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THE LAUREN CLASSIFICATION PROGNOSTIC VALUE AND SURVIVAL ANALYSIS IN PATIENTS WITH GASTRIC CANCER

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ABSTRACT

Relevance: *Numerous pathohistological classification systems are used to diagnose gastric cancer (GC). Several studies have examined the relationship between the pathohistological characteristics of gastric cancer and various patient-related aspects, as well as factors influencing the course and prognosis of the disease. The Lauren classification system remains an accessible and widely used method for classifying gastric cancer, having been correlated with the clinical, histological, and molecular features of these tumors. This article presents a statistical analysis and evaluates the prognostic significance of the Lauren pathohistological classification system for gastric cancer, aiming to determine the most relevant classification for predicting overall survival in patients with this disease.*

The study aimed to *investigate the clinicopathological characteristics of gastric cancer based on the Lauren classification and to assess its value in predicting the overall survival of patients with gastric cancer.*

Methods: *In this retrospective cohort study, a multidisciplinary team reviewed and discussed the data of 161 patients with GC from Aktobe. All patients met the criteria of the diagnostic and treatment protocol for oncology patients in the Republic of Kazakhstan (Order No. 174, dated November 21, 2022) for surgical treatment and were newly diagnosed with gastric cancer at any stage, aged 18 years or older. Data analysis was performed using SPSS v.25 (SPSS Inc., Chicago, Illinois, USA). The Pearson chi-square test was used to analyze the association between the Lauren classification and clinicopathological factors. The study was conducted at the Medical Center of West Kazakhstan Marat Ospanov Medical University based on pathomorphological reports collected from January 2020 to August 2024.*

Results: *In the analysis of 161 gastric cancer cases, the Lauren classification showed a statistically significant association with the clinicopathological characteristics of the disease and patients' overall survival. The diffuse type was associated with a more aggressive course and worse prognosis. The intestinal type was more frequently observed in patients with favorable prognostic features. Statistical analysis using the Pearson chi-square test revealed significant differences in survival rates between the Lauren subtypes.*

Conclusion: *The Lauren classification remains a clinically significant and reliable tool for the prognostic stratification of gastric cancer patients. According to Lauren, the tumor type enables the assessment of disease aggressiveness and prognosis, supporting informed therapeutic choices and a personalized approach to treatment.*

Keywords: *gastric cancer (GC), Lauren classification, overall survival, prognosis.*

Introduction: Gastric cancer (GC) is a malignant neoplasm with an aggressive course, most often diagnosed at advanced stages, particularly in Western countries [1, 2]. GC ranks fifth in prevalence among oncological diseases and third in mortality, according to WHO data [3]. In East Asian countries, such as Japan, the Republic of Korea, and Mongolia, an increase in incidence has been reported. In contrast, rates in North America, Northern Europe, and several African regions remain significantly lower, following a trend observed over recent decades [4]. In the Republic of Kazakhstan, GC ranks third in prevalence among oncological diseases, with an incidence rate of 15.8 cases per 100,000 population, and also holds third place in mortality, with 11.4 cases per 100,000 population [5].

Currently, the gold standard for GC prognosis and treatment guidance is the anatomical classification of tumors, lymph nodes, and metastases (TNM), developed by the American Joint Committee on Cancer (AJCC) [6, 7]. It is widely used in many clinical practices without considering histopathology, as the significance of the morphological characteristics of GC in determining clinical outcomes remains limited [8].

Most studies have identified the Lauren subtype as an independent prognostic factor in GC [9 - 11]. Recent studies conducted in Asia have also suggested that the Lauren classification may serve as a reliable prognostic tool for GC patients [12, 13].

Depending on tumor architecture, growth pattern, and cell morphology, this classification divides GC into intestinal, diffuse, and mixed types [14 - 16]. Intestinal-type GC consists of glandular structures accompanied by papillary or solid components. On the other hand, diffuse-type GC consists of loosely cohesive cells that grow in small clusters or as scattered cells, exhibiting an infiltrative pattern. This classification is differently associated with clinicopathological features [17, 18]. According to well-established experiments, *Helicobacter pylori* is the primary factor in the development of malignant changes in the stomach; however, the influence of factors such as diet, genetic predisposition, and the patient's socioeconomic status cannot be excluded in

this multistep process [19]. Intestinal tumors are more frequently found in elderly males and are associated with *Helicobacter pylori* infection and environmental factors. Moreover, most studies have identified the Lauren subtype as an independent prognostic factor in GC [20 - 22]. Thus, in the era of molecular medicine, the Lauren system is a cost-effective and widely used classification that is associated with clinical, pathological, prognostic, and molecular features. Lauren subtypes can be considered distinct entities that differ in histology, biology, and clinical behavior, and the identification of easily accessible prognostic factors in patients with intestinal and diffuse-type tumors may significantly improve risk assessment and patient stratification in GC [23].

The study aimed to investigate the clinicopathological characteristics of gastric cancer based on the Lauren classification and to assess its value in predicting the overall survival of patients with gastric cancer.

Materials and methods:

Study design: In this retrospective cohort study, data from 161 patients aged 18 years and older with a newly diagnosed GC of any grade who underwent surgical treatment following the Protocol for Diagnosis and Treatment of Oncology Patients of the Republic of Kazakhstan No. 174 dated 21.11.2022, were reviewed and discussed by a multidisciplinary team. The study was conducted at the Medical Center of the West Kazakhstan Marat Ospanov Medical University NCJSC based on histological reports compiled from January 2020 to August 2024.

Inclusion Criteria:

– Age over 18 years;

– Patients with pathomorphologically confirmed diagnosis of GC;

– Disease stages I, IIa, IIb, IIIa - IIIc according to the 8th edition of the TNM classification;

– Tumor located in any anatomical region of the stomach;

– Operable and resectable growing tumor;

– Histological tumor type according to Lauren classification: intestinal and diffuse types of GC.

Exclusion Criteria:

– Patients with newly diagnosed GC with primary multiple metachronous and synchronous tumor growth;

– Diagnosis established postmortem;

– Mixed type GC (dimorphic tumors);

– Neuroendocrine tumors of the stomach;

– Sarcomas, lymphomas of the stomach;

– Gastrointestinal stromal tumors (GIST) of the stomach.

Within the framework of the retrospective study, patients were divided into subgroups based on the morphological type of GC according to Lauren's histological classification:

– Diffuse type: poorly differentiated carcinoma, signet-ring cell carcinoma, and undifferentiated carcinoma.

– Intestinal type: papillary adenocarcinoma, tubular adenocarcinoma, mucinous adenocarcinoma, and well-differentiated adenocarcinomas.

Disease staging was determined according to the TNM classification of the American Joint Committee on Cancer (AJCC), 8th edition.

Patients were also stratified into subgroups according to tumor localization in:

– Cardiac part of the stomach (C16.0 - C16.1)

– Body of the stomach (C16.2 - C16.8)

– Antral part of the stomach (C16.3)

Statistical Analysis: Survival time was presented as the median and interquartile range (IQR, 25th-75th percentiles). Pearson's chi-square test was used to analyze the relationship between the Lauren classification and clinicopathological factors. Five-year survival rates were assessed using the Kaplan–Meier method, with group differences evaluated by the log-rank test. A 95% confidence interval was applied, and p-values < 0.05 were considered statistically significant.

Ethical Approval: The study was conducted in compliance with bioethical standards related to the use of patients' pathomorphological data. The study design and protocol were approved at a local meeting of the Bioethical Experimental Committee of West Kazakhstan Marat Ospanov Medical University, Aktobe (Protocol No. 10, dated October 27, 2023).

Results: A total of 161 GC patients underwent surgical treatment at the Aktobe Oncology Medical Center from 2020 to 2023 (Table 1).

Table 1 – Descriptive Characteristics of Patients with Newly Diagnosed Gastric Cancer (n=161)

Demographic Data and Tumor Characteristics	Number of Patients	%
Gender		
Men	110	68.3
Women	51	31.7
Age		
Under 60 years	37	23
Over 60 years	124	77
Tumor Location		
Cardia of the stomach	58	36.0
Body of the stomach	56	34.8
Antrum of the stomach	47	29.2
Disease Stage		
I	15	9.3
II	8	5.0
III	138	85.7
Tumor (T)		
T1	12	7.5
T2	8	5.0
T3	11	6.8
T4	130	80.7
Node (N)		
N0	72	44.7
N1	28	14.7
N2	43	26.7
N3	17	10.6
Histological Type (Lauren Classification)		
Diffuse type	110	68.3
Intestinal type	51	31.7
Grade		
1	6	3.7
2	51	31.7
3	84	52.2
4	20	12.4

In our study, the incidence of GC was twice as high among men as among women. A total of 80.7% of patients had large invasive gastric tumors, with 73.9% of those in locally advanced stages. In 36% of patients, the tumor was localized in cardia of the stomach. Lymphatic metastasis was identified in 55% of GC patients. Diffuse-type GC was diagnosed twice as often as the intestinal type (68% vs. 32%). Poorly differentiated tumors accounted for 52% of all cases.

According to the Lauren classification, the diffuse type predominated in both sexes (Table 2). Advanced tumor growth (pT) was more commonly observed in diffuse-type GC (75.4% vs. 25%; p<0.001). Distant lymphatic metastasis (pN) was also more frequently noted in diffuse-type cases (65% vs. 35%), although the difference was not statistically significant. In diffuse-type GC, the tumor was most frequently localized in cardia of the stomach (98%), whereas in intestinal-type GC, the tumor was predominantly found in the antral region (79%; p<0.001). By stage, the intestinal type significantly prevailed (80%) in early-stage GC, whereas the diffuse type predominated in locally advanced forms (74%) (p<0.001).

Table 2 – Clinicopathological Characteristics According to the Lauren Classification

Parameters	Diffuse Type, abs. (%)	Intestinal type, abs. (%)	Total, abs. (%)	p*
Gender				p=0.502
Women	33 (64.7%)	18 (35.3%)	51 (31.7%)	
Men	77 (70%)	33 (30%)	110 (68,3%)	
pT stage				p<0.001
T1	2 (16.7%)	10 (83.3%)	12(7.5%)	
T2	3 (37.5%)	5 (62.5%)	8 (4.9%)	
T3	7 (63.6%)	7 (36.4%)	11 (6.8%)	
T4	98 (75.4%)	32 (24.6%)	130 (80.7%)	
Tumor Location				p<0.001
Cardia of the stomach	57 (98.3%)	1 (1.7%)	58 (36.02%)	
Body of the stomach	43 (76.8%)	13 (23.2%)	56 (35%)	
Antrum of the stomach	10 (21.3%)	37 (78.7%)	47 (29.2%)	
pN stage				p=0.280
N0	47 (65.3%)	25 (34.7%)	72 (44.7%)	
N1	18 (64.3%)	10 (35.7%)	28 (17.4%)	
N2	34 (79.1%)	9(20.9%)	43 (26.7%)	
N3	11 (64.7%)	6(35.3%)	17 (10.6%)	
Stage				p<0.001
1	3 (20%)	12(80%)	15 (100.0%)	
2	5 (62.5%)	3 (37.5%)	8 (100.0%)	
3	102 (73.9%)	36(26.1%)	138 (100.0%)	

*Note: *- Pearson's Chi-square test was used*

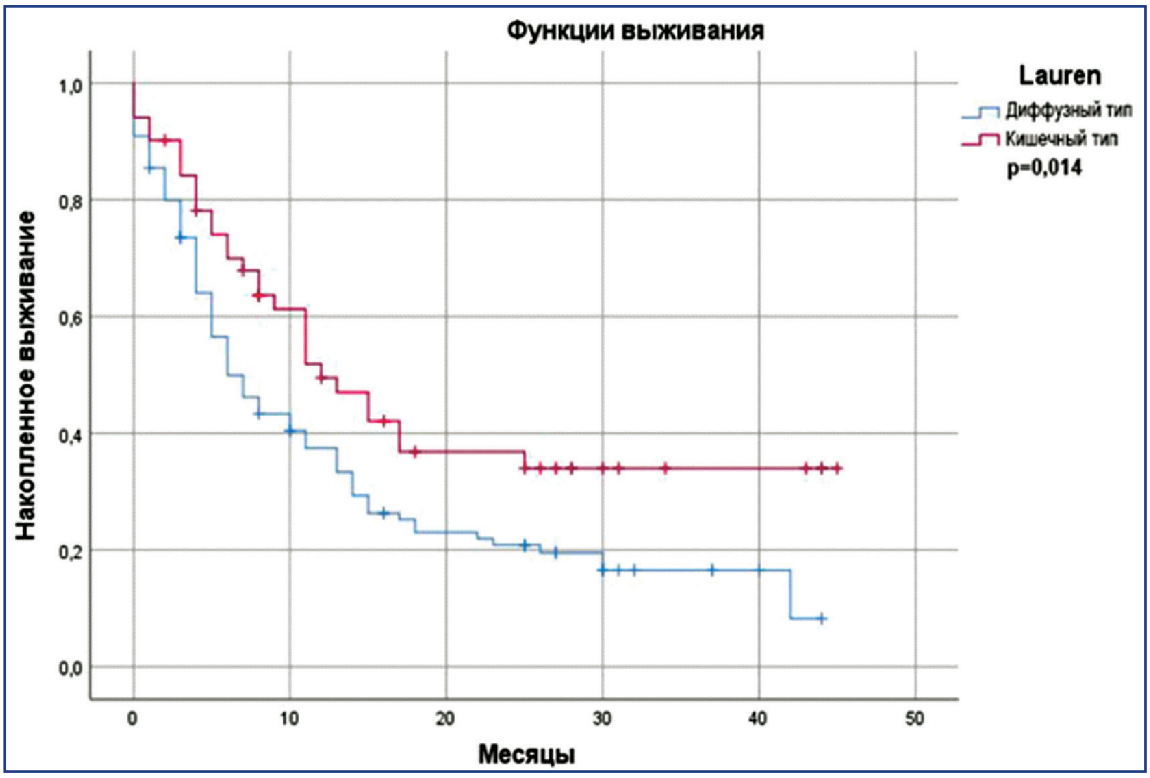
Survival Analysis in Patients with Gastric Cancer: The overall survival rate among patients was 15%, with a median survival time of 8 months. The analysis of survival in relation to tumor size (pT) and lymphatic metastasis (pN) revealed a reliable association: The best survival outcomes were observed in patients with early-stage tumors (T1 – T2) and absence of lymph node metastasis (N0 – N1), where the median survival was around or more than 13 months. The worst prognosis was noted in patients with advanced tumor stages (T3-T4) and multiple lymph node metastases (N3-N4), where median survival decreased to 3-6 months (p<0.001). The survival analysis revealed an overall survival rate of 15%, with a median survival time of 8 months. A statistically significant difference in survival was observed depending on tumor size (pT) and presence of lymphatic metastasis (pN) (p<0.001) (see Table 3).

Table 3 – Overall and Median Survival Depending on Tumor Stage (pT) and Lymphatic Metastasis (pN)

Disease Indicator	Overall survival, % (95% CI)	Median Survival, $Q_{50}(Q_{25}$-$Q_{75})$
pT stage		
T1	32.19% [23.19-41.19]	∞
T2	33.39% [21.83-44.96]	∞
T3	12.15% [6.05-18.26]	11 [5.72-16.28]
T4	13.25% [6.05-18.26]	6 [3.94-8.06]
pN stage		
N0	20.08% [15.60-24.55]	13 [9.03-16.96]
N1	16.37% [11.80-20.94]	13 [9.54-16.45]
N2	12.11% [7.65-16.57]	5 [3.45-6.54]
N3	6.47% [3.80-9.13]	6 [1.96-10.03]

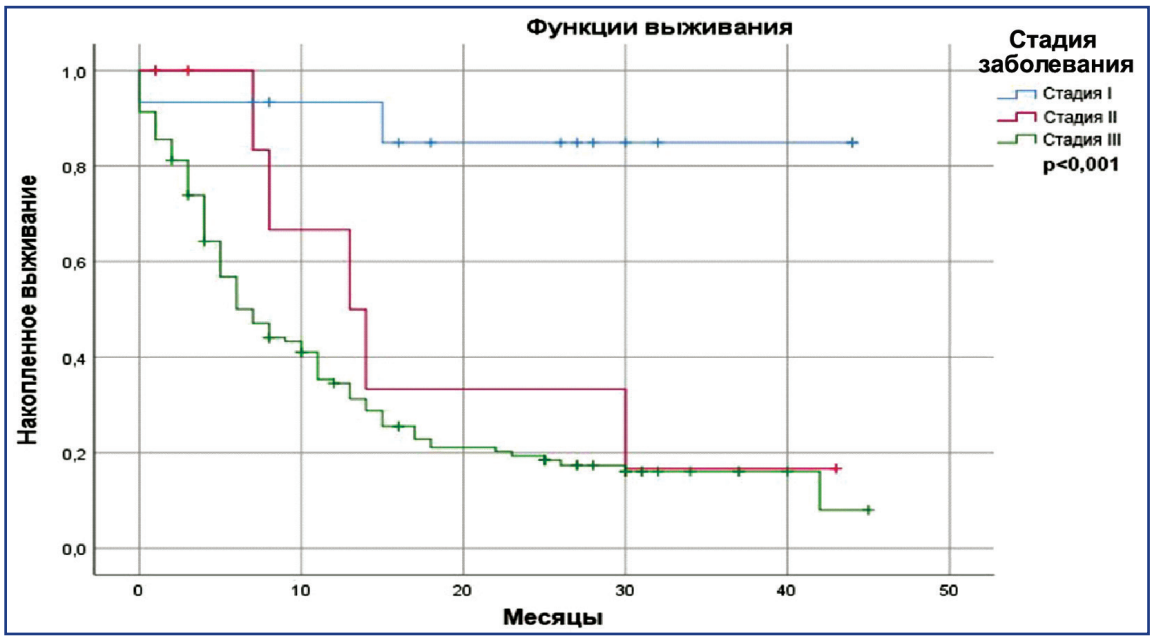
Survival Dependence on Gastric Cancer Type: According to the Lauren classification, the best survival rate was observed in patients with the intestinal type of gastric cancer: the overall survival rate was 20.88% [95% CI: 15.6-26.17], and the median survival time was 12 months [95% CI: 7.48-16.51]. In contrast, patients with the diffuse type had an overall survival rate of 13.58% [95% CI: 10.72-16.44], and the median survival time was 6 months [95% CI: 3.84-8.15]. Statistical significance: p<0.001 (see Figure 1).

Survival Dependence on Tumor Stage: A direct correlation was found between survival and the stage of tumor development. Thus, the overall survival rate at Stage I was 38% [95% CI: 31.64-45.56], while in patients with Stage III, it was 13.30% [95% CI: 10.74-15.85]. The median survival time for all Stage III patients was 7 months [95% CI: 5.01-8.98]. Statistical significance: p<0.001 (see Figure 2).



Legend: Накопленное выживание – Accumulated survival; Функции выживания – Survival functions; Месяцы – Months; Диффузный тип – Diffuse type; Кишечный тип – Intestinal type

Figure 1 – Five-Year Survival Rate considering the Lauren classification

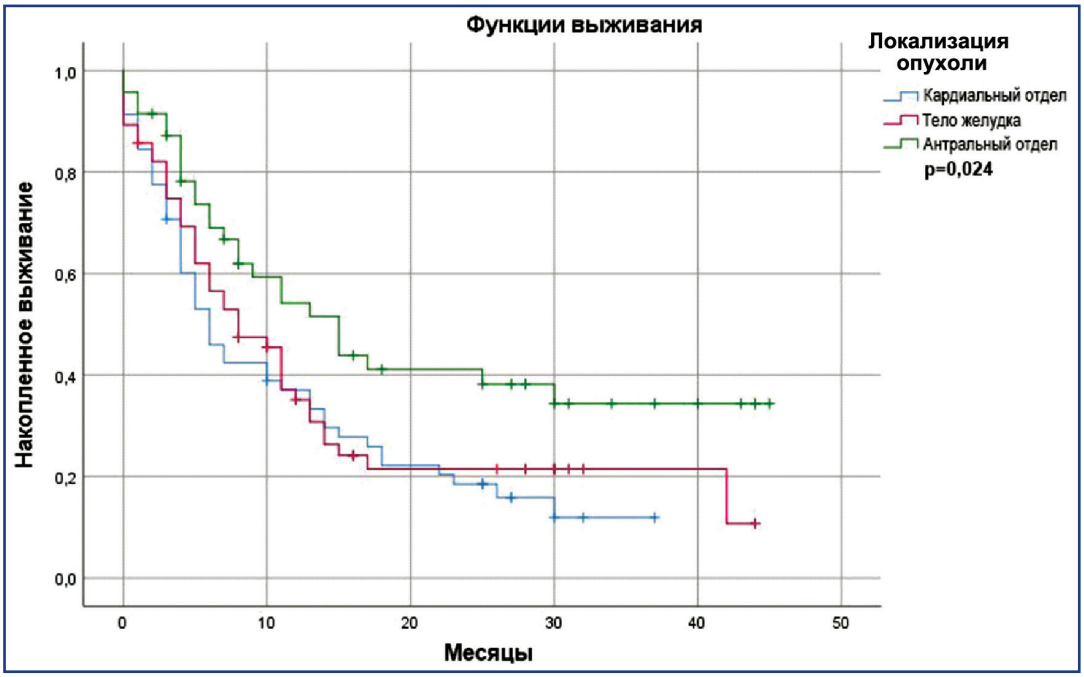


Legend: Накопленное выживание – Accumulated survival; Функции выживания – Survival functions; Месяцы – Months; Стадия – Stage

Figure 2 – Five-Year Survival Rates by Stage

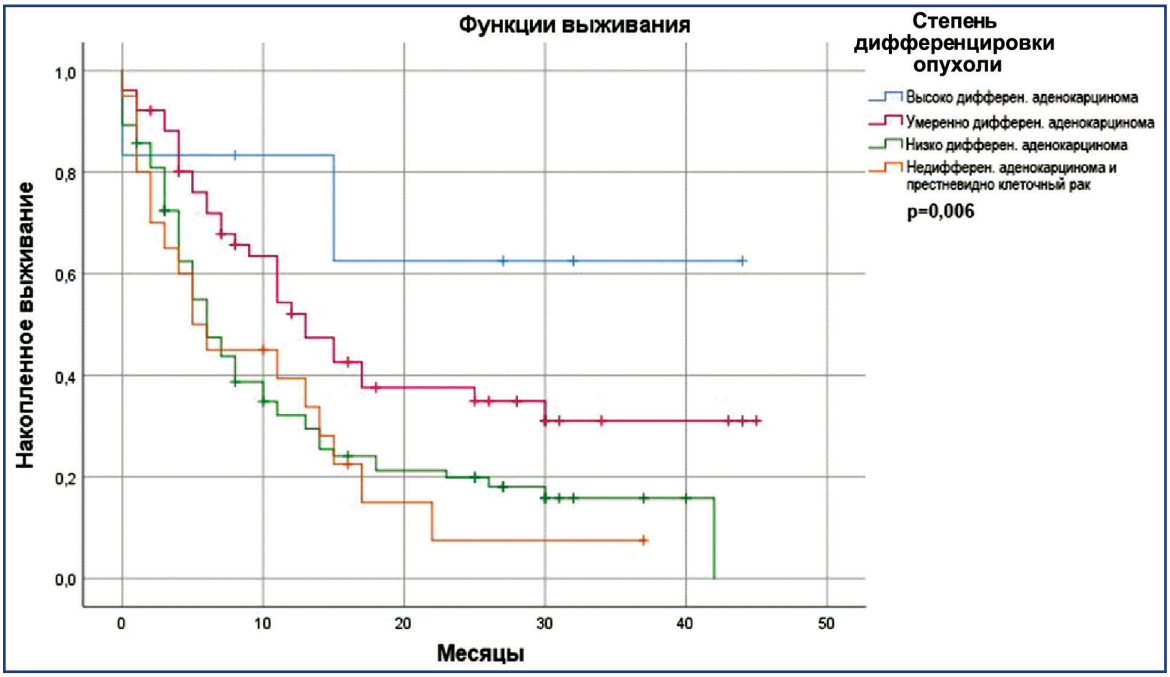
Survival Dependence on Tumor Location: For tumors located in cardia of the stomach, the overall survival rate was 11.79% [95% CI: 8.61-14.97], and the median survival time was 6 months [95% CI: 3.80-8.19]. In the body of the stomach, the overall survival rate was 14.48% [95% CI: 10.17-18.79], with a median survival time of 8 months [95% CI: 4.59-11.40]. The best survival outcomes were observed in tumors located in the antrum, with an overall survival rate of 21.68% [95% CI: 16.17-27.20], and a median survival time of 15 months [95% CI: 9.12-20.87]. Statistical significance: p=0.024 (see Figure 3).

Survival Dependence on Tumor Differentiation: In patients with well-differentiated adenocarcinoma, the overall five-year survival rate was 30% [95% CI: 15.61-45.63], while in cases of undifferentiated and signet-ring cell carcinoma, the overall survival rate was 10% [95% CI: 5.51-14.84]. Statistical significance: p=0.006 (see Figure 4).



Legend: Накопленное выживание – Accumulated survival; Функции выживания – Survival functions; Месяцы – Months; Кардиальный отдел – Cardia of the stomach; Тело желудка – Body of the stomach; Антральный отдел – Antrum of the stomach

Figure 3 – Five-Year Survival Rates Depending on Tumor Location



Legend: Накопленное выживание – Accumulated survival; Функции выживания – Survival functions; Месяцы – Months; Высокодифференцированная аденокарцинома – Well-differentiated adenocarcinoma; Умеренно дифференцированная аденокарцинома – Moderately differentiated adenocarcinoma; Низкодифференцированная аденокарцинома – Poorly differentiated adenocarcinoma; Недифференцированная аденокарцинома и перстневидно-клеточный рак – Undifferentiated adenocarcinoma and signet-ring cell carcinoma

Figure 4 – Five-Year Survival Rates Depending on Tumor Differentiation

Discussion: There are several histopathological classifications of GC due to the pronounced morphological heterogeneity of this disease [24]. However, the question of which classification is superior remains a matter of controversy. Tumor grades of differentiation are commonly used to describe GC, and four types are defined: well-differentiated, moderately differentiated, poorly differentiated, and undifferentiated [12]. It is widely believed that poorly differentiated tumors are typically more widespread at the time of surgery compared to well-differentiated ones, and that patients with more differentiated tumors have clear survival advantages after curative resection [25, 26]. However, recent studies have reported that tumor differentiation grade does not have a significant association with the prognosis of GC patients [27-30]. In the present study, tumor differentiation was significantly associated with prognosis, as determined by the log-rank test; however, it was not an independent prognostic factor for overall survival (OS). This inconsistency may be due to the mixing of differentiated and undifferentiated histologies in GC [29, 31]. Therefore, further research is needed to understand the significance of tumor differentiation grade in GC.

According to the results of our study based on the Lauren classification, the diffuse type predominates among both sexes. Diffuse tumors were mostly advanced (75.4% vs. 24.6%; p<0.001). Distant lymphatic metastasis (pN) was also observed more frequently in the diffuse type (65% vs. 35%), although the difference was not statistically significant. In the diffuse type, the tumor was most commonly located in cardia of the stomach (98%), whereas the intestinal type was more often located in the antral region (79%; p<0.001). By stage: at early stages, the intestinal type of GC predominated (80%), while in locally advanced cases, the diffuse type accounted for the majority (74%, p<0.001).

Our study showed a direct correlation between tumor stage and survival rate. According to our results, survival at stage I was 38% [95% CI: 31.64-45.56], while in patients with stage III, overall survival was 13.30% [95% CI: 10.74-15.85], and median survival was 7 months [95% CI: 5.01-8.98] with statistical significance of p<0.001.

By tumor location: In cardia of the stomach, overall survival was 11.79% [95% CI: 8.61-14.97], and the median survival time was 6 months [95% CI: 3.80-8.19]; In the body of the stomach – 14.48% [95% CI: 10.17-18.79], with a median survival time of 8 months [95% CI: 4.59-11.40]; the best survival outcome was observed in GC located the antral part of the stomach – 21.68% [95% CI: 16.17-27.20], and a median survival time of 15 months [95% CI: 9.12-20.87], with statistical significance of p=0.024.

By tumor differentiation grade: The overall five-year survival in patients with well-differentiated adenocarcinoma was 30% [95% CI: 15.61-45.63]; In cases of undifferentiated and signet-ring cell carcinoma, overall survival was 10% [95% CI: 5.51-14.84], with statistical significance of p=0.006.

Based on the data from our study, the incidence in men was twice that of women. Among them, 80.7% of patients had massive invasive gastric tumors. In the majority of patients, the tumor was located in cardia of the stomach (36%). In addition, 55% of patients with gastric cancer had lymphatic metastasis.

In our study, the diffuse type GC was twice as common as the intestinal type (68% vs. 32%).

The Lauren classification of GC is one of the widely used morphological classification systems applied for survival prediction [15]. There is evidence that tumor subtypes under the Lauren classification respond differently to chemotherapy, resulting in different survival outcomes [14].

The specific pathogenetic and morphological features of the intestinal and diffuse types may underlie their differing behaviors [16]. The epidemiological intestinal type of cardia cancer, especially in the antral part, is often closely associated with chronic inflammation due to *Helicobacter pylori* infection [32, 33]. Anatomically proximal GC can be classified as the third type, in which inflammation of a different origin may be the driving force of carcinogenesis [34]. In addition, the anatomical location of GC has clinical relevance, with proximal third gastric cancers being associated with worse prognosis than middle or distal third cancers [35].

Several studies have shown that the Lauren classification has better discriminatory ability and monotonicity [11, 12]. In this study, the Lauren classification demonstrated superior model discrimination, fitting efficiency, and net benefit compared to other classifications. The five-year survival based on the Lauren classification showed similar results when stratified by morphological type, tumor stage, location, and differentiation grade.

The solution curve analysis revealed that the use of this classification model yields greater clinical benefits compared to alternative approaches. Nomograms are visual tools that enable individualized survival prediction based on a patient's unique clinical data [36], providing improved prognostic accuracy and comprehensive outcomes for various types of cancer [37]. Based on the Lauren classification, considering tumor stage, location, and differentiation, we developed a new prognostic nomogram. This new prognostic model demonstrated higher discriminatory ability, better model fitting, and net advantages compared to the 8th edition AJCC TNM classification. These findings confirm that incorporating a broader range of factors encompassing various aspects of the disease is the most promising approach to enhancing the clinical treatment of GC. However, the results of this study should still be interpreted with caution, as specific intervention factors, such as surgical procedures, chemotherapy and radiotherapy regimens, and drug dosages, were not controlled.

Conclusion: Thus, the Lauren classification exhibits high discriminatory ability, effective model calibration, and clear advantages compared to classification based on tumor differentiation grade and the Lauren classifica-

tion itself. This classification also demonstrates good applicability in various clinical scenarios. The new prognostic nomogram, based on the Lauren classification, also demonstrates high discriminatory ability, model fitting performance, and notable advantages. Nevertheless, the results of this study require further confirmation.

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АНДАТПА

АСҚАЗАН ҚАТЕРЛІ ІСІГІ БАР НАУҚАСТАРДА LAUREN КЛАССИФИКАЦИЯСЫНЫҢ БОЛЖАМДЫҚ МӘНІ ЖӘНЕ ӨМІР СҮРУ ТАЛДАУЫ

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Өзектілігі: *Асқазан обырын диагностикалау үшін қолданылатын көптеген патогистологиялық классификациялық жүйелер бар. Бірқатар зерттеулерде асқазан рагының патогистологиялық сипаттамалары мен науқастардың әртүрлі аспектілері, сондай-ақ аурудың ағымына және оның болжамына әсер ететін факторлар арасындағы өзара байланыс зерттелді. Lauren жіктеу жүйесі асқазан ісіктерінің клиникалық, гистологиялық және молекулалық сипаттамаларына негізделген және асқазан ісіктерін жіктеудің қолжетімді және кеңінен қолданылатын әдісі болып қала береді. Осы мақалада асқазан обырын (АО) үшін Лаурен патогистологиялық классификациясының статистикалық анализі мен прогностикалық маңызы, сондай-ақ осы аурумен ауыратын науқастардың жалпы өмір сүруін болжау үшін ең маңызды классификацияны анықтау ұсынылған.*

Зерттеу мақсаты *– асқазан рагының клиникалық-патологиялық сипаттамасын Лаурен классификациясы бойынша зерттеуге және асқазан обырын бар науқастардың жалпы өмір сүруін болжауға бағытталған.*

Әдістері: *Осы ретроспективті когорттық зерттеуде Қазақстан Республикасының 2022 жылғы 21 қарашадағы № 174 онкологиялық науқастарды диагностикалау және емдеу хаттамасына сәйкес хирургиялық ем тағайындалған кез келген дәрежедегі асқазан обыры жаңадан анықталған 18 жастан асқан және одан жоғары 161 науқастың деректері мультидисциплиналық топта зерттеліп, талқыланды. Есептеу үшін SPSS.v.25 бағдарламасы қолданылды. Категориялық деректер Пирсон X^2 тесті арқылы бағаланды.*

Зерттеу КеАҚ Марата Оспанов атындағы БҚМУ медицина орталығы базасында 2020 жылдың 01 айынан 2024 жылдың 08 айына дейінгі патоморфологиялық сипаттама негізінде жүргізілді.

Нәтижелері: *Асқазан обырының 161 жағдайын талдау Лаурен классификациясының аурудың клиникалық-патологиялық сипаттамаларымен және науқастардың жалпы өмір сүруімен статистикалық маңызды өзара байланысты растайтынын көрсетті. Диффузды рак түрі агрессивті ағыммен және нашар болжаммен байланысты болды. Ішек түрі көбінесе қолайлы прогностикалық белгілері бар науқастарда кездеседі. Пирсон X^2 критерийін қолдану арқылы статистикалық өңдеу Лаурен типіне байланысты өмір сүру бойынша топтар арасында сенімді айырмашылықтарды көрсетті.*

Қорытынды: *Лаурен бойынша асқазан обырын классификациялау науқастарды прогностикалық стратификациялау үшін клиникалық маңызды және сенімді құрал болып қала береді. Лаурен бойынша ісік түрі процестің агрессивтілігін және болжамды бағалауға мүмкіндік береді, бұл терапияны негізделген таңдау мен жекелендірілген тәсілді қамтамасыз етеді.*

Түйінді сөздер: *асқазан обыры, Лаурен классификациясы, жалпы өмір сүру, болжам.*

АННОТАЦИЯ

ПРОГНОСТИЧЕСКОЕ ЗНАЧЕНИЕ КЛАССИФИКАЦИИ LAUREN И АНАЛИЗ ВЫЖИВАЕМОСТИ У ПАЦИЕНТОВ С РАКОМ ЖЕЛУДКА

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Актуальность: *Существует множество патогистологических классификационных систем, применяемых для диагностики рака желудка (РЖ). В ряде исследований изучалась взаимосвязь между патогистологическими характеристиками РЖ и различными аспектами пациентов, а также факторами, влияющими на течение болезни и её прогноз. Система классификации Lauren привязана к клиническим, гистологическим и молекулярным характеристикам опухолей желудка и остается доступным и широко используемым методом классификации РЖ. В данной статье представлен статистический анализ и прогностическая значимость системы*

патогистологической классификации Lauren для РЖ, а также определена наиболее значимая классификация для прогнозирования общей выживаемости пациентов с РЖ.

***Цель исследования** – изучение клинико-патологической характеристики рака желудка по классификации Lauren и прогнозирования общей выживаемости пациентов с раком желудка.*

Методы: В данном ретроспективном когортном исследовании были изучены и обсуждены на мультидисциплинарной группе данные 161 пациента в возрасте от 18 лет с впервые установленным диагнозом РЖ любой степени дифференцировки, которым было показано оперативное лечение согласно протоколу диагностики и лечения онкологических больных РК №174 от 21.11.2022 г. Исследование проводилось в МЦ НАО ЗКМУ имени Марата Оспанова на основании гистологических описаний, составленных с 01.2020 г. по 08.2024 г. Для анализа данных использовали программу SPSS.v.25 (SPSS Inc., Чикаго, Иллинойс, США), связь между классификацией Lauren и клинико-патологическими факторами исследовали при помощи теста хи-квадрат Пирсона.

Результаты: Анализ 161 случая РЖ показал, что классификация Lauren подтверждает статистически значимую взаимосвязь с клинико-патологическими характеристиками заболевания и общей выживаемостью пациентов. Тип диффузного рака ассоциировался с более агрессивным течением и худшим прогнозом. Кишечный тип чаще встречался у пациентов с более благоприятными прогностическими признаками. Статическая обработка с использованием критерия хи-квадрат Пирсона показала достоверные различия между группами по выживаемости в зависимости от типа Lauren.

Заключение: Классификация РЖ по Lauren остается клинически значимым и надежным инструментом для прогностической стратификации пациентов. Тип опухоли по Lauren позволяет оценить агрессивность процесса и прогноз, что способствует обоснованному выбору терапии и персонализированного подхода.

Ключевые слова: рак желудка (РЖ), классификация Lauren, общая выживаемость, прогноз.

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