Estimated Leukemia Deaths by State, US, 2007*  

*US Mortality Public Use Data Tapes, 1964-2004 • National Center for Health Statistics • CDC
When Moshe Talpaz, MD, was considering making the leap from his senior position at the MD Anderson Cancer Center in Houston to the U-M Comprehensive Cancer Center, one thing kept standing out to him: the amazing range of very promising laboratory-based cancer research going on throughout the unparalleled research facilities of the CCC and the entire Medical School.

But getting that research out of the lab and into the hands of hundreds of U-M cancer clinicians was a challenge. Moving ideas from the test tube and the Petri dish to the bodies of cancer patients involves many hurdles—and not just those involving money, facilities and permission to pursue a clinical trial. At an institution as large as U-M, sometimes the biggest hurdle was just getting the right people to connect with one another and make the handoff from lab to clinic possible.

That’s why Dr. Talpaz this year accepted the challenge of making these connections happen, and creating better conditions at U-M for “translational” research that brings new scientific ideas to patient care. As the Comprehensive Cancer Center’s new Associate Director for Translational Research since February of 2006, he has already set in motion several major initiatives designed to do just that.

The most visible: a new Phase I Research Center within the Cancer Center building, where patients and researchers will have a dedicated facility solely for early-stage testing of new drugs and biologic agents against all types of cancer. Some of the first candidates are molecules developed by the division’s Shaomeng Wang, PhD, and Max Wicha, MD.

Funded by the Cancer Center and by a donation from the Ravitz Foundation, the facility will make it more possible to conduct Phase I trials and collect detailed data on patients’ response to novel treatments. Those data can be used to evaluate how well the therapy works, but data must also be fed back to the laboratory researchers who first developed the concept, Dr. Talpaz says. This kind of “feedback loop” is vital to the further refinement of new ideas.

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Making connections between cancer researchers and clinicians who work on similar problems is another priority for U-M, and a new mechanism to do just that got under way this year. A new set of “working groups” bring scientists and physicians together around research themes—such as a process called Wnt signaling, a type of communication between cells that cancer appears to hijack for its own purposes.

Another innovation begun this year is a series of retreats for U-M cancer researchers and representatives from pharmaceutical and biotechnology companies. These interactions will allow both sides to see where they might be able to work together toward translating research findings into clinical trial candidates. And as the state of Michigan’s economy looks to life sciences industries for relief from automotive downturns, this kind of interaction may lead to new licensing agreements and startup companies based on U-M cancer diagnostics and therapies.

Even while he “stirs up,” in his own words, the U-M translational cancer research effort, Dr. Talpaz is also a translational researcher himself. His specialty is chronic myeloid leukemia—both treating it and studying its causes and potential therapies. Support from the Sheldon Glass Fund and other donors has funded ongoing efforts to establish a leukemia bank of blood and tissue samples to further studies of chronic and acute myeloid leukemia.

A High Honor for a U-M Cancer-Prevention Leader

Dean Brenner, MD, (right) has devoted his career to reducing the deadly threat that cancer poses. For the first part of his career, he focused on finding new ways to treat it. But for the last 15 years, since coming to U-M, he has zeroed in on another approach. As he puts it, “the most successful way to reduce mortality from cancer is to prevent it.”

This year, he received a high honor in recognition of his achievements in cancer prevention: the Kutsche Memorial Chair of Internal Medicine.

The endowed professorship is named for John Kutsche, MD, an alumnus of the U-M Medical School who practiced in Trenton, Michigan. His wife, Estelle, and their daughters Katherine and Lynn also graduated from the University, making theirs an “all-U-M” family. The effort to establish the chair was initiated by Dr. Kutsche following the passing of his wife, and made a reality through the generosity of his daughter, Katherine, following his death.

This generous support will aid Dr. Brenner’s research on the clinical pharmacology of compounds aimed at preventing the development of cancer, and his work to identify and validate biomarkers for the early detection of cancer progression. As part of his biomarker work, he directs the Great Lakes New England Clinical Epidemiology and Validation Center, a five-university international consortium that’s part of the National Cancer Institute’s Early Detection Research Network (EDRN). He also serves as Co-Director of the Biomedical Prevention Program at the U-M Comprehensive Cancer Center.

Among the compounds that Dr. Brenner has studied for their cancer-preventing potential are commonly used drugs such as aspirin and topical retinoids, a new drug called difluoromethylornithine (DFMO), and even nutrition-based interventions such as the spices turmeric and ginger, and the compound resveratrol found in red wine. He and his growing group of collaborators are studying all of these substances as new tools to delay or reverse the process of colon, esophagus, skin (melanoma) and breast cancer progression. In December, they received a five-year, $1.7 million grant from the National Institutes of Health to study the impact of how changing the diet of Americans to one more similar to the Mediterranean countries might be a way to prevent breast and colon cancer.

Images from leukemia research by Dr. Talpaz, showing the effect of degrasyn on leukemogenic tyrosine kinase mobilization.
His laboratory team is working to find new drug candidates against leukemia and the other major blood cancer group, lymphoma, while also studying the genetic factors involved in those diseases.

Nicholas Donato, PhD, came to Michigan with Dr. Talpaz to continue this work together with Sami Malek, MD. Meanwhile, Dr. Talpaz has brought several ongoing Phase I clinical trials that he was conducting in Houston to Ann Arbor, where he was a leader of the trials that led to the introduction of major drugs such as Gleevec and Avastin. Together with trials led by other members of the leukemia and lymphoma clinic team, these trials will give U-M blood-cancer patients the chance to participate in more cutting-edge studies than ever.

As these efforts continue, Dr. Talpaz and his colleagues hope to greatly increase the percentage of all U-M cancer patients who take part in clinical trials—especially those who fail to respond to frontline treatments. Because only through more translational research will the new options that these patients need become available.

A Noble Award

This year, Laurence H. Baker, DO, (left) Hematology/Oncology faculty member and chairman of the Southwest Oncology Group (SWOG), received the Sarcoma Foundation of America’s Nobility in Science Award. He was honored for his 34-year commitment to the advancement of scientific knowledge about sarcoma.

Sarcoma, one of the rarest types of cancers, affects bones, cartilage, fat, muscle, blood vessels and other connective or supportive tissue. In addition to his SWOG and U-M roles, Baker is the executive director and president of the Sarcoma Alliance for Research through Collaboration (SARC), whose mission is to conduct clinical trials to improve the diagnosis and treatment of sarcoma, and ultimately to find a cure for this disease. The organization includes participants from 20 institutions with many physicians from various diagnostic and therapeutic disciplines whose practices are limited to sarcoma. In addition, SARC is committed to providing accurate and up-to-date information about sarcoma to physicians, patients and families affected by the disease.

The Hematology/Oncology unit received a very thoughtful and much-needed gift from Deanna & Duane Cortright and Darlene & Randy Bowman in memory of their daughter, Jennifer Bowman, a U-M patient who passed away in 2006. During the weeks they spent at the hospital with Jennifer, her parents noted a shortage of sleeper chairs for families of patients and decided to use the memorial gifts they received to purchase three of them for the University. The Cortrights and fellow Members of the American Legion Auxiliary, District 3, to which Jennifer also belonged, purchased a vital signs monitor for the patients undergoing chemotherapy at U-M. At left, Drs. Harry Erba and Robert Todd, gathered with other staff who cared for Jennifer to thank the Cortrights and Bowmans for their generous contributions.