

# Clinical Course, Diagnosis, and Treatment of Gastric Cancer in Young Adults

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**Annotation:** Gastric cancer in young people is an aggressive disease that requires special attention. The article examines the features of the clinical course of gastric cancer in young people, including its clinical manifestations, diagnosis, and treatment. Symptoms are analyzed in detail, which can often be uncharacteristic of this age, making early diagnosis difficult. Modern examination methods and treatment approaches are described, and the importance of early detection of the disease for improving the prognosis is emphasized.

**Keywords:** stomach cancer, young age, clinical features, diagnosis, early detection, treatment.

## Introduction.

Stomach cancer is traditionally considered a disease of the elderly, with the highest incidence rates among people over 60 years old [6]. However, recent decades have shown a disturbing trend: the number of gastric cancer cases among young people, that is, those under 44, has been increasing. This trend attracts the attention of researchers and practicing physicians, as gastric cancer in young people has a number of unique clinical and diagnostic features that require a special approach [1]. One of the key problems is that gastric cancer in young people often manifests with less specific symptoms compared to older patients. For example, in the early stages of the disease, young people may exhibit general signs such as fatigue, loss of appetite, nausea, and minor abdominal pain, which can complicate diagnosis and lead to delayed seeking of medical attention. This delayed treatment increases the risk of the disease progressing to more advanced stages, complicating treatment and worsening the prognosis [2]. Furthermore, gastric cancer in young people can have a more aggressive course. Studies show that in this group of patients, tumors with a higher level of malignancy and a greater tendency to metastasize are more common. This requires more intensive and complex treatment, which can negatively impact quality of life and overall survival [1]. Despite the availability of modern diagnostic tools such as gastroscopy and computed tomography, traditional methods often prove insufficient for early detection of the disease in young patients, especially in cases where symptoms are not pronounced. This underscores the need to develop and implement new, more sensitive diagnostic methods, as well as to adapt existing screening programs for this age group [5]. Moreover, it is crucial to continue investigating genetic and environmental factors that may contribute to the development of gastric cancer in young people, in order to devise more effective preventive measures and strategies [3].

Therefore, focusing on research into gastric cancer in young people is critical for improving the diagnosis, treatment, and prevention of this disease, as well as for improving the quality of life and survival of patients in this age group.

**The aim of this study** is to conduct a comprehensive examination of the clinical course characteristics, diagnostic methods, and treatment approaches for gastric cancer in young patients.

**Material and methods.**

The study utilized data from medical records and case histories of patients under 44 years old who were diagnosed with gastric cancer. Data was collected from the Khorezm Regional Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology (KhB RSCPMCOaR) for the period from 2014 to 2023. In total, 110 patients were analyzed, of whom 56 (50.9%) were men and 54 (49.1%) were women. The age of the patients ranged from 19 to 44 years, with an average of 38.7 years. The majority of patients were aged 35-40 years and 40-44 years, accounting for 51.8% and 26.4% respectively. The smallest number of patients (10%) were in the 19-30 age group. (Table 1).

**Table 1. Distribution of Patients by Gender and Age**

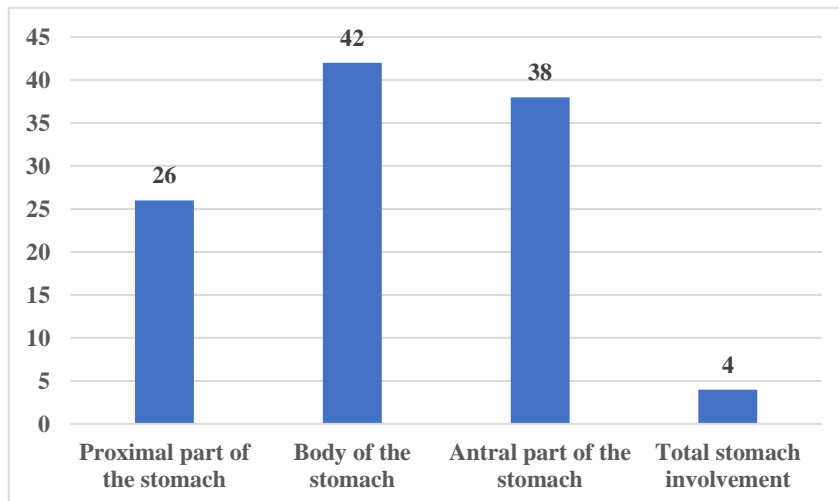
Gender	Number of Patients	Age
		Under 30
Male	56	3
Female	54	8
<b>Total</b>	<b>110</b>	<b>11</b>

Analysis of the clinical symptoms revealed that out of 110 patients, 108 (98.2%) experienced pain in the epigastric region, 107 (97.3%) experienced loss of appetite, 88 (80%) experienced sleep disturbance, 85 (77.3%) experienced weight loss, 78 (71%) experienced nausea, 24 (22%) reported vomiting, and 17 (15.5%) experienced belt pains. (Table 2)

**Table 2. Distribution of Patients by Clinical Symptoms**

Clinical Symptoms	Present	Absent
Epigastric Pain	108 (98%)	2 (2%)
Nausea	78 (71%)	32 (29%)
Vomiting	24 (22%)	86 (78%)
Change in Stool Color	31 (28%)	79 (72%)
Loss of Appetite	107 (97.3%)	3 (2.7%)
Weight Loss	85 (77.3%)	25 (22.7%)
Sleep Disturbances	88 (80%)	22 (20%)
Radiating Pain	17 (15.5%)	93 (84.5%)
Elevated Body Temperature	3 (2.7%)	107 (97.3%)

Of the 110 patients, 39 (35.4%) had stomach body damage, 37 (33.6%) had antral, 26 (23.6%) had proximal, and 4 (3.6%) had total. (Figure 1)



**Fig. 1 Distribution of patients based on tumor location.**

During the histological examination, adenoma of varying degrees was detected in most cases (83.6%), rarely undifferentiated carcinoma (7.3%), annular cell carcinoma (4.5%), and MALT lymphoma (3.6%), and in one case, squamous cell carcinoma (4.5%) was detected. Gistological examination of the tumor malignancy revealed that out of 110 patients, 22 (20%) had highly differentiated adenocarcinoma, 21 (19.1%) had moderately differentiated adenocarcinoma, 50 (45.4%) had poorly differentiated adenocarcinoma, 7 (6.4%) had undifferentiated adenocarcinoma, and 10 (9.1%) had no tumor malignancy. As can be seen from the presented data, 51.8% of patients had low and undifferentiated malignancy levels of the tumor, which are prognostically unfavorable.

All patients underwent a comprehensive examination using clinical, laboratory, and instrumental research methods, as well as endoscopic (fibroezofagogastroskopy), radiological, and ultrasound examinations, as well as abdominal CT scans, to assess the extent of the tumor process.

The study of all these data made it possible to comprehensively assess the clinical and diagnostic features of gastric cancer in young people, identify existing problems, and propose improved approaches to the diagnosis and treatment of this disease.

Of the 110 patients, 12 (10.9%) underwent various surgical interventions, 2 (1.8%) underwent preoperative neoadjuvant chemotherapy and surgery, 45 (40.9%) underwent surgery and adjuvant chemotherapy, 36 (32.7%) underwent polychemotherapy, and 15 (11.8%) underwent symptomatic treatment. The volume of surgical interventions in our observations depended on the location, extent of tumor spread, general condition, and presence of concomitant diseases.

In the group of patients who underwent minimally invasive surgical interventions, out of 12 patients, 2 underwent a radical gastrectomy, 1 underwent a distal subtotal resection, and 3 underwent a gastrostomy. In the remaining 6 cases, symptomatic surgeries were performed on the volume of gastroenteral anastomosis.

In the second group, where neoadjuvant chemotherapy and surgery were performed, treatment began with chemotherapy according to the FLOT 4 course scheme, followed by surgery in the volume of gastrectomy in 2 patients

In the third group of 45 patients, 1 underwent gastric resection and 3 underwent gastrectomy followed by adjuvant chemotherapy. Of the 19 patients with stomach tumor localization, 5 underwent gastrectomy, 14 underwent distal subtotal gastrectomy, and subsequently adjuvant chemotherapy. Of the 21 patients with tumor localization in the antral part of the stomach, 2 underwent gastrectomy, 18 underwent distal subtotal gastrectomy, and 1 underwent gastro-enteroanastomosis. Thirty-six patients in the fourth group underwent chemotherapy. Chemotherapy was conducted according to the XELOX, FLOT, PF, DCF scheme for 4 to 6 courses

Overall, the surgical interventions in the general group were performed as follows: gastrectomy was performed in 14 patients, proximal gastric resection in 1 patient, and distal subtotal gastric resection in 33 patients.

In our observations, patients were observed from 6 months to 60 months. We studied the frequency of recurrent metastases and the survival rate of patients

## **Results and discussion.**

Analysis of survival results showed that among 47 patients who underwent surgery, 13 patients experienced continued tumor growth and recurrence after radical treatment. Continued growth was observed in 2 patients within 6 months. Tumor recurrence was detected in 2 patients within 1 year, in 6 patients within 2 years, in 2 patients within 3 years, and in 1 patient within 5 years.

Within one year after surgery, 11 patients died from tumor progression. 12 patients lived for more than 5 years without signs of recurrence and metastasis.

The obtained results highlight the diversity of approaches to the treatment of gastric cancer in young people. The analysis demonstrates the need for an individualized approach to each patient in choosing

the optimal treatment method and emphasizes the importance of improving diagnostic methods and early disease detection.

Patients who received chemotherapy without surgical intervention died within 2 years due to tumor progression, while patients receiving symptomatic therapy died within 1 year of observation.

## Conclusions

The study showed that the wide range of surgical interventions used to treat gastric cancer in young patients emphasizes the need for an individualized approach depending on the stage and location of the tumor. Among the patients who underwent surgery, a high mortality rate was observed in the first year after surgery (11 patients). Of the 110 patients, 12 (10.9%) survived the 5-year observation period. The rest died within 5 years. These data indicate the need for more effective treatment methods and improved early diagnosis to increase survival.

The identified types of adenocarcinoma show a significant degree of variability in the differentiation of tumors. A high frequency of low-differentiation tumors (G3 and G4) indicates an aggressive course of the disease, requiring more intensive and individualized treatment. The results highlight the importance of early detection of gastric cancer in young people, as late diagnosis complicates treatment and reduces survival prognosis.

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