A Comparative Evaluation for breastcancer.org

Abstract: This Comparative Evaluation begins with a brief description of breastcancer.org and its features. The main focus is an evaluation of the site compared to other health sites in terms of functionality, usability, and aesthetics. Findings will be used to identify issues and opportunities for breastcancer.org.
Organization of Report

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- Description of breastcancer.org
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Introduction

The major, recent, and ubiquitous rise of Internet access and usage in the developed world has led to an increase in number of consumer-oriented websites that offer health and wellness information. Patients choose to take a more active role in their health-care decisions, and the Internet is proving an avenue to supplement, enhance, and in some cases replace information provided by medical professionals. “[P]atients are turning into active demanders and “searchers” of information; they want to be better informed about their health problems and possible treatments and best practices” (Alpay, 2004).

The widespread availability of health-related information found online, however, comes with its drawbacks: visitors to a particular website need to judge whether the site and the information it provides are trustworthy, whether the features a site offers are better than those of other similar sites, and whether the information they find is worth the time and effort they may have spent.

While many health portals offer a similar set of features: “a catalog of health information, a search engine, a personalization system, and a network of communities” (Luo, 2004), their functionality, usability, and aesthetic appeal may vary drastically. The purpose of this Evaluation is to compare five health-related websites based on their provided features.

Description of breastcancer.org

Breastcancer.org is a publicly accessible website of over 3,000 pages that provides medical information and emotional support regarding breast cancer. The functionality of breastcancer.org is extensive and includes over twenty-six features.

Comparative Evaluation Methodology

The methodology prescribed by Kuniavsky in Observing the User Experience is utilized for this comparative evaluation. While comparative evaluation techniques are typically used for physical products, the basic logic behind the techniques – to gain a better understanding of a product by comparing its features against that of its competition – easily applies to websites.

In order to assess the functionality, usability, and aesthetics of breastcancer.org, The team deconstructed the evaluation process into four distinct phases. Each phase is well-supported by relevant academic literature.
Identify the competition

Many millions of Americans search for breast cancer information on the Internet each year, and it is not surprising that the volume of available information has increased exponentially in response. While it is nearly impossible to fully capture the entirety of the online breast cancer information space, The team was able to discover fifteen (15) strong competitor websites to breastcancer.org. These sites were identified through a process of compiling information from Foraker Design, interviews conducted by The team in January 2006, academic literature, and web searches with popular search engines. Of the 15, four websites were chosen for in-depth comparison to breastcancer.org based on their popularity, search ranking, or highly respected reputation as ‘experts’ for breast cancer or health-related issues. These four websites are:

<table>
<thead>
<tr>
<th>Website Name</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Cancer Institute (NCI)</td>
<td><a href="http://www.cancer.gov">www.cancer.gov</a></td>
</tr>
<tr>
<td>American Cancer Society (ACS)</td>
<td><a href="http://www.cancer.org">www.cancer.org</a></td>
</tr>
<tr>
<td>Susan G. Komen Foundation (Komen)</td>
<td><a href="http://www.komen.org">www.komen.org</a></td>
</tr>
<tr>
<td>WebMD</td>
<td><a href="http://www.webmd.com">www.webmd.com</a></td>
</tr>
</tbody>
</table>

An intense one-day work session with all team members was conducted in February 2006 to determine the key attributes of breastcancer.org and its competitors. Consistent with the suggestions by Kuniavsky, competitor profiles provided here are comprised of two parts – a website description and an audience profile. This phase of the Comparative Evaluation is extremely valuable for better understanding the difference in audience across the competitor websites; consequently, competitor profiles greatly affect the “actionable intelligence” identified later in this Evaluation.
breastcancer.org
Self-described as a website dedicated to “your lifeline to the best medical information about breast cancer”, breastcancer.org offers resources and support tools for people concerned about breast cancer. The site is dense with reliable information primarily geared towards those who have been diagnosed with breast cancer. Some of the pages address the needs of friends and family members of someone suffering from breast cancer. The information on the website is easy to find and just as easy to understand.

Audience profile: Women in their mid-40s and older; the site strives to be as easy to use for non-tech-savvy people as possible.

National Cancer Institute (NCI)
Cancer.gov is an online portal created and maintained by National Cancer Institute (NCI), the governmental principal agency for cancer research and training. It has wealth of cancer-related resources primarily targeted to medical professionals: information on research, clinical trials, NCI news, and so on. Many topics are offered in three versions (for patients, for medical professionals, and in Spanish), but people without background in medicine may feel that many of their questions are not easily answered by the clinical information provided on the site. Nonetheless, the site is well-designed and well-organized for those familiar with medical jargon.

Audience profile: Medical professionals looking for authoritative information on current cancer research.
Susan G. Komen Foundation
Komen.org, the website of the Susan G. Komen Breast Cancer Foundation, is a trusted source of current information on breast cancer. The website is targeted towards women who have been diagnosed with breast cancer and need to find more information about the disease, treatment options, living with cancer, and so on. This information is well-organized and offered in easy-to-understand language. It is simple to find answers to specific questions or to read up on a certain topic. Visitors can also find Komen Affiliates in their geographical area and learn how they can help fight breast cancer by donations or volunteering.

Audience profile: Older women who have been diagnosed with breast cancer, supporters of women with breast cancer, and women who want to find information on prevention. Even the advanced interactive features of the site are easy to use.

American Cancer Society (ACS)
Cancer.org is a website maintained by American Cancer Society, a nationwide organization dedicated to supporting cancer research and education. The website has resources for anyone who has questions about cancer: patients, their friends and family members, cancer survivors, people interested in general information about cancer, and medical professionals. Website visitors can specify the type of cancer they are concerned about, choose their location, create bookmarks, calendar, and to-do lists, and more.

Audience profile: Anyone interested in cancer; personalization tools (such as RSS feeds) require more technically apt users, but the main content is easy to access for anyone with minimal experience on the Web.
WebMD

The motto of WebMd.com is “Better Information. Better Health.” This site, full of interactive features (i.e. Symptom Checker), offers its visitors health and wellness information in a way that is easy to understand and follow. People can look up their symptoms or conditions, find information about medications, talk to peers on discussion boards, and even find doctors in their area. However, a lot of information on the site comes from sponsors, so it’s not clear how objective it is. The site has so much information that it can seem overwhelming – it is difficult to sift through the search results trying to find exactly what you need; at the same time, it’s the only site out there that has information on practically any condition one might have questions about.

Audience profile: Internet-savvy health-conscious users who have questions about non-life-threatening conditions.
Each phase of the Comparative Evaluation serves as a foundation for the next, and this third phase compares the features of breastcancer.org to those of its competitors. Two main activities were conducted during this phase to draw out elements of functionality, usability, and aesthetics from each website.

**Feature Matrix**

To organize the extremely dense information in this section, our team developed the Feature Matrix (full Matrix is included as Appendix A). The Feature Matrix clearly illustrates the functionality offered by breastcancer.org and its four selected competitors. Five non-mutually exclusive categories were created in the Matrix: Trust, Personalization, Ease of Use & Accessibility of Information, Support & Community, and Extras. It must be recognized that each category has significant influence upon another. For instance, if the Trust features of the website are lacking, people may shy away from the Personalization features; this, in turn, has a clear negative affect on the usefulness of information provided by the website.

In creating the Feature Matrix Our team explored each website on at least four hierarchical levels in at least one subject category. While we attempted to capture all features of all of the selected websites, it is likely that many features are not enumerated in the Feature Matrix because they are located deeper in the sites and surface only with personalization options and specific subject categories. Thus, while being an extremely valuable analysis tool, the Feature Matrix is not exhaustive.

**Test Task**

Collecting detailed usability data was the primary focus of the test task, which used features listed in the Feature Matrix. To obtain this information, our team members turned to Theresa Donnetti, a persona developed by team member Chris Korintus. (Theresa’s full persona is provided in Appendix B). Theresa was recently diagnosed with breast cancer and was in the process of deciding on treatment options. She was very interested in learning about mastectomy and what it entails. Pictures and graphics, while daunting, would aid in her understanding. To obtain comparable results, Our team chose to have Theresa start her search in the search box, a universally available and frequently used website feature. Each of the team members attempted to find information relevant to Theresa’s need on one of the five websites.
Test Task Findings

The test task findings revealed valuable information. While all of the sites had information available on mastectomy, there were notable differences in how the information was obtained and the quality of the experience. Of all the sites, breastcancer.org and Komen.org provided the most positive experiences for Theresa. The specifics of each test are provided below; points further discussed as pieces of “actionable intelligence” are denoted with blue text.

Breastcancer.org

The site has a very well-branded look that is obtained by using the same color scheme and global navigation bar on all pages. Branding carries over into the Firefox browser, showing the site icon in the URL bar. The navigation path was defined through the next page feature and left menu.

Advantages:

- Search Box plus one click got desired results
- Uncluttered display of search results
- Top search results appeared very relevant
- Search term highlighted
- Results included graphics
- Larger versions of graphics are available
- Language was appropriate to level of medical expertise
- Medical terminology provided with link to dictionary
- Link for free PDF about breast cancer fears offered
- Personal quote provided to add a caring note to the results
- Date of last page modification listed, attesting to information currency
- ‘Send this Page to a Friend’ feature at bottom of page makes information sharing convenient
- Misspelling term still brings up results

Hindrances:

- Clicking on terminology takes Theresa off Mastectomy page and into the Dictionary – no back button except for browser to return
- Menu on left sidebar has the ‘path’ of information to follow, but when scrolling down on the page it remains at the top, making it hard to see the flow of information at all times on the page
- Very long webpage requires lengthy scrolling down
Susan G. Komen Foundation

The site uses consistent colors and maintains the same header bar on all pages. The overall feel of the site seems geared to a mature audience and lends a sense of credibility to the content. The navigation path for this site was extremely clear.

Advantages:

- Search Box plus one click got desired results
- Uncluttered display of search results
- Results included graphics
- Language was appropriate to Theresa’s level of medical expertise
- Clicking on a medical term embedded in text brings up definition in pop-up window
- Section headings stated the question in medical terms as well as in layman’s terms, i.e. “Assessing Margins (Was the entire tumor removed during surgery?)”
- Multi-media resources provided
- Toll-free helpline phone number displayed in footer at all times
- Webpages available in Spanish
- Clear navigation ‘path’ provided at bottom of page, allowing Theresa to move backward or forward through the Mastectomy information
- Free PDF about breast cancer treatment options offered in clear manner

Hindrances:

- Total number of results was displayed on left hand side of search results…because there was no other information to the left side, it was overwhelming to Theresa to see that there were 125 results
- Top search result was chosen not based on title, but simply because it was first
- Search term NOT highlighted
- Only small versions of graphics available
- If term misspelled, Theresa gets error message saying that there are no results for her search
American Cancer Society

The site did not provide a positive experience for Theresa for this task. Organization of the site would greatly benefit from use of color to define content areas. Navigation menus are confusing because they expand upon clicking, but this functionality is essentially hidden. The site design appears fairly low quality. Navigation tools except the search box are extremely unwieldy. In general, using the site requires a large cognitive load.

Advantages:
- Search Box plus one click got desired results
- Search term highlighted
- Language was appropriate to Theresa’s level of medical expertise
- If term misspelled, Theresa gets error message saying that there are no results for her search but is provided an alternative spelling

Hindrances:
- Search results displayed inconsistent with ACS font size and type because search is powered by Google
- Search results have two colors and the URL included, and appear very cluttered and hard to sift through
- Webpage has horizontal scroll bar at bottom of page, thus entire width of page is not visible at all times
- Related Topics listed in right sidebar are not actually related to the search
- Clicking on some anchor text links produced no actions; for others, Theresa was taken to a new page but couldn’t figure out how to get back to the original page
- Results included graphics, although graphic looked dated and did not have much information
- Medical terminology definitions only accessible via Glossary link on left sidebar menu
- Webpage very long and required a lot of scrolling down
**National Cancer Institute (NCI)**

The site has a very professional appearance and uses color sparingly in its design. The header color and appearance remains consistent throughout the user experience. There are two notable information organization features offered by NCI: the ‘Best Bets’ during search and ‘Key Points’ on the content pages. The site has good organization and high-quality content but is difficult to navigate due to the use of clinical language. The content seems geared towards medical professionals more than consumers; Theresa felt intimidated and overwhelmed and had difficulty with the site’s terminology and acronyms.

**Advantages:**
- ‘Best Bet’ results listed first
- Additional resource list at bottom of page
- Highly authoritative source
- Larger versions of graphics are available
- Some pages have date of last page modification listed, attesting to information currency
- Tabs on some pages to provide the information as ‘Patient Version’, ‘Health Professional’ or ‘En Espanol’
- Misspelling term does not bring up results, but does offer alternative spelling
- Print options for page available on content page
- Webpages available in Spanish

**Hindrances:**
- Two Search Box searches plus nine clicks got desired results
- Search term NOT highlighted
- Result titles used medical terminology and were confusing
- Results related to mastectomy, but page titles obscured information for Theresa (page shown at left is first result and contains the information Theresa found after seven clicks – didn’t use first result because confused by title
- Clicking on terminology brings up pop-up window with minimal definition
- Language was NOT appropriate to Theresa’s level of medical expertise
- Results included graphics, but only when clicking on embedded text
- Very long webpage requires lengthy scrolling down
WebMD

The site logo in the left of the page remains consistent on the site, but there is not a strong sense of branding. A commercial feel pervades the site, with frequently changing banner ads and prominently placed pharmaceutical ads. The site is not intended to be a comprehensive resource for specific diseases and did not perform as such for Theresa during the test.

Advantages:
- Uncluttered display of search results
- Language was appropriate to Theresa’s level of medical expertise
- Search box is prominently displayed and long enough to type a sentence
- Print options for Page available on content page
- Misspelling term does not bring up results, but does offer alternative spelling

Hindrances:
- Search Box plus scrolling & two clicks got incomplete results
- Sponsored links came up at top of search results
- Results were straightforward but extremely brief
- Sponsored ads had significant effect on trust in site content
This part of the Comparative Evaluation allows our team to reflect on all phases of the process and create an outline of actions for breastcancer.org which may help to further enhance user experience of the site. Below is a table of “Actionable Intelligence” items culled from our team’s experiences during the Comparative Evaluation. Clearly, all suggestions made by the group are made from our standpoint of limited experience with the site, lack of medical training and the reality that all members of our team have only utilized the selected websites for research purposes.

<table>
<thead>
<tr>
<th>Item</th>
<th>Actionable Intelligence</th>
<th>Addresses Functionality, Usability or Aesthetics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spelling</strong></td>
<td>Make the correct spelling explicit. Since the goal of the site is education-oriented, this will aid the user when exploring the site and discussing the topic with others.</td>
<td>Usability</td>
</tr>
<tr>
<td>- Breastcancer.org</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>returns search results when a term is misspelled, but does not explicitly tell the user how to correctly spell the term.</td>
<td></td>
</tr>
<tr>
<td><strong>Dictionary</strong></td>
<td>Consider adding a ‘Return to Previous Page’ or ‘Back’ button to the Dictionary to aid in site navigation.</td>
<td>Usability</td>
</tr>
<tr>
<td>- Clicking on terminology in ‘Words on this Page’ section takes the user from starting point page and into the Dictionary, with no back button except for the one on the browser to return to the previous page.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Menu Location</strong></td>
<td>Susan G. Komen’s bottom navigation options may provide an elegant solution to this item and would likely aid in site navigation. Alternatively, separate content into smaller pages.</td>
<td>Usability, Aesthetics</td>
</tr>
<tr>
<td>- Menu on left sidebar has the ‘path’ of information to follow, but when scrolling down on the page it remains at the top, making it hard to see the flow of information at all times on the page.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Language other than English</strong></td>
<td>Consider adding some site content, or a page in another language to direct non-English speaking users to online resources in another language. Two competitor sites offer information in Spanish at this time.</td>
<td>Usability, Functionality</td>
</tr>
<tr>
<td>- No webpages in breastcancer.org are available in a language other than English.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Content Page Layout</strong></td>
<td>For site users, Our team believes that adding prominence to the location of downloadable resources would be of high value. Following principles of Gestalt, i.e. using a colored background, brighter or bigger font, or placing the resource in a consistent location on each page may increase accessibility.</td>
<td>Functionality, Usability, Aesthetics</td>
</tr>
<tr>
<td>- Breastcancer.org offers free PDF brochures and information on various aspects of breast cancer. During our test, these resource links were immediately adjacent to the main content text, but were not prominently placed or highlighted.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Content Page Length</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Actionable Intelligence</td>
<td>Addresses Functionality, Usability or Aesthetics</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>- Many pages on breastcancer.org are extremely long and need a lot of scrolling to get through information. Research has shown that long pages tax users’ cognitive resources by requiring them to remember the information they read at the top of the page (Becker, 2004).</td>
<td>Content of the pages can be separated into subsections and split into multiple smaller pages.</td>
<td>Usability</td>
</tr>
<tr>
<td><strong>Search Box Location</strong></td>
<td>- On breastcancer.org, the search box is located in the header’s upper right corner. It is surrounded by other links such as Gift Shop, Donations, Site Map and Dictionary and is somewhat difficult to see.</td>
<td>Consider adding emphasis to the search box by removing or relocating other existing text surrounding it. While not too difficult to locate, it did not pop out to Our team as quickly as it did on other sites.</td>
</tr>
<tr>
<td><strong>Length of Search Box</strong></td>
<td>- The search box visual display suggests that a term or phrase is appropriate for input.</td>
<td>Our team noticed that each site had a different size search box. We are not aware of the specifics of search goals on breastcancer.org, but felt that this item was worthy of mention. If the goal were to encourage users to enter in single words, it may be beneficial to decrease the size of the search box.</td>
</tr>
<tr>
<td><strong>Print Options</strong></td>
<td>- There is no print option on breastcancer.org pages. The site's use of CSS does produce print layouts that are free of navigation</td>
<td>Consider adding a visible print icon to the website to draw attention to this function. If it is more apparent that printing is possible, site users may be more likely to print and share information.</td>
</tr>
</tbody>
</table>
Conclusion

Conducting a Comparative Evaluation has proven to be an essential part of the larger usability research of breastcancer.org. Evaluating “competitor,” or at least comparable, websites allowed our team to see how others are attempting to deliver similar sensitive content. Charting and organizing each site’s features and attributes brought light to strengths and weaknesses of breastcancer.org. And, by adopting the persona “Theresa” during our sample test trials, we were able to better view breastcancer.org and the other sites through the lens of an actual potential user.

Overall, we found that breastcancer.org is commensurate with or surpasses the other sites we evaluated. Breastcancer.org is especially adept at presenting information in a clear, concise, and appropriate language level for its audience. Breastcancer.org offers invaluable resources, such as the discussion boards and chat rooms, for support and community-based communication. However, much can be gained by further evaluating the strong elements of the other sites. Making the relatively small changes discussed in the Actionable Intelligence section would likely improve the sites navigability and usability. Additional potential action areas for breastcancer.org to consider are shown in the Feature Matrix for American Cancer Society and WebMD; both sites offer additional functionality through site and resource customization, interactive decision-making tools, personal planners, and RSS feeds. Similar features may prove to be valuable additions to breastcancer.org to further improve the overall user experience.


## Appendix A – Feature Matrix

<table>
<thead>
<tr>
<th>Site</th>
<th>HON Certified</th>
<th>HON Seal Displayed</th>
<th>Certified Privacy Policy (TrustE)</th>
<th>Corresponds to a Real Agency</th>
<th>Content Providers’ Profile</th>
</tr>
</thead>
</table>
| breastcancer.org  
www.breastcancer.org | ✓ | ✓ | ✓ | × | ✓ |
| American Cancer Society (ACS)  
www.cancer.org | ✓ | ✓ | × | ✓ | × |
| Susan G. Komen Foundation  
www.komen.org | × | × | × | ✓ | ✓ |
| National Cancer Institute (NCI)  
www.cancer.gov | × | × | × | ✓ | × |
| WebMD  
www.webmd.com | ✓ | × | ✓ | × | ✓ |
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<table>
<thead>
<tr>
<th>Personalization</th>
<th>Support/Community</th>
<th>Extras</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>breastcancer.org</td>
<td><a href="http://www.breastcancer.org">www.breastcancer.org</a></td>
<td>✗ ✗ ✗ ✗ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>Shrink the Whale</td>
</tr>
<tr>
<td>American Cancer Society (ACS)</td>
<td><a href="http://www.cancer.org">www.cancer.org</a></td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>Quiz &amp; Work Sheet to track side effects</td>
</tr>
<tr>
<td>Susan G. Komen Foundation</td>
<td><a href="http://www.komen.org">www.komen.org</a></td>
<td>✗ ✗ ✗ ✗ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>None found</td>
</tr>
<tr>
<td>National Cancer Institute (NCI)</td>
<td><a href="http://www.cancer.gov">www.cancer.gov</a></td>
<td>✗ ✗ ✗ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>None found</td>
</tr>
<tr>
<td>WebMD</td>
<td><a href="http://www.webmd.com">www.webmd.com</a></td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>Symptom checker</td>
</tr>
</tbody>
</table>
# Appendix A – Feature Matrix

## Ease of Use/Accessibility of Information

<table>
<thead>
<tr>
<th>User Characteristics</th>
<th>Navigation Tools</th>
<th>Features &amp; Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>breastcancer.org</td>
<td><a href="http://www.breastcancer.org">www.breastcancer.org</a></td>
</tr>
<tr>
<td></td>
<td>American Cancer</td>
<td>Society (ACS)</td>
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<tr>
<td></td>
<td>Susan G. Komen</td>
<td>Foundation</td>
</tr>
<tr>
<td></td>
<td>National Cancer</td>
<td>Institute (NCI)</td>
</tr>
<tr>
<td></td>
<td>WebMD</td>
<td><a href="http://www.webmd.com">www.webmd.com</a></td>
</tr>
</tbody>
</table>

- **Categorized Information:** by Person Type (Patient, Doctor, Family) or Audience
  - Categorized Information: by Cancer Stage
- **Other Language**
- **Search Box**
- **Site Map**
- **Text-embedded Links**
- **Section Links at Bottom of Page**
- **Consistent Global Navigation**
- **Local Navigation**
- **Dictionary**
- **Dictionary**
- **Print This Page**
- **FAQ**
- **New to the Site**
- **Free Brochures or PDF files**
- **Website Help Contact / Technical Support**
- **Medical Help Contact (Phone or Email)**
Appendix B – “Theresa Donnetti” Persona

• 63-year-old married woman. High school graduate, class of 1961
• Lives in Indio, CA. Husband is 67-years-old; retired mechanical engineer.
• Part-time office manager; doesn’t have to work, but likes staying active
• Two grown children (one lives close, the other is far) but no grandchildren yet…!
• Historically, excellent health

Personal Attributes
• Financially secure; plans to retire in a few years. Fully health-insured.
• Involved in the community (volunteer at local church and public school).
• Numerous friends in their area; often meets them at the local Olive Garden.
• Plays golf with her husband and friends at least 3 times a week.
• Learned Word Perfect and Lotus Notes back in the 1980s, but mostly uses computers for checking email and for eBay (“depression glass”); Web-user since 2000:
  - Older Compaq Presario at home, located in a spare bedroom with dial-up Internet connection; at work, a Dell Dimension (Windows 2000) with a T1 connection.

Theresa’s Story
Theresa almost never gets sick, not even so much as a cough. However, two months ago, she felt a bump in her right breast, which led to visit to the doctor, a mammogram, a biopsy, and the diagnosis of breast cancer. She has not yet made a final decision about which treatment she will undergo. Her oncologist’s recommendation is for her to have either a lumpectomy (and the removal of several lymph nodes from with radiation therapy) or a full mastectomy of her right breast and possible chemotherapy. Theresa knows many women who have suffered from breast cancer, but she didn’t know the specifics of their diagnoses or treatments. In the end, despite feeling better as a result of talking to so many women, Theresa is confused about all of the information (sometimes contradictory) that she has heard