Questions and Answers on Breast Cancer

The presentations by participants in the Second National Conference on Breast Cancer held in Los Angeles on May 17, 18 and 19, 1971 included a question and answer period. Because time did not allow all questions to be answered during the conference, the unanswered questions were forwarded to the participants. Their answers are published below.

Question addressed to Dr. Charles B. Wilson, M.D., University of California, School of Medicine, San Francisco, California: Would you follow removal of a "solitary" brain metastasis with whole brain irradiation on the assumption that there are multiple metastases?

Dr. Wilson
In general, I would recommend whole head irradiation following removal of a metastatic brain tumor believed to be a solitary lesion on the basis of current diagnostic techniques, e.g., brain scan and cerebral angiography. There are two reasons for this: First, approximately two thirds of metastatic brain tumors are accompanied by one or more additional brain metastases although the latter may be occult. Consequently, odds are at least two to one that an apparent single lesion is associated with at least one additional brain metastasis. The odds are slightly higher with certain tumors such as melanomas and perhaps slightly lower in other tumors such as colon. Second, while metastatic tumors are characteristically circumscribed, they are often soft, friable and easily implanted at the operative site. Local recurrence at the site of a metastatic tumor thought to have been removed totally is common experience.

Although postoperative radiation therapy does not exclude the possibility of local recurrence, certainly in the case of radiosensitive tumors this would seem a logical prophylactic step.

One could cite exceptions to the foregoing generalization favoring postoperative radiation therapy. I would be inclined to withhold postoperative radiation therapy in the case of a patient with a metastatic tumor appearing several years after removal of a colon carcinoma, with no evidence of disease elsewhere if I had achieved a clear surgical removal. Other factors such as the patient’s general condition, prior radiation to the head, etc., would also be factors modifying the desirability of postoperative irradiation.

Questions addressed to Rita M. Kelley, M.D., Harvard Medical School, Boston, Massachusetts: Please comment on routine prophylactic postoperative chemotherapy for all breast cancer.

Dr. Kelley
The prophylactic use of chemotherapy for breast cancer should be the ideal way to assure that the tumor will not recur. However, our lack of knowledge of cell kinetics does not allow precise timing for drug administration in a lesion which is as slow to replicate as is breast cancer. It would be extremely difficult to estimate the optimum time of delivery of the chemotherapeutic
agent of choice. None of the agents presently available have a high enough response rate against established breast cancer to render them reliable and drug combinations may have unacceptable toxicity for prophylactic use. It would be extremely difficult to know when one could stop delivering chemotherapy, since recurrences are so often delayed for many years. Increasing knowledge and more effective drugs which should be available over the next few years should allow for a much more enlightened approach to chemotherapy prophylaxis.

Do you have any objections to simultaneous radiation therapy and chemotherapy?

Dr. Kelley

No, as long as marrow depressing effects of simultaneous X-ray therapy and chemotherapy are recognized and respected. X-ray treatment to local painful areas plus hormonal therapy for systemic manifestations of disease is often a rewarding program.

Questions addressed to
Malcolm A. Bagshaw, M.D.,
Stanford University, School of Medicine, Stanford, California:
Do you suggest prophylactic irradiation of the entire spine if only a few vertebrae are involved?

Dr. Bagshaw

Yes, I do. One must consider the likelihood that objective evidence of vertebral involvement probably indicates that subclinical foci are present in many vertebrae. It is always difficult to patch together adjacent radiation fields, especially when the treatment sequence extends over a long period of time. The danger of overlapping adjacent fields becomes significant; therefore, it would be better to prevent structural change in the vertebrae rather than cope with the structural change once it has occurred. It has been our policy to treat rather large segments, that is either the thoracic or the lumbar segment when only one or two vertebrae are involved and I think this policy should be extended to include the entire spine. One must consider, of course, the effect this might have on bone marrow depression and carefully monitor the patient during the radiotherapy in order to avoid excessive diminution in peripheral white blood count. We do know from experience with Hodgkin’s disease and the rather extensive treatment of testicular neoplasms that it is possible to treat the entire spine without an unacceptable fall in the peripheral count, especially when the radiation fields are closely tailored to fit the anatomy. From a radiobiological viewpoint, there is a greater chance to achieve sterilization of local involvement when there are fewer neoplastic cells. Thus, it would seem possible to sterilize minute foci of metastatic involvement with doses in the range of 4,000 rads delivered at the rate of 1,000 rads per week.

Would you irradiate on the basis of “suspicious” bone scan but negative X-rays in asymptomatic cases?

Dr. Bagshaw

Assuming there is no other confirmatory evidence of metastases to bone, I would require that the scan be clearly positive before proceeding with irradiation to the entire spine at least until we have acquired more objective evidence for the value of this presumptive approach.

Question addressed to
Jerome M. Vaeth, M.D.,
Mount Zion Hospital and Medical Center,
San Francisco, California:
On what basis do you use the 4x/week therapy schedule as opposed to the conventional 5x/week?

Dr. Vaeth

The 4x/week schedule vs. the 5x/week schedule is well tolerated particularly if the overall weekly dose is reduced
Questions addressed to
James L. Quinn, III, M.D.,
Northwestern University,
Chicago, Illinois:
Would you recommend brain, bone and liver scanning in workup of Stage I and II patients before radical mastectomy?

Dr. Quinn
I would recommend bone and liver scanning in patients with suspected carcinoma of the breast because our experience has shown the presence of metastases to both the bone and the liver before either X-rays or clinical chemistry tests are abnormal. It has been estimated by some that as many as 15 percent of asymptomatic breast carcinoma patients will show unsuspected bone metastases. This figure seems a little high but the definitive studies are not finished yet.

I would recommend brain scanning only in patients who have central nervous system symptomatology. Under those circumstances, I believe the brain scan is a very effective screen for abnormal uptake.

What isotopes are used for bone, brain etc., scan? What is the time interval between injection and securing of bone scan?

Dr. Quinn
The agent of choice in brain scanning is technetium-99m pertechnetate. It is recommended that a scan be started no sooner than two hours after injection and that a minimum of four views be obtained. The agent of choice for the detection of metastases to the liver is technetium sulfur colloid. It is recommended that a period of at least one hour from injection to starting the scan be followed so that blood clearance is sufficient so as to not obscure abnormal lesions. The agent of choice for bone scanning, to date, has been fluorine-18. This is not yet approved for routine use by the Atomic Energy Commission but in the laboratories where it is under investigation, it has proved to be an excellent agent. A period of two to three hours after injection or oral ingestion is suggested.

More recently a technetium-99 polyphosphate has been reported to be superior to fluorine-18 but this is in the early developmental stages.

Questions addressed to
Alfred A. Fracchia, M.D.,
Memorial Hospital for Cancer and Allied Diseases, New York, New York:
Could you please define in terms of differential count, a vaginal smear that would indicate likelihood of response to adrenalectomy or combined adrenalectomy and oophorectomy?

Dr. Fracchia
It is difficult to define in terms of differential count a vaginal smear that would indicate likelihood of response to adrenalectomy or combined adrenalectomy and oophorectomy as it varies with age and endocrine status. Furthermore, there are different methods of evaluating vaginal smears.

Unfortunately, two thirds of our patients evaluated were either in the normal range or had additive hormone therapy or pelvic irradiation. The vaginal smears in these patients were of no assistance in predicting a remission to adrenalectomy.

An abnormally high vaginal smear index in postmenopausal women who do not have trichomonas infestation and have not received exogenous hormones may indicate an increased probability of response whereas an unexpectedly low index in the absence of hormone administration or pelvic irradiation probably indicates a considerably reduced chance of obtaining a remission.

What are your present indications for simultaneous bilateral oophorectomy and adrenalectomy?
Dr. Fracchia
The indications for simultaneous bilateral oophorectomy and adrenalectomy are primary or recurrent inflammatory carcinoma regardless of whether the patients are pre- or postmenopausal. Since the response rates to castration in patients with irregular menses is low, whenever ablative endocrine surgery is planned, we sometimes perform a combined procedure. Simultaneous bilateral oophorectomy and adrenalectomy is usually performed on those patients who have had inadequate irradiation castration or hysterectomies but whose ovaries are still present and whose ovarian hormonal activity cannot be accurately determined.

This type of procedure is particularly suitable for postmenopausal patients with systemic disease who have either failed or terminated their remission with additive hormones but whose disease is limited either to soft tissue or skeleton without hypercalcemia with a free interval of more than two years.

Patients with central nervous system involvement, those with markedly restrictive pulmonary or pleural disease and those with jaundice, hypercalcemia or myelophthisic anemia have not responded well and should be excluded from consideration.

Question addressed to
Frank W. Norman, M.D.,
Santa Rosa, California:
How is a general practitioner able to make decisions as a medical oncologist after the original surgery has been accomplished?

Dr. Norman
No general practitioner claims to be an oncologist. He does claim, however, to be an expert in the comprehensive management of each of his patients. His knowledge of the total medical, social and environmental factors in the life of his patient allows him to offer her irreplaceable advantages in cancer management.

After his patient undergoes her initial surgery, the knowledgeable general practitioner can inexpensively and conveniently follow her closely with a definite plan of attack on the progress of her disease. The interested family physician can remain knowledgeable in oncological matters by reading, attending seminars on cancer and by conferring with specialist colleagues. If these contacts are not available in his local community, he will find that university centers are anxious to cooperate, educate and outline future plans of treatment most conveniently carried out at a home base. The general practitioner’s careful, regularly planned physical examinations, appropriately spaced chest X-rays, hematological studies and panel assays keep him posted on the ideal time to embark on the next phase of treatment. He can assist the radiologist in treating complications of radiation therapy; he can initiate chemotherapy programs or follow those previously discussed, including weekly chemotherapeutic injections; he can administer hormones and even follow up on more experimental forms of therapy between visits by his patient to a university center.

Remember that the treatment of metastatic cancer of the breast is by no means settled, nor is there unanimity of thought among specialists in the field. Few oncologists have the general practitioner’s opportunity to follow his patient from the discovery of cancer to its ultimate conclusion.

The general practitioner is not an oncologist. He is, however, an experienced well-trained physician and he is the “doctor” for that specific patient. No oncologist today can render more service to his patient than the informed, tender, sympathetic day by day comfort the family physician can offer her and her family.