

# THE SURGICAL TREATMENT OF CANCER

## *The Presidential Address*

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IT HAS BEEN A great privilege to serve as president of this society during the past year. Among its members are many of my teachers, some of my closest friends and men whom I admire most because of their leadership and their many contributions to our understanding of cancer. When we decided four years ago to change our name from the James Ewing Society to the Society of Surgical Oncology, it signified no change in the spirit of fellowship or the scientific interests of this group, but merely a desire to define more adequately the part played by surgeons in the treatment of cancer. In selecting the surgical treatment of cancer as a topic for this address, I hope to emphasize the role of the surgical oncologist.

All of us here who are surgeons commenced our careers with basic training in general surgery or the surgical specialties and we share with our colleagues in these disciplines an interest in such common problems as wound healing, shock, sepsis, pre- and postoperative care and surgical craftsmanship. The surgical oncologist by virtue of additional training and concentration of interest has developed a special competence in the field of cancer and his role is by no means confined to activities in the operating room. Stimulated by the heritage left by James Ewing and his many later counterparts, the surgical oncologist maintains daily contact with a surgical pathologist and has a major interest in the pathology and pathogenesis of neoplasms. He is knowledgeable regarding the behavior and natural history of the many forms of cancer and of variations that may occur as the result of host-tumor interactions. He is familiar with currently known preventive measures and screening techniques. He is aware of the increasingly effective tools for early diagnosis

and is an expert in the staging of cancer. He is the most qualified individual to decide whether a tumor is operable or inoperable, resectable or nonresectable. He has the background and the skill to select and carry out the most appropriate surgical procedures for the definitive treatment of cancer as well as the many operations designed for effective palliation.

While he is primarily a specialist in the surgical treatment of tumors, he maintains a working knowledge of radiation therapy, its advantages and limitations, and its effect on normal as well as neoplastic tissue. He is familiar with, and often proficient in, the use of the many chemotherapeutic agents used in the management of cancer. He is aware of the immunologic deficiencies present in many patients with cancer, the prognostic implications of these humoral and cellular defects and of methods being devised to correct them. In short, the surgical oncologist is an indispensable member of any multidisciplinary team organized for the study or treatment of cancer.

I should like to emphasize that the role of the surgical oncologist is not that of performing all the major operations required in the treatment of cancer. This would be impossible in view of our relatively small numbers. More importantly, we are aware that our colleagues in general surgery and the surgical specialties have been trained in the fundamentals of tumor surgery and are generally competent in the performance of standard excisional operations. It is rather our role to be leaders in the surgical community in this ever changing field. By teaching young surgeons and by example in our daily activities, we must emphasize the principles of adequate tumor surgery. We must keep our associates aware of advances in the diagnosis and treatment of cancer and must take the lead in the adoption of these advances into everyday practice.

Many of us here today have lived through some exciting periods in the operative management of cancer. We have witnessed some pendulum-like changes in surgical philosophy and, with each change, it seems to me the pendulum has swung too far. Commencing with Halsted and his contemporaries, there

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Presented at the 31st Annual Meeting of The Society of Surgical Oncology, San Diego, California, April 2-6, 1978.

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Accepted for publication July 5, 1978.

was the hope that if an excision could be designed that was wide enough and radical enough, a cancer with all its hidden extensions could be eradicated and the patient cured. These efforts became intensified in the 1940's and 50's when such advances as blood transfusions, antimicrobial agents and improved anesthesia, coupled with a quantum increase in knowledge of surgical physiology, allowed us to carry out the most extensive procedures with relative safety. We participated in the advent of such efforts as extended radical mastectomies, pelvic exenterations, extended total gastrectomies, multi-organ resections and even hemi-corporectomies. While these procedures deserve to maintain a place in our armamentarium for specific clinical presentations, there has been a gradual retreat from their general application.

Thoughtful surgeons have long realized that while they are aiming for cure, often the most they can accomplish by operation is local control of a tumor (and this is true of radiation therapy as well). Even Halsted, while he never fully accepted the concept of vascular dissemination of cancer stated in 1894: "The efficiency of an operation is measured truer in terms of local recurrence than of ultimate cure." And local control of a tumor is no goal to be derided. To those who have to care for patients with advanced cancer, the freedom from recurrent tumor on the chest wall, in the pelvis or in the upper air and food passages is an entirely laudable goal and one we can frequently achieve by adherence to accepted principles of tumor surgery. I might remind you that while some may scoff at Halsted today, of his first 50 patients treated by radical mastectomy and followed three or more years, there were only three local recurrences. All of his 50 patients had axillary node metastases and some had supraclavicular metastases as well. This record, to my knowledge, has not been equalled by those who imply we have entered an era of physiologic as opposed to anatomic cancer surgery where skill with drugs will largely replace skill with the scalpel.

It is certainly true that in the past few decades as we have dealt more effectively with local tumors and their sites of primary lymphatic spread, the problem of distant dissemination has become more apparent. This is obvious not only for the breast, but also the head and neck, the colon, the lung and many other sites. We have therefore awaited and wel-

come efforts to control currently undetectable foci of tumor beyond the scope of our surgical or radiation fields. We are excited by progress in chemotherapy, not only the development of new and more effective drugs, but also by advances in the knowledge of cell kinetics and the demonstration that micro-metastases which contain largely actively dividing cells are far more responsive to drugs than are bulky masses of tumor. We cannot help but feel hopeful with the early results of adjuvant chemotherapy for childhood cancer, bone sarcomas, testis cancer and breast cancer. We pray these early successes will be followed by long-term control and that similar regimens will be developed for other solid tumors we see in daily practice.

As the pendulum went too far in one direction, I believe it is starting to swing too far in the other. There are those who would have us discard all the lessons handed down by our surgical predecessors, who decry the principle of wide bloc excision, who would have us do lymph node dissections only for staging of cancer and who minimize the importance of our techniques to avoid dissemination or implantation of cancer at the time of operation. They suggest that the role of the surgeon is merely to perform staging and debulking procedures to allow more effective use of drugs. They are, I fear, reviving the defeatist and discredited concept of biologic predeterminism by such statements as "most, if not all cancers are disseminated at the time the diagnosis is made." While this theory is intriguing, it remains unproved. In reviewing such publications as the 30 year survival report following mastectomies for breast cancer by Frank Adair and other presentations on long-term survival, I tend to give credit to timely diagnosis and adequate surgery rather than some immune process.

I think we should be concerned at the inadequate, piecemeal, often sloppy surgery that is being performed in some parts of the country as a result of these defeatist attitudes and the hope, as yet unfounded, that the patient will be saved by drug therapy. We hear of such things as local excisions, lumpectomies, partial resections and debulking operations, or if you prefer the more elegant term "cytoreductive surgery." I think it is up to us as surgical oncologists to practice, to teach and demand what we consider adequate tumor surgery. We cannot cut through a cancer or its microscopic extensions and hope to eradicate it. We can-

not seed a wound with tumor cells and expect drugs or an immune reaction to bail us out. We cannot do "raisin-plucking" operations in the neck, the axilla or the groin and expect to achieve local control of a cancer. We cannot abandon surgical principles established by many generations of surgeons just for the sake of a multidisciplinary approach.

I believe that in addition to responsibilities as a teacher and a practitioner, the surgical oncologist has an additional role—that of a scientist. He has the background and skill to participate in clinical or laboratory studies designed to improve our knowledge of cancer. A glance at the program of this meeting illustrates the important scientific studies surgical oncologists are capable of conducting. Some members of this society are active in oncology groups engaged in cooperative clinical trials. The National Cancer Institute has been slow to enlist surgeons in many such groups and surgical support will become increasingly necessary as we move from studies on the palliation of advanced cancer to studies of adjuvant therapy combined with surgery for hopefully curable tumors. We surgeons care for such patients and must take part in designing and conducting these trials. I believe it's an encouraging development that this society is sponsoring clinical research projects in which we can all join, both university oncologists and private practitioners. In clinical fields and basic research there are numerous questions which can best be answered by surgical oncologists with their unique backgrounds and abilities.

It has often been customary for those with specialized training and interest to receive recognition by taking examinations and receiving certification by duly organized specialty boards. It is certainly true that many of our younger members and those in training in institutions about the country feel a need for such recognition. They point to the recently established boards of medical oncology and gynecologic oncology and urge the formation of similar boards for their surgical disciplines. While the majority of our members are recognized in their communities as oncologists and need no certification, we must recognize the importance of this for younger men. From my acquaintance with the present surgical hierarchy, I cannot envision the formation of a specialty board in surgical oncology in the near term. We can, however, establish the foundation for such a board and I believe we have taken the necessary first steps. Our present membership requirements help define the aptitudes of a surgical oncologist. Our committee on education and training has established guidelines for the training needed by those who would enter this field and the American Cancer Society has adopted these guidelines in awarding Clinical Fellowships in surgery. Many of our members have been instrumental in establishing divisions of surgical oncology in medical schools and teaching hospitals. While election to membership in this society is currently the most effective recognition of a surgical oncologist, I am certain that in the future as a result of present efforts, there will be appropriate surgical specialty boards and certification.