

Evaluation of the results of the implementation of regional programs of control and prevention breast cancer in the Samara region (RF) (international comparative study on CI5 and Concord 3)

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According to Globocan, in 2012 in the Russian Federation, the incidence of breast cancer was 45.6 per 100 thousand inhabitants, which is significantly lower than in European countries (69.2 ± 3.2 ; $p = 0.95$, $t = 2$). However, 17.2 per 100 thousand of us died from this disease, which is significantly higher than in the European Region (16.1 ± 0.4 ; $p = 0.95$, $t = 2$).



For the scientific substantiation of organizational measures to improve breast cancer control and prevention programs conducted in the Samara region, an assessment was made of the quality of medical care provided to this group of patients in the period 2008-2012. The materials used were Cancer Incidence in Five Continents Vol.XI and Concord 3. The trends in incidence, mortality and survival were studied using extensive and standardized indicators, the alignment of time series of which was carried out using a parabola of the first order.

Incidence and mortality (Globocan, 2012)

Incidence		Mortality	
A country	ASR	A country	ASR
Belgium	111,9	Macedonia	25,5
Denmark	105,0	Serbia	22,0
Netherlands	99,0	Belgium	20,3
Iceland	96,3	Montenegro	20,2
Great Britain	95,0	Ireland	19,1
Ireland	92,3	Denmark	18,8
Germany	91,6	Ukraine	18,4
Italy	91,3	Moldova	18,3
France	89,7	Malta	18,1
Finland	89,4	Netherlands	18,0
Luxembourg	89,1	Latvia	17,6
Malta	85,9	Bulgaria	17,2
Switzerland	83,1	Russia	17,2
Sweden	80,4	Great Britain	17,1
Cyprus	78,4	Mcp + 2m = 17,0	
Macedonia	76,2	Samara	16,9
Mcp + 2m = 75,5		Croatia	16,7
Norway	73,1	France	16,4
Czech	70,3	Lithuania	16,3
Serbia	69,0	Hungary	16,2
Austria	68,0	Albania	16,0
Portugal	67,6	Italy	15,8
Spain	67,3	Estonia	15,7
Slovenia	66,5	Slovenia	15,6
Mcp - 2m = 62,9		Germany	15,5
Croatia	60,9	Romania	15,2
Montenegro	59,7	Mcp - 2m = 15,2	
Bulgaria	58,5	Cyprus	14,9
Slovakia	57,5	Austria	14,4
Hungary	54,5	Iceland	14,4
Albania	53,9	Belarus	14,2
Latvia	52,1	Greece	14,1
Poland	51,9	Poland	13,8
Estonia	51,6	Finland	13,6
Romania	50,0	Switzerland	13,6
Himself. region	49,6	Sweden	13,4
Lithuania	48,7	Luxembourg	13,1
Belarus	45,9	Portugal	13,1
RUSSIA	45,6	Slovakia	13,1
Greece	43,9	Czech	12,8
Ukraine	41,3	Norway	12,5
Moldova	38,7	Herzegovina	12,0
Bosnia	37,4	Spain	11,8

In the Samara region, breast cancer ranks first in the structure of cancer incidence among women (24.6%). The standardized incidence rate of breast cancer was significantly lower than the European average (70.1 ± 3.7 ; $p = 0.95$, $t = 2$) and amounted to 51.8 per 100 thousand of us.

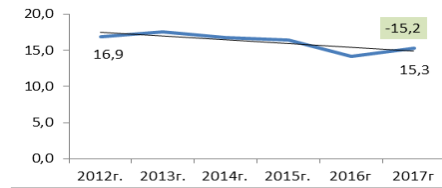
Incidence (CI5, 2008-2012)

A country	ASR
Belgium	109,2
Denmark	101,3
Netherlands	99,0
Iceland	97,6
France	96,2
Germany	94,6
Ireland	91,5
Great Britain	87,4
Italy	87,4
Switzerland	85,1
Malta	81,2
Cyprus	78,5
Mcp + 2m = 77,4	
Norway	75,6
Austria	68,1
Portugal	67,1
Slovenia	65,5
Spain	65,3
Czech	63,2
Croatia	63,2
Mcp - 2m = 62,8	
Slovakia	60,4
Bulgaria	54,5
Latvia	54,4
Estonia	53,1
Lithuania	52,3
RF, Samara	51,8
Poland	50,4
RF, Chelyabinsk	47,6
RF, Karelia	44,7
Belarus	44,2
Ukraine	41,9
RF, Arkhangelsk	39,3

The mortality rate from breast cancer was 16.9 per 100 thousand of us, which corresponds to the average European values. Over the past 5 years, the figure dropped by 15.2% and in 2017 it became even lower - 15.3 per 100 thousand of us. However, the 5-year relative survival of patients with breast cancer registered in 2010-2014 was only 71.0%, which was significantly lower than the average European level (81.3 ± 1.2 ; $p = 0.95$, $t = 2$). And, despite the emerging trend of its growth to 74.2%, continues to remain significantly lower than in the countries of the European Region.

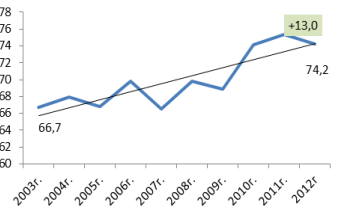
Mortality (Globocan 2012, Samara Cancer Register, 2012-2017)

A country	ASR
Macedonia	25,5
Serbia	22,0
Belgium	20,3
Montenegro	20,2
Ireland	19,1
Denmark	18,8
Ukraine	18,4
Moldova	18,3
Malta	18,1
Netherlands	18,0
Latvia	17,6
Bulgaria	17,2
Russia	17,2
Great Britain	17,1
Mcp + 2m = 17,0	
Samara	16,9
Croatia	16,7
France	16,4
Lithuania	16,3
Portugal	16,2
Albania	16,0
Italy	15,8
Estonia	15,7
Slovenia	15,6
Germany	15,5
Romania	15,2
Mcp - 2m = 15,2	
Cyprus	14,9
Austria	14,4
Iceland	14,4
Belarus	14,2
Greece	14,1
Poland	13,8
Finland	13,6
Switzerland	13,6
Sweden	13,4
Luxembourg	13,1
Portugal	13,1
Slovakia	13,1
Czech	12,8
Norway	12,5
Herzegovina	12,0
Spain	11,8



Relative survival (Concord 3, Samara Cancer Register)

A country	RSC
Iceland	89,1
Sweden	88,8
Finland	88,5
Norway	87,7
Portugal	87,6
Malta	86,9
France	86,7
Netherlands	86,6
Belgium	86,4
Switzerland	86,2
Denmark	86,1
Germany	86,0
Italy	86,0
Great Britain	85,6
Spain	85,2
Austria	84,8
Mcp + 2m = 83,7	
Slovenia	83,5
Latvia	82,2
Ireland	82,0
Czech	81,4
Karelia (RF)	79,3
Mcp - 2m = 78,9	
roatia	78,6
Bulgaria	78,3
Estonia	76,6
Poland	76,5
Slovakia	75,5
Lithuania	73,5
Arkhangelsk (RF)	72,4
Samara (RF)	71,0
Russia	70,8
Tomsk (RF)	68,4
Omsk (RF)	64,0



Conclusion: The international comparison made showed that in the Samara region there is a worrying epidemiological situation in breast cancer. Despite the low incidence and positive trends in mortality rates, the levels of which are either lower or not significantly different from the average European values, the region has a significantly low survival rate for this group of patients. This circumstance determines the need to accelerate the introduction of modern technologies for prevention, screening, early diagnosis and treatment of breast tumors, which, on the one hand, reducing the impact of risk factors, will prevent up to 1/3 of tumors, and on the other hand, will provide timely diagnosis and effective treatment.