Consider a Career in Cancer

Speaker
Venue
Organization
Date
What Do You Enjoy?

Making a difference in people’s lives?

Consider a career in cancer.
What Do You Enjoy?

Solving problems and challenges?

Consider a career in cancer
What Do You Enjoy?

Working as part of a team?
Working independently?
What Do You Enjoy?
Work that means something to others and to yourself?

Consider a career in cancer
Would you like to help people when they need help the most?

Consider a career in cancer
Consider joining the team fighting our nation’s most deadly health problem.
Be the generation that conquers cancer

Consider a career in cancer
CONSIDER THE PROBLEM

CANCER

Now the leading killer of Americans under age 85

570,000+ deaths in 2005
(171,000+ will be tobacco related)

1,372,000+ new cases

CONSIDER THE PROBLEM

1 in 2 Men
1 in 3 Women
Age 50+ will develop cancer

CONSIDER THE PROBLEM

75 percent
Have been touched by cancer in the family

88 percent
Know someone with cancer
CONSIDER THE GOOD NEWS

Up to 70 percent of all cancers are preventable

Five Year Cancer Survival Rate: 63 percent (all cancers combined)

10 Million+
Cancer survivors today

Lance Armstrong
Champion + Cancer Survivor
Consider Your Options

Would you like to have in your career...

Many meaningful job choices?
Dynamic and diverse work?

Consider a career in cancer
Would you like to have in your career...

Deep Personal Satisfaction?

Knowledge that you are making a difference?

A chance to touch the lives of millions?
Would you like to have in your career...

A variety of career choices and paths?

Limitless career growth?

Consider a career in cancer
Consider Your Options

Economic Considerations

Financial Aid
Growing current and future needs
Job opportunities
Job security
Flexibility

Earning potential
$35,000 – $200,000+
Consider Your Options
Opportunities Abound
In Prevention & Control

Tobacco
Obesity
Sun exposure
Environmental toxins
Research
Health Policy

Consider a career in cancer
Consider Your Options
Opportunities Abound
In Detection

Mammography
Blood tests
X-rays, Ultrasound, CT Scan
Biopsy
Molecular science
Mathematical modeling
Information technology

Consider a career in cancer
Consider Your Options
Opportunities Abound
In Treatment

- Surgery
- Radiation therapy
- Chemotherapy
- Clinical trials/Research
- Pain management
- Nutrition counseling
- Emotional counseling

Consider a career in cancer
Consider Your Options
For Whom You Will Work

Private Companies
Businesses and Industry
Public Agencies/Organizations
Not-For-Profit Organizations

Consider a career in cancer
Consider Your Options
Where You Will Work

Bedside/Directly with patients and families

Nurse
Physician
Pharmacist
Radiology Technologist
Radiation Technologist
Nutritionist
Educator
Advocate
Patient Navigator
Social Worker
Consider Your Options
Where You Will Work

In the Laboratory

Research Scientist
Oncologic Pathologist
Medical/Lab Technologist

Consider a career in cancer
Consider Your Options
Where You Will Work
In the Community
Nurse
Social Worker
Pharmacist
Health Educator
Advocate
Inter-cultural Expert
Consider Your Options

Where You Will Work

In the Office/Computer Center

Cancer Registrar
Information Technologist
Patient Advocate
Data Manager
Health Policy Planner/Expert
Executive/Administrator
Consider a Career in Cancer

Nursing
Medicine
Social Work
Public Health
Research
Pharmacology
Cancer Registration
In high school, my boyfriend’s father died of lung cancer. It was hard for his dad and his family because there were not many medications then to ease the pain or provide care at home.

Being a nurse lets me stay close to my passion for family care-giving. As an oncology nurse, you are always contributing to improved care. What a good feeling to know I can be right there and make a difference that means so much to others. Fortunately, now we can better manage pain and make our patients more comfortable.
Consider a Career in Cancer Nursing

Benefits of becoming a nurse

Giving direct care to patients and families
Applying knowledge of biological and social sciences
Advocating for patients and families
Being a part of the healthcare team
Making a difference in individual lives on a daily basis
Educational Pathway

Education for Registered Nurse (RN) License
- Associate Degree (2 yrs)
- Bachelors Degrees (4 yrs)
- Accelerated Bachelors with degree in another field (1+ yrs)

Advanced Degrees
- Masters (2 yrs)
- Doctorate (3 yrs)
Consider a Career in Cancer Nursing

Endless Variety
Inpatient, Outpatient
Prevention, Detection, Treatment
Private, Public, Non-profit
Adults, Children
Home Care, Hospice
Research, Education
Part-time, Full-time
Licensed Independent Practitioner
Consider a Career in Cancer Nursing

Universal Opportunity

Hospitals
Cancer Centers
Hospice Agencies
Public Health Agencies
Patient Advocacy Groups
Pharmaceutical & Biotech Companies
Military
Consider a Career in Cancer Nursing

A Rewarding Career

Beyond great satisfaction from working with patients and families, nurses today can earn a substantial income.

- Staff nurse (avg. all settings) $35,000
- Clinical Nurse Specialist $40,000
- Supervisors $43,000
- Nurse Practitioners $70,000
- Nurse Anesthetists $115,000
- Senior Nurse Executives $200,000±

Source: American Nurses Association
I always liked my science classes. Then, when my mother was diagnosed with cancer, I spent a lot of time at the hospital and saw how much the doctors and others could help because of their scientific training.

It took a big commitment to go to school for eleven years after high school. But I learned so much, and now I can help a lot. I enjoy applying my science knowledge and figuring out what exactly is wrong with my patient. And then I get to plan how to solve their illness and see that the plan gets done with the help of the care team.

When you can give someone hope and then help them conquer cancer, the feeling you get is indescribable and makes the years of schooling and training all worth it.

I am sure the doctor who cared for my mother felt the same way.
Consider a Career in Cancer Medicine

Benefits of becoming a physician

- Ability to prevent illness and cure disease
- Opportunity to participate in direct patient care, research, education, leadership
- Continuous learning
- Personal relationships

Consider a career in cancer
Consider a Career in Cancer Medicine

Educational Pathway

Bachelors Degree (4 years) and Doctorate in Medicine, with additional degrees or training. Minimum of 11 years of education after high school, including the Bachelors Degree.

Fields of Emphasis
- Primary Care
- Oncology/Hematology
- Radiology
- Radiation Oncology
- Pathology
- Surgery
- Gynecologic Oncology
- Research
- Public Health
- Biomedical Engineering
- Information Technology & Education
Consider a Career in Cancer Medicine

Endless Variety
Inpatient, Outpatient
Prevention, Control
Detection, Treatment
Private, Public, Non-profit
Adults, Children
Education, Research, Advocacy
Cultural Diversity
Consider a Career in Cancer Medicine

Universal Need
- Hospitals
- Medical Schools
- Cancer Centers
- Public Health Agencies
- Patient Advocacy Groups
Consider a Career in Cancer Medicine

Cancer Specialties
Medical Oncology
Hematology
Radiation Oncology
Surgical Oncology
Gynecologic Oncology
Health care problems like cancer have complications way beyond the physical illness. I enjoy helping people cope with these other issues. I enable people to get along the best they can in their world, which can be turned upside down by their condition.

I help them with everything from housing issues, to lost jobs or having to change what they can do for work, to transportation, and so much more. I really get to know my patients and feel so good helping them. They really appreciate me.
Consider a Career in Cancer
Social Work

Benefits of becoming a social worker

Provide support and counseling to help them cope with illnesses

Work directly with the patient, family and caregivers to help them manage cancer

Use expertise in psychosocial science, community services, & financial resources

One of the fastest growing careers in U.S.
Consider a Career in Cancer
Social Work

Educational Pathway

Bachelors of Social Work (BSW) minimum requirement (4 years)

Masters (MSW) (2 years) usually required in healthcare setting

Licensing, registration, or certification is required by all states
Consider a Career in Cancer Social Work

Endless Variety

- Inpatient, Outpatient
- Prevention, Detection, Treatment
- Private, Public, Non-profit
- Adults, Children
- Home care, Hospice
- Education
- Part-time, Full-time
Consider a Career in Cancer Social Work

Universal Need
- Hospitals
- Cancer Centers
- Hospice Agencies
- Public Health Agencies
- Patient Advocacy Groups
- Community Agencies
Consider a Career in Cancer
Public Health

Most people don’t realize it, but public health has had more to do with keeping them healthy and safe than any other field. You name it—water, food, transportation, hazardous waste, aging, substance abuse, and so much more—all involve public health experts.

I am focusing on cancer by developing programs so women in medically underserved populations get breast cancer screening. We know that if we catch the disease early, we can conquer it, saving lives and suffering. Everyone deserves that chance.
Benefits of becoming a public health scientist

Identifying and solving health problems in communities locally and worldwide

Making a difference by focusing on prevention, early detection, & health promotion

Developing strategic alliances with public health authorities, professional associations, health professionals and community groups
Consider a Career in Cancer Public Health

Educational Pathway

- Bachelors Degree (4 years)
- Masters in Public Health (2 years)
- Doctorate (4 years)

Often combined with other degrees (MD, RN)
Consider a Career in Cancer Public Health

Fields of Emphasis
- Epidemiology
- Biostatistics
- Health education
- Environmental health
- Disease prevention
- Health administration
- Community health sciences
- Surveillance
Consider a Career in Cancer
Public Health

**Current Trends in Public Health**

Employment projected to grow more than any other major occupation group between 2002-2012

Major advances will come from population-based prevention programs

Healthcare is increasing emphasis on health promotion and disease prevention to improve health and reduce costs
Consider a Career in Cancer Research

My work is a combination of movie making and detective work. All my projects begin with me saying to myself, “I wonder if”, or, “Imagine if.” Every new drug, new piece of equipment, or other medical advance starts out imagining a new world.

Then you get to do the science and apply rigorous methods to test if your vision can be made a reality.

It is exciting to come to the lab or office everyday to take another step closer to an answer. Even if your theory does not prove out, and you are disappointed, you have made progress. Even your misses help you or someone else come closer to the truth. Building that new world is exhilarating and so rewarding, especially when you know it will save lives or add quality to life.
Consider a Career in Cancer Research

Benefits of becoming a cancer researcher

Contributing to the advancement of science, creating new knowledge

Applying science to improve the quantity and quality of life

Giving hope to patients and families by making new treatments available to them and helping conquer the nation’s most deadly disease
Consider a Career in Cancer Research

Educational Pathway

Bachelors of Science (4 years)  
Masters (2 years)  
Doctorate (PhD or other/3years+)

Biology  Pharmacology  
Genetics  Toxicology  
Biochemistry  Epidemiology  
Pathology  Mathematics  
Molecular Biology  Computer Science  
Microbiology  Engineering  
Immunology
Consider a Career in Cancer Research

Fields for Discovery

- New Knowledge of Cancer Risks
- New Ways of Detecting Cancer Sooner, More Effectively
- New Drugs Therapies
- New Treatments
- New Procedures
Consider a Career in Cancer Research

Universal Need

Hospitals
Cancer Centers
Research Centers
Pharmaceutical & Biotech Companies
National Cancer Institute
Public Health Agencies
I work in a hospital pharmacy. I specialize in making the IV admixtures, or chemotherapy, for cancer patients. Whether it is a large or small batch, I must assure proper stability and dilution. I must be precise in what I do.

On occasion, I work directly with patients, and I can see the appreciation on their face. They, like the nurses, count on me to get the right drug and that it won’t react with other medications they are taking. I love the challenge, especially since new and better drugs and other treatments are always coming out.
Consider a Career in Cancer Pharmacology

Benefits of becoming a pharmacist

- Vital part of the healthcare team
- Provides advice to other healthcare professionals on medicines
- Opportunities to educate patients
- Excellent earning potential
- Outstanding career opportunities
- Trusted profession
Consider a Career in Cancer Pharmacology

**Educational Pathway**

A Doctorate in Pharmacy is required for licensure (as of Spring 2004)

Includes 2 years of undergraduate work (min.), followed by 4 academic years of pharmacy study
Consider a Career in Cancer Pharmacology

Growing Significance and Need

Serves in all areas of healthcare, from neighborhood to cutting-edge research

Explosion in new drug discoveries

Hospital pharmacist demand is expected to continue growing

Numerous career options

Academic institutions
Pharmaceutical industry
Hospitals & community/retail pharmacies
State and Federal Government, Military
I learned early on that I wanted to work in healthcare and help people but I did not like being at the “bedside.”

Being a Cancer Registrar, I get to help reduce the problem overall. We take all the information gained at the “bedside” and analyze the medical records to find patterns and clues to what the problem really is or what works or not.

We are like “CSI” detectives tracking down even little bits of information and being very precise in keeping track of them. Plus, I love working with computers to help put the pieces of the puzzle together.
Benefits of becoming a cancer registrar

Collects data to report cancer statistics for various healthcare organizations

Works closely with healthcare team to support cancer program development

Analyzes clinical cancer information for education, research, and outcome measurement

Monitors quality of care and practice guidelines
Consider a Career in Cancer

Cancer Registration

Educational Pathway

High school diploma plus 2 years experience in Medical Records

Bachelors Degree (4 years)

Additional degrees preferred
Consider a Career in Cancer
Cancer Registration

Trends in Health Information Management

Cancer diagnosis & treatment
Anatomy, Physiology
Biostatistics, Epidemiology
Cancer data abstracting
Medical terminology
Database record management
Cancer registry procedures
Certification
Additional Career Paths

**Clinical laboratory technician** - clinical laboratory testing plays a crucial role in the detection, diagnosis and treatment of disease. Clinical laboratory technicians help perform these tests by analyzing body fluids, tissues, cells and other specimens.

**Dietetics and Nutrition** - participates as a member of the health-care team, who plans, directs and implements nutrition intervention care to patients based on assessment. Collaborates with other health-care team members to coordinate nutrition care.

**Biomedical equipment technicians** - install, inspect, service, and repair medical equipment. From defibrillators to infusion pumps, from patient monitors to electrocardiograph machines, biomedical equipment, technicians keep sophisticated medical devices in working order.

**Information Technology for electronic health records**; Health Education/Community Health Specialist, Biomedical engineers, neuro-oncology, nuclear medicine technology, statistician, mathematician, health policy.
Radiation therapy technologist - assist radiation oncologists in treating diseases by exposing areas of patients' bodies to ionizing radiation. In addition to helping with treatments, technologists are responsible for maintaining the radiation therapy equipment and helping to maintain patient records.

Medical Physicist - uses protocol of physics to assure optimum use of radiation to produce a diagnostic or therapeutic outcome. Protects patient and others from harmful or excessive radiation.

Dosimetrist - is a member of the radiation oncology team who has knowledge of the overall characteristics and clinical relevance of radiation oncology treatment machines and equipment, is cognizant of procedures commonly used in brachytherapy and has the education and expertise necessary to generate radiation dose distributions and dose calculations in collaboration with the medical physicist and radiation oncologist.
**Additional Career Paths**

**Radiobiologist** - is a specialized biologist who studies the effects of ionizing radiation on cells and organisms.

**Radiology technologist** - is an important member of the health care team; it is the entry-level position in the Radiologic Technology career ladder. X-rays are taken by trained Radiologic Technologists according to standardized practices and procedures. Ultrasound, CT scan, and Mammography Technologists help diagnose cancer.

**Genetic Counselors** - are health professionals trained to help families understand genetic disorders and to provide information and support them. Counselors may also serve as patient advocates by referring individuals or families to local services that can be of assistance.
Financial Assistance

**Basis of Financial Aid**
- Need-based (income-based)
- Merit-based (academically based)

**Type of Financial Aid**
- Loans
- Grants
- Private award
- Scholarships
- Gift Assistance
- Loan forgiveness through federal, state, & employee programs
Financial Assistance

Sources of Financial Aid

Private funds and gifts
Institutional funding
State loans and grants
Federal loans and grants
Me

Education preparation
Career path
Rewards/Highlights
Current role

Consider a career in cancer
The Lance Armstrong Perspective

Champion and Cancer Survivor
At age 25, Lance Armstrong discovered he had advanced testicular cancer and had a 50 percent chance of surviving. After two surgeries and four rounds of chemotherapy, Lance went on to win more Tours de France than any other cyclist in history.

“I give credit (for beating cancer) to the doctors, nurses, and the medicines (developed by research scientists with the help of patients who agreed to participate in research studies)...My friends, my family, and my doctors were my heroes while I was sick.”

*From online interview: Coalition of National Cancer Cooperative Groups, Inc.*