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# A Case Where an Immunomodulatory Food was Effective in Conservative Therapy for Progressive Terminal Pancreatic Cancer

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**Key words:** pancreatic cancer, rice bran Arabinoxylan derivative, complementary medicine, ACM  $\pi$  water

## Summary

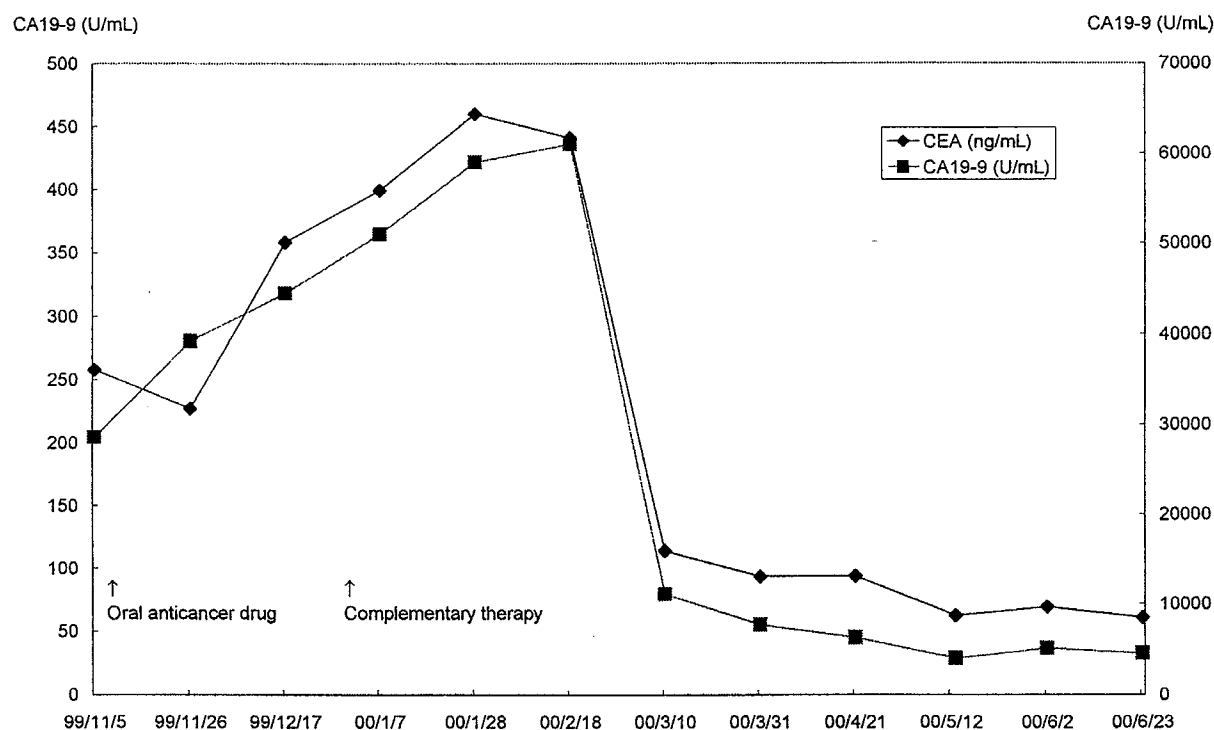
A patient with terminal pancreatic cancer accompanied by distant metastasis who was unfit for radical surgical treatment was treated with BioBran/MGN-3, which is reported to have a biological defense action, and  $\pi$  water, which can enhance the blood circulation and transportation of nutrients and drugs (Vehicle action), in addition to low toxicity chemotherapeutic agents in order to maintain biological functions and QOL. As a result, satisfactory therapeutic effects were obtained, such as improvements in biological functions and spontaneous power of recovery.

## Introduction

The author has a great deal of experience in endoscopic examination of the stomach and large intestine

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and has achieved results in the early detection and prevention of stomach and large-intestinal cancer. When a diagnosis of early-stage cancer within the mucous membrane is made as a result of examination, resection is performed by endoscopy. When laparotomy is required, radical operation is performed in hospitals in cooperation with our clinic. In inoperable cases, however, chemotherapy is used for life prolongation, and conservative therapy is given at the same time for improvement of QOL. The author uses oral anticancer drugs that cause fewer adverse reactions in inoperable patients unless aggressive ones are desired, because adverse reactions of chemotherapy generally affect the patient's nutritional state in cases of terminal cancer, and conservative therapy is not effective in a poor nutritional state. In addition, functional foods with biophylactic activity are combined to reduce adverse reactions and enhance the effect of chemotherapy.



Graph 1 Changes in tumor markers in patient with pancreatic cancer

Anticancer drugs that cause fewer adverse reactions were combined with functional foods in a patient with progressive terminal pancreatic cancer who was judged inoperable, and a marked therapeutic effect was obtained.

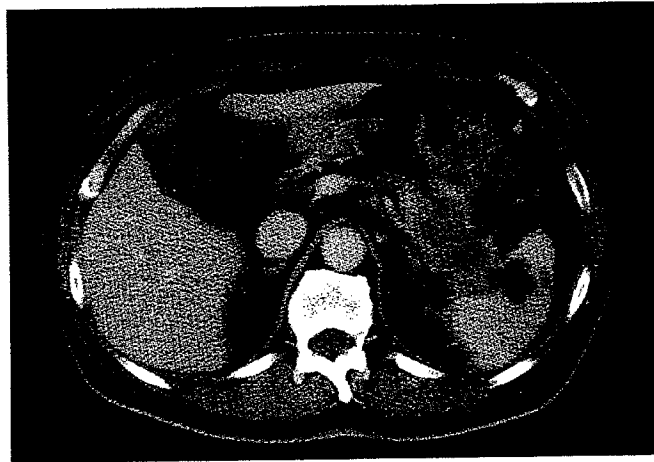
### 1. Case presentation

A 64-year-old man with a history of type II diabetes mellitus had subjective symptoms of epigastric pain and anorexia and visited our clinic in November 4, 1999. Endoscopy revealed unclearly defined enlargement of the mucosal fold with easily haemorrhagic erosion on the posterior wall of the upper gastric corpus (**Figure 2a**). It was diagnosed as Group V, well-differentiated adenocarcinoma by biopsy. Another lesion of early cancer (stage II a + II c) was noted on the anterior wall of the angular lesser curvature stomach at the same time (**Figure 3a**, arrow). CT examination showed that the lesion on the upper gastric

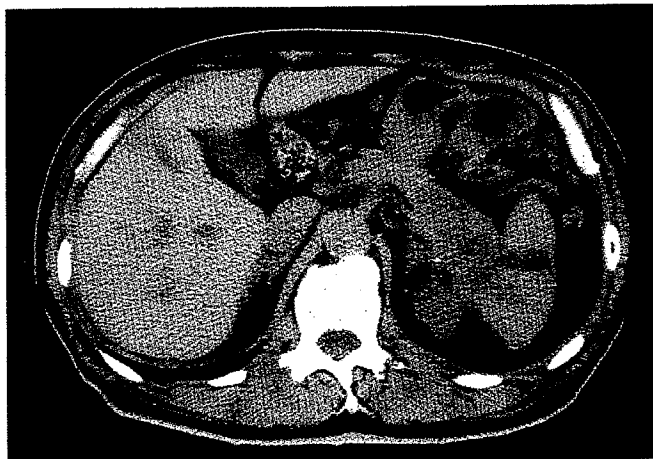
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corpus was pancreatic cancer. The tumor penetrated the gastric wall from behind the stomach and reached the upper posterior wall. This was a very rare case, where stomach biopsy detected pancreatic cancer. Many liver metastases were also noted with ascites fluid retention. For tumor markers, CEA was 258.0 ng/mL, and CA19-9 was 28,600 U/mL on November 5, 1999. Radical surgery was judged impossible, and chemotherapy was tried. As the patient wished to have treatment on an outpatient basis, oral anticancer drugs that cause fewer adverse reactions (Furtulon 1,200 mg/time and Endoxan 200 mg/time) were administered.

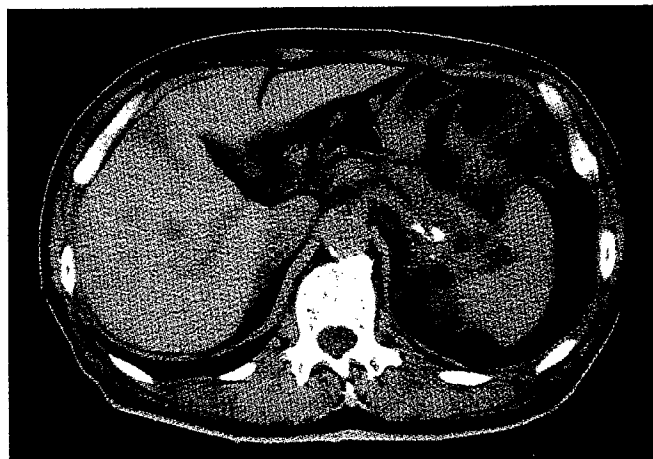
**Figure 1a**



**Figure 1b**



**Figure 1c**



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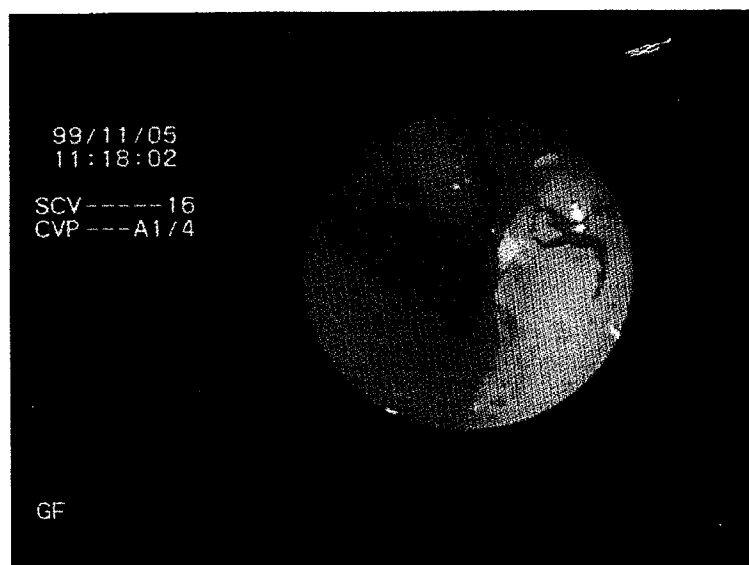


Figure 2a

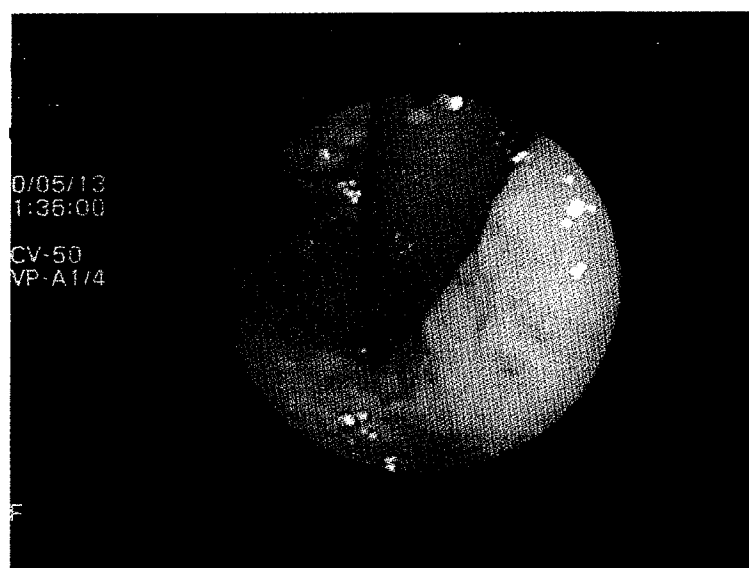


Figure 2b

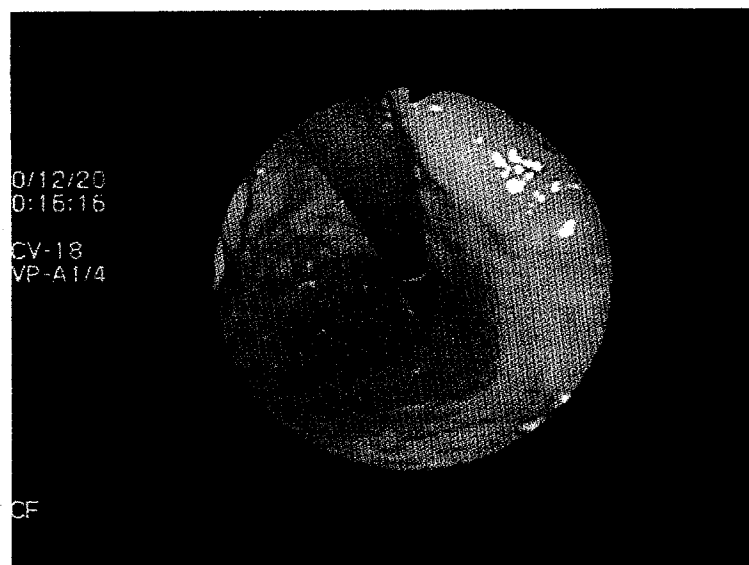


Figure 2c

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1,856/mm<sup>3</sup>, and granulocytes were 3,723/mm<sup>3</sup>. The leukocyte count was maintained; but the level of lymphocytes was low, inflammatory monocytes increased to 608/mm<sup>3</sup>, and the CD4/CD8 ratio was low, showing decreased cellular immunity.

From January 28, 2000 (about 1 month after treatment initiation), the increase in tumor markers stopped (CEA 441 ng/mL; CA19-9 61,000 U/mL), ascites retention and anorexia improved, body weight began to increase at the same time, and nutritional state clearly improved. On CT images, however, the diameter of the pancreatic tumor was about 5 cm, and liver metastatic lesions were unchanged. On March 31, 2000 (3 months after treatment initiation), the tumor markers rapidly decreased (CEA 93.6 ng/mL, CA19-9 6,300 U/mL, leukocyte count 6,120/mm<sup>3</sup>, lymphocyte count 1,678/mm<sup>3</sup>, granulocyte count 3,654/mm<sup>3</sup>, and monocyte count 586/mm<sup>3</sup>).

CT images showed marked reductions of the pancreatic cancer and liver metastases (**Figure 1b**). **Figures 1c** and **2b** show CT images and endoscopic findings obtained on May 13, 2000 (5 months after treatment initiation). The diameter of the pancreatic cancer was almost unmeasurable, and the liver metastases reduced in the same way. Endoscopic examination showed a marked reduction in mucosal prominence. On December 20, 2000, there was almost no abnormality, and only a scar-like ulcer remained (**Figure 2c**). Early cancer on the anterior wall of the angular lesser curvature stomach completely disappeared (**Figure 3b**, arrow). A biopsy revealed no malignant tumor cells.

The remaining life expectancy of this patient with progressive terminal cancer was judged to be about 3 months at first visit. However, ingestion of the rice bran arabinoxylan derivative and ACM  $\pi$  water, in addition to Furtulon, produced a dramatic therapeutic effect. He died of haematemesis in another hospital on April 13, 2001. The cause was not judged to be cancer, because there was no increase in tumor markers just before death. For QOL, he was able to live a normal life for about 17 months.

### 3. Discussion

Patients with pancreatic cancer are tending to increase in number in Japan. The death rate for pancreatic cancer is high, and the prognosis is very poor<sup>3)</sup>. Pancreatic cancer at a very early stage is considered curable by operation. In spite of advanced diagnostic imaging technology, however, most cases detected are advanced and not resectable<sup>4)</sup>. This case was also diagnosed as terminal pancreatic cancer with liver metastases and judged not resectable. The oral anticancer drugs Furtulon and Endoxan, combined with functional foods, caused dramatic tumor reduction and QOL improvement. Improvement in biological functions may have induced natural cure of the terminal cancer. The patient had the decreased sugar metabolism peculiar to pancreatic cancer, but the combination therapy allowed easy control of blood sugar, and a good nutritional state was maintained. It has been reported that the rice bran arabinoxylan derivative improved sugar metabolism in models of types I and II diabetes mellitus. This effect may partly contribute to an improvement in nutritional state in the patient. The author combines anticancer drugs that cause fewer adverse reactions, such as UFT, 5FU, and Endoxan, with BioBran/MGN-3 and ACM  $\pi$  water in patients with progressive terminal stomach, large-intestinal or breast cancer in whom radical treatment might have been impossible, and has noted life prolongation and improvement of QOL in many cases. This therapy is one treatment option that prolongs the lives of patients with terminal cancer while preserving physical strength and maintaining QOL.

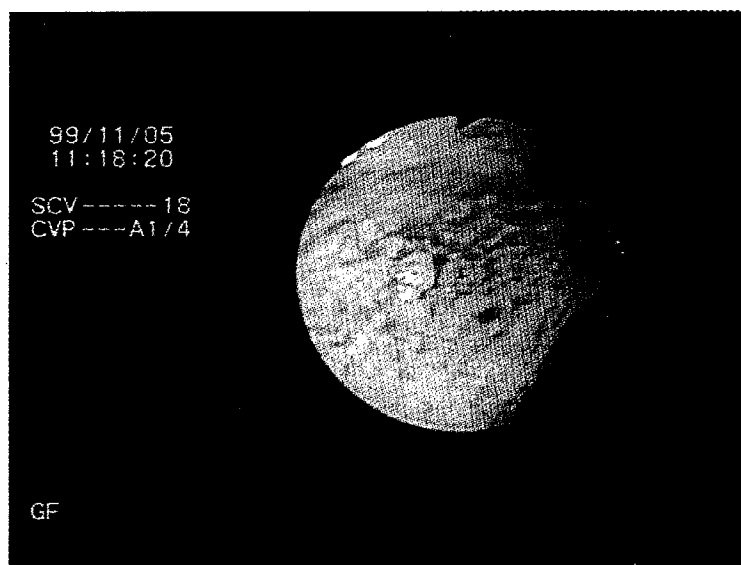


Figure 3a

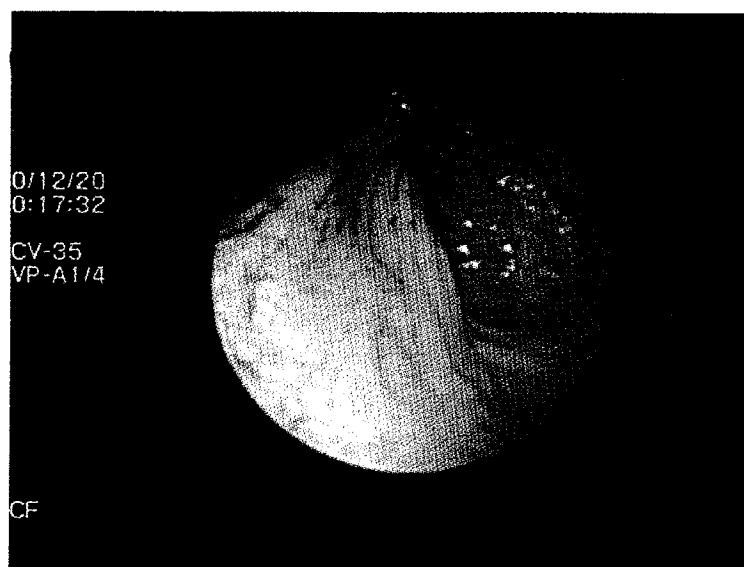


Figure 3b

The conservative therapy and observation were continued for a period, but the tumor markers rose rapidly (CEA: 460.0 ng/mL; CA19-9: 54,000 U/mL), and anorexia and pain increased. At the patient's request, complementary therapy was commenced with BioBran/MGN-3 (brand name Lentin Plus 1000, Daiwa Pharmaceutical Co., Ltd.)<sup>1)</sup> and ACM  $\pi$  water (brand name MRN-100A, ACM Co., Ltd.)<sup>2)</sup> from January 7, 2000, about 2 months later.

## 2. Clinical course and results

Graph 1 shows changes in tumor markers, Figures 1a, b, and c CT scan images, and Figures 2a, b, and c endoscopic findings over time.

At the time of the first revisit on January 7, 2000, the patient started Lentin Plus, containing 1 g of BioBran/MGN-3 in each parcel (6 parcels/day), and ACM  $\pi$  water (MRN-100A) (300 mL/day) for nonspecific immunomodulation and biophylactic improvement.

When the therapy started on January 7, 2000, the leukocyte count was 7,800/mm<sup>3</sup>, lymphocytes were

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