cancer.txt

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slide1= Cancer kills over 550,000 Americans yearly and is the second leading cause of death behind heart disease. That’s the bad news, the good news is that we do have some control over whether we develop cancer. We make choices everyday that either increase or decrease our cancer risks.

slide2= Here's a question for you. "Cancer" is derived from a Greek word meaning?

slide3= The early Greek physicians who first described cancerous tumors were struck by the resemblance of these invasive tumors to crabs. So they termed these cells, karkinos, or crab cells.

slide4= The term "cancer" refers to a group of diseases in which cells grow and spread unrestrained throughout the body. So, cancer is the abnormal, uncontrolled growth of cells, which, if left untreated, can ultimately cause death.

slide5= What causes cancer? That's a very complex question, but basically all cancer occurs because of cellular changes. Cells contain hereditary or genetic materials called chromosomes. This genetic material controls the growth of the cell. Cancer always arises from changes that occur in these genetic materials. When the genetic material in a cell becomes abnormal, it can lose its ability to control its own growth. These changes in genetic material can occur for a variety of reasons. They can be inherited from parents, or occur because of exposure to infections, drugs, tobacco, chemicals or other factors.

slide6= True or false? If a tumor is BENIGN, it will not spread to other body tissues.

slide7= Cancer arises from a loss of normal growth control. In normal tissues, the rates of new cell growth and old cell death are kept in balance. In cancer, this balance is disrupted. The gradual increase in new cells creates a mass of tissue called a TUMOR. BENIGN TUMORS are ones that cannot spread to other tissues, a process known as METASTASIS. MALIGNANT tumors are ones that are capable of spreading. By definition, the term CANCER applies only to malignant tumors.

slide8= Metastasis, the spreading of cancer cells from a primary site to form a secondary tumor, occurs because the cancer cells break away and can pass through the lining of the lymph or blood vessels to invade nearby tissues. They can also drift to distant parts of the body, where they establish new colonies of cancer cells.

slide9= The place where the cancer first occurred is termed the PRIMARY TUMOR or site. From that primary site one or more secondary tumors, or metastases can develop. This example shows possible secondary sites for primary testicular cancer.

slide10= Cancer can originate almost anywhere in the body. Malignant tumors are classified according to the types of cells that give rise to them. CARCINOMAS, the most common types of cancer, arise from the cells that cover external and internal body surfaces. Lung, breast, and colon are the most frequent cancers of this type in the United States. SARCOMAS are cancers arising from cells found in the supporting tissues of the body such as bone, cartilage, fat, connective tissue, and muscle. LYMPHOMAS are cancers that arise in the lymph nodes and tissues of the body’s immune system. LEUKEMIAS are cancers of the immature blood cells that grow in the bone marrow and tend to accumulate in large numbers in the bloodstream.

slide11= Here's another question for you: True or false breast cancer is the number one cancer killer of women.

slide12= Each year, about 1.3million people in the United States are diagnosed with cancer. Most will be cured, but about 38will eventually die as a result of their cancer within 5 years of diagnosis. In January 2005, researchers announced that cancer has surpassed heart disease as the leading cause of death among Americans under 85. In this 2003 image from the American Cancer Society, the NEW CASES column indicates the number of cancers that occurred in each site; the DEATHS column indicates the number of cancer deaths that were attributed to each type. As you can see, the leading cause of cancer death for both men and women is lung cancer, followed by prostate cancer in men and breast cancer in women. Colorectal cancer is the third leading cancer killer for both men and women.

slide13= There are many types of cancers. We're going to take a look at several of the most prevalent ones, but first let's discuss what causes cancer.

slide14= Cancer is a chronic disease and remember with chronic disease we talk RISK FACTORS not CAUSES. This graph shows the percentage of all cancer deaths linked to various risk factors. The primary identified risk factors for cancers can be divided into three categories: genetic, environmental and lifestyle. Genetic factors are those pertaining to a
family history of the disease. Environmental factors include exposure to carcinogens in the workplace, viruses and other biological agents, environmental pollution and UV radiation. The most significant category by far is lifestyle. Evidence indicates that more than 60% of all cancer deaths may be prevented by simple changes in lifestyle. Tobacco use alone is responsible for about one-third of all cancer deaths.

slide15= Lung cancer is the most common cause of cancer death for both American men and women and is responsible for about 155,000 deaths each year.

slide16= The number one risk factor for lung cancer is tobacco smoke. Smoking accounts for 87% of all lung cancers. Each year, a staggering 440,000 people die in the US from tobacco use. Nearly 1 of every 5 deaths is related to smoking. Cigarettes kill more Americans than alcohol, car accidents, suicide, AIDS, homicide, and illegal drugs combined. Based on data collected from 1995 to 1999, the CDC estimated that adult male smokers lost an average of 13.2 years of life and female smokers lost 14.5 years of life because of smoking.

slide17= Smoking is also the number one risk factor for cardiovascular disease killing over 148,000 Americans each year. It also kills almost 100,000 due to respiratory conditions such as emphysema and chronic Obstructive Lung Disease, also known as COPD. Did you know that COPD is the fourth leading cause of death in the United States?

slide18= When you choose to smoke, you have increased your risk of many chronic diseases. Besides lung cancer, smoking is also a major cause of cancers of the larynx (voice box), oral cavity, pharynx (throat), and esophagus, and is a contributing cause in the development of cancers of the bladder, pancreas, liver, uterine cervix, kidney, stomach, colon and rectum, and some leukemia's.

slide19= More than 4,000 individual compounds have been identified in tobacco and tobacco smoke. How many of these are linked to the development of cancer?

slide20= At least 43 chemicals in tobacco smoke are linked to the development of cancer. Some, for example, urethane, are carcinogens, that is they directly cause cancer. Others such as formaldehyde are co-carcinogens meaning they do not themselves cause cancer but combine with other chemicals to stimulate the growth of certain cancers. Tobacco smoke also contains other poisonous substances, including arsenic and hydrogen cyanide.

slide21= The primary reason people continue to use tobacco despite the health risks is because they have become addicted to a powerful psychoactive drug contained in tobacco: nicotine. Many researchers consider nicotine to be the most physically addictive of all the psychoactive drugs. Recent neurological studies indicate that nicotine acts on the brain in much the same way as cocaine and heroin. It triggers the release of powerful chemical messengers in the brain, including epinephrine, norepinephrine, and dopamine. All tobacco products contain nicotine, and the use of any of them can lead to addiction.

slide22= While fewer people smoke today than ever, approximately 1-in-4 American adults still smoke. Two-thirds of them believe that they will die of tobacco-related causes if they don't quit and most wished they'd never lit up their first cigarette. Each day, 6,000 young people try cigarettes and of this number 3,000 of them will become regular smokers. But why do people start smoking in the first place? Why do they take that first puff?

slide23= The reasons that a teen picks up that first cigarette are many and complicated. They want to appear older; they want to lose weight; their friends are doing it. Advertising is another major influence. The tobacco industry spends nearly 10 billion dollars each year on ads. These ads link tobacco products with desirable traits such as confidence, popularity, sexual attractiveness and slenderness. Young people are a prime target for these ads and these ads are very effective.

slide24= Check out this commercial which was one of the most popular in the early 1960s. What do you think of using Fred and Barney to encourage smoking? Click the play button to see the commercial.

slide25= Before we begin our discussion of breast cancer, try answering this question. How many women do you think will eventually develop breast cancer?

slide26= Breast cancer is the most common cancer in women and is the second leading cause of cancer death. In the U.S., one-in-five women will develop breast cancer in her lifetime. While there is a strong genetic factor in breast cancer, only about 15% of cancers occur in women with a family history of breast cancer. Other risk factors include early onset of menstruation, late onset of menopause, having no children or having a first child after 30,
current use of hormone replacement therapy, obesity and alcohol use.

slide27= Early detection is the key to the successful treatment of breast cancer. The American Cancer Society recommends a three-part personal program for the early detection of breast cancer. First is a clinical breast exam performed by a health care provider. Women between the ages of 20 an 39 should have a clinical breast exam every 3 years, and women over 40 should have one every year. The second part is regular mammography. Mammograms, low-dose breast X rays, should be performed on women over 40 every year. The third part of a successful early-detection regimen is self-exam.

slide28= There is a greater than 1-in-10 chance that a woman will contract breast cancer at some point over her lifetime, and over 1,000,000 women find lumps in their breasts (some cancerous, most benign) every year. While these statistics are frightening to a woman, a simple Breast Self-Examination(BSE) could be the key to finding any abnormality early on. And remember when it comes to cancer treatment, the earlier the better. The American Cancer Society recommends that women aged 20 and older should conduct Breast Self-Exam on a monthly basis, so it is never too soon to learn how to do it right. Go to this website for detailed instructions in how to perform Breast Self-Examinations.

slide29= Spread by skin-to-skin contact, HPV is the most common sexually transmitted infection in the USA. More than 50% of sexually active adult women are already infected with HPV and studies show that once you’ve been infected, the vaccine will not prevent the ability of that virus to cause cancer. Therefore, health professionals are encouraging girls to be vaccinated BEFORE becoming sexually active.

slide30= In June 2006, the Food and Drug Administration announced approved the first vaccine designed to prevent cancer. The vaccine, Gardasil, blocks infection by two types of the human papillomavirus, or HPV, which is responsible for about 70% of cervical cancer cases.

slide31= Let's shift our focus to the men in the class... Most of you are between the ages of 15 and 35, what do you think is the most common form of cancer of men in your age group?

slide32= Testicular cancer usually strikes men between the ages of 15 and 35 and is the most common cancer for men in this age group. As with breast cancer, early detection is the key to successful treatment. Men can increase their chances of finding testicular cancer early by performing monthly Testicular Self-Examination (TSE). Go to this website for detailed instructions for how to perform Testicular Self-Examinations.

slide33= Skin cancer is the most common cancer of all when cases of the highly curable forms are included in the count. Of the 1 million cases diagnosed each year, 54,000 are of the most serious type, melanoma. Ultraviolet, or UV, radiation from the sun is the main cause of skin cancer. Artificial sources of UV radiation, such as sunlamps and tanning beds, can also be dangerous. Most skin cancers appear after age 50, but the sun’s damaging effects begin at an early age.

slide34= Melanoma usually appears in a mole. Anytime a mole undergoes sudden or progressive changes, you should bring it to the attention of your health care provider immediately. How do you know if the moles you have are something to worry about or not? To evaluate moles, use the ABCDs. A is for ASSEMETRY: Check for spots that are asymmetrical, meaning a line drawn down the center would not create identical halves. Moles you don't have to worry about are round and symmetrical. B is for BORDER: Look for ones with uneven borders, such as scalloped or notched edges. Common moles have smooth and even borders. C is for COLOR: Does the mole have an unusual or uneven color, or has it changed in color? Melanoma can be black, dark brown, red, white or even blue while common moles generally have a uniform shade. D is for DIAMETER: Watch for moles that are larger than a pencil eraserhead (about a quarter inch in diameter). Common moles are usually smaller.

slide35= To see if you are at risk for melanoma, take this assessment.

slide36= The cure rate for skin cancer could probably be 100% if all skin cancers were brought to a doctor before they had a chance to spread. So, people should check their skin regularly for new growths or other skin changes. For detailed instructions for performing a skin self-exam, go to this website.

slide39= Here's our final question. Regarding your behavior, what is the most important thing you can do to prevent cancer?
slide40= Your lifestyle choices play an important role in whether or not you get cancer. There are several concrete strategies you can adopt to reduce your risk. Let's take a look at a few.

slide41= The use of tobacco products has been implicated in roughly one out of every three cancer deaths, making it the largest single cause of death from cancer. As we've already discussed, cigarette smoking is responsible for nearly all cases of lung cancer, and has also been implicated in cancer of the mouth, larynx, esophagus, stomach, pancreas, kidney, and bladder. Pipe smoke, cigars, and smokeless tobacco are risky as well. Avoiding tobacco is, therefore, the single most effective lifestyle decision any person can make in attempting to prevent cancer. If you don't smoke: congratulations! If you do smoke: quit!

slide42= Exposure to carcinogens (cancer-causing agents) is responsible for triggering most human cancers, so you can reduce your cancer risk by taking steps to avoid such agents. As you know, cigarette smoke is the most harmful carcinogen. Others include environmental and industrial pollutants like hydrocarbons and asbestos.

slide43= Based on hundreds of studies, the National Cancer Institute estimates that about one-third of all cancers are in some way linked to what we eat. And it's not just WHAT we eat but HOW much because if we become obese our risk for certain cancers goes up. A high percentage of body fat appears to increase the risk of cancer of the prostate, breast, female reproductive tract and kidney. In addition, several common cancers are associated with an inactive lifestyle and there is some evidence that exercise reduces the risk of colon cancer.

slide44= Radiation is simply energy that travels through space and all forms of radiation are potentially cancer causing. The radiation that we come into contact with most often is the UV rays from the sun. All types of skin cancer are increased by early and excessive exposure to the sun, and severe sunburns in the childhood and teen years carry an added risk of melanoma in later life. So remember when you're lying out catching rays, you're really lying out catching radiation.

slide45= Do you like to like lying out in the sun? Do you think you are typical of most college students? See what others have to say about it.

slide46= Drinking excessive amounts of alcohol is linked to an increased risk for several kinds of cancer, especially those of the mouth, throat, and esophagus. An average alcohol intake of three drinks per day is associated with a doubling in the risk of breast cancer. The combination of alcohol and tobacco appears to be especially dangerous. For example, in heavy smokers or heavy drinkers, the risk of developing cancer of the esophagus is roughly 6 times greater than that for nonsmokers/nondrinkers. But in people who both smoke and drink, the cancer risk is more than 40 times greater than that for nonsmokers/nondrinkers. Clearly the combination of alcohol and tobacco is riskier than would be expected by just adding the effects of the two together. So if you must drink, do so in moderation which most experts agree is no more than two drinks per day.

slide47= And lastly, but very importantly, when it comes to reducing your risk of cancer, you need to choose your parents wisely. Cancer is not considered an inherited illness because most cases of cancer, perhaps 80 to 90 percent, occur in people with no family history of the disease. However, a person's chances of developing cancer can be influenced by the inheritance of certain kinds of genetic alterations. These alterations tend to increase an individual's susceptibility to developing cancer in the future. But hold on, what's that you're thinking...you didn't have any say in choosing your parents? You're stuck with those ones you have. Not to worry, if you do have a family history of certain cancers, that just means that you're going to have to work extra diligently on addressing those cancer risks that you can change.