Breast Cancer Patient Perspectives Project

SPECIAL REPORT

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A summary of the proceedings from three breast cancer patient town hall meetings

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Dr Generosa Grana and Dr Neil Love present the Breast Cancer Patient Perspectives Project during the "Meet the Professor" session of the 26th Annual San Antonio Breast Cancer Symposium, December 2003.

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Prologue: A snapshot of what it was like

The following are select, edited, anonymous comments made by breast cancer survivors using portable computers during the patient perspectives meetings in Miami and Houston.

How did you feel when you were first diagnosed with breast cancer?

- I was horrified, terrified and could only concentrate on the faces of my children, wondering if they were mature enough to live without a mother. My husband is a strong parent and I am blessed with good friends who would be supportive of my children, but I wanted it to be me.
- I was overwhelmed and scared that I was dying. I felt like I had been hit by a truck.
- I was in denial for about five minutes before I realized that nothing was really under my control. My faith in God kicked in, and I realized that all I could do was place myself in the hands of my doctors and hope that they made the right decisions concerning my future health. I have always had a very positive attitude, and I believe it was this attitude that allowed me to get through this without any problems.
- I became an information junkie. I hit the Internet, talked to family and friends, and strived for open and honest discussions with my doctors. I understood the treatment options far better than most because I had gone through my twin sister's illness with her. I trained my doctors to see that I was a competent, intelligent woman and that they worked for me.
- I was devastated, afraid, angry, alone and shocked. At first I did not hear anything the doctor was telling me. After a few days of praying and calling on the support of family and friends, I approached this in a different manner. I started reading and educating myself about my options and was able to make good choices.
- I was stunned. I am a physician, myself, but despite all my training, my immediate thought was, "I'm going to die." Once I had time to process it, I knew which treatment I wanted. Had I not been a physician, I don't think I would have been able to understand much of the information given because I was so shocked.
- I was devastated. I thought I was a picture of health. I was paralyzed and numb. Although I am a nurse, I forgot everything I knew about medical terminology. I was totally confused. I think I had an out-of-body experience. It wasn't me going through all of this.
- I felt total and complete panic, terror and bewilderment. My brother had just died of kidney cancer, and I helped take care of him. I was so afraid that I would suffer the same fate he did. But I am alive and well after 12 years. I had

to take my husband to all of my appointments because I was too panicked, fearful and terrorized to make effective choices for myself. As time went on, I calmed down and made excellent choices that I have been happy with as the years passed.

- I was told over the phone by my surgeon and was in complete shock. I had heart palpitations, broke out into a sweat and felt faint. By the time I had my first appointment, I had done my homework and had my list of questions ready. I also took a friend with me to every appointment so that she could pick up what I missed.
- I was frightened and devastated. It was hard to concentrate on what the doctors were saying. I found it helpful to write things down and to have someone else with me to hear the information.
- I felt like I was in a time warp. Everything around me was cloudy and all I heard was CANCER.
- When I was told I had breast cancer, my first reaction was, "Am I going to be around to see my children grow and be a part of their lives." It took me some time just to digest the information and inform my husband, family and friends. As I began to tell my loved ones, I started to understand more and more of what I would be going through.
- I was depressed and felt like my world was spinning out of control. I kept thinking, how could I leave my one- and three-year-old children without a mother? It was hard to make treatment decisions. You are thrown so many options and so much information, it is VERY difficult to assimilate it all. However, I do feel I made the best decisions at the time with the information I had.
- I was totally shocked and thought, "I'm going to die." In the beginning, I only wanted to hear that I wasn't going to die, and I didn't care what they had to do to me to get me where I wanted to be. I pretty much agreed to everything.

How did you feel about the medical care you received for breast cancer?

- I was moderately satisfied with my medical team. The most positive thing was that the physicians listened to my questions.
- In my first meeting with my first physician, it was like pulling teeth to get him to talk about my condition, so I went to another doctor. He discussed options but also wanted to know about my dreams, the things I still wanted to do, how much I loved life and what kind of fight I was willing to go through. That was a good start. I left there feeling that I was going to be a part of my treatment.
- I was very satisfied with my interactions with all my physicians. However, I am a very assertive person and went into my treatment with a positive attitude. I can see that timid and shy people would feel overwhelmed.

- I was seen by resident doctors at a public hospital. Some of them were sympathetic and listened to my concerns but others did not even know my case. I had to wait four to five hours for a two- to three-minute visit with the doctor. By the end of my treatment, when I was more informed, I was able to make them stop, pay attention to me and answer my questions.
- I was very satisfied with the competence of my physicians. They were well-informed and generally patient with my questions. There were only two negatives. First, my surgeon told me I had breast cancer via a phone call while I was at work. I had no support immediately available and was unprepared for the news. Second, after my surgery, I was sad and grieving. My doctor immediately ordered a tranquilizer instead of letting me cry.
- I was extremely satisfied with my interactions with physicians. Both my surgeon and oncologist were women; they were the first female doctors I had ever dealt with. They were kind without being sentimental, and each of them understood how much information I needed and how much I could process at the time. Some of the doctors were like best friends, others like disinterested third parties. Some offered plenty of information, others said, "I'm the doctor, you're the patient. Let me worry about that." That is not the method I prefer. I prefer to be an informed partner in my health care.
- The doctor told me on the phone when I was babysitting my grandchildren, and I was not expecting such news. I did not hear a word he told me after he said my biopsy was positive. I was totally devastated and numb with fear. There needs to be a better way to inform patients.
- I loved all of my doctors except the surgeon. I score him a one on a scale of one to ten. I didn't have any complaints about his work, but he had an extremely cold personality and didn't offer much information. He just kept telling me that I would be going to see a specialist — an oncologist — who would elaborate on the issues.
- Most of the many physicians I dealt with were problematic in one way or another. Many have enormous egos and want to make all the decisions. They seemed to think that the patient doesn't know anything or enough to even participate in decisions about their own life and body.
- I was satisfied with my interactions with physicians — when I could get to them. It took a very long time to secure appointments. I believe physicians make a lot of assumptions regarding the knowledge a patient has just following the diagnosis. It's an everyday activity for a doctor, but for a patient it is a frightening experience.
- My medical oncologist was great. He really spent time with me and listened to me. But I must say, it was the nurses who really listened and understood me, especially the parts physicians are not comfortable hearing about — the "whole" person, feelings, psychologically and spiritually speaking, not just the cancer.

Editor's Note: Freedom of choice

As a junior faculty member in oncology at the University of Miami School of Medicine in the early 1980s, it was my annual privilege to deliver the very first lecture to incoming freshman medical students. The purpose of my talk was to teach these aspiring docs how to navigate the medical library and read journal articles. However, each year, gazing out at the shining, idealistic faces of the physicians of tomorrow, I could not help but take the opportunity to be the first of hundreds to impart something meaningful about being a doctor.

"Listen," I said. "Listen very, very carefully to what your patients tell you… and think about it… a lot." I would then show them a 10-minute video of patients talking about being ill and their experiences with doctors. The content of the video was strikingly similar to the comments found on the previous three pages. Twenty years later, I still like listening… listening to patients, doctors and researchers. I am all ears. In fact, I have established an entire medical education group that provides nationally distributed cancer education. At the center of everything we do is… listening.

This monograph summarizes a unique project we launched last year to provide physicians further insights into the perspectives of women facing breast cancer. We held daylong "breast cancer patients' perspectives" meetings in New York City, Miami and Houston. During each meeting, we supplied the attendees with handheld wireless keypads that allowed anonymous polling. At the Miami and Houston meetings, we also provided portable computers to about 40 of the patients. This enabled these women to continuously comment with free text throughout the day.

At the conferences, a faculty of nationally known breast cancer research leaders discussed a variety of common and controversial treatment decisions encountered in the management of early breast cancer. These discussions revolved around several hypothetical patient scenarios. For each case, we asked the breast cancer survivors to select the type of therapy they might have preferred based on the information discussed about the side effects and potential for benefit. We also asked a variety of other related questions.

As a national provider of continuing medical education for oncologists and surgeons, our goal was to gather information that could increase the awareness of physicians about the diversity in breast cancer patients' perspectives. To that end, some of this information was recently presented at the 2003 San Antonio Breast Cancer Symposium.[1] A follow-up report containing additional information was submitted for presentation at the 2004 American Society of Clinical Oncology's Annual Meeting.[2]

[1]Love N et al. Heterogeneity in breast cancer survivors' perceptions of adjuvant systemic therapy options after verbal counseling from a physician panel in a Town Meeting. *Breast Cancer Res Treat* 2003;Abstract 142.

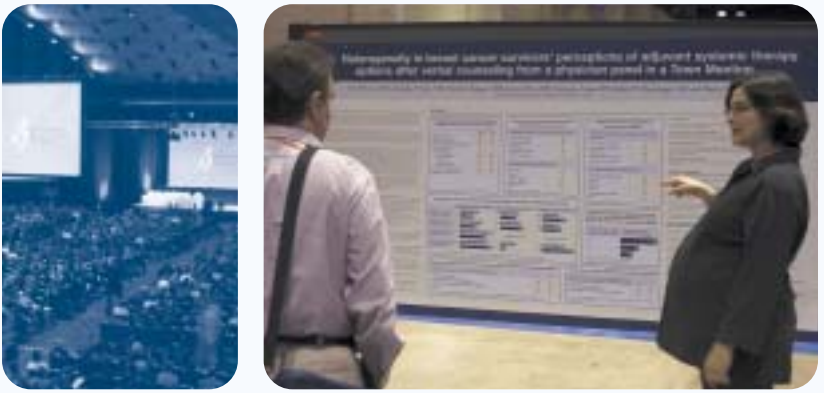
[2]Love N et al. Influence of prior therapy on breast cancer survivors' preferences for adjuvant systemic therapy in hypothetical scenarios. Abstract submitted to ASCO, 2004.

It is important to note that these interactive patient surveys were not intended to be rigorous scientific studies but rather glimpses into the perspectives of women facing controversial management decisions. This monograph summarizes some of the polling results we obtained from these women. We are aware that the people who attended these events are not necessarily reflective of the overall breast cancer survivor population.

Our main objectives were twofold. First, we wanted to encourage physicians treating breast cancer patients to individualize discussions about treatment decisions when more than one acceptable option exists. Second, we wished to support the practice of allowing patients the opportunity to actively participate in decisions, if they so chose. With our objectives in mind, this monograph has been distributed to more than 30,000 medical oncologists and surgeons as a special supplement to our *Breast Cancer Update* audio series. It will also be mailed to the breast cancer survivors who attended the three meetings, thousands of breast cancer advocacy group members, and selected journalists and media outlets.

To facilitate comprehension of this information for all constituencies, the commentary is written at the level of a layperson. Our hope is that the opinions and viewpoints of these women will be informative to audiences from a variety of backgrounds, and that as this project evolves, there will be greater awareness of the heterogeneity of perspectives on these controversial questions. We are extremely grateful to the 722 survivors and 363 guests who attended the three meetings and the many support group members who assisted in recruiting attendees. Their selflessness and concern for future patients provide us with another valuable opportunity to listen.

— Neil Love, MD
Editor, *Breast Cancer Update*
February 2004



Dr Michelle Paley at the invited poster session discussing the Breast Cancer Patient Perspectives Project during the 26th Annual San Antonio Breast Cancer Symposium, December 2003.

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Part 1: Background to the project

One of our major goals as physicians is to fully educate our patients by providing them with relevant, accurate and complete information, so they are able to understand their prognosis, treatment options and the benefit-to-risk ratios associated with each of those options. But we can't stop there. After that education, we also need to make a recommendation.

— Gabriel N Hortobagyi, MD, FACP
Breast Cancer Update audio series, January 2003

Medical decision-making and the leadership role of breast cancer

Over the last 20 years, our medical education group in Miami has witnessed a remarkable shift in the classic paradigm of the doctor-patient relationship. In the past, physicians often approached clinical decision-making in a somewhat paternalistic manner. However, in 2004, the "I am the doctor; this will be your treatment" model has largely been replaced by a shared decision-making approach, as noted above by Dr Hortobagyi — a legendary breast cancer research leader from MD Anderson Cancer Center in Houston.

Starting in the 1970s, breast cancer medicine assumed a central role in the evolution of the contemporary medical decision-making paradigm with what became an ongoing series of controversies concerning the choice of breast cancer surgery. Facing a storm of criticism from his surgical colleagues, Dr Bernard Fisher launched a series of clinical research trials to determine whether simple removal of a tumor (lumpectomy) provided cancer control equivalent to removal of the breast (mastectomy).

Even when these studies began to demonstrate that lumpectomy provided the same cancer outcome as mastectomy, many physicians were reluctant to discuss breast-conserving surgery as an alternative for their patients. However, survivor advocates, such as Rose Kushner, stridently challenged doctors who wished to make unilateral decisions for their patients. Today, lumpectomy is a commonly utilized option presented to most women diagnosed with breast cancer.

As this debate raged in the medical and lay press, the larger issue of clinical decision-making in the face of evolving research data gained momentum. Doctors and patient advocates in other parts of oncology and medicine began to apply the breast cancer paradigm to other decisions.

"Adjuvant" therapy decisions

Many other challenging decisions in breast cancer management have emerged since the initial debate about lumpectomy. Perhaps the most widely discussed of these relates to the use of systemically administered agents such as chemotherapy and hormone therapy as an "adjuvant" to primary local surgery and radiation therapy. Therapy is given to reduce the chance of recurrence.

The controversy about this therapeutic strategy stems from the fact that treatments with potentially significant side effects are administered for what are, in many cases, statistically marginal benefits. For example, in some cases relatively toxic chemotherapy is considered for women who have a 90 percent chance of remaining cancer-free without treatment. In these types of cases, chemotherapy may only improve this probability by one or two percent.

Is it worth experiencing significant side effects for such a modest benefit? While similar difficult decisions are made in the treatment of all cancers and many nononcologic conditions, the breast cancer research and advocacy community embraced a very patient-centered approach to this situation. Specifically, physicians have not only been encouraged but also pressured to openly discuss the available and relevant research data with their patients to allow them the opportunity to make informed decisions.

One historic example of what became an extraordinary exploration of challenging decisions in breast cancer was a study conducted in Australia in 1987.[3] Essentially, 104 women were interviewed after receiving adjuvant chemotherapy for breast cancer. These patients, who were personally familiar with the entire panorama of chemotherapy-related side effects, were asked, "How much benefit would you require in order to justify going through this type of treatment?"

Remarkably, these women seemed willing to undergo toxic therapy for a relatively minimal potential treatment benefit. This study was so important in altering the way healthcare professionals view breast cancer treatment decisions that the data were re-presented at the 2000 NIH Consensus Conference on Early Breast Cancer.[4]

Perhaps one of the most oft-quoted statistics in medical oncology comes from this study — more than half of the patients indicated that a one percent improvement in their chance to survive for five years would justify treatment with chemotherapy. Many physicians were surprised that these women expressed such an intense focus on cancer risk reduction, and this study helped increase awareness that the mindset and value system of women with breast cancer may be difficult for their doctors to envision. It also clearly pointed to the fact that more efforts like the Australian survey were needed to help physicians fully understand this phenomenon.

Breast Cancer Update (BCU) audio series and "periods of uncertainty"

Our group in Miami has been actively involved in breast cancer continuing education for 20 years. In 1988, we launched *Breast Cancer Update*, a nationally distributed audio series featuring one-on-one interviews conducted with breast cancer research leaders. This series utilizes an interview format to ask the challenging questions faced by practicing physicians every day. *BCU* has

[3]Coates AS, Simes RJ. Patient assessment of adjuvant treatment in operable breast cancer. *In: Williams CJ, ed. Introducing New Treatments for Cancer: Practical, Ethical and Legal Problems.* London, UK: John Wiley & Sons Ltd; 1992:447-58.

[4]Simes RJ, Coates AS. Patient preferences for adjuvant chemotherapy of early breast cancer: How much benefit is needed? *J Natl Cancer Inst Monogr* 2001;(30):146-52. Abstract

been enormously successful. Three external independent reviews conducted from 2000 to 2003 have documented that more than two-thirds of oncologists and surgeons in the United States are regular listeners.

Over the years, we have observed that the most controversial questions in breast cancer management arise when new research information first becomes available. This frequently occurs because of the extraordinary number of breast cancer clinical trials that are conducted. New research information is often provocative, but its clinical implications are often uncertain, particularly since it may take years for the data to mature and definitive results to emerge.

I have interviewed Dr Michael Baum, a leading researcher from the United Kingdom, a number of times for the *BCU* audio series. During a recording several years ago, we discussed the interpretation of clinical trial results. "There are always periods of uncertainty in the evolution of science and medicine," he said. Our group embraced Dr Baum's concept of "periods of uncertainty." We have referred to this concept in many of our subsequent education programs, and physicians have responded positively.

The essential dilemma that physicians face during these "periods of uncertainty" is whether to utilize a promising new treatment strategy before definitive evidence proves that it will provide an advantage over the current standard treatment. In oncology, we have observed that about one-third of physicians tend to quickly adopt new treatments, one-third tend to conservatively wait until definitive research data are available, and one-third fall in the middle.

In breast cancer, there are many examples in which acting too quickly or too slowly have had important consequences (Figure 1.1). In the early 1990s, based on preliminary data suggesting a benefit to very high doses of chemotherapy in combination with bone marrow transplantation (to protect against infection), many physicians utilized this very toxic treatment.

Figure 1.1: Periods of Uncertainty in Breast Cancer

Scenario	Consequence	Example
Therapy is later proven ineffective	Unnecessary treatment	High-dose chemo/marrow transplant
Therapy is later proven effective	Reduced morbidity/mortality	Tamoxifen

Subsequent research demonstrated that this approach did not offer an advantage compared to the less toxic alternatives. In retrospect, many women experienced unnecessary toxicity because this therapy was prematurely adopted during a "period of uncertainty."

On the other hand, in the late 1980s clinical trials began to demonstrate a significant survival advantage for the use of the antiestrogen drug tamoxifen as an adjuvant after primary breast cancer surgery. However, the initial data supported an advantage for adjuvant tamoxifen only for postmenopausal women. Some research leaders at that time — including Dr Baum — believed that these benefits would eventually be established in younger women. However, at that point oncologists were divided as to whether adjuvant tamoxifen should be prescribed for premenopausal women.

It was not until 1995 that the benefits of adjuvant tamoxifen were established in younger women. During those years of uncertainty, many younger women were not offered a treatment that could have potentially decreased their risk of cancer relapse and death. In retrospect, physicians who delayed implementing this intervention denied their patients an important treatment benefit.

One approach to these "periods of uncertainty" is to offer patients the opportunity to learn about the uncertain benefits and risks of new interventions and to share these very difficult decisions with physicians. Our group fully supports this strategy, and we decided to develop programs and projects to facilitate the communication of perspectives about breast cancer between the key constituents: research leaders, community-based oncologists and patients.

Perspectives about breast cancer

Our audio series regularly communicates the perspectives of research leaders to community-based physicians. Our national "Patterns of Care" surveys of community-based oncologists illustrate how emerging research is being translated into practice.

With this same perspectives awareness strategy in mind, last year we emulated the Australian group and attempted to gather the viewpoints of women with breast cancer. Our primary objective was to incorporate these breast cancer patients' perspectives into our physician education programs.

To accomplish this task we applied for, and received, an unrestricted education grant from AstraZeneca Pharmaceuticals LP to fund a "Breast Cancer Patients' Perspectives Project." AstraZeneca has several major breast cancer products — Nolvadex® (tamoxifen citrate), Arimidex® (anastrozole), Faslodex® (fulvestrant), and Zolodex® (goserelin acetate implant) — and is one of four corporate supporters of the *Breast Cancer Update* series. (The others are Genentech BioOncology, Roche Laboratories Inc and Amgen Inc.)

Funding for cancer education is surprisingly difficult to obtain from public sources such as the National Cancer Institute, which focuses its resources primarily on research. I mention the issue of funding openly to invite scrutiny of our work. For many years we have sought to ensure balance in our education projects by working with the world's most renowned and respected cancer research leaders (see pages 3 and 10). Our belief is that what we have presented

is fair and helpful to physicians in patient care.

Breast cancer patients' perspectives meeting

Our goal for this project was to efficiently and expeditiously gather information that would be useful in our education programs. To this end, we decided to utilize an approach that has been very effective in gathering information from physicians.

For many years we have used electronic, handheld, wireless keypads to survey doctors at educational meetings. These devices allow immediate feedback on multiple-choice questions designed to survey physicians about challenging treatment decisions. We frequently collate and publish the information gathered in the polls from these meetings.

Obviously, to most effectively use keypad polling, it is necessary to first gather a large population of individuals. For the patient preferences project, our strategy was to recruit breast cancer survivors and their guests through the media, support groups and physicians' offices, and invite them to attend one of three daylong breast cancer "patient perspective meetings." Attendees were given gift certificates in appreciation for their attendance.

During these events we gave participants keypads and asked a number of questions based on case scenarios we developed. A panel of national research leaders discussed the cases and relevant issues. Specifically, these physicians told the audiences what they might say when counseling a patient with a similar case scenario, including the options they might present and benefits and risks of each option.

We decided that the case scenarios presented would focus on one very specific clinical situation that oncologists often confront: the decision concerning adjuvant systemic therapy after primary breast cancer surgery. To avoid any chance of interfering with ongoing patient-physician discussions, only survivors who were initially diagnosed more than one year ago were invited to participate in the meetings.

We also were sensitive to privacy issues. We excluded the media from attending these meetings, did not allow photography and did everything possible to maintain patient anonymity and confidentiality. (Keypad polling is anonymous.) Our first meeting took place in New York City on May 18, 2003, in a former Broadway theatre that was renovated as part of the Millennium hotel. In attendance were 197 breast cancer survivors and 110 guests.

When we began that morning, even the faculty were a bit nervous at what might transpire. To break the ice, Dr Patrick Borgen, Memorial Sloan-Kettering's chief of breast cancer surgery and panel member at the meeting, quipped to the audience, "I called my mother and said, 'Mom, I'm going to be on a Broadway stage on Sunday!' And she said, 'It took you 15 years in New York to get on a

Broadway stage?'"

One of our greatest concerns was whether we would be able to effectively communicate the complex information discussed during a breast cancer diagnosis in this type of setting. On the one hand, we knew that we would spend much more time discussing these issues than likely would be allotted in a doctor's office. We also had some of the country's foremost experts to help discuss these topics. On the other hand, a large theatre is not nearly as conducive to learning as the one-on-one discussions that typically occur during an office visit.

Our impression was that we were able to successfully communicate these complex issues, and the feedback from patients confirmed this assertion. We polled meeting attendees, and the vast majority of patients indicated that they were able to understand the information presented. Even in Miami, where about 10 percent of the audience spoke another language (primarily Spanish), this was excellent self-assessed comprehension (Figure 1.2).

Future similar patient perspective meetings might be considered in other languages, including Spanish. Another population group that might provide valuable insights would be economically disadvantaged women. We believe that physician education programs that specifically focus on the perspectives of these and other minorities would be very worthwhile.

Figure 1.2: Breast Cancer Patients' Perceptions of Their Understanding of the Information Presented at the Meetings

I have a good understanding of what was discussed today.

	Primary Language	
	English	Other
Strongly agree	67%	67%
Agree	25%	25%
Neutral	5%	4%
Disagree	2%	4%
Strongly disagree	1%	0%

Data collected at the Miami meeting.

The initial experience in New York allowed us to tinker with the agenda and polling questions for the other two meetings — in Miami, Florida, on September 14, where we were joined by 264 patients and 131 guests, and in Houston, Texas, on November 16, where 261 patients and 122 guests attended.

This monograph summarizes many of the key survey results from the three

meetings. The main purpose of this project is to assist in educating physicians about the perspectives of breast cancer patients. This report and a CD containing PowerPoint® slides of the enclosed graphics are being distributed to our national audience of more than 30,000 oncologists and surgeons.

Our education group has already presented and discussed many of these findings at medical meetings. In fact, when we presented some of this information in Chicago at the Lynn Sage Breast Cancer Symposium last September, panel member Dr Michael Baum said, "These data are truly fascinating. It was worth my trip from England just to see this!" It is our hope that the distribution of this report and slides will encourage other healthcare professionals to present and discuss the findings.

From a physician education viewpoint, the most important aspect of these data is the spectrum of responses observed. Clearly, women begin the breast cancer experience with different perspectives. Our goal is to further sensitize physicians providing care for these patients to the fact that no two women will view the risks and benefits of treatment options in the same way.

An unexpected outcome from the initial year of our project was that we noticed that the women attending the three meetings responded very favorably to the interview format used to query the research leader panels. We recognized that this approach, which formed the foundation for the success of our *BCU* series, might be well-received by patients.

As a consequence, this year we will launch "*Breast Cancer Update for Patients*." This is the first time we have attempted to make our work available to patients. In the coming months, new audio programs will be available through physicians' offices and will be available to download without charge at www.BreastCancerUpdate.com.

Our group continually seeks innovative methods to facilitate the communication of perspectives among the key constituents in the breast cancer crucible. We are particularly interested in stretching this model to include patients' family members and ancillary healthcare professionals, particularly nurses. While the rapid pace of breast cancer research will constantly create new "periods of uncertainty," our hope is that the burden associated with these difficult decisions can be shared together.

Part 2: Who attended the meetings?

Almost 1,100 people attended the three meetings we hosted. This project was not a scientific endeavor; however, the number of participants was much greater than that of the classic Australian study of 104 women. In promoting these events, we described the project as a physician education initiative. Patients were asked to participate in the educational process by providing their perspectives on many challenging treatment decisions. We, in turn, made the commitment to deliver this important information to physicians caring for breast cancer patients.

In the United States the median age at the time of breast cancer diagnosis is approximately 65. The women who attended these meetings were slightly younger than the national average (Figure 2.1).

Figure 2.1: Age of the Breast Cancer Survivors Attending the Meetings

	New York	Miami	Houston
Total survivors	199	253	273
Age			
Under 40	5%	5%	6%
41-50	27%	26%	23%
51-60	39%	38%	43%
61-70	21%	20%	21%
Over 70	9%	11%	7%

We asked that survivors attending these events to be at least one year from their initial diagnosis. There was a spectrum of attendees in that regard, including 26 women who had been diagnosed more than 20 years ago (Figure 2.2).

Figure 2.2: Time Since Initial Breast Cancer Diagnosis for the Breast Cancer Survivors Attending the Meetings

	New York	Miami	Houston
Initial diagnosis			
Less than a year ago	4%	8%	4%
1-2 years ago	35%	33%	35%
3-5 years ago	28%	30%	28%
6-10 years ago	17%	18%	17%
More than 10 years ago	16%	11%	16%

About one-fourth of the women attending these meetings had experienced a breast cancer recurrence (the cancer coming back). Interestingly, at each of the three meetings when the polling results indicated that many survivors with recurrence were in attendance, the audience broke into spontaneous applause. The outpouring of appreciation for the selflessness of these women in trying to assist in the future care of other women was heartwarming.

When most women are first diagnosed with breast cancer, the disease is localized to the breast. A fraction of these patients will later develop a relapse in which the cancer is found in another location, usually in the bone, lung or liver. These metastases may be effectively treated with chemotherapy, hormonal therapy or biologic agents, such as trastuzumab (Herceptin®), but the disease at that point is difficult or impossible to eradicate.

Some recurrences occur locally (where the original cancer was present) either in the breast in women treated with lumpectomy or in the chest wall in women treated with mastectomy. These local recurrences may be eradicated with a variety of therapies.

Surgery and radiation therapy are the primary treatments utilized to attempt to eradicate a tumor in the breast. In tertiary care centers of excellence, the majority of patients are initially treated with lumpectomy and breast irradiation because it is thought to convey a better cosmetic result.

In community-treatment settings, fewer women undergo lumpectomy. This perhaps can be attributed to lower acceptance rates for this procedure. At the Miami meeting, only 38 percent of the attendees had been treated with lumpectomy (Figure 2.3).

Figure 2.3: Prior Therapies Received by the Breast Cancer Survivors Attending the Meetings

	New York	Miami	Houston
Surgery			
Lumpectomy		38%	
Mastectomy		60%	
Other		2%	
Systemic treatment			
Chemotherapy	69%	66%	67%
Hormonal therapy	71%	74%	66%
Tamoxifen	57%	61%	49%
Aromatase inhibitor	10%	11%	15%

The other major form of breast cancer treatment is "systemic" therapy, which can be administered orally or intravenously to counteract cancer cells throughout the body. A number of chemotherapy agents and combinations are utilized, and more than two-thirds of attendees had received one or more of these therapies (Figure 2.3). Endocrine or hormonal therapy is another systemic treatment option that is frequently utilized.

Hormonal therapy, however, is generally only administered to women whose tumors contain the "estrogen receptor protein (ER)." When tumor tissue is removed, (for example, during primary breast surgery), testing for ER is routinely done.

Approximately 70 percent of all breast cancers are considered estrogen-receptor positive. Accordingly, about two-thirds of the meeting attendees had received some form of hormonal therapy.

There are many different types of hormonal therapies. The two most common are tamoxifen, an antiestrogen that blocks estrogen hormones from stimulating breast cancer cells, and the newer aromatase inhibitors, which lower the levels of estrogens in postmenopausal women. Most of the attendees who reported taking endocrine therapy received tamoxifen.

Breast cancer patients also frequently seek out complementary or alternative therapies, e.g., herbs, meditation, reflexology, etc. More than half of the meeting attendees indicated that they were currently receiving some form of this type of therapy (Figure 2.4). About one-third of the women utilizing these approaches indicated that their doctors were not aware of this.

Figure 2.4: Use of Complementary and Alternative Medicine by the Breast Cancer Survivors Attending the Meetings and their Doctors' Awareness

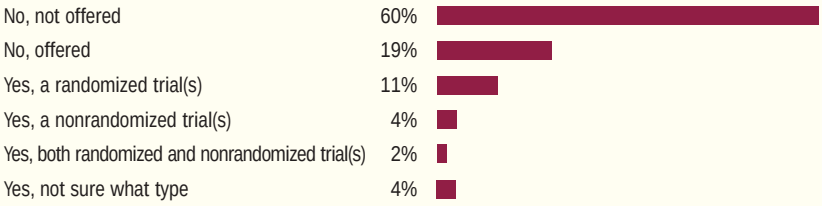
	Yes	No
Are you utilizing some form of complementary medicine?	54%	46%
Of those who are using complementary medicine(s), does your doctor know?	68%	32%

Data collected at the Houston meeting.

One of the key options available to most breast cancer patients is participation in a research study. Nationally, it has been estimated that only two to three percent of women enter these clinical studies. Many of these studies compare a standard therapy to one that is slightly different.

Only about one in five of the meeting attendees participated in a research trial. More than half were not even offered participation in a study, and 18 percent were offered participation but declined (Figure 2.5).

Figure 2.5: Participation in Studies by Breast Cancer Survivors Attending the Meetings



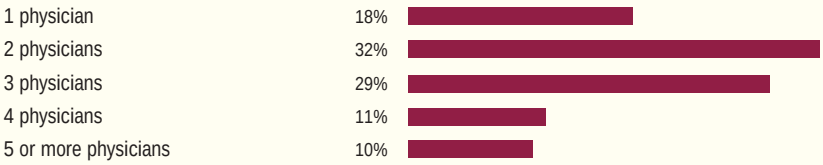
Data collected at the New York, Miami and Houston meetings.

The fact that so few women enter clinical trials means that the research will take much longer to complete, prolonging the time to evaluate new therapies that could potentially benefit patients. An important goal of our project was to obtain information on patients' perspectives about research study participation, and a specific case presented at the meetings related to that issue (see page 39, Figure 5.14).

Part 3: Breast cancer patients' prior experiences

In order to learn about the past experiences of the attendees, we asked a number of questions related to their interactions with doctors. Most of the patients interacted with several physicians before their treatment was initiated (Figure 3.1). This reflects the normal flow of patient care and the preference of many women to obtain second and third opinions. We discovered that most of the attendees were pleased with the care they received from their surgeons and oncologists (Figure 3.2).

Figure 3.1: *How many physicians did you consult prior to treatment?*



Data collected at the New York, Miami and Houston meetings.

Figure 3.2: *I was pleased with the care that my Surgeon or Oncologist gave to me.*

	Surgeon	Oncologist
Strongly Agree	60%	62%
Agree	17%	24%
Neutral	7%	10%
Disagree	8%	2%
Strongly Disagree	8%	2%

Data collected at the Miami meeting.

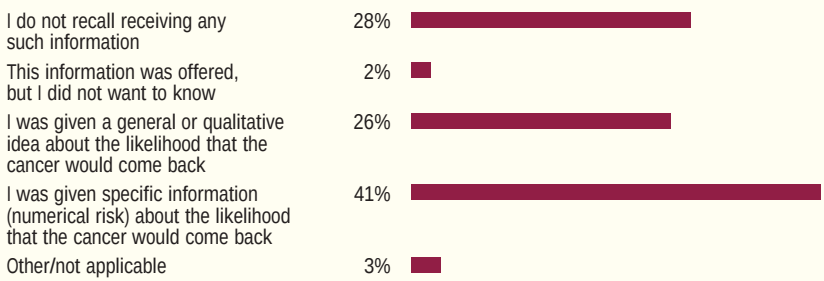
Some of the portable computer input from attendees about physician practices are included in the beginning of this report. A number of women verbalized dissatisfaction that their initial diagnosis was given by phone. With regard to "bedside manner," more women reported dissatisfaction with surgeons than with oncologists. Office-based nurses were widely viewed as being particularly helpful.

One of the most important facets of a medical oncologist's initial evaluation of a patient after surgery is determining the likelihood that the cancer will recur. While surgery is able to remove the local cancer, in some cases microscopic tumor cells remain in the body. These may later grow and cause problems. This later growth is termed "recurrence."

A number of factors are utilized to predict the probability of recurrence including the size of the original breast tumor, whether local lymph nodes were involved and other clues from examining the cancer under the microscope.

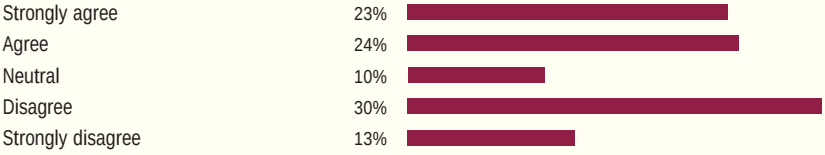
Most of the meeting attendees recalled receiving some information about their prognosis (Figure 3.3). However, in related questions, more than a third of patients indicated that they had difficulty sorting through information due to emotional stress or the complexity of the information (Figures 3.4 and 3.5).

Figure 3.3: *At the time of your diagnosis, what do you recall that your doctor told you about the chance of the cancer coming back or progressing?*



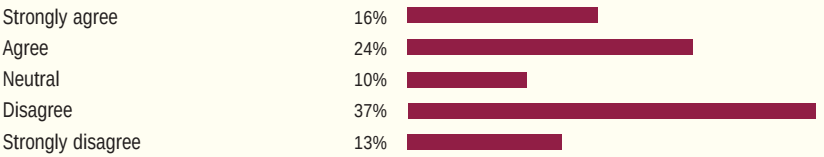
Data collected at the New York and Miami meetings.

Figure 3.4: *When I was first diagnosed with breast cancer, I was so upset that I had a very difficult time understanding what the doctor was explaining to me about treatment.*



Data collected at the Miami meeting.

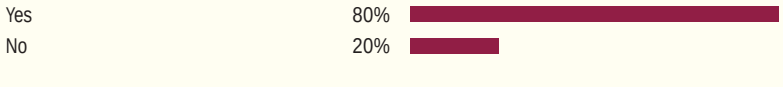
Figure 3.5: *When I was first diagnosed with breast cancer, I had a very difficult time understanding what the doctor was explaining to me because it was too complex.*



Data collected at the Miami meeting.

The panel of faculty in Miami noted that one of the most important factors in assisting patients to understand complex information is to provide the opportunity to ask questions. Most patients indicated that their physicians routinely allowed them that important opportunity (Figure 3.6).

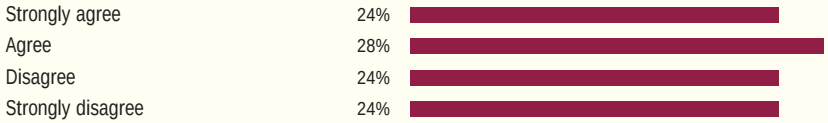
Figure 3.6: *Do you find that your doctor asks you if you have any questions regarding your treatment?*



Data collected at the Miami meeting.

Patient perceptions regarding the adequacy of physician counseling was quite variable. One specific question posed in New York, regarding the important issue of educating patients about treatment side effects, resulted in considerable disparity (Figure 3.7).

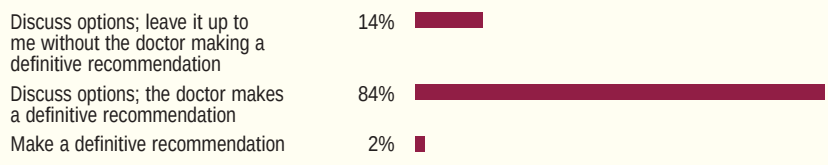
Figure 3.7: *My doctor adequately described the side effects/toxicities of my hormonal therapy.*



Data collected at the New York meeting.

This patient perspectives project primarily focused on controversial treatment decisions involving multiple acceptable options. We asked attendees at the Miami meeting how they wished their physicians to approach education and counseling in these situations. One approach was overwhelmingly preferred: Patients wanted physicians to review all of the options and then provide a definitive recommendation (Figure 3.8).

Figure 3.8: *If you were in a situation with multiple acceptable options, how would you like your doctor to discuss this with you?*



Data collected at the Miami meeting.

Part 4: Breast cancer patients' perspectives about treatment-related side effects

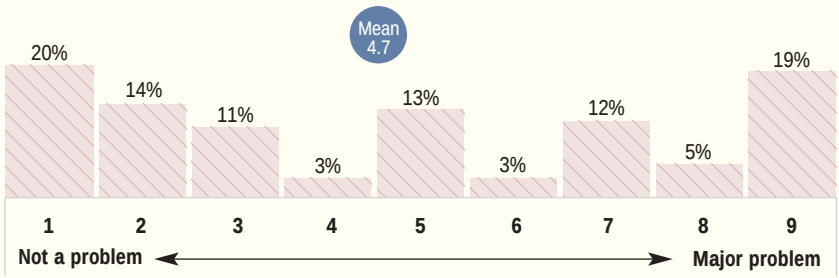
Any discussion about treatment options must include an open and informative dialogue on the potential risks and side effects associated with the therapy. At each of the breast cancer patients' perspectives meetings, the expected side effects were reviewed for the three common forms of drug treatment for breast cancer — chemotherapy, hormonal therapy and biologic therapy with trastuzumab (Herceptin).

The panel of research leaders discussed these side effects in the same way they might explain them to a patient in their office. No slides were utilized, so the voting would be based on the typical counseling a patient receives in a doctor's office.

At the New York meeting, we asked patients to use a 1-9 scale to rate their perceptions of individual side effects independent of the potential benefit of therapy. The heterogeneity in responses was interesting. Some of the factors discussed mainly interfered with quality of life, while others posed substantial health risks.

Hot flashes and sweating — common effects of menopause — were described since they have been observed to increase in severity and frequency with hormone therapy. For many years, both physicians and patients have recognized that hot flashes increase in frequency with the use of tamoxifen. The same can be said, perhaps to a lesser extent, for aromatase inhibitors. Patient perceptions of this risk were quite variable (Figure 4.1).

Figure 4.1: *On a scale of 1-9, how do you view hot flashes associated with tamoxifen?*

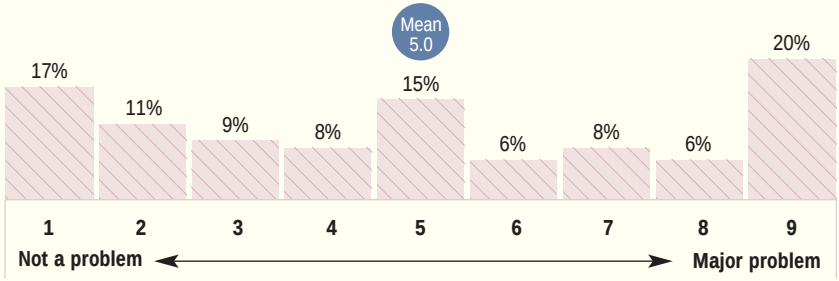


Data collected at the New York meeting.

Another polling question related to joint aches and pains, also known as arthralgias, observed in a minority of patients receiving aromatase inhibitors. These symptoms

are usually reversible if the therapy is discontinued. As with hot flashes, there was a spectrum of patient responses (Figure 4.2).

Figure 4.2: *On a scale of 1-9, how do you view joint pain (arthraglia) associated with aromatase inhibitors?*

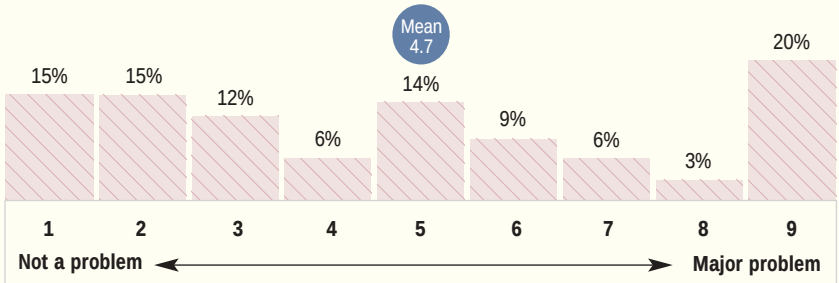


Data collected at the New York meeting.

Tamoxifen has a growth inhibitory effect on breast cancer cells, but at the same time stimulates the lining of the uterus. This stimulation can result in an increase in uterine bleeding and cancer of the endometrium. As presented by our faculty, endometrial cancer occurs in about one percent of women who take tamoxifen for five years.

The treatment is a hysterectomy (removal of the uterus), which is curative in most cases. Oncologists know that this risk, while very uncommon, is of significant concern to patients. Our polling results indicated a substantial variation in breast cancer patients' perceptions of the risk of endometrial cancer (Figure 4.3).

Figure 4.3: *On a scale of 1-9, how do you view the risk of endometrial cancer associated with tamoxifen?*

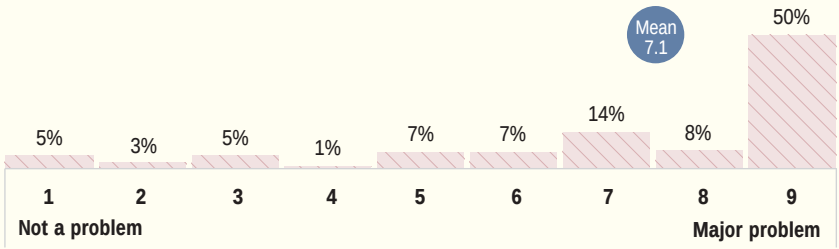


Data collected at the New York meeting.

There was also substantial variation in the breast cancer patients' perceptions of other serious, but uncommon, risks associated with hormonal therapy, such as blood clots and stroke with tamoxifen, and bone loss and fractures seen with the aromatase inhibitors. At this time, there is no known method to reduce the serious risks associated with tamoxifen, but as discussed by Dr Gabriel Hortobagyi in New York and Houston, medication to strengthen the bones, i.e., bisphosphonates, may reduce or eliminate the bone loss associated with the aromatase inhibitors.

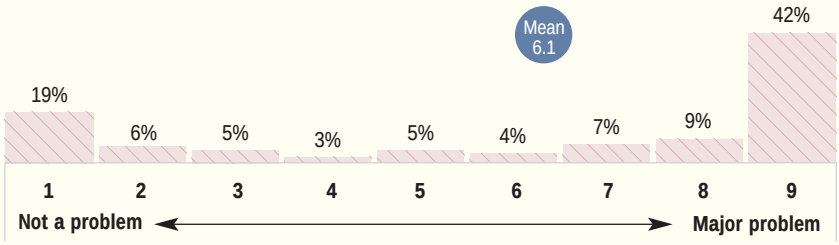
A variety of potential side effects and toxicities related to chemotherapy were also discussed. Common side effects include hair loss and nausea. Uncommon side effects include a drop in the white blood cell count, which may result in infection, and heart damage with drugs called anthracyclines, e.g., Adriamycin®. While there was substantial variation in the breast cancer patients' perceptions of these side effects, more women expressed greater concern about the complications of chemotherapy than about the side effects discussed with hormonal therapy (Figures 4.4 and 4.5).

Figure 4.4. *On a scale of 1-9, how do you view the reduction in blood cell count associated with chemotherapy?*



Data collected at the New York meeting.

Figure 4.5 *On a scale of 1-9, how do you view hair loss?*



Data collected at the New York meeting.

After discussing individual side effects in New York, we decided to take a different approach in Miami and Houston. At these meetings, we asked the faculty members to review the overall side effects of two common forms of chemotherapy and hormonal therapy. We then polled the audience about their perceptions.

First, with regard to endocrine therapy for postmenopausal women, we asked the panelists to describe what they say to patients about the two most common options for postmenopausal women discussed at first diagnosis: tamoxifen and the aromatase inhibitor anastrozole (Arimidex®).

Although two other aromatase inhibitors are currently available for postmenopausal women (letrozole [Femara®] and exemestane [Aromasin®]), we focused on Arimidex because it is the only one of the three to have clinical research available on use in this setting.

Specifically, in December 2001 Dr Baum presented the first results of the ATAC trial (Arimidex, Tamoxifen, Alone or in Combination) at the San Antonio Breast Cancer Symposium. This study was later published in *The Lancet*, and Arimidex was approved by the Food and Drug Administration (FDA) for use in the adjuvant setting. At the current time, similar data with the other two aromatase inhibitors are not available, and the other aromatase inhibitors have not been approved by FDA for this use.

The panelists reviewed the major side effects and toxicities of tamoxifen, as has been documented through more than two decades of use. Arimidex is a newer agent, but the side effects are relatively well-understood. This can be attributed to the fact that the ATAC trial, with more than 9,000 patients, was the largest cancer treatment trial ever conducted. All three aromatase inhibitors have been studied in many trials of women with advanced breast cancer.

The panelists noted that one advantage for tamoxifen was its long track record of relative safety. The major concerns are an increased risk of endometrial cancer, stroke and blood clots in the leg. It was noted that these are potentially major but very uncommon complications, particularly those that relate to thrombosis.

In terms of Arimidex, the two major issues discussed were joint discomfort, as previously noted, and loss of bone density. The ATAC trial documented a somewhat increased risk of fractures in women receiving Arimidex, but preventive therapy with bisphosphonates was not utilized in this study.

The panelists noted that they routinely measure bone density in women who might receive Arimidex and would not use this treatment in a woman who already had osteoporosis. Most of the panelists agreed that bone was a potential concern.

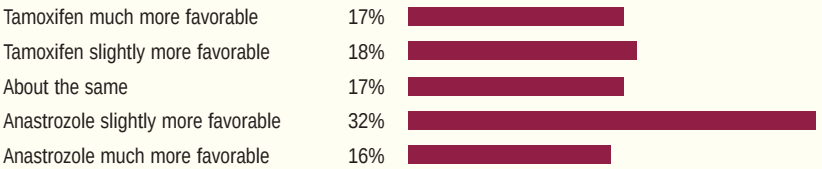
We then asked the patients in Miami and Houston which of these two therapies they would likely prefer to receive if they assumed the agents had the same cancer treatment benefit. More women indicated they would prefer to receive Arimidex, but again, there was significant heterogeneity in response (Figure 4.6).

We also considered the fact that more than half of the attendees were already receiving tamoxifen, and this might have biased their answers. When we restricted the vote to women who had not received tamoxifen, more than 75 percent preferred Arimidex.

When asked which factor most influenced their choice of therapy, endometrial cancer and blood clots associated with tamoxifen were the predominant side effects leading women to prefer Arimidex. Breast cancer patients who preferred tamoxifen focused on its long track record and concerns about bone with Arimidex.

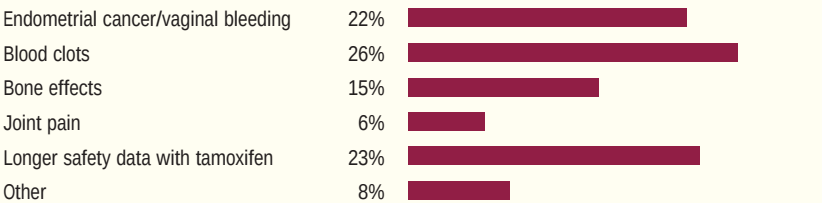
Figure 4.6: Breast Cancer Patients' Perspectives about Side Effects of Adjuvant Hormonal Therapy

How would you compare the acceptability of tamoxifen versus anastrozole?



Data collected at the Miami and Houston meetings.

Which factor influenced your choice the most?



Data collected at the Miami and Houston meetings.

A similar approach was used to compare two commonly utilized chemotherapy regimens — "CMF" and "AC." While oncologists frequently use single chemotherapy drugs in women with advanced breast cancer, combinations are almost always utilized in the adjuvant setting.

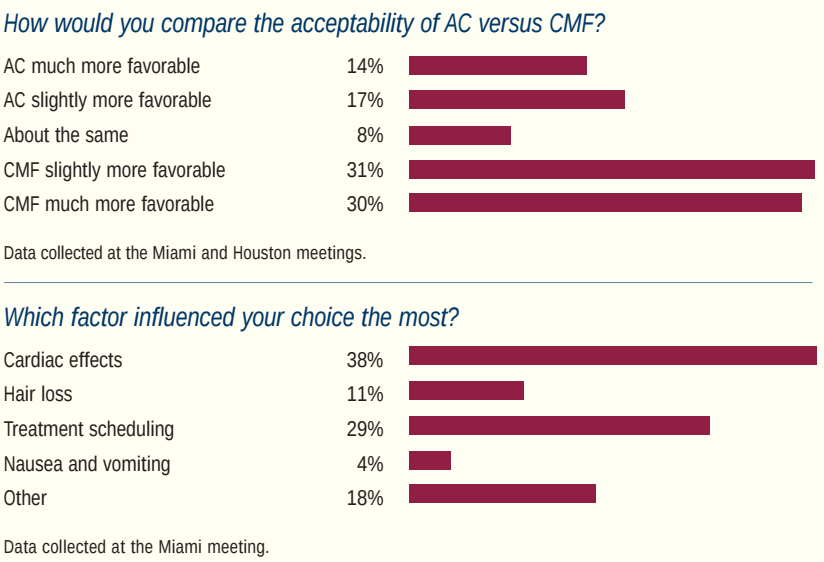
CMF includes three drugs: cyclophosphamide, methotrexate and 5-fluorouracil. It was one of the first regimens tested almost three decades ago. AC includes two agents: doxorubicin (Adriamycin®) and cyclophosphamide.

Our faculty pointed out that treatment with AC is completed in a shorter time period — usually nine weeks — compared to treatment with CMF, which lasts about six months. AC — because of the Adriamycin — is much more likely to cause

hair loss and, in a very small number of patients, can cause heart damage. CMF may cause more chronic nausea, while AC tends to cause acute nausea and vomiting.

Based on this input from the panelists, assuming there was equivalent anticancer benefit, patients preferred CMF (Figure 4.7). The most important factor in making this choice was concern about the small, but real, risk of cardiac damage with AC.

Figure 4.7: Breast Cancer Patients' Perspectives about Adjuvant Chemotherapy Regimens



One of the unexpected outcomes of these meetings was our impression that attendees found the format very favorable for learning. For more than 15 years, we have successfully utilized research leader interviews as the cornerstone of our *Breast Cancer Update* audio series. In many ways, these meetings were a "live" version of that format and helped us realize that patients, just like doctors, are fascinated by and can learn from the viewpoints of the leaders in the field.

Part 5: Breast cancer patients' treatment preferences

A key component to this project was the presentation of hypothetical case scenarios to attendees, and the documentation of their impressions about them. The cases we selected were typical situations commonly found in early breast cancer. We have presented similar scenarios to physicians during the many meetings and survey projects we have conducted. For these cases, we attempted to keep the questions at a very basic level to address a number of issues in the selection of adjuvant systemic therapy:

1. What is the threshold of treatment benefit required for breast cancer patients to consider receiving chemotherapy and endocrine therapy?

2. Which type of hormonal therapy do breast cancer patients prefer for premenopausal and postmenopausal situations?

3. How would breast cancer patients view participation in a randomized clinical trial in which a computer decides the selection of treatment? Would they prefer receiving the same therapy in a nonresearch setting?

When preparing for this project we were uncertain about the best method for the panel of breast cancer research leaders to discuss treatment options. On one hand, we wanted these experts to emulate the counseling they provide their own patients. On the other hand, it was important to have a credible basis about what was presented so that physicians could identify with the polling results.

Here is what happened. At the first meeting in New York we presented several hypothetical patients to the experts. They were allowed to utilize whatever information or statistics they normally present to their patients in those situations. For the second meeting in Miami, we came up with a different approach the day before the meeting.

Dr Peter Ravdin is one of the most respected breast cancer research leaders in the world, and we were privileged that he agreed to participate in the Miami and Houston meetings. One of Dr Ravdin's greatest accomplishments has been the development of a computer database that allows physicians to precisely estimate the benefits of adjuvant systemic therapy for individual patients.

On the day prior to the Miami meeting, Dr Ravdin was a guest panelist at an educational meeting we held for physicians. As he discussed his computer model, it occurred to us that the numbers obtained from this computer model could be used as the basis for what was presented at the breast cancer patient meetings.

The next morning, we met with the panel of breast cancer research leaders for the Miami meeting and presented this idea. Most research leaders believe that patients should be presented with specific numbers if they wish to hear them. In fact, one

common criticism we have heard about oncologists is that too often, in their enthusiasm to reassure patients, they overstate the benefits of adjuvant therapy.

The faculty liked the idea of using very specific estimates of what could be expected from an intervention, and we decided to quickly calculate the numbers from the New York cases using Dr Ravdin's model. We then presented these statistics to the patients throughout the meeting. For interventions for which inadequate data exists, we informed patients of this. Based on the positive feedback we received from our faculty panelists and the smooth flow of the meeting, we decided to repeat this approach in Houston.

Postmenopausal case scenarios

The first hypothetical patient discussed represents the most common situation encountered in early breast cancer management — a "young" elderly woman with estrogen receptor-positive breast cancer and a relatively good prognosis because her axillary lymph nodes are negative (no cancer is detected outside of the breast).

For this first hypothetical patient — a 65-year-old woman with a 20 percent chance of her cancer coming back, Dr Ravdin's computer model estimated that tamoxifen, taken for five years as adjuvant therapy, would reduce the risk of the cancer coming back to 13 percent.

The meeting attendees were told that if 100 women in this situation received tamoxifen, 13 would still have their cancer come back despite the treatment, 80 would have received the treatment unnecessarily because they would have remained cancer-free either way, and seven who were destined to have their cancer return would remain cancer-free (Figure 5.1).

Figure 5.1: Case Scenario: A 65-year-old woman with ER-positive breast cancer, 20% risk of relapse

Treatment	Risk of Relapse
No systemic treatment	20%
Tamoxifen	13%

80 percent of women are "cured" without tamoxifen.
13 percent of women relapse even with tamoxifen.
7 percent of women are spared relapse by tamoxifen.

The numbers from Dr Ravdin's computer model for adjuvant Arimidex were also provided. Dr Ravdin explained that he based his projections for Arimidex on the four-year follow-up data from the ATAC trial and that his projections assumed the data from the trial would demonstrate the same benefit over a longer period. However, he clarified that only time could provide a definitive long-term answer.

Based on these assumptions, a hypothetical patient with an estrogen receptor-positive cancer and a 20 percent risk of the cancer coming back would have a reduction in that risk to 11 percent if she were treated with Arimidex for five years (Figure 5.2). Both tamoxifen and Arimidex are considered reasonable options for adjuvant hormonal therapy in postmenopausal women, and our "patterns of care" surveys demonstrate both of these drugs being frequently recommended by oncologists.

Figure 5.2: Case Scenario: A 65-year-old woman with ER-positive breast cancer, 20% risk of relapse

Treatment	Risk of Relapse
No systemic treatment (hormone therapy)	20%
Arimidex (hormone therapy plus chemo)	11%

80 percent of women are "cured" without Arimidex.
11 percent of women relapse even with Arimidex.
9 percent of women are spared relapse by Arimidex.

There is considerable debate as to which of these treatments might be a better choice in various circumstances. A prestigious panel of experts from the American Society of Clinical Oncology issued position papers in 2002* and 2003** stating that they believe that tamoxifen was still the standard as adjuvant hormonal therapy for postmenopausal women.

However, these papers also explain that Arimidex is a good option for women who cannot receive tamoxifen. Regardless, many research leaders and community-based physicians believe Arimidex is generally a better choice overall.

Due to the uncertainty surrounding this issue, we attempted to clarify to meeting attendees that this is actually good news. Now postmenopausal women have two excellent options, as the differences between these two approaches are relatively minor.

We also discussed the issue of receiving chemotherapy in addition to either tamoxifen or Arimidex. When this is done, the chemotherapy is generally administered first, over a period of months, and then hormone therapy is given, usually for five years. According to Dr Ravdin's model, adding chemotherapy to hormone therapy in this situation further reduces the chance for recurrence, but only by about 1 percent (Figure 5.3).

*Winer EP et al. **American Society of Clinical Oncology technology assessment on the use of aromatase inhibitors as adjuvant therapy for women with hormone receptor-positive breast cancer: Status report 2002.** *J Clin Oncol* 2002;20(15):3317-27. **Abstract**

Winer EP et al. **American Society of Clinical Oncology Technology Assessment Working Group Update: Use of Aromatase Inhibitors in the Adjuvant Setting. *J Clin Oncol* 2003;21(13):2597-2599. **Abstract**

Figure 5.3: Case Scenario: A 65-year-old woman with ER-positive breast cancer, 20% risk of relapse

Treatment	Risk of Relapse
No systemic treatment	20%
Tamoxifen	13%
Tamoxifen plus chemo	12%
Arimidex	11%
Arimidex plus chemo	10%

Based on this information from Dr Ravdin's computer model, more than 90 percent of breast cancer patients attending the meeting chose to receive hormonal therapy with a varied reaction in terms of preferences for tamoxifen or Arimidex (Figure 5.4). About half of the breast cancer patients would choose to receive chemotherapy in addition to hormonal therapy, even with the projected modest benefits.

Figure 5.4: Breast Cancer Survivors' Preferences for Adjuvant Therapy in Hypothetical Postmenopausal Situations: A 65-year-old woman with ER-positive breast cancer, 20% risk of recurrence

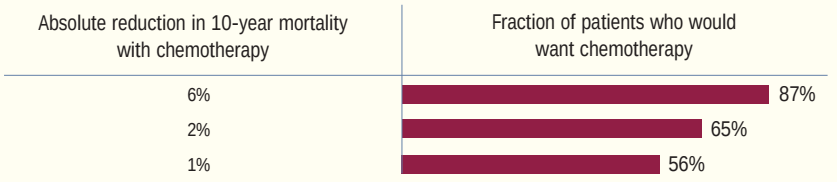
	New York	Miami	Houston
Chemotherapy (with or without hormonal therapy)	64%	48%	50%
Tamoxifen (with or without chemotherapy)	49%	54%	20%
Anastrozole (with or without chemotherapy)	42%	44%	73%
Other	9%	2%	7%

Data collected at the New York, Miami and Houston meetings.

The desire of many women to receive chemotherapy despite the modest benefits originally observed in the Australian survey was confirmed in our meeting setting. In New York, we specifically attempted to tease this out with a question regarding the level of treatment benefit that would justify receiving four to six months of chemotherapy.

The responses were remarkably similar to those in the Australian study, and not surprisingly, the fraction of women who would wish to be treated increased as the benefit of treatment increased (Figure 5.5). More than half of the attendees would wish to receive chemotherapy for a one percent improvement in survival.

Figure 5.5: Influence of Magnitude of Benefits on Survivors' Preferences for Adjuvant Chemotherapy: A 65-year-old woman with ER-negative breast cancer



Based on 20 percent 10-year risk of breast cancer mortality. Data collected at the New York meeting.

It is important to consider that breast cancer is perhaps the only major common tumor type for which adequate research has been conducted to be able to define such modest improvements in benefit. The numerous clinical research trials available to guide physicians and patients has thus created many challenging clinical decisions.

To further narrow down the lower limit of benefit required for adjuvant systemic therapy, we presented a hypothetical patient identical to the first one, but with a lower baseline risk of the cancer coming back (10 percent) (Figure 5.6). Preferences for hormonal therapy did not change substantially, probably because the side-effect profiles for these drugs are relatively favorable, particularly compared to chemotherapy (Figure 5.7).

Figure 5.6: Case Scenario: A 65-year-old woman with ER-positive breast cancer, 10% risk of relapse

Treatment	Risk of Relapse
No systemic treatment	10%
Tamoxifen	6%
Tamoxifen plus chemo	5%
Arimidex	5%
Arimidex plus chemo	4%

Figure 5.7: Breast Cancer Survivors' Preferences for Adjuvant Therapy in Hypothetical Postmenopausal Situations: A 65-year-old woman with ER-positive breast cancer, 10% risk of recurrence

	New York	Miami	Houston
Chemotherapy (with or without hormonal therapy)	50%	34%	42%
Tamoxifen (with or without chemotherapy)	46%	41%	15%
Anastrozole (with or without chemotherapy)	41%	52%	74%

While most women with breast cancer have cancer cells that contain the estrogen receptor, for the remainder the only standard method to reduce the risk of recurrence is chemotherapy. We presented one hypothetical patient with an ER-negative breast cancer, a 65-year-old woman with a 20 percent baseline risk of the cancer coming back (Figure 5.8).

Figure 5.8: Case Scenario: A 65-year-old woman with ER-negative breast cancer, 20% risk of relapse

Treatment	Risk of Relapse
No systemic treatment	20%
Chemotherapy	14%

While more than three-fourths of the breast cancer patients attending the meetings would choose chemotherapy in such a situation, a substantial minority would not (Figure 5.9). Interestingly, when we present similar cases to oncologists, almost all recommend chemotherapy, as did our panel of breast cancer research leaders.

Figure 5.9: Breast Cancer Survivors' Preferences for Adjuvant Therapy in Hypothetical Postmenopausal Situations: A 65-year-old woman with ER-negative breast cancer, 20% risk of recurrence

Treatment	New York	Florida	Houston
Chemotherapy	87%	74%	76%

Data collected at the New York, Miami and Houston meetings.

When we substantially increased the baseline risk of our ER-positive case to 60 percent, many more breast cancer patients attending the meetings chose chemotherapy. There was also a shift towards Arimidex, probably because the disparity in projected recurrence rates increased (Figures 5.10, 5.11).

Figure 5.10: Case Scenario: A 65-year-old woman with ER-positive breast cancer, 60% risk of relapse

Treatment	Risk of Relapse
No systemic treatment	60%
Tamoxifen	45%
Tamoxifen plus chemo	37%
Arimidex	38%
Arimidex plus chemo	30%

Figure 5.11: Breast Cancer Survivors' Preferences for Adjuvant Therapy in Hypothetical Postmenopausal Situations: A 65-year-old woman with ER-positive breast cancer, 60% risk of recurrence

Treatment	New York	Miami	Houston
Chemotherapy (with or without hormonal therapy)	83%	86%	89%
Tamoxifen	41%	15%	8%
Anastrozole	51%	81%	89%

Premenopausal case scenario

Another hypothetical patient situation involved a premenopausal woman with a high risk for recurrence. Nationally, about 25 percent of breast cancers occur in younger women. As with the postmenopausal high-risk case, the tumor was ER-positive; however, we added an additional element. For this case we decided to elevate another tissue factor in this patient's tumor — the HER2 receptor.

HER2 — like the estrogen receptor — should be measured in all breast cancers. It is considered to be positive in about 20 to 25 percent of breast tumors. The implications of a positive HER2 test are complex. First, women with HER2-positive breast cancer may have a greater risk for their cancer to come back.

In addition, women with HER2-positive breast cancer may respond to different chemotherapies and hormonal therapies. Many oncologists believe that Adriamycin should be included if chemotherapy is to be given to a woman with an HER2-positive breast cancer.

It is also widely believed that in women with ER-positive and HER2-positive cancers, aromatase inhibitors are perhaps more effective, particularly when compared to tamoxifen. Finally, and most importantly, one of the most recent and efficacious systemic treatments for breast cancer, trastuzumab (Herceptin), is only effective when utilized in women with HER2-positive cancers.

This is logical when one considers that trastuzumab is essentially an antibody to the HER2 receptor. This remarkable therapy, which has been available for about five years, currently is only approved for women with advanced or metastatic breast cancer. In this case scenario, the patient had early disease.

There are a number of important research trials evaluating trastuzumab in the early setting, and one very important option we wanted to discuss was participation in one of these trials.

With regard to endocrine therapy, the treatments in actively menstruating women are somewhat different than those for postmenopausal patients. Tamoxifen is equally effective, but another strategy that has been studied extensively is to shut down the production of estrogen by the ovaries.

This can be done by surgically removing the ovaries or administering monthly intramuscular injections of medications that shut down ovarian production of estrogen. When these medications, called LHRH agonists, are used, treatment usually continues for five years.

In discussing the hypothetical 40-year-old woman with a 60 percent risk for the cancer coming back, the panel of breast cancer research leaders indicated that standard therapy consisted of chemotherapy and tamoxifen. A controversial issue is whether to add ovarian ablation / suppression by either removal of the ovaries or an LHRH agonist (Figure 5.12).

Figure 5.12: Case Scenario: A 40-year-old premenopausal woman with ER-positive, HER2-positive cancer, 60% risk for recurrence

Treatment	Risk of Relapse
No systemic treatment	60%
Chemotherapy	40%
Tamoxifen plus chemo	20%
Tamoxifen, chemo, ovarian ablation/suppression	Unknown

The three panels of breast cancer research leaders counsel their patients in a similar manner in this situation — namely, there is suggestive, but not definitive, evidence that ovarian ablation / suppression would further reduce the risk of the cancer coming back. In fact, many ongoing clinical studies are attempting to determine whether ovarian ablation / suppression provides an advantage, particularly in view of the potential negative consequences of inducing premature menopause.

With these caveats, it is interesting that at all three meetings the breast cancer patients preferred a combination of chemotherapy, tamoxifen and ovarian ablation / suppression for this hypothetical patient (Figure 5.13). Undoubtedly, a major part of this relates to the very substantial risk of recurrence, even if chemotherapy and tamoxifen are administered.

Figure 5.13: Breast Cancer Survivors' Preferences for Adjuvant Therapy in Hypothetical Postmenopausal Situations: A 40-year-old woman with ER-positive, HER2-positive breast cancer, 60% risk of recurrence

	New York	Miami	Houston
Chemotherapy plus tamoxifen	18%	27%	36%
Chemotherapy plus ovarian ablation/suppression	12%	8%	10%
Chemotherapy plus ovarian ablation/ suppression plus tamoxifen	62%	63%	50%
Other	8%	2%	4%

Another interesting question in this case scenario related to Herceptin. This agent shows great promise for use in the adjuvant setting, but there is even less research data available than there is for ovarian ablation. Essentially, there is no available data for adjuvant Herceptin. Another important issue is that a small fraction of women receiving Herceptin will experience heart damage.

With this background, we surveyed attendees on two issues. First, would they wish to receive Herceptin in addition to chemotherapy and hormone therapy? The faculty in all three meetings strongly advised against this because of the lack of evidence to support this potentially promising but unproven approach.

Interestingly, in spite of these comments a significant fraction of attendees indicated that they would want to receive Herceptin in this situation (Figure 5.14). This was most striking in Houston, not only because almost half the patients expressed this interest, but also because the Houston faculty was perhaps the most emphatic about this not being an acceptable option.

A related question was whether the attendees would be willing to enter a clinical research trial in which they would be randomly assigned to either receive Herceptin or not. Less than half of the participants indicated that they would be willing to undergo such a "randomization."

Figure 5.14: Breast Cancer Survivors' Perspectives on Adjuvant Trastuzumab/ Participating in Clinical Trials: A 40-year-old woman with ER-positive, HER2-positive breast cancer, 60% 10-year risk of breast cancer recurrence

	New York	Miami	Houston
Would want Herceptin off protocol	15%	35%	48%
Would participate in a randomized adjuvant Herceptin trial	21%	44%	40%

In clinical practice, one major obstacle to enrolling patients in clinical trials is that the patient or the physician often strongly prefers one option or the other. In order to be comfortable with this type of trial, both parties must feel balanced about the randomization options.

In this situation some women might be strongly opposed to receiving Herceptin because of concerns about toxic effects, while others might wish to ensure that they are treated as they look for any — even unproven — method to reduce their substantial risk of cancer recurrence.

Epilogue: Food for thought

You may not see a similar report or project like this one about any other type of cancer — or for that matter, any other medical condition. The choices faced by breast cancer patients are unlike any in contemporary medicine.

Part of the reason for this phenomenon is the extraordinary amount of clinical research that has been conducted in this disease. For example, more women have participated in adjuvant breast cancer research trials than perhaps all adjuvant trials in other types of cancer combined. This means more data, more "uncertainty" and more options.

Another reason for the complexity of choices is the nature of the disease and its treatments. Breast cancer is the first common cancer in which "targeted" therapy has had a significant impact. The current targets include the estrogen receptor and the HER2 receptor. Many other targets are under investigation.

While these and other factors mean that doctors and patients must sort through the many acceptable treatment options, this is, of course, also good news. Therapies like Arimidex and Herceptin were not available 10 years ago, but today women must certainly consider them as viable treatment options and a clear sign that we have made significant progress.

One cannot read the patient comments contained in the prologue of this monograph and not empathize with the intense anguish that women experience when first diagnosed with breast cancer. Sorting through the maze of information during these stressful first moments can make it all the more difficult to arrive at decisions with lifelong implications.

Our hope is that this project, and others like it, will assist in further opening lines of communication, bringing doctors and patients closer and validating the importance of listening to patients' perspectives.