

Assessing the State of Surgical Oncology: The Future Is Now

Timothy J. Eberlein, MD^{1,2}

¹Department of Surgery, Washington University School of Medicine, Campus Box 8109, 660 S. Euclid Avenue, St Louis, MO 63110, USA

²Alvin J. Siteman Cancer Center, St. Louis, MO, USA

In assessing the state of surgical oncology, we will need to institute some significant and timely changes in order to move our field forward. A number are discussed which will have a profound impact on our society and our profession. Stimulating the membership to think and to act will result in advancing the field and improving patient care.

First, let me say what a tremendous honor it is to serve as the president of the Society of Surgical Oncology (SSO). I can clearly recall my first meeting about 25 years ago, when I was a young surgical resident at the Brigham and Women's Hospital, and the organization was still very much in the process of forming its identity and evolving into the mature and vital institution that it is today. It is remarkable to witness how the organization has grown and thrived, as has the specialty of surgical oncology. We can only hope that we as individuals enjoy such health and longevity.

I would like to take this occasion to recognize some of the individuals who have personally served as mentors to me over my career, many of whom are surgical oncologists. Shortly after I joined the Harvard faculty, I had the privilege of serving under a wonderful mentor, Richard E. Wilson, who was diagnosed with metastatic melanoma at the peak of his career. His death taught me much, as I used to stop by to visit him at the end of the day and, while I provided support for activities of daily care, he pro-

vided me guidance about life in general and dying with dignity. I was fortunate also to find a number of later mentors, many outside my own institution. There are a large number of individuals in this group, and they know how important their guidance, advice, and friendship have been over the years. Finally, I want to acknowledge my wife, Kim, for her unwavering support, as those of you who know me well know that she is my best friend and closest advisor.

The major premise of my talk in assessing the state of surgical oncology is that we need to institute some significant and timely changes in order to move our field forward. Since this society began, dramatic advances have occurred in our specialty. Even more radical changes lie in our future. I can remember as a medical student and young resident witnessing a large cancer operation and being in awe of people like Dick Wilson who successfully performed these major interventions and established long-lasting relationships with their patients. This is really the past (Fig. 1)—it is a Shakespearean view of the world that “Diseases desperate grown, by desperate appliance are relieved...or not at all,” as Hamlet said. The future of surgical oncology is really an Oslerian view (Fig. 2), “Diseases that harm require treatments that harm less”; and so I am going to try to convince you today that our profession must actively embrace change. Specifically, we must begin to think of ourselves less as surgeons and more as oncologists. This is not a revolution but an evolution. It is an evolution from major surgical interventions to minimally

Received June 6, 2006; accepted June 14, 2006; published online October 1, 2006.

Presented at the Society of Surgical Oncology meeting, San Diego, CA, March 2006.

Address correspondence and reprint requests to: Timothy J. Eberlein, MD; Department of Surgery, Washington University School of Medicine, Campus Box 8109, 660 S. Euclid Avenue, St Louis, MO 63110, USA; E-mail: eberleint@wustl.edu

Published by Springer Science+Business Media, Inc. © 2006 The Society of Surgical Oncology, Inc.

Surgical Oncology – the Past

A Shakespearean View

***“Diseases desperate grown,
by desperate appliance are relieved...
or not at all”***

–Hamlet

FIG. 1.

Surgical Oncology – the Future

An Oslerian View

***“Diseases that harm require
Treatments that harm less”***

FIG. 2.

Surgical Oncology Confronting the Future

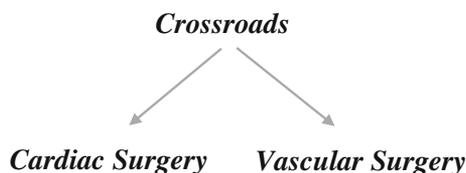


FIG. 3.

invasive procedures, guided by genetics and by multidisciplinary care teams that take advantage of the primary role of surgeons in the care of their patients.

I will also address some of the steps necessary for us to accomplish these changes, which have significant implications for education, training, and certification. As we confront the future, our profession is at a crossroads (Fig. 3). To recognize how important it is to plan for our future, it is helpful to look at the contrasting scenarios which have played out in two other surgical specialties. The first is cardiac surgery, where we have seen a 20 to 30% decrease in volume, competition from other subspecialties, and internal conflict. One leading institution saw the volume of coronary artery bypass procedures decrease from 3,000 to 600 cases in the course of 1 year. A strikingly different model from cardiac surgery is that of vascular surgery. Just 8 years ago at Washington University, there were very few endovascular procedures

being done. In the course of the past 8 years, that specialty has reinvented itself. In the past, large operations were performed routinely, necessitating several days in an intensive care unit; these same procedures now are frequently performed on an outpatient basis. As a result, not only has the volume of new, minimally invasive endovascular procedures increased, but we have seen the specialty establish a new identity and a leadership role within the institution. In other words, new technology has reinvigorated the field, improved overall volumes, and resulted in better patient outcomes. In addition, the technology has continued to improve and new applications have been developed, with similar advances now being made in areas such as thoracic aneurysms and even extracranial carotid artery disease.

In trying to predict the future, I am reminded by what some very well-informed individuals had to say about the future of computers in the mid-1950s. Could we have ever imagined the technology progressing to hand-held devices such as a Blackberry? So what I am going to ask you to do today is begin to think of where the field of surgical oncology can go, not so much where it has been. Where do we need to position our profession, and how do we need to prepare ourselves to continually improve care for our patients, using every possible advance in technology?

The Human Genome Project, of which Washington University was a major part, successfully mapped 100% of the human genome. This has allowed all of us to be seminal participants in identifying cancer-related genes and beginning to introduce the knowledge of their function into everyday cancer care. I have listed in the next two figures, genes of familial cancer syndromes. Many of these syndromes have genetic diagnoses which already play a role in the everyday care of patients with these problems. However, over the next few years, this list will explode in size.

Our cancer center, as well as many of yours, has invested significantly in the field of pharmacogenetics (Fig. 4). Soon, utilizing gene analysis, we will be able to specifically tailor cancer care for each patient. No longer will we routinely assign a regimen of toxic chemotherapy for all patients because we know that some are likely to benefit. No longer will it be justifiable to take a node-negative premenopausal woman with a greater than 1 cm breast cancer and submit her to chemotherapy, unless we know, based on genetics, that she is likely to respond. This type of personalized care is not decades away. The technology exists now and, when fully utilized, will allow us to define what will and will not be of benefit to a specific patient.

Pharmacogenetics

Comprehensive optimization of cancer care

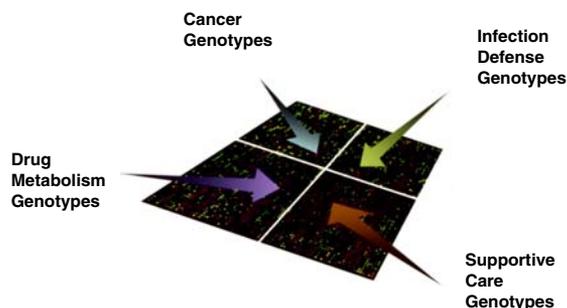


FIG. 4.

Recent findings in research on colorectal cancer demonstrate how the field is likely to advance. Ideally, one would be able, from a typical endoscopic biopsy specimen, to perform a single gene-based assay that would provide prognosis, staging information, and receptivity to neoadjuvant or adjuvant therapy, as well as determining a specific drug regimen and a specific outline for the surgical management of each patient. Current staging, utilizing the TNM classification, results in a significant number of patients being undertreated or overtreated. An important example is when to utilize adjuvant therapy for stage II colon cancer. Another clinical dilemma is the management of locally advanced rectal cancer: Who should have neoadjuvant therapy, and who should go directly to surgery? And what type of surgery should be performed?

We know that colon cancer results from the accumulation of multiple and sequential genetic mutations. Given the genetic heterogeneity of colon cancer, examining single genes such as APC, 18q, or MSI will inherently exclude many tumors from analysis. Therefore, genomic expression analysis is a method that allows for a comprehensive examination of the genetic events that occur with a large group of tumors.

High-throughput gene expression analysis allows for a comprehensive evaluation of a specific set or subset of tumors, to determine if there are clinical and biological differences in behavior that can be identified from seemingly similar tumors. Matt Mutch, in our department at Washington University, isolated RNA from fresh frozen tumor specimens and identified a 23-gene expression profile that was highly predictive of a patient's risk of developing recurrent disease. He and his colleagues showed that overexpression of the 23 genes was predictive of recurrence.

Here is the Kaplan-Meier curve for risk of recurrence. There was a significant survival difference between the high- and low-risk groups. This observation has been validated in other retrospective studies and is now the basis of a multicenter prospective validation.

Another example where genetics may help treatment decisions for surgeons is in the treatment of locally advanced rectal cancer. Work done by Howard McLeod from our cancer center shows a pharmacogenetic study using genotyping of thymidylate synthetase and directing the neoadjuvant treatment regimen for locally advanced rectal cancer. This gene-based, directed therapy using irinotecan, 5-fluorouracil, and radiation therapy (RT) increased the number of patients with a complete response from 20% to 53%.

If we can develop a gene-based test that will tell us who will and who will not respond to neoadjuvant therapy, we can spare those who will not respond the associated costs and toxicities or utilize a different regimen. For patients who do not respond, is there some way we can impact the ultimate surgical management? Similarly, might patients who have a complete pathological response to neoadjuvant therapy be candidates for local excision? These are the questions that will not only impact surgical management of our patients but form the basis of important clinical trials. I will come back to that in a moment. Certainly, this gene-guided approach to clinical decision making will become more prevalent in our specialty and form the basis for major changes in treatment paradigms.

A gold standard for gene-based diagnosis has been the career-long work of my predecessor at Washington University, Sam Wells. Sam has been a remarkable role model as an academic surgeon and still collaborates with Jeff Moley at our institution. Sam was the leader of the team that identified the *Ret* protooncogene and its association with the multiple endocrine neoplasia (MEN) syndromes. Their work led to a genetic diagnosis with a single blood test, utilizing polymerase chain reaction amplification, that could identify patients who were destined to develop medullary carcinoma of the thyroid. Equally important, a patient could be tested and found to be not at risk and to never require further intervention or testing. This led to total thyroidectomy for the MEN IIa syndrome and eventually was extended into preventative surgery. As seen in a recent publication by Mike Skinner (from Duke) and Jeff Moley, curative preventative surgical intervention was associated with young age, a normal preoperative stimu-

lated calcitonin test, and the absence of medullary thyroid cancer in the prophylactically resected gland. These investigators are continuing to address the controversies surrounding these preventative surgeries. What is the optimal age? What should be done with the parathyroids, and is it really necessary to perform a node dissection when doing preventative surgery? Again, this whole example emphasizes the importance of earlier intervention and more minimal surgery. At the same time, it raises other important issues that we need to address. How do we ensure the best possible outcome for an individual, and what are the ethical issues involved in, for example, performing a prophylactic operation on an infant? Let us extend this thinking a little bit further: why can we not imagine a drug that might block the oncogene or turn on the suppressor gene and prevent the onset of the malignancy altogether? The future, in fact, holds promise that, at least in some diseases, we will eliminate surgical intervention altogether.

However, we as physicians have a long way to go in correctly using this genetic information in our practice. One study in familial adenomatous polyposis patients showed that only 17% of patients genetically tested had informed consent, fewer than 20% had genetic counseling, and in almost one-third of cases the physician misinterpreted the test results.

Our profession needs to emphasize the oncology component of our specialty. We need to take advantage of the primary relationship that we have with our patients. When patients have a breast, colon, lung, or prostate cancer, among others, it is the surgeon who is usually the primary caregiver. We need to extend that beyond the operating room. As newer targeted therapies are utilized, it should be the surgical oncologist who feels comfortable administering these medications, which likely will be much less toxic and potentially more effective (Fig. 5) than existing regimens. Once again, having a firm grasp on pharmacogenetic advances, we should be able to identify responders and nonresponders for a particular medication, design individualized dosing, and minimize toxicity. The surgeon of the future should be adept at performing minimally invasive procedures, integrating genetic diagnoses into surgical practice, addressing the ethical issues of prophylactic surgery, and administering systemic targeted agents.

Again, utilizing the MEN story, let me provide an example. Ross Cagan is a professor of genetics at the Siteman Cancer Center at Washington University. Dr. Cagan has developed a *Drosophila* model to screen genes or medications. As you know, MEN II is a dominant cancer syndrome

Surgical Oncology

Targeted Therapy

- Take advantage of the primary relationship with patient
- More effective therapy
- Less toxic

- Identify responders and non-responders
- Individualize dosing
- Resurrect old drugs

FIG. 5.

characterized by medullary thyroid carcinoma. While patients can also show pheochromocytomas, mucosal neuromas, and parathyroid adenomas, the disease is due to activating mutations in the *Ret* receptor. Tumors tend to be resistant to chemotherapy, and currently surgery is the only therapeutic option; but in patients with late-stage disease, surgery is often ineffective. Targeting oncogenic forms of *Ret* to the fly eye using an eye-specific promoter results in the eye being small and rough due to many defects, including tissue overgrowth. This model permits study in a living animal in the context of an intact epithelium.

Growing flies in a 96-well plate format (Fig. 6) and utilizing robotics to move food, drug, and seven embryos in each well, the embryos grow and then the flies are scored for efficacy (is the eye better?) and toxicity (did the fly live through the experience?). One of the early hits was ZD6474, a drug from AstraZeneca (Macclesfield, UK) that can block several receptor tyrosine kinases including *Ret*. Utilizing this drug, the eye was completely rescued at a dose that was 30-fold lower than the dose that showed any toxicity in the fly. Based on this work and human tissue culture work indicating that the drug could block *Ret*, Dr. Wells moved this into clinical trials sponsored by AstraZeneca. This is an example of one of the trial's early patients. As you can see, there was a dramatic shrinkage of paratracheal lymph nodes. Further work being done by Dr. Cagan will screen the flies with limiting amounts of ZD6474 to find synergistic compounds aimed at the inevitable resistance to cancer drugs that has been observed. Finally, these studies will be extended to other diseases, including metastatic disease. Speaking of metastases, Dr. Cagan has also developed a *Drosophila* metastasis model. In the image at the left, he has activated the *Src* oncogene (by turning off its negative regulator Csk with RNAi). This is shown in the green stripe in

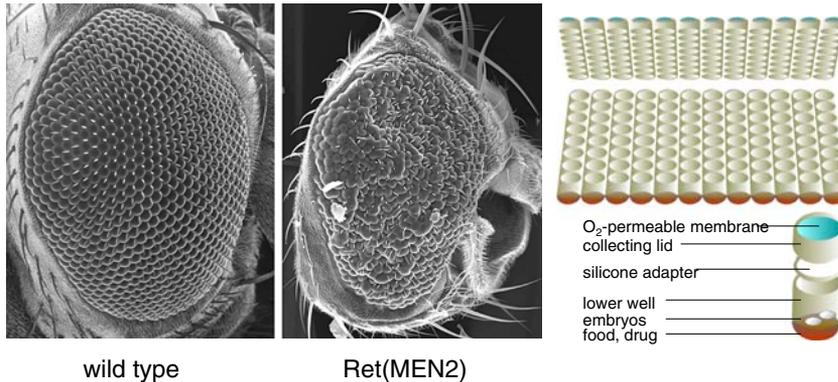
Drosophila MEN2 Cancer Model

FIG. 6.

the wing (the cells expressing RNAi also express a green fluorescence protein marker). Rising *Src* levels in progressing tumors have been tightly linked to metastasis in most major solid tumors such as breast, lung, melanoma, colon, etc. Utilizing this wing model, cells with elevated *Src* migrate out. The result in the adult is a crumpled wing. These investigators are currently screening for genes as well as drugs that “uncrumple” the wing back to normal and currently there are several candidate drugs.

This kind of technology will undoubtedly produce numerous new medications that are more targeted, less toxic, and frequently oral in administration. I would suggest that we as surgeons, who are the primary caregivers in most of these solid tumors, become actively involved in administering the drugs and managing patients who receive these drugs as well as the clinical trials that establish the parameters for their usage (I will speak more about clinical trials in a moment).

In order to most effectively take advantage of these new targeted agents, surgical oncologists will require certification. Surgery is the only subspecialty in oncology that does not currently have certification. Without doubt, this should be done under the auspices of the American Board of Surgery and through the Surgical Oncology Advisory Council. Obtaining certification for new young members of our profession should be a straightforward process. We already have SSO-approved fellowships that produce high-quality, well-trained surgeons who are well-versed in multidisciplinary care. Upon successful completion of these audited programs, one would simply take a secure, written examination and, upon passage, receive certification.

The major dilemma, of course, is what to do with all of us who may or may not have done a fellowship some time in our training but are now focused on

practices in surgical oncology. Once again, I would take a page from the vascular surgeons. Fellowship training would not be required, but clearly cancer focus and documentation of cancer cases over a period of time would be needed (vascular surgeons required 100 cases in the year prior to application). Continuing medical education that is concentrated in oncology would be necessary, and I have just provided several reasons why this would be particularly important. I would, however, go beyond the requirements in vascular surgery to include participation in clinical trials (I will have more to say about that in a minute), participation in an outcomes measure such as the National Surgical Quality Improvement Project (NSQIP), as well as taking a secure exam. Those of you familiar with the American Board of Surgery’s plan for maintenance of certification will recognize many of these elements as being similar.

Using this approach, any general surgeon who had a cancer-focused practice and was willing to meet the criteria for certification could become certified. The surgical oncology advisory council of the American Board of Surgery is actively discussing these initiatives as well as the possibility of modular examinations, something that would I think be particularly welcome in the breast cancer field.

Again, as a society, we have an opportunity to provide initiative, direction, and momentum for seeing that this is done in cooperation with the American Board of Surgery and the field of general surgery. Clearly, this cannot be a divisive activity but, rather, one that allows for better, more focused, and more comprehensive cancer care for our patients.

I have already mentioned the importance of participation in clinical trials as it relates to certification. As you will hear from Murray Brennan, our John Wayne Clinical Research Lecturer, participation in

***Partnership of SSO and
ACOSOG***

- *SSO would be the Education and Training and recruitment component of ACOSOG*
- *Involve community members of SSO*
- *Establish a network of SSO members interested in supporting clinical trials*

FIG. 7.

clinical trials and performing clinical research needs to be a cornerstone of our specialty. I would propose, however, a more formal and integrated relationship between the SSO and the American College of Surgeons Oncology Group (ACOSOG) (Fig. 7). These organizations should have a complementary, non-competitive relationship. I would envision the SSO being the education and training, as well as recruitment, component for ACOSOG. While the participation and financial support by the American College of Surgeons is extraordinarily important to ACOSOG, clearly the membership of the SSO has a direct interest in participation and learning the outcome of ACOSOG clinical trials. It is no secret that the ACOSOG grant renewal will be largely dependent on accrual numbers, and clearly the SSO membership could play a significant role in accrual to these trials. Not only would this provide an ideal opportunity for meaningful participation of our community members of the SSO, but it would build disease-focused networks in the SSO that could very quickly initiate, perform, and analyze clinical trials that would change the face of surgical oncology. This partnership and active participation of SSO members in clinical trials (Fig. 8) would be a particularly fruitful foundation for establishing constructive, legal, and ethical relationships with pharmaceutical and other industrial partners. Knowing that a network of surgeons was able to quickly answer therapeutic questions through rigorous, carefully controlled clinical trials would enhance the visibility of and ability for the SSO to receive needed additional support for our educational mission and for ensuring the continued development of the future leaders of surgical oncology. I have already mentioned the importance that participation in these trials should have in the certification and recertification process. Finally, it would provide the ideal opportunity for nonacademics to

***Partnership of SSO and
ACOSOG***

- *Opportunity for SSO to improve fund raising for educational mission*
- *Link to certification and recertification*
- *Opportunity for non-academic trialists to participate on SSO committees, including the Executive Council*

FIG. 8.

participate actively in SSO committees, including the Executive Council. In fact, I would recommend changing the bylaws of our society and establishing at least two positions on the Executive Council for community-based, nonacademic active members of the society. Their participation in society events will strengthen our society and enhance our visibility and diversity.

At this meeting, there are several sessions devoted to our ACOSOG colleagues, and we had a detailed update at our Executive Council meeting; however, I would recommend that we institute formal recruitment, training, and education courses at our annual meetings that will demonstrate to all of us how easy it can be to participate in ACOSOG clinical trials.

With respect to educational grants from industry, we would be able to potentially sponsor more young surgeons interested in basic or clinical research initiatives. Our executive council approved an ad hoc committee to look into leveraging the dollars the society and the Ewing Foundation can provide to young investigators by integrating with the American College of Surgeons and then receiving matching funds from the National Cancer Institute. Much like the Lifeline Foundation in vascular surgery, the SSO should be able to provide several significant KO8 awards through enhanced educational grants and partnering with the American College of Surgeons and the National Cancer Institute.

Fortunately, our society has numerous members generating outstanding research hypotheses that can form the basis for important diagnostic or therapeutic trials. As an example, our James Ewing Lecturer, Jim Economou, has done seminal work in vaccines and gene therapy trials. I offer several other possible ideas for trials from colleagues of mine in St. Louis and have mentioned several possibilities in my previous remarks.

Integration of Outcomes into Surgical Oncology Practice

Advantages of ACS/NSQIP systems

- *Outstanding risk adjustment performance based on clinical data*
- *Rigorously defined variables/measures*
- *Outcome measures strictly resolved at set point in time (30d)*
- *Data collection performed by personnel independent of surgeons*
- *Data collection audited*
- *Can be applied to any subspecialty*
- *Has had clinical impact*

FIG. 9.

Finally, I would strongly recommend the integration of outcomes research into our surgical oncology practice. I am not talking about retrospective, selective reporting of results. I am talking about rigorously gathered and analyzed data. Once again, this is an important component of eventual recertification by the American Board of Surgery and should, therefore, also be used in the process of initial certification for surgical oncology, as well as eventually recertification. I am most familiar with the NSQIP/American College of Surgeons program because our department has participated in this activity for the last 6 years (Fig. 9). The advantage to this type of system is the ability to adjust for level of risk based on clinical data. The variables are rigorously defined and the outcome measures are strictly resolved at a set time point. In the NSQIP system, this is 30 days; but it could easily be adjusted, particularly for surgical oncology patients, since 30-day mortality is probably not very relevant in a breast cancer patient, for example. Most important, however, is that data collection is performed by personnel who are independent of the surgeons. The people who gather the data for this system are well trained and schooled to be independent and not influenced by a surgeon's interpretation of possible confounding variables. All of the data are audited, and as we are now finding out, this collection system can be applied to any subspecialty. This system has already led to significant reductions in morbidity and mortality as seen through multiple publications from the Veterans Administration system and the private sector hospitals that also participate. This is a typical report of institutional performance. Our institution is the red arrow. The risk-adjusted performance was slightly better than expected. The institutional performance

does indeed vary, and some institutions appear to perform statistically better than expected and others worse. As can be seen here, the vast majority of institutions are within acceptable limits, but clearly there are a small number of outliers among the nearly 140 institutions represented.

Bruce Hall at our institution has pioneered evaluation of individual surgeon performance. I do not have time to go into the complex mathematical modeling that this is based upon, except to say that it is a Bayesian analysis with Monte Carlo simulation. It offers exceptional ability to discriminate poor performing outliers. In this example, surgeons 1, 29, and 2 appear to be performing below standard. Again, what we see is that individual surgeon performance data cover a range, and while the vast majority perform within "acceptable limits," the statistical certainty of certain distinctions can be exceedingly high. Of course, this information provides us the opportunity to improve individual surgeon performance in a confidential and constructive way. Here is another example where individual surgeon performance at a single institution was plotted using hospital cost as the outcome measure. This is work that Dr. Hall did with Dr. Skip Campell at the University of Michigan. The x axis shows the case mix of the surgeon, representing the severity of illness of the patient population. We can see that surgeon performance by cost does vary. The volatility of different surgeons' costs varies as well. The clinical significance in terms of actual dollars is large, some surgeons differing from others by more than 30%. Again, we now have the tools to improve financial performance, a needed outcome in this era of shrinking provider reimbursement. Finally, we have now been able to compare individual surgeon performance at different academic institutions. This is a set of nine different academic institutions. Once again, surgeon populations at different institutions perform within relatively similar ranges. Statistically, however, some institutions do appear to perform better than others. In this example, sites C, H, and I are statistically better. Surgeon performance within an institution also varies. The objective of collecting all of these outcome data and integrating them into maintenance of certification and other criteria is to improve patient care, not necessarily weed out or reduce the number of surgeons.

In summary, I will set forth several predictions. Prediction 1 (Fig. 10) is that surgical oncology will undergo profound change. I think, as a profession and certainly as a society, we will be much better off if we are proactive, embrace the change, and help

Summary . . .**Prediction #1 -***Surgical Oncology will undergo profound change*

FIG. 10.

Summary . . .**Prediction #2 -***Genetics will permit personalized surgical intervention*

FIG. 11.

control and guide it. Our colleagues, our trainees, and most importantly, our patients will benefit. Prediction 2 (Fig. 11) is that genetics and other areas of science will permit personalized surgical intervention. I have given examples where already genetics and molecular staging are used to guide therapeutic decisions. Over the next few years, we will see an explosion of more genetic information that will impact daily cancer care. This will have a profound impact on surgery, making large resections more obsolete and fulfilling the Oslerian prediction of less invasive, smaller surgical interventions in a multidisciplinary setting. Prediction 3 (Fig. 12) is that surgeons will maintain their primary role with patients through the knowledge and practice of oncology, not only surgery. I hope I have made the case that we will begin to see more targeted, less toxic interventions. In fact, personalized medicine is just around the corner. Once again, surgeons treating cancer patients should embrace this, adapt to it, and lead it. This will help to maintain the primary role that we all serve with our patients. If not, we will easily be replaced, like the cardiac surgeons, by other specialists and have a resultant decrease in volume and stature. Prediction 4 (Fig. 13) is that the SSO-ACOSOG alliance will become a dominant force in cancer clinical trials. This, frankly, is one of the more risky predictions, but I think it should be one of our most important goals. We cannot afford to let ACOSOG fail, and this is the time and the SSO is the mechanism to establish disease-focused networks of community and academic surgeons to rapidly accrue patients to ACOSOG trials. The result will be to more meaningfully engage community-based members of our society, not only in clinical trials but in the various important committees in our society, including the Executive

Summary . . .**Prediction #3 -***Surgeons will maintain their primary role with patients through oncology*

FIG. 12.

Summary . . .**Prediction #4 -***The SSO/ACOSOG alliance will become a dominant force in cancer clinical trials*

FIG. 13.

Summary . . .**Prediction #5 -***Use of outcomes will become standard and be used in certification, maintenance of certification and reimbursement*

FIG. 14.

Council. Our society will benefit from the wisdom of these members, and it will enhance the stature and diversity of our organization as we continue to grow and to serve our membership and our patients. My final prediction (Fig. 14) is that the use of outcomes will become standard and will be used in certification, maintenance of certification, and reimbursement. Certainly, outcomes of some form will be used in the maintenance of certification. This has already been initiated by the American Board of Surgery. If the discipline of surgical oncology is to require certification, then incorporating measurements of surgeon performance is logical and should be credible, third party-gathered, and risk-adjusted. In this way, it can have the most profound impact and help us improve the daily care of our patients.

At this meeting, the Executive Council has approved funding for and decided to embark on a strategic planning process that will begin this spring and extend over the next year. It is envisioned as an inclusive process but one that has the exciting potential to improve our society and especially be of benefit to our patients.

In conclusion, I have tried to touch on a number of areas that I think will have a profound impact on our

society and our profession. While I do not expect that all of my suggestions will be followed, the purpose of my talk is to stimulate your thinking and then your action in order to advance the field. I have had the privilege of seeing this society grow dramatically, improve its stature, enhance its ability to educate its

members, and ultimately, improve the care of our patients.

I look forward to continuing to work with you on these challenges and thank you for the privilege of serving as your president.