Presidential Address

The Things That Matter Most

John E. Niederhuber, MD

John, I very much appreciate your most kind and sincere words of introduction. It is very special and meaningful to me to be followed in this presidency by an admired colleague and a very dear friend.

This year, as many of you know, has been a very difficult and sad one for my family and me. Those who know me well are very much aware of just how much Tracey and I were a team; she was central to my personal and professional life and to the guidance of our family. There are many of you here today who were also very close to Tracey, and I know you share with me the pain of losing her to breast cancer. It would be impossible for me to stand before you this morning without having this tragic event in my life have a great deal of influence on what I will say and for that I certainly beg your indulgence.

First and most important, I want everyone present this morning to know that being your president this year has been the highlight of my professional career. I am extremely proud to have been entrusted with this honor. Throughout the year, I have experienced a persistent and an especially uplifting outpouring of warmth and concern from all of you, and I know that this was a very important source of strength for Tracey as well. Your letters, e-mails, phone calls, and hugs have been a tremendous help to me. For this outpouring of love and support, I simply do not have words that can adequately express my gratitude. Of course, all of you understand this battle with cancer all too well, and, I know, many of you have experienced it personally just as Tracey and I did.

This morning I would like to share with you some thoughts about the future of oncology, especially surgical oncology, as well as a few personal insights into this business of being a cancer surgeon (Fig. 1).

When I was beginning to prepare this address, I recalled an incident with Tracey in early November. I had finished a draft of a message to be included in the Society of Surgical Oncology newsletter (perhaps you recall reading it). As I often did, I took my early draft to her one evening. She was my biggest supporter and also my most honest and rigorous critic.

As many of you know, Tracey loved to write and was really quite good at it. She was fond of writing long letters. They were always full of wonderful personal insights and laced with lots of humor as well. In fact, a friend of mine, as we were sharing memories, stated that no one threw her letters away and he was convinced there were little stashes of these treasured epistles in drawers all over the country.

When Tracey read my draft she said to me, "You know, I think you are missing something very important. I think the events of September 11th have had a tremendous impact on all of us." She said, "Write about what is really happening to you and your colleagues and what it means to your work and to your patients." She was, of course, absolutely correct.

As surgeons, we tend not to share our inner feelings very much and the demands of our work often push the life-changing events we experience to the background. The tragedy of September 11th, and the events that followed, changed our lives forever and caused each and every one of us to pause and look inward at our own being. We certainly sharpened the focus as to what is precious and truly meaningful to us, "The things that matter most."

The point of telling you this personal story is to indicate to you that all of us here this morning have experienced a significant change in how we see the world around us and how we see ourselves. For some of us these events in our lives have been more personal but for everyone they have been very real. As a consequence, I believe there is much more awareness of the weight of
the responsibility we bear to care for those who come to
us with one of the most devastating of all diseases,
primary and secondary malignancy. Perhaps there is a
heightened sense of urgency among us to conquer this
dreaded disease.

Standing before you this morning and hoping to leave
you with something to remember, something to take with
you, I am reminded of a story I heard quite a number of
years ago regarding a very prominent theologian. He was
faced with a task similar to mine. He was assigned to
deliver the Sunday morning sermon at a national con-
vention of fellow preachers in his denomination. As he
ascended to the pulpit and gazed out over his audience
that Sunday morning he stated, “What I have to say to
such a learned group of colleagues is not necessarily new
—but all of you need to hear the message anyway.”

My friends what I have to say to you this morning is
not necessarily new, but I would like to stimulate you to
think about the changes that I believe lie before us. I
would like to remind you of what an important respon-
sibility we have to ensure the future of surgical oncology,
especially the responsibility to our patients.

My talk this morning has three messages. The first
is that we are entering an unprecedented era of discovery in
biology, often termed the age of molecular medicine. The second follows on the first. We in cancer medicine
will certainly need to change and change is never easy. In
this room are the young people that will lead this impor-
tant process. And the third is that September 11th
changed forever how we see the world and how we view
our sense of security. The lives of our patients have been
equally impacted and we must not lose sight of this.

We are living in an era of unprecedented discovery,
and very clearly the force behind this era of discovery is
the ability to sequence DNA and the knowledge to read
and understand its code. It has been stated that the
knowledge base for science and technology doubled be-
tween the years 1990 and 2000. Even more shocking is
the prediction that it will continue to double approxi-
mately every 5 years, and all of this is occurring with
instant information exchange.

The major contributor to this explosion in discovery
has been in the biological sciences, and the study of
genetics has been at the center of this logarithmic growth
in new knowledge.

The first 25 years of the 20th century was the period of
defining inheritance and linking that process to the nu-
cleus of the cell (Fig. 2). Then came the discovery of
chromosomes and the speculation that the genes respon-
sible for inheritance were located on these structures.
The next quarter of the century can be described as the
period of biochemistry. The discovery of the double
helix ended the first half of the century and really set
the stage for the tremendous advances in recombinant DNA
technology that mark the second half of the century.

It was relatively late in the century when scientists
began talking about the possibility of generating a com-
plete sequence of the entire human genome. These dis-
cussions began in 1985 and completing such a sequence
seemed at the time to be an overwhelming task. I can
remember in 1985 how long it took me to set up a
sequencing reaction from which I would hope to gener-
ate approximately 300 bases of readable sequence.

Important to the amazing success of the human ge-
nome project was the early decision by those involved to
break up the task into reasonable, achievable steps. Also
important was the decision to involve multiple groups,
including both public and private, in a collaborative
effort. By focusing initially on goals that could be
achieved, such as obtaining the genetic and physical
maps, the leaders provided the time needed for develop-

![History of Genetics](image)
ment of automated, high-throughput technology required to do large-volume sequencing. It also allowed for the development of the computing needed for data storage, retrieval, and analysis. The technology for high-volume sequencing needed to catch up to the challenge of the task at hand. It was originally estimated that there would be some 100,000 genes in the human genome. Interestingly, it has turned out that there are only 32,000 ± 4,000 genes.

Although we continue to finalize the human sequence, three important programs within the human genome project are ongoing. For example, it is important to complete the sequencing of other mammals. The mouse sequence is well on its way to completion and you may have read the debate in the newspapers as to who should be next; in Wisconsin we are pushing the cow. Comparative genomics certainly has much to offer. It will provide the opportunity to see what has been conserved especially in the long stretches of DNA that do not contain known genes. Why are these regions conserved in evolution?

Another important aspect of the human genome project is the mapping of the sites where variation occurs. Although the number of sites where variation occurs is estimated to be approximately 6 million, already some 2.3 million have been identified providing strong evidence that this aspect of the project will be completed in a timely fashion. We are literally at the point where we can walk into the library and check out the gene we wish to study, packaged for us in a common vector.

This progress toward a complete sequence of the human genome has occurred in parallel with the elucidation of the basic mechanisms responsible for the development of cancer. We as surgeons have always known cancer as a disease of unprecedented growth, maturation, and, at times, unbelievable ability for cell survival. What we have learned over the past two decades is that cancer is fundamentally a disease of the genome. It arises from changes within the DNA of our cells during their lifespan. These changes in our DNA are brought about through deletions, amplifications, mutations, and translocations. They are DNA changes that result in the production of growth stimulating proteins and/or their receptors, a loss of proteins that normally would act to negatively control abnormal growth, and changes that result in the loss of our ability to repair DNA when the normal process of DNA replication goes awry.

This understanding of cancer as a disease of the genome has begun to fuel an unprecedented enthusiasm for predicting cancer’s demise. Perhaps understandably the catalyst behind our enthusiasm is the sequencing of the human genome and the feeling that having accomplished this, no goal in biology is unattainable. As a result, we now talk and plan our research around cell signaling pathways, receptors, and growth factors. The new term to describe these efforts in cancer is molecularly targeted therapy.

All of you are very familiar with one of the first examples of this new age of molecular therapy. The story of the development of STI571 or Gleevec (Novartis, Basel, Switzerland) is a good illustration of at least the beginnings of this new era.

As you know, tyrosine kinases are enzymes that transfer phosphate from adenosine 5'-triphosphate (ATP) to tyrosine residues on substrate proteins that regulate cel-
lular pathways, which lead to functional activities such as proliferation, differentiation, and cell survival (Fig. 3).

It is no surprise, therefore, that this activity would make tyrosine kinases very attractive as targets for intercepting the path. Because all protein kinases use ATP as the phosphate donor and the ATP binding sites are highly conserved, it was hypothesized that these binding sites could be effective targets for cancer therapy.

In the disease chronic myelogenous leukemia, the bcr-abl tyrosine kinase appeared to Brian Drucker at the University of Oregon to be an ideal therapeutic target. Ciba-Geigi, now Novartis, used an approach that is key to the new era of drug discovery. They used high-throughput screening of natural product libraries and combinatorial chemical compound libraries to identify a chemical substance that would bind to the ATP receptor target. From the lead compounds that came from these initial screening processes, they were able to rationally synthesize more effective ATP receptor binding compounds. This yielded a novel agent called STI571, which proved to be a potent selective inhibitor of abl tyrosine kinases. Of course you know the rest of the story. Brian Drucker used STI571 in clinical trials to treat patients with chronic myelogenous leukemia with dramatic results. The story of STI571 development demonstrates the new paradigm of drug discovery.

This paradigm shift is illustrated by a graphic (Fig. 4) kindly loaned to me by my good friend Ann Barker (President/CEO, BIO-NOVA, Inc., Cincinnati, OH). It illustrates the changes that are occurring in the field of oncology. These are changes brought about by the sequencing of the human genome and elucidation of intracellular signal pathways as potential targets for anticancer therapy. These scientific advances are opening a whole new era in cancer treatment.

The old paradigm for drug discovery was search and destroy. The new era is based on having a specific target or perhaps more realistically a group of key targets for a patient's tumor. The old way was reactive, and the new is proactive. In the old paradigm we talk about maximum tolerated dose and dose-limiting toxicity. Our cytotoxic therapies affect normal tissue as well as tumor cells and are always fraught with emerging resistance, and usually, unfortunately, not too many months after starting treatment. In the new era the goal is to have rationally targeted drugs with no or relatively little toxicity. For the first time, there is real hope for controlling the disease, of converting cancer to a chronic illness with a good quality of life.

Frequently, in discussing the steps of drug discovery we refer to the "pipeline." I have tried to graphically depict this for you (Fig. 5).

Just a few years ago we had only a handful of potential new anticancer drugs in development. Currently there are more than 400. You will note the valve in the middle of the pipe. This represents the bottleneck that exists getting these novel agents tested in an efficient, cost-effective manner. The problem is not a lack of suitable patients willing to participate in clinical trials. The challenge is our inability to put in place an organized infrastructure that makes the clinical trials of these new molecular therapies available to a broad segment of the population so that their dosing and efficacy can be studied in a rapid and cost-effective manner. Considerable change will be required to accomplish the task of testing this new class of anticancer drugs.

On this slide (Fig. 6) I have outlined the familiar steps in developing cytotoxic drugs on the left and on the right what I believe will be the process for developing the new molecularly targeted agents. The point that I want to raise with you this morning is that in the past we have evaluated candidate cytotoxic agents through a series of defined clinical trials, phase I, phase II, and phase III trials. In phase I studies, we measure end points in terms of dose-limiting toxicity and maximum tolerated dose.

In the new paradigm we will be determining the observed biologic dose, and we will be searching for the
Clinical Trials in the Post Genomic Era

<table>
<thead>
<tr>
<th>Cytotoxic Drugs</th>
<th>Molecular Target Pathway Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>DLT</td>
</tr>
<tr>
<td></td>
<td>MTD</td>
</tr>
<tr>
<td></td>
<td>OBD/EBD</td>
</tr>
<tr>
<td></td>
<td>Need to assess target</td>
</tr>
<tr>
<td></td>
<td>Tissue sample</td>
</tr>
<tr>
<td>Phase II</td>
<td>CR</td>
</tr>
<tr>
<td></td>
<td>PR</td>
</tr>
<tr>
<td></td>
<td>Surrogate tissues</td>
</tr>
<tr>
<td></td>
<td>Molecular imaging</td>
</tr>
<tr>
<td>Phase III</td>
<td>DFS</td>
</tr>
<tr>
<td></td>
<td>OS</td>
</tr>
<tr>
<td></td>
<td>Median survival</td>
</tr>
<tr>
<td></td>
<td>Time to progression</td>
</tr>
<tr>
<td></td>
<td>Quality of life</td>
</tr>
</tbody>
</table>

FIG. 6. A comparison of the steps of developing cytotoxic drugs versus molecularly targeted agents.

effective biologic dose. To accomplish this, we will need to have access to tumor tissues to assess whether we are getting the agent to the target. This will be what determines the dose, not toxicity. Hopefully we will be able to identify surrogate tissues to study these questions, but it is going to require research in each and every case to try to identify potential surrogate markers. Is a skin biopsy sufficient? Can we use peripheral blood lymphocytes? Are there ways we can actually image these agents binding to the target? There will be a whole new field of molecular imaging. We are going to be looking at times of progression, median survival, and quality of life as measurable end points. This is a dramatic shift in what we have been trained to do to bring new cytotoxic drugs to market and what our large cooperative clinical trials groups have been structured and funded to do in the past.

Although the new paradigm of molecularly targeted therapy will require many changes in the way we do drug discovery, it will also require a new approach to diagnosis. In addition, it will require a rethinking of the way we train the next generation of oncologists. There are a number of problems that we will need to address as we enter this new era of drug development.

The new era is going to require, I am afraid, a major increase in investment in drug development. These new drugs, as you might imagine if you think about them for a moment, may have very limited market share. They can be, in fact, classed as orphan drugs. It will be very difficult to walk into the office of the CEO of a major pharmaceutical company and tell him or her that you wish to take a new agent forward but this new agent will only be useful in 10% of breast cancer patients, perhaps 5% of prostate cancer patients, and maybe a few percent-age of lung cancer patients. The CEO is going to say, “But how does this translate into profit?” I raise this potential problem with you this morning, as I think it is the most significant issue to be considered regarding future oncology drug development. I will come back to this concern in a moment.

The new paradigm of clinical trials and translational research is going to require a much greater investment in the area of correlative study. In addition, as my pipeline suggested, we are going to have a lot more of these agents to evaluate. The presence already of more than 400 new drugs is going to present us significant challenges in terms of developing the infrastructure to do the required clinical evaluations and to do these studies with greater speed and less cost. I am not so sure the public and specifically our cancer patients will have a lot of patience with us if we do not figure out how to do this and do it rapidly.

It has occurred to me that the solution to the many challenges of drug development in this new era resides in the creation of partnerships between the private sector and the public side, not too different from what was done to accomplish the human genome project. I have depicted this interrelationship involved in drug discovery as a set of overlapping circles (Fig. 7). The faculty in our major research universities and especially our cancer centers has a major role in elucidating the abnormal pathways involved in cancer growth and metastasis. They are specifically skilled at identifying potential targets and, in some instances, possess the capacity and technology to do high-throughput screening of combinatorial chemical libraries and natural product libraries searching for lead compounds that interact with
these targets. Similar research also takes place in federal laboratories, such as the National Cancer Institute (NCI), and to some extent in private industry.

Private industry, whether novel biotech companies or large pharmaceutical corporations, has most of the intellectual strength and technical infrastructure needed to rationally design and chemically refine lead compounds for optimal target interaction. The private side is specifically equipped to produce, in necessary quantity and required quality, the agent in a form suitable for human testing. They are also better positioned to acquire the preclinical assessment needed and are staffed to understand and meet federal regulations. Although there is certainly overlap, as I have indicated in my diagram, there is a great need for partnering.

As you can see, I have drawn on top of these overlapping circles a new platform. At this time, I am not sure what this novel platform should be, but I am totally convinced that we must create a structure within which we can come together to accomplish the task ahead. This new structure could help us overcome the issue of "orphan drugs." It could help us manage the challenge of needing to test multiple new agents owned by different corporations and targeting different tumor pathway defects in the same patient. It could provide a major force in dealing with the shift in regulatory issues required to move us from the era of cytotoxic drug development into the new postgenome period of molecularly targeted therapy.

We have been working in my role as president of The Association of American Cancer Institutes to try to see if we can develop partnering between the cancer centers, the NCIs, and major pharmaceutical companies. I believe we are beginning to make progress and that very soon you will see the first opportunity for cancer centers to apply to the NCI for this special fund. We have people from industry at the table, and we are beginning to get some dollars flowing. These private/public funds will help our cancer centers begin to meet the challenges in terms of clinical trials infrastructures needed for this new era of translational research.

All of you know how strongly I feel about multidisciplinary and interdisciplinary activities, and of course a role that I play as the leader of a major cancer center is in trying to create a truly integrated research and care environment. I wanted to emphasize this morning that I believe this new era is going to have an increasing need for pulling together people of multiple specialties and multiple research activities.

For example, a few years ago we did not talk about faculty in mathematics as part of our cancer research program. But I can tell you today, they are absolutely key to what we are doing, and increasingly so, and we do not have enough of them and we do not have enough resources to get more of them. Engineering, engineering to do systems analysis, engineering to create high-throughput target screening systems that are so necessary to the screening for novel compounds and the high-volume sequencing technology that we are doing in science today.

What Will We Need to Do as Surgical Oncologists?

What does this new postgenome era mean for surgical oncology? Certainly trainees in our programs will need to be well grounded in cancer biology and genetics (Fig. 8). There will be a much greater requirement to work in a multidisciplinary fashion in patient care. Cancer therapy of the future will be less toxic. I have heard Larry Norton, current American Society of Clinical Oncology president (2001–2002), refer to this change as similar to changes that have occurred in the internal medicine subspecialty of infectious diseases. Many of you in this room are as old as I am and remember the tuberculosis hospitals that we had on our University Health Care campuses and the large isolation infectious disease wards that we had for the infectious disease service.

All of this has changed. It is very likely we will see similar changes in oncology. We as surgeons are going to be participating in these changes and we are going to need to change some of the roles that we play, not just as surgeons but now more as oncologists having added surgical training and technical skills.

The Cancer Surgeon as Care Provider

As a care provider we of course must bring surgical skill and compassionate care to our patients. The cancer

---

**What does the new era mean for Surgical Oncology?**

- Trainees will need to be well-grounded in cancer biology and genetics.
- There will be a much greater requirement to work in a multidisciplinary fashion in patient care.
- Trainees will need to have skills in clinical trials design and management that are equivalent to their counterparts in other disciplines of cancer care.
- Therapy of the future will tend to be oral with minimal toxicity.
- Cancer surgeons will need to increase their role in risk assessment and prevention.

**FIG. 8.** Our responsibility to provide leadership for the future of Surgical Oncology.
surgeon as a care provider in this new era will need to be much more involved with risk assessment and risk prevention. We will need to facilitate the genetic characterization of the patient’s tumor and provide access to metastatic tumor and/or surrogate tissues when needed during therapy. Most important we need to provide leadership in terms of multidisciplinary clinical care teams.

The Cancer Surgeon as Investigator

As cancer surgeons we will need to continue the critical investment in laboratory research. So often in my travels when I am asked for my opinions about surgery in the future, the question put to me is whether it is really realistic for surgeons to have major laboratory efforts? We simply have to. We have no choice. If we are going to be credible in what we do and are going to be accepted by other oncology specialists we must be seen as credible investigators contributing new knowledge.

We are certainly going to have to do more in clinical research and we owe a tremendous debt of gratitude to Dr. Sam Wells for his efforts to establish the American College of Surgeons Oncology Group (ACOSOG). It is through Dr. Well’s efforts that we now have a platform from which we can lead clinical research; ACOSOG also gives us a great opportunity to train our young people in the design of clinical trials and the conduct of clinical research.

As a teacher and mentor in this new era we will, of course, need to continue our efforts to insure excellence in surgical care. It is essential for us to step forward and lead a multidisciplinary approach to integrating the essential elements of oncology training. If we are successful, we will leave a legacy of trainees that will work much more effectively in providing multidisciplinary integrated care. As department chairs and division leaders, we will need to adjust how decisions are made for career advancement. The essential task, I cannot emphasize too strongly and too often, is the need for cancer surgeons to be leaders in research and leaders of multidisciplinary clinical teams.

The Cancer Surgeon as a Teacher and Mentor in this New Era

I have only briefly touched on the changes I believe are before us as surgical oncologists this morning. As we face the challenge to be leaders in this new era of cancer prevention and treatment, I believe it is imperative that we always keep the welfare of our patients as the measure of what we do and the decisions that we make. The goals we set to make progress against this disease and the paths we design to achieve those goals should not be encumbered by a need for authorship and ownership but instead facilitated by a desire to provide leadership and real progress.

Perhaps I can emphasize the importance of what I just said by providing some personal observations from my own experience of being the husband of a patient with cancer. I might add that being both spouse and surgeon was a difficult position, as you might imagine. I do so to remind us of what it is like to be a patient with cancer. I do so to share with you the thoughtful comments that Tracey shared with me and hoped one day to write about.

When you sit on the other side of the exam room stripped of your white coat and sense of invincibility, you are painfully reminded of just how vulnerable you are and how tough it is to be a patient with cancer. I am not sure there are any words more devastating than those that bring the news of this dreaded diagnosis.

How frightening it is to feel the loss of control of your body and your life.

How scary it is each time you give a blood sample for analysis or you go for another computed tomography scan. Will the news be good or will it be not so good?

How the needle sticks become increasingly irritating.

How it feels to progressively lose your physical appearance, to take on the all too recognizable look of a cancer patient. How you want to hide but you cannot.

How some people who take care of you exude confidence, warmth, sensitivity, are gentle and slow in their caring for you, whereas others (maybe they are having a bad day themselves) are cold, their mind obviously somewhere else, fast in their actions, rough, and impatient with you. And for you, it is the luck of the draw on any given day.

How important and uplifting it is to see the familiar face of a caring nurse who has become your friend. Tracey used to tell me that it was difficult to put into words the sense of serenity that would come over her when she was in for therapy and the nurses were hovering over her with all the kindness and words of support. She felt safe and protected for a while during that period of time when she was present at the center.

How important and uplifting it is to see the familiar face of a caring nurse who has become your friend. Tracey used to tell me that it was difficult to put into words the sense of serenity that would come over her when she was in for therapy and the nurses were hovering over her with all the kindness and words of support. She felt safe and protected for a while during that period of time when she was present at the center.

How much time is spent waiting, sometimes for hours, in waiting rooms with others who through no fault of their own provide a strong reminder of who you have become and how close the end could be.

What it is like to sit alone in a very small and often very sterile exam room, often not just for a few minutes. And I can tell you, sometimes you wonder if they really forgot they put you there.

How much of your time is spent with the nonphysician members of your team and just how precious are the short bits of time with the captain of the ship.
How much work you need to do as a patient to be educated about your disease, to be an advocate for yourself, and above all to put your game face on. The game face for a cancer patient is to be cheerful and upbeat because you know how important that is to the people who work so hard to take care of you when you are there.

You want to give something to them, even if it is only a cheery smile, for all they do for you.

What struck my wife and I is how very precious the nurses are in this whole experience. The nurses become true friends with our cancer patients and you know, I do not think we as surgeons recognize the pain this brings them. As all of you know, we are facing a crisis in nursing, and I believe as surgeons, we need to be proactive in our efforts to recruit more individuals to train in nursing. We need to ensure that we as surgeons make their work meaningful to them and that we make them a partner with us so they will be inspired to continue their work and to stay in their professions.

As cancer surgeons we need to remind ourselves each morning of the important role we play. We need to be sure when we are sitting with our patients, and I stress sitting, that our patients feel that we are focused on them and their problem. That we will give just as much time as they need. It is good to lean forward, to make eye contact. It is OK to have wet eyes when you talk about the difficult issues that they face. It is OK to hold their hand and yes it is OK to put an arm on their shoulder when you walk with them out of the room.

Cancer is a slow and emotionally painful road. The lessons that I learned from watching my beloved wife manage this process were not lessons I had learned from years of practice. I find these lessons difficult to teach. I have often said to my students that the most difficult "doctoring" we have to do is the "doctoring" in defeat. It is so important to keep hope and we are the bearers of hope.

Some physicians have a special way of doing this, for them it is truly a gift. I also learned that we need to think not just about the patient but we need to extend our care to the family, and sometimes in our busy day we do not do a very good job of that.

We as surgeons, and this is a point I would really like to leave you with today, need to be there for our patients during all of their illness, not just when we are operating and providing postoperative care. Because we have been their surgeons they have a very different relationship with us, a different kind of dependence. Please, do not avoid accepting their need just because their disease is not something you can fix anymore with your hands. Stay involved throughout their care. You do not realize how important that is.

I have talked this morning about a lot of changes we as surgeons will face over the next decade. I cannot say to you with enough emphasis how absolutely essential it is that surgeons provide leadership as members of the oncology team.

We need to step forward and take on new roles. We need to be leaders in clinical research, and we need to continue to make major investments in laboratory research within our surgical programs. It is only as major contributors of new knowledge that we can expect to be credible and respected colleagues and teachers.

We need to convince our colleagues in medical oncology and radiation oncology of the necessity of our joining forces in developing cross-discipline training so that the next generation will be better prepared to work in a multidisciplinary fashion.

When I began my talk this morning, I said that Sept 11th changed forever how we see the world and how we view our own sense of security. The availability of the complete library of human genes has also changed forever how we see diseases such as cancer and how we will treat them. As a result, this is a time in great need of innovation in our thinking, of sensitivity in what we do, and of much love, love for our work, love for our patients, and most of all for our families.

You have brought me much support and love this year. There are way too many of you here this morning to acknowledge individually. I can only pledge to all of you to be an advocate and leader for the issues I have discussed this morning. These are, after all, the things that matter most to all of us.

As I relinquish the presidency of this wonderful society and turn it over to my dear friend John Daly, I want to again thank my family for their uncompromising support. Tracey was extremely proud of the honor that was bestowed on me and she wanted so much to be here to share this day. Each day I realize that the honor of being your president has been granted to me by some very, very special friends to whom I will be forever grateful.

God bless each and every one of you and give you knowledge, wisdom, and abundant grace to care for his patients. Thank you all so very much for being here this morning.