

Good Writing = Strong Medicine: Dr. Susan Love's Rhetorical Prescriptions for Better Health

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Surgeon, Author, *Susan Love's Breast Book*

*Transcript of interview-format lecture presented by the
Center for Interdisciplinary Studies of Writing's
Annual Colloquium*

**Speaker Series
No. 22 ♦ 2003**

**Lillian Bridwell-Bowles,
Series Editor**

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Thomas Sebanc & Elizabeth Oliver, Editors

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Preface

At the Fourteenth Annual Colloquium sponsored by the Center for Interdisciplinary Studies of Writing, Dr. Susan Love spoke at the Ted Mann Concert Hall on issues of “health literacy,” doctor-patient communication, and the rhetoric of medicine. Author of the renowned *Dr. Susan Love’s Breast Book*, Dr. Love is a leading voice in not only the fight against breast cancer, but also in the demand for clear and effective medical information for patients. She visited the University of Minnesota on February 4, 2003 to share her thoughts on these issues.

Dr. Love is an activist who is perhaps the most visible advocate for women's health in the United States. She not only empowers female patients with knowledge about their health, but also seeks to inform health professionals on techniques for better writing and better communication in the health sciences. As of 2003, she was an Adjunct Professor of Surgery at UCLA. In 1998, President Clinton appointed her to the National Cancer Advisory Board. Dr. Love is author of both *Dr. Susan Love’s Breast Book* (considered the bible of breast care books) and, more recently, *Dr. Susan Love’s Hormone Book: Making Informed Choices About Menopause*. Her books contribute to “health literacy:” defined as the capacity of individuals to obtain, interpret, and understand basic health information and services (and the competence to use such information and services) in ways to enhance health.

What follows is a transcription of Dr. Love’s speech, as well as the question and answer session that followed, at which point Dr. Love was joined by Dr. Douglas Yee to answer together a variety of questions from audience members. Dr. Yee is a Professor of

Medicine at the University of Minnesota, the program leader of the University's Cancer Center's Breast Cancer Program, and Chair of the University's Academic Health Center.

The CISW is grateful to the many departments and organizations that helped sponsor this event: Abbott Northwestern Hospital's Piper Breast Center, Academic Initiative and Community Initiative of the University of Minnesota in Partnership with Coca-Cola, Academic Health Center, Center for Advanced Feminist Studies, College of Biological Sciences, College of Liberal Arts Scholarly Events Fund, Consortium on Law and Values in Health, Environment, and the Life Sciences, Department of Communication Studies, Department of Cultural Studies and Comparative Literature, Department of English, Department of English Graduate Student Organization, Department of Women's Studies, Graduate and Professional Student Assembly, Novasoy Office for Multicultural and Academic Affairs, Office for University Women, Office of the Vice President for Research and Dean of the Graduate School, Schochet Center for GLBT Studies, University of Minnesota Medical Auxiliary, Vice President and Vice Provost for Faculty and Academic Programs, and the Women's Cancer Resource Center

The Center's Annual Colloquium and its Speaker Series contribute to its primary mission of improving undergraduate writing at the University of Minnesota. These activities, along with faculty development workshops conferences, publications, and other outreach programs, are designed to foster active engagement with issues and topics related to writing among all of the members of the university community. In addition, the Center annually funds research projects by University of Minnesota faculty who study any of the following topics:

- curricular reform through writing across the curriculum,

- characteristics of writing across the curriculum,
- connections between writing and learning in all fields,
- characteristics for writing beyond the academy,
- the effect of ethnicity, class, and gender on writing, and
- the status of writing ability during the college years.

We invite you to contact the Center about this publication or any other publication and activities.

Lillian Bridwell-Bowles, Series Editor
Elizabeth Oliver, Editor
May, 2003

Introductions

Lillian Bridwell-Bowles: Good evening and welcome to the University of Minnesota on such a dreary cold night. My name is Lillian Bridwell-Bowles and it's my pleasure to welcome you to the fourteenth annual colloquium sponsored by the Center for Interdisciplinary Studies of Writing. I've been directing this organization for fourteen years and I've seen some marvelous speakers, but I think tonight you're in for a special treat.

Before we begin I'd like to thank all of our sponsors, including the College of Liberal Arts, the Academic Health Center, and a host of other organizations that are listed in your programs, so if you'll take a moment and look at the people who have helped to bring Dr. Love here, we'd appreciate it. I'd like to thank, in particular, Mary Knatterud, Assistant Professor and Research Associate in the Department of Surgery, and Mary Kenyon in Academic Health Center for all of their efforts in organizing the events earlier today. All kinds of coverage; you will see her on television; KSTP, so there are some wonderful events and these folks have helped to organize them.

And finally, I'd like to recognize Ann Browning. I can't see you Ann because of the lights but where are you? Please stand up Ann, if you're out there. Let's give a round of applause to Ann Browning, who is the Assistant Director in the Center and has made all of the arrangements for this event.

Every year we bring to the University, speakers who enrich our understanding of academic literacy. This year we're pleased to host Dr. Susan Love, whose work first came to my personal attention in 1999 when I needed to know everything there was to know about breast cancer. On April Fool's Day of 1999, my diagnosis turned me into an

instant consumer of health care research and treatment guides. Love's *Breast Book* became my bible and a constant source of information and guidance. It did not condescend to me as a reader, and neither did it obfuscate with unnecessary technicalities. Its rhetoric was just right for me and for a generation of highly motivated readers. In short, the book has made us health literate, many of us, according to the American Cancer Society. This organization defines health literacy as "the capacity of individuals to obtain and interpret and understand basic health information and services, and the competence to use such information and services in ways that enhance health." Dr. Love had made a primary commitment to the rhetoric of the health sciences by demanding clear communication about breast health and about hormone replacement, and she has produced a web site that provides the most up-to-date information. All of these contributions to health literacy make her an exemplar of good writing. And one of the reasons we brought her here this evening is to honor her for her exemplary work. She is a writer with great gift who has touched so many of our lives with information we could use, written in a clear and concise style and with her personal voices as researcher, surgeon, mother, and friend on the pages of her books.

There are others tonight who would like to welcome you and welcome Dr. Love to the stage on behalf of the University. Tonight, Dr. Frank Cerra, Senior Vice President for Health Sciences, Dr. Deborah Day, Medical Director and Chief of Breast Imaging at Abbott Northwestern's Piper Breast Cancer Center, and Dr. Arlene Carney, Associate Dean of the College of Liberal Arts will join me in welcoming you and Dr. Love.

Dr. Carney has a long history of research in communication disorders. She's been an editor of a research journal, and she now serves the College of Liberal Arts with her

interdisciplinary commitment to knowledge and good writing. So Dr. Carney will speak first.

[audience applause]

Dr. Arlene Carney: I want to extend a warm welcome to all of you from the College of Liberal Arts and say a few words about the Center for the Interdisciplinary Studies of Writing, the group that's hosting this conference for all of us today, and to let you know that this is a critically important research center in the College of Liberal Arts and it's incredibly invaluable in providing guidance for faculty and staff to teach writing to all of our students. And one of the most important accomplishments of the Center in the past ten years has been to help the University really implement Writing Across the Curriculum. And I think that our speaker tonight really exemplifies this goal of the Center and we're looking to connect with Dr. Love tonight and find out what is it about her writing that resonates with all of us. And so I'd like to welcome you so that we can all learn about the content of Dr. Susan Love's work but also her insights into writing and what that tells us about clear communication. So once again, welcome from College of Liberal Arts.

[audience applause]

Lillian Bridwell-Bowles: Thank you, Dean Carney. And next, Dr. Frank Cerra will welcome you on behalf of the University's medical community. Cerra leads one of the largest and most comprehensive academic health centers in the United States. The U of M Academic Health Center prepares two-thirds of our state's health professionals, supports biomedical industry, and attracts over \$160 million dollars a year in government and private grants. Dr. Cerra believes that the University of Minnesota's Medical Center

should serve the community, should serve the people that establish us as a land grant institution. He received his B.A. in biology from the State University of New York and his M.D. from the Northwestern School of Medicine. Dr. Cerra.

[audience applause]

Dr. Frank Cerra: Thank you, Lillian. I'm pleased to welcome all of you and I'm pleased to welcome Dr. Susan Love to our campus. One of the great values of this University is the strength and diversity of the programs and schools that connect on campus. Here I am, the leader of the Academic Health Center, introducing, in this program of the Center for Interdisciplinary Studies of Writing in the College of Liberal Arts. Why do that? Well, I'll tell you. The connections of our disciplines strengthens each of our schools and centers. I firmly believe that true innovation begins where disciplines touch. Dr. Love is a surgeon, she's a researcher, she's an author, and she promotes the concept of health literacy. Health literacy, in my mind, is a key component of the future of health in this country. People who can find, interpret, understand basic health information and services in a way that enhances health. I look forward to hearing Dr. Love's presentation. I am certain that it will demonstrate how medicine is strengthened by clear and strong language and writing. Have a good evening.

[audience applause]

Lillian Bridwell-Bowles: Next, Dr. Deborah Day will welcome all of you and Dr. Love on behalf of our community. Dr. Day works closely with surgeons, oncologists, nurses, and technologists to efficiently evaluate women's breast concerns in a caring manner. Dr. Day was instrumental in designing the Screening and Diagnostic Mammography Program

when the Piper Breast Center opened in 1995. It was the first comprehensive breast health center in the Twin Cities. Dr. Day.

[audience applause]

Dr Deborah Day: Good evening. I am very happy to be here representing the Twin Cities community and the Piper Breast Center at Abbott Northwestern Hospital. Dr. Susan Love is a very visible and vocal advocate for women's health issues. She empowers women patients with knowledge about their health. I have two personal experiences with Dr. Love. One is listening to a talk she gave about five years ago, and I found her very knowledgeable, I really enjoyed her casual style and I found her to be charismatic in her speaking approach. The other way that I've come to know here is through my work at the Piper Breast Center. We see about 500-plus cases of new breast cancer every year. We recommend Dr. Susan Love's *Breast Book* to all our newly diagnosed breast cancer patients and to a lot of women who have benign breast concerns. And all these patients have benefited greatly from Dr. Susan Love's *Breast Book*. I am delighted to welcome Dr. Susan Love, thank you.

[audience applause]

Lillian Bridwell-Bowles: We're almost ready to bring her out, and I know that that's why you're here. But a few words about our procedure this evening. After Dr. Love's lecture, she will be joined onstage by Dr. Douglas Yee of the University of Minnesota, who is a world renowned researcher on the subject of breast cancer. He and Dr. Love will answer as many questions as we have time for. There are ushers who will be passing out cards and you can write your questions on the cards. I will take them down on the lower level, read them out so everyone can hear them, and they will take the questions.

We know that the focus tonight is on writing and communication, health literacy, but we welcome your questions on the latest research and treatment, after the presentation. So now, this is the fun part, join me in welcoming Dr. Susan Love to Minnesota.

Dr. Susan Love

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Better Health**

[Transcript]

[audience applause as Dr. Susan Love walks onstage]

[inaudible]

Dr. Susan Love: Thank you all very much. It's great to be here. I'm even happy about the weather, because, when you're from Los Angeles and you come to Minneapolis in February you want to have snow on the ground. You know, otherwise it doesn't feel like you've been here. The other reason I'm happy is because, as some of you probably know, I have an almost fifteen year old, fourteen and a half year old daughter, and she's getting to the age where it's really her trial in life to have me as a mother. Because I, you know, I talk too much, I pontificate, I have such great ideas for her on what she should do or think and she really gets a little fed up. And one day recently I said, "well you know Katie, there are people who are interested in what I have to say." She said, "well why don't you go tell them?" So I'll get it out of my system and I'll go home tomorrow and be a much better mother, thanks to you. So I'm sure Kate appreciates it, too.

You know, as I thought about this talk I must admit I was a bit stymied because people ask me to talk about medicine, about menopause, about breast cancer all the time, but it's really the first time I've been asked to talk about writing and writing about these topics. It made me stop and reflect a bit on, really, how did I get to be a writer. It wasn't how I started out. But you know, I grew up in a house that was stuffed with books. And in our house reading was like breathing, in my family, and books were really honored. And in

fact, everybody always had a book that they were reading. And if you were visiting my house as a guest and you didn't—my father would ask you within, probably, ten or fifteen minutes, what you were reading and if you didn't have a ready answer he would jump up, go to the book shelves and find you at least three possible books that you would really love to read, and you felt obligated, at least, to start. In fact we even took books, in my family, to the movie theater so we could read them until the movie started. And in fact, I laugh, because my daughter does the exact same thing so it must be a genetic mutation. And my baby sister was visiting this weekend, from Argentina, and we were talking and it turns out, if I start something new, and she's the same, the first thing we do is get a pile of books, read about it, and then you can do it. So I really did have a very bibliocentric upbringing and it had an impact on two of my siblings; one is a journalist and another is a screenwriter. But I was the scientist. I was the surgeon, I, you know, was not one that was really affected by words until I found myself as a breast surgeon with a very busy practice, explaining, and trying to explain to women what was going on.

I found the women really craved information and not just information about the facts of their case, but really information that would help them understand what was going on, how to think about things, and how doctors were approaching it. And as I figured out the metaphors and the analogies that really would help make this clearer for them, it became clear to me that what I really needed to do was to get those analogies and metaphors out to a wider audience and that meant writing a book.

Now, this was 1985 and in fact, in 1985 there was nothing in print that really explained to women how to think about their breast cancer. There were books that were like Rose Kushner's *Why Me?* like Betty Rollin's *First, You Cry* that talked about my experience

with breast cancer and how I dealt with it. And then there were some other books that were, sort of, books of hope that talked about somewhat simplistic “don’t worry dear, it’ll all be OK” kind of books. But there were no books that really gave you any facts, that gave you any ways to think about it. And it was important, this was really an important time for that, because, in fact, in 85, in 86, and 87, big changes were happening in breast cancer. The obvious change on the surface was we started talking about breast conservation rather than mastectomies. And there was initial data, randomized control data out of Italy, which suggested that lumpectomy and radiation was equal to mastectomy, which was really a radical thing to say. Now this option was starting to be available and we were doing it in Boston but doctors were really not open to that and surgeons were not. And in fact, a lot of the surgeons would say, if faced with data, “well you know, yeah, but that’s Italian women and they had Italian breast cancer which is completely different than American, so not applicable.”

But, and likewise, you had a whole generation of doctors who were trained in the don’t-worry-dear-I’ll-take-care-of-it mode care and were being confronted by women who had come out consciousness raising and women’s lib and wanted all the answers. And so needless to say, this was not a very good match. In fact one of my colleagues, who’s really a very good breast surgeon, told me once that “it never took more than 15 minutes to explain breast cancer to anyone.” And I thought, “gee, it takes me more than 15 minutes to say ‘hello, how are you.’” And then, another colleague said—and this was one of my favorites—that he didn’t really like breast surgery because the talk-to-cut ratio was wrong. You had to talk to the patient too much for the amount of operating you got to do.

So you had this type of medical profession and these patients who wanted information and you were really, you know, it was really very frustrating for everybody.

So at this point I entered the scene and decide it's really the time to write this book. It was important not just to give people, again, the facts, but why they were facts, because it wasn't what it appeared, just a shift from mastectomy to lumpectomy and radiation, it really represented a major shift in the way we thought about the disease. Because we used to think that breast cancer started in the breast, got slowly bigger, went one-by-one up the lymph node and then got out. And we thought that you had to rush right in there, it was an emergency, you had to slam the door and cut off that breast really fast and prevent it from getting out. And that hypothesis was around for a long time but what had changed was people had started to realize that most breast cancers are actually present for six to eight years by the time you can feel a lump or see it on a mammogram. And that those cancers have the ability to get out of the breast and to the rest of the body, hm, about year two. So by the time we come along, in the majority of cases, if those cells wanted to get out they've gotten out. So rushing in and doing a mastectomy was really slamming the barn door when the horse was down in the field somewhere already and was not going to make a major life and death decision. This was also the time when we started to think about adding things like chemotherapy and hormone therapy to take care of those cells that might have gotten out.

So the shift in surgery really represented the fact that we were realizing that the surgery was not the important part, and that it didn't matter so much what you did to the breast, all that could do was prevent the breast cancer from spreading. What mattered more was what you did to the rest of the body. Well, once you explained that to the women then it

was much easier for them to make the decision. What was hard was when the doctor said to them “well, you can have a mastectomy or lumpectomy and radiation, call me in a week and let me know what you’ve decided.” Because, when you say that you’ve got a woman who says, “I don’t know what to decide” and is afraid it’s a life and death decision, but if you give her the context in why there’s this option and how it really doesn’t matter medically which she chooses but matters what works better for her head, then it all becomes worthwhile. So that’s what I set out to do; not to just give people their options but tell them why there were options. Not to just give them the facts but to try to explain what was behind the facts.

Well, as I set out to write I realized a few key things. First of all I realized, I really hate to write and that I wasn’t very good at it. I wrote like a doctor. Now, doctors are trained to write in a very peculiar way. We use a lot of what’s called the passive voice. When you read something a doctor writes there’s never a person there, either a patient or a doctor. We say things like, “the incision was made.” I have this image of this knife just floating across the patient’s abdomen. Or we say “the breast was removed.” There’s no person with the breast nor is there a person removing it, it’s all done in the abstract. Well that’s not a very good way to write. Secondly, I figured out that I didn’t really know anything about books and writing books and luckily I bumped into—I met a friend who’s a writer who told me, “first you need an agent, you need a proposal, and by the way,” he said, “no doctors know how to write, so you should find a writer to help you.” I realized, I didn’t really trust anybody else to do the research, that really, that was something I had to do. I didn’t mind, so much, having somebody help me write but I really to had to make sure the research was right. And finally I realized I was not going to ingratiate myself to my

colleagues doing this. That, especially at that time, it was frowned upon to write books for the public and to really give all this information out. But I had never really been that in with my colleagues, as—funny thing about that—as a lesbian woman surgeon in the early eighties, I knew I was never going to part of the old boys club and so I had nothing to lose. I wasn't going to get thrown out because I was never going to be in in the first place. So I figured I didn't have to worry about that piece and I might as well, then, do what I really thought was needed by the women.

So I interviewed a bunch a collaborators and I hit the jackpot with Karen Lindsey. Karen Lindsey, who has worked with me on these books, turns out not to be a medical writer, she's a poet and she teaches writing at Emerson College in Boston and she is completely different than me. In fact, I don't think, outside of this, we would ever have been friends because we're completely different personalities. And she's very science phobic; she hates medicine, she hates science. So I have to be really good at explaining it for her to get it. And I love, not to write, but to talk, as you can tell, and so I would do my research, we would meet together, I would explain it all to her, she would tape it, then she'd come back with a draft, we'd edit it back and forth and come up with a chapter. It worked out great because she was able to capture my voice so that it reads the way I talk, but much better than the way I write. And I had to really get good at explaining things in order for her to get it. I think if I had had a medical writer working with me it would not have been so clear because the medical writer would have understood it just like that and then I wouldn't have had to do all my analogies and metaphors.

The first book really took several years. We met once a week and, you know, there were a few interruptions, like I had a kid in the middle of it and things like that. But over the

years the partnership survived and we've done, now, three editions of the *Breast Book* and two of the *Hormone Book* together. We work more quickly, it doesn't take five years anymore, I think partly because we understand each other better but also because she's made me a better writer. In fact, it's good and bad that she's made me a better writer because I've recently been trying to write a few medical papers for journals and I get yelled at because they're too easy to understand. And so they can't possibly be published that way, I need to make them more obscure. So I had to get a friend who was a pathologist to write it because my style wasn't good anymore.

When I wrote the first edition of the book I told the editor that I wanted to write the book so that a woman could be called on Friday and told she had micro-calcifications and she could get the book on Saturday, read it over the weekend and by the time she saw the surgeon on Monday she would know what they were, what the possibilities are and what the options are, and not feel one down in the relationship but actually feel like she knew where she was coming from. I decided that I'd include the studies and the actual data because I really felt that it was important for women not to take this on faith, but to actually understand where things were coming from. And I thought it was really important to treat women as intelligent human beings, God forbid. It was a novel idea at the time. And I also decided to include all the references because it felt to me, especially with the first book when I was saying these heretical things like, you can keep your breast, that if a woman went into a doctor and started making these demands she needed to be able to back it up. When he said, "well, where's the data?" she could say, "well, here's this paper, and here's that paper, and here's that paper." And I must say I got a lot of pushback from my editors saying "oh, we don't want to clutter it up, women aren't

interested in that” and I insisted on the references and it’s always been amazing to me that women really do read them; I know because they email me on every mistake I’ve made in every footnote in every book. So even the most obscure, I’ll get “well, you know, footnote number 265, it’s really not page 267, it’s really page 266 that it starts on.” So I know they’re reading it.

And finally, I didn’t want to tell women what to do. You know, I wanted to get away with (from) what was then the style which I call the if-you-were-my-wife. Now, I always say that, when somebody says to you, “if you were my wife” you need to find out whether they like their wife before you—I mean you can’t, it’s not a given that they do—before you follow that. But I was taught, you know, you should put yourself in the patient’s position and then guide them to make a decision and that really is not a good thing because the patient, or the woman, is not me. I have my own neuroses, my own feelings about my body, my own thoughts and things, and she has her own values, her own neuroses, her own feelings about her body that are different than mine, so we may well take the same information and come out with a completely different outcome. And my job is not to decide for her, but to give her the information so that she can make a decision which is consistent with her values, her ability to tolerate risk, her feelings about her body, her neuroses, and that she can live with; not that I can live with because it’s not my—you know, I’m not going to have to live with it and she’s going to have to live with this decision for the rest of her life.

The final thing I decided was that if we didn’t know the right answer, I would say it. That I would say, “guess what, we don’t know whether this is safe or it isn’t safe,” or “we don’t know if this works or it doesn’t work.” It’s interesting because I’ve kept up this

thing of pointing out when we have inadequate information, and lots of times when I'm interviewed on TV, and one time particular I remember Diane Sawyer saying to me, "you know the trouble with you is you won't give me the answer, women want the answer." And I said, "no, women don't want the answer, you want the answer, the media wants to be able to give the answer." Women are perfectly capable of making decisions based on inadequate information. We do it all day, everyday. We're actually quite good at it. And so what you need to do is, not pretend there's an answer when there isn't, what you need to do is tell us that that's what we're doing. Tell us that there's inadequate information and then we'll make our own decision, thank you very much. But, we don't have to pretend there's answers that aren't there.

Well, when the book finally came out I was surprised with the result. It came out in 1990, the first one. Doctors hated it. At that time it was taboo to let patients in on the secrets of the profession, it was taboo to let anybody know that there was any debate in the medical profession. Academics disdained the book because it was, God forbid, popularizing medicine, which was also not thought to be a good thing. And women loved it. They carried it around, they slept with it, they used it—some of them tell me they used it as a litmus test. One woman said she would prominently carry it into a doctor's office and if the doctor turned pale she would leave.

[audience laughter]

And that was a sign she didn't want him as a doctor. And it was very rewarding to me because it did exactly what I wanted it to do. It gave women the information and the power. It didn't take away the fact that they had cancer but they had a way of thinking about it and of understanding it.

Now, it also taught me the power of the written word because it launched a movement. As it came out, AIDS was now a big thing and the AIDS advocacy movement had come up and women's lib had come and women with breast cancer were just starting to think that maybe they could really have some impact on the disease. Like spontaneous combustion there were a few groups that had arisen to look at the political aspects of breast cancer. Not surprisingly, one was in San Francisco, one was in Cambridge, Massachusetts, and one was in Washington. But it was just like these little spontaneous fires and I was thinking, you know, it may be time—we maybe have to think about having a breast cancer movement.

And then I went to Salt Lake City, Utah, on a lecture thing. And I gave a lecture, it was a long thing on breast cancer; I think it was like a whole day thing, in the middle of the day, in the middle of the week. There were maybe six hundred women there. They were mostly middle aged and non-working, because, of course, they were there in the middle of the day, in the middle of the week. And I gave this whole really pretty pedantic talk about breast cancer and towards the end I was really looking for a laugh. Bush senior was President and I said, you know “I don't know what it's going to take for us to really eradicate breast cancer. Maybe we should march topless on the White House.” And the image of Bush senior standing there with all these topless women going by made everybody laugh and that was what I was looking for. And then afterwards they came up to me and said, “when do we leave?” And I said “gracious, if the women in Salt Lake City, Utah are ready to march topless on the White House, it is time to politicize breast cancer.” I went home and I said to my partner, “I think it's the time to politicize breast cancer and I hate to tell you but I think I'm in the perfect position to light the match and

get it started.” And it was, and it was really the book that helped galvanize women from all over to realize that they did have the power and they did have a voice and they could say something. And that led to the National Breast Cancer Coalition, which had really been the most successful advocacy group ever, by, in the first two years we increased the funding for breast cancer from forty million to three hundred and fifty million and it was just grass-roots organizing. We created a monster because now it’s everywhere. But at that time there was nobody advocating, there was nobody yelling in congress and yelling at the NCI and it’s really been very successful. And much to my surprise, as Lilly said, it became the bible for many women with breast cancer.

This, of course, made writing the second edition much harder. The first edition, I was just writing a book. The second edition, I was writing the bible. The weight was on my shoulders but as I wrote the new editions, I didn’t shy away from my iconoclastic roles. So if the first edition had the options for local therapy, which was the controversy at the time, the second pointed out the problems with bone marrow transplant, at a time when they were the standard of care but we still didn’t have proof as to whether they worked. And I was there again, saying “you know, I think the emperor may not have any clothes” and indeed, as you know, that turned out to be the case.

We added a section on metastatic disease because as I had gone around the country giving talks women came up to me and said, “you were with me all through my diagnosis, and by my bed. But when I got metastatic disease, you didn’t have anything to say about it. You didn’t care about me anymore.” And I realized that in none of the books that were out there was metastatic disease ever mentioned. It was like this silence that we so much wanted—we sort of wanted to deny, and what that meant to the woman who was

diagnosed with a recurrence was really shattering. It was hard enough to have a recurrence but then to have nobody even willing to talk about it. So we added two chapters on metastatic disease and it was the first time that it was mentioned in a popular book.

The third edition, which just came out in 2000 has gone much deeper into quality of life issues, it's gone deeper into the molecular biology behind a lot of the newer treatments and also the side effects of chemo and the actual benefits of it. And as I was writing this talk I started adding on my finger because the *Breast Book* comes out about every five years, which means we're due again in 2005, which means I've got to start in 2003, which hadn't really occurred to be. So the boxes of papers that I rip out of the journals and keep in the corner of the room are going to have to start getting dusted off again. Now, somewhere between the second and the third edition an amazing thing happened; the book which had been the bane of doctors' existence in the 1990s became their salvation and they started recommending it to their patients, especially the ones who asked too many questions.

[audience laughter]

So they realized that maybe instead of having to sit down with them, they say, "well go read this book and then come back and talk to me."

The *Hormone Book* was a similar proposition; I wasn't looking for another book to write. But, I got more and more concerned about the widespread use of Hormone Replacement Therapy for prevention without any data to back it up. I was getting asked a lot of questions from my patients about HRT and, indeed, I was fifty and flashing so I wanted to figure it out. And I felt somebody had to explain to women what we knew and what we

didn't know. And menopause had been framed in a certain way and no one had really looked critically at it. Interestingly, as I started to research it, I found out that there were people who were looking critically at the data in the scientific circles but nobody was doing it publicly. And I went, and I talked to people like Deborah Grady and Elizabeth Barrett-Connor, who are becoming more prominent now, but they both said to me, "oh, I'm so glad your doing this book because somebody need to do this and I don't want to put up with the shit."

So there I was again, climbing out on the limb all by myself trying to point out to women what we knew and what we didn't know. The results of that book, again, doctors hated it; especially the gynecologists. I got invited to debate HRT at the American College of OB-GYN after it came out. I wore my bullet proof vest and I—you know, I said ahead of time, because basically I'm really a well socialized female, I said to the guy I was debating, "my worry is we're not going to disagree" and he said, "oh, we'll disagree." Indeed, I gave a nice, reasoned talk and he just trashed me. I mean, he made personal insults, he talked about how horrible the book was, he talked about how horrible I was, how did I have any right to write about this. As one of my friends later told me, it was basically as if he had said, "you ignorant slut." And people came up to me afterwards and said, "I don't know if I agree with you, but I want to apologize for his behavior," and that's how bad it was. *The New Yorker* wrote an article, "How wrong is Susan Love?" That was the headline. Needless to say, that puts a little chill in your bones. And all of this was over, not even saying—because most of these people had never read the book, mind you—I didn't say HRT was the devil, I just said, "we haven't proven, yet, that it prevents heart disease, osteoporosis, or Alzheimer's, or any of these things. And so

before we give it to all these women for prevention, shouldn't we do the studies to see whether it works and whether it's safe?" That was all I said.

Well there I was out on a limb, and then nicely, fortuitously, for me anyway, the women's health initiative came out this summer and there I was vindicated, which of course is much nicer than being told how wrong you are. All of a sudden people were acting like, of course, we always knew that.

[audience laughter].

But what really had happened, briefly, is we had what was known as observational data. That means we had data on women who were on HRT and we compared them to women who weren't on HRT and indeed the women who were on HRT had less heart disease, less osteoporosis, less colon cancer, less Alzheimer's, less car crashes, less bankruptcies—

[audience laughter]

—and they also were higher socio-economic level, more likely to go to the doctor, more likely to eat a good diet, more likely to exercise, to watch their cholesterol, to treat their high blood pressure, than the women who weren't on hormones. And so without a study that has the same number of couch potatoes in each group, you actually don't know whether hormones make you healthy, or whether healthy women take hormones.

HRT's been around for sixty years and finally the study was done that randomized women to take HRT or placebo. And low and behold, much to everyone's amazement, it not only did not prevent heart disease, it increased heart attacks, increased strokes, increased blood clots, and increased breast cancer. It had a small effect on fractures and a small effect on colon cancer. And Alzheimer's, we have no idea; really, there's no data

one way or the other on that one. And if you put it together, the risks far outweigh the benefit in almost every situation. So short term use for treatment of symptoms is relatively safe but long term use for prevention, which was of course what we were doing, is not safe. And everybody now has pretty much come around and all the believers are focusing on quality of life and they've gotten away from all these claims.

The second edition is now out. I mean, it's probably this week, it's out. I spent a lot of time in it trying to illustrate the pros and cons of the new data in a lot of different ways, because statistics are hard for people and I think, you know, some people understand it in one way, some people in another way, so I tried to put it in a lot of different ways. And also, yet again, put the background information about things like osteoporosis and heart disease and even how we think about menopause. You know, as much as I enjoy writing and even talking more, what I really find interesting—the most interesting—is the way we communicate about science and medicine and how even the words we use lead us in certain directions. And menopause, again, is a great example of this.

When I first started looking at it, and you can still find this in most of the medical textbooks and journals, the term for menopause was ovarian failure. There we go, failing yet again; or, reproductive failure. The other term was “Estrogen Deficiency Disease.” It did occur to me that if estrogen deficiency was a disease, then all men had it. You know, it really doesn't make any sense that there's a disease that every women gets as soon as she turns fifty or so and that we're all diseased after that. Even when you say replacement, what you're doing is that you are implying that you are replacing something missing. What you're really saying is, the pre-menopausal woman is normal and the post-menopausal woman is abnormal and we need to fix her back into a pre-menopausal

woman somehow, which doesn't make a whole lot of sense. Why was menopause programmed in, in fact? It occurred to me that you could think about it in a whole different way. That you could change the paradigm around and have a whole different response.

There's always data about girls and how they're full of beans and ready to take on the world and then they hit puberty and they lose it. And then, you get people like Margaret Mead talking about post-menopausal zest and if you look at it, who are the really powerful women in this world? They're all post menopausal: Indira Gandhi, Margaret Thatcher, Madeleine Albright, Hillary. All post-menopausal. So maybe what happens is, we need hormones at high levels to domesticate us enough to reproduce the race and then we get liberated from the menopause and we can reclaim our power. You know, who knows? But it shows you that how you tell the story leads you in a completely different pathway. So if you tell a story of deficiency and failure and replacement, then of course you're going to want to take these drugs. But if it's really a release and more power, then it puts you in an entirely different place. It really was a lesson to me on how this is.

The last myth, which I can't resist saying is the one that, which doctors would say to me, 'well you know, that's all well and good but we weren't supposed to live this long.' This is the biggest myth of all. The implication is: we're supposed to live as women until we finish reproducing and then drop dead because we die as soon as we can't reproduce anymore. And it's based on this notion that—of course men can reproduce well into their eighties so they're allowed to live longer—but it's based on this notion that the average life expectancy at the turn of the century was about forty or fifty and now it's seventy-eight. And so, obviously, we have artificially, through modern medicine, artificially

extended life and in the process of extended life lived beyond our hormones and need to add them to prop us up. Well, the real problem with this is the word average. Remember averages, you add up and divide. The average life expectancy was indeed forty or fifty at the turn of the century but it was not modern medicine that changed things, it's not lengthening life, it was getting rid of infant mortality. The problem was, there were a lot of zeros in that column of figures, and ones and twos, because people died at such an early age so that brought the average down. Now we don't have that. We haven't actually extended the life span much at all; we've added a month or two to the life span. But we've changed the average because we're not seeing so many people die at early ages. Women always lived into their seventies and eighties. In fact, I went to Mount—not Mount Vernon...yeah, I guess it is Mount Vernon—with my daughter and George Washington's mother died at eighty-two well before Premarin and she still made it. Amazing.

[audience laughter]

And when you think, all of you can think of relatives that made it into their eighties a generation or two generations ago. So, this is not a new phenomenon. What's new is that more of us than ever before are making it our full life span but it's not new to live beyond menopause and we are indeed supposed to live this long.

The one other thing I just want to mention about menopause, and then I'll come back to it if people have questions, is that the other change in concepts that happened when we got away from the ovarian failure, you know, that the ovaries sort of shrivel up, dry up, and become useless—which, in fact is what we thought of post-menopausal women, too—is that the symptoms of menopause turn out not to be from low estrogen but rather from the

change in hormones and they're transient; they don't last forever, they last on average two to three years. Not everybody has them. About a third of women have no symptoms, a third have symptoms that they can manage, and a third are really suffering. It's not to say that some women may not benefit from taking hormones to get over the hump but the ideas that you need to take drugs for ever or your going to have hot flashes forever is really not true.

The other side of this are the stories we tell ourselves about—how the stories we tell ourselves about science and medicine and the hypothesis frame the research. And I think we lose track of the fact that medicine is a work in progress and that at any one moment we're only ever giving you our best guess, and stay tuned and that may change. I think the media and the medical profession sometimes collude to make it seem like we have the answer, like we're telling you *the* answer as opposed to our best guess. And then when we get a new guess it gets confusing. And I think people will continue to be confused and to have unreal expectations about medicine as long as we keep presenting it as if we've got it all figured out. I mean it really reminds me of that old parable of the blind men and the elephant: There's three blind men and they're describing an elephant and one of them is at the tail and says, you know "elephants are long and hairy and stringy" and the other one is up at the trunk and says "no, no, your wrong, elephants are tubular with hot air coming out of them" and then the third one is at one of the legs and says "no, they're like a tree trunk." Well, they're all right but you can't extrapolate from that little piece to the whole and that's what we do all the time in medicine. We make an observation and we extrapolate as if that observation explains everything. And it works for a while until we get another observation that contradicts it and then we go, "oops, back to the drawing

boards. Guess it wasn't that." And I think we're seeing a lot of these shifts in paradigms right now; not just the menopause shift that we've just been talking about, but also in cancer.

You know, we used to think, the way we thought about cancer was as if it were a foreign invader, as if it were a bacterial infection and these cancer cells came from somewhere else, I'm not sure quite where, and our job was to kill every cancer cell, to blast it away. Notice the war metaphors that are used here. It is the battle with cancer that is the, you know, we're going to win the war with cancer. And it's all a foreign invader kind of image and in fact, you could argue, that it was that view that led us to high dose chemotherapy with stem cell rescue which, in a way, is the epitome of this "let's blast it away" treatment. Chemotherapy is really poison and you're hoping you're going to poison more cancer cells than normal cells. You know, radiation, you're just aiming it...the treatments we have, which I've been known to call "slash, burn, and poison" are really pretty crude. Now, it's not to say that if I were diagnosed today, I wouldn't sign up to have them myself. I would. But they're pretty crude and they show you we don't really understand very well what we're doing and that we're really working on a model that is just trying to obliterate the cancer.

Now, what the stem cell transplant said was, that whole concept was, if chemo's not working that well, maybe we're just not giving enough. So, what if we take the bone marrow out and then it turn from bone marrow to stem cells and put it in a freezer somewhere, blast the hell out of you with chemo and then take the bone marrow out and give it back to you. That way, you wouldn't knock out the bone marrow to boot. It was an interesting idea, might have worked, but in fact, people just got carried away and before

you new it became the standard of care with really not any data suggesting that it worked better. And it even got worse than that. I mean, as you know people were suing their insurance companies to pay for it and we still didn't know whether it worked. And then finally, there were randomized control trials which showed that it did not work any better than standard chemotherapy. So, not to say that it didn't work, but that this treatment which was much more aggressive, had much more side effects, and even had a fairly high mortality rate was really no better than the standard that we'd had before.

Well, this did two things. Not only did it knock that treatment off the menu, but it also said maybe blasting away is not the way to go at this. And then if you re-look at it you come up with the notion that, you know, these really aren't foreign invaders, these are your own cells that are going off. These are not coming from somewhere else. And maybe if you used sort of a criminal analogy, you know, some criminals really are pretty far gone and maybe you do have to lock them forever but some of them could be rehabilitated. You know, maybe these cells are not so far gone that we can't call them back. And in fact, another thing came into play. We had always been studying breast cancer cells in isolation. We took cancer cells from pleural effusion, from metastases, we grew them in a petri-dish and we studied their behavior which is like taking one of you, putting you in an isolation chamber and studying your personality without letting you talk to anybody; unlikely to be very accurate. Well, guess what, these cells don't live in isolation, they live in a breast and they're talking to the fiber cells and the fat cells, there's a whole conversation going on and they're chatting with each other and they're interacting with each other and they're influencing each other. In fact, there's a researcher at Berkeley, Mina Bissell, who has taken breast cancer cells who have the

mutation of cancer and grown them on normal breast tissue and you know what, they behave normally. They grow right up and make ducts and act normally when put into a normal environment. So it sort of reminds me, I'm going to take my criminal out of a bad neighborhood and move him to a good neighborhood and give him some fresh air and good food and exercise and maybe I can shift the peer pressure and change their behavior. It seems to work. And can this happen in people? Well, probably. You know, we have this concept called tumor dormancy. People who get all their treatment for breast cancer are doing fine and five, six, seven years later, the cancer comes back again. What were those cells doing for seven years? They were asleep. What put them to sleep? What woke them up? And if they could be asleep for seven years, why not ten, twenty, thirty, forty, fifty years? You could die in the meantime of a stroke, you know, and then you wouldn't care if the cells were asleep. What matters is not whether they're there or not, what matters is whether they're bugging you, whether they're active, whether they're causing a problem. How can we do that? How can we change the environment? Well you know, when I first started in practice, before we were doing chemotherapy, if you had breast cancer and you were pre-menopausal, we took your ovaries out. And you know what, they've done some follow-up on those people and they've found out that taking the ovaries out of pre-menopausal women who have estrogen positive tumors is as good as chemotherapy. How could that be? Chemotherapy is poison, it kills cells. Taking the ovaries out doesn't kill cells, we don't think. But it sure changes the environment, you know. It changes the whole hormonal milieu and that in itself may be enough to change the way these cells are dividing.

So what we're learning and what the newer wave that you're seeing happening in breast cancer oncology is a shift, not entirely away from chemotherapy, but certainly a shift again to look at the hormonal things that can change the environment. And other things too. Things that really take advantage of our new knowledge of molecular biology that will allow us to use things like the HER2/neu anca gene which gets over-expressed in some cancers and then make an antibody to it that is specific, that will specifically attack those cells. Or epidermal growth factor alterations, or changes in angiogenesis, so that the newer treatments are much more targeted; they're not blast away, but they're looking to just change a few subtle things that will hopefully reverse the cancer or make them behave better.

You know, my goal in writing really is to be a conscience for the medical profession and the public so that the debates are clear and the vested interests are clear and people realize what's going on. Realize that if you go to a surgeon you'll get surgery, if you go to a medical oncologists, you'll get chemo, usually, if you go to a gynecologist you'll get hormones. There are—that this is not a bias free, you know, the doctors still have mortgages and that money gets into things, as well. My goal for my life is really to eradicate breast cancer, whatever that takes. Writing, lobbying, researching, I don't care how I do it.

[audience applause]

And my current way of doing this is really looking on what research I'm working on now, and then we'll open this up a bit—but it's really looking at where breast cancer starts. Because until now, as we said, by the time we can feel it or see it it's been there too long. And I don't want to find cancers; I want to find the cells that are just thinking

about being cancers someday when they grow up. I want to not find criminals that I have to rehabilitate, I want to go to the high schools and find the kids that are having trouble and intervene there so they never grow up to be criminals. And so how do you do that? Well it turns out that all breast cancer starts in the lining of the milk ducts. And if you could get there maybe you could actually find the cells that are getting a little off, ahead of time. Or find the conditions. And so I've developed this catheter that you can thread into the milk ducts that will let you wash out cells. I'm not the first one to do this; whenever you think you have a brilliant idea there's always somebody who thought of it before you. In fact, the first guy to ever do this was a guy in Uruguay in 1948. No anesthesia, nothing. And he called it ductal rinse. And then again in the 70s people were thinking about it, so I'm just the latest person to think about. But there's no question in my mind that if you have a reliable way of getting to where it starts you can start to figure it out, you can start to find out "what are the steps?" you can look at "what are the conditions in the duct that lead to cancer?"

You know, we don't actually know what happens in the non-breast feeding breast, we don't know what the physiology is. We don't know what's concentrated, what's absorbed. When you're breast feeding if you have spicy food, your kid's up all night. If you drank a glass of wine, your kid goes to sleep. We know things, the breast turns blood into milk, and we know things get in there. There's some preliminary studies showing that the estrogen levels in the breast duct fluid are actually a hundred times higher than they are in the blood. Why? Because, guess what, the breast can make its own estrogen. So it doesn't care so much what's going on elsewhere it can actually make it itself. Now is this everybody? Some people? What makes it? I have no idea. There was a very

interesting study, you know, provocative pilot study, presented about a year ago, that showed actually different levels of estrogen in different ducts. You have six to eight ducts and it may not be the same one duct to the other. And in fact breast cancer is only the disease of one ductal system, it's not the whole breast that goes bad. So maybe if we could figure out "what are the conditions in that duct" and if we can get a marker, a protein, or something—this is my real fantasy—then we could just squeeze out a drop a fluid, dip stick it and if it turned blue, then you'd go to the doctor and we'd go duct to duct and figure out which one was abnormal and then we'd squirt something down the duct to clean it out. Drano, or something like that. Probably not Drano, but, you know, something.

[audience laughter]

And then you'd be back to normal. I mean, you know, we'd never get to cancer, chemo, surgery, radiation, any of that stuff, and in fact that's really the pap-smear model. Most people who have an abnormal pap smear do not have a cervical cancer, they have sort of funny looking cells and then they repeat it and if they're still there then they go in and laser, cryo, the cone biopsy, or whatever the treatment is and then you're back to normal again. And that's where we need to be in breast cancer. We need to be much earlier in the process and now that we have access to where it starts we have the hope of doing that. So now what I'm doing is really focusing on funding research through my foundation and actually start—I'm going to start doing some research myself on the normal breast, to get us there, because I am a very impatient person. I'm a surgeon, you know, and we're not known for our patience and I am sick of this. I've been dealing with this disease for most of my career and I, you know, would like to go on to something else, so I am going to try

to jump start this as fast as I possibly can. Because there's no question in my mind that getting to where breast cancer starts is how we're going to get rid of this disease.

Now I'm going to tell you a story of what drives me and then I will give you my prescription for good health and then we'll be happy to answer questions. And in addition, if some of you have questions that you really don't want to ask in this public forum, I do answer questions on my Web site which is susanlovemd.org. Don't go to drlove.com. That's not me.

[audience laughter]

But, susanlovemd.org and you go to the bottom of the page and you can ask questions and we do answer them.

Some of you may have heard this story before but this is really what drives me. When my daughter, who is almost fifteen, when she was four we moved to L.A. and it was Breast Cancer Awareness Month, and there was an exhibit and it was plaster casts of women's torsos. So they took their bodies from here to here, they used white plaster like you use on a broken arm or leg and they made these casts and they had a thousand-five hundred of them on a hill and from far away they looked like graves because they were about this tall, they were white. From close up, they were the range of women's breasts; big breasts, small breasts, lumpectomies, mastectomies, silicon implants, actually a lot of silicon implants because it was L.A.—

[audience laughter]

—and my daughter Katie was going around trying to pick out what breasts she wanted when she grew up. I tried to explain to her it wasn't so simple. And then she got really serious, the way they do at four. She said, "Mommy, are these the graves of the women

who died of breast cancer?” And I said, “No Kate, these women are all alive, but there are women who die of breast cancer.” And she said, “Well mommy, you’re going to stop it aren’t you?” I said, “Well Kate, I’m going to try to stop it. I’m going to actually try to stop it before you grow up.” And she thought a little bit more and then she said, “Well, what if you die first?” I said, “Well Kate, I’m going to actually try to stop it before I die.” She thought a little bit more and she said, “Well mommy, if there’s still breast cancer left over after you die, it’s going to be a real problem.” And I said, “Yes Kate?” And she said, “Because, I’m going to be a ballerina.”

[audience laughter]

This isn’t her problem, it’s our problem. You know, we need to stop it so that it doesn’t go on to another generation. And we can stop it, there’s no question in my mind, if we put our mind to it. Now, the title of this talk was my prescription for health and I want to tell you what it is. It’s to keep abreast—all puns intended—of what we know and don’t know, and to be your own expert, because often you’re the one with the disease, you’re the one with the problem, you have the biggest vested interest, and you’re the one that’s most likely to get the information. Doctors are busy, they’ve got lots of different diseases they’re treating. Where as you’ve only got you to worry about. The best advice I can give you is exercise, eat a healthy diet, don’t smoke, and get a good book. Thank you.

[audience applause]

Lillian Bridwell-Bowles: This is the part where you come in. First, we’ll hear a brief reaction from Dr. Douglas Yee and then we’ll send your questions to one of the two of them, or maybe both, and they’ll try to answer them.

Dr. Douglas Yee received his MD from the University of Chicago and then did his residency in internal medicine at the University of North Carolina, one of my favorite places, being home, where he also served as chief resident. He received his medical oncology training at the National Cancer Institute in Bethesda, Maryland. He's held positions at Georgetown University, and the University of Texas, Health Science Center at San Antonio. In 1999, he came to the University of Minnesota where he is now a Professor of Medicine. He also has appointments, and this man gets around, listen to this, appointments in pharmacology, microbiology, immunology, and cancer biology. He holds the Tickle Family Land Grant Chair in Breast Cancer Research and is the program leader of the University of Minnesota, Cancer Center's Breast Cancer Program. His research focuses on the growth regulation of breast cancer from insulin-like growth factors. We are proud to have a world-renowned researcher on this campus and proud to bring him to share the stage with Susan Love.

[audience applause]

Dr. Douglas Yee: Thank you very much. I just wanted, actually, to make a few brief comments and I wanted to thank the organizers for inviting me here. Susan's a tough act to follow so I'll be very brief. I wanted to comment first on what I do, so Susan mentioned that the treatment of breast cancer is slash, burn, and poison, so she is the slash part of that. I'm a medical oncologist and I do the poison part of that. I don't know if we have any burners here but. Actually, I really was glad to hear Susan talk because I think I'm going to change my title to cancer cell rehabilitator because I really think that that's what I would like to be doing instead of poisoning.

[audience laughter]

But anyway, I just wanted a couple of brief points. One point is that I've been asked to provide a response to Susan's comments and I guess that's a little bit like the democratic response to the State of the Union Address although unlike in D.C. or in St. Paul, I completely agree with everything she said and I want to make a few other points that she probably didn't make but probably should have. So the one very important point is that cancer mortality, particularly breast cancer mortality, has been decreasing since 1990. If you really look at these population statistic curves, there was a dramatic increase over the 70s and 80s and roughly in 1990, there has been a downturn. Susan mentioned to you already, and I was glad to hear it from a surgeon, I apologize to Dr. Cerra, but the surgeons had actually nothing to do with this. Better surgical technique did not change cancer mortality. What has thought to change cancer mortality is what Dr. Day does, and that's increase screening population mammography. And on the other side of that is more systemic therapy, and more chemotherapy, and hormonal therapy, even for women with early stage breast cancer.

But the couple points I want to make is I think it's very largely not credited to the women themselves. So first off, Susan mentioned to you that her book came out in 1990 and then that's when the cancer mortality went down, so maybe that's a coincidence and maybe it's not.

[audience laughter].

But it is very clear that women have many better options in this country and are much better informed and the advocacy movement had led to both better therapies and better training of clinicians treating patients with breast cancer. That's very clear when you look at the population mortality in the United Kingdom compared to the United States. The

United Kingdom mortality has always exceeded the United States. In fact during the 70s and 80s had an exponential, dramatic increase in breast cancer mortality and that was largely because the United Kingdom has a very limited national health service where women are not allowed to seek second opinion, or if they do seek second opinion, it's very difficult to obtain one. In the United States, we've been fortunate to have the ability to see an expert of our choosing, and I really do think that's driven down cancer mortality in the United States. Once that was recognized in the United Kingdom, changes were made and that also has decreased mortality there, as well. So, I do think it's been very important, and Susan's work has been very important, in terms of decreasing breast cancer mortality in general and I think that trend will continue.

The one last thing I want to comment on is that Susan mentioned she wrote the book for women. I also want to comment that one of the things we do as physicians is communicate with our patients and I want to also comment that I think Susan's book and particularly her Web site as well are really very powerful communication tools. I was actually just on her Web site the other day, I needed to check some dates on a conference, and I actually happened to run across a couple of questions that were asked of her by patients. Her responses were really very well thought out, very well stated, and I have to say, for myself, I really think that her Web site, as well as her book, provides a communication tool for physicians as well as for patients. Because certainly the number of patients who come having quoted and read the bible serves as a very useful kind of jumping off point to have further discussions about management of the disease.

So those are the few comments I would like to make and again I would really like to thank Susan for providing the book and providing her Web site and I guess we should open up to questions now.

[audience applause]

Lillian Bridwell-Bowles: Alright. We have a few already—is this mic live? Maybe we could turn up the house lights. The cards are coming around so please write questions. If you didn't get a card, get one now, if you did get a card, Ann Browning and Pamela Flash, the Associate Director of the Center, will pick them up and we will ask and get answers to as many as possible. Theoretically, we are supposed to go to about nine with this question and answer, but I may go a little longer until I'm told we can't.

Okay. First one, near and dear to my heart. "What causes lymphedema after mastectomy? Why do some women and others don't?" Here I am with a fat arm, thank you for whoever asked that question.

Dr. Susan Love: Well, you know, lymphedema—this is a surgical question, so that's why I'm jumping at it—we don't really know, is the answer as what causes lymphedema and what doesn't. We have our hypothesis, and our hypothesis is that somehow the lymphatic drainage from the arm gets blocked. And when you use your muscles they create fluid, you can think of it as muscle sweat, but it's under the skin. And then that gets collected by the lymph vessels, returned back through, strained by the lymph nodes, and then dumped back into the blood stream up here in the neck. If something blocks that drainage, then theoretically, the fluid will back up, the arm will swell and you'll have lymphedema. Okay, that sounds pretty good, but why, I mean, the second part of the question is the more interesting, why do some women get it and not others? To a certain

degree it varies in terms of the amount of surgery. That if you have more nodes taken out, versus less, you get more lymphedema, but not entirely, and I've had patients where we took out four nodes who got lymphedema and people who had thirty nodes who get no lymphedema. So that's not totally it. My theory about that is maybe some people just have less lymph channels and less lymph nodes and then they get tipped over more easily than the ones who have more, but I just made that up.

[audience laughter]

We know that if you have both surgery and radiation it's worse. We're hoping that if you just have the sentinel node it will be better, but actually we haven't proven that yet, and it probably depends as much on how much mucking around you do in the armpit as it does how many nodes you take and how much scarring you cause. So all this to say, we really don't have a good handle on it. Now the treatments are really mechanical treatments and I think one of the bad things we've done is, the standard has been sort of, if you have a little bit of lymphedema we tell you to elevate your arm. If you have a medium amount we say get a stocking, and if you have a lot, we say get massage and get it pumped out. Well the problem is that the skin has an elasticity in it and as it gets swollen, you start messing with that elasticity. It sort-of reminds me of pantyhose at the end of the day. At the beginning of the day they're nice, and you take them off and they're like this. Well if you stretch out the skin, so if you wait to do your message until you've got bad lymphedema, there's no elasticity to hold it back in again. So what we probably should be doing is if somebody has a little bit of swelling, jumping all over it rather than waiting until it's bad. Having said that, a lot of surgeons don't even admit that patients have lymphedema, so it's a real problem. I would suggest for anybody who is suffering with it,

there's a great Web site and group, it's lymphedema.net I think [link from susanlovemd.org is <http://www.lymphnet.org/>]. We have a link from my Web site in the links section and they really have a lot of information. All of those suggestions you hear about how to prevent it, you know, don't cut your cuticles and don't put your hand in the oven and don't prune your roses, they're just made up. They're not based on any data. They're just made up because people said, well you know what, somebody, one surgeon, the surgeons are sitting around—this is how I picture it. These surgeons are sitting around some night, you know, in their club smoking, they say, “well you know, I once had a patient who pruned her roses and got lymphedema. Oh, we better put that on the list.”

[audience laughter]

“Well I had somebody who flew in an airplane and got lymphedema.” There's no data, there are no studies showing that. So you sort of have to do your own experiment. And, the things that help you, help you and the things that make it worse, make it worse, and we desperately need more research. But even better would be if we had a better way—what we're doing when we take the nodes out is we're trying to guess who has the bad kind of cancer and who has the good kind. So we can help to decide who needs to get chemotherapy or not, and if we had a better way to do that, we could leave the nodes alone. And that's on the horizon, actually—

Dr. Douglas Yee: Yeah.

Dr. Susan Love: --with some of the newer ways of analyzing the tumors and the DNA micro-arrays.

Lillian Bridwell-Bowles: There are too many good questions, we'll have to send them to her Web site, or figure out a way to handle all of these. "Do doctors prescribe too many drugs and should drugs be advertised on television?"

Dr. Douglas Yee: That's actually a very difficult question, so can I have the first part of that?

Lillian Bridwell-Bowles: Do doctors prescribe too many drugs?

Dr. Douglas Yee: So, we give—the short answer is yes. The short answer is, we as physicians err on the side of over treatment. We understand that chemotherapy and hormonal therapy reduces the risk of recurrence. We also understand very clearly that the vast majority of women we give these chemotherapies and hormonal therapies to don't benefit in the sense that they had good risk tumors anyways. But because we can't distinguish those, and this was something Susan just alluded to, we can't distinguish the good risk versus the poor risk tumors despite fifty or more years of trying. Right now the state of the art is we do give too much chemotherapy.

The second part about the advertisement on TV, I kind of have mixed feelings about that. I do think that there are certain—most of the things that have been advertised have been really in the realm of supportive care and I think it's worth bringing up as a question to your physician and I think that that's probably their benefit. I think it is little bit of a difficult ethical question however.

Dr. Susan Love: And to take that a step further, on the menopause front, and this sort of preventative diseases front, it's even more so. Osteoporosis is a great example where we change the definition. It used to be fractures in your eighties, now it's an abnormal bone

density test. Somebody actually said, “if you think your healthy you just haven’t had enough tests done yet.”

[audience laughter]

We’ll find a test—And the bone density test is great but it’s not the whole picture and actually age is a much bigger predictor of fracture than bone density. But we started comparing and we found these women in their fifties who have low bone density and then people started treating them with Fosamax and there’s no—it doesn’t really help in that group. And in fact, the current recommendation is you shouldn’t get a bone density test ‘til you’re sixty-five, because age is a bigger predictor than bone density. And because treating osteopenia actually doesn’t do anything. It hasn’t been shown to prevent fractures, the risk isn’t high enough, we don’t even know what osteopenia means. And so, unless you have had a fracture or have severe osteoporosis, you should not be taking drugs and you shouldn’t be getting tested until a later age.

Now this is relatively new, this last year the bone people have started saying this. When it first came out we thought, “ah ha, this is the answer to everybody.” So it takes a while for it to filter through. But meanwhile, you have the drug companies advertising not only on TV about osteoporosis, but they advertise now diseases instead of drugs. You know, “have you had your bone density test?” “Hidden problem, how do you know you don’t have osteoporosis? You better go in and get tested.” And then, of course, once you get tested it’s really hard not to get treated and then you get sucked along this whole path. So I really don’t think, as much as I like patient information, I don’t think it should be coming from the drug companies, to tell you the truth.

[audience applause]

I think we should figure out other ways of educating the public.

Lillian Bridwell-Bowles: Here's a drug to talk about. "How would you explain the impact of tamoxifen on pre-menopausal women or women nearing menopause? Is there anything on the horizon," part two, "to replace tamoxifen and its side effects or risks?"

Dr. Douglas Yee: Tamoxifen, for those of you who don't know, has now taken a name of a selective estrogen receptor modulator, so hormones—

[audience laughter]

We had to make up a—

Dr. Susan Love: It used to be an anti-estrogen, but...

Dr. Douglas Yee: We didn't want people to understand actually what we were talking about so we had to make up a new term.

Estrogen works by binding a protein within cells called the estrogen receptor. Many other chemicals, from plant products, from industrial sources, from drugs that were cooked up in a pharmaceutical company's house can also interact with the estrogen receptor and one of the very first ones identified was the drug tamoxifen. So tamoxifen binds the estrogen receptor and it gets the term selective estrogen receptor modulator because it's not an anti-estrogen in every tissue. In the breast it's an anti-estrogen, in the uterus it's an estrogen, in the bone it's an estrogen, in the brain it's probably an anti-estrogen.

Dr. Susan Love: I sort of think of it as bi-sexual, you know, it goes both ways.

Dr. Douglas Yee: Yeah—

[audience laughter]

—That's a good way to think.

Dr. Susan Love: Depending who it's hanging out with, you know.

Dr. Douglas Yee: But at any rate, it is effective in pre-menopausal patients. It does have different effects in pre-menopausal patients than post-menopausal patients because pre-menopausal patients make their own estrogen. So when I said to you that tamoxifen was good for the bone, that's good in post-menopausal women. In pre-menopausal women it's a negative effect on the bone. But nonetheless it is still a very effective breast cancer treatment.

Lillian Bridwell-Bowles: Is there anything on the horizon?

Dr. Douglas Yee: So once everything has been understood about how estrogen receptors interact with their proteins you can design one. So that's the hope, we have designer estrogens; ones that do exactly what you want it to which is an estrogen in the brain and in the bone, not in the breast and not in the uterus. And I think those will be coming pretty quickly.

Lillian Bridwell-Bowles: I want a designer estrogen. "Is the rate of reduction in breast cancer mortality since 1990 similar across socioeconomic groups or is there a disparity between low income women and other women?"

Dr. Douglas Yee: Do you want to comment on this?

Dr. Susan Love: There is a disparity. It actually is more class related than race related, actually. Although, that if you look at socioeconomic levels- there's an interesting study done in the V.A. where everybody has access to the same health care and then you saw no racial differences. But if you look in the general population it's much more tied to socioeconomic level.

Interesting, however, breast cancer is a disease of high socioeconomic women. It is much more common in white, high socioeconomic women than it is in poor white women. It's

more common in white, high socioeconomic than it is African American women, and then Hispanic women, and then Asian women, and then Native American women, in that order. Why that is, is not clear. You can come up with all kinds of hypothesis. My favorite is that it's the magnetic strip on the credit card.

[audience laughter]

[inaudible]—I mean it's as good as any. We really don't know. One of the reasons probably has to do with the age of first child birth, because the older you are with your first pregnancy, the higher your risk, and lower socioeconomic women tend to have earlier pregnancies, but it's not enough to explain the whole thing. So, it is a bit complex. A lot of people would want to say, "well what about pesticides and environmental agents?" In fact, what's fascinating is if you look at the Hispanic women who are working in the fields out in California, they do not have a higher risk of breast cancer. It's sort of mixed up. You say "oh, well it's a high fat diet." Well you know, if you're rich you eat brie and if you're poor you eat potato chips. It's all high fat, you know, so I'm not sure what's going on. But it definitely does track along socioeconomic lines.

Dr. Douglas Yee: Yeah. And just a comment. I made a statement about access to health care and I don't just mean access to physicians, but actually having the appropriate social support to get to appointments, to actually come in daily for your radiation for the six weeks that you need to do it. So I think there are a lot of compromises in health care that lower socioeconomic women incur that higher socioeconomic women do not. And I actually think that's still a big factor.

Lillian Bridwell-Bowles: I have a handful of questions, including one I just got, that ask about alternative therapies, things outside the realm of traditional medicine and whether any of those are effective or recommended.

Dr. Susan Love: You know, we really—there's two avenues, because we're sort of talking about breast cancer and menopause, and in some ways it's easier to talk about—I'll talk about the menopause ones because they're easier and you can—

Dr. Douglas Yee: Yeah.

Dr. Susan Love: In menopause...you know, menopause is not a disease, as we said. It's normal. And what you're treating is not a disease. What your doing is trying to alleviate symptoms. The transient symptoms that interfere with women's lives. There are a lot of alternatives that actually have been studied and been shown to work for this. Soy protein has been shown in randomized controlled studies to reduce hot flashes, even in women on tamoxifen. There are some people who worry about tamoxifen and soy together, although there is at least rat data that shows them being synergistic rather than counteracting each other. Soy is also a selective estrogen receptor modulator so it's more like tamoxifen than estrogen.

Black cohosh is another one. You can get it as remefemin, which is not estrogenic, which is very good for menopausal symptoms, has been shown in randomized control trials to work and to not have estrogenic side effects.

Some of the other things, actually acupuncture has been shown to be good for hot flashes in a randomized controlled study. They put needles in, some of them they put an electric current and some them they didn't, that's how they had the control groups, or they had fake needles, or something, I'm not quite sure.

Paced respiration, slowing your breathing down, has also been shown to help. So there are some things in the “alternative world” that have been shown to be useful. There are others that a little more shaky. Some of the Chinese herbs have not been so far demonstrated but it’s a little bit tricky because the way we do studies is not always conducive to the way these herbs are prescribed.

I’m trying to think what other things—it feels to me like I’m missing something but it’s not popping into my menopausal brain. At any rate there definitely are alternatives that are possible and useful and I think certainly have less side effects than estrogen.

Interestingly when you do any of these randomized controlled studies, there’s about a fifty percent placebo effect with whatever you use, for menopausal symptoms. That’s great. So if there’s a placebo effect I figure you might as well get the placebo effect from flax seed rather than from a drug. I think that there are alternatives, even if it is just a placebo effect.

But I think part of that is also the fact that hot flashes come and go. You know when you write a book about menopause the goddess punishes you with every symptom that you wrote about.

[audience laughter]

So, I’ve been there. And the thing about them is you’ll get a couple of months that are real flashy and then you’ll be fine for a month or two and then they’ll come back and so if you started the study just as you were going into a fine period you might think, “gee, it was the treatment I started” as opposed to the change in symptoms. But I do think alternatives are very reasonable for managing menopausal symptoms. You want to talk about it?

Dr. Douglas Yee: Sure, in terms of cancer treatment. My grandfather and my uncle were both traditional Chinese physicians and I think that my take is if you do things for thousands of years it can't be completely wrong. As a medical oncologist, I also know that some of the best drugs we have are from plant sources so that Taxol, Taxotere come from plant agents, mycin comes from a soil organism, so there are clearly natural products, so to speak, that are very active.

However, the story I always tell is: My uncle as a traditional Chinese physician had hypertension and he absolutely refused to take his hypertension medicine; they made him dizzy, they made him fatigued. He tried to take his Chinese herbals and he actually died of a stroke because he had uncontrolled hypertension. So, in that setting, sometimes we do better with traditional Western medications and sometimes we don't. So my advice is always, *instead* of the prescribed is not a good idea, *in addition to* may be ok.

I do have a little bit concern that some of the agents could interfere with drug metabolism, could actually enhance toxicity, rather than diminish it. But again, as Susan mentioned, the way Chinese or Eastern medications are prescribed, they are not prescribed like Western medications how we give the biggest dose we can and that's what your supposed to do. With the Eastern medications, you're just trying to put things back in line, so we never had the kind of pharmacology we do with current cancer chemotherapy.

Lillian Bridwell-Bowles: "You mentioned that cancer sometimes becomes dormant. How frequently does aggressive cancer like grade III HER2 positive cancer become dormant only to reawaken several years later?"

Dr. Susan Love: This is not something you can say because it's not like we follow it and say "ok this person is in, we'll just watch this cell and see what happens." We can't do that. So this is all circumstantial evidence. So, the way that I come up with "some cells become dormant" is the fact that I know there are people that are treated that are fine for a period of time and those cells show up again. So they must have been doing something in-between and my way of thinking about it is they were sleeping. You could come up with a different story if you want.

How frequently does that happen? I think sometimes chemotherapy kills the cells and sometimes maybe it just stuns them. Sometimes hormonal therapy may knock them out and sometimes it may put them to sleep. The interesting thing about tamoxifen, to me the most interesting thing about tamoxifen, is if you give it for five years you can reduce recurrence in second cancers and if you take it for five years and then stop, fifteen years later you still have the benefit, the same benefit. So whatever it's doing it doesn't stop happening when you stop taking it. So as a simple simplistic surgeon I figure it puts the cells to sleep and they stay asleep and something comes along and wakes them up. And if nothing comes along and wakes them up, they stay asleep forever. So there may be some people who think they're cured of cancer who really have dormant cells. It doesn't really matter.

And, how often will it happen? It's really not as predictable as we would like to think. Our way of guessing who has the good kind and who has the bad kind, things like grade III and HER2 new, it's like looking at a line-up at the police station and trying to guess who the criminal is by how they're dressed. Maybe it's the guy who looks like a bum and maybe it's the guy in the three-piece suit. And we're really just not very good at it so we

use all these things to help us guess but none of them really dictate the behavior and they're just attempts to guess, on our part.

Dr. Douglas Yee: Susan alluded to the fact that there are much more technically robust techniques to look at exactly what a cancer cell's picture looks like. A very important paper came out, about a year and half ago now, where that kind of technology was controlled. The question was asked "what genes is this tumor cell making?" and then they did this in a very large population. And it turns out, that kind of technology was a much more powerful predictor of outcome than the things we use clinically now, which is tumor size, lymph node status, and histologic rates. When we talk about the current four prognostic factors, they're pretty crude tools. They really are our best guesses at what we think is good or bad but still don't completely reflect tumor cell biology. So that's a long way around of saying that even patients that have classically bad prognostic factors can still have a really good outcome.

Dr. Susan Love: And in a way, if you want to take my analogy to the full length, what it means is this new technique, instead of trying to guess who the criminal is from the lineup by how they look and how they're dressed, we get to do DNA testing which is more accurate.

Lillian Bridwell-Bowles: We're going a little long but there are too many good questions, so someone will have to tell me I absolutely can't go any longer. "Lobular cancer in situ, and I guess ductal cancer in situ also, in one breast, does it greatly chances of cancer in the other breast? If so, how much, what are the statistics on the in situ versions?"

Dr. Susan Love: Ok, lobular carcinoma in situ is really not cancer. It doesn't metastasize, it can't kill you. And so in that sense, in the sense of thinking of cancer as something life-threatening, it is not. What it is more is a marker for future risk of cancer and the risk is about one percent per year, so about one out of a hundred people that have this a year will end up getting cancer. And it can be anywhere in either breast.

There was just a paper—I think it was last week, it's on my desk, I glanced at the abstract, I didn't read the whole thing yet—suggesting that the risk was a little higher in the breast that had the LCIS than the other breast, but they're both pretty much at risk. And so the treatments generally are treatments aimed at preventing breast cancer. It's not surgery and radiation, but you can either do what we call close follow up, meaning mammography and exams; you can do tamoxifen as prevention which will reduce the risk of lobular invasive cancer by somewhere around fifty-eight percent in this group; and you can—this is a situation where this new technique that I developed, ductal lavage, might be useful—where you actually can have some cells washed out of your ducts and see whether they look atypical like they're marching on towards cancer or not and use that, as well, as a gauge, to help you in your decisions.

Ductal carcinoma in situ is a little bit different because in ductal carcinoma in situ again, it cannot spread and kill you so your treatment is more prevention of it developing into an evasive cancer. Again, it has about, left totally untreated, about a thirty percent chance of developing into an invasive cancer over about ten years. Again, we are not very good at telling who has the bad kind and who has the good kind, so we treat everybody as if their's is going to go on. The treatments, in this situation, you can actually cut it out. And if you can get all the ductal carcinoma in situ out, because it's only in one ductal system

so there is an opportunity to be able to get around it, then you can prevent the person from getting cancer. And sometimes people go in either of the situations and elect to have preventative mastectomies which is sort of the ultimate treatment. Tamoxifen can also be used in patients with ductal carcinoma in situ but the benefit—it does have a benefit but it's pretty small, actually, and so I'm not a big fan of tamoxifen in that setting.

But one of the real downsides, in a way, of mammography screening is—you could argue whether it's a downside or upside, I think it's a downside—we're detecting all these things and it's very hard to figure out which ones are significant and which ones aren't and so we over treat everybody. It's a little bit like, now if we go with my criminal analogy, going to the high schools and trying to decide which kids are going to turn into criminals someday by how they're dressed now, not very accurate, again. Or just going into the high school and taking everybody who looks like they might someday grow up to be criminal and rehabilitate them prophylactically. That's sort of what we're doing because we can detect these things and we don't really know what they are. And I'm hoping that by being able to get into the milk ducts and starting to do some of these studies we may be able to get tipped off as to which ones are the ones that are going to go on and which ones aren't.

Lillian Bridwell-Bowles: Here's a person who speaks for many of us. She says, "we love you, thank you for all you do." And then there's a question that goes with this one, which is, "is your name really Susan Love?"

Dr. Susan Love: Yeah.

[audience laughter]

It's the name I was born with. It 'tis indeed.

Lillian Bridwell-Bowles: “Could you please comment on Barbara Ehrenreich article on the pinking of breast cancer, the breast cancer movement?”

Dr. Susan Love: Yeah. I read it a while ago so I don't totally remember it but I know the general premise. There was another article in *Business 2.0*, I think, on the business of breast cancer. You know, I sort-of alluded to this when I said we were victims of our own success when we started the breast cancer advocacy movement. When we started it there were no companies that would go anywhere near us, they thought it would be bad and actually Revlon was the first one and Avon jumped on much later. But now it's become the sort of feel-good movement and I agree with her. I really don't like the pink ribbon. I have never worn a pink ribbon and people give them to me and I graciously say “thank you” and then stick it in my pocket, because I think that it, in a way, it tries to gloss it over into this is a disease that we can deal with. You know, it's still a bad disease and it's sort of like not talking about metastatic disease.

And I think that early detection message also gets a little bit screwed up. People say things like “mammography can find eighty percent of cancers.” It's absolutely true, it can. Some of them are as big as a grapefruit but it can find them. And then we say “mammography can find breast cancer early.” Absolutely true; doesn't always, but it can. And then we say “early breast cancer is ninety-five percent curable.” Absolutely true. But when you say those three sentences together it sounds like mammography can find eighty percent of cancers when they're ninety-five percent curable, which is not true at all. In the best of hands, in postmenopausal women, it reduces the mortality rate by around thirty percent.

I think we try to make it into too much of a feel good thing and it's not. I mean it's nice that we can cure some people. It's too bad that we over-treat so many people; that over-treatment comes with a cost, it comes with costs like chemobrain and lymphedema and other things, and it would be much nicer if we could predict better. A third of the women who get diagnosed with breast cancer still die of it, you know. And I hear people who say "my friend got breast cancer, I'm so mad of her. She must not have done breast self-exam," or "she must not have been detected early." It's not that, some of it is we really still don't understand this disease very much and I think that handing out shower cards, pick ribbons, is sort of an easy way for corporations and for people to say they're supporting breast cancer without really getting into the hard part of it. And I agree with her. I really worry about this and now, you know, you can have a pink, what is it, a pink vacuum cleaner for the cure and a pink BMW for the cure, you know, it just doesn't do it for me. Anyway...

Lillian Bridwell-Bowles: There are several questions about how to get good information, some of them having to do with how to assess Web sites. Then there's another one about how Susan Love manages to keep up with the individual answers on her Web site. And I know that—

Dr. Susan Love: I have a clone.

Lillian Bridwell-Bowles: A clone, oh yeah, well we like that clone too. So the big question, I guess, is where do we go from here to get adequate information and how do we judge the reliability of what we get?

Dr. Susan Love: You know, we were talking about this a little bit at dinner and I think people make a big deal about this on the Web but actually it's a problem we have all

throughout, in terms of information. When you look for books there are good books and there are not so good books about breast cancer, I means there are books about—there was this one book out *Dressed to Kill*, talked about how bras caused breast cancer and we could solve the whole problem if we burned our bras, without really any scientific data behind it. There's another one about how, if you just get rid of dairy products, that's the answer, again without any science behind it. And so, with books you have to judge which one is valid and which one isn't. The same thing is true on the Web. So going to credible sites, places that have reputations of people you trust, the NCI has a very good site, cancer.gov. There are others, the National Cancer Center here has a very good site, has a lot of information. And I think you basically have to do like you do in every other source of information, you have to look at it critically, look at who's sponsoring it, figure out what they're selling or not selling, and try to get an idea of what's going on.

In my own site I actually have three nurse practitioners who worked with me over the years, two in Boston and one in Los Angeles who do the first cut on the questions and then they're reviewed by either myself or when I'm out of town, I have another woman breast surgeon up in northern California, Ellen Mahoney, who looks at them. I actually have twenty on my computer right now that I'll do on the plane on the way home. We don't advertise this widely because it's free so it actually cost us money to do and so we really don't want millions of people doing it because it doesn't necessarily make our life easier. We do manage to get most of them.

Lillian Bridwell-Bowles: Doctor Yee, how can people get information from the University of Minnesota?

Dr. Douglas Yee: There is a cancer Web site that actually is pretty good. And I think, to reiterate something that Susan mentioned, is that a lot of the better sites, the NCI site, the national NCI site, the American Cancer Society site are sort of all peer reviewed in the sense it's not one person's opinion putting things out. And they're usually, like Susan's book, fairly well referenced as to why we make the recommendations. So the Cancer Center Web site I think is www.cancer.umn.edu and that actually does provide links to lots of other services as well as a call in phone line where you can be directly connected to a nurse who can help deal with some educational issues about cancer.

Lillian Bridwell-Bowles: There were many more questions and I hope you have some ideas about how to ask them individually. Let's, once again, thank Dr. Susan Love and Dr. Douglas Yee.

[audience applause]

Dr. Susan Love: Signing books.

Lillian Bridwell-Bowles: We've saved just enough time, I think, for you to buy some books, if you're interested and to have them signed. Dr. Love is generous with her time and will maybe even answer a short question while she's signing the book.

Thanks for coming.

[audience applause]