Editorial

THE SURGERY OF CANCER OF THE BREAST

That so old a subject as operative treatment of cancer of the breast should offer opportunity for discussion may seem strange, for the reader will remember that the Willy Meyer suggestion of beginning the dissection with the axilla was originally published by Fabricius in 1614, and that the old technic of destroying tumors with a hot iron is still imitated nowadays with either galvanic cautery or the electric spark—much more elegant, though perhaps no more effective instruments, than the hot soldering iron or the old cauterizing iron of the late middle ages, familiar to every lover of the work of the wood engravers of that time. However, there is much still to be learned concerning the details of the technic of the operative treatment of cancer of the breast. Everyone who sees many of these patients realizes that procedures are still far from being standardized and that many surgeons persist in using skin incisions which almost guarantee a swollen arm from scar contraction in the axilla, while others remove so small an amount of neighboring skin that local recurrences are almost certain to follow. It is a pleasant hypothesis that such evidence of poor surgery exists only in the backwoods or the small country town, at a distance from civilization, but unfortunately those who know realize that just as bad work is done in metropolitan districts as in the uttermost wilds of the Middle West.

It is refreshing, therefore, to turn to so excellent an article as the one by Lewis and Rienhoff, which reports upon the results of operations for the cure of cancer of the breast performed in Johns Hopkins Hospital from 1889 to 1931 (Ann. Surg. 95: 336, 1932). The particular advantage of this situation is that the intellectual influence of Halsted has persisted in Johns Hopkins to the present time, so that the general principles of the surgical treatment have been carried out very much as if it were all done by one man. The number of patients studied was 950. Even with so large and carefully observed a material as that at Hopkins, the authors have to acknowledge that a considerable number of patients have been lost track of, and in this group of non-traced patients belong some 22 per cent of the total. Of all those traced, 10 per cent are alive
and well, and of these nearly two-thirds have lived more than five years.

As regards diagnosis, all of the sections were originally studied and reported on by pathologists of wide reputation, and recently the material has been largely re-studied by Dr. Joseph Colt Bloodgood. Only one per cent of the diagnoses recorded had to be rejected because increased knowledge of the differences between extensive hyperplasia of the breast and early carcinoma necessitated transferring some tumors to the benign group. Both breasts were involved in 5 per cent of the patients; with single involvement, the right and left breast were equally attacked. One-half the growths were scirrhous carcinomata. Colloid carcinoma unfortunately—since it is so favorable for cure—occurred in only 1.3 per cent. Only about one-fifth of the patients were without metastatic distribution of the tumor at the time of their treatment, showing that the average material was fairly advanced. The total operative mortality in the 420 cases studied from this aspect was 6.4 per cent.

One of the most interesting facts derived from this study is comprised in the analysis of the results obtained where either grafting was used or where the skin loss was closed by some plastic operation. The writers think that there is a definite difference in favor of the Thiersch graft procedure as regards the survival period. In each period, with few exceptions, the percentage of patients who died of recurrence after the Halsted-Thiersch graft operation was smaller than after the closed plastic operation.

An interesting table is given of the percentage of local recurrences with different operators, including those who did over 30 operations. The percentage of local recurrences varies from 5.6 per cent to 22 per cent. Of course, this cannot be wholly attributed to the surgeon's technic. It may have been due in some degree to the type of case which fate brought to him for operation.

In all such statistics there is still lacking accurate information regarding details as to the actual malignancy of the growth, its accidental involvement of a small portion of the skin, the size of the breast, and the position of the tumor, which has much to do with the appearance of skin metastases.

The size of the cells of the tumor, entirely independent of its biologic malignancy, is also an important factor too often overlooked. Small cells permeate the lymphatics more easily than large or gelatinous ones. That is why small-cell scirrhous carei-
noma often shows a more extensive metastasis in the regional nodes than a larger-cell tumor which may be of considerably greater size; yet the first patient dies and the second lives. The amount of cell differentiation under these circumstances is unimportant. Why not acknowledge that so simple a thing as cell size may be of as much importance as some minute change in the morphology of the cell or its degree of differentiation? One of the great teachers of medicine who knew how to mix some humor with his pills used to say that the modern physician was too apt in diagnosis to search for the ichthyosaurus and forget the humble cimex. The simple things must not be forgotten in pathology either.

Further evidence of the advisability of sacrificing the largest possible area of skin is supplied when the location of the recurrences is considered. A large majority of the observed local recurrences following the closed plastic procedure occurred along the incision in skin areas where there had been no evidence of carcinoma before the operation, while in the Thiersch graft operation, though there were also some skin recurrences about the periphery of the graft, the great majority seemed to be deep beneath the skin, arising within the chest wall and later involving the surface. Such recurrences presumably start either in the lymphatic vessels along the course of the anterior perforating branches of the internal mammary artery or in the slips of origin of the pectoralis major muscle.

There is no discussion of the point made by some surgeons that the necessity for grafting can be avoided if the subcutaneous fat is shaved off the corium, leaving what is practically an autogenous Thiersch graft. These surgeons hold that skin metastases come from the deeper layers and ascend to the surface through vertically penetrating lymphatics, so that if the subcutaneous tissue is sufficiently removed, the skin itself would be free from metastatic particles and a lesser area need be removed. This question can be settled only by a large number of carefully observed patients, selecting those with tumors of the same type of cell and the same position in the breast.

One other conclusion that can be drawn from this careful study is that, regardless of the extent of the disease in the breast, so long as it is confined within possible operative limits, it is incumbent on the surgeon to perform the most radical and scrupulous operative procedure possible, with a wider removal of the skin than has been customary, because by this method alone will the patient's life obtain greatest prolongation, since such prolongation evidently
depends upon the possibility of reducing local recurrences to a minimum. Even if there is a possibility that seedings of the growth may exist in distant lymph nodes, the prolongation of life obtained by such a careful and radical operation is so great that it carries a number of patients along without return of the disease, until they ultimately die of some of the infectious or other diseases so frequent as a cause of death in the aged.

It is unfortunate that to this large clinical material no palliative x-ray radiation has been applied, but, of course, much of it dates to the time before the use of x-ray. We still need records of a large number of breast tumors operated upon in a single institution, part of them treated with postoperative x-ray and part allowed to go without such treatment. The existing records, while suggestive as to the real value of radiation properly applied, are not as yet sufficiently extensive to permit a final decision.