbow trout (coldwater not far raised), herring and sardines. Shrimp, pollack, catfish, clams, scallops and flounder also are low in mercury, but not as high in Omega 3 fatty acids. Fish such as swordfish, king mackerel, shark, tilapia, Chilean sea bass, grouper, and blue fin tuna should be eaten less frequently in order to minimize ingestion of contaminants like mercury.

6. Red Meat

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- Soy

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7. There is evidence soy has both a protective role and a stimulatory role. The protective benefits of eating soy may depend on the timing of how old

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8. The Big Picture: Obesity

There are multiple studies that show a link between weight gain, increased risk of developing cancer and increased mortality from cancers. For many years, people have thought dietary fat was a factor and percent of body fat also plays a role in breast cancer risk. Abdominal obesity is more problematic; for each 11 pound weight gain, a woman who has had breast cancer increases her risk of death from breast cancer by 14%. After six years of follow-up, the risk of death was twice as high for women who were obese, having a BMI of 30 or higher (example 5’4” and 175 lbs). This study confirms the trend of increasing risk for death and recurrence with increasing BMI in breast cancer survivors. If you want to figure out your BMI, you can do a web search on BMI or go to (http://www.nhlbisupport.com/bmi/) to find programs that allow you to enter your height and weight.

- Fish

- Soy

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you are when you eat soy. We now think that eating soy may be most effective before and during puberty and that may be why Asian women, who consume soy from birth, have lower rates of breast cancer. It is also difficult to accurately measure how much soy individuals eat or should eat in order to get the protective benefits because there are so many individual differences in metabolism as well as each person’s hormonal environment. For example, an overweight woman already has more endogenous estrogens than a non-overweight woman. The bioavailability of phytoestrogens from soy is also affected by how the plant itself was grown and processed. However, there is an absence of good quality studies related to soy.

Soy is a high quality plant protein and it appears safe to consume three servings per day as part of a balanced diet as long as it is consumed as a whole food. If you are undergoing treatment for cancer recommend you eat it only once you stop tamoxifen. Avoid supplements and powders as there is no evidence that these are safe or effective. Examples of some servings of soy include:

- Edamame (1 and one-half cup of frozen in shells): It has 11 grams of soy protein, 28 micrograms of isoflavones, 70 mg of calcium and 110 calories with 20% of the calories from fat.
- Soy milk (one cup): It has 5 grams of soy protein, 150 calories and 30% calories from fat.
- Soy Nuts (1/2 cup or about 50): It has 25 grams of soy protein.
- Tofu (1/2 cup): It has 10 grams of soy protein.

On another note, women on tamoxifen should not be consuming soy as there is evidence that it may help mitigate, but not eliminate, the additional risk.

Fruits and Vegetables Eating a colorful diet of fruits and vegetables is still the most effective way to stay healthy. Fresh fruits and vegetables provide you with the most protective nutrients and, when consumed as whole food, they are more bio-available to your body. Unfortunately, the most commonly eaten fruits and vegetables in the United States do not have the optimum distribution or quantities of phytochemicals. The most common fruits and vegetables in the American diet are bananas, fresh and frozen potatoes (often eaten as French fries), onions, corn, iceberg lettuce, and tomatoes (as ketchup). A micro-nutrient rich diet should include servings from each color of fruit and vegetable. For example, choices by color include: Red – tomato products, soups, sauces, juices; watermelon, pink grapefruit; Purple – grapes, berries, plums, pomegranate; Orange – carrots, mangos, apricot, sweet potato, butternut squash; Orange/Yellow – citrus fruits, papaya, peaches; Yellow/Green – spinach and leafy greens, corn, avocado, green beans; Green – broccoli, Brussel sprouts, cabbage, spinach, collard greens; and White/Green – garlic, onions and chives. Many people wonder whether they should spend money on organic foods. I am often asked, “Is it worth the price?” A good web site for information about organic foods is www.foodnews.org. They have identified the “dirty dozen” which includes fruits and vegetables that have the highest pesticide loads and thus, are worth the splurge for organic produce. The dirty dozen include the following fruits and vegetables: peaches, strawberries, nectarines, apples, spinach, celery, tomatoes, potatoes, lettuce, and imported grapes. One consistent recommendation is to buy organic produce because the wax that is put on apples does help seal the actualise in the pesticides and, thus, cannot be washed off before eating. They list other fruits and vegetables including the amount of pesticide in them. Be sure to look up the fruits and vegetables in your area. As this determines not only the use of pesticides at the time of growing, but how long the soil has been free from pesticide application as well.

Grapefruit is a fruit that has recently been in the news in relation to breast cancer. There was an associated 30% higher relative risk of developing breast cancer for women who consumed 1/4 of a grapefruit per day. This finding came from a study published in the British Journal of Cancer in 2007 in which they found that grapefruit inhibits CYP 450(3A4), which inactivates estrogen. Women who are cautioned not to eat grapefruit when taking hormone replacement therapy, otherwise it should be fine as part of a balanced diet. They did not look at consumption of grapefruit juice in this study. The recommendation is that grapefruit medications should not be taken at the same time as grapefruit, so be sure to read the labels.

Dairy Foods Dairy is another somewhat controversial food group. While dairy products such as cheese are a good source of calcium and protein, they are often high in fat and calories which can be a problem if it leads to weight gain or maintains a person in an overweight state. There is some evidence that indicates that dairy foods may play a protective role against breast cancer in premenopausal women. However, it is unclear if the protection comes from the calcium and vitamin D in these foods or if there are other factors involved. A dairy-free diet has been proposed in the popular literature as a “cure” for breast cancer, but there is no data to support this. One problem with dairy foods is they may contain hormones, antibiotics or pesticides and when we eat these foods the toxins are stored in our fat. You can limit your exposure to toxins and fats by using non-fat, hormone-free organic dairy products.

Alcohol Alcohol may be the one diet intervention that can make you have a significant impact on the development of cancer, especially breast cancer. There have been many studies that link alcohol intake with increased risk for breast and colon cancer. Alcohol increases estrogen levels and may have adverse effects on serum cotinine levels. Plasma concentrations of selenium and vitamin E are decreased in alcoholics. It is recommended that alcohol is limited to an average of 3-4 alcoholic beverages per week. More recently, researchers have looked at an alcoholic beverage is no more than 5 ounces (not a full goblet). If you do drink alcoholic beverages, you may consider taking a folic acid supplement (800 micrograms) per day. As there is some evidence from Walter Willet’s Nurses Health Study that this may help mitigate, but not eliminate, the additional risk.

Vitamins and Supplements The quantity of vitamins sold each year is increasing at staggering numbers. But are all of these vitamins needed? There is no ‘one size fits all’ answer to this question. Some people get more micronutrients from their foods because of the way they eat, while others may be deficient. Having an expert design a personalized approach for you will save you money in the long term, optimize your supplement prescriptions and minimize purchase of unnecessary items. Most importantly, you will eliminate any potentially harmful products from your regimen. Some key thoughts and recommendations are discussed below on the topic of vitamins and supplements:

Folate. Foods containing folate (folic acid) may have protective effects. Folates, which are naturally found in many foods, may include avocado, bananas, orange juice, asparagus, fruits, green leafy vegetables, dried beans and peas and yeast. Many commercial grain products are also fortified with folate. The recommendation is 400-600 micrograms per day cumulative from diet and supplements.

Vitamin D. Some of the most exciting and potentially significant research has recently been published on the role of vitamin D and cancer. Low levels of vitamin D are associated with increased cancer risk especially in older women. Higher dietary intakes are also associated with lower breast density in premenopausal women. Researchers suggest that the current recommendation of 400IU/day is well below the dose need for chemoprevention. Many health professionals, me included, recommend 800-1000 IU per day. It can be combined with a multivitamin and a few. A few examples of where vitamin D might exist in your diet include: Wild salmon (3 ounces) = 420 IU, Atlantic mackerel (3 oz) = 320 IU, Sardines (1 can) = 250 IU, Shrimp (3 oz) = 150 IU, skm and 1% fat milk (8 oz) = 100 IU.

Fish Oil. Many people wonder about fish oil supplements, especially if they dislike fish. These can be good sources of Omega 3 fatty acids provided that you have a good quality supplement. The general recommendation is 1000-2000 mg per day. Remember that if you are taking fish oil, it has an anticoagulation effect (thins the blood and increases clotting time). It is important to discuss this with your doctor or an integrative medicine expert as you make these additions to your diet, especially if you are on other medications specifically for anti-coagulation or may have a side effect of anti-coagulation.

Calcium. Research on calcium suggests it has an important role in cancer prevention. Dietary intake is often suboptimal in many individuals, especially women. Dairy foods contain the highest concentrations of calcium but women often limit dairy due to calorie concerns. A calcium supplement does not indicate. Calcium should be combined with Vitamin D to increase absorption. Adults need 1200-1500mg per day with vitamin D.

Multivitamin. Multivitamins help to rectify nutrient gaps from your diet. It is important that you have a good quality multivitamin.

Quality of vitamins and supplements. Since dietary supplements and vitamins are not regulated by the FDA regarding what is actually contained in the bottle relative to the label, it can be Risky picking items off the shelf of pharmacies and health food stores. Some vitamin companies manufacture to drug standards and test their products, while others do not. ConsumerLab.com select more than 20 brands of multivitamins to be tested by independent laboratories. The vitamins that met standards included: Centrum Silver, Member’s Mark Complete Multi, One A Day Women’s and Flintstones Complete. Many others failed to meet the standards. Some of the findings of those that failed included the following difficulties:

- Vitamin Shoppe Multivitamins Especially for women: Contaminated with lead
- Hero Nutritional Yummy Bears: Had twice the labeled amount of vitamin A
- Nature’s Plus Especially Yours for Women: Took twice as long as allowed to disintegrate.
- AARP Maturity Formula: Took nearly twice as long as allowed to disintegrate
- Enviva VIBE: had only 54% of the claimed amount of vitamin A.

These findings show the variability that can be found and again underscore the importance of knowing how to select a high quality supplement.

Antioxidants. There is a growing consensus that the best consumed as whole foods. For example, broccoli, cauliflower and carrots have antioxidant properties. A recent, widely publicized study published in the New England Journal of Medicine looked at antioxidant supplements containing vitamins E, C and beta-carotene to determine additional research. Simms/Mann – UCLA Center for Integrative Oncology News, Spring 2008
whether there were benefits to consummating these particular antioxidant supplements. The study used a methodology called “meta-analysis” where multiple studies are combined to evaluate and determine a consensus. This study was published in 2007 and looked at mortality related to antioxidant supplements for primary and secondary prevention. The study has been criticized by some because the analysis contained many flaws. For example, it included both small and large studies. The period of follow-up ranged from as short as three months to as long as twelve years. The doses and combinations were vastly different with some doses being very high. The authors concluded that the following supplements when taken singly or combined significantly increased mortality: beta carotene (7%), vitamin A (16%) and vitamin E (4%). Vitamin C and selenium had no significant effect on mortality. Again, these findings suggest that antioxidants taken as supplements are not used judiciously, and only after getting information from someone who has read and evaluated this literature carefully.

Genetically Modified Foods & Functional Foods

Many foods are modified to help resist disease, insects, increase nutrients and lengthen the shelf life. Currently, there are no labels required to indicate that a food has been genetically modified. There are situations where genetically modified foods could be very important for sustaining the health of a population. One example is growing genetically engineered genes from a daffodil and beta carotene and has been used in Africa for children to help correct the vitamin A deficiency. Seventy percent of food in the market may contain one genetically modified ingredient. However, despite these benefits, one of the concerns about genetically modified foods is that they may be a problem for people with allergies since the proteins in genetically modified foods that are “certified” organic do not have genetically modified genes because the USDA standards do not allow it. If you are concerned about this, you may want to check with Whole Foods Market and Trader Joe’s, which have a policy to not carry genetically modified foods.

Functional foods are foods that have added nutrients to offer extra health benefits, e.g., orange juice with calcium, eggs with vitamin E and pasta with added omega 3 fatty acids. The food industry has been adding nutrients to foods for many years and there has been an effort to add antioxidants to foods as well. While these ideas sound potentially beneficial and these “wellness” foods now exist in the market place, there is no known proven benefit.

Macrobiotic Diet

Macrobiotic diets claim to both prevent and treat cancer, especially breast cancer. A macrobiotic diet is typically made up of the following; whole grains (50-60%), vegetables (25-30%), beans/soybeans, nuts, herbal teas (5-10%) and a minimum of white meat or fish. Dairy, eggs, processed foods and red meat are discouraged. Individuals who strictly observe this diet are often deficient in calcium, vitamin D, zinc, folate, and vitamin B12. Macrobiotic diets tend to be calorie restrictive which can be a problem for individuals needing to maintain their weight. At this time, there is no solid evidence to support claims that cancer risk is reduced by eating a macrobiotic diet; however, proponents state this claim often citing anecdotal or poorly designed studies. There are many things that are healthy about a macrobiotic diet but the best current data suggest probiotics aid in the prevention of antibiotic-induced diarrhea and viral diarrhea. These products are strain specific, such as lactobacillus, acidophilus, GG, casein and BB12. The products must have an appropriate type and number of microorganisms to colonize and survive in the GI tract. ConsumerLab.com found that 44% of the supplements they tested had too few organisms to be effective. To be effective, 1 billion live organisms/servings per day are needed.

Artificial Sweeteners

Many people use artificial sweeteners. How safe are these for consumption?

Aspartame (Equal). There is growing evidence that the FDA needs a new look at this product. A recent study showed an increased risk of lymphomas and leukemia in rats fed very large doses. Smaller doses found an increased risk but it was not statistically significant. The smaller dose in rats would be equivalent to a 50 pound child consuming 2-3 cans of diet soda per day. Aspartame is ubiquitous in the food supply in yogurts, jello and other foods. Neotame, which is 40 times sweeter than aspartame, is used in baked goods.

Stevia. This sweetener is 100 times sweeter than sugar and is obtained from a shrub (yerba dulce) that grows in Brazil and Paraguay; thus it is sometimes promoted as a “healthy alternative.” It is widely used in Japan and other countries; however, Canada and several European countries have not allowed it as a food additive. Small amounts, added to beverages, appear to be safe, but it has also been shown in the lab to alter DNA.

Splenda. This sweetener is sucralose and is 600 times sweeter than sugar. It is manufactured by the selective chlorination of sucrose (table sugar), in which some of the hydroxyl groups are replaced with chlorine atoms. Although some biochemists have voiced concern over safety, this sweetener appears, at least to date, to have the fewest health concerns. However, it has not been on the market very long, so stay tuned. The best advice is to avoid all these sweeteners as much as possible. The growing obesity epidemic has shown the introduction of artificial sweeteners has not led to reduced calorie consumption or aid individuals in weight management.

Exercise: Presented by Marc Murphy

There is a growing body of literature that supports the importance of exercise in the prevention of cancer and possibly cancer recurrence. Exercise helps increase lean body mass, reduces fat and decreases the likelihood of weight gain. To keep a diet, complementary approaches, dietary supplementation and exercise.

Editors Note: At the Simms/Mann – UCLA Center for Integrative Oncology a body composition analysis is done as part of the individualized integrative oncology assessments and personalized recommendations are made for diet, dietary supplements and exercise as well as other strategies to enhance wellness, symptom management and well-being. We encourage patients and family members to consider these individualized sessions as part of developing a tailored plan for wellness. In addition, some of our group programs also address some of these issues.

In a 2004 study, women who exercised greater than 17.2 METS per week had a reduced likelihood of breast cancer recurrence compared to women who exercised less than that amount, suggesting that exercise may have benefits both in terms of prevention and recurrence. While more research is needed, there are many other benefits known from exercise including positive effects on the cardiovascular system as well.
Prostate cancer is a complex disease. No man likes to hear the diagnosis of prostate cancer, but it can be treated. It is important to take a deep breath, try not to panic and develop a multi-disciplinary team of experts to help guide you and decide on treatment plans that are right for the individual. Every man is unique and it is important to consider the person to the next, but try not to understand the complexities of the disease, recognize that there are many different view points and that your team should help you come to a decision that feels like the right one for your individual circumstances.

The best people to help you understand the medical information are your team of physicians. They should present you with information that includes the pros and cons of every treatment. There are many good references that can be helpful including publications from the American Cancer Society and AACR sites which are listed at the end of this article. There are many different websites, but not all websites are sourced from “informational” sites, but sometimes difficult to distinguish between good information, bad information and marginal information. Always call a doctor, try to find sources that come from reliable institutions that are research-based and are not trying to sell you something.

There are a lot of men with this disease. In 2007, an estimated 218,890 new cases of prostate cancer were diagnosed and 27,090 deaths were attributed to the disease. The new cases impact the number of men who go live with this disease for long periods of time and many men (most) will die from their prostate cancer, but rather from some other cause. In research that has been ongoing in which autopsies are conducted, prostate cancer has been found in many men who were not symptomatic. Prostate cancers in general may often be a very slow growing disease, although there are some very aggressive forms which fortunately seem in the minority. The most common risk factor is age.

The prostate gland is normally a walnut sized gland that sits under the bladder and in front of the rectum. In the male, a narrow tube that runs the length of the penis directly through the prostate which carries seminal fluid to the urethra, a narrow tube that runs the length of the penis direct through the prostate which carries seminal fluid to the urethra, a narrow tube that runs the length of the penis. It drains into the urethra, a narrow tube that runs the length of the penis. It drains into the urethra, a narrow tube that runs the length of the penis. The prostate gland is normally a walnut sized gland that sits under the bladder and in front of the rectum. In the male, a narrow tube that runs the length of the penis directly through the prostate which carries seminal fluid to the urethra, a narrow tube that runs the length of the penis.

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men. There have been a variety of techniques used to offer greater evidence of the likelihood of success or the likelihood of recurrence. These options include many different kinds of medications, narcotics and radiolabeled strontium and sodium that are helpful with bone pain.

Hormone therapies have some side effects. Hot flashes can be managed with medications such as SSRIs – selective serotonin reuptake inhibitors including Prozac, Paxil, and Zoloft. Progestational agents such as ketoconazole, (or abiraterone which is currently being studied clinically). Estrogenic compounds such as estrogen and diethylstilbestrol (DES) are also effective. These have side effects that can vary from one person to another. In different areas. There is some thinking that primary and secondary bone loss may not be the same and there could be a reanalysis of data suggested the possibility of a 20% survival advantage to combined therapy.

It is important to consider options and consult your physician regarding starting hormone therapy when a tumor is hormone sensitive and there is a PSA relapse (a PSA that was low or non-existent and then begins to rise). The issues that must be considered include the rate of PSA rise (doubling time) and whether there is any measurable disease.

There have been some recent studies looking at new treatments. One was a phase 3 study, which was a double blind placebo controlled trial of ateenatan (an endothelin antagonist) and it found no significant trend in delaying time to progression, but it did delay time to bone progression. The FDA is still considering this trial. Another approach was a recent phase 2 drug of a study called ZD4545. A randomized controlled study showed no significant differences in progression free or overall survival, however, the overall survival was 23-25% in the treated group versus 16-17% in the placebo group. Clearly more research is needed, but the data are promising.

Metastatic prostate cancer is often initially hormone sensitive. Ultimately it will develop into a hormone insensitive or “cachectic resistant” state. Early trials of chemotherapy initially were found to be ineffective, but now two drugs, mitoxantrone and docetaxel/Taxotere have emerged as active agents. In addition to the FDA approved drugs there is a compendium of chemotherapeutic agents that have been demonstrated to have some activity and will be covered by insurance companies. These drugs include vinorelbine/Navelbine, cabazitaxel, docetaxel/Taxotere. Other agents such as ketoconazole, (or abiraterone which is currently being studied clinically). Estrogenic compounds such as estrogen and diethylstilbestrol (DES) are also effective. These have side effects that can vary from one person to another. In different areas. There is some thinking that primary and secondary bone loss may not be the same and there could be a reanalysis of data suggested the possibility of a 20% survival advantage to combined therapy.

Research studies are very important in the advancement of care for patients with prostate cancer. Research often starts out in the lab either in vitro (test tube) or in vivo (other than human) evaluation. These are considered Phase 0 or preclinical trials. Because many men have agreed to allow their removed tumors to be used in research there are many lines of tumor cells that can be produced in the lab and studied. When drugs are used in humans they have to go through various stages of testing. Phase 1 clinical studies usually consist of 10-30 people and the goal is to find the proper dose, establish safety and, look at the pharmacokinetics (how the drug behaves). The next step is a Phase 2 clinical trial which can have 20-200 patients and is used to determine if some efficacy is seen. If there is efficacy and safety, the trial is a Phase 3 clinical trial which is usually large and uses 1000’s to 10000’s of patients and is considered a definitive study when compared against current standard of care. After Phase 3 trials and drugs are approved by the FDA, additional studies are done to look for additional uses of the drug in different populations or groups that were not included in the original trial. These are Phase 4 studies. UCLA has an active research program in prostate cancer that involves all levels of trials described above. There are some exciting new trials underway now and these can be found at the UCLA Comprehensive Cancer Center’s website. In addition there are some exciting new ideas that include vaccines, targeted therapies and the possibility of high dose VI-D therapy.

In sum, it is important to realize that prostate cancer is a disease that needs a multidisciplinary team that includes urologists, radiation oncologists, medical oncologists, nursing staff, social workers and psychologists, and integrative medicine physicians to assist with diet and lifestyle issues. In addition, behind the scene, the specialists are involved in the process in pathology, radiology, pharmacy, medical scientists and pharmaceutical companies that develop new drugs.

Resource Web sites for Prostate Cancer

- American Cancer Society, www.cancer.org
- National Cancer Institute, www.cancer.gov
- American Society of Clinical Oncology, www.asco.org
- Prostate Cancer Foundation, www.prostatecancerfoundation.org

Many people find great value in being part of a group led by an experienced professional. Since each person has somewhat different needs, we offer a variety of services. Some groups are like a class while others provide greater opportunity for self-expression, feedback and providing and receiving support.

The groups listed below are available with cost to patients and family members. Priority is given to UCLA patients. Enrollments require an interview with the facilitator. For more information about our groups or to enroll, please call (310) 794-6644.

FOR WOMEN PATIENTS

Look Good, Feel Better

This program, co-sponsored with the American Cancer Society, helps women manage the physical appearance changes brought about by cancer and its treatments. Participants receive a complimentary bag of cosmetics and are taught skin care techniques and make-up application. Wigs and head-coverings are also demonstrated. Reservations are required.

Women Together

We offer weekly, ongoing support groups for women being treated for early stage breast cancers. These groups focus on living with breast cancer and address changes created by the disease and its treatments. Day and evening groups are available.

DCIS Support Group

This monthly support group for women with ductal carcinoma in situ (DCIS) provides information about DCIS and the changes created by its diagnosis and treatment.

Looking Ahead

These groups, for women who have finished treatment and have no evidence of disease, provide an opportunity to explore ongoing needs and concerns such as fear of recurrence, job discrimination, intimacy and self-esteem.

FOR MEN & WOMEN PATIENTS

Healing Through Art

This weekly group uses therapeutic art making (drawing, painting, box making, collage, etc.) to explore, reveal and express the issues faced by men and women with cancer. A registered art therapist facilitates the group. No art experience or skill is required.

Lung Cancer Support Program

This program provides an opportunity for patients and their families to share stories, provide practical suggestions, and support each other. An Oncology Social Worker provides information and skills for relaxation, navigating the healthcare system, finding needed resources, coping with chemotherapy and radiation related to the stigma of lung cancer, fear and anxiety, and keeping a positive outlook.

QIGong

QiGong is an ancient Chinese art for restoring health and prolonging life. Our QiGong classes are led by a Chinese master, are held weekly and promote health, health, and fitness.

Mind/Body Approaches to Coping with Esophageal Cancer

This workshop offers individuals with esophageal cancer and their partners or adult family members an opportunity to learn and practice techniques that will help them manage the stresses associated with esophageal cancer and its treatments. This program will be held on one evening and is facilitated by a clinical psychologist. Participants will have the opportunity to share their experiences and receive a detailed manual and relaxation tape.

FOR FAMILY MEMBERS & FRIENDS

Family and Friends

This weekly group is for friends and family members of individuals with cancer. Participants discuss their concerns and issues related to coping with cancer and their roles as caregivers and members of the support team.

Grief Work

This bereavement support group is for men and women who have experienced a recent loss of an adult family member to cancer. Emphasis is placed on working through grief and loss.

Husbands (Partners) of Women with Cancer

This twice-a-month meeting is for husbands and partners who live with women diagnosed with any kind of cancer. This group helps men find the best ways to support their partners as well as themselves through the cancer experience.
EATING AND WALKING YOUR WAY TO WELLNESS AS A CANCER SURVIVOR - William J. McCarthy, PhD, Associate Professor in Public Health and Psychology and cancer researcher focuses on behavioral and nutritional strategies that individuals touched by cancer can use to enhance their health through better food choices and higher levels of daily physical activity. Using time tested progressive goal-setting strategies, almost anybody can expect short-term and long-term success at improving lifestyle choices and reaching personal wellness goals. This presentation helps patients and their families improve consumption of fruits and vegetables, whole grains, legumes and move major muscle groups daily to improve longevity and quality of life.

UPDATE ON THE GENETICS REVOLUTION AND IMPLICATIONS FOR PERSONALIZED MEDICINE IN CANCER - Patricia Ganz, MD, UCLA Professor, medical oncologist and researcher and Joyce Seldon, MS, CGC, Deputy Director, UCLA Family Cancer Registry, genetic counselor, discuss how genetic discoveries and the results of the human genome project have impacted our understanding of the development of cancer, hereditary risk for cancer and treatment issues. Variations in individual genetic patterns may lead to modifications in the metabolism of drugs. Tumor specific gene expression patterns can be used to predict response to targeted therapies. They highlight how genetic factors play an important role in the continuum of cancer management from prevention to adjuvant therapy to the continuum of cancer management.

COMPLEMENTARY MEDICINE IN CANCER: A PANEL OF EAST/WEST, MANIPULATIVE THERAPIES AND HERBALISM - Mary Hardy, MD, Medical Director, Simms/Mann—UCLA Center for Integrative Oncology, moderates a panel discussion with experts in treatment areas that complement conventional oncology on how complementary approaches can be utilized to improve quality of life, reduce symptoms and benefit wellness throughout the continuum of cancer care. Keith Henry, BS, DC, Assistant Professor of the Cleveland School of Chiropractic discusses the advantages and cautions of manual therapies for cancer patients; Ka-Kit Hu, MD, FACP, Director, UCLA Center for East-West Medicine describes how acupuncture and herbs are used to treat symptoms of cancer and treatment side effects; and Amanda McQuade Crawford, BA MINIH, author, medical herbalist with 20 years of experience shares knowledge about nutrition and herbs as complements to cancer care.

INSOMNIA AND CANCER: CAUSES AND TREATMENTS THROUGHOUT THE CONTINUUM - Saresch J. Motivala, PhD, UCLA Assistant Professor, psychologist and research scientist discusses insomnia, a condition affecting about 50% of people who have had a cancer diagnosis. Different types of insomnia, its underlying causes and a broad spectrum of treatment approaches including the effectiveness of pharmacotherapy, cognitive-behavioral treatment approaches and promising mind-body approaches, such as Tai Chi, are some of the topics discussed.

MELANOMA OF THE SKIN AND EYE: TREATMENT STRATEGIES FOR LOCAL AND WIDESPREAD DISEASE - Antoni Ribas, MD, UCLA Associate Professor, medical oncologist and researcher and Tara Young, MD, PhD, UCLA Assistant Professor, ophthalmologist and researcher, discuss melanoma of the skin and of the eye. Specific treatment approaches for each form of melanoma are discussed including information about molecular prognostic testing in ocular melanoma. Recent developments in the understanding and treatment including surgical treatment, adjuvant treatment and treatment for metastatic melanoma are discussed with information about melanoma cancer cells and how they interact with the immune system, leading to new treatment approaches being tested in patients.

NEW DISCOVERIES IN NUTRITION AND PROSTATE CANCER - William Aronson, MD, UCLA Professor, urologist and researcher presents the most recent advances in nutritional therapy for prostate cancer. Presently there are no proven nutritional treatments for prostate cancer. However, there is a wealth of new basic science and early clinical trials evaluating nutrition and prostate cancer. A number of these new studies are presented, their findings put into perspective, and future research in the field is discussed.

LUNG CANCER 2008: TRADITIONAL AND NOVEL APPROACHES - Jay M. Lee, MD, Surgical Director, Thoracic Oncology Program, UCLA Assistant Professor, thoracic surgeon and researcher, and Edward Garon, MD, Co-Director, Medical Oncology Program in Thoracic Malignancies, UCLA Assistant Professor, medical oncologist and researcher, discuss the role of surgical treatment and non-surgical interventional procedures, chemotherapy and targeted therapy for early and late stage lung cancer. New treatment options including inhibition of blood vessel formation, medications to block growth signals in cancer cells and a novel immunotherapy trial for lung cancer are presented. Clinical trials at UCLA and the rationale behind those studies also are addressed.

Our lectures are free of charge, open to the public, first-come, first-served, Tuesday nights 7:00 – 9:00 p.m. For information, call (310) 794-6644. All lectures are held in the RPB Auditorium at the Jules Stein Eye Institute at UCLA unless otherwise specified. UCLA parking is $8; wheelchair accessible.
Reflections® is a boutique that provides information, resources and products to help men, women and children manage the physical appearance changes caused by cancers and their treatments. Our staff are certified fitters of mastectomy bras, prostheses and lymphedema garments and have many solutions for hair loss.

Reflections® is located in Suite 163 on the ground floor of the 200 UCLA Medical Plaza. It is open to the public Monday–Thursday from 10am-5pm, Fridays from 10am-3pm. Please call to verify our hours.

Reflections® is a not-for-profit organization committed to providing an array of affordable services and products. Proceeds from the sale of goods support Reflections’ daily operations and those of the Simms/Mann - UCLA Center for Integrative Oncology.

Many insurance companies provide partial to complete reimbursement for breast prostheses and some lymphedema garments. Reflections® is a preferred provider of breast prostheses and bras for Kaiser-Permanente, Blue Cross, Blue Shield, the University of California Medical Group and others. We also are a Medicare provider. We can assist you in obtaining authorization for covered services.