

# Making Sense of Melanoma

by Esther Chapman

**mel·a·no·ma:** a form of skin cancer that begins in melanocytes, the cells that make the pigment melanin. It is most common on the skin but can originate in other pigmented tissue, such as the eye or intestines.

**76,690** new cases of melanoma are expected in the U.S. this year

**Risk Factors**

Fair Skin   Moles   UV Exposure   Family History

The thinnest of melanomas, a tumor less than 1 mm deep, can spread throughout the body

1mm deep

The incidence of melanoma has **200%** increased in the last 40 years, a more rapid increase than for any other cancer.

Melanoma can contain up to **300** possible genetic mutations

**Treatments Include**

Surgery   Radiation

Immunotherapy   Biologic and Targeted Therapy

Sources: National Cancer Institute, American Cancer Society, AIM at Melanoma, CPMC Center for Melanoma Treatment and Research

The first of melanoma's many painful ironies is that it impacts young and healthy individuals at higher rates than any other cancer. The second is that even the smallest of melanomas—a tumor less than a millimeter deep—can spread cancer throughout the body, making it one of the most puzzling illnesses to diagnose, treat and eliminate.

Both of these ironies ring true for Larry Beck of Sunnyvale and Jim Rowe of Santa Rosa. Larry, a 65-year-old former computer programmer and marathoner, first discovered melanoma at age 45 and has battled its aggressive spread, on and off, ever since. Jim, 52, was first diagnosed three years ago and now hopes he can waylay the cancer long enough to see his two young children grow up. Thankfully, recent treatment revolutions have given patients like Larry and Jim a fighting chance.

## Physician Collaboration Speeds Treatment

Because melanoma is so aggressive and invasive, determining the best course of treatment previously required the patient to see a vast array of specialists and wait patiently for those doctors to agree on an action plan. **Now, to expedite care, specialist appointments are clustered together and scheduled immediately after diagnosis.**

At both CPMC's Center for Melanoma Research and Treatment and the North Bay Melanoma Program in Santa Rosa, doctors participate in melanoma tumor conferences to review one's case and collectively make decisions regarding diagnosis and treatment. "We have physicians, surgeons, pathologists, radiologists, medical oncologists, radiation oncologists, all working together," says Peter Brett, M.D., an oncologist and medical director for the North Bay Melanoma Program.

## Targeted Approach to Surgery

After reviewing Jim Rowe's case at a North Bay tumor conference in February 2010, doctors determined he should have surgery to remove the melanoma tumor on his back, and also undergo a sentinel lymph node biopsy. During this procedure, the surgeon injects dye into the patient's skin and follows the dye to the first lymph node it stains. **The surgeon then removes only this "sentinel" lymph node, rather than the multiple nodes removed in the past. If the sentinel node is free of cancer, research shows, the other nodes should be free as well.**

Unfortunately for Jim, his sentinel node tested positive, leading to removal of a second layer of lymph nodes and four weeks of chemotherapy. Subsequent scans looked clean, and Jim believed he had beaten the odds.

## Access to Research Pipeline

Meanwhile, Larry Beck's melanoma, treated successfully in 1994, came raging back in 2003 in the form of tumors in his lungs and abdomen. After several surgeries failed to stop the spread, he turned in 2008 to David Minor, M.D., a medical oncologist at CPMC, seeking a different approach. **Dr. Minor and his team decided to attack the cancer through bio-chemotherapy, a combination of traditional chemotherapy and two then-experimental immunotherapy drugs (interferon and interleukin-2)**

## Protect Yourself from Skin Cancer

Avoid tanning and tanning booths



Stay out of the sun between 10 am and 4 pm



Use a broad spectrum (UVA/UVB) sunscreen with SPF 15 or higher every day

Wear protective clothing, long-sleeved shirts, pants, brimmed hats, and sunglasses when outside



Do regular home self-exams to spot changes in moles or your skin's surface. Report any concerns to a dermatologist or your primary care doctor.

to help Larry's immune system block the pathways by which the melanoma can spread. Dr. Minor believed this combination of treatments would stimulate the immune system to eliminate or reduce the tumors in Larry's lungs.

After 16 months, Larry's tumors shrank, with one disappearing altogether. But in 2010, Larry began coughing up blood and Dr. Minor arranged for Larry to take part in a drug trial of ipilimumab—a type of immunotherapy designed for melanomas that have spread and cannot be surgically removed. Combined with targeted radiation, ipilimumab (now an FDA-approved drug called Yervoy®) worked for Larry. He's now on maintenance doses of the drug and recent scans have returned clear.

"Dr. Minor was tied into the latest investigative and research programs, and aware of new treatments that could prolong the lives of melanoma patients. Because of this, he was able to get me into a life-prolonging immunotherapy program," he says.

### Clues from Your Genes

While immunotherapy, chemotherapy, radiation and surgery can work together to thwart melanoma in some, it's only marginally successful in others. That's because melanoma can be triggered by 300 possible genetic mutations, or changes in the genes that trigger cell growth. (Leukemia, in contrast, has one mutation.) One treatment may work for a time on a melanoma patient, then become ineffective as another genetic mutation takes over.

Because of this, the very latest melanoma treatments involve targeted therapeutics, a way of examining one's tumor to determine

the exact genetic mutation and selecting drugs accordingly.

"Our society's investment in mapping the human genome is starting to pay off. We're now matching patients' treatment to their type of tumor, rather than giving everyone the same drug," said Mohammed Kashani-Sabet, M.D., medical director of cancer services at CPMC.

After Jim Rowe's melanoma returned last year, Dr. Brett's team identified a particular genetic mutation called BRAF that qualified him for a clinical trial using both targeted therapeutic drugs and a chemotherapy drug to keep the cancer at bay. "It's still pretty new, but I have hope that I've bought some time. Every day is a blessing right now," Jim says.

### Preventing Melanoma Altogether?

The next wave of melanoma research, already occurring at CPMC, takes medical science to a new level, developing new radiation methods and identifying genetic markers that can help prevent, detect and chart the course of melanoma. Meanwhile, Sutter Health affiliates continue to work collaboratively to extend lives and advance patient care. For Jim Rowe and Larry Beck, that's certainly reason for hope. ❖

Learn more about skin care, find a Sutter dermatologist, or ask our experts your questions at [https://www.mylifestages.org/health/skin\\_care/skin\\_care.page](https://www.mylifestages.org/health/skin_care/skin_care.page)

# Today's Cancer Care

## Developing a New Vision of Wellness

By Kimberly Carlisle



Tentatively, Michelle takes a purple lead rope in her outstretched hand. She lifts her eyes from the sand floor of the small arena to look into the eyes of what is attached to the other end: a 1,000-pound horse, still and watching, waiting for her cue.

"Make a connection," the group's leader suggests. Michelle exhales and takes a step forward. The horse backs up in equal measure.

Equine-guided therapy is a powerful new program in Sutter Health's cancer recovery and support services.