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DEPARTMENT OF HEALTH & HUMAN SERVICES

Statement by

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on

Fiscal Year 2002 President's Budget Request
for the National Cancer Institute

Before the

House Subcommittee on Labor-HHS-Education Appropriations

Mr. Chairman and Members of the Subcommittee:

I am Richard Klausner, the Director of the National Cancer Institute (NCI). I am pleased to appear before you to present a brief review of some of the activities supported by the NCI and to present the President's budget proposal for fiscal year 2002. The significant budget increases over the past several years have allowed the NCI to aggressively implement its strategic plans to:

- Support a broad-based portfolio of superb research to increase our knowledge about all aspects of cancer.

- Translate basic science to transform all aspects of cancer prevention and care

- Train the next generation of cancer researchers

- Address both the quality of cancer care and the disparate burden of cancer experienced in America across the cancer continuum.

CANCER TRENDS

Four years ago, the NCI initiated an annual report to the Nation on the burden of cancer. This report is developed in collaboration with the American Cancer Society, the Centers

for Disease Control and Prevention and its National Center for Health Statistics. This spring, we will report the latest cancer statistics for the country through 1998. Total cancer death rates are falling now by 1.1% per year with black males showing the largest drop of 2% per year. For breast and prostate cancer, death rates are now falling by 3.5% per year. Despite overall progress, incidence and/or death rates for some cancers are rising. These cancers, which include esophageal cancer, liver cancer, non-Hodgkin's lymphoma, acute myelogenous leukemia and melanoma, account for about 13% of the total cancer burden in the U.S. The NCI has convened task forces and directed new research to understand these trends.

The full and accurate assessment of the U.S. cancer rates is at the foundation of our ability to define the cancer burden, detect trends and pinpoint geographic and demographic variables and disparities. For 30 years, the NCI's Surveillance, Epidemiology and End Results (SEER) Program has been the gold standard for cancer registration worldwide. This year, we announced a major expansion including California, Louisiana, Kentucky and New Jersey, and SEER now covers 26% of the U.S. population. We will increase the coverage of the rural population by 150%, of the population below the poverty line by 200%, of Asian Americans by 200%, of non-Mexican Hispanics by 70% and of Native Americans by 36%.

We have expanded and will continue to expand what we call Rapid Response Studies which allow researchers and NCI staff to rapidly respond to urgent issues that are revealed by cancer surveillance. We have greatly expanded our capacity to monitor, report and evaluate geographic differences in cancer burden. This involves a three-pronged approach. First, we are continually improving our analyses and dissemination of cancer mortality maps so that they are useful to researchers, local officials and policy makers. Second, we have provided a fund to encourage researchers to propose hypothesis-testing studies associated with geographic variations in cancer. Third, we are greatly expanding the funding for and management of Geographic Information Systems (GISs) to create computer systems that allow examination and tracking over time and space of cancer rates with any geographically defined factor that might contribute to the cancer burden. About 30 applications have been received in response to this new initiative.

EARLY DETECTION RESEARCH

New approaches, based on genomics, proteomics and other emerging technologies, are being systematically pursued to reach the goal of developing effective and reliable tests for the earliest possible detection of all cancers and even of pre-cancers. The Early Detection Research Network (EDRN) is a major new initiative of the NCI to create, for the first time, a national R&D enterprise to discover biomarkers of cancer, develop reliable tests and validate them with clinical studies. The EDRN is a partnership between NCI, other government agencies, industry and academics; in its first year, dozens of potential markers are being studied and three are moving towards validation studies. The need to develop effective early detection for lung cancer aimed at current and former smokers at risk for this deadly disease is clear. We are actively pursuing the possibility

that low dose, helical Computed Tomography might provide a new method to detect early and potentially curable lung cancers. A randomized trial to compare standard screening mammography with digital mammography for the detection of breast cancer is being initiated and we continue to closely monitor the results of NCI's large randomized trial to finally determine the clinical value of PSA in prostate cancer screening. Even our most successful cancer detection tool, the Pap smear, can use improvement. A recent NCI study has addressed ways to make the test more predictive of serious findings for the large number of Pap smears that are currently read as being of uncertain significance and whose evaluation is estimated to cost as much as $1 billion per year. A DNA test looking for the virus that causes cervical cancer can successfully predict which of these Pap smears can be safely ignored and which require follow-up.

DIAGNOSIS

Two years ago, the NCI announced a major new program aimed at utilizing the emerging knowledge of the genome to create new approaches to the diagnosis of cancer, indeed to potentially change the very names and classifications being applied to human cancer. This program, called the Director's Challenge, has been responded to by a consortium of researchers from around the country who will attempt to redefine the classification of leukemia, lymphoma, lung, prostate, breast, colorectal, brain, ovarian, childhood and other cancers. Results have begun to emerge demonstrating that cancers currently lumped under one diagnosis are actually multiple molecularly distinct diseases. For at least one group of cancers called diffuse large cell lymphoma, this previously hidden heterogeneity may explain why only 50% of patients can be cured with current therapy. Rather, it now appears that this cancer is actually at least two different diseases, one of which is almost always cured by current therapy and the other of which is almost never cured. This program will accelerate progress towards achieving a long-held dream of being able to correctly classify human cancer.

MOLECULAR TARGETS: A NEW ERA IN THE DISCOVERY AND DEVELOPMENT OF PREVENTIVE AND THERAPEUTIC AGENTS FOR CANCER

Revealing the actual molecular machinery of cancer has long promised to bring a new, highly selective approach to both prevention and treatment. Examples of molecularly targeted therapy for cancer are beginning to emerge. For example, chronic myelogenous leukemia (CML) is known to be the result of the breaking and recombination of two chromosomes. The fused chromosomes produce a new gene which tells the cell to produce a protein called bcr-abl whose uncontrolled activity is responsible for the growth of the leukemia cell. A new drug, called STI571, developed as a collaboration between Novartis Pharmaceuticals and NCI-funded investigators, is highly effective at turning off the activity of bcr-abl. In recently published studies, virtually every patient with the chronic phase of CML, the disease expressing the molecular target, has shown a complete correction of their blood abnormalities. This is an oral drug with apparently few and mild side effects. We now know that this same drug has activity against two other distinct molecular machines present in a variety of cancers. As a result, the NCI in collaboration

with Novartis is rapidly developing numerous clinical trials to test STI571, alone or in combination with other drugs, in leukemia, gastrointestinal sarcomas (in which dramatic responses have already been seen), brain tumors, lung, prostate, breast, ovary and pediatric cancers.

To expand the discovery, validation and development of more molecular targets in cancer, the NCI has initiated a series of funding programs including:

1. Molecular Targets Drug Discovery (MTDD) grants – four new grant programs to discover andvalidate molecular targets for cancer for which we have received over 170 applications.

2. Interdisciplinary Research Teams for Molecular Target Assessment (IRT/MTA) – a new approach to the development of clinically useful assays to measure and monitor cancer in patients according to the actual molecular targets where treatment is directed.

3. Chemistry/Biology Centers – we have funded six centers of excellence to bring chemists and biologists together to discover chemicals that report on and can perturb the molecular machinery of cancer.

This year we hope to establish one to three large contract efforts called National Molecular Target Laboratories (MTLs). These are envisioned as genomic-scale efforts to discover molecular probes for all potential cancer relevant molecular targets.

We hope to expand the Rapid Access to Interventional Development (RAID) program, which was established two years ago to take potential therapeutics from academic or small business laboratories and turn them into drugs ready to be tested in phase I clinical trials. In its first two years, RAID is supporting 51 novel agents and we hope that 11 will reach the clinic by the end of this year.

The way scientific discovery eventually leads to advances in medical practice is through the clinical trial. Currently, the NCI is actively accruing patients (about 25,000 a year) to over 840 clinical trials including about 700 early phase trials where we can test the safety and possible effectiveness of new agents. In FY 2000, 261 new trials were opened compared to 177 in FY 1999. Our goal is to double the number of new agents entering such clinical testing over the next two years. Over the past year, completed clinical trials have demonstrated new treatment regimens that show a 50% increase in survival for resectable gastric cancer and a 40% increase in survival rates for metastatic renal cancer, to cite just two examples.

Over the past year, we have been implementing our strategic plan to address the pressing question of cancer disparities through our Quality of Cancer Care initiatives, our newly formed Center to Reduce Cancer Health Disparities and our Comprehensive Minority Biomedical Programs. Eighteen Special Population Networks for Cancer Awareness, Research and Training have been launched as have 12 new partnership programs between NCI-funded Cancer Centers and Minority Serving Institutions. These and other activities are aimed at increasing our understanding of cancer disparities, increasing the participation of minority and underserved communities in the cancer research enterprise and finding ways to address the disparities in cancer burden.

I am pleased to present the President's budget request for the National Cancer Institute for FY 2002, a sum of $ 4,177,203,000, which reflects an increase of $439,275,000 over the comparable Fiscal Year 2001 appropriation.

The NIH budget request includes the performance information required by the Government Performance and Results Act (GPRA) Of 1993. Prominent in the performance data is NIH's second annual performance report which compares our FY 2000 results to the goals in our FY 2000 performance plan. As performance trends on research outcomes emerge, the GPRA data will help NIH to identify strategies and objectives to continuously improve its programs.