

NATIONAL PROGRAM
against oncological diseases in the Republic of Moldova
for the years 2008-2012

I. General provisions

In the Republic of Moldova the oncological diseases represent a major medical and social problem. The National Program against Cancer for the years 1998-2003, approved by the Government Decision nr. 1269 of December 25, 1998, as well as the additional Program against breast and cervical cancer contributed to oncological morbidity and mortality rates stabilization in the Republic of Moldova with an increasing tendency and, at the same time, allowed keeping the oncological service in the Republic. The oncological morbidity rates in the Republic of Moldova are in permanent increase, from 149,0 in 1990, to 152,6 in 2000 and 209,0 in 2007.

The oncological patient – the person to whom was established the clinical and morphological diagnosis of malignant, benignant tumour, or other pre-tumour states related with.

In conformity with the data of the World Health Organization, the cancer represent the main cause of death in the developed countries, being being left behind only by the cardio-vascular diseases. (Russia – 200,6 the annual cases of death at 100.000 persons; Romania – 148,3; Ukraine -150,1). Thus, in the world, every year 10 mln. people die from cancer. The mortality from oncological diseases in the Republic of Moldova is characterized by a moderate increase of rate, which consisted of 130,8 death cases annually at 100.000 persons in 1990, 153,5 cases in 2007. The increased mortality from oncological diseases is determined by the late detection of tumours (approximately 27-28% of ill persons are diagnosed with stage IV) and a great number of risk factors (chemical, physical, biological, the stress, the radioactive area, the smoking and the incorrect alimentation).

Thus, the necessity of an early detection of the oncological diseases and the correct verification of the risk factors are still an actual problem.

The National Program against the Oncological Diseases is focused on the prophylaxis strategy, on the yearly detection, the diagnostics, the treatment and the rehabilitation of these patients, who have a major weight in the structure of the health rates in the Republic. The National Program will be realized with the direct participation of the State Bodies, of the medical sanitarian institutions from the country, of the economical and the educational unities, of mass-media, etc. The National Program will be supported and financed by the State in conformity with the legislation in force on three basic compartments:

- a) Yearly detection of oncological diseases.
- b) Treatment of oncological patients.
- c) Training and perfecting the oncological staff.

The realization will lead to a decrease in mortality from oncological diseases with approximately 2-3 %, in the infant mortality with 0,2%, in the case of fatality

till one year with 8 – 10%, it will increase the morbidity rate with 5-10%, the yearly detection with 5-8%, the number of cured patients with approximately 15-20% and in reducing the risk factors of population with 10%.

II. The main purpose and objectives

The purpose of the Program consists in improving the health rates and the rates of early detection of oncological diseases, the decreasing of late detection, of disability and mortality from oncological diseases, as well as increasing the surviving period of patients.

The objectives of prophylaxis and fighting against oncological diseases are determined by the morbidity and the mortality caused by this disease and are including:

- The creation of a research system and applying primary and secondary prophylaxis measures, rehabilitation, medical oncological assistance.
- The implementation of the Program in the medical assistance system, with the help of the family doctor, of the medical specialists and of the oncologist at regional level, of the cancer specialist doctor of the Republican Specialized Oncological Polyclinic, of the oncologists from the Oncological Institute.
- Monitoring and evaluation of the prophylaxis efficiency and fighting against the oncological diseases.
- Promoting a healthy lifestyle, by involving directly the population.
- The coordination of the Program of prophylaxis and fighting against oncological diseases with other National Programs.

III. Strategies against oncological diseases

The prevention of oncological diseases includes four strategies:

Strategy 1. Primary cancer prophylaxis

The primary cancer prophylaxis at the level of the society, controlling the risk factors (especially the lifestyle and the environmental factors: the air, the water, the soil, the radioactive area, the stress, etc.)

Strategy 2. Secondary cancer prophylaxis:

a) The active and passive detection of pre-cancerous states and their treatment (the active prophylactic medical examination of the risk, the cytological screening), the yearly detection and the morphological confirmation realized by the general medical specialists, the family doctors, the oncological and the pathomorphological doctors.

b) The complex treatment (surgical, radio-, chemico-therapeutical).

The medical and social rehabilitation of oncological patients (in the specialized polyclinics, hospitals, ambulatory, sanatorium)

c) Vitality expertise;

d) Palliative treatment (symptomatic), creation of medical and social

infrastructure of the oncological patients with the help of the Cancer Society)

Strategy 3. Staff management.

Strategy 4. Development of scientific researches.

IV. National Program actions

Nr. d/o	Actions, measures	Responsible for the execution	The carrying out term
1	2	3	4
Strategy I. Primary prophylaxis of the oncological diseases			
1.	a) Fighting against the risk factors of the macro-environment: chemical, physical, biological factors, radioactive area, stress, and the microenvironment: smoking, alcoholism, non-rational alimentation, incorrect social life; b) Propagation of a healthy lifestyle by means of mass-media: television, radio, newspapers, magazines.	Ministry of Health, Academy of Science of Moldova; Ministry of Ecology and Natural Resources, Ministry of Education and Youth, Ministry of Agriculture and Food Industry; Public Company «Tele-Radio-Moldova»; Mass - Media Moldova; Non-Governmental Associations and Organizations; Ministry of Health, Authorities of the Local Public Administration.	permanently
2.	Elaboration and implementation of the annual Plans against the oncological diseases on the basis of the recommendations of the International Union Against Cancer (UICC).	Ministry of Health Oncological Institute.	2008-2012
3.	Realization of screening of the population by the family doctor in order to accentuate the oncological risk at the persons from the respective sector (Passport of the sector). Estimation and risk management of the patients in evidence (the hereditary factor, the age factor, the social factor).	Ministry of Health, Authorities of the Local Public Administration.	2008-2012
4.	Increasing the role of the regional oncologist, of the medical specialists in keeping in evidence the patients from the oncological group of risk.	Ministry of Health, Authorities of the Local Public Administration.	permanently
5.	Drawing up the yearly cancer detection Guides and the clinical protocols of the patients with the most widely-spread forms of oncological diseases. (pulmonary, breast, skin, gastric, cervical, colorectal cancer).	Ministry of Health Oncological Institute	Annually – a guide
6.	Drawing up and implementation of satellite programs against the most frequent oncological diseases in Republic of Moldova (pulmonary, breast, skin, gastric, cervical, colorectal cancer).	Ministry of Health Oncological Institute	2008-2012

7.	Drawing up and implementation of the program „The importance of Vitamin „C" in cancer prophylaxis" based on the recommendations of the World Health Organization.	Ministry of Health; Academy of Science of Moldova; Ministry of Ecology and Natural Resources and Territory Arrangement Ministry of Education and Youth; State University of Medicine and Pharmacy „N. Testemitanu", Moldova State University; Authorities of the Local Public Administration.	2008-2012
8.	Drawing up and implementation of the National Convention on Tobacco Control based on the recommendations of the World Health Organization and of the International Union Against Cancer (UICC) in order to decrease the cancer morbidity rates.	Ministry of Health; Ministry of Ecology and Natural Resources, Ministry of Education, Youth and Sport.	2008-2012
9.	Organization of "Week against cancer" with the motto „Early detection- saves life". Telemarathons, radiomarathons organization once in 3 years.	Ministry of Health; Oncological Institute; Society „Fighting against Cancer ", Public Company«Tele-Radio-Moldova»; Mass-Media Moldova, Authorities of the Local Public Administration.	Annually the month of June
10.	Drawing up ministerial normative documents necessary for realization the National Program of prophylaxis and against the oncological diseases in the Republic of Moldova for the years 2008-2012.	Ministry of Health; Oncological Institute;	2008-2012
11.	Prevention of congenital malformations in newborn by protecting the pregnant women, practicing the medicogenetic and ecographic examination for women from the group of risk, in conformity with the respective National Programs.	Ministry of Health; Institute of Scientific Researches in the Field of Mother and Child's Protection , CNSPSRGM	permanently
12.	Organization of consultative teams in yearly detection of oncological diseases in the districts of the Republic of Moldova, resulting from the morbidity and the mortality rates.	Ministry of Health; Academy of Science of Moldova. Oncological Institute: Authorities of the Local Public Administration.	permanently
14.	Organization of annual conferences, seminars and thematic symposiums with the oncologists, the family doctors, and the medical specialists in order to acquire the programmed methods of monitoring the oncological risk, actual detection and treatment guides.	Ministry of Health; Oncological Institute. Authorities of the Local Public Administration.	Annually a conference and a symposium abroad

**Strategy 2. Secondary prophylaxis of the oncological diseases
(yearly detection, diagnostics and cancer treatment)**

1.	Insurance of efficient working of oncological consulting rooms within the consultative sections from the medical institutions of the republic. Increasing the number of oncologists and providing consulting rooms with medical equipment in conformity with the regulations in force (computers, portable ecographer)	Ministry of Health; Oncological Institute Authorities of the Local Public Administration.	permanently
2.	Yearly detection of cancer and of precancerous processes by applying the active and the passive principle of detection with the help of the family doctors, the regional oncologists, the medical specialists (experts in internal medicine, surgeons, ORL, dermatologists , endocrinologists, gynecologists, dentists etc.)	Ministry of Health; National Health Insurance Company, Authorities of the Local Public Administration.	permanently
3.	Modernizing and popularizing the cytological <i>screening</i> in cervical cancer detection. Implementation of new methods of pathomorphological detection (by applying the immunohistochemical and electromicroscopic procedures).	Ministry of Health; Oncological Institute	permanently
4.	Establishing a definitive diagnosis in the oncological specialized institutions excepting the emergency cases in conformity with the provisions of the decision no.142 from 3.04.06, providing the Oncological Policlinic with modern diagnostication equipment (ultrasonographic, endoscopical, radioimagistical, cytological laboratory, computerized tomography).	Ministry of Health; Oncological Institute National Health Insurance Company	2008-2012
5.	Realization of adequate treatment of the malignant tumours (surgical, radio- and chemico-therapeutic) only in the hospital of the Oncological Institution, where there are 1005 beds and a professional staff. Improving the technico-material basis of the Institution (providing with necessary medical equipment apparatuses, designing a new radiotherapy building, purchasing new modern apparatuses of radiotherapy, inclusively of a linear accelerator).	Ministry of Health; National Health Insurance Company	2008 - 2009
6.	On the basis of the Government decision of the Republic of Moldova no. 276 from March 13, 2003 „Regarding the State policy in the medicine field for the years 2003-2005” elaboration of a standard treatment with specific oncologicals medicinal products and realization of a centralized acquisition from the sources foreseen for this purpose.	Ministry of Health; Ministry of Finance. Medicinal Products Agency, Oncological Institute	permanently

7.	Elaboration, optimization and standardization of new treatment methods (surgical, radiology, chemico-therapeutical and complex) of the oncological patients by elaborating clinical treatment protocols.	Ministry of Health; Oncological Institute	2008-2009
8.	Organization within the Oncological Institution of a medullary transplant department in order to provide medical insurance of hematological patients.	Ministry of Health; Ministry of Finance, Oncological Institute International Public Organizations of the Republic of Moldova	till 2010
9.	The oncological patients will be rehabilitated at the Republican Center of rehabilitation within the Oncological Policlinic; - by improving the medical expertise; - by using the sanatoriums and the existent rehabilitation centers of the Republic; - by the palliative treatment of the patients in stage IV, treatment of the algic syndrome; - by building hospices in the Republic of Moldova (North – Balti; South – Cahul).	Ministry of Health; Ministry of Family and Child Social Protection, Ministry of Finance; Authorities of the Local Public Administration , NGO	permanently
10.	Elaboration of a new method of prophylactic medical examination and evidence of the oncological patients by implementing a republican informational system within “Cancer-Register “ of the Republic of Moldova.	Ministry of Health Ministry of Finance, Ministry of Informational Technologies	2008 - 2010

Strategy 3. Staff Management			
1.	Rising the requirements towards the post-university training and the periodical recycling of the medical staff in the oncology field (in conformity with the European program), that will be realized by residency; doctoral candidacy and probation period at the centers from abroad.	Ministry of Health Medical-Sanitarian Public Institution, Oncological Institute „N. Testemițanu”, Academy of Science of Moldova	permanently
2.	Including the general doctors and the family doctors in recycling courses, conferences, seminars, congresses in the problems of the yearly detection of oncological diseases, no less that once in 3 years, on the basis of the Oncological Institute and of the oncology department of the State University of Medicine and Pharmacy „N. Testemitanu”. Training the paramedical personnel in the social aspect with the programs „Nursing” and „Hospis”.	Ministry of Health; Oncological Institute; State University of Medicine and Pharmacy „N. Testemitanu”	permanently
3.	Training the medical staff in the problems of <i>screening</i> and monitoring the oncological risk.	Ministry of Health; Ministry of Health; State University of Medicine and Pharmacy „N. Testemitanu” Medical-Sanitarian Public Institution. Oncological Institute	
4	Collaboration with European and world centers in oncology field in the primary and secondary directions cancer prophylaxis, implementation of new, advanced treatment methods.	Ministry of Health ; Oncological Institute , Academy of Science of Moldova	permanently
5.	Elaboration and optimization of the organization forms of the oncological assistance at all levels and collaboration with other services of the health protection system. Elaboration of methodical recommendations for the general medical network in electronic format, making an oncological educational „site”.	Ministry of Health ; Oncological Institute	2008 - 2012
Strategy 4. Scientific researches development			
1.	The scientific researches in the oncology field will be realized in the following directions: 1. <i>the basis researches</i> in the primary prophylaxis problems (cancerogenesis mechanisms, the role of „papilloma”-virus in the etiology of cervical cancer, cancer genetics, the risk factors: physical, chemical, biological, radioactive area, tobacco, cement industry, asbestos, stress	Academy of Science of the Republic Moldova ; Ministry of Health; Oncological Institute.	permanently

2.	2. <i>applicative researches</i> – continuing education of the oncological service management in the Republic of Moldova; - the yearly detection and the definitive diagnosis; - the specialized adequate treatment (surgical, radiology, chemico-therapeutic) by applying physical methods (hyperthermia, cryodestruction lasero-destruction, ultra high frequency wave of millimetric range, etc); - surgical and conservative rehabilitation of the oncological patients.	Academy of Science of the Republic Moldova ; Ministry of Health; Ministry of Economy, Oncological Institute.	permanently
Financial Insurance of the Program			
1.	The Financing of the National Program against oncological diseases in the Republic of Moldova for the years 2007-2010 will be realized from the State budget, from the insurances of the obligatory medical assistance sources, from the special sources (external, grants, SCC fund, The Academy of Science) and from the local budgets, in the limits of the needs stipulated in this Program.	Ministry of Health Ministry of Finance, National Company of Insurances in Medicine, Academy of Science of Moldova, Authorities of the Local Public Administration	permanently

The annual expenses for the realization of the National Program against oncological diseases in the Republic of Moldova for the years 2008-2012 are foreseen in the enclosures 1;2 and in the following tables:

Table no.1

The annual expense estimate for the realization of the National Program against oncological diseases (years 2008 - 2012), (thousand lei)

Basic compartments	2009	2010	2011	2012
1. Yearly detection of the oncological patients	20760000	18732000	14808000	12648000
2. Treatment of the oncological patients	23760000	25776000	25020000	24828000
3. Training and perfecting the oncological staff.	3420000	1404000	1884000	1644000
TOTAL	47940000	45912000	41712000	39120000

Total: 174.684.000 lei

Table no.2

**The budget of the National Program of fighting against oncological diseases
(years 2005-2010)**

No./o	Years	Moldavian Lei
1.	2009	47 940 000
2.	2010	45 912 000
3.	2011	41 712 000
4.	2012	39 120 000
	TOTAL	174.684.000

Table .no.3

**The estimated budget of the National Program against oncological diseases
(years 2008 - 2012), in conformity with the financing sources and articles**

No./o	Program compartment	Total	Ministry of Health	National Company of Insurances in Medicine	Authorities of the Local Public Administration	Academy of Science of the Republic of Moldova	External donors
1.	Yearly detection of the oncological patients	66948000	4.220.000	1.200.000	5.800.000	4.300.000	3.250.000
2.	Treatment of the oncological patients	99384000	24.500.000	100.000.000	1.000.000	7.400.000	18.700.000
3.	Training and perfecting the oncological staff.	8352000	2.110.000	-	480.000	1.420.000	360.000
	TOTAL	174684000	30.830.000	101.200.000	7.280.000	13.120.000	22.250.000

The economical effect and the approximate medical and social prejudices caused by the oncological diseases

The oncological diseases brings enormous social and economical depressions in society. The oncological morbidity and invalidity control requires important financial sums and considerable human efforts.

The economical prejudice generated by the oncological diseases will be calculated resulting from 5 basic indicators:

1. The ambulatory treatments and investigation prices.
2. The hospital treatment prices.
3. The prices for medical leaves.
4. The payments for the disability compensations.
5. The economical prejudice defined by the volume and the price for the non-delivered production.

In order to calculate the economical prejudices, it is necessary monitoring some basic rates:

- the price for an ambulatory visit - 13,82 lei;
- the number of visits effectuated annually in the policlinic-121.751 lei;
- the number of oncological patients who received ambulatory treatment -1.451 lei;
- the volume (price) of the ambulatory treatment for a patient in the hospital - 52,63 lei;
- the price of the hospital bed per day - 203,80 lei;
- the average period of staying in hospital - 19,8 days;
- the annual number of oncological patients who received treatment in the Oncological Institution of the Republic of Moldova (OIM) -18.396;
- the compensation price for a day of medical leave - 21 lei;
- the medical leave period in hospital and in policlinic . - 241.580 days;
- the price for the disability compensations:
 - I gr.- 195 lei;
 - II gr.- 170 lei;
 - III gr. -100 lei;
- the number of disabled persons per each disability degree, annually;
- the price of the daily economical product of an employee - 12,30 lei;
- the average number of absences of an oncological employee - 19,8;
- the number of primary oncological patients able-bodied - 5350.

1. The ambulatory investigation and treatment prices

These prices are calculated in the following way:

$$E_{amb} = C_a \times Z_a \times N_a \times V_a$$

where

C_a - the price of an ambulatory visit- 13,82 lei;

Z_a - the number of visits effectuated annually in the policlinic - 121.571;

N_a - the number of oncological patients who received ambulatory treatments-1451;

V_a - the ambulatory treatments volume for an oncological patient- 52,63.

$$E_{amb} = (C_a \times Z_a) + (N_a \times V_a) = 13,82 \times 121.571 + (1451 \times 52,63) = 1682598,8 + 76366,13 = 1.758964,9 \text{ lei}$$

2. The prices for the hospital treatment.

These prices are calculated in the following way:

$$E_{hosp} = C_s \times D_s \times N_s$$

where

C_s - the price of the hospital bed per day - 203,80 lei;

D_s - the average period of staying in hospital - 19,8;

N_s - the annual number of oncological patients who received treatment in the Oncological Institution of the Republic of Moldova (OIM) - 18.396

$$E_{stat} = C_s \times D_s \times N_s = 203,80 \times 19,8 \times 18.396 = 74.232.275$$

3. The payment prices for medical leaves:

$$E_{c.m.} = C_z \times (N_{z,s} + N_{z,amb.}),$$

where;

C_z — the compensation price for a day of medical leave;

N_z – the medical leave period in hospital and in policlinic

$$E_{c.m.} = C_z \times (N_{z,s} + N_{z,amb.}) = 21 \times (225.330 + 16.250) = 5.073.180$$

4. The payment prices for disability compensations:

$$E_{inv} = C_i \times M_i \times N$$

is

where

C_i - the disability compensation price for the I gr.

M_i - the disability compensation price for the II gr.

N_i – the disability compensation price for the III gr.

$$E_{inv} = C_i \times M_i \times N_i = (427 \times 195 \times 12) + (646 \times 170 \times 12) + (20 \times 100 \times 12) = 999.180 + 1.317.840 + 247.200 = 2.564.220 \text{ lei}$$

5. The economical prejudice defined by the volume and the price of the non-delivered production:

$$E_{p.n.} = C_{p.n.} \times Z_{p.n.} \times N_{p.n.}$$

where,

$C_{p.n.}$ – the price of the daily economical product of an employee;

$Z_{p.n.}$ – the number of the primary oncological patients able-bodied;

$N_{p.n.}$ – the average number of absences of an oncological employee.

$$E_{p.n.} = C_{p.n.} \times Z_{p.n.} \times N_{p.n.} = 12,30 \times 5.350 \times 19,8 = 1.302.939$$

Thus, it resulted that the global economical prejudice caused by the oncological diseases in the Republic of Moldova is caused by 5 basic indicators:

Table no. 1

<i>Nr.d/o</i>	<i>Name of the characteristic rates</i>	<i>Final expenses</i>	<i>Structure (%)</i>
1.	Ambulatory investigations and treatment	1.758.964,9	2,1
2.	Hospital treatment	74.232.275	87,4
3.	Medical leave compensations	5.073.180	6,0
4.	Disability compensations	2.564.220	3,1
5.	Price of the non-delivered product	1.302.939	1,5
	Total:	84.931.578,9	100

The structure of the approximate economical prejudice caused the oncological diseases is about 85 mln. lei annually.

Thus, preventing the oncological diseases and using these sums for the prophylaxis of theses diseases, the financial¹ expenses in this direction can be cut down.

Enclosure no. 2
of the National Program
against oncological diseases
for the years
2008-2012

**The technical equipment and the auxiliary resources for elaborating the National
Program against the oncological diseases for the years 2008-2012.**

Name	Quantity (pcs.)				Total quantity (pcs.)	Unit price (lei)	Total price (lei)
	OIM	Oncologic Polyclinic	Oncological section Balti	Regional Oncologist			
1.	2.	3.	4.	5.	6.	7.	8.
Supplying with chemico-therapeutic products.					27 mln. lei /year		135000000
Construction of the new building of radiology for radiotherapy.					1	12 mln lei	12000000
Finishing the renovation of the aseptic building in hematology.					1	3 mln lei	3000000
Supplying with laboratory equipment.						2 mln lei	2000000
Technical service of the radio-therapy apparatuses.					460 thousand lei /year	5 years	2300000
Supplying with endoprotheses of the oncological patients.	250				250	8000 lei	2000000
Apparatus for bone processing.	1				1	315 thousand lei	315000
Autolcav rn-400.	2				2	160000	320000
Sterilizing drier with hot air ITI-80.	2				2	9900	19800
Distiller 3-25.	2				2	9100	18200
Binocular Microscope.	6	5	2	2	15	17931	268965
Colposcope Model I.	2	2	1	5	10	72035	720350
Gamma camera „JBLSCINTApexSP-6".	1				1	1160000	1160000
Sterilizing drier.	20				20	9900	198000

Operating table.	5				5	214500	1072500
Suction apparatuses.	2				2	7810	15620
Cassolettes for sterilizing the bandage.	20				20	665	13300
Portable cardiographe.	2				2	23840	47680
Spirographe.	1				1	55440	55440
Bronchoscope.	1				1	196250	196250
Surgical instruments set for abdominal operations.	5				5	45900	229500
Surgical instruments set for operations in traumatology and orthopedia.	1				1	43000	43000
Surgical instruments set for operations in the ORL field.	1				1	42500	42500
Surgical instruments set for operation in the maxillary -facial region.	2				2	42000	84000
Surgical instruments set for neuro-surgical operations.	1				1	47000	47001'
Optical equipment set for endocavitary surgery in the ORL field.	1				1	860000	860000
Epipharyngoscope „Olympus ENF type T3 + set de forcepsuri.	1	1				82283	164566
Bronchoscope „Olympus BF type PE + set of forcepses.		1			1	85400	85400
Colonoscope „Olympus CF type EI + set of forcepses.		1			1	122000	122000

Gastroscope „Olympus Q30 + set of forcepses + ansa for diathermo-coagulation SD-9.		1			1	134000	134000
Ecographer „Aloka-1400" (doppler color)		1			1	575000	575000
Portable ecographer „Aloka-500 SD".			1	9	10	135000	1350000
Thermographer „Raduga”		1			1	29500	29500

Magnetotherapy apparatus „Magniter” „Olimp”.	2 1	2 1	1 1		5 3	700 2000	3500 6000
Electroanalgesia apparatus „Eliman-01”.	3				3	28800	86400
Crioapplication apparatus	2	1			3	27500	82500
Crioapplicator „KP - 04”.	4	1			5	5600	28000
Mechanical suturing apparatuses: YO-40 YO-60. yKr yr-60 H5KKA KLJ-28 AKA-4.	5 4 3 4 2 2 20				5 4 > 4 2 2 20	2500 2500 2500 2500 2500 2000	12500 10000 7500 10000 5000 5000 40000
Mechanical lung ventilation apparatus „Briz”.	15					140000	2100000
Electrosurgical apparatus Coagulator.	15					40000	600000
Water distiller „AAVS-60”.	1					70000	70000
TOTAL							16566400