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# PATIENT SURVIVAL AFTER GASTRECTOMY FOR GASTRIC CANCER: A RETROSPECTIVE CLINICAL STUDY

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**Abstract**

This paper presents the results of a retrospective clinical study of 40 patients who underwent gastrectomy (subtotal or total) for gastric cancer. Case histories were obtained from the Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology of the Republic of Uzbekistan; data were collected over a five-year follow-up period. Survival was assessed depending on the type of operation, sex, disease stage, presence of postoperative complications, and use of adjuvant therapy. It was found that subtotal gastrectomy was associated with higher survival (93%) compared with total gastrectomy (40%), and adjuvant therapy increased survival to 70%.

**Keywords**: Gastric cancer, gastrectomy, survival, adjuvant therapy, retrospective study.

## 1. Introduction

Gastric cancer ranks fifth in incidence and third in mortality among oncological diseases worldwide: about 969,000 new cases and 660,000 deaths are registered

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annually (GLOBOCAN 2020). In Uzbekistan, the incidence is approximately 9.8 per 100,000 population, with up to 65–70% of cases detected at advanced (III–IV) stages, which significantly worsens the prognosis.
The disease occurs in men approximately twice as often as in women. This is explained by the higher prevalence of risk factors among men: smoking and alcohol consumption, occupational hazards, a diet high in salt and smoked foods, and a higher rate of Helicobacter pylori infection. An additional protective role in women is played by estrogens, which have an antiproliferative effect on the gastric mucosa (Chandanos & Lagergren, 2008).
Subtotal gastrectomy demonstrates higher survival compared with total gastrectomy for several reasons: it is used predominantly for early, operable stages (I–II) of tumors of the distal stomach; it preserves part of the organ and its physiological functions (reservoir, secretory, endocrine, including production of ghrelin and intrinsic factor), which supports nutritional status and chemotherapy tolerance; it is technically less traumatic and is accompanied by a significantly lower rate of anastomotic leakage compared with the esophagojejunal anastomosis required after total gastrectomy.
The aim of the study was a retrospective analysis of patient survival after gastrectomy with assessment of the influence of the type of operation, sex, disease stage, complications, and adjuvant chemotherapy.

## 2. Methodology

The retrospective study included 40 patients who underwent gastrectomy for gastric cancer. Case histories were obtained from the archive of the Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology of the Republic of Uzbekistan; the analyzed follow-up period was 5 years.
Patient characteristics. The mean age was 59.3 years (range 43–75). By sex, the patients were distributed as follows: 21 men (52.5%) and 19 women (47.5%). Subtotal gastrectomy was performed in 15 patients (37.5%) and total gastrectomy

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in 25 (62.5%). By TNM stage: stage II – 14 patients (35%), stage III – 16 (40%), stage IV – 10 (25%). Postoperative complications were recorded in 17 patients (42.5%) and absent in 23 (57.5%). Adjuvant chemotherapy was received by 22 patients (55%) and not received by 18 (45%).

Inclusion criteria: histologically verified gastric cancer; performed subtotal or total gastrectomy; availability of complete postoperative follow-up data during the study period; age over 18 years.

Exclusion criteria: other malignant neoplasms in the medical history; palliative operations without radical removal of the tumor; inoperable forms of the disease; absence of histological verification; absence of follow-up data; severe concomitant pathology that led to death from causes unrelated to gastric cancer.

Survival analysis was performed using the "alive/deceased" criterion at the last follow-up visit, with calculation of frequencies and percentages for each parameter.

## 3. Results

Survival rates were analysed across five clinical parameters. Regarding the type of surgical procedure, patients who underwent subtotal gastrectomy had a survival rate of 93%, while those who underwent total gastrectomy had a survival rate of 40%. The substantially higher survival in the subtotal group reflects both the organ-preserving nature of the procedure and the fact that it is predominantly performed for distal tumours diagnosed at earlier stages.

When analysed by sex, male patients had a survival rate of 63% and female patients 57%. This difference was minimal and not clinically significant, suggesting that sex alone does not independently influence prognosis in this cohort.

Disease stage was the most critical prognostic factor. Survival at Stage III was 42%, dropping sharply to 11% at Stage IV. The markedly poor outcome at Stage

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IV highlights the vital importance of early diagnosis, as the majority of patients in Uzbekistan are still diagnosed at advanced stages.

Postoperative complications had a profound impact on survival. Patients without complications had a survival rate of 87%, compared with only 23% in those who experienced complications — a difference of 64 percentage points. This finding underscores the critical role of surgical quality and careful perioperative management in determining long-term outcomes.

Finally, the use of adjuvant therapy was associated with a meaningful improvement in survival: 70% in patients who received adjuvant treatment versus 50% in those who did not. This 20-percentage-point difference supports the benefit of a multimodal treatment approach following resection.

## 4. Discussion

The data obtained demonstrate a significant difference in survival depending on the type of operation: subtotal gastrectomy – 93%, total – 40%. This difference is explained not only by the smaller volume of resection, but primarily by the distribution of patients by stage: subtotal surgery is performed predominantly for early forms (I–II), whereas total gastrectomy is performed for more advanced ones (III–IV).

Differences in survival by sex (men – 63%, women – 57%) are not statistically significant and are consistent with literature data on the absence of a substantial influence of sex on prognosis at comparable stages.

Disease stage was confirmed as the most significant prognostic factor: at stage IV survival was only 11%, which emphasizes the critical importance of early diagnosis and screening, especially in regions with high incidence.

The most contrasting result is the impact of complications: 87% versus 23%. This indicates the need to improve surgical technique, careful preoperative selection, and perioperative management of patients.

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Adjuvant chemotherapy reliably improves prognosis (70% versus 50%), which justifies a multimodal approach as the standard of treatment for stage II–III gastric cancer (Bang et al., 2012; Al-Batran et al., 2019).

## 5. Conclusion

The retrospective analysis of data from 40 patients who underwent gastrectomy at the Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology of the Republic of Uzbekistan over a five-year period confirms that survival is determined by a complex of clinical factors.
The type of operation is one of the key predictors of outcome: subtotal gastrectomy is associated with significantly higher survival (93%) compared with total gastrectomy (40%), reflecting the predominance of early stages in this group and the organ-preserving nature of the intervention.
Disease stage remains the most significant prognostic factor: extremely low survival at stage IV (11%) confirms the need for early screening and timely diagnosis of gastric cancer in Uzbekistan.
Postoperative complications sharply reduce survival (from 87% to 23%), which requires the improvement of surgical technique and perioperative preparation. Adjuvant chemotherapy reliably improves the prognosis (70% versus 50%), justifying the use of a multimodal approach for stage II–III gastric cancer as the standard of treatment. The obtained results correspond to global trends and confirm the universality of the established patterns for the patient population of Uzbekistan.

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