This Time It IS Personal

When *Time* magazine selected “You” as “Person of the Year,” it was recognizing that individuals armed with computers, cell phone cameras, iPods, personal digital assistants, personal blogs and a cornucopia of other communications mechanisms had taken control of information away from mass media and self-appointed experts.

But that isn’t all the information explosion has wrought. Today, genetic information about each individual “You” can be used to enhance our health care in important new ways. Combined with a person’s distinctive family, social and environmental profile, new “personalized medicine” tools hold the promise of predicting disease as well as the risk of a particular course of treatment on a particular cancer in a particular person.

Until now, deciding which cancer treatment has the best chance of success has been based on years of physician experience, slowly but steadily informed by research. But today, because of the convergence of genomics, nanotechnology and computational biology, what was once “breast cancer” is now treated as “Miranda’s breast cancer,” “Lakeisha’s breast cancer” or “Susan’s breast cancer,” each requiring different prevention strategies and therapies based on age, stage, lifestyle and – most significantly – genetic makeup.

New research tools have made it possible for disciplines such as molecular biology, genetics and computer science, to name just a few, to work together more closely so that cancer can be better understood by oncologists as well as by basic and clinical researchers as an integrated system of individual diseases and individual therapies.

Personalized medicine doesn’t just aim at cancer. Dr. Francis Collins, director of the National Human Genome Research Institute, predicts that by 2010 the promising science of pharmacogenetics will be put to work to treat and even conquer diabetes, heart disease, Alzheimer’s schizophrenia and many other diseases.

It’s good news that the public seems to embrace the personalized medicine concept, albeit without much sense of specificity. We at Research!America commissioned a national poll that found a good base of intuitive support for personalized medicine. But it’s not enough. Now the research community must let more people know what they can do as individuals to help assure that this research moves forward as rapidly as scientific opportunity warrants. Moving forward will require robust investment.

The relationship between money well spent and development of therapies that improve and extend quality of life is a direct one. As cancer survivor and television news personality Sam Donaldson puts it: “I think the biggest challenge we face now is how to energize the American public to really get behind the effort to fund research. Cancer is one problem you *can* solve by throwing money at it.”

Why is it such a challenge to turn favorable public opinion into favorable public investment? As with so many other public policy issues, it is a matter of more
effectively spreading the word. In this case, the word is an easy one: Medical research saves lives and saves the government money. In the past two years, The Ohio State University has earned double-digit percentage increases in support from the National Institutes of Health, the federal agency responsible for funding most of the medical research paid for by taxpayers, and has more than doubled its annual funding from the NIH over the past six years. A new biomedical research tower has opened, and recent recruitment of outstanding researchers has put another necessary component of infrastructure in place. All that is needed now is strong funding support to put a state-of-the-art facility and 21st century brainpower to work.

But the NIH budget has now been cut for the first time in 30 years. It would be a terrible irony if the successes wrought in that time somehow lead policymakers to believe they can retract support and expect progress to continue. Thirty years ago, only one child in 10 survived cancer. Now it is seven out of 10. For two years in a row, fewer Americans are dying of cancer than died the year before. It is tempting to say this progress did not come cheaply. But it did. Spending on cancer research sponsored by the NIH from 1974 to 2004 was less than $9 annually per American* – the cost of a movie ticket.

The promise of personalized medicine is within reach of cancer patients and their families because of research conducted at OSUCCC. But it won’t happen if NIH budget stagnation eliminates all but the conventional research and starves young investigators of opportunity. Flat or declining NIH budgets are not only bad for science but harmful to the economy, because medical breakthroughs have the promise of reducing health care costs. In addition, medical research has the added advantage of driving strong regional economies that stimulate new biotech and I.T. businesses as well as keeping locally educated young people from leaving to find better career opportunities elsewhere.

To assure continuing, dynamic public support for the OSUCCC, many more people – patients, family members, physicians and scientists – must participate in public policy. That means talking with community leaders and elected officials to make sure that researchers and their institutions operate in a fiscal, policy and intellectual environment that makes faster progress against fearsome diseases like cancer a much higher national priority. If more of us get involved, it won’t be long until that Time person of the year – “You” – will be healthier than ever before.

* Source: National Institutes of Health
http://www.nih.gov/about/researchresultsforthepublic/NIH101.ppt