

Continued from page 3

block multiple components of the machinery used by the cancer cells to proliferate and spread. The new investigational drug motexafin gadolinium attacks the formation of new blood vessels and new lymphatics and antagonizes the triggers of cell proliferation on lung cancer cells. Multiple additional molecular targets are addressed by newly designed therapeutics, such as vandetanib and ABT-869.

We are conducting seven new investigational programs in lung cancer therapy. Of note is that a National Cancer Institute-sponsored study showed no advantage for the use of a shark cartilage extract over a placebo in the treatment of lung cancer.

#### USING TUMOR HYPOXIA (LOW OXYGENATION IN CANCER CELLS) AS A TARGET

We are studying a new medication that is activated into a cancer-killer agent when it is exposed to the low oxygen tension found inside cancer growths. The study includes patients with lung, breast, prostate, pancreas, stomach, prostate, or urinary bladder cancers. We are also studying new ways to image hypoxic cancer with PET scanning.

#### TESTING CANCERS IN THE TEST TUBE

It is important to find out what treatments are likely to be effective before starting with full clinical testing so that patients are spared ineffective therapies. Current research is focusing on "preclinical" testing, which uses human cancer cell lines in test tubes and in animal models.

This approach is being pursued vigorously by our colleagues at UCLA so that we can bring carefully-crafted programs that are ready for our clinic. We believe this is truly a faster pathway to reach for cures.

There are 51 human cancer cell lines that can be tested for breast cancer, 60 for lung cancer, 30 for colon cancer, and 20 for ovarian cancer. Additionally, there are many more cancer cell lines available to test for prostate, liver, pancreas, urinary bladder, kidney, melanoma, sarcoma, head and neck, uterine, and gastrointestinal cancers.

Research is focused on stored cancer tissue obtained at the time of surgery from thousands of patients who have participated in research programs. The newest technologies, such as microarrays, allow the investigators to study the genes and their activities in these cancer samples and correlate them with how these different kinds of cancer respond to various treatments.

#### SARCOMAS

Soft tissue sarcomas and sarcomas of bones are relatively uncommon tumors, but they have great importance because they can affect the young and old and can spread and lead to major complications. A comprehensive approach to the management of these patients is necessary, including close cooperation between specialized surgical oncologists, pathologists, radiation oncologists, medical oncologists, and rehabilitation therapists.

Several new drugs that specifically target sarcoma cells are in the pipeline as we refocus our strategies not only for the common cancers, but also for the many less-common cancers that affect so many of our patients.

#### CHRONIC MYELOGENOUS LEUKEMIA (CML) AND MYELOYDYSPLASTIC SYNDROMES

Something very interesting is happening with our clinical trials for chronic myelogenous leukemia treatments – very few patients are available for testing! The reason? Our patients are doing so well with currently available oral medications that they don't need any new treatments!

After having very few effective treatments for it in the past, CML is now an amazing story of success. Over the last few years, we have been able to control this disease with the use of imatinib mesylate, a newly-approved oral medication. Other new medications under testing also offer hope to the few who find their disease has become resistant to the new therapy.

Similarly, newer medications like CC-4047 are being tested to reverse the bone marrow failure associated with myelodysplastic syndromes, conditions in which the bone marrow is not able to produce enough cells to populate the blood. A related condition called polycythemia vera may soon have a potential therapy which is under testing, known as XL019.

#### GASTROINTESTINAL CANCERS (INCLUDING COLON, LIVER, PANCREATIC, ESOPHAGEAL, AND GASTRIC)

We have made significant advances over the last few years with these cancer types, including a new treatment just approved for liver cancer. Sorafenib was found to improve the survival time in patients with liver cancer. However progress has been relatively slow with these cancers when compared to the success stories we have seen in treating some types of breast cancer and chronic myelogenous leukemia. The newest approaches include the use of antibodies such as the insulin growth factor receptor-1 antibody, which is in the early phases of testing.

#### FINDING TARGETS AND MEDICATIONS THAT HIT THEM

Targets on cancer cells can have puzzling and provocative names, such as death receptor (a target so-named because it triggers cancer cell death). Another cancer cell target, heat shock protein 90 (HSP90), is an exciting new target for therapy. The development of medications that attack these targets is proceeding rapidly, with the focus not only on efficacy, but also on any potential adverse side effects. The number of new molecules and targets are growing exponentially as the ability of basic scientists is expanded by newer technologies.

For example, they can study thousands of genes in a cancer sample very rapidly with new tests called microarrays. Or they can develop a human antibody to attack a cancer cell target precisely and uniquely. In the pipeline is AMG-706, which is being tested in thyroid and other cancers, and XL999, a drug that inhibits the development of cancer-feeding blood vessels and blocks multiple and key pathways for cancer cell growth.

We are continuing to make significant progress in treating cancer in the bones with the addition of a new investigational medication called denosumab. We are also participating in studies that address less-common malignancies, such as neuroendocrine tumors. We believe that even the rarest of cancers should be a subject of research; not only for the people who suffer from them, but also because we can discover new treatments with wider applications.

## THOSE WHO KEEP GIVING...



Linda Aghakhanian and Kalust Ucar, MD

### MEDICINE IS TEAMWORK



Kalust Ucar, MD pictured with  
Values in Action Award

"Medicine is teamwork. Without that, it gets compromised," says Linda Aghakhanian, a physician's assistant who works to ensure quality patient care at Pacific Shores Medical Group's Glendale office. She also serves as president of SocalPA, her local chapter of the California Academy of Physicians Assistants.

Linda works closely with Dr. Ucar, who was honored recently with Glendale Memorial Hospital's Values in Action Award. Honorees have to demonstrate the hospital's core values of excellence, dignity, collaboration, justice, and stewardship every day, and to demonstrate a commitment that distinguishes them as truly outstanding.

"I felt proud and I felt energized and appreciated. Dr. Ucar says of receiving the award, "It makes you even more demanding of yourself to be better."

*To our patients, their families, and their caregivers for their courage, friendship and trust.*

• To Beckstrand Cancer Foundation for their commitment to providing a unique combination of financial assistance, counsel, and advocacy to cancer patients and their families.  
www.beckstrand.org



Elizabeth Lucas and family

### INFUSION CENTER DEDICATION



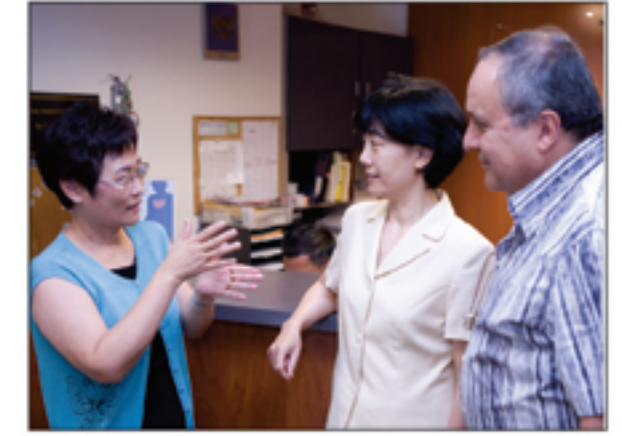
(from left) Dr. Tchekmedyian, Liz Lucas,  
Former California Gov. George Deukmejian,  
and Chief Justice of the California Supreme  
Court Malcolm M. Lucas (Ret.)

The late Justice Campbell Lucas and his family were honored for their many contributions to the advancement of cancer education and research at the December 23, 2006, ceremony at Pacific Shores Medical Group on the campus of St. Mary Medical Center in Long Beach.

The Lucas family, including wife Elizabeth, children and grandchildren, brother Chief Justice Malcolm Lucas (Ret.), and former Governor George Deukmejian, a long-time family friend, joined the tribute and shared many highlights of the remarkable and inspiring life of Justice Campbell Lucas.

### KUDOS TO YOU!

• To Rosa Babayan, a long-time employee and friend at our Glendale office, who recently donated a kidney to her daughter, Rima, who had complications during pregnancy. "I work every day watching people whose lives are at risk," Rosa says, "and here, right in front of me, was my daughter, whose life was at risk. The uncondi-



Lucy Young, Dr. Amy Wang and  
Mihran Nazaretyan at the  
Herald Cancer Association Center

### PHYSICIAN'S COMMUNITY OUTREACH

Dr. Amy Wang is leading Pacific Shores Medical Group's efforts to attend to the large Chinese-American community's cancer care needs. A speaker of Mandarin, Dr. Wang understands the cultural and language barriers that many Chinese-American patients face.

"There is an unequal burden of cancer mortality among Asian-Americans," Dr. Wang says. "While heart disease is the leading cause of death for all U.S. groups, cancer has been the number-one killer of Asian-American women since 1980."

Lucy Young, Executive Director of the Herald Cancer Association in San Gabriel, CA explains that having a doctor who understands her patients' language and culture helps tremendously.

"Many Chinese cancer patients can't communicate with their physicians due to language barriers," says Young, whose group assists Chinese-Americans with cancer and who has hosted Dr. Wang at meetings. "I really think it is vital that the patient and doctor be able to communicate well with each other."

tional giving I witness every day is awesome, and this time it was my turn to give."

We are happy to report that mother and baby are healthy and well!

*And to our colleagues, hospitals, and staff for all they do to help our patients!*

*We are at a turning point in cancer therapy and research.  
Our hope is that we reach the needed cures in time to help many of our patients.*