

# Breast Cancer

## **Introduction:**

Breast Cancer is cancer that forms in the tissues of the breast, it occurs in both men and women, but is rarely seen in men. Breast Cancer is a major problem that is talked about a lot. It affects hundreds of thousands of woman around the world; in fact, over 200,000 women are diagnosed with breast cancer every year. While cancer is always caused by a genetic abnormality and only 5–10% of cancers are inherited from your mother or father but 90% of breast cancers are due to genetic abnormalities that happen because of the aging process. I chose this topic because Breast Cancer awareness is everywhere we look, the grocery store, Staples, even clothing stores, it is a huge disease today that we hear about all the time, that I want to learn more about. Also, Breast Cancer is a widely spread disease that many women fear. Although nobody in my family has had Breast Cancer, I have always been afraid of getting it as I get older. Since I hear about so many people with Breast Cancer, I wanted to learn more about the causes, symptoms, treatments and prevention methods.

## **Section 1: Background and Problem Statement:**

Healthy People 2010: Breast Cancer (23)

[Http://www.healthypeople.gov/healthfinder/](http://www.healthypeople.gov/healthfinder/)

I thought the Web site Healthy People 2010 was not a good source of information. It doesn't give any specific information on any disease, it talks about more broadly about the public and its' health issues. It was very confusing to navigate and didn't tell me anything about Breast Cancer.

National Cancer Institute: (26)

<http://www.cancer.gov/cancertopics/understanding-breast-changes/page4>

This Web site was a great source of information and it was very nicely organized, which made it easy to read. It gave great diagrams of the breast, explained what the breast was made of, breast changes that can occur and whether or not we should be worried. Also, I learned how to feel your breasts to see if there is anything you should be worried about. It

gave a lot of information on what it is like to go through the necessary mammogram if you are diagnosed with Breast Cancer. Another great thing about this Web site was that it explained what symptoms you should not be worried about because they are not signs of

Breast Cancer.

U.S. Department of Health and Human Services: (19)

<http://www.ahrq.gov/consumer/brcanchoice.htm>

I thought this Web site was okay with providing me with the information I was looking for, but it was very clear. It was all about surgery choices for women with early stage breast cancer and how to talk to your surgeon. It did give good advice for people who are in the situation, but it did not give any information on what breast cancer is. One thing I did enjoy reading was the stages of breast cancer.

Office of Women's Health in the U.S. Department of Health and Human Services: (23)

<http://www.womenshealth.gov/faq/breast-self-exam.cfm>

This Web site is a good source of information, but it was repetitive with another Web site I looked at. The negative thing about it was that it only talked about examining yourself for breast cancer. It answers frequently asked questions like why you should do a self-breast exam, what you are looking for when you test yourself for breast cancer and how often you should do self-exams. The first Web sites I looked at were definitely more informative.

## **Section 2: Research**

Cancer Research: (17)

<http://cancerres.aacrjournals.org/cgi/content/abstract/40/11/3863>

Objective: This report highlights many laboratory explorations conducted for past five years. These tests have resulted in the replacement of old concepts of tumor biology with others that have been helpful in changing the therapy of breast cancer. Results: Now have a better understanding of how to cure cancer and wiped away many of the popularly held hypotheses concerning tumor cell distribution. The results concluded that regional lymph nodes do not trap dispersed tumor cells, there is no orderly pattern of tumor cell

distribution based upon mechanical consideration, patterns of tumor spread are not only controlled by consideration but are influenced by natural factors in tumor cells as well as in the organs to which they make an entrance into, and lastly, lymph node cells are capable of destroying tumor cells.

BMC Cancer: (22)

<http://www.biomedcentral.com/1471-2407/8/305/abstract>

Objective: Obesity in women who have been through menopause is related with increased breast cancer risk, development of more tumors and resistance to some breast cancer treatments. Expression of ObR, HER2, phospo-HER2 was assessed by immunoblotting. Physical interactions between ObR and HER2 were probed by immunoprecipitation and fluorescent immunostaining. Expression of leptin and ObR in breast cancer tissues was detected by immunohistochemistry (IHC).

Results: Co expression of HER2 and the leptin/ObR system might contribute to enhanced HER2 activity and reduced sensitivity to anti-HER2 treatments.

Breast Cancer Research: (23)

<http://breast-cancer-research.com/content/10/6/R93>

Objective: Gene expression signatures have been proposed which have been demonstrated to predict the outcome in breast cancer. This test answers questions like do signatures perform similarly, are there common molecular processes reported by these signatures and can better prognostic predictors be constructed based on these identified molecular processes?

Results: This study revealed that the nine signatures perform similarly. Functional analyses indicate that increase in signatures is a common cellular process, but that other functional categories are also enhance and show independent prognostic ability. Provided new evidence of the potentially promising prognostic impact of Immunity and RNA-splicing processes in breast cancer.

BMC Cancer: (22)

<http://www.biomedcentral.com/info/presscenter/pressreleases?pr=20080430>

Objective: Taking aspirin daily may lower women's risk of a particular type of breast cancer. In this experiment, aspirin use was connected to a small reduction in estrogen receptor-positive breast cancers. However, aspirin and related painkillers were not found to reduce the total risk of breast cancer.

Results: Around 75% of breast cancers are estrogen receptor-positive (ER+), which means the cancer cells have receptors for the female hormone estrogen on their surface. Estrogen helps the cancer cells grow, so drugs that block the action of estrogen are often used to treat ER+ cancer.

### **Section 3: Statistics**

Center for Disease Control And Prevention: (25)

<http://www.cdc.gov/Cancer/Breast/statistics/>

It was interesting to learn that besides non-melanoma skin cancer, breast cancer is the most common form of cancer in women. Also, something new I learned was breast cancer is the number one cause of cancer death in Hispanic women. I understood the data being presented, it was very clear unlike many other Web site I looked at that I could hardly understand.

National Cancer Institute: (26)

<http://seer.cancer.gov/statfacts/html/breast.html>

I thought the statistics presented on this Web site were great, they were interesting and easy to understand. This site gave statistics about race/ethnicity, and mortality rates. Two interesting facts I learned from this site are that it is estimated that 182,460 women will be diagnosed with and 40,480 women will die from breast cancer in 2008.

New York Presbyterian: (25)

<http://www.childrensnyp.org/mschony/fp/health/breast-stats.html>

This site was one of the worst ones that I looked at, most of the statistics were based on the

year 2001, but it was easy to understand. I thought it was interesting to learn that family history does not put you at a higher risk of getting breast cancer, in fact in 90% of cases there is no family history of breast cancer.

Breast Cancer Network of Strength: (25)

<http://www.networkofstrength.org/information/bcnews/stats.php>

Although this site was a good source of information and very easy to understand, a lot of statistics I read earlier were repeated. An interesting piece of information I learned was that one out of eight women who are over 80 will develop breast cancer, a statistic that was one out of fourteen in 1960.

#### **Section 4: Consumer Information**

Understanding Breast Cancer: (28)

[http://www.breastcancer.org/symptoms/understand\\_bc/](http://www.breastcancer.org/symptoms/understand_bc/)

Understand Breast Cancer is a great site that provides people who don't know a lot about Breast Cancer with a lot of information give to the reader in easy terms. It is easy to read/understand and easy to navigate; there is a link to anything you would like to read about. For example, there are links like symptoms and diagnosis, treatment and side effects, lower your risk, how breast cancer happens, who gets breast cancer and many more.

National Cancer Institute: (25)

<http://www.cancer.gov/cancertopics/types/breast>

This Web site is also a good place to learn about Breast Cancer. Although it is not as easy to understand or navigate as the previous site, it is definitely informative because it gives a lot of information that is not easy to find anywhere else. For example, what kind of effect alcohol has on Breast Cancer risk. Also, the reader has the choice of reading it in English or Spanish.

The National Breast Cancer Foundation, INC: (28)

<http://www.nationalbreastcancer.org/About-Breast-Cancer/>

Prepared By: Milena Kotara, PCH 201-13, Fall, 2008

This is a very friendly site that makes you want to read on. It gives you basic knowledge on Breast Cancer in a language that is easy to understand. Something that I found interesting was a movie on what Breast Cancer is, which is great for people who learn better by listening and watching something. The one reason I wouldn't recommend this site for research only because it is based a lot on people who have been diagnosed with cancer.

Medline Plus: (18)

<http://www.nlm.nih.gov/medlineplus/breastcancer.html>

This Web site is my least favorite because the information is not very organized, easy to get confused as you read. Also there is too much information clumped together and too many links that I didn't understand. I felt like I didn't know where to start reading.

### **Conclusions:**

#### **Section 1: Background and Statement**

Best Web site:

<http://www.cancer.gov/cancertopics/understanding-breast-changes/page4>

I like this site the best because it was very informative and easy to read. It gave a lot of information on all topics of Breast Cancer.

Worst Web site:

<Http://www.healthypeople.gov/healthfinder/>

Healthy People 2010 was my least favorite Web site because it gave me no information on Breast Cancer and it was very difficult to navigate, the links were very unclear.

#### **Section 2: Research**

I found the research part of the assignment was most difficult because of a lot of medical terms that I could not understand. Most of the sites I looked at I couldn't even summarize. But I found it interesting that obesity in women who have been through menopause is related with increased breast cancer risk, development of more tumors and resistance to some breast cancer treatments. Also, I was surprised to learn that taking aspirin daily may lower women's risk of a particular type of breast cancer.

### **Section 3: Statistics**

Two new pieces of information I learned are that it is estimated that 182,460 women will be diagnosed with and 40,480 women will die from breast cancer in 2008. Another interesting fact is, family history does not put you at a higher risk of getting breast cancer, in fact in 90% of cases there is no family history of breast cancer.

### **Section 4: Consumer Information**

Although some of the four Web sites I read were more challenging than others, three of the sites were great sources of information. The sites, Understanding Breast Cancer, National Cancer Institute and National Breast Cancer Foundation INC, had a lot of repetitive information, but they had lots of great information and it was presented in an organized fashion. It was great how organized they all were because the fourth site I looked at, Medline Plus, was horrible with organization and information it provided. I would definitely recommend the first three Web sites for someone who wanted to learn about Breast Cancer.

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|--|---|
| <b>Back to Betty C. Jung's Web site</b>            | <a href="http://www.bettyjung.net/">http://www.bettyjung.net/</a>                                       |
| <b>Back to Web site Critique Reports Directory</b> | <a href="http://www.bettyjung.net/Pch201wsreports.htm">http://www.bettyjung.net/Pch201wsreports.htm</a> |

## **Breast Cancer (Class Handout)**

-After finding four Web sites analyzing the background/problem statement on Breast Cancer I found that the best Web site was This Web site National Cancer Institute:

<http://www.cancer.gov/cancertopics/understanding-breast-changes/page4>

I liked this site because I feel that it answered any questions about Breast Cancer someone might have with out many medical terms. It provided great diagrams of the breast, explained what the breast was made off, breast changes that can occur and whether or not we should be worried. It was very organized and easy to understand.

-The best Web site I found for research on Breast Cancer was BMC Cancer:

<http://www.biomedcentral.com/info/presscenter/pressreleases?pr=20080430>.

This was one of the few sites I could understand. In all the other research sites I read every other word was medical, it made it hard for me to summarize what I was reading. But this site was put in simple terms and the research done was very interesting to read about.

- The best Web site I found on statistics of Breast Cancer was National Cancer Institute:

<http://seer.cancer.gov/statfacts/html/breast.html>

The reason I liked this one the most was because it went straight to the point and presented many different statistics, on race, ethnicity, age, male breast cancer and more.

The given statistics helped me learn a lot more about Breast Cancer.

- The Web site, which I felt provided the best information on consumer information, was The National Breast Cancer Foundation, INC:

<http://www.nationalbreastcancer.org/About-Breast-Cancer/>

Although all the Web site I looked at where good sources of information, this is a very friendly site that makes you want to read on. It gives you basic knowledge on Breast Cancer in a language that is easy to understand. Something that I found interesting was a movie on what Breast Cancer is, which is great for people who learn better my listening and watching something.