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CANCER CONTRACTS & BACKGROUND



FACSIMILE

DATE: 8/4

TO: Sarah Branchi

FAX#: 456 5551

FROM: Elizabeth Summy
Deputy Chief of Staff

Phone: 202/690-7431 Fax: 202/401-5783

COMMENTS:

Cancer material - options discussed
for Armstrong event

21 Pages [including this cover]

AL GORE'S AGENDA TO COMBAT CANCER IN THE 21st CENTURY

Today, Al Gore is unveiling a historic five-point plan to change the way that we prevent, detect, and treat cancer in the 21st century. "We must set a national goal: to work tirelessly toward a vision of a 21st Century America that is free of cancer as the killer it is today," said Al Gore. The five-point plan is as follows:

STEP ONE: ENHANCE RESEARCH TO SPEED UP THE SEARCH FOR THE CURE.

As scientists unravel the human genome and the inner workings of cancer cells, there are historic new opportunities to target the molecular makeup of each cancer leading to new approaches to prevention and treatment carefully tailored to each specific type of cancer. To assure we realize new possibilities for revolutionary progress in preventing, detecting, and treating cancer, Al Gore is proposing to:

- **Double funding for cancer research over the next five years.** To step up the fight against cancer, Al Gore is proposing to double cancer research at the National Institutes of Health over the next five years. This investment, which would consist of an increase of nearly \$9 billion over five years in spending in cancer research, will be part of a similar commitment to all medical research. It will help assure scientists have the resources to develop new cutting edge treatments, prevention, and detection tools, including identifying the molecular basis for the prevention and treatment of all major cancers in the next five years; developing a whole new class of prevention and therapies within the next decade; and tripling the number of new drugs and therapies that enter clinical trials.
- **Double the progress over the next ten years in reducing cancer deaths and new cancer cases.** After steady increases in cancer rates since the 1930s, in the 1990s, for the first time, progress in cancer prevention and treatment led to unprecedented declines in the number of new cancer cases and deaths. Still today, 1.3 million Americans are diagnosed with cancer each year and 560,000 will die from it. This new investment aims to double the rate of progress by 2010 – doubling the rate of decreases in cancer deaths and cancer incidence. This would mean that by 2010 each year, 700,000 fewer Americans would get cancer and 200,000 less would die from it.

STEP TWO: DIAGNOSE AND DETECT EVERY MAJOR CANCER SOONER – SO THE CORRECT TREATMENT CAN BEGIN IN ITS EARLIEST STAGES. The Cancer Genome Anatomy Project, the historic effort that Vice President Al Gore unveiled in 1997 to unravel the genetics of cancer, has already more than doubled its original goals. Now we must apply the breakthroughs of that project to more precisely diagnose and detect each cancer early when we have a better chance of effective treatment. To achieve this goal, Al Gore is issuing three specific challenges to the scientific community:

- **Identify every gene that predisposes people to cancer by 2002.** With the completion of the Human Genome Project in sight, the next challenge is for scientists to identify every major human gene that predisposes people to cancer and the genetic variations that affect cancer risk by 2002.

- **Develop precise blood tests for virtually every cancer within five years to revolutionize early detection.** New information about genetics has the potential to revolutionize the way that we detect cancer or even any early signs that indicate a likelihood of cancer. New blood tests would give signs that would enable cancer to be detected much earlier than virtually any screening available today by pinpointing genetic alterations that indicate early signs of cancer. This is a challenge to scientists to use breakthroughs in genetics to develop these tests in the next five years.
- **Develop diagnostic tests for every major kind of cancer within five years.** With new progress in the genetics of cancer, now the challenge is for scientists to develop new diagnostic tests for every major kind of cancer within the next five years. Today, we cannot distinguish many types of cancers that would enable us to answer critical questions such as how fast will the cancer grow, will it respond to therapy, and which therapy is likely to work. These tools will enable health professionals to diagnose cancer far more precisely than is currently possible so that more targeted new treatments can begin right away.

STEP THREE: ASSURE CANCER PATIENTS ACCESS TO CUTTING EDGE

TREATMENTS. Only three percent of cancer patients currently participate in clinical trials. Many scientists believe that higher participation in clinical trials could lead to faster development of new therapies, as it often takes between three and five years to enroll enough participants in clinical trials to make them statistically meaningful – and for the patients themselves, access to these trials can mean the difference between life and death. We need to assure cancer patients can access these top quality treatments. Al Gore has three specific proposals:

- **Increase the number of patients by fivefold participating in cancer clinical trials at the National Cancer Institute.** Over the past two years, the National Cancer Institute has speeded up admission to clinical trials by launching a new program to enroll patients on the spot. New investments should increase the number of patients participating in clinical trials funded by NCI by 500 percent in the next five years to a total of 120,000.
- **Pass legislation to assure Medicare patients can participate in clinical trials.** America's seniors make up half of all cancer patients, and are ten times more likely to get cancer than younger Americans. Older Americans, however, frequently cannot participate in cutting-edge cancer clinical trials because Medicare does not pay for experimental treatments. Al Gore is calling on Congress to pass the legislation that would provide Medicare patients with coverage to participate in cancer clinical trials which has been proposed by Senators Rockefeller and Mack.
- **Pass long overdue legislation that requires all health plans to allow patients to participate in clinical trials.** Many health plans also do not reimburse patients who participate in clinical trials that give patients access to the most cutting edge treatments. As part of the Patients' Bill of Rights, Congress should pass legislation right now that requires all health plans to cover patients who participate in clinical trials.

STEP FOUR: EXPAND PREVENTION AND DETECTION FOR CANCER. There is much more to do to assure that Americans are using the tools we have today to fight cancer, such as screening those at risk and preventing smoking. Unfortunately, many Americans do not benefit from this information. Al Gore is proposing a national effort to address this issue. Four specific proposals are to:

- **Expand access to mammograms, colorectal screening and other well proven screening tests.** There are already effective detection methods in place for many of the major cancers.
 - To assure Americans have access to effective cancer screenings, Al Gore is proposing to expand public health programs at the Centers for Disease Control (CDC) that provide screenings at low-cost, such as mammography, colorectal, and cervical cancer. Al Gore also believes we should continue to work to assure Americans have access to affordable health care.
 - Second, even those with access to these tests often do not benefit from them. Some are unaware that they may be at risk. Others fear these tests, or don't know where to go to receive them. To address this issue, Al Gore is proposing a national informational campaign to educate all Americans about the importance of early screening and detection. Both these efforts will have a particular emphasis on eliminating the disparate proportionate of cancer rates. For example, African-Americans are 30 percent more likely to die of cancer than whites and twice as likely to get prostate cancer, while Hispanic women are twice as likely to get cervical cancer. Taken together, these initiatives represent about a \$125 million increase each year.
- **Take special steps to insure that all older Americans get the most up-to-date screening benefits that detect cancer early.** Older Americans are most vulnerable to cancer and are often less likely to get preventive benefits that could help detect and treat cancer early. For example, only 60 percent of older women receive regular mammograms and even less receive treatment for colorectal cancer -- one of the most treatable cancers when detected early. This proposal would eliminate all cost-sharing for Medicare cancer preventive benefits -- including the deductibles and coinsurance for colorectal and prostate cancer screening as well as coinsurance for mammography. He is also challenging health plans cover effective screening procedures. Taken together all these efforts could lead to a decrease the number of Americans who do not get the recommended screenings by 50 percent.
- **Increase efforts to improve diet and nutrition to help prevent cancer.** Thousands of cancer cases could be prevented through improved diet and exercise and other healthy behaviors. This proposal would include increases of about \$25 million per year in school-based prevention programs and other public health efforts to encourage Americans to take measures that would reduce the likelihood of cancer. Also, as scientists learn new information about prevention, this challenges to assure that this new knowledge is quickly translated into national practice.

- **Renew our commitment to stop children from smoking.** Tobacco is still the largest preventable cause of cancer and causes about 30 percent of all cancer deaths, and most Americans begin to smoke when they are children. Al Gore is committed to fighting on all fronts to prevent our children from smoking, including the following steps:
 - Launch a \$200 million new counter advertising campaign to help fight against the millions of dollars that tobacco companies spend to get children to smoke.
 - Penalize tobacco companies that market to children so that they pay the price.
 - Call on the Congress to reaffirm FDA's authority to keep cigarettes out of the hands of children and give our leading consumer protection agency the full authority to help stop young people from smoking before they start by eliminating advertising aimed at children and curbing minors' access to tobacco products.
 - Double efforts to prevent children from smoking through programs that are proven to work and call on states to enhance their efforts. Provide more research to understand why tobacco is so addictive as well as improve current cessation efforts to help those who want to quit now do so.

STEP FIVE: WE MUST GUARANTEE FAIRNESS FOR CANCER PATIENTS.

We must assure that cancer patients are treated fairly. They should have access to the doctors and specialists they need, and should not have to fear discrimination because they have cancer. In 1996, the Administration took steps to assure cancer patients could keep health insurance when they changed jobs. Al Gore is calling for legislation that achieves three objectives:

- **Protect medical privacy.** Cancer patients should not worry about who will see their medical records. Al Gore is challenging Congress to pass comprehensive privacy legislation right away. If they don't pass it, Al Gore will do everything in his power to implement these protections.
- **Assure quality health care by passing a strong Patients' Bill of Rights.** These protections are critical to cancer patients because they assure those in the middle of chemotherapy are not forced to stop treatment because their employer changes health plans; or cannot see a cancer specialist.
- **Prevent genetic discrimination.** Studies have shown that a leading reason that women do not get the latest genetic breast cancer tests is that they fear these tests will be used to discriminate against them. We must assure that Americans do not avoid taking advantage of critical advances in cancer by passing legislation that prevents employers and health insurers from using genetic information to discriminate.

Possible Cancer Announcements on August 10

1) Two years ago this month, Vice President Gore launched the National Cancer Institute's Cancer Genome Anatomy Project (CGAP) to compile the first comprehensive index of genes involved in human cancer. Now, on its second anniversary, CGAP's Tumor Gene Index initiative (TGI) has already discovered 30,000 new human genes, making it the leading source of new gene discovery in the world today. In addition, TGI has catalogued more than 66,000 genes, both new and previously identified. More than 40,000 of these are active in one or more cancers. See Attachment One: a draft press release.

2) In 1998 the U.S. Postal Service issued a breast cancer stamp — called a semipostal — that earmarks a portion of its sales to breast cancer research. Of that portion, 70% goes to the National Cancer Institute and 30% to the Department of Defense. The USPS announced July 28 that more than 100 million of the stamps had been sold, generating over \$7.6 million for research, of which over \$5.3 million will be provided to NCI. So far, the institute has received \$4.15 million. Today, it is announced that the NCI is creating "Insight Awards to Stamp Out Breast Cancer," a program that will award funds generated by the breast cancer stamp to support innovative pilot studies that seek to gain new understanding of breast cancer. Each of the two-year grants will receive a maximum of \$75,000. The \$4 million already received by NCI will fund 20 to 25 grants. See Attachment Two: a press release from the U.S. Postal Service, providing background information.

3) There are now an estimated 8.4 million cancer survivors in the United States. See Attachments Three: Estimated U. S. Cancer Prevalence, 1999, for all cancer sites combined and for 22 major individual cancer sites. See Attachment 4: a new NCI fact sheet on Cancer Survivorship.

4) NCI has just leased a new supercomputer whose use is expected to play a key role in translating recent advances in gene discovery into new, more targeted cancer treatments. This was announced this week, but has gotten little attention outside of the trade press. See Attachment Five: NCI Update — NCI Leases New Supercomputer.

5) An interagency agreement between NCI and the Department of Defense now gives TRICARE beneficiaries more options for cancer care and greater access to the latest advances in cancer treatment and prevention (including screening and early detection) through clinical trials. See Attachment Six: NCI Cancer Facts — TRICARE Beneficiaries Can Enter Clinical Trials for Cancer Prevention and Treatment.

Attachment One

NCI'S TUMOR GENE INDEX REACHES ITS TWO-YEAR MARK

Two years ago this month, the National Cancer Institute publically launched a historic initiative to compile the first comprehensive record, or index, of genes involved in human cancer. The project promised to lay the groundwork for scientists to define tumors based on their unique molecular features, information that could revolutionize the diagnosis and treatment of cancer.

Today, the NCI announced that the initiative, known as the Tumor Gene Index (TGI), is living up to its promise. According to Robert Strausberg, Ph.D., an NCI scientist who oversees the project, TGI already has discovered nearly 30,000 new human genes, making it the leading source of new gene discovery in the world today. Human DNA contains an estimated 100,000 genes, of which over 73,000 have been discovered.

30,000
Leading
gene
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source

Strausberg said TGI has catalogued over 66,400 genes in its first two years, both new and previously identified genes. In total, over 40,500 of them are active, directly or indirectly, in one or more cancers. Some of the 44 tissues that have been studied to date include:

Total
Cataloged
122
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- ▶ Prostate: About 13,000 genes have been found to be expressed in the prostate. Of these, 4,141 are active in cancer and 1,089 have not been seen in other tissues.
- ▶ Breast: Over 5,500 genes have been identified in the breast. Of these, 5,327 are active in cancer and 221 genes have never been seen in other tissues.
- ▶ Colon: More than 11,800 genes have been identified in the colon. Of these, over 11,783 are active in cancer and 892 have never been seen in other tissues.

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- ▶ Lung: Over 15,500 genes have been located in the lung. Of these, 12,488 are active in cancer and 1,468 have not been found elsewhere in the body.
- ▶ Brain: Over 13,900 genes have been discovered in the brain. Of these, 10,781 are active in cancer and over 1,524 genes have not been identified in other parts of the body.

"The Tumor Gene Index is still far from complete," said Richard Klausner, M.D., NCI director. "But already, it is difficult to think of another project that in such a short period of time has generated so much useful, publically available data to benefit cancer research and ultimately people with cancer."

TGI is the first in a series of initiatives under NCI's Cancer Genome Anatomy Project (CGAP), a program to develop publically available databases and technologies that assist scientists in deciphering the molecular anatomy of the cancer cell. "Just as anatomists have defined the human body, CGAP seeks to define for the first time the molecules that are present in cancer cells and make them accessible to scientists," said Strausberg.

The project builds on the understanding that genes encode the instructions to produce proteins, which comprise the bulk of a cell's molecular anatomy. By measuring the expression patterns of genes in tumor cells, scientists can generate a roll call of which proteins are produced and at which levels.

Roll
Call

But TGI added another important element. For each tissue that the project planned to study, it would record gene expression levels in normal, precancerous, and cancer cells. Strausberg said that by monitoring various distinct cell types in any given tissue, the project would have multiple points of comparison to track the changes in gene expression over time that drive tumor development.

To create the index, Strausberg said the project initially turned to the tried-and-true

strategy of creating cDNA libraries. cDNAs are snippets of DNA that scientists synthesize from gene transcripts, or copies of expressed genes, that are present en masse within the cell nucleus. By creating cDNAs from the transcripts and arranging them into ordered clone libraries, scientists can track which of the genome's estimated 100,000 genes are active in a given cell.

As reported today, TGI already has produced a total 142 cDNA libraries. Of these libraries, 38 are created from normal cells, 11 originated from precancerous cells, and 91 are produced from cancer cells.

TGI also has submitted over 650,000 gene transcripts to EST databases, online storehouses of known gene transcripts, over the last two years. This makes the project the leading contributor to EST databases in the world today, accounting for just over half of all recorded gene transcripts. Strausberg said TGI would likely top the million mark in the next year.

Strausberg also stressed that TGI has made major push to develop strong informatic tools on the CGAP website to assist scientists with their studies. These include its Tumor Suppressor and Oncogene directory, a variety of gene expression tools, such as "Differential Digital Display," an online tool to compare computed gene expression, and links to other biology websites.

"The TGI website has been designed not only to list gene names, but to display these names in the context of tumor biology," said Strausberg. "These added, valuable informatic tools provide an integrated package for accessing data and performing cancer experiments."

Strausberg said TGI will continue to build its gene expression index, including the generation of cDNA libraries from strains of mice commonly used in cancer research. In the meantime, NCI has begun soliciting applications from scientists to develop viable strategies and

technologies to apply information in the TGI database toward a molecular classification of tumors. "This initiative would mark a giant step forward in our understanding of the molecular causes of cancer," said Klausner. "But, more importantly, it will lead to improved strategies for cancer prevention, early detection, diagnosis, and ultimately treatment."

TGI is a partnership among NCI, academic centers, and private companies. Some these partners include NIH's National Institute of Dental and Craniofacial Research, the National Institute of Neurological Disorders and Stroke, and the National Institute of Allergy and Infectious Diseases; National Center for Biotechnology Information; Lawrence Livermore National Laboratory; Washington University Genome Sequencing Center, the University of Iowa Hospitals and Clinics Department of Pediatrics; Bristol-Myers Squibb; Genentech; Glaxo Wellcome; and Merck & Co.

The CGAP website can be accessed at <http://www.ncbi.nlm.nih.gov/CGAP/>

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Attachment Two

1ST STORY of Level 1 printed in FULL format.

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Business Wire

July 28, 1999, Wednesday

DISTRIBUTION: City Desks & News Editors/Health & Medical Writers

LENGTH: 506 words

HEADLINE: Breast Cancer Research Stamp Celebrates First Anniversary Thursday, July 29; California Sales are No. 1 in Money Raised for Research

DATELINE: SAN FRANCISCO

BODY:

ly 28, 1999--The Breast Cancer Research stamp -- the nation's first postage stamp that earmarks a portion of its sales to a charitable cause -- celebrates its first anniversary Thursday, July 29, 1999.

And, California remains the nationwide leader in sale of the stamp and in money raised for breast cancer research.

As of Monday, July 26, exactly 101,494,086 Breast Cancer Research stamps had been sold nationwide, generating \$ 7,696,517 to research. Of that volume, 22,386,100 -- or 22 percent -- of the stamps were sold in California, generating \$ 1,688,426 to research.

Of the 85 Postal districts across the country, five of the top ten in Breast Cancer Research stamp sales are located in California, with Sacramento, San Francisco and Oakland holding first, second and third places, respectively, ahead of Seattle and New York City. Santa Ana district scored sixth in the nation, ahead of Washington DC, Denver and Atlanta. San Diego district rounded out the top ten.

"I am gratified that Californians are showing such strong support for the Breast Cancer Research stamp and that our postal employees have been so effective in informing their family, friends and customers about the importance of this stamp and its availability," said Postal Service Pacific Area vice-president Jesse Durazo. The stamp will be available at all post offices until July 2000.

It was at a White House ceremony exactly one year ago, July 29, 1998, that First Lady Hillary Rodham Clinton dedicated the Breast Cancer Research "semipostal" stamp -- the first stamp in U.S. history to have its net proceeds above the cost of postage earmarked for research.

The Breast Cancer Research stamp costs 40 cents and is valid for First-Class letter rate postage. Seventy percent of net proceeds above the cost of postage is given to the National Institutes of Health (NIH), and 30 percent of net proceeds above the cost of postage is given to the Medical Research Program of the Department of Defense (DoD). The NIH and DoD were identified as recipients of the funds by legislation enacted in 1997.

Business Wire, July 28, 1999

Breast cancer is considered the most commonly diagnosed cancer among women in every major ethnic group in the U.S. Experts say when breast cancer is diagnosed early (stages I and II), five year survival rates are nearly 95 percent, and offer better options for breast conserving surgery.

For six decades, USPS has issued new stamps to help raise awareness for a variety of health and social issues including drug abuse, AIDS awareness, environmental protection and conservation. For more information about the Breast Cancer Research stamp, visit the Postal Service's Web site at <http://www.usps.com> and click "Stamps."

CONTACT: U.S. Postal Service

Dan De Miglio or Alan Wald, 415/536-6490

Today's News On The Net - Business Wire's full file on the Internet with Hyperlinks to your home page.

URL: <http://www.businesswire.com>

LANGUAGE: ENGLISH

LOAD-DATE: July 29, 1999

Attachment Four



Cancer Research

BECAUSE LIVES DEPEND ON IT

For Response to Inquiries

National Institutes of Health

July 1999

NCI Press Office
(301) 496-6641

Cancer Survivorship

Cancer, once considered incurable, is no longer a certain death sentence. Since the 1971 National Cancer Act, much of the research into early cancer detection and treatment has paid off. Mortality rates for most major cancers are declining, and today more people survive cancer than ever before. In fact, over 8 million Americans — nearly one in 30 — are living with a history of cancer.

Recent survivorship milestones:

- The five-year survival rate for children with cancer improved from 65 percent in the early 1980s to 74 percent in the early 1990s.
- The five-year survival rate for all cancers improved from 51 percent in the early 1980s to almost 60 percent in the early 1990s.
- 2 million women are breast cancer survivors.
- 1 million men are prostate cancer survivors.

However, surviving cancer can leave a host of problems in its wake. Physical, emotional, and financial hardships often persist for years after initial diagnosis and treatment. Many survivors suffer decreased quality of life following successful treatment, leading one cancer activist and survivor to say, "Surviving is not just about a cure, but about living the rest of our lives."

Long-term problems, many unique to cancer survivors, include:

- **Physical effects** — Physical problems can stem from the cancer itself or from treatments patients undergo. For instance, surgery to remove a tumor may also impair nearby

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organs. Likewise, radiation therapy can damage surrounding tissue and cause hormonal changes. Chemotherapy can be toxic to the heart, liver, lungs, nervous system, and other organs. Persistent fatigue and pain are also common among cancer survivors. In addition, childhood cancer survivors often suffer impaired growth and development.

- **Sexual effects** — Sexual problems are a common consequence of cancer treatment, cited by as many as 50 percent of women surviving breast and gynecologic cancers and as many as 70 percent of men surviving prostate cancer. Loss of desire, pain during sex, erectile dysfunction, premature menopause, and infertility have all been reported by cancer survivors.
- **Psychosocial effects** — Coping with cancer can strain relationships and trigger maladies such as depression, post-traumatic stress disorder, and profound fear of recurrence. In addition, a diagnosis of cancer can cause social stigmatization. These problems can interfere with daily living as much or more than physical side effects.
- **Economic effects** — Acute and long-term medical expenses, and lost wages and lost jobs can all leave cancer survivors deep in debt, increasing worry, and decreasing quality of life.
- **Second cancers** — Of the 1.4 million new cancers diagnosed each year, almost 100,000 are second cancers. Patients surviving one cancer have almost twice the risk of developing a second cancer as the general population has of developing a first. Children under age 15 who have survived cancer have eight times the risk. The reasons for this are unclear, although genetic susceptibility and the effects of chemotherapy and radiation treatments are likely important factors.

Unfortunately, many of these long-term effects — and how they impact survivors — are poorly understood. In 1996, the National Cancer Institute (NCI) formally recognized the need to better understand the issues cancer survivors face by establishing the Office of Cancer Survivorship (OCS). OCS awarded its first research grants in 1997, totaling \$4 million over two years. In 1998, OCS awarded another \$15 million over five years. Altogether, NCI supports \$20 million per year in survivorship research, much of it begun before the creation of OCS.

The primary goal of OCS, to improve the quality of life of cancer survivors, is served by a range of initiatives. Expanding research into cancer survivorship issues is the first step. OCS has placed a priority on funding research on long-term survivors — those alive five or more years after diagnosis. OCS is dedicated to developing the infrastructure — such as databases and researcher networks — that supports the follow-up needed to study long-term survivors. OCS also supports programs to educate patients, physicians, and the public about cancer survivorship. Finally, much of the research supported by OCS is aimed at interventions that can lessen the burden of cancer survivors.

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As more becomes known about the long-term effects of specific treatments, clinicians — and their patients — will better understand the consequences of such treatments. They will also be better equipped to face those consequences.

Examples of OCS-funded research:

- Quality of life in prostate cancer survivors.
- Studying complications in breast cancer survivors.
- Cardiac risk factors in pediatric cancer survivors.
- Enhancing long-term survival after bone marrow transplant.
- Second cancers following childhood cancer: Possible interaction between genetic predisposition and cancer.

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For more information about cancer visit NCI's Web site for patients, public, and the mass media at <http://www.nci.nih.gov>.



Office of Cancer
Communications

Building 31, Room 10A24
Bethesda, Maryland 20892

National Institutes of Health

EMBARGOED FOR RELEASE
August 2, 1999

NCI Press Office
(301) 496-6641

NCI Leases New Supercomputer

Attachment Five

The National Cancer Institute (NCI) today announced the signing of a three-year, \$6.5 million agreement with Silicon Graphics, Inc., (SGI) to lease a Cray SV1 supercomputer. The new machine will be operated at NCI's Advanced Biomedical Computing Center (ABCC) in Frederick, Md., where it will replace a Cray Y-MP supercomputer that has been in use there since 1991.

According to Jacob Maizel, Jr., Ph.D., chief of NCI's Laboratory of Experimental and Computational Biology and a founder of the Frederick center, the SGI supercomputer has a combined computing power of 115 gigaflops, or enough capacity to process in one day a computational task that would take a high-end Pentium computer about four years to complete. A gigaflop is a measure of a computer's speed that, in the terminology of the trade, equals 1 billion floating point operations per second.

Maizel said the new SGI supercomputer, which should be fully operational by the end of the year, provides about 48 times more computing capacity than ABCC's previous supercomputer. It also has about 96 times the disk and memory capacity of the older computer and features 96 processors, a plus in simulating biological problems that require large amounts of computer memory.

Richard Klausner, M.D., NCI director, said the Institute's decision to lease the Cray SV1 comes as cancer researchers worldwide have shown a growing interest in implementing the latest, high-speed computational methods into their studies. "The last decade has shown that supercomputing has an important place in cancer research, and its importance will only increase in the coming years as studies move forward in defining the molecular causes of cancer," he said.

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Klausner said supercomputing will likely play a key role in translating recent advances in gene discovery into new, more targeted cancer treatments. "One of the great opportunities now in cancer research is to find molecules in tumor cells that are driving their growth and target them directly with drugs or other treatments," he said. "As more of these molecular targets are identified, computational biology can play a key role in defining their precise chemical structure, critical information in designing compounds that can reliably hit these targets."

Supercomputers are broadly defined as the most technologically advanced, or high performance, computers in existence at any time. Though computational speed is one major asset in supercomputing, scientists say that supercomputers also must be technologically mature and reliable in generating useful data. "Supercomputing is still in its infancy," said Maizel. "But the field is so fluid that the computer power at our disposal continues to grow exponentially every few years."

For biologists, supercomputing studies can generate a resolution of detail that is almost impossible to obtain from laboratory work. Current supercomputers produce models in a relatively brief time predicting the complete chemical structure of various regions of a human protein all the way down to fine electronic detail. These calculations, in turn, can be used to predict the folding patterns of the protein, now a major area of research interest, and how these structures move or interact with other proteins and drugs.

Though several supercomputing centers currently are in operation in the United States, Stan Burt, Ph.D., ABCC director, said the Frederick facility continues to fill a unique niche. "The ABCC remains the only supercomputing center available to the public and dedicated solely to biological research," he said. "It's also unique in that the center employs a staff of trained computational scientists who can assist in problem solving and formulating computations. Requests here do not go into a processing vacuum."

Among its past accomplishments, the ABCC played a critical role in solving the 3-D structure of HIV-1 protease, an enzyme that HIV utilizes to infect human immune cells. With the 3-D structure clarified, scientists were able to design highly effective protease inhibitors, now the mainstay of AIDS therapy.

Burt said that with the new Cray SV1, the prospects for future computational successes only will be enhanced. "The Cray SV1 represents a significant resource for the entire biological

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research community," said Burt. "It is a powerful machine with lots of memory, and users will find it to be a valuable tool in sorting out the functions of the genes and proteins involved in their diseases of interest."

Other SGI systems that also will be available in Frederick are an SGI Origin™2000 and two Cray J90™ supercomputers, and a PowerChallenge™ system. Further details can be found at <http://www.abcc> or <http://ncifcrf.gov>.

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SGI is a registered trademark, and the SGI logo, Origin2000 and PowerChallenge are trademarks, of Silicon Graphics, Inc. Cray is a registered trademark, and Cray SV1 and Cray J90 are trademarks, of Cray Research, L.L.C., a wholly owned subsidiary of Silicon Graphics, Inc. All other trademarks are the property of their respective owners.

For more information about cancer visit NCI's Web site for patients, public, and the mass media at <http://www.nci.nih.gov>.

CANCER FACTS

National Cancer Institute • National Institutes of Health

TRICARE Beneficiaries Can Enter Clinical Trials for Cancer Prevention and Treatment Through Department of Defense and National Cancer Institute Agreement

An interagency agreement between the Department of Defense (DoD) and the National Cancer Institute (NCI) gives TRICARE* beneficiaries more options for cancer care and greater access to the latest advances in cancer prevention (including screening and early detection) and treatment through clinical trials. Known as the DoD/NCI Cancer Clinical Trials Demonstration Project, this agreement was signed in June 1999. It represents the first time that a national health plan has agreed to provide coverage for patients to participate in cancer prevention trials.

The DoD/NCI clinical trials agreement allows cancer patients who are beneficiaries of TRICARE, the medical program of the DoD, to participate in phase II and phase III NCI-sponsored cancer prevention and treatment clinical trials and have the associated medical costs reimbursed. Before the 1999 agreement, DoD regulations only allowed TRICARE beneficiaries access to cancer treatment clinical trials through a pilot initiative known as the DoD/NCI Cancer Treatment Clinical Trials Demonstration Project, which was signed in 1996.

*TRICARE provides medical coverage for active duty members, qualified family members, CHAMPUS-eligible retirees and their family members, and survivors of all uniformed service members.

Cancer Research • Because Lives Depend On It

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Page 1

Sue Bailey, M.D., Assistant Secretary of Defense (Health Affairs), stated, "For some TRICARE beneficiaries with an increased risk of developing cancer, the expanded DoD/NCI Cancer Clinical Trials Demonstration Project offers new choices to minimize chances of developing cancer. Our beneficiaries will have the chance to take part in the evaluation of emerging new strategies that have significant promise for the prevention, early detection, and successful treatment of cancers, without the added worry of related costs."

Richard Klausner, M.D., NCI's director, praised DoD for its "foresight, sense of responsibility, and clear concern for the best care of its community. The willingness of DoD to join us in this partnership is an important statement of its commitment to progress against cancer."

The DoD/NCI clinical trials agreement gives TRICARE beneficiaries the option to enter NCI-sponsored phase II and phase III cancer prevention (including screening and early detection) and treatment clinical trials. Phase II clinical trials provide preliminary information about the anticancer effects of drugs or prevention agents; phase III clinical trials compare promising new cancer treatments or prevention strategies against standard care.

During a cancer clinical trial, patients are cared for in the same facilities where standard care is provided. These facilities include more than 2,000 sites throughout the United States, including military hospitals, clinics, cancer centers, community hospitals, and doctors' offices. Costs for screening tests to determine clinical trial eligibility, and the associated costs of participation in cancer clinical trials are covered for qualified TRICARE members. Family members of active duty personnel, as well as TRICARE-eligible retired service members and their families, may participate in trials at military treatment facilities or in civilian health care

settings. Active duty members can participate in NCI-sponsored clinical trials at military treatment facilities.

DoD's primary medical mission is to provide medical services and support to the Armed Forces during military operations, but DoD also offers health services during peacetime to members of the Armed Forces, their family members, and others entitled to DoD medical care. The DoD administers health benefits to about 8.3 million beneficiaries through its direct care system at military hospitals and clinics, as well as care purchased from civilian providers who are reimbursed by DoD.

About 20,000 cancer patients enroll in NCI treatment clinical trials each year. But the increasing use of managed care plans, which often limit coverage for experimental therapies, could jeopardize the access of patients to promising new approaches available in clinical trials and compromise the progress of cancer treatment research. The agreement with DoD "will move us in the direction of ensuring that trials will enroll enough patients to answer vital research questions about cancer," Dr. Klausner said.

NCI and DoD staff will evaluate the success of the demonstration project, looking specifically at actual patient enrollment and cost of care. DoD hypothesizes that the increased access to innovative cancer therapies will cost it about the same amount as it now spends on conventional care. Dr. Klausner said, "This agreement will become a model for providing access to the best available health care for people, while ensuring that cancer research can continue to make progress."

Questions and Answers About the DoD/NCI Clinical Trials Agreement

1. What are clinical trials?

Clinical trials are research studies conducted with people to find better ways to prevent, detect, diagnose, and treat cancer. The DoD/NCI clinical trials agreement allows TRICARE beneficiaries to participate in NCI-sponsored phase II and phase III cancer prevention and treatment trials. Under this agreement, cancer prevention clinical trials will include not only studies designed to prevent cancer but also studies to screen for cancer and to find cancer in its early stages.

2. What happens in phase II and phase III cancer prevention clinical trials covered under this agreement?

- A phase II cancer prevention trial focuses on learning whether the agent being studied (medicine, vitamin, mineral, food supplement, or a combination of these) has an effect on preventing a particular type of cancer. It may also involve the use of cancer screening tests or evaluation of a method to better detect a cancer.
- A phase III cancer prevention trial compares promising new agents with a standard agent or a placebo (an inactive substance that looks the same as, and is administered in the same way as, a drug in a clinical trial). Some phase III trials evaluate cancer screening tests to see if they can decrease the cancer death rate.

3. What happens in phase II and phase III cancer treatment clinical trials?

- A phase II cancer treatment trial usually focuses on a particular type of cancer and provides preliminary information on the anticancer effect of a new drug or therapy.
- A phase III cancer treatment trial compares a promising new treatment with standard treatment.

4. Why participate in a cancer prevention clinical trial?

Cancer prevention clinical trials are conducted with healthy people who have not previously had cancer. Prevention trials are also conducted with people who have had cancer and are trying to reduce the chance of either developing a new type of cancer or preventing a reappearance of cancer (recurrence). Prevention clinical trials are

important because through research, scientists hope to determine what steps are effective in preventing cancer or finding cancer early.

There are two kinds of cancer prevention clinical trials. *Action studies* (doing something) focus on finding out whether actions people take, such as exercising more or quitting smoking, can prevent cancer. *Agent studies* (taking something) focus on examining whether taking certain medicines, vitamins, minerals, or food supplements (or a combination of them) can prevent cancer.

5. **Why participate in a cancer treatment clinical trial?**

Patients take part in cancer treatment clinical trials in hopes for a cure of disease, a longer time to live, or a way to feel better. Often, they feel that taking part in clinical trials benefits others by improving future cancer treatment options. Many clinical trial participants may be the first to receive new treatments before they are widely available. No cancer patient goes without treatment or receives a placebo (inactive substance) when there is a standard cancer therapy available. Cancer treatment studies lead to advances in cancer treatment, which may become the future standard care.

6. **Where do patients receive care?**

When participating in a DoD/NCI clinical trial, patients are closely monitored and cared for in the same facilities where standard care is provided. These facilities include more than 2,000 sites throughout the United States, such as military hospitals, clinics, cancer centers, community hospitals, and doctors' offices.

7. **Who is eligible to participate in the DoD/NCI clinical trials agreement?**

TRICARE beneficiaries, including retired service members and their families, and family members of active duty personnel are eligible. Medical care costs are covered when participating in both phase II and phase III NCI-sponsored clinical trials in civilian health care facilities and in military treatment facilities. Active duty members can participate in clinical trials at military treatment facilities.

8. **What is covered?**

Costs for screening tests to determine clinical trial eligibility, as well as the related costs of participating in the trial, are covered under this demonstration project. All usual TRICARE rules, cost shares, and deductibles apply, and eligible patients may receive care out of the TRICARE network. Call the DoD cancer trials demonstration coordinator at 1-800-779-3060 to learn more about this benefit or contact your health benefits advisor.

9. How can you learn more?

Patients and providers can learn more about patient participation in the DoD/NCI clinical trials demonstration project through the many resources listed below.

- **Over the phone:** Call the NCI's Cancer Information Service (CIS) at 1-800-4-CANCER (1-800-422-6237). Monday through Friday, 9:00 a.m. to 4:30 p.m., local time. The CIS is a national information and education network that provides up-to-date cancer information to patients, their families, health professionals, and the general public. The CIS responds to calls in English and Spanish. Deaf and hard of hearing callers may use the toll-free TTY number at 1-800-332-8615. CIS information specialists have access to PDQ®, NCI's comprehensive computer database of cancer information, and can share information from PDQ about clinical trials covered by the demonstration project.

You may also call the DoD cancer trials demonstration project coordinator at 1-800-779-3060. Patients and health care providers can call for more information about using and authorizing this benefit, or they may contact a case manager. Pre-authorization is only required when patients are treated in a clinical trial outside of a military treatment facility.

- **On the Internet:** The NCI has many online resources to help you locate cancer clinical trials and cancer information.

The NCI's cancerTrials™ (<http://cancertrials.nci.nih.gov>) Web site provides the latest news in cancer research and general information about clinical trials, including understanding clinical trials. You may access PDQ from this site to search for phase II and phase III cancer prevention and treatment trials covered by the DoD/NCI demonstration agreement.

CancerNet™ (<http://cancernet.nci.nih.gov>) provides up-to-date prevention, screening, treatment, and supportive care information for all types of cancer. Access to PDQ is also available from this Web site.

The DoD/NCI interagency agreement for cancer prevention and treatment clinical trials is available at <http://www.tricare.osd.mil/cancertrials/> on the Internet.

- **PDQ/CANCERLIT® Service Center:** Health care professionals without Internet access may contact NCI's PDQ/CANCERLIT Service Center via e-mail at pdqsearch@icic.nci.nih.gov, or by telephone at 1-800-345-3300. Providing a detailed medical history will help the Service Center staff customize a clinical trials search for the patient; the searches are completed in one business day.

Patients: Talk to your doctor and discuss your choices in cancer care. Use these resources to help guide your discussion with your doctor about participating in a clinical trial.

Providers: Use these resources to help locate NCI-sponsored cancer prevention and treatment clinical trials for your patients and obtain authorization for their medical care costs.

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Sources of National Cancer Institute Information

Cancer Information Service

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

NCI Online

Internet

Use <http://www.nci.nih.gov> to reach NCI's Web site.

CancerMail Service

To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word "help" in the body of the message.

CancerFax® fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

This fact sheet was reviewed on 7/21/99



F A C S I M I L E

DATE: 8/4

TO: Sarah Branchi

FAX#: 456 5551

FROM: Elizabeth Summy
Deputy Chief of Staff

Phone: 202/690-7431 Fax: 202/401-5783

COMMENTS:

Cancer material - options discussed
for Armstrong event

MR. Paul VanNavel (301) 496 6631
should be back around 3:30

Millie
H

2 Pages [including this cover]

Bob Kuska (301) 402-4917

Possible Cancer Announcements on August 10

1) Two years ago this month, Vice President Gore launched the National Cancer Institute's Cancer Genome Anatomy Project (CGAP) to compile the first comprehensive index of genes involved in human cancer. Now, on its second anniversary, CGAP's Tumor Gene Index initiative (TGI) has already discovered 30,000 new human genes, making it the leading source of new gene discovery in the world today. In addition, TGI has catalogued more than 66,000 genes, both new and previously identified. More than 40,000 of these are active in one or more cancers. See Attachment One: a draft press release.

2) In 1998 the U.S. Postal Service issued a breast cancer stamp — called a semipostal — that earmarks a portion of its sales to breast cancer research. Of that portion, 70% goes to the National Cancer Institute and 30% to the Department of Defense. The USPS announced July 28 that more than 100 million of the stamps had been sold, generating over \$7.6 million for research, of which over \$5.3 million will be provided to NCI. So far, the institute has received \$4.15 million. Today, it is announced that the NCI is creating "Insight Awards to Stamp Out Breast Cancer," a program that will award funds generated by the breast cancer stamp to support innovative pilot studies that seek to gain new understanding of breast cancer. Each of the two-year grants will receive a maximum of \$75,000. The \$4 million already received by NCI will fund 20 to 25 grants. See Attachment Two: a press release from the U.S. Postal Service, providing background information.

3) There are now an estimated 8.4 million cancer survivors in the United States. See Attachments Three: Estimated U.S. Cancer Prevalence, 1999, for all cancer sites combined and for 22 major individual cancer sites. See Attachment 4: a new NCI fact sheet on Cancer Survivorship.

4) NCI has just leased a new supercomputer whose use is expected to play a key role in translating recent advances in gene discovery into new, more targeted cancer treatments. This was announced this week, but has gotten little attention outside of the trade press. See Attachment Five: NCI Update — NCI Leases New Supercomputer.

5) An interagency agreement between NCI and the Department of Defense now gives TRICARE beneficiaries more options for cancer care and greater access to the latest advances in cancer treatment and prevention (including screening and early detection) through clinical trials. See Attachment Six: NCI Cancer Facts — TRICARE Beneficiaries Can Enter Clinical Trials for Cancer Prevention and Treatment.

ask Paul what this means.

add new facts

DDO sent out a press Release
 Mary Ann Coates
 Marianne (703) 681-1698

Attachment One

NCI'S TUMOR GENE INDEX REACHES ITS TWO-YEAR MARK

Two years ago this month, the National Cancer Institute publically launched a historic initiative to compile the first comprehensive record, or index, of genes involved in human cancer. The project promised to lay the groundwork for scientists to define tumors based on their unique molecular features, information that could revolutionize the diagnosis and treatment of cancer.

Today, the NCI announced that the initiative, known as the Tumor Gene Index (TGI), is living up to its promise. According to Robert Strausberg, Ph.D., an NCI scientist who oversees the project, TGI already has discovered nearly 30,000 new human genes, making it the leading source of new gene discovery in the world today. Human DNA contains an estimated 100,000 genes, of which over 73,000 have been discovered.

Strausberg said TGI has catalogued over 66,400 genes in its first two years, both new and previously identified genes. In total, over 40,500 of them are active, directly or indirectly, in one or more cancers. Some of the 44 tissues that have been studied to date include:

- ▶ (Prostate: About 13,000 genes have been found to be expressed in the prostate.) Of these, 4,141 are active in cancer and 1,089 have not been seen in other tissues.
- ▶ (Breast: Over 5,500 genes have been identified in the breast.) Of these, 5,327 are active in cancer and 221 genes have never been seen in other tissues.
- ▶ (Colon: More than 11,800 genes have been identified in the colon.) Of these, over 11,783 are active in cancer and 892 have never been seen in other tissues.

- ▶ Lung: Over 15,500 genes have been located in the lung. Of these, 12,488 are active in cancer and 1,468 have not been found elsewhere in the body.
- ▶ Brain: Over 13,900 genes have been discovered in the brain. Of these, 10,781 are active in cancer and over 1,524 genes have not been identified in other parts of the body.

"The Tumor Gene Index is still far from complete," said Richard Klausner, M.D., NCI director. "But already, it is difficult to think of another project that in such a short period of time has generated so much useful, publically available data to benefit cancer research and ultimately people with cancer."

TGI is the first in a series of initiatives under NCI's Cancer Genome Anatomy Project (CGAP), a program to develop publically available databases and technologies that assist scientists in deciphering the molecular anatomy of the cancer cell. "Just as anatomists have defined the human body, CGAP seeks to define for the first time the molecules that are present in cancer cells and make them accessible to scientists," said Strausberg.

The project builds on the understanding that genes encode the instructions to produce proteins, which comprise the bulk of a cell's molecular anatomy. By measuring the expression patterns of genes in tumor cells, scientists can generate a roll call of which proteins are produced and at which levels.

But TGI added another important element. For each tissue that the project planned to study, it would record gene expression levels in normal, precancerous, and cancer cells. Strausberg said that by monitoring various distinct cell types in any given tissue, the project would have multiple points of comparison to track the changes in gene expression over time that drive tumor development.

To create the index, Strausberg said the project initially turned to the tried-and-true

strategy of creating cDNA libraries. cDNAs are snippets of DNA that scientists synthesize from gene transcripts, or copies of expressed genes, that are present en masse within the cell nucleus. By creating cDNAs from the transcripts and arranging them into ordered clone libraries, scientists can track which of the genome's estimated 100,000 genes are active in a given cell.

As reported today, TGI already has produced a total 142 cDNA libraries. Of these libraries, 38 are created from normal cells, 11 originated from precancerous cells, and 91 are produced from cancer cells.

TGI also has submitted over 650,000 gene transcripts to EST databases, online storehouses of known gene transcripts, over the last two years. This makes the project the leading contributor to EST databases in the world today, accounting for just over half of all recorded gene transcripts. Strausberg said TGI would likely top the million mark in the next year.

Strausberg also stressed that TGI has made major push to develop strong informatic tools on the CGAP website to assist scientists with their studies. These include its Tumor Suppressor and Oncogene directory, a variety of gene expression tools, such as "Differential Digital Display," an online tool to compare computed gene expression, and links to other biology websites.

"The TGI website has been designed not only to list gene names, but to display these names in the context of tumor biology," said Strausberg. "These added, valuable informatic tools provide an integrated package for accessing data and performing cancer experiments."

Strausberg said TGI will continue to build its gene expression index, including the generation of cDNA libraries from strains of mice commonly used in cancer research. In the meantime, NCI has begun soliciting applications from scientists to develop viable strategies and

technologies to apply information in the TGI database toward a molecular classification of tumors. "This initiative would mark a giant step forward in our understanding of the molecular causes of cancer," said Klausner. "But, more importantly, it will lead to improved strategies for cancer prevention, early detection, diagnosis, and ultimately treatment."

TGI is a partnership among NCI, academic centers, and private companies. Some these partners include NIH's National Institute of Dental and Craniofacial Research, the National Institute of Neurological Disorders and Stroke, and the National Institute of Allergy and Infectious Diseases; National Center for Biotechnology Information; Lawrence Livermore National Laboratory; Washington University Genome Sequencing Center; the University of Iowa Hospitals and Clinics Department of Pediatrics; Bristol-Myers Squibb; Genentech; Glaxo Wellcome; and Merck & Co.

The CGAP website can be accessed at <http://www.ncbi.nlm.nih.gov/CGAP/>

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Attachment Two

1ST STORY of Level 1 printed in FULL format.

Copyright 1999 Business Wire, Inc.
Business Wire

July 28, 1999, Wednesday

DISTRIBUTION: City Desks & News Editors/Health & Medical Writers

LENGTH: 506 words

HEADLINE: Breast Cancer Research Stamp Celebrates First Anniversary Thursday,
July 29; California Sales are No. 1 in Money Raised for Research

DATeline: SAN FRANCISCO

BODY:

ly 28, 1999--The Breast Cancer Research stamp -- the nation's first postage stamp that earmarks a portion of its sales to a charitable cause -- celebrates its first anniversary Thursday, July 29, 1999.

And, California remains the nationwide leader in sale of the stamp and in money raised for breast cancer research.

As of Monday, July 26, exactly 101,494,086 Breast Cancer Research stamps had been sold nationwide, generating \$ 7,696,517 to research. Of that volume, 22,386,100 -- or 22 percent -- of the stamps were sold in California, generating \$ 1,688,426 to research.

Of the 85 Postal districts across the country, five of the top ten in Breast Cancer Research stamp sales are located in California, with Sacramento, San Francisco and Oakland holding first, second and third places, respectively, ahead of Seattle and New York City. Santa Ana district scored sixth in the nation, ahead of Washington DC, Denver and Atlanta. San Diego district rounded out the top ten.

"I am gratified that Californians are showing such strong support for the Breast Cancer Research stamp and that our postal employees have been so effective in informing their family, friends and customers about the importance of this stamp and its availability," said Postal Service Pacific Area vice-president Jesse Durazo. The stamp will be available at all post offices until July 2000.

It was at a White House ceremony exactly one year ago, July 29, 1998, that First Lady Hillary Rodham Clinton dedicated the Breast Cancer Research "semipostal" stamp -- the first stamp in U.S. history to have its net proceeds above the cost of postage earmarked for research.

The Breast Cancer Research stamp costs 40 cents and is valid for First-Class letter rate postage. Seventy percent of net proceeds above the cost of postage is given to the National Institutes of Health (NIH), and 30 percent of net proceeds above the cost of postage is given to the Medical Research Program of the Department of Defense (DoD). The NIH and DoD were identified as recipients of the funds by legislation enacted in 1997.

Business Wire, July 28, 1999

Breast cancer is considered the most commonly diagnosed cancer among women in every major ethnic group in the U.S. Experts say when breast cancer is diagnosed early (stages I and II), five year survival rates are nearly 95 percent, and offer better options for breast conserving surgery.

For six decades, USPS has issued new stamps to help raise awareness for a variety of health and social issues including drug abuse, AIDS awareness, environmental protection and conservation. For more information about the Breast Cancer Research stamp, visit the Postal Service's Web site at <http://www.usps.com> and click "Stamps."

CONTACT: U.S. Postal Service

Dan De Miglio or Alan Wald, 415/536-6490

Today's News On The Net - Business Wire's full file on the Internet with Hyperlinks to your home page.

URL: <http://www.businesswire.com>

LANGUAGE: ENGLISH

LOAD-DATE: July 29, 1999

Attachment Three

Table I-19

ESTIMATED UNITED STATES CANCER PREVALENCE, 1999

All Races, By Sex

Primary Site	Estimated Prevalence		
	Total	Males	Females
All Sites	8,368,000	3,465,000	4,903,000
Brain and Other Nervous System	91,000	49,000	42,000
Breast	2,057,000	13,000	2,044,000
Cervix Uteri	211,000	0	211,000
Colon	877,000	408,000	469,000
Corpus Uteri	550,000	0	550,000
Hodgkin's Disease	158,000	84,000	74,000
Kidney and Renal Pelvis	204,000	123,000	81,000
Larynx	132,000	106,000	26,000
Leukemias	144,000	80,000	64,000
Lung and Bronchus	397,000	212,000	185,000
Melanomas of Skin	484,000	234,000	250,000
Non-Hodgkin's Lymphoma	300,000	150,000	150,000
Oral Cavity and Pharynx	214,000	134,000	80,000
Ovary	191,000	0	191,000
Pancreas	25,000	12,000	13,000
Prostate	1,017,000	1,017,000	0
Rectum	379,000	202,000	177,000
Stomach	77,000	42,000	35,000
Testis	130,000	130,000	0
Thyroid	214,000	53,000	161,000
Urinary Bladder	601,000	443,000	158,000
Childhood (0-14 yrs)	154,000	78,000	76,000

Survivors
New #

Source:

U.S. 1999 cancer prevalence rates are based on 1994 cancer prevalence rates from the Connecticut registry of the SEER program and 1999 population estimates from the U.S. Bureau of the Census. Connecticut prevalence rates are based on 1940-1993 cancer incidence and survival rates.

Attachment Four



Cancer Research

BECAUSE LIVES DEPEND ON IT

For Response to Inquiries

National Institutes of Health

July 1999

NCI Press Office
(301) 496-6641

Cancer Survivorship

Cancer, once considered incurable, is no longer a certain death sentence. Since the 1971 National Cancer Act, much of the research into early cancer detection and treatment has paid off. Mortality rates for most major cancers are declining, and today more people survive cancer than ever before. In fact, over 8 million Americans — nearly one in 30 — are living with a history of cancer.

Recent survivorship milestones:

- The five-year survival rate for children with cancer improved from 65 percent in the early 1980s to 74 percent in the early 1990s. //V
- The five-year survival rate for all cancers improved from 51 percent in the early 1980s to almost 60 percent in the early 1990s. //V
- 2 million women are breast cancer survivors.
- 1 million men are prostate cancer survivors.

However, surviving cancer can leave a host of problems in its wake. Physical, emotional, and financial hardships often persist for years after initial diagnosis and treatment. Many survivors suffer decreased quality of life following successful treatment, leading one cancer activist and survivor to say, "Surviving is not just about a cure, but about living the rest of our lives."

Long-term problems, many unique to cancer survivors, include:

- **Physical effects** — Physical problems can stem from the cancer itself or from treatments patients undergo. For instance, surgery to remove a tumor may also impair nearby

(more)

organs. Likewise, radiation therapy can damage surrounding tissue and cause hormonal changes. Chemotherapy can be toxic to the heart, liver, lungs, nervous system, and other organs. Persistent fatigue and pain are also common among cancer survivors. In addition, childhood cancer survivors often suffer impaired growth and development.

- **Sexual effects** — Sexual problems are a common consequence of cancer treatment, cited by as many as 50 percent of women surviving breast and gynecologic cancers and as many as 70 percent of men surviving prostate cancer. Loss of desire, pain during sex, erectile dysfunction, premature menopause, and infertility have all been reported by cancer survivors.
- **Psychosocial effects** — Coping with cancer can strain relationships and trigger maladies such as depression, post-traumatic stress disorder, and profound fear of recurrence. In addition, a diagnosis of cancer can cause social stigmatization. These problems can interfere with daily living as much or more than physical side effects.
- **Economic effects** — Acute and long-term medical expenses, and lost wages and lost jobs can all leave cancer survivors deep in debt, increasing worry, and decreasing quality of life.
- **Second cancers** — Of the 1.4 million new cancers diagnosed each year, almost 100,000 are second cancers. Patients surviving one cancer have almost twice the risk of developing a second cancer as the general population has of developing a first. Children under age 15 who have survived cancer have eight times the risk. The reasons for this are unclear, although genetic susceptibility and the effects of chemotherapy and radiation treatments are likely important factors.

Unfortunately, many of these long-term effects — and how they impact survivors — are poorly understood. In 1996, the National Cancer Institute (NCI) formally recognized the need to better understand the issues cancer survivors face by establishing the Office of Cancer Survivorship (OCS). OCS awarded its first research grants in 1997, totaling \$4 million over two years. In 1998, OCS awarded another \$15 million over five years. Altogether, NCI supports \$20 million per year in survivorship research, much of it begun before the creation of OCS.

The primary goal of OCS, to improve the quality of life of cancer survivors, is served by a range of initiatives. Expanding research into cancer survivorship issues is the first step. OCS has placed a priority on funding research on long-term survivors — those alive five or more years after diagnosis. OCS is dedicated to developing the infrastructure — such as databases and researcher networks — that supports the follow-up needed to study long-term survivors. OCS also supports programs to educate patients, physicians, and the public about cancer survivorship. Finally, much of the research supported by OCS is aimed at interventions that can lessen the burden of cancer survivors.

(more)

As more becomes known about the long-term effects of specific treatments, clinicians — and their patients — will better understand the consequences of such treatments. They will also be better equipped to face those consequences.

Examples of OCS-funded research:

- Quality of life in prostate cancer survivors.
- Studying complications in breast cancer survivors.
- Cardiac risk factors in pediatric cancer survivors.
- Enhancing long-term survival after bone marrow transplant.
- Second cancers following childhood cancer: Possible interaction between genetic predisposition and cancer.

###

For more information about cancer visit NCI's Web site for patients, public, and the mass media at <http://www.nci.nih.gov>.

Klausner said supercomputing will likely play a key role in translating recent advances in gene discovery into new, more targeted cancer treatments. "One of the great opportunities now in cancer research is to find molecules in tumor cells that are driving their growth and target them directly with drugs or other treatments," he said. "As more of these molecular targets are identified, computational biology can play a key role in defining their precise chemical structure, critical information in designing compounds that can reliably hit these targets."

Supercomputers are broadly defined as the most technologically advanced, or high performance, computers in existence at any time. Though computational speed is one major asset in supercomputing, scientists say that supercomputers also must be technologically mature and reliable in generating useful data. "Supercomputing is still in its infancy," said Maizel. "But the field is so fluid that the computer power at our disposal continues to grow exponentially every few years."

For biologists, supercomputing studies can generate a resolution of detail that is almost impossible to obtain from laboratory work. Current supercomputers produce models in a relatively brief time predicting the complete chemical structure of various regions of a human protein all the way down to fine electronic detail. These calculations, in turn, can be used to predict the folding patterns of the protein, now a major area of research interest, and how these structures move or interact with other proteins and drugs.

Though several supercomputing centers currently are in operation in the United States, Stan Burt, Ph.D., ABCC director, said the Frederick facility continues to fill a unique niche. "The ABCC remains the only supercomputing center available to the public and dedicated solely to biological research," he said. "It's also unique in that the center employs a staff of trained computational scientists who can assist in problem solving and formulating computations. Requests here do not go into a processing vacuum."

Among its past accomplishments, the ABCC played a critical role in solving the 3-D structure of HIV-1 protease, an enzyme that HIV utilizes to infect human immune cells. With the 3-D structure clarified, scientists were able to design highly effective protease inhibitors, now the mainstay of AIDS therapy.

Burt said that with the new Cray SV1, the prospects for future computational successes only will be enhanced. "The Cray SV1 represents a significant resource for the entire biological

(more)

research community," said Burt. "It is a powerful machine with lots of memory, and users will find it to be a valuable tool in sorting out the functions of the genes and proteins involved in their diseases of interest."

Other SGI systems that also will be available in Frederick are an SGI Origin™2000 and two Cray J90™ supercomputers, and a PowerChallenge™ system. Further details can be found at <http://www.abcc.> or <http://ncifcrf.gov>.

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SGI is a registered trademark, and the SGI logo, Origin2000 and PowerChallenge are trademarks, of Silicon Graphics, Inc. Cray is a registered trademark, and Cray SV1 and Cray J90 are trademarks, of Cray Research, L.L.C., a wholly owned subsidiary of Silicon Graphics, Inc. All other trademarks are the property of their respective owners.

For more information about cancer visit NCI's Web site for patients, public, and the mass media at <http://www.nci.nih.gov>.

CANCER FACTS

National Cancer Institute • National Institutes of Health

TRICARE Beneficiaries Can Enter Clinical Trials for Cancer Prevention and Treatment Through Department of Defense and National Cancer Institute Agreement

An interagency agreement between the Department of Defense (DoD) and the National Cancer Institute (NCI) gives TRICARE* beneficiaries more options for cancer care and greater access to the latest advances in cancer prevention (including screening and early detection) and treatment through clinical trials. Known as the DoD/NCI Cancer Clinical Trials Demonstration Project, this agreement was signed in June 1999. It represents the first time that a national health plan has agreed to provide coverage for patients to participate in cancer prevention trials.

what it does

The DoD/NCI clinical trials agreement allows cancer patients who are beneficiaries of TRICARE, the medical program of the DoD, to participate in phase II and phase III NCI-sponsored cancer prevention and treatment clinical trials and have the associated medical costs reimbursed. Before the 1999 agreement, DoD regulations only allowed TRICARE beneficiaries access to cancer treatment clinical trials through a pilot initiative known as the DoD/NCI Cancer Treatment Clinical Trials Demonstration Project, which was signed in 1996.

*TRICARE provides medical coverage for active duty members, qualified family members, CHAMPUS-eligible retirees and their family members, and survivors of all uniformed service members.

Cancer Research • Because Lives Depend On It

1.13
7/21/99
Page 1

Sue Bailey, M.D., Assistant Secretary of Defense (Health Affairs), stated, "For some TRICARE beneficiaries with an increased risk of developing cancer, the expanded DoD/NCI Cancer Clinical Trials Demonstration Project offers new choices to minimize chances of developing cancer. Our beneficiaries will have the chance to take part in the evaluation of emerging new strategies that have significant promise for the prevention, early detection, and successful treatment of cancers, without the added worry of related costs."

Richard Klausner, M.D., NCI's director, praised DoD for its "foresight, sense of responsibility, and clear concern for the best care of its community. The willingness of DoD to join us in this partnership is an important statement of its commitment to progress against cancer."

The DoD/NCI clinical trials agreement gives TRICARE beneficiaries the option to enter NCI-sponsored phase II and phase III cancer prevention (including screening and early detection) and treatment clinical trials. Phase II clinical trials provide preliminary information about the anticancer effects of drugs or prevention agents; phase III clinical trials compare promising new cancer treatments or prevention strategies against standard care.

During a cancer clinical trial, patients are cared for in the same facilities where standard care is provided. These facilities include more than 2,000 sites throughout the United States, including military hospitals, clinics, cancer centers, community hospitals, and doctors' offices. Costs for screening tests to determine clinical trial eligibility, and the associated costs of participation in cancer clinical trials are covered for qualified TRICARE members. Family members of active duty personnel, as well as TRICARE-eligible retired service members and their families, may participate in trials at military treatment facilities or in civilian health care

settings. Active duty members can participate in NCI-sponsored clinical trials at military treatment facilities.

DoD's primary medical mission is to provide medical services and support to the Armed Forces during military operations, but DoD also offers health services during peacetime to members of the Armed Forces, their family members, and others entitled to DoD medical care. The DoD administers health benefits to about 8.3 million beneficiaries through its direct care system at military hospitals and clinics, as well as care purchased from civilian providers who are reimbursed by DoD.

About 20,000 cancer patients enroll in NCI treatment clinical trials each year. But the increasing use of managed care plans, which often limit coverage for experimental therapies, could jeopardize the access of patients to promising new approaches available in clinical trials and compromise the progress of cancer treatment research. The agreement with DoD "will move us in the direction of ensuring that trials will enroll enough patients to answer vital research questions about cancer," Dr. Klausner said.

NCI and DoD staff will evaluate the success of the demonstration project, looking specifically at actual patient enrollment and cost of care. DoD hypothesizes that the increased access to innovative cancer therapies will cost it about the same amount as it now spends on conventional care. Dr. Klausner said, "This agreement will become a model for providing access to the best available health care for people, while ensuring that cancer research can continue to make progress."

Questions and Answers About the DoD/NCI Clinical Trials Agreement

1. What are clinical trials?

Clinical trials are research studies conducted with people to find better ways to prevent, detect, diagnose, and treat cancer. The DoD/NCI clinical trials agreement allows TRICARE beneficiaries to participate in NCI-sponsored phase II and phase III cancer prevention and treatment trials. Under this agreement, cancer prevention clinical trials will include not only studies designed to prevent cancer but also studies to screen for cancer and to find cancer in its early stages.

2. What happens in phase II and phase III cancer prevention clinical trials covered under this agreement?

- A phase II cancer prevention trial focuses on learning whether the agent being studied (medicine, vitamin, mineral, food supplement, or a combination of these) has an effect on preventing a particular type of cancer. It may also involve the use of cancer screening tests or evaluation of a method to better detect a cancer.
- A phase III cancer prevention trial compares promising new agents with a standard agent or a placebo (an inactive substance that looks the same as, and is administered in the same way as, a drug in a clinical trial). Some phase III trials evaluate cancer screening tests to see if they can decrease the cancer death rate.

3. What happens in phase II and phase III cancer treatment clinical trials?

- A phase II cancer treatment trial usually focuses on a particular type of cancer and provides preliminary information on the anticancer effect of a new drug or therapy.
- A phase III cancer treatment trial compares a promising new treatment with standard treatment.

4. Why participate in a cancer prevention clinical trial?

Cancer prevention clinical trials are conducted with healthy people who have not previously had cancer. Prevention trials are also conducted with people who have had cancer and are trying to reduce the chance of either developing a new type of cancer or preventing a reappearance of cancer (recurrence). Prevention clinical trials are

important because through research, scientists hope to determine what steps are effective in preventing cancer or finding cancer early.

There are two kinds of cancer prevention clinical trials. *Action studies* (doing something) focus on finding out whether actions people take, such as exercising more or quitting smoking, can prevent cancer. *Agent studies* (taking something) focus on examining whether taking certain medicines, vitamins, minerals, or food supplements (or a combination of them) can prevent cancer.

5. Why participate in a cancer treatment clinical trial?

Patients take part in cancer treatment clinical trials in hopes for a cure of disease, a longer time to live, or a way to feel better. Often, they feel that taking part in clinical trials benefits others by improving future cancer treatment options. Many clinical trial participants may be the first to receive new treatments before they are widely available. No cancer patient goes without treatment or receives a placebo (inactive substance) when there is a standard cancer therapy available. Cancer treatment studies lead to advances in cancer treatment, which may become the future standard care.

6. Where do patients receive care?

When participating in a DoD/NCI clinical trial, patients are closely monitored and cared for in the same facilities where standard care is provided. These facilities include more than 2,000 sites throughout the United States, such as military hospitals, clinics, cancer centers, community hospitals, and doctors' offices.

7. Who is eligible to participate in the DoD/NCI clinical trials agreement?

TRICARE beneficiaries, including retired service members and their families, and family members of active duty personnel are eligible. Medical care costs are covered when participating in both phase II and phase III NCI-sponsored clinical trials in civilian health care facilities and in military treatment facilities. Active duty members can participate in clinical trials at military treatment facilities.

8. What is covered?

Costs for screening tests to determine clinical trial eligibility, as well as the related costs of participating in the trial, are covered under this demonstration project. All usual TRICARE rules, cost shares, and deductibles apply, and eligible patients may receive care out of the TRICARE network. Call the DoD cancer trials demonstration coordinator at 1-800-779-3060 to learn more about this benefit or contact your health benefits advisor.

9. How can you learn more?

Patients and providers can learn more about patient participation in the DoD/NCI clinical trials demonstration project through the many resources listed below.

- **Over the phone:** Call the NCI's Cancer Information Service (CIS) at 1-800-4-CANCER (1-800-422-6237). Monday through Friday, 9:00 a.m. to 4:30 p.m., local time. The CIS is a national information and education network that provides up-to-date cancer information to patients, their families, health professionals, and the general public. The CIS responds to calls in English and Spanish. Deaf and hard of hearing callers may use the toll-free TTY number at 1-800-332-8615. CIS information specialists have access to PDQ®, NCI's comprehensive computer database of cancer information, and can share information from PDQ about clinical trials covered by the demonstration project.

You may also call the DoD cancer trials demonstration project coordinator at 1-800-779-3060. Patients and health care providers can call for more information about using and authorizing this benefit, or they may contact a case manager. Pre-authorization is only required when patients are treated in a clinical trial outside of a military treatment facility.

- **On the Internet:** The NCI has many online resources to help you locate cancer clinical trials and cancer information.

The NCI's cancerTrials™ (<http://cancertrials.nci.nih.gov>) Web site provides the latest news in cancer research and general information about clinical trials, including understanding clinical trials. You may access PDQ from this site to search for phase II and phase III cancer prevention and treatment trials covered by the DoD/NCI demonstration agreement.

CancerNet™ (<http://cancernet.nci.nih.gov>) provides up-to-date prevention, screening, treatment, and supportive care information for all types of cancer. Access to PDQ is also available from this Web site.

The DoD/NCI interagency agreement for cancer prevention and treatment clinical trials is available at <http://www.tricare.osd.mil/cancertrials/> on the Internet.

- **PDQ/CANCERLIT® Service Center:** Health care professionals without Internet access may contact NCI's PDQ/CANCERLIT Service Center via e-mail at pdqsearch@icic.nci.nih.gov, or by telephone at 1-800-345-3300. Providing a detailed medical history will help the Service Center staff customize a clinical trials search for the patient; the searches are completed in one business day.

Patients: Talk to your doctor and discuss your choices in cancer care. Use these resources to help guide your discussion with your doctor about participating in a clinical trial.

Providers: Use these resources to help locate NCI-sponsored cancer prevention and treatment clinical trials for your patients and obtain authorization for their medical care costs.

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Sources of National Cancer Institute Information

Cancer Information Service

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

NCI Online

Internet

Use <http://www.nci.nih.gov> to reach NCI's Web site.

CancerMail Service

To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word "help" in the body of the message.

CancerFax® fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

This fact sheet was reviewed on 7/21/99



F A C S I M I L E

DATE: 8/4

TO: Sarah Branchi

FAX#: 456 5551

FROM: Elizabeth Summy
Deputy Chief of Staff

Phone: 202/690-7431 Fax: 202/401-5783

COMMENTS:

Cancer material - options discussed
for Armstrong event

21 Pages [including this cover]

Possible Cancer Announcements on August 10

X 1) Two years ago this month, Vice President Gore launched the National Cancer Institute's Cancer Genome Anatomy Project (CGAP) to compile the first comprehensive index of genes involved in human cancer. Now, on its second anniversary, CGAP's Tumor Gene Index initiative (TGI) has already discovered 30,000 new human genes, making it the leading source of new gene discovery in the world today. In addition, TGI has catalogued more than 66,000 genes, both new and previously identified. More than 40,000 of these are active in one or more cancers. See Attachment One: a draft press release.

X 2) In 1998 the U.S. Postal Service issued a breast cancer stamp — called a semipostal — that earmarks a portion of its sales to breast cancer research. Of that portion, 70% goes to the National Cancer Institute and 30% to the Department of Defense. The USPS announced July 28 that more than 100 million of the stamps had been sold, generating over \$7.6 million for research, of which over \$5.3 million will be provided to NCI. So far, the institute has received \$4.15 million. Today, it is announced that the NCI is creating "Insight Awards to Stamp Out Breast Cancer," a program that will award funds generated by the breast cancer stamp to support innovative pilot studies that seek to gain new understanding of breast cancer. Each of the two-year grants will receive a maximum of \$75,000. The \$4 million already received by NCI will fund 20 to 25 grants. See Attachment Two: a press release from the U.S. Postal Service, providing background information.

3) There are now an estimated 8.4 million cancer survivors in the United States. See Attachments Three: Estimated U. S. Cancer Prevalence, 1999, for all cancer sites combined and for 22 major individual cancer sites. See Attachment 4: a new NCI fact sheet on Cancer Survivorship.

4) NCI has just leased a new supercomputer whose use is expected to play a key role in translating recent advances in gene discovery into new, more targeted cancer treatments. This was announced this week, but has gotten little attention outside of the trade press. See Attachment Five: NCI Update — NCI Leases New Supercomputer.

5) An interagency agreement between NCI and the Department of Defense now gives TRICARE beneficiaries more options for cancer care and greater access to the latest advances in cancer treatment and prevention (including screening and early detection) through clinical trials. See Attachment Six: NCI Cancer Facts — TRICARE Beneficiaries Can Enter Clinical Trials for Cancer Prevention and Treatment.

Attachment One

NCI'S TUMOR GENE INDEX REACHES ITS TWO-YEAR MARK

Two years ago this month, the National Cancer Institute publically launched a historic initiative to compile the first comprehensive record, or index, of genes involved in human cancer. The project promised to lay the groundwork for scientists to define tumors based on their unique molecular features, information that could revolutionize the diagnosis and treatment of cancer.

Today, the NCI announced that the initiative, known as the Tumor Gene Index (TGI), is living up to its promise. According to Robert Strausberg, Ph.D., an NCI scientist who oversees the project, TGI already has discovered nearly 30,000 new human genes, making it the leading source of new gene discovery in the world today. Human DNA contains an estimated 100,000 genes, of which over 73,000 have been discovered.

Strausberg said TGI has catalogued over 66,400 genes in its first two years, both new and previously identified genes. In total, over 40,500 of them are active, directly or indirectly, in one or more cancers. Some of the 44 tissues that have been studied to date include:

- ▶ Prostate: About 13,000 genes have been found to be expressed in the prostate. Of these, 4,141 are active in cancer and 1,089 have not been seen in other tissues.
- ▶ Breast: Over 5,500 genes have been identified in the breast. Of these, 5,327 are active in cancer and 221 genes have never been seen in other tissues.
- ▶ Colon: More than 11,800 genes have been identified in the colon. Of these, over 11,783 are active in cancer and 892 have never been seen in other tissues.

- ▶ Lung: Over 15,500 genes have been located in the lung. Of these, 12,488 are active in cancer and 1,468 have not been found elsewhere in the body.
- ▶ Brain: Over 13,900 genes have been discovered in the brain. Of these, 10,781 are active in cancer and over 1,524 genes have not been identified in other parts of the body.

"The Tumor Gene Index is still far from complete," said Richard Klausner, M.D., NCI director. "But already, it is difficult to think of another project that in such a short period of time has generated so much useful, publically available data to benefit cancer research and ultimately people with cancer."

TGI is the first in a series of initiatives under NCI's Cancer Genome Anatomy Project (CGAP), a program to develop publically available databases and technologies that assist scientists in deciphering the molecular anatomy of the cancer cell. "Just as anatomists have defined the human body, CGAP seeks to define for the first time the molecules that are present in cancer cells and make them accessible to scientists," said Strausberg.

The project builds on the understanding that genes encode the instructions to produce proteins, which comprise the bulk of a cell's molecular anatomy. By measuring the expression patterns of genes in tumor cells, scientists can generate a roll call of which proteins are produced and at which levels.

But TGI added another important element. For each tissue that the project planned to study, it would record gene expression levels in normal, precancerous, and cancer cells. Strausberg said that by monitoring various distinct cell types in any given tissue, the project would have multiple points of comparison to track the changes in gene expression over time that drive tumor development.

To create the index, Strausberg said the project initially turned to the tried-and-true

strategy of creating cDNA libraries. cDNAs are snippets of DNA that scientists synthesize from gene transcripts, or copies of expressed genes, that are present en masse within the cell nucleus. By creating cDNAs from the transcripts and arranging them into ordered clone libraries, scientists can track which of the genome's estimated 100,000 genes are active in a given cell.

As reported today, TGI already has produced a total 142 cDNA libraries. Of these libraries, 38 are created from normal cells, 11 originated from precancerous cells, and 91 are produced from cancer cells.

TGI also has submitted over 650,000 gene transcripts to EST databases, online storehouses of known gene transcripts, over the last two years. This makes the project the leading contributor to EST databases in the world today, accounting for just over half of all recorded gene transcripts. Strausberg said TGI would likely top the million mark in the next year.

Strausberg also stressed that TGI has made major push to develop strong informatic tools on the CGAP website to assist scientists with their studies. These include its Tumor Suppressor and Oncogene directory, a variety of gene expression tools, such as "Differential Digital Display," an online tool to compare computed gene expression, and links to other biology websites.

"The TGI website has been designed not only to list gene names, but to display these names in the context of tumor biology," said Strausberg. "These added, valuable informatic tools provide an integrated package for accessing data and performing cancer experiments."

Strausberg said TGI will continue to build its gene expression index, including the generation of cDNA libraries from strains of mice commonly used in cancer research. In the meantime, NCI has begun soliciting applications from scientists to develop viable strategies and

technologies to apply information in the TGI database toward a molecular classification of tumors. "This initiative would mark a giant step forward in our understanding of the molecular causes of cancer," said Klausner. "But, more importantly, it will lead to improved strategies for cancer prevention, early detection, diagnosis, and ultimately treatment."

TGI is a partnership among NCI, academic centers, and private companies. Some these partners include NIH's National Institute of Dental and Craniofacial Research, the National Institute of Neurological Disorders and Stroke, and the National Institute of Allergy and Infectious Diseases; National Center for Biotechnology Information; Lawrence Livermore National Laboratory; Washington University Genome Sequencing Center; the University of Iowa Hospitals and Clinics Department of Pediatrics; Bristol-Myers Squibb; Genentech; Glaxo Wellcome; and Merck & Co.

The CGAP website can be accessed at <http://www.ncbi.nlm.nih.gov/CGAP/>

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Attachment Two

1ST STORY of Level 1 printed in FULL format.

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Business Wire

July 28, 1999, Wednesday

DISTRIBUTION: City Desks & News Editors/Health & Medical Writers

LENGTH: 506 words

HEADLINE: Breast Cancer Research Stamp Celebrates First Anniversary Thursday, July 29; California Sales are No. 1 in Money Raised for Research

DATELINE: SAN FRANCISCO

BODY:

ly 28, 1999--The Breast Cancer Research stamp -- the nation's first postage stamp that earmarks a portion of its sales to a charitable cause -- celebrates its first anniversary Thursday, July 29, 1999.

And, California remains the nationwide leader in sale of the stamp and in money raised for breast cancer research.

As of Monday, July 26, exactly 101,494,086 Breast Cancer Research stamps had been sold nationwide, generating \$ 7,696,517 to research. Of that volume, 22,386,100 -- or 22 percent -- of the stamps were sold in California, generating \$ 1,688,426 to research.

Of the 85 Postal districts across the country, five of the top ten in Breast Cancer Research stamp sales are located in California, with Sacramento, San Francisco and Oakland holding first, second and third places, respectively, ahead of Seattle and New York City. Santa Ana district scored sixth in the nation, ahead of Washington DC, Denver and Atlanta. San Diego district rounded out the top ten.

"I am gratified that Californians are showing such strong support for the Breast Cancer Research stamp and that our postal employees have been so effective in informing their family, friends and customers about the importance of this stamp and its availability," said Postal Service Pacific Area vice-president Jesse Durazo. The stamp will be available at all post offices until July 2000.

It was at a White House ceremony exactly one year ago, July 29, 1998, that First Lady Hillary Rodham Clinton dedicated the Breast Cancer Research "semipostal" stamp -- the first stamp in U.S. history to have its net proceeds above the cost of postage earmarked for research.

The Breast Cancer Research stamp costs 40 cents and is valid for First-Class letter rate postage. Seventy percent of net proceeds above the cost of postage is given to the National Institutes of Health (NIH), and 30 percent of net proceeds above the cost of postage is given to the Medical Research Program of the Department of Defense (DoD). The NIH and DoD were identified as recipients of the funds by legislation enacted in 1997.

Business Wire, July 28, 1999

Breast cancer is considered the most commonly diagnosed cancer among women in every major ethnic group in the U.S. Experts say when breast cancer is diagnosed early (stages I and II), five year survival rates are nearly 95 percent, and offer better options for breast conserving surgery.

For six decades, USPS has issued new stamps to help raise awareness for a variety of health and social issues including drug abuse, AIDS awareness, environmental protection and conservation. For more information about the Breast Cancer Research stamp, visit the Postal Service's Web site at <http://www.usps.com> and click "Stamps."

CONTACT: U.S. Postal Service

Dan De Miglio or Alan Wald, 415/536-6490

Today's News On The Net - Business Wire's full file on the Internet with Hyperlinks to your home page.

URL: <http://www.businesswire.com>

LANGUAGE: ENGLISH

LOAD-DATE: July 29, 1999

Attachment Three

Table I-19

ESTIMATED UNITED STATES CANCER PREVALENCE, 1999

All Races, By Sex

Primary Site	Estimated Prevalence		
	Total	Males	Females
All Sites	8,368,000	3,465,000	4,903,000
Brain and Other Nervous System	91,000	49,000	42,000
Breast	2,057,000	13,000	2,044,000
Cervix Uteri	211,000	0	211,000
Colon	877,000	408,000	469,000
Corpus Uteri	550,000	0	550,000
Hodgkin's Disease	158,000	84,000	74,000
Kidney and Renal Pelvis	204,000	123,000	81,000
Larynx	132,000	106,000	26,000
Leukemias	144,000	80,000	64,000
Lung and Bronchus	397,000	212,000	185,000
Melanomas of Skin	484,000	234,000	250,000
Non-Hodgkin's Lymphoma	300,000	150,000	150,000
Oral Cavity and Pharynx	214,000	134,000	80,000
Ovary	191,000	0	191,000
Pancreas	25,000	12,000	13,000
Prostate	1,017,000	1,017,000	0
Rectum	379,000	202,000	177,000
Stomach	77,000	42,000	35,000
Testis	130,000	130,000	0
Thyroid	214,000	53,000	161,000
Urinary Bladder	601,000	443,000	158,000
Childhood (0-14 yrs)	154,000	78,000	76,000

Survivors
New #

Source:

U.S. 1999 cancer prevalence rates are based on 1994 cancer prevalence rates from the Connecticut registry of the SEER program and 1999 population estimates from the U.S. Bureau of the Census. Connecticut prevalence rates are based on 1940-1993 cancer incidence and survival rates.

Attachment Four



Cancer Research

BECAUSE LIVES DEPEND ON IT

For Response to Inquiries

National Institutes of Health

July 1999

NCI Press Office
(301) 496-6641

Cancer Survivorship

Cancer, once considered incurable, is no longer a certain death sentence. Since the 1971 National Cancer Act, much of the research into early cancer detection and treatment has paid off. Mortality rates for most major cancers are declining, and today more people survive cancer than ever before. In fact, over 8 million Americans — nearly one in 30 — are living with a history of cancer.

Recent survivorship milestones:

- The five-year survival rate for children with cancer improved from 65 percent in the early 1980s to 74 percent in the early 1990s.
- The five-year survival rate for all cancers improved from 51 percent in the early 1980s to almost 60 percent in the early 1990s.
- 2 million women are breast cancer survivors.
- 1 million men are prostate cancer survivors.

However, surviving cancer can leave a host of problems in its wake. Physical, emotional, and financial hardships often persist for years after initial diagnosis and treatment. Many survivors suffer decreased quality of life following successful treatment, leading one cancer activist and survivor to say, "Surviving is not just about a cure, but about living the rest of our lives."

Long-term problems, many unique to cancer survivors, include:

- **Physical effects** — Physical problems can stem from the cancer itself or from treatments patients undergo. For instance, surgery to remove a tumor may also impair nearby

(more)

organs. Likewise, radiation therapy can damage surrounding tissue and cause hormonal changes. Chemotherapy can be toxic to the heart, liver, lungs, nervous system, and other organs. Persistent fatigue and pain are also common among cancer survivors. In addition, childhood cancer survivors often suffer impaired growth and development.

- **Sexual effects** — Sexual problems are a common consequence of cancer treatment, cited by as many as 50 percent of women surviving breast and gynecologic cancers and as many as 70 percent of men surviving prostate cancer. Loss of desire, pain during sex, erectile dysfunction, premature menopause, and infertility have all been reported by cancer survivors.
- **Psychosocial effects** — Coping with cancer can strain relationships and trigger maladies such as depression, post-traumatic stress disorder, and profound fear of recurrence. In addition, a diagnosis of cancer can cause social stigmatization. These problems can interfere with daily living as much or more than physical side effects.
- **Economic effects** — Acute and long-term medical expenses, and lost wages and lost jobs can all leave cancer survivors deep in debt, increasing worry, and decreasing quality of life.
- **Second cancers** — Of the 1.4 million new cancers diagnosed each year, almost 100,000 are second cancers. Patients surviving one cancer have almost twice the risk of developing a second cancer as the general population has of developing a first. Children under age 15 who have survived cancer have eight times the risk. The reasons for this are unclear, although genetic susceptibility and the effects of chemotherapy and radiation treatments are likely important factors.

Unfortunately, many of these long-term effects — and how they impact survivors — are poorly understood. In 1996, the National Cancer Institute (NCI) formally recognized the need to better understand the issues cancer survivors face by establishing the Office of Cancer Survivorship (OCS). OCS awarded its first research grants in 1997, totaling \$4 million over two years. In 1998, OCS awarded another \$15 million over five years. Altogether, NCI supports \$20 million per year in survivorship research, much of it begun before the creation of OCS.

The primary goal of OCS, to improve the quality of life of cancer survivors, is served by a range of initiatives. Expanding research into cancer survivorship issues is the first step. OCS has placed a priority on funding research on long-term survivors — those alive five or more years after diagnosis. OCS is dedicated to developing the infrastructure — such as databases and researcher networks — that supports the follow-up needed to study long-term survivors. OCS also supports programs to educate patients, physicians, and the public about cancer survivorship. Finally, much of the research supported by OCS is aimed at interventions that can lessen the burden of cancer survivors.

(more)

As more becomes known about the long-term effects of specific treatments, clinicians — and their patients — will better understand the consequences of such treatments. They will also be better equipped to face those consequences.

Examples of OCS-funded research:

- Quality of life in prostate cancer survivors.
- Studying complications in breast cancer survivors.
- Cardiac risk factors in pediatric cancer survivors.
- Enhancing long-term survival after bone marrow transplant.
- Second cancers following childhood cancer: Possible interaction between genetic predisposition and cancer.

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For more information about cancer visit NCI's Web site for patients, public, and the mass media at <http://www.nci.nih.gov>.



Office of Cancer
Communications

Building 31, Room 10A24
Bethesda, Maryland 20892

National Institutes of Health

EMBARGOED FOR RELEASE
August 2, 1999

NCI Press Office
(301) 496-6641

NCI Leases New Supercomputer

Attachment Five

The National Cancer Institute (NCI) today announced the signing of a three-year, \$6.5 million agreement with Silicon Graphics, Inc., (SGI) to lease a Cray SV1 supercomputer. The new machine will be operated at NCI's Advanced Biomedical Computing Center (ABCC) in Frederick, Md., where it will replace a Cray Y-MP supercomputer that has been in use there since 1991.

According to Jacob Maizel, Jr., Ph.D., chief of NCI's Laboratory of Experimental and Computational Biology and a founder of the Frederick center, the SGI supercomputer has a combined computing power of 115 gigaflops, or enough capacity to process in one day a computational task that would take a high-end Pentium computer about four years to complete. A gigaflop is a measure of a computer's speed that, in the terminology of the trade, equals 1 billion floating point operations per second.

Maizel said the new SGI supercomputer, which should be fully operational by the end of the year, provides about 48 times more computing capacity than ABCC's previous supercomputer. It also has about 96 times the disk and memory capacity of the older computer and features 96 processors, a plus in simulating biological problems that require large amounts of computer memory.

Richard Klausner, M.D., NCI director, said the Institute's decision to lease the Cray SV1 comes as cancer researchers worldwide have shown a growing interest in implementing the latest, high-speed computational methods into their studies. "The last decade has shown that supercomputing has an important place in cancer research, and its importance will only increase in the coming years as studies move forward in defining the molecular causes of cancer," he said.

(more)

Klausner said supercomputing will likely play a key role in translating recent advances in gene discovery into new, more targeted cancer treatments. "One of the great opportunities now in cancer research is to find molecules in tumor cells that are driving their growth and target them directly with drugs or other treatments," he said. "As more of these molecular targets are identified, computational biology can play a key role in defining their precise chemical structure, critical information in designing compounds that can reliably hit these targets."

Supercomputers are broadly defined as the most technologically advanced, or high performance, computers in existence at any time. Though computational speed is one major asset in supercomputing, scientists say that supercomputers also must be technologically mature and reliable in generating useful data. "Supercomputing is still in its infancy," said Maizel. "But the field is so fluid that the computer power at our disposal continues to grow exponentially every few years."

For biologists, supercomputing studies can generate a resolution of detail that is almost impossible to obtain from laboratory work. Current supercomputers produce models in a relatively brief time predicting the complete chemical structure of various regions of a human protein all the way down to fine electronic detail. These calculations, in turn, can be used to predict the folding patterns of the protein, now a major area of research interest, and how these structures move or interact with other proteins and drugs.

Though several supercomputing centers currently are in operation in the United States, Stan Burt, Ph.D., ABCC director, said the Frederick facility continues to fill a unique niche. "The ABCC remains the only supercomputing center available to the public and dedicated solely to biological research," he said. "It's also unique in that the center employs a staff of trained computational scientists who can assist in problem solving and formulating computations. Requests here do not go into a processing vacuum."

Among its past accomplishments, the ABCC played a critical role in solving the 3-D structure of HIV-1 protease, an enzyme that HIV utilizes to infect human immune cells. With the 3-D structure clarified, scientists were able to design highly effective protease inhibitors, now the mainstay of AIDS therapy.

Burt said that with the new Cray SV1, the prospects for future computational successes only will be enhanced. "The Cray SV1 represents a significant resource for the entire biological

(more)

research community," said Burt. "It is a powerful machine with lots of memory, and users will find it to be a valuable tool in sorting out the functions of the genes and proteins involved in their diseases of interest."

Other SGI systems that also will be available in Frederick are an SGI Origin™2000 and two Cray J90™ supercomputers, and a PowerChallenge™ system. Further details can be found at <http://www.abcc> or <http://ncifcrf.gov>.

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SGI is a registered trademark, and the SGI logo, Origin2000 and PowerChallenge are trademarks, of Silicon Graphics, Inc. Cray is a registered trademark, and Cray SV1 and Cray J90 are trademarks, of Cray Research, L.L.C., a wholly owned subsidiary of Silicon Graphics, Inc. All other trademarks are the property of their respective owners.

For more information about cancer visit NCI's Web site for patients, public, and the mass media at <http://www.nci.nih.gov>.

CANCER FACTS

National Cancer Institute • National Institutes of Health

TRICARE Beneficiaries Can Enter Clinical Trials for Cancer Prevention and Treatment Through Department of Defense and National Cancer Institute Agreement

An interagency agreement between the Department of Defense (DoD) and the National Cancer Institute (NCI) gives TRICARE* beneficiaries more options for cancer care and greater access to the latest advances in cancer prevention (including screening and early detection) and treatment through clinical trials. Known as the DoD/NCI Cancer Clinical Trials Demonstration Project, this agreement was signed in June 1999. It represents the first time that a national health plan has agreed to provide coverage for patients to participate in cancer prevention trials.

The DoD/NCI clinical trials agreement allows cancer patients who are beneficiaries of TRICARE, the medical program of the DoD, to participate in phase II and phase III NCI-sponsored cancer prevention and treatment clinical trials and have the associated medical costs reimbursed. Before the 1999 agreement, DoD regulations only allowed TRICARE beneficiaries access to cancer treatment clinical trials through a pilot initiative known as the DoD/NCI Cancer Treatment Clinical Trials Demonstration Project, which was signed in 1996.

*TRICARE provides medical coverage for active duty members, qualified family members, CHAMPUS-eligible retirees and their family members, and survivors of all uniformed service members.

Cancer Research • Because Lives Depend On It

1.15

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Sue Bailey, M.D., Assistant Secretary of Defense (Health Affairs), stated, "For some TRICARE beneficiaries with an increased risk of developing cancer, the expanded DoD/NCI Cancer Clinical Trials Demonstration Project offers new choices to minimize chances of developing cancer. Our beneficiaries will have the chance to take part in the evaluation of emerging new strategies that have significant promise for the prevention, early detection, and successful treatment of cancers, without the added worry of related costs."

Richard Klausner, M.D., NCI's director, praised DoD for its "foresight, sense of responsibility, and clear concern for the best care of its community. The willingness of DoD to join us in this partnership is an important statement of its commitment to progress against cancer."

The DoD/NCI clinical trials agreement gives TRICARE beneficiaries the option to enter NCI-sponsored phase II and phase III cancer prevention (including screening and early detection) and treatment clinical trials. Phase II clinical trials provide preliminary information about the anticancer effects of drugs or prevention agents; phase III clinical trials compare promising new cancer treatments or prevention strategies against standard care.

During a cancer clinical trial, patients are cared for in the same facilities where standard care is provided. These facilities include more than 2,000 sites throughout the United States, including military hospitals, clinics, cancer centers, community hospitals, and doctors' offices. Costs for screening tests to determine clinical trial eligibility, and the associated costs of participation in cancer clinical trials are covered for qualified TRICARE members. Family members of active duty personnel, as well as TRICARE-eligible retired service members and their families, may participate in trials at military treatment facilities or in civilian health care

settings. Active duty members can participate in NCI-sponsored clinical trials at military treatment facilities.

DoD's primary medical mission is to provide medical services and support to the Armed Forces during military operations, but DoD also offers health services during peacetime to members of the Armed Forces, their family members, and others entitled to DoD medical care. The DoD administers health benefits to about 8.3 million beneficiaries through its direct care system at military hospitals and clinics, as well as care purchased from civilian providers who are reimbursed by DoD.

About 20,000 cancer patients enroll in NCI treatment clinical trials each year. But the increasing use of managed care plans, which often limit coverage for experimental therapies, could jeopardize the access of patients to promising new approaches available in clinical trials and compromise the progress of cancer treatment research. The agreement with DoD "will move us in the direction of ensuring that trials will enroll enough patients to answer vital research questions about cancer," Dr. Klausner said.

NCI and DoD staff will evaluate the success of the demonstration project, looking specifically at actual patient enrollment and cost of care. DoD hypothesizes that the increased access to innovative cancer therapies will cost it about the same amount as it now spends on conventional care. Dr. Klausner said, "This agreement will become a model for providing access to the best available health care for people, while ensuring that cancer research can continue to make progress."

Questions and Answers About the DoD/NCI Clinical Trials Agreement

1. What are clinical trials?

Clinical trials are research studies conducted with people to find better ways to prevent, detect, diagnose, and treat cancer. The DoD/NCI clinical trials agreement allows TRICARE beneficiaries to participate in NCI-sponsored phase II and phase III cancer prevention and treatment trials. Under this agreement, cancer prevention clinical trials will include not only studies designed to prevent cancer but also studies to screen for cancer and to find cancer in its early stages.

2. What happens in phase II and phase III cancer prevention clinical trials covered under this agreement?

- A phase II cancer prevention trial focuses on learning whether the agent being studied (medicine, vitamin, mineral, food supplement, or a combination of these) has an effect on preventing a particular type of cancer. It may also involve the use of cancer screening tests or evaluation of a method to better detect a cancer.
- A phase III cancer prevention trial compares promising new agents with a standard agent or a placebo (an inactive substance that looks the same as, and is administered in the same way as, a drug in a clinical trial). Some phase III trials evaluate cancer screening tests to see if they can decrease the cancer death rate.

3. What happens in phase II and phase III cancer treatment clinical trials?

- A phase II cancer treatment trial usually focuses on a particular type of cancer and provides preliminary information on the anticancer effect of a new drug or therapy.
- A phase III cancer treatment trial compares a promising new treatment with standard treatment.

4. Why participate in a cancer prevention clinical trial?

Cancer prevention clinical trials are conducted with healthy people who have not previously had cancer. Prevention trials are also conducted with people who have had cancer and are trying to reduce the chance of either developing a new type of cancer or preventing a reappearance of cancer (recurrence). Prevention clinical trials are

important because through research, scientists hope to determine what steps are effective in preventing cancer or finding cancer early.

There are two kinds of cancer prevention clinical trials. *Action studies* (doing something) focus on finding out whether actions people take, such as exercising more or quitting smoking, can prevent cancer. *Agent studies* (taking something) focus on examining whether taking certain medicines, vitamins, minerals, or food supplements (or a combination of them) can prevent cancer.

5. **Why participate in a cancer treatment clinical trial?**

Patients take part in cancer treatment clinical trials in hopes for a cure of disease, a longer time to live, or a way to feel better. Often, they feel that taking part in clinical trials benefits others by improving future cancer treatment options. Many clinical trial participants may be the first to receive new treatments before they are widely available. No cancer patient goes without treatment or receives a placebo (inactive substance) when there is a standard cancer therapy available. Cancer treatment studies lead to advances in cancer treatment, which may become the future standard care.

6. **Where do patients receive care?**

When participating in a DoD/NCI clinical trial, patients are closely monitored and cared for in the same facilities where standard care is provided. These facilities include more than 2,000 sites throughout the United States, such as military hospitals, clinics, cancer centers, community hospitals, and doctors' offices.

7. **Who is eligible to participate in the DoD/NCI clinical trials agreement?**

TRICARE beneficiaries, including retired service members and their families, and family members of active duty personnel are eligible. Medical care costs are covered when participating in both phase II and phase III NCI-sponsored clinical trials in civilian health care facilities and in military treatment facilities. Active duty members can participate in clinical trials at military treatment facilities.

8. **What is covered?**

Costs for screening tests to determine clinical trial eligibility, as well as the related costs of participating in the trial, are covered under this demonstration project. All usual TRICARE rules, cost shares, and deductibles apply, and eligible patients may receive care out of the TRICARE network. Call the DoD cancer trials demonstration coordinator at 1-800-779-3060 to learn more about this benefit or contact your health benefits advisor.

9. How can you learn more?

Patients and providers can learn more about patient participation in the DoD/NCI clinical trials demonstration project through the many resources listed below.

- **Over the phone:** Call the NCI's Cancer Information Service (CIS) at 1-800-4-CANCER (1-800-422-6237). Monday through Friday, 9:00 a.m. to 4:30 p.m., local time. The CIS is a national information and education network that provides up-to-date cancer information to patients, their families, health professionals, and the general public. The CIS responds to calls in English and Spanish. Deaf and hard of hearing callers may use the toll-free TTY number at 1-800-332-8615. CIS information specialists have access to PDQ®, NCI's comprehensive computer database of cancer information, and can share information from PDQ about clinical trials covered by the demonstration project.

You may also call the DoD cancer trials demonstration project coordinator at 1-800-779-3060. Patients and health care providers can call for more information about using and authorizing this benefit, or they may contact a case manager. Pre-authorization is only required when patients are treated in a clinical trial outside of a military treatment facility.

- **On the Internet:** The NCI has many online resources to help you locate cancer clinical trials and cancer information.

The NCI's cancerTrials™ (<http://cancertrials.nci.nih.gov>) Web site provides the latest news in cancer research and general information about clinical trials, including understanding clinical trials. You may access PDQ from this site to search for phase II and phase III cancer prevention and treatment trials covered by the DoD/NCI demonstration agreement.

CancerNet™ (<http://cancernet.nci.nih.gov>) provides up-to-date prevention, screening, treatment, and supportive care information for all types of cancer. Access to PDQ is also available from this Web site.

The DoD/NCI interagency agreement for cancer prevention and treatment clinical trials is available at <http://www.tricare.osd.mil/cancertrials/> on the Internet.

- **PDQ/CANCERLIT® Service Center:** Health care professionals without Internet access may contact NCI's PDQ/CANCERLIT Service Center via e-mail at pdqsearch@icic.nci.nih.gov, or by telephone at 1-800-345-3300. Providing a detailed medical history will help the Service Center staff customize a clinical trials search for the patient; the searches are completed in one business day.

Patients: Talk to your doctor and discuss your choices in cancer care. Use these resources to help guide your discussion with your doctor about participating in a clinical trial.

Providers: Use these resources to help locate NCI-sponsored cancer prevention and treatment clinical trials for your patients and obtain authorization for their medical care costs.

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Sources of National Cancer Institute Information

Cancer Information Service

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

NCI Online

Internet

Use <http://www.nci.nih.gov> to reach NCI's Web site.

CancerMail Service

To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word "help" in the body of the message.

CancerFax® fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

This fact sheet was reviewed on 7/21/99

Fax Transmittal**OFFICE OF THE DIRECTOR
NATIONAL CANCER INSTITUTE****DATE:** June 22, 1999**TO:** Sarah Blanchi**Fax No.** (202) 456-5557**FROM:** Dr. Richard KlausnerBuilding 31, Room 11A48
National Cancer Institute, Bethesda, MD 20892**Fax No.** 301-402-0338 **Telephone No.** 301-496-5615**Cover Sheet Plus** 4 **Pages Transmitted****Additional Comments:**

In the early 1990s, for the first time in history, progress in cancer prevention and treatment led to an overall decline in cancer incidence and death rates. Until the 1990s cancer rates had been continuously rising since we first began following these in the 1930s. Next year, at the dawn of the new millennium, we will see 50,000 fewer cancer deaths, and about 200,000 fewer cases, than we would have if cancer rates had not started to decline.

Cancer research is paying off and I want it to pay off even more. By redoubling our efforts in cancer research and in applying what we learn to all Americans, we must challenge ourselves as a Nation to do all we can to maintain this historic decline and to increase it. If we just double the rate of decline, by 2010, there will be 200,000 fewer deaths and 700,000 fewer new cases than if the rising rates seen just a few years ago had continued.

DIAGNOSE EVERY MAJOR CANCER ACCURATELY AND EARLY- SO THE CORRECT TREATMENT CAN BEGIN IN ITS EARLIEST STAGES. Two years ago, I announced NCI's Cancer Genome Anatomy Project whose goal has been to decipher the genetic and molecular fingerprint of each type of cancer. Now we must apply the breakthroughs of that project to more precisely diagnose each cancer so that the treatment chosen is correct for each cancer. Too many cancers are still detected too late and we must use new discoveries and new technologies to change that. To achieve these goals, I am issuing two specific challenges:

1. Develop new diagnostic techniques for every major kind of cancer by 2002. For over a century, we have based our diagnosis of cancer on where in the body the cancer arises and what it looks like under the microscope. Now, we must turn to a new era of molecular diagnostics whereby cancer is defined by its molecular fingerprint, revealing answers to questions such as: How fast will it grow? Will it spread and to where? Will it respond to therapy? and Which therapy will likely work?
2. Identify new potential molecular tests, such as blood tests, for the most common cancers within five years. New information on the molecular changes that define the very earliest signs of cancer could be harnessed to search for tests that will detect cancers, especially those that remain silent until they are advanced, early when treatment is most effective.

what does this mean

ENHANCE RESEARCH TO SPEED UP THE SEARCH FOR NEW WAYS TO PREVENT AND CURE CANCER. As scientists unravel the inner workings of cancer cells and how they survive in the body, we can develop new approaches to prevention and treatment tailored to the fingerprint of each type of cancer and targeted, for the first time, to the molecular machinery of each cancer. These revolutionary approaches will be more effective and less toxic. With this possibility on the horizon, I challenge researchers to:

- 1) Identify molecular targets for the prevention and treatment of all major cancers within the next five years.
- 2) Triple the number of promising new agents entering early clinical trials and quadruple the number of patients entering these early trials over the next five years. This will allow us to move these new molecular approaches to cancer from the laboratory to the clinic.

What does this mean?

ASSURE ACCESS TO CUTTING EDGE TREATMENTS. Only three percent of cancer patients currently participate in clinical trials--that means 97% may be missing out on the latest and best treatments that science has to offer. Many scientists believe that higher participation in clinical trials could lead to faster development of new therapies, as it often takes between three and five years to enroll enough participants in clinical trials to make them statistically meaningful--and for the patients themselves, access to these trials can mean the difference between life and death. We need to assure all patients can access these top quality treatments.

- 1) We must expand access to all cancer clinical trials to all Americans. Over the next two years, the NCI will implement a plan to simplify and expand access to clinical trials and to speed the pace of trials to get answers for patients as quickly as possible.
- 2) Enact legislation to assure Medicare patients can participate in clinical trials. America's seniors make up half of all cancer patients,

and are 10 times more likely to get cancer than younger Americans. Older Americans, however, frequently cannot participate in cutting-edge cancer clinical trials because Medicare does not pay for experimental treatments. We could back legislation that would provide Medicare patients with coverage to participate in cancer clinical trials; this legislation has been proposed by Senators Rockefeller and Mack.

To accomplish these goals, goals that are within our reach, we must double funding for cancer research over the next five years. We can fund a doubling of research efforts in cancer research at the National Institutes of Health over the next five years, and thereby assure that scientists have the resources to develop the technology to help string these gene sequences, to collect data and research on mutations, and test strategies to put these diagnostic tools and treatments in place.



here is the
cancer stuff I could
find ~~from~~ in my preventive
stuff

Healthy People 2000

Healthy Endings

A Collaborative Health Promotion Project for the Elderly

Susan C. Slaninka, RN, EdD, and Anna Mae Galbraith, RN, MSN

ABSTRACT

This article describes a collaborative health promotion project between a graduate nursing program at a state university and a small community hospital. The Healthy Endings program provided health promotion education to groups of older adults at a local senior center. Health promotion in this population is vital to prevent complications and decrease risks that affect quality of life. Health promotion programs were designed to be accomplished through three major components: education, health screenings/services, and the referral process. Specific project objectives focused on safety, sensory deprivation, exercise, screening, compliance with medications, and a variety of psychosocial issues. Graduate nursing students functioning proactively in a senior center on a consistent basis were viewed as valuable by both members and staff.

The health care industry continues to change constantly in today's world. Health care economics have become a major force in reducing staff and resources in most facilities in an effort toward cost containment. The advent of managed care has caused a shift in

emphasis from quality of care to cost effectiveness, making it impossible for most health care facilities to continue to provide the quantity and quality of services once common to the hospital setting. As patient length of stay decreases, nurses have been forced to priori-

tize nursing care, and thus have limited time for patient teaching and psychosocial issues.

As a result of these changes, health care facilities have been required to examine new methods of health care delivery. For health care professionals the emphasis continues to be placed on quality of care for the patient and family. Community health nursing is increasingly devoted to assisting patients and their families adapt to illness following hospitalization. Health education is a major emphasis of that effort. Survival of community health programs depends on creative collaborative efforts among institutions. This article describes a collaborative health promotion project (Healthy Starts/Healthy Endings) between a small community hospital and a state university nursing program. The targeted population for this project was a senior citizen population served by the hospital Community Health Education Department. Healthy Endings was complemented by another collaborative project called Healthy Starts that focused on prenatal education in two other community hospitals. This article focuses only on the Healthy Endings portion of that project.

ABOUT THE AUTHORS

Susan C. Slaninka, RN, EdD is Professor of Nursing and Assistant Chairperson, Department of Nursing, West Chester University, West Chester, Pennsylvania, and Anna Mae Galbraith, RN, MSN is Director of Community Health Education, Phoenixville Hospital, Phoenixville, Pennsylvania.

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Address correspondence to Susan C. Slaninka, RN, EdD, Professor of Nursing and Assistant Chairperson, Department of Nursing, West Chester University, West Chester, PA 19383.

HISTORY OF COLLABORATION BETWEEN THE HOSPITAL AND THE UNIVERSITY

The collaborative partnership between this community hospital and the university undergraduate nursing program was initiated in 1972. Undergraduate nursing students have had clinical experiences

TABLE 1**COMMUNITY HEALTH EDUCATION SURVEY**

Phoenixville AARP & Phoenixville Hospital Community Health Education Needs Your Help!

What kind of health/illness programs are of interest to you and your family?

We would appreciate your filling out the form below by checking off the programs of interest to you. If a subject you are interested in is not listed, please feel free to write it in.

(Optional)

Name _____ Phone Number _____

Address _____ Age _____

- ☐ How safe is your home?
- ☐ Hospital tours
- ☐ Stop smoking class
- ☐ Weight control/new direction
- ☐ Cholesterol class
- ☐ Adult cardiopulmonary resuscitation
- ☐ Exercise and your health
- ☐ Caring for parents
- ☐ Nutrition and you
- ☐ Label reading
- ☐ Cancer support group
- ☐ Breast cancer support group
- ☐ Diabetes support group
- ☐ Living with diabetes
- ☐ Living with high blood pressure
- ☐ Living with intestinal problems
- ☐ Living with arthritis
- ☐ Living with chronic lung disease
- ☐ How assertive are you?
- ☐ Depression
- ☐ Stress and your health
- ☐ Alzheimer's disease—What it is and isn't
- ☐ Summer safety
- ☐ Winter health
- ☐ Drug addiction
- ☐ Alcohol abuse
- ☐ AIDS
- ☐ Medication review
- ☐ Medicare benefits

Specific for:

Men

- ☐ Testicular cancer detection/testicular self-examination
- ☐ Changing roles—Life after age 55
- ☐ Prostate cancer

Women

- ☐ Breast cancer detection/breast self-examination
- ☐ What does my Pap Smear tell me?
- ☐ Cystic breast disease
- ☐ Osteoporosis
- ☐ Medicare benefits

Other

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of the University of Pennsylvania Health System.

at the hospital for more than 25 years on the medical-surgical and maternity units. In 1992 this affiliation was expanded to include the Community Health Education Department and the graduate nursing program. Because the focus of the graduate nursing program was community health nursing, it was logical to include this facility as a clinical experience for graduate nursing students. A major responsibility of the Community Health Education Department is outreach to the community by providing health promotion programs. Having graduate students at the hospital enhanced the ability of this department to expand its offerings. Despite this collaboration, it became clear that the needs of older adults in the community far exceeded the ability to provide the services. Grant funding from a private foundation allowed for the necessary expansion of services through the Healthy Endings project.

TARGETED POPULATION

The older population in the United States, people 65 years or older, numbered 32.2 million in 1992 (Stanhope & Lancaster, 1992). That figure represents 12.7% of the population, approximately one in every eight Americans. *Chronic Care in America: A 21st Century Challenge* (Hoffman & Rice, 1996) states most older people have one or more chronic conditions. The *Survey of Health Indicators of Chester County* (Chester County, Community Needs Task Force, 1995) identifies 42,000 older people residing in Chester County. The leading causes of death in 1992 for people 65 years or older in Chester County were heart disease, cancer, stroke, pneumonia, and chronic obstructive pulmonary disease, totaling 1,881 deaths. Assisting older adults to minimize the impact of these diseases was clearly a priority. The *Chester County Office of Aging Three-Year Plan (1993-1996)*

TABLE 2

PROGRAM OBJECTIVES FOR HEALTHY ENDINGS

1. To supply information that encourages healthy habits for older adults.
2. To motivate older adults to protect their health through compliance with medication regimens.
3. To motivate older adults to protect their health through disease prevention and screening.
4. To assist older adults to minimize the impact of their diseases through exercise and healthy lifestyle behaviors.
5. To increase older adults' understanding of the specific health risks related to sensory deprivation.
6. To explore the impact of psychosocial issues on a healthy lifestyle.

(Spool, 1996) identified the development of community outreach programs addressing informational service needs as the primary goal in the older population. Another goal of that same document encouraged expansion and enhancement of programming in senior centers. The grant-funded project was intended to focus on these two goals.

SETTING DESCRIPTION

The Senior Center facility is located in a converted church recreation building and is open to members from 10 a.m. to 2 p.m. Beyond the center's driveway is an outpatient community center for substance abuse recovery and the fire department. Two churches, a low-income housing development, and several residences are also situated on the same block. Staff members include a director, activities coordinator, receptionist, cook/custodian, and an advisor of financial services.

Most of the clients attending the Senior Center live in the surrounding towns. Paratransit buses provide transportation for many of the clients for a nominal fee. Several clients continue to drive. An average of 35 to 40 clients attend the

center's events on a routine basis. Total membership includes 750 clients. Morning coffee or tea with Danish pastries and hot lunches are served daily. The morning treat is free, but donations are accepted. Everyone staying for lunch must preregister and pay a small fee. The food for the center is provided by an outside organization and is served by some of the staff and volunteers.

Activities at the center include numerous card games, art, ceramic and craft classes, two levels of exercise classes, line dancing, billiards, shuffleboard, and day outings or trips lasting several days. The trips are carefully planned and coordinated by the financial advisor and have included trips to New England and Florida. Day trips include special dinner theater shows, mystery shows, musicals, and holiday spectacles.

HISTORY OF HEALTH PROMOTION PROVIDED BY COMMUNITY HEALTH EDUCATION

Prior to the collaborative partnership with the university nursing program, health promotion pro-

TABLE 3
THE ZUNG SELF-RATING DEPRESSION TEST

Circle the letter following each statement to indicate how often each of the following statements has applied to you during the past 2 weeks.

A. None or little of the time

C. A good part of the time

B. Some of the time

D. Most or all of the time

Feeling Down?

Statements

- | | | | | |
|---|---|---|---|---|
| 1. I feel downhearted, blue, and sad. | A | B | C | D |
| 2. Morning is when I feel best. | A | B | C | D |
| 3. I have crying spells or feel like it. | A | B | C | D |
| 4. I have trouble sleeping through the night. | A | B | C | D |
| 5. I eat as much as I used to. | A | B | C | D |
| 6. I enjoy looking at, talking to, and being with attractive men/women. | A | B | C | D |
| 7. I notice that I am losing weight. | A | B | C | D |
| 8. I have trouble with constipation. | A | B | C | D |
| 9. My heart beats faster than usual. | A | B | C | D |
| 10. I get tired for no reason. | A | B | C | D |
| 11. My mind is as clear as it used to be. | A | B | C | D |
| 12. I find it easy to do the things I used to do. | A | B | C | D |
| 13. I am restless and can't keep still. | A | B | C | D |
| 14. I feel hopeful about the future. | A | B | C | D |
| 15. I am more irritable than usual. | A | B | C | D |
| 16. I find it easy to make decisions. | A | B | C | D |
| 17. I feel that I am useful and needed. | A | B | C | D |
| 18. My life is pretty full. | A | B | C | D |
| 19. I feel that others would be better off if I were dead. | A | B | C | D |
| 20. I still enjoy the things I used to do. | A | B | C | D |

From Zung (1965). Reprinted with permission from Archives of General Psychiatry.

grams were held at the Senior Center on a request basis by Senior Center staff. Programs included health fairs, screenings, and health education lectures. In more recent years, the Community Health Education Department surveyed members and staff of the Senior Center to identify health promotion programs of interest. An outcome of that survey was the establishment of a monthly Health Talks program for Senior Center members after

lunch. Programs addressed various issues including living with chronic illness, safety, and psychosocial concerns. A medication review was instituted during Medication Awareness Month which included a pharmacist, nurse, and physician. A Flu Immunization program was initiated as community visiting nurses, the hospital, and the local health department worked together to provide this service.

Through these health program

efforts, a strong cooperative working relationship was established with Senior Center staff who valued the hospital as a resource to address significant senior health issues. Senior Center staff also served as a valuable resource to hospital personnel by identifying health problems and concerns of members that could be addressed through health promotion programs or referrals to appropriate health care services. Because of limited staffing, the

TABLE 4
HEALTH CARE SCALE FOR THE AGED

Directions: Circle yes or no for Items 1 through 6.

Which of these things are you healthy enough to do without help?

- | | | |
|--|-----|----|
| 1. Go to a movie, church, a meeting, or visit friends. | Yes | No |
| 2. Walk up and down stairs to the second floor. | Yes | No |
| 3. Walk half a mile (about eight ordinary blocks). | Yes | No |
| 4. Heavy work around the house, such as shoveling snow or washing walls. | Yes | No |
| 5. Which of these statements fits you best (choice of the following three)? | | |
| • I am not limited in any of my activities. | Yes | No |
| • I cannot work (keep house) at all now because of my health. | Yes | No |
| • I have to limit some of the work or other things I do. | Yes | No |
| 6. Is there any physical condition, illness, or health problem that bothers you now? | Yes | No |

From Rosow & Breslau (1966). Reprinted with permission from the Journal of Gerontology, 21, 556-559.

health promotion programs could not be expanded beyond monthly meetings. The collaborative partnership with the university was envisioned as an opportunity to enhance health promotion efforts at the Senior Center. Graduate students' participation at the center would allow a more consistent presence of health care professionals and provide continuity for the seniors. Members of the center would have weekly access to a nurse who would be readily accessible to the 30 to 40 members who attend the center daily.

HEALTHY ENDINGS

In the planning phase of this collaborative relationship, a working definition for senior health promotion was adopted for this experience. Both hospital and university participants believed that senior health promotion at the center would be a program that emphasized maintaining health, preventing injury or complications from illness, and identifying psychosocial issues. Health promotion programs would focus on services not readily available to older people, which are different from traditional medical care. Frenn (1996) states the importance of health promotion in the elderly;

it is essential in effectively preserving health and functional abilities, thereby reducing health care costs. In Healthy Endings, an emphasis was placed on primary prevention through self-care that encouraged healthy lifestyles, control of chronic illnesses, and identification of health and safety issues for older people. These health promotion efforts were an attempt to increase awareness of community resources available to assist in self-care practices and, when necessary, provide early and timely access to the health care system.

Health promotion programs were designed to be accomplished through three major components: education, health screenings/services, and the referral process. The educational component focused on what the Senior Center members identified as needed programs, what the health risks are for this population, and promoting safety in the environment both at home and at the Senior Center.

ASSESSMENT OF HEALTH PROMOTION NEEDS

An assessment of the issues that affect the targeted population was a beginning point in the planning process. Senior Center members

identified their health promotion needs through several different methods. A survey (Table 1) was developed to identify specific programs of interest to this group. Senior Center staff, through daily observation, also provided input on issues that created difficulties for seniors affecting their health status (e.g., financial issues, hygiene problems, or loss of spouses). Health promotion needs of older people are identified in *Healthy People 2000* (United States Department of Health and Human Services [USDHHS], 1990), which clearly articulates health issues and recommendations for implementation. A more recent document, *Survey of Health Indicators for Chester County* (Chester County Community Needs Task Force, 1995), indicated health issues prevalent for this age group in this particular community. Survey results were also reviewed and identified loneliness and social isolation as prevalent conditions in the county's older population.

After the assessment process was completed, objectives for the project were identified. Healthy Endings became a collaborative effort between the university Department of Nursing and the

TABLE 5
HEALTHY ENDINGS EDUCATION OUTCOMES SCALE

Competency	Pre-education Program		Post-education Program		6-Month Follow Up	
	YES	NO	YES	NO	YES	NO
1. Participates in blood pressure monitoring.						
2. Can list their medications.						
3. Can list the correct usage of their medications.						
4. Can list potential side effects and interactions of their medications.						
5. Identifies basic dietary issues in blood pressure control.						
6. Recognizes symptoms to be reported to their physicians.						
7. Describes how to obtain psychosocial support.						
8. States how to access emergency assistance if needed (e.g., 911).						
9. Verbalizes home safety concepts.						
10. Participates in discussion groups relating to loneliness and social isolation.						

Community Health Education Department of this community hospital. Graduate nursing students provided weekly health promotion programs as part of their required clinical practicum courses. The faculty member and the Director of Community Health Education served as supervisors of the planning, implementation, and evaluation of the programs.

PROJECT OBJECTIVES

The program objectives for the Healthy Endings program are listed in Table 2. This program provided health promotion education to groups of older adults at the Senior Center. Several programs were immediately identified and initiated including living with chronic illnesses such as diabetes, hypertension, congestive heart failure, arthritis, and stroke. Other programs included hygiene, incontinence, summer and winter safety, safety regarding chronic illness, medication compliance, exercise, and

depression. Educational programs were provided in both large and small groups. Informal individualized health education also was provided. For those members who were not able to attend the programs, a newsletter was initiated so all could benefit from the information provided.

A second component of the Healthy Endings health promotion project was the provision of various health screenings and services. Breast cancer and depression are issues that are often observed in older people yet frequently neglected by primary care providers. A focus was given to these two major issues affecting older adults. Before a breast cancer screening program was initiated, two breast cancer awareness seminars were held to provide basic information related to breast cancer. Methods of detection were addressed with an emphasis on American Cancer Society (ACS) guidelines (1997) including clinical breast examination, mammogra-

phies, and breast self-examination (BSE). Most of the women knew mammograms were necessary, but less than half of the women had mammography using the ACS guidelines. Fewer women had yearly clinical breast examinations and even less women practiced BSE. The breast cancer screening was scheduled during the following month, and BSE was emphasized by health care providers. Referrals for mammographies were made as needed. Individual follow up was completed to ensure participants' understanding of ACS screening recommendations.

A similar approach was used to address depression. A lecture/discussion was used to introduce the topic of depression. A depression screening was then completed using the Zung Self-Rating Depression Test (Zung, 1965) (Table 3). Nineteen people were screened for depression, with seven requiring follow up. Follow up was again completed to address issues of con-

cern after the screening.

The issue of safety was addressed in various ways: an overview of home safety, medication compliance, winter safety, and summer safety with skin cancer assessment. As in previous programming, a repetitive pattern was used. The safety module began with an overview of safety issues with a focus on safety in the home. Slides and games were used as the teaching methodologies to introduce the topic of safety. Safety assessment was completed using the *National Safety Council Home Safety Check List* (National Safety Council, 1982) to identify older people living in unsafe environments. People having an elevated score were identified and counseled on safety risks and encouraged to incorporate the necessary measures to improve their home environments.

A second focus of the safety module included the issue of medication compliance. Medication reviews were completed to detect unsafe medication practices, knowledge regarding medications, correct administration of medications, and potential for medication interactions with other medications or foods. Small group discussions served to address these issues as Senior Center members arrived that day with their medications in hand.

The last portion of the safety module focused on winter and summer safety and included a skin cancer screening component. Members were instructed on the importance of safety in regard to protection from the sun, and then screening was provided. Other summer safety issues addressed included prevention of hyperthermia and preparation of food. This program was very popular especially because it was a relatively new program at the center.

The third component of the health promotion project addressed the referral process. Referrals were identified through various education, health screening, and service

programs. Staff from the Senior Center also identified people in need of a community resource referral. The referral process required collaboration among a variety of health care providers and agencies. Most frequent referrals included the Visiting Nurses' Association, the Office of Aging, Social Services of the hospital, and local physicians.

EVALUATION OF THE HEALTHY ENDINGS PROJECT

Because evaluation of outcomes was a key priority for this project, a set of evaluation instruments was prepared. Funding from the Independence Foundation allowed the project directors to obtain the services of a consultant, who prepared an evaluation packet that included a client consent form, demographic questionnaire, Health Care Scale for the Aged (Rosow & Breslau, 1966) (Table 4), the Zung Self-Rating Depression Test (Zung, 1965) (Table 3), and the Healthy Endings Education Outcomes Scale (Table 5). These forms were used to gather data essential to the project goals. The *National Safety Council Home Safety Check List* (National Safety Council, 1982) provided by the hospital was added to the data collection package.

The demographic questionnaire contained 24 items for baseline data collection. These included health concerns (e.g., identification of illnesses, medication use, and disabilities) and social factors (e.g., marital status, living arrangements, social activities, and support network availability). The demographic questionnaire was completed prior to the start of the educational program.

Rosow and Breslau's (1966) Health Care Scale for the Aged is a six-item, cumulative scale which measures a respondent's self-report of functional health. The tool assesses one's perception of an ability to perform various physical and social activities that could be

impaired by health-related activities. The Health Scale for the Aged requires the respondents to circle "yes" or "no" for each item. The response indicates agreement or disagreement with each of six statement choices offered in the instrument. A .91 coefficient of reliability was reported by the developers of the scale. In support of validity, Rosow and Breslau (1966) found that 17% of respondents indicated their health fell into the lowest portion of the worst category. This percentage was similar to that of the American population of elderly, and they argued that the scale did measure self-assessed health in people age 65 and older.

The Zung Self-Rating Depression Test (Zung, 1965) was developed to gauge whether or not patients were at risk for depression. The test consists of 20 statements—each of which relate to a specific characteristic of the disorder. Ten statements are negative indicators, and 10 are positive and are rated according to the degree each applies over the past 2 weeks to the person taking the test. The test can be used to gauge a person's emotional state and to assess whether the person is at low, moderate, or high risk for depression. In one recent national survey, 12% of people older than age 60 were at high risk for depression.

The Healthy Endings Educational Outcomes Scale was developed specifically for this project to assess gains in health knowledge as a result of the health promotion educational program provided by the graduate nursing students. This tool is a competency-based measure that covers basic health knowledge and activities essential to the health functioning of all participants. These include:

- Participation in blood pressure monitoring and dietary control.
- Knowledge of medications, their side effects and potential interactions.

- Symptoms to report to the physician.
- How to access emergency assistance.
- Home safety concepts.
- How to obtain psychosocial support.

Competency in these areas was determined by verbal response and was assigned a "yes" or "no" rating. All of the clients had positive outcomes after the sessions.

VALUE OF NURSES IN A SENIOR CENTER

A nurse functioning proactively in a senior center on a consistent basis was viewed as valuable by both members and staff. Members relied on the nurse to provide them with an excellent source of health and illness information through group activities such as lectures, group discussions, or screenings. Members could approach the nurse with any health questions or concerns and knew they would receive guidance and assistance in resolving the health issues. The weekly participation by the nurse at the center also promoted a sense of continuity and allowed for follow up of a member's concern or problem. Through these weekly sessions, members also became more familiar with the nurse, thus promoting interaction. Members felt more at ease in approaching a nurse who knew them. Members had access to a health care provider in a familiar gathering place for service.

Staff also benefited from the weekly sessions at the center. Both the director and the activities coordinator developed positive working relationships with the nurse. The nurse's influence on the members' health was viewed as significant, with many important health issues addressed and resolved through nursing intervention. The staff also

indicated that health issues they could not address and normally would refer to other agencies were easily referred to the nurse on site for consideration and follow up. The staff also benefited personally as the graduate student provided CPR training for them as well as education on many health issues through the formal programs.

Another valuable aspect of the nurse's role in this setting was case finding, with early detection of risks or health problems and then referrals to appropriate health services or providers. Members in this setting have a history of delaying access to the health care system because of either denial or inability to attach significance to a symptom. The screenings and other health services provided by the nurse allowed early detection and promoted access to the health system for further evaluation and treatment. Case finding and referrals were viewed as positive outcomes of the nurse's intervention, and they were significantly affected by the relationship established with both members and staff.

GERONTOLOGICAL NURSING IMPLICATIONS

The objectives for older adults from *Healthy People 2000* (USDHHS, 1990) clearly define interventions that can have a positive affect on the health status of this growing population. This project addressed these interventions with the older adult population in a setting that was not a health institution. If nurses are to have an impact on health promotion for older adults, a site such as a senior center offers multiple opportunities for gerontological practice.

An indirect observation from this project was that health promotion for older adults is not consistently addressed in primary care

settings but can significantly affect health status and quality of life issues for older adults. Community agencies such as senior centers, meetings of the American Association of Retired Persons, and retirement communities where older adults gather provide excellent opportunities for health promotion. It is in such settings that gerontological nurses can take a proactive primary prevention focus. This model of care will allow older adults to live longer and healthier lives.

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Health Promotion Practices of the Old-Old

Barbara Resnick PhD, CRNP

Assistant Professor

University of Maryland School of Nursing
Baltimore, Maryland



The purpose of this study was to describe the health promotion activities of older adults in a life care community. A total of 195 older adults participated in a health promotion survey. The old and old-old age groups demonstrated a decrease in cancer screening behaviors, aerobic exercise, and compliance with a low cholesterol diet. Moreover, these individuals indicated that they had lived a sufficient period of time, and were no longer interested in disease prevention and prolongation of life. Older adults may benefit from an individualized approach to health promotion that focuses on quality rather than quantity of life.

In developed countries, because of both medical care and research, the average life expectancy is now approximately 80 years (*Aging America: Trends and Projections*, 1985; Lohman, Sankaranarayanan, & Ashby, 1992). The purpose of health promotion and disease prevention is to reduce the potential years of life lost (in premature mortality) and to ensure better quality of remaining life. With Americans living longer, it is suggested that health promotion activities are all the more important because these individuals will have more years to benefit from preventive services (Omenn, 1990). Moreover, there is evidence to suggest that seniors benefit just as much from preventive programs as do those who are middle-aged (Costanza, 1992; Goldberg & Chavin, 1997; Mettlin, Jones, & Averette, 1993). Specifically, there is evidence to suggest that cancer screening with mammography, a screening Pap test, digital examination for monitoring prostate size, and yearly evaluation of stool specimens for occult blood can help reduce mortality and morbidity among older adults (Gudas, 1996; Sherman, Abel, & Tavakoli, 1996). Other preventive health behaviors, such as exercise and reducing cholesterol levels, impact overall health status and physical fitness, including aerobic power, strength, balance, and flexi-

bility, and acute medical problems such as fractures, myocardial infarctions, and cerebral vascular accidents (Ettinger, 1996; Goldberg & Chavin, 1997; LaCroix, Leveille, Hecht, Grothaus, & Wagner, 1996; Okumiyu et al., 1996).

Despite the positive outcomes of health promotion activities, only a small percentage of older adults actively engage in these activities. This is particularly true of the old-old age group (age 85 and older). For example, in a large study (Burns et al., 1996) of 3,347,410 older women, only 4% of those 85 and older had mammograms routinely. Likewise, regardless of socioeconomic status or race, older women were less likely to get Pap tests than were their younger counterparts (Sherman et al., 1996). A number of variables have been reported to impact the older adult's participation in health-promoting activities, including: (a) socioeconomic factors (Miller & Champion, 1996); (b) beliefs and attitudes (Champion, 1992); (c) encouragement by a health care provider (Rimer, Ross, Cristinzio, & King, 1992); and (d) specific motivation based on efficacy beliefs (Grebowski et al., 1992). However, this research has focused on all adults age 65 and older. It is likely that there may be alternative explanations for noncompliance with suggested preventive health behaviors for those in the 90 years of age and older group.

The purposes of this study were to: (a) describe the health promotion activities of a group of older adults living in a life-care community; (b) compare the health

Address correspondence to Barbara Resnick, PhD, CRNP, 5435 Watercrest Place, Columbia, MD 21045.

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TABLE 1.
CRITERIA FOR HEALTH BEHAVIORS

Behavior	Health Risk
Exercise	Physical (aerobic) activity at least 3 times per week, 20 minutes per session
Diet	Monitors cholesterol in diet
Smoking	Currently smoking
Alcohol use	> 4 drinks/setting or > 2 drinks at least 3 times per week, or at least 1 drink per day

promotion activities between the young-old (age 65-80), the old (81-90), and the old-old (91-104); (c) consider predictors of health promotion activities; and (d) explore the reasons for lack of compliance with commonly suggested health behaviors.

METHODS

SUBJECTS

All of the 195 older adults living independently in a life-care community participated in the health promotion survey. All of these individuals had at least a high school education, had Medicare plus supplemental insurance, and were seen at least yearly by a primary health care provider. For those participants who had a history of cognitive impairment (scores of less than 20 on a Mini-Mental State Examination) (Folstein, Folstein, & McHugh, 1975), the primary caregiver was asked to serve as a proxy.

PROCEDURE

The health promotion survey was an open-ended interview, and was conducted during the 3-week period in which flu shots were given. All of the participants were told that the purpose of the interview was to learn more about health promotion activities of older adults. Residents were asked whether or not they had: (a) a recent mammogram (within the past 2 years); (b) a recent Pap test (within the past 3 years); (c) an annual prostate examination; (d) a yearly flu shot; (e) a pneumonia vaccine; (f) a current tetanus vaccine (within the past 10 years); (g) recent testing of stools for occult blood (within the past year); and (h) a recent skin evaluation (within the past year). Residents were also asked about exercise behavior, smoking, alcohol use, and adherence to a low-cholesterol diet. Criteria for specific health behaviors are shown in Table 1. If the resident did not participate in a given activity, he or she was asked to state the reason why this activity was not done. The interviews were all done pri-

vately by a geriatric nurse practitioner or a geriatric nurse practitioner student.

DATA ANALYSIS

Descriptive statistics were used to consider health promotion practices of all the residents. Reasons for not participating in specific activities were coded and categorized, and frequencies were calculated. Chi-square tests were used to consider the differences in health practices by age group. A stepwise multiple regression analysis was done to test the predictors of health-promoting behavior, with health-promoting behavior being the sum total of preventive activities the older adult participated in. Predictors included age, gender, marital status, number of chronic illnesses, and a history of cognitive impairment.

RESULTS

Demographic characteristics of the participants by age group are presented in Table 2. There were no statistically significant differences between the groups based on race, cognitive impairment, gender, or number of chronic illnesses. The majority of the participants were female, white, and cognitively intact. There was a difference between the groups with regard to marital status, with a greater percentage of those in the younger group married, and a larger percentage of those in the old-old age group widowed ($X^2 = 20.4, p < .05$).

HEALTH PROMOTION BEHAVIORS

Table 3 describes the health promotion behaviors of the residents overall and by age group. Ninety-five percent (185) of the residents had a yearly flu vaccine, 86% (168) a pneumonia vaccine, and 61% (119) a current tetanus booster. There were no differences in immunization behavior based on age.

Thirty-two percent (62) of all the residents monitored the cholesterol in their diet. There was a statistically significant difference between the groups ($X^2 = 17, p < .05$), and greater than half (53%) of the young-old residents tried to watch cholesterol and/or fat intake, while only 11% of those in the old or old-old age group reported trying to control daily intake of cholesterol and/or fat. Fifty-nine percent (115) of residents had yearly skin screening and 62% (121) had yearly stool evaluations for occult blood. There was no difference between the age groups with regard to participation in a yearly screening of skin ($X^2 = 1.9, p > .05$) or stool ($X^2 = 2.8, p > .05$).

Half (81) of the female residents had recent mammograms, 37% (60) a Pap test, and 65% (22) of the male residents had a yearly prostate examination. There

TABLE 2.
DESCRIPTIVE CHARACTERISTICS OF THE SAMPLE BY AGE GROUP

Variable	Group 1 (n = 40)	Group 2 (n = 117)	Group 3 (n = 38)	X ² /F
Gender				
Male	5 (12%)	23 (13%)	6 (16%)	1.19
Female	35 (88%)	94 (80%)	32 (84%)	
Marital status				
Married	12 (30%)	21 (18%)	3 (7%)	15.0*
Widowed	18 (45%)	76 (65%)	33 (87%)	
Single	10 (25%)	20 (17%)	2 (5%)	
Cognitive impairment				
Yes	5 (12%)	9 (8%)	3 (7%)	.92
No	35 (88%)	108 (91%)	35 (93%)	
Race				
White	39 (97%)	116 (99%)	38 (100%)	.52
Black	1 (3%)	1 (1%)		
Number of chronic illnesses	2.46	3.17	3.18	3.10*
Number of preventive health behaviors	6.37	5.7	4.9	5.7*

* $p < .05$.

was a difference between the groups with regard to mammography ($X^2 = 6.9$, $p < .05$) and Pap testing ($X^2 = 8.4$, $p < .05$). While 66% (23) of those in the young-old group had recent mammography, only 35% (11) of those in the old-old group were tested. Similarly, 57% (20) of the young-old women had a recent Pap test, while only 25% (8) of those in the old-old group had a recent Pap test. While there was no statistically significant difference between age groups with regard to screening for prostate cancer via a rectal examination ($X^2 = 3.3$, $p < .05$), 80% of those in the young-old group had yearly screening examinations, while only 33% of those in the old-old group were tested.

Overall 50% (98) of the residents regularly drank alcohol, and 11% (22) smoked. Neither alcohol nor nicotine use varied by group ($X^2 = 2.15$ and .74, respectively; $p < .05$). In each age group approximately half of the residents drank alcohol regularly, with regular consumption being at least one drink per day. Nicotine use was limited across all age groups, with only 8% (3) of the residents in the young-old group, 12% (14) in the old group, and 13% (5) in the old-old age group smoking.

Thirty-six percent (70) of all residents participated in a regular aerobic exercise program such as walking or swimming for at least 20 minutes three times per week. There was a statistically significant difference in exercise behavior based on age group ($X^2 = 6.7$, $p < .05$). Thirty-five percent (14) of the residents in the young-old group participated in regular exercise, compared to 42% (49) in the old and 18% (7) of those in the old-old age group.

RATIONALE FOR REPORTED BEHAVIOR

Of the 133 residents who did not adhere to a low-cholesterol diet, 77% (102) reported that they were never told to by their primary health care provider, and believed their cholesterol levels were normal. Twenty percent (31) of these residents did not monitor their diets because they felt that, "At my age, what difference does it make?" This response was more prevalent in the old (70%) and old-old (22%) groups than in the young-old (9%) group.

Of the 125 non-exercising residents, 41% (51) reported that they did not exercise because of pain and/or functional changes that limited their ability. Almost as frequent was the response that exercise was not done because of laziness (34%, 43). Other reasons for not exercising included fatigue (11%, 14), insufficient time (5%, 6), and beliefs such as being too old to benefit from exercise or that exercise in addition to regular activity was not needed (9%, 11).

There were 80 residents who had not had recent mammograms, and 101 residents who had not currently had a Pap test. Fifty-seven percent (46) of those who did not have a mammogram and 41% (41) of those who did not have a Pap test reported that they did not have these tests because they would not pursue further treatment if testing were abnormal. Other frequently reported reasons for not having either a mammogram or a Pap test included: (a) not being told to do so by the primary care provider (26% and 30%); (b) having had bilateral mastectomies, or a hysterectomy (8% and 16%); and (c) a belief that they were unlikely to get breast or uterine cancer (6% and 5%).

TABLE 3.
DIFFERENCES IN HEALTH BEHAVIOR BY AGE GROUP

Variable	Group 1 (n = 40)	Group 2 (n = 117)	Group 3 (n = 38)	X ²	Total (n = 195)
Fatty diet					
Yes	21 (53%)	37 (31%)	4 (11%)	17.0*	62 (32%)
No	19 (47%)	80 (69%)	34 (89%)		133 (68%)
Alcohol use					
Yes	16 (40%)	61 (52%)	22 (55%)	2.15	98 (50%)
No	24 (60%)	56 (48%)	16 (48%)		97 (50%)
Exercise					
Yes	14 (35%)	49 (42%)	7 (18%)	6.7*	70 (36%)
No	26 (65%)	68 (58%)	31 (82%)		125 (64%)
Flu vaccine					
Yes	38 (95%)	113 (97%)	34 (89%)	3.0	185 (95%)
No	2 (5%)	4 (3%)	4 (10%)		10 (5%)
Pneumonia vaccine					
Yes	37 (93%)	100 (84%)	31 (82%)	2.1	168 (86%)
No	3 (7%)	17 (12%)	7 (18%)		27 (14%)
Tetanus vaccine					
Yes	29 (73%)	69 (59%)	21 (55%)	2.6	119 (61%)
No	11 (27%)	48 (41%)	17 (45%)		76 (39%)
Skin screening					
Yes	27 (68%)	76 (64%)	20 (53%)	1.9	115 (59%)
No	13 (32%)	41 (36%)	18 (47%)		80 (41%)
Stool screening					
Yes	27 (68%)	76 (64%)	18 (47%)	2.8	121 (62%)
No	13 (32%)	41 (36%)	20 (53%)		74 (38%)
Nicotine use					
Yes	3 (8%)	14 (12%)	5 (13%)	.74	22 (11%)
No	37 (92%)	103 (88%)	33 (87%)		173 (89%)
Mammogram	n = 35	n = 94	n = 32		
Yes	23 (66%)	47 (50%)	11 (35%)	6.9*	81 (50%)
No	12 (34%)	47 (50%)	21 (65%)		80 (50%)
Pap test	n = 35	n = 94	n = 32		
Yes	20 (57%)	32 (34%)	8 (25%)	8.4*	60 (37%)
No	15 (43%)	62 (66%)	24 (75%)		101 (63%)
Prostate examination	n = 5	n = 23	n = 6		
Yes	4 (80%)	16 (70%)	2 (33%)	3.3	22 (65%)
No	1 (20%)	7 (30%)	4 (67%)		12 (35%)

*p < .05.

Of the 34 males in the study, only 12 (35%) did not get regular prostate examinations. The rationale for not having screening was similar to that given by the women and included: (a) 42% (14) who reported that they already had their prostate removed; (b) 25% (8) who were not told by a primary health care provider to have a prostate examination; and (c) 35% (12) who reported that they would not have any surgery or treatment done if the prostate was enlarged.

Eighty residents did not have yearly skin evaluations, and 74 did not have yearly screening of their stool for occult blood. Fifty-nine percent (47) of these residents were not told by a health provider to monitor their skin, and 66% (49) were not told to have their stools checked for occult blood. Thirty-one percent (25) of the residents who did not have yearly skin evaluations and 12% (9) of those who did not have yearly stool evaluations

reported that they did not believe they were likely to acquire either skin or bowel cancer. Smaller percentages of residents—8% (6) of those not getting a skin evaluation and 10% (7) of those not having stools checked—reported that they would not pursue any further treatment if abnormalities were found. Eleven percent (8) of the residents reported that they did not have screening for bowel cancer because they wanted to contract the disease to facilitate death. Of these 8 residents, 5 were in the old group and 3 were in the old-old group.

There were 10 residents who refused a flu vaccine and 27 who refused a pneumonia vaccine. Of those who refused a flu vaccine, 45% (5) reported that they believed they were at low risk for getting the flu. Twenty-two percent (2) of these residents reported that they wanted to get the flu to facilitate death, and 33% (3) were allergic and/or had side effects such that they

refused further inoculations. Forty percent (11) of the residents who refused the pneumonia vaccine did so because they wanted to contract the disease and allow for a natural death. Of these 11 residents, 7 were in the old age group and 4 were in the old-old group. Other reasons for refusal included: (a) a belief that he or she would not get pneumonia ($n = 8$ [30%]); (b) not being told to do so by a primary health care provider ($n = 4$ [15%]); and (c) concerns about allergic reactions ($n = 4$ [15%]). Sixty-six residents did not have a current tetanus vaccine; the majority ($n = 49$ [65%]) of these individuals did not have this done because they were not aware that they needed to. Other reasons for not getting a tetanus booster included a belief that this was not needed ($n = 18$ [25%]) or that they were "too old to bother" ($n = 9$ [11%]).

A stepwise multiple regression analysis was done using age, gender, marital status, number of chronic illnesses, and cognitive status as predictors of number of preventive health behaviors. Age was the only statistically significant predictor of preventive health behaviors, and accounted for 7% of the variance (Table 4). With increased age, the resident participated in fewer preventive health behaviors.

DISCUSSION

Overall, the disease prevention behaviors of this sample were better than those commonly reported with regard to older adults. For example, 86% to 95% of the current sample had flu and/or pneumonia vaccines, exceeding the goal in *Healthy People 2000* to inoculate 60% of those over 65 years of age. Similarly, 50% of older adults in this study had a current mammogram and 37% a current Pap test, while prior reports indicated that only 12% of those 65 and older report having a mammogram within the past 3 years (Burns et al., 1996) and only 25% of those over 65 report regular Pap tests (Mandelblatt & Phillips, 1996). It is likely that these differences were due to sample selectivity as these residents: (a) were well educated; (b) were predominately white; (c) had both Medicare and additional insurance coverage; and (d) had a regular primary care provider as well as easy access to medical and nursing care within the life-care community.

Despite the relatively high compliance with health-promoting activities, there was a downward trend in the percentage of residents in the old and old-old age groups who participated in health promotion activities related to diet and exercise, and screening for bowel, breast, prostate, and uterine cancer. Moreover, age was the only statistically significant predictor of disease prevention activities. Many of the residents in the old and

TABLE 4.

REGRESSION TABLE FOR PREVENTIVE HEALTH BEHAVIORS

Source Step	Cum R^2	R^2 Change	F	Final Beta
1. Age	.07	.07	13.7*	-.26
2. Gender	.07			-.03
3. Marital status	.07			-.09
4. Cognitive impairment	.07			.10
5. Number of chronic illnesses	.07			-.13

* $p < .05$.

old-old age groups reported that they refused testing because they felt that they were too old for preventive health care and because they would not pursue further treatment given an abnormal finding. A smaller number reported that they hoped they would get these diseases to facilitate death.

The literature continues to support the effectiveness of primary prevention in older adults (Burns et al., 1996; Marwill, Freund, & Barry, 1996; Sitzes, 1995; Verschuren et al., 1995), and current recommendations suggest that yearly testing should include a fecal occult blood test and a prostate examination and that all older adults should receive influenza, pneumonia, and tetanus/diphtheria prophylaxis (Goldberg & Chavin, 1997). Mammography continues to be recommended for women until the age of 85 (Costanza, 1992; Goldberg & Chavin, 1997). After that time, the risks and discomforts of mammography may outweigh the benefits (Mandelblatt, Wheat, & Monane, 1992). Likewise, aggressive attempts to control cholesterol in asymptomatic adults over the age of 75 may not be appropriate (Scandinavian Simvastatin Survival Study Group, 1994).

Based on the reasons the older adults in this study gave for refusing to participate in preventive health behavior and cancer screening, the question must be raised as to whether or not there is a need or a desire to prolong life by prevention and early disease recognition. Moreover, preventive health care may result in the older adult's dying from a disease that has a greater impact on function and quality of life (Hulley & Newman, 1996; Kane, 1996; Silliman, Balducci, Goodwin, Holmes, & Leventhal, 1993).

It is not uncommon when working with old-old patients to have them report a feeling of satisfaction with a long life lived, yet a desire for this life to quietly end (Kane, 1996). Health care providers need to listen to these older adults and carefully consider disease prevention and cancer screening activities in this age group. Older adults need to be educated about the benefits of screening tests and the risks of not participating in these tests. Moreover, an important guiding

question for all older adults prior to testing should be whether or not they would pursue further treatment if abnormal findings were noted.

With age there was a decrease in exercise activity, with less than half of those in the old-old age group performing regular aerobic activities. The most common reasons for not exercising included pain and/or a decline in ability and laziness. Exercise has been demonstrated to prevent disease and decrease cardiovascular risk factors (Ettinger et al., 1994), improve muscle strength (Bravo et al., 1996; Jette et al., 1996; Larson & Bruce, 1996) and function (Przybylski et al., 1996), and, most importantly, increase quality of life (Okumura et al., 1996). Although the old and old-old residents in this study indicated that they did not want to prolong life, participation in an exercise program should be strongly encouraged in these older adults, as exercise can help to maintain functional well-being and thereby improve quality rather than life quantity. Exploring pain and using interventions to increase motivation to participate in exercise (Resnick, 1998) can help to encourage exercise activities, and can help these individuals remain at their highest functional level.

The use of alcohol in this sample was consistent with what has been reported to be the rate of use in older adults living in the community, and particularly those who live in retirement or life-care facilities (Adams, 1996). Responses from residents supported the prior belief that alcohol use within a life-care community was an important social activity (Adams, 1996). Residents expressed concern that if they did not have a drink, they would no longer be invited to parties or pre-dinner gatherings. These social activities had an important impact on quality of life.

Moderate alcohol use has been reported to have a protective effect on heart disease and to increase high-density lipoprotein (HDL) cholesterol (Gaziano et al., 1993; Klatsky, Armstrong, & Friedman, 1992). This cardiovascular risk reduction was especially true for adults above the age of 50. Generally, health care providers encourage the older adult to abstain from alcohol use due to the risk of drug-drug interactions and the increased risk of falls and fractures. While these risks need to be taken into consideration, the positive effects of moderate alcohol use for the older adult also must be recognized.

The prevalence of smoking in this sample of older adults was less than is commonly reported in the general population (Gilles & Greene, 1996). Interestingly, the old-old group had the largest percentage of smokers. These older adults, who have survived into their 90s smoking, may not see the advantage to smoking cessation, which would most likely only offer them increased longevity. Counseling to reduce nicotine use

to a minimum may be more appropriate than working toward complete cessation of smoking in this group of individuals.

CONCLUSION

The older adults in this study demonstrated a relatively high compliance with preventive health behaviors. Consistent with previous reports of older adults living in life-care communities, 50% regularly used alcohol and a small percentage (11%) used nicotine. It is likely that the overall positive health behavior of this group of older adults was due to their education, socioeconomic status, and easy access to health care within their own living environment.

Despite this overall compliance with health promotion activities, there was a decline in these behaviors in the old and old-old age groups. The old and old-old individuals indicated that they had lived a sufficient period of time and were no longer interested in disease prevention and prolongation of life. Consequently, for this group, it may be more appropriate to focus health teaching and health promotion on exercise activities and moderate use of alcohol and nicotine, rather than aggressively restricting fat and cholesterol intake, and encouraging routine cancer screening. Health care providers should consider an individualized approach to health promotion for old and old-old adults, with a strong focus on quality rather than quantity of life.

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CNN Today

Researchers Find Promising Lead in Search for Cancer Cure

Aired July 29, 1999 - 1:20 p.m. ET

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NATALIE ALLEN, CNN ANCHOR: Scientists have a promising new lead in the quest for drugs that turn cancerous cells healthy again. The break through happened at MIT where, for the first time ever, researchers turned a healthy cell cancerous by tinkering with specific genes. Genetic defects have long been known to cause various cancers but until scientists haven't known which defects cause which diseases or which drugs work on which gene.

Joining us now with some insight into this new development is CNN medical correspondent Dr. Steve Salvatore.

Hello, Steve.

DR. STEVE SALVATORE, CNN MEDICAL CORRESPONDENT: Hi, how are you doing?

ALLEN: Good, thanks.

Well, how exactly might this help scientist come up with treatment for cancer patients.

SALVATORE: Well, this is pretty exciting because once researchers can nail down which genetic changes take place inside the cell and can then nail down the right molecular pathways that cause healthy cells to become cancerous, that can give them specific treatments that work directly at the core of where the problem is. This provides a targeted approach as opposed to some of the more shotgun approaches that we have today with chemotherapy and radiation where both healthy cells and cancer cells are destroyed. Also, there are a lot of side effects with those treatments so doctors are pretty excited about this discovery.

ALLEN: So, it begs the question: Could this mean that a cure is near?

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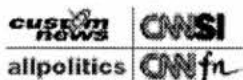
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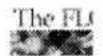
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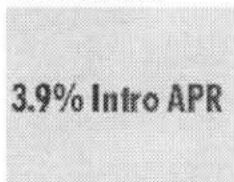
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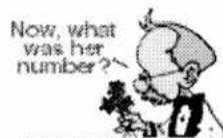
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SALVATORE: Well, Natalie, really the researchers caution that this is not a cure. But, they are very excited because this is a great beginning. There is still a lot of learn about how these healthy cells do get converted to cancer cells and they also remind us that this research is still in the laboratory phases. But, they are beginning to scratch the surface, they are beginning to get a better idea and that's very exciting.

ALLEN: Dr. Steve Salvatore in New York today. Thanks for joining us, Steve.

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CANCER FACTS & FIGURES-1997



Estimated number of new cancer cases in 1997 by state, total: 1,382,400 (excluding Puerto Rico).
 Estimates for Puerto Rico are based on 1990-1991 data from the Central Cancer Registry of Puerto Rico.

*Excluding basal and squamous cell skin cancer and carcinoma in situ except bladder.

File Cancer Research

Richard Nixon, 1971

Dec. 23 [408]

se at an annual rate of
recent in the fourth quar-
pared to 4 percent in the
d 5 percent in the second
July, employment has
1 million, and more jobs
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ising and businesses are
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ent during the next 6
of the favorable economic

efforts are designed to
prosperity in peacetime for
tension of the Economic
assures that we will not
neutralized—as so often
the forces of inflation.

confidently say that 1971
st encouraging economic
1972 will begin as a year
c promise.

the bill (S. 2891) is Public
at. 743).

s Prescribing
ises.

ovides that pay of mili-
ial be increased auto-
r adjustments are made
for Federal civilian em-
the basic statutory sys-
I have also signed an
[1638] which will grant
uses in pay for military
ncreases are in addition
s provided for military
e Selective Service Act
September.

In connection with this action, a ques-
tion has arisen as to whether Federal civil-
ian employees and military personnel will
be entitled to a second pay increase in
October 1972, unless I submit to the Con-
gress, as I did last August, an alternative
plan postponing or otherwise modifying
the raises that would be prescribed by the
machinery established by the Pay Com-
parability Act. Therefore, I believe it is
appropriate for me to state my under-
standing of the law at this time.

The purpose of section 3 of the Sta-
bilization Act Amendments was to provide
equal treatment for Federal employees
and military personnel as compared with

employees in the private sector who are
subject to the Phase 2 pay guidelines. The
raises I am implementing today do pre-
cisely that. Should a second raise be
granted next October, Federal employees
and military personnel would be receiving
preferential treatment—raises in excess of
the Phase 2 guidelines. That would be
plainly inconsistent with the overall in-
tention of the Congress, which is to relate
Federal pay to the guidelines of the Pay
Board.

Therefore I am authorizing an annual
increase consistent with these guidelines,
interpreting the law to mean there will be
no automatic October adjustment.

408 Remarks on Signing the National Cancer Act of 1971. December 23, 1971

*Members of the Senate, Members of the
House, ladies and gentlemen:*

We are here today for the purpose of
signing the cancer act of 1971. I hope that
in the years ahead that we may look back
on this day and this action as being the
most significant action taken during this
Administration. It could be, because when
we consider what cancer does each year
in the United States, we find that more
people each year die of cancer in the
United States than all the Americans who
lost their lives in World War II.

This shows us what is at stake. It tells
us why I sent a message to the Congress
the first of this year, which provided for a
national commitment for the conquest of
cancer, to attempt to find a cure.

Now, with the cooperation of the Con-
gress, with the cooperation of many of the
people in this room, we have set up a
procedure for the purpose of making a
total national commitment. I am not go-

ing to go into the details of that procedure,
except to say this: As a result of what has
been done, as a result of the action which
will come into being as a result of signing
this bill, the Congress is totally com-
mitted to provide the funds that are nec-
essary, whatever is necessary, for the con-
quest of cancer. The President is totally
committed—we have a Presidential panel
headed by Benno Schmidt, which will re-
port directly to the President so that the
President's influence, whenever necessary,
can be used to reach this great goal.

And, in addition to that, all of the agen-
cies of government, the National Institutes
of Health, HEW, et cetera, are totally
committed.

Now, having said that, I have spoken
exclusively of government up to this point.
In this room are scores of people who have
worked voluntarily for this cause for
many, many years. The American Cancer
Society, of course, is the best known or-

ganization, but there are many others as well.

In saying that there will be a Presidential commitment, in saying that there will be a Congressional commitment, a government commitment, I should emphasize that a total national commitment means more than government. It means all the voluntary activities must also continue. We have to realize that only one-sixth of everything that is produced in America is produced by what government does. Five-sixths of what we do in America is produced by what people do in their voluntary and cooperative capacities.

So, we need the continued cooperation of all the volunteer organizations. You will have, of course, the total commitment of government, and that is what the signing of this bill now does.

Finally I should emphasize, as Benno Schmidt mentioned just a moment ago, that we would not want to raise false hopes by simply the signing of an act, but we can say this: That for those who have cancer and who are looking for success in this field, they at least can have the assurance that everything that can be done by government, everything that can be done by voluntary agencies in this great, powerful, rich country, now will be done and that will give some hope, and we hope those hopes will not be disappointed.

409 Statement About the National Cancer Act of 1971. December 23, 1971

HOPE and comfort, the relief of suffering and the affirmation of life itself—these are qualities which have traditionally been associated with the Christmas

Now, ladies and gentlemen, for those of you who have not participated in signing ceremonies—and that, of course, does not include the Members of the House and Senate who are here; I see that many of them have been here previously—the custom is always to sign with the Presidential pen. I will use two pens for the signature, but a souvenir pen will be available to everybody in the audience here. We had to stretch a little to find that many, but we did it.

Incidentally, it is a very good pen, but the box is worth more than the pen.

[At this point, President Nixon signed the act. He then resumed speaking.]

Benno, you get the "Richard." Dr. Letton, if you will step forward—the president of the American Cancer Society—you get the last name.

NOTE: The President spoke at 12 noon in the State Dining Room at the White House.

Dr. A. Hamblin Letton's response is printed in the Weekly Compilation of Presidential Documents (vol. 7, p. 1711).

As enacted, the bill (S. 1828) is Public Law 92-218 (85 Stat. 778).

On the same day, the White House released an announcement of the signing and a fact sheet on the provisions of the act.

An announcement of the appointment of Benno C. Schmidt as Chairman of the President's Cancer Panel was also released on December 23, 1971, and is printed in the Weekly Compilation of Presidential Documents (vol. 7, p. 1712).

season. There could be no more appropriate time than this to sign into law the National Cancer Act of 1971. For this legislation—perhaps more than any legis-

lation I have signed United States—can comfort in the years people in this country.

The enactment of minates a yearlong of unprecedented attack a for such a program Union Message in expanded on that case to the Congress February 18. Early in the Congress very special cancer cure program are reflected in all the legislation I have

The effort to national campaign continued to make sign those proposals were the most important by the Congress of million I requested expanded attack on \$100 million, when appropriation for the national cancer program level of \$337.5 million only \$180 million fiscal year 1972. Anponent in our campaign in October when I bacteriological war ties at Fort Detrick, converted into a leukemia research.

Now this year of all-out assault on cancer with the signing of Act. The new program which this legislation able us to mobilize both our human

lation I have signed as President of the United States—can mean new hope and comfort in the years ahead for millions of people in this country and around the world.

The enactment of this legislation culminates a yearlong effort to launch an unprecedented attack against cancer. I called for such a program in my State of the Union Message in January 1971, and I expanded on that call in my special message to the Congress concerning health on February 18. Early in May, I submitted to the Congress very specific proposals for a cancer cure program—proposals which are reflected in all important respects in the legislation I have signed today.

The effort to mobilize a concerted national campaign against cancer has continued to make significant progress since those proposals were submitted. One of the most important steps was the approval by the Congress of the additional \$100 million I requested to support an expanded attack on cancer. This additional \$100 million, when added to the regular appropriation for this fiscal year, gives the national cancer program a current operating level of \$337.5 million, compared to only \$180 million during the first half of fiscal year 1972. Another important component in our campaign was put in place in October when I announced that the bacteriological warfare research facilities at Fort Detrick, Maryland, would be converted into a leading center for cancer research.

Now this year of preparation for an all-out assault on cancer comes to a climax with the signing of the National Cancer Act. The new organizational structure which this legislation establishes will enable us to mobilize far more effectively both our human and our financial re-

sources in the fight against this dread disease.

I appreciate deeply the months of hard and careful effort which so many Members of the Congress gave to this cause. I am especially pleased that the new national cancer program incorporates the basic recommendations I made last May. It allows the President to appoint the Director of the National Cancer Institute and provides that the budget of the National Cancer Institute be submitted directly to the President. It creates a 3-member President's Cancer Panel to monitor its development and execution on a regular basis and a 23-member National Cancer Advisory Board to offer general guidance. Both of these groups are to be appointed by the President and will report directly to him. The important result of all these provisions is to place the full weight of the Presidency behind the national cancer program. As I recommended in May, the President will be able to take personal command of the Federal effort to conquer cancer so that its activities need not be stymied by the familiar dangers of bureaucracy and redtape.

Having asked for this authority—and this responsibility—I now pledge to exercise it to the fullest. Biomedical research is, of course, a notoriously uncertain enterprise, and its rate of progress cannot be predicted with confidence. But I can say with the greatest confidence that there will be no uncertainty about the Government's role in this effort. I am determined that the Federal will and Federal resources will be committed as effectively as possible to the campaign against cancer and that nothing will be allowed to compromise that commitment.

I make this statement with even greater confidence knowing that Benno C.

Schmidt has accepted my invitation to become the first Chairman of the President's Cancer Panel. As chairman of the National Panel of Consultants on the Conquest of Cancer, Mr. Schmidt has played an active role in the development and enactment of the National Cancer Act. He is an effective leader of men and a dedicated community servant. The Nation is fortunate that he will be heading this important panel in its critical first year.

Even as the plans for our national cancer program were being completed in the past few months, other developments have continued to fuel our hopes for further substantial progress in discovering the causes and cures of cancer. Scientists in all parts of the world have continued to contribute important new findings to the growing pool of knowledge about this disease. There continues to be every reason for believing that cancer research, of all of our research endeavors, may be in the best position to benefit from a new application of human and financial resources.

This is the case, however, only because so many men and women have already given so much to the battle against cancer in the past. Their energies and talents and sacrifices have built the foundations on which all future progress must rest.

As we plan for future progress, we should also remember that the expansion

of the Federal campaign against cancer in no way diminishes the continuing importance of private and voluntary activities. It is essential, for example, that an organization such as the American Cancer Society—which has raised so much money for this cause and which has done so much to promote research and education in this field—continue to play its full effective role. The new national cancer program must not replace our present efforts to fight cancer; it must supplement them and build on them.

As this year comes to an end, cancer remains one of mankind's deadliest and most elusive enemies. Each year it takes more lives in this country alone than we lost in battle in all of World War II. Its long shadow of fear darkens every corner of the earth. But just as cancer represents a grim threat to men and women and children in all parts of the world, so the launching of our great crusade against cancer should be a cause for new hope among people everywhere.

With the enactment of the National Cancer Act, the major components for our campaign against cancer are in place and ready to move forward. I am particularly happy that the year 1971—at the beginning of which I issued my call for a new campaign against cancer—can end with the signing of this landmark legislation.

410 Christmas Message. *December 23, 1971*

CHRISTMAS is a season of joy and of love, and also a time for reflection.

We think, in this season, of those who are closest to our hearts, even though they may be far away in miles. We pause to give special thought to those in need, and

to the universal bonds that link all mankind in brotherhood under God. In doing so, we touch something basic and good in the human spirit: that special grace that makes this a time of giving, and of forgiving—a time of goodwill,

when we know the truth in the heart.

As we work toward let us do so both inspired by this peace in the

As we give to one another of Christmas, let us give one of the lessons of

411 Christmas *December*

AS WE move into this to the ideals of humanity the first time in man can see a day when it come a reality. We seek of peace for America.

Because we have ties of war, we know it. But at this time of the cially conscious that a practical necessity imperative.

We are equally concerned of peace—like the eternal vigilance. In

412 Informal President *December*

Q. Mr. President, h
THE PRESIDENT. C

Q. You know, wh
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to come to the hospit:

THE PRESIDENT. I
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alance. Don't let the
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ng on in this country
of this country. It is

that that I would suggest to the editors
and the other opinionmakers here: that
from time to time, maybe once a month,
that message might come through.

NOTE: The President spoke at 2:56 p.m. in the
Holiday Inn.

On the same day, the White House released
a list of participants at the briefing.

223 Statement on the Death of Louis Armstrong. July 6, 1971

MRS. NIXON and I share the sorrow of
millions of Americans at the death of
Louis Armstrong. One of the architects
of an American art form, a free and in-
dividual spirit, and an artist of worldwide
fame, his great talents and magnificent
spirit added richness and pleasure to all
our lives.

NOTE: Mr. Armstrong, 71, died of a heart
attack in his home in Corona, Queens, N.Y.
He achieved worldwide fame as a jazz musi-
cian and trumpet player.

The statement was made available to the
press on board Air Force One en route to San
Clemente, Calif.

On July 9, 1971, Leonard Garment, Special
Consultant to the President, represented the
President at funeral services in New York City.

224 Statement Following Senate Approval of the Conquest of Cancer Bill. July 7, 1971

THE SENATE deserves the thanks of all
Americans for its prompt bipartisan ac-
tion today in passing the conquest of can-
cer act introduced by Senator Dominick
and cosponsored by 67 Senators of both
parties. This measure represents an im-
portant part of the "total national com-
mitment" to an intensive campaign to
find a cure for cancer that I called for in
my State of the Union Message and in
my special message to the Congress on a
national health strategy. Another essen-
tial part of that commitment was the
additional \$100 million I asked for cancer
research. The Congress has already met
that request, and I signed the bill on
May 25.

But money alone will not be enough.
The way we organize our work in this
field is also extremely important. It was
for that reason that on May 11, I pro-
posed legislation to establish the cancer
cure program that would be independ-
ently budgeted, with its Director respon-
sible directly to the President.

Now that the Senate has acted on this
program, I urge prompt agreement by
the House of Representatives so that we
can swiftly lengthen our strides against
the dreaded ravages of cancer, bringing
new hope to all Americans—and indeed
bringing new hope to the world.

NOTE: The statement was released at San
Clemente, Calif.



For further information:

ALCASE

360.696.2436

800.298.2436

info@alcas.org

Lung Cancer Fact Sheet

- In 1999, over 171,500 Americans will be diagnosed with lung cancer. Over 160,000 Americans will die from lung cancer.
- Lung cancer receives far less research funding than other cancers. In 1998, the National Cancer Institute estimates that it will spend only \$231 per lung cancer death compared to \$7,895 per breast cancer death, and \$2,283 per prostate cancer death.
- Lung cancer kills more men each year than prostate cancer. Lung cancer kills more women each year than breast cancer. Every three minutes a new person is diagnosed with lung cancer...18 will die each hour.
- Approximately 85% of people are not diagnosed with lung cancer until they are in the late stages of the disease. If diagnosed early approximately 50% of people achieve 5-year survival or longer.
- Tobacco addiction is the number one cause of lung cancer. In addition, tobacco addiction is responsible for many other premature deaths.
- More than 50% of people newly diagnosed with lung cancer are former smokers and 14% are never-smokers.
- Although smoking cessation reduces the risk of lung cancer, former smokers always remain at significantly higher risk than those who have never smoked.
- More people die each year from lung cancer than from breast, prostate, and colon cancer combined.
- New treatment modalities and recent technical advances are increasing cure and survival rates as well as increasing quality of life for people with lung cancer.

Date: _____

FAX



Health Division



Office of Management and Budget
Executive Office of the President
Washington, DC 20503

To: Anna Richter
Fax:

From: Greg White 57791

Number of Pages (excluding cover):

Subject: Description of the CCT
policy from the FY 2000 Budget.

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Health Division (Front Office)	202/395-4922
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Health Financing Branch	202/395-4930

Fax Numbers:

Health Division (Front Office)	202/395-3910
Health Division (Room 7001)	202/395-7840
Health Division (Room 7002)	202/395-5648

202
833 3472 :
FAX



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF DOMESTIC POLICY COUNCIL

FACSIMILE FROM: SARAH BIANCHI'S OFFICE (Anna Richter)
OLD EXECUTIVE OFFICE BUILDING, ROOM 224
WASHINGTON, DC 20050

VOICE: (202)456-5585 FAX: (202)456-5557

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TO: Carrie Elmo

VOICE: 202 223-8224

FAX: 202 833-3472

☐ FOR YOUR REVIEW
☐ PER MY E-MAIL OR VOICE-MAIL MESSAGE TO YOU
☒ PER YOUR REQUEST

COMMENTS:

BUDGET



BUDGET OF THE UNITED STATES GOVERNMENT

Fiscal Year 2000

JEFF FARKAS

-
- **Establishing Medicare cancer clinical trial demonstration:** The budget gives more Americans access to these cutting-edge cancer treatments and encourages higher participation in clinical trials by establishing a three-year, \$750 million demonstration program. Medicare beneficiaries who participate in certain cancer clinical trials will be covered for the patient care costs for those trials. Funding priority will be given to trials that would most assist the Health Care Financing Administration (HCFA) in making future coverage policy decisions for cancer-related treatments and to substantive trials designed to address specific research questions. Although HCFA would run the demonstration, it would not draw upon Medicare's trust funds.
 - **Ensuring access to powerful AIDS therapies and improving quality of care through Ryan White HIV/AIDS Treatment Grants:** The budget proposes a \$100 million increase in Ryan White treatment grants to help States provide AIDS treatment, especially the powerful "combination therapy" AIDS drugs through the AIDS Drug Assistance Program. In total, the budget proposes \$1.5 billion in Federal spending for activities authorized by the Ryan White CARE Act, a seven-percent increase over 1999 levels and a 291-percent increase over comparable 1998 levels.
 - **Helping to reduce racial disparities in health status:** Despite improvements in the Nation's overall health, continuing disparities remain in the burden of death and illness that certain minority groups experience. For example, the infant mortality rate for African-Americans is more than twice that of Caucasians. American Indian and Alaska Natives are about three times as likely to die from diabetes as other Americans. To address these and other disparities, the budget includes \$135 million for health education, prevention, and treatment services for minority populations. The budget also proposes to provide an additional \$50 million to address HIV and AIDS issues in minority communities.

- **Providing quality health care to Native Americans:** The budget proposes a four-pronged funding strategy for the Indian Health Service (IHS), which includes: 1) increased resources; 2) a coordinated effort to ensure that HHS health grants provide assistance to Native Americans; 3) review of reimbursements from Medicaid and Medicare; and 4) increased vigilance to ensure that Federal funds are used properly.

The budget proposes a \$170 million increase for IHS. This eight-percent increase will allow IHS to finance an additional 34,000 breast cancer screening mammographies for Native American women between ages 50 and 69, create 44 new dental unit teams to provide an additional 25,000 dental visits, reduce incidence of complications related to chronic diseases such as diabetes and enable approximately 130 new community-based public health nurses to provide outreach activities, including home visitations, well-child examinations, immunizations, prenatal care, health fairs, follow-up visits, and missed clinical appointments. The budget also supports the continuation of the construction of two health care facilities (Fort Defiance and Parker Health Clinic). From 1998 to 2000, IHS expects to collect an additional \$82 million in reimbursements due to Medicaid and Medicare collection rate increases.

- **Increasing Federal support for improving the mental health of all Americans:** The budget provides a \$5 million, 19-percent, increase for the Projects for Assistance in Transition from Homelessness (PATH) program, which provides much-needed supportive services to persons with a mental illness who are homeless. In addition to increasing funding for this vulnerable population, the budget provides a \$70 million, or 24-percent, increase for the Mental Health Block Grant, which provides integral support to States for services for people with mental illness.
- **Expanding anti-substance abuse activities:** The budget includes an \$85 million increase for anti-substance abuse activities. These new funds continue the Administration's commitment to expand substance

STATEMENT FROM DR. HAROLD VARMUS, NIH DIRECTOR
March 6, 1997

As I have said on many occasions, I fully support the President's ban on federal support for human cloning, his appeal for a voluntary moratorium by the private sector, and the review he has requested by the National Bioethics Advisory Board (NBAC). In my comments at yesterday's House hearing,* I said that I hoped imminent legislation on cloning would be held off while the President's NBAC hears public testimony and deliberates about the matter.

At yesterday's hearing, I explicated the broad range of possible applications for cloning--in animals and humans. Among them was application of cloning techniques in such cases as untreatable infertility. This possible application is one that would likely be brought to the NBAC for consideration at its public hearings. I feel strongly that public discussions on all aspects of human cloning are important and that the NBAC is the right forum for that.

* House Science Subcommittee on Technology.



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SERVICES, INC.

501 Holiday Drive
Pittsburgh, PA 15220-2749
412-921-1929

Fax: 412-921-6565
E-mail: oes@ons.org
<http://www.oesweb.com>

1-888-OES-RSVP

June 7, 1999

Sara Bianci
1600 Pennsylvania Avenue, NW
Washington, DC 20015

Dear Sara ,

Enclosed for your review is the background information provided to the Ambassadors in preparation for the summer training program.

We have explained that this training session will utilize lung cancer as a media model to address the supportive care issues of pain, nutrition and fatigue. This model will help to illustrate the approaches (e.g. specific tumor type) that can be used to incorporate supportive care issues in your media messages.

In addition, The Ambassadors were requested to become familiar with any current research and articles on lung cancer and supportive care in clinical journals, and lay media (TV, magazines, and local newspapers).

If you have any questions regarding the training program, please feel free to call me at 412/921-1929. I look forward to seeing you in Washington, DC!

Sincerely,

Angela D. Gorn, BA
Project Manager

Attachments