Onkološki inštitut v Ljubljani
55 let

Institute of Oncology Ljubljana
55 years

1938-1993

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Ob tako častitljivi obletnici, kot je 55 let obstoja in dela Onkološkega inštituta, je na mestu iskrena čestitka, še posebej, ker je bilo delo, in s tem temeljno poslanstvo te ustanove, na tako občutljivem področju medicine uspešno, polno dosežkov in priznanj, ki prav nič ne zaostajajo za uspehi v razvitem svetu. Onkologija v Sloveniji ima po vseh pokazateljih zavidanja vredno tradicijo. Doba preživetja rakavih bolnikov se podaljšuje in vedno več je med nami ljudi, ki so svojega raka tudi preživeli.

Zdravniki in drugo zdravstveno osebje kljub težavam, ki so pestile naše zdravstvo in še posebej Onkološki inštitut, zaradi neprimernih prostorov, in s tem težjih delovnih pogojev, niso klonili, temveč so vselej zagotavljali ustrezno oskrbo bolnikov ter uspešno raziskovalno in pedagoško delo na tem strokovno zahtevnem in človeško tako občutljivem področju medicine. Posebna zahvala vsem za dobro opravljeno delo, za vse, kar je bilo doseženo, za vso zagnanost in požrtvovalnost.

Slovenski javnosti so dobro poznana vaša prizadevanja in želje, da bi svoje delo lahko opravljali v tehnološko in prostorsko primernejših pogojih, zato želim, da bi bila ta prizadevanja čimprej uresničena, saj bi to pripomoglo k doseganju novih strokovnih in človeških uspehov.

Svojo 55. obletnico praznujete v samostojni državi Sloveniji, ki je sredi velikih družbenih sprememb. Če boste uspeli uresničiti vaše načrte, boste svojo poslanstvo lahko izpolnjevali v primernejših pogojih dela, v skladu s prostorskimi in strokovnimi normativi in vašimi željami ter v koraku z razvitim svetom in tako prispevali svoj delež k ozdravitvi rakavih bolezni in s tem k prijaznejšemu življenju v naši državi.

Milan Kučan,
predsednik Republike Slovenije

Such a respectable occasion as is the 55th anniversary of the functioning of the Institute of Oncology deserves our sincere congratulations, more so since the mission that this institution has been performing in this highly sensitive branch of medicine has been throughout successful, and marked by achievements and acknowledgements comparable with those of the developed world.
According to all indicators, oncology in Slovenia has an enviable tradition. The duration of cancer patient survival is on the increase, and there are more and more of those among us who have managed to outlive their cancers.
Despite the difficulties affecting our health service and particularly the Institute of Oncology, its doctors and other medical staff have never given in under the weight of difficult and unsuitable working conditions; moreover, they have not only always managed to secure adequate medical care for their patients, but also promoted successful research and education work in this professionally demanding and – from the humanistic point of view – so sensitive a field of medicine. Our special thanks go to all concerned for the well performed work, for all the achievements, and for their enthusiasm and devotion to work. The Slovenian public is well aware of your struggle to obtain suitable and technologically adequate conditions for your work, and therefore I wish that your endeavours may swiftly yield the desired results, for this will surely contribute to further advancement of the profession as well as to the improvement of human life.
Your 55th anniversary is being celebrated in the independent state of Slovenia which is undergoing great social changes. Should you manage to turn your plans into reality, you will be able to carry out your mission under more adequate working conditions, in accordance with the relevant technical and professional standards – and in keeping with your own aims – while staying abreast of the developed world. Thus you will be able to contribute towards cancer cure, and thereby improve the wellbeing of our country.

Milan Kučan,
President of the Republic of Slovenia

Slovenski onkološki inštitut je dopolnil 55 let. V tem času je sodoživljal razvoj onkološke stroke. Četudi še vedno ne vemo, zakaj se naša tkiva z neobrzdano rastjo lahko obrnejo proti nam samim, pa je zdravljenje teh sprememb danes bolj učinkovito kot kdajkoli doslej. Beseda rak sicer še ni izgubila svojega hudega pomena, se pa o tej bolezni danes vendarle pogovarjamo manj obremenjeno kot nekoč; in vse več je takih, ki s tem, ko pravijo »imel sem raka«, postavljajo na laž tiste dobronamerneže, ki skušajo raku zmanjšati njegov zločesti sloves s trditvijo, da je to pravzaprav le kronična bolezen. Vemo pa, da kronične bolezni niso ozdravljive.

Kljub temu pa število rakavih bolnikov pri nas še vedno narašča. Slovenci se staramo, rak pa je predvsem bolezen starosti. Imamo tudi veliko zdravju škodljivih razvad, ki raka prav kličejo. Več ga je pa tudi zato, ker ga več odkrijemo, ko se šele začenja in ga je še mnogo laže obvladovati. Za vsakim takim bolnikom stojijo pozornost in izkušnje zdravnikov in zdravstvenega osebja. Veliko smo storili tudi za izobraževanje vseh naših ljudi, da bi na sebi dovolj zgodaj odkrili opozorilo, da je potrebna pot k zdravniku. Zgodnje odkrivanje rakastih sprememb sodi zato na področje usklajenosti med preventivo in kurativo, med delom v osnovni in specialistični zdravstveni dejavnosti ter med Onkološkim inštitutom in drugimi bolnišnicami.

Onkološki inštitut potrebujemo vsi. Za vsakogar od nas v hudi zdravstveni stiski pooseblja dejansko ali morebitno pomoč. Zato si ga želimo dobro organiziranega in dobro vodenega, da bo zmogel sproti spremljati hiter razvoj stroke in nam najsodobnejše zdravljenje tudi uspešno posredovati. Ko zbolimo, namreč vsi želimo le najboljše. Ta naša pričakovanja predstavljajo veliko nalogo, ki pa ne sme biti le enostranska. Ali slovenska družba pozna svojo dolžnost? Če bi se sprehodili po vseh prostorih Onkološkega inštituta, bi najbrž morali ugotoviti, da temu ni tako in da prostorske razmere nekaterih enot ne morejo več motivirati niti stroke niti tam zaposlenih.

Onkološki inštitut za svoj nadaljnji razvoj nujno potrebuje prostorsko obnovo. To Slovenci že dolgo vemo. Upamo, da bo to ugotovil tudi Državni zbor, ki pooseblja našo novo slovensko državo. Ko izražam Onkološkemu inšitutu vse priznanje in mu čestitam za opravljeno delo, pa si želim, da bi bilo praznovanje naslednjih obletnic tudi po tej plati bolj veselo.

Božidar Voljč,
minister za zdravstvo

The Slovene Institute of Oncology has reached its 55th anniversary. Throughout this time it has participated in the development of oncology.
Even though we still cannot explain why our own tissues – by their uncontrollable growth – can turn against us, the treatment of these changes has become more effective than ever. The word cancer has still not lost its fatal significance; nevertheless, this disease is nowadays discussed more freely than before.
Increasingly, we hear the remark from patients: "I have had cancer" – a remark which seems to test the credibility of those who try to dismiss cancer as just another chronic disease. But we know that chronic diseases are incurable.
Nevertheless, the number of cancer patients in our country is still on the increase. The Slovenian population is aging, and cancer is primarily a disease associated with old age. Then there are all those health-threatening life habits which directly put us at risk of cancer. But the increasing cancer incidence may also be attributed to the larger number of cases being detected at an early stage when the disease is much easier to control. All such patients need to be – and are supported by the attention and experience of physicians and other medical staff. A lot has also been done for general public education with the aim of teaching people to become aware of any warning signs calling for doctor's attention. Therefore, early cancer detection represents a link between the prevention and therapy, between the basic and specialist health services, as well as between the Institute of Oncology and other hospitals.
We all need the Institute of Oncology. For everyone faced with severe health problems it symbolises either real or potential help. Therefore, we want to see this institution well organized and well managed, so that it will keep abreast of the rapid development of the profession, and will be able to transfer to us the latest advances in cancer treatment: for when we fall ill, we all need the best treatment. These expectations involve a great duty and responsibility which, however, should not be onesided. But is Slovenian public aware of its duty? A brief walk through the buildings of the Institute of Oncology would probably convince us that this is not so, and that the inadequate conditions of some units are by no means stimulating, either for the medical staff or for the general personnel.
For its further development, the Institute of Oncology urgently needs renovation of its room facilities. In Slovenia, we have long been aware of this, and we hope that this need will also be recognized by the State Council which represents our new state. In expressing my due thanks and congratulations to the Institute of Oncology for their achievements, I sincerely wish that the forthcoming anniversaries may be celebrated in an even brighter working environment.

Božidar Voljč,
Minister of Health

Ob petinpetdesetletnici Onkološkega inštituta

Onkološki inštitut je danes na moč razvejana in hkrati v sebi tesno prepletena združba zelo različnih dejavnosti. Od enot, ki se ukvarjajo z epidemiologijo, preventivo in registracijo raka, preko oddelkov, ki se ukvarjajo s tumorsko biologijo ter z laboratorijsko, patomorfološko in topografsko diagnostiko, pa do kirurgije, radioterapije, internistične onkologije ter njim priključenih dejavnosti zdravstvene nege in rehabilitacije – vsa ta raznolika združba se je zbrala okrog istega temeljnega poslanstva. Poslanstvo inštituta pa je danes prav tako kot pred petinpetdesetimi leti. Medicinska oskrba bolnikov, raziskovanje in pouk so tri temeljne veje dejavnosti celega inštituta in vsake njegove enote posebej.
S to publikacijo želimo pokazati, da ima onkologija na Slovenskem zavidanja vredno tradicijo. V času, ko je tudi v bolj razvitih deželah večina zdravništva še gledala na rakavo bolezen kot na neovrgljivo obsodbo zle usode, je pri nas skupina zanesenjakov iz neke prav posebne slovenske trme pričela udejanjati multidisciplinarno zdravljenje raka. Publikacija naj pokaže, da je v petinpetdesetih letih iz te trme vzklilo žilavo drevo.

Tudi drevo, zraslo na kamniti zemlji, lahko ponudi sadež in zavetje.

Matjaž Zwitter,
direktor Onkološkega inštituta

On the 55th anniversary of the institute

Nowadays the Institute of Oncology is a comprehensive institution housing a wide range of different yet closely related activities. This heterogeneous association of individual units and departments – covering all from epidemiology, prevention and registration of cancer to tumor biology, laboratory, pathomorphological and topographic diagnostics, as well as surgery, radiotherapy, medical oncology with the affiliated services of nursing care and rehabilitation – is centred on the same basic mission: cancer patient care, research and education. Ever since the Institute's foundation 55 years ago, these have been the three basic activities of the Institute.

The presented anthology is aimed to prove that oncology in Slovenia has got an enviable tradition. While even in more developed countries the medical profession mostly saw cancer as an inexorable doom of ill fate, in our country a group of enthusiasts driven by that typical "Slovenian stubbornness" started to carry into effect the principle of a multidisciplinary approach to cancer treatment. The anthology proves that these 55 years of perseverance have given rise to a tenacious tree able to offer fruit and shelter, despite the scarce land it grows on.

Matjaž Zwitter,

Director of the Institute of Oncology

Sredi julija 38: Cholewa: 1.VIII. odpremo, pa magari z eno samo kahlico!

Junij: dr. Novak vzre (oz. naroči, da se vzre) prvo belo podgano (ki je niti ni pogledal), s spontanim tumorjem golička.— G. doc. ne brega.

31.VII.38: G. Skubic pozabi ključe v odprti blagajni v kateri je za 50.000 Din. G. doc. ne brega.

1.VIII.38: Otvoritev. ~~Mikolger~~ Sprejme se 9 bolnikov. Takoj se prične z aplikacijo Ra. Veliko manjka. Osebje večinoma ne pozna tega posla. G. doc. pravi: danes pa še ne smem bregati.

(1)

3.VIII.38: Leži že 10 bolnikov. Zjutraj prvo Rtg obsevanje. Šef I. kirg. Lavrič in urolog Rakovec sta (v privatnem razgovoru) načelno proti operiranju v našem zavodu in...

4.VIII.38: Prva manjša operacija: abrasio prob. (dr. Novak)

5.VIII.38: Prva večja operacija: Ca mammae. Doc. Cholewa, prim. Šavnik, dr. Novak, ter dr. Perušek, instrumentira s. Ljudmila. Sterilizatorja še nimamo. Tudi kaset še ni. Imamo le par kaset, ki so jih posodili docent, primarij in dr. Novak — so pa nepolne — in pa kasete narejene iz pletenih košar. Sterilizirajo pod roko sestre na ...

9.VIII. Druga amputatio mammae — pri moškem. Pred operacijo dobi po pomoti 0·04 Mo z odgovarjajočim 0,002 atropina! Pa ni bilo nič, še po 200 ccm etra je robantil.
Kot zadnji aparat spustimo danes še Chaoula za zelo napredovel ca nosi. Schaefer-Witte je pa že v uporabi (še vedno).
Bolnikov je vsak dan več — prostih je le še par postelj.
Skoro vsi oddelki so že poslali bolnike, največ otološki.
Le ženska bolnica še nič, pač pa je prišla sama od sebe neka bolnica, ki ima recidiv ca po — pred 1 letom izvršenem — Wertheimu).
Vsi delajo skoro dvojno dobo uradnih ur.

Začetki dela Onkološkega inštituta: prva stran dnevnika dr. **Franca Novaka**

The early days of the Institute of Oncology: The first page from the Diary of Dr. ***Franc Novak,*** *1938*

Zgodovinski pregled

Historical review

1817

Prof. dr. **Jožef Wattmann** predava kirurgijo na ljubljanskem mediko-kirurškem liceju. Med njegovo kazuistiko so tudi primeri karcinoma ustnice in dojke.

Prof. ***Jožef Wattmann,*** *MD gives lectures in surgery at the Medico--surgical Lyceum in Ljubljana. His case presentations also include carcinomas of the lip and breast.*

1892

Prof. dr. **Edo Šlajmer** prevzame kirurški oddelek ljubljanske bolnišnice, uvede nove metode anestezije in poroča o operativnem zdravljenju rakavih bolezni.

Prof. ***Edo Šlajmer,*** *MD is appointed the head of Surgical Department of Ljubljana Hospital; he introduces new methods of anesthesia and reports on surgical treatment of cancer diseases.*

1902

Predstojnik očesnega oddelka ljubljanske splošne bolnišnice prim. dr. **Emil Bock** prične s prvimi poskusi terapevtske uporabe radija.

Head of the Ophthalmologic Department of the General Hospital in Ljubljana Prim. ***Emil Bock,*** *MD starts with his first attempts to use radium for therapeutic purposes.*

1920

Dr. **Josip Cholewa** ustanovi v brežiški bolnišnici onkološki eksperimetalni laboratorij, dr. **Alija Košir** pa prične s poskusi eksperimentalne indukcije raka na Histološko--embriološkem inštitutu Medicinske fakultete v Ljubljani.

Dr. ***Josip Cholewa*** *sets up the Experimental Laboratory for Oncology at Brežice Hospital, and Dr.* ***Alija Košir*** *starts with experiments on cancer induction at the Institute of Histology and Embryology of the Medical Faculty in Ljubljana.*

1928

Prim. dr. **Pogačnik** nabavi 49 mg radija in z njim prične zdraviti rakave bolnike.

Primarius ***Pogačnik,*** *MD purchases 49 mg of radium and starts with the first radium applications.*

1937

Z odlokom uprave Dravske banovine ustanovljen **Banovinski inštitut za raziskovanje in zdravljenje novotvorb.**

By order of the authorities of Drava Province the ***Regional Institute for Research and Treatment of Neoplasms*** *was established.*

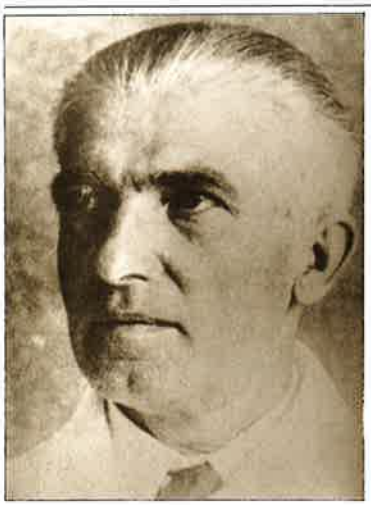
1938
1. avgust

Sprejem prvih bolnikov v prenovljene prostore šempetrske kasarne (danes stavba A). V prvem letu obstoja je inštitut razpolagal z **28** posteljami in sprejel v oskrbo **718** bolnikov. Opravljenih je bilo **61** velikih in **97** manjših operacij, **450** aplikacij radija, **5.391** obsevanj na Stabilivoltu, **341** z vaginalno rentgensko aparaturo in **831** z aparaturo po Chaoulu.

First admissions of patients into the reconstructed building of the former "Šempeter's Barracks" (presently Building A). In the first year of its existence the Institute, with a capacity of ***28*** *beds, accommodated* ***718*** *patients. Among the procedures performed were* ***61*** *major and* ***97*** *minor surgeries,* ***450*** *radium applications,* ***5391*** *irradiations on Stabilivolt machine,* ***341*** *with a vaginal X-ray and* ***831*** *with Chaoul's device.*

Direktorji Onkološkega inštituta

The directors of the Institute of Oncology



Doc. dr. **Josip Cholewa,**
1938–1942

Prof. dr. **Leo Šavnik,**
1942–1945; 1948–1963

Prof. dr. **Josip Hebein,**
1945–1948

Prof. dr. **Božena Ravnihar,**
1963–1982

Prof. dr. **Stojan Havliček,**
1982

Prof. dr. **Stojan Plesničar,**
1982–1986

Prof. dr. **Zvonimir Rudolf,**
1986–1991

Mag. dr. **Matjaž Zwitter,**
1991–

	Zgodovinski pregled	***Historical review***
1945	Inštitut, kot del Rentgenološkega in radiološkega zavoda, pride pod okrilje popolne Medicinske fakultete.	*The Institute is affiliated to the Medical Faculty as part of the Rentgenological and Radiological Institute*
1946	Prevzame naziv **»Onkološki inštitut«** in se loči od Rentgenološkega zavoda.	*By separation from the Rentgenological Institute, the institution gains autonomy and becomes the* ***"Institute of Oncology"***
1947	Ustanovljena Katedra za onkologijo in radioterapijo Medicinske fakultete v Ljubljani.	*The Chair of Oncology and Radiotherapy is established at the Medical Faculty in Ljubljana*
1950	Uredba o obveznem prijavljanju rakavih obolenj v Sloveniji Ustanovljen Register raka za Slovenijo	*By enforcement of the regulation on compulsory registration of cancer diseases in Slovenia the Cancer Registry of Slovenia is established (at the Institute of Oncology)*
1951	Prva aplikacija citostatikov; pričetek citološke diagnostike	*The first application of cytostatics; the beginning of cytological diagnostics*
1952/1960	Intenziven razvoj specialističnih in raziskovalnih dejavnosti; zasnova timskih konzilijev	*Intense development of specialistic and research activities; fundamentals of multidisciplinary team advisory boards*
1955	Pričetek supervoltne terapije (Betatron, 31 MeV)	*The beginning of high-voltage therapy (Betatron, 31 MeV)*
1957	Pričetek sodelovanja v mednarodnih epidemioloških študijah	*The beginning of collaboration in international epidemiological studies*
1960	Z delom prične radioizotopni laboratorij.	*The Laboratory of Nuclear Medicine begins with work*
1961	Onkološki inštitut ponovno dobi status samostojnega zavoda.	*The Institute of Oncology regains its status as an independent institution*
1962	Prvi telekobaltni aparat; prvi rentgenski diagnostični aparat	*The first telecobalt and diagnostic X-ray machines*
1963	Pričetek intraarterijske aplikacije citostatikov	*The beginning of the intraarterial application of cytostatics*
1967	Adaptacija in prevzem »gluhonemnice« (danes stavba B)	*Reconstruction and allocation of the former "Gluhonemnica" building (present B building)*

	Zgodovinski pregled	***Historical review***
1970	Uvedba kombiniranega citostatskega zdravljenja	*Introduction of combined therapy with cytostatics*
1972	Adaptacija in prevzem stavbe Interne klinike (danses stavba C)	*Reconstruction and allocation of the building of the former University Hospital of Internal Medicine (present C building)*
1973	Prvi simulator; ustanovljen Center dr. **Jožeta Žitnika** za bolezni dojk	*The first simulator; establishment of Dr.* **Jože Žitnik's** *Center for Breast Diseases*
1975	Določevanje hormonskih receptorjev; prvi kriokirurški poseg	*Determination of hormone receptors; introduction of cryosurgery*
1976	Pričetek sodelovanja v mednarodnih kliničnih študijah	*The beginning of collaboration in international clinical studies*
1977	Izgradnja objekta za teleradioterapijo; prvi linearni pospeševalnik	*Completion of the building for teleradiotherapy; the first linear accelerator*
1979	Uvedba brahiradioterapije z naknadnim polnjenjem	*Introduction of afterload brachytherapy*
1982	Dograditev stavbe D	*Completion of D building*
1983	Pričetek dela oddelka za psihoonkologijo	*Establishing of Psychooncology Department*
1984	Uvedba imunohistoloških tehnik v patološko in citološko diagnostiko	*Introduction of immunohistological methods into pathological and cytological diagnostics*
1985	Terapija neuroblastoma z I-131 metajodbencilgvanidinom	*Treatment of neuroblastoma by means of I-131 meta-iodobenzylguanidine*
1987	Ustanovljen laboratorij za elektronsko mikroskopijo	*Establishment of the laboratory for electron microscopy*
1988	Pričetek klinične hipertermije; uvedba pretočne citometrije	*Introduction of clinical hyperthermia and flow-cytometry*
1992	Aparat za ultrazvočno disekcijo parenhimskih organov	*Device for ultrasonic dissection of parenchymatous organs*
1993	Računalniška analiza celice	*Computerized cell analysis*


BANOVINSKI INSTITUT ZA RAZISKOVANJE
IN ZDRAVLJENJE NOVOTVORB

Božena Ravnihar

Koncept inštituta in njegova uveljavitev

Že v dvajsetih letih se je rodilo spoznanje, da sodi klinična obravnava raka v roke specialistov, posebej usposobljenih in izkušenih na tem področju, in da morajo ti specialisti raznih terapevtskih in diagnostičnih disciplin skupaj – timsko – obravnavati vsak posamezen klinični primer te bolezni. Ti specialisti si lahko pridobijo zadostne izkušnje le, če imajo priložnost, da obravnavajo dovolj raznoliko in veliko število primerov in s stalnim nadzorom bolnikov po zdravljenju preverjajo rezultate svojih postopkov. Idealne možnosti za vse to jim lahko dajo le posebni inštituti. Komite ameriškega društva za rak je v letu 1929 oblikoval ta spoznanja in priporočila in prav preroško zabeležil: »Čutimo, da bo šel nadaljnji razvoj zdravljenja raka po linijah koncentracije, organizacije in specializacije . . .«. Enaka stališča in priporočila vladam je mnogo kasneje, tj. v šestdesetih letih, na podlagi izkušenj že obstoječih centrov oblikovala skupina izvedencev pri Svetovni zdravstveni organizaciji. Prosto povzeto so ta priporočila takale: v vsaki deželi ali skupini regij naj bi imeli najmanj en inštitut, ki bi bil usposobljen izvajati kompleksno diagnostiko in terapijo rakavih bolezni ter bi redno nadzoroval bolnike po zdravljenju, hkrati pa bi se posvečal raziskovanju in bil vzgojno-izobraževalni center na področju onkologije; nadalje, vodil naj bi register raka za svoje teritorialno območje (register naj bi z ene strani rabil za podlago pri programiranju onkološke službe v deželi, z druge pa kot podlaga pri epidemioloških in kliničnih raziskavah); naposled naj bi bila naloga takega centra, da vodi boj proti raku v svoji deželi.
Z občudovanjem in spoštovanjem se moramo danes spominjati daljnovidnosti in smelosti naših pionirjev, da so prav s takim obsežnim konceptom v skrajno skromnih razmerah zasnovali naš inštitut. Marsikaj se danes zdi že samo po sebi umevno, vendar pa si zasnova in njena uresničitev nista lahko utirali poti niti ob ustanovitvi inštituta niti kasneje.
Naj navedem še nekaj resnih zaviralnih okoliščin za razvoj našega inštituta.

1. Pri mnogih specialistih klasičnih medicinskih panog, žal tudi pri najuglednejših in vplivnih, je le težko prodirala in še danes ni povsem prodrla zavest, da je za ustrezno klinično obravnavo rakavih bolezni potrebno posebno znanje in posebna izkušenost, za izbiro optimalnih diagnostičnih in terapevtskih postopkov pri posameznih bolnikih pa skupinska obravnava za to usposobljenih specialistov raznih terapevtskih in diagnostičnih disciplin (kirurga ustrezne panoge, radioterapevta, internista-kemoterapevta, rentgenologa, patologa in po potrebi še drugih specialistov).

2. Še vedno ni prodrlo spoznanje, da si more specialist te ali one panoge pridobiti ustrezno onkološko znanje in izkušnje le tam, kjer je zbrano zadostno število posameznih rakavih bolezni in kjer ima priložnost, da spremlja stanje bolnikov še dolgo dobo po zdravljenju. S tem povezana je zlasti potreba po koncentraciji bolnikov z redkimi oblikami raka zaradi pridobivanja izkušenj in oblikovanja strokovne doktrine.

3. K težavnemu problemu potrebe po koncentraciji rakavih bolnikov v visoko specializiranih institucijah se priključuje še povsem neprimerno mnenje, morda celo bolj zdravnikov kakor laikov, da je rakavim bolnikom treba skrivati naravo njihove bolezni in jih zato odtegovati zavodu, ki se posebej posveča tem boleznim, nekateri pa so celo proti obstoju takih zavodov. Naj k temu pripomnim iz naših izkušenj, da take vrste »pieteta« do bolnikov navadno mine tedaj, ko si zdravniki ob napredujoči bolezni ne znajo več pomagati in ko nega takega bolnika začne močno bremeniti svojce.
Ljudje se seveda upravičeno boje te nevarne bolezni, vendar pa se razsoden bolnik ne bo bal bolnišnice, za katero ve, da mu bo lahko nudila najboljšo zdravstveno pomoč.

4. Naposled naj omenim še oporekanja, ki smo nanja naleteli pri našem zavzemanju za gradnjo inštituta in to ne samo pri laikih, temveč celo pri zdravnikih. Opirajo se na nekontrolirane senzacionalne žurnalistične objave o novih učinkovitih zdravilih, češ da bodo ta kmalu odpravila potrebo po obstoju posebnih inštitucij za zdravljenje raka in da zato pač ni vredno zanje investirati večjih denarnih sredstev.
Vse našteto je bolj ali manj botrovalo temu, da si je naš inštitut le z veliko težavo in znatnim angažiranjem energije svojih strokovnjakov postopno pridobival življenjski prostor za razvoj svojih dejavnosti in da še danes nima prostorov, ki bi omogočali ustrezno funkcionalno

povezavo njegovih služb in enot ter sodobnim standardom ustrezno udobje za bolnika v času bivanja v bolnišnici. Boj za življenjski prostor se zares kot rdeča nit vleče skozi vso zgodovino inštituta od njegovega začetka do danes.

Concept of the Institute and its implementation

Already in the 20's it had become apparent that the clinical workup of cancer should be the domain of specialists with relevant knowledge and experience in this field; every individual clinical case of the disease should be subjected to workup by a team of such specialists of various therapeutic and diagnostic disciplines. These professionals can gain the necessary experience only through dealing with a sufficiently large casuistics and through the continuous follow up of treated patients, which enables them to evaluate the results of the applied procedures. Only specialised cancer centers can offer ideal conditions for such a comprehensive approach. In 1929, these findings and recommendations were formulated by a special committee of the American Cancer Society in the following prophetic statement: "We feel that the development of cancer treatment in the future will be in the direction of concentration, organization and specialization . . .". Much later, i.e. in the 60's, the same standpoints and recommendations to governments, based on the experiences of some already existing centers, were postulated by a group of experts at the World Health Organization. These recommendations could be summarized as follows: Preferably, every country or a group of regions should have at least one institute for comprehensive cancer care (diagnostic and therapeutic), and for regular follow-up of patients after therapy, which would at the same time serve as a research and education basis in the filed of oncology; it would also operate a population--based cancer registry for the pertinent territory (on the one hand, the registry would serve as a basis for programming the country's oncological service, whereas on the other, it would provide a data base for epidemiological and clinical research); finally, such a comprehensive center should also represent a core of the activities associated with an anti-cancer campaign in the country.

It is with admiration and respect that we nowadays look upon the courageous visionaries who laid the foundations of our comprehensive institution despite the extremely scarce means. While nowadays many of these achievements may be taken for granted, it should be kept in mind that their conceptualization and implementation in practice were not always easy – neither at the time of the Institute's foundation nor later on.
Here I should point out a few severe obstacles to the further development of our institute.

1. *Many specialists in the classical branches of medicine, even the most prominent and influential ones, unfortunately found it very difficult to accept – or still have not quite accepted – the fact that the adequate clinical management of cancer requires special knowledge and experience, and that the decision on the optimal diagnostic and therapeutic procedures in individual patients should be made by a team of adequately qualified specialists of different therapeutic and diagnostic disciplines (i.e. oncological surgeon, radiotherapist, medical oncologist, radiologist, pathologist, and some other specialists when necessary).*
2. *It has still not been commonly recognised that these specialists of different branches can gain adequate knowledge and experience in oncology only in an institution where a sufficiently large casuistics on particular cancer types is available, and where there are conditions for continuous follow up of patients after therapy. This also explains the need for concentration of patients with rare types of cancer in order to gather sufficient experience necessary to establish an adequate doctrinary approach.*
3. *The already tough problem of the need to have cancer patients concentrated in highly specialised institutions is further complicated by the thoroughly inappropriate standpoint – which is even more common among doctors than among the lay population – that cancer patients should be spared the truth about the nature of their disease, and should therefore be preferably treated outside the institutions which are primarily intended for cancer diseases;*

some even openly reject the idea of such institutions. But, our experience shows that such false sympathy for the patient generally fades off when the doctor remains helpless in face of the advancing disease, and when care of such a patient demands sacrifice from the relatives.

Although the fear of this dangerous disease is fully justified, no patient is likely to be afraid of a hospital which is known to be able to offer him the best possible health care.

4. *Finally, I cannot avoid mentioning the objections to our plans for the building for the institute, expressed not only by lay persons but also by some physicians, that prospective new medications would soon render such specialised cancer institutions unnecessary, and therefore any investments in this direction were not economically justified; such negative standpoints were based on uncritical, sensationalistic reports in the mass media.*

All the above factors have more or less contributed to the fact that the fight of our institute for sufficient space and facilities for its development has always been extremely laborious and associated with considerable effort on the side of its professional personnel. This also explains why even today this institution lacks the necessary room facilities which would enable adequate functional connections between its services and units, and also provide suitable hospital comfort for the patients. This fight for "space under the sun" can really be traced throughout the history of the Institute, from its beginnings to the present moment.

Vera Pompe Kirn

Rak v Sloveniji

Republika Slovenija sodi med dežele s srednjo visoko zbolevnostjo in umrljivostjo za rakom. Leta 1989 je zbolelo za rakom okoli 6200 ljudi, od tega več moških (okoli 3200) kot žensk (okoli 3000). Po preračunavanju teh podatkov lahko napovemo, da bo vsak tretji moški in vsaka peta ženska, rojena v Sloveniji v letu 1989, do svojeta 75. leta zbolel za rakom. S starostjo se tveganje zbolevanja veča. Tako bo do 50. leta starosti za rakom zbolel le vsak 34. moški in vsaka 23. ženska. Do 50. leta starosti zboleva namreč za rakom več žensk kot moških.

Rak lahko prizadene različne organe, nekatere bolj, druge manj pogosto. Spremljajoče slike kažejo 10 najbolj pogostnih rakov pri moških in pri ženskah ter trende vseh in izbranih rakavih bolezni od leta 1950 dalje. Še vedno se veča incidenca pljučnega raka pri obeh spolih, pri ženskah raka dojk, pri moških pa še incidenca rakov ustne votline, žrela in grla, debelega črevesa ter rakov ledvic in mehurja. Tudi zbolevnost za malignim melanomom pri obeh spolih naglo narašča. Pri večini drugih rakov je porast zmeren, pri želodčnem raku in raku maternicnega vratu pa dolgoletni trendi kažejo upadanje. Število primerov raka maternicnega vratu je upadalo do leta 1978, od takrat dalje pa stoji. Tako je leta 1989 za to boleznijo še zbolelo 167 žensk, od tega jih je bilo 54 starih manj kot 40 let.

Med rake, za katerimi zboleva iz leta v leto več bolnikov, sodijo tudi tisti, katerih nastanek je močno povezan s kajenjem (pljučni rak, rak grla, rak mehurja in ledvic), še prav posebno pa tisti, ki jih najdemo pri kadilcih, ki pijejo alkoholne pijače v preveliki meri (raki jezika, ustne votline, žrela, grla, požiralnika, pa tudi trebušne slinavke in jeter). Zaskrbljujoč je porast teh rakov v srednjih letih, ki je bolj strm kot v poznih letih. Opozarja nas na velik delež kadilcev, pa tudi alkoholikov med mladimi v Sloveniji. O kajenju in alkoholizmu govorimo veliko, pa vendarle premalo! Žal sodijo prav »kadilski in pivski« raki med tiste, pri katerih se kljub prizadevanju zdravnikov po vsem svetu preživetje ne izboljšuje. Pri pljučnem raku, najpogostnejšem raku kadilcev, preživi pet let le 6 % bolnikov.

Zemljevidi incidence raka kažejo, da je tako zaradi različne starostne strukture kot zaradi različne družbeno-gospodarske razvitosti in s tem različnih življenjskih navad zbolevanje po posameznih občinah Slovenije različno. Na sliki smo prikazali zanimive razlike v zbolevanju za rakom dojk.

V primerjavi s sosednjimi državami pri nas zaradi povprečno pričakovane krajše življenjske dobe problem raka še ni tako velik kot je v Italiji in Avstriji. Za Slovenijo je še značilna dokaj visoka zbolevnost za želodčnim rakom in raki ustne votline, žrela in grla, medtem ko je pri bolj razvitih sosedah več raka dojk in debelega črevesa.

Tudi pri nas se preživetje rakavih bolnikov podaljšuje in vedno več je med nami ljudi, ki so svojega raka preživeli. Razveseljivi so podatki o izboljšanju preživetja pri tistih vrstah raka, ki prizadene mlade: pri raku moda (pet let preživi 82% bolnikov), pri Hodgkinovi bolezni in pri levkemijah. Ocenjujemo, da živi danes v Sloveniji okoli 38.000 ljudi, ki so jim v zdravstveni kartoteki nekoč zapisali diagnozo rak. Mnogi med njimi pa žive in delajo že več kot deset let po zdravljenju.

Cancer in Slovenia

The Republic of Slovenia is among the countries with moderately high cancer incidence (morbidity and mortality). In 1989, there were approximately 6200 new cancer patients, the incidence in males being slightly higher than in females (3200 vs 3000). From the available data it can be estimated that every third man and every fifth woman born in 1989 in Slovenia will develop cancer up to his/her 75th year of age. The risk increases by age, so that accordingly, up to 50 years, only every 34th man and every 23rd woman will contract the disease.

Cancer can affect different organs, the frequency of involvement is site dependent. The enclosed figures show the 10 most frequent cancers in males and females, with the trends for all, and selected cancers form 1950 on. Thus, the incidence of lung cancer is still on the increase in both sexes, and increasing trends are also observed for breast cancer in females, and for cancers of the oral cavity, pharynx, larynx, colon, kidneys and urinary bladder in males. Also the morbidity for malignant melanoma in both sexes is steeply increasing. Other cancers present with a moderate increase, whereas the long-term incidence trends for cancers of the stomach and uterine cervix are showing a tendency to decrease. The number of cervical cancer cases, which had been decreasing up till 1978, has been stable from then on. Thus in 1989, 167 women were affected by this type of cancer, 54 of these being under 40 years of age.
Among the cancers which claim more and more victims every year are also those which are etiologically closely associated with smoking (cancers of the lung, larynx, bladder and kidneys), and particularly the types most frequently seen in smokers-alcoholics (cancers of the tongue, oral cavity, pharynx, larynx, esophagus, pancreas and liver). The increase in the incidence of these cancers in the middle age groups, which is more prominent than in the older population, raises special concern. It calls attention to the high rate of smokers and also alcoholics among the youth of Slovenia. Though this issue is frequently brought to public attention, the impact of these two harmful life habits still seems to be underrated. (We seem to be speaking a lot about smoking and alcoholism, but yet too little!). Unfortunately, particularly in the cancers typical of smokers and alcoholics the overall survival rates worldwide do not seem to be improving, despite the efforts of the medical profession. Thus, only 6% of patients with lung cancer, which is the most frequent cancer in smokers, will survive five years.

The maps of cancer incidence show that cancer incidence for particular Slovenian communities is differing, which can be attributed to different age structure as well as to different stage of socio--economic development and consequent life habits. The enclosed figure shows interesting differences in the incidence of breast cancer.

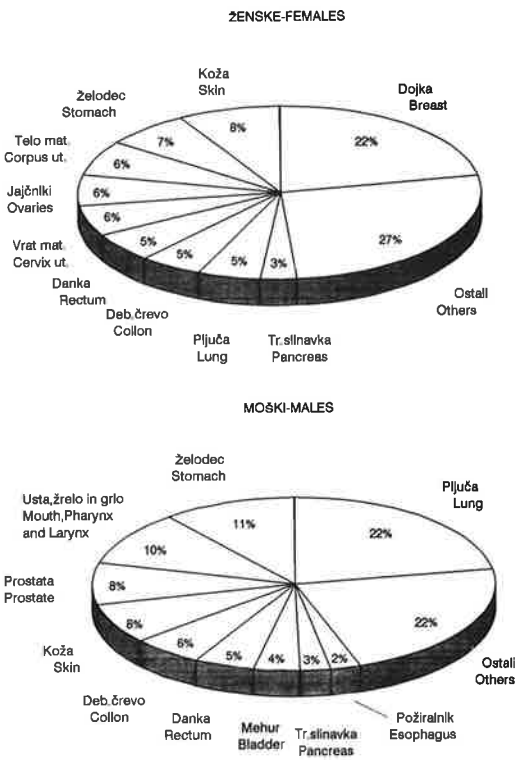
In comparison with the neighbouring countries, the problem of cancer in Slovenia, with a shorter life expectancy, does not appear so urgent as in Italy and Austria. Slovenia is still characterised by a relatively high incidence of cancers of the stomach and oral cavity, whereas our more developed neighbours are more frequently affected by cancers of the breast and colon.

As elsewhere in the world, in our country too the survival of cancer patients is getting longer, and there is an increasing number of people who have managed to live out their cancers. The evidence

on improved survival with the types of cancer primarily affecting younger age groups is also encouraging; these include testicular cancer (82 % 5-year survival), Hodgkin's disease and leukemias. It is estimated that at present there are about 38000 people in Slovenia who have been some time during their lives registered as cancer patients; many of them are still alive and active well over 10 years after therapy.

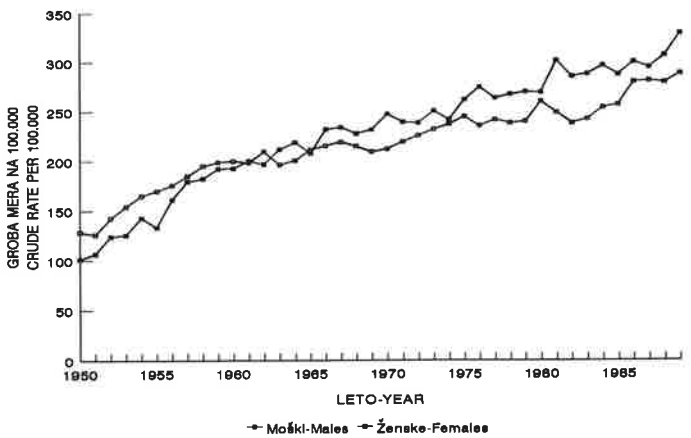
Delež desetih najpogostejših lokalizacij raka po spolu – Slovenija 1989

Percentages for the ten leading cancer sites by sex – Slovenia 1989.



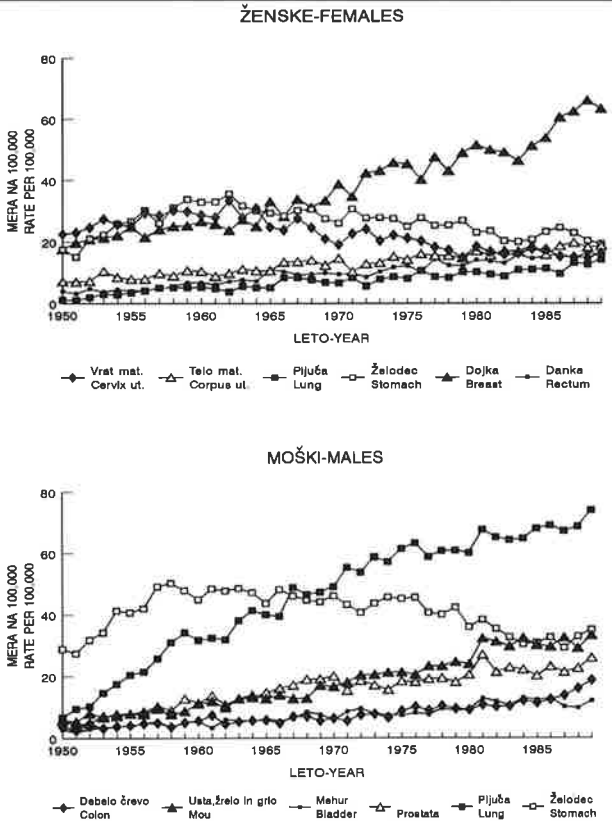
Groba letna incidenčna mera raka vseh lokalizacij po spolu – Slovenija 1950–1989

Crude annual cancer incidence rate; all sites by sex – Slovenia 1950–1989



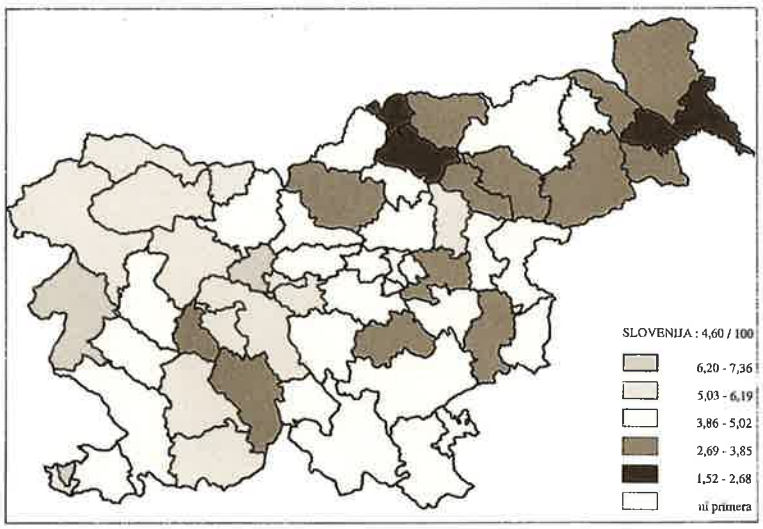
Grobe letne incidenčne mere izbranih rakov po spolu – Slovenija 1950–1989

Crude annual cancer incidence rates by selected primary sites and sex – Slovenia 1950–1989



Rak dojk – ženske. Povprečne letne kumulativne incidenčne mere

Breast cancer – females. Average annual cummulative incidence rates



Svet Onkološkega inštituta

Council of the Institute of Oncology:

Ustanovitelj Onkološkega inštituta je Republika Slovenija. Onkološki inštitut je javni zdravstveni zavod, ki ga upravlja Svet Onkološkega inštituta. V Svet so imenovali svoje predstavnike:

Institute of Oncology is a public health institution managed by the Council of the Institute consisting of the following representatives:

Vlada Republike Slovenije	*Representatives of the Government of the Republic of Slovenia:*	**Elda Gregorič Rogelj,** Dipl. oec. prof. dr. **Marija Marolt Gomišček,** dr. med./ *MD, PhD* **Metka Mencej,** dr.med./ *MD* **Marjana Šoukal Ribičič,** Dipl. iur.
Mesto Ljubljana	*Representative of the Town of Ljubljana:*	**Jože Golmajer,** dr. med./ *MD*
Zavod za zdravstveno zavarovanje Slovenije	*Representatives of the Inst. of Health Insurance of Slovenia:*	**Sladjana Jelisavčič,** Dipl. oec. **Peter Pajntar,** dr. med./ *MD* **Martin Toth,** dr. stom./ *D. Stom*
Zveza slovenskih društev za boj proti raku	*The Association of Slovenian Cancer Societies:*	prof. dr. **Andrej Kocijan,** dr. med./*MD, PhD*
Društvo onkoloških bolnikov	*Association of Oncological Patients:*	**Marija Vegelj Pirc,** dr. med./*MD*
Delavci Onkološkega inštituta	*Representatives of the Institute of Oncology:*	prof. dr. **Zvonimir Rudolf,** dr. med./*MD, PhD* dr. **Marija Bizjak Schwarzbartl,** dr. med./ *MD, PhD* **Nevenka Papler,** VMS/*RN* **Alenka Vodnik Cerar,** dr. med./*MD* asist. dr. **Borut Štabuc,** dr. med./*MD, PhD*

Razširjen strokovni kolegij za onkologijo
Slovenian Board for Oncology

Predsednik / *President:*	prof. dr. **Franc Lukič,** dr. med./*MD, PhD*	Ljubljana
Člani / *Members:*	prof. dr. **Marija Auersperg,** dr. med./*MD, PhD*	Ljubljana
	Jože Avžner, dr. med./*MD*	Celje
	mag. **Tanja Čufer,** dr. med./*MD, MSc*	Ljubljana
	prof. dr. **Rastko Golouh,** dr. med./*MD, PhD*	Ljubljana
	doc. dr. **Borut Gorišek,** dr. med./*MD, PhD*	Maribor
	Nikolaj Kinkela, dr. med./*MD*	Izola
	prim. **Vasja Klavora,** dr. med./*MD*	Nova Gorica
	dr. **Janez Kokalj,** dr. med./*MD, PhD*	Maribor
	doc. dr. **Jurij Lindtner,** dr. med./*MD, PhD*	Ljubljana
	Leopold Morela, dr. med./*MD*	Novo mesto
	prof. dr. **Stojan Plesničar,** dr. med./*MD, PhD*	Ljubljana
	prof. dr. **Stane Repše,** dr. med./*MD, PhD*	Ljubljana
	doc. dr. **Lojze Šmid,** dr. med./*MD, PhD*	Ljubljana
	prof. dr. **Jurij Šorli,** dr. med./*MD, PhD*	Golnik
	mag. **Matjaž Zwitter,** dr. med./*MD, MSc*	Ljubljana

Strokovni svet Onkološkega inštituta

Direktor inštituta, direktorji za raziskovalno delo, za finance in administracijo in za zdravstveno nego, predstojniki klinik ter predstavnik diagnostičnih oddelkov sestavljajo strokovni svet inštituta. Svet se sestaja praviloma vsak teden.

Professional Board

Director of the Institute, director of research, director of finances and administration, director of nursing services, heads of clinical departments and a representative of diagnostic departments form the Professional Board of the Institute. The Board meets once weekly.

Raziskovalno--izobraževalni kolegij

V Raziskovalno--izobraževalnem kolegiju so poleg članov strokovnega sveta inštituta še vsi visoko strokovni delavci z doktoratom znanosti. Kolegij se sestaja praviloma vsak mesec.

Board for Research and Education

This board consists of the members of Professional Board as well as of all professionals with PhD degree. The Board meets once monthly.

Etična komisija

Committee for Medical Ethics

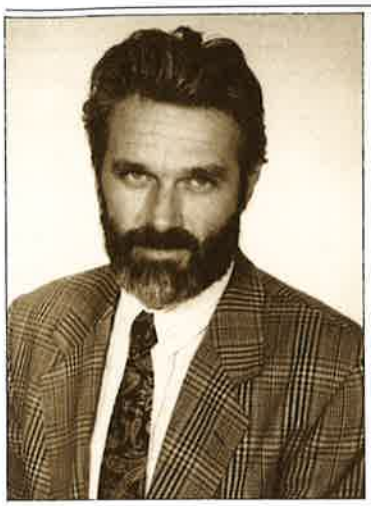
Univerza v Ljubljani, Filozofska fakulteta	*Faculty of Arts, University of Ljubljana*	prof. dr. **Tine Hribar,** dipl. phil. et soc.,/*PhD*
Univerza v Ljubljani, Pravna fakulteta	*Faculty of Law, University of Ljubljana*	prof. dr. **Ada Polajnar Pavčnik,** dipl. iur/*PhD*
»Delo«, Ljubljana	*»Delo«, Ljubljana*	**Alenka Puhar,** prof. prim. knj./*BA*
Onkološki inštitut	*Institute of Oncology*	prof. dr. **Rastko Golouh,** dr. med./*MD, PhD* doc. dr. **Jurij Lindtner,** dr. med./*MD, PhD* **Gabrijela Petrič Grabnar,** dr. med./*MD* dr. **Gregor Serša,** dipl. biol./*BSc Biol, PhD* **Branko Zakotnik,** dr. med./*MD* mag. **Matjaž Zwitter,** dr. med./*MD, MSc*

Komisija razpravlja o teoretičnih izhodiščih in praktičnih priporočilih v zvezi z etiko strokovnega in raziskovalnega dela na inštitutu.

The Committee is concerned with the theoretical principles and practical recommendations referring to the ethics of routine clinical and research work at the Institute.

Uprava

Administration and finances:



Direktor za finance in administracijo / *Director of Administration and Finances:*
Matevž Bambič, dipl. oec./ *Dipl Oec*

Vodja finančno-knjigovodske službe:	*Head of Accounting Service:*	**Silva Kristančič,** oec./*Oec*
Vodja analitske službe:	*Head of Analysis Service:*	**Ana Žličar,** oec./*Oec*
Vodja nabavne službe:	*Head of Bursar's Office:*	**Malči Zdešar**
Vodja kadrovske službe:	*Head of Personnel Department:*	**Bojan Korenčan,** dipl. org. dela/*Dipl WO*
Pravnica:	*Legal Office:*	**Alenka Benedik Senčar,** Dipl. Iur.
Vodja tehnično-vzdrževalne službe:	*Head of Technical Service & Maintenance:*	**Franc Vrečar,** ing.
Informatika: vodja / *Informatics: Head*		**Cveto Gregorc,** dipl. ing. fiz./*BSc Phys*
strokovna sodelavca / *Associates:*		**Jurij Modic,** dipl. ing. račun./*BSc Comp* **Gorazd Noč,** dipl. ing. mat./ *BSc Math*

Onkološki inštitut v številkah

Delavci inštituta – stanje 31. 12. 1992

Zdravniki			**94**
klinične službe		**55**	
diagnostične službe		**21**	
ostale dejavnosti		**6**	
mladi raziskovalci		**12**	
Zdravstveni sodelavci z visoko izobrazbo			**19**
Medicinske sestre			**193**
bolnišnična dejavnost	VMS	**41**	
	SMS	**93**	
ostale dejavnosti	VMS	**39**	
	SMS	**20**	
Ostali zdravstveni delavci in sodelavci			**81**
višja izobrazba		**62**	
srednja izobrazba		**19**	
Administrativni delavci v zdravstveni dejavnosti			**34**
Bolniške strežnice			**107**
v bolnišnični dejavnosti		**70**	
ostale dejavnosti		**37**	
Delavci v servisni dejavnosti			**52**
Delavci v upravi			**46**
Skupaj			**626**

Prostori

Stavbe	m^2	število postelj	dejavnost
Stavba A zgrajena 1788	**5353**	**93**	kirurgija, ginekologija, anestezija z intenzivnim oddelkom in terapijo bolečine, brahiradioterapija, radiološka in ultrazvočna diagnostika, nuklearna medicina, center za bolezni dojk, biokemija, tumorska biologija, fotolaboratorij
Stavba B zgrajena 1889	**3677**	**57**	interna onkologija, specialna knjižnica, lekarna, kuhinja, likalnica, uprava
Stavba C zgrajena 1902	**5215**	**145**	bolnišnični oddelki radioterapije in ginekologije, pedagoška dejavnost, ambulantno zdravljenje, urad direktorja, register raka, fizioterapija, pralnica
Stavba D zgrajena 1982	**6524**	**35**	bolnišnični oddelek radioterapije in interne onkologije, ambulante, patologija, citopatologija, radiobiologija, radiofizika, tumorska biologija, klinični laboratorij, bolnišnični register raka, psihoonkologija, uprava
TRT zgrajen 1977	**2802**	–	radioterapija, radiofizika
Paviljona in Gamatron zgrajeni 1958–1975	**697**	–	epidemiologija, Društvo za boj proti raku, publicistika, uprava
Skupaj	**24268 m^2**	**330** postelj	

Institute of Oncology in Figures

Personnel – status on December 31, 1992

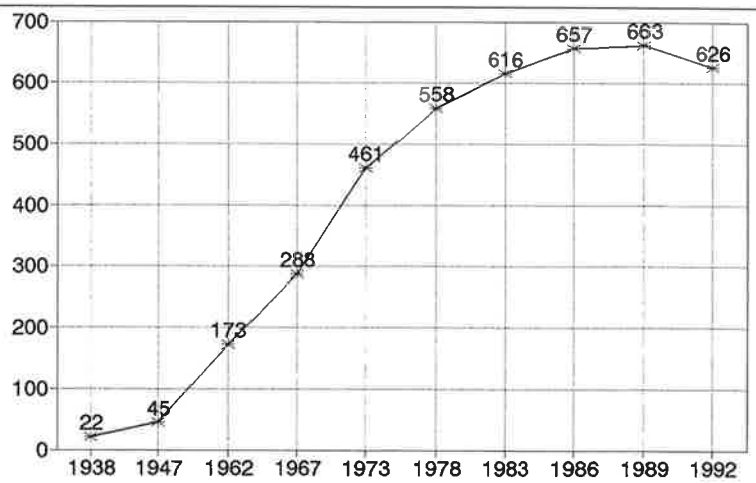
Physicians		**94**
clinical departments	**55**	
diagnostic departments	**21**	
other activities	**6**	
junior investigators	**12**	
Professional and research associates with high education		**19**
Nurses		**193**
in-patient services RN	**41**	
TN	**93**	
other activities RN	**39**	
TN	**20**	
Other health professionals and coworkers		**81**
college education	**62**	
secondary education	**19**	
Hospital clerks		**34**
Orderlies		**107**
hospital services	**70**	
other activities	**37**	
Maintenance and ancillary service workers		**52**
Administration personnel		**46**
Total		**626**

Room capacities

Building	*Area in m²*	*No. of beds*	*Services / activities*
Building A built in 1788	**5353**	**93**	*Surgery, gynecology, anesthesiology with intensive care unit and pain clinic, brachytherapy, diagnostic radiology and ultrasonography, nuclear medicine, center for breast diseases, biochemistry, tumor biology, photo-laboratory*
Building B built in 1889	**3677**	**57**	*Medical oncology, library, pharmacy, kitchen, laundry, administration*
Building C built in 1902	**5215**	**145**	*Radiotherapy and gynecology wards, education activity, out-patient clinic, management, cancer registry, physical therapy, laundry*
Building D built in 1982	**6524**	**35**	*Radiotherapy and medical oncology wards, out-patient clinic, pathology, cytopathology, radiobiology, radiophysics, tumor biology, clinical laboratory, hospital cancer registry, psychooncology, management*
TRT built in 1977	**2802**	–	*Radiotherapy, radiophysics*
Pavilions and Gamatron built from 1958–1975	**697**	–	*Epidemiology, Cancer Society, Editorial office of Radiology and Oncology, administration*
Total	**24268 m²**	**330** *beds*	

Onkološki inštitut: število zaposlenih po letih

Institute of Oncology: the number of employees by years



Ambulantno in hospitalno delo v letu 1992

Turnover of outpatient and inpatient departments in 1992

Število ambulantnih pregledov	*No. of outpatient examinations*	**55.829**
prvi pregledi	*first examinations*	**6.890**
ponovni pregledi	*follow-up examinations*	**48.939**
Število hospitaliziranih bolnikov	*No. of hospitalized patients*	**9.171**
Število oskrbnih dni	*No. of inpatient days*	**108.494**
Povprečna ležalna doba	*Average hospitalization period*	**12 dni/days**

Prihodki inštituta za leto 1992 v 1000 USD

Income in 1992 in 1000 USD

		18.750
Prihodki za zdravstveno dejavnost	*Income from clinical work*	**18.040**
Prihodki za raziskovalno dejavnost	*Income from research work*	**710**

Matjaž Zwitter

Načrti za dograditev inštituta

Pogovor o našem sedanjem delu, problemih in načrtih pri tako raznoliki dejavnosti inštituta lahko zastavimo na prav različne načine. Pogovor se lahko prične pri dosežkih, s katerimi smo v svetovnem vrhu ali pri strokovnih problemih in prizadevanjih, da bi sledili razvoju v svetu; izhodišče je lahko nikoli zadovoljiva finančna situacija, kadrovska problematika ali pomanjkanje opreme. Prav pri vseh takšnih pogovorih pa je zaključek enak: dokler bo inštitut v tako neprimernih prostorih, toliko časa ni moč pričakovati rešitve prav nobenega problema. Današnji prostori, ki so povečini povsem neprimerni za medicinsko dejavnost, nam ne zagotavljajo več okolja za varno strokovno delo. Nadaljnje adaptacije so nesmiselne, namestitev sodobne opreme v take prostore pa nemogoča. Brez rešitve tega osnovnega problema pa tudi ni moč razpravljati o trženju našega znanja v tujini pri zdravljenju bolnikov in pri mednarodnih raziskovalnih projektih.

Petdeset let mineva, kar je ing. arh. *Tomori* pripravil prvi načrt za novogradnjo inštituta. Od tedaj do danes smo pripravili vrsto projektov, le eden pa je bil – in to v manjšem delu – realiziran. Leta 1977 smo namreč predali namenu nov objekt za potrebe teleradioterapije in pet let kasneje stavbo D, kjer so prostore namenili delu ambulantne dejavnosti, nekaterim laboratorijem in manjšemu bolniškemu oddelku. Nato pa – kakor da nas je ta nova zgradba oslepila, tako da nismo več videli siromašnih razmer, v katerih dela večina naših zdravnikov in sester in v katerih bolniki preživljajo najtežje trenutke svojega življenja.

Zadnje dve leti ponovno veliko govorimo o načrtih, da bi vsem dejavnostim onkologije in vsem našim bolnikom zagotovili normalne pogoje zdravljenja. Potem ko nismo uspeli z načrtom, da bi dobili celotno Vojno bolnico (na delno selitev pa nismo pristali), se nam odpira perspektiva z obljubljenim prevzemom in adaptacijo stavbe stare travmatološke klinike in sedanje upravne stavbe Kliničnega centra. Program izgradnje inštituta je s strokovne strani pripravljen. V pripravi je gradivo za razpis natečaja, ki nam bo omogočil izbiro najustreznejše prostorske rešitve celotnega inštituta.

Izkušnja petinpetdesetletne zgodovine priča, da o upravičenosti obstoja inštituta in o potrebi po dostojnih prostorih za naše delo in za bivanje bolnikov nikoli ni bilo težko prepričati laične javnosti, težave pa smo imeli v strokovnih krogih. Prepričani smo, da bo tokrat drugače: strokovna razprava zadnjih dveh let je jasno pokazala, da Slovenija potrebuje Onkološki inštitut v njegovi multidisciplinarni zasnovi in da z gradnjo ni več mogoče odlašati. Trdno upamo, da bomo šestdesetletnico praznovali v novem inštitutu.

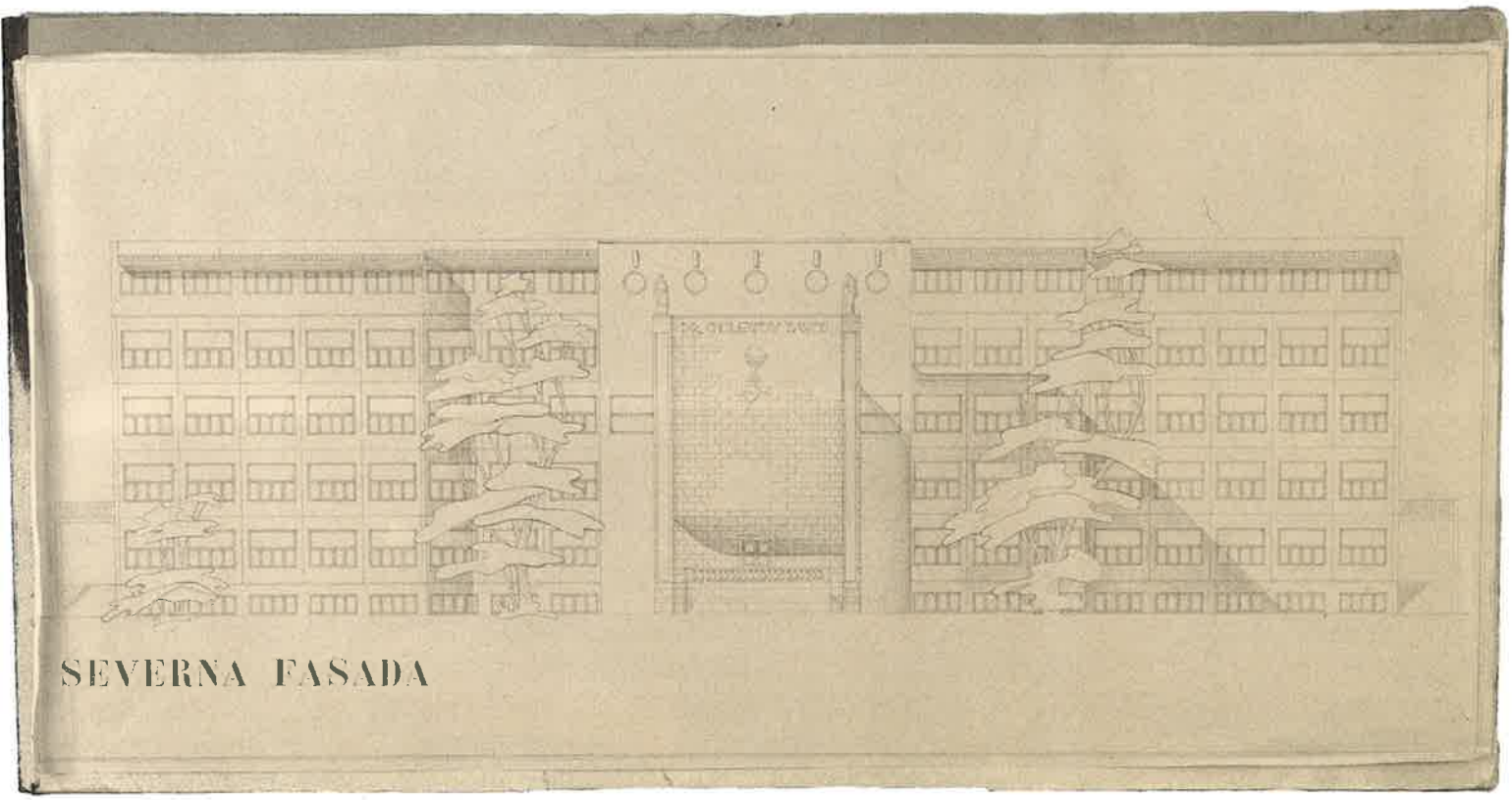
Plans for reconstruction of the Institute

In view of the comprehensive nature of the Institute, our work, problems and plans can be discussed from various aspects; we can either start from our most outstanding achievements comparable with foreign advances, or from our endeavours to keep abreast of the state-of-the art in the world. But – regardless whether the topic is discussed in view of the perpetually unsatisfactory financial situation, staff problems or inadequate equipment – the conclusion is basically the same: no essential improvement can be expected as long as the Institute is housed in the present inadequate buildings. The existing room capacities, most of which are totally unsuitable for medical activities, do not ensure conditions for safe professional work. Further reconstruction would not make sense, and the installation of up-to-date equipment in these buildings is not feasible. The solving of this basic problem is a prerequisite for possible marketing abroad of our knowledge on cancer treatment, as well as our cooperation in international research projects.

It has been fifty years since the first plan for construction of a new institute was presented by Mr. Tomori, Eng. Arch. This project has been followed by many others, but only one for these was partly realised in the year 1977 when the new teleradiotherapy facilities – and 5 years later building D housing an outpatient department, some laboratories and a smaller ward unit – were put to use. From then on – as if dazzled by the newly constructed building – we have ceased to be aware of the inferior working conditions of our doctors and nurses as well as of the low standard offered to our patients during the most critical time of their lives.

Prvi projekt izgradnje Onkološkega inštituta. Arhitekt **Tomori,** 1943

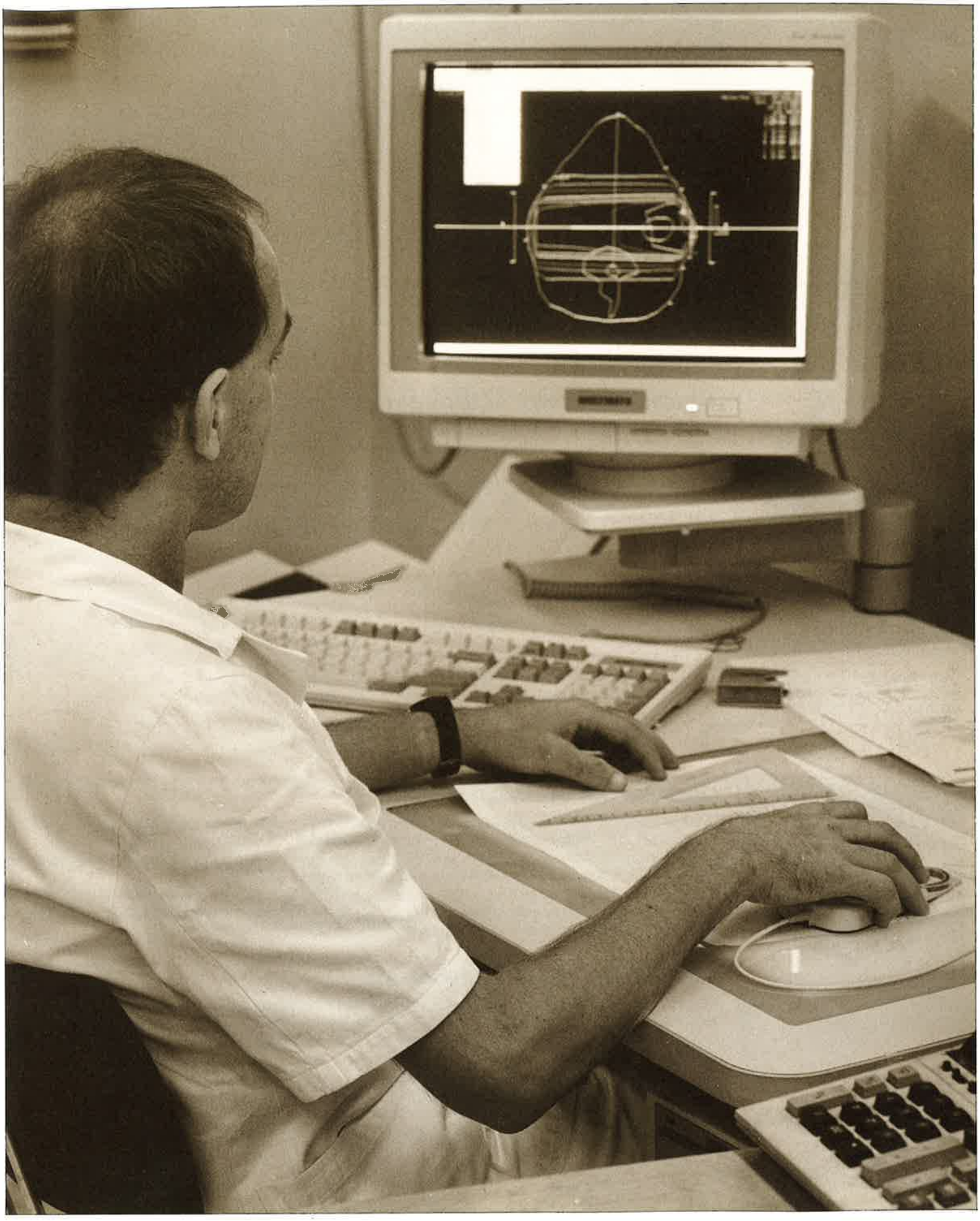
The first construction plan for the Institute of Oncology. Architect ***Tomori,*** *1943*



In the past two years, public attention has again started to focus on the plans for ensuring adequate conditions for all oncology affiliated activities, and normal treatment conditions. Since our attempts to obtain the former Military Hospital have failed, a new option to solve the problem by reconstruction of the old Thraumathological Hospital and present administration headquarters of the Clinical Center is coming into view. A team of competent professionals has already prepared a preliminary construction project. A campaign for inviting tenders to submit their proposals for the best solution of the Institute's room capacity problem is under way.

Our 55-year-long history shows that the need for the existence of our Institute as well as the need to obtain adequate room for our work and accommodation for our patients has never been disputed by lay society, but we have had problems with medical profession. Nevertheless, we are convinced that this time it will be different; the professional discussions and polemics of the past two years have clearly shown that Slovenia needs the Institute of Oncology – as a comprehensive cancer center – and that the problem of its (re)construction should be solved without further delay. We firmly believe that our 60th anniversary will already be celebrated under a new roof.

Strokovno delo
Professional work



vodja / *Head:*
prof. dr. **Vera Pompe Kirn,**
dr. med./*MD, PhD*
vodja tehnične ekipe / *Head – tehnical team:*
Ana Dotzauer, VMS/*RN*

Objavljena dela / *references:* 19, 20, 21, 22, 23, 24, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 194.

Register raka za Slovenijo

Register raka za Slovenijo vzdržuje podatkovne baze o rakavih bolnikih v Sloveniji od leta 1950 dalje. Iz te podatkovne baze tečejo analize v dve smeri: vodenje državnega registra o incidenci raka in preživetju rakavih bolnikov med stalnimi prebivalci Slovenije ter vodenje bolnišničnega registra Onkološkega inštituta, ki daje pregled nad vsemi, na inštitutu zdravljenimi bolniki. Ob rutinskem delu tečejo še domače in mednarodne študije.

Cancer Registry of Slovenia

The Cancer Registry of Slovenia has been maintaining a data base on cancer patients in Slovenia since 1950. This pool of information provides the basis for the following two lines of analyses: 1) on-line registration of cancer incidence and follow up of cancer patient survival in the Slovenian population, and 2) running of the hospital registry at the Institute of Oncology in order to collect information and provide an overview on all patients treated there. Apart from their routine work, both services are also involved in national and international cancer research projects.

vodja / *Head:*
as. mag. **Maja Primic Žakelj,**
dr. med./*MD, MSc*

Objavljena dela / *references:* 19, 126, 127, 129, 131, 133, 136, 137, 138.

Oddelek za epidemiologijo

V okviru oddelka za epidemiologijo potekajo trenutno štiri samostojne analitično-epidemiološke raziskave o raku dojk in rakih prebavnega trakta. Oddelek za epidemiologijo tudi strokovno usmerja preventivno onkologijo ter koordinira nacionalni program nadzora nad rakavimi boleznimi za Slovenijo, v skladu s priporočili Svetovne zdravstvene organizacije.
Strokovna ekipa skrbi za prenos in vnos sodobne metodologije in tehnologije dela v onkološko-epidemiološko raziskovanje v Sloveniji ter za čim bolj kakovostno publicistično dejavnost. Tako sta obe enoti vključeni tudi v več multicentričnih mednarodnih raziskav.

Department of Epidemiology

Presently, four independent analytical-epidemiological studies on breast cancer and cancers of the intestinal tract are being conducted. The epidemiological service also offers professional guidance in the field of preventive oncology, and coordinates the national program for cancer control in Slovenia in accordance with the recommendations issued by WHO (World Health Organization). The professional team is responsible for transfer and implementation of up-to-date methodology and technology in oncological-epidemiological research in Slovenia; it also ensures that the publishing activities are maintained at an adequately high (professional) level. Both services have also joined several international multicentric studies.

vodja / *Head:*
dr. **Gregor Serša,** dipl. biol./ *BSc Biol, PhD*
specialist radioterapije in onkologije / *Specialist in radiotherapy and oncology:*
prof. dr. **Stojan Plesničar,** dr. med./*MD, PhD*
strokovna sodelavca / *Scientific Associates:*
mag. **Srdjan Novaković,** dipl. biol./*BSc Biol, MSc*
Gorazd Krošl, dipl. biol./*BSc Biol*
glavni tehnik / *Chief Technician:*
Mira Lavrič, ing.

Objavljena dela / *references:* 1, 16, 78, 108, 109, 110, 111, 119, 120, 121, 141, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 182.

Oddelek za tumorsko biologijo

Tumorski markerji v klinični praksi.
Tumorske celice proizvajajo antigene, ki jih imenujemo tumorski markerji. Ker so tumorski markerji – specifični za določene maligne bolezni, so zelo primerni za spremljanje poteka bolezni in uspešnosti zdravljenja. Tumorske markerje (CEA, MCA, CA-125, CA19-9, NSE, PSA) določamo v serumu bolnikov našega inštituta ter tudi pri bolnikih mnogih drugih bolnišnic širom Slovenije. Pri delu uporabljamo novo aparaturo Cobas Core, s katero lahko hitro in natančno določimo vsebnost določenega tumorskega markerja v vzorcu. Vsako leto naredimo prek 15000 preiskav. Poleg tega pa uvajamo vedno nove preiskave na področju tumorskih markerjev v rutnsko delo.

Predklinične raziskave na tumorskih modelih.
Cilji našega raziskovalnega dela so usmerjeni k boljšemu razumevanju delovanja posameznih protitumorskih dejavnikov in kombinacij le-teh na rast tumorjev. Eden od predpogojev za izboljšanje protitumorskega zdravljenja je prav boljše razumevanje biologije normalnih in tumorskih tkiv. Opremljenost naših laboratorijev za celične kulture in živalske kolonije nudi dobro tehnično podlago za preizkušanje različnih načinov zdravljenja na in vitro in in vivo nivoju. Za preizkušanje protitumorskih dejavnikov na celicah v celičnih kulturah uporabljamo več različnih humanih in živalskih celičnih linij. Nekatere mišje celične linije lahko tudi presadimo na sokrvne miši, kjer te celice rastejo kot tumor. Ti tumorski modeli nam omogočajo preizkušanje novih, pa tudi že uveljavljenih načinov zdravljenja ter tudi njihovih različnih kombinacij. Trenutno je naše delo posvečeno preizkušanju modifikatorjev biološkega odziva, kemoterapevtikov, elektroterapije in radioterapije. Eno glavnih področij so modifikatorji biološkega odziva v kombinaciji z drugimi citotoksičnimi zdravljenji, kot sta kemoterapija in radioterapija. Že nekaj časa pa je del naših raziskav posvečen tumorskemu nekroznemu faktorju (TNF). Čeprav so eksperimentalni podatki obetajoči, pa klinične raziskave kažejo, da ima TNF poleg majhne učinkovitosti na zaviranje rasti tumorja tudi hude stranske učinke. Zaradi tega iščemo nove načine, da bi povečali njegovo terapevtsko učinkovitost in zmanjšali stranske učinke. Ena od možnih poti je sočasna uporaba drugih imunomodulatorjev ter radioterapije in elektroterapije. Druga možnost pa je lokalno zdravljenje namesto sistemskega.
Celotna dejavnost je usmerjena v reševanje vprašanj eksperimentalne onkologije tako na predkliničnem kot tudi diagnostičnem nivoju. Končni cilj pa je prenos znanja iz eksperimentalnega dela v klinično prakso.

Department of Tumor Biology

Tumor markers in clinical practice. *Malignant cells produce specific antigens called tumor markers which can be determined in the body fluids of cancer patients. Since specific tumor markers are associated with certain malignancies, their determination in cancer patients is helpful in diagnostic procedures and specially in the follow up of cancer patients for evaluation of treatment effectiveness. Tumor markers such as CEA, CA-125, MCA, CA-19-9, NSE, PSA are being determined for the inpatient and outpatient clinical departments of our Institute and many hospitals all over Slovenia. Quick and accurate determinations are possible with the new Cobas Core machine. Each year more than 15000 determinations are done. New tumor markers are constantly being introduced into routine use.*

Research on tumor models at pre-clinical level. *The research performed is aimed at achieving a better understanding of the effects of anticancer drugs – given alone or in combination – on tumor growth, tumor metastases, and normal tissues. A better understanding of the biology of normal and tumor tissues is a prerequisite for the effective improvement of cancer therapy. The facilities of our animal colony and cell culture laboratory, provide a technical basis for testing different treatment modalities at* in vitro *and* in vivo *level. Several human and animal cell lines*

provide adequate testing of anticancer drugs at cellular level in cell culture conditions. Some of the murine cell lines can be transplanted into syngeneic mice and grown as tumors. This provides tumor models for testing of different treatment modalities on the same cell types at two levels: in vitro *in cell cultures and* in vivo *in experimental animals. All these tumor models enable the testing of both new and already established treatments, and their combinations. Currently, biological response modifiers, chemotherapeutic drugs, electrotherapy and radiotherapy are being tested as single treatment or in different combinations. One of the major areas includes biological response modifiers in combination with other cytotoxic treatments such as chemotherapy or radiotherapy. The tumor necrosis factor (TNF) has recently drawn much of our attention. Although experimental data are promising, clinical studies have shown that TNF produces severe side effects, with minor impact on the tumor growth. Therefore, new approaches are sought to increase therapeutic effectiveness and diminish side effects. One of the possibilities is simultaneous use of TNF and other immunomodulators in combination with radiotherapy and electrotherapy. Another possibility is to use it in loco-regional instead of systemic treatment.*
We believe that the Department of Tumor Biology with its concept and facilities provides a sound basis for research in experimental oncology at preclinical and diagnostic level. The final goal is to transfer the knowledge derived from the experimental work into clinical practice.

vodja / *Head:*
Breda Jančar,
dr. med./*MD*
specialisti radiologi / *Specialists in radiology:*
Miljeva Rener,
dr. med./*MD*
prim. **Jurij Us,**
dr. med./*MD*
Tomaž Vargazon,
dr. med./*MD*
specialist internist, UZ diagnostik / *Specialist in medical oncology and ultrasonography:*
France Guna,
dr. med./*MD*
specializantka radiologije/ *Resident in radiology:*

Oddelek za radiologijo

Letni obseg dela (1992)

21123 vseh rentgenskih preiskav
53 limfografij
15 rentgensko vodenih aspiracijskih biopsij
5976 ultrazvočnih preiskav
450 ultrazvočno vodenih aspiracijskih biopsij

Najpomembnejšo strokovno dejavnost enote predstavlja rentgenska diagnostika pljuč, skeleta, dojk, zgornjega dela prebavil, uropoetskega trakta in retroperitoneja ter ultrazvočna diagnostika abdomna, male medenice, dojk, ščitnice in tumorjev na okončinah. Pri tem preiskave pogosto dopolnjujemo z aspiracijsko biopsijo ali se dodatno posvetujemo s specialisti nuklearne medicine in s tem še izboljšamo točnost diagnostike.

Razvoj oddelka vidimo v uvajanju novih, modernejših slikovno diagnostičnih metod: računalniške tomografije velike ločljivosti, magnetne resonance in Dopplerjevega ultrazvočnega aparata. Te aparature omogočajo zgodnejše odkrivanje rakavega obolenja, natančnejše določanje razširitve bolezni in intervencijsko-terapevtske posege. Tesno sodelovanje in smotrna delitev dela z Radiološkim inštitutom Kliničnega centra ter dodelitev ustreznih prostorov in opreme za delo našega oddelka nam bodo omogočili, da bo onkološka radiološka dejavnost sledila razvoju v svetu.

Department of Diagnostic Radiology

Annual turnover (1992)

21123 *All radiologic examinations together*
53 *Lymphographies*
15 *X-ray guided aspiration biopsies*
5976 *Ultrasonographies*
450 *US guided aspiration biopsies*

The bulk of professional potential goes towards X-ray diagnostics of the lung, bone, breast, upper intestinal tract, uropoietic system and peritoneum, as well as to ultrasonography of the abdomen, true pelvis, breast, thyroid and tumors of the extremities. The investigations are often

Kristjana Hertl,
dr. med./*MD*
glavni rentgenski tehnik / *Chief X-ray technician:*
Stojan Pirc,
VRT/*SRT*

Oprema
diaskopskodiagnostični rtg aparat
mamograf
tomograf
2 ultrazvočna aparata
Facilities:
diascopic X-ray unit
mammograph
tomograph
2 ultrasonographers

Objavljena dela / *references:* 64, 186, 194, 195, 196, 197, 198.

complemented by aspiration biopsy or additional team consultations with specialists in nuclear medicine in order to further improve the specificity of the diagnostic workup.
The Department's future lies in the implementation of new, up-to-date diagnostic imaging methods: high resolutin CAT scan (computed tomography), magnetic resonance, and Doppler sonography. These modern devices enable earlier cancer detection, more accurate staging of the disease and interventional therapeutic procedures. A close cooperation and sensible sharing of work between our department and the Institute of Diagnostic and Interventional Radiology of the Clinical Center, as well as the anticipated allocation of suitable room capacities and equipment, would help us keep abreast of the state of the art elsewhere in the world.

vodja / *Head:*
prim. **Janez Šuštaršič,**
dr. med./*MD, MSc*
specializanta nuklearne medicine/ *Residents in nuclear medicine:*
Viljem Kovač, dr. med./*MD*
Tadeja Movrin Stanovnik,
dr. med./*MD*

Oprema:
2 gama kameri
2 mobilna renografa
Facilities:
2 gamma cameras
2 mobile renographs

Oddelek za nuklearno medicino

Letni obseg dela (1992):
5515 aplikacij izotopov, od tega 5480 za preiskave in vivo in 35 za zdravljenje
1986 scintigrafij skeleta
1860 renografij
321 subtrakcijskih scintigrafij z dvojnim izotopom
258 scintigrafij ščitnice
178 scintigrafij možganov
167 scintigrafskih lokalizacij ledvic pred radioterapijo
134 radionuklidnih ventrikulografij
363 scintigrafij drugih organov

Vrhunec v diagnostiki pomenijo scintigrafije vsega telesa s tumorotropnimi radiofarmaki. Za zdravljenje (metabolno radioterapijo) uporabljamo radioaktivne izotope, ki sevajo elektrone (beta sevanje) in sicer 131-J, 90-Y in 89-Sr. V letu 1992 je bilo opravljenih 35 terapevtskih aplikacij izotopov. V Sloveniji smo edini, ki z radiojodom zdravimo folikularne in papilarne rake ščitnice, uvedli pa smo tudi zdravljenje nevroblastoma s 131-J-metajodobencilgvanidinom.

Uspešno delo enote v prihodnosti je odvisno od pridobitve sodobne opreme in novega znanja, kar bo omogočilo diagnostiko s pomočjo enofotonske emisijske tomografije in širšo aplikacijo tumorotropnih radiofarmakov z radioimunodetekcijo in receptorsko scintigrafijo. V metabolni radioterapiji moderne tehnike omogočajo selektivno obsevanje tumorjev, ki kopičijo tumorotropne radiofarmake.

Department of Nuclear Medicine

Annual turnover (1992):
5515 *Radionuclide applications 5480 for investigations in vivo and 35 for therapeutic purposes*
1986 *Bone scintiscansz*
1860 *Renographies*
321 *Subtraction scintiscans with double radionuclide*

Objavljena dela / *references:*
28, 37, 38, 58, 64, 73, 74, 186, 187, 188, 189.

258 *Scintiscans of the thyroid*
178 *Scintiscans of the brain*
167 *Scintigraphic localization of the kidney before radiotherapy*
134 *Radionuclide ventriculographies*
363 *Scintiscan of other organs*

High-tech diagnostic procedures include whole body scintiscan by means of tumorotropic radiopharmaceuticals. Metabolic radiotherapy makes use of radionuclides emitting beta rays (131-I, 90-Y and 89-Sr). In 1992, there were 35 therapeutic applications of radionuclides performed. Ours is the only radionuclide laboratory in Slovenia where follicular and papillary cancers of the thyroid are treated by means of radioiodine. We have also started to use 131-I-metaiodobenzylguanidine in the treatment of neuroblastoma.
The future of the unit lies in the improvement of equipment and upgrading of knowledge, which would enable diagnosis by means of monophoton emission tomography and wider application of tumorotropic radiopharmaceuticals with radioimmunodetection and receptor scintiscan. Advanced techniques of metabolic radiotherapy enable selective irradiation of tumors which uptake tumorotropic radiopharmaceuticals.

vodja / *Head:*
prof. dr. **Rastko Golouh,** dr. med./*MD, PhD*
specialisti patologi / *Specialists in pathology:*
Janez Jančar, dr. med./*MD*
Janez Lamovec, dr. med./*MD*
Andreja Zidar, dr. med./*MD*
glavni laboratorijski tehnik / *Chief laboratory technician:*
Alenka Kljun, ing. farm. /*ISc Pharm*

Oprema:
kriostati za intraoperativno diagnozo,
laboratorij za histološke tehnike (aparature za vklop tkiva

Oddelek za patologijo

Letni obseg dela (1992):
4347 biopsij
122 obdukcij

Obdelava preparatov:
623 zmrzlih rezov
42532 hematoksilin-eozin barvanj na parafinskih rezinah
1099 posebnih barvanj
7115 imunohistokemijskih preiskav
2144 vklapljanj v umetno smolo
51 preiskav z elektronsko mikroskopijo
353 pretočnih citometrij

Osnovna naloga oddelka je razvoj znanja v onkološki patologiji. Pri tem so enako pomembne klinično-patološke korelacije in klinične aplikacije. Strokovno in raziskovalno delo je usmerjeno predvsem v ugotavljanje morfoloških značilnosti in diferencialno-diagnostičnih problemov pri tumorjih dojke, malignih limfomih, tumorjih ščitnice in mehkih ter kostnih tkiv. Posebej nas zanimajo prognostični parametri in morfološke spremembe po različnih načinih zdravljenja. Pripravljamo se na uvajanje metod molekularne patologije. V prvi fazi predvidevamo postavitev sistema za in situ hibridizacijo mRNA.

Department of Pathology

Annual turnover (1992):
4347 *Biopsies*
122 *Autopsies*

Sample processing:
623 *frozen sections*
42532 *paraffin – HE*
1099 *special stainings*
7115 *immunohistochemistry*
2144 *art. resin embedding*
51 *electron microscopy*
353 *flow cytometry*

mikrotomi, možnosti za 42 različnih barvnih tehnik), laboratorij za imunohistokemijo, laboratorij za molekularno patologijo (v ustanavljanju), fotomikroskopi.

Facilities:
cryostats for intraoperative diagnosis
laboratory for histological techniques (devices for tissue embedding, microtomes, 42 different staining techniques)
laboratory for immunohistochemistry
laboratory for molecular pathology (under way)
photomicroscopes

Objavljena dela / *references:* 28, 32, 52, 59, 60, 61, 62, 65, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 114, 124, 164, 183, 202, 203, 204, 207, 208.

The basic task of the department is to promote the development of knowledge in oncological pathology. Here, equal importance is attributed to both clinico-pathologic correlations and to clinical application. The professional and research work is mainly centred on the determination of morphologic characteristics and on the problems of differential diagnosis in breast tumors, malignant lymphomas, tumors of the thyroid, soft tissues and bones. We take special interest in prognostic parameters and morphological changes after different treatment modalities.
We plan to introduce new methods of molecular pathology. In the first phase a system for in situ hybridization of mRNA will be established.

vodja / *Head:*
dr. **Ana Pogačnik,** dr. med./ *MD, PhD*
specialisti patologi / *Specialists in pathology:*
dr. **Marija Bizjak Schwarzbartl,** dr. med./*MD, PhD*
Živa Pohar Marinšek, dr. med./*MD*
mag. **Ljudmila Ruparčič Oblak,** dr. med./*MD, MSc*

Oddelek za citopatologijo

Letni obseg dela (1992):

25501 vseh preiskav
8708 aspiracijskih biopsij

Obdelava preparatov:
27513 barvanj po Papanicolaou
12150 barvanj po Giemsi
88 citokemijskih preiskav
1524 imunocitokemijskih preiskav
19 preiskav z elektronsko mikroskopijo
2065 pretočnih citometrij

Osnovna strokovna dejavnost oddelka je diagnostika neoplastičnih in neoplastičnim podobnih patoloških procesov. Pri zdravljenih bolnikih diagnosticiramo ostanke bolezni, recidive, metastaze in morebitne druge patološke procese, ki se pojavijo med zdravljenjem ali po njem. Specifična dejavnost oddelka je spremljanje in ocenjevanje učinka kemoterapije in drugih antitumorskih agensov.
V diagnostiki uporabljamo aspiracijsko in eksfoliativno citodiagnostiko. Razen punkcij, ki jih izvajamo pod kontrolo rentgena, ultrazvoka ali računalniške tomografije, aspiracijsko biopsijo opravljamo sami. Vzorce aspiracijske in eksfoliativne citodiagnostike barvamo po metodah Giemsa in Papanicolaou. Uporabljamo tudi citokemične in imunocitokemične reakcije, pri nekaterih tumorjih pa še metodo pretočne citometrije. Izvid preiskave posredujemo v 48 urah, v nujnih primerih pa je čas preiskav še krajši. Vsa rutinska dejavnost je od leta 1984 računalniško vodena.
V oddelku želimo izboljšati diagnostično zanesljivost citopatološke preiskave in razširiti uporabnost metode. V ta namen skušamo izostriti konvencionalna diagnostična merila, s pomočjo kvantitativno-analitičnih metod najti nova diagnostična merila, ugotoviti možnost in zanesljivost ocenjevanja nekaterih prognostičnih dejavnikov s citopatološko preiskavo in uvesti nove molekularno-biološke metode v diagnostiko nekaterih malignih obolenj.

prof. dr. **Marija Us Krašovec,** dr. med./*MD, PhD*
specializant patologije / *Resident in pathology:*
mag. **Veronika Kloboves Prevodnik,** dr. med./*MD, MSc*
strokovna sodelavka / *Technical associate:*
Irena Srebotnik Kirbiš, dipl. ing./*BSc*
glavni laboratorijski tehnik / *Head technician:*
Majda Škrk, laboratorijski tehnik / *laboratory technician*

Department of Cytopathology

Annual turnover (1992)

25501 *All examinations*
8708 *Aspiration biopsies*

Sample processing:
27513 *Papanicolau staining*
12150 *Giemsa staining*
88 *cytochemistry*
1524 *immunocytochemistry*
19 *electron microscopy*
2065 *flow cytometry*

Prostori in oprema:

rutinski diagnostični laboratorij
laboratorij za imunodiagnostiko
laboratorij za elektronsko mikroskopijo (skupaj z oddelkom za patologijo)
laboratorij za pretočno citometrijo z dvema pretočnima citometroma
laboratorij za računalniško analizo posnetkov celic

Facilities:

laboratory for routine diagnostics
laboratory for immunodiagnostics
laboratory for electron microscopy (shared with pathology dept)
laboratory for flow-cytometry with two flow-cytometers
laboratory for computer analysis of cell images

The basic activity of the department is the diagnostics of neoplastic and neoplastic-like pathological processes. This includes the diagnosis of residual disease, recurrences, metastases and other possible pathological processes occurring during or after treatment. A specific task of our department is the monitoring and evaluation of the effect of chemotherapy and other antitumor agents.

Diagnosis is made by means of aspiration and exfoliative cytodiagnostics. Apart from X-ray-, US- or CT-guided punctures, all aspiration biopsies are performed by ourselves. Samples for aspiration or exfoliative cytodiagnosis are stained according to Giemsa or Papanicolaou methods. We use cytochemical and immunocytochemical reactions, and in some tumors also flow-cytometry. The findings of investigations are ready in 48 hours, though in urgent cases this time can be even shorter. Since 1984, all the routine procedures have been controlled by computer.

In our department, we aim at improving the diagnostic reliability of cytopathologic examination and enhancing its applicability. For this purpose we try to better define the conventional diagnostic criteria and determine new ones by means of quantitative analytical methods, as well as to establish the possibility and reliability of the evaluation of some prognostic factors by cytopathologic examination, and to introduce new methods of molecular biology into the diagnostics of certain malignant diseases.

Objavljena dela / *references:* 4, 15, 26, 28, 29, 30, 32, 33, 37, 38, 39, 52, 70, 71, 86, 95, 122, 123, 124, 199, 200, 201, 202, 203, 204, 208.

organizacijski vodja / *Head: (technical)* **Vera Čoroli,** profesor biologije / *BSc Biol.*

Klinični laboratorij

Letni obseg dela (1992):

35191 odvzemov in analiz krvnih vzorcev
900 analiz razmazov kostnega mozga

V kliničnem laboratoriju opravljamo hematološke in urinske preiskave, preiskave blata ter preglede kostnega mozga. Laboratorij organizira tudi odvzem krvnih vzorcev za ambulantne in hospitalne bolnike.
V letu 1991 smo prvi v Sloveniji na področju hematologije prešli na računalniško obdelavo preiskav. Z računalnikom enostavno in hitro nadzorujemo naročila in rezultate analiz, izdajamo delovne naloge, zajemamo rezultate iz avtomatskega analizatorja in vodimo statistično in arhivsko dokumentacijo.
Vprašanje neoplastične infiltracije kostnega mozga ter ocenjevanje rezerve kostnega mozga pred onkološko terapijo in med zdravljenjem je pogost problem, pri katerem laboratorij tesno sodeluje s kliničnimi zdravniki. Za oceno aspiratov kostnega mozga in patoloških perifernih krvnih slik razvijamo dodatne preiskave s specialnimi barvanji in imunocitokemičnimi testi. Omenjene dejavnosti dopolnjujemo s sodobnimi diagnostičnimi metodami pretočne citofotometrije celic periferne krvi in kostnega mozga.

strokovni vodja / *Head (scientific):*
Bogdanka Pirc Marjanović,
dr. med. specialist internist /
MD specialist in internal medicine

Clinical Laboratory

Annual turnover (1992)

35191 *Blood sample taking and analysis*
900 *Analysis of bone marrow smears*

The Clinical laboratory performs hematological and urine tests, as well as examinations of feces and bone marrow. Blood sample taking for outpatient and inpatient needs is also organized by this laboratory.
In 1991, we were the first in Slovenia to introduce computer analysis of examinations in hematology. The computer enables simple and quick supervision of orders for examinations and of analysis results, as well as planning of work, retrieval of results from the automatic analyser, and filing of statistics and patient records.
The question of neoplastic bone marrow infiltration, and the evaluation of bone-marrow capacity prior to oncological therapy and during its course is a frequent problem that calls for close collaboration between our laboratory and the clinicians. For the evaluation of bone-marrow aspirates and pathological peripheral blood patterns we have been developing additional investigations using special staining techniques and immunocytochemical tests. The techniques mentioned are supplemented by modern diagnostic procedures such as flowcytometry of peripheral blood cells and bone marrow.

Oprema:
diskusijski mikroskop
mikroskopi
elektronski avtomatski števec

Facilities:
discussion microscope
microscopes
electronic automatic counter

vodja / *Head:*
dr. **Ivan Vrhovec,** dipl. ing. kem. / *BSc Chem, PhD*
sodelavca / Associates:
specialist klinične biokemije /
Specialist in clinical biochemistry:

Biokemični laboratorij

Letni obseg dela (1992):

103446 ambulantnih preiskav
219251 hospitalnih preiskav
34312 urgentnih preiskav za potrebe intenzivne terapije in kemoterapije
483 radioizotopnih določitev koncentracije estrogenskih in progesteronskih receptorjev v citosolu tumorskega tkiva dojke

V naslednjem letu načrtujemo postavitev analitske metode za rutinsko določanje proteina PS2 v citosolu tumorjev dojk in receptorjev epidermalnega rastnega faktorja (EGF – receptor) iz membransko-jedrne frakcije homogenizata tumorjev dojk.
V okviru raziskovalnih nalog v sodelovanju z Inštitutom Jožef Stefan ugotavljamo klinični pomen spremenjenih koncentracij in aktivnosti proteinaz (katepsini B, H, L in D) in inhibitorjev (stefina A in B) v citosolu rakastega tkiva.

Biochemical Laboratory

Annual turnover (1992):

103446 *outpatient examinations*
219251 *inpatient examinations*
34312 *urgent examinations for the needs of intensive therapy and chemotherapy radionuclide-based determination of estrogen and progesterone receptors in the cytosol of breast tumor tissue*
483

mag. **Marta Kramberger,** dipl. farm./*BSc Pharm*
Valentina Čuk Pašanku, dipl. ing. farm./*BSc Pharm*

Oprema:
sistem za elektroforezo
analizator za določanje natrija in kalija
tekočinski scintilacijski števec
računalniški sistem za povezavo biokemičnih analizatorjev in obdelavo
laboratorijskih podatkov

Facilities:
2 biochemical analysers
system for electrophoresis
analyser for Na and Ca determination
liquid scintillation counter
computer system for linkage of biochemical analysers and laboratory data processing

Objavljena dela / *references:* 77, 177

During the next year we plan to introduce an analytical method for routine determination of PS2 protein in the cytosol of breast tumors, and EGF (epidermal growth factor) receptors from the membrane-nuclear fraction of breast tumor homogenate.

Within the research projects carried out in collaboration with the Institute Jožef Stefan, clinical significance of changed concentrations and activities of proteinases (cathepsins B, H, L and D) and inhibitors (stephins A and B) are being studied in the cytosol of cancer tissues.

predstojnik / *Head:*
prof. dr. **Franc Lukič,** dr. med./*MD, PhD*
specialisti kirurgije/*Specialists in surgery:*
prof. dr. **Marija Auersperg,** dr. med./*MD, PhD*
Damijan Bergant, dr. med./*MD*
Darja Eržen, dr. med./*MD*

Klinika za kirurško onkologijo

Letni obseg dela (1992):
1221 velikih operativnih posegov
817 manjših operativnih posegov
14429 ambulantnih pregledov, od tega 1254 prvih pregledov

Klinika za kirurško onkologijo se posveča operativni dejavnosti v zvezi z rakavimi boleznimi in med njimi še posebej tistim, kjer je ključno tesno sodelovanje s specialisti ostalih onkoloških terapevtskih in diagnostičnih usmeritev. Glavna področja onkološke kirurgije so kirurgija dojke, ščitnice, sarkomov mehkih tkiv in kosti, abdominalnih tumorjev, kombinirani kirurško-ginekološki posegi, diagnostični kirurški posegi (biopsije, diagnostične laparotomije), kriokirurgija in paliativni kirurški posegi.

V okviru onkološke kirurgije se je razvila tudi študijska intraarterijska in individualizirana citostatska terapija. Po tej metodi zdravimo bolnike, ki jim standardni načini zdravljenja ne dajejo nobenih možnosti. Zaradi narave teh bolezni (anaplastični karcinom ščitnice, sarkomi mehkih tkiv in kosti itd.) in zaradi pogostih zapletov je potrebno zdravljenje izvajati na oddelku, kjer je možna takojšnja intervencija in kjer je na voljo izkušena ekipa. Če naj bi v bodoče s to dejavnostjo nadaljevali, ji bo potrebno zagotoviti ustrezne kadrovske, organizacijske in prostorske pogoje. Prihodnji razvoj kirurgije v Onkološkem inštitutu je kritično odvisen od novih prostorov za strokovno delo in nego bolnikov in od sodobne opreme. Osnovno vodilo je tesno sodelovanje onkološkega kirurga v vseh fazah diagnostičnega in terapevtskega postopka in njegova intervencija v trenutku, ko je največ možnosti za uspešno zdravljenje s čim manj kasnimi posledicami. Endoskopska in laserska kirurgija, kirurško zdravljenje metastaz, uvajanje regionalne terapije s citostatiki, mikroembolizacijo ali hipertermično perfuzijo, intraoperativna radioterapija in konzervirajoča kirurgija tumorjev dojke, prebavil ter sarkomov mehkih tkiv in kosti so področja sodobnega razvoja onkološke kirurgije.

Matjaž Kaučič, dr. med./*MD*
doc. dr. **Jurij Lindtner,** dr. med./*MD, PhD*
prim. **Janez Novak,** dr. med./*MD*
Franc Pompe, dr. med./*MD*
asist. dr. **Marko Snoj,** dr. med./*MD, PhD*
Rudi Snoj, dr. med./*MD*
Matjaž Šušteršič, dr. med./*MD*

Prostori in oprema:
operacijska dvorana z dvema operacijskima mizama
mala operacijska soba
aparat za ultrazvočno disekcijo parenhimskih organov
kriokirurški aparat

Facilities:
operating theatre with two operating tables
operating theatre for minor surgeries
device for ultrasonic dissection of parenchymal organs
device for cryosurgery

Objavljena dela / *references:* 3, 6, 25, 26, 27, 28, 29, 30, 31, 32, 33, 37, 38, 101, 102, 103, 104, 105, 168, 169, 170, 203.

Department of Surgical Oncology

Annual turnover (1992):

1221 *major surgeries*
817 *minor surgeries*
14429 *outpatient examinations*
1254 *first examinations*

The Department of Surgical Oncology performs cancer-related surgical interventions, particularly those demanding close collaboration with specialists of other therapeutic and diagnostic branches of oncology. The scope of oncological surgery comprises the following main fields: surgery of the breast, thyroid, soft tissue and bone sarcomas, abdominal tumors, combined surgical & gynecological interventions, diagnostic surgeries (biopsies, diagnostic laparotomies), cryosurgery and palliative surgical interventions.

Oncological surgery also served as a basis for the development of experimental intra-arterial and individualised chemotherapy (with cytostatic drugs). This approach is used in cases when other standard treatment modalities are considered ineffective. Owing to the nature of these diseases (anaplastic thyroid carcinomas, soft tissue and bone sarcomas etc.) well as because of frequent complications, the treatment has to be carried out on an inpatient basis (in the ward) in order to secure the possibilities for prompt intervention by a competent team. The continuation of these activities would require adequate conditions with regard to personnel, organizational and room facilities.

Further development of surgery at the Institute of Oncology depends vitally on new room capacities suitable for professional work and adequate patient care, as well as on up-to-date equipment. The basic principle is close collaboration of oncological surgeons in all phases of diagnostic and therapeutic workup, and their timely intervention at a stage when the chances are optimal for successful treatment with the fewest side effects. The prospects for the further development of oncological surgery lie in endoscopic and laser surgery, surgical therapy of metastases, regional chemotherapy (cytostatic therapy), microembolization or hyperthermic perfusion, intraoperative radiotherapy and conservative surgery for tumors of the breast, the gastro–intestinal tract, and soft tissue & bone sarcomas.

predstojnik / *Head:*
doc. dr. **Peter Albert Fras,** dr. med./*MD, PhD*
Specialisti ginekologi/*Specialists in gynecology:*
asist. **Milan Baškovič,** dr. med/*MD*
Sonja Bebar, dr. med./*MD*
mag. **Vida Stržinar,** dr. med./*MD, MSc*
Aleš Vakselj, dr. med./*MD*
mag. **Marjetka Uršič Vrščaj,** dr. med./*MD, MSc*

Klinika za ginekološko onkologijo

Letni obseg dela (1992):

249 velikih operativnih posegov
310 malih operativnih in diagnostičnih posegov
139 laparaskopij
197 cistoskopij
41950 ambulantnih pregledov, od tega 1087 prvih pregledov

Specifičnost dejavnosti ginekološke onkologije je v povezovanju vseh načinov zdravljenja malignih bolezni. Operativno zdravljenje v kombinaciji z obsevanjem in kemoterapijo je občutno izboljšalo rezultate zdravljenja. Diagnostični postopki za ugotavljanje obsega primarnega tumorja, pa tudi za oceno uspešnosti zdravljenja prav tako predstavljajo pomemben del specifičnosti ginekološke onkologije.
Z radikalnimi kirurškimi posegi po radioterapiji ali po kemoterapiji imamo v Sloveniji največ izkušenj. Rešujemo tudi kirurške zaplete po drugih vrstah zdravljenja: tu so zajete zlasti komplikacije na sečilih po zdravljenju napredovalih oblik raka vratu in telesa maternice. Posebnost so tako imenovane »second look« operacije in laparoskopije, opravljene največkrat po predhodnem agresivnem citostatskem zdravljenju napredovalih oblik raka jajčnikov.
Pri paliativnem zdravljenju napredovalega raka vedno češče uporabljamo kriokirurško metodo. Pri radikalnih operativnih posegih veliko pričakujemo od laserske kirurgije, zlasti če jo bo možno kombinirati z intraoperativnim obsevanjem. Tudi uvajanje laserske endoskopije v sklopu minimalne invazivne terapije lahko bistveno pripomore k izboljšanju rezultatov zdravljenja napredovalih oblik ginekološkega raka. Razvoj v svetu pa kaže tudi na vse pogostejše indikacije za individualno planirano brahiradioterapijo. Kadar gre za implantate pri ženskah z ginekološkim rakom, je nujno tesno sodelovanje ginekologa, radioterapevta in radiofizika. Upamo lahko, da bomo z novimi prostori omogočili razvoj te dejavnosti.

Prostori in oprema:

operacijska soba za velike posege
operacijska soba za male posege in endoskopijo
instrumentarij za laparoskopijo z endovizijo
instrumentarij za pnevmocistoskopije in cistometrije

Facilities:

operating theatre for major interventions
operation theatre for minor interventions and endoscopy
instruments for laparoscopy and endovision
instruments for pneumocystoscopy and cystometry

Objavljena dela / *references:* 2, 7, 34, 193.

Department of Gynecological Oncology

Annual turnover (1992):

***249** major surgeries*
***310** minor and diagnostic surgeries*
***139** laparoscopies*
***197** cystoscopies*
***4195** outpatient examinations*
***1087** first examinations*

The specific feature of oncological gynecology is its inter-linking with all other modalities of cancer treatment. Thus a significant improvement of treatment results has been obtained by surgery in combination with irradiation and chemotherapy. Diagnostic procedures for the determination of tumor extent and for the evaluation of treatment success are a further important feature of gynecologic oncology.
Our considerable experience in radical surgery following radiotherapy or chemotherapy has shown that our gynecological service is the most competent for this type of treatment in Slovenia. We also perform surgeries for other treatment-related complications, particularly urological problems associated with the treatment of advanced cervical and endometrial cancers. We also specialize in the so-called second-look surgeries and laparoscopies required mainly after a previous aggressive chemotherapy in advanced stages of ovarian cancer. In the palliative treatment of advanced cancers, cryosurgery is used more frequently, whereas the advances in radical surgery are associated with laser techniques, particularly when these can be combined with intraoperative irradiation. Also the use of laser endoscopy within the frame of minimally invasive therapy can significantly improve the treatment results in advanced forms of gynecological cancer. According to the state of the art the indications for individually planned brachytherapy are on the increase. In the case of gynecological cancer, implantations require close collaboration of gynecologist, radiotherapist and radiophysicist. We hope that new room capacities will promote further development of this treatment modality.

predstojnik / *Head:*
Lučka Baraga, dr. med./*MD*
vodja intenzivnega oddelka
Head of Intensive Care:
prim. **Mojca Senčar,** dr. med./*MD*
vodja oddelka za terapijo bolečine
Head of Pain-Control Clinic:
Drago Ažman, dr. med./*MD*
specialisti anesteziologi:
Specialists in anesthesiology:
Dragica Kmet, dr. med./*MD*
Višnja Kolonič, dr. med./*MD*
Slavica Lahajnar, dr. med./*MD*
specializantka anesteziologije
Resident in anesthesiology:
Tatjana Stopar, dr. med./*MD*

Prostori in oprema:
6 anestezijskih aparatov
5 monitorjev
4 respiratorji

Facilities:
6 anesthesiology units
5 monitors
4 respirators

Objavljena dela / *references:* 107.

Klinika za onkološko anesteziologijo

Letni obseg dela (1992):
2187 posegov v splošni ali regionalni anesteziji
385 prvih pregledov na oddelku za bolečino
2181 analgetičnih terapevtskih posegov – blokad
1050 bolnikov, zdravljenih na intenzivnem oddelku
425 ambulantnih pregledov, od tega 40 prvih pregledov

Strokovna dejavnost Klinike za onkološko anesteziologijo se odvija na treh področjih: anestezija pri kirurških, ginekoloških in brahiradioterapevtskih posegih, vodenje intenzivnega oddelka in terapija bolečine. Na vseh treh področjih se soočamo s posebnostmi onkološkega bolnika. Napredovali stadij rakave bolezni, poprejšnje citostatsko in obsevalno zdravljenje in pogosto izjemno obsežen in dolgotrajen operativni poseg so specifični dejavniki, ki označujejo delo anestezijske službe z onkološkim bolnikom od priprave na operativni poseg preko vodenja bolnika med samo anestezijo do pooperativne intenzivne terapije in rehabilitacije. Pri tem je ključnega pomena tesno sodelovanje anestezista z vsemi drugimi diagnostičnimi in terapevtskimi službami inštituta.

Razvoj in obstoj vseh treh vej anestezijske dejavnosti bosta v prihodnosti močno odvisna od možnosti, da vsem operativnim dejavnostim na inštitutu zagotovimo normalne prostore in sodobno opremo za delo in za oskrbo bolnikov.

Department of Oncological Anesthesiology

Annual turnover (1992):
2187 *interventions in general or local anesthesia*
385 *first examinations at the Pain-Control Clinic*
2181 *analgesic blocks*
1050 *patients treated at the intensive care department*
425 *outpatient examinations*
40 *first examinations*

Anesthesiology covers the following three fields: 1) anesthesia in surgical, gynecological and brachytherapeutic procedures, 2) supervision of the intensive care unit, and 3) pain treatment. All these different activities have one thing in common: they are centred on the specific problems of the oncological patient. Advanced stages of cancer, previous chemo- and radiotherapy as well as frequently very extensive and protracted surgical procedures are the specific factors which characterise the work of oncological anesthesiologists, starting with patient preparation for surgery, throughout the procedure of anesthesia and ending with postoperative intensive care and rehabilitation. At all these stages, close collaboration with all other diagnostic and therapeutic units of the institute is of utmost importance.

The further development and the existence of all three branches of anesthesiology-related activities are greatly dependent on the plans envisaged for securing adequate room facilities and up-to date equipment necessary for our work and patient care.

predstojnik / *Head:*
Alenka Vodnik Cerar, dr. med./*MD*
vodja oddelka za brahiradioterapijo/
Head of Brachyradiotherapy:
prof. dr. **Janez Kuhelj,** dr. med./*MD, PhD*
specialisti radioterapije in onkologije/
Specialists in radiotherapy and oncology:
mag. **Tomaž Benulič,** dr. med./*MD, MSc*
mag. **Cvetka Bilban Jakopin,** dr. med./*MD, MSc*
Jože Bitenc, dr. med./*MD*
prof. dr. **Marjan Budihna,** dr. med./*MD, PhD*
prof. dr. **Miha Debevec,** dr. med./*MD, PhD*
Ladislava Furlan, dr. med./*MD*
Boris Jančar, dr. med./*MD*
Marija Jeromen Kavčič, dr. med./*MD*
Metka Klevišar, dr. med./*MD*
mag. **Borut Kragelj,** dr. med./*MD, MSc*
asist. **Hotimir Lešničar,** dr. med./*MD*
Elga Majdič, dr. med./*MD*
prim. **Franc Marolt,** dr. med./*MD*
Gabrijela Petrič Grabnar, dr. med./*MD*
Marija Plaper Vernik, dr. med./*MD*
Jasna Sever, dr. med./*MD*
Vesna Sgerm Robič, dr. med./*MD*

Klinika za radioterapijo in Oddelek za radiofiziko

Letni obseg dela (1992):

5297 bolnikov na teleradioterapiji
58393 posamičnih obsevanj (vsakokrat povprečno 2,1 obsevalni polji)
226 brahiradioterapevtskih aplikacij zaprtih virov sevanj
42 terapevtskih aplikacij odprtih radioaktivnih izotopov
24377 ambulantnih pregledov, od tega **3230** prvih pregledov

Osnovna strokovna dejavnost je načrtovanje, izvedba in nadzor radioterapije vseh lokalizacij malignih tumorjev ter klinično delo z bolniki na bolniških oddelkih, v ambulantah, na konzilijih in v svetovalni službi v drugih slovenskih bolnišnicah. Radioterapija se v Sloveniji skoraj v celoti izvaja v Onkološkem inštitutu. Razumljivo je torej, da mora Klinika za radioterapijo zagotavljati sodobno zdravljenje z obsevanjem za vse lokalizacije malignih tumorjev. Številnih tehnik obsevanja v tem kratkem prikazu ni mogoče našteti. Omenimo naj le nekatere novejše načine obsevalnega zdravljenja: obsevanje vsega telesa s translacijsko tehniko na telekobaltu pri presaditvi kostnega mozga; obsevanje vse kože v zdravljenju kožnih malignih limfomov; namestitev rutenijevih aplikatorjev za zdravljenje očesnega melanoma; hipertermija v kombinaciji z brahiradioterapijo; hiperfrakcionirano obsevanje; terapija neuroblastoma z radiojodom.

Da bi pri obsevalnem zdravljenju v Onkološkem inštitutu lahko šli v korak z razvojem v svetu, je nujno, da povečamo naše zmogljivosti in izpopolnimo tehnično opremo na teleradioterapiji. Dograditi moramo prostore za brahiradioterapijo in hipertermijo ter se lotiti kadrovske prenove. Na teh osnovah bomo lahko razvijali nove načine zdravljenja: kontinuirano hiperfrakcionirano obsevanje, tridimenzionalno in stereotaktično planiranje obsevanja, sodobne metode brahiradioterapije, intraoperativno obsevanje, uporabo radiosenzibilizatorjev in kontrolo kvalitetne izvedbe obsevanja z metodami filmske in elektronske dozimetrije obsevalnih polj.

Department of Radiotherapy and Department of Radiophysics

Annual turnover (1992):

5297 *patients on teleradiotherapy*
58393 *individual irradiations (average 2.1 irrad. fields per course)*
226 *brachyradiotherapy with sealed sources*
42 *therapeutic radionuclide applications*
24377 *outpatient examinations*
3230 *first examinations*

The basic activity covers planning, performance and supervision of radiotherapy for malignant tumors of all sites, as well as clinical work with patients on wards and in the outpatient department, in multidisciplinary advisory teams, and in consultant service to other Slovenian hospitals. The needs for radiotherapy service in Slovenia are almost exclusively covered by the Institute of Oncology in Ljubljana. It is clear, therefore, that the department is expected to provide up-to-date radiation treatment for all tumor sites. A detailed account of the different techniques available is beyond the scope of our brief presentation. Therefore, only a few of the most advanced approaches in radiotherapy will be mentioned: whole body irradiation on telecobalt using the translation technique within the frame of bone-marrow transplantation procedure; whole skin irradiation for treatment of cutaneous malignant lymphomas; placement of ruthenium applicators for the treatment of ocular melanoma; hyperthermia in combination with brachytherapy; hyperfractionated irradiation; radioiodine therapy for neuroblastoma.

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Resident in radiotherapy and oncology:
Vaneja Velenik, dr. med./*MD*
glavni tehnik/
Chief tehnician:
Boris Sekereš, VRT/*SRT*

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Janez Burger, dipl. fiz./*BSc Phys*
Božidar Casar, dipl. ing. fiz./*BSc Phys*
Vlado Robar, dipl. fiz./*BSc Phys*
mag. **Bogdan Umek,** dipl. fiz./*BSc Phys, MSc*
vodja oddelka za varstvo pred sevanjem/
Division for radiation protection:
Janez Marolt, VRT/*SRT*
vzdrževalca / *Maintenance:*
Franc Pičman, VRT/*SRT*
Jernej Satler, dipl. ing. elektr./*BSc Electr*

In order to enable radiotherapy at our Institute to keep abreast of the global advances in this speciality, it will be mandatory to secure additional room capacities and up-to-date technical equipment for the needs of teleradiotherapy, as well as to build new capacities for brachytherapy and hyperthermia treatment, and to revitalize the staff. This will form a sound basis for the implementation of new approaches such as continued hyperfractionated irradiation, three-dimensional and stereotactic radiation planning, advanced brachytherapy methods, intraoperative irradiation, the use of radiosensitizers, and radiation quality control by means of film and electron dosimetry of irradiation fields.

Prostori in oprema:
2 linearna pospeševalnika
2 telekobaltna aparata
3 rentgenski aparati za površinsko obsevanje
2 simulatorja
3 planirni sistemi
aparat za izdelavo fiksacijskih mask
Curietron
aparat za intersticijsko hipertermijo

Facilities:
2 *linear accelerators*
2 *telecobalt units*
3 *X-ray units for superficial irradiation*
2 *simulators*
3 *planning systems*
device for preparation of fixation masks
Curietron
device for interstitial hyperthermia

Objavljena dela / *references:*
13, 14, 16, 17, 18, 26, 28, 29, 30, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 53, 54, 55, 56, 57, 61, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 79, 80, 81, 96, 97, 98, 99, 100, 110, 112, 113, 114, 115, 116, 118, 139, 140, 141, 142, 143, 144, 145, 146, 179, 181, 186, 190, 191, 192, 207, 208, 209, 210, 211.

vodja / *Head:*
prof. dr. **Janez Škrk,** dipl. biol./ *BSc Biol, PhD*
sodelavec/
Research associate:
Elizabeta Tekavčič, prof. biol./*BSc Biol*

Objavljena dela / *references:*
19, 41, 47, 73, 117, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181.

Oddelek za radiobiologijo

Radiobiologija kot veda, ki preučuje učinke sevanj (ionizirajočih in neionizirajočih) na živo snov, dobiva v sklopu medicinskih in bioloških ved vedno večji pomen (vključno z varstvom človeka in njegovega okolja). Ob skromni kadrovski zasedbi in aparaturah oddelek v tesnem sodelovanju z radioterapevti in radiofiziki rešuje niz praktičnih vprašanj in s tem prispeva k dvigu kvalitete radioterapije.

V okviru osnovne (bazične) radiobiologije se oddelek ukvarja z izvajanjem in razvojem metod testiranja biološkega učinka sevanj na molekularnem, celičnem, tkivnem in organizmičnem nivoju, na normalnih in malignih celicah in tkivih v pogojih in vitro in in vivo. Predvsem je raziskovanje usmerjeno na kvalitativne in kvantitativne spremembe znotraj celičnih proteinaz in njihovih inhibitorjev, interferonov ter hormonov, na vpliv le-teh na proliferativno aktivnost celic in reparacijo potencialne letalne poškodbe celic ter na odkrivanje njihovih radioprotektivnih lastnosti.

Na področju klinične (medicinske) radiobiologije se oddelek ukvarja z indikacijami za različne režime obsevanja, z velikostjo in številom dnevnih frakcij, celično repopulacijo med obsevanjem, ugotavljanjem bioloških značilnosti tumorjev, toleranco normalnih tkiv, biološko dozimetrijo, vzroki radiorezistence in kemorezistence in vrstnim redom terapij pri kombinirani obliki zdravljenja.

V sodelovanju z Inštitutom Jožef Stefan in nizozemskim inštitutom za uporabno radiobiologijo in imunologijo v Rijswijku teče raziskava o primarnih in sekundarnih učinkih pri obsevanju celic in vitro z nevtroni. Preučujemo tudi proteinazne profile celic v kulturi in v bioptičnih vzorcih ob učinkovanju multimodalnih terapevtskih agensov v sodelovanju z Inštitutom Rudjer Boškovič v Zagrebu.

V razvoju so metode za določanje parametrov celične kinetike pri biopsijah humanih tumorjev zaradi natančnejšega vodenja radioterapije in kemoterapije.

Department of Radiobiology

Radiobiology is a science which studies the effect of radiation (ionizing and non-ionizing) on live matter, and as such it is gaining in importance in the field of medical and biological sciences (especially with regard to the efforts for protection of humans and their environment). Despite its scanty personnel and equipment facilities, the laboratory helps to solve a range of practical problems in close cooperation with radiotherapists and radiophysicists, and thus contributes towards the improvement of radiotherapy.

Within the frame of basic radiobiology, the laboratory performs and develops tests for the biological effects of radiation at the molecular, cell, tissue and organism levels, on both normal and malignant cells and tissues, in in vitro and in vivo conditions. The research is centred on the qualitative and quantitative changes within the cell proteinases and their inhibitors – interferons and hormones, their influence on the proliferative activity of cells, and the potentials for lethal cell-damage repair, as well as on the detection of their radioprotective properties.

Within the scope of clinical radiobiology the laboratory is involved in activities related to indications for different irradiation regimens including: calculation of the size and number of daily fractions, cell population during irradiation, determination of biological properties of tumors, normal tissue tolerance, biological dosimetry, reasons for radioresistance and chemoresistance, and the sequence of therapies in combined modality treatment.

The Department of Radiobiology is involved in a study on the primary and secondary effects of the irradiation of cells with neutrons in vitro, which is being carried out in collaboration with the Jožef Stefan Institute (Ljubljana) and TNT Institute from the Netherlands. Another study concerning the proteinase profiles of cells in culture and in bioptic samples exposed to the effects of multimodal therapy is performed in collaboration with the Rudjer Bošković Institute from Zagreb.

Also under way is the development of methods for the assessment of cell kinetics (LI, T–pot) in human tumor biopsies for a more accurate planning of radiotherapy and chemotherapy.

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specialisti internisti-onkologi/ *Specialists in medical oncology:*
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asist. mag. **Tanja Čufer,** dr. med./*MD, MSc*
Marija Fidler Jenko, dr. med./ *MD*
doc. dr. **Saša Markovič,** dr. med./*MD, PhD*
Marjeta Stanovnik, dr. med./ *MD*
asist. dr. **Borut Štabuc,** dr. med./*MD, PhD*
mag. **Marjeta Vovk,** dr. med./ *MD, MSc*
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specializantka interne medicine/ *Resident in medical oncology:*
Bojana Pajk, dr. med./*MD*

Objavljena dela / *references:*
5, 8, 18, 33, 43, 45, 50, 51, 52, 59, 70, 71, 106, 117, 182, 183, 184, 185, 192, 202, 207, 208.

Klinika za internistično onkologijo

Letni obseg dela (1992):

3300 sprejetih bolnikov
6004 aplikacij kemoterapevtikov v okviru ambulantne kemoterapije
19968 hospitalnih aplikacij kemoterapevtikov
12403 ambulantno pregledanih bolnikov, od tega **1279** prvič

Poleg rednega zdravniškega dela v ambulantah, na bolniških oddelkih in v okviru timskih konzilijev internisti-onkologi posvečamo še prav posebno pozornost vpeljavi novih citostatikov, hormonov, bioloških modifikatorjev ter novih zdravil za podporno terapijo. V zadnjih letih smo preizkušali številna nova zdravila: karboplatin, pirarubicin, etoposid v peroralni obliki, LH-RH (luteinizirajoči hormon – releasing hormon) agoniste, interleukin, 5 HT_3 (hidroksi triptamin) antagoniste, kardioksan in rastne faktorje ter nekatere od njih uvedli v rutinsko zdravljenje. Razvijamo nove načine kombiniranega zdravljenja. Odmevna je bila naša študija o zdravljenju raka sečnega mehurja s kemoterapijo in obsevanjem, kjer smo pri visokem odstotku bolnikov lahko ohranili sečni mehur (Int J Radiat Oncol Biol Phys 25: 777, 1993). Podobne načine zdravljenja razvijamo tudi pri zdravljenju raka grla. Razvijamo in uporabljamo tudi nove načine sistemske terapije in regionalno terapijo z intraarterialno aplikacijo citostatikov.
V okviru IBCS in EORTC študij sodelujemo v mednarodnih kliničnih študijah na področju zdravljenja karcinoma dojke, limfomov in sarkomov. Pripravljamo se tudi na medinštitutsko sodelovanje z onkološkim centrom v Avianu na področju zdravljenja sarkomov. Smo tudi pobudniki prve vseslovenske onkološke študije (»Študija dopolnilnega zdravljenja raka danke in debelega črevesa«), ki naj bi v slovenskem prostoru pripomogla k poenotenju zdravljenja.
V prihodnosti načrtujemo ustanovitev enote za intenzivno nego in terapijo ter enote za raziskovalno klinično delo na področju internistične onkologije. Kvaliteto dela na področju kemoterapije želimo v prihodnje izboljšati s postopnim uvajanjem farmakodinamike v raziskovalno, kasneje pa tudi v rutinsko klinično delo.

Department of Medical Oncology

Annual turnover (1992):

3300 *admissions*
6004 *outpatient chemotherapy applications*
19968 *inpatient chemotherapy applications*
12403 *outpatient examinations*
1279 *first examinations*

Apart from the routine clinical work in the outpatient department, wards and within team counsels, medical oncologists are responsible for the introduction of new cytostatics, hormones, biological response modifiers and new drugs for supportive therapy. In the past few years many new drugs have been studied, e.g. carboplatinum, pyrarubicin, peroral etoposide, LH RH agonists, interleukin, 5 HT_3 antagonists, cardioxan, and growth factors; some of these substances have also become part of routine therapy. New protocols for combined therapy are being developed. Our report on the use of chemotherapy and irradiation for the treatment of bladder cancer – which revealed that the bladder could be preserved in a high percentage of treated patients – was met with great interest (Int J Radiat Oncol Biol Phys 25: 777, 1993). Similar treatment approaches are also being developed for the therapy of laryngeal cancer. Furthermore, new methods of systemic therapy by means of regional intra-arterial application of cytostatics are under study for clinical use. We are taking part in international clinical studies of treatment for breast cancer, lymphomas and sarcomas, which are being carried out as part of the IBCS and EORTC research projects. Collaboration with the Oncological Center in Aviano in the field of sarcoma treatment is under way. We are also the initiators of the first all-Slovenian oncological study of adjuvant treatment for colorectal cancer, aimed at unifying the relevant treatment in Slovenia.
In the future, we plan to establish a unit for intensive care and therapy, as well as a unit for clinical research in the field of medical oncology. Further, we plan to improve the quality of chemotherapy by gradual inclusion of pharmacodynamics – first into our research work, and later on also into routine clinical practice.

vodja / *Head:*
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zunanja sodelavka/ *Nonresidential co-worker:*
mag. **Vesna Radonjič Miholič,** specialist klinični psiholog/*Specialist in Clinical Psychology, MSc*

Objavljena dela / *References:* 117, 205, 206.

Oddelek za psihoonkologijo

Sodobne smernice obravnave raka vse bolj poudarjajo pomen prizadevanja za izboljšanje kvalitete življenja bolnikov. Pri tem ima psihoonkologija pomembno vlogo.
Oddelek deluje po načelu »odprtih vrat in odprtega telefona«. Tako išče različne oblike pomoči letno v povprečju okoli 2000 ljudi. Psihoonkologija daje svoj prispevek k celostni obravnavi bolnika z rakom s tem, da preučuje in obravnava psihične in socialne dejavnike pri nastanku in razvoju bolezni, pa tudi pri zdravljenju in rehabilitaciji bolnikov.
V okviru oddelka za psihoonkologijo smo razvili te dejavnosti:
– neposredno psihodiagnostično in psihoterapevtsko delo z bolniki in njihovimi svojci: svetovanje, posredovanje v krizi, podporna psihoterapija, učenje sprostitvenih tehnik in vizualizacije;
– posredno psihoterapevtsko pomoč bolnicam z rakom dojke prek strokovnega usposabljanja in nadzora dela prostovoljk, ki delujejo v bolnišnicah po vsej Sloveniji. To je organizirana oblika samopomoči z imenom Pot k okrevanju in je vključena v mednarodno gibanje Reach to Recovery pri UICC;
– pedagoško delo v programih do- in podiplomskega izobraževanja vseh, ki se pri svojem delu srečujejo z bolniki z rakom – zdravnikov, medicinskih sester, psihologov in drugih;
– raziskovalno delo, ki je usmerjeno v osvetljevanje pomena psiholoških in socialnih dejavnikov v etiologiji in poteku bolezni ter v sprotno preverjanje svojega dela;
– strokovno svetovanje in koordinacijo v okviru Društva onkoloških bolnikov Slovenije pri organizaciji in izvajanju različnih oblik samopomoči in medsebojne pomoči bolnikov, kot tudi pri publicistični dejavnosti (revija Okno in razni priročniki).
Kadrovska okrepitev oddelka nam bo omogočila, da se bomo lahko vključili v vse multidisciplinarne time in tako zagotovili celostno obravnavo bolnika od prvega sprejema dalje.

Department of Psychooncology

In accordance with the principles of up-to-date cancer management, endeavours to improve the quality of life of cancer patients are considered increasingly important. In this respect, psychooncology plays an important role.
The Department works on the principle of "open door and hot-line telephone". Thus, some 2000 people on average report for different forms of help and advice every year. Psychooncology contributes to the comprehensive care of cancer patients by studying and taking into account different psychological and social factors believed to be associated with the etiology and course of cancer disease, and also the treatment and rehabilitation of patients.
Psychooncology covers the following range of activities:
– direct psychodiagnostic and psychotherapeutic work with patients and their relatives: counselling, emergency interventions, supportive psychotherapy, practice in relaxation techniques and visualization;
– indirect psychotherapeutic support for breast cancer patients through professional training and supervision of volunteers' work in Slovenian hospitals. This is a form of patients self-support aid organized within the frame of the international UICC sponsored "Reach to Recovery" movement.
– participation in under- and post-graduate education programs for all professionals concerned with cancer patients, i.e. physicians, nurses, psychologists and others.
– research work centred on the study of the role of psychological and social factors in the etiology and course of the disease, and on-line assessment of the work performed.
– professional counselling and coordination of the activities of the Slovenian Cancer Patients Society related to the organization and performance of different self-support and mutual support programs for cancer patients, as well as publishing work (the bulletin "Okno" and various handbooks).
Employment of additional staff will enable us to join all relevant multidisciplinary teams and thus ensure that comprehensive cancer care is available right from the day of admission.

direktor zdravstvene nege/
Director of nursing care services:
Marina Velepič, VMS/*RN*
namestnica / *Deputy:*
Jožica Bostič Pavlovič, VMS/*RN*
vodilna sestra kirurških inštrumentark/
Charge nurse of Surgical Dept:
Marina Šek, VMS/*RN*
vodilna sestra ginekoloških inštrumentark/
Charge nurse of Gynecological Dept:
Nevenka Papler, VMS/*RN*
vodilna sestra anestezije/
Charge nurse of Anesthesiological Dept:
Alenka Muha, VMS/*RN*
vodilna sestra sterilizacije/
Charge nurse of Sterilisation:
Teja Markuš, VMS/*RN*
vodilna sestra ambulant/
Charge nurse of Outpatient Dept:
Duša Gaspari, VMS/*RN*
vodilna sestra ambulantne kemoterapije/
Charge nurse of Outpatient Chemotherapy:
Jožica Brulc, VMS/*RN*
vodilna sestra mediko-socialne službe/
Charge nurse of Medico-Social Service:
Ema Logar, VMS/*RN*
vodilna sestra Centra za bolezni dojk/
Charge nurse of CBD:
Tatjana Kumar, VMS/*RN*

Zdravstvena nega

Zdravstvena nega se kot zdravstvena stroka vključuje v vse faze bolezni od odkrivanja, zdravljenja, psihične in fizične rehabilitacije do pomoči umirajočemu bolniku. Medicinske sestre izvajajo celovito standardno zdravstveno nego, specifično intenzivno nego in terapijo operirancev, bolnikov, zdravljenih s teleradioterapijo in brahiradioterapijo, bolnikov z najzahtevnejšo citostatsko terapijo ter nego paliativno zdravljenega in terminalnega bolnika. Stik s službami zdravstvene nege v osnovni zdravstveni dejavnosti (nega na domu) in v drugih zdravstvenih zavodih poteka pisno preko dokumentacije službe za zdravstveno nego in preko medicinskih sester v socialno-medicinski enoti inštituta.
Od leta 1985 dalje medicinske sestre inštituta sodelujejo v European Oncology Nursing Society (EONS). Onkološki inštitut je vključen v evropsko študijo o kontinuiteti zdravstvene nege. Živahna je tudi založniška dejavnost, saj smo v zadnjih petih letih izdali 9 strokovnih publikacij in prevedli 2 tuja priročnika za medicinske sestre.
Za razvoj zdravstvene nege bo v prihodnje bistvenega pomena izdelava enotnih standardov zdravstvene nege onkološkega bolnika in uvedba ustrezne dokumentacije. Načrtujemo tudi izdelavo ostrejših meril kontrole svojega dela ter raziskovalnega dela medicinskih sester. Z uvedbo svetovalne službe onkoloških medicinskih sester želimo doseči kontinuiteto in enotno doktrino zdravstvene nege v Sloveniji.

Nursing Care Services

As a medical discipline, nursing care is involved in all phases of disease, including its diagnosis, treatment, psycho-physical rehabilitation and terminal patient support. Thus nurses perform comprehensive standard nursing care as well as a specific intensive care and therapy of patients after surgery, and of those treated by teleradiotherapy, brachytherapy, chemotherapy, and last but not least, of palliatively treated terminal patients. Contacts with basic health care services (home care) and with other medical institutions are maintained through correspondence and written documentation/reports of the nursing care service and through the nurses in charge of the medico-social unit of the Institute.
Since 1985, the nurses of our Institute have been actively participating in the European Oncology Nursing Society (EONS). The Institute of Oncology takes part in the European study on the continuity of nursing care. Our publishing activity also merits mention: in the past five years we have issued 9 professional publications and translated two foreign textbooks for nurses.
The most essential prerequisites for the further development of nursing care are the preparation of uniform standards for the nursing care of oncological patients and the introduction of an adequate documentation system. We also plan to work out stricter criteria for the evaluation of our own work and the research work of nursing staff. The introduction of a counsel service of oncological nurses is aimed at contributing towards the continuity and standardization of nursing care in Slovenia.

vodilne sestre bolniških oddelkov/
Charge nurses of hospital wards:
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Jana Fink, VMS/*RN*
Olga Koblar, VMS/*RN*
Štefka Kodrman, VMS/*RN*
Irena Koselj, VMS/*RN*
Jelka Piškur, VMS/*RN*
Milena Popit, VMS/*RN*
Tatjana Povh, VMS/*RN*
Tatjana Rozman, VMS/*RN*

vodja / *Head:*
Stana Kneževič, VFT/*SPT*

Oddelek za fizikalno terapijo in rehabilitacijo

Fizikalna terapija in rehabilitacija sta pomembna člena v procesu zdravljenja onkoloških bolnikov. Fizioterapevt pripravi za vsakega bolnika individualen program, ki ga nato sproti prilagaja trenutnemu bolnikovemu stanju.

Področja dela fizioterapevta v Onkološkem inštitutu so: respiratorna fizioterapija, kinezioterapija, limfna drenaža in elektroterapija.

Respiratorna fizioterapija je najpogosteje indicirana pred operativnimi posegi in po njih. Z dihalnimi vajami, inhalacijami, vibracijsko masažo in drenažnim položajem izboljšujemo delovanje dihalnega sistema in zmanjšujemo nevarnost okužb.

Kinezioterapija pospešuje okrevanje bolnika s spodbujanjem mišične aktivnosti, to pa hkrati preprečuje motnje v delovanju srca in ožilja, dihalne motnje, mišično oslabelost, prebavne motnje in preležanine. Individualno načrtovana kinezioterapija pa pomaga bolniku pri prilagajanju na nove anatomske razmere po odstranitvi dojke ali okončine in pripomore k lažji in hitrejši namestitvi proteze za dojko, kar je prav tako pomemben del dejavnosti fizioterapevtske službe.

Limfno drenažo uporabljamo v zdravljenju limfnih edemov, ki so lahko posledica malignega obolenja samega ali pa zdravljenja. V elektroterapiji pa poleg aparatov za limfno drenažo uporabljamo tudi aparate za protibolečinsko terapijo in elektrostimulacijo.

Tesnejše sodelovanje z vsemi kliničnimi zdravniki ter ustreznejši prostori in oprema nam bodo omogočili, da bomo bolnikom lahko tudi v prihodnje nudili sodobno strokovno pomoč.

Department of Physical Therapy and Rehabilitation

Physical therapy and rehabilitation are important components of the treatment of oncological patients. An individual program adjusted with respect to the patient's condition is prepared for every patient.

The scope of physical therapy at the Institute includes the following four main activities: respiratory physical therapy, kinesitherapy, lymphatic drainage and electrotherapy.

Respiratory therapy is most frequently indicated before and after surgical interventions. Breathing exercises, inhalations, vibration massage and drainage position are employed to improve the function of the respiratory system and to diminish the risk of infection.

Kinesitherapy accelerates the rehabilitation process by enhancing muscular activity which at the same time prevents the possible appearance of cardiovascular disorders, respiratory distress, muscular atrophy, indigestion and bedsores. Individually planned kinesitherapy helps patients to adjust to new anatomic situations resulting from mastectomy or limb amputation, and also facilitates undelayed application of a breast prothesis – a task which represents an important part of physical therapy activities.

Lymphatic drainage is used in the therapy of lymphedemas which are due either to the malignant disease or to its treatment. In addition to the appliances for lymphatic drainage, electrotherapy also makes use of various devices for analgesia and electrostimulation.

Close collaboration with all clinicians, together with adequate room and equipment facilities, will also enable our service to offer the patients up-to-date and professionally competent help in the future.

vodja / *Head:*
Dušica Kiauta, bibliotekar/ *Librarian*

Objavljena dela / *References:* 16.

Specialna knjižnica

Specialna knjižnica Onkološkega inštituta je osrednja onkološka knjižnica in nosilec specializiranega INDOK centra za onkologijo. Aktivno sodeluje v bibliografski bazi podatkov Biomedicinae Slovenicae pri Inštitutu za biomedicinsko informatiko in je vključena v sistem znanstveno tehnološkega informiranja v Sloveniji.

Uporabniki knjižnice so zdravniki in drugi strokovni sodelavci Onkološkega inštituta in ostalih medicinskih ustanov ter študenti medicine, kakor tudi strokovne knjižnice iz Slovenije in tujine.

Knjižnica nudi uporabnikom najnovejšo literaturo, ki jo potrebujejo pri svojem kliničnem, raziskovalnem in pedagoškem delu in skrbi, da so njihova publicirana dela vključena v nacionalne in mednarodne baze podatkov. Vsa dela delavcev Onkološkega inštituta so vključena v interno računalniško bazo podatkov, kar omogoča izdelavo osebnih bibliografij in vsakih pet let tudi izdajo tiskane bibliografije.

Knjižnica ima 9805 strokovnih knjig ter 261 naslovov revij, številna polpublicirana dela in drugo literaturo s področja onkologije. Dostop do informacij omogočajo strokovni katalogi, interna baza podatkov in mednarodna podatkovna zbirka na kompaktnem disku CANCERLIT, kar služi za izdelavo retrospektivnih poizvedb in SDI (selektivne diseminacije informacij).

V programu je povezava v sistem COBISS (kooperativni online bibliografski sistem in servisi) – vzajemni katalog knjig in revij, online povezava z Inštitutom informacijskih znanosti v Mariboru (IZUM), omrežna terminalska povezava z mednarodno podatkovno zbirko v okviru Medicinske fakultete v Ljubljani in nadaljnje sodelovanje z evropskimi onkološkimi knjižnicami.

Special Library

The Special Library of the Institute of Oncology is a central oncological library and an Information and Documentation Center (INDOC) for oncology. It maintains active collaboration with the bibliographic data base Biomedicina Slovenica at the Institute for Biomedical Informatics, and is also included in the scientific and technological information system in Slovenia.

The users of the library are physicians and other professional co-workers of the Institute of Oncology as well as of other medical institutions, students of medicine, and also other special libraries in Slovenia and abroad.

The library provides the users with the most recent publications/literature needed in their clinical, research and teaching work, and includes their published works in the national and international data bases. All published works of the Institute's authors are recorded in the internal data base, which enables computerized processing of their personal bibliographies and as well publication of a comprehensive bibliography every five years.

The library has 9805 books and 261 journal titles, internal publications and other literature pertinent to oncology. It also maintains several professional catalogues, an internal bibliographic data base and an international data base CANCERLIT on compact discs, which enables retrospective searches and SDI (selective dissemination of information).

Our further plans include connection with COBISS (Cooperative Online Bibliographic System and Services), which would enable access to the cooperative catalogue of books and journals, online connection with the Institute of Information Sciences in Maribor (IZUM), a network of terminals within Medical Faculty in Ljubljana as well as further cooperation with European oncological libraries.

vodja / *Head:*
Milena Vojinović, dipl. ing. farm./*BSc Pharm*
Monika Sonc, dipl. ing. farm./ *BSc Pharm*

Lekarna

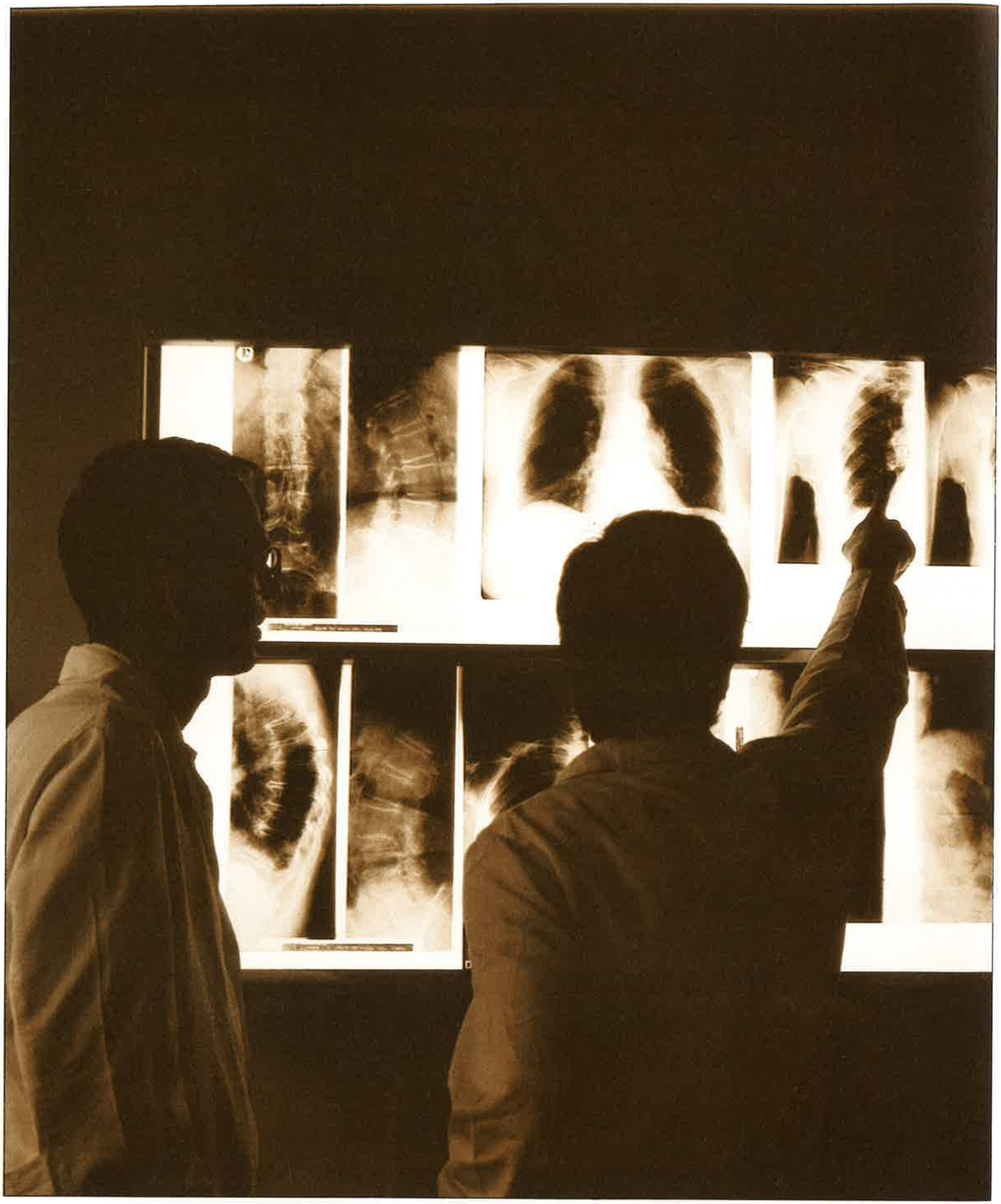
Lekarna Onkološkega inštituta ima status bolnišnične lekarne, kar pomeni, da lekarna zagotavlja preskrbo z zdravili in drugimi pomožnimi sredstvi bolnikom, ki se zdravijo na bolnišničnih in ambulantnih oddelkih inštituta. Tako lekarna oskrbuje oddelke, laboratorije in ambulante Onkološkega inštituta z gotovimi zdravili – specialitetami (zlasti citostatiki), lastnimi galenskimi in magistralnimi pripravki, obvezilnim in sanitetnim materialom, laboratorijskim materialom in kemikalijami. Poleg že izdelanih zdravil, ki jih izdajamo na zahtevke oddelkov in ambulant, izdelamo v galenskem laboratoriju lekarne mesečno v povprečju 70 kg mazil in krem, 1000 komadov praškov in 10 litrov raznih solucij za zunanjo in notranjo rabo. Zdravila po magistralni recepturi za posameznega bolnika pripravljamo le v manjšem obsegu. Izjema so analgetične kapljice, ki vsebujejo kodein ali pa morfij. Njihova poraba močno narašča. V juliju 1992 smo pričeli z izdelavo epiduralnih in subarahnoidalnih raztopin, ki jih dobivajo bolniki za blažitev bolečine kot trajno analgetsko terapijo v spinalni kanal.

Kratkoročna strokovna usmeritev lekarne je priprava na zakonsko določeno verifikacijo lekarne, ki zahteva primerne prostore, opremo in kadrovsko zasedbo. Lekarna naj bi zaživela kot specifična strokovna enota Onkološkega inštituta in ne le kot servis za razdeljevanje in naročanje zdravil. V prihodnosti bi želeli preiti na centralno pripravo citostatikov, kar pa za zdaj zaradi prostorske razdrobljenosti inštituta ni mogoče.

Pharmacy / Dispensary

As a hospital dispensary, the Pharmacy of the Institute of Oncology provides medications and other materials needed in the treatment and care of hospitalised patients. It supplies the wards, laboratories and outpatient departments with ready made medications – specialities (particularly cytostatics), as well as with its own preparations, bandages and other sanitary materials, laboratory material and chemicals. Apart from supplying the wards and outpatient units with ready-made medications, our laboratory produces an average monthly quantity of 70 kg of different ointments and creams, 1.000 powder packages and 10 l different solutions for external and internal use. Magistral prescriptions are much less frequent, with the exception of analgesic drops containing codeine or morphine, the use of which has been steeply increasing. In July 1992 we started producing epidural and subarachnoidal solutions used for continuous spinal analgesia.

The short-term professional strategy of our pharmacy lies in its preparation for legal registration, which would require suitable room capacities, equipment and personnel. The pharmacy should become a specific professional unit of the Institute rather than a service for distribution and purchase of drugs. In the future, we would like to switch to central preparation of cytotoxic drugs which has thus far been hindered by the physical dispersion of the Institute's various departments.



Redna tedenska ali štirinajstdnevna onkološka svetovalna služba deluje v bolnišnicah v Celju, na Golniku, v Izoli, Mariboru, Novi Gorici, Novem mestu in na Ptuju.

Regular team consultancy service in oncology is maintained weekly or every two weeks in the hospitals of Celje, Golnik, Izola, Maribor, Nova Gorica, Novo mesto and Ptuj.

Multidisciplinarni konziliji in svetovalna dejavnost

Vse od svoje ustanovitve dalje se Onkološki inštitut trudi za uveljavitev multidisciplinarnega zdravljenja bolnikov z rakom in spodbuja k temu tudi zdravnike v drugih ustanovah. Usklajenost diagnostičnih in terapevtskih postopkov od prve predstavitve bolnika dalje je najboljše zagotovilo za optimalen rezultat zdravljenja. Konziliji poleg tega predstavljajo forum za oblikovanje in stalno posodabljanje strokovnih doktrin, zagotavljajo izmenjavo izkušenj med inštitutskimi zdravniki in zagotavljajo sodelovanje z zdravniki drugih klinik in zdravstvenih ustanov ter omogočajo načrtovanje in realizacijo skupnih pedagoških in raziskovalnih projektov.

Multidisciplinary Advisory Teams and Consultant Service

Ever since its establishment, the Institute has been striving for multidisciplinary approach to the cancer patient, and has also been encouraging such an approach among the physicians in other hospitals. The optimal timing of diagnostic and therapeutic procedures from the patient's first admission on is the best guarantee for optimum treatment results. In addition, the multidisciplinary teams represent a forum for the preparation and regular updating of professional doctrine, thus ensuring exchange of experience between the physicians of our Institute, promoting their collaboration with colleagues from other clinics and health institutions, and facilitating the planning and performance of their collaborative education and research projects.

Stalni multidisciplinarni konziliji za področje onkologije področje konzilija	***Permanent Multidisciplinary Advisory Teams for Oncology*** *Area covered*	vodja konzilija ali glavni svetovalec Onkološkega inštituta *Head of the multidisciplinary team or chief consultant*
tumorji aksilofacialnega področja	*tumors of the maxillofacial region*	**Erika Šoba Podobnik**
tumorji prebavil	*gastrointestinal tumors*	**Borut Štabuc**
jetrni tumorji	*hepatic tumors*	**Saša Marković**
tumorji ORL področja	*ENT tumors*	**Erika Šoba Podobnik**
tumorji pljuč in prsnega koša	*tumors of the lung and chest*	**Miha Debevec**
mezenhimski tumorji	*mesenchymal tumors*	**Branko Zakotnik**
tumorji kože	*tumors of the skin*	**Marjana Plaper Vernik**
melanom	*melanoma*	**Zvonimir Rudolf**
tumorji dojke	*breast tumors*	**Jurij Lindtner**
ginekološki tumorji	*gynecological tumors*	**Peter Albert Fras**
tumorji sečnega mehurja	*tumors of the urinary bladder*	**Jožica Červek**
tumorji sečil in moških genitalij	*tumors of the uropoietic system and male genitals*	**Marjeta Stanovnik**
očesni tumorji	*tumors of the eye*	**Boris Jančar**
možganski tumorji	*brain tumors*	**Marjana Plaper Vernik**
tumorji ščitnice	*thyroid tumors*	**Marija Auersperg**
limfomi	*lymphomas*	**Gabrijela Petrič Grabnar**
otroški tumorji	*childhood tumors*	**Gabrijela Petrič Grabnar**

Izobraževanje
Education

Pri osrednji državni ustanovi je s strokovnim delom neločljivo povezano pedagoško delo v vseh njegovih oblikah. Predavanja in praktični pouk na vseh stopnjah izobraževanja, podiplomsko in specialistično izobraževanje ter mentorsko delo s pripravniki, specializanti in mladimi raziskovalci – vse to je del rednih obveznosti delavcev inštituta. Zgoščen pregled pedagoških dejavnosti inštituta je predstavljen v tabeli. Podrobneje nato predstavljamo Katedro za onkologijo in radioterapijo Medicinske fakultete v Ljubljani. Pedagoško dejavnost inštituta v letu 1992 ponazarja seznam tečajev in seminarjev v organizaciji Onkološkega inštituta in oris kontinuiranega izobraževanja naših zdravstvenih delavcev.

Pedagoška dejavnost

šola	predmet	predavatelj
Medicinska fakulteta	onkologija z radioterapijo	**Stojan Plesničar** **Peter Albert Fras** **Zvonimir Rudolf**
	onkologija z radioterapijo – vaje	**42** zdravnikov inštituta
	interna medicina – vaje	**Saša Markovič**
	socialna medicina – vaje	**Maja Primic Žakelj**
Visoka šola za zdravstvo	radiobiologija	**Janez Škrk**
	radioterapija	**Peter Albert Fras**
	patologija	**Janez Jančar**
	radioterapija – vaje	**Boris Sekereš**
	zdravstvena nega	**Marina Velepič**
	prehrana	**Helena Cvilak**
	zdravstvena nega – vaje	**Jožica Bostič Pavlovič** in **7** višjih sester
Biotehniška fakulteta	radiobiologija	**Janez Škrk**
Fakulteta za strojništvo	letalska medicina	**Rastko Golouh**
Zavod RS za varstvo pri delu	zaščita pred ionizirajočim sevanjem	**Peter Albert Fras** **Janez Škrk**
Srednja šola za farmacijo in zdravstvo	citologija zdravstvena nega – vaje	**Živa Pohar Marinšek** **Jožica Bostič Pavlovič** in **7** višjih sester
Srednja zdravstvena šola in gimnazija	zdravstvena nega – vaje	**Jožica Bostič Pavlovič** in **7** višjih sester

In a central national institution, professional work is inseparably linked to all forms of educational activity. Thus, lectures and practical training at all levels of education, postgraduate studies and residencies, as well as mentor work with probationers, residents and junior research fellows – all belong within the scope of the regular duties of the Institute's personnel. The table summarises a review of educational activities of the Institute. Somewhat more detailed information is given on the Chair of Oncology and Radiotherapy of the Medical Faculty in Ljubljana. The educational activity of the Institute in 1992 is presented by the list of courses and seminars organized by the Institute, as well as by an outline of the continuous education program for our medical staff.

Teaching Activity

School	*Subject*	*Lecturer*
Faculty of Medicine	*oncology and radiotherapy*	**Stojan Plesničar** **Peter Albert Fras** **Zvonimir Rudolf**
	oncology and radiotherapy – practical training	**42** *physicians of the Institute*
	medical oncology – practical training	**Saša Markovič**
	social medicine – practical training	**Maja Primic Žakelj**
School for Health Professionals, University of Ljubljana	*radiobiology*	**Janez Škrk**
	radiotherapy	**Peter Albert Fras**
	pathology	**Janez Jančar**
	radiotherapy – practical training	**Boris Sekereš**
	nursing care	**Marina Velepič**
	nutrition	**Helena Cvilak**
	nursing care – practical training	**Jožica Bostič Pavlovič** + **7** *RNs*
Biotechnical Faculty	*radiobiology*	**Janez Škrk**
Faculty of Mechanical Engineering	*aviatic medicine*	**Rastko Golouh**
Institute of Occupational Safety	*protection against ionizing radiation*	**Peter Albert Fras** **Janez Škrk**
Secondary School for Pharmacy and Health Profession	*cytology* *nursing care – practical training*	**Živa Pohar Marinšek** **Jožica Bostič Pavlovič** + **7** *RNs*
Secondary School for Nurses	*nursing care – practical training*	**Jožica Bostič Pavlovič** + **7** *RNs*

predstojnik / *Chairman:*
prof. dr. **Stojan Plesničar,**
dr. med./*MD, PhD*
asistenta / *Assistants:*
doc. dr. **Peter Albert Fras,**
dr. med./*MD, PhD*
prof. dr. **Zvonimir Rudolf,**
dr. med./*MD, PhD*
pedagoška sestra / *Training Nurse:*
Helena Cvilak, VMS/*RN*

Katedra za onkologijo in radioterapijo

Pouk onkologije povezujemo z obstojem dveh strokovno usposobljenih ustanov. To sta Medicinska fakulteta in Onkološki inštitut.

Obe ustanovi sta bili pri nas zasnovani že pred drugo svetovno vojno. Na Medicinski fakulteti so tedaj poučevali bazične predmete in medicinsko propedevtiko, Onkološki inštitut pa je pričenjal delo s skromnimi 28 bolniškimi posteljami. Že tedaj je bilo osnovno načelo takratnega Banovinskega inštituta za raziskovanje in zdravljenje novotvorb uvajanje koncepta multidisciplinarnega zdravljenja. Ta način zdravljenja predvideva razumsko prepletanje kirurških, radioterapevtskih in internističnih indikacij pri zdravljenju rakave bolezni.

Takoj po končani drugi svetovni vojni smo dobili popolno Medicinsko fakulteto in Onkološki inštitut. S tem novim nazivom, ki pomeni tudi drugačno vsebino, je inštitut lahko postal učna baza za učenje onkologije in radioterapije v sklopu Medicinske fakultete v Ljubljani.

Katedra za onkologijo in radioterapijo je bila ustanovljena pri nas zelo zgodaj, decembra 1947 leta. Medicinska fakulteta je leta 1948, komaj dve leti po ustanovitvi popolne Medicinske fakultete, sprejela v svoj program onkologijo in radioterapijo kot poseben predmet. Prvi predstojnik je bil dr. Leo Šavnik, redni profesor, ki je na tem mestu ostal do svoje upokojitve 1963 leta. Od tedaj pa do leta 1984 je katedro vodila prof. dr. Božena Ravnihar.

Učenje onkologije kot posebnega predmeta je z ustanovitvijo te katedre predstavljalo prvi tak primer v Jugoslaviji, tedaj redek tudi v svetu. Zato je v tistem času UICC postavljala našo katedro za zgled vsem ostalim.

Onkologija je v zadnjih desetletjih doživela svoj intenziven razvoj, temu pa je katedra zvesto in verno sledila. Danes onkologijo in radioterapijo predavamo kot samostojen predmet v 36 urah v zimskem semestru. Temu se v poletnem semestru priključuje klinično-praktični pouk kandidatov v manjših skupinah. Ciklus učenja zaključimo z izpitom.

Na katedri je bil izdelan tudi nov program specializacije iz onkologije in radioterapije. V njem je podana drugačna, sodobnejša osnova za tovrstno izobrazbo. V programu je izražena tendenca oblikovati onkologa, ki se zatem v pospecialističnem študiju usmeri bodisi v radioterapijo ali v internistično onkologijo ali pa postane »splošen« onkolog. Take težnje so zelo prisotne v mednarodni strokovni sredini in jih nismo smeli prezreti. Upoštevali smo smeri razvoja pri nas, na našem kontinentu in v svetu.

V tem času na katedri nismo uspeli povečati števila učiteljskih mest. Še vedno so samo tri mesta, učitelja in dveh asistentov, kar je manj, kot je bilo pred dvema desetletjema. Toda ves čas so nam v veliko pomoč vnaprej habilitirani učitelji, profesorji, docenti, asistenti in specialisti, kar je skupaj 42 visoko kvalificiranih strokovnjakov.

Današnji čas je čas intenzivnega dogajanja in vrenja na vseh področjih človekovega udejstvovanja in ustvarjanja. Seveda vsakodnevno trčimo ob negativne pojave, vendar ne pozabljamo, da moramo stalno in intenzivno skrbeti za razvoj stroke in učenja. Zato se bo še vedno treba potegovati za nova učiteljska mesta, saj se znanje o onkologiji plazovito širi in poglablja. Mislimo tudi na podiplomsko izobraževanje, ki nasploh postaja stalnica v življenju vsakega zdravnika. Sodelovali bomo povsod, kjer se bo pokazala potreba po znanju in učenju.

Prepričani smo, da je katedra opravila in opravlja pomembno delo v izobraževalnem procesu. Onkologija pri nas ni podpoglavje pri drugih predmetih, temveč samostojna in pomembna veda o boleznih, ki so po svoji pogostnosti pri našem narodu na drugem mestu v bolezenski patologiji.

H kraju pa: vsem, ki so pri tem delu sodelovali, pomagali in to dejavnost podpirali, naša iskrena hvala!

Chair for Oncology and Radiotherapy

Oncology teaching is affiliated to two professionally competent institutions, i.e. the Medical Faculty and the Institute of Oncology.

Both institutions had already been established before World War II. At that time, the Medical Faculty was concerned with the teaching of basic subjects and propedeutics, whereas the Institute had started to run a hospital with only 28 beds. Even at that time, the basic principle of the Institute (then called The Regional Institute for Research and Treatment of Neoplasms) was the development of a multidisciplinary approach to cancer treatment. It is based on the consideration of surgical, radiotherapeutic or medical indications, so that all these treatment approaches are rationally interlinked.

Soon after World War II, a comprehensive Medical Faculty and the Institute of Oncology were established. By obtaining a new name, the latter institution had also been assigned a new role which qualified it as a teaching base for oncology affiliated to the Medical Faculty.

Our Chair of Oncology and Radiotherapy was established as early as December 1947. In 1948 – i.e. only two years after the establishment of the comprehensive Medical Faculty – oncology & radiotherapy was introduced as a separate subject into the regular program. The first chairman was Prof. Dr. Leo Šavnik who held this position until his retirement in 1963. From then until 1984 the chair was headed by Prof. Dr. Božena Ravnihar.

The teaching of oncology as a separate subject and establishment of the Chair of Oncology was a pioneer achievement not only at national but also at international level, as there had been only few such cases known worldwide. Consequently, our Chair was singled out as an example for others by the International Union Against Cancer (UICC).

Over the last decades, oncology has undergone an intensive development which has also been reflected in the activities of our Chair. Today oncology & radiotherapy is taught as a separate subject for 36 hours of the winter term. This theoretical part is followed by practical clinical training of students in small groups. The teaching program is completed with an exam.

The Chair has also prepared a new program of residency in oncology and radiotherapy, thus providing the basis for a different, up-to-date education in this field. The program is aimed at forming an oncologist who will later on subspecialize into a radiotherapist or medical oncologist, or will remain a practising "general" oncologist. These tendencies were very apparent in the international professional society and, therefore, could not be ignored. We have respected the trends of development in our country, as well as in Europe and worldwide.

Unfortunately, we have not managed to increase the number of teaching positions at our Chair. We still have only three posts, i.e. one for a professor, and two for teaching assistants, which is less than we had two decades ago. Nevertheless, the teachers, professors, associate professors, teaching assistants and specialists – habilitated in advance – were found to be of great support, contributing to a total of 42 highly qualified experts/professionals.

Today is a time of intense development and thriving in all spheres of human activity. Despite the daily encountered negative tendencies, our efforts toward the development of profession and knowledge should be permanent and intensive. Likewise, we should also strive to create new teaching positions, considering that the knowledge in oncology is becoming increasingly complex and vast. Here we also have in mind postgraduate education, which has generally become a permanent feature of the doctor's life. We should be prepared to collaborate wherever knowledge and learning are needed.

We are convinced that the Chair has been performing an important task in the education process. In our programs, oncology is not just a chapter comprised within other subjects, but an independent and important source of knowledge on diseases which – according to their frequency – take second place in the national pathology. In conclusion, our thanks are due to all who joined, helped and supported us in these endeavours.

Tečaji in seminarji v organizaciji Onkološkega inštituta v letu 1992	***Courses and seminars organized by the Institute of Oncology in 1992***		
Pretočna citometrija	***Flow cytometry***	mednarodni tečaj Ljubljana, 25.–29. maj 1992 Predsednica organizacijskega odbora: **Marija Us Krašovec** Število udeležencev: **40**	*international course* *Ljubljana, May 25–29, 1992* *President of the organizing committee:* **Marija Us Krašovec** *No. of participants:* **40**
Melanom in nosečnost	***Malignant melanoma and pregnancy***	mednarodni tečaj v sodelovanju z European School of Oncology, Milano Trst, 18.–19. junij 1992 Predsednik organizacijskega odbora: **Stojan Plesničar** Število udeležencev: **50**	*international course organized in collaboration with the European School of Oncology, Milano* *Trieste, June 18–19, 1992* *President of the organizing committee:* **Stojan Plesničar** *No. of participants:* **50**
Pisanje znanstvenih člankov v biomedicini	***Scientific writing in biomedicine***	mednarodni tečaj v sodelovanju z IPOKRaTES, Dunaj Bled, 7.–11. september 1992 Predsednica organizacijskega odbora: **Marija Auersperg** Število udeležencev: **20**	*international course organized in collaboration with IPOKRaTES, Vienna* *Bled, September 7–11, 1992* *President of the organizing committee:* **Marija Auersperg** *No. of participants:* **20**
Slovensko-hrvaški intersekcijski sestanek citologov	***Slovene-Croatian meeting of cytologists***	Ljubljana, 27. november 1992 Predsednica organizacijskega odbora: **Marija Bizjak Schwarzbartl** Število udeležencev: **35**	*Ljubljana, November 27, 1992* *President of the organizing committee:* **Marija Bizjak Schwarzbartl** *No. of participants:* **35**
Delovni sestanki združenja onko-patologov Alpe-Jadran	***Workshops of the Association of onco-pathologists of Alps-Adria region***	Ljubljana, 21. januar; 25. februar; 11. marec; 21. april; 19. maj; 16. junij; 30. september; 14. oktober; 18. november; 16. december 1992 Predsednik organizacijskega odbora: **Rastko Golouh** Število udeležencev: **20**	*Ljubljana: January 21, February 25, March 11, April 21, May 19, June 16, September 30, October 14, November 18, December 16.* *President of the organizing committee:* **Rastko Golouh** *No. of participants:* **20**

Onkološki diagnostični mozaik **Rak dojke** **Rak maternicnega telesa** **Maligni tumorji mehkih tkiv**	***Oncological diagnostic mosaic*** ***Breast cancer*** ***Endometrial cancer*** ***Malignant tumors of the soft tissue***	Tečaji podiplomskega izobraževanja v sodelovanju s Kancerološko sekcijo Slovenskega zdravniškega društva in Zvezo slovenskih društev za boj proti raku Šmarješke toplice, 6./7. marec in 20./21. november 1992 Organizatorji: **Franc Lukič, Jurij Lindtner, Jurij Us, Otmar Bergant** Število udeležencev: **115**	*Postgraduate courses organized in collaboration with the Cancerological Section of the Slovenian Medical Society and the Association of Slovenian Cancer Societies* *Šmarješke toplice, March 6–7 and November 20–21* *Organizers:* ***Franc Lukič, Jurij Lindtner, Jurij Us, Otmar Bergant*** *No. of participants:* **115**
Teoretično izobraževanje s področja onkologije za višje medicinske sestre pripravnice	***Theoretical education in the field of oncology for senior nurses – probationers***	Ljubljana, 30. marec – 2. april; 26.–29. oktober 1992 Predsednica organizacijskega odbora: **Marina Velepič** Število udeležencev: **120**	*Ljubljana: March 30 – April 2, 1992; October 26–29, 1992* *President of the organizing committee:* ***Marina Velepič*** *No. of participants:* **120**
Stranski učinki citostatikov **zdravstvena nega in prehrana bolnikov ob stranskih učinkih zdravljenja** **Zaščita medicinske sestre pri delu s citostatiki**	***Side effects of cytotoxic drugs*** ***Nursing care and diet with respect to treatment related side effects*** ***Protection of the nurse against exposure to cytotoxic drugs***	Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Ljubljana, 5. marec 1992 Organizacijski odbor: **Marina Velepič, Jožica Bostič Pavlovič, Olga Koblar** Število udeležencev: **130**	*Seminar organized in collaboration with the Slovenian Chamber of Nursing Care* *Ljubljana, March 5, 1992* *Organizing committee:* ***Marina Velepič, Jožica Bostič Pavlovič, Olga Koblar*** *No. of participants:* **130**
Diagnostika v onkologiji	***Diagnostics in oncology***	Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Ljubljana, 25. september 1992 Organizacijski odbor: **Marina Velepič, Jožica Bostič Pavlovič, Olga Koblar** Število udeležencev: **85**	*Seminar organized in collaboration with the Slovenian Chamber of Nursing Care* *Ljubljana, September 25, 1992* *Organizing committee:* ***Marina Velepič, Jožica Bostič Pavlovič, Olga Koblar*** *No. of participants:* **85**
Zdravstvena nega onkološkega bolnika	***Nursing care of oncological patients***	Ljubljana, 28. februar in 23. oktober 1992 Organizator: **Jožica Bostič Pavlovič** Število udeležencev: **200**	*Ljubljana, February 28, 1992 and October 23, 1992* *Organizer:* ***Jožica Bostič Pavlovič*** *No. of participants:* **200**

Stalno izobraževanje zdravstvenih delavcev Onkološkega inštituta

Pregled udeležb naših zdravstvenih delavcev na strokovnih prireditvah doma in v zamejstvu ter obiski tujih strokovnjakov pri nas kažejo, da se kljub težki finančni situaciji zavedamo, da je pretok sodobnega znanja pogoj, brez katerega si ni moč zamisliti nadaljnjega razvoja. Naši strokovnjaki s teh prireditev prinašajo sveže znanje in nove izkušnje in prispevajo tudi k našemu uveljavljanju v tujini, saj gre v veliki večini primerov za aktivno sodelovanje z vabljenimi predavanji ali posterji. V letu 1992 se je 293 naših zdravstvenih delavcev udeležilo strokovnih prireditev v Sloveniji, 81 v sosednjih državah, 78 v drugih evropskih državah in 10 v deželah izven Evrope.

Continued education of the medical staff of the Institute of Oncology

A review of the participation of our medical staff at various national and international professional meetings, as well as the visits of foreign experts to our Institute prove that – despite the difficult financial situation – we are aware of the fact that the exchange of current knowledge is a prerequisite for any further development. At these meetings our experts not only gain new knowledge and experience, but also contribute to our affirmation abroad since most of these are active participations with invited lectures or poster presentations. In 1992, there were 293 participations by our medical staff at national professional meetings, 81 in the neighbouring countries, 78 in other European countries, and 10 overseas.

Redni program strokovnega izobraževanja (»Torkovi seminarji«) v Onkološkem inštitutu v letu 1992.
Regular program of professional education ("Tuesdays Seminars") at the Institute of Oncology in 1992:

Gregor Serša:	Protitumorsko delovanje tumorskega nekroznega faktorja	*Antitumor activity of TNF*
Dušan Pavčnik:	Vena kava filtri za preprečevanje pljučnih embolizmov	*Vena cava filters for the prevention of pulmonary embolism*
Snežana Frković Grazio:	Prognostična vrednost patološke klasifikacije Hodgkinove bolezni	*Prognostic value of pathologic classification of Hodgkin's disease*
Branko Zakotnik:	Medicinska statistika	*Statistics in medicine*
Olga Mavrič Jovan in Drago Ažman:	Protibolečinska terapija	*Pain therapy*
Bojan Novak:	Predstavitev dela v pljučnem dispanzerju	*Work in an outpatient clinic for lung diseases*
Jožica Červek, Matjaž Kaučič:	Oncology 92	*Oncology 92*

Ervin B. Podgoršak:	Radiokirurgija pri zdravljenju možganskih obolenj	*Radiosurgery in the treatment of brain lesions*
Marica Marolt-Gomišček:	Novosti v antibiotični terapiji	*Advances in antibiotic therapy*
Jurij Lindtner, Jožica Červek:	Tamoxifen kot preventiva raka dojke	*Tamoxifen for breast cancer prevention*
Mara Popović:	Germinom centralnega živčevja	*Germinoma of the central nervous system*
France Cukjati:	Članstvo v zdravniški zbornici	*Membership in the chamber of the medical profession*
Peter Albert Fras:	Predstavitev doktrine zdravljenja ginekoloških tumorjev	*Principles of the treatment of gynecological tumors*
Jože Pretnar:	Kondicioniranje pacientov za presaditev kostnega mozga z obsevanjem vsega telesa	*Conditioning of patients for bone marrow transplantation and whole body irradiation*
Alfred Kobal:	Postopki za invalidsko upokojitev in ocena delazmožnosti	*Procedures for invalidity retirement and the assessment of working ability*
Karel Lipovec:	Rehabilitacija bolnikov z motnjami mikrocirkulacije, vključno z limfedemom	*Rehabilitation of patients with microcirculatory disorders including lymphedema*
Ljubiša Lukič:	Novosti v komponentni terapiji s krvjo	*Advances in component blood therapy*
Berta Jereb:	Kasne posledice zdravljenja raka v otroštvu	*Late sequelae of childhood cancer treatment*
Štefan Adamič:	Medicinska informatika 92	*Medical informatics 92*
Aleksej Kansky:	Kožne manifestacije paraneoplastičnega sindroma	*Cutaneous manifestations of the paraneoplastic syndrome*
Luca Orlandini:	Novosti v antraciklinski kemoterapiji	*An update on anthracycline chemotherapy*
Saša Markovič:	Vpliv citoprotekcije na regeneracijsko sposobnost jeter po obsežni resekciji	*Influence of cytoprotection on the regenerative potential of the liver after major resection*
Darja Eržen:	Konzervirajoče kirurško zdravljenje karcinoma dojke	*Conservative surgery of breast cancer*
Swen Alfas:	Zdravljenje raka z električnim tokom	*Defeating cancer by electricity*

Vittorio Tison, Pietro Riva:	Zdravljenje glioblastoma z intratumorsko aplikacijo označenih monoklonskih protiteles	*Treatment of glioblastomas by intra-tumoral administration of labelled monoclonal antibodies*
Jožica Červek:	Neoadjuvantna kemoterapija operabilnega raka	*Neoadjuvant chemotherapy of operable cancer*
Jožica Červek, Olga Cerar:	Novosti v internistični onkologiji	*Advances in medical oncology*
Anton Roth:	Neoadjuvantna kemoterapija pri vnetnem karcinomu dojke	*Neoadjuvant chemotherapy for inflammatory breast cancer*
Jožica Červek:	Multimodalno zdravljenje lokalno napredovalega in vnetnega karcinoma dojke	*Multimodal therapy of locally advanced inflammatory breast cancer*
Jože Krašovec:	Biblična podoba o človeku	*The biblical image of man*


MICRO•IMAGER

Raziskovanje
Research

Že od ustanovitve dalje je raziskovalno delo vpleteno prav v vse veje dejavnosti Onkološkega inštituta.
V naši državi je raziskovanje na področju raka smiselno zaokroženo v sedanjem raziskovalnem polju *Onkologija,* ki je naslednik prejšnjega Usmerjenega raziskovalnega programa (URP) Onkologija in projektov v okviru Posebnih raziskovalnih skupnosti (PoRS) PoRS-09: Diagnostika, zdravljenje in preprečevanje komplikacij rakavih bolezni.
Koordinacijska nosilna institucija je Onkološki inštitut, sodelujejo pa še številni raziskovalni zavodi: Medicinska fakulteta s svojimi raziskovalnimi inštituti, Inštitut J. Stefan, Biotehniška fakulteta, Fakulteta za elektrotehniko, klinike in inštituti Kliničnega centra v Ljubljani, Splošna bolnica Maribor in drugi zavodi.
Multidisciplinarnost in povezovanje bazičnih raziskovalcev s kliniki prispeva k temu, da lahko v smeri najpomembnejših problemov spremljamo in dopolnjujemo raziskave v razvitejših državah, pri čemer bi želeli posebej omeniti dolgoletno tradicionalno sodelovanje inštituta z mnogimi centri v tujini.
Raziskovalni projekti se vključujejo v dobro definirane tematske sklope, ki so po pomembnosti in specifičnosti problemov povzeti po načelih moderne onkologije in prilagojeni stanju v Sloveniji. Ti tematski sklopi so:

kancerogeneza
rast in značilnosti tumorjev
odzivnost organizma
odkrivanje in ugotavljanje bolezni
zdravljenje
posledice

Ever since the Institute's establishment, research work has represented an integral part of all its activities.
In Slovenia studies on cancer are carried out within the frame of a national research project "Oncology" and as projects conducted through Special Research Communities PoRS-09: "Diagnostics, Treatment and Prevention of Cancer-related Complications".
Our multidisciplinary approach, close cooperation between basic and clinical researchers, and our already traditional and long lasting collaboration with many foreign centers qualify us to take part in international multicentric studies on the most outstanding cancer-related problems.
The research projects are grouped into several topics defined with respect to the relevance for modern oncology and the state of the art in Slovenia. These thematic complexes are as follows:

cancerogenesis
growth and characteristics of tumors
response of the organism
detection and diagnosis of diseases
treatment
sequelae

Mednarodne vezi
International Collaboration

Mednarodno sodelovanje poteka v okviru projektov Evropske skupnosti, kot je na primer COST v programu EUREKA, kot tudi v sklopu drugih mednarodnih raziskovalnih združenj in skupin. Inštitut je že od leta 1947 član UICC (Mednarodne zveze proti raku – International Union Against Cancer) in član združenja evropskih onkoloških inštitutov OECI (Organization of European Cancer Institutes), v okviru teh organizacij pa sodelujemo v posameznih raziskovalnih skupinah. Na področju onkološke epidemiologije sodelujemo v skupnih projektih z IARC (International Agency for Research on Cancer, Lyon) in z NCI (National Cancer Institute, Bethesda, USA). Ker ima Slovenija kvaliteten nacionalni register raka, je že dolgo prisotna tudi v rednih svetovnih publikacijah o raku (»Cancer incidence in five continents«).

Na področju kliničnih raziskav so raziskovalci vključeni v multicentrične študije v okviru EORTC (European Organization for Research and Treatment of Cancer), SIOP (International Society of Pediatric Oncology), LBCS (Ludwig Breast Cancer Study), IBCS (International Breast Cancer Study), ESTRO (European Society for Therapeutic Radiology and Oncology), ESMO (European Society for Medical Oncology), FIGO (International Union for Gynecologic Oncology), SEEOG (South-Eastern European Oncology Group) in v druge.

Živo je tudi bilateralno sodelovanje z znanimi mednarodnimi centri tako z izmenjavo strokovnjakov kot tudi v okviru skupnih raziskovalnih projektov. Stalne stike vzdržujemo z M. D. Anderson Hospital and Tumor Institute (Houston), Memorial Sloan-Kettering Cancer Center (New York), British Columbia Cancer Center (Vancouver), Erasmus University (Rotterdam), Univerzo v Münstru, Univerzo v Ulmu, Centro Riferimento Oncologico (Aviano) in z Institutom za tumore i slične bolesti (Zagreb). Na temelju pridobljenega ugleda in uspešnega raziskovalnega dela so bila Onkološkemu inštitutu v Ljubljani v zadnjem desetletju zaupana tudi številna mednarodna srečanja: mednarodna tečaja kemoterapije v sodelovanju z UICC leta 1983 in 1985, tečaj uporabe monoklonskih protiteles v hematopatologiji leta 1987, tečaj radioterapije v sodelovanju z Evropsko šolo za onkologijo (ESO) leta 1987, mednarodni seminar citomorfologije ne-Hodgkinovih limfomov v letu 1988, tretje mednarodno srečanje o AIDS in njemu sorodnih stanjih, patologiji dojke in tehničnem napredku v patologiji leta 1988, mednarodni tečaj o epidemiologiji poklicnega raka v sodelovanju z IARC leta 1989, seminar o novih dosežkih v radioterapiji leta 1989 ter številne domače in regionalne (Alpe-Jadran) raziskovalne prireditve.

Podroben pregled posameznih študij presega okvir tega zbornika. To poglavje zato podaja le naslove mednarodnih in slovenskih študij z njihovimi nosilci ter spisek mladih raziskovalcev z njihovimi mentorji.

Several international links have been established through our collaboration in European Community projects, such as COST within the frame of EUREKA program, as well as through participation in other international research associations and groups. Since 1947, the Institute has been a member of the UICC (International Union Against Cancer), and of OECI (Organization of European Cancer Institutes); within the frame of these two organizations we have been collaborating in individual research groups. In the field of oncological epidemiology we have joined in mutual research projects with IARC (International Agency for Research on Cancer, Lyon) and with NCI (National Cancer Institute, Bethesda, USA). The high standards of our Cancer Registry of Slovenia have ensured that the Registry's reports are included in the international publications on cancer ("Cancer Incidence in Five Continents") on a regular basis.

In the field of clinical research, our investigators participate in multicentric studies withing the frame of EORTC (European Organization for Research and Treatment of Cancer), SIOP (International Society of Pediatric Oncology), LBCS (Ludwig Breast Cancer Study), IBCS (International Breast Cancer Study), ESTRO (European Society for Therapeutic Radiology and Oncology), ESMO (European Society for Medical Oncology), FIGO (International Union for Gynecologic Oncology), SEEOG (South-Eastern European Oncology Group) and others.

Active bilateral collaboration, in the form of exchange of experts and mutual research projects, has also been established with many internationally renowned centers. Thus, regular contacts are maintained with M. D. Anderson Hospital and Tumor Institute (Houston), Memorial Sloan-Kettering Cancer Center (New York), British Columia Cancer Center (Vancouver), Erasmus University (Rotterdam),

Universities of Münster and Ulm, with Centro Riferimento Oncologico (Aviano), and with Institute for Tumors and Allied Deseases (Zagreb). Based on its reputation and successful research activity, in the last decade the Institute of Oncology has been entrusted with organization of several international meetings: two international courses in chemotherapy held in 1983 and 1985 in collaboration with UICC, a course on the use of monoclonal antibodies in hematopathology (1987), a radiotherapy course held in 1987 in collaboration with ESO (European School of Oncology), an international seminar on cytomorphology of non-Hodgkin lymphomas (1988), the third international meeting on AIDS and allied diseases, on breast pathology and technical advances in pathology (1988), an international course on the epidemiology of occupational cancer held in 1989 in collaboration with IARC, a seminar on new achievements in radiotherapy (1989), as well as several national and regional (Alps Adria) scientific meetings.

A detailed survey of individual studies is beyond the scope of this publication. Therefore, only the titles of international and national studies with the names of chief investigators, and a list of junior research fellows with their mentors are given.

Pregled sodelovanja v mednarodnih kliničnih študijah v letu 1992
Review of Collaboration in International Clinical Studies in 1992

Oznaka študije *Study code*	Naslov *Title*	Nosilec študije na Onkološkem inštitutu *Principal Investigator at Institute of Oncology*
Karcinom pljuč ***Lung cancer***		
ICS – LCSG	*Multimodality treatment of small-cell lung cancer*	**M. Debevec**
Karcinom dojke ***Breast cancer***		
IBCS VI+VII	*Adjuvant chemotheraphy in patients with operable breast cancer with lymph node involvement*	**D. Eržen**
IBCS VII+IX	*Adjuvant chemotherapy in patients with operable breast cancer with no lymph node involvement*	**J. Lindtner**
ECC	*Adjuvant chemotherapy with CMF vs observation of premenopausal patients with lymph node negative by morphometrically unfavorable breast cancer*	**R. Golouh**
EORTC	*Continuous tamoxifen versus intermitent tamoxifen versus altering tamoxifen and MPA First line endocrine treatment for postmenopausal patients*	**T. Čufer**
EORTC	*Second line endocrine treatment of postmenopausal patients with advanced breast cancer (A randomized phase III study)*	**T. Čufer**

EORTC	*Postoperative adjuvant chemotherapy followed by adjuvant tamoxifen versus nil for patients with operable breast cancer*	**T. Čufer**

Limfomi
Lymphomas

EORTC	*Prospective controlled trial in clinical stage I–II Hodgkin's disease; studying comprehensive management tailored to prognostic factors*	**M. Vovk**
EORTC	*Prospective randomized controlled trial of adjuvant involved field radiotherapy after MOPP/ABV hybrid chemotherapy in advanced Hodgkin's disease*	**M. Vovk**

Tumorji ORL področja
Head and neck cancer

EORTC	*A phase III study of accelerated fractionation in the radiotherapy of advanced head and neck carcinoma*	**B. Jančar**
EORTC	*A European study on chemoprevention of second primary tumors in high risk subjects*	**B. Jančar**

Tumorji prebavil
Gastrointestinal tumors

CRF	*A double-blind randomized, placebo controlled phase II study in parallel group design to establish the efficacy of oral K-24 in patients with pancreatic adenocarcinoma*	**B. Zakotnik**

Tumorji mehkih tkiv in kosti
Soft tissue and bone tumors

EOI EORTC	*Randomised trial of two chemotherapy regiments in the treatment of operable osteosarcoma: ADM/DDP vs MTX/VCR/ADM + ADM/DDP + BLM/CPH/ACTD*	**B. Zakotnik**

Kratice
Abbreviations

ISC – LCSG	*International Society of Chemotherapy Lung Cancer Study Group*
IBCS	*International Breast Cancer Study Group*
EORTC	*European Organization for Research and Treatment of Cancer*
EOI	*European Osteosarcoma Intergroup*
CRF	*Clinical Research Foundation – Germany*

Raziskovalni projekti

Plačnik: Ministrstvo za znanost in tehnologijo (1–12), Ministrstvo za zdravstvo (11, 13, 14), »LEK« (12) in National Cancer Institute, Bethesda (15)

1. **Dejavniki tveganja zbolevanja za raki debelega črevesa in danke**
   Nosilka: Maja Primic Žakelj
   Sodelavci: Vera Pompe Kirn, Božena Ravnihar, Dražigost Pokorn, Igor Križman, Saša Markovič, Katarina Košmelj

2. **Vpliv imunopotenciacije z imunomodulatorji in citotoksičnimi zdravili na nekatere proteolizne encime, njihove inhibitorje in potek napredovalega malignega melanoma**
   Nosilec: Borut Štabuc
   Sodelavci: Branko Zakotnik, Tanja Čufer, Matjaž Kaučič, Ivan Vrhovec, Janez Jančar, Janez Škrk, Vladimir Kotnik, Tamara Lah

3. **Študij primarnih in sekundarnih efektov pri obsevanju celic »in vitro« z nevtroni v jedrskem reaktorju nizke moči** (Triga Mark II)
   Nosilec: Janež Škrk
   Sodelavci: Aleš Fajgl, Igor Remec, Djurdja Horvat

4. **Novi pristopi v kombiniranem zdravljenju solidnih tumorjev z biomodulatorji – interferon pri malignem melanomu**
   Nosilec: Zvonimir Rudolf
   Sodelavci: Gregor Serša, Borut Štabuc, Ladica Furlan, Marija Us Krašovec, Janez Lamovec, Hotimir Lešničar, Gabrijela Petrič Grabnar, Gorazd Noč, Tanja Roš Opaškar, Vladimir Kotnik, Bratko Filipič

5. **Izbrani problemi klinične onkologije v Sloveniji: študij možnosti za izboljšanje terapevtskih učinkovitosti, zmanjšanje sopojavov in zmanjšanje invalidnosti**
   Nosilec projekta: Marjan Budihna

   a: **Kombinirano zdravljenje mišično invazivnega karcinoma sečnega mehurja s transuretralno resekcijo, kemoterapijo in radioterapijo**
   Nosilka podprojekta: Jožica Červek
   Sodelavci: Tanja Čufer, Borut Kragelj, Marko Stanonik, Branko Zakotnik

   b: **B-limfoblastni limfomi v Sloveniji: Prospektivna klinično-patološka, citogenetska in epidemiološka raziskava**
   Nosilka podprojekta: Marjeta Vovk
   Sodelavci: Jožica Anžič, Marija Bizjak Schwarzbartl, Janez Jančar, Marija Fidler Jenko, Jožica Marin, Gabrijela Petrič Grabnar, Črt Volavšek

   c: **Klinična in prognostična vrednost morfoloških in imunofenotipskih parametrov pri anaplastičnem velikoceličnem limfomu (AVCL) in sorodnih obolenjih**
   Nosilec podprojekta: Janez Jančar
   Sodelavci: Jožica Anžič, Mara Dominis, Alenka Vodnik Cerar, Marjeta Vovk, Andreja Zidar

   d: **Prospektivna klinična študija akceleriranega hiperfrakcioniranega obsevanja in citostatske terapije pri bolnikih z malignimi gliomi**
   Nosilec podprojekta: Matjaž Zwitter
   Sodelavci: Vinko Dolenc, Matej Lipovšek, Marjana Plaper Vernik, Alenka Vodnik Cerar, Branko Zakotnik

Research Projects

Financed by: The Ministry of Science and Technology of Republic Slovenia (1–12), The Ministry of Health (11, 13, 14) Pharmaceutical company »Lek« (12), and National Cancer Institute, Bethesda (15)

1. **Risk factors associated with the incidence of colorectal cancer**
   Chief investigator: Maja Primic Žakelj
   Co-investigators: Vera Pompe Kirn, Božena Ravnihar, Dražigost Pokorn, Igor Križman, Saša Markovič, Katarina Košmelj

2. **The influence of immunopotentiation with immunomodulators and cytotoxic drugs on some proteolytic enzymes and their inhibitors, and on the course of advanced malignant melanoma**
   Chief investigator: Borut Štabuc
   Co-investigators: Branko Zakotnik, Tanja Čufer, Matjaž Kaučič, Ivan Vrhovec, Janez Jančar, Janez Škrk, Vladimir Kotnik, Tamara Lah

3. **Study of primary and secondary effects of the irradiation of cells "in vitro" with neutrons in a low-power nuclear reactor (Triga Mark II)**
   Chief investigator: Janez Škrk
   Co-investigators: Aleš Fajgl, Igor Remec, Djurdja Horvat

4. **New approaches to the combined treatment of solid tumors by means of biomodulators – interferon in malignant melanoma**
   Chief investigator: Zvonimir Rudolf
   Co-investigators: Gregor Serša, Borut Štabuc, Ladica Furlan, Marija Us Krašovec, Janez Lamovec, Hotimir Lešničar, Gabrijela Petrič Grabnar, Gorazd Noč, Tanja Roš Opaškar, Vladimir Kotnik, Bratko Filipič

5. **Selected problems of clinical oncology in Slovenia: study of possibilities for improvement of therapeutic effectiveness, and for reduction of side effects and disability**
   Chief investigator: Marjan Budihna

   a: **Combined treatment of muscle invasive bladder carcinoma by means of transurethral resection, chemotherapy and radiotherapy.**
   Chief investigator: Jožica Červek
   Co-investigators: Tanja Čufer, Borut Kragelj, Marko Stanonik, Branko Zakotnik

   b: **B-lymphoblastic lymphomas in Slovenia: A prospective clinico-pathological, cytogenetic and epidemiological study**
   Chief investigator: Marjeta Vovk
   Co-investigators: Jožica Anžič, Marija Bizjak Schwarzbartl, Janez Jančar, Marija Fidler Jenko, Jožica Marin, Gabrijela Petrič Grabnar, Črt Volavšek

   c: **Clinical and prognostic value of morphological and immuno-phenotype parameters in anaplastic large cell lymphoma and allied diseases**
   Chief investigator: Janez Jančar
   Co-investigators: Jožica Anžič, Mara Dominis, Alenka Vodnik Cerar, Marjeta Vovk, Andreja Zidar

   d: **Prospective clinical study of accelerated hyperfractionated irradiation and cytostatic therapy in patients with malignant gliomas**
   Chief investigator: Matjaž Zwitter
   Co-investigators: Vinko Dolenc, Matej Lipovšek, Marjana Plaper Vernik, Alenka Vodnik Cerar, Branko Zakotnik

e: Dozimetrični in klinični problemi obsevanja vsega telesa
Nosilec podprojekta: Marko Habič
Sodelavci: Bogdan Umek, Alenka Vodnik Cerar, Matjaž Zwitter

f: Lokalna hipertermija v kombinaciji z radioterapijo pri zdravljenju rakavih obolenj
Nosilec podprojekta: Hotimir Lešničar
Sodelavci: Marjan Budihna, Janez Burger, Boris Jančar, Janez Kuhelj

g: Akcelerirano hiperfrakcionirano obsevanje pri karcinomih glave in vratu
Nosilec podprojekta: Boris Jančar
Sodelavci: Marjan Budihna, Ladica Furlan, Hotimir Lešničar, Erika Šoba Podobnik

6. Odkrivanje novih prognostičnih dejavnikov za smiselno načrtovanje zdravljenja solidnih malignih tumorjev
Nosilec projekta: Rastko Golouh
Sodelavci: Gregor Serša, Andreja Zidar, Tanja Čufer, Branko Zakotnik, Jurij Lindtner, Ana Pogačnik, Živa Pohar Marinšek, Ljudmila Ruparčič Oblak, Marija Bizjak Schwarzbartl, Franc Pompe, Damjan Bergant, Gabrijela Petrič Grabnar, Alenka Vodnik Cerar, Veronika Kloboves, Katarina Košmelj, Matej Bračko, Karmen Stanič, Barbara Jezeršek, Nikola Bešić, Marko Hočevar

a: Tumorji ščitnice – klinični in patološki parametri, tumorski markerji, pretočna citometrija
Nosilka podprojekta: Marija Auersperg

b: Dojka – klinični in patološki parametri
Nosilec podprojekta: Janez Lamovec

c: Dojka – pretočna citometrija in analiza celičnih posnetkov
Nosilka podprojekta: Marija Us Krašovec

d: Maligni mezenhimski tumorji – klinični in patološki parametri, tumorski markerji in pretočna citometrija
Nosilec podprojekta: Rastko Golouh

7. Kasne spremembe zdravljenja malignih bolezni v otroški dobi
Nosilka: Berta Jereb
Sodelavci: Gabrijela Petrič Grabnar, Borut Kragelj, Ciril Kržišnik, Jožica Anžič, Lorna Zadravec Zaletel

8. Preprečevanje intraabdominalnih adhezij, nastalih zaradi obsevanja, kirurškega posega ali vnetja s površinsko aktivnimi snovmi
Nosilec: Marko Snoj
Sodelavci: Franc Lukič, Peter Albert Fras, Borut Kragelj, Olga Vraspir Porenta, Ruda Zorc Pleskovič, Dražigost Pokorn, Kazimir Drašler

9. Reševanje problema majhnih populacijskih območij pri analizi incidence rakavih bolezni
Nosilka: Vera Pompe Kirn
Sodelavci: Maja Primic Žakelj, Anuška Ferligoj, Neva Volk

e: Dosimetric and clinical problems of whole body irradiation
Chief investigator: Marko Habič
Co-investigators: Bogdan Umek, Alenka Vodnik Cerar, Matjaž Zwitter

f: Combined local hyperthermia and radiotherapy for cancer treatment
Chief investigator: Hotimir Lešničar
Co-investigators: Marjan Budihna, Janez Burger, Boris Jančar, Janez Kuhelj

g: Accelerated hyperfractionated irradiation in the treatment of head and neck cancers
Chief investigator: Boris Jančar
Co-investigators: Marjan Budihna, Ladica Furlan, Hotimir Lešničar, Erika Šoba Podobnik

6. Determination of new prognostic factors for sensible treatment planning in solid malignant tumors
Project coordinator: Rastko Golouh
Co-investigators: Gregor Serša, Andreja Zidar, Tanja Čufer, Branko Zakotnik, Jurij Lindtner, Ana Pogačnik, Živa Pohar Marinšek, Ljudmila Ruparčič Oblak, Marija Bizjak Schwarzbartl, Franc Pompe, Damjan Bergant, Gabrijela Petrič Grabnar, Alenka Vodnik Cerar, Veronika Kloboves, Katarina Košmelj, Matej Bračko, Karmen Stanič, Barbara Jezeršek, Nikola Bešič, Marko Hočevar

a: Thyroid tumors – clinical and pathological parameters, tumor markers, flow-cytometry
Study coordinator: Marija Auersperg

b: Breast – clinical and pathological parameters
Study coordinator: Janez Lamovec

c: Breast – flow-cytometry and cell image analysis
Study coordinator: Marija Us Krašovec

d: Malignant mezenchymal tumors – clinical and pathological parameters, tumor markers, flow-cytometry
Study coordinator: Rastko Golouh

7. Late sequels of childhood tumor treatment
Chief investigator: Berta Jereb
Co-investigators: Gabrijela Petrič Grabnar, Borut Kragelj, Ciril Kržišnik, Jožica Anžič, Lorna Zadravec Zaletel

8. Prevention of intraabdominal adhesions due to irradiation, surgical intervention for inflammation caused by superficially active substances
Chief investigator: Marko Snoj
Co-investigators: Franc Lukič, Peter Albert Fras, Borut Kragelj, Olga Vraspir Porenta, Ruda Zorc Pleskovič, Dražigost Pokorn, Kazimir Drašler

9. Solving the problem of small population-based areas in cancer incidence analysis
Chief investigator: Vera Pompe Kirn
Co-investigators: Maja Primic Žakelj, Anuška Ferligoj, Neva Volk

10. Novi pristopi kombiniranega zdravljenja raka na eksperimentalnih tumorskih modelih in v kliniki
Nosilec: Gregor Serša
Sodelavci: Rastko Golouh, Marija Us Krašovec, Borut Štabuc, Tomaž Benulič, Tanja Čufer

11. Racionalizacija obravnave bolnikov z malignomi prebavil v R Sloveniji
Vodja projekta: Stane Repše

a: Rak debelega črevesa in danke
Vodja sklopa: Saša Markovič
Sodelavci: Borut Štabuc, Branko Zakotnik, Janez Lamovec, Alenka Vodnik Cerar, Tomaž Benulič, Matjaž Zwitter, Ivo Ferkolj, Mile Čalič, Bojan Žakelj

b: Primarni limfomi prebavil
Vodja sklopa: Marjeta Vovk
Sodelavci: Marija Fidler Jenko, Gabrijela Petrič Grabnar, Janez Jančar, Stane Repše

12. Preučevanje antitumorskega delovanja rh TNF alfa in njegovih analogov ob sočasni uporabi potencialnih imunomodulatorjev, strukturnih analogov muramil dipeptida
Nosilec: Gregor Serša
Sodelavci: Srdjan Novaković, Mira Lavrič

13. Dolgoročni projekt spremljanja uspešnosti preventive raka v Sloveniji in priprava izhodišč za morebitne vsebinske dopolnitve: osnovno šolski učitelji in preventiva raka
Nosilka: Maja Primic Žakelj
Sodelavci: Božena Ravnihar, Vera Pompe Kirn, Mateja Kožuh

14. Pilotni preizkus sodobnega zgodnjega odkrivanja raka dojk v šestih občinah R Slovenije
Nosilec: Matjaž Kaučič
Sodelavci: Vera Pompe Kirn, Jurij Us, Milan Baškovič, Vanja Jelinčič, Veljko Vlaisavljević

15. Primerjalna analiza podatkovnih baz registra raka in bolnikov, ki so prejeli diagnostične doze radioaktivnega joda
Nosilka: Vera Pompe Kirn
Sodelavci: Miran Porenta, Sergej Hojker

10. Study of new approaches to combined therapy on experimental tumor models and in clinical practice
Chief investigator: Gregor Serša
Co-investigators: Rastko Golouh, Marija Us Krašovec, Borut Štabuc, Tomaž Benulič, Tanja Čufer

11. Rationalization in the management of gastrointestinal cancer in Slovenia
Project coordinator: Stane Repše

a. Colorectal cancer
Study coordinator: Saša Markovič
Co-investigators: Borut Štabuc, Branko Zakotnik, Janez Lamovec, Alenka Vodnik Cerar, Tomaž Benulič, Matjaž Zwitter, Ivo Ferkolj, Mile Čalič, Bojan Žakelj

b. Primary gastrointestinal lymphomas
Study coordinator: Marjeta Vovk
Co-investigators: Marija Fidler Jenko, Gabrijela Petrič Grabnar, Janez Jančar, Stane Repše

12. Study of antitumor effects of rh TNF alpha and its analogues at simultaneous use of potential immunomodulators, structural analogues of muramil dipeptide.
Chief investigator: Gregor Serša
Co-investigators: Srdjan Novaković, Mira Lavrič

13. Long-term project of the follow up of cancer prevention results in Slovenia and preparation of basis for possible program improvements: Primary school teachers and cancer prevention
Chief investigator: Maja Primic Žakelj
Co-investigators: Božena Ravnihar, Vera Pompe Kirn, Mateja Kožuh

14. Pilot study of early breast cancer detection in six Slovenian communes
Chief investigator: Matjaž Kaučič
Co-investigators: Vera Pompe Kirn, Jurij Us, Milan Baškovič, Vanja Jelinčič, Veljko Vlaisavljević

15. Record linkage study of patients exposed to diagnostic radioactive iodine
Chief investigator: Vera Pompe Kirn
Co-investigators: Miran Porenta, Sergej Hojker

Objavljena dela
/ *references:*
9, 10, 11, 12, 30, 38, 52, 59, 60, 61, 90, 92, 108, 109, 110, 111, 118, 146, 153, 154, 155, 156, 158, 162, 163, 164, 166, 167, 202.

Mladi raziskovalci

Plačnik usposabljanja magistrskega ali doktorskega študija: Ministrstvo za znanost in tehnologijo R Slovenije

Junior research associates

Postgraduate studies for MSc or PhD degrees financed by Ministry of Science and Technology of Republic Slovenia

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Matej Bračko, dr. med., specialist patolog/ *MD, Spec. in Pathology*	prof. dr. **Rastko Golouh,** dr. med./ *MD, PhD*
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Marko Hočevar, dr. med./*MD*	prof. dr. **Marija Auersperg,** dr. med./*MD, PhD*
Barbara Jezeršek, dr. med. /*MD*	dr. **Gregor Serša,** dipl. biol. /*BSc.Biol., PhD*
Metka Mizerit, dr. med./*MD*	prof. dr. **Vera Pompe Kirn,** dr. med./*MD, PhD*
Janja Ocvirk, dr. med./*MD*	prof. dr. **Zvonimir Rudolf,** dr. med./*MD, PhD*
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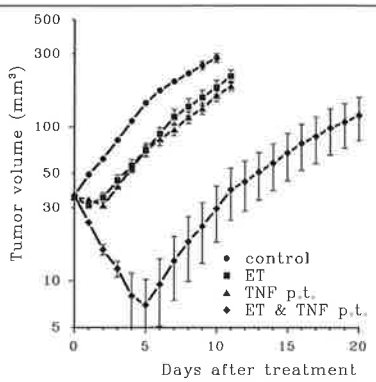
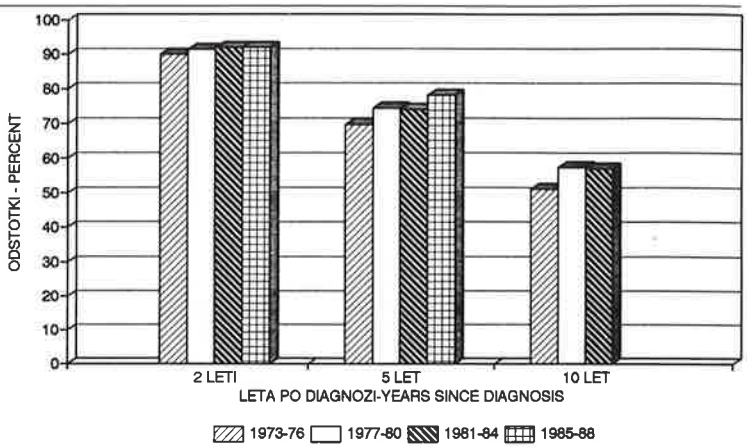
Lorna Zadravec Zaletel, dr. med./*MD*	prof. **Berta Jereb,** dr. med./ *MD, PhD*
Janez Žgajnar, dr. med./ *MD*	doc. dr. **Jurij Lindtner,** dr. med./*MD, PhD*

Krivulje rasti tumorjev fibrosarkoma SA-1 na singenskih A/J miškah. Najboljši uspeh zdravljenja je bil po kombinirani terapiji s peritumoralno aplikacijo tumorskega nekroznega faktorja alfa in elektroterapijo z enosmernim električnim tokom.

Growth curves of subcutaneous SA-1 fibrosarcoma tumors in syngeneic A/J mice. The best antitumor effect was obtained in combined treatment after peritumoral application of tumor necrosis factor of alpha and electrotherapy with low level direct current.





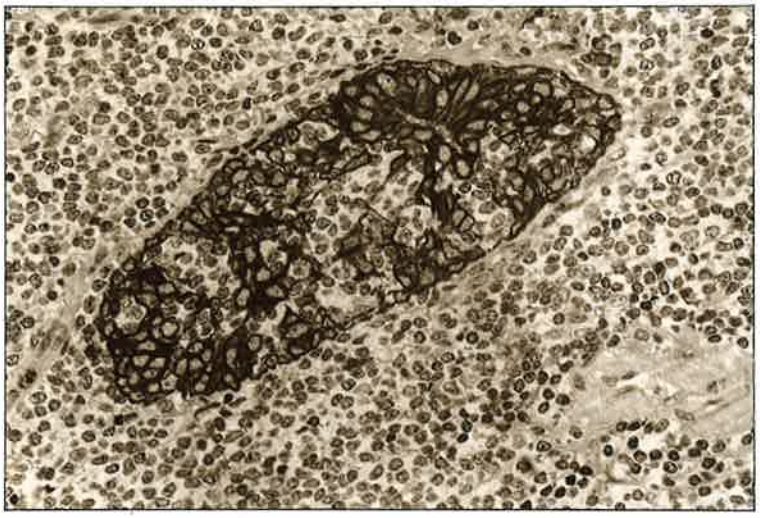
Preživetje bolnic z operabilnim rakom dojk. Izboljšanje prognoze pri bolnicah, ki so bile zdravljene v zadnjih petnajstih letih, lahko pripišemo tudi skrbno načrtovanim študijam dopolnilnega zdravljenja, v katerih Onkološki inštitut z ekipo doc. dr. **Jurija Lindtnerja** in sodelavci sodeluje od leta 1976.

Survival of operable breast cancer patients. The improved prognosis of patients treated within the last fifteen years is at tributable to carefully planned multicentric studies of adjuvant therapy. Assist. Prof. ***Jurij Lindtner*** *and his team have been participating in these studies since 1976.*

V/*In: Cancer incidence in Slovenia 1989. Ljubljana, Institute of Oncology – Cancer registry of Slovenia 1993, 19. (Report No. 31)*

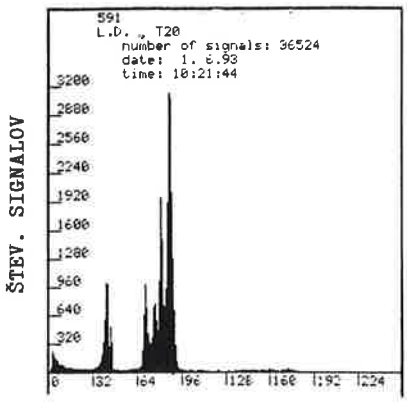
Limfoepitelijska lezija pri primarnem limfomu dojke malt tipa; barvanje na keratin

Lymphoepithelial lesion in primary lymphoma of the breast of malt type; keratin staining
Iz/*from: J. Lamovec and Jančar J: Primary malignant lymphoma of the breast. Lymphoma of the Mucosa-Associated Lymphoid Tissue. Cancer 60: 3033-3041, 1987*



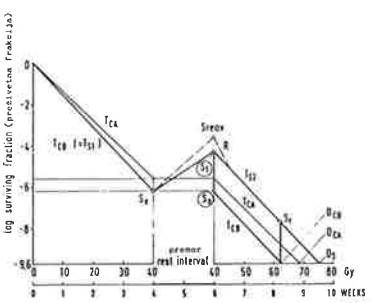
DNA histogram celic raka dojke; poliploieni tumor; aspiracijska biopsija s tanko iglo.

DNA histogram of breast cancer cells; polyploid tumor; fine needle aspiration biopsy.



Izsledki mnogih raziskav govore v prid domnevi, da odkrivanje humanih virusov papiloma (HPV) v celicah materničnega vratu (značilno obarvana jedra celic) učinkovito pripomore pri detekciji bolnic ogroženih z rakom materničnega vratu.

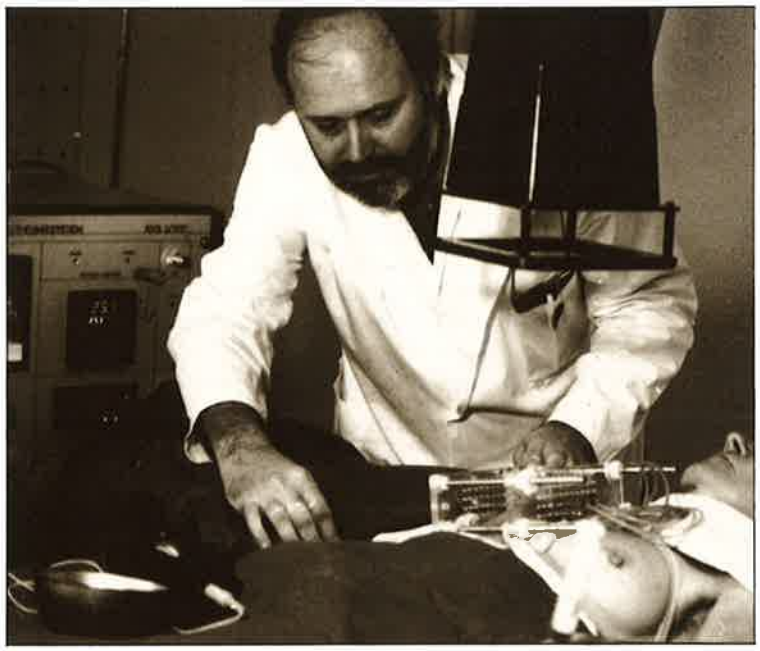
Results of many studies suggest that HPC detection in cervical cells (characteristicly coloured nucleus could be used to identify women at high risk for the development of cervical cancer.



Prvič v strokovni literaturi (1980) prikazana in izračunana *pospešena rast* tumorjev v premoru deljenega obsevanja. S tem je bilo ovrženo dotlej prevladujoče mnenje, da tumorji v premoru rastejo enako hitro kot pred obsevanjem.

In 1980, the acceleration of repopulation *in tumors in the restinterval of the split-course irradiation treatment was calculated and reported. That opposed the common belief that during the rest interval, tumor growth rate is similar to that before irradiation.*

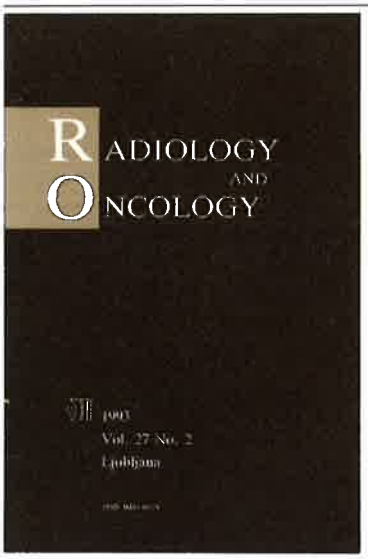
M. Budina, J. Škrk, L. Šmid, L. Furlan: *Tumor cell repopulation in the rest interval of split-course radiation treatment. Strahlen therapie 156 (1980), 402–408.*



V zadnjih letih razvijamo posebno tehniko intersticialnega vodnega pregrevanja. Izkazalo se je, da ta izvirni način dovajanja toplote v tumor edini omogoča hkratno ogrevanje in obsevanje dostopnih tumorjev. Metoda zagotavlja nekajkratno zvišanje terapevtskega učinka radioterapije, medtem ko toksičnega delovanja ne poveča.

Recently, a special technique of interstitial hot-water hyperthermia has been developed. This original technique enables simultaneous hyperthermia and irradiation of the accessible tumors. Using this method, a several-fold increase in the therapeutic ratio of radiotherapy can be achieved.

Publicistika in društvena dejavnost
Publishing activity and societies



Uveljavljanje strokovnih doktrin in dosežkov našega strokovnega in raziskovalnega dela ne bi bilo mogoče brez publicistične dejavnosti. Inštitut že štiri desetletja izdaja letna poročila Registra raka za Slovenijo, devetindvajset let pa pri nas izhaja tudi strokovna revija Radiologia Iugoslavica, ki se je pred dvema letoma preimenovala v Radiology and Oncology in pokriva širši prostor srednje Evrope.

V letu 1992 smo izdali v Onkološkem inštitutu še vrsto internih publikacij, med njimi povzetke doktrine diagnostike in zdravljenja pljučnega raka, ginekoloških malignomov, malignomov zgornjih prebavil, malignomov črevesja in karcinoida ter postopkov zdravstvene nege pri raku sečnega mehurja. Redno izdajamo tudi poročila o raziskovalnih nalogah.

The affirmation of professional doctrine, as well as of the results of our professional and scientific work, would not have been possible without publishing activity. Thus, the Institute has been publishing regular annual reports of the Cancer Registry of Slovenia for four decades while publication of the medical journal Radiology and Oncology (former Radiologia Iugoslavica) has already been continuing for 29 years and presently covers an extensive area of middle Europe. In 1992, a number of other publications for internal use were published at our Institute, including the principles of diagnosis and treatment of lung and gynecological cancers, malignancies of the upper digestive tract, intestine and carcinoid, as well as the principles of nursing care procedures in bladder cancer. Regular reports on current research projects are published annually.

glavni urednik/
Editor-in-Chief:
Tomaž Benulič
urednika/
Editors:
Gregor Serša
Viljem Kovač

Radiology and Oncology

Zgodovina izdajanja radiološko-onkološke revije v Onkološkem inštitutu v Ljubljani sega v leto 1964. Tega leta je po zaključkih IV. Kongresa radiologov SFRJ izšla prva številka revije Radiologia Iugoslavica. Revija je izhajala štirikrat letno v jezikih jugoslovanskih narodov s povzetki v več svetovnih jezikih. Že prva številka je vsebovala prispevke o ugotavljanju in zdravljenju raka izpod peresa strokovnjakov diagnostične radiologije, nuklearne medicine, onkologije in zaščite pred sevanjem. Širino obravnavanih področij je revija ohranila skozi vsa nadaljnja leta, v svoje tekste pa je sproti vključevala prispevke o novo nastajajočih vedah.

Sedež uredništva je vseskozi v Onkološkem inštitutu v Ljubljani, ki z uredništvom nesebično sodeluje in tako omogoča redno izhajanje revije. Glavni in odgovorni uredniki so bili: prof. dr. B. Ravnihar, prof. dr. V. Gvozdanovič, prof. dr. M. Magarašević, prof. dr. L. Tabor, prof. dr. S. Plesničar in dr. T. Benulič. V uredniškem odboru je do sedaj sodelovalo 16 urednikov, od katerih jih je bilo več kot polovica z Onkološkega inštituta. Uredniki so skupaj z recenzenti in drugimi sodelavci v 27 letih izdajanja in v 25 letnikih uspeli objaviti v 100 številkah revije in petih posebnih izdajah (suplementih) na več kot 10000 straneh 1629 znanstvenih, strokovnih, revijalnih in drugih prispevkov.

V 27 letih je revija opravila pomembno znanstveno in pedagoško poslanstvo in z objavljanjem del domačih in tujih strokovnjakov pomembno prispevala k izmenjavi znanstvenih novosti in k primerjavi doseženih rezultatov.

Ob zaključku 25. letnika revije v letu 1992 je kljub vojni na področju bivše Jugoslavije uredništvo izdalo knjigo »Advances in Radiology and Oncology«. S to knjigo, v kateri je sodelovalo mnogo domačih in tujih vrhunskih strokovnjakov, se pričenja novo obdobje naše revije. Od leta 1992 dalje izhaja revija z novim naslovom Radiology and Oncology, z modernejšo notranjo ureditvijo in s še skrbneje izbranimi teksti. Izdajatelja revije sta sedaj radiološki sekciji slovenskega in hrvaškega zdravniškega društva, kar naj bo vzpodbuda in nov izziv za delovanje uredništva. Novi sodelavci in naročniki v Evropi, vstop v pomembne biomedicinske sekundarne publikacije (Biomedicina Slovenica, Chemical Abstracts, Excerpta Medica Electronic Publishing Division) in sodelovanje z drugimi strokovnimi združenji v inozemstvu – vse to nakazuje reviji lepšo prihodnost.

Strokovna področja:
diagnostična in intervencijska radiologija, nuklearna medicina, radioterapija, klinična in eksperimentalna onkologija, radiobiologija, radiofizika, zaščita pred sevanjem.

Jezik:
angleški
Izšlo v letu 1992:
Vol. **26, 4** številke
skupaj **42** znanstvenih člankov
naklada: **1000** izvodov
Topics: diagnostic and interventional radiology, nuclear medicine, radiotherapy, clinical and experimental oncology, radiobiology, radiophysics, radiation protection

Laguange:
English
Published in 1992:
Vol. **26, 4** *issues*
Total **42** *scientific and professional papers*
Circulation: **1000** *copies*

The history of the publishing of this radiological-oncological journal at the Institute of Oncology in Ljubljana dates back to the year 1964, when the first issue of Radiologia Iugoslavica was published after the IVth Congress of Radiologists of Yugoslavia. The journal appeared quarterly, in national Yugoslav languages with abstracts in several world languages. The very first issue already comprised articles on the diagnosis and treatment of cancer pertinent to diagnostic radiology, nuclear medicine, oncology and radiation protection.
The journal has continued to cover this wide scope of fields throughout the following years of its publication, currently including reports on newly developing modalities.
The seat of the editorial office has always been at the Institute of Oncology in Ljubljana; the latter institution has been contributing to regular publishing by its unselfish support and cooperation with the editorial board. Editor-in-Chief from the beginning on: Prof. Dr. B. Ravnihar, Prof. Dr. V. Gvozdanović, Prof. Dr. M. Magaraševič, Prof. Dr. L. Tabor, Prof. Dr. S. Plesničar, and Dr. T. Benulič. So far, the Editorial Board has had 16 editors; more than half of whom were from the Institute of Oncology. Over the 27 years of the journal's existence, its editors – in collaboration with reviewers and other co-workers – have managed to publish 25 volumes comprising altogether 100 issues and 5 supplements totalling more than 10000 pages, and covering 1629 original scientific, professional, review and other articles. This is proof that the journal has been performing an important scientific and education mission by contributing to the exchange of information on new scientific achievements and enabling the comparison of results through publication of local and foreign articles.
Despite the war on the territory of former Yugoslavia, in 1992, on completion of the 25th volume the Editorial Board published a book entitled "Advances in Radiology and Oncology". This publication, which has been prepared in collaboration with many renowned national and foreign experts, represents a milestone in the life of our journal. By 1992 its 26th volume appeared under the new title Radiology and Oncology. Its design and contents have been improved. Presently, the publishers are the radiological sections of the medical societies of Slovenia and Croatia, which represents a new stimulus and challenge for our editorial board. New co-workers and subscribers from other European countries, coverage by some relevant secondary publications in biomedicine (Biomedicina Slovenica, Chemical Abstracts, Excerpta Medica Electronic Publishing Division), and collaboration with other professional societies abroad, are opening up new perspectives for our journal in the future.

glavni urednik / *Editor-in-Chief:*
Vera Pompe Kirn
uredniki / *Editors:*
Rastko Golouh, Jurij Lindtner, Maja Primic Žakelj, Božena Ravnihar, Zvonimir Rudolf, Branko Zakotnik
Jezik:
slovenski, angleški
Naklada:
700 izvodov
Language:
Slovene, English
Circulation:
700 *samples*

Incidenca raka v Sloveniji 1989

Register raka za republiko Slovenijo je prva letna poročila izdajal že v letih 1953–1957 za leta 1951–1955. Prva analiza podatkov Registra raka za Slovenijo za leto 1950 je bila objavljena leta 1951 v Zdravstvenem vestniku. Samostojna letna poročila za leta 1951–1955 je Register izdal v letih 1953–1957. Kasneje so bila poročila Registra objavljena v periodičnih publikacijah Svetovne zdravstvene organizacije »Epidemiological and Vital Statistics Report« in v »World Health Statistics Report«. Podatke od leta 1965 dalje spet redno objavljamo v posebnih letnih poročilih z naslovom »Rak v Sloveniji« (1965–1977) oz. »Incidenca raka v Sloveniji« (1978–1989) v slovenskem in angleškem jeziku. Letna poročila vsako leto dopolnjujemo v skladu z željami in pripombami uporabnikov. Pri tem nam pomaga uredniški odbor, v katerem so zbrani specialisti raznih strok onkologije (kliniki, epidemiolog in patolog).

Cancer Incidence in Slovenia, 1989

The first annual reports by the Cancer Registry of Slovenia were published already in the years 1953–1957, covering the period from 1951 to 1955, while the first Registry's data analysis for 1950 was published in 1951 in "Zdravstveni vestnik". Later on, the Registry's reports were included in the periodical publications "Epidemiological and Vital Statistics Report" and "World Health Statistics Report" by World Health Organization. However, the data from 1965 on have been again

appearing in separate annual reports entitled "Cancer in Slovenia" (1965–1977), and "Cancer Incidence in Slovenia" (1978–1989) in Slovene and English. Every year our annual reports are modified according to the requests and comments of the users. In this we are supported by the editorial board composed of specialists in different branches of oncology (clinicians, epidemiologists and pathologists).

avtorji/
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Jezik:
slovenski, angleški
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2000 izvodov
Language:
Slovene, English
Circulation:
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Zemljevidi incidence raka v Sloveniji 1978–1987

V Sloveniji smo bili v letih 1989–1990 priča nepravilni rabi podatkov o raku. V dnevnem časopisju so bile objavljene napačne, ponavadi bistveno prevelike številke o zbolevnosti za rakom, posebno še o zbolevnosti za otroškimi levkemijami, ki so po nepotrebnem dodatno vznemirjale prebivalce prizadetih občin. S to knjigo smo želeli bralcem ponuditi objektivne številke o zbolevanju za rakom po občinah Slovenije. Ob zemljevidih, ki so prav zaradi majhnega števila primerov po občinah narisani le za 17 najbolj pogostnih rakov v Sloveniji, so ob prikazu časovnega gibanja in starostne porazdelitve na kratko navedeni še vsi tisti dejavniki, za katere je v času pisanja te knjige znano, da povečujejo ali zmanjšujejo nevarnost zbolevanja za temi raki. Žal jih tiči velika večina v našem vsakdanjem življenju, v naših razvadah (kajenju, pretiranem pitju alkoholnih pijač, pretiranem izpostavljanju soncu, menjavanju spolnih partnerjev) in v napačni prehrani. Prikazane razlike zbolevnosti po slovenskih občinah so gradivo za razmišljanje in za nadaljnje podrobne raziskave po metodah analitične epidemiologije. Noben tovrsten atlas v svetu namreč ne more dati odgovora na vprašanje, zakaj je prav v tej in ne v drugi občini zbolevnost višja. Vsekakor pa zemljevidi kažejo na tista območja, kjer bodo raziskovanja še potrebna.

Atlas of Cancer Incidence in Slovenia 1978–1987

It has been found that in the years 1989–1990 the data on cancer in Slovenia were misinterpreted. The reports on cancer incidence published in daily newspapers were incorrect and the figures were often too high, particularly those on the incidence of childhood leukemias, which evoked unnecessary public concern in the communes involved. This book was aimed at providing readers with objective cancer incidence rates by Slovenian communes. Owing to a small number of cases by communes only the 17 most frequent cancers in Slovenia are presented in the maps; the information on time trends and age distribution is completed by a brief account of all factors known to increase or decrease the risk of these cancers. Unfortunately, a vast majority of these originate in our everyday life habits (smoking, alcohol abuse, excessive sunbathing, frequent change of sexual partners) and in incorrect diet. The differences in morbidity by Slovenian communes form a good basis for discussion and further detailed studies by means of analytical epidemiology. Namely, none of the atlases of this type can provide an answer to the question of why one particular commune rather than some other is affected by a higher morbidity rate, but it can point out the areas that need to be studied.

Društvo Onkoloških bolnikov in revija »Okno«

Ustanovna skupščina Društva onkoloških bolnikov Slovenije je bila 24. 6. 1986. Sedež društva je v Onkološkem inštitutu v Ljubljani, ki ima za društvo veliko razumevanja in mu nudi vso podporo. Članstvo v društvu je prostovoljno. Člani društva so lahko zdravljeni in ozdravljeni bolniki, njihovi svojci, prijatelji, strokovno medicinsko osebje in drugi, ki želijo pomagati pri reševanju problemov, ki se pojavljajo v zvezi z boleznijo.
Osnovne naloge društva so pomoč pri celostni rehabilitaciji vsem onkološkim bolnikom, organiziranje raznih oblik pomoči in samopomoči ter zavzemanje za pravice iz zdravstvenega in socialnega varstva. Med pomembnimi nalogami društva je tudi izdajanje publikacij in priročnikov

predsednica/
President:
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za bolnike in njihove svojce. Leta 1985 smo izdali knjižico »Pot k okrevanju«. Doživela je že drugo izdajo, kmalu pa bomo morali misliti na tretjo. Od junija 1989 izdajamo lastno glasilo OKNO, ki vsebuje prispevke bolnikov in poljudne članke iz medicinske stroke. Glasilo je za vse bolnike brezplačno in je namenjeno vsem, ki se soočajo s problemom raka. Vse delo v društvu je prostovoljno, pri stroških tiska in papirja pa nam pomagajo sponzorji.
V vseh večjih krajih po Sloveniji ima društvo podružnice. Najbolj pomembna in delovna je sekcija prostovoljk. »Reach to recovery« ali, kot ga imenujemo pri nas, Pot k okrevanju je nemedicinski del rehabilitacijskega programa za bolnice po operaciji dojke, ki ga izvajajo prostovoljke. Za svoje delo mora biti prostovoljka posebej usposobljena in mora upoštevati mednarodna pravila gibanja. Naša predsednica prostovoljk, gospa Vida Zabric, je tudi članica mednarodnega komiteja prostovoljk gibanja Reach to Recovery. S programom rehabilitacije onkoloških bolnikov tako sodelujemo tudi v mednarodnem okviru.

glavna urednica revije Okno/
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prof. dr. **Manca Košir**
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The Association of Oncological Patients and their bulletin "Okno"

The assembly meeting for the foundation of the Association of Oncological Patients of Slovenia was held on June 24, 1986. The seat of the Association is at the Institute of Oncology in Ljubljana, which offers considerable moral and material support to this activity. Membership in the Association is free and voluntary. The members can be either treated or cured patients, their relatives, friends, professional medical staff and all others wishing to help in solving various cancer--related problems.
The basic tasks of our Association include support in the comprehensive rehabilitation of all cancer patients, organizing different support- and self-support programs, and defending the patient's rights ensuing from health and social security programs. An important activity of the Association is also the publishing of information and manuals for patients and their relatives. In 1985 we published a "Reach to Recovery" booklet. It has already been reprinted twice, and its third edition should be prepared before long. The Association's bulletin "Okno" has been appearing since June 1989. The journal publishes contributions written by patients, as well as semi-professional articles in the field of medicine. All patients receive the bulletin free of charge, and is intended for everyone concerned with cancer related problems. The work in our Association is voluntary, and the costs of print and paper are covered by sponsors.
Our Association has its sections in all larger towns of Slovenia. The most outstanding and important is the section of volunteers working in the "Reach to Recovery" program. This is a non-medical rehabilitation program, carried out by volunteers, for patients after mastectomy. The volunteers must undergo a special training which qualifies them for this activity, and must respect the internationally accepted rules of the program. Our president of the volunteers, Mrs Vida Zabric, is also a member of the International Committee of Volunteers within the Reach to Recovery program. Thus our oncological patient rehabilitation program is integrated into international collaboration.

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President:
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generalni tajnik/
Secretary General:
Otmar Bergant
člana sekretariata/
Secretariat members:
prof. **France Demšar,**
Janez Ogorelc

Zveza slovenskih društev za boj proti raku

Slovensko društvo za boj proti raku smo ustanovili 6. aprila 1970 na pobudo Onkološkega inštituta in prof. dr. Božene Ravnihar. Zveza združuje devet regijskih društev po Sloveniji in je polnopravni član UICC.

Osnovna naloga zveze je zdravstvena vzgoja prebivalstva. Po ideji »Evropa in rak« smo povzeli program »Slovenija 2000 in rak« in si za cilj zastavili zmanjšanje umrljivosti za rakom za 15 %. Marca 1991 smo podpisali slovesno deklaracijo za uresničevanje tega programa. Podpisniki – Ministrstvo za zdravstvo, Zveza slovenskih društev za boj proti raku, Onkološki inštitut, Univerzitetni zavod za zdravstveno in socialno varstvo, Zavod Republike Slovenije za šolstvo, Rdeči križ Slovenije in Zveza nekadilcev Slovenije – so se zavezali, da bodo sodelovali pri izvajanju programa, naša zveza pa je pripravila podroben program aktivnosti in zadolžitev. Pri tem smo posvetili posebno skrb vzgoji in izobraževanju šolske mladine ter ostalega prebivalstva. Sestanki s predstojniki regijskih zavodov za šolstvo in z ravnatelji osnovnih in srednjih šol so že zajeli večino slovenskih šol, pripravili pa smo tudi številna predavanja za zdravnike, druge medicinske delavce in učitelje. Šole so prejele tri monografije, komplete zloženk, plakate, videokasete in komplete prosojnic. Kakovostna strokovna priprava celotnega programa, privlačna estetska podoba didaktičnega gradiva in prizadevnost vseh udeležencev zagotavljajo programu »Slovenija 2000 in rak« uspeh.

Program »Slovenija 2000 in rak« izpolnjujemo tudi z zloženkami (»7 dobrih nasvetov« in »7 opozorilnih znakov«), s knjižico »Kaj je treba vedeti o raku« in plakati, ki smo jih s pomočjo Univerzitetnega zavoda za zdravstveno in socialno varstvo posredovali vsem ambulantam v Sloveniji. Del programa so tudi edukacijski pregledi dojk za članice naših društev, za moške člane društev pa anketa z vprašanji in odgovori o zgodnjih znakih rakavih obolenj.

Za izvedbo svojega programa prejema zveza redne letne dotacije Ministrstva za zdravstvo. Znatna sredstva prispevajo tudi Loterija Slovenije in sponzorji, pridobivamo pa jih še s prodajo novoletnih voščilnic ter s prispevki, ki jih ljudje darujejo namesto cvetja v spomin pokojnikov. Zbrana sredstva nam omogočajo, da smo v letu 1992 prispevali sredstva za nakup rentgenske aparature za površinsko terapijo raka ter nabavili dva prenosna EKG aparata, specialen presoterapevtski aparat za fizioterapijo ter blazine proti preležaninam. Za prijetnejše bivanje v bolnišnici smo v preteklih letih našim bolnikom podarili barvne televizorje in tudi prijaznejšo osebno garderobo.

The Association of Slovenian Cancer Societies

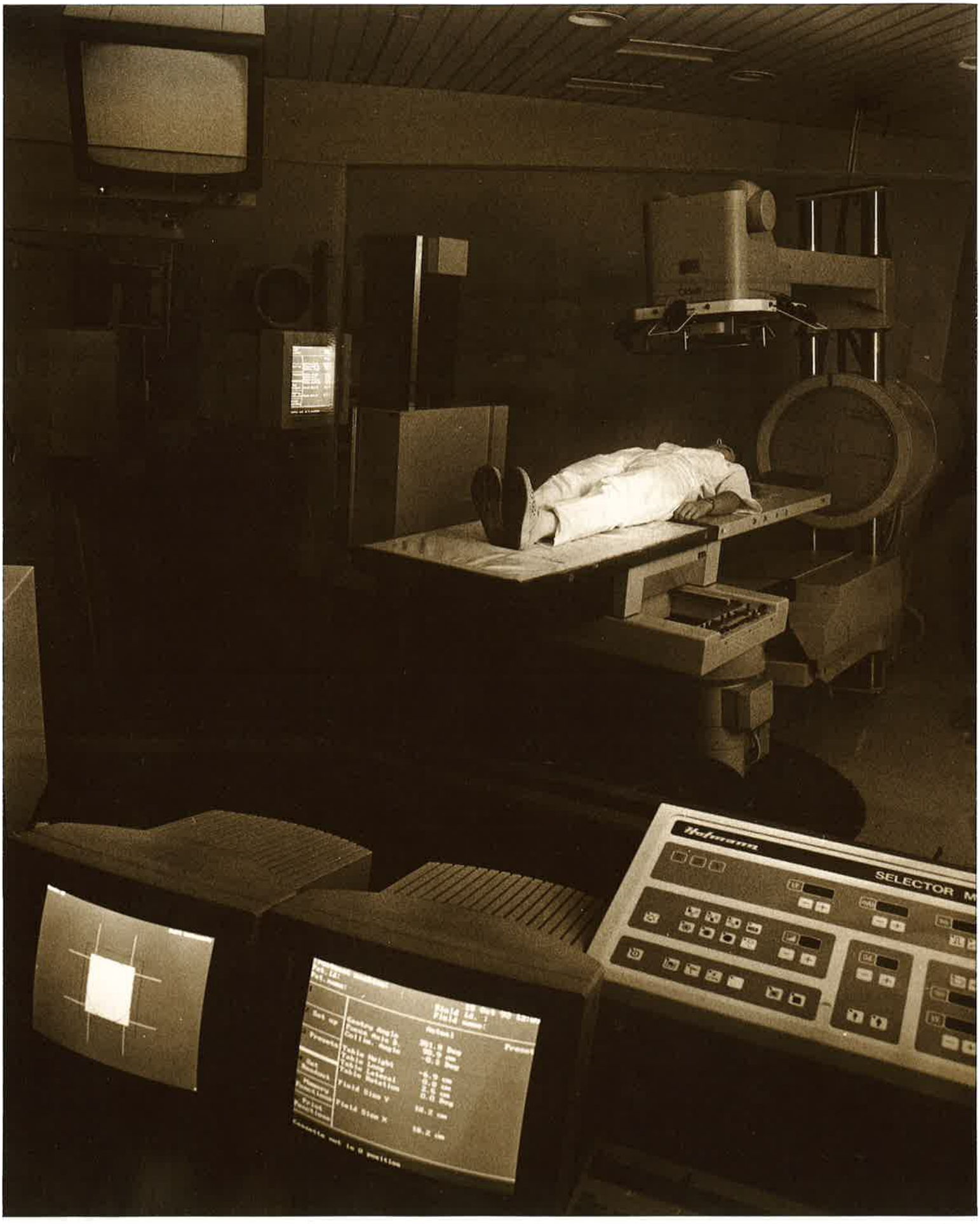
The Cancer Society of Slovenia was established on April 6, 1970, on the initiative of the Institute of Oncology and Prof. Dr. Božena Ravnihar. The Association unites nine regional Slovenian cancer societies and is an authorized member of the UICC.

The basic task of the Association is public health education. The idea of "Europe and Cancer" was adopted in our program "Slovenia 2000 and Cancer" with the aim of decreasing cancer mortality rates for 15 %. In March 1991 a solemn declaration for realisation of this program was signed by the Ministry of Health, Association of Slovenian Cancer Societies, Institute of Oncology, Institute of Health and Social Welfare, Establishment for Education of the Republic Slovenia, Red Cross of Slovenia and by the Association of Nonsmokers of Slovenia. All the undersigned institutions bound themselves to carry into effect the accepted program, while our Association worked out a detailed plan of activities and assignments. There, special emphasis was laid on the education of school--children and the general population. Our program consisting of meetings with directors of regional educational establishments and headmasters of primary and secondary schools, and lectures for physicians, allied medical workers and teachers, has already been implemented in a majority of Slovenian schools. Each school has received three monographs, a batch of leaftlets, posters,

videocassettes and a set of overhead-projection slides. The success of the program "Slovenia 2000 and Cancer" is ensured by the highly competent professional approach to its organisation, attractive design of didactic materials and the enthusiasm of its organisers.

The program "Slovenia 2000 and Cancer" is further implemented through publication of leaflets ("Seven Useful Recommendations" and "Seven Warning Signs"), a book "What do we need to know about cancer?" and posters which were forwarded to all outpatient clinics in Slovenia by the Institute for Health Promotion. The program also includes breast examinations with education intent for the female members of our societies, and for male members, a questionnaire on early symptoms of cancer.

The Association's program is subsidized by regular annual funding from the Ministry of Health. Considerable financial means are also contributed by the Lotery of Slovenia and various sponsors as well as by the sales of seasonal greetings cards and donations in memoriam of the deceased. In 1992 the funds collected enabled us to contribute towards the purchase of a new X ray unit for superficial radiation therapy; we also bought two mobile ECG apparatures, a special pressure--therapeutic device for physical therapy and special cushions for prevention of bedsores. In order to make the patients' stay in hospital more pleasant, in the past few years we have provided them with color TV sets and a more attractive personal wardrobe.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Avtorji pisani z velikimi črkami so delavci Onkološkega inštituta
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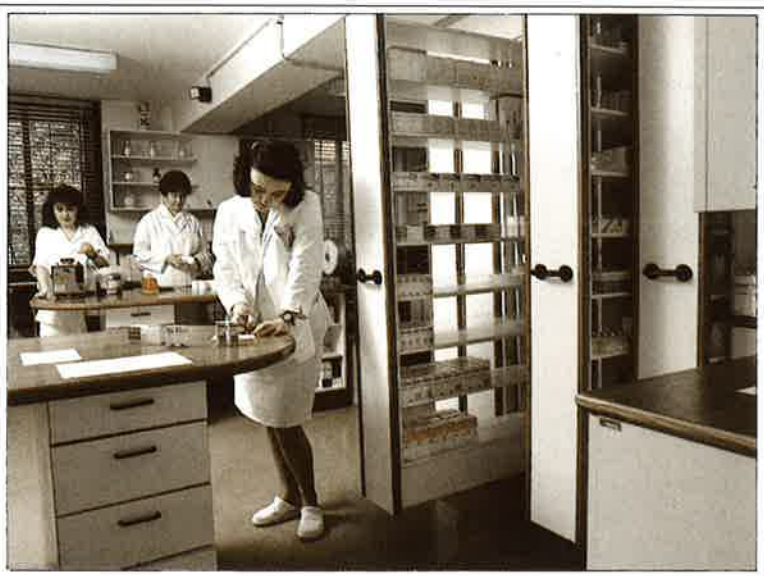

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