## Why Research is Important

## How do I Know if I am at High Risk for Developing an Inherited Cancer?

If, in your family there is/are

- many cases of an uncommon or rare type of cancer (such as kidney cancer);
- members diagnosed with cancers at younger ages than usual (such as colon cancer in a 20 year old);
- one or more members who have more than one type of cancer (such as a female relative with both breast and ovarian cancer);
- one or more members with cancers in both of a pair of organs simultaneously (both eyes, both kidneys, both breasts);
- more than one childhood cancer in a set of siblings (such as sarcoma in both a brother and a sister);
- a close relative, like a parent or sibling, with cancer; and/or
- a history of a particular cancer among those on the same side of the family.
Adapted from:
http://www.cancer.org/Cancer/CancerCauses/GeneticsandCancer /heredity-and-cancer.


## Change in Death Rates for BREAST CANCER (1990-2009)


"Amazing progress has been made against cancer because of the dedicated work of researchers throughout the biomedical research enterprise. Their efforts have spurred, and continue to spur, the translation of scientific discoveries into new and better ways to prevent, detect, diagnose, and treat cancer. These remarkable advances are contributing to the rise in the number of people who are surviving longer and living life to the fullest after their cancer diagnosis. The improvements in health care that have significantly reduced the burden of cancer were made possible by the scientific foundation provided through the many decades of investments in basic, translational, and clinical research."

## Change in Death Rates for UTERINE CANCER (1990-2009)



## Change in Death Rates for OVARIAN CANCER (1990-2009)




## Change in Death Rates for CERVICAL CANCER (1990-2009)

EST. 2013 INCIDENCE $=12,340 \bullet$ DEATHS $=4,030$

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Figure 9: Risky Business. Research has identified numerous factors that increase an individual's risk for developing cancer. Not all factors have the same impact on cancer risk. The factors that have the biggest impact are tobacco use, obesity and being overweight, infection with one of several microorganisms, poor dietary habits, and lack of physical activity. Modifying personal behaviors could eliminate or reduce many of these risks (see Figure 10, p. 20), and, therefore, have a tremendous impact on our nation's burden of cancer. Data obtained from (10).

## USPSTF Cancer Screening Guidelines

The U.S. Preventive Services Task Force (USPSTF) is an independent group of experts that makes evidence-based recommendations about clinical preventive services such as screenings, counseling services, or preventive medications Importantly, recommendations can be revised if research uncovers new evidence.

The USPSTF has made numerous recommendations related to population-based screening for early detection of several cancers. Here we highlight its recommendations, as of Aug. 1 2013, for generally healthy individuals.

- Breast cancer:
* For women aged 50 to 74 years, screening mammography once every two years.
* For women younger than 50 , the decision to start regular screening should be an individual one.
- Cervical cancer:
* For women aged 21 to 29 years, a Pap test every three years.
* For women aged 30 to 65 years a Pap test every three years or a Pap test and human papillomavirus (HPV) testing every five years.
- Colorectal cancer:
* For adults aged 50 to 75 years, fecal occult blood testing, sigmoidoscopy, or colonoscopy.
- Draft lung cancer recommendation:
* For adults aged 55 to 79 years, annual low-dose computed tomography for those who have smoked one pack per day for 30 years or equivalent (two packs per day for 15 years, etc.).

Not listed are the screening programs the USPSTF believes there is insufficient evidence to recommend for or against (e.g., screening for ovarian cancer).

