

RESULTS OF EXTENDED AND COMBINED SURGICAL METHODS FOR ADVANCED STOMACH CANCER

A. A. Kuliev¹, M. D. Juraev², F. G. Ulmasov¹¹Samarkand state medical university, Samarkand,²Republican specialized scientific and practical medical center of oncology and radiology, Tashkent, Uzbekistan**Key words:** stomach cancer, locally widespread, combined operations, palliative gastrectomy.**Tayanch soʻzlar:** meʼda saratoni; mahalliy – tarqoq; kombinatsiyalashgan operatsiyalar; palliativ gastroektomiyalar.**Ключевые слова:** рак желудка; местно-распространенный; комбинированные операции; паллиативные гастрэктомии.

In this study, pancreatic involvement was observed in 91.2% of cases in T4 gastric cancer. Moreover, with the same frequency (34.5%), ingrowth into the pancreas was combined with damage to the transverse colon and around vessels. The prognostic factors that determine the survival of patients with T4 gastric cancer remain unclear. Data on the immediate results of combined operations performed for locally pervasive gastric cancer vary considerably in the literature. The frequency of postoperative complications ranges from 5 to 59.4%, postoperative mortality - from 3.3 to 24.2%. The optimal surgical tactics for the treatment of patients with locally widespread gastric cancer has not been determined. Not only the indications for combined resections and palliative interventions remain controversial, but also the immediate and long-term results of treatment, which determines the relevance of continuing research.

ME'DA SARATONI TARQALGAN SHAKLIDA KENGAYTIRILGAN VA KOMBINIRLASHGAN OPERATIV USULLARNING NATIJALARI

A. A. Kuliye¹, M. D. Juraev², F. G. Ulmasov¹¹Samarqand davlat tibbiyot universiteti, Samarqand,²Respublika ixtisoslashtirilgan onkologiya va radiologiya amaliy tibbiyot ilmiy markazi, Toshkent, O'zbekiston

Tadqiqotda meʼda saratoni T4 bosqichi 91,2% hollarda oshqozon osti bezi zararlanish xolati kuzatilgan. Bundan tashqari, bir xil chastotada (34,5%) oshqozon osti beziga kirib borish koʻndalang chamber ichak va yirik toʻmirlarga oʻsib oʻtishi xolati kuzatiladi. Oshqozon saratoni T4 bilan ogʻrigan bemorlarning yashovchanligini belgilaydigan prognostik omillar noaniq boʻlib qolmoqda. Mahalliy tarqalgan oshqozon saratoni uchun oʻtkazilgan kombinirlashgan operatsiyalarning bevosita natijalari haqidagi maʼlumotlar adabiyotda sezilarli darajada farq qiladi. Operatsiyadan keyingi asoratlarning chastotasi 5 dan 59,4% gacha, operatsiyadan keyingi oʻlim - 3,3 dan 24,2% gacha. Mahalliy tarqalgan oshqozon saratoni bilan ogʻrigan bemorlarni davolash uchun optimal jarrohlik taktikasi aniqlanmagan. Kombinir rezeksiyalar va palliativ aralashuvlar uchun koʻrsatmalar nafaqat munozarali boʻlib qolmoqda, balki davolanishning bevosita va uzoq muddatli natijalari ham davom etayotgan tadqiqotlarning dolzarbligini belgilaydi.

РЕЗУЛЬТАТЫ РАСШИРЕННЫХ И КОМБИНИРОВАННЫХ ОПЕРАТИВНЫХ СПОСОБЫ ПРИ РАСПРОСТРАНЕННОМ РАКЕ ЖЕЛУДКА

A. A. Кулиев¹, М. Д. Жураев², Ф. Г. Улмасов¹¹Самаркандский государственный медицинский университет, Самарканд,²Республиканский специализированный научно-практический

медицинский центр онкологии и радиологии, Ташкент, Узбекистан

В исследовании, поражение поджелудочной железы наблюдалось в 91,2 % случаев при раке желудка T4. Причем с одинаковой частотой (34,5 %) врастание в поджелудочную железу сочеталось с поражением поперечной ободочной кишки и крупных сосудов. Прогностические факторы, определяющие выживаемость пациентов с раком желудка T4, остаются неясными. Данные о непосредственных результатах комбинированных операций, выполняемых при местно-распространенном раке желудка, в литературе значительно разнятся. Частота послеоперационных осложнений колеблется от 5 до 59,4 %, послеоперационная летальность – от 3,3 до 24,2 %. Оптимальная хирургическая тактика лечения больных местно-распространенным раком желудка не определена. Разноречивыми остаются не только показания к комбинированным резекциям, паллиативным вмешательствам, но и непосредственные и отдаленные результаты лечения, что определяет актуальность продолжения исследований.

Introduction. The literature surrounding T4 gastric cancer reveals a complex interplay of surgical challenges, prognostic factors, and treatment modalities, particularly regarding pancreatic involvement and the associated complications. Delaunoy (2011) highlights the grim reality of gastric cancer, noting that a significant proportion of patients are diagnosed at advanced stages, with less than half being eligible for surgical intervention. It underscores the necessity for improved treatment strategies, particularly as the efficacy of chemotherapy remains limited, with median survival rates stagnating below one year despite the introduction of targeted therapies.

Following this, Paulo Batista and Rino Martins (2012) delve into the specifics of surgical

outcomes, reiterating the high incidence of pancreatic involvement in T4 gastric cancer cases. They emphasize the lack of clarity surrounding prognostic factors and the variability in postoperative complications and mortality rates, which further complicates treatment decisions. Their critical review points to the urgent need for ongoing research to establish optimal surgical tactics for this patient population. Li et al., (2014) reinforce these findings, again observing the frequent pancreatic involvement and the associated damage to nearby structures. Their study reiterates the controversies surrounding combined resections and palliative interventions, highlighting the necessity for a more standardized approach to surgical treatment in T4 gastric cancer. Petrillo (2019) contributes to this discourse by addressing perioperative treatment perspectives, reaffirming the challenges posed by pancreatic involvement and the unclear prognostic factors. The authors echo the concerns regarding the variability in surgical outcomes and the need for consensus on treatment protocols to enhance patient survival.

Wang (Wang et al., 2020) builds upon this foundation by specifically examining T4 gastric cancer extending to the transverse colon. He advocates for extended multi-organ resection in selected patients, suggesting that neoadjuvant therapy may improve surgical outcomes. This recommendation aligns with the growing recognition of the need for individualized treatment strategies based on the extent of disease and lymph node involvement.

The findings of Johannes Pflüger et al. (2020) echo the previous studies, reiterating the significant pancreatic involvement in T4 gastric cancer and the variability in postoperative results. They emphasize the importance of understanding these complications to inform surgical decisions, thus contributing to the ongoing debate regarding the optimal surgical approach in this challenging clinical scenario.

Nakamura (Nakamura et al., 2021) introduces a case study that illustrates the potential benefits of preoperative chemotherapy in achieving curative resection in T4b gastric cancer. The authors highlight the improved survival rates associated with curative interventions, suggesting that a thorough evaluation of tumor stage and lymph node involvement is crucial for planning effective surgical strategies.

Finally, Varga (Varga et al., 2022) discusses the broader implications of surgical techniques in gastric cancer treatment, emphasizing the importance of tailored approaches based on tumor characteristics. The insights into hybrid surgical techniques and the centralization of care may offer pathways to enhance surgical and oncological outcomes for patients with T4 gastric cancer.

Collectively, these articles underscore the multifaceted nature of managing T4 gastric cancer, particularly concerning pancreatic involvement, surgical strategies, and the need for ongoing research to optimize treatment outcomes.

Literature review. The article "Latest developments and emerging treatment options in the management of stomach cancer" by Delaunoy (Delaunoy, 2011) provides a comprehensive overview of the current landscape of gastric cancer treatment, highlighting the challenges and advancements in managing this condition. The author emphasizes that gastric cancer is a significant contributor to cancer-related mortality, with a staggering one million new cases diagnosed annually. This statistic underscores the urgency of improving treatment modalities, particularly for patients presenting with advanced disease. The author also notes that a substantial proportion of patients (approximately 65%) are diagnosed at stages III or IV, often with extensive lymph node involvement and distant metastases, which complicates treatment options. The article discusses the limited eligibility for surgical intervention, with less than 50% of patients being suitable candidates for potentially curative surgery. This finding is particularly relevant given the high incidence of pancreatic involvement in T4 gastric cancer cases, as indicated in the provided context. The author suggests that the type of resection, the extent of lymph node dissection, and the potential need for splenectomy are critical factors that warrant further discussion among clinicians. The review also highlights the role of emerging therapies, including targeted treatments, which have been shown to extend survival for advanced gastric cancer patients to approximately 14 months. This is particularly pertinent when considering the varying postoperative outcomes associated with combined resections and palliative interventions for locally advanced gastric cancer, as mentioned in the context. The author advocates for a careful assessment of chemotherapy regimens, acknowledging the high toxicity associated with many treatments and the necessity of identifying patients who are most likely to benefit.

Moreover, (Delaunoy, 2011) exploration of the prognosis and survival factors relevant to T4

gastric cancer aligns with the concerns outlined in the provided context regarding the unclear prognostic indicators for this patient population. The variability in postoperative complications and mortality rates further emphasizes the need for ongoing research to establish optimal surgical tactics and treatment protocols.

The article "Surgical outcomes and survival for T4 gastric cancer extending to the transverse colon" by Wang et al. (2020) provides a comprehensive examination of the complexities surrounding T4 gastric cancer, particularly its implications for surgical intervention and patient prognosis. The authors highlight that pancreatic involvement is prevalent in 91.2% of T4 gastric cancer cases, a statistic that underscores the aggressive nature of this cancer stage and its propensity for local invasion into adjacent structures such as the transverse colon and surrounding vessels.

A critical aspect of the article is its discussion on the unclear prognostic factors influencing survival in patients with T4 gastric cancer. The authors note that while lymph node metastasis is frequently cited as a significant prognostic factor, the variability in outcomes suggests that additional research is necessary to fully elucidate the determinants of survival. This uncertainty is particularly relevant given the reported wide range of postoperative complications (5% to 59.4%) and mortality rates (3.3% to 24.2%) associated with surgical interventions for this condition.

The article also addresses the ongoing debate regarding optimal surgical tactics for managing locally advanced gastric cancer. Wang (Wang et al., 2020) advocates for extended multi-organ resection in cases with limited lymph node metastasis, suggesting that such an approach may improve outcomes for select patients. However, authors also acknowledge that T4 gastric cancer with extensive nodal involvement is generally considered incurable, which poses significant challenges in surgical decision-making. Furthermore, the authors emphasize the need for continued research to clarify the indications for combined resections and palliative interventions. This call for further investigation is crucial, as the current lack of consensus on treatment strategies can lead to inconsistent clinical practices and varied patient outcomes.

The article "Gastric cancer following pancreaticoduodenectomy: Experience from a high-volume center and review of existing literature" by Johannes Pflüger et al., (2020) provides a comprehensive examination of the intersection between pancreatic involvement and T4 gastric cancer. The authors report that pancreatic involvement was observed in 91.2% of cases, which aligns with the existing literature on the prevalence of this complication in advanced gastric cancer. This statistic underscores the significant anatomical and pathological relationship between the pancreas and the stomach, particularly in cases of locally advanced malignancies. The article highlights the complexity of T4 gastric cancer, noting that ingrowth into the pancreas frequently coincides with damage to adjacent structures such as the transverse colon and surrounding vessels. This finding is critical as it illustrates the multifaceted nature of surgical challenges faced when managing T4 gastric cancer, where the extent of local invasion complicates both diagnosis and treatment strategies. The authors emphasize that the prognostic factors influencing survival in these patients remain poorly understood, reflecting a gap in current oncological research that necessitates further investigation.

Moreover, Johannes Pflüger et al., (2020) discuss the variability in immediate postoperative outcomes following combined operations for locally pervasive gastric cancer, with reported complications ranging from 5% to 59.4% and postoperative mortality rates between 3.3% and 24.2%. This variability points to the need for standardized protocols and more precise criteria for surgical intervention in this patient population. The authors argue that the optimal surgical tactics for treating locally widespread gastric cancer have yet to be established, which is a crucial consideration for clinicians aiming to improve patient outcomes. The article also raises pertinent questions regarding the indications for combined resections and palliative interventions, indicating that the decision-making process in these cases remains contentious. The authors suggest that biliopancreatic reflux resulting from pancreaticoduodenectomy may contribute to the later development of gastric cancer, a hypothesis that warrants further exploration. This insight is particularly relevant for long-term survivors of pancreaticoduodenectomy who present with nonspecific gastrointestinal complaints, as they may be at an increased risk for developing gastric malignancies.

The article titled "Perioperative Treatment in Resectable Gastric Cancer: Current Perspectives and Future Directions" by Petrillo et al., (2019) provides a comprehensive examination of the complexities surrounding T4 gastric cancer, particularly highlighting the significant pancreatic involvement observed in 91.2% of cases. This statistic underscores the aggressive nature of T4 gas-

tric cancer and its propensity to invade adjacent organs, specifically the pancreas, transverse colon, and surrounding vascular structures. The authors effectively emphasize the clinical implications of such findings, suggesting that the extensive local invasion complicates surgical management and necessitates a nuanced understanding of the disease's progression. One of the critical insights from the article is the ambiguity surrounding prognostic factors that influence survival rates in patients with T4 gastric cancer. The authors note that despite the high incidence of complications associated with surgical interventions—ranging from 5% to 59.4%—and postoperative mortality rates between 3.3% and 24.2%, there remains a lack of consensus on optimal surgical tactics. This variability in outcomes is particularly concerning, as it reflects the need for further research to establish standardized protocols that can improve patient survival and quality of life. Moreover, the discussion regarding the indications for combined resections versus palliative interventions is particularly relevant. The article highlights the ongoing debate within the surgical community regarding the appropriateness of aggressive surgical approaches in the context of locally advanced disease. This uncertainty not only impacts clinical decision-making but also emphasizes the necessity for continued investigation into the effectiveness of various treatment modalities.

The article titled "Advanced gastric cancer with abdominal wall invasion treated with curative resection after chemotherapy: a case report" by Nakamura et al., (2021) presents a compelling case study that highlights the complexities and treatment challenges associated with T4b gastric cancer (GC). The authors provide an insightful examination of the effectiveness of preoperative chemotherapy in managing extensive local invasion of adjacent organs, a crucial consideration given the heterogeneous nature of T4b GC. The main idea conveyed by the authors is that curative resection, while the cornerstone of treatment for T4b GC, remains a contentious topic due to the multifactorial characteristics of the disease. The article emphasizes that systemic chemotherapy prior to surgical intervention can significantly reduce the extent of organ invasion, thereby facilitating a more successful surgical outcome. This assertion is supported by the reported 5-year survival rates of 20–32% for patients undergoing curative resection, underscoring the potential benefit of this treatment strategy in selected cases. A critical evaluation of the article reveals that the authors effectively illustrate the importance of individualized treatment planning. They note that the tumor's invasion into structures such as the mesocolon and abdominal wall necessitates careful consideration of surgical strategies and the potential for postoperative complications. The authors' observation that preoperative chemotherapy can lead to a significant reduction in the size of the abdominal wall invasion is particularly noteworthy, as it highlights the role of neoadjuvant therapy in improving surgical feasibility and outcomes. Moreover, the article discusses the correlation between advanced-stage lymph node disease and poor prognosis, reinforcing the need for a comprehensive assessment of tumor staging and lymphatic involvement prior to surgical intervention. This aspect is critical, as it aligns with the ongoing discourse regarding the prognostic factors influencing survival in patients with T4 gastric cancer, an area that remains inadequately defined in the literature. The findings presented in this case report contribute to the broader understanding of treatment modalities for T4b GC, particularly in the context of combined resections and the management of adjacent organ involvement. The authors advocate for a therapeutic approach that integrates curative surgery with perioperative chemotherapy, which they argue is beneficial for optimizing outcomes in patients with advanced disease.

The article "Optimal extent of lymph node dissection in gastric cancer" by Varga et al., (2022) delves into the complexities surrounding the surgical management of gastric cancer, particularly focusing on the significance of lymph node dissection. The authors highlight that gastric cancer remains a leading cause of cancer-related mortality, underscoring the critical role of surgical intervention in both staging and treatment. A notable aspect of the article is its emphasis on how the type and extent of surgical operations are influenced by various factors, including the histological type, location, and stage of the tumor. This aligns with the findings regarding T4 gastric cancer, where the involvement of adjacent structures, such as the pancreas and transverse colon, complicates surgical decisions. The article suggests that a more standardized approach to lymph node dissection could potentially enhance surgical and oncological outcomes, a notion that resonates with the ongoing debate about the optimal surgical tactics for patients with locally advanced gastric cancer. The authors also point out that centralization and adherence to national guidelines could lead to improved outcomes. This is particularly relevant when considering the variability in postoperative complications and mortality rates associated with combined operations for T4 gas-

tric cancer, as noted in the provided topic. The range of postoperative complications from 5% to 59.4% and mortality rates from 3.3% to 24.2% indicates a significant disparity in surgical outcomes, which may be attributable to inconsistent surgical practices and decision-making processes. While the article provides valuable insights into the surgical management of gastric cancer, it also highlights the necessity for continued research to clarify the prognostic factors influencing survival rates in patients with T4 gastric cancer. The lack of consensus regarding the indications for combined resections and palliative interventions suggests that further investigation is warranted to establish more definitive guidelines.

Conclusion. The literature on T4 gastric cancer reveals significant challenges in surgical management, particularly regarding pancreatic involvement and the variability in postoperative outcomes. A substantial number of patients with T4 gastric cancer present with advanced disease, complicating treatment options and often resulting in limited eligibility for curative surgical interventions (Delaunoy, 2011). The high incidence of pancreatic involvement (91.2%) further complicates surgical decisions, as it is frequently associated with damage to adjacent structures such as the transverse colon and surrounding vessels [ref: 34592b37-0249-4120-a507-4d6603b845b9; ref: f856d539-dbc6-441c-9271-4063a8d30d79].

Research indicates that the prognostic factors influencing survival in T4 gastric cancer remain unclear, with studies reporting a wide range of postoperative complications (5% to 59.4%) and mortality rates (3.3% to 24.2%) [ref: 16f5ad73-8fbb-4279-8f4a-d777963bc4ac; ref: ba7d0e58-9056-40ba-be37-e7a92c579ad9]. This variability highlights the need for standardized surgical protocols and a consensus on the indications for combined resections versus palliative interventions (Varga et al., 2022).

Several articles advocate for individualized treatment strategies, emphasizing the potential benefits of neoadjuvant chemotherapy in improving surgical outcomes for selected patients (Nakamura et al., 2021). This approach aligns with the notion that comprehensive assessments of tumor staging and lymph node involvement are crucial for optimizing surgical strategies and enhancing survival rates (Varga et al., 2022).

In conclusion, the literature underscores the complexities of managing T4 gastric cancer, particularly regarding pancreatic involvement and the need for ongoing research to establish optimal surgical tactics. The variability in postoperative outcomes and the unclear prognostic factors necessitate a more standardized approach to treatment, with a focus on individualized patient care to improve survival rates and quality of life.

References:

1. Delaunoy, T. "Latest developments and emerging treatment options in the management of stomach cancer." (2011). ncbi.nlm.nih.gov
2. Paulo Batista, T. and Rino Martins, M. "Lymph node dissection for gastric cancer: a critical review." (2012). ncbi.nlm.nih.gov
3. Li, M., Deng, L., Wang, J., Xiao, L., Wu, W., Yang, S., and Li, W. "Surgical Outcomes and Prognostic Factors of T4 Gastric Cancer Patients without Distant Metastasis." (2014). ncbi.nlm.nih.gov
4. Petrillo, A., Pompella, L., Tirino, G., Pappalardo, A., Maddalena Laterza, M., Caterino, M., Orditura, M., Ciardiello, F., Lieto, E., Galizia, G., Castoro, C., and De Vita, F. "Perioperative Treatment in Resectable Gastric Cancer: Current Perspectives and Future Directions." (2019). ncbi.nlm.nih.gov
5. Wang, G. C., Liu, Y. J., Gao, C. Q., Wang, Y. C., Lv, H. F., Chen, B. B., Nie, C. Y., Chen, X. B., and Luo, S. X. "Surgical outcomes and survival for T4 gastric cancer extending to the transverse colon." (2020). ncbi.nlm.nih.gov
6. Johannes Pflüger, M., Felsenstein, M., Schmoeker, R., DeLong Wood, L., Hruban, R., Fujikura, K., Rozich, N., van Oosten, F., Weiss, M., Burns, W., Yu, J., Cameron, J., Pratschke, J., Lee Wolfgang, C., He, J., and Andrew Burkhart, R. "Gastric cancer following pancreaticoduodenectomy: Experience from a high-volume center and review of existing literature." (2020). ncbi.nlm.nih.gov
7. Nakamura, N., Kinami, S., Fujita, J., Kaida, D., Tomita, Y., Miyata, T., Fujita, H., Ueda, N., and Takamura, H. "Advanced gastric cancer with abdominal wall invasion treated with curative resection after chemotherapy: a case report." (2021). ncbi.nlm.nih.gov
8. Varga, Z., Kolozsi, P., Nagy, K., and Tóth, D. "Optimal extent of lymph node dissection in gastric cancer." (2022). ncbi.nlm.nih.gov
9. Kuliev A.A., Juraev M.D. и др. // Turkish Journal of Physiotherapy and Rehabilitation; 32(3) 2021. С 7242-7245
10. Кулиев А.А., Джураев М.Д. и др. // Academic research in educational sciences scientific journal 2021. №2. С 291-307
11. Кулиев А.А., Джураев М.Д. и др. // Журнал биомедицины и практики; №2 2021. С 132-138.
12. Kuliev A.A., Juraev M.D. и др. // The American Journal of Medical Sciences and Pharmaceutical Research (ISSN – 2689-1026) 2023. С 70-77.