Hospital Uses Moon Landing As Inspiration For Fight Against Cancer

Marilynn Marchione, AP

The nation's largest cancer center is launching a massive "moonshot" effort against eight specific forms of the disease, similar to the all-out push for space exploration 50 years ago. The University of Texas MD Anderson Cancer Center in Houston expects to spend as much as $3 billion on the project over the next 10 years and already has "tens of millions" of dollars in gifts to jump start it now, said its president, Dr. Ronald DePinho.

One of the cancers is myelodysplastic syndrome. *Good Morning America* co-anchor Robin Roberts has that kind and had a bone marrow transplant to treat it on Thursday. The others are especially deadly forms of breast and ovarian cancer, along with lung, prostate, melanoma and two types of leukemia. The project aims to find cures and lower deaths. Although no overall benchmarks have been set, individual projects for various cancers have specific goals.

With genetic information and more precise drugs, "we have many of the tools we need to pick the fight of the 21st century and find ways to defeat these cancers," DePinho said. Dr. Otis Brawley, chief medical officer of the American Cancer Society, which has no role in the project, praised DePinho's effort. "I'm thrilled to see somebody take the lead," Brawley said. "The results that I see him promising, in my mind, are reasonable both in terms of raising money and fighting cancer."

Cancer death rates have been falling since the 1990s at an average of more than one percent per year but the disease remains a top killer worldwide. In the United States this year, estimates are that more than 1.5 million people will be diagnosed with cancer, and more than 500,000 will die from it. The MD Anderson program was inspired by the goal President John F. Kennedy announced in 1962 to put a man on the moon by the end of that decade. He described it to Congress that May and in a speech in September at Rice University, a mile from MD Anderson.

The Houston cancer center treats 112,000 patients a year and has been building a database of tumor samples and their genetic characteristics, especially of breast and ovarian cancers. A year ago, when DePinho became its new president, he started a competition among its researchers to submit ideas for how to make fresh inroads against the disease. Six teams were chosen to tackle the eight cancers. Each team has specific goals, ranging from basic research to clinical trials that test treatments, biomarkers and diagnostics. Some projects are aimed at novel prevention methods — a mandatory role for any of the federally funded National Comprehensive Cancer Centers, DePinho said.

The teams will focus on personalizing treatment according to an individual's tumor genes, real-time assessment of the effectiveness of therapies being tried, better diagnoses and early detection and reducing side effects of treatment. For example, one project will jointly target a deadly type of ovarian cancer and triple-negative breast cancer — breast tumors whose growth is not fueled by estrogen, progesterone or the gene that the drug Herceptin targets. The cancers share some striking similarities at the genetic and molecular level and treatments for them are converging, MD Anderson scientists say.

Scientists plan to study one cancer pathway and how nearby tissue influences the cancer's growth. They also hope within five years to find a way to detect ovarian cancer early. Experts have recommended against routinely screening healthy women for ovarian cancer now because methods to do so are too flawed. Money for all of the moonshot projects will come from foundations, gifts from individuals, grants, revenues from treating the additional patients the center expects to attract, and patents and royalties from discoveries, MD Anderson officials said. That will be on top of the $700 million the cancer center spends each year now on research.

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