tissue necrosis is so great that no residual functioning
procedure (29 percent). It is important to note, however,
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also have been reports in which the affected kidney was
kidney is identifiable and nephrectomy should be consid-
subsequently noted to have impaired or no residual function
normal function occurred when the infection was localized
utility of the study and proper patient preparation should
[14,15]. In most instances, as in our patient, the extent of
tissue necrosis is so great that no residual functioning
is lower in patients who have undergone some form of
in this patient population.
In evaluating the treatment of patients with emphysema-
tous pyelonephritis, it can only be concluded that mortality
is lower in patients who have undergone some form of
surgical intervention than in those treated with medical
therapy alone. Nephrectomy is not necessary in every in-
stance. In our review, mortality in patients who initially
underwent nephrectomy (24 percent) was not notably dif-
ferent from that of patients treated initially with a drainage
procedure (29 percent). It is important to note, however,
that several patients who initially underwent drainage pro-
cedures ultimately required nephrectomy [5–10]. There
also have been reports in which the affected kidney was
subsequently noted to have impaired or no residual function
[11–14]. The rare reports of an affected kidney regaining
normal function occurred when the infection was localized
within a kidney that had function in the remaining substance
[14,15]. In most instances, as in our patient, the extent of
tissue necrosis is so great that no residual functioning
kidney is identifiable and nephrectomy should be consid-
ered.

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in a renal transplant: sonographic and computed tomographic

HEPATOCELLULAR CARCINOMA AFTER
SPONTANEOUS REGRESSION OF EXTENSIVE
SMALL CELL LUNG CANCER

To the Editor:
A spontaneous regression of malignant neoplasm is a
strange phenomenon. There are some doubts as to the
validity of regression without therapy. In fact, however,
there are a few case reports of spontaneous regression of
malignant neoplasm [1–3]. It has been estimated that such
regression has occurred about once in 60,000 to 100,000
patients with cancer [4]. We report a case of second
primary hepatocellular carcinoma after spontaneous re-
gression of extensive small cell lung cancer.

A 50-year-old man was admitted on August 1, 1980,
because of increasing dyspnea and a chronic cough. A
radiograph of the chest on admission showed a right hilar
mass (Figure 1, left). Bronchosopic examination on Au-
 gust 5, 1980, showed an endobronchial tumor in the right
main bronchus, and a diagnosis of small cell carcinoma
was made upon cytologic brushing. A single left inguinal
lymph node swelling was palpated, and biopsy was subse-
dently performed, revealing a metastatic undifferentiated
carcinoma histologically. Cirrhosis of the liver was further
diagnosed. Hepatitis B surface antigen was not demonstra-
table, and result of testing for hepatitis B surface antibody
was positive. The level of alpha-fetoprotein was 4.7 ng/ml
(normal 0 to 25 ng/ml), and the serum carcinoembryonic
antigen level was 4.7 ng/ml (normal 0 to 3.0 ng/ml). During

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Figure 1. Left, chest radiograph (August 2, 1980) showing a right hilar mass. Right, clearing of the right hilar mass (September 17, 1980).

the one and a half months after admission, radiography showed a progressive clearing of the right hilar mass shadow despite the absence of chemotherapy (Figure 1, right). Bronchoscopic examination on September 17, 1980, revealed no evidence of the previous endobronchial lesion. Furthermore, result of cytologic brushing of the right main bronchus was negative. He was discharged on October 13, 1980. He was followed and no evidence of endobronchial recurrence of the neoplasm was noted on bronchoscopy in July 1981 and September 1982. A chest radiograph was obtained regularly every four months for six years, and showed normal radiographic findings until the onset of pitting edema on the lower extremities and abdominal distension. Computed tomographic scanning showed a diffuse low density area in the right hepatic lobe. The level of alpha-fetoprotein was 1,140 rig/ml and the serum carcinoembryonic antigen level was 1.4 rig/ml. His condition deteriorated rapidly despite extensive therapy for hepatic failure and he died on September 13, 1988. Histologic examination of the hepatic mass showed hepatocellular carcinoma.

Recently, the introduction of intensive combination chemotherapy has resulted in a significant prolongation of the median duration of survival for small cell carcinoma of the lung. It has been reported, however, that long-term survivors are likely candidates for development of a second malignancy. Not only acute leukemia but also a variety of different solid tumors have been identified as second malignancies after the treatment of patients for small cell carcinoma.

The mechanism of spontaneous regression of malignant neoplasm is thus far unknown. Cole [5] has reported that blood transfusion, surgical trauma (including biopsy), and febrile episodes are possible factors related to regression. However, in the present case, we can offer no explainable reason for the phenomenon.

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DENTIA

To the Editor:

In Dr. Van Horn’s (Am J Med 1987; 83: 101–110) review of dementia, his comments on the laboratory evaluation of dementia begin with a statement that the cost-effectiveness of these tests must be kept in mind. In the next sentence he states that “in almost all cases, the work-up should begin with computed tomography.” Although computed tomography is useful in identifying patients with a structural lesion, such as a subdural hematoma or mass lesion, and hydrocephalus, these are relatively infrequent causes of dementia. Atrophy is a nonspecific finding and, although often seen in advanced Alzheimer’s disease, should not preclude further work-up.

Of great interest to us is the possibility of using the history and physical examination to identify those patients in whom computed tomography is unlikely to add useful information. In a study of elderly outpatients with dementia, Larson et al (Larson EB, Reifler BV, Featherstone HJ, et al: Dementia in elderly outpatients: a prospective study. Ann Intern Med 1984; 100: 417–423) identified such a patient group whose features included either no history of acute deterioration; or prolonged duration of symptoms (greater than 36 months) and severe dementia, defined as a Mini-Mental status score of 15 or less. This group contained 72 of the 107 patients studied. No diagnostically important findings would have been missed by not performing computed tomography in these patients. Although these results have not been validated to our knowledge, it seems that a selective and cost-effective approach to the use of computed tomography in evaluating dementia is possible and warranted.

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