Once the above data has been obtained, we are interested in testing the hypothesis that the two variables—method of treatment and 10-year survival—are independent. If method of treatment is independent of 10-year survival, then the proportion of patients who did survive 10 years after simple mastectomy should be the same as the proportion of patients who also survived 10 years after modified radical mastectomy. The procedure is to study the sample proportions and determine whether or not they are "significantly" different. The statistic used to compare the proportions is a Chi Square ($X^2$) statistic.

Simple computations show the hypothesis of independence is accepted (computed $X^2 = 2.98$, critical $X^2 = 3.84$ at five percent level of significance). In other words, we do not have sufficient evidence to say that the 10-year survival of a patient is dependent on whether the patient undergoes simple mastectomy or modified radical mastectomy.

My purpose in writing is to emphasize the increasing importance and application of statistics in medicine, which is evident from the numerous articles published not only in medical journals, but also in computer and engineering publications. Valuable classical statistical methods have been adapted for use in medical research and a quick perusal of the many available tests in biostatistics indicates that the repertoire of the statistically conscientious, working medical researcher is substantial indeed. Finally, I strongly believe that there is a substantial need for more rigorous and cautious analysis of medical data.

To the Editor

I enjoyed the interchange with Drs. Angleni and Leber in the November/December 1973 issue of "Ca—A Cancer Journal for Clinicians." I'd like to point out, however, that when I mentioned a 12 percent difference in survival between patients who received no treatment and those who underwent the most radical treatment, I was referring not to the treatment of the breast, but rather to the axillary nodes. The remark was perhaps written unclearly and was open to misrepresentation. I certainly believe that surgery significantly improves the patient's prognosis.

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To the Editor:

From recent electron microscopy, mammography, whole and bilateral organ and other investigations, it could be implied that the natural history of epithelial breast carcinoma, like any other epithelial structure, progresses sequentially from proliferation to dysplasia, to in situ, to microinvasion and then eventually to the clinically familiar macroinvasion. This natural growth, like cancer of the uterine cervix, may span twenty years or more, as shown by backtracking, kinetic or biomathematical studies and clinical observations.

It is well known that extirpation of the so-called Clinical Stage I primary lesions has resulted in prolonged short-term survivorship but paradoxically the mortality ratio has not changed since Halsted's time. Apparently, we have been uncovering the disease in its earlier phases, thus improving immediate survival time, but not early enough to catch the disease at a pre-seeding stage to ensure permanent cure.

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It is my strong personal opinion, therefore, that the smoldering controversy on mastectomy for palpable lesions is passé, unnecessary, divisive and only aggravates the current atmosphere of uncertainty and confusion in the overall treatment of breast cancer. In short, it is doing more harm than good for physicians and the laity alike.

Contemporary findings insinuate that there are two general types of breast carcinoma—the "preinvasive" and the "invasive." Recent studies imply that the majority of "operable" lesions belong to the invasive group and are already systemic diseases upon presentation. Therefore, a stumbling block to ultimate progress persists as long as emphasis on the archaic and obsolete "treat when found" method of management of lactiferous neoplasms is perpetuated.

Instead, as a constructive proposition, concentrated efforts and monies on the optimistic prospect of "preinvasive" control as an alternative should be given more professional and lay exposure. Let the public be involved, so that their motivation and cooperation is improved.

It is believed by most contemporary clinicians that the magnitude of primary invasive lesion control is a dead issue. It is the consensus that biologic variants of uncontrollable occult metastases should be resolved, as it actually predetermines the longevity of the afflicted. Distant metastases is the bane of seemingly successful primary ablations.

Precluding that first magical wave of viable circulating cancer cells from the earliest of the multicentric and bilateral lesions is the key to the solution of the problem. It can be solved! It is difficult to understand how cancer of the uterine cervix could be studied and treated contingent upon an intact basement membrane as noted under the light microscope, whereas management of epithelial carcinoma of the mammary duct is still discussed, debated and ideated at a postinvasive relatively advanced intraglandular and extramammary plane, years after the basement membrane had been penetrated. That this disparity and discrimination in mentation could exist in this era is unbelievable.

It is agonizingly clear that the evolution of an invasive method to identify patients with premetastatic breast cancer is sadly lacking. What we desperately need today is a reincarnation of Papamicalou or his pattern of thought.

Debating how extensive one should excise the primary tumor and environs at risk without simultaneously considering the possibility of preventing, detecting or treating secondary distant cryptic implants will only perpetuate our ignorance of the biologic nuances of the disease. If tumors that can be felt or seen are invasive already, we must accept them as such, and like carcinoma of the uterine cervix, phase out the invasive forms and investigate the preinvasive lesions. After all, the mortality rate of cervical cancer has improved about fifty percent in the past three decades. That of breast cancer is still at an impasse since antiquity. It is obvious that mastectomy of a palpable tumor has improved the quality of survivorship. Long-term longevity, as yet, cannot be credited to the method of primary treatment but merely to the biologic variant at play.

In conclusion, may I humbly suggest the following:

1. The moot arguments on the primacy of primary ablative dissections be squelched for good as a non-issue;
2. A moratorium be established on ultra-radical and conventional radical mastectomy;
3. While phasing out palpable and visible lesions with conservative procedures wide enough to prevent local recurrence, prospective and retrospective randomized investigations be conducted without fanfare;
4. While the above studies are being made, the possibility of cancer control
following the "preinvasive" line be pursued with concerted action and vigor; and
5. The nebulous term "early" in describing palpable or visible lesions be stricken out from medical lingo to avoid deceiving ourselves any further.

I hope that in the future, physicians can debate at a molecular rather than at a gross anatomical level.

Feliciano M. Perez, M.D.
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To the Editor:

The American Cancer Society shares the concern of Dr. Perez and others that there has been little improvement in the mortality rate of breast cancer during the past 35 years. At the time of initial surgery, this cancer—the leading cause of cancer incidence and cancer deaths in women—has already spread to the homolateral axillary nodes in about 50 percent of patients. In an attempt to detect breast cancer in its earliest and most curable stage, the American Cancer Society, in conjunction with the National Cancer Institute, has established 27 breast cancer detection demonstration projects located strategically throughout the United States to learn about the practicality, feasibility and value of periodic screening of asymptomatic women over the age of 35 years. Approximately 200,000 women entering the program will be screened by clinical examination, mammography and thermography once yearly for five years and then will be followed for an additional five years.

Beyond the obvious problems of costs and the availability of professional time, there are the problems of motivation and recruitment of screenees and the need for concurrent programs of public and professional education. The combined resources of the American Cancer Society and the National Cancer Institute will be used to try to resolve these problems.

It is expected that similar screening projects will be established under local auspices and funding in many other facilities throughout the country and, in fact, this is already taking place.

The data collected in this program will compare the effectiveness of detection modalities and provide leads to the more precise identification of the high-risk patient.

Earlier detection based on screening of asymptomatic women using clinical examination, mammography and thermography, plus ensuring the availability of treatment will hopefully help reduce the mortality rate of breast cancer significantly.

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