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State of the Russian Oncology Service: esophageal cancer. Population-based study at the federal district level. Part II. Median survival, observed and relative survival of patients considering disease stage and histological structure of tumors

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ABSTRACT. Esophageal cancer (EC) is the most severe pathology of malignant tumors, with the mortality rate of patients exceeding 70% in the first year of observation. Over the past 19 years, there was a slight improvement in the effectiveness of anticancer measures for this localization of tumors. In February 2019 the Population-based Cancer Registry database (PCRD) of the Northwestern Federal District of the Russian Federation (NWFD RF) was developed with more than 1 million 350 thousand observations which provides insight into the real state of the effectiveness of anti-cancer measures and directs the following development of the database. After a thorough data quality assurance, about 1 million observations were selected for analysis.

From 2000 to 2018, 15760 primary EC cases were accumulated in the NWFD RF PCRD. Considering that the levels of standardized morbidity and mortality rates of the population of Russia and the Northwestern Federal District of the Russian Federation are close in terms of the level of indicators, we believe that the data obtained for the first time in Russia on the survival of EC patients in the Northwestern Federal District of the Russian Federation fully reflect the state of the effectiveness of combating EC in Russia.

The purpose of the study is to carry out a set of analytical calculations of the survival rates of EC patients in the dynamics over the past 19 years according to the NWFD RF PCRD. All calculations were performed in accordance with the international requirements for such development and, first of all, according to Eurocare standards.

The results of our study indicate that the EC median survival rate for both sexes has increased from five to six months.

The mortality rate of patients in the first year of follow-up has decreased from 72.4 to 71.4% (both sexes), from 73.9 to 71.6% among men, from 69.3 to 65.1% among women.

The five-year survival rate of EC patients in the NWFD RF had slight fluctuations, especially among the female population. Data grouped for three five-year observation cycles has shown an increase in the five-year survival rate of EC patients from 7.3 to 8.1%, and the one-year survival rate has increased over four five-year cycles from 25.3 to 30.8%.

For the first time in Russia, at the population level, the effect of treating EC patients has been shown according to the fourth sign of ICD-10.

The greatest treatment success has been achieved for Cervical esophagus cancer patients (C15.0) from 23.3 to 35.0% (one-year survival), Thoracic esophagus cancer patients (C15.1) from 29.6 to 35.8%. The most significant improvement has been made for Upper third of esophagus cancer patients (C15.3) – from 18.2 to 34.0%.

It is important to note that over the four observation periods, the proportion of Esophagus, unspecified cancer patients (C15.9) has decreased (from 29.3 to 19.8%), which indicates a major diagnosis quality improvement.

KEYWORDS: esophageal cancer, the Northwestern Federal District of the Russian Federation, survival of patients, median survival, age, disease stage, localization and histological structure

ABBREVIATIONS:

EC – Esophageal cancer;
PCRD – Population-based Cancer Registry database;
NWFD RF – Northwestern Federal District of the Russian Federation;
NOS – Not Otherwise Specified;
Unk. – Unknown.

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INTRODUCTION

Having at our disposal the new PCR database of the Northwestern Federal District of the Russian Federation with about a million of observations, the studies were conducted on the state of cancer care for patients with malignant tumors in Russia, including malignant melanoma of skin (C43), other malignant neoplasms of skin (C44), lip cancer (C00), tongue neoplasms (C01.02), malignant neoplasm of colon (C18), rectum (C19, 20), liver (C22), heart (C38), eye (C69), brain (C72), kidney (C64) and others [1–3].

Calculations of survival rates, subject to careful database maintenance, reflects the real effect of all anti-cancer measures taken. However, the process of improving survival rates is slow. The graph shows this process over the five-year periods [1, 2].

It is also important that the state reporting (Form No. 7) provide objective data on the cancer incidence and mortality rate in Russian population [4]. However, it does not include the data for calculating one-year and five-year observed and relative survival rates in the analytical indicators section. It specifies only the calculation of mortality in patients with cancer in the first year of observation, but these indicators are formed outside the PCR system created in Russia [5] and do not correspond to the real state.

A large number of studies have been devoted to the methodology for calculating the survival rates of cancer patients [1, 2, 6–13].

Unfortunately, in the Russian Federation, only a limited number of cancer registries calculate survival rates according to international standards. The first register was the PCR of Saint Petersburg, on the basis which three editions of the monograph "Survival of cancer patients" were prepared [1, 2, 7, 8, 14, 15].

Calculation fragments were presented in the books of the PCR of St. Petersburg [7, 8, 14, 15]. Calculation of the survival rates for patients diagnosed with cancer were presented in the Express-information of the Northwestern Federal District of the Russian Federation [1, 2]. Calculations of the survival rate of patients with malignant neoplasms were also carried out by the PCR of the Arkhangelsk, Samara, Chelyabinsk regions and the Republic of Karelia [1, 2].

Express-Information 5th issue summarizes the data on the one-year and five-year survival rates of cancer patients in 16 administrative territories of the Russian Federation, which work on the basis of the programs developed by the Laboratory of Oncological Statistics staff of the N.N. Petrov National Medicine Research Center of Oncology and the Laboratory of Medical Cybernetics of the "Novel" LLC [1, 2].

The calculation of the survival rate of cancer patients is the most important indicator for assessing the activities of the oncological service, provided that doctors of cancer registries have access to the databases of the deceased. Median survival is necessary to control the level of observed and relative survival rates of cancer patients.

Median survival

Median survival is a variant that is in the middle of the variation series dividing it in half. In our case, it is the period during which 50% of the primary registered patients die [16].

For localizations with a **high mortality rate**, to which EC belongs, it is measured in months.

Table 1 shows the trends in median survival among esophageal cancer patients in the Northwestern Federal District of the Russian Federation for the period from 2000 to 2018.

Annual fluctuations in the indicator may be explained by the difference in each observation year, the health status of the recorded contingents, the age difference of patients and other reasons. Large fluctuations in values among the female population may also be explained by the small number of observations.

The improvement in the survival rate of EC patients is slow, but at the same time, we may note a clear pattern of growth in the median survival rate from five to six months, and even up to seven months among the female population.

Cumulative survival

Table 2 shows the dynamics of the observed survival rates of EC patients in the Northwestern Federal District of the Russian Federation for the period from 2000 to 2018. Over 19 years, the one-year survival rate of EC patients in both sexes increased from 29.2 to 29.6%, or by 1.7%.

Among the male population, an increase in the survival rate of patients in the first year of observation was established from 27.5 to 29.3%, among the female population – a decrease from 33.8 to 30.4%. The relative survival rate in the first year of follow-up was 1.0% higher. The five-year observed survival rate of EC patients in the Northwestern Federal District had small annual fluctuations, especially among the female population. The relative survival rate compared to many other cancer sites for EC was also only 1.0% higher.

Thus, we may state that the five-year observed and relative survival rate of patients with EC in the Northwestern Federal District of the Russian Federation is actually 7–9%.

The high level of five-year survival in 2000 may be associated with the development of the methodology for the formation of the database and the difference in the age composition of the compared groups.

It is important to note that the five-year survival rate of EC patients in the Northwestern Federal District of the Russian Federation for patients under 60 years of age exceeded 10%.

Trends in the observed five-year survival rate of esophageal cancer patients, taking into account the stage of the disease

Figures 1–3 show the time series of survival rates of EC patients in the Northwestern Federal District of the Russian Federation, structured by five-year calendar periods from 2000 to 2014, which increases the reliability of the compared indicators. To estimate the five-year survival rate, we need to deviate from the analyzed date by at least seven years. The data at our disposal for 2020 for calculating the five-year survival rate will be available no earlier than 2027-2028.

The general rule: when sending materials to the publisher, it is necessary to submit illustrative or tabular material. In our case, both sets complement each other. There is one more nuance, which we will dwell on later. Figure 1 reflects the surviv-

Table 1.

Trends in median survival among esophageal cancer (C15) patients in the Northwestern Federal District of the Russian Federation (NWFD RF) NWFD RF Population-based Cancer Registry database (PCRD)

Табл. 1.

Динамика медианы выживаемости больных раком пищевода (С15) в СЗФО РФ БД ПРР СЗФО РФ

Sex	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Both	5,4	4,6	4,8	5,1	5,5	5,1	5,1	5,2	5,3	5,6	5,5	5,8	5,6	5,9	6,5	6	5,9	6,3	5,8
Male	5,1	4,5	4,9	4,8	5,3	5,1	5	5,1	4,8	5,5	5,1	5,7	5,2	5,8	6,6	5,5	5,9	5,9	5,8
Female	6,3	5,1	4,7	5,9	6,7	5,1	5,7	5,3	6,8	5,8	6,8	6	6,7	6,4	6,1	6,9	5,9	7,5	5,8

Table 2.

Cumulative observed survival of esophageal cancer (C15) patients in the NWFD RF. NWFD RF PCRD

Табл. 2.

Кумулятивная наблюдаемая выживаемость больных раком пищевода (С15) в СЗФО РФ БД ПРР СЗФО РФ

both sexes

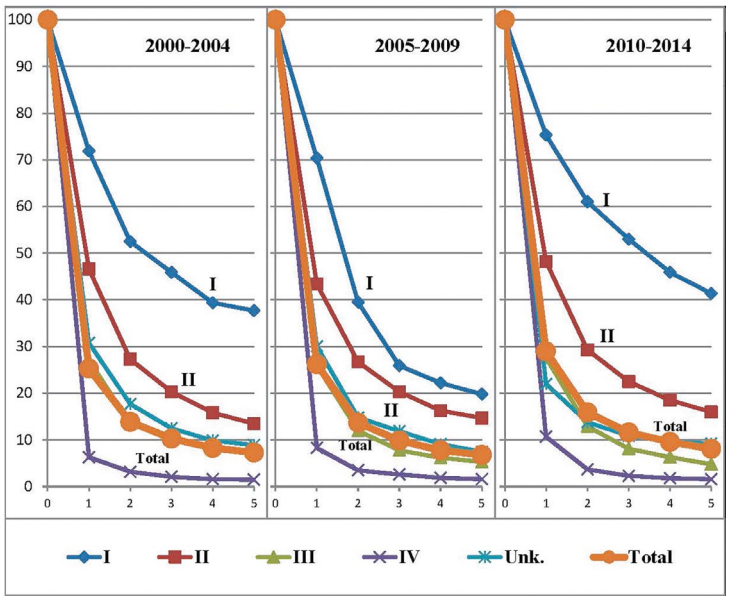
Year of diagnosis		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Absolute no. of patients		732	840	801	792	769	767	842	827	827	830	837	879	819	790	768	894	923	924	899
Median		"5,4 mos."	"4,6 mos."	"4,8 mos."	"5,1 mos."	"5,5 mos."	"5,1 mos."	"5,1 mos."	"5,2 mos."	"5,3 mos."	"5,6 mos."	"5,5 mos."	"5,8 mos."	"5,6 mos."	"5,9 mos."	"6,5 mos."	"6 mos."	"5,9 mos."	"6,3 mos."	"5,8 mos."
Observation period	1	29,2	24,4	24,9	27,6	27,4	26,8	27,2	26,7	27,9	28,6	28,5	31,4	30,0	28,5	31,9	32,5	33,6	31,8	29,6
	2	18,0	15,2	13,6	16,5	14,0	15,8	14,4	14,4	14,8	15,6	17,1	16,8	16,2	16,3	19,0	19,9	16,6	16,2	
	3	14,2	10,9	11,3	12,2	11,8	10,4	10,8	10,6	11,6	13,0	13,4	12,6	12,1	12,8	13,8	14,3	9,7		
	4	12,5	9,6	9,2	10,1	9,7	9,3	9,3	8,2	10,1	9,9	11,9	10,1	11,1	10,6	11,2	8,6			
	5	12,2	8,4	9,2	9,4	8,8	8,6	7,8	7,6	9,6	9,1	11,2	8,9	9,9	9,4	7,8				

males

Year of diagnosis		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Absolute no. of patients		530	620	590	586	562	574	609	613	614	587	622	633	598	602	573	619	669	662	666
Median		"5,1 mos."	"4,5 mos."	"4,9 mos."	"4,8 mos."	"5,3 mos."	"5,1 mos."	"5 mos."	"5,1 mos."	"4,8 mos."	"5,5 mos."	"5,1 mos."	"5,7 mos."	"5,2 mos."	"5,8 mos."	"6,6 mos."	"5,5 mos."	"5,9 mos."	"5,9 mos."	"5,8 mos."
Observation period	1	27,5	21,7	24,1	26,3	24,8	26,0	27,2	26,8	25,0	28,1	25,8	31,3	29,6	28,2	31,4	30,4	33,3	29,0	29,3
	2	15,7	13,6	11,8	15,3	13,2	14,6	13,8	14,7	12,5	15,5	14,0	15,6	15,5	15,9	18,9	17,5	15,3	13,5	
	3	12,6	10,1	8,9	10,8	10,8	9,3	10,3	10,8	9,1	12,5	10,7	11,2	11,4	12,7	13,3	11,6	8,5		
	4	11,2	9,2	7,4	9,4	8,6	8,2	9,0	8,5	8,2	9,4	8,8	8,7	10,4	9,8	10,7	7,0			
	5	10,8	8,0	7,3	9,2	7,9	7,7	7,5	7,6	7,7	8,8	8,5	7,5	8,7	8,7	7,3				

females

Year of diagnosis		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Absolute no. of patients		202	220	211	206	207	193	233	214	213	243	215	246	221	188	195	275	254	262	233
Median		"6,3 mos."	"5,1 mos."	"4,7 mos."	"5,9 mos."	"6,7 mos."	"5,1 mos."	"5,7 mos."	"5,3 mos."	"6,8 mos."	"5,8 mos."	"6,8 mos."	"6 mos."	"6,7 mos."	"6,4 mos."	"6,1 mos."	"6,9 mos."	"5,9 mos."	"7,5 mos."	"5,8 mos."
Observation period	1	33,8	32,4	27,1	31,5	34,3	29,6	27,3	26,5	36,4	29,9	36,4	31,7	31,3	29,6	33,4	37,5	34,5	39,2	30,4
	2	24,1	19,8	18,6	20,0	16,1	19,7	16,0	13,4	21,4	16,0	26,4	19,8	18,2	17,8	19,4	25,5	20,0	23,1	
	3	18,6	13,2	18,2	16,2	14,5	14,1	12,3	9,9	19,1	14,0	21,6	16,2	14,0	13,2	15,2	20,8	13,3		
	4	16,0	10,8	14,6	12,0	12,6	12,8	9,9	7,2	15,6	11,3	21,2	13,6	12,9	12,8	12,4	12,4			
	5	16,0	9,3	14,7	10,0	11,2	11,4	8,4	7,5	15,1	9,9	19,3	12,4	12,8	11,6	9,3				



C15 2000-2014 NWFD PCR both sexes							
Period		Stage					Total
		I	II	III	IV	Unk.	
2000-2004	No.	65	640	1455	1185	589	3934
	%	1,7	16,3	36,9	30,1	15,0	
	1	71,9	46,6	27,1	6,3	30,8	25,3
	2	52,5	27,3	13,5	3,2	17,7	13,9
	3	45,9	20,3	10,1	2,1	12,5	10,3
	4	39,4	15,8	8,3	1,6	9,9	8,3
	5	37,7	13,5	7,5	1,5	8,9	7,3
2005-2009	No.	87	874	1516	1108	508	4093
	%	2,1	21,4	37,0	27,1	12,4	
	1	70,4	43,4	25,9	8,3	30,1	26,2
	2	39,5	26,7	12	3,5	14,8	13,7
	3	25,9	20,3	7,8	2,6	11,9	9,9
	4	22,2	16,3	6,2	1,9	9,1	7,8
	5	19,8	14,7	5,3	1,6	7,5	6,8
2010-2014	No.	158	957	1504	1128	346	4093
	%	3,9	23,4	36,7	27,6	8,5	100
	1	75,3	48,2	27,6	10,7	22	29
	2	61	29,3	12,9	3,7	13,8	15,9
	3	53	22,5	8,1	2,3	10,9	11,6
	4	45,9	18,5	6,3	1,8	9,7	9,6
	5	41,4	16	4,8	1,6	9,2	8,1

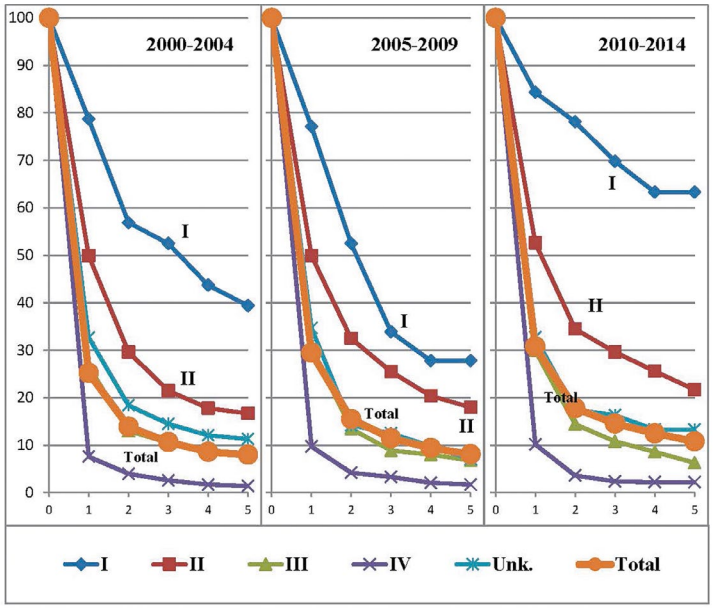
Fig. 1. Trends in five-year observed survival of esophageal cancer (C15) patients considering disease stage (both sexes) NWFD RF PCRD
Рис. 1. Динамика наблюдаемой пятилетней выживаемости больных раком пищевода (С15) с учетом стадии заболевания в СЗФО РФ (оба пола) БД ПРР СЗФО РФ

al or death of EC patients, taking into account the stage of the disease. Naturally, the question arises: what is this first stage of the disease, in which from 80 (2005–2009) to 40% (2010–2014) of the primary registered patients die? The answer is simple: tabular data (even after clarification) reflect the results of data collection outside the database of cancer registries, and the figures – the real state of the problem already according to the actual results calculated on the basisof the PCR database. These data, of course, may differ due to errors of doctors when making a diagnosis. The five-year survival rate of patients with the first stage of the disease should theoretically be 100%. From this value, 10% of patients may die from other causes, that is, the survival rate of patients with stage I of the disease (if it is stage I) should not be less than 90%.

The discrepancy between the proportions of early stages and the real value of survival rates is determined by the strongest administrative pressure on the chief doctors of oncological dispensaries, heads of all levels: local and all-Russian. Since these indicators are formed manually, in a hurry, by January 20 (F. 7), and also on self-control, you can trust them with great care. The same problems can be traced when assessing the indicator of neglect (stage IV of the disease).

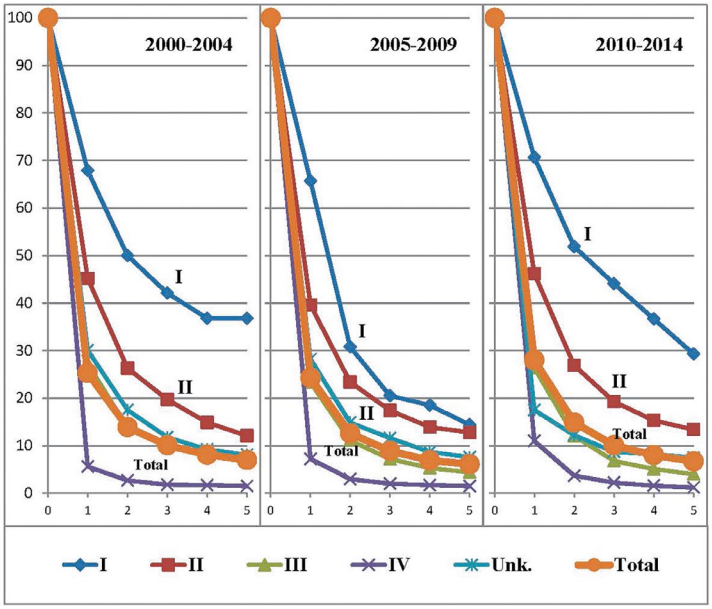
It is necessary to repeat once again that in order to obtain information about the real state of the oncological service, one-year and five-year survival rates should be calculated only on the basis of the **PCR database available in all administrative territories of the country** [17].

Malignant neoplasm is the most severe pathology. What do we see in the published reference books reflecting government



C15 2000-2014 NWFD PCR both sexes							
Period		Stage					Total
		I	II	III	IV	Unk.	
2000-2004	No.	24	193	450	438	159	1264
	%	1,9	15,3	35,5	34,7	12,6	
	1	78,7	49,9	26,6	7,6	32,7	25,2
	2	56,9	29,6	13	4	18,4	13,9
	3	52,5	21,5	10,5	2,6	14,5	10,7
	4	43,7	17,8	8,6	1,7	12,1	8,6
	5	39,4	16,7	7,9	1,4	11,3	8
2005-2009	No.	37	324	549	479	157	1546
	%	2,4	21,0	35,4	31,0	10,2	
	1	77,1	49,9	30,5	9,7	34,7	29,5
	2	52,5	32,5	13,5	4,2	14,2	15,5
	3	33,9	25,5	8,9	3,3	12,5	11,5
	4	27,8	20,4	8	2,1	9,8	9,4
	5	27,8	18	6,8	1,7	7,1	8,1
2010-2014	No.	53	307	511	435	104	1410
	%	3,8	21,8	36,1	30,9	7,4	
	1	84,3	52,6	29,9	10,2	32,7	30,8
	2	78,1	34,5	14,4	3,6	17,5	17,8
	3	69,8	29,6	10,8	2,4	16,3	14,6
	4	63,3	25,6	8,6	2,2	13,3	12,5
	5	63,3	21,7	6,3	2,2	13,3	10,8

Fig. 2. Trends in five-year observed survival of cancer patients under the age of 60 in the NWFD RF (both sexes) NWFD RF PCRD
Рис. 2. Динамика наблюдаемой пятилетней выживаемости больных ЗНО в возрасте до 60 лет в СЗФО РФ (оба пола) БД ПРР СЗФО РФ



C15 2000-2014 NWFD PCR both sexes							
Period		Stage					Total
		I	II	III	IV	Unk.	
2000-2004	No.	41	447	1005	747	430	2670
	%	1,5	16,7	37,7	28,0	16,1	
	1	67,9	45,2	27,3	5,6	30,1	25,3
	2	50	26,3	13,7	2,7	17,5	13,9
	3	42,1	19,7	10	1,8	11,8	10,1
	4	36,8	14,9	8,2	1,7	9,2	8,1
	5	36,8	12,1	7,3	1,5	8,1	7
2005-2009	No.	50	550	967	629	351	2547
	%	2,0	21,6	37,9	24,7	13,8	
	1	65,7	39,6	23,3	7,2	28,2	24,3
	2	30,8	23,4	11,1	3	14,9	12,6
	3	20,5	17,4	7,2	2	11,6	8,9
	4	18,5	13,9	5,3	1,7	8,7	6,9
	5	14,4	12,8	4,4	1,5	7,6	6,1
2010-2014	No.	105	650	993	693	242	2683
	%	3,9	24,2	37,1	25,8	9,0	
	1	70,7	46,2	26,4	11	17,5	28
	2	51,9	26,9	12,1	3,7	12,2	14,9
	3	44,1	19,3	6,8	2,2	8,7	10,1
	4	36,7	15,3	5,1	1,6	8,2	8
	5	29,3	13,4	4	1,2	7,5	6,7

Fig. 3. Trends in five-year observed survival of cancer patients under the age of 60 and older in the NWFD RF (both sexes) NWFD RF PCRD
Рис. 3. Динамика наблюдаемой пятилетней выживаемости больных ЗНО в возрасте 60 лет и старше в СЗФО РФ (оба пола) БД ПРР СЗФО РФ

reporting? The one-year mortality rate in EC patients is 56%, and in some territories it is much less (Moscow region - less than 40%, the Chechen Republic and the Republic of Ingushetia - 28%), while the actual death rate of patients is not less than 70%.

This also applies to many other localizations of cancer that create the illusion of well-being [5].

Figures 2 and 3 give an idea of the effectiveness of the performed anticancer measures in relation to EC for patients in younger age groups (up to 60 years old) and patients aged 60 years and older. Better survival rates are clearly seen among patients in younger age groups. If the five-year survival rate of EC patients with stage I of the disease among people under the age of 60 was 63.3%, then among those who have reached 60 years of age, this indicator in the first stage was only 29.3%, in the second - 13.4%. not to mention the third and fourth stages (Fig. 2, 3).

Localization structure of esophageal cancer and patient survival rate

For the first time in Russia, at the population level, a study was carried out to study changes in the detailed EC localization structure, taking into account the fourth character of ICD-10. 15760 primary cases for patients with a EC diagnosis were selected from the PCRD of the Northwestern Federal District of the Russian Federation, grouped by four five-year periods from 2000 to 2018. A stable EC structure distribution was noted for detailed groups of neoplasms.

The first place in the localization EC structure belongs to the middle third of esophagus (C15.4), the second - to the lower third of esophagus (C15.5). These two detailed localization groups account for more than 50.0% of all EC cases.

It is important to note that C15.9 subheading (Esophagus, NOS) decreased over the four observation periods from 29.3% to 19.8%, which indicates an improvement in the quality of diagnosis of this pathology.

We also have the opportunity to assess the effectiveness of the ongoing complex of anticancer measures at the federal district level and note a significant improvement in the one-year survival rate for cervical esophagus (C15.0), which increased from 23.3 to 35.0%. The same applies to patients with a diagnosis of the thoracic esophagus (15.1): an increase in indicators from 29.6 to 35.8%. The survival rate of patients in the upper, middle and lower third of esophagus increased to varying degrees. There was a decrease in the survival rate of EC patients of the abdominal esophagus (C15.2) [18–20].

Histological structure of esophageal cancer and patient survival

Out of 15760 cases, the EC histotype was indicated in registration cards only in 71.5%. The survival calculations for the group of patients who did not have a histological report were significantly worse than for those who underwent a complete examination.

The histological EC structure was presented by Squamous cell carcinoma, NOS – M-8070/3; Squamous cell carcinoma, large cell, non-keratinizing – M-8072/3; Squamous cell carcinoma, keratinizing – M-8071/3, as well as Adenocarcinoma, NOS – M-8140/3 (Table 3). It is important to note that the Neoplasm, malignant M-8000/3 cases (in fact, the absence of a histological conclusion) has decreased from 4.0 to 2.4%.

The entire observation period has been characterized by the constancy of the distribution of histotypes according to the marked headings. The highest one-year survival rate was in the M-8140/3 (Adenocarcinoma, NOS) – 38.1%. For other histotypes, the survival rate of EC patients in the first year of follow-up exceeded 30%.

CONCLUSION

Thus, the study has shown some success in the organization of cancer care for EC patients. The quality of the initial registration of patients has improved. The median survival rate of EC patients has increased from five to six months. The observed one-year survival rate has increased from 27.6% to 28.6%, or 3.6%; The five-year one has hardly changed.

The study showed that the five-year survival rate of EC patients at the age of up to 60 years is almost two times higher than among patients aged 60 and older.

The work shows the specificity of the survival rate of patients taking into account the histotype of the neoplasms.

Care should be taken to use government reporting data generated outside of the PCR database.

Table 3.

Trends in localization structure and survival of esophageal cancer patients in the NWFD RF (both sexes)
NWFD RF PCRD

Табл. 3.

Динамика локализационной структуры и выживаемости больных раком пищевода в СЗФО РФ (оба пола)
БД ПРР СЗФО РФ

ICD		2000–2004					2005–2009				2010–2014				2015–2018		
		Abs. No	%	Survival 1-year	Survival 5-years	Survival 10-years	Abs. No	%	Survival 1-year	Survival 5-years	Abs. No	%	Survival 1-year	Survival 5-years	Abs. No	%	Surv. 1-year
C15		3934		25,3	7,3	4,5	4093		26,2	6,8	4093		29,0	8,1	3640		30,8
Cervical esophagus	.0	31	0,8	23,3	3,9	3,9	321	7,8	19,2	4,6	352	8,6	27,3	5,3	128	3,5	35,0
Thoracic esophagus	.1	101	2,6	29,6	11,4	10,2	76	1,9	35,6	7,7	152	3,7	36,8	15,3	233	6,4	35,8
Abdominal esophagus	.2	31	0,8	35,5	12,9	9,7	26	0,6	48,0	14,9	33	0,8	48,4	14,0	58	1,6	28,2
Upper third of esophagus	.3	300	7,6	18,2	5,9	3,5	314	7,7	19,4	5,0	301	7,4	23,5	7,4	278	7,6	34,0
Middle third of esophagus	.4	1281	32,5	28,3	7,4	5,1	1178	28,8	30,8	7,2	1145	27,9	31,6	8,4	1004	27,7	32,4
Lower third of esophagus	.5	908	23,1	29,5	7,8	3,6	834	20,4	30,3	8,8	945	23,1	32,2	10,1	889	24,4	30,9
Overlapping lesion of esophagus	.8	128	3,3	16,9	5,4	4,1	173	4,2	16,2	5,8	240	5,9	20,1	4,8	329	9,0	24,2
Esophagus, NOS	.9	1154	29,3	20,8	7,0	4,2	1171	28,6	22,8	6,0	925	22,6	26,3	7,5	721	19,8	28,1

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Обзорная статья

Состояние онкологической помощи в России: рак пищевода. Популяционные исследования на уровне федерального округа. Часть II. Медиана выживаемости, наблюдаемая и относительная выживаемость больных с учетом стадии заболевания и гистологической структуры опухолей

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АННОТАЦИЯ. Рак пищевода – тяжелейшая патология злокачественных новообразований, где летальность больных на первом году наблюдения превышает 70%. За последние 19 лет мы видим незначительное улучшение эффективности противораковых мероприятий по данной локализации опухолей. Созданная в феврале 2019 года база данных Популяционного ракового регистра Северо-Западного федерального округа РФ с численностью более 1 млн. 350 тыс. наблюдений позволяет получить представление о реальном состоянии эффективности проводимых противораковых мероприятий и на этой основе планировать ее развитие. После тщательной проверки качества данных было отобрано для анализа около миллиона наблюдений.

С 2000 по 2018 гг. в БД ПРР СЗФО РФ накоплено 15760 первичных случаев РП. Учитывая, что уровни стандартизованных показателей заболеваемости и смертности населения России и СЗФО РФ близки, мы полагаем, что полученные впервые в России данные о выживаемости больных РП в СЗФО РФ вполне отражают состояние эффективности борьбы с РП в целом по России.

Целью настоящего исследования является проведение комплекса аналитических расчетов показателей выживаемости больных РП в динамике за последние 19 лет по БД ПРР СЗФО РФ. Все расчеты осуществлены в соответствии с международными требованиями проведения таких разработок и, в первую очередь, по стандартам Eurocare.

Полученные нами результаты исследования свидетельствуют о том, что медиана выживаемости на оба пола по РП возросла с пяти до шести месяцев.

Летальность больных на первом году наблюдения снизилась с 72,4 до 71,4% (на оба пола), с 73,9 до 71,6% среди мужчин, с 69,3 до 65,1% среди женщин.

Пятилетняя выживаемость больных РП в СЗФО РФ имела небольшие колебания, особенно среди женского населения. Сгруппированные данные за три пятилетних цикла наблюдений показали рост пятилетней выживаемости больных РП с 7,3 до 8,1%. Однолетняя выживаемость возросла за четыре пятилетних цикла с 25,3 до 30,8%.

Впервые в России нами на популяционном уровне показан эффект лечения больных РП по четвертому знаку МКБ-10.

Наибольший успех в лечении достигнут для больных РП шейного отдела пищевода (С15.0) – с 23,3 до 35,0% (однолетняя выживаемость), грудного отдела пищевода (С15.1) – с 29,6 до 35,8%. Особенно значительные успехи отмечены для рака верхней трети пищевода (С15.3) – с 18,2 до 34,0%.

Важно отметить, что за четыре периода наблюдений снизился удельный вес больных РП С15.9 – «Злокачественные новообразования неуточненные» (с 29,3 до 19,8%), что свидетельствует о существенном повышении качества диагностики больных.

КЛЮЧЕВЫЕ СЛОВА: рак пищевода, СЗФО РФ, выживаемость больных, медиана выживаемости, возраст, стадия заболевания, локализационная и гистологическая структура

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