

# EFFECTIVENESS OF CHEMOTHERAPY IN 54 CASES OF ADVANCED GASTRIC CANCER IN ISFAHAN

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## ABSTRACT

To determine the effectiveness of chemotherapy in the treatment of gastric cancer, a sample of 54 patients suffering from advanced adenocarcinomas were studied. The results of the study showed that the disease is more prevalent in the age group of 56-60 years. The three major signs of this kind of cancer were almost equally present among both sexes in our patients. After chemotherapy, 74% of the patients survived up to one year and 50% survived up to two years or more following treatment. Chemotherapy increased the survival rate of the patients but our results were less successful compared to that of other institutions. This probably is due to delayed referral of patients to the physician. It is suggested that those patients in age groups 56-60 showing the slightest signs of gastric cancer be examined by a physician and it is hoped that early detection of the disease will increase the survival rate of the patients.

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## INTRODUCTION

Gastric cancer is one of the most prevalent fatal malignancies in the world.<sup>1</sup> The symptoms in the early stage of the disease are very inconspicuous and similar to the classical signs of gastric ulcer. Thus the patient insidiously becomes aware of his condition and therefore often consults a physician in the later stages of the disease. Therefore in spite of new advances and developments in diagnosis and therapy, the overall 5-year survival rate of patients is less than 5%.<sup>2</sup>

The disease is generally diagnosed by radiographic methods. In difficult cases however, gastroscopy and cytological methods are often required. The majority of gastric cancer cases are adenocarcinomas.<sup>3</sup>

The rate of incidence is twice in men as compared to women.<sup>4</sup> This disease usually occurs in persons over 50 with a mean occurrence at 55 years,<sup>5</sup> with only 5% occurring under 40 years of age.<sup>6</sup>

**Etiology** Although the etiology of the disease is obscure,<sup>7</sup> some believe that pathogenic environmental factors,<sup>7</sup> use of diets containing nitro and nitrite

compounds<sup>8</sup> and excessive use of fried and smoked foods<sup>9</sup> may be involved. In addition, adenomatous polyps of the stomach<sup>10</sup> may have a role. Blood group A,<sup>11</sup> gastric epithelium atrophy and metaplasia are among some of the predisposing risk factors.

**Treatment.** From the therapeutic point of view, the only decisive way to cure gastric cancer is tumor excision in the primary phases. The success of surgical treatment is extremely limited however,<sup>12</sup> especially when the tumor has invaded submucosal layers of the stomach.<sup>13</sup>

Considering the fact that chemotherapy is one of the best alternative methods of treating advanced gastric cancer,<sup>14</sup> we undertook a study to examine the effectiveness of this method of treatment in our cases of gastric cancer in Isfahan.

## METHODS AND MATERIALS

A total number of 54 patients (23 males and 31 females) aged 46-78 suffering from advanced gastric

## Chemotherapy in Advanced Gastric Cancer

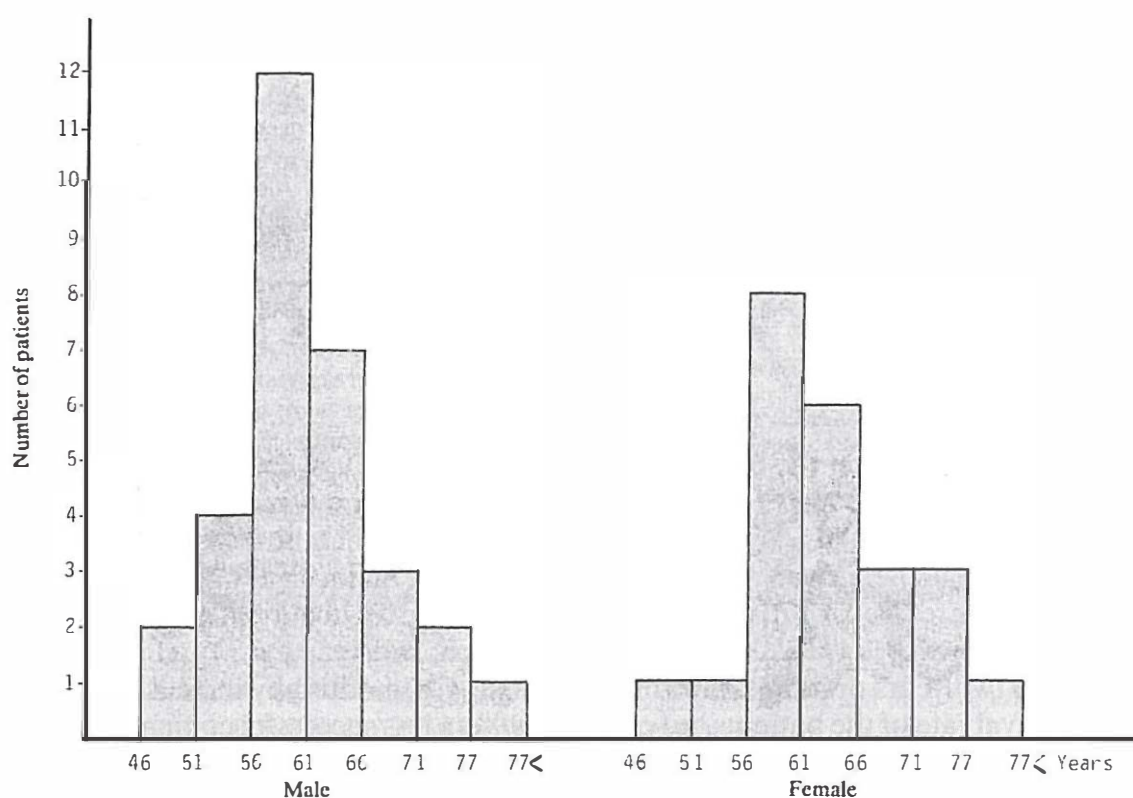


Fig. 1. Age distribution of patients according to sex.

adenocarcinomas not suitable for surgical treatment were chosen for the study. Some of the patients were diagnosed by colleagues and referred to us for chemotherapy. After diagnosis, all patients were first treated for general disorders such as water and electrolyte imbalances and infections (if present). Anemia was controlled by blood transfusion or iron administration. Chemotherapy was started by the FAM regimen<sup>15</sup> using 5-fluorouracil, 600 mg/m<sup>2</sup>; doxorubicin, 30 mg/m<sup>2</sup>; and mitocin C, 10 mg/m<sup>2</sup>. This protocol was repeated for 8-12 treatments according to the patient's general condition.

### RESULTS

Figure 1 presents the age distribution of patients according to sex. It can be seen that the disease in both sexes is more prevalent in the age group of 56-60 years. In this age group, there was no significant difference between men and women involved in the study.

Table I shows the occurrence of primary clinical symptoms of gastric cancer according to sex. It can be seen that an average of 37.5% of patients (24 patients) were suffering from vomiting after meals. The percentage was 37.5% for men and 37.3% for women. The second sign was the sense of fullness and heaviness after

having meals, which was seen in 37.5% of patients (24 patients), 37.2% for men and 37.9% for women. The third sign was weight loss which was seen in 25% of patients (16 patients), 25.6% for men and 24.2% for women.

In one patient, signs of hematemesis and melena were present. Guaiac test was positive for all patients. In 38 patients solid and irregular tumors were evident upon palpation. All patients had adenopathy above the left clavicle, hepatomegaly was seen in 29 patients, and frank ascites in eight patients.

After the start of the first phase of chemotherapy, two patients discontinued treatment due to symptoms such as nausea, vomiting and hair loss. Two others were dropped from the study because of severe hemorrhage necessitating blood transfusion. The general condition

Table I. Primary clinical symptoms of gastric cancer in patients according to sex  
Percent of occurrence

Symptom	Men	Women	Average
Sense of fullness and heaviness after meals	37.2%	37.9%	37.5%
Weight loss	25.6%	24.4%	25%
Vomiting after meals	37.5%	37.3%	37.5%

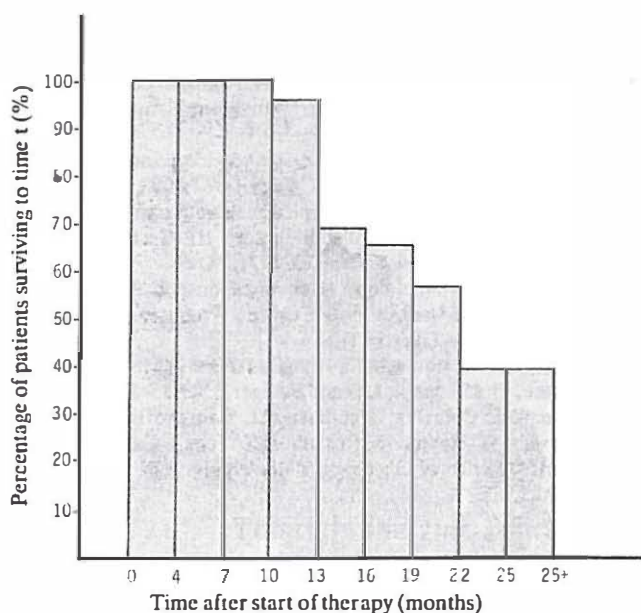


Fig. 2. Percentage of patient survival after chemotherapy in men.

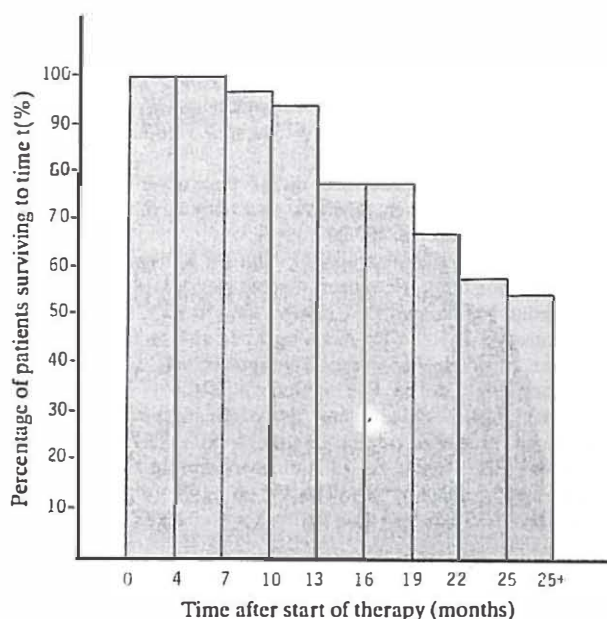


Fig.3. Percentage of patient survival after chemotherapy in women.

of the remaining patients (49 cases) after the second phase of chemotherapy improved. Their appetite increased and their weight increased by up to 3kg after six months. Following six months of treatment, in spite of continuing medication, symptoms of gradual weight loss, anorexia and signs of relative obstruction of the stomach, jaundice or ascites recurred which necessitated a decrease in the interval between two successive periods of therapy. With this new form of therapy, for a period of 3-5 months, the general condition of the patients improved slightly but in two cases we were obliged to change therapy and in general, the disease advanced.

Figures 2 and 3 show the percentage of survival after chemotherapy in the men and women, respectively. After chemotherapy, 74% of the patients (77% men and 69.6% women) survived up to one year and 50% (54.8% men and 29.1% women) survived up to two years or more following the treatment.

### DISCUSSION

Our results show that the disease is more prevalent in the age group of 56-60 and it occurs slightly later in women (mean age 62.82 years) than in men (mean age 60.45 years).

The three major signs of gastric cancer (Table I) were almost equally prevalent in both sexes. Figures 2 and 3 present the effectiveness of chemotherapy as a method of treating gastric cancer. These data show that compared to patients not receiving chemotherapy, who have a 1-year survival rate of less than 20%<sup>15</sup> the

1-year survival rate of our patients was 74%. Similarly the two-year survival rate of untreated patients is very low, whereas we observed a 50% 2-year survival rate.

Patients suffering from gastric cancer are severely morbid and without chemotherapy barely have a one year chance of survival. The results of chemotherapy were successful in increasing the survival rate of our patients. However, compared to other institutions which have reported a 2-year survival rate of 60%<sup>17</sup> our survival rate was slightly less, which is probably due to the fact that our patients delayed in consulting a physician and hence their disease was diagnosed at a later stage.

It is suggested that all people in this age group showing the slightest signs of this kind of cancer should be checked at least once to ensure that they are not suffering from gastric cancer. Also, people who experience the most common signs of gastric cancer including vomiting, feeling of fullness and heaviness after meals and weight loss should be examined by a specialist. With these precautions, those patients with an increased risk and more vulnerable to developing gastric cancer will be diagnosed earlier and as a result, we may be able to prolong their life expectancy.

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## Chemotherapy in Advanced Gastric Cancer

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