### MAYO CLINIC Cancer Center

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### Research and Treatment for Melanoma: A Concerted Effort Across Three Time Zones By Svetomir Markovic, M.D., Ph.D.

Spring 2008: Volume 8 Number 1

ogether

The Mayo Clinic Melanoma Study Group is a model of the clinic's collaborative ethic. Participants include nearly 80 researchers in 15 specialties, located in three different states several thousand miles apart and across three time zones. Its goal is to improve the prognosis for this deadliest of skin cancers that continues to increase at alarming rates.

In 2002, the National Cancer Institute recognized Mayo's excellence in cancer care by extending its official comprehensive cancer center designation to include all three campuses: Scottsdale/Phoenix, Ariz.; Jacksonville, Fla.; and Rochester, Minn. The result: one integrated, comprehensive cancer center serving three geographical sites – an approach the Melanoma Study Group began even earlier, in 1999.

"The integration efforts have already had a remarkable impact on my practice," notes William Maples, M.D., an oncologist in Jacksonville who has worked on melanoma for almost 20 years.

Collaborative efforts include:

- Non-invasive experimental treatment strategies One example: By giving a *biological therapy* in combination with an aerosolized cancer vaccine via a nasal spray to the lungs, researchers prompt the immune system to recognize the cancer as foreign and attack the tumor. After the attack has begun, the body develops its own vaccine (immune response) against the tumor. This is a non-invasive, non-toxic experimental approach that to date appears to be free of negative side effects.
- Angiogenic chemotherapy (cutting off blood supply of tumors) A new trend in the treatment of cancer is using drugs to block the growth of blood vessels in tumors. The reason behind this is the fact that most cancers depend on the formation of new blood vessels—a process called angiogenesis—in order to grow and spread. In angiogenesis, cancer cells can make—or cause healthy cells to make— chemicals to stimulate the growth of new blood vessels. Mayo researchers are testing a drug injected under the skin to protect tumors from developing blood vessels. Early reports by Mayo investigators suggest that combining these agents with chemotherapy may prolong the life of patients with metastatic *melanoma*.
- Gene therapy for malignant melanoma Mayo researchers delayed melanoma cell growth and in some cases shrunk melanoma tumors in mice by taking an unusual tactic, which they are now planning to translate into human clinical trials. Their strategy: use normal, healthy cells that are the type that give rise to melanoma to make a vaccine against melanoma—thus suggesting that healthy cells may have the power to teach the immune system how to identify and fight melanoma.

The key factor in the management of patients with melanoma is the recognition of the need for a dedicated group of clinicians, researchers, and statisticians to work closely with patients and their families. This disease is too complicated and unpredictable to be managed without clinical trials. Mayo Clinic researchers are hopeful that within the next decade, they will be able to offer creative and innovative treatments with fewer side effects for individuals diagnosed with melanoma.

## **Familial Melanoma Syndrome**

Adapted from Mayo Clinic's Familial Melanoma Syndrome brochure

Each year in the United States, more than 60,000 people are diagnosed with melanoma, sometimes referred to as *malignant* melanoma. The average age of diagnosis is 57.

Melanoma is a cancer of the skin cells that produce pigment or color (melanocytes). It is a serious form of skin cancer because it can invade downward into the skin and spread throughout the body (figure 1). As with all skin cancers, exposure to the sun or tanning beds increases the chances of developing melanoma. However, when melanoma is detected early, it is highly treatable.

### How is Melanoma Diagnosed?

A melanoma may appear as a new growth or a change in an existing *mole*. Anyone with numerous moles (more than 100) or with large, flat or irregular moles may have an increased risk of developing melanoma. These types of moles are referred to as *dysplastic* or *atypical*. A physician may order a biopsy of the mole or area of skin in question.



Figure 1

# What is Familial Melanoma Syndrome?

Some individuals and families are affected by a condition called Familial Melanoma Syndrome (FMS), which is an inherited genetic disorder. Individuals with this syndrome have an extremely high risk of developing melanoma.

#### How Do I Know if I Have FMS?

A physician or genetic counselor can determine the likelihood of FMS by learning about a patient's family cancer history. A diagnosis of FMS may be a possibility if there is a pattern of cancer in an individual's family that meets at least one of the following criteria:

- Two or more melanomas occurring in the same person
- Melanoma occurring in two or more family members
- History of abnormal moles in a person who develops melanoma
- An abnormal mole in more than one generation of the same family in which a family member has had melanoma
- A family member with a melanoma diagnosed before age 40
- Family history of melanomas plus other certain cancers

Diagnosing FMS by using family cancer history can be difficult if families are small, if the individual is adopted, or if cancer information about family members is unavailable. When appropriate, individuals may undergo a blood test to determine the presence of a genetic mutation responsible for FMS.

### Early Diagnosis of Melanoma Saves Lives

Melanoma is preventable and if caught early, is curable. Knowing that FMS is present within a family illustrates the importance of sun protection and regular skin examinations both personally and by a physician.

# **Sun Protection & Screening Guidelines**

The following guidelines may help prevent skin cancer or help detect it early.

### To protect your skin from the sun:

- Limit exposure to the sun from 10 a.m. to 3 p.m. when the sun's rays are most intense.
- Use a "broad spectrum" sunscreen with a sun protection factor (SPF) of 30 or greater. "Broad spectrum" means the product protects from both UVA and UVB rays. UVA and UVB rays are light rays that damage the skin.
- Apply sunscreen everyday as part of a daily routine. When in the sun for prolonged periods, re-apply sunscreen every few hours.
- Use protective clothing including broad-brimmed hats and tightly woven fabrics.
- Do not use tanning booths.

### To make sure your skin is properly examined for melanoma, follow these screening guidelines:

- Perform monthly skin self-examinations to detect new growths or changes in existing moles. A physician should promptly examine any mole or new growth on the skin that meets one of the ABCDE criteria (Figure 2).
- Schedule a *complete skin examination* by a physician every six to 12 months with removal of any changing, pigmented growths.
- Ask your dermatologist to photograph your skin for purposes of future comparisons.



Figure 2

### Personal Experience Inspires Cancer Survivor to Create Awareness of Melanoma

**By Nicole Bennett Engler** 

Tim Burriss and his wife, Susan, along with their sons Bradley and Daniel.



In the summer of 1996, Tim Burriss couldn't have been happier. Living in Charleston, W.Va., he and his wife, Susan, were expecting their first child in just months.

But after a mole became darker on his left upper arm, he had a hunch that something wasn't right.

A biopsy at Tim's local health care facility confirmed that he had stage III metastatic malignant melanoma, which spread from its original location in his left arm to one of his lymph nodes. The same week that Tim's life had been turned upside down by learning of his diagnosis of the most serious type of skin cancer, his son Daniel was born. "Believe it or not, I think the stress was probably greater on Susan because she had just given birth and she was worried about both of us," says Tim. "I wasn't yet at the state of 'this is devastating.' I think I was more focused on Daniel's birth than on myself, but I was obviously still very scared."

A week later, Tim had a full lymph node dissection under his left armpit, where the original cancer was detected. This surgery revealed that the cancer had not spread further into the lymph nodes.

Tim later began regular interferon injections, a type of immunotherapy, which he continued for the next year.

Tim says that this treatment regimen was more stressful than the diagnosis itself because he began around the holidays and was extremely tired after each therapy session. As the months went on, however, he says he learned to handle them better.

While Tim's bout with cancer was frightening, he says that Susan and Daniel were his saving grace during this difficult time. Daniel's birth helped him remain focused on life beyond cancer —which Tim says helped him from feeling sorry for himself.

"My family definitely provided me with the strength that I needed," he says, adding that he repeatedly told them, "We can beat this."

In 1999, a Mayo Clinic job offer in Rochester, Minn., brought Tim and his family across the country. While he was somewhat reluctant to leave his familiar West Virginia life behind, he knew that he would be in good hands with his follow-up cancer care at Mayo.

"I felt very lucky to be able to be under the care of Drs. Svetomir Markovic and Mark Pittelkow, who have both dedicated their lives to finding a cure for melanoma," says Tim. After getting to know these doctors, Tim says they inspired him to form a venue to raise awareness of the disease. Thus, the Stay Out of the Sun Run was born.

"The inspiration of what they do and how they have interacted with me over the years is really what gave me the idea to raise money for melanoma research and education through a run/walk—I really wanted to help these guys out," says Tim.

Funds from the run support melanoma research and education at Mayo Clinic.

As a result of his diagnosis, Tim says he is much more appreciative of what he has been blessed with, including his healthy family.

"It's important to have your family be a strong part of your life and do things together," he says. "As a result of my diagnosis, I have not completely changed my lifestyle. We still have been able to enjoy the outdoors and take vacations but are more aware of ways to protect ourselves from the harmful sun rays. I've learned to dress appropriately and regularly apply sunscreen."

Tim has remained cancer-free since 1996. He credits his positive attitude as a contributing factor to his recovery.



He offers this advice to cancer patients: "Learn as much about your illness as possible so you are well-equipped to move forward with the treatment options you have." But most importantly, he adds: "Stay strong and be positive—a positive attitude goes a long way in helping your body stay strong to fight cancer."

Tim and Susan adopted their four-year old son Bradley from Russia last year, and Daniel is now 11. Outside of coordinating the Stay Out of the Sun Run, Tim enjoys coaching Daniel's basketball and baseball teams. He also enjoys spending time outdoors riding bike and playing tennis. Accompanied by his wife, Susan, and son, Daniel, Tim Burriss poses with the \$25,000 check from the 2007 Stay Out of the Sun Run.



**Third Annual Stay Out of the Sun Run** • **Friday, May 16, 2008** Holy Spirit Catholic Church & School • Rochester, Minn. • 6:30 p.m.

#### www.sosrun.org

Come join the third annual family evening event to promote awareness of the dangers of sun exposure and support melanoma research and patient education at Mayo Clinic.

#### A Message from the Founder

It has been over 10 years since I was diagnosed with metastatic malignant melanoma. Since then, over 400,000 people have been diagnosed and over 85,000 have died from melanoma in the United States. Mayo Clinic researchers are committed to finding a cure. In our two years of coordinating the Stay Out of the Sun Run, we have raised over \$58,000 to help Mayo Clinic fight melanoma. Our family has been touched by the many heart-felt stories with the realization that too many have been afflicted with melanoma. Thank you for your continued support and remember to always protect yourself from the sun.

-Tim Burriss, Race Founder & Director

## **Cancer Terms**

Atypical mole	A mole that, when examined under the microscope, does not conform to what is considered normal, but yet is not a melanoma.
Biological therapy	Treatment to boost or restore the ability of the immune system to fight cancer, infections, and other diseases. Also used to lessen certain side effects that may be caused by some cancer treatments. Agents used in biological therapy include monoclonal antibodies, growth factors, and vaccines. These agents may also have a direct antitumor effect. Also called immunotherapy, biotherapy, biological response modifier therapy, and BRM therapy.
Complete skin examination	A skin examination that involves a physician viewing both exposed areas and more difficult-to- view skin areas such as between the buttocks, on the scalp, on the palms and soles of the feet, and between the toes and fingers.
Dysplastic mole	A mole that is considered abnormal based on color, size and/or shape.
Melanoma	A form of cancer that begins in melanocytes (cells that make the pigment melanin). It may begin in a mole (skin melanoma), but can also begin in other pigmented tissues, such as in the eye or in the intestines.
Mole	A benign (non-cancerous) growth on the skin that is formed by a cluster of melanocytes (cells that make melanin—the substance that gives color to skin and eyes). A mole is usually dark and may be raised from the skin. Also called a nevus.

Definitions obtained from www.cancer.gov. Defined terms are in italics throughout the newsletter.

### Resources

### Books

*Melanoma: Prevention, Detection, and Treatment;* Second Edition by Catherine M. Poole and IV DuPont Guerry

*The Cancer Survivor's Guide: The Essential Handbook to Life after Cancer* by Michael Feuerstein and Patricia Findley

*Happiness in a Storm: Facing Illness and Embracing Life as a Healthy Survivor* by Wendy Schlessel Harpham



### **Book Review**

**100** *Questions and Answers about Melanoma and Other Skin Cancers,* by Edward F. McClay, M.D., Mary-Eileen T. McClay, and Jodie Smith, Jones and Bartlett Publishers, 2004, ISBN 0-7637-2036-4, 153 pages, \$16.95.

Written in a conversational question-and-answer format, this book includes the basics on skin cancer, including types, risk factors, and prevention and protection to avoid skin cancers. Special sections highlight detection and diagnosis, treatment options, and clinical trials for skin cancers. In addition, a directory of non-profit organizations that address skin cancers is included.

### Web Sites

Skin Cancer Foundation http://www.skincancer.org/ Cancer Survivors Network http://www.acscsn.org



# Creating a "New Normal" After a Cancer Diagnosis

By Shayna Diamond-Atonna, Cancer Resource Navigator



Cancer patients and their families often yearn for a return to life "before cancer." As anyone touched by cancer can tell you, there is no going back. After hearing the words, "You have cancer," you may feel as if your world has been turned upside down, but there are a number of things you can do to help cope with that diagnosis.

Some of the changes that accompany a cancer diagnosis can cause additional stress on your life. For example, there may be a change in your schedule to accommodate treatments and medical appointments. Responsibilities around the house or at work may change. There is also the possibility of changes in the way you look, such as losing your hair or scars appearing from a surgery. How we cope with change and stress can be different for each person. Below are ideas that may help:

- Keep a journal or calendar of how you feel each day and recognize patterns so you can predict "good days."
- Find out what resources are available in your community to assist cancer survivors, such as support groups.
- Create a to-do list and accept offers from your support network, such as friends or family members.

After treatment, there is an opportunity to create a "new normal." This can be the perfect time to prioritize what is really important to you. Evaluate how you spend your time, your money and your energy. Some survivors take on new hobbies, begin a new workout regimen or even end up changing careers. Others may vow to make it to every family gathering or to never postpone calling a friend. Each person will have a unique new "normal," so take the time to create the one that is right for you. As you look at the possibilities before you, remember to take time to grieve your losses, and offer yourself time to adjust to being a survivor counting all your blessings and evaluating what is good in your life.

### How Can You Find New Meaning in Your Life After Cancer?

*Reproduced from the National Cancer Institute's, "Facing Forward: Life After Cancer Treatment" brochure* 

- **Assess your life.** Some survivors say their cancer gave them a wake-up call and a second chance to make life what they want it to be. Ask yourself: Do your roles in your family fulfill you? What are things you've always wanted to try?
- **Seek spiritual support.** A trusted clergy member or professional counselor may be able to help you with life questions.
- **Keep a journal.** Write down your thoughts about what gives meaning to your life now.
- Think about helping others who have had cancer. For some, reaching out and helping others helps them find meaning. Others want to get cancer out of their minds and prefer to focus their energy in other ways. If you want to help, many local and national cancer groups need volunteers.
- Think about taking part in a research study. Research studies are trying to identify the effects of cancer and its treatment on survivors. Joining a research study is always voluntary, and it could benefit both you and others.



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### Slaggie Gift Dedicated to Cancer Patients, Families



The Stephen and Barbara Slaggie family. Back row: Sara Poulos, Michael Slaggie, Matthew Slaggie; Front row: Michelle Schlehuber, and Barbara and Stephen Slaggie.

Mayo Clinic recently celebrated the naming and endowment of its Stephen and Barbara Slaggie Family Cancer Education Center in Rochester, Minn., ensuring the permanent availability of its resources to patients and the community.

"When cancer strikes a family, there can be fear and uncertainty," says Stephen Slaggie. "Through the Cancer Education Center at Mayo Clinic, we know that patients will receive information on the latest

and most effective treatments. Most of all, we are certain that every patient will find guidance, help and support."

The Stephen and Barbara Slaggie Family Foundation's \$10 million gift provides funding to cover yearly operating expenses for the Cancer Education Center. Services include information and classes on prevention, diagnosis, treatment, nutrition, clinical trials, support, caregiving, alternative and complementary therapies, and end-of-life care.

For more information on the Stephen and Barbara Slaggie Family Cancer Education Center, call (507) 266-9288 or visit www.mayoclinic.org/cancer-education.rst.

# **Calendar of Events**

### May

### Melanoma/Skin Cancer Detection and Prevention Month American Academy of Dermatology

(888) 462-DERM (3376) www.aad.org

**16** *Stay Out of the Sun Run* Stay Out of the Sun Run Foundation Rochester, Minn. http://www.sosrun.org/site/home

### June

**1** National Cancer Survivors Day -Rochester area 11 a.m. – 3 p.m. Mayo Civic Center Rochester, Minn. (507) 424-4602 www.ncsdf.org



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The mission of Mayo Clinic Cancer Center is to provide compassionate, state-of-the-art care for the patient with cancer today and continued advancements in the prevention, diagnosis, treatment and cure of cancer in the future. The programs and services of the Cancer Center span the three Mayo Clinic campuses in Arizona, Florida and Minnesota.

**together** newsletter provides educational information for cancer patients, their family, caregivers and friends. Physicians, staff and cancer patients write the articles. To view the **together** newsletter online, visit www. mayoclinic.org/cancer-education-rst.

To submit story ideas, provide feedback or unsubscribe, call (507) 266-9288 or e-mail canceredprog@mayo.edu.



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