

UNOFFICIAL TRANSLATION

NATIONAL PROGRAM SERBIA AGAINST CANCER

1. Introduction

Malignant tumors, after diseases of heart and blood vessels represent the most frequent cause of disease development and dying of people, both in the world and in our country. According to estimates of the World Health Organization, over 22 million people in the world live with cancer. Every year 11 millions of new patients are registered in the world, out of which around 60% in the developing countries, while seven million people die from malignant diseases (1.2). Every year in the Republic of Serbia around 32.000 new cases of malignant diseases are diagnosed, and annually in the Republic of Serbia around 20.000 people die from cancer.

Due to high frequency of malignant diseases and their high mortality rate, in order to implement prevention and early detection of malignant tumors, but also for better diagnostics, cure and treatment of the diseased, the World Health Organization's Assembly has adopted at its 58th meeting in Geneva in 2005, Resolution on Prevention and Control of Cancer (WHA 58.22 Cancer Prevention and Control). The Resolution points out to the need for compiling and implementing comprehensive national programs for prevention and control of malignant diseases.

Prevention of malignant diseases has huge public-health potential and represents the most efficient approach to control of malignant diseases. It is possible to influence more than 80% of all malignant diseases by prevention or by modifying risk factors, that is, prevention of the start of disease. If the disease still develops, its outcome can be improved by early detection, therapy and rehabilitation, with adequate palliative care.

The objective is to improve the health of the population of the Republic of Serbia and to prevent development of malignant diseases, especially in persons

with increased risk for their development. The objective is to improve the quality of life of those who have already developed malignant diseases, who need efficient treatment, adequate control of symptoms and complications, control of undesired treatment effects, as well as psychological, social and spiritual support to the patient and the family.

Adequate application of knowledge on all levels of healthcare, but primarily comprehensive mobilization of nation in fight against cancer has multiple benefits. Comprehensive and integrated action shall be directed at preventable risk factors, enhancing and strengthening of the healthcare system in order to more efficiently prevent and control malignant diseases.

Bearing in mind the fact that the malignant diseases have common risk factors (smoking, use of alcohol, improper diet and physical inactivity) and social-economic determinants with other chronic non-contagious diseases, malignant diseases have been covered also by the European Strategy for Prevention and Control of Chronic Non-Contagious Diseases from 2006. Malignant diseases shall be the topic and strategy for prevention and control of chronic non-contagious diseases, and therefore also for malignant diseases. Besides this, the other strategies and national programs also include specific measures and activities directed to prevention and control of malignant diseases.

The Ministry of Health has initiated the Action Plan for Active Participation of Nation in Fight Against Cancer, in the form of National Program for Fight Against Cancer (hereinafter: the Program). The Program precisely defines objectives and specific measures with detailed implementation dynamics. The Program represents an integrated social activity directed towards the risk factors and social-economic determinants of health, with active participation and responsibility of all sectors. The objective is to improve the health of the population of the Republic of Serbia and to prevent development of malignant diseases, especially in persons with increased risk for their development. The objective is also to improve the quality of life of those who have already developed malignant diseases, who need efficient treatment, adequate control of

symptoms and complications, control of undesired treatment effects, as well as psychological, social and spiritual support to the patient and the family.

The National Program has a potential for sustainable, coordinated, comprehensive, team approach in prevention and control of malignant diseases in the Republic of Serbia. Program implementation means that in the next five years:

- mortality from malignant diseases shall decrease,
- life of those ill of malignant diseases shall be prolonged,
- quality of life of the diseased and their families shall improve.

2. Burden of malignant diseases in the Republic of Serbia – analysis of the existing situation

In the Republic of Serbia relatively high incidence and mortality from malignant tumors is marked, as well as high frequency of risk factors. An important problem is represented by lack of recognition of risky behavior and insufficient use of positive experiences in implementing prevention and early detection program for malignant diseases from developed countries of Europe and the world.

After cardio-vascular diseases malignant tumors represent the most frequent cause of dying in our country. In the Republic of Serbia in 2006 20.217 persons died of cancer (11.495 men and 8.722 women) (table 1). Standardized mortality rate was 202.7 per 100.000, which has ranked the Republic of Serbia within the countries with medium risk of dying from malignant diseases in Europe. Standardized mortality rates for cancer were higher in AP Vojvodina, and lower in the Republic of Serbia, without data for the territory of AP Kosovo and Metohija, in relation to the republic average.

Table 1. Mortality from malignant tumors according to gender in the Republic of Serbia, in 2006

All malignant tumors (S00-S97)	Gender		
	Men	Women	Total

Data for the territory of the Republic of Serbia	Number of deceased	11.495	8.722	20.217
	Mortality*	319.0	229.1	272.8
	Stand. Mortality**	257.8	159.0	202.7
Data for territory of AP Vojvodina	Number of deceased	3.527	2.576	6.103
	Mortality*	362.7	250.1	304.8
	Stand. Mortality**	317.5	177.9	237.0
Data for territory of the Republic of Serbia without data for the territory of AP Kosovo and Metohija	Number of deceased	7.968	6.146	14.114
	Mortality*	302.8	221.3	260.9
	Stand. Mortality**	238.1	152.0	190.6

Source: non-published data of the Republic Statistics Bureau, processed in the Institute for Public Health of Serbia “dr Milan Jovanovic-Batut”

* Per 100.000 inhabitants

** According to standard population in Europe (5).

Based on data of the Republic Statistics Bureau it has been noticed that the number of people who have died from malignant tumors in the period 1997-2007 has increased for 20.3% (from 16.973 to 20.417). **During the last decade there have been an increase in the rates of mortality from all malignant tumors**, in men for 11.7% (from 235.0/100.000 to 262.5/100.000) and in women for 7.0% (from 146.8/100.000 to 157.1/100.000). Increase in mortality from all leading localizations of malignant tumors has been marked in men, except for the stomach cancer. Standardized mortality rates for stomach cancer have dropped for 20.1% (from 19.1/100.000 to 15.9/100.000), and mortality rates for malignant tumors of prostate (for 32.4%), of colon and rectum (for 16.0%), lungs (for 15.0%) and pancreas have simultaneously increased (for 12.4%). And in women in the same period growth of mortality from all leading localizations of malignant tumors occurred, except from the stomach cancer that shows decrease in mortality for 16.7% (from 8.4/100.000 to 7.2/100.000 inhabitants). Mortality rates

have increased for malignant tumors of lungs (for 43.8%), cervical cancer (for 9.4%), breast cancer (for 4.1%) and colon and rectum cancer (for 1.8%). The most frequent causes of death in both men and women were those malignant tumors that were the most frequent causes of disease (table 2).

Table 2. Mortality from the leading localizations of malignant tumors, according to gender, Republic of Serbia, 2006

Malignant tumor localization (codes according to MKB-10)		Gender		
		Men	Women	Total
Lungs and bronchia (S34)	Number	3.693	1.136	4.829
	Raw mortality*	102.5	29.8	65.2
	Stand. mortality**	82.9	21.5	49.4
Colon and rectum (S18-S20)	Number	1.358	1.045	2.403
	Raw mortality*	37.7	27.4	32.4
	Stand. mortality**	29.7	17.9	23.1
Breast (S50)	Number	36	1.574	1.610
	Raw mortality*	1.0	41.3	21.7
	Stand. mortality**	0.8	29.6	16.6
Cervix (S53)	Number	-	481	-
	Raw mortality*	-	12.6	-
	Stand. mortality**	-	10.0	-
Prostate (S61)	Number	901	-	-
	Raw mortality*	25.0	-	-
	Stand. mortality**	19.6	-	-
Stomach (S16)	Number	665	402	1.067
	Raw mortality*	18.5	10.6	14.4
	Stand. mortality**	14.7	6.9	10.4

Source: non-published data of the Republic Statistics Bureau, processed in the Institute for Public Health of Serbia "dr Milan Jovanovic-Batut"

* Per 100.000 inhabitants

** According to standard population in Europe (5).

In relation to 1999 in 2005 incidence rates of all localizations of cancer in the Republic of Serbia, without data for territory of Autonomous Provinces have grown in men for 21.8% (from 321.3/100.000 to 391.5/100.000 inhabitants), and in women for 16.8% (from 276.3/100.000 to 322.7/100.000 inhabitants).

Men in the Republic of Serbia, without data for the territory of Autonomous Provinces mostly became ill from cancer of lungs, colon and rectum, prostate, urethra, stomach and pancreas (3). From 1999 to 2005 an increase has been observed in diseases in men from all leading localizations of malignant tumors, except for stomach cancer. In relation to 1999, in 2005 the standardized rates of incidence have grown in prostate malignant tumors for 60.3%, of urethral cancer for 36.6%, colon and rectum cancer for 28.6% and lung cancer for 15.5% (table 2).

In women, malignant process was most often localized at the breast, colon and rectum, cervix, lungs, uterus and stomach. With certain variations in the values of incidence, in the period from 1999 to 2005 growth in disease development has been marked in women in all the leading localizations of malignant tumors, except for the cervical cancer, where decrease of the rate of incidence has been observed for 3.5% (from 31.3/100.000 to 30.2/100.000 inhabitants). Incidence rates have grown for malignant tumors of colon and rectum for 24.6%, lung cancer for 23.7, of uterus for 17.1% and for breast for 6.8%.

Out of all malignant tumors analyzed in the study "Burden of diseases and injuries in Serbia", burden with lung cancer holds the first place (59.088 DALY-s), followed by colorectal cancer (26.007 DALY-s), breast cancer (23.868 DALY-s), stomach cancer (16.487 DALY-s) and cervical cancer (8.230 DALY-s), which is in total 133.689 DALY-s (4).

3. Objectives, framework and Program leading principles

3.1. Program objectives

- Decrease of the number of newly developed patients suffering from malignant diseases,
- Decrease of number of dead from malignant diseases,
- Improvement in early detection of malignant diseases,
- Improving diagnostics and treatment of malignant diseases,
- Improvement in the quality of life of those ill with malignant diseases and their families,
- Securing to those ill from malignant diseases adequate standard of services on all healthcare levels,
- Improvement of scientific researches in oncology.

3.2. Program leading principles

The leading principles on which the activities envisaged by the Program are based are:

- implementation of Program objectives represent responsibility of the whole community,
- those objectives can be achieved only through multicultural cooperation and inter-sectoral investment into maintenance and health improvement,
- each sector of the society is responsible for influence of its activities on the health,
- measures and activities envisaged by the Program are based on available scientific discoveries and recommendations of international expert associations,
- a comprehensive and integrated approach means planning, coordination, monitoring and evaluation of activities, thereby improving efficiency of implemented measures and optimizing usage of available resources.

3.3. Key Program components

A comprehensive approach to Program implementation is characterized by simultaneous:

- promoting of the program for enhancing health and conditions in the working and living environment on the population level and of the disease prevention programs (primary prevention),
- directing to persons with high risk and securing adequate diagnostics and therapy (secondary prevention),
- maximum increase of the number of people to whom efficient treatment and care shall be rendered (tertiary prevention),
- securing conditions for quality life, by applying rehabilitation and palliative care measures.

Strategic plans for mobilization of nation against cancer envisage several indicators matching desired outcomes for planned five-years period.

3.3.1 Prevention

Programs for prevention of risk factors for appearance of malignant diseases have been applied throughout the country.

Objective: number of smokers should be decreased for 5% among young people, and for 3% in adults, to decrease the percentage of obese, increase everyday intake of fruits and vegetables and increase physical activity.

3.3.2. Early detection – screening

National programs for early detection (screening) of cervical cancer, breast cancer and colorectal carcinoma should be applied throughout the country. It is planned that in the next five years period: 45% of women age from 45 to 69 years should be checked for breast cancer; 75% of women age from 25 to 69 years – for cervical cancer; to perform testing and reading of test for occult bleeding in 40% of men and women age from 50 to 70 years invited for testing, with average risk for colon cancer.

3.3.3. Diagnostics and treatment – organization and healthcare coverage

To achieve 100% of the coverage of patients with national programs of oncology healthcare with secured diagnostics, treatment and palliative care within the healthcare system. To enhance procedures securing equal availability of diagnostics and treatment, from establishing doubt to implemented treatment.

3.3.4. Palliative care and rehabilitation

Palliative care is an approach improving the quality of life of the patient and the family, facing problems following the disease that puts life at danger, using prevention and elimination of suffering by early detection and unmistakable evaluation and treatment of pain and other symptoms, just like treatment of complications of the disease itself or of therapy procedures. The rehabilitation offers possibility for creating better quality of life.

3.3.5. Education

Accessible, sufficient and continuous education on all levels, primarily in the form of improved basic training in the oncology, within the basic medical studies, improvement of training for other profiles of health workers and healthcare collaborators, continuous medical education, education of non-medical sector and education of the population.

3.3.6. Researches in oncology

The main objective of the research is improvement in reporting malignant diseases and improvement of already existing cancer register as a system for monitoring malignant diseases in the Republic of Serbia, which would cover the whole population of the Republic of Serbia. However, enhancing of research means also securing implementation of researches in oncology, application of screening of frequency of genetic alterations and their spectrum, research in tumor biology in different localizations, as well as clinical researches.

4. Prevention

Prevention means undertaking necessary steps for decreasing high risk behavior.

Program for fight against cancer shall be implemented on all levels of healthcare, within healthcare institutions on the primary (medical centers, institutes), secondary (hospitals) and tertiary (clinics, institutes, clinics-hospital, clinical centers) healthcare level, as well as in the public health institutes. In rendering oncology healthcare to citizens selected physicians have been included (of general medicine, gynecologists) and physicians specialists of

different specialties (internal medicine, dermatology), and in the field of diagnostics also specialists of radiology.

The existing capacities of stationary healthcare institutions (on secondary and tertiary level) from the Regulation on the Plan of Healthcare Institutions' Network ("Official Gazette of the RS", no.s 42/06, 119/07 and 84/08) which have been exclusively determined for treating those ill from malignant diseases have been shown in the table 3. Implementation of the protocol for treatment of patients in the quoted institutions shall also be organized within the daily hospitals.

	Name of the institution	Number of beds	Number of treated individuals	Number of sickness days	Occupancy of beds in %
1.	Institute for oncology of Vojvodina, Sremska Kamenica	239	8.111	66.851	77
2.	Institute for Lung Diseases of Vojvodina, Sremska Kamenica	72	2.077	20.305	77
3.	Institute for Oncology and Radiology of Serbia	362	12.191	133.755	101
4.	CBC "Bezanijska kosa" Department for Oncology Surgery	16	711	4.160	71
5.	CBC "Zvezdara" – Oncology Department	26	765	8.428	79
6.	CC Kragujevac – Oncology Clinics	82	1.890	29.646	99

7.	General Hospital Kladovo	60	965	16.678	76
8.	CC Nis – Oncology Clinics “Knez selo”	125	2.981	32.385	71
Total		982	29.691	312.208	87

Source: Public Health Institute “dr Milan Jovanovic-Batut”, year 2007

4.1. Primary prevention (steps 1-6)

Primary prevention means activities directed to enhancing and preserving health and prevention of development of diseases through decreased exposure to risk factors or through positive behavior. It is estimated that primary prevention could prevent development of even two thirds of all cases of cancer.

Primary prevention activities cover:

- health education of the population,
- smoking prevention,
- improvement of nutrition, promotion of physical activity and prevention of obesity,
- prevention of infections relevant for development of malignant diseases,
- prevention and protection from excessive exposure to ultraviolet rays,
- protection from cancerogenous agents in living and working environment.

4.1.1. Health education of the population (step 1)

Organizing media campaigns directed to preserving and improving health, prevention and early detection of malignant diseases.

Securing source of adequate information on prevention and treatment of cancer (Internet presentation, printed materials, info phone-line, etc.).

Inclusion of health education in the curricula of institutions from preschool, elementary and secondary education, by joint programs of the Ministry of Health and the Ministry of Education.

4.1.2. Prevention of smoking (step 2)

4.1.2.1. Protection from exposure to tobacco smoke

Enhancing and application of laws and other regulations, in order that all public places and work places would be free of tobacco smoke.

Rising of the population's consciousness about the harmfulness of passive smoking, through media campaigns and educational programs intended for schools, public and private companies, etc.

4.1.2.2. Decreasing frequency of smoking in the population

Raising the level of knowledge in the population regarding harmfulness of smoking.

Implementation of the Law on Prohibition of Advertising and Promoting Tobacco Products, as well as sponsorship of public events by tobacco industry.

Training of healthcare, educational and social workers and employees from the local self-government in techniques on giving up smoking.

Envisaging, application and enhancing of the program for prevention and elimination of smoking in healthcare institutions, educational institutions, work places and places for training sports, using "the best practice" for giving up smoking.

Increase of availability of pharmaceutical products used in treating tobacco dependency.

Application of the Tobacco Act provisions ("Official Gazette of the RS", no.s 101/05, 63/06, 10/07, 67/07, 18/08 and 73/08) prohibiting sales of tobacco products to minors.

4.1.3. Enhancing nutrition, increase in physical activity and prevention of obesity (step 3)

Promotion of healthy lifestyles through campaigns and educational programs for enhancing nutrition, increase in physical activity and prevention of obesity.

Implementing regulations on health safety and quality of foodstuffs.

Underlining the importance of foodstuffs' declarations (contents, calorie value, presence of additives, etc.).

4.1.4. Prevention of infections relevant for development of malignant diseases (step 4)

Implementation of program immunization against hepatitis B.

Implementation of measures for transmitting hepatitis C virus.

Compilation and application of recommendations for immunization against human papilloma virus.

Compilation and application of recommendations for discovering and treatment of infections with *Helicobacter pylori*.

4.1.5. Prevention and protection from excessive exposure to UV rays (step 5)

Increase of knowledge about dangers of excessive exposure to UV irradiation and methods of prevention, as well as change of attitudes and behavior of the population through media campaigns, educational programs, continuous informing of the population about risks (UV index, etc.), and education of healthcare and educational workers.

Passing of the legal regulations pertaining to the work of solariums and other artificial sources of UV.

4.1.6. Protection from exposure to cancerogenous agents (step 6)

4.1.6.1. Professional exposure to cancerogenous agents

Developing mechanisms for monitoring persons exposed to cancerogenous risks in the working place and improvement of diagnosis of work related cancer.

Developing long term monitoring of on-job exposition - strengthening mechanisms for control of cancerogenous substances.

Improvement of measures for decreasing exposure to cancerogenous agents in the work environment.

Inclination towards bigger inclusion of employees in the occupational medicine in campaigns for prohibition of smoking in the workplace.

4.1.6.2. Protection from exposure to cancerogenous agents in the environment

- Obligation to include cancer risk estimate in studies of industrial place influence.
- Initiating studies on influence of cancerogenous agents (dioxin, lead, dust, benzene, radon, arsenic, electromagnetic irradiation, small doses of ionizing irradiation, etc.).

- Discovering and treating places contaminated with one or several substances with known cancerogenous effect and monitoring the exposed population.
- Monitoring polluters and compilation of programs for preserving the environment, in collaboration with the other sectors and ministries.

4.2. Early detection and screening (steps 7-11)

If the disease is diagnosed in the initial phase treatment is more efficient and cheaper.

Early detection means recognizing early symptoms or signs of the disease.

Screening means preliminary identification of until then unrecognized disease by application of screening test in the healthy (asymptomatic) population. Organized screening program means that all persons of certain age and gender in a certain territory should be invited for checks, using written invitations to their home address. Those calls should be as necessary repeated, in order to have as large reply as possible.

The objective of the program is introducing and enhancing organized national screening programs for three localizations: breast cancer, cervical cancer, colon cancer.

4.2.1. Early detection of symptoms-signs of the disease (step 7)

Education of health workers for recognizing early symptoms-signs of malignant diseases and for adequate diagnostics and care of patients.

Health education of the population about early symptoms-signs of malignant diseases.

4.2.2. Breast cancer screening (step 8)

- Implementation of the National Breast Cancer Prevention Program.
- Securing adequate screening capacities (equipment, staff).
- Health education of women regarding importance of regular checks.
- Education of healthcare workers regarding importance and method of implementing screening.

4.2.3. Cervical cancer screening

- Initiation of the National Cervical Cancer Prevention Program in an increased number of healthcare institutions, which would participate in the quoted program implementation.
- Health education of women regarding importance of regular checks.
- Health workers' education for screening implementation.
- Securing adequate capacities for screening (equipment, staff).

4.2.4 Colon cancer screening (step 10)

- Passing of the National Program for Colorectal Carcinoma Prevention.
- Health education about importance of regular checks.
- Health workers' education on importance and method of screening implementation.
- Securing adequate capacities for screening (equipment, staff).

4.2.5. Development of capacities for testing hereditary predisposition for cancer (step 11)

It is necessary to develop capacities for genetic testing, that is, discovering of genetic alterations leading to hereditary predisposition for malignant diseases (mutations of BRCA genes, etc.).

Those capacities shall, besides laboratories, also cover genetic counseling and formation of the national register of families with hereditary predisposition for cancer.

Special preventive programs are developed for healthy persons with confirmed genetic alteration.

4.3. Secondary prevention – diagnostics and treatment (step 12)

Diagnostics of malignant diseases covers a wide spectrum of activities implemented in different institutions and on different levels of healthcare.

It is necessary to secure that the diagnosis should be established in the shortest possible deadline and that the patient should be directed to adequate institution.

The first step in care of cancer is correct diagnosis, requiring combination of precise clinical searches and diagnostic procedures. Cancer diagnosis can be established directly, by visualization of the covered place, for instance by bronchoscope, oesophagoscope, mediastinoscopy, colonoscopy or colposcopy, etc. Even when it looks like the tissue is malignant, biopsy has to be completed for confirming malignancy.

Once that you establish malignant disease diagnosis, it is necessary to have additional check, in order to determine a degree of its expansion.

The treatment should be implemented based on recommendations or protocols based on evidence and harmonized with the recommendations of international expert organizations. Oncology treatment is multidisciplinary, and the decision on treatment shall be passed by a team of experts of adequate specialties. Decisions on therapeutical approach, as well as the decisions on selection of patients shall be passed in adequate commissions named according to this program.

Primary cancer treatment objectives are:

- Recovery,
- extension of quality living,
- enhancing the quality of life.

In this context, recovery has been defined as fulfillment of expectations regarding normal lives and consists of three important components:

- recovery from all signs of presence of disease,
- achieving stadium with minimal or without any risk for reappearance of the disease,
- returning of the functional health.

Basic treatment methods are: surgery, radiotherapy, chemotherapy (including hormonal and other therapy) and psycho-social support.

Cancer treatment effect greatly depends on the disease localization and on numerous other factors.

4.3.1. Role of surgery

Surgery has an important role in diagnostics, determining the stadium (of operations) and treatment of local tumors. Surgery can successfully treat early detected solid tumors. Objective of surgery for diseases that have ceased to exist after radiotherapy or chemotherapy is to secure control of the local disease, as well as better chances for adjuvant treatment. The surgery is rarely indicated in patients with metastatic disease, and it also has an important role in urgent oncology.

4.3.2. Role of radiotherapy

Radiotherapy is equal with surgery, as the most important method in treatment of local forms of cancer. It is often applied even before surgery, as well as after surgery without clear excision lines. Palliative radiotherapy is very important in patients with endangered life. If radiotherapy is indicated, patient can be treated using two types of equipment: teletherapy or brachytherapy. Quality assurance is essential in both techniques, which also necessitates cooperation with the medical physics service.

4.3.3. Role of chemotherapy

Chemotherapy can lead to recovery from certain forms of cancer, even when the disease has spread. Chemotherapy is also efficient in palliative care of many diseases. Adjuvant therapy is a treatment added to primary definitive therapy, in the absence of macroscopic signs of the disease. Neo-adjuvant chemotherapy is applied in developed forms of certain solid tumors. Currently more than a hundred cytostatics are in use. The World Health Organization has made a list of so-called essential cytotoxic drugs. This list of drugs represents a basis for national chemotherapy policy, in order to resolve problems related to cancer within the country.

4.3.4. Role of stem cells therapy

Today, transplantation of stem cells (SC) in combination with intensive radio-chemotherapy is applied in treatment of a large number of hematological and non-hematological, mostly malignant diseases, like chronic and acute leukemias, lymphomas, multiple myeloma, solid tumors, kidney and breast cancers and other solid tumors and some auto-immune disorders. The effect of

treatment using stem cells' transplantation is not always the same – besides else, it depends on the type, form and stadium of the basic disease, age of the patient and term for transplantation. The objective of improving diagnostics and treatment is securing timely, optimum diagnostics and therapy of malignant diseases available to all citizens of the Republic of Serbia.

Measures contributing to implementation of those objectives reflect themselves in:

- change of organizational structure of medical institutions treating oncology patients,
- expansion of the existing and increasing capacities for diagnostics and treatment.

4.3.5. Change of organizational structure of medical institutions treating oncology patients (step 13)

The Minister of Health shall establish National Office for Cancer (hereinafter: the Office) as a special working group – professionally competent body with defined roles and responsibilities, which is responsible to the Minister of Health. The Office shall be in charge of coordinating all participants who implement the Program, and shall represent the basic support to the Ministry of Health's Republic Expert Commission for Cancer.

The Office shall coordinate compilation of national protocols and guides, it shall propose standards, plan, implement, coordinate and supervise prevention and early diagnostics programs, supervise and evaluate cancer registers.

Comprehensive multidisciplinary treatment of oncology patients shall be implemented in the reference institutions. According to the demographic structure of the Republic of Serbia and the Office protocols, therapy procedures shall be implemented. The reference institutions shall simultaneously represent institutions supervising application of treatment protocols in healthcare institutions (oncology medical centers, etc.).

Healthcare institutions rendering healthcare to patients ill from malignant diseases shall be professionally and methodologically tightly connected to the reference institution, and in the case of need the reference institution shall also

implement decisions of the consilium, passed on the level of reference institutions.

4.3.6. Expansion of the existing capacities and capacity building (step 14)

Number of facilities for diagnostics and monitoring (scanning with magnetic resonance, CT scanners, PET scanners, mammographs, etc.), as well as a number of devices for planning and implementing irradiation therapy shall be increased, according to the recorded needs.

Equal access to all drugs, including expensive, innovative drugs that have been proposed by the Office shall be enabled, according to the previous approval by adequate institutions in the Republic of Serbia.

4.4. Tertiary prevention (step 15-19)

Psycho-social support means securing support not only regarding certain diagnostics and treatment, but also by developing additional support, early rehabilitation and palliative care for malignant disease patients and their families.

4.4.1. Support therapy (step 15)

4.4.1.1. Palliative care and supportive therapy

Palliative care is an approach improving the quality of life of the patient and family, facing the problems following life threatening diseases, through prevention and elimination of suffering by early detection and unmistakable evaluations, treatment of pain and other symptoms, as well as by treating complications of the disease itself or of therapy procedures. Palliative care covers a period from illness' diagnosis to the end of mourning period due to loss of a family member. Palliative care is interdisciplinary, multi-professional approach and it requires team work, informing of the patients and their participation in passing of the decision on treatment, continuous care covering the network and coordination of services securing that type of continuity.

Supportive therapy is necessary in all phases of malignant diseases, including the patients with potentially incurable disease. Rendering psycho-social support to the diseased and the family means recognizing worrying, misunderstandings, financial problems, as well as support to physicians

implementing palliative care, to oncologists and other team members, in order to prevent job burn-out syndrome.

Palliative care is a care both of medical services, as well as of the whole community, therefore it is necessary to establish inter-departmental cooperation, inclusion of local self-government, of educational and social institutions, as well as civil society engagement, of church and international organizations.

4.4.1.2. Social inclusion of malignant diseases patients (step 16)

Keeping one's job, if there is no decrease in working ability of the diseased (according to the report on evaluation of the working ability by the physician specialist), that is, allocation to another work place within one's qualification, possible additional qualification or re-qualification according to the law.

4.4.1.3. Assistance to parents of children ill from malignant diseases (step 17)

Improvement in this field shall strive to easier approach in exercising the right to have special sick leave of the parent of children ill from malignant diseases and adequate levels of pecuniary compensation (without decrease) during absence from work of one parent, due to care of the sick child.

4.4.1.4. Stimulation and supporting of the role of patients' association and of the association of parents of diseased, volunteers and other associations (step 18)

Role of the association of: patients, parents of sick children, volunteers and foundations is precious. Their activity is complementary to the activities of health workers and health collaborators.

4.4.1.5. Introduction of the program and activities related to enhancing psychological status of oncology patients and members of their families (step 19)

It is necessary to engage adequate number of psychologists in all specialized institutions in which patients ill of malignant diseases are diagnosed and treated. Psychologists are necessary on all levels, from establishing the diagnose to the terminal phase of the disease. It is also important to educate patients and members of their families by physicians, medical technicians and health

collaborators. In this way, patients and their family members shall be informed about diagnosis and method of treatment.

4.5. Education (steps 20-24)

4.5.1. Improvement of the basic training in oncology (step 20)

Modernization and enhancing curricula of medical profession faculties in order to make oncology adequately represented at all levels of study.

4.5.2. Improvement of training for other profiles of health workers and health collaborators (step 21)

Besides high education healthcare staff, all the other profiles of health workers and health collaborators must be educated using specially developed programs that in an adequate way treat oncology as a national problem, according to its meaning: psychologists from oncology directed department, physicists and physico-chemists working in medicine, nurses and technicians.

4.5.3. Continuous medical education (step 22)

Continuous medical education shall be implemented among health workers of all profiles, according to the Rule Book on Closer Conditions for Implementing Continuous Education for Health Workers and Healthcare Collaborators (“Official Gazette of the RS”, number 130/07).

4.5.4. Non-medical sector education (step 23)

Improvement of knowledge about risk factors for development of malignant diseases and establishing inter-sectoral cooperation, in order to form joint objectives pertaining to public health and prevention of malignant diseases.

4.5.5. Education of the population (step 24)

Developing educational campaigns for informing the public about risk factors for development of malignant diseases.

Development of the education program directed to risk factors for development of malignant diseases by education program from elementary school to university.

4.6. Researches in oncology (steps 25-28)

4.6.1. Securing research implementation in oncology (step 25)

Scientific research in oncology and its implementation in healthcare institutions can be performed according to the law.

Researches in oncology should be directed to translational researches. It is necessary to increase technological and staff readiness in order to implement such researches.

4.6.2. Screening frequency and spectrum of genetic alterations leading to hereditary predisposition for cancer in the Republic of Serbia (step 26)

The researches done so far have shown that in the different population there could be different spectrum of mutations carrying hereditary predisposition, for instance, for hereditary breast and ovary cancer, hereditary non-lipose colon carcinoma, familiar adenomatous polyposis, MEH1, MEH2, etc.

4.6.3. Research in the biology of tumors of various localizations (step 27)

Researches contributing to the prognosis and envisioning the answer to the therapy shall define sub-grouping of patients in prognostic groups, not only based on classical prognosis parameters, but the role of new markers shall be observed, for early diagnostics, disease forecast, forecasting of replies and monitoring of reactions to anti-cancer therapy, as well as the development of new biological therapies.

Researches defining molecular monitoring of minimum residual disease.

The basic goal is to detect minimum residual disease before clinical signs of disease re-appearance.

Research in the tumor immunology covers research of regulatory mechanisms related to immuno-modulation in malignant diseases.

4.6.4. Clinical researches (step 28)

Through clinical researches in oncology, one should determine tolerance and efficiency of biologically targeted therapies, new chemo-therapeutic drugs, as well as efficiency of new regimes of applying chemotherapy, radiotherapy in combination with surgery or independently.

5. Monitoring and evaluation (steps 29-30)

Monitoring means monitoring of the primary prevention program, early detection and screening, diagnostics and treatment, psycho-social support, education and research in oncology, and monitoring indicators pertaining to decrease of incidence and prevalence of malignant diseases, improved quality of life of diseased, better coverage by early detection checks, improvement in attitudes and knowledge pertaining to risk factors and malignant diseases.

Reports about the work plan and execution of services for oncology healthcare on all three levels (primary, secondary and tertiary healthcare) and opinion on execution shall be delivered by the public health institutes to the Public Health Institute of Serbia “dr Milan Jovanovic-Batut” and to the Office.

The Republic Expert Commission for Oncology shall two times a year evaluate integration and implementation of the Program, and shall pass measures for its improvement and enhancing.

6. Financing

Funds necessary for implementing this program shall be secured from the budget of the Republic of Serbia. Funds intended for implementing the Program shall be determined every year, depending on the dynamics of using funds and planned activities for the current year.