Onkološki inštitut Ljubljana 60 let

Institute of Oncology Ljubljana 60 years

1938 - 1997

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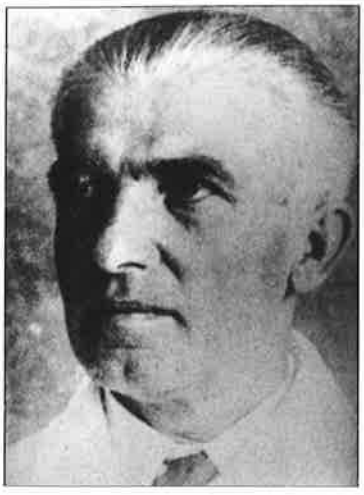
Vsebina *Contents*

Pogostejše kratice *Frequent Abbreviations*

CNR	Državni raziskovalni svet	*Consiglio nazionale di ricerca*
EFOMP	Evropska zveza organizacij za medicinsko fiziko	*European Federation of Organisations for Medical Physics*
EONS	Evropsko društvo za onkološko zdravstveno nego	*European Oncology Nursing Society*
EORTC	Evropska organizacija za raziskovanje in zdravljenje raka	*European Organisation for Research and Treatment of Cancer*
ERTED	Evropska skupina radioloških tehnikov za izobraževanje	*European Radiation Technologists Education Development Group*
ESMO	Evropsko združenje za internistično onkologijo	*European Society for Medical Oncology*
ESO	Evropska onkološka šola	*European School of Oncology*
ESSO	Evropsko društvo za kirurško onkologijo	*European Society of Surgical Oncology*
ESTRO	Evropsko združenje za terapevtsko radioonkologijo	*European Society for Therapeutic Radiology and Oncology*
FIGO	Mednarodna zveza za ginekologijo in porodništvo	*Fédération Internationale de Gynécologie et d'Obstétrique*
IACR	Mednarodno združenje registrov raka	*International Association of Cancer Registries*
IALT	Mednarodna raziskava adjuvantnega zdravljenja pri pljučnem raku	*International Adjuvant Lung Cancer Trial*
IBCS	Mednarodna skupina za raziskovanje raka dojke	*International Breast Cancer Study Group*
IAEA	Mednarodna agencija za atomsko energijo	*International Agency for Atomic Energy*
IARC	Mednarodna agencija za raziskovanje raka	*International Agency for Research on Cancer*
IBCS	Mednarodna skupina za študij raka dojke	*International Breast Cancer Study Group*
IHPBA	Mednarodno hepatopan-kreatobiliarno združenje	*International Hepato-Pancreato-Biliary Association*
ISOPP	Mednarodno društvo onkoloških lekarn	*International Society of Oncology Pharmacy Practices*
LBCS	Ludvikova skupina za raziskovanje raka dojke	*Ludwig Breast Cancer Study Group*

LCCG	Skupina za sodelovanje pri pljučnem raku	*Lung Cancer Cooperative Group*
NCI	Državni inštitut za raka ZDA	*National Cancer Institute USA*
OECI	Organizacija evropskih onkoloških inštitutov	*Organization of European Cancer Institutes*
SIRM	Italijansko društvo za medicinsko radiologijo	*Society Italiana di Radiologia Medica*
SEEOG	Jugovzhodnoevropska onkološka skupina	*South-Eastern European Oncology Group*
SIOP	Mednarodno društvo za pediatrično onkologijo	*International Society of Pediatric Oncology*
UICC	Mednarodna zveza proti raku	*Union International Contre le Cancer*



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

Mag. dr. **Matjaž Zwitter,** 1991–1995

Prof. dr. **Zvonimir Rudolf,** 1986–1991; 1995

Ob 60-letnici Onkološkega inštituta

Prof. dr. Zvonimir Rudolf, dr. med., direktor Onkološkega inštituta

Publikacija povzema pomembne dosežke in dejavnost inštituta za obdobje zadnjih pet let. Seveda pa je to le logično nadaljevanje 60 let strokovnih, raziskovalnih in pedagoških naporov sodelavcev inštituta.

Iz majhne družine zanesenjakov je Banovinski inštitut za raziskovanje in zdravljenje novotvorb postal velika multidisciplinarna ustanova – Onkološki inštitut, ki delno sama opravlja, sicer pa za področje države usmerja programe celostne obravnave rakavih bolezni, tako na področju preventive, zgodnjega odkrivanja, diagnostike, zdravljenja in rehabilitacije rakavih bolnikov. Takšno poslanstvo je bilo zastavljeno že ob samem začetku. Lahko smo hvaležni našim predhodnikom za daljnovidnost, naloga sedanje generacije pa je, da razvijamo poslanstvo inštituta tudi v tretje tisočletje.

V 60 letih smo prehodili dolgo pot. Kot rdeča nit se vije boj za življenjski prostor, pa tudi bitke za umestitev onkologije kot multidisciplinarne stroke v medicini. Začeli smo v vojaški konjušnici, napori generacij pa bodo v naslednjem tisočletju kronani z novim inštitutom.

On the 60th Anniversary of the Institute

Prof. Zvonimir Rudolf, MD, PhD, Director of the Institute of Oncology

The publication is an overview of all the activities and achievements of the Institute in the past five years. Of course, all this should be looked upon but as a logical continuation of the 60 years lasting endeavors of the Institute in its clinical work, scientific research and education activities.

In the meantime, the former Regional Institute for Research and Treatment of Neoplasms with its small family of enthusiasts has developed into a large multidisciplinary institution – the Institute of Oncology which partly performs – and at the national level coordinates – the programs of comprehensive cancer care, including prevention, early detection, diagnosis, treatment, and rehabilitation. This comprehensive range of activities was set up as the Institute's mission from the very beginning. We cannot but feel grateful to our predecessors for their visionary concept, which obliges our generation to further develop the Institute's mission in the third millennium.

Looking back, we have made a long way in those 60 years. A common thread in the story of our endeavors leads through a constant fight for living space, as well as through our striving that oncology be recognized as an independent multidisciplinary branch of medicine. Thanks to the zealous efforts of many generations, our modest beginnings in the former military barracks will end up with a new institute in the millennium to come.

Zgodovinski pregled 1993–97 *Historical Review 1993–97*

1994	Prenovljeni prostori ambulantne kemoterapije	*Renovation of the Department for Outpatient Chemotherapy*
1995	Generalna skupščina organizacije evropskih onkoloških inštitutov (OECI), Bled	*General Assembly of the Organization of European Cancer Institutes (OECI), Bled*
1996	Podelitev naziva Klinični inštitut za onkologijo	*Nomination for University Institute and Hospital of Oncology*
	Nov linearni pospeševalnik	*Installation of a new linear accelerator*
1997	Postavitev temeljnega kamna za nov inštitut	*Laying of the foundation stone for the new premises of the Institute*
	Pridobitev naziva "EORTC pridruženi inštitut"	*Recognition as "EORTC affiliated Institute"*


BANOVINSKI INSTITUT ZA RAZISKOVANJE
IN ZDRAVLJENJE NOVOTVORB

Zasnova inštituta in njena uveljavitev

Božena Ravnihar

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 skupno – 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. Odbor ameriškega društva za raka je v letu 1929 oblikoval ta spoznanja in priporočila in prav preroško zapisal: "Čutimo, da bo šel nadaljnji razvoj zdravljenja raka po linijah koncentracije, organizacije in specializacije...". Enaka stališča in priporočila vladam je mnogo kasneje, t.j. v šestdesetih letih, na podlagi izkušenj že delujočih centrov oblikovala skupina izvedencev pri Svetovni zdravstveni organizaciji. Prosto povzeto so ta priporočila takale: v vsaki deželi ali skupini pokrajin naj bi imeli najmanj en inštitut, ki bi bil usposobljen za kompleksno diagnostiko in terapijo ter bi redno nadzoroval bolnike po zdravljenju, hkrati pa bi se posvečal raziskovanju in bil vzgojno-izobraževalni center za onkologijo; 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 osnova za epidemiološke in klinične raziskave); 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 tako obsežno zasnovo v skrajno skromnih razmerah začrtali naš inštitut. Marsikaj se danes zdi že samo po sebi umevno, vendar pa si zasnova in njena uresničitev nista lahko utirali poti niti ob ustanitvi inštituta niti kasneje.

Naj navedemo 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 potrebni še drugih specialistov).
2. Še vedno ni dovolj 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 po zdravljenju. S tem povezana je zlasti potreba po koncentraciji bolnikov z redkimi oblikami raka zaradi pridobivanja izkušenj in oblikovanja strokovne doktrine.
3. Težavni uresničitvi zahteve po koncentraciji rakavih bolnikov v visoko specializiranih ustanovah se pridružuje še povsem neprimerno mnenje, morda celo bolj zdravnikov kakor laikov, da je rakavim bonikom treba skrivati naravo njihove bolezni in jih zato odtegovati zavodu, ki se posebej posveča tem boleznim, nekateri pa so celo sploh 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 dala najboljšo zdravstveno pomoč.
4. Naposled naj omenimo še nasprotovanja našemu zavzemanju za gradnjo inštituta, in to ne samo laikov, ampak celo zdravnikov. Opirala so se na senzacionalistične objave o novih

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 field 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 we 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*

učinkovitih zdravilih, češ da bodo kmalu odpravila potrebo po obstoju posebnih ustanov za zdravljenje raka in da zato pač ni vredno zanje namenjati toliko denarja.

Vse našteto je povzročalo večje in manjše težave in zahtevalo znatno energijo strokovnjakov, da si je naš inštitut postopno pridobil življenjski prostor za razvoj svojih dejavnosti in da še danes nima prostorov, ki bi omogočali ustrezno funkcionalno povezavo njegovih služb in enot, bolnikom pa sodobnim standardom ustrezno udobje v času bivanja v bolnišnici. Boj za življenjski prostor se zares kot rdeča nit vleče skozi vso zgodovino inštituta od njegovega začetka do danes.

Zvonimir Rudolf

Onkologija je izrazito multidisciplinarna stroka, Onkološki inštitut pa funkcionalni center za celostno obravnavo rakavih bolezni (comprehensive cancer center). Tudi v prihodnje bo treba krepiti multidisciplinarno usmerjenost stroke in zadržati delovanje inštituta kot celostnega centra.

Naloge takšnih centrov so omogočanje in uvajanje multidisciplinarne diagnostike in zdravljenja, vodenje in koordiniranje raziskovalne dejavnosti, vodenje in koordiniranje izobraževalne dejavnosti (profesionalne in laične) ter vodenje epidemiološkega nadzora. Zasnova obsega klinično in temeljno raziskovalno delo, izobraževanje in predstavljanje diagnostičnih in terapevtskih metod. Strokovno delo temelji na kakovostnem multidisciplinarnem pristopu v diagnostiki in zdravljenju. V sodelovanju z univerzo in drugimi raziskovalnimi ustanovami je omogočeno temeljno raziskovalno delo. Organizirani so programi detekcije. Center vzdržuje statistično bazo za vrednotenje rezultatov, standardizacijo, klasifikacijo malignih bolezni in izmenjavo informacij med ustanovami. Inštitut vodi nacionalne programe, v katerih sodelujejo vsi dejavniki zdravstvenega varstva. Inštitut se povezuje v regionalne in mednarodne sisteme za boljšo prevencijo, diagnozo in zdravljenje.

Onkološki inštitut je tako osrednja ustanova, ki delno sama izvaja, sicer pa za področje države usmerja programe celostne obravnave rakavih bolezni, tako na področju preventive, zgodnjega odkrivanja, diagnostike, zdravljenja in rehabilitacije rakavih bolnikov. V dokumentih R Slovenije za področje zdravstva mora biti ta vloga tudi v prihodnje jasno opredeljena in ovrednotena.

Onkološki inštitut ne more zdraviti vseh rakavih bolnikov, in to tudi ni njegov cilj. Zaradi nadzora, delitve dela ter vodenja enotne politike in doktrin na področju onkologije je pomembno, da sodeluje z drugimi zdravstvenimi zavodi v Sloveniji. V ta namen je pomembna tudi dobra koordinacija z Republiškim strokovnim kolegijem za področje onkologije, Zdravstvenim svetom in drugimi organi in ustanovami.

Racionalno je, da ima R Slovenija za celotno območje tudi en sam radioterapevtski center; draga oprema je tako bolje izkoriščena, vzdrževana in servisirana. Pomembno je tudi, da inštitut omogoča vso potrebno strokovno podporo tej dejavnosti z osebjem, ki ga že ima.

Strokovno delo in razvoj potekata predvsem prek multidisciplinarnih timov, ki vodijo, nadzirajo in vrednotijo delo na svojem področju ter pripravljajo doktrinarna izhodišča in klinične protokole za obravnavo posameznih malignih bolezni.

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, we cannot avoid mentioning the objections to our plans for the building of 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.

Zvonimir Rudolf

Oncology is clearly a multidisciplinary profession, and therefore this multidisciplinary orientation should be followed in the future as well, if the Institute of Oncology is to maintain its role of a functional comprehensive cancer center.

Such institutions are aimed at enabling and introducing of multidisciplinary diagnostics and treatment, conducting and coordination of research as well as of education activities (both professional and lay), and the performance of epidemiological control. The fundamental concept includes clinical and basic research, education and the implementation of diagnostic and therapeutic methods. The professional work is based on a high-quality multidisciplinary approach to diagnosis and treatment. The basic research is made possible through collaboration with the university and other research institutions. There are (cancer) detection programs organized. The center maintains a statistical data base for the evaluation of results, standardization, classification of malignant diseases and exchange of information between institutions. The Institute conducts national programs involving all sectors of health care. It is linked with regional and international systems for better prevention, diagnosis and treatment (of cancer).

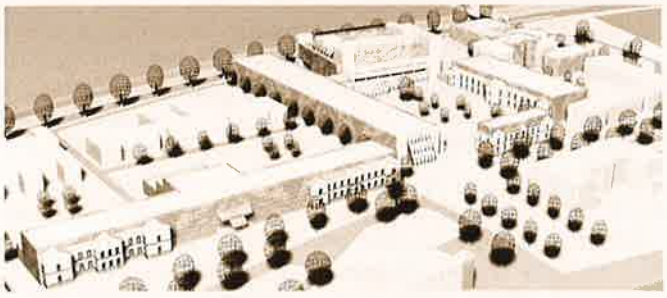
Thus, the Institute of Oncology is the central institution that partly performs, and at a national level directs the programs of comprehensive cancer care in the fields of prevention, early detection, diagnosis, treatment and rehabilitation. Also in the future, this role should be clearly defined and its value acknowledged by the legal documents of the Republic of Slovenia pertinent to the domain of health care.

The Institute of Oncology cannot and has never aimed to treat every cancer patient in the country. Therefore, its cooperation with other hospitals and health centers - to promote control and mutual sharing of workload and to ensure that a uniform policy and doctrine in the field of oncology be respected throughout Slovenia - is all the more important. With this goal in mind, an adequate coordination with the Slovenian Board for Oncology, Health Council and other national organs and institutions is of essential importance.

It is only logical that Slovenia should have one single radiotherapeutic center which would cover the needs of the whole country, in order to rationalize the high costs of equipment purchase and maintenance. It is also important that the Institute offers the necessary support to this service through its expert staff.

Professional work and further development are ensured by the activity of multidisciplinary teams, which have the competence to conduct, supervise and evaluate work in the domain of their expertise, and prepare the doctrine and clinical protocols for individual malignant disease.

ONKOLOŠKI INŠTITUT, LJUBLJANA



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PERSPEKTIVE,
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Gradnja novega onkološkega inštituta

Marko Snoj, predsednik gradbenega odbora

Onkološki inštitut je najpomembnejša terciarna ustanova za zdravljenje raka v Sloveniji, prostorski pogoji, v katerih deluje, pa se v zadnjih dvajset letih niso spremenili, čeprav se je v tem času število bolnikov z rakom neprestano povečevalo in čeprav je Inštitut v diagnostiko in zdravljenje uvajal vedno nove načine in nove tehnologije.

Kot je znano, deluje Onkološki inštitut v štirih poslopjih: v stavbi A, v kateri so združeni diagnostični oddelki, kirurška dejavnost in intenzivni oddelek, v stavbi B, kjer so internistična dejavnost, lekarna, knjižnica in kuhinja, v stavbi C, kjer so radioterapevtska dejavnost, vodstvo, pedagoška dejavnost, in v stavbi D, kjer so ambulante, del diagnostične in bolnišnične dejavnosti ter naprave za obsevanje. Od vseh zgradb je za moderno onkološko diagnostiko in zdravljenje primerna samo stavba D, zgrajena v sedemdesetih letih; stavbi B in C sta stari okrog 100 let, stavba A pa več kot 200 let.

V letih 1992 in 1993 smo si zaman prizadevali, da bi dobili prostore nekdanje vojaške bolnišnice na Zaloški cesti, in postalo je jasno, da se bo Inštitut lahko širil samo na sedanji lokaciji. Ko je izšel zakon o investicijah v javne zdravstvene zavode (Ur. l. št. 19/94), so bili izpolnjeni vsi pogoji za snovanje novega onkološkega inštituta. Takoj smo ustanovili gradbeni odbor. Skupaj z odborom za investicije v javne zdravstvene zavode, ki ga vodi prim. Jože Arzenšek, naj bi usmerjal in usklajeval dejavnosti, potrebne za novogradnjo. Tako je bil že v letu 1994 izdelan medicinski program, v letu 1995 pa medicinsko programska naloga, ki je opredelila površine novega inštituta in je bila podlaga za javni natečaj za idejni projekt. Natečaj se je uspešno zaključil v začetku leta 1996 z izbiro projekta Biroja 71, podjetja, ki ima velike izkušnje z načrtovanjem bolnišnic doma in v tujini. Sledil je natečaj za izbiro izvajalca gradbenih del; končal se je leta 1996 z uspehom podjetja SCT. Dela so se uradno začela 16. julija 1997, ko je minister za zdravstvo dr. Marjan Jereb slovesno odkril temeljno ploščo.

V idejnem projektu je zasnovanih okrog 37.000 m^2 površin v več stavbah okrog parka pred stavbama C in D. Sedanjo stavbo D naj bi preuredili in nadzidali za nadstropje in pol, nasproti nje pa naj bi zrasla nova trinadstropna zgradba na stebrih, ki bi reševalnim avtomobilom omogočali dostop z zadnje strani ob Ljubljanici. Na mestu nekdanjih Tehničnih služb Kliničnega centra bo zrasla nova dvonadstropna bolnišnična stavba. Stavbo C naj bi v celoti prenovili in razširili. V parku med stavbama C in D bi omejili zunanji promet. Celotna gradnja naj bi tekla v dveh fazah: v prvi naj bi gradili za dejavnosti, ki sedaj delajo v nasjlabših okoliščinah, t.j. za dejavnosti v stavbi A in za bolnišnične dejavnosti v stavbi B, v drugi fazi pa še za vse preostale. Prva faza naj bi bila končana do leta 1999, ko je predviden začetek druge faze.

Construction of the New Institute of Oncology

Marko Snoj,
President of the Construction Committee

While the Institute of Oncology has become a central institution for cancer treatment in Slovenia, its capacity and facilities have essentially remained the same over the past 20 years. The number of cancer patients, however, has been increasing steadily and many new technologies and methods have been introduced into cancer diagnostics and treatment in that period.

The Institute's facilities consist of four buildings: Building A houses the diagnostic, surgical and intensive care departments; the medical oncology facilities, pharmacy, library and kitchen are in Building B; Building C is used for radiotherapy, administration and training; Building D provides the premises for the outpatient department, a part of the diagnostic services, hospital wards and for radiotherapy devices. Only Building D -built in the 70's- is suitable for modern oncological diagnostics and treatment. Building B and Building C are about a hundred years old, while Building A was erected over two centuries ago.

In 1992 and 1993, the Institute tried in vain to obtain the premises of the former military hospital on Zaloška street. It finally become clear that any future expansion of the Institute would have to be planned within the existing location. When the Law on Investments into Public Health Institutions (Official Gazette No. 19/94) came into force, all the requirements for the planning of a new oncological institute were fulfilled, and a construction committee was set up. Its purpose was to direct and coordinate the activities related to the new construction, in cooperation with the Public Health Investments Committee, headed by Dr. Jože Arzenšek. Thus, as early as 1994, a medical program--and a year later, a medical program study--were worked out, laying down the plans for the new institute and providing the basis for a public tender and preliminary project documentation. The tender was completed in early 1996, with the selection of the project submitted by Biro 7, a company with a great deal of experience in hospital construction. This was followed by a public tender to select the contractor for the construction works, and in 1996, SCT Company was chosen. The construction works officially got under way on 16 July 1997, when the Minister of Health laid the foundation stone.

The basic layout of the new facility provides for about 37.000 m^2 of surface area, divided into several buildings and set out around the park in front of Building C and Building D. The existing Building D will be renovated and raised by one floor and a half. Across from Building D, a new three-floor building will be erected on pillars, which will enable ambulance access from the rear, along the Ljubljanica River. The former Technical Maintenance Services of the Medical Center will give way to a new two-floor hospital building. Building C will be completely renovated and enlarged. The park between Building C and Building D will be partly closed to outside traffic. The entire construction works will be carried out in two phases: the first phase will provide the premises for the activities and services that currently operate in extremely poor conditions, i.e., the facilities in Building A and Building B; the second phase will provide for the rest of the Institute's needs. The completion of the first phase is expected in 1999 and the second phase would get under way the same year.

Rak v Sloveniji

Vera Pompe-Kirn

Republika Slovenija sodi med dežele s srednje visokima zbolevnostjo in umrljivostjo za rakom. Leta 1995 je zbolelo za rakom okoli 7.380 ljudi, od tega več moških (3.740) kot žensk (okoli 3.640), umrlo pa jih je okoli 4.580, 2.530 moških in 2050 žensk (1). Glede na te podatke lahko napovemo, da bosta do svojega 75. leta zbolela za rakom eden od treh moških in ena od štirih žensk, ki so se rodili v Sloveniji v letu 1995. S starostjo se nevarnost za zbolenje veča: do 50. leta starosti bo zbolel za rakom le eden od 27 moških in ena od 22 žensk. Do te starosti zboleva namreč za rakom več žensk kot moških.

Rak lahko prizadene razne organe, nekatere pogosteje, druge redkeje. Slika 1 kaže najpogostejše rake moških in žensk v Sloveniji v letu 1995.

Število vseh zbolelih za rakom še vedno narašča, vendar ne zaradi enakomernega porasta vsake od rakavih bolezni. Še se povečuje incidenca kožnega raka, rakov ledvic, debelega črevesa in danke, rakov ustne votline in žrela ter mehurja, in to pri obeh spolih, pri ženskah incidenca raka dojk in pljuč, pri moških pa incidenca raka mod in prostate. Tudi zbolevnost za malignim melanomom in ne-Hodgkinovimi limfomi pri obeh spolih naglo narašča. Pri večini drugih rakov je porast zmeren, pri želodčnem raku in raku žolčnika pa dolgoletni podatki kažejo trend upadanja incidence, podatki zadnjih deset let pa njeno ustaljenost. Zbolevnost za rakom materničnega vratu se je manjšala do leta 1979, od takrat do leta 1994 je bila bolj ali manj ustaljena, v letu 1995 pa smo ponovno registrirali 211 novih primerov (20,6/100.000 žensk) – skoraj toliko kot zadnjikrat leta 1974, ko je bilo novih primerov 204 (22,2/100.000 žensk). Število novih primerov se je povečalo v starosti 30–54 let, žal ne na račun večjega števila bolezni s stadijem IA. Med 211 zbolelimi leta 1995 jih je bilo 126 starih manj kot 50 let in 60 manj kot 40 let. Le pri 26 od slednjih je bila bolezen odkrita v stadiju IA.

Med raki, za katerimi zboleva iz leta v leto več ljudi, so tudi tisti, katerih nastanek je močno povezan s kajenjem (pljučni rak, rak grla, rak mehurja in ledvic), še prav posebno pa tisti, ki jih zasledimo pri kadilcih, ki popijejo tudi preveč alkohola (raki jezika, ustne votline, žrela, grla, požiralnika, pa tudi trebušne slinavke in jeter). Zaskrbljuje porast "pivskih" rakov v srednjih letih starosti, ki je bolj strm kot pri starejših; opozarja namreč, da je delež kadilcev pa tudi alkoholikov med mladimi v Sloveniji precejšen.

Zemljevidi incidence raka (2) kažejo, da je tako zaradi različne starostne strukture kot zaradi različne družbeno-gospodarske razvitosti in s tem različnih življenjskih navad zbolevanje po posameznih upravnih enotah Slovenije različno.

Ker je pri nas pričakovana življenjska doba krajša kot, na primer, v Italiji in Avstriji, pri nas problem raka še ni tako velik, kot je v teh sosednjih državah. Za Slovenijo je še značilna dokaj visoka zbolevnost za želodčnim rakom in raki ustne votline in žrela, medtem ko je pri bolj razvitih sosedah več raka dojk in raka debelega črevesa. S staranjem prebivalcev Slovenije, z večanjem pričakovane življenjske dobe in s pomikom številno najmočnejše generacije rojenih okoli leta 1950 v starejše starostne skupine, lahko v naslednjih dvajset letih pričakujemo večji letni porast števila novih bolnikov. Pri raku z ustaljeno incidenčno stopnjo, želodčnem raku, se bo tako število primerov do leta 2000 nekoliko zmanjšalo, potem pa se bo ponovno nekoliko povečalo.

Objavljeni (3) in še neobjavljeni podatki kažejo, da se 5-letno preživetje bolnikov z rakom v Sloveniji povečuje. Med nami je vedno več ljudi, ki so raka preživeli. Konec leta 1995 jih je bilo več kot 38.400. Mnogi med njimi živijo in delajo že več kot deset let od dneva, ko so jim v zdravstveno kartoteko zapisali diagnozo rak. Razveseljivi so predvsem podatki o nadaljnjem izboljšanju preživetja mladih bolnikov. Od tistih, ki so zboleli v letih 1988–92 za

Cancer in Slovenia

Vera Pompe-Kirn

The Republic of Slovenia is one of the countries with moderate cancer incidence and mortality. In 1995, there were about 7,380 new cancer cases registered, of these more in males (3,740) than in females (3,640), while some 4580 people died of cancer, of these 2530 males and 2050 females (1). On the basis of these data it can be estimated that every third man and every fourth woman born in Slovenia in 1995 will develop cancer up to their 75th year of age. The risk of incidence increases by age: thus it is estimated that only every 27th man and every 22nd woman will be affected by cancer up to their 50th year of age. Females of that age are more prone to cancer than males.

Cancer can affect different organs, the frequency of involvement being site dependent. Figure 1 shows the most frequent cancer sites of males and females in Slovenia in 1995.

The total number of all cancer cases is still increasing, although not as a result of a steady increase in the incidence of each individual cancer site. Thus, the incidence of lung, skin, kidney, colon and rectum cancers as well as of cancers of the oral cavity, pharynx and bladder is still on the increase in both sexes, while breast cancer is on the increase in females, and testicular and prostate cancer in males. Also, the incidence of malignant melanoma and non-Hodgkin lymphoma is experiencing a steep increase in both sexes. A majority of other cancers show a moderate increase, while data collected over many years for the incidence of stomach and gall bladder cancers show a decreasing trend and the data for the past decade indicate a leveling-out. The incidence of cervical cancer was decreasing till 1979 and remained relatively stable till 1994. Iin 1995, however, 211 new cases were registered (20.6 / 100,000 women), i.e. almost as many as in 1974, when there were 204 new cases (22.2 / 100,000 women). The number of new cases was found to have increased in the age group 30–54 years. Unfortunately, this was not on the account of a higher number of cases with stage I-A of the disease. Among the 211 patients detected in 1995, 126 were younger than 50 years, and 60 were younger than 40 years. In only 26 of the latter cases, the disease was detected in stage I-A.

Among the cancers which claim more and more victims every year are also those which are etiologically closely related to smoking (cancers of the lung, larynx, bladder and kidneys), and particularly cancers most frequently detected 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 steeper than in the older population, raises special concern. It calls attention to the high rate of alcoholics as well as smokers among the youth of Slovenia.

The maps of cancer incidence (2) show that cancer incidence for particular Slovenian communities varies, which can be attributed to a different age structure, as well as to different stage of socioeconomic development and consequently different life habits.

In comparison with the neighboring countries, the problem of cancer in Slovenia, with a shorter life expectancy, does not appear so urgent as for example in Italy and Austria. Slovenia is still characterized by a relatively high incidence of cancers of the stomach and oral cavity, whereas our more developed neighbors are more frequently affected by cancers of the breast and colon. Considering the aging of the Slovenian population, the increased life expectancy, and the shift of the "numerically" strongest generation born around 1950 into the older age groups, a higher annual increase in the number of new cancer patients can be expected in the following two decades. In stomach cancer, i.e. a cancer with a stable incidence rate, it is expected that by the year 2000 the number of cases will slightly decrease, followed by a slight increase.

rakom moda, jih je 91% preživelo pet let, od bolnikov s Hodgkinovo boleznijo 80% in prav tako 66% od otrok z levkemijo. Žal pa sodijo prav "kadilski in pivski" raki med tiste, pri katerih se kljub prizadevanju zdravnikov po vsem svetu preživetje le počasi izboljšuje, in to predvsem zaradi pozne diagnoze bolezni. Pri pljučnem raku, najpogostnejšem raku kadilcev, je preživelo pet let 8% vseh bolnikov. Od tistih, ki so jim to bolezen našli še omejeno in so bili operirani, pa jih je 5 let preživelo 49%.

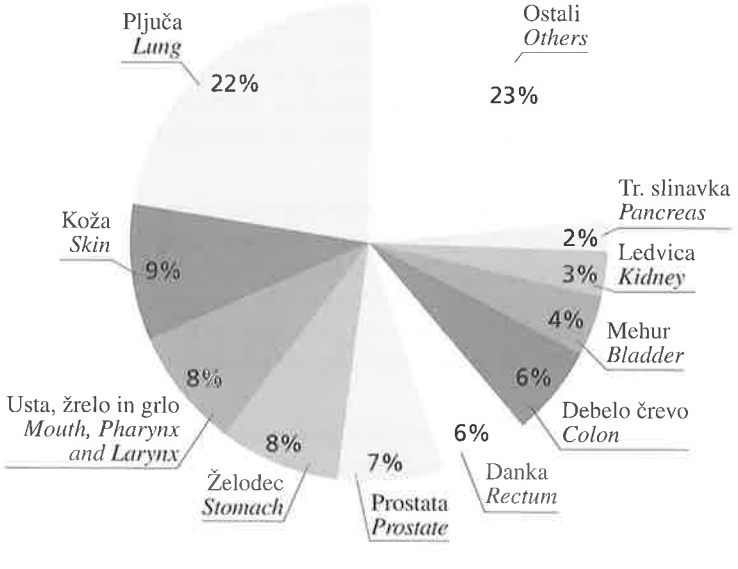
1. Incidenca raka v Sloveniji 1995. Ljubljana: Onkološki inštitut, Register raka za Slovenijo, 1997.

2. Pompe-Kirn V, Žakelj-Primic M, Ferligoj A, Škrk J. Zemljevidi incidence raka v Sloveniji. Ljubljana: Onkološki inštitut, Register raka za Slovenijo, 1992.

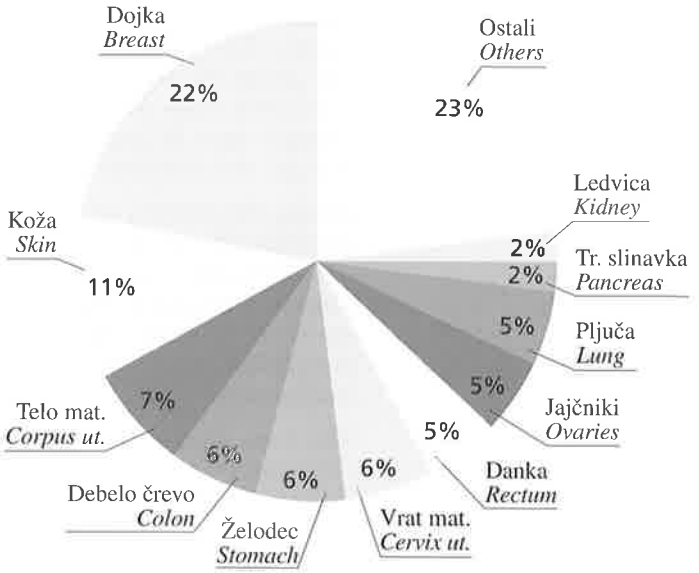
3. Pompe-Kirn V, Zakotnik B, Benulič T, Volk N, Škrk J. Preživetje bolnikov z rakom v Sloveniji. Ljubljana: Onkološki inštitut, Register raka za Slovenijo, 1997.

Najpogostejše lokacije raka po spolu – Slovenija 1995

The leading cancer sites by sex – Slovenia 1995



Moški *Males*



Ženske *Females*

According to the published (3) and unpublished data, the 5-year survival of cancer patients in Slovenia is improving. There is an increasing number of people who have managed to live out their cancers. By the end of 1995 there were over 38,400 of them. Many of these people have been enjoying an active life for well over ten years from the day when they were diagnosed with cancer. The evidence on further improvement of younger patients' survival is encouraging. Thus, 91% of those who developed testicular cancer in the period between 1988 and 1992 survived five years; the same survival results were achieved in 80% of patients with Hodgkin's disease, and in 66% of children with leukemia. Unfortunately, particularly in the cancers typical of smokers and alcoholics the overall survival rates worldwide seem to be improving too slowly, despite the efforts of the medical profession. This is mainly due to late diagnosis. Thus, only 8% of all patients with lung cancer, which is the most frequent cancer in smokers, have survived five years. However, the five-year survival of those in whom the disease had been diagnosed and treated by surgery when still in a localized stage was 49%.

Razširjeni strokovni kolegij za onkologijo *Slovenian Board for Oncology*

Razširjeni strokovni kolegiji so strokovni organi, sestavljeni iz priznanih strokovnjakov posamezne medicinske stroke. V sodelovanju z Zdravstvenim svetom in Medicinsko fakulteto oblikujejo strokovno doktrino za svoje področje in spodbujajo strokovni razvoj ter ga usmerjajo, po potrebi z obvezujočimi navodili. Oblikujejo se pri klinikah in inštitutih. Na Onkološkem inštitutu je sedež Razširjenega strokovnega kolegija za onkologijo, ki ga sestavljajo:

Slovenian Medical Boards are professional bodies consisting of renowned experts of a particular branch of medicine. In collaboration with the National Medical Council and the Faculty of Medicine, they form the doctrine of their field of expertise, encourage its development and take part in the supervision of its professional activities. They are established at University departments and institutes. Thus, the Slovenian Board of Oncology is affiliated with the Institute of Oncology, and consists of the following members:

Predsednik / *Chairman:*	prof. dr. **Zvonimir RUDOLF,** dr. med. / *MD, PhD,*	Onkološki inštitut, Ljubljana
Člani / *Members:*	prof. dr. **Marija AUERSPERG,** dr. med. / *MD, PhD,*	Onkološki inštitut, Ljubljana
	prim. **Jože AUŽNER,** dr. med. / *MD,*	Splošna bolnišnica Celje
	doc. dr. **Tanja ČUFER,** dr. med. / *MD, PhD,*	Onkološki inštitut, Ljubljana
	prof. dr. **Andrej DEBELJAK,** dr. med. / *MD, PhD,*	Inštitut za pljučne bolezni, Golnik
	prof. dr. **Rastislav GOLOUH,** dr. med. / *MD, PhD,*	Onkološki inštitut Ljubljana
	doc. dr. **Borut GORIŠEK,** dr. med. / *MD, PhD,*	Splošna bolnišnica Maribor
	prim. **Nikolaj KINKELA,** dr. med. / *MD,*	Splošna bolnišnica Izola
	prim. **Vasja KLAVORA,** dr. med. / *MD,*	Splošna bolnišnica Dr. F. Derganca Nova Gorica
	doc. dr. **Hotimir LEŠNIČAR,** dr. med. / *MD, PhD,*	Onkološki inštitut, Ljubljana
	prof. dr. **Jurij LINDTNER,** dr. med. / *MD, PhD,*	Onkološki inštitut, Ljubljana
	prim. **Leopold MORELA,** dr. med. / *MD,*	Splošna bolnišnica Novo mesto
	doc. dr. **Maja PRIMIC-ŽAKELJ,** dr. med. / *MD, PhD,*	Onkološki inštitut, Ljubljana
	prof. dr. **Stane REPŠE,** dr. med. / *MD, PhD,*	Gastroenterološka klinika, Klinični center, Ljubljana
	prof. dr. **Lojze ŠMID,** dr. med. / *MD, PhD,*	Otorinolaringološka klinika, Klinični center, Ljubljana

Članstvo zdravnikov Onkološkega instituta v drugih razširjenih strokovnih kolegijih (RSK)

Membership of Physicians of the Institute of Oncology – in Other Slovenian Medical Boards (SB)

prim. **Drago Ažman,** dr. med., / *MD,*	RSK za anesteziologijo in reanimatologijo, Stalna strokovna skupina za terapijo bolečine / *SB for Anesthesiology and Resuscitation, Permanent Group of Experts for Treatment of Pain*
Lučka Baraga, dr. med., / *MD,*	RSK za anesteziologijo in reanimatologijo / *SB for Anesthesiology and Resuscitation*
prof. dr. **Rastko Golouh,** dr. med., *MD, PhD,*	RSK za patologijo in sodno medicino / *SB for Pathology and Forensic Medicine*
Breda Jančar, dr. med., / *MD,*	RSK za radiologijo / *SB for Radiology*
mag. **Igor Kocijančič,** dr. med., / *MD, MSc,*	RSK za radiologijo / *SB for Radiology*
doc. dr. **Maja Primic-Žakelj,** dr. med., / *MD, PhD,*	RSK za varovanje zdravja / *SB for Health Protection*
doc. dr. **Marko Snoj,** dr. med., / *MD, PhD,*	RSK za kirurgijo / *SB for Surgery*
prof. dr. **Marija Us-Krašovec,** dr. med., / *MD, PhD,*	RSK za patologijo in sodno medicino / *SB for Pathology and Forensic Medicine*
Alenka Vodnik-Cerar, dr. med., / *MD,*	RSK za transplantacijo, Stalna strokovna komisija za transplantacijo kostnega mozga / *SB for Transplantation, Permanent Commission for Bone Marrow Transplantation*

Svet Onkološkega inštituta Ljubljana / *Council of the Institute of Oncology*

Vlada Republike Slovenije	*Representatives of the Government of the Republic of Slovenia:*	prim. dr. **Dunja Piškur Kosmač,** dr. med. / *MD* **Elda Gregorič Rogelj,** dipl. oec. / *BSc Oec* prim. dr. **Janez Kuhelj,** dr. med. / *MD, PhD* prof. dr. **Primož Rode,** dr. med. / *MD, PhD* prof. dr. **Miha Žargi,** dr. med. / *MD, PhD* **Ljubiša Lukič,** dr. med. / *MD* prim. **Marija Vegelj Pirc,** dr. med. / *MD* asist. mag. **Janez Eržen,** dr. med. / *MD, MSc*
Mestni svet Mestne občine Ljubljana	*Representatives of the Town of Ljubljana:*	prof. dr. **Marica Marolt Gomišček,** dr. med. / *MD, PhD*
Zavod za zdravstveno zavarovanje Slovenije	*Representatives of the Institute of Health Insurance of Slovenia:*	**Nada Šefman**
Delavci Onkološkega inštituta Ljubljana	*Representatives of the Institute of Oncology:*	doc. dr. **Peter Albert Fras,** dr. med., predsednik sveta zavoda / *MD, PhD, the president of the Council* **Gorazd Noč,** dipl. ing. / *BSc Math* dr. **Ana Pogačnik,** dr. med. / *MD, PhD* **Zdenka Erjavšek,** VMS / *RN* **Jelica Piškur,** VMS / *RN*

Strokovni svet *Professional Board*

Strokovni svet se sestaja dvakrat mesečno. Sestavljajo ga naslednji člani: direktor Inštituta, direktor za strokovno delo, direktor za raziskovalno dejavnost in izobraževanje, direktor zdravstvene nege ter vodje diagnostičnih in kliničnih služb in oddelkov.

Strokovni svet se ukvarja s problematiko načrtovanja in nadzorovanja strokovnega dela, nabave medicinske opreme, izobraževanja zdravstvenega osebja, vključno z določanjem pogojev za specializacijo iz onkologije. Med pristojnosti sveta sodi tudi nadzor kvalitete strokovnega dela.

The Professional Board meets twice monthly and consists of the following members: director of the Institute, medical director, director for research and education, nursing director and heads of diagnostic and clinical departments.

The Board is concerned with issues such as planning and control of professional work, medical equipment purchase, education of medical staff, including specification of conditions for residency in oncology. The range of Board's responsibilities also includes quality control assurance.

Raziskovalno-izobraževalni kolegij

V raziskovalno-izbraževalnem kolegiju so vsi inštitutski strokovnjaki z doktoratom znanosti in vodje oddelkov. Kolegij se sestaja po potrebi, vendar ne manj kot enkrat na tri mesece. Na delovnih sestankih o vprašanjih strategije raziskovalnih projektov se sestajajo samo vodje projektov.

Board for Research and Education

The Board consists of all the professionals with PhD and Heads of the departments. The board meets whenever necessary, however not less than once in three months. Whenever implementation policies of research projects are dealt with, the attendance at the board meeting is limited to principal investigators of the research projects.

Komisija za strokovno oceno protokolov kliničnih raziskav

Komisija je odgovorna za strokovni pregled in oceno protokolov kliničnih raziskav, ki potekajo na Onkološkem inštitutu v Ljubljani. Komisijo sestavlja šest članov, zdravnikov Onkološkega inštituta, po en specialist patolog, rentgenolog, kirurg in radioterapevt ter dva specialista internista kemoterapevta.

Protocol Review Board

The Board is responsible for technical revision and expert evaluation of the protocols related to the clinical research studies which are currently being carried out at the Ljubljana Institute of Oncology. The Board has six members, all of them physicians at the Institute, covering the following speciality fields: pathology (1 member), radiology (1 member), surgical oncology (1 member), radiotherapy (1 member) and medical oncology (2 members).

Etična komisija

Etična komisija sestoji iz članov, ki so zaposleni na Onkološkem inštitutu, kjer delajo na različnih področjih – pri zdravljenju, diagnostiki, raziskovanju in pri negi bolnikov, in zunanjih članov, ki zastopajo področja filozofije, teologije, prava in novinarstva. Komisija razpravlja o teoretičnih izhodiščih in praktičnih priporočilih v zvezi z etiko strokovnega in raziskovalnega dela na inštitutu. Je samostojna v svojih odločitvah, vendar tesno povezana s Komisijo za medicinsko etiko pri Ministrstvu za zdravstvo Republike Slovenije.

Committee for Medical Ethics

The Committee membership consists of the in-house staff, engaged in different fields of oncology, such as cancer treatment, diagnostics, research and nursing care, as well as of the members not affiliated with the Institute and representing interests, such as philosophy, theology, law and journalism. The Committee is concerned with theoretical and practical questions related to the ethical issues arising from professional and research work at the Institute. It is an independent body, at liberty to make decisions, yet closely associated with the Medical Ethics Committee at the Ministry of Health of the Republic of Slovenia.

Imenovanja in nagrade *Nominations and Awards*

Naziv višji svetnik, ki ga podeljuje Ministrstvo za zdravstvo Republike Slovenije za aktivni prispevek na strokovnem, pedagoškem in raziskovalnem področju, so prejeli:

The Ministry of Health of the Republic of Slovenia conferred the title of Senior Advisor on the following persons who distinguished themselves in the field of their expertise, research and education:

7. junija 1995 / *7 June 1995*:
prof. dr. **Marija AUERSPERG,** dr. med. / *MD, PhD*
7. junija 1995 / *7 June 1995*:
prof. dr. **Marija US-KRAŠOVEC,** dr. med. / *MD, PhD*
30. decembra 1997 / *30 December 1997*:
prof. dr. **Rastko GOLOUH,** dr. med. / *MD, PhD*

Nagrade Republike Slovenije za znanstveno-raziskovalno delo, ki jih podeljuje Vlada Republike Slovenije, so v novembru 1995 prejeli:

The Award of the Republic of Slovenia for Scientific Research was received in November 95 by:

Prof. dr. **Gregor SERŠA** za vrhunske dosežke na področju elektrokemoterapije (in akademik prof. dr. **Lojze Vodovnik** ter prof. dr. **Damijan Miklavčič**). / for outstanding achievements in the field of electrochemotherapy (shared with co-workers: Prof. **Lojze Vodovnik,** *PhD*, and Prof. **Damijan Miklavčič,** *PhD*).

Državni program nadzorovanja raka

Maja Primic-Žakelj,
Tanja Čufer

Onkološki inštitut in Ministrstvo za zdravstvo sta 27. novembra 1996 organizirala Posvetovanje o Državnem programu nadzorovanja raka. Namen posvetovanja, ki so se ga udeležili nacionalni koordinatorji posameznih programov SZO v Sloveniji, vodilni strokovnjaki s področja diagnostike in zdravljenja rakavih bolezni in zdravstvene nege, je bil pregledati aktivnosti na vseh področjih nadzorovanja raka, od primarne preventive do zdravljenja in rehabilitacije, in ugotoviti, kje in kako jih izboljšati, da bi do leta 2000 za 10% zmanjšali umrljivost za rakom pred 65. letom starosti. Posvetovanja se je udeležil tudi Dr. R. Sankaranarayanan, predstavnik programa SZO za nadzorovanje raka, ki je posebej govoril o tistih področjih nadzorovanja raka, na katerih je mogoče z nekaj več organiziranega dela doseči največji učinek. Gradivo je bilo objavljeno v zborniku, ki je izšel ob posvetovanju. Poročilo in sklepe je februarja 1997 sprejel Razširjeni strokovni kolegij za onkologijo, poslani pa so bili vsem ustanovam, odgovornim za njihovo uresničevanje v obravnavanih dejavnostih s področja nadzorovanja raka.

Dejavnosti s področja nadzorovanja raka so v Sloveniji opredeljene v Zakonu o zdravstvenem varstvu, sprejetem leta 1992, strategija varovanja zdravja pa je začrtana v Nacionalnem programu zdravstvenega varstva RS – Zdravje za vse do leta 2000.

S področja primarne preventive raka smo pregledali aktivnosti, ki potekajo za zmanjševanje izpostavljenosti nevarnostnim dejavnikom, ki jih obravnava tudi Evropski kodeks proti raku (kajenje, prekomerno pitje alkoholnih pijač, prehrana, onesnaženost delovnega in življenjskega okolja in prekomerno sončenje) in sprejeli sklepe, katerih uresničevanje bi pripomoglo k zmanjšanju zbolevnosti za pogostejšimi raki v Sloveniji.

V primarni preventivi raka imata pomembne naloge izobraževanje strokovnjakov in javnosti ter zakonodaja, torej širša družba, ne le zdravstvo. Kljub temu so sodelujoči nakazali več možnosti za izboljšanje tudi v primarnem zdravstvenem varstvu.

Sekundarna preventiva je čim prejšnje odkrivanje raka ali njegovih predstopenj. Poleg čim zgodnejše diagnostične pojasnitve sumljivih simptomov ali znakov sodijo v njeno domeno tudi preproste preiskave ali testi, ki med ljudmi brez kliničnih težav odkrijejo tiste, pri katerih je velika verjetnost, da imajo predinvazijsko ali zgodnjo invazijsko obliko raka. Take teste je mogoče opraviti pri rednih zdravniških pregledih ali organizirano, z vabili na pregled ciljnim skupinam prebivalstva (organizirano presejanje).

Pregledali smo možnosti za presejanje za raka materničnega vratu, dojk, debelega črevesa in danke, prostate, zgornjih dihalnih in prebavnih poti in pljučnega raka.

Zaključili smo, da je treba:

- izpeljati organizirano presejanje za raka materničnega vratu v skladu s programom, ki ga je
- sprejel Zdravstveni svet;
  postopno uvajati program presejanja za raka dojk. Določiti je treba politiko presejanja, plačevanje, pripraviti standarde za delovanje ambulant za presejanje in diagnostičnih centrov za bolezni dojk, pripraviti dopolnilno izobraževanje rentgenologov za odčitavanje
- mamogramov in zagotoviti strokovni nadzor;
  za zgodnje odkrivanje drugih rakov pripraviti enotne smernice za obseg preventivnih pregledov v osnovnem zdravstvenem varstvu.

Pomembnejši zaključki in sklepi v okviru sekcij o diagnostiki rakastih bolezni in zdravljenju bolnikov z rakom v Sloveniji se nanašajo na:

- dodiplomsko in podiplomsko izobraževanje zdravstvenih delavcev na področju onkologije;
- načelo multidisciplinarnosti diagnostike, zdravljenja in zdravstvene nege ljudi z rakom, kjer je treba izdelati enotne doktrine in standarde za zdravljenje posameznih rakastih bolezni,

National Cancer Control Program

Maja Primic-Žakelj,
Tanja Čufer

On November 27, 1996, a conference on the National Cancer Control Program was organized by the Institute of Oncology and the Ministry of Health. The conference was attended by the national coordinators of individual WHO programs in Slovenia, leading experts in the diagnosis and treatment of cancer and oncology nursing care. They met with the aim to review the ongoing activities in all the domains of cancer control, from primary prevention to treatment and rehabilitation, in order to find out where and in what way these could be improved so that cancer morbidity before the 65th year of age could be reduced by 10% till the year 2000. The meeting was attended by Dr. R. Sankaranarayanan, representative of WHO Cancer Control Program. He pointed out certain fields of cancer control where the greatest improvement can be achieved through a better organization of work. The lectures were published in the proceedings of the conference. In February 1997, the report and conclusions of that meeting were confirmed by the Slovenian Board of Oncology, and forwarded to all the institutions responsible for their implementation in the pertinent fields of cancer control.

In Slovenia, cancer control activities are defined by the Law on Health Care, which came into force in 1992, while the strategy of health care has been outlined in the National Health Plan of the Republic of Slovenia "Health for All by the year 2000".

In the field of primary cancer prevention, we reviewed the activities aimed at reducing the exposure to risk factors as defined by the European Code against Cancer (smoking, alcohol abuse, diet, occupational exposure, environmental pollution and excessive sunbathing). Decisions were reached which should contribute towards decreasing the incidence of most frequent cancers in Slovenia. Although in the primary cancer prevention the role pertinent to legislation and the education of professionals and lay population concerns the whole society rather than health service alone, the possibilities of improvement in the primary health care have been pointed out. Secondary cancer prevention refers to early detection of cancer and precancerous conditions. Apart from timely diagnosis of any suspicious symptoms or signs, it also comprises simple examinations or tests which are carried out in asymptomatic population with the aim of detecting individuals at an increased risk of having a pre-invasive or early invasive form of cancer. Such tests can be performed either during routine medical checks, or as organized population screening, by invitations to target population groups.

The possibilities of screening for cancers of the uterine cervix, breast, colon and rectum, prostate, upper respiratory and digestive tracts, and the lung were reviewed, and the following conclusions were drawn:

- *an organized screening for cervical cancer should be carried out in accordance with the Program that has been confirmed by the National Health Committee;*
- *step-by-step implementation of breast cancer screening program. Screening policy, financing, standards for functioning of screening clinics and diagnostic centers for diseases of the breast should be determined, and additional education of radiologists in mammography reading, as well as adequate control, ensured;*
- *uniform guidelines for the range of preventive examinations to be performed within the program of primary health care should be prepared.*

More relevant conclusions and decisions reached within the framework of sections on the diagnosis and treatment of cancer patients in Slovenia refer to the following:

- *undergraduate and postgraduate education of medical staff in the field of oncology;*
- *multidisciplinary approach to the diagnosis, treatment and nursing care of cancer patients, including uniform doctrines and standards for the treatment of individual cancers, nursing*

zdravstvene nege, paliativne oskrbe onkološkega bolnika in podpornega zdravljenja bolnikov z rakom. Poskrbeti je treba za prenos doktrin v vsakodnevno delo z bolniki po vsej državi in zagotoviti strokovni nadzor nad izvajanjem doktrinarnih stališč. Doktrine morajo biti po vsebini preproste, prilagojene razpoložljivemu osebju in opremi. Obsegati morajo celotno oskrbo bolnika z rakom. Standardi morajo opredeljevati tudi minimalno zahtevano strokovno izobrazbo in znanje osebja za diagnostične in terapevtske posege kot tudi osebja za zdravstveno nego.

Celostni rehabilitaciji ljudi z rakom bo treba v naslednjih letih posvetiti več pozornosti. Vse tri veje rehabilitacije, medicinska, delovna in psihosocialna, med seboj niso dovolj povezane in vsem niso enako dostopne. Zagotoviti bi bilo treba financiranje za ustanovitev rehabilitacijskega centra. Od sprejetih sklepov se bo na področju sekundarne preventive leta 1998 začel uresničevati sklep o organiziranem presejanju za raka materničnega vratu, in sicer z začetkom pilotne študije (projekt ZORA). Pripravljeni so bili standardi za delovanje ambulant za presejanje za raka dojk, preventivni pregledi z mamografijo po 50. letu starosti pa so zaenkrat uzakonjeni kot pravica iz obveznega zdravstvenega zavarovanja.

Na področju izobraževanja medicinskih sester se pripravlja predlog za izobraževanje iz onkologije in onkološke zdravstvene nege za zdravstvene tehnike, ki naj bi bilo vključeno v osnovni program. Za rentgenologe bo organizirana šola mamografske diagnostike, za terapevte pa šola o raku dojk. Na področju diagnostike in zdravljenja so bila izdelana priporočila za celostno obravnavo bolnikov z rakom prebavil, priporočila za zdravljenje bolnic z rakom dojk, pripravljajo pa se priporočila za paliativno zdravljenje onkoloških bolnikov.

care, palliative care and supportive therapy of cancer patients; nation-wide implementation of these doctrines in daily clinical practice, and adequate control to ensure that these are strictly respected and observed. The doctrines must be simple and clear, adjusted to the staff and equipment available, and must cover comprehensive cancer care. The standards must define the minimum education requirements and experience of the personnel performing diagnostic and therapeutic procedures, including nursing staff.

In the following years, more attention should be paid to comprehensive rehabilitation of cancer patients. The three aspects of rehabilitation, i.e. medical, occupational, psychological and social, are insufficiently incorporated and are not equally accessible to everyone. Establishment of funds for a rehabilitation center should be ensured.

Of the decisions made in the field of secondary cancer prevention, we have started to carry into effect the decision on organized screening for cervical cancer by introducing a pilot study within the framework of ZORA project. Standards for the operation of centers for breast cancer screening were worked out, and the right to mammography checks after the age of 50 was ensured by legislation as one of the compulsory health insurance rights.

In the field of education in nursing care, a proposal is being prepared that the education in oncology and oncological nursing care for medical technicians should be incorporated into the basic education program. In 1998 a school of mammography will be set up for radiologists, while a similar seminar, i.e. a school of breast cancer, will also be organized for clinicians. In the field of diagnosis and treatment, recommendations for a comprehensive care of patients with gastrointestinal cancer were worked out along with the recommendations for the treatment of breast cancer patients, while recommendations for palliative treatment of oncological patients are under way.

Državni program zgodnjega odkrivanja predrakavih sprememb materničnega vratu v Sloveniji ZORA – pilotni projekt

Maja Primic Žakelj

Kljub temu, da je Slovenija ena redkih dežel, ki je po letu 1960 omogočila vsem ženskam redne preventivne ginekološke preglede in preglede citoloških brisov, se pri nas zbolevanje za rakom materničnega vratu (RMV) od leta 1980 ne zmanjšuje več, pri mlajših od 54 let pa se celo povečuje. Vsako leto za RMV zboli okrog 170 žensk, leta 1995 jih je zbolelo več kot 200. Analize kažejo, da približno polovica slovenskih žensk ne hodi na redne ginekološke preglede.

Na Onkološkem inštitutu (v sodelovanju z Ministrstvom za zdravstvo, Zavodom za zdravstveno zavarovanje Slovenije in Ginekološko kliniko) pripravljamo državni program zgodnjega odkrivanja predrakavih sprememb materničnega vratu (DP ZORA). Zbolevnost in umrljivost za RMV želimo čim prej zmanjšati za najmanj 15% tako, da bo vsaj 80% žensk v starosti 25–64 let imelo pregledan bris v obdobju treh let. Program, pripravljen v skladu s smernicami Evropske skupnosti, bo obsegal: vzpostavitev centralne evidence brisov s povezavo vseh laboratorijev za ginekološko citopatologijo, poenotenje terminologije in povezavo izvidov brisov z registrom žensk in ciljano pošiljanje vabil na ginekološki pregled in test PAP tistim ženskam, ki ju ne bodo imele narejene v zadnjih treh letih. Pripravljeni bodo tudi standardi za zagotavljanje in nadziranje kakovosti vseh postopkov.

Program naj bi v celi državi stekel leta 2000, leta 1998 pa se bo pričelo pilotno preverjanje metode v ljubljanski zdravstveni regiji. V pilotnem projektu sodelujejo laboratoriji za ginekološko citopatologijo in ginekologi, ki delajo v zdravstvenih domovih oz. zasebno s koncesijo s tega področja.

National Program of Early Cervical Cancer Detection in Slovenia – a Pilot Study

Maja Primic Žakelj

Despite the fact that Slovenia is one of the few countries where regular preventive gynecological checks and cytological smear examination have been available to all women since 1960, the incidence of cervical cancer has stopped decreasing since 1980. Moreover, in women under 54 years of age it has been on the increase. There will be approximately 170 new CC cases detected every year; This number exceeded 200 in 1995 alone. The analyses show that about a half of Slovenian women fail to attend regular gynecological checks.

The Institute of Oncology is preparing (in cooperation with the Ministry of Health, Institute of Health Insurance of Slovenia, and Gynecology Clinic) a national program of cervical cancer screening (ZORA). The aim of this screening program is to reduce the CC morbidity and mortality by at least 15%, so that during a three year period at least 80% of women in the 25 to 64 age group will undergo regular smear checks. The program, which is prepared in keeping with the guidelines of the European Union, will comprise the following: central data base of smear findings, pooling information from all laboratories of gynecological cyto-pathology; uniform terminology, and linkage of smear findings with female population registry, and finally, invitations to a gynecological check and PAP test sent to those women who failed to undergo these within the past three years. Standards for quality assurance and control of all the procedures will be worked out.

While the nation-wide program should be under way by the year 2000, pilot testing of the method in the Ljubljana region will begin in 1998. The pilot study is carried out in cooperation with the laboratories for gynecological cyto-pathology and gynecologists operating at regional health centers, or as private gynecological clinics with concession in this field of activity.

Vodstvo inštituta *Board of Directors*

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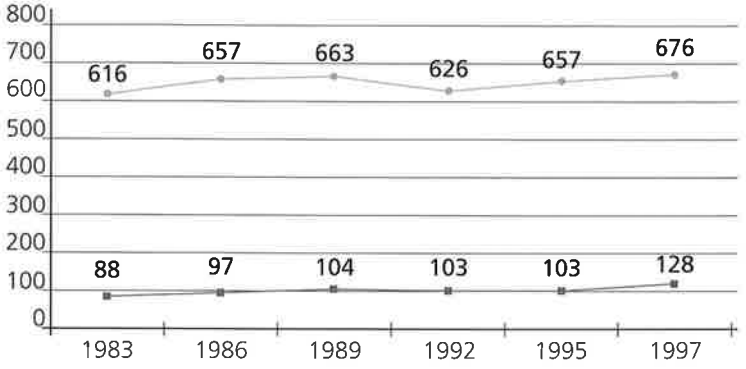
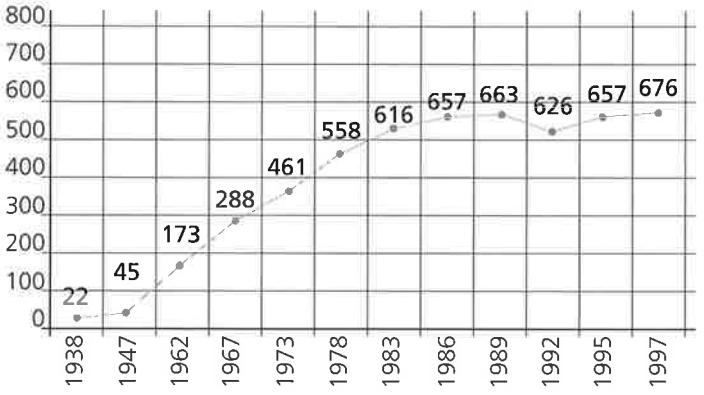


Vsi zaposleni

Zdravniki in zdr. sodelavci



Gibanje števila zaposlenih

Onkološki inštitut v številkah

Delavci inštituta – stanje 31. 12. 1997

Zdravniki			**107**
klinične službe		**61**	
diagnostične službe		**21**	
ostale dejavnosti		**4**	
mladi raziskovalci		**14**	
sekundariji		**7**	
Zdravstveni sodelavci z visoko izobrazbo		**18**	**21**
mladi raziskovalci		**3**	
Medicinske sestre			**220**
bolnišnična dejavnost	VMS	**39**	
	SMS	**111**	
ostale dejavnosti	VMS	**40**	
	SMS	**30**	
Ostali zdravstveni delavci in sodelavci			**91**
višja izobrazba		**58**	
srednja izobrazba		**33**	
Administrativni delavci v zdravstveni dejavnosti			**37**
Bolniške strežnice			**93**
v bolnišnični dejavnosti		**56**	
ostale dejavnosti		**37**	
Delavci v servisni dejavnosti			**53**
Delavci v upravi			**54**
Skupaj			**676**

Bolniške postelje

Radioterapija z onkologijo	**151** postelj
Onkološka interna medicina	**82** postelj
Onkološka kirurgija	**45** postelj
Onkološka ginekologija	**40** postelj
Intenzivni oddelek	**18** postelj

Institute of Oncology in Figures

Personnel – Status on December 31, 1997

Physicians			**107**
Clinical Departments		**61**	
Diagnostic Departments		**21**	
Other Activities		**4**	
Junior Research Fellows		**14**	
Doctors-Trainees		**7**	
College-Level Educated Professional and Research Associates		**18**	**21**
Junior Research Fellows		**3**	
Nurses			**220**
In-Patient Services	*RN*	**39**	
	TN	**111**	
Other Activities	*RN*	**40**	
	TN	**30**	
Other Health Professionals and Co-Workers			**91**
College Education		**58**	
Secondary Education		**33**	
Hospital Clerks			**37**
Orderlies			**93**
Hospital Services		**56**	
Other Activities		**37**	
Maintenance and Ancillary Service Employees			**53**
Administration Personnel			**54**
Total			**676**

Room Capacities

Radiotherapy with Oncology	**151** *beds*
Medical Oncology	**82** *beds*
Surgical Oncology	**45** *beds*
Gynaecological Oncology	**40** *beds*
Intensive Care	**18** *beds*

Ambulantno in hospitalno delo v letu 1997

Turnover of Outpatient and Inpatient Departments in 1997

Število ambulantnih pregledov	No. of Outpatient Examinations	**67.862**
prvi pregledi	First Examinations	**8.364**
ponovljeni pregledi	Follow-Up Examinations	**59.498**
Število hospitaliziranih bolnikov	No. of Hospitalized Patients	**9.215**
Število oskrbnih dni	No. of Inpatient Days	**102.231**
Povprečna ležalna doba	Average Hospitalization Period	**11 dni / *days***

Prihodki inštituta za leto 1997 v USD

Income in 1997 in USD

Prihodki za zdravstveno dejavnost	Income from Clinical Work	**24.280.000**
Prihodki za raziskovalno dejavnost	Income from Research Work	**870.000**

Oprema Oddelka za radioterapijo in Oddelka za nuklearno medicino

Devices of Radiotherapy Department and Department of Nuclear Medicine

Radioterapija	***Radiotherapy***	
Trije linearni pospeševalniki	*Three Linear Accelerators*	– Philips 75/20 (6–20 MeV) – Philips SL-15 (6–10 MeV) – Philips 75/5 (5 MeV)
Dva obsevalna aparata s ^{60}Co (1,25 MeV)	*Two Cobalt (^{60}Co) Machines (1.25 MeV)*	
En orotovolten aparat (30.000–150.000 kV)	*One Ortovoltage Machine (30.000–150.000 kV)*	– Pantak 150
Dva simulatorja	*Two Simulators*	– Philips, Oldelf
Dva stroja za brahiradioterapijo z naknadnim vstavljanjem izvorov	*Two afterload machines for brachytherapy*	– Curietron (^{137}Cs) – Minirad (^{192}Ir)
Računalniško vodeni stroj za izdelavo individualnih zaščit in kompenzatorjev	*Computerized milling machine for individual shields and compensators Par Scientific*	
Računalniški sistem za individualno načrtovanje radioterapije	Treatment planning system for individual planning of radiotherapy	

Nuklearna medicina	***Nuclear Medicine***
Tri kamere gama	*Three Gamma Cameras*
– dvoglava tomografska kamera z vidnim poljem 54 x 54 cm	*– Dual-Head Gamma Camera SPECT (single-photon computed tomography) – diameter 54 x 54 cm*
– enoglava planarna kamera z vidnim poljem 40 cm	*– Single-Head Gamma Camera – diameter 40 cm*
– enoglava planarna kamera z vidnim poljem 26 cm	*– Single-Head Gamma Camera – diameter 26 cm*
Renograf	*Renaltron*

Strokovno delo

Tanja Čufer

Onkološki inštitut v Ljubljani je v letih 1993–98 nadaljeval tradicijo plodnega strokovnega dela. Uvedli smo številne nove diagnostične metode, od določanja novih tumorskih markerjev, imunoscintigrafije, radiološko vodenih citoloških punkcij do analize tumorske celice s slikovnim citometrom. Začeli smo delo na področju molekularne patologije in imunofenotipizacije celic. Pri zdravljenju raka smo okrepili multidisciplinarnost pri večini bolezni, kar je omogočilo razmah ohranitvene kirurgije. Z boljšim obsevanjem in novimi učinkovitimi sistemskimi zdravili pa smo svojim bolnikom zagotovili večjo učinkovitost zdravljenja ob večji kakovosti življenja. V sodelovanju s Hematološko kliniko Kliničnega centra smo uvedli visokodozno kemoterapijo ob podpori perifernih matičnih celic pri solidnih tumorjih. Zaključili smo tudi vse priprave za uvedbo stereotaktične radiokirurgije. Skupaj s kolegi z drugih klinik in bolnišnic smo obnovili in pripravili strokovna priporočila za diagnostiko in zdravljenje večine rakavih bolezni. Izdelali smo tudi standarde onkološke zdravstvene nege. Pod okriljem Ministrstva za zdravstvo R Slovenije smo napisali priporočila za varno rokovanje s citostatiki v R Sloveniji.

V letu 1996 smo organizirali prvo državno posvetovanje o nadzorovanju raka, na katerem je bila dana tudi pobuda za oblikovanje državnega programa zgodnjega odkrivanja predrakavih sprememb materničnega vratu. Strokovnjaki Onkološkega inštituta so bili med glavnimi tvorci tega programa, ki je začel teči v začetku leta 1998.

Zadnjih pet let smo sodelovali pri organizaciji številnih mednarodnih in domačih strokovnih sestankov, med katerimi naj omenim le najpomembnejše, kot je 24. evropski kongres citologov, mednarodni simpozij Zdravljenje raka z ohranitvijo organov in srečanje evropskih onkoloških inštitutov z naslovom Kvaliteta življenja in rak. Zavedajoč se potrebe po širjenju onkološkega znanja med zdravniki neonkologi, smo leta 1996 začeli izdajati strokovni časopis Onkologija, ki seznanja slovenske zdravnike v domačem jeziku o najnovejših strokovnih spoznanjih v onkologiji. V letu 1995 je Register raka za Slovenijo ob svoji 45-letnici skupaj z Onkološkim inštitutom izdal knjigo Preživetje bolnikov z rakom v Sloveniji, ki prinaša dragocene podatke o preživetju bolnikov z najpogostejšimi raki v Sloveniji.

Bogato strokovno delo se je vseskozi tesno prepletalo tudi z raziskovalnim in pedagoškim delom. Potrditev visoke strokovne ravni tega dela je tudi imenovanje treh sodelavcev Onkološkega inštituta za višje strokovne svetnike ministrstva za zdravstvo R Slovenije v tem obdobju. Mednarodno priznanje dobrega strokovnega in klinično-raziskovalnega dela pa je inštitut prejel s tem, da je bil leta 1997 uvrščen med onkološke centre, ki jih priznava Evropska organizacija za raziskovanje in zdravljenje raka, EORTC.

Professional Work

Tanja Čufer

In the years 1993–98, the Institute of Oncology in Ljubljana continued with its tradition of active professional work. Several new diagnostic methods were introduced, including the determination of new tumor markers, immunoscintiscans, X-ray guided aspiration biopsies, and finally also tumor cell analysis by means of flow cytometry. Work in the field of molecular pathology and immuno-fenotypization of cells was started as well. Multidisciplinary approach, which has become the prevailing method in the treatment of most cancer types, promoted further development of conservative surgery. Improved irradiation regimens and new, more effective chemotherapeutic agents have ensured better treatment results, while at the same time improving the patients' quality of life. The method of high-dose chemotherapy with peripheral stem-cell support for the treatment of solid tumors was introduced in cooperation with the Department of Hematology of the University Medical Center in Ljubljana. All the necessary procedures for the introduction of stereotactic radiosurgery have been completed as well. In collaboration with our colleagues from other university-affiliated and general hospitals, we revised and prepared the guidelines for diagnosis and treatment of most cancers. The standards of oncological nursing care have been accepted as well. Recommendations for safe handling of cytotoxic agents have been worked out under the auspices of the Ministry of Health of the Republic of Slovenia.

In 1996 we organized the first national conference on cancer control, where it was proposed that a national program for early detection of precancerous changes of the uterine cervix should be developed. Experts of the Institute of Oncology were among the founders of that program which was launched in the beginning of 1998.

In the past five years, we took an active part in the organization of numerous international and national professional meetings, of which the most notable were the 24th European Congress of Cytology, International Symposium on Organ Sparing Treatment in Oncology, and the meeting of European Oncological Institutes dedicated to the topic "Quality of Life and Cancer". Being aware of the need to spread and upgrade the knowledge of oncology among general practitioners, we started to publish, in 1996, a new medical journal Onkologija, whose aim is to inform the Slovenian physicians about the current developments in oncology; the journal appears in the Slovenian language. In 1995, on the occasion of its 45th anniversary, the Cancer Registry of Slovenia and the Institute of Oncology published a book entitled "The Survival of Cancer Patients in Slovenia", which provides valuable information on the survival of patients with most frequent cancers in Slovenia.

Productive professional work has always been closely connected with the scientific research and education activities. The high professional level of this work has been acknowledged when three staff members of the Institute of Oncology were nominated as senior professional advisers to the Republic of Slovenia Ministry of Health in the appointed period. To acknowledge the high professional standard of our clinical and research work, in 1997 our institute joined the ranks of oncological centers recognized by the European Organization for Research and Treatment of Cancer – EORTC.


Cancer Incidence in
Five Continents Vol. VII

Register raka za Slovenijo, Bolnišnični register Onkološkega inštituta

Vodja: prof. dr. Vera Pompe-Kirn, dr. med

Zdravnik specializant mag. Neva Volk, dr. med.

Operativni pomočnik Registra raka Slovenije Frančiška Škrlec, VMS

Operativni pomočnik Bolnišničnega registra Ana Dotzauer, VMS

Register raka za Slovenijo zbira in obdeluje podatke o rakavih bolnikih v Sloveniji že od leta 1950. Podatkovna baza omogoča vodenje državnega registra o incidenci, prevalenci in preživetju bolnikov z rakom med prebivalci Republike Slovenije ter Bolnišničnega registra Onkološkega inštituta. Bolnišnični register, ki naj bi ga po mednarodnih priporočilih imel vsak nacionalni onkološki inštitut, omogoča podroben pregled nad vsemi bolniki, zdravljenimi na inštitutu, ne glede na njihovo stalno bivališče.

V preteklem petletnem obdobju smo izpopolnjevali tehnologijo in kakovost obdelave podatkov. Leta 1993 smo v Registru raka za Slovenijo prešli na sodobnejšo, s programom Oracle podprto podatkovno bazo na lastnem strežniku, ki je omogočila racionalnejšo in boljšo obdelavo podatkov ter olajšala vključevanje v mednarodne študije. Tudi delo Bolnišničnega registra se je precej posodobilo, ko je leta 1997 na Onkološkem inštitutu začel delovati bolnišnični informacijski sistem. Število iskalcev podatkov raste iz leta v leto in naročila so vse zahtevnejša (npr. koliko raka je bilo med strumektomiranimi na Kliniki za torakalno kirurgijo, kakšno je preživetje bolnic z rakom dojk glede na bolnišnico prvega zdravljenja, kakšno je zbolevanje za rakom med delavci Onkološkega inštituta…).

Redno smo izdajali letna poročila o incidenci raka, leta 1995 pa večjo publikacijo, knjigo Preživetje bolnikov z rakom v Sloveniji. S številnimi prispevki smo sodelovali na strokovnih srečanjih doma in v tujini. Na rednih letnih srečanjih Mednarodnega združenja registrov raka smo predstavili štiri prispevke in podali eno poročilo. Eno vabljeno predavanje v tujini je bilo tudi objavljeno.

V letih 1993–97 je bil Register raka za Slovenijo vključen v pet mednarodnih projektov programa PECO in v študijo pojava otroških levkemij v Evropi po Černobilu. Od leta 1984 sodeluje s krovno pogodbo z ameriškim državnim inštitutom za raka. V letih 1989–92 je potekala raziskava o bolnikih, izpostavljenih diagnostičnim dozam radioaktivnega joda. Gradivo je bilo obdelano tudi v doktorski nalogi. Ministrstvo za znanost in tehnologijo RS je podprlo dve raziskavi, Preživetje bolnikov z rakom v Sloveniji in Napoved incidence raka v Sloveniji do leta 2000 in 2010. Register je sodeloval še pri raziskavah Pilotni preizkus sodobnega zgodnjega odkrivanja raka dojk v šestih občinah R Slovenije in Dejavniki tveganj zbolevanja za raki debelega črevesa in danke.

Pod mentorstvom prof. Pompe-Kirn je mlada raziskovalka v Registru raka pripravila doktorsko nalogo Napovedni dejavniki preživetja bolnikov z želodčnim rakom v Sloveniji, specialistka medicine dela iz Kočevja pa magistrsko delo Zbolevanje za rakom v obdobju 1961–94 in ocena izbranih dejavnikov tveganja v občini Kočevje.

Register raka za Slovenijo je od ustanovitve Mednarodnega združenja registrov raka leta 196 njegov redni član. Leta 1996 je bila v njem prof. Pompe-Kirn imenovana in izvoljena za predstavnico za Evropo.

Cancer Registry of Slovenia Hospital-Based Cancer Registry

Head: prof. dr. Vera Pompe-Kirn, MD, PhD

Resident: Neva Volk, MD, MSc

Senior Data Manager, Cancer Registry of Slovenia: Frančiška Škrlec, RN

Senior Data Manager, Hospital-Based Cancer Registry: Ana Dotzauer, RN

Cancer Registry of Slovenia has been collecting and processing the data on cancer patients in Slovenia since 1950 on. This data base enables the running of a national population-based registry on the incidence, prevalence and survival of cancer patients in Slovenian population, as well as the running of the hospital-based cancer registry at the Institute of Oncology. The latter provides a detailed overview of all patients treated at the Institute, irrespective of their permanent residence; according to the internationally accepted guidelines, such a registry is an indispensable integral part of every national cancer center.

In the past five years, our efforts were invested into improving the technology and quality of data processing. In 1993, the Cancer Registry of Slovenia introduced an upgraded data base supported by Oracle program on the Registry's own server. This has made possible a more rational and efficient way of processing data and facilitated our participation in international studies. A major breakthrough in the work of the hospital registry occurred in 1997, when the hospital information system at the Institute of Oncology began operation. The number of users has been steadily growing, and their requests for information have become increasingly demanding (e.g. the rate of cancers diagnosed in patients with thyreodectomy performed at the Department of Thoracic Surgery; survival of breast cancer patients by hospital of first admission; cancer morbidity in the staff of the Institute of Oncology...).

In addition to the regular Annual Reports, in 1995, a major publication entitled "Survival of Cancer Patients in Slovenia" was published. Apart from numerous reports presented at various national and international meetings, there were four papers and one report presented at the regular annual meetings of the International Association of Cancer Registries, while one invited paper was published abroad.

In the 1993–97 period, the Cancer Registry of Slovenia took part in 5 international projects within the PECO program, as well as in the study of childhood leukemias in Europe after the Chernobyl accident. In 1984, a master agreement on a long-term cooperation has been signed with the National Cancer Institute in Bethesda, USA. Thus, in the period 1989–92, a study on patients' exposure to ionizing radiation during diagnostic investigations with radioactive Iodine was carried out. The same topic was also the subject of a doctoral thesis. Two studies were supported by the Ministry of Science and Technology of Republic Slovenia: Cancer Patient Survival in Slovenia, and Prediction of Cancer Incidence in Slovenia till the years 2000 and 2010. In addition, the Registry participated in the following two studies: Pilot Study of Breast Cancer Screening in Six Communes of Slovenia, and Risk Factors of Colorectal Cancer in Slovenia.

Under Prof. Pompe-Kirn's supervision, a junior research associate in the Cancer Registry has prepared her doctoral thesis entitled Prognostic Factors of Survival in Stomach Cancer Patients in Slovenia, while a specialist in occupational medicine from Kočevje has prepared her Masters Thesis entitled Cancer Morbidity in 1961–94, and the Evaluation of Selected Risk Factors in the Community of Kočevje.

Ever since the establishment of the International Association of Cancer Registries in 1968, the Registry has been its voting member, and in 1996 Prof. Pompe-Kirn was appointed IACR Representative for Europe.

Oddelek za epidemiologijo

Vodja:
doc. dr. Maja Primic Žakelj, dr. med.

Na Oddelku za epidemiologijo smo končali večletno zbiranje podatkov za analitični epidemiološki raziskavi raka dojk in prebavil. Zdaj jih analiziramo – sami in v sodelovanju z Oddelkom za epidemiologijo in biostatistiko Evropskega onkološkega inštituta v Milanu, s katerim smo navezali tesnejše stike. Nekaj vmesnih rezultatov in ugotovitev smo že objavili. Smo tudi člani Collaborative Group on Hormonal Factors in Breast Cancer, skupine raziskovalcev s celega sveta, ki jih povezuje Imperial Cancer Research Fund v Oxfordu. Namen tega skupinskega dela je pridobiti nova spoznanja o etiologiji raka dojk.

V skladu s strategijo in cilji Svetovne zdravstvene organizacije na oddelku strokovno usmerjamo in koordiniramo slovenski program nadzorovanja raka. V jeseni leta 1996 smo bi pobudniki in operativni organizator Posvetovanja o državnem programu nadzorovanja raka, k je bilo namenjeno pregledu dejavnosti na področju celovitega boja proti raku v Sloveniji in postavitvi izhodišč in prednostnih nalog v bližnji prihodnosti. Za tako delo je seveda potrebn dobro stalno sodelovanje z ustanovami in nosilci drugih preventivnih programov. Oddelek je tudi sedež Državnega programa zgodnjega odkrivanja predrakavih sprememb materničnega vratu (ZORA). V letu 1997 smo zaključili priprave na pilotno študijo, ki je stekla v začetku letošnjega leta.

S strokovnim in pedagoškim delom na vseh izobraževalnih ravneh, z mentorstvom in s povezovanjem z drugimi programi Svetovne zdravstvene organizacije in z društvi na oddelku skrbimo za prenos znanja s širokih področji preventive raka in metodologij analitičnih epidemioloških raziskav.

Department of Epidemiology

Head:
Assist. Prof. Maja Primic Žakelj, MD, PhD

At the Department of Epidemiology of the Institute of Oncology, the long-term project of data collection within the framework of analytical epidemiological studies of breast and colorectal cancers has been completed. The collected data are being analyzed locally, as well as in close cooperation with the Milan-based Department of Epidemiology and Biostatistics of the European Institute of Oncology. Some preliminary results and findings have already been published. We are also members of the Collaborative Group on Hormonal Factors in Breast Cancer, which consists of a group of researchers from every part of the world, joined together by the Imperial Cancer Research Fund of Oxford. The purpose of this group is to acquire new knowledge on the etiology of breast cancer.

In accordance with the strategy and aims of the World Health Organization, we coordinate the Slovenian cancer control program. As the instigators and operative organizers, we organised, in the autumn of 1996, a conference on the national cancer control program, which was intended to provide an overview of the activities in the field of comprehensive fight against cancer in Slovenia, and to set the priorities for the next period. Of course, this work requires a close and continuous cooperation with institutions and individuals involved in other prevention programs. Our Department is also the seat of the national cervical cancer screening program (ZORA). By this year, we have completed the preparatory procedures for the pilot study that got under way in 1998.

The transfer of knowledge in the broad field of cancer prevention, as well as the transfer of methodologies of analytical epidemiological studies are ensured through professional and educational work at all levels, through mentorships and involvement in other World Health Organization programs and associations.


WASTE
ABFALL

Oddelek za tumorsko biologijo

Vodja: prof. dr. Gregor Serša, dipl. biol.

Zdravstveni sodelavci: znan. sod. dr. Srdjan Novaković, dipl. biol. mag. Maja Čemažar, dipl. biol. Urška Čegovnik, dipl. ing. kemije Elizabeta Tekavčič, dipl. biol.

Delo oddelka lahko v grobem razdelimo na določanje tumorskih markerjev in predklinične raziskave.

Tumorski markerji, antigeni, ki jih izdelujejo tumorske celice, so specifični za nekatere maligne bolezni in zato primerni za spremljanje njihovega poteka in uspešnosti zdravljenja. Poleg že uveljavljenih tumorskih markerjev (CEA, MCA, CA-125, CA 19-9, NSE, PSA, (βHCG, AFP) smo lani začeli določati še marker CA 15-3. Preiskav za določanje tumorskih markerjev je vse več, zato smo nedavno nabavili novo aparaturo, ki bo omogočila določanje še več novih tumorskih markerjev.

Predklinične raziskave. Z raziskovalnim delom želimo bolje spoznati delovanje posameznih protitumorskih dejavnikov in njihovih kombinacij na rast tumorjev. Predklinične raziskave potekajo na področju kemoterapije, biološke terapije z modifikatorji biološkega odziva in vakcinami, pa tudi radiobiologije. Pri kemoterapiji nam je v preteklih letih uspelo v klinično prakso prenesti spoznanja o elektrokemoterapiji. Uporabo električnih pulzov za povečevanje vnosa kemoterapevtikov v celice smo testirali in vitro in in vivo na poskusnih živalih. S tem smo postavili temelje za prve klinične študije o uporabi elektrokemoterapije s cisplatinom in bleomicinom pri bolnikih z rakom.

Tumorski nekrozni faktor je eden najpomembnejših modifikatorjev biološkega odziva, vendar je zaradi hudih stranskih pojavov za zdravljenje omejeno uporaben. Zato je naše delo usmerjeno v predklinično testiranje analogov tumorskega nekroznega faktorja, ki jih sintetizirajo kolegi iz Leka. Eno izmed hitro razvijajočih se področij molekularne onkologije je tudi izdelovanje vakcin. Pripravljamo se na izdelovanje avtologni in heterologni vakcin z geni za IL-2 in tumorski nekrozni faktor.

Radiobiološko raziskovanje nam bo omogočila nova obsevalna aparatura, s katero bomo lahko obsevali tako tumorske celice in vitro kot tudi tumorje laboratorijskih mišk. Naprava je dragocena pridobitev, saj nam bo omogočila preskušanje zdravljenj, ki smo jih že opisali, v kombinaciji z obsevanjem. Že nekaj časa je znano, da lahko tumorski nekrozni faktor poveča uspeh obsevalne terapije. Novo sintetizirane analoge bo treba preizkusiti, ali tudi tako delujejo. Tudi cisplatin, ki ga uporabljamo v elektrokemoterapiji, poveča učinkovitost obsevalnega zdravljenja. Ker z elektrokemoterapijo povečamo količino cisplatina v tumorskih celicah, lahko pričakujemo, da bo v kombinaciji z obsevalnim zdravljenjem še učinkovitejši.

Rezultate svojega raziskovalnega dela redno objavljamo v domači in tuji strokovni literaturi. Večina raziskav je tudi prijavljena v projektih na Ministrstvu za znanost in tehnologijo Republike Slovenije. Poleg tega se povezujemo z nekaterimi centri po svetu, kot so Institut Gustave Roussy v Franciji, Grayev laboratorij v Angliji in Mofitt Cancer Center v ZDA.

Department of Tumor Biology

Head: Assoc. Prof. Gregor Serša, BSc Biol, PhD

Medical Associates: Sc. Assoc. Srdjan Novaković, BSc Biol, PhD
Maja Čemažar, BSc Biol, MSc
Urška Čegovnik, BSc Chem
Elizabeta Tekavčič, BSc Biol

The scope of work in this department can be roughly divided into two main activities: tumor marker determination, and pre-clinical research work.

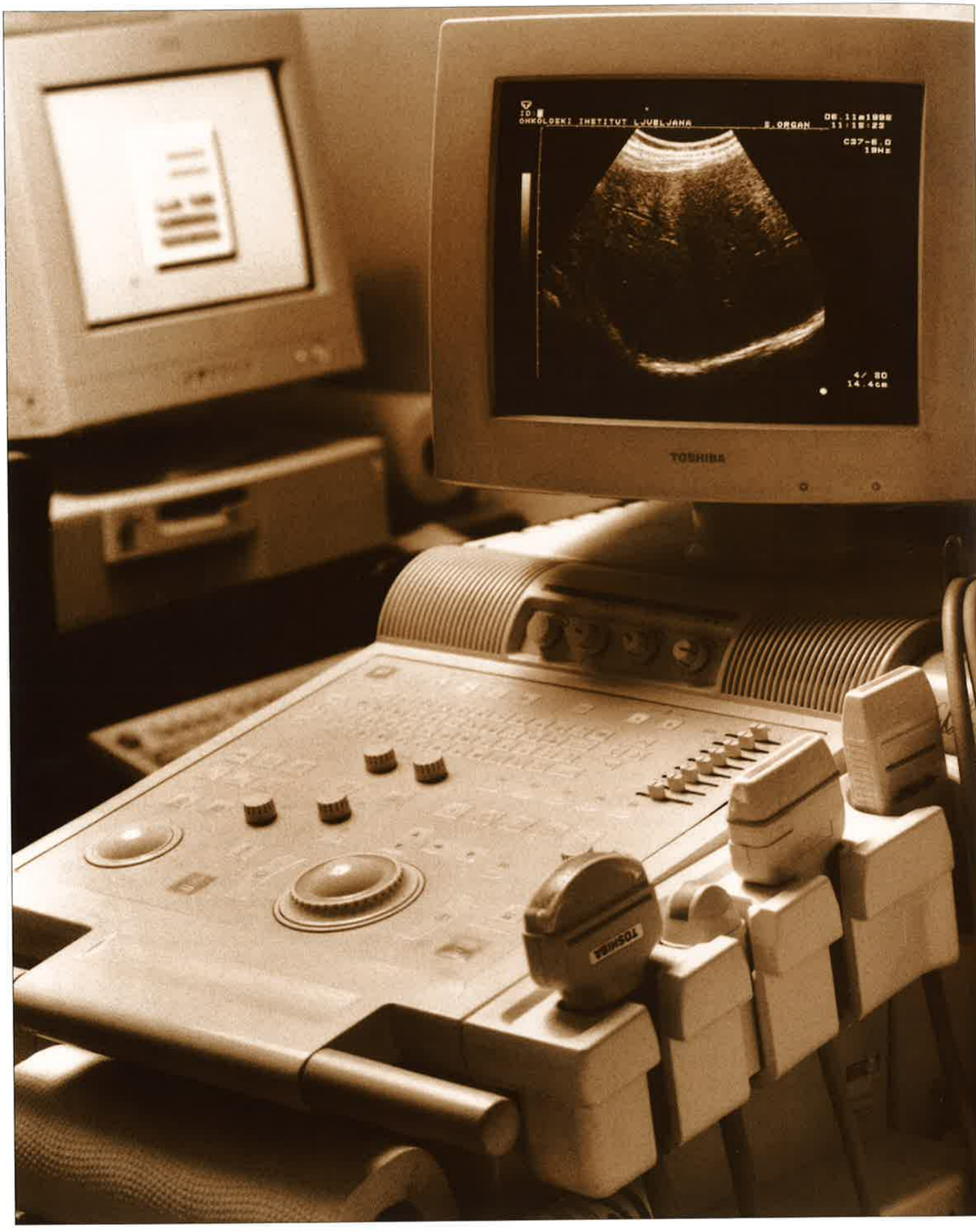
Tumor markers: Tumor markers are antigens which are produced by tumor cells. Being specific for particular malignant diseases, they can be used in the follow up of the course of disease and treatment response. Apart from the already established tumor markers (CEA, MCA, CA-125, CA 19-9, NSE, PSA, (βHCG, AFP), yet another marker, CA 15-3, was introduced last year. The on-going studies in this field are comparing the diagnostic value of individual markers and testing new ones before their routine use. In view of the increasing demand for these investigations, a new machine was obtained, which will enable us to introduce determination of yet new tumor markers.

Pre-clinical research: Our research is aimed at achieving a better understanding of the effects of anticancer agents – given alone or in combination - on tumor growth. The area of pre-clinical research covers chemotherapy, treatment with biological response modifiers and vaccines as well as radiobiology. In the field of chemotherapy, the knowledge on electrochemotherapy that was acquired in the past few years, has been successfully applied in clinical practice. The use of electric pulses to increase permeation of cells with cytotoxic drugs was tested on experimental tumor models in vitro and in vivo, thus setting up a base for the first clinical studies on the use of electrochemotherapy with cisplatin and bleomycine in cancer patients.

Tumor necrosis factor is one of the most relevant biological response modifiers with all the potentials for clinical use. Its practical clinical value, however, is largely limited by its severe side effects. Therefore our recent research is centered on pre-clinical testing of the new tumor necrosis factor analogues which have been synthesized by our colleagues in pharmacevtical company Lek. Another fast-developing field of molecular oncology is also the preparation of vaccines. There we started to develop both autologous and heterologous vaccines by means of IL-2 and tumor necrosis factor genes.

Further radiobiological research will be facilitated by the new radiotherapeutic machine, which will serve for irradiation of tumor cells in vitro as well as of experimental tumors in mice. This is an important advance, which will enable us to test the described treatment modalities in combination with radiotherapy. It has been known for awhile that the tumor necrosis factor has the potential of increasing the success of irradiation therapy. The newly synthesized analogues will have to be tested again for their effectiveness. Apart from that, cisplatin, which is used in electrochemotherapy, enhances the effectiveness of irradiation therapy. As electrochemotherapy results in an increased uptake of cisplatin by tumor cells, greater effectiveness can be expected also in combination with radiation therapy.

Results of our work are regularly published in national and international literature. Most of the studies are registered as part of the national research project supported by the Ministry of Science and Technology of Republic Slovenia. In addition to that, we have established links with a few centers worldwide, such as Institute Gustave Roussy in France, Gray Laboratories in Great Britain, and Mofitt Cancer Center in the USA.


ONKOLOŠKI INŠTITUT LJUBLJANA
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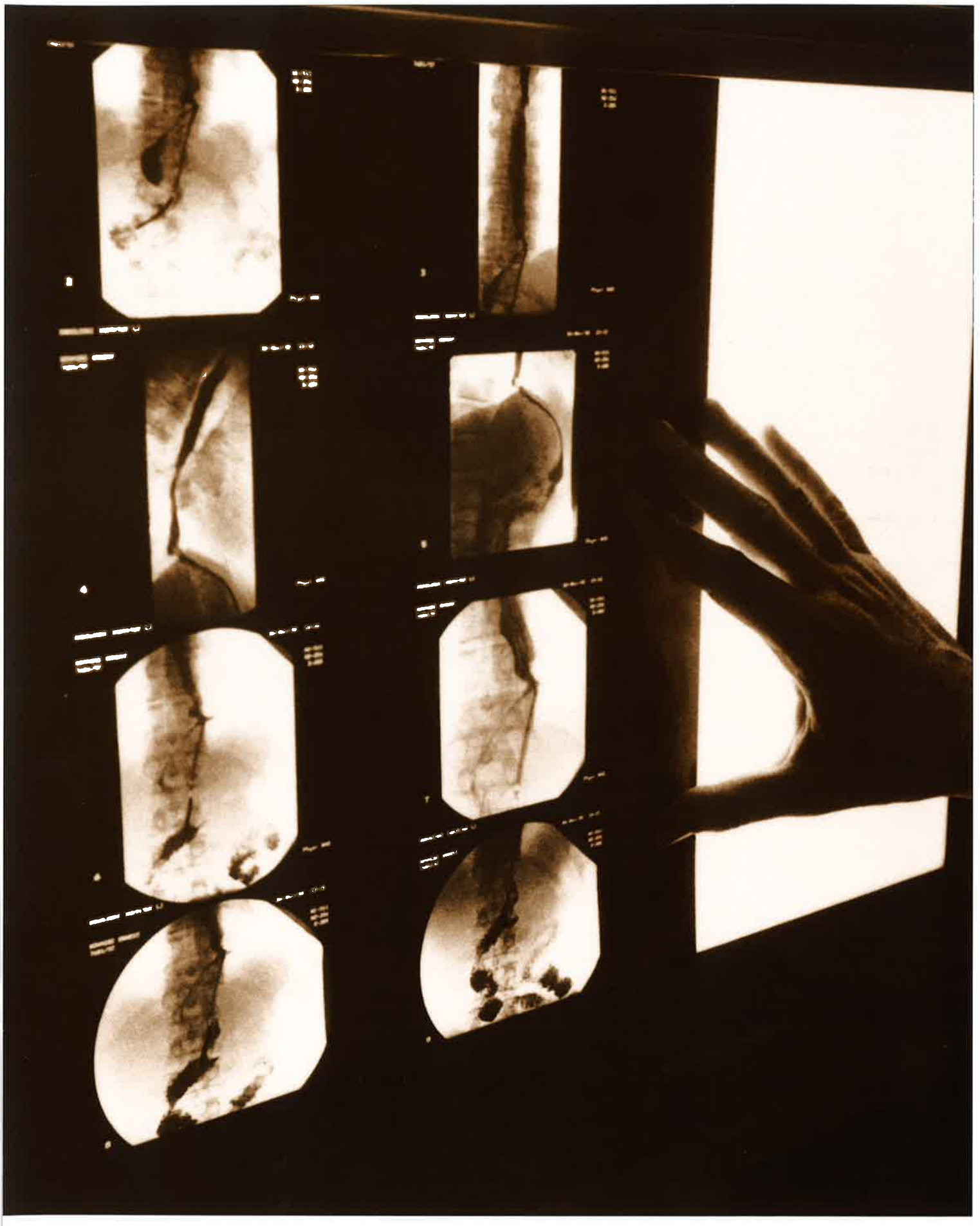


Oddelek za radiologijo

Vodja: asist. Maksimiljan Kadivec, dr. med.
1996–97: mag. Igor Kocijančič, dr. med.
1992–96: Breda Danica Jančar, dr. med.

Specialisti radiologije:
Kristijana Hertl, dr. med.
Maja Podkrajšek, dr. med
Miljeva Rener, dr. med.
Tomaž Vargazon, dr. med.

Specialist interne medicine:
Franc Guna, dr. med.

Vodja radioloških inženirjev:
Stojan Pirc, ing. radiol.

Na radiološkem oddelku opravljamo številne diagnostične radiološke preiskave (diagnostiko bolezni pljuč, skeleta, prebavnega trakta, sečil in dojk, ultrazvočno diagnostiko bolezni vratu, dojk, trebuha, testisov, prostate, mehkih tkiv in žil, slednjih z barvno dopplersko sonografijo). Diagnostične preiskave pogosto dopolnjujemo z intervencijskimi posegi (vse vrste punkcij pod ultrazvočnim nadzorom in računalniško vodene stereotaktične punkcije dojk skupaj z intervencijskimi posegi na dojkah pod rentgenskim nadzorom – cytoguide). Edini v državi delamo limfografske preiskave, predvsem za prikaz retroperitonealnih bezgavk.

V letu 1997 smo uvedli označevanje tumorjev v dojki in poti do tumorja s suspenzijo grafitnega prahu. Ob koncu istega leta smo začeli delati stereotaktično histološko punkcijo tumorjev, kalcinacij in drugih sumljivih sprememb v dojkah. Ustanovili smo konzilij za netipne lezije dojk, kjer skupaj z drugimi specialisti Onkološkega inštituta obravnavamo diagnostično najbolj zapletene spremembe v dojkah. Pri tem vedno tesneje sodelujemo tudi s citologi in patologi.

Specialisti radiološkega oddelka sodelujemo pri mnogih domačih in mednarodnih raziskovalnih projektih. Slikovna diagnostika velikega števila projektov poteka pri nas v celoti, manjšega pa vsaj delno. Sodelujemo tudi v skupini za izdelavo doktrine diagnostike in zdravljenja raka dojke na Onkološkem ištitutu in v Republiki Sloveniji.

Ko bo zgrajena nova stavba Onkološkega inštituta, bomo z novimi diagnostičnimi aparati, ko so računalniški in magnetnoresonančni tomograf ter naprava za tridimenzionalno ultrazvočno slikanje, močno izboljšali kakovost slikovne in intervencijske radiologije našega inštituta.

Department of Radiology

Head: Assist. Maksimiljan Kadivec, MD
1996–97:
Assist. Igor Kocijančič, MD, MSc
1992–96:
Breda Danica Jančar, MD

Specialists in Radiology:
Kristijana Hertl, MD
Maja Podkrajšek, MD
Miljeva Rener, MD
Tomaž Vargazon, MD

Specialist in Internal Medicine: Franc Guna, MD

Radiological Engineer in Charge:
Stojan Pirc, Eng Radiol

There are numerous radiological diagnostic procedures performed routinely at the . Department of Radiology: radiography of the lung, skeleton, gastrointestinal tract, uropoietic system and the breast; ultrasonography of the neck, breast, abdomen, testicles, prostate, soft tissues and Doppler ultrasonography of the vascular system. Often, the diagnostic techniques are complemented with interventional procedures (all types of ultrasonographically guided biopsies, and computer guided stereotactic aspiration biopsies of the breast, as well as cytoguide – X-ray guided interventional procedures on the breast). Lymphographic investigations, prevailingly for retroperitoneal lymph node imaging, are performed exclusively by our department.

In 1997 we introduced a method for labeling of breast tumors and tumor accessing routes by means of graphite powder suspension, and since the end of 1997 we have been using stereotactic histological biopsy of tumors, calcinations and suspicious lesions of the breast. We also set up a counsel for non-palpable breast lesions; there our radiologists are solving the most complex diagnostic problems of suspicious breast lesions in collaboration with other specialists. Thus, our collaboration with cytologists and pathologists in the diagnosis of those lesions has been enhanced.

Specialists of our radiological department play an active role in several national and international research projects, as in the majority of these, the diagnostic imaging is either completely or partly carried out at the Institute of Oncology. Apart from that, we participate in the group for development of doctrines for the diagnosis and treatment of breast cancer at the Institute of Oncology and in the Republic of Slovenia.

Our department in the newly constructed building of the Institute of Oncology is expected to be equipped with new diagnostic facilities, such as CT-scan, magnetic resonance, three-dimensional ultrasonography, which will improve considerably the quality of interventional and imaging radiology at our institute.

Oddelek za nuklearno medicino

Vodja: Tadeja Stanovnik-Movrin, dr. med.
1992–95: prim. Janez Šuštaršič, dr. med., upokojen 1997

Specialistka nuklearne medicine in interne medicine: prof. dr. Nataša Budihna, dr. med.

Specializant interne medicine: Barbara Vidergar-Kralj, dr. med.

Najpogostejše preiskave v naši enoti so scintigrafije skeleta, ščitnice, možganov, jeter in vranice, kostnega mozga, scintigrafije telesa z 67Ga za odkrivanje limfomov in hitro rastočih tumorjev mehkih tkiv ter vnetij, scintigrafije telesa z 131J za iskanje metastaz karcinoma ščitnice, nevroblastoma, feokromocitoma, karcinoida, scintigrafije ledvic, scintigrafije pljuč, radioizotopna ventrikulografija, radioizotopna flebografija, renografije. Z nakupom dvoglave kamere gama v letu 1994 se nam je odprla možnost odkrivanja tumorjev z imunoscintigrafijo in receptorsko scintigrafijo. Takoj, ko so v svetu začeli preiskovati dojke z radionuklidi, smo jih začeli tudi pri nas. Edini v Sloveniji zdravimo z 131J diferencirane nevroblastome, feokromocitome, karcinoide in karcinome ščitnice. V zadnjih treh letih se je število terapevtskih aplikacij radiojoda povečalo več kot trikrat in tako doseglo vrh prostorskih in kadrovskih zmogljivosti. Pri svojem delu smo povezani tako z radiologi kot kliničnimi zdravniki, kar močno poveča točnost diagnostike.

Sodelujemo v večini kliničnih raziskav, ki potekajo na inštitutu. Pravkar se končuje tudi triletna mednarodna raziskava primerjave učinkovitosti in toksičnosti 32P in 89Sr pri lajšanju bolečih kostnih metastaz, ki je potekala pod okriljem Mednarodne agencije za atomsko energijo.

Nuklearna medicina se v svetu usmerja v odkrivanje vseh vrst tumorjev s pozitronsko emisijsko tomografijo (PET), ki pa nam zaenkrat še ni dosegljiva.

Department of Nuclear Medicine

Head: Tadeja Stanovnik-Movrin, MD
1992–95: Prim. Janez Šuštaršič, MD, retired 1997

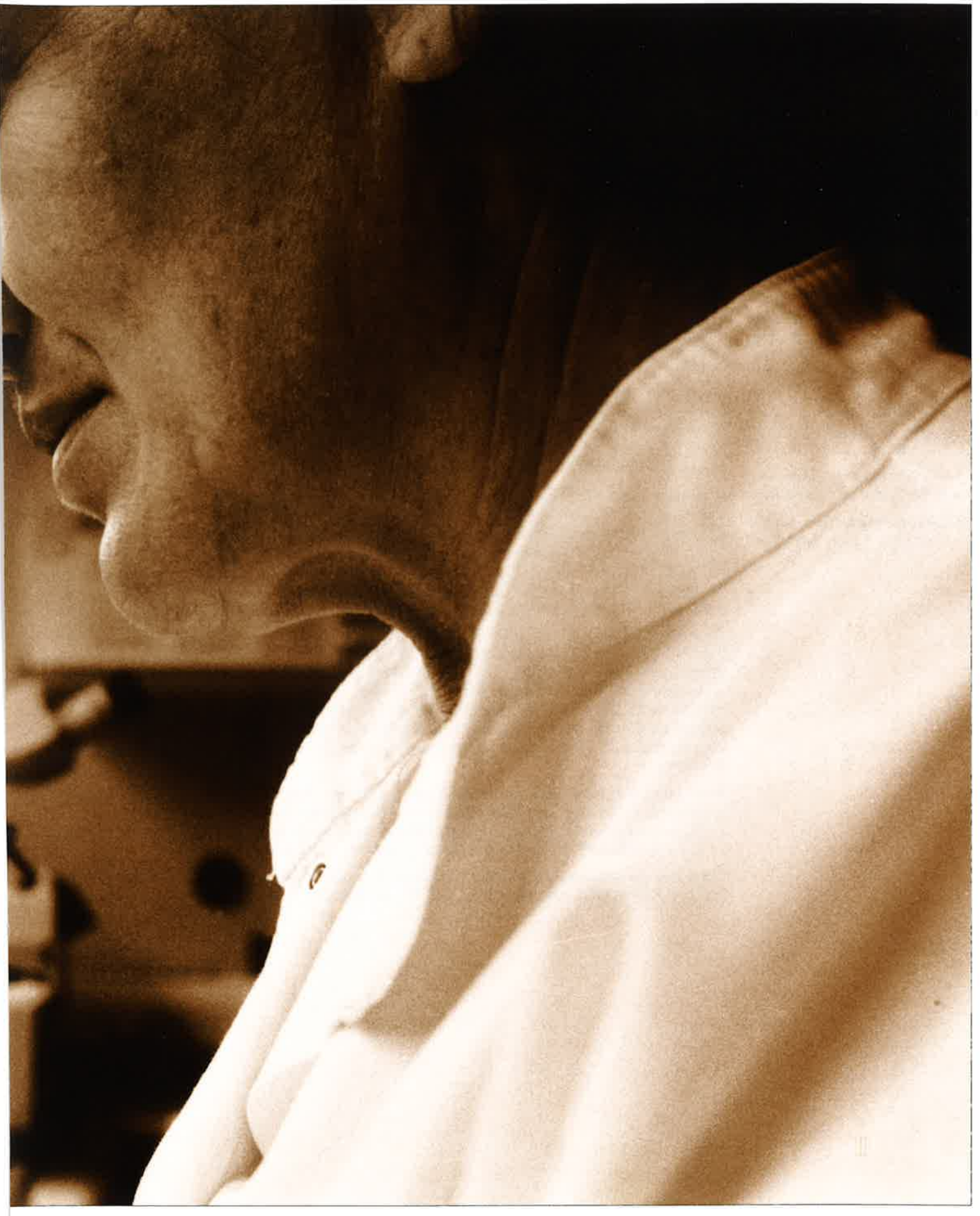
Specialist in Nuclear and Internal Medicine: Assoc. Prof. Nataša Budihna, MD, PhD

Resident in Internal Medicine: Barbara Videgar-Kralj, MD

The major part of the workload in our department consists of scintiscans of the bones, thyroid, liver and spleen, bone marrow, and whole-body scintiscans with 67Ga for the detection of lymphomas and rapidly growing soft-tissue tumors and inflammatory processes, scintiscans with 131Iodine for the detection of metastases from thyroid carcinoma, neuroblastoma, feochromocytoma, carcinoids, scintiscans of the kidney and lung, radionuclide ventriculography, radionuclide phlebography, and renography. The purchase of a two-head gamma camera in 1994 opened new possibilities for tumor detection by means of immuno-scintiscan and receptor-scintiscan. No later than the radionuclide procedures for breast cancer detection came into use elsewhere in the world, the same methods were also introduced in our Institute. We are the only center in Slovenia where 131I is used in the treatment of thyroid cancers, neuroblastomas, feochromocytomas and carcinoids. In the past three years, the number of therapeutic applications of radioiodine has increased more than threefold, thus reaching the maximum of the available technical and personnel capacities. In our work we cooperate with radiologists as well as with clinicians, which greatly improves the accuracy of our diagnosis.

We participate in most clinical studies carried out at our Institute. We are currently completing the 3-year international study within the framework of IAEA comparing the effectiveness and toxicity of 32P and 89Sr for alleviation of bone-metastases related pain.

The worldwide trend in the development of nuclear medicine is directed toward the use of positron emission tomography (PET) for the detection of all types of tumors; this method, however, is not yet available at our Institute.



Oddelek za patologijo

Vodja: prof. dr. Rastko Golouh, dr. med.

Specialisti patologije: doc. dr. Matej Bračko, dr. med. mag. Snježana Frković-Grazio, dr. med. Janez Jančar, dr. med. dr. Janez Lamovec, dr. med. Andreja Zidar, dr. med.

Zdravstvena sodelavka: mag. Ira Todorović, dipl. biol.

Glavni laboratorijski tehnik: Alenka Kljun, ing. farm.

Osnovna naloga oddelka je vodenje in opravljanje del onkološke kirurške in avtopsijske patologije ob istočasni skrbi za izpopolnjevanje znanja s teh področij v onkološki patologiji. Naše strokovno in raziskovalno delo je v glavnem usmerjeno v določanje morfoloških značilnosti, diferencialno diagnostiko, napovedne dejavnike poteka bolezni in odzive na zdravljenje pri tumorjih dojke, malignih limfomih, tumorjih ščitnice ter tumorjih mehkih tkiv in kosti.

Po zgledu Zveze direktorjev anatomske in kirurške patologije iz ZDA smo izdali knjižico slovenskih priporočil za standardizirano kirurško patološko poročilo, saj enotnejša poročila nedvomno lahko prispevajo k boljši oskrbi bolnika. Knjižica prinaša priporočila glede oblike poročila in predloge, kaj naj poročilo vsebuje. Uporabna je kot opomnik, pa tudi kot zbirka stavkov, pripravljenih za računalniško sestavljanje poročil.

V zadnjih petih letih smo svoje strokovno in raziskovalno delo obogatili z več novimi tehnologijami. Za dokumentiranje osnovnih karakteristik kirurških vzorcev in rentgenskih slik smo nabavili namenski avtomatski fotografski sistem. Rentgensko slikanje vzorcev tkiva lahko včasih zagotovi kakšno pomembno informacijo, zato smo v ta namen kupili tudi priročen rentgenski aparat Hewlett-Packard Faxitron. Posebej je tako slikanje primerno za študij reseciranega tkiva iz dojke z netipljivimi lezijami. Aparat bi bil še uporabnejši, če bi imeli tudi ustrezno povečevalno napravo.

Za večjo zanesljivost in ponovljivost imunohistokemičnih preiskav smo prešli na avtomatsko barvanje vzorcev z robotsko napravo TechMate, ki zagotavlja standardizirane imunohistokemične rezultate. S tem smo prispevali tudi k zagotavljanju kakovosti dela, za ka si prizadevamo tudi v ločenem programu. Z njim smo privzeli točnejša načela za nadzorovanje kakovosti, po katerih so procesi in tehnike prirejeni tako, da se kar najbolj zmanjšajo ali celo odpravijo slabosti imunohistokemičnega laboratorija. V teh prizadevanjih smo se pridružili britanskemu programu zunanjega preverjanja kakovosti in v njem tudi delujemo.

Razvijamo tudi laboratorij za molekularno patologijo. Ker nas posebej zanima hematološka patologija, že sedaj in situ hibridiziramo mRNA, s polimerazno verižno reakcijo z oligonukleotidnimi pobudili, specifičnimi za odkrivanje prerazporeditev genov v celicah B in T, pa določamo klonalnost limfoidnih proliferacij iz parafinskih vzorcev.

Odgovore na nekatera strokovna in raziskovalna vprašanja iščemo tudi v kvantitativni patologiji, posebej s pretočno in s slikovno citometrijo.

Department of Pathology

Head: Prof. Rastko Golouh, MD, PhD

Specialists in Pathology: Assist. Prof. Matej Bračko, MD, PhD
Snježana Frković-Grazio, MD, MSc
Janez Jančar, MD
Janez Lamovec, MD, PhD
Andreja Zidar, MD

Medical Associate: Ira Todorović, BSc Biol, MSc

Laboratory Technician in Charge: Alenka Kljun, Eng Pharm

The basic task of the department is to perform and conduct the practice of oncological surgical and autopsy pathology and to promote the development of knowledge of the respective fields in oncological pathology. The professional and research work is aimed mostly at the determination of morphological characteristics, problems in differential diagnosis, and prognostic and predictive factors in breast tumors, malignant lymphomas, tumors of the thyroid gland and soft tissue and bone tumors.

Since a more standardized surgical pathology report may positively contribute to patient's care, we adopted the recommendation of the Association of Directors of Anatomic and Surgical Pathology, USA, and published a Slovenian booklet on standardized surgical reports. The recommendations concern the format of the report and provide suggestions for information to be included in the report. The document may be employed as a check-list or as modifiable canned sentences for computer data base.

During the past 5 years several new technologies have been introduced into our research and professional work.

For documentation of the general features of surgical specimens and X-ray pictures, an automatic gross photography system was introduced. As specimen radiography sometimes provides important information, a handy X-ray machine, Hewlett-Packard Faxitron, was purchased, mainly to be used in the study of resected breast specimens of unpalpable lesions. However, its practical use has been limited by the absence of enlargement equipment.

In seeking to improve the reliability and reproducibility of immunohistochemistry, we introduced automatic staining, using a robotic stainer TechMate to obtain standardized immunohistochemical results together with quality assurance program in the same field. We adopted more precise concepts of quality control, which is an aggregate of processes and techniques so derived in order to detect, reduce and correct deficiencies in the immunohistochemical laboratory. For this reason, we joined UK National External Quality Assessment Scheme for Immunohistochemistry, where we play an active role.

A molecular pathology laboratory is being developed. As we take special interest in hematological pathology we are already performing mRNA in situ hybridization, as well as determination of clonality of lymphoid proliferations using the polymerase chain reaction and specific primers for the detection of B and T cell gene rearrangements on paraffin embedded specimens.

In the field of quantitative pathology, we use flow and image cytometry for solving some of professional and research problems.


MICRO•IMAGER


Preventiva in nega z roko v

Oddelek za citopatologijo

Vodja:
dr. Ana Pogačnik, dr. med.

Specialisti patologije:
dr. Marija Bizjak-Schwarzbartl, dr. med., upokojena 1997
dr. Veronika Kloboves-Prevodnik, dr. med.
Živa Pohar-Marinšek, dr. med.
mag. Marija Ruparčič-Oblak, dr. med., upokojena 1997
mag. Matjaž Šebenik, dr. med.
prof. dr. Marija Us-Krašovec, dr. med., upokojena 1997

Specializant patologije:
mag. Margareta Fležar, dr. med.

Zdravstveni sodelavec:
mag. Jaka Lavrenčak, dipl. biol.

Glavni tehnik:
mag. Irena Srebotnik-Kirbiš, dipl. ing. živil. tehnol.
Majda Škrk, upokojena 1997

V zadnjih petih letih smo si na Oddelku za citopatologijo še nadalje prizadevali povečevati diagnostično zanesljivost, in sicer s citopatološko in patološko korelacijo, z izboljšavami imunocitokemičnih reakcij in s poglabljanjem znanja. V rutinsko diagnostiko smo uvedli meritve DNA iz vzorca aspiracijske biopsije raka dojk in urina pri bolnikih z rakom mehurja.

Raziskovalno delo oddelka je bilo v tem času osredotočeno na kvantitativno analizo tumorskih celic s slikovnim citometrom (Cyto-Savant TM, Oncometrics, Technologies Corp. Vancouver, Canada). S slikovno citometrijo dobimo kvantitativne informacije o velikosti in obliki celic in celičnih jeder, o razporeditvi jedrnega kromatina in količini jedrne DNA. S slikovnim citometrom lahko izmerimo okoli 100 različnih citometričnih značilnostih celičnega jedra. V začetku smo posvetili vso pozornost predvsem optimalni pripravi vzorcev in fiksaciji celic, kasneje pa smo raziskave usmerili v ugotavljanje prognostičnih dejavnikov pri raku dojke in v odkrivanje sprememb, povezanih z malignostjo na cervikalnih brisih. Delo s slikovnim citometrom je za sedaj še povsem raziskovalno in naprave še ne moremo vključit v rutinsko citodiagnostiko.

Na našem oddelku so pripravili nalogo in jo uspešno zagovarjali štirje magistrandi in dva dokotoranda, trije magistrandi pa zaključujejo svoje delo. Prof. dr. Marija Us-Krašovec, dr. med., in dr. Ana Pogačnik, dr. med., sodelujeta pri pripravi državnega programa zgodnjega odkrivanja predrakavih sprememb na maternicnem vratu v Sloveniji (DP ZORA). Pripravili smo enoletno izobraževanje za vse, ki delajo na področju ginekološke citopatologije.

Kot svetovno znan strokovnjak citopatolog je bila prof. dr. Us-Krašovec povabljena k pripravi slikovnega seminarja z naslovom Diagnostična aspiracijska biopsija na 11. mednarodnem kongresu citologov leta 1992 v Melbournu, ruski patologi pa so jo povabili k sodelovanju na svojem prvem kongresu v Moskvi leta 1997, kjer je predavala o pomenu slikovne citometrije v sodobnih raziskavah.

V septembru 1997 je oddelek za citopatologijo organiziral 24. evropski kongres citologov v Ljubljani. Udeležilo se ga je 220 udeležencev iz 30 držav, med njimi številni svetovno priznani strokovnjaki.

Department of Cytopathology

Head:
Ana Pogačnik, MD, PhD

Specialists in Pathology:
Marija Bizjak-Schwarzbartl, MD, PhD, retired 1997
Veronika Kloboves-Prevodnik, MD, PhD
Živa Pohar-Marinšek, MD
Marija Ruparčič-Oblak, MD, MSc, retired 1997
Matjaž Šebenik, MD, MSc
Prof. Marija Us-Krašovec, MD, PhD, retired 1997

Resident in Pathology:
Margareta Fležar, MD, MSc

Medical Associate:
Jaka Lavrenčak, BSc Biol, MSc

Technician in Charge:
Irena Srebotnik-Kirbiš, BSc Food Technol, MSc
Majda Škrk, retired 1997

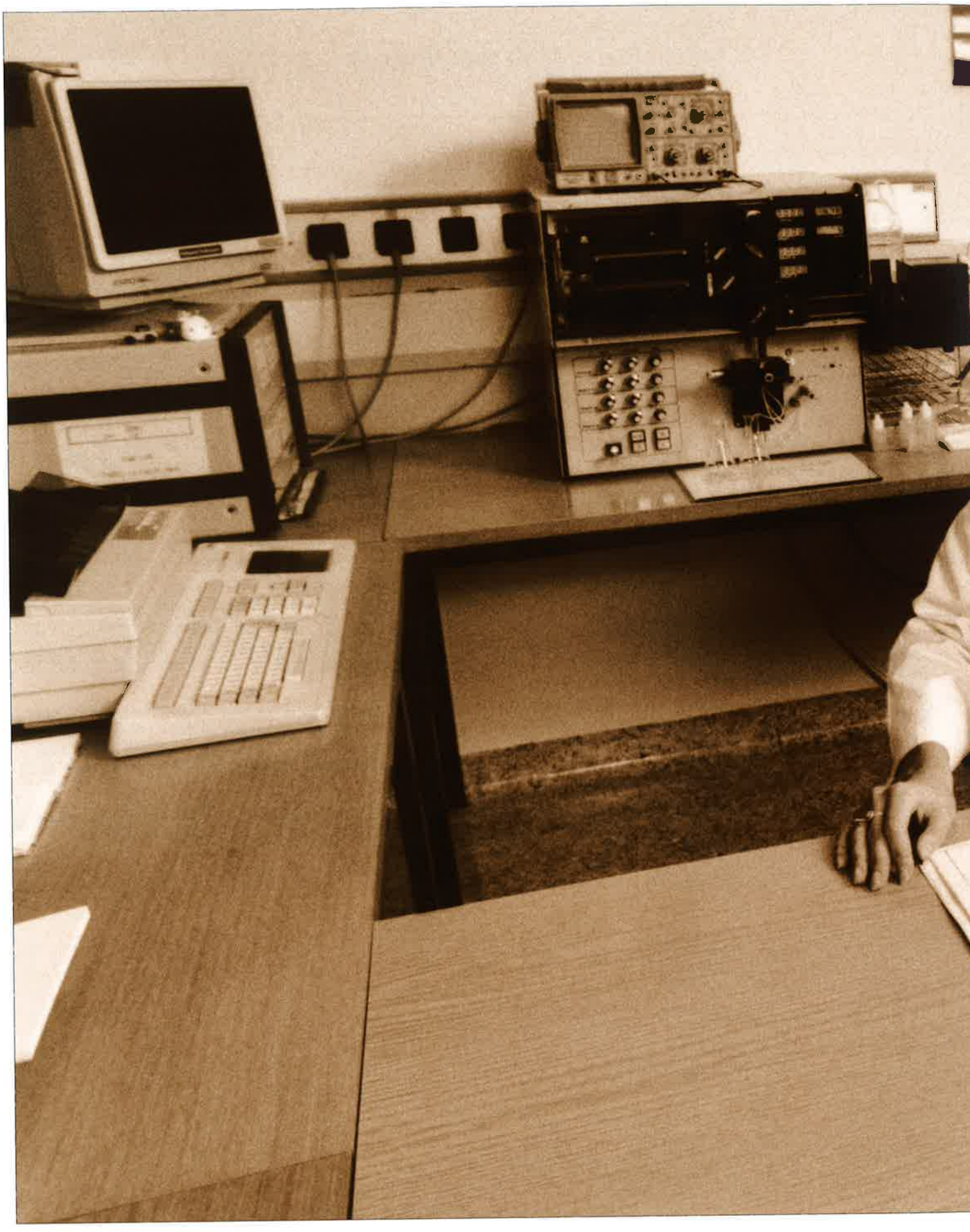
In the past five years, our department continued to pursue quality control activities in order to improve diagnostic reliability by means of cytopathological and pathological correlation; to improve immunocytochemical reactions and upgraded knowledge in the field of cytodiagnosis. The routine diagnostics were implemented with DNA measurements of aspiration biopsy samples in breast cancer and urine samples in urinary bladder cancer.

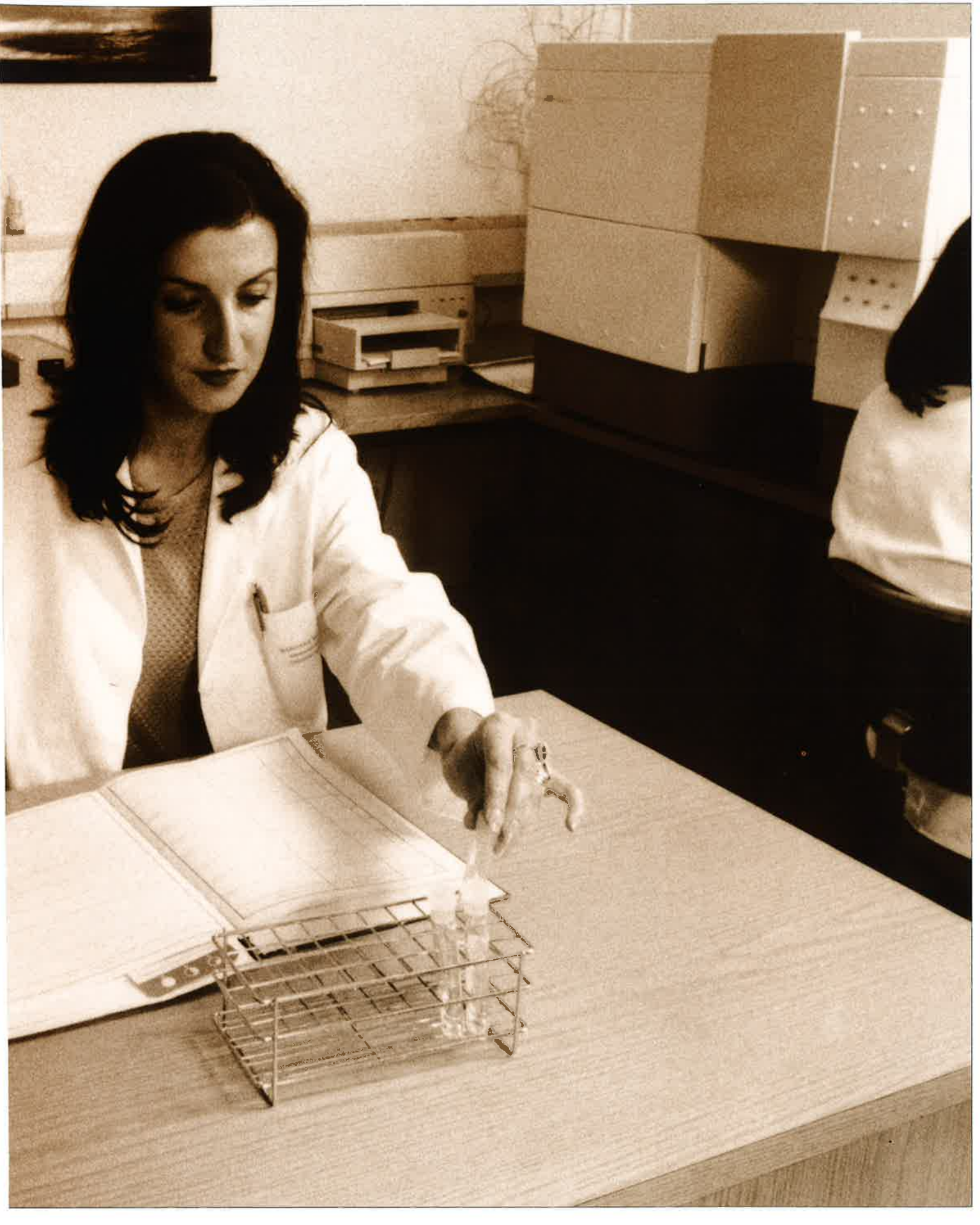
The research work of our Department was centered on the quantitative analysis of tumor cells by means of image cytometry (Cyto-Savant TM, Oncometrics, Technologies Corp. Vancouver, Canada). Image cytometry provides quantitative information on the size and shape of cells and cell nuclei, as well as on the distribution of nucleic chromatin and the quantity of nucleic DNA content. An image cytometer enables us to determine approximately 100 different cytometric features of the cell nucleus. In the beginning, we mainly focused on the optimal sample preparation and cell fixation, while our further studies concentrated on the determination of prognostic factors in breast cancer and the detection of malignancy associated changes in cervical smears. So far, we have been using the image cytometer solely for the purpose of scientific research, as its use in routine cytodiagnosis is still not feasible.

At our department, four candidates for Master's Degree and two candidates for Doctoral Degree have prepared their theses and successfully defended them. Prof. Marija Us-Krašovec, MD PhD, and Ana Pogačnik, MD PhD, are actively participating in the preparation of the national program for early detection of precancerous changes in Slovenia (ZORA). We have prepared a one-year training program for all those working in the field of gynecological cytopathology.

As an internationally renowned expert in the field of cytopathology, Prof. Us-Krašovec was invited to prepare a slide seminar on Diagnostic Aspiration Biopsy at the 11th International Congress of Cytology in 1992 in Melbourne, while Russian pathologists invited her to take part in their 1st Congress in Moscow in 1997; there she presented a lecture on the role of image cytometry in current research studies.

In September 1997, the Department of Cytopathology organized the 24th European Congress of Cytology in Ljubljana; the event was attended by 220 participants from 30 different countries, many of them being world renowned experts.





Klinični laboratorij

Vodja:
Vera Čoroli, prof. biol.

Specialist internist:
Bogdanka Pirc-Marjanović, dr. med.

Letno opravimo diagnostiko okoli 4.000 aspiracijskih biopsij kostnega mozga ter hematološke in urinske preiskave za vse ambulantne in hospitalne bolnike. V zadnjem letu smo za točnejšo opredelitev vrste malignih ne-Hodgkinovih limfomov skupaj z Inštitutom za mikrobiologijo uvedli imunofenotipizacijo celic kostnega mozga in periferne krvi s pretočno citometrijo. V letu 1997 smo začeli rutinsko uporabljati novo analizo, imenovano Uricult, za določanje bakterij v urinu.

Sodelujemo v vseh kliničnih raziskavah, kjer je pred zdravljenjem, med njim ali po njem potrebna ocena hematološke rezerve oz. infiltracije kostnega mozga iz slike krvi ali kostnega mozga.

Clinical Laboratory

Head:
Vera Čoroli, BSc Biol

Specialist in Internal Medicine:
Bogdanka Pirc-Marjanović, MD

Our laboratory performs approximately 4,000 bone marrow aspiration biopsies yearly. In addition, we carry out hematological and urinary analyses for all out-patient and in-patient admissions to the Institute.

In the past year, supported by the Institute of Microbiology, we implemented our diagnostics with immuno-phenotypization of bone marrow and peripheral blood cells by means of flow-cytometry for more accurate classification of non-Hodgkin's malignant lymphomas. In 1997, Uricult, the new analytical method for the determination of bacteria in the urine, was introduced into our routine work.

We participate in all clinical studies requiring blood and bone-marrow tests for the evaluation of hematological reserve or bone-marrow involvement before, during and after therapy.

Biokemični laboratorij

Vodja:
dr. Ivan Vrhovec, dipl. ing. kem.

Zdravstveni sodelavci:

Specialist klinične biokemije:
mag. Marta Kramberger, dipl. farm.

Specializant klinične biokemije:
Branka Svetic, dipl. ing. kem.
Valentina Čuk-Pašanku, dipl. farm.

Naša najpomembnejša strokovna dejavnost je rutinsko določanje elektrolitov, encimov in substratov v krvi in drugih telesnih tekočinah. Uporabljamo sodobne biokemične analizatorje, ki so prek laboratorijskega računalniškega sistema povezani v integralni informacijski sistem Onkološkega inštituta. S tehnikami DCC, RIA in ELISA določamo v tumorjih dojk hormonske receptorje in druge prognostične faktorje iz družine cisteinskih, serinskih in aspartatnih proteinaz.

Strokovno in raziskovalno delo je usmerjeno v razvoj analiznih tehnik, ki so enake ali primerljive s tehnikami v podobnih ustanovah v svetu in so osnova za izvedbo diplomskih nalog, magisterijev, doktoratov in raziskovalnih nalog zdravnikov. Specifični strokovni delež s področja analitike prispevamo v raziskavah, ki potekajo pod okriljem IBCS in EORTC.

Zaradi funkcij, ki smo jih prevzeli v organih nacionalnega strokovnega društva kliničnih biokemikov, aktivno sodelujemo pri vseh dejavnostih matičnega društva v slovenskem in mednarodnem merilu, kot je bil 4. kongres klinične kemije in laboratorijske medicine Alpe-Jadran na Bledu leta 1997.

Biochemical Laboratory

Head:
Ivan Vrhovec, BSc Chem, PhD

Medical Associates:

Specialist in Clinical Biochemistry:
Marta Kramberger, BSc Pharm, MSc

Resident in Clinical Biochemistry:
Branka Svetić, BSc Chem
Valentina Čuk-Pašanku, BSc Pharm

The most relevant activity of the Laboratory is routine determination of electrolytes, enzymes and substrates in the blood and other body liquids. This is done by means of advanced biochemical analyzers connected through a laboratory computer system with the integral information system of the Institute of Oncology. Using DCC, RIA and ELISA techniques, we determine hormone receptors and other prognostic factors of cisteine, serine and aspartic proteases family in breast tumors.

Professional and research work is centered on the development of analysis techniques which are either identical or comparable with those used in similar institutions abroad, and serve as the basis for diploma, Master's and Doctoral theses, as well as for research studies carried out at the Institute. We contribute our specific analytical part to the studies carried out within the framework of IBCS and EORTC.

The function that we were entrusted with in the bodies of our national professional association of clinical biochemists, calls for active collaboration in all the activities organized by our core association at a national as well as international level, such as the 4th Alps-Adria Congress of Clinical Chemistry and Laboratory Medicine, which was held in 1997 in Bled.

Oddelek za onkološko kirurgijo

Vodja:
doc. dr. Marko Snoj, dr. med.
1995–96:
prof. dr. Marija Auersperg, dr. med., upokojena 1997
do 1995:
prof. dr. Franc Lukič, dr. med., upokojen 1995

Specialisti kirurgije:
Damjan Bergant, dr. med.
dr. Nikola Bešič, dr. med.
Ibrahim Edhemovič, dr. med.
mag. Darja Eržen, dr. med.
mag. Marko Hočevar, dr. med.
Matjaž Kaučič, dr. med
prof. dr. Jurij Lindtner, dr. med.
prim. Janez Novak, dr. med.
Franc Pompe, dr. med.
Rudolf Snoj, dr. med.
Marko Špiler, dr. med.
Matjaž Šušteršič, dr. med.

Specializanta kirurgije:
mag. Janez Žgajnar, dr. med.
Erik Brecelj, dr. med.

Zdravnik:
Aleksander Pečnik, dr. med.

Kirurški posegi so pri bolniku z rakom potrebni za diagnostiko bolezni, za primarno zdravljenje ali pa za zdravljenje po zapletih, nastalih po kemoterapiji ali obsevanju. Praviloma se pri nas zdravijo tisti rakavi bolniki, pri katerih predvidevamo, da bo zdravljenje obsegalo tudi kemoterapijo in/ali obsevanje. Pri takih bolnikih je zaželeno, da se pred začetkom zdravljenja skupaj z zdravniki drugih specialnosti naredi načrt, v katerem ima svoje mesto tudi kirurški poseg. Praviloma je le-ta pri bolnikih z rakom solidnih tkiv na začetku zdravljenja.

Glavna področja onkološke kirurgije so kirurgija dojke, kirurgija sarkomov mehkih tkiv in kosti, kirurgija ščitnice, kombinirani ginekološko-kirurški posegi, zapletenejši kirurški posegi v trebuhu in kirurgija malignega melanoma. Pomembno področje onkološke kirurgije so tudi eksperimenti na živalih.

V zadnjih letih se močno povečuje priliv kirurških onkoloških bolnikov. Čakanje na operativne posege se podaljšuje, čeprav smo povečali število operacij in delo bolje organizirali, saj so prostorske možnosti enake kot pred 20 leti, ko je bilo rakavih bolnikov pol manj. Takšno stanje seveda ovira strokovni razvoj in zahteva od nas veliko prizadevnosti, da sledimo razvoju v svetu. V zadnjih petih letih je močno napredovala kirurgija netipljive spremembe v dojki, v porastu je ohranitvena kirurgija dojke, uvedli smo nova zapiranja laparotomije, ki ne povzročajo toliko prirastlin, v vzponu je uporaba avtomatskih spenjalnikov. Sodelujemo pri pripravi doktrine zdravljenja raka dojke v Sloveniji. Vodimo več raziskav na področju kirurgije dojke, tumorjev glave in vratu ter sarkomov mehkih tkiv in sodelujemo v mednarodnih kliničnih raziskavah, ki potekajo pod okriljem IBCS ter EORTC. Tudi tako bogatimo svoje znanje. V zadnjih letih smo imeli več vabljenih predavanj na Kirurških dnevih. Smo člani ESSO, nekateri tudi IHPBA.

Novi prostori, ki jih pričakujemo v naslednjih petih letih, bodo gotovo pospešili razvoj onkološke kirurgije na Onkološkem inštitutu v naslednjem tisočletju.

Department of Oncological Surgery

Head:
Assist. Prof. Marko Snoj, MD, PhD
1995–96:
Prof. Marija Auersperg, MD, PhD, retired 1997
till 1995:
Prof. Franc Lukič, MD, PhD, retired 1995

Specialists in Surgery:
Damjan Bergant, MD
Nikola Bešič, MD, PhD
Ibrahim Edhemovič, MD
Darja Eržen, MD, MSc
Marko Hočevar, MD, MSc
Matjaž Kaučič, MD
Assoc. Prof. Jurij Lindtner, MD, PhD
Prim. Janez Novak, MD
Franc Pompe, MD
Rudolf Snoj, MD
Marko Špiler, MD
Matjaž Šušteršič, MD

Residents in Surgery:
Janez Žgajnar, MD, MSc
Erik Brecelj, MD

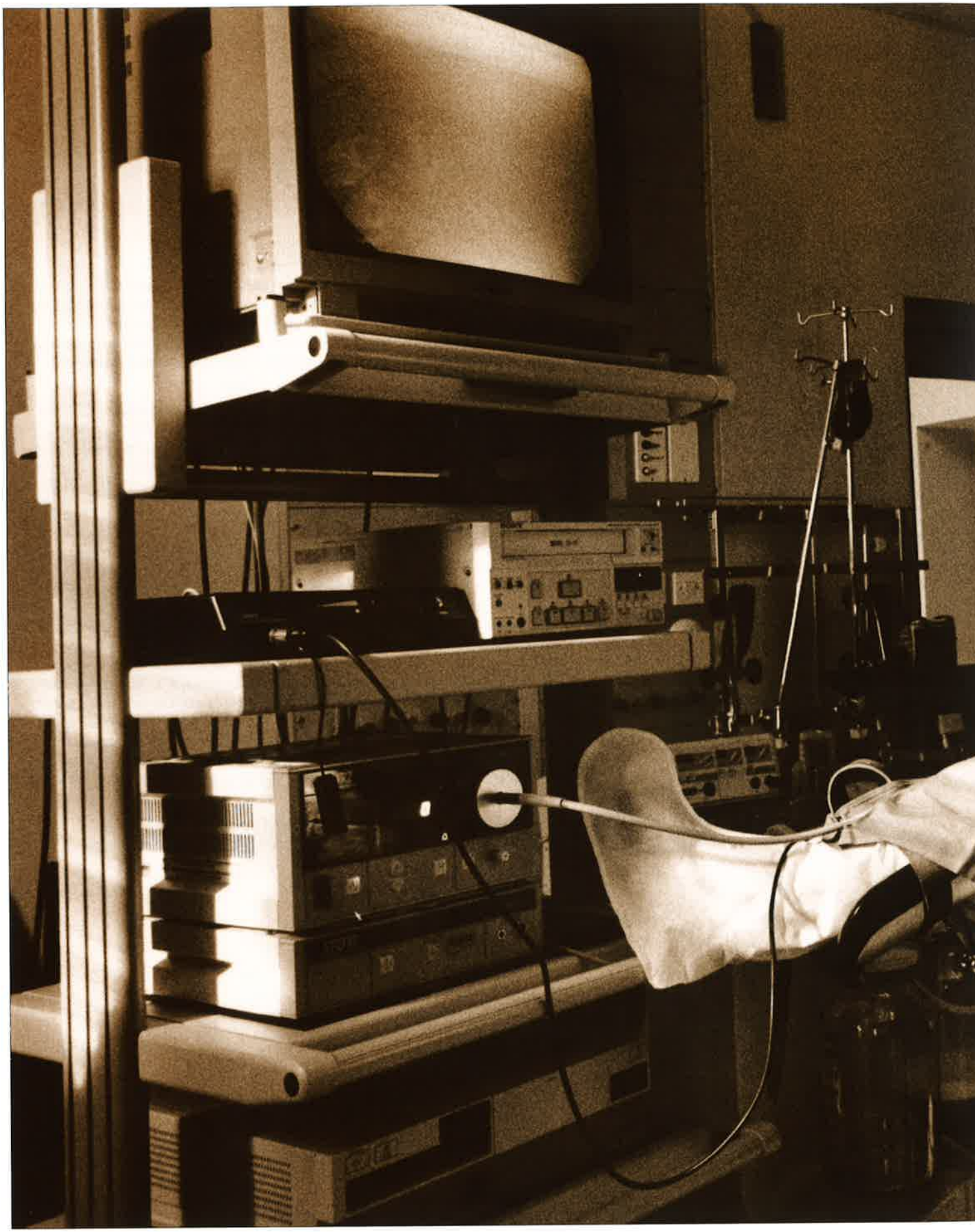
Attending Physician:
Aleksander Pečnik, MD

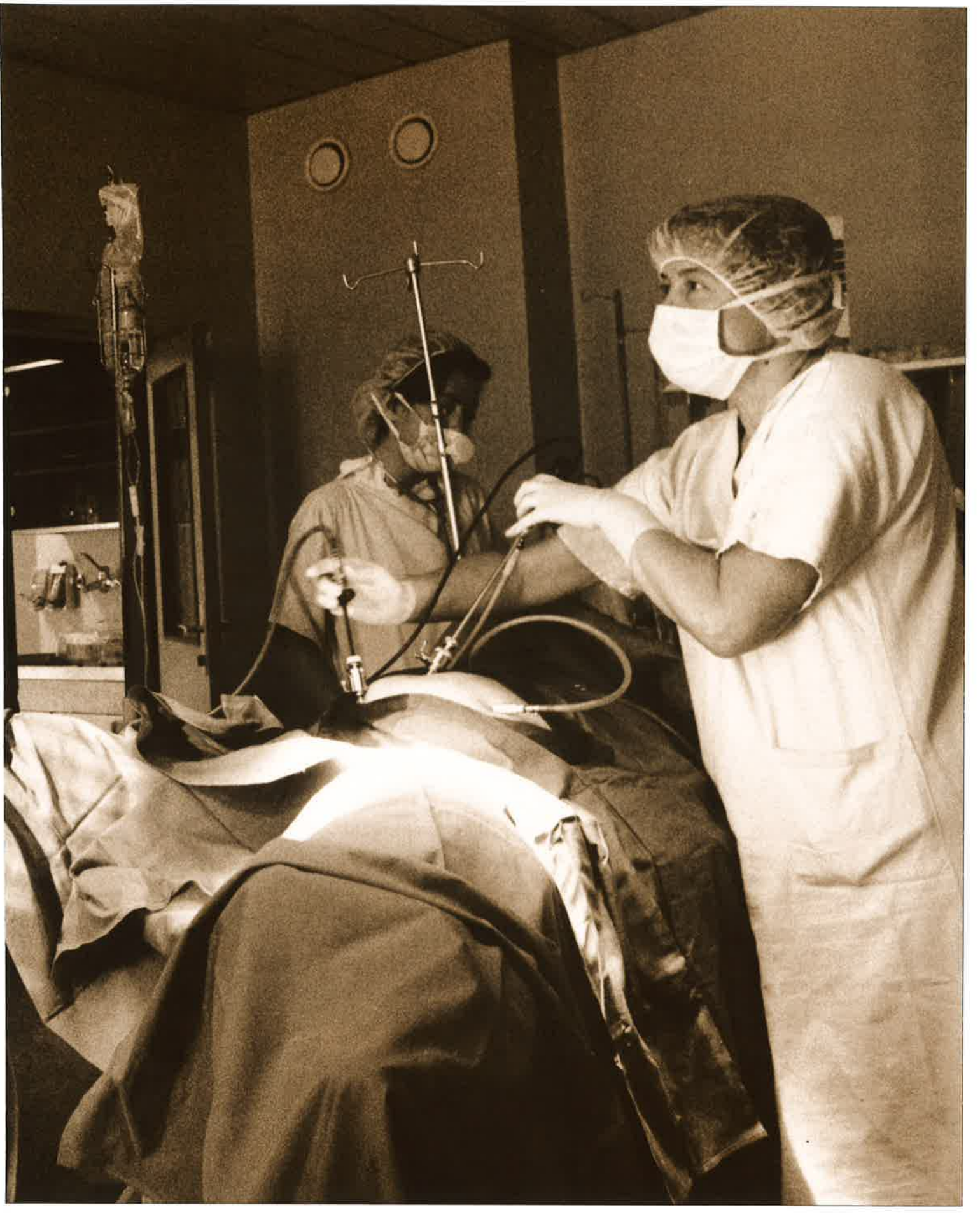
Department of oncological surgery performs surgical interventions in patients with cancer or in those with chemo- or radiotherapy related complications that require surgical treatment. As a rule, the Department admits those cancer patients whose treatment plan includes chemo- and/or radiotherapy. It is advisable that a treatment plan including surgery be made in collaboration with other specialists. Generally, in patients with solid tumors surgery represents the primary treatment.

The main domains of oncological surgery are as follows: surgery of the breast, soft tissue and bone sarcomas, thyroid surgery, combined gynecological and surgical interventions, complicated abdominal surgeries and surgery for malignant melanoma. Interventions in the mentioned sites can be performed either with therapeutic or diagnostic intent. Among the important domains of oncological surgery is also experimental surgery on animal models.

In the past few years, our department has had to cope with a substantial increase of patients suffering from the above types of cancer. Despite the great efforts and increased number of surgeries performed, the waiting list of patients scheduled for surgery is getting longer since the existing facilities are the same as twenty years ago, when the number of cancer patients was half lesser than today. Self-evidently, this situation results in a slower progress of the profession, which-– at a cost of maximum effort--nevertheless manages to keep abreast of the development in the world. Thus, in the past five years, substantial progress has been noted in the surgery of non-palpable breast lesions, breast preserving surgery, new methods of laparatomy closure which cause less adhesions, and in the use of automatic staplers in surgery. We also participate in the development of a doctrinary approach to the treatment of breast cancer in Slovenia. In addition, we conduct numerous studies concerned with surgery of the breast, head and neck tumors and soft tissue sarcomas. Our surgeons upgrade their knowledge by participating in the clinical trials carried out within the framework of IBCS and EORTC. In the past few years, we gave a number of guest lectures on the occasion of "Surgical Days". We are members of the ESSO, and some of our surgeons are also members of the IHPBA.

The new premises, to be built in the following five years, will contribute to further development of oncological surgery at the Institute of Oncology in the next millennium.





Oddelek za ginekološko onkologijo

Vodja:
doc. dr. Albert Peter Fras, dr. med.

Specialisti ginekologije:
asist. mag. Milan Baškovič, dr. med.
Sonja Bebar, dr. med.
mag. Vida Stržinar, dr. med.
doc. dr. Marjetka Uršič Vrščaj, dr. med.
Aleš Vakselj, dr. med.

Strokovna dejavnost ginekološke službe obsega poleg kirurškega zdravljenja bolnic z ginekološkim rakom še sodelovanje z radioterapevtsko in internistično službo. Novosti so odprto zdravljenje peritonitisov kot zapletov poprejšnjega zdravljenja in konservativnejši kirurški posegi pri napredovalih in neozdravljivih ginekoloških rakih, npr. ureterostoma namesto derivacije urina po Brickerju pri malignih fistulah sečil. Razvili smo endovizijo, ki omogoča laparoskopske kirurške posege (minimalna invazivna terapija), z novo ultrazvočno napravo pa razvijamo predoperativne endoluminalne preiskave (vaginalna ultrasonografija) za predoperativno diagnostiko ginekoloških rakov.

Po samostojni publikaciji o doktrini zdravljenja ginekoloških rakov, ki je izšla leta 1992, smo pripravili dve strokovni srečanji ginekologov Slovenije, leta 1994 s temo rak nožnice, leta 1995 pa rak zunanjega spolovila. Obakrat smo izdali tudi samostojni publikaciji. V pripravi za tisk je revidirana doktrina zdravljenja ginekoloških rakov v Sloveniji. Na 1. kongresu ginekologov in perinatologov Slovenije z mednarodno udeležbo leta 1996 smo predavali o zdravljenju raka jajčnikov in o urgentnih stanjih v ginekološki onkologiji. Bili smo soorganizatorji 2. sestanka združenja za ginekologijo Alpe-Adria.

Department of Gynecological Oncology

Head:
Assist. Prof. Albert Peter Fras, MD, PhD

Specialists in Gynecology:
Assist. Milan Baškovič, MD, MSc
Sonja Bebar, MD
Vida Stržinar, MD, MSc
Assist. Prof. Marjetka Uršič Vrščaj, MD, PhD
Aleš Vakselj, MD

The scope of activities of our department covers the surgical treatment of gynecological cancers as well as cooperation with radiotherapy and medical oncology departments as part of the multidisciplinary activities.

A few new activities have been introduced into our (clinical) practice: open treatment for postoperative peritonitis, conservative surgery in advanced and incurable gynecological cancers, e.g. ureterostomies instead urine derivation according to Bricker in malignant fistulas of the uropoietic system.

Endoscopy with the possibility of laparoscopic surgery (i.e. minimal invasive therapy) was developed.

The use of a new ultrasonographic device has enabled us to introduce preoperative endoluminal investigations (vaginal ultrasonography) into the diagnostics of gynecological cancer.

After the independent publication on the doctrine of gynecological cancer treatment, which appeared in 1992, we organized two professional meetings of gynecologists in Slovenia: a meeting on vaginal cancer in 1994, and another one on cancer of the vulva in 1995. On each occasion, we also published an independent publication.

A revised doctrine of gynecological cancer treatment in Slovenia is currently being prepared for print.

Our lectures on the treatment of ovarian cancer and on the emergency conditions in gynecological oncology were presented at the 1st Congress of Gynecologists and Perinatologists of Slovenia with international participation, which was held in 1996. We were the co-organizers of the 2nd Meeting of the Alps-Adria Society of Gynecology.

Oddelek za onkološko anesteziologijo

Vodja:
prim. Mojca Senčar, dr. med.
do 1996: Marija Baraga, dr. med., upokojena 1997

Specialisti anesteziologije:
prim. Drago Ažman, dr. med.
Dragica Kmet, dr. med.
Slavica Lahajnar-Čavlovič, dr. med.
asist. Ksenija Mahkovic-Hergouth, dr. med.
prim. Višnjica Kolonič, dr. med.
mag. Nada Rotovnik-Kozjek, dr. med.
Tatjana Stopar, dr. med.

Anesteziologi Onkološkega inštituta menimo, da je naše strokovno poslanstvo predvsem sodelovanje z drugimi specialisti onkologi. Anesteziolog na onkološkem inštitutu mora poleg svoje stroke dobro poznati tudi specifično onkološko zdravljenje in njegove posledice, saj le tako lahko ob operaciji predvidi in poskuša preprečiti zaplete in omogočiti bolniku, da je v čim krajšem času po operaciji sposoben za nadaljnje onkološko zdravljenje. Onkološki anesteziologi sodelujemo pri zdravljenju bolnikov z rakom, ki so življenjsko ogroženi zaradi same bolezni (npr. dihalna stiska pri anaplastičnem karcinomu ščitnice) ali pa zaradi posledic onkološkega zdravljenja (npr. sepsa, nevtropenični enterokolitis po sistemski terapiji). Da zagotovimo dobro in varno delo, moramo nenehno izpopolnjevati svoje znanje in skrbeti za obnavljanje in dopolnjevanje aparatur v operacijskih dvoranah in na oddelku za intenzivno nego. V zadnjih petih letih smo zamenjali enega izmed starejših anestezijskih aparatov z najsodobnejšim Dragerjevim, ki omogoča varno anestezijo pri bolnikih vseh starosti, tudi pri majhnih otrocih. Tehnična opremljenost oddelka je tolikšna, da danes noben, še tako kratek operativni poseg ne poteka brez osnovnega monitoringa. Ob velikih posegih uporabljamo poleg neinvazivnega tudi invazivni monitoring. Z aparatom za suho gretje tekočin se pri dolgotrajnih posegih z velikimi izgubami krvi izognemo podhladitvi bolnikov in njenim škodljivim posledicam. Pri dolgotrajnih posegih smo začeli uporabljati tehniko popolne intravenske anestezije (TIVA) s propofolom in alfentanilom v trajni infuziji, kar nam omogočajo intravenske črpalke. Prednost TIVA je manjša imunska modulacija bolnika kot pri balansirani tehniki anestezije. Izognemo se namreč dušikovemu oksidulu, ki deluje negativno na kostni mozeg, obenem pa povzroča širjenje zaprtih telesnih votlin (npr. črevesja), kar je za tehnično izvedbo zahtevnih in dolgotrajnih operacij neugodno. S to tehniko se izognemo tudi poluciji operacijske dvorane.

Pomembno področje dela onkološkega anesteziologa je lajšanje bolečine bolnikov z rakom. Dolgo delujoči analgetiki morfinskega tipa in dolgo delujoči tramadol so velika pridobitev za lajšanje bolečine naših bolnikov. Velik napredek je tudi vnašanje učinkovin v trajni infuziji, bodisi pod kožo ali v epiduralni prostor. Bolniki na intenzivnem oddelku si lahko s črpalko PCA individualno uravnavajo analgezijo. Nadaljnji napredek v lajšanju bolečine si obetamo od kožnih obližev s fentanilom.

Onkološki anesteziologi smo v zadnjih petih letih sodelovali na številnih mednarodnih in domačih strokovnih srečanjih. Smo člani slovenskih strokovnih združenj, nekateri pa tudi člani ESSO.

Department of Oncologycal Anesthesiology

Head:
Prim. Mojca Senčar, MD
till 1996: Marija Baraga, MD, retired 1997

Specialists in Anesthesiology:
Prim. Drago Ažman, MD
Dragica Kmet, MD
Slavica Lahajnar-Čavlovič, MD
Assist. Ksenija Mahkovic-Hergouth, MD
Prim. Višnjica Kolonič, MD
Nada Rotovnik-Kozjek, MD, MSc
Tatjana Stopar, MD

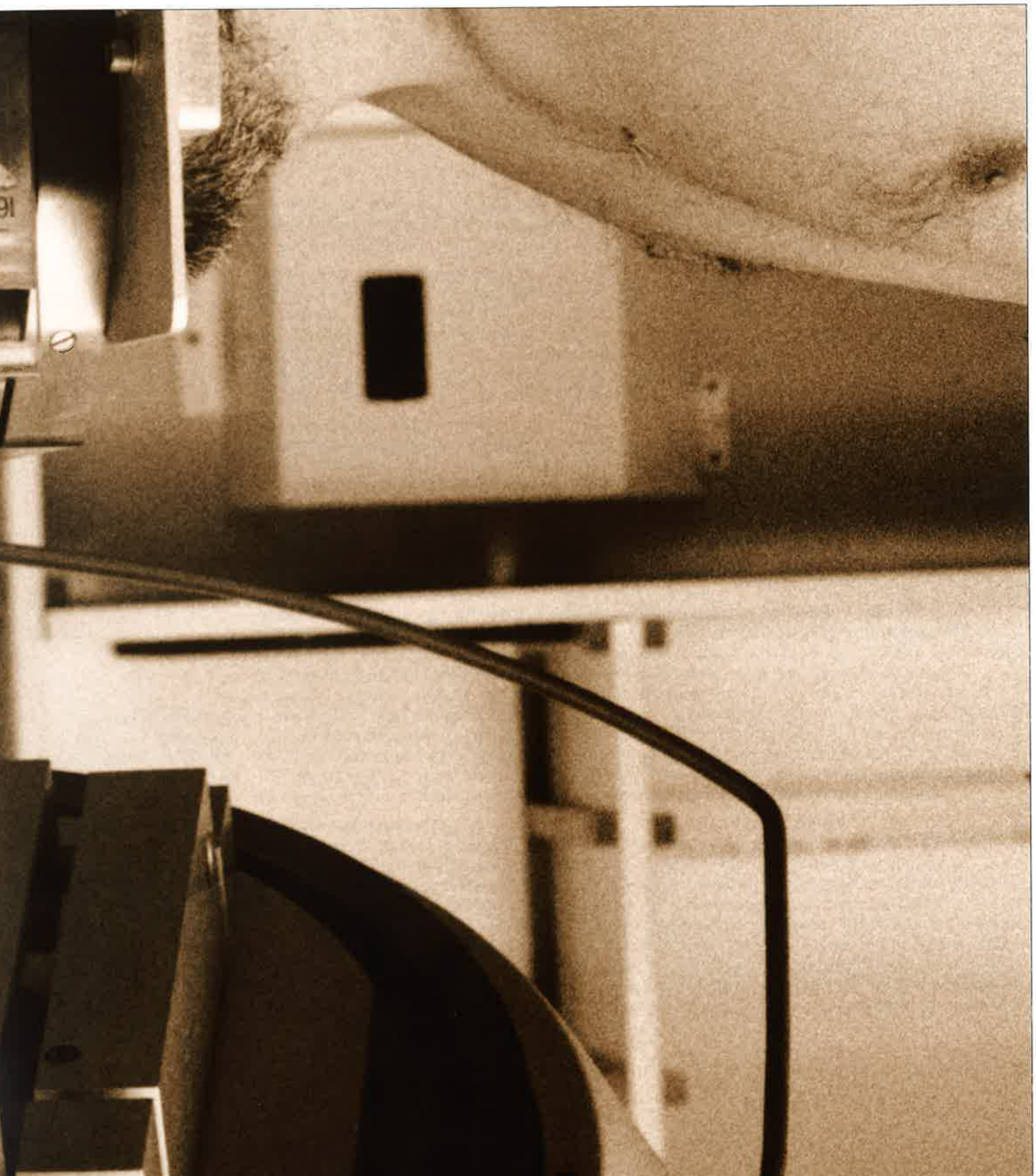
The anesthesiologists of the Institute of Oncology consider their mission mainly in terms of their active cooperation with oncologists of other specialties. An anesthesiologist working at our institution must have, apart from the standard qualifications and skills, also a profound knowledge of oncology-specific treatment and its sequels, in order to be able to foresee any complications that may occur during surgery and by preventing them ensure that the patient is fit for adjuvant oncological treatment in the shortest possible time after surgery. Oncological anesthesiologists play a role in the treatment of cancer patients whose life is at stake either due to the primary disease (e.g. respiratory distress in anaplastic thyroid carcinoma) or due to sequels of oncological treatment (e.g. sepsis, neutropenic enterocolitis after systemic therapy).

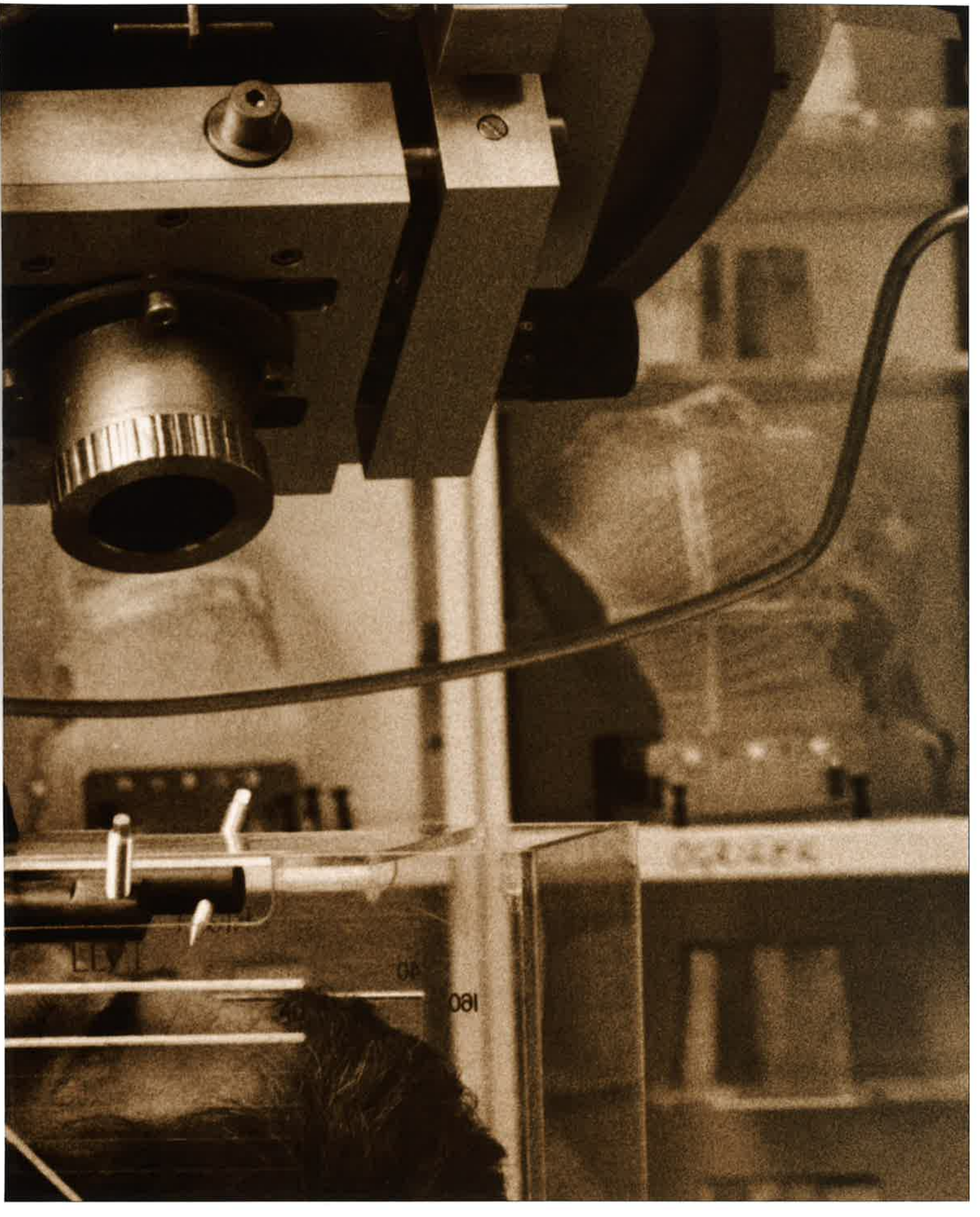
In order to ensure proper working conditions and work safety-apart from continuous upgrading of their skills-anesthesiologists must take care that the relevant equipment in the operating theaters and in the intensive care unit is replaced and supplemented with new devices when necessary. Therefore, in the last five years, one of our older anesthetic units was replaced with the latest Dragger's machine, which enables safe anesthesia in patients of all ages, including infants. Thanks to the existing technical facilities of our department, nowadays basic monitoring is employed invariably in all, even the shortest surgical procedures. Apart from the non-invasive monitoring, major surgeries also require the use of invasive monitoring. During prolonged surgical procedures associated with massive blood losses, a device for dry warming of liquids is used to protect the patient from hypothermia and its adverse consequences.

In prolonged surgical procedures, we began using the technique of total intravenous anesthesia (TIVA) with propofol and alfentanyl in a continuous infusion, which is made possible by means of intravenous pumps. The advantage of TIVA over the balanced anesthesia technique lies in its lower immunomodulation effect. Namely, there is no need to use nitrous oxide which exerts adverse effect on the bone marrow and at the same time causes dilatation of the closed somatic spaces (e.g. intestine), which is not in favor of demanding and long-lasting surgeries. Also, by using this technique, pollution of the operating theater is avoided.

Another important task of oncological anesthesiologists is alleviation of pain in cancer patients. The introduction of morphine and codeine type analgesics and tramadol with prolonged action has greatly improved analgesic treatment of our patients. Another great advancement was made by subcutaneous or epidural application of analgesic agents via continuous infusion. The use of PCA pump enables the patients at the Intensive Care Unit to adjust analgesia to their individual needs. The introduction of fentanyl skin plasters is expected to bring about further progress in pain treatment.

In the past five years our oncological anesthesiologists have participated in several international and national professional meetings. They are members of Slovenian professional associations, and some of them also members of ESSO.





Oddelek za radioterapijo

Vodja: doc. dr. Hotimir Lešničar, dr. med.
do 1995: Alenka Vodnik-Cerar, dr. med.

Vodja oddelka za brahiradioterapijo: prim. dr. Janez Kuhelj, dr. med.

Specialisti radioterapije in onkologije:
mag. Cvetka Bilban-Jakopin, dr. med.
akad. sp. Tomaž Benulič, dr. med.
Jože Bitenc, dr. med., upokojen 1995
prof. dr. Marjan Budihna, dr. med.
prof. dr. Mihael Debevec, dr. med., upokojen 1995
asist. Boris Jančar, dr. med.
Marija Jeromen-Kavčič, dr. med., upokojena 1997
Ladislava Furlan, dr. med., upokojena 1997
Metka Klevišar, dr. med., upokojena 1994
mag. Katarina Koritnik, dr. med.
asist. mag. Viljem Kovač, dr. med.
mag. Borut Kragelj, dr. med.
prim. Franc Marolt, dr. med.
Elga Majdič, dr. med.
prim. Gabrijela Petrič-Grabnar, dr. med.
Marija Plaper-Vernik, dr. med.
Vesna Sgerm-Robič, dr. med.
asist. mag. Primož Strojan, dr. med.
akad. sp. Erika Šoba-Podobnik, dr. med.
Radka Tomšič-Demšar, dr. med.
Vaneja Velenik, dr. med.
doc. dr. Matjaž Zwitter, dr. med.

Specializanti radioterapije in onkologije:
Irena Oblak, dr. med.
Snežna Paulin-Košir, dr. med.
Uroš Smrdel, dr. med.
mag. Lorna Zadravec-Zaletel, dr. med.

Sobni zdravniki:
Marta Dremelj, dr. med.
Katarina Barbara Karner, dr. med.
Vodja radioloških inženirjev: Boris Sekereš, ing. radiol.

Osnovna strokovna dejavnost našega oddelka je načrtovanje in izvajanje teleradioterapije in brahiradioterapije pri vseh malignih in nekaterih nemalignih boleznih na področju Republike Slovenije. Zdravniki specialisti ob tem opravljajo še klinično delo s hospitaliziranimi bolniki, ambulantno in konziliarno dejavnost na inštitutu in so svetovalci v drugih slovenskih bolnišnicah. Število bolnikov, ki so na Onkološki inštitut napoteni na obsevalno zdravljenje, v zadnjih letih narašča s stopnjo okrog 3% letno, ker se veča incidenca rakavih bolezni v Sloveniji in ker se širijo indikacije za (predvsem postoperativno) obsevanje. V letu 1997 smo s teleradioterapijo na megavoltnih aparatih, ki jih imamo pet, obsevali povprečno po 280 bolnikov dnevno.

V slovenski radioterapiji skušamo slediti razvoju stroke, ki omogoča načrtovanje obsevanja s čim boljšo zaščito zdravih tkiv. V zadnjih letih smo v ta namen iz tujine prevzeli številne metode. Računalniška izdelava individualne zaščite omogoča varnejše obsevanje in hkrati koncentracijo višje tumorske doze v strogo določenih področjih. S hiperfrakcionacijo in obsevanjem ob hkratnem vdihavanju karbogena (t.j. mešanice 95% kisika in 5% ogljikovega dioksida) skušamo izboljšati učinkovitost zdravljenja pri napredovalih oblikah malignomov glave in vratu. Karcinom prostate zdravimo z implantacijsko brahiradioterapijo, zgodnje oblike karcinoma grla pa z akceleriranim obsevanjem. Kemoradioterapija je na osnovi naših lastnih kliničnih izkušenj že postala standardno zdravljenje pri inoperabilnih karcinomih žrela. Končali smo tehnološko-fizikalne priprave za prvo izvedbo stereotaktične radioterapije pri nas.

Z lastnimi temeljnimi in kliničnimi raziskavami preverjamo vrednost postoperativne kemoradioterapije pri karcinomih glave in vratu, raziskujemo vlogo katepsinov pri metastaziranju, vpliv medikamentnega zdravljenja na postiradiacijski defekt žlez slinavk, učinke 5-krat dnevnih obsevalnih frakcij pri možganskih in pljučnih tumorjih ter kombinirane učinke radioterapije in hipertermije. Sodelujemo tudi pri šestih mednarodnih kliničnih študijah v okviru Evropske organizacije za raziskovanje in zdravljenje raka (EORTC). Lastne retrospektivne analize nam pomagajo posodabljati doktrinarna stališča za zdravljenje tumorjev pljuč, glave in vratu, dojke, testisa, požiralnika, debelega črevesa, malignih limfomov, sarkomov mehkih tkiv pri odraslih ter rabdomiosarkomov in gliomov pri otrocih.

Mednarodno se poskušamo slovenski radioterapevti uveljavljati s povprečno 20 aktivnimi udeležbami na strokovnih srečanjih letno. Samo v revijah, ki jih spremlja Science Citation Index, smo v zadnjem času objavili več kot 15 strokovnih člankov. Doma sodelujemo pri organizaciji mednarodnih in mnogih domačih strokovnih srečanj. Vključevanje specialistov radioterapije in onkologije v Evropsko združenje za terapevtsko radioonkologijo (ESTRO), višjih radioloških inženirjev pa v sorodni ERTED, nam omogoča, da se po kakovosti organizacije, opreme in izvedbe zdravljenja približujemo evropskim standardom. Pri tem posebno pozornost namenjamo zmanjševanju poškodb, ki jih lahko povzroča sicer uspešno zdravljenje, saj želimo vsakemu bolniku zagotoviti čim uspešnejše in čim varnejše obsevalno zdravljenje.

Department of Radiotherapy

Head: Assist. Prof. Hotimir Lešničar, MD, PhD
till 1995: Alenka Vodnik-Cerar, MD

Head, Brachiradiotherapy
Prim. Janez Kuhelj, MD, PhD

Specialists in Radiotherapy and Oncology:
Cvetka Bilban-Jakopin, MD, MSc
Tomaž Benulič, MD, MSc
Jože Bitenc, MD, retired 1995
Assoc. Prof. Marjan Budihna, MD, PhD
Prof. Mihael Debevec, MD, PhD, retired 1995
Assist. Boris Jančar, MD
Marija Jeromen-Kavčič, MD, retired 1997
Ladislava Furlan, MD, retired 1997
Metka Klevišar, MD, retired 1994
Katarina Koritnik, MD, MSc
Assist. Viljem Kovač, MD, MSc
Borut Kragelj, MD, MSc
Prim. Franc Marolt, MD
Elga Majdič, MD
Prim. Gabrijela Petrič-Grabnar, MD
Marija Plaper-Vernik, MD
Vesna Sgerm-Robič, MD
Assist. Primož Strojan, MD, MSc
Erika Šoba-Podobnik, MD, MSc
Radka Tomšič-Demšar, MD
Vaneja Velenik, MD
Assist. Prof. Matjaž Zwitter, MD, PhD

Residents in Radiotherapy and Oncology:
Irena Oblak, MD
Snežna Paulin-Košir, MD
Uroš Smrdel, MD
Lorna Zadravec-Zaletel, MD, MSc

Attending Physicians:
Marta Dremelj, MD
Katarina Barbara Karner, MD

Radiological Engineer in Charge:
Boris Sekereš, Eng Radiol

The basic activity of the Department of Radiotherapy is the planning and performance of tele- and brachyradiotherapy for all malignant and some benign diseases in the territory of Slovenia. Apart from that, our specialists in radiotherapy also perform clinical work in the wards with hospitalized patients, outpatient and counseling service inside the Institute, as well as consultations in other Slovenian hospitals. With a steady increase of cancer incidence in Slovenia and wider indications for radiotherapy, particularly for postoperative irradiation, in the past few years the number of patients referred to the Institute of Oncology for radiation therapy has been increasing by approx. 3% yearly. In 1997, the average daily turnover on the existing five MV teleradiotherapy units was 280 patients.

The Slovenian radiotherapy tries to keep abreast with new advances in this field, which are aimed to ensure irradiation planning with an optimum protection of healthy tissues. Therefore, in the past years we introduced a number of new methods that had already been recognized as effective elsewhere (worldwide, abroad). Thus, computer guided designing of individualized shielding masks ensures safer application of radiotherapy, while it provides higher tumor dose concentrations in strictly defined areas. The newly introduced method of hyperfractionated irradiation combined with carbogen (i.e. a mixture of 95% oxygen and 5% CO_2) is aimed to improve the effectiveness of therapy in advanced head and neck cancers. Brachyradiotherapy by means of implantation technique is used for carcinoma of the prostate and accelerated irradiation for early laryngeal cancer. Based on our own clinical experience, chemo-radiotherapy has already become a standard therapy for inoperable pharyngeal cancer. The preliminary technological and physical preparations for the introduction of stereotactic radiotherapy in our Institute have been successfully completed.

Our basic and clinical research is aimed to establish the relevance of chemotherapy in head and neck cancers, study the role of cathepsins in metastasizing process, and investigate the effect of medical treatment on the occurrence of postirradiation defect of the salivary glands, the effects of five daily fractions of irradiation for tumors of the brain and lung, and to study the combined effects of radiotherapy and hyperthermia. We participate in six multinational clinical studies carried out within the framework of EORTC. Using the results of our own retrospective analyses, we are currently updating the doctrine of treatment for cancers of the lung, head and neck, breast, testis, esophagus, large intestine, malignant lymphomas, soft tissue sarcomas in adults, and rhabdomyosarcomas and gliomas in children.

The presence of Slovenian radiotherapists in the international scientific community is maintained by approximately 20 active participations at different professional meetings yearly. In the past period, our radiotherapists have published over 15 original papers in the journals covered by SCI alone. They play an active role in the organization of several international and national professional meetings. Membership of our specialists in radiotherapy and oncology in ESTRO, and of radiological engineers in a similar association called ERTED, enables us to approach the European standards in terms of the quality of organization, equipment and treatment procedures. Within this, a particular attention is attributed to minimizing the injuries which may occur as a result of otherwise successful treatment. Only in this way can we ensure safe therapeutic procedures for every individual patient.

Enota za radiofiziko

Vodja:
mag. Bogdan Umek, dipl. ing. fiz.
do 1995: dr. Marko Habič, dipl. ing. fiz., upokojen 1995

Radiofiziki:
Janez Burger, prof. fiz.
Božidar Casar, dipl. ing. fiz.
mag. Vlado Robar, dipl. ing. fiz.
Tomaž Verk, dipl. ing. fiz.

Odgovorna oseba za varstvo pred ionizirajočim. sevanjem:
Janez Marolt, ing. radiol.

Tehnični nadzor in vzdrževanje:
Franc Pičman, Jernej Satler, dipl. ing. elek.

Radiofizikalna enota pripada Oddelku za radioterapijo. Skrbi za dozimetrično in geometrično pravilno obsevanje bolnikov, izdelavo obsevalnih načrtov za vsakega bolnika posebej ter za brezhibno delovanje in kalibracijo obsevalnih aparatov, simulatorjev in dozimetrijske opreme. Izpopolnjujemo sedanje načine obsevanja in uvajamo nove. Skrbimo tudi za varstvo delavcev našega inštituta pred sevanjem.

V zadnjih petih letih smo si najbolj prizadevali za zagotavljanje kakovosti obsevanja v radioterapiji. V skladu z mednarodnimi standardi (ISO 2000) v pogostih rednih pregledih preverjamo mehanske, optične in radiacijske lastnosti obsevalnih aparatov in simulatorjev obsevanja. Izkazalo se je, da to lahko pomembno poveča kakovost obsevanja. Pri tem delu že nekaj let sodelujemo v projektu EURAQA v okviru Evropske skupnosti za zagotavljanje kakovosti v radioterapiji. Obsevanje bolnikov smo izpopolnili z individualnim oblikovanjem zaščit in kompenzatorjev doze za posamezna obsevalna polja. Do konca letošnjega leta bomo zagotovili tehnične pogoje za stereotaktično radiokirurgijo z linearnim pospeševalnikom. Z njo bo našim bolnikom na voljo novo zdravljenje manjših možganskih, rakavih in nerakavih tvorb.

Leta 1996 smo pri Društvu biofizikov Slovenije ustanovili Sekcijo za medicinsko fiziko. Njen predsednik je Božidar Casar, ki deluje tudi v Evropski zvezi organizacij za medicinsko fiziko (EFOMP). Zveza je namreč našo sekcijo sprejela za svojo članico.

Unit of Radiophysics

Head:
Bogdan Umek, BSc Phys, MSc
till 1995: Marko Habič, BSc Phys, PhD, retired 1995

Radiophysicists:
Janez Burger, BSc Phys
Božidar Casar, BSc Phys
Vlado Robar, BSc Phys, MSc
Tomaž Verk, BSc Phys

In charge of Radiation Protection:
Janez Marolt, Eng Radiol

Technical Surveillance and Maintenance:
Franc Pičman,
Jernej Satler, BSc Electr

The Unit of Radiophysics is part of the Radiotherapy department, which is responsible for geometrically and dosimetrically correct irradiation of patient; for designing irradiation plans for every individual patient, as well as for faultless functioning and calibration of the irradiation machines, simulators and dosimetric devices. Our activities include upgrading the existing and introducing new irradiation techniques into radiotherapy. We are also responsible for the radiation protection of the staff of our Institute.

In the past five years, our major attention was centered on the irradiation quality assurance in radiotherapy. In keeping with the international standards (ISO 2000). We increased the frequency of regular checks for individual mechanical, optical and radiation properties of irradiation units and simulators. This has proved very useful in terms of quality assurance. A few years ago, we began cooperating with this work in the EURAQA project within the framework of European Community activities for quality assurance in radiotherapy.

The irradiation of patients was improved by the development of individually formed protection masks and dose compensators for individual irradiation fields. By the end of this year, we plan to ensure technical conditions for the introduction of stereotactic radiosurgery with a linear accelerator. This will provide new possibilities for the treatment of smaller malignant and benign brain tumors.

In 1996, we established a Section of Medical Physics within the framework of the Society of Biophysicists of Slovenia. The president of this section is Božidar Casar, who is also active in the European Federation of Organizations for Medical Physics (EFOMP), since our Section of Medical Physics was admitted to the membership of this organization.

Oddelek za internistično onkologijo

Vodja:
doc. dr. Borut Štabuc, dr. med.
do 1997: Olga Cerar, dr. med.

Specialisti interne medicine:
prim. Jožica Červek, dr. med.
doc. dr. Tanja Čufer, dr. med.
Marija Fidler-Jenko, dr. med., upokojena 1997
doc. dr. Aleksandra Markovič-Predan, dr. med.
mag. Janja Ocvirk, dr. med.
Bojana Pajk, dr. med.
Marjeta Stanovnik, dr. med.
mag. Marjeta Vovk, dr. med.
Branko Zakotnik, dr. med

Specialist nevrologije:
mag. Tanja Roš-Opaškar, dr. med.

Specializanti interne medicine:
mag. Simona Borštnar, dr. med.
mag. Zvezdana Hlebanja, dr. med.
mag. Barbara Jezeršek, dr. med.
Tanja Južnič, dr. med.
asist. mag. Andrej Franc Plesničar, dr. med.
mag. Breda Škrbinc, dr. med.

Zdravniki oddelka za internistično onkologijo načrtujemo diagnostiko, sistemsko zdravljenje in spremljamo potek bolezni bolnikov z rakom. Zagotavljamo jim standardno sistemsko zdravljenje, ob tem pa raziskujemo nove možnosti sistemskega zdravljenja. Posebej se posvečamo novim citotoksičnim učinkovinam, hormonom in modifikatorjem biološkega odziva, učinkovanju njihovih kombinacij in novim učinkovinam za podporno zdravljenje. S sodelovanjem v večcentričnih mednarodnih raziskavah smo preskušali nove učinkovine: talimustin, paklitaksel, docetaksel, pirarubicin, eksamestan, kardioksan, amifostin, granisetron, tropisetron, rekombinantni eritropoetin. Razvijamo nove načine kombiniranega zdravljenja s kemoterapevtiki in obsevanjem, ki omogočajo manj mutilantne operacije. Odmevno je naše kombinirano zdravljenje invazivnega raka sečnega mehurja, s katerim smo v raziskavi pri velikem deležu bolnikov lahko ohranili sečni mehur. V zadnjih letih smo standardizirali pooperativno zdravljenje kolorektalnega raka. Delujemo tudi v multidisciplinarnem timu, ki načrtuje zdravljenje za vse bolnike s tumorji v področju glave in vratu in za bolnike s pljučnim rakom. Pri primarnih in sekundarnih tumorjih jeter in pri sarkomih delamo žilno-podkožne vložke ali vstavljamo intraarterijske katetre za regionalno kontinuirano kemoterapijo. Upoštevaje izsledke mednarodnih kliničnih raziskav smo v zadnjem letu bolnicam z rakom jajčnikov začeli kot prvo zdravljenje dajati kombinacijo paklitaksela in karboplatina. Pri bolnikih z rakom testisov in pri bolnicah z rakom dojk smo začeli uvajati zdravljenje s kemoterapevtiki v visokih odmerkih ob podpori perifernih matičnih krvnih celic.

Kot konzultanti za sistemsko zdravljenje sodelujemo v vseh timskih konzilijih na Onkološkem inštitutu, pa tudi v drugih bolnišnicah v Sloveniji. Izdelali smo smernice za sistemsko zdravljenje in s sodelavci v multidisciplinarnih timih tudi smernice za celostno obravnavo bolnikov z rakom dojke, testisov, sečnega mehurja, želodca, črevesja, požiralnika, trebušne slinavke, bolnikov s primarnimi in sekundarnimi tumorji jeter in žolčnih vodov, ginekološkimi tumorji, kostnimi tumorji in tumorji mehkih tkiv, primarnimi limfomi prebavil in smernice za standardno antiemetično zdravljenje.

Sodelujemo v mednarodnih raziskavah raka dojke, Hodgkinove bolezni in ne-Hodgkinovih limfomov. Večina jih poteka pod okriljem EORTC ter IBCS. Od leta 1997 sodelujemo s 7 najbolj priznanimi kemoterapevtskimi centri v Evropi tudi v kliničnih raziskavah skupine EORTC za preizkušanje zdravil. V zadnjem času smo bili nosilci štirih raziskovalnih nalog pod okriljem Ministrstva za znanost in tehnologijo.

V zadnjih petih letih smo sodelovali na številnih mednarodnih in domačih strokovnih srečanjih. Bili smo v strokovnih in organizacijskih odborih šestih domačih in petih mednarodnih strokovnih srečanj. V letu 1997 smo gostili delovni sestanek skupine EORTC z raka dojk. Smo nosilci vsakoletnega podiplomskega izobraževanja specializantov splošne medicine za področje onkologije.

Smo aktivni člani Evropskega združenja za internistično onkologijo (ESMO). Prav tako smo člani in v predsedstvih številnih strokovnih združenj Slovenskega zdravniškega društva. Delujemo v mnogih odborih Zdravniške zbornice, Zvezi Slovenskih društev za boj proti raku in Društvu onkoloških bolnikov.

Department of Medical Oncology

Head:
Assist. Prof. Borut Štabuc, MD, PhD
till 1997: Olga Cerar, MD

Specialists in Internal Medicine:
Prim. Jožica Červek, MD
Assist. Prof. Tanja Čufer, MD, PhD
Marija Fidler-Jenko, MD, retired 1997
Assist. Prof. Aleksandra Markovič-Predan, MD, PhD
Janja Ocvirk, MD, MSc
Bojana Pajk, MD
Marjeta Stanovnik, MD
Marjeta Vovk, MD, MSc
Branko Zakotnik, MD

Specialists in Neurology:
Tanja Roš-Opaškar, MD, MSc

Residents in Internal Medicine:
Simona Borštnar, MD, MSc
Zvezdana Hlebanja, MD, MSc
Barbara Jezeršek, MD, MSc
Tanja Južnič, MD
Assist. Andrej Franc Plesničar, MD, MSc
Breda Škrbinc, MD, MSc

Physicians of the Department of Medical Oncology are involved in the planning of diagnostic procedures, carrying out systemic therapy and following up the treated cancer patients. In carrying out the standard systemic therapy, a particular attention is attributed to the introduction of new cytotoxic agents, hormones and biological response modifiers, their combinations and new agents for supportive therapy. In the past period, new agents such as talimustin, paclitaxel, docetaxel, pirarubicin, examestan, cardioxan, amifostin, granisetrone, tropisetrone and recombinant erythropoetin, were investigated within the framework of multicentric studies. We have been developing new methods of combined treatment with chemotherapeutics and irradiation, which enable us to choose less mutilating surgeries. Our study of the combined treatment for invasive bladder cancer was met with great interest, since it showed that the urinary bladder could be preserved in a high percentage of the patients. In the period covered by this report, we have standardized the postoperative treatment for colorectal cancer, and established a permanent cooperation within the multi-expert team regarding the planning of systemic treatment in all patients with head-and-neck and lung cancers. In primary and secondary tumors of the liver and in sarcomas, regional continuous chemotherapy is performed by means of subcutaneous and vascular access-port valves or intraarterial catheters. In keeping with the results of international clinical trials in the past year, we introduced the combination of paclitaxel and carboplatin as a first-line therapy for ovarian cancer. In patients with cancers of the testicles and in breast cancer patients, we started to use high-dose chemotherapy at a simultaneous support with peripheral blood stem cells.

As consultants for systemic therapy we have been participating in all the team counsels at the Institute of Oncology, as well as in other Slovenian hospitals. We have worked out the guidelines for systemic therapy, and in collaboration with other members of our multidisciplinary team also the guidelines for a comprehensive care of patients with cancers of the breast, testicles, urinary bladder, stomach, intestine, esophagus, pancreas, as well as with primary and secondary tumors of the liver and bile ducts, gynecological and soft tissue tumors, primary gastrointestinal lymphomas, and finally also the guidelines for antiemetic treatment.

We participate in a number of international studies on breast cancer, Hodgkin's disease and non-Hodgkin lymphomas, most of which are being carried out within the framework of EORTC and IBCS. Since 1997, we have had active cooperation with seven most relevant European chemotherapeutic centers in joint clinical trials conducted by the EORTC drug testing group. In the past period medical oncologists of our department were chief investigators of four studies carried out as part of the scientific research projects sponsored by the Ministry of Science and Technology of Republic Slovenia.

In the past five years, we actively participated in numerous international and national medical meetings. Apart from that, we had members in the scientific and organizing committees of six national and five international professional meetings. In 1997 we hosted an EORTC workshop on breast cancer. We are organizers of a regular annual postgraduate education program covering the field of oncology for residents in general medicine.

We are active members of the European Society of Medical Oncology (ESMO), as well as members of numerous sections of the Slovenian Medical Association, holding key positions in some of them. We play an active role in several boards and committees of the Medical Chamber of Slovenia, the Association of Slovenian Anticancer Societies, as well as in the Oncological Patients Association.


DRUŠTVO ONKOLOŠKIH BOLNIKOV SLOVENIJE
DRUŠTVO ONKOLOŠKI
BOLNIKOV SL
CANCER PATIENTS ASSOCIAT

Oddelek za psihoonkologijo

Vodja:
prim. Marija Vegelj-Pirc, dr. med.

Zdravnik:
Zvezdana Snoj, dr. med.

Zdravstvena sodelavka:
Andreja Cirila Škufca, dipl. psih.

V težišču našega dela je ambulantna klinična dejavnost, ki poteka po načelu odprtih vrat in odprtega telefona. Namenjena je bolnikom in/ali bolnikovim svojcem, ki lahko v duševnih stiskah pri nas poiščejo pomoč. V zadnjem času jih vse pogosteje k nam napotijo tudi osebni zdravniki ali specialisti. Delo je individualno in/ali skupinsko. Psihoterapevtska pomoč obsega svetovanje, posredovanje v krizi, podporno psihoterapijo, učenje sprostitvenih tehnik in vizualizacije.

Zanimanje za psihoonkologijo postaja vse večje. Pri naših predavanjih, predstavitvah in seminarjih sodelujejo tudi bolniki. Obiskali smo več bolnišnic in zdravstvenih domov po Sloveniji, sodelovali na 11 strokovnih srečanjih za zdravnike in sestre, imeli več poljudnih predavanj in številne prispevke v raznih medijih obveščanja.

Za pomoč zdravstvenemu osebju je v letu 1995 na oddelku delovala skupina za osebnostno rast z rednimi mesečnimi srečanji in v letu 1996 skupina Monte Verita, ki se je srečevala na 3 tedne.

Oddelek sodeluje v programih do- in podiplomskega izobraževanja za sestre in zdravnike, vs pogosteje pa tudi v programih drugih fakultet, zlasti z mentorstvom pri seminarskih in diplomskih nalogah. Na oddelku so diplomsko delo opravili trije psihologi in diplomantka Visoke šole za socialno delo.

Od leta 1993 sodelujemo z Inštitutom Antona Trstenjaka in smo med prvimi začeli uvajati logoterapijo v klinično prakso. Z logotestom smo napravili dve raziskavi o življenjskem smislu ob soočanju z rakom – prvo med ambulantnimi bolnicami z rakom dojke, drugo, ki so jo delali študentje medicine po razpisu za Prešernove nagrade, pa med bolniki na Onkološkem inštitutu. Med bolniki in zdravstvenim osebjem smo raziskovali odnos do bolezni in zdravljenja, še posebej do alternativnega.

Sodelovanje s tujino poteka z Nemškim združenjem za psihoonkologijo, z Europa Donna – Evropsko koalicijo za boj proti raku dojke in z UICC – s programom Reach to Recovery. Na konferencah redno sodelujemo. Leta 1997 smo bili pobudniki za ustanovitev Slovenskega nacionalnega združenja za boj proti raku dojke Europa Donna. UICC je izkazal priznanje za organizirano samopomoč žensk z rakom dojke v Sloveniji (Pot k okrevanju), s podelitvijo priznanja – Medal Reach to Recovery – vodji oddelka leta 1994. Največje priznanje pa je, da je bila oddelku zaupana organizacija 10. mednarodne konference Reach to Recovery, ki je bila maja 1998 v Ljubljani.

Department of Psychooncology

Head:
Prim. Marija Vegelj-Pirc, MD

Attending Physician:
Zvezdana Snoj, MD

Medical Associate:
Andreja Cirila Škufca, BSc Psych

Our work on the ward is centered on the outpatient clinical activities. It functions on the principle of "open door and open telephone", which means that it is readily available to help the patients, and/or their relatives, cope with different psychological and emotional problems. Recently, the patients have been referred to us by their general practitioners (family doctors) or specialists. We work with them individually and/or in groups: support psychotherapy, counseling, intervention in crisis, teaching of relaxation techniques and visualization.

Interest in psychooncology is steadily increasing. Our lectures, presentations and seminars are carried out with patients' participation. With this objective in mind, we visited several different hospitals and health centers in Slovenia, took part in 11 different professional meetings of physicians and nurses, and gave a number of lectures and media presentations for lay public.

As support to the medical staff, in 1995 regular monthly meetings of personal growth group were organized at the Department of Psychooncology. In 1996, another group, Monte Verita, had its regular meetings every three weeks.

The Department contributes its share to different undergraduate and postgraduate education programs for nurses and physicians. Also, our cooperation with other university schools has intensified, particularly in the form of mentorships in student's seminar and diploma work; thus three psychologists and a graduate from the College of Social Work have been preparing their theses at our department.

Since 1993, we have been cooperating with Anton Trstenjak Institute, and were among the first to introduce logotherapy into clinical practice. We performed two studies with logotest on the meaning of life in relation to cancer: The first one was carried out in our outpatients with breast cancer, while the second investigation was done by medical students in patients treated at the Institute of Oncology, within the contest for Prešeren's award. The attitude to disease and treatment with an emphasis on alternative methods was studied in patients and medical staff.

International cooperation has been maintained through our links with the German Society for Psychooncology, Europa Donna – the European Breast Cancer Coalition, and with UICC – within its Reach to Recovery program. We regularly attend all the conferences. In 1997, a Slovenian national association for fight against breast cancer – Europa Donna was established at our initiative. In 1994, the Head of our Psychooncology Department was awarded Reach to Recovery Medal by UICC for organizing self-support activity (Pot k okrevanju) among women with breast cancer in Slovenia. The greatest international recognition was won, however, when we were entrusted with the organization of the 10th Reach to Recovery International Conference, held in May 1998 in Ljubljana.

Zdravstvena nega

Direktor za zdravstveno nego:
Marija Velepič, VMS

Pomočnica direktorja: Brigita Skela Savič, VMS
do 1997: Jožica Bostič-Pavlovič, VMS

Vodilna medicinska sestra za področje higiene:
Darja Musič, VMS

Raziskovalna medicinska sestra:
Albina Bobnar, VMS, prof. defektologije

Vodja prehrane:
Helena Drolc, VMS

Vodilne medicinske sestre hospitalnih oddelkov:
Štefka Kodrman, VMS
Irena Koselj, VMS
Tatjana Pouh, VMS
do 1997:
Brigita Skela Savič, VMS
Metka Zajc, VMS
Marija Koblar, VMS
Jelica Piškur, VMS
Cvetka Cerar, VMS
do 1997: Milena Popit, VMS, upokojena 1997
Zdenka Erjavšek, VMS
Jana Fink, VMS

Specialistične ambulante:
Janja Babič, VMS

Center za bolezni dojk:
Tatjana Kumar, VMS

Ambulanta za kemoterapijo:
Marija Horvat, VMS

Operacijski prostori: Nevenka Papler, VMS

Anesteziologija:
Alenka Muha, VMS

Centralna sterilizacija:
Andreja Žagar, VMS
do 1997: Nevenka Brolih, VMS

Mediko-socialni oddelek:
Irena Golob, VMS
do 1997: Ema Logar, socialni delavec, upokojena 1997

Zaradi vedno novih metod in načinov zdravljenja onkoloških bolnikov postaja onkološka zdravstvena nega (ZN) vse bolj specifična in zahtevna. Ob tem pa se povečujejo tudi potrebe po večji kakovosti zdravstvene nege.

V letih od 1993 do vključno 1997 je zdravstvena nega kot stroka močno napredovala. Na podlagi vsebin podiplomskega izobraževanja na Univerzi v Ljubljani (Visoka šola za zdravstvo) in znanja, ki so ga pridobile vse vodilne medicinske sestre inštituta, smo začeli izdelovati standarde za onkološko ZN in bolnikovo negovalno dokumentacijo. Izdelanih je bilo 30 projektnih nalog, ki naj bi pomagale izboljšati kakovost ZN, predlog novega organizacijskega sistema službe ZN in uvedbe timske metode dela v ZN. Izdelane so bile smernice razvoja onkološke ZN v nacionalnem programu nadzorovanja raka v R Sloveniji.

Raziskovalna naloga, ki je zajela celotno področje R Slovenije in ki jo je denarno podprlo Ministrstvo za zdravstvo RS, Zaščita medicinske sestre pri rokovanju s citostatiki, je potekala v letih 1996 in 1997 in je v zaključni fazi. V tej nalogi je predstavljeno trenutno stanje na področju rokovanja s citostatiki in zaščite osebja v Sloveniji in izdelana so strokovna priporočila.

V letih od 1993 do 1997 je bilo izdanih šest strokovnih brošuric za področje onkološke ZN in po metodi procesa ZN dopolnjeni članki v Priročniku iz onkološke ZN in onkologije za višje medicinske sestre. Prvič smo izdelali tudi pisno gradivo za bolnike Kemoterapija in vi in Kako premagati izgubo las.

Pripravili smo program onkološke ZN za specializacijo iz patronažne zdravstvene nege, v sodelovanju z Zbornico ZN R Slovenije pa izobraževalni program onkološke ZN za pripravnice VI. in VII. stopnje izobraževanja. Na inštitutu dvakrat letno organiziramo podiplomsko izobraževanje za višje medicinske sestre - pripravnike, neprestano pa tečejo programi praktičnega izobraževanja iz onkološke ZN za dijake Srednje zdravstvene šole in študente Visoke šole za zdravstvo v Ljubljani. Že tri leta sodelujemo v programu mednarodne izmenjave študentov zdravstvene nege.

Medicinske sestre, specialistke za posamezna področja (prehrana okološkega bolnika, onkološka ZN, ZN bolnika z bolečino itd.), so redno vabljene predavateljice na seminarjih strokovnih sekcij in na predavanjih v drugih zdravstvenih zavodih. Z aktivnimi udeležbami na evropskih kongresih smo postale poznane tudi v tujini, kamor smo bile vabljene tudi kot predavateljice (1. balkanski kongres v Atenah – Vpliv onkološke ZN na kvaliteto bolnikovega življenja) in predsedujoče (ECCO 9 – Home, sweet home).

Kot članice Zbornice ZN Slovenije predsedujemo etičnemu razsodišču zbornice, Sekciji medicinskih sester v onkologiji in Sekciji operacijskih medicinskih sester. Predstavnica Onkološkega inštituta je članica Sveta EONS (European Oncology Nursing Society), zaupano pa nam je tudi mesto nacionalnega konzultanta za evropsko revijo Oncology Nurses Today.

Nursing

Director of Nursing:
Marija Velepič, RN

Assist. Director of Nursing:
Brigita Skela Savič, RN
till 1997: Jožica Bostič-Pavlovič, RN

Infection Control Nurse:
Darja Musič, RN

Research Nurse:
Albina Bobnar, RN, BA Defectology

Head of Nutrition Department:
Helena Drolc, RN

Ward Nurses in Charge:
Štefka Kodrman, RN
Irena Koselj, RN
Tatjana Pouh, RN
till 1997: Brigita Skela Savič, RN
Metka Zajc, RN
Marija Koblar, RN
Jelica Piškur, RN
Cvetka Cerar, RN
till 1997: Milena Popit, RN retired 1997
Zdenka Erjavšek, RN
Jana Fink, RN

Outpatient Department:
Janja Babič, RN

Breast Clinic:
Tatjana Kumar, RN

Oupatient Chemotherapy:
Marija Horvat, RN

Operating Theatre:
Nevenka Papler, RN

Anesthesiology:
Alenka Muha, RN

Central Sterilisation: Andreja Žagar, RN
till 1997: Nevenka Brolih, RN

Medico-social Unit:
Irena Golob, RN
till 1997: Ema Logar, Social Worker, retired 1997

New cancer treatment methods call for the development of specific, cancer nursing, which is becoming increasingly demanding in terms of the quality of performance.

In the years 1993–97, a great advance was made in the development of nursing care as profession. Based on the undergraduate education programs of the College of Health Profession, University of Ljubljana, and the knowledge obtained by all head nurses of the Institute, we started to develop our first standards of cancer nursing and record keeping. There were 30 project studies carried out with the aim to improve the quality of nursing care. A proposal was made for a more efficient organization of nursing care service, and team approach to nursing care was introduced. Guidelines for the development of oncology nursing care were worked out within the Slovenian national cancer control program.

The research study Protection of Nurses Handling Cytotoxic Drugs, which covered the whole territory of Slovenia, was financially supported by the Ministry of Health of the Republic Slovenia. The study was carried out in the years 1996–97, and is almost completed. This project presents the present state regarding handling of cytotoxic drugs, together with the protection measures to minimize occupational exposure of the nursing staff in Slovenia, and guidelines for further work will be developed.

In the years 1993–97, six brochures dealing with cancer nursing care were published, and a Cancer Nursing Manual for Registered Nurses, containing papers written in keeping with the principles of nursing care. The first written information for patients, entitled You and Chemotherapy and How to Cope with Hair Loss, was prepared.

A program of cancer nursing for residents in field nursing care has been prepared besides the cancer nursing education program for the students of the 6th and 7th grade of education, which was developed in collaboration with the Nurses Association of Slovenia. There is a postgraduate education program for RN-trainees organized at the Institute twice yearly, along with the permanent programs of practical training in oncology nursing care for students of the secondary schools of health profession and students of the College of Health Profession in Ljubljana. For three years we have been participating in the international exchange program for students of nursing.

Registered nurses, specialists in individual fields of nursing (e.g. nutrition in cancer patients, oncology nursing care, nursing care of the patient with pain, etc.) are regular invited speakers at seminars and lectures in other health care institutions. By active participations in European congresses, we successfully asserted ourselves abroad, often in the capacity of invited speakers (the 1st Balkan Congress in Athens – The Influence of Oncology Nursing Care on the Quality of Patient's Life) and chairmen (ECCO 9 – Home, Sweet Home).

As members of the Nurses Association of Slovenia, we hold key positions in the Association's bodies, such as ethical commission, oncology nursing care section, and operating-room nurses section. A member of the Institute of Oncology represents Slovenia in the Advisory Council of EONS (European Oncology Nursing Society). It is also noteworthy that we were entrusted with the position of a national consultant for the European journal "Oncology Nurses Today".


A Word Of Advice
For Those Going

Specialistične ambulante

Vodja:
Damijan Bergant, dr. med.

Delo specialističnih ambulant poteka na treh večjih področjih, ki se funkcionalno zlivajo z delom posameznih kliničnih služb Onkološkega inštituta. Ta področja so: poliklinična ambulantna dejavnost, konziliarna dejavnost in ambulantno zdravljenje in diagnostika. Poliklinično ambulantno delo in delno konziliarna dejavnost sta ožji organizacijski področji dela specialističnih ambulant, medtem ko ambulantna terapija in diagnostika razumljivo v celoti pripadata kliničnim in diagnostičnim službam Onkološkega inštituta.

Delo poteka v osmih ambulantah, kjer se v tednu dni zvrsti več kot petdeset specialistov onkologov Onkološkega inštituta, usmerjenih v ožja področja onkologije. V času od leta 1993 do prve polovice 1997 je bilo na inštitutu registriranih 261.829 pregledov. Dejansko je pregledov še več, kajti prostorska razdrobljenost inštituta in kombinacije raznih pregledov z zdravljenjem še ne omogočajo dosledne evidence.

Od leta 1994 na inštitutu vpeljujemo računalniški informacijski sistem Marbis, ki je prav v specialističnih ambulantah povsem zaživel. Pozitivni rezltati so: točnost, povezanost podatkov in njihova hitra dosegljivost, s tem pa tudi preglednost ambulantnega dela. To so tudi osnovni elementi pri načrtovanju izboljšav v tem segmentu dela Onkološkega inštituta.

V okviru specialističnih ambulant potekajo številni timski konziliji. Po dosegljivi dokumentaciji je bilo na njih v času od leta 1995 do septembra 1997 predstavljenih 3314 bolnikov. Poleg zaključkov teh konzilijev pa se k nam stekajo tudi zaključki ostalih onkoloških konzilijev v okviru Kliničnega centra in mnenja posameznih konzultantov Onkološkega inštituta iz drugih zdravstvenih ustanov. Skrb naše enote je, da pri odločitvi za specifično onkološko zdravljenje bolnikov - v sodelovanju z zdravnikom terapevtom - to tudi organizacijsko izpeljemo.

V prihodnjih letih želimo svojo enoto čim bolj smotrno in učinkovito organizirati. Delo želimo podrediti stroki in le bolnikom z maligno boleznijo oz. sumom nanjo. Za te nove bolnike ne smemo dopustiti čakalne dobe za pregled in za načrtovanje diagnostike ter zdravljenja. To nameravamo doseči z dosledno triažo in boljšo komunikacijo med izbranim zdravnikom in specialisti v naših specialističnih ambulantah. Znanje, inštitutski informacijski sistem ter upoštevanje pripomb in predlogov bolnikov bodo tako v prid strokovnega, prijaznega in gospodarnega ambulantnega dela.

Fizikalna terapija in rehabilitacija

Vodja:
Kneževič Stana, fizioterapevt

Outpatient Department

Head:
Damijan Bergant, MD

The activity of the Outpatient Department of the Institute of Oncology falls into the following three major areas which are functionally combined with the work of individual clinical services: outpatient clinics, counseling service, and out-patient treatment and diagnostics. While the outpatient clinics and partly also the counseling service are the domain of the specialist Outpatient Department of the Institute, the out-patient therapy and diagnostics are exclusively within the domain of relevant clinical and diagnostic services of the Institute.

The work takes place in eight outpatient dispensaries, where in a week's time more than fifty oncologists of different specialties perform their service on a regular basis. Thus in the period from 1993 to the first half of 1997, there were 261,829 visits registered at the Institute of Oncology. The number should be even higher, the reason being the spatial fragmentation of the Institute's premises, the combination of different examinations and treatment modalities, as well as inconsistent record keeping.

From 1994 on, MARBIS information system has been introduced at the Institute, and it was in the out-patient department that this system became fully operational. The advantages are clear: the system ensures the accuracy of data, as well as their compatibility and accessibility, which all contributes to the transparency of outpatient activities, thus providing the basis for planning further improvement of this segment of the Institute's services.

Within the framework of the Outpatient Department, numerous team counsels take place on a regular basis. Thus, according to the available information, in the period from the year 1995 to September 1997, there were 3314 patients presented at team counsels. Apart from the conclusions reached by those teams of specialists, the findings of other oncology-related counsels held at the University Medical Center, as well as opinions of individual consultants offering their services to other institutions, are pooled at the Institute of Oncology. Whenever a specific oncological treatment has been indicated, it is the responsibility of our department to see that all the necessary organizational procedures for such treatment be carried out in cooperation with the relevant therapist.

In the following years, we shall strive for the most sensible and effective organization of our Department as possible. The work should be performed in keeping with the specific demands of the profession, and should be limited only to patients with either confirmed or suspected malignant disease.

The potential new patients should not be subject to placement on waiting lists for their first check as well as for planning of their diagnosis and treatment. This could be achieved by consistent triage and a better communication between the patient's general physician (family doctor) and specialists in the Outpatient Department of the Institute. In this respect, our endeavors will be substantially supported by the computerized information network system of the Institute, which will also contribute to the efficacy, cost-effectiveness, and higher professional level of the outpatient service.

Physical Therapy and Rehabilitation

Head:
Kneževič Stana, PT

Lekarna

Vodja:
Milena Vojinovič, dipl. farm.

Specialist klinične farmacije:
Monika Sonc, dipl. farm.

Osnovna naloga lekarne Onkološkega inštituta je oskrbovanje bolnišnice z gotovimi zdravili, predvsem citostatiki, magistralnimi pripravki in medicinskim materialom. V zadnjih petih letih smo začeli izdelovati sterilne epiduralne in subarahnoidalne raztopine, ki jih onkologi v protibolečinski ambulanti individualno predpisujejo bolnikom za trajno blažitev bolečine.

Posebno pozornost je lekarna na strokovnem področju v tem obdobju namenila teoretični pripravi na zahtevno nalogo, ki jo čaka v prihodnosti, to je organizaciji centralne priprave citostatikov. Temu je bila namenjena specialistična naloga Pripravljanje raztopin citostatikov za individualnega pacienta v posebni lekarniški enoti ene od dveh magister farmacije. Glavni namen naloge je zagotoviti varnost in ekonomičnost priprave raztopin citostatikov v skladu s predpisi Evropske skupnosti in Svetovne zdravstvene organizacije tudi na Onkološkem inštitutu v Ljubljani. Sodelovali smo tudi v raziskavi Zaščita medicinske sestre pri rokovanju s citostatiki, ki je na podlagi posnetka trenutnega stanja v Sloveniji pripravila smernice za pravilno rokovanje s citostatiki in pripravo citostatikov v Sloveniji.

V bolnišnicah po svetu se vse bolj uveljavlja profil kliničnega farmacevta. Tak specialist ni le seznanjen z izborom terapije, ampak nanj lahko tudi vpliva. Vključen je v individualni sistem odmerjanja, kar zmanjšuje možnost napak in omogoča boljše življenje bolnikov. Klinični farmacevt poskrbi, da je tudi po odpustu iz bolnišnice predpisana terapija pravilno vodena. Glede na to, da je ena od naših magister farmacije v letu 1997 zaključila specializacijo iz klinične farmacije, predvidevamo v naslednjih letih razširiti obseg svojega strokovnega dela v skladu z navedenimi nalogami.

Magistri farmacije sodelujeta pri kliničnih raziskavah. Tako je zagotovljena učinkovita in varna uporaba novega zdravila pri vsakem bolniku. Želimo, da bi klinični farmacevt v prihodnje spremljal tudi stranske učinke novih zdravil pri vsakem bolniku in jih primerjal s stranskimi učinki pri že ustaljenih shemah zdravljenja.

Magistri farmacije sta aktivni članici ISOPP (International Socyety of Oncology Pharmacy Practices), Slovenskega farmacevtskega društva in Lekarniške zbornice. Ena od njiju je tudi tajnica Sekcije bolnišničnih farmacevtov in predsednica Sekcije kliničnih farmacevtov Slovenije.

Pharmacy

Head:
Milena Vojinovič, BSc Pharm

Clinical Pharmacologist:
Monika Sonc, BSc Pharm

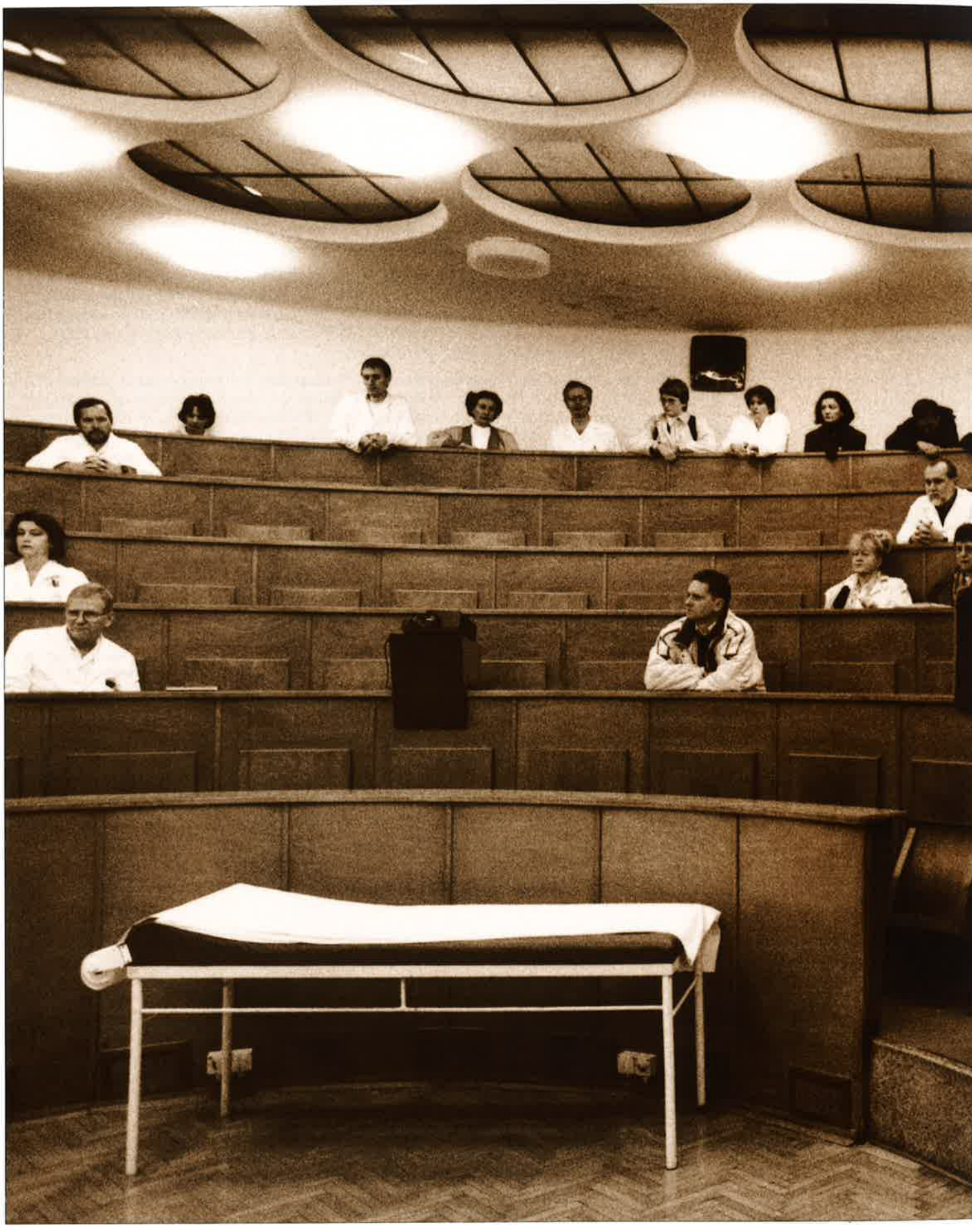
The Pharmacy of the Institute of Oncology is basically intended to provide the hospital with ready made medications, particularly cytotoxic drugs, as well as with its own preparations and other sanitary materials. In the past five years, we started producing sterile epidural and subarachnoidal solutions, prescribed to patients individually by oncologists in our Pain Treatment Clinic, as continuous analgesic therapy.

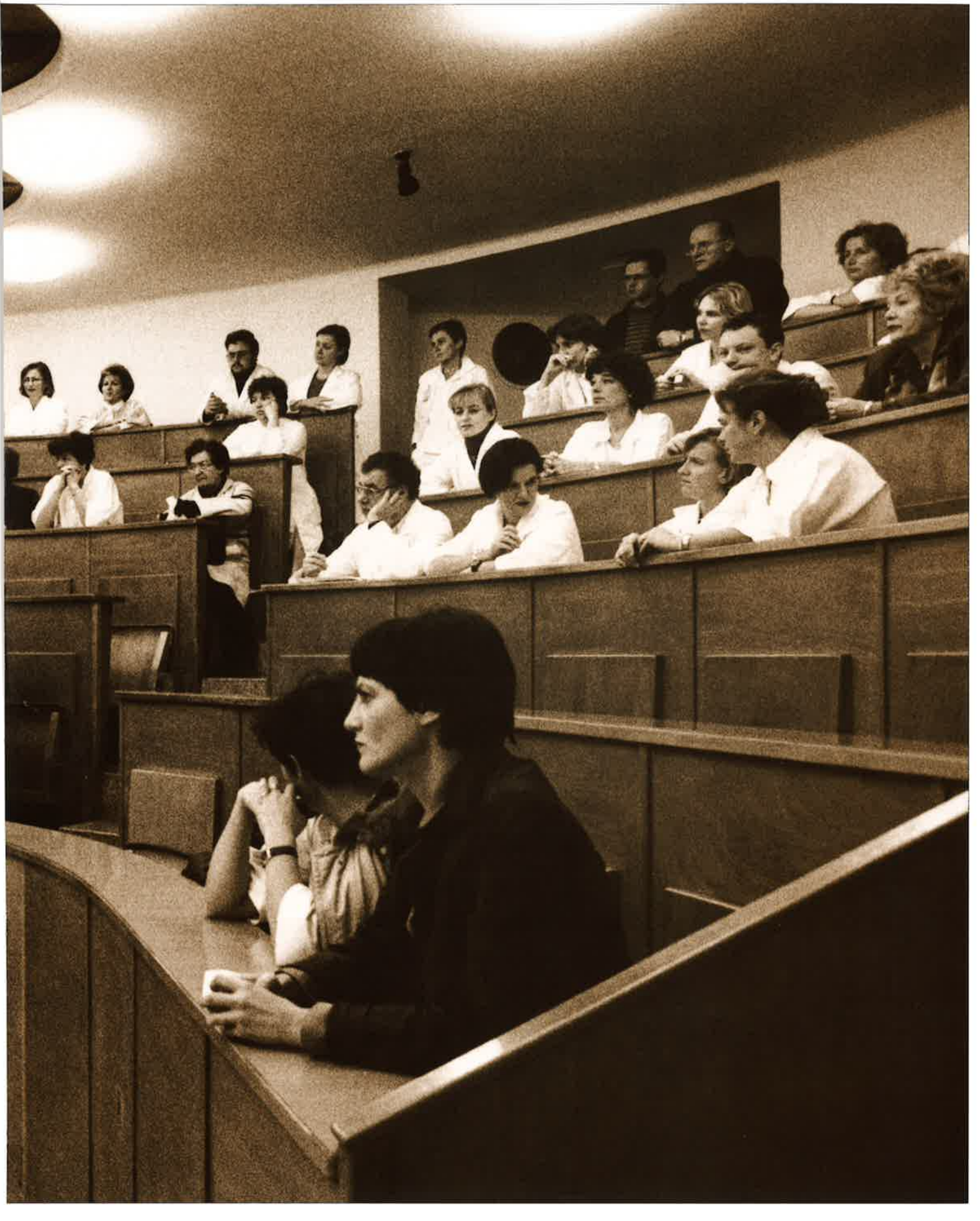
In the appointed period, our Pharmacy centered its attention on the theoretical preparation for the demanding task to be accomplished in the future, i.e. the organization of centralized cytotoxic drug preparation. This also made the topic of a specialist thesis of one of the two Masters of Pharmacy, entitled Preparation of cytotoxic solutions for individual patients in a special pharmacy unit. The study was aimed to ensure that safe and economical preparation of cytotoxic solutions in keeping with the regulations of European Union and World Health Organization would also be available at the Institute of Oncology in Ljubljana. Furthermore, we took an active part in the study Protection of nurses in handling cytotoxic agents. Based on the analysis of the present situation in Slovenia, the study will provide guidelines for proper handling and preparation of cytotoxic drugs in Slovenia.

Hospitals worldwide are more and more recognizing the profession of clinical pharmacist - specialist, who should be acquainted with the selected therapy, and thus able to influence it by being a member of the dosage determination team. Such an approach reduces the occurrence of errors and thus contributes to a better quality of the patient's life. Clinical pharmacist ensures that the prescribed therapy is carried out correctly also after discharge from hospital. In view of the fact that in 1997 one of our pharmacists completed her specialization in clinical pharmacy, it is expected that the scope of our professional activities will be enhanced in accordance with the above mentioned tasks.

Both pharmacists participate in clinical trials, which ensures that the use of a new drug in each individual patient is effective and safe. It is expected that in the future, clinical pharmacists would also follow up the side effects of new medications in individual patients, and compare them with those observed in standard treatment schedules.

Our pharmacists are active members of ISOPP (International Society of Oncology Pharmacy Practices), Slovenian Pharmaceutical Society, and of the Pharmacy Chamber of Slovenia. One of them is also Secretary of the Section of Hospital Pharmacists and President of the Section of Clinical Pharmacists of Slovenia.





Multidisciplinarni konziliji

Od ustanovitve dalje si Onkološki inštitut prizadeva uveljaviti multidisciplinarno zdravljenje bolnikov z rakom. Usklajenost diagnostičnih in terapevtskih postopkov od prve predstavitve bolnika dalje je zagotovilo za kar najboljši rezultat zdravljenja. Konziliji so poleg tega forum za oblikovanje in stalno posodabljanje strokovnih doktrin, zagotavljajo izmenjavo izkušenj med inštitutskimi zdravniki in sodelovanje z zdravniki drugih klinik in zdravstvenih ustanov. Ob sodelovanju vseh specialistov konzultantov Onkološkega inštituta ter kolegov z drugih klinik in zdravstvenih ustanov potekajo redni tedenski konziliji za več onkoloških področij. Področja dela stalnih multidisciplinarnih konzilijev za onkologijo so: tumorji prebavil, otorinolaringološki tumorji, tumorji pljuč in prsnega koša, mezenhimski tumorji, tumorji dojke, ginekološki tumorji, tumorji sečnega mehurja, tumorji sečil in moških genitalij, tumorj ščitnice, limfomi, otroški tumorji, netipljive lezije v dojki.

Zdravniki konzultanti Onkološkega inštituta redno sodelujejo na multidisciplinarnih konzilijih, ki potekajo na drugih klinikah, in sicer na konzilijih za jetrne, očesne in možganske tumorje.

Multidisciplinary Advisory Teams and Consultation Service

Ever since its establishment, the Institute has been striving for a 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 treatment Suidelines, thus ensuring exchange of experience between the physicians of our Institute and promoting their knowledge among colleagues from other clinics and health institutions. Advisory teams for oncology meet regularly once a week and gather the consultants of the Institute and of other health care institutions. Areas covered by Permanent Multidisciplinary Advisory Teams for Oncology are: gastrointestinal tumors, ENT tumors, tumors of the lung and chest, mesenchymal tumors, breast tumors, gynecological tumors, tumors of the urinary bladder, tumors of the uropoietic system and male genitals, thyroid tumors, lymphomas, childhood tumors, non-palpable lesions in the breast.

The physicians-consultants of the Institute of Oncology are regularly participating in the multidisciplinaty advisory teams that are held in the clinics outside the Institute; these are the Teams for hepatic tumors, tumors of the eye and brain tumors.

Specialna knjižnica

Vodja: Dušica Kiauta, bibliotekar

Knjižnica Onkološkega inštituta je osrednja onkološka knjižnica in specializiran informacijski center za onkologijo. Vključena je v sistem znanstveno-tehnološkega informiranja v Sloveniji.

Uporabniki knjižnice so zdravniki in drugi strokovni delavci Onkološkega inštituta in ostalih medicinskih ustanov ter študenti medicine, kakor tudi strokovne knjižnice iz Slovenije in tujine. Knjižnica jim nudi najnovejšo literaturo, ki jo potrebujejo pri svojem kliničnem, raziskovalnem in pedagoškem delu. Fond obsega 11.000 knjig, 290 naslovov tekočih revij, številna polpublicirana dela in drugo literaturo s področja onkologije. Naročanje strokovne literature je usklajeno z ostalimi knjižnicami s področja biomedicine. Od leta 1995 je vključena v sistem COBISS (Kooperativni online bibliografski sistem in servisi), v katerega vnaša svoj knjižni in revijalni fond, omogočen pa ji je tudi pregled fonda vseh slovenskih knjižnic, vključenih v sistem.

V zadnjih petih letih je knjižnica pridobila računalniško opremo, ki omogoča iskanje po podatkovnih zbirkah CANCERLIT, PDQ, DRUGDEX na CD-ROM-ih in on-line po zbirki MEDLINE (prek Inštituta za biomedicinsko informatiko Medicinske fakultete), prek INTERNETA pa dostop do drugih sorodnih domačih in tujih baz podatkov. Vse omenjene baze podatkov in lastne podatkovne zbirke omogočajo izdelavo retrospektivnih poizvedb in SDI (selektivne diseminacije informacij).

Knjižnica vodi bibliografijo delavcev Onkološkega inštituta na interni računalniški bazi podatkov, ki omogoča izdelavo osebnih bibliografij in vsakih pet let tudi izdajo tiskane bibliografije. Z vnašanjem slovenske onkološke literature sodeluje tudi pri izgradnji bibliografske baze podatkov Biomedicina Slovenica pri Inštitutu za biomedicinsko informatiko MF.

V načrtu je vključitev inštitutske bibliografije v sistem COBISS, povečanje omrežne povezave z mednarodnimi podatkovnimi zbirkami v okviru Medicinske fakultete v Ljubljani in nadaljnje sodelovanje z evropskimi onkološkimi knjižnicami.

Vodja knjižnice deluje v odborih Društva bibliotekarjev Slovenije in v Evropskem združenju medicinskih bibliotekarjev.

Strokovno prevajanje

Mojca Čakš, prof. ang. in franc.
Olga Shresta, dipl. prev. ang. in rus.

Special Library

Head:
Dušica Kiauta,
Librarian

The Special Library of the Institute of Oncology is a central oncological library and the information center for oncology. It is integrated into the scientific and technological information system of 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 latest publications/literature needed in their clinical, research and teaching work. The library contains 11,000 books, 290 periodicals, and other literature pertinent to oncology. The acquisition of professional literature is coordinated with other libraries in the field of biomedicine. Since 1995, it has been connected with COBISS (Cooperative Online Bibliographic System and Services) which provides on-line registration of the available books and periodicals, as well as access to browse through the collections of all Slovenian libraries included in the system.

In the past five years, the library has obtained an adequate computer equipment which enables searches of data bases on CD-ROMs (CANCERLIT, PDQ, DRUGDEX) and on-line MEDLINE through IBMI and all national and foreign data bases through the Internet. The mentioned data bases and internal catalogues enable retrospective searches and SDI (selective dissemination of information).

The library keeps records of bibliographies of the Institute's authors in the internal data base, which enables computerized processing of their personal bibliographies as well as publication of a comprehensive bibliography every five years. With the input of Slovenian oncological literature, it takes active part in building the bibliographic data base "Biomedicina Slovenica" at the Institute of Biomedical Information of the Faculty of Medicine.

Further plans comprise registration of the Institute's bibliography into the COBISS, expanded network connections with international data bases within the framework of the Faculty of Medicine, and further cooperation with European oncological libraries.

The head of the library is an active member in the boards of the Society of Librarians of Slovenia, and in the European Association for Health Information and Libraries.

Technical Translation

Mojca Čakš,
BA in English and French
Olga Shresta,
BA, Translator of English and Russian

Uprava *Administration and Finances*

Direktor za upravne zadeve, finance in administracijo	*Managing, Finances and Administration Director: 1995–97:*	**Marjan Jurkovič,** dipl. oec. / *BSc Oec*
	1992–95:	**Matevž Bambič,** dipl. oec. / *BSc Oec*
Vodja oddelka za informatiko	*Head of Informatics Department:*	**Gorazd Noč,** dipl. ing. / *BSc Math*
	1995–96:	**Marjan Logar,** dipl. oec. / *BSc Oec*
	1994–95:	**Jurij Modic,** dipl. ing. rač. / *BSc Comp*
	1993–94:	**Cveto Gregorc,** dipl. ing. fiz. / *Bsc Phys*
Strokovni sodelavci	Associates	**Mojca Berlec,** dipl. ing. / *BSc Electr*
		Vanja Černilec, dipl. org. dela / *dipl NO*
Vodja kadrovskega oddelka	*Head of Personnel Department:*	**Bojan Korenčan,** dipl. org. dela / *Dipl WO*
Vodja analitskega oddelka	*Head of Analysis Department:*	**Ana Žličar,** oec. / *Oec*
Vodja oddelka finančnega knjigovodstva	*Head of Accounting Department:*	**Silva Kristančič,** oec. / *Oec*
Vodja pravne pisarne	*Head of Legal Office:*	**Alenka Benedik Senčar,** dipl. iur. / *LL B*
Vodja nabavnega oddelka	*Head of Bursar's Office:*	**Amalija Zdešar**
Vodja tehnično-vzdrževalnega oddelka	*Head of Technical Service and Maintenance:*	**Franc Vrečar,** ing. stroj. / *Eng Mech*
Vodja pralnice	*Head of Laundry:*	**Marija Moškrič,** sanitarni ing. / *Sanitary Eng*

Izobraževanje

Pri osrednji državni onkološki ustanovi je pedagoško delo v vseh oblikah neločljivo povezano s strokovnim delom. 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. Pedagoška dejavnost je zgoščeno predstavljena v tabeli. Na inštitutu je sedež Katedre za onkologijo in radioterapijo Medicinske fakultete v Ljubljani, učitelji in sodelavci inštituta pa sodelujejo tudi v izobraževalnih programih drugih fakultet, višjih, srednjih šol in drugih zavodov. Izobraževalna dejavnost obsega tudi organizacijo seminarjev, tečajev in drugih oblik izobraževanja vseh profilov zdravstvenih delavcev, ki jo lahko delno predstavimo s pregledom tečajev in seminarjev v letu 1997.

Pedagoška dejavnost

Šola	Predmet	Predavatelj
Medicinska fakulteta	onkologija in radioterapija	**Zvonimir Rudolf** **Peter Albert Fras** **Borut Štabuc** **Hotimir Lešničar** **Vera Pompe-Kirn** **Maja Primic-Žakel** **Marko Snoj** **Rastko Golouh** **Ana Pogačnik** **Drago Ažman** **Tanja Čufer** **Gregor Serša** **Matjaž Zwitter**
	onkologija z radioterapijo – vaje	**55** zdravnikov inštituta **1** višja medicinska sestra
	kirurgija	**Marko Snoj**
	interna medicina – vaje	**Saša Markovič**
	socialna medicina - vaje	**Maja Primic-Žakelj**
Visoka šola za zdravstvo	radiobiologija	**Janez Škrk**
	radioterapija	**Albert Peter Fras**
	nuklearna medicina	**Janez Šuštaršič**
	patologija	**Janez Jančar**
	radioterapija – vaje	**Boris Sekereš**
		Dušan Kumar
		Bogdan Umek
		Vlado Robar
	zdravstvena nega	**Marina Velepič**
	prehrana	**Helena Drolc**
	zdravstvena nega – vaje	**Jožica Bostič-Pavlovič** in **7** višjih medicinskih seste
	radiofizika in varstvo pred sevanji – vaje	**Janez Marolt**

Education

Professional work of the Institute as the central national institution is inseparable from all forms of its educational activities. Thus, lectures and practicums at all levels of education, as well as postgraduate and residency programs and mentors work with trainees, residents and junior research fellows – all these are part of regular duties of the Institute's staff. The table presents a condensed overview of the educational activities. The Chair of Oncology and Radiotherapy of the Ljubljana Faculty of Medicine is situated at the Institute, while the instructors and associates of the Institute are also actively involved in the programs of other faculties, vocational school, high schools, and various other institutions. The comprehensive education activity also includes organization of seminars, courses and other education programs for all profiles of health professionals. Part of this activity is presented in the list of courses and seminars that were organized in 1997.

Teaching Activity

School	*Subject*	*Lecturer*
Faculty of Medicine	*oncology and radiotherapy*	**Zvonimir Rudolf** **Peter Albert Fras** **Borut Štabuc** **Hotimir Lešničar** **Vera Pompe-Kirn** **Maja Primic-Žakelj** **Marko Snoj** **Rastko Golouh** **Ana Pogačnik** **Drago Ažman** **Tanja Čufer** **Gregor Serša** **Matjaž Zwitter**
	oncology and radiotherapy – practical training	**55** *physicians of the Institute* **1** *RN*
	surgery	**Marko Snoj**
	medical oncology – practical training	**Saša Markovič**
	social medicine – practical training	**Maja Primic-Žakelj**
School for Health Professionals,	*radiobiology*	**Janez Škrk**
University of Ljubljana	*radiotherapy*	**Albert Peter Fras**
	nuclear medicine	**Janez Šuštaršič**
	pathology	**Janez Jančar**
	radiotherapy – practical training	**Boris Sekereš** **Dušan Kumar** **Bogdan Umek** **Vlado Robar**
	nursing care	**Marina Velepič**
	nutrition	**Helena Drolc**
	nursing care – practical training	**Jožica Bostič-Pavlovič** *and* **7** *RNs*

Šola	Predmet	Predavatelj
Biotehniška fakulteta	radiobiologija	**Janez Škrk**
Fakulteta za strojništvo	letalska medicina	**Rastko Golouh**
Zavod RS za varstvo pri delu	zaščita pred ionizirajočim sevanjem	**Albert Peter Fras** **Janez Škrk**
Srednja zdravstvena šola	zdravstvena nega	**Jožica Bostič-Pavlovič** in **7** višjih medicinskih sester
Srednja šola za farmacijo	citologija	**Živa Pohar-Marinšek**
	zdravstvena nega – vaje	**Jožica Bostič-Pavlovič** in **7** višjih medicinskih sester

School	*Subject*	*Lecturer*
	radiophysics, radiation protection -practical training Profession	**Janez Marolt**
Biotechnical Faculty	*radiobiology*	**Janez Škrk**
Faculty of Mechanical Engineering	*aviatic medicine*	**Rastko Golouh**
Institute of Occupational Safety	*radiation protection*	**Albert Peter Fras** **Janez Škrk**
Secondary School	*nursing care – practical training for nurses*	**Jožica Bostič-Pavlovič** *and* **7** *RNs*
Secondary School for Pharmacy	*cytology*	**Živa Pohar-Marinšek**
and Health Profession	*nursing care – practical training*	**Jožica Bostič-Pavlovič** *and* **7** *RNs*

Katedra za onkologijo in radioterapijo

Chair of Oncology and Radiotherapy

Predstojnik / Chairman:
prof. dr. Zvonimir Rudolf, dr. med / MD, PhD

Asistenta / Assistants:
doc. dr. Hotimir Lešničar, dr. med. / MD, PhD
doc. dr. Borut Štabuc, dr. med. / MD, PhD

Pedagoška sestra / Teaching Nurse:
Helena Drolc, VMS / RN

Katedra za onkologijo in radioterapijo je bila ustanovljena decembra 1947, v naslednjem letu pa je Medicinska fakulteta sprejela v svoj program onkologijo in radioterapijo kot poseben predmet. Prvi predstojnik je bil prof. dr. Leo Šavnik (1947-63), za njim pa prof. dr. Božena Ravnihar (1963-84) in prof. dr. Stojan Plesničar (1984-95). Pomembno je, da je bila Katedra za onkologijo kot klinična katedra umeščena na Onkološki inštitut, ki je tako baza za pedagoško in raziskovalno dejavnost.

Onkologijo in radioterapijo so v tistem času le redkokje poučevali kot poseben predmet. Ljubljanska medicinska fakulteta ga je sprejela v svoj program prva v nekdanji Jugoslaviji, pa tudi med prvimi v Evropi in svetu. Pouk onkologije in radioterapije poteka v petem letniku študija medicine, vendar mu je kljub obsežnosti tematike žal namenjenih premalo ur. Zasedba katedre je temu primerna - predstojnik in dva asistenta. Tudi zaradi tega pouk onkologije in radioterapije bogatimo z izbranimi multidisciplinarnimi predavanji habilitiranih učiteljev, zaposlenih na inštitutu. V poletnem semestru organiziramo s pomočjo sodelavcev zelo uspešne vaje za študente.

The Chair of Oncology and Radiotherapy was established in December 1947, and in the following year, the Faculty of Medicine included oncology and radiotherapy into its curriculum as a separate subject. The first Chairman, Prof. Dr. Leo Šavnik (1947-63), was followed by Prof. Dr. Božena Ravnihar (1963-84), and Prof.Dr. Stojan Plesničar (1984-95). It is important that the Chair of Oncology, being a clinical chair, was located at the Institute of Oncology which thus became a basis for education and research activities in this field.

Until then, oncology and radiotherapy were not taught as a separate subject in the former Yugoslavia, and in this respectas well we were amongst the first in Europe and elsewhere in the world.

Unfortunately, considering the complexity of the subject, the number of hours dedicated to oncology and radiotherapy within the curriculum of the 5th year of medical studies is insufficient, and accordingly also the faculty of the chair is modest: the chairman and two teaching assistants. This is also why we decided to implement the program with multidsciplinary lectures by habilitated lecturers, employees of the Instiute. With the help of the latter, we have been organizing a very successful cycle of practical exercises for students during the summer term.

Univerzitetni učitelji in asistenti *Faculty members*

Redni profesorji / *Full Professors:*	dr. **Marija AUERSPERG,** dr. med. / *MD, PhD*
	dr. **Rastislav GOLOUH,** dr. med. / *MD, PhD*
	dr. **Vera POMPE-KIRN,** dr. med. / *MD, PhD*
	dr. **Zvonimir RUDOLF,** dr. med. / *MD, PhD*
	dr. **Marija US-KRAŠOVEC,** dr. med. / *MD, PhD*
Izredni profesorji / *Associate Professors:*	dr. **Marjan BUDIHNA,** dr. med. / *MD, PhD*
	dr. **Nataša BUDIHNA,** dr. med. / *MD, PhD*
	dr. **Jurij LINDTNER,** dr. med. / *MD, PhD*
	dr. **Gregor SERŠA,** dipl.biol. / *BSc Biol, PhD*
	dr. **Janez ŠKRK,** mag.biol. / *MSc Biol, PhD*
Docenti / *Assistant Professors:*	dr. **Matej BRAČKO,** dr. med. / *MD, PhD*
	dr. **Tanja ČUFER,** dr. med. / *MD, PhD*
	dr. **Peter A. FRAS,** dr. med. / *MD, PhD*
	dr. **Hotimir LEŠNIČAR,** dr. med. / *MD, PhD*
	dr. **Aleksandra MARKOVIČ-PREDAN,** dr. med. / *MD, PhD*
	dr. **Maja PRIMIC-ŽAKELJ,** dr. med. / *MD, PhD*
	dr. **Marko SNOJ,** dr. med. / *MD, PhD*
	dr. **Borut ŠTABUC,** dr. med. / *MD, PhD*
	dr. **Marjetka URŠIČ-VRŠČAJ,** dr. med. / *MD, PhD*
	dr. **Matjaž ZWITTER,** dr. med. / *MD, PhD*
Asistenti / *Teaching Assistants:*	mag. **Milan BAŠKOVIČ,** dr. med. / *MD, MSc*
	Boris JANČAR, dr. med. / *MD*
	Maksimiljan KADIVEC, dr. med. / *MD*
	mag. **Viljem KOVAČ,** dr. med. / *MD, MSc*
	mag. **Andrej PLESNIČAR,** dr. med. / *MD, MSc*
	mag. **Primož STROJAN,** dr. med. / *MD, MSc*
Znanstveni sodelavec / *Scientific Associate:*	dr. **Srdjan NOVAKOVIĆ,** dipl. biol. / *BSc Biol, PhD*

Mednarodni kongresi in simpoziji v organizaciji Onkološkega inštituta 1. 1. 1993 – 31. 12. 1997

International Congresses and Symposia Organized by the Institute of Oncology 1 January 1993 – 31 December 1997

Izdano gradivo *Published material*

Rak in kakovost življenja Kongres OECI Bled, 12.–14. maj 1995	***Cancer and Qaulity of life*** *OECI Conference* *Bled, May 12–13 1995*	*Zwitter M, ed: OECI conference on cancer and quality of life, Bled 1995. Programme, proceedings. Ljubljana, Onkološki inštitut 1995.*
Ohranjujoče zdravljenje v onkologiji Mednarodni simpozij Ljubljana, 19.–21. junij 1997	***Organ sparing Treatment in Oncology*** *International Symposium* *Ljubljana, June 19–21, 1997*	*Budihna M, Čufer T, Golouh R, Lindtner J, Rudolf Z, Zakotnik B, eds: Organ sparing treatment in oncology. Proceedings of the International symposium on organ sparing treatment in oncology, Ljubljana 1997. Ljubljana, Radiology and Oncology 1997. (Radiol Oncol 31:2, 1997).*
24. evropski citološki kongres Ljubljana, 21.–24. september 1997	***24th European Congress of Cytology*** *Ljubljana, September 21–24, 1997*	
Prirodoslovne znanosti '97 in 2. slovensko-hrvaški sestanek o sodobni molekularni onkologiji Mednarodni simpozij Gozd Martuljek, 16.–19. oktober 1997	***Life Science '97 & 2nd Slovenian-Croatian meeting on molecular Oncology today*** *International Symposium* *Gozd Martuljek, October 16–19, 1997*	*Serša G, Miklavčič D, eds: International conference Life sciences '97 & 2nd slovenian-croatian meeting on molecular oncology today. Book of abstracts & programme, Gozd Martuljek 1997. Ljubljana, Slovenian Biophysical Society; Institute of Oncology 1997. (Radiol Oncol 32:1, 1998).*

Mednarodni in slovenski strokovni sestanki, tečaji ter seminarji v organizaciji Onkološkega inštituta

International and National Professional Meetings, Courses, and Seminars Organized by the Institute of Oncology

Izdano gradivo — *Published material*

1993

Maligni limfom

Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije
Ljubljana, 5. marec 1993

Lymphoma

Seminar organized in co-operation with the Chamber of Nursing Care of Slovenia
Ljubljana, March 5, 1993

Onkološka zdravstvena nega in onkologija

Seminar za višje medicinske sestre – pripravnice
Ljubljana, 22.–25. marec in 23.–26. november 1993

Velepič M, Bostič Pavlovič J, eds: Zbornik predavanj s področja onkologije za višje medicinske sestre. 3.dop.izd., Ljubljana, Onkološki inštitut 1993.

Oncological nursing care and Oncology

Seminar for registered nurses – trainees
Ljubljana, March 22–25, and November 23–26, 1993

Tumorji kože, Hodgkinova bolezen

Poklicne bolezni in rak, zdravljenje bolečine

Tečaj podiplomskega izobraževanja v sodelovanju s Kancerološko sekcijo Slovenskega zdravniškega društva in Zvezo slovenskih društev za boj proti raku
Šmarješke toplice, 2.–3. april in 22.–23. oktober 1993

Lindtner J, Lukič F, Us J, eds: Tumorji kože. Hodgkinova bolezen. 3. onkološki vikend, Šmarješke Toplice 1993. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1993.

Us J, ed.: Poklicne bolezni in rak. Zdravljenje bolečine. 4. onkološki vikend, Šmarješke Toplice 1993. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1993.

Tumors of the skin, Hodgkin's disease

Occupational diseases and cancer, pain treatment

Postgraduate courses organized in collaboration with the Cancerological Section of the Slovenian Medical Society and the Association of Slovenian Cancer Societies
Šmarješke toplice, April 2–3 and October 22–23, 1993

Celostna rehabilitacija bolnic po operaciji dojke

Strokovni seminar
Ljubljana, 16. april 1993

Comprehensive rehabilitation of patients after surgery for breast cancer

Seminar
Ljubljana, April 16, 1993

Onkološka šola za specializante splošne medicine

Ljubljana, 3.–14. maj, 1993

School of oncology for residents in general medicine

Ljubljana, May 3–14, 1993

Alpe-Jadran hepatobiliarna šola 1. mednarodni postdiplomski tečaj iz hepatologije in hepatobiliarne kirurgije v sodelovanju z Medicinsko fakulteto v Ljubljani, Kliničnim centrom v Ljubljani in Hepatobiliarnim slovenskim združenjem Ljubljana, 5.–9. julij 1993		***Alps-Adria hepatobiliary school*** *The 1th postgraduate course in hepatology and hepatobiliary surgery organized in collaboration with Faculty Of Medicine in Ljubljana, University Medical Center, HPBA Slovenia and Open Society Institute of Slovenia* *Ljubljana, July 5–9, 1993*	*Gadžijev E, Markovič S, Sojar V, Pleskovič L, eds: Hepatobiliary school. 1st course on hepatology. Postgraduate course on hepatobiliary surgery, Ljubljana 1993. Book of lectures and abstracts. Ljubljana, Faculty of Medicine et al 1993.*
Sodobne metode v kemoterapiji Intersekcijski sestanek kemoterapevtov Hrvaške in Slovenije Šmarješke toplice, 1. september 1993		***New methods in chemotherapy*** *Joint Meeting of Slovenian and Croatian Medical Oncologists* *Šmarješke toplice, September 1, 1993*	
Ščitnica in njene bolezni 24. Plečnikov memorialni sestanek v sodelovanju z Medicinsko fakulteto v Ljubljani in Kliničnim centrom v Ljubljani Ljubljana, 10.–11. december 1993	Benulič T, Serša G, Kovač V, eds. Ščitnica in njene bolezni. 24. Plečnikov memorialni sestanek. Ljubljana 1993. (Radiol Oncol 27:Suppl 6, 1993).	***The thyroid gland and its diseases*** *The 24th Plečnik's Memorial Meeting, organized in collaboration with the Faculty of Medicine, and the University Medical Centre in Ljubljana* *Ljubljana, December 10–11, 1993*	
1994 **Onkološka šola za specializante splošne medicine** Ljubljana, 24. januar – 18. februar in 5.–9. december 1994		***School of oncology for residents in general medicine*** *Ljubljana, January 24 – February 18 and December 5–16, 1994*	

Onkološka ginekologija Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Ljubljana, 3.–4. marec 1994	Fras AP, Bostič Pavlovič J, Velepič M, eds: Izbrana poglavja iz ginekološke onkologije. 14. izobraževalni dnevi iz onkologije za medicinske sestre, Ljubljana 1994. Ljubljana, Onkološki inštitut 1994.	***Oncological gynecology*** *Seminar organized in co-operation with the Chamber of Nursing Care of Slovenia* *Ljubljana, March 3–4, 1994*
Onkološka zdravstvena nega in onkologija Seminar za višje medicinske sestre – pripravnice Ljubljana, 5.–8.april in 15.–18. november 1994	Velepič M, Bostič Pavlovič J, eds: Zbornik predavanj s področja onkologije za višje medicinske sestre. 4. dop. izd. Ljubljana, Onkološki inštitut 1994.	***Oncological nursing care and oncology*** *Seminar for registered nurses – trainees* *Ljubljana, April 5–8 and November 15–18, 1994*
Ne-Hodgkinov limfom, maligni tumorji na modih **Kolorektalni rak, spremljanje umirajočega bolnika** Tečaj podiplomskega izobraževanja v sodelovanju s Kancerološko sekcijo Slovenskega zdravniškega društva in Zvezo slovenskih društev za boj proti raku Šmarješke toplice, 8.–9. april in 22.–23. oktober 1994	Us J, ed: Ne-Hodgkinov limfom. Maligni tumorji na modih. 5. onkološki vikend, Šmarješke Toplice 1994. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1994. Us J, ed: Kolorektalni rak. Spremljanje umirajočega bolnika. 6. onkološki vikend, Šmarješke Toplice 1994. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1994.	***Non-Hodgkin lymphomas, malignant tumors of the testicles*** ***Colorectal cancer, follow up of the terminal patient*** *Postgraduate courses organized in collaboration with the Cancerological Section of the Slovenian Medical Society and the Association of Slovenian Cancer Societies* *Šmarješke toplice, April 8–9 and October 22–23, 1994*
Patronažno zdravstveno varstvo in onkologija Seminar za specializantke, višje medicinske sestre iz patronažnega zdravstvenega varstva in onkologije Ljubljana, maj in oktober 1994		***Field health care and oncolgy*** *Seminar in field health care and Oncology for Residents – Registered Nurses* *Ljubljana, May and October, 1994*

Hepatobiliarna šola 2. mednarodni postdiplomski tečaj iz hepatologije in hepatobiliarne kirurgije v sodelovanju z Medicinsko fakulteto v Ljubljani, Kliničnim centrom v Ljubljani in Hepatobiliarnim slovenskim združenjem Ljubljana, 20.–24. junij 1994		***Hepatobiliary school*** *The 2nd postgraduate course in hepatology and HPB surgery organized in collaboration with Faculty of Medicine in Ljubljana, University Medical Center, HPBA Slovenia and Open Society Institute in Slovenia* *Ljubljana, June 20–24, 1994*	*Gadžijev E, Markovič S, Sojar V, Pleskovič L, eds: Hepatobiliary school. 2nd course on hepatology. Postgraduate course on hepatobiliary surgery, Ljubljana 1994. Book of lectures and abstracts. Ljubljana, Faculty of Medicine et al. 1994.*
9. mednarodni sestanek jadranske zveze patologov Portorož, 25.–26 junij 1994		***9th international meeting of the Adriatic Society of Pathology*** *Portorož, June 25–26, 1994*	*Golouh R, Lamovec J, eds: Ninth international meeting on head and neck pathology, pathology of the mediastinum and retroperitoneum, technological advances in pathology, Portorož 1994. Book of abstracts. Ljubljana, Adriatic Society of Pathology; Institute of Oncology 1994.*
Pisanje znanstvenih člankov v biomedicini Mednarodni tečaj in nadaljevalni tečaj v sodelovanju z IPOKRaTES, Dunaj Bled, 5.– 9. in 12.–16. september 1994		***Scientific writing in biomedicine*** *International course organized in collaboration with IPOKRaTES, Vienna* *Bled, September 5–9, and 12–16, 1994*	
Rak črevesja Seminar v sodelovanju Zbornice zdravstvene nege Slovenije Ljubljana, 7.–8. oktober 1994	Bostič Pavlovič J, Koblar O, Velepič M, eds: Rak na črevesju. 15. izobraževalni dnevi iz onkologije za medicinske sestre, Ljubljana, 1994. Ljubljana, Onkološki inštitut 1994.	***Cancer of the intestine*** *Seminar organized in collaboration with the Chamber of Nursing Care of Slovenia* *Ljubljana, October 7–8, 1994*	
Podpora nekajenju v družini 1. delovno srečanje Alpe-Jadran Rogaška Slatina, 18.–20. november 1994	Rehar V, Primic Žakelj M, eds. Podpora nekajenju v družini. 1. delovno srečanje Alpe-Jadran. Rogaška Slatina 1994. Celje, Zavod za zdravstveno varstvo 1994.	***Supporting nonsmoking in the family*** *The 1st Alpe-Adria meeting* *Rogaška Slatina, November 18–20, 1994*	

1995

Sestanki patologov Slovenije, Hrvaške, Italije in Avstrije Ljubljana, 18. januar, 15. februar, 15. marec, 19. april, 17. maj in 21. junij 1995		***Meeting of pathologists of Slovenia, Croatia, Italy and Austria*** *Ljubljana, January 18, February 15, March 15, April 19, May 17, and June 21, 1995*
Tumorji v otroški dobi Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Ljubljana, 10. marec 1995	Bostič Pavlovič J, Koblar O, Velepič M, eds: Tumorji v otroški dobi. 16. izobraževalni dan iz onkologije za medicinske sestre, Ljubljana 1995. Ljubljana, Onkološki inštitut 1995.	***Childhood tumors*** *Seminar organized in collaboration with the Chamber of Nursing Care of Slovenia* *Ljubljana, March 10, 1995*
Zdravstvena nega onkološkega bolnika Seminar za študente Visoke šole za zdravstvo – VII. stopnja izobraževanja Ljubljana, marec 1995		***Nursing care of oncological patients*** *Seminar for students of College of Health Care – Bachelor's Degree* *Ljubljana, March, 1995*
Onkološka zdravstvena nega in onkologija Seminar za višje medicinske sestre – pripravnice Ljubljana, 18.–21. april in 28. november – 1. december 1995	Velepič M, Bostič Pavlovič J, eds: Zbornik predavanj s področja onkologije za višje medicinske sestre. 5. dop. izd. Ljubljana, Onkološki inštitut 1995.	***Oncological nursing care and oncology*** *Seminar for registered nurses – trainees* *Ljubljana, April 18–21 and November 28 – December 1, 1995*

Rak glave in vratu

Detekcija raka dojk in ginekološkega raka

Tečaj podiplomskega izobraževanja v sodelovanju s Kancerološko sekcijo Slovenskega zdravniškega društva in Zvezo slovenskih društev za boj proti raku
Šmarješke toplice, 31. marec –1. april in 24.–25. november 1995

Lindtner J, Budihna M, Škrk J, Štabuc B, Zakotnik B, Žgajnar J, eds: Rak glave in vratu. 7. onkološki vikend, Šmarješke Toplice 1995. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1995.

Lindtner J, Budihna M, Marolt F, Škrk J, Štabuc B, Zakotnik B, Žgajnar J, eds: Detekcija raka dojk. Detekcija ginekološkega raka. 8. onkološki vikend, Šmarješke Toplice 1995. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1995.

Head and neck cancer

Breast cancer and gynecological cancer detection

Postgraduate courses orgaized in collaboration with the Cancerological Section of the Slovenian Medical Society and the Association of Slovenian Cancer Societies
Šmarješke toplice, March 31–April 1, and November 24–25, 1995

Onkološka šola za specializante splošne medicine

Ljubljana, 9.–13. januar in 18.–22. december 1995

School of oncology for residents in general medicine

Ljubljana, January 9–13, and December 18–22, 1995

Strokovni sestanek in generalna skupščina direktorjev evropskih onkoloških inštitutov

OECI sestanek
Bled, 15. maj 1995

General assembly meeting of the directors of european oncological institutes

OECI meeting
Bled, May 15, 1995

Kvantitativne metode v diagnostiki in terapiji raka

Seminar Ljubljana, 29.–30. maj 1995

Quantitative methods in cancer diagnosis and therapy

Seminar Ljubljana, May 29–30, 1995

Hepatobiliarna šola 3. mednarodni postdiplomski tečaj iz hepatologije in hepatobiliarne kirurgije v sodelovanju z Medicinsko fakulteto v Ljubljani, Kliničnim centrom v Ljubljani in Hepatobiliarnim slovenskim združenjem Ljubljana, 19.–23. junij 1995	***Hepatobiliary school*** *The 3th postgraduate course in hepatology and HPB surgery organized in collaboration with Faculty of Medicine in Ljubljana, University Medical Center, HPBA Slovenia and Open Society Institute of Slovenia* *Ljubljana, June 19–23, 1995*	*Markovič S, Gadžijev EM, Sojar V, eds: Hepatobiliary school. 3rd postgraduate course in hepatology. Postgraduate course in hepatobiliary surgery. Ljubljana 1995. Book of lectures and abstracts. Ljubljana, Faculty of Medicine et al 1995.*
Osvežitvena delavnica ginekološke citopatologije Ljubljana, 4.–9. september 1995	***Refreshment workshop in gynecological cytopathology*** *Ljubljana, September 4–9, 1995*	
Pisanje znanstvenih člankov v biomedicini Mednarodni tečaj v sodelovanju z IPOKRaTES Bled, 11.–15. september 1995	***Scientific writing in biomedicine*** *International course organized in collaboration with IPOKRaTES* *Bled, September 11–15, 1995*	
Začetki uvajanja metode procesa zdravstvene nege na onkološkem inštitutu Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Rogla, 28.–29. september 1995	***Introduction of the method of nursing care at the institute of oncology*** *Seminar organized in collaboration with the Chamber of Nursing Care of Slovenia* *Rogla, September 28–29, 1995*	
Molekularna onkologija danes Hrvaški in slovenski strokovni sestanek Zagreb, 19. december 1995	***Molecular oncology today*** *Croatian and Slovenian Meeting* *Zagreb, December 19, 1995*	*Osmak M, Škrk J, eds: Molecular oncology today. Proceedings of the croatian-slovenian meeting, Zagreb 1995. Zagreb, Croatian Ligue Against Cancer 1996.*

1996

Novosti v sistemskem zdravljenju in pri zdravljenju kronične bolečine

Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije
Ljubljana, 8. marec 1996

Bostič Pavlovič J, Velepič M, eds: Novosti v sistemskem zdravljenju in pri zdravljenju kronične bolečine. 18. izobraževalni dan iz onkologije za medicinske sestre, Ljubljana 1996. Ljubljana, Onkološki inštitut 1996.

New advances in systemic therapy and in the treatment of chronic pain

Seminar organized in collaboration with the Chamber of Nursing Care of Slovenia
Ljubljana, March 8, 1996

Zdravstvena nega onkološkega bolnika

Seminar za študente Visoke šole za zdravstvo – VII. stopnja izobraževanja
Ljubljana, marec 1996

Nursing care of oncological patients

Seminar for students of the College of Health Care – Bachelor's Degree
Ljubljana, March 1996

Onkološka zdravstvena nega in onkologija

Seminar za višje medicinske sestre – pripravnice
Ljubljana, 2.–5. april in 15.–18. oktober 1996

Oncological nursing care and oncology

Seminar for registered nurses – trainees
Ljubljana, April 2–5, and October 15–18, 1996

Onkološka šola za specializante splošne medicine

Ljubljana, 15.–19. januar, 25. marec – 5. april in 18. november – 13. december 1996

School of oncology for residents in general medicine

Ljubljana, January 15–19, March 25 – April 5, and November 18 – December 13, 1996

Diagnostični algoritmi raka v ambulanti splošne medicine **Medicina in alternativa v onkologiji** Tečaj podiplomskega izobraževanja v sodelovanju s Kancerološko sekcijo Slovenskega zdravniškega društva in Zvezo slovenskih društev za boj proti raku Laško, 12.–13. april in 25.–26. oktober 1996	Zakotnik B, Lindtner J, Budihna M, Marolt F, Škrk J, Štabuc B, Žgajnar J, eds: Diagnostični algoritmi raka v ambulanti splošne medicine. 9. onkološki vikend, Laško 1996. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1996. Lindtner J, Budihna M, Marolt F, Škrk J, Štabuc B, Zakotnik B, Žgajnar J, eds: Medicina in alternativa v onkologiji. 10. onkološki vikend, Laško 1996. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1996.	***Algorithms of cancer diagnosis in general medical practice*** ***Medicine and alternative methods in oncology*** *Postgraduate courses organized in collaboration with the Cancerological Section of the Slovenian Medical Society and the Association of Slovenian Cancer Societies Laško, April 12–13 and October 25–26, 1996*	
Hepatobiliarna šola 4. mednarodni postdiplomski tečaj iz hepatologije in hepatobiliarne kirurgije v sodelovanju z Medicinsko fakulteto v Ljubljani, Kliničnim centrom v Ljubljani in Hepatobiliarnim slovenskim združenjem, Ljubljana, 24.–28. junij 1996		***Hepatobiliary school*** *The 4th postgraduate course in hepatology and HPB surgery organized in collaboration with Faculty of Medicine in Ljubljana, University Medical Center, HPBA Slovenia and Open Society Institute of Slovenia Ljubljana, June 24–28, 1996*	*Markovič S, Gadžijev EM, Sojar V, eds: Hepatobiliary school. 4th postgraduate course in hepatology. Postgraduate course in hepatobiliary surgery, Ljubljana 1996. Book of lectures and abstracts. Ljubljana, Faculty of Medicine et al 1996.*
Posvetovanje o državnem programu nadzorovanja raka Ljubljana, 7. november 1996	Primic Žakelj M, ed: Posvetovanje o državnem programu nadzorovanja raka. Zbornik prispevkov, Ljubljana 1996. Ljubljana, Onkološki inštitut 1996.	***Conference on the national cancer control programe*** *Ljubljana, November 7, 1996*	

Standardi onkološke zdravstvene nege – ustna votlina Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Ljubljana, 8. november 1996	Velepič M, Bostič Pavlovič J, eds: Standardi onkološke zdravstvene nege. Ustna votlina. 19. izobraževalni dan iz onkologije za medicinske sestre. Ljubljana 1996. Ljubljana, Onkološki inštitut 1996.	***Standards of oncological nursing care – oral cavity*** *Seminar organized in collaboration with the Chamber or Nursing Care of Slovenia Ljubljana, November 8, 1996*
Febrilna nevtropenija Tečaj podiplomskega izobraževanja v sodelovanju s Sekcijo za kemoterapijo Slovenskega zdravniškega društva Ljubljana, 13.–14. december 1996	Beovič B, Černelč P, Čižman M, Čufer T, eds: Febrilna nevtropenija. Zbornik predavanj. Ljubljana 1996. Ljubljana, Medicinski razgledi 1996. (Med Razgl 35: Suppl 7, 1996).	***Febrile neutropenia*** *Postgraduate courses organized in collaboration with the Chemotherapeutic Section of the Slovenian Medical Society Ljubljana, December 13–14, 1996*

1997

Rak prebavil, lajšanje kronične bolečine **Rak prostate parapareza onkološkega bolnika** Tečaj podiplomskega izobraževanja v sodelovanju s Kancerološko sekcijo Slovenskega zdravniškega društva in Zvezo slovenskih društev za boj proti raku Bled, 18.–19. april in Laško, 21.–22. november 1997	Štabuc B, Budihna M, Lindtner J, Marolt F, Škrk J, Zakotnik B, Žgajnar J, eds: Rak prebavil. Lajšanje kronične bolečine. 11. onkološki vikend, Bled 1997. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1997. Marolt F, Budihna M, Lindtner J, Škrk J, Štabuc B, Zakotnik B, Žgajnar J, eds: Rak prostate. Parapareza onkološkega bolnika. 12. onkološki vikend, Laško 1997. Zbornik. Ljubljana, Kancerološka sekcija Slovenskega zdravniškega društva; Zveza slovenskih društev za boj proti raku 1997.	***Gastrointestinal cancer, alleviation of chronic pain*** ***Prostatic cancer para-parhesis of the oncological patient*** *Postgraduate courses organized in collaboration with the Cancerological Section of the Slovenian Medical Society and the Association of Slovenian Cancer Societies Bled, April 18–19 and Laško, November 21–22, 1997*

Onkološka zdravstvena nega in onkologija Seminar za višje medicinske sestre – pripravnice Ljubljana, 22.–25. april in 17.–21. november 1997	Velepič M, Bostič Pavlovič J, eds: Priročnik iz onkološke zdravstvene nege in onkologije za višje medicinske sestre. Ljubljana, Onkološki inštitut 1997.	***Oncological nursing care and oncology*** *Seminar for registered nurses – trainees* *Ljubljana, April 22–25, and November 17–21, 1997*
Zadovoljna, celovito urejena medicinska sestra – kakovostna zdravstvena nega Seminar v sodelovanju z Zbornico zdravstvene nege Slovenije Gozd Martuljek, 15.–16. maj 1997	Koblar O, Bostič Pavlovič J, eds: Zadovoljna, celovito urejena medicinska sestra – Kakovostna zdravstvena nega. 20. izobraževalni dnevi iz onkologije za medicinske sestre. Gozd Martuljek 1997. Zbornik. Ljubljana, Zbornica zdravstvene nege Slovenije – Sekcija medicinskih sester v onkologiji 1997.	***A happy, neat and well organized nurse – quality nursing care*** *Seminar organized in collaboration with the Chamber of Nursing Care of Slovenia* *Gozd Martuljek, May 15–16, 1997*
Onkologija in onkološka zdravstvena nega Seminar za višje medicinske sestre Ankaran, 23. maj in 24. oktober 1997		***Oncology and oncological nursing care*** *Seminar for registered nurses* *Ankaran, May 23, and October 24, 1997*
Onkološka šola za specializante splošne medicine Ljubljana, 14.–24. april in 17. november – 5. december 1997		***School of oncology for residents in general medicine*** *Ljubljana, April 14–24, and November 17 – December 5, 1997*

Zdravljenje in rehabilitacija onkološkega bolnika, psihofizične posledice ter pričakovani potek bolezni Strokovni seminar za zdravnike izvedence invalidskih komisij v sodelovanju z Zavodom za pokojninsko in invalidsko zavarovanje Slovenije Ljubljana, 9. maj 1997	Dšuban G, Čufer T, eds: Zdravljenje in rehabilitacija onkološkega bolnika, psihofizične posledice zdravljenja ter pričakovani potek bolezni. Zbornik prispevkov s strokovnega seminarja za zdravnike izvedence invalidskih komisij, Ljubljana, 1997. Ljubljana, Zavod za pokojninsko in invalidsko zavarovanje Slovenije – Invalidska komisija II. stopnje; Onkološki inštitut 1997.	***Treatment and rehabilitation of oncological patinets, psycho-physical sequels and the expected course of disease*** *Seminar for physicians – experts in disability evaluation commissions, organized in collaboration with the Institute of Pension and Disability Insurance of Slovenia Ljubljana, May 9, 1997*	
Hepatobiliarna šola 5. mednarodni postdiplomski tečaj iz hepatologije in hepatobiliarne kirurgije v sodelovanju z Medicinsko fakulteto v Ljubljani, Kliničnim centrom v Ljubljani in Hepatobiliarnim slovenskim združenjem, Ljubljana, 25.–29. junij 1997		***Hepatobiliary school*** *The 5th postgraduate course in hepatology and HPB surgery organized in collaboration with Faculty of Medicine of Ljubljana, University Medical Center, HPBA Slovenia and Open Society Institute of Slovenia Ljubljana, June 25–29, 1997*	*Markovič S, Gadžijev EM, Sojar V, eds.: Hepatobiliary school. 5th postgraduate course in hepatology. Postgraduate course in hepatobiliary surgery, Ljubljana 1997. Book of lectures and abstracts. Ljubljana, Faculty of Medicine et al. 1997.*
Rak dojke Sestanek Evropskega združenja za raziskovanje in zdravljenje raka Bled, 2.–4. oktober 1997		***Breast cancer*** *EORTC Group meeting Bled, October 2–4, 1997*	

Predavanja tujih vabljenih predavateljev na Onkološkem inštitutu od 1. januarja 1993 do 31. decembra 1997

Lectures by International Guest Lecturers at the Institute of Oncology in the Period from 1 January 1993 to 31 December 1997

6. april 1993 Prof. dr. **Gianni Bussolati,** dr. med., Torino, Italija:	Slabo diferencirani tumorji ščitnice.	*April 6, 1993* *Prof.* ***Gianni Bussolati,*** *MD, PhD, Torino, Italy:*	*Poorly Differentiated Tumors of the Thyroid Gland.*
7. april 1993 Prof. dr. **Gianni Bussolati,** dr. med., Torino, Italija:	Patofiziologija mioepitelijskih celic dojke.	*April 7, 1993* *Prof.* ***Gianni Bussolati,*** *MD, PhD, Torino, Italy:*	*Pathophysiology of the Breast Myoepithelial Cells.*
18. maj 1993 **D. Mitrović,** dr. med., Osijek, Hrvaška:	Patologove izkušnje iz vojne v vzhodni Hrvaški.	*May 18, 1993* ***D. Mitrović,*** *MD, Osijek, Croatia:*	*A Pathologist's Experience from the War in East Croatia.*
8. junij 1993 Prof. dr. **Robert W. Fleischmann,** dr. med., Galveston, ZDA:	Predklinično antiproliferativno in antitumorsko delovanje interferonov.	*June 8, 1993* *Prof.* ***Robert W. Fleischmann,*** *MD, PhD, Galveston, USA:*	*Preclinical Antiproliferative and Antitumor Action of Interferons.*
30. avgust 1993 Prof. dr. **Branimir Sikić,** dr. med., Stanford, ZDA:	Rezistenca na kemoterapevtike.	*August 30, 1993* *Prof.* ***Branimir Sikić,*** *MD, PhD, Stanford, USA:*	*Multiduring Resistance to Cancer Chemotherapy.*
3. september 1993 **Mary Hellen Briscoe,** San Francisco, ZDA:	Medicinske ilustracije.	*September 3, 1993* ***Mary Hellen Briscoe,*** *San Francisco, USA:*	*Medical Illustration.*
3. september 1993 **Wayne Lanier,** San Francisco, ZDA:	Nova biotehnologija v medicini.	*September 3, 1993* ***Wayne Lanier,*** *San Francisco, USA:*	*New Biotechnology in Medicine.*
20. september 1993 Dr. **Stane Bah,** Windsor, Ontario, Kanada:	Slovenci v multikulturni Kanadi. Možnosti za kanadsko pomoč pri strokovnem in znanstvenem izobraževanju.	*September 20, 1993* ***Stane Bah,*** *PhD, Windsor, Ontario, Canada:*	*The Slovenians in Multicultural Canada. Possibilities for Canadian Support Towards Professional and Scientific Education.*
9. november 1993 Prof. dr. **Krsto Kolarić,** dr. med., Zagreb, Hrvaška:	Kombinirana terapija karcinoma požiravnika.	*November 9, 1993* *Prof.* ***Krsto Kolarić,*** *MD, PhD, Zagreb, Croatia:*	*Combined Therapy for Esophageal Carcinoma.*
23. maj 1994 Prof. dr. **Patrick P. Bateson,** dr. med., Cambridge, Velika Britanija:	Pouk in raziskovanje v biologiji in medicini.	*May 23, 1994* *Prof.* ***Patrick P. Bateson,*** *MD, PhD, Cambridge, United Kingdom:*	*Education and Research in Biology and Medicine.*

24. maj 1994 Prof. dr. **Franz Porzsolt,** dr. med., Ulm, Nemčija, doc. dr. **M. Steger,** Dunaj, Avstrija:	Simpozij o Novantronu.	*May 24, 1994* *Prof.* ***Franz Porzsolt,*** *MD, PhD, Ulm, Germany, Assist. Prof.* ***M. Steger,*** *MD, PhD, Wienna, Austria:*	*Symposium on Novantrone.*
26. maj 1994 Prof. dr. **Ervin B. Podgoršak,** Montreal, Kanada:	Radioterapija v letu 2000.	*May 26, 1994* *Prof.* ***Ervin B. Podgoršak,*** *PhD, FCCP, Montreal, Canada:*	*Radiotherapy in the Year 2000.*
30. maj 1994 Prof. dr. **Ervin B. Podgoršak,** Montreal, Kanada:	Clintonov načrt za zdravstvo v primerjavi s kanadskim zdravstvenim sistemom.	*May 30, 1994* *Prof.* ***Ervin B. Podgoršak,*** *PhD, FCCP, Montreal, Canada:*	*Clinton's vs. Canadian Health Care System.*
31. maj 1994 Prof. dr. **Ervin B. Podgoršak,** Montreal, Kanada:	Sedanje smeri v radiokirurgiji.	*May 31, 1994* *Prof.* ***Ervin B. Podgoršak,*** *PhD, FCCP, Montreal, Canada:*	*Present Trends in Radiosurgery.*
7. junij 1994 Prof. dr. **Boguslaw Maciewski,** Gliwice, Poljska:	Nova biološka spoznanja in napredek v radioterapiji tumorjev glave in vratu.	*June 7, 1994* *Prof.* ***Boguslaw Maciewski,*** *PhD, Gliwice, Poland:*	*New Biological Findings and Advances in Radiotherapy For Head and Neck Tumors.*
21. junij 1994 Prof. dr. **Štefan Korec,** dr. med., Bratislava, Slovaška:	Zdravljenje raka dojke z visokimi odmerki citostatikov.	*June 21, 1994* *Prof.* ***Štefan Korec,*** *MD, PhD, Bratislava, Slovak Republic:*	*High-Dose Chemotherapy for Breast Cancer.*
20. december 1994 Prof. **Lev Detela,** Dunaj, Avstrija:	Slovenec biti na Dunaju.	*December 20, 1994* *Prof.* ***Lev Detela,*** *Wienna, Austria:*	*To Be a Slovenian in Vienna.*
25. april 1995 Prof. dr. **Konrad Pillwein,** dr. med., Dunaj, Avstrija:	Novi načini zdravljenja medulobastoma pri otrocih.	*April 25, 1995* *Prof.* ***Konrad Pillwein,*** *MD, PhD, Wienna, Austria:*	*New Treatment Modalities for Medulloblastoma in Children.*
11. maj 1995 **Hokan Cederberg,** ZDA:	Predstavitev tributiratov.	*May 11, 1995* ***Hokan Cederberg,*** *USA:*	*Tributirate Presentation.*
11. maj 1995 **Federico Welsch,** dr. med., Bethesda, ZDA:	Možnosti znanstvenega sodelovanja z National Cancer Institute, Bethesda, ZDA.	*May 11, 1995* ***Federico Welsch,*** *MD, Bethesda, USA:*	*The Possibilities of Collaboration with National Cancer Institute, Bethesda, USA.*

30. maj 1995 **Ernest Wagner,** dr. med., Dunaj, Avstrija:	Izdelava tumorskih vakcin z receptorsko uravnavanim prenosom genov.	*May 30, 1995* ***Ernest Wagner,** MD, Wienna, Austria:*	*Production of Tumor Vaccines with Receptor-Controlled Gene Transfer.*
12. september 1995 **Walter Rhomberg,** dr. med., Feldkirsch, Avstrija:	Zdravljenje sarkomov mehkih tkiv in nekaterih drugih tumorjev z obsevanjem in Razoxinom.	*September 12, 1995* ***Walter Rhomberg,** MD, Feldkirsch, Austria:*	*Irradiation and Razoxine for the Treatment of Soft-Tissue Sarcomas and Some Other Tumors*
30. september 1996 Dr. **Branko Palčič,** Vancouver, Kanada:	Ali je možen racionalnejši pristop k zdravljenju displazij vratu maternice?	*September 30, 1996* ***Branko Palčič,** PhD, Vancouver, Canada:*	*Are There Any Possibilities for a More Rational Approach to the Treatment for Dysplasias of the Uterine Cervix?*
2. okrober 1996 Prof. **Jorge Barrio,** dr. med., ZDA:	Pozitronska emisijska tomografija v medicini.	*October 2, 1996* *Prof.* ***Jorge Barrio,** MD, USA:*	*Positron Emission Tomography in Medicine.*
21. okrober 1996 Dr. **Johann Klocker,** Celovec, Avstrija:	Naše izkušnje pri zdravljenju inoperabilnega karcinoma glave in vratu.	*October 21, 1996* ***Johann Klocker,** MD, Klagenfurt, Austria:*	*Our Experience in the Treatment for Inoperable Head and Neck Carcinoma.*
25. november 1996 Dr. **Ernst Ulsperger,** Dunaj, Avstrija:	Gemcitabin – farmakologija in klinične izkušnje.	*November 25, 1996* ***Ernst Ulsperger,** MD, PhD, Wienna, Austria:*	*Gemcitabine – Pharmacology and Clinical Experience.*
3. december 1996 Prof. dr. **Norman Jaffe,** dr. med., Houston, ZDA:	Perspektive zdravljenja otroškega raka.	*December 3, 1996* *Prof.* ***Norman Jaffe,** MD, PhD, Houston, USA:*	*Perspectives of Childhood Cancer.*
3. december 1996 Prof. dr. **Norman Jaffe,** Houston, ZDA:	Taktika in strategija pri zdravljenju otroškega raka.	*December 3, 1996* *Prof.* ***Norman Jaffe,** MD, PhD, Houston, USA:*	*Tactics and Strategies in the Management of Childhood Cancer.*
3. februar 1997 **Richard Bryce,** dr. med., Aberdeen, Škotska:	Esencialne maščobne kisline v zdravljenju raka.	*February 3, 1997* ***Richard Bryce,** MD, Aberdeen, Scotland:*	*Essential Fatty Acids in Cancer Treatment.*
8. september 1997 Prof. dr. **Edward J. Wilkinson,** dr. med., Gainesville, Florida, ZDA:	Kontroverznosti pri boleznih vulve.	*September 8, 1997* *Prof.* ***Edward J. Wilkinson,** MD, PhD, Gainesville, Florida, USA:*	*Controversies in Vulvar Disease.*
22. september, 1997 Prof. dr. **Ervin B. Podgoršak,** Montreal, Kanada:	Uporaba CT-simulatorja v radioterapiji.	*September 22, 1997* *Prof.* ***Ervin B. Podgoršak,** PhD, FCCP, Montreal, Canada:*	*Use of CT-Simulator in Radiotherapy.*

2. oktober 1997 **Cornelius Van de Velde,** dr. med., Leiden, Nizozemska:	Novo v kirurgiji raka dojke.	*October 2, 1997* ***Cornelius Van De Velde,*** *MD, Leiden, The Netherlands:*	*New Developments in the Surgery of Breast Cancer.*
2. oktober 1997 **Martine J. Piccart,** dr. med., Bruselj, Belgija:	Novi dosežki v kemoterapiji raka dojke.	*October 2, 1997* ***Martine J. Piccart,*** *MD, Brussels, Belgium:*	*New Developments in the Chemotherapy of Breast Cancer.*
2. oktober 1997 **Peter Bruning,** dr. med., Amsterdam, Nizozemska:	Novi dosežki pri hormonskem zdravljenju raka dojke.	*October 2, 1997* ***Peter Bruning,*** *MD, Amsterdam, The Netherlands:*	*New Developments in the Hormonal Therapy of Breast Cancer.*
2. oktober 1997 **Louis Mauriac,** dr. med., Bordeau, Francija:	Vinorelbine. Novo zdravilo pri mono- in polikemoterapiji raka dojke.	*October 2, 1997* ***Louis Mauriac,*** *MD, Bordeau, France:*	*Vinorelbine. New Agent in Mono- and Polychemo-therapy of Breast Cancer.*
2. oktober 1997 **J. P. Julien, Rouen,** dr. med., Francija:	Novosti pri študijskem zdravljenju duktalnega karcinoma dojke in situ.	*October 2, 1997* ***J. P. Julien,*** *MD, Rouen, France:*	*Update on Ductal Carcinoma in Situ Trials.*
3. oktober 1997 **Patrick Therase,** dr. med., Belgija:	Oblikovanje in načela kliničnih študij.	*October 3, 1997* ***Patrick Therase,*** *MD, Belgium:*	*Design and Regulations of Clinical Trials.*
14. oktober 1997 **Martin Guillaud,** dr. med., Vancouver, Kanada:	Arhitekturna analiza tkivnih rezin: nov diagnostični pripomoček pri bronhialnih biopsijah.	*October 14, 1997* ***Martin Guillaud,*** *MD, Vancouver, Canada:*	*Architectural Analysis of Tissue Sections: A new Diagnostic Tool for Bronchial Biopsies.*
20. oktober, 1997 **Harold Swartz,** dr. med., Urbana-Champain, Illinois, ZDA:	Možnost individualnega vodenja onkološke terapije ob ponavljanih merjenjih pO_2 v tumorjih z elektronsko paramagnetno resonanco.	*October 20, 1997* ***Harold Swartz,*** *MD, Urbana-Champain, Illinois, USA:*	*The Potential for Guiding and Individualizing Cancer Therapy by the Use of Repeated Measurements of the pO_2 in Tumors Using Electron Paramagnetic Resonance.*
2. december 1997 Dr. **Hironobu Yanagie,** Tokio, Japonska:	Sistemi za vnos bora pri zdravljenju z zajemanjem borovih nevtronov. Od poskusov do rabe.	*December 2, 1997* ***Hironobu Yanagie,*** *PhD, Tokyo, Japan:*	*Drug Delivery System for Boron Neutron Capture Therapy. From Experiments to Clinical Application.*

Vabljena predavanja na mednarodnih strokovnih srečanjih in tujih ustanovah

Guest Lectures at International Conferences and Institutions

Rastko Golouh: *Endocrine Pathology. 14th European Congress of Pathology, Innsbruck, September 9, 1993.*

Vera Pompe-Kirn: *Epidemiological Features of Cervical Carcinoma in Young Women of Slovenia. 8th Congress of European Association of Gynaecologists and Obstetricians, Ljubljana, October 13–16, 1993.*

Marija Auersperg: *Effectiveness of Vinblastin in Thyroid Tumours. British Columbia Cancer Agency, Vancouver, July 18, 1994.*

Marija Auersperg: *Can Flow Cytometry Data Be Used for Steering Chemotherapy of Patients Who Do Not Respond to Conventional Treatment Protocol? British Columbia Cancer Agency, Vancouver, July 21, 1994.*

Vera Pompe-Kirn: *Epidemiological Features of Lung Cancer in Slovenia. 2nd Central European Conference on Lung Cancer: Biology and Clinical Aspects, Ljubljana, April 13-16, 1994.*

Gregor Serša: *The Role of TNF in Tumor Regression. Hepatobiliary School. 2nd Postgraduate Course on Hepatology. Postgraduate Course on Hepatobiliary Surgery, Ljubljana, September 29, 1994.*

Marija Us-Krašovec: *The Use of Biopsy Aspirates in Clinical Oncology. British Columbia Cancer Agency, Vancouver, July 10, 1994.*

Marija Us-Krašovec: *The Use of Fine Needle Aspiration Biopsy in Oncological Research. British Columbia Cancer Agency, Vancouver, July 21, 1994.*

Marija Us-Krašovec: *Diagnostic Cytopathology. Centro di Riferimento Oncologico di Aviano. Aggiornamento in Oncologia e Anatomia Patologica, Udine, June 6, 1994.*

Matjaž Zwitter: *Epidemiology of Hodgkin's Disease. School of Medicine, University of Pittsburgh, Pittsburgh, May 13, 1994.*

Rastko Golouh: *Soft Tissue Tumors. Centro di Riferimento Oncologico di Aviano. Aggiornamento in Oncologia e Anatomia Patologica, Udine, January 26, 1995.*

Gregor Serša: *Electrochemotherapy with Cis-Platinum: Preclinical and First Clinical Studies. Institute Gustave-Roussy, Villejuif Cedex, November 21, 1995.*

Matjaž Zwitter: *The Patient In Randomized Clinical Trials - a Partner? Memorial Sloan-Kettering Cancer Center, Division of Solid Tumor Oncology Conference, New York, February 6, 1995.*

Matjaž Zwitter: *Epidemiology of Hodgkin's Disease. Montreal General Hospital, Montreal, July 17, 1995.*

Matjaž Zwitter: *On the Epidemiology of Hodgkin's Disease. Deutsches Krebsforschungszentrum, Heidelberg, June 19, 1995.*

Matjaž Zwitter: *Cancer Patients and Quality of Life. Strahlentherapeutische Institut, Klagenfurt, November 30, 1995.*

Rastko Golouh: *Do DNA Content, Proliferation Markers PCNA and Ki-67 and Oncoprotein P53 Have Prognostic Significance in Spindle-Cell Soft Tissue Sarcomas. N. N. Blokhin Cancer Research Center, 4th Conference "New Trends in Oncopathology", Moscow, January 24–26, 1996.*

Rastko Golouh: *Do Proliferation Markers, Oncoprotein P53 and DNA Ploidy Predict Survival in Patients with Soft Tissue Spindle Cell Sarcomas? 1st Croatian Congress of Pathology and Forensic Medicine, Zagreb, September 26–28, 1996.*

Vera Pompe-Kirn: *Cancer Registry of Slovenia: 46 Years Of Experience. Workshop "Cancer Epidemiology in the Mediterranean", Heraklion, September 26–29, 1996.*

Zvonimir Rudolf: *Research at the Institute of Oncology, Ljubljana. N. N. Blokhin Cancer Research Center, 4th Conference "New Trends in Oncopathology", Moscow, January 24–26, 1996.*

Rastko Golouh: *Comparison of Standardized Immunohistochemical and Biochemical Assays for Estrogen Receptors in Breast Carcinoma – A Prospective Study. 1st Congress of the Association of Pathologists of Russia, Moscow, January 21–24, 1997.*

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Raziskovanje

Gregor Serša

Že od ustanovitve dalje je tako bazično kot klinično 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 obsega diagnostiko in zdravljenje rakavih bolezni ter preprečevanje zapletov.

Koordinacijska nosilna ustanova je Onkološki inštitut, sodelujejo pa 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 bolnišnica Maribor in drugi zavodi.

Multidisciplinarnost in povezovanje bazičnih raziskovalcev s kliničnimi prispeva, da v skladu z najpomembnejšimi problemi spremljamo in dopolnjujemo tako domače kot tuje raziskave.

Raziskovalni projekti se vključujejo v dobro opredeljene tematske sklope, ki so zbrani po pomembnosti in specifičnosti problemov moderne onkologije in stanja v Sloveniji. Ti tematski sklopi so: kancerogeneza, rast in značilnosti tumorjev, odzivnost organizma, odkrivanje in ugotavljanje raka, zdravljenje raka ter posledice zdravljenja.

Več kot 20 let se Onkološki inštitut aktivno vključuje v mednarodne klinične raziskave, ki potekajo po načelih dobre klinične prakse in prek katerih se v sodelovanju z priznanimi mednarodnimi inštituti za zdravljenje in raziskave raka zagotavlja prenos novih spoznanj v vsakodnevno klinično delo.

Research

Gregor Serša

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, covering diagnostics and treatment of cancer, as well prevention of cancer-related complications.

The Institute of Oncology is the main co-ordinating institution of this project in which several other research institutions are involved, such as the Medical Faculty of Ljubljana with its research institutes, Jožef Stefan Institute of Ljubljana, Biotechnical Faculty and Faculty of Electrical Engineering, both in Ljubljana, and departments and institutes of the University Medical Centre of Ljubljana, Maribor Teaching Hospital.

Our multidisciplinary approach, close co-operation between basic and clinical researchers, and our traditional and long-standing 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 its current status 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.

For more than 20 years, the Institute of Oncology has been involved in multicentric clinical studies, which have been implemented according to the principles of good clinical practice and, jointly with other prominent international cancer research institutions. The Institute helps introduce the latest findings as routine work into clinical practice.

Mednarodne vezi

Gregor Serša

Mednarodno sodelovanje poteka v okviru projektov Evropske skupnosti, kot je na primer COST v programu EUREKA, in v sklopu drugih mednarodnih raziskovalnih združenj in skupin. Inštitut je že od leta 1947 član Mednarodne zveze proti raku (UICC) in član Združenja evropskih onkoloških inštitutov (OECI). V teh organizacijah sodelujemo v posameznih raziskovalnih skupinah. Na področju onkološke epidemiologije sodelujemo v skupnih projektih z Mednarodno agencijo za raziskovanje raka (IARC, Lyon), in Državnim inštitutom za raka (NCI, Bethesda). Ker ima Slovenija zelo pregleden nacionalni register raka, je že dolgo navzoča v rednih svetovnih publikacijah o raku (na primer v Cancer Incidence in Five Continents).

Raziskovalci Onkološkega inštituta sodelujejo v multicentričnih kliničnih študijah Evropske organizacije za raziskovanje in zdravljenje raka (EORTC), Mednarodnega društva za otroško onkologijo (SIOP), v skupinah IBCSG (International Breast Cancer Study Group) - nekdaj LBCSG (Ludwig Breast Cancer Study Group), SEEOG (South-Eastern European Oncology Group) in drugje. V okviru teh raziskav sodelujemo s številnimi priznanimi tujimi centri.

Živo je tudi dvostransko sodelovanje z znanimi mednarodnimi centri tako v izmenjavi strokovnjakov kot tudi v skupnih raziskovalnih projektih, med najpomembnejšimi so M.D. Anderson Hospital and Tumor Institute (Houston), Memorial Sloan-Kettering Cancer Center (New York), British Columbia Cancer Center (Vancouver), Erasmus University (Rotterdam), Institut Gustave Roussy / CNRS (Villejuif), Istituto Europeo di Oncologia (Milano), Mount Vernon Hospital, Gray Laboratory (Northwood), University of Ulm (Ulm), University of Münster (Münster), Univerity of South Florida (Tampa), Centro Riferimento Oncologico (Aviano), Institute of Tumors and Allied Diseases (Zagreb). Posamezni strokovnjaki Onkološkega inštituta tudi aktivno delujejo v tujih inštitucijah; vodja Oddelka za epidemiologijo na našem inštitutu, doc. dr. Maja Primic-Žakelj, je, npr., tudi raziskovalna sodelavka na oddelku za epidemiologijo in biostatistiko (Division of Epidemiology and Biostatistics) na Evropskem onkološkem inštitutu v Milanu (European Institute of Oncology). Na temelju pridobljenega ugleda in uspešnega raziskovalnega dela so bila Onkološkemu inštitutu Ljubljana zaupana tudi številna mednarodna srečanja.

Podrobnejši pregled kliničnih študij presega okvir tega zbornika, zato podaja le naslove mednarodnih in slovenskih kliničnih študij z njihovimi nosilci ter nekoliko podrobnejši opis raziskovalnih projektov, ki jih je financiralo Ministrstvo za znanost in tehnologijo Republike Slovenije in tudi druge ustanove.

International Collaboration

Gregor Serša

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, and of OECI; 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 (Lyon) and with NCI (Bethesda). 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 clinical studies within the frame of EORTC, SIOP, IBCSG, SEEOG, and others. We are co-operating with numerous renowned research centers abroad.

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 Columbia Cancer Center (Vancouver), Erasmus University (Rotterdam), Institut Gustave Roussy / CNRS (Villejuif), Istituto Europeo di Oncologia (Milano), Mount Vernon Hospital, Gray Laboratory (Northwood), University of Ulm (Ulm), University of Münster (Münster), University of South Florida (Tampa), Centro Riferimento Oncologico (Aviano), Institute of Tumors and Allied Diseases (Zagreb). Many experts from our Institute are also engaged in several institutions abroad; hence, Assist. Prof. Maja Žakelj, MD, PhD, Head of the Department of Epidemiology, is Senior Research Assistant in the Department of Epidemiology and Biostatistics, at the European Institute of Oncology in Milan (Italy). Based on its reputation and successful research activity, the Institute of Oncology has been entrusted, in the past decade, with the organization of several international meetings.

A detailed survey of individual clinical studies is beyond the scope of this publication. Therefore, only the titles of international and national clinical studies with the names of chief investigators are given. However, included is a more detailed description of the research projects, supported by The Ministry of Science and Technology of Slovenia and some others.

Pregled sodelovanja v mednarodnih kliničnih študijah od leta 1993 do 1997

Review of Collaboration in International Clinical Studies from 1993 to 1997

Oznaka študije *Study code*	Naslov	*Title*	Nosilec študije na Onkološkem inštitutu *Principal investigator at Institute of Oncology*
Karcinom pljuč ***Lung Cancer***			
EORTC-LCCG	Primerjava kirurškega zdravljenja in radioterapije pri bolnikih z nemikroceličnim pljučnim karcinomom stadija IIIa, zdravljenih z induktivno kemoterapijo	*Randomized trial of surgery versus radiotherapy in patients with stage IIIa non-small cell lung cancer after a response to induction-chemotherapy*	**Viljem Kovač**
IALT	Evalvacija adjuvantne kemoterapije po kurativni operaciji nedrobnoceličnega raka pljuč	*A large-scale trial evaluating adjuvant chemotherapy after curative resection of non small-cell lung cancer*	**Viljem Kovač**
Karcinom dojke ***Breast Cancer***			
EORTC	Predoperativna kemoterapija pri operabilnem raku dojk	*Preoperative chemotherapy in operable breast cancer*	**Jožica Červek**
EORTC	Nadaljevanje zdravljenja s tamoksifenom ali brez njega po operaciji in dopolnilni kemoterapiji pri bolnicah z rakom dojk (faza III raziskave)	*Phase III randomized trial of postoperative adjuvant chemotherapy followed by adjuvant tamoxifen vs nil for patients with operable breast cancer*	**Tanja Čufer**
EORTC-NCIC-SAKK	Zdravljenje lokalno napredovalega vnetnega raka dojk z intenzivno kemoterapijo v kombiniranem zdravljenju	*A multicentre randomized study of dose-intensive chemotherapy as primary treatment in a multimodality approach for locally advanced inflammatory breast cancer*	**Tanja Čufer**
EORTC, IDBBC	Hormonska terapija prvega reda z eksemestanom ali tamoksifenom pri pomenopavznih bolnicah z rakom dojk – randomizirana klinična raziskava, faza II	*Randomized phase II study in first line hormonal treatment for metastatic breast cancer with exemestane or tamoxifen in postmenopausal patients*	**Tanja Čufer**

EORTC, IDBBC-ECSG	Prvo zdravljenje napredovalega raka dojk z doksorubicinom in taksolom; randomizirana klinična raziskava primerjave s standardnim zdravljenjem z doksorubicinom in ciklofosfamidom	*Doxorubicin/Taxol combination as first line chemotherapy in metastatic breast cancer: a randomized study versus standard doxorubicin/cyclophosphamide combination regimen*	**Tanja Čufer**
IBCS XI	Dodatno zdravljenje predmenopavznih bolnic z operabilnim rakom dojk in metastazami v bezgavkah, primernih za hormonsko zdravljenje samo	*Adjuvant therapy for premenopausal patients with node positive breast cancer who are suitable for endocrine therapy alone*	**Jurij Lindtner**
IBCS XIII	Dodatno zdravljenje pomenopavznih bolnic z operabilnim rakom dojk in metastazami v bezgavkah, neprimernih za hormonsko zdravljenje samo	*Adjuvant therapy for premenopausal patients with node positive breast cancer who are not suitable for endocrine therapy alone*	**Jurij Lindtner**
IBCS XII	Dodatno zdravljenje peri- in pomenopavznih bolnic z operabilnim rakom dojk in metastazami v bezgavkah, primernih za hormonsko zdravljenje samo	*Adjuvant therapy for post-perimenopausal patients with node positive breast cancer who are suitable for endocrine therapy alone*	**Jurij Lindtner**
IBCS XIV	Dodatno zdravljenje peri- in pomenopavznih bolnic z operabilnim rakom dojk in metastazami v bezgavkah, neprimernih za hormonsko zdravljenje samo	*Adjuvant therapy for post-perimenopausal patients with node positive breast cancer who are not suitable for endocrine therapy alone*	**Jurij Lindtner**
IBCS IX	Dodatno zdravljenje pomenopavznih bolnic z operabilnim rakom dojk brez metastaz v bezgavkah	*Adjuvant therapy in postmenopausal patients with operable breast cancer*	**Jurij Lindtner**
IBCS VIII	Dodatno zdravljenje pred- in perimenopavznih bolnic z operabilnim rakom dojk brez metastaz v bezgavkah	*Adjuvant therapy in pre- and perimenopausal patients with node-negative breast cancer*	**Jurij Lindtner**
IBCS X	Kirurško zdravljenje starejših bolnic z operabilnim rakom dojk, ki dobijo adjuvantno tamoksifen, brez disekcije pazduhe ali z njo	*Surgical therapy with or without axillary node clearance for breast cancer in the elderly who receive adjuvant therapy with tamoxifen*	**Jurij Lindtner**

Limfomi ***Lymphomas***			
EORTC	Prospektivna randomizirana študija vloge adjuvantnega obsevanja prizadete regije po citostatskem zdravljenju MOPP/ABV pri bolnikih z napredovalo Hodgkinovo boleznijo	*Prospective randomized controlled trial of adjuvant involved field radiotherapy after MOPP/ABV hybrid chemotherapy in advanced Hodgkin disease*	**Radka Tomšič**
EORTC	Randomizirana študija za bolnike z ne-Hodgkinovim limfomom stadijev II, III, IV visoke stopnje malignosti, starih 50–70 let, da bi ocenili vrednost konsolidacijske radioterapije pri bolnikih, kjer smo s kemoterapijo dosegli popolno remisijo	*Randomized trial for non-Hodgkin lymphoma patients st. II, III, IV, intermediate high grade, to assess the value of consolidation ("iceberg") irradiation for patients in complete remission after chemotherapy age group 50–70 yr*	**Radka Tomšič**
EORTC	Protokol H8 za prospektivno randomizirano študijo bolnikov s supradiafragmalno Hodgkinovo boleznijo stadijev I in II: Ocena učinkovitosti zdravljenja in stranskih učinkov v treh različnih prognostičnih skupinah	*Protokol H8 for a prospective controlled trial in clinical stage I–II supra-diaphragmatic Hodgkin's disease. Evaluation of treatment efficacy and (long-term) toxicity in 3 different prognostic subgroups*	**Radka Tomšič**
Otorinolaringološki tumorji ***Head and Neck Cancer***			
EORTC	Primerjava učinkov pooperativnega obsevanja s kemoterapijo in brez pri bolnikih s karcinomi glave in vratu z velikim tveganjem za razsoj	*A phase III randomized study on postoperative radio- and chemotherapy with locally advanced head and neck carcinoma*	**Boris Jančar**
EORTC	Primerjava konvencionalnega obsevanja in hiperfrakcionacije s kemoterapijo in brez nje pri napredovalih karcinomih glave in vratu	*A phase III study comparing conventional versus hyperfractionated radiotherapy, with or without cocomitant chemotherapy, in patients with head and neck squamous carcinoma*	**Boris Jančar**

Tumorji mehkih tkiv in kosti
Soft Tissue and Bone Tumors

CNR	Integrirano zdravljenje odraslih s sarkomi mehkih tkiv na ekstremitetah	*Combined treatment of soft-tissue tumors on the extremities of adult patients*	**Branko Zakotnik**

Ginekološki tumorji
Gynecological Tumors

Radiumhemet, Stockholm	Pooperativna radioterapija nožnice pri bolnicah z manjšim tveganjem za razvoj endometrijskega karcinoma	*Postoperative vaginal radiotherapy of patients with low risk cancer corporis uteri*	**Janez Kuhelj**

Raziskovalni projekti

Plačnik: Ministrstvo za znanost in tehnologijo Republike Slovenije, Ministrstvo za zdravstvo Republike Slovenije in druge tuje ustanove

Racionalna diagnostika in zdravljenje tumorjev ščitnice

Oznaka študije / Study code: MZT - J3-7842-0302

Vodja projekta / Principal investigator: Marija Auersperg

Sodelavci / Co-investigators: Marija Us-Krašovec, Rastko Golouh, Gregor Serša, Andreja Zidar, Janez Jančar, Ana Pogačnik, Marija Bizjak-Schwarzbartl, Živa Pohar-Marinšek, Ljudmila Ruparčič-Oblak, Alenka Vodnik-Cerar, Radka Tomšič, Gabrijela Petrič-Grabnar, Damjan Bergant, Franc Pompe, Mojca Senčar, Nikola Bešić, Marko Hočevar, Maja Čemažar

Dobro diferencirani folikularni karcinomi so diagnostičen, nediferencirani pa terapevtski problem. Preskušamo, ali bi bilo predoperativno določanje tumorskega markerja tiroglobulina uprabno v diagnostiki folikularnih karcinomov. Z multivariatno analizo bomo preverili, kako vplivajo razni dejavniki in obseg operacije na prognozo bolnikov s temi karcinomi. Pri nediferenciranih karcinomih v randomizirani študiji preverjamo uspešnost dveh kombinacij kemoterapije z obsevanjem. Mehanizme delovanja teh kombinacij pri bolnikih proučujemo citomorfološko in z meritvami DNA v vzorcih aspiracijskih biopsij tumorjev. Na tumorskih modelih proučujemo uspešnost raznih kombinacij kemoterapevtikov in njihov vpliv na fluidnost membran tumorskih celic.

Poskus izboljšanja zdravljenja malignih tumorjev, zmanjšanja posledic zdravljenja in proučevanje nekaterih prognostičnih dejavnikov

Oznaka raziskave / Study code: MZT - J3-7952-0302

Vodja projekta / Pricipal investigator: Marjan Budihna

Sodelavci / Co-investigators: Janez Burger, Boris Jančar, Hotimir Lešničar, Mirela Rode, Zvonimir Rudolf, Janez Škrk, Erika Šoba, Matjaž Zwitter

1. Ozdravitev raka z obsevanjem narašča s skrajševanjem trajanja obsevanja in, kjer se le da, z višanjem celotne tumorske doze. Avtorji bodo obsevali karcinom glave in vratu s po 3 x 0,9 Gy dnevno do ≈75 Gy namesto konvencionalnih 70 Gy v 7 tednih. Namen naloge je izboljšati ozdravljivost in zmanjšati kasne posledice obsevanja.
2. Kombinacija hipertermije in obsevanja je učinkovita pri zdravljenju napredovalih tumorjev, kjer so zaradi hipoksije centralni predeli tumorja odporni na obsevanje. Avtorje zanima povezava velikosti doze na frakcijo pri sočasni hipertermiji z odzivom tumorja.
3. Proteolitični encimi, katepsini B, H, L, D in njihovi inhibitorji stefini A, B ter cistatin C verjetno vplivajo na metastaziranje. Avtorji proučujejo povezavo med njihovo koncentracijo v tumorju in izidom zdravljenja karcinomov glave in vratu.
4. Pogost stranski učinek obsevanja tumorjev glave in vratu je pomanjkanje sline. Avtorji nameravajo proučiti, kako na kserostomijo deluje zaviranje delovanja slinavk z biperidenom med obsevanjem pri eni skupini bolnikov in vzpodbujanje slinavk s pilokarpinom pri drugi.

Research Projects

Financed by: The Ministry of Science and Technology of the Republic of Slovenia, The Ministry of Health of the Republic of Slovenia, and other foreign institutions

Rational Diagnostics and Treatment of Thyriod Tumors

Well differentiated thyroid tumors are a diagnostic problem while nondifferentiated are a therapeutic problem. The values of preoperative measurement of tumor marker thyroglobulin for diagnosis of follicular carcinomas are studied. The impact of various prognostic factors on the survival of patients with follicular carcinomas are studied by multivariate analysis. In a randomised study of nondifferentiated carcinomas, two combinations of chemotherapy with irradiation are compared. In patients, the mechanisms of action of these combinations are studied by cytomorphology and DNA measurements. In addition, tumor models are used for studying the efficacy of various chemotherapeutic drugs and their impact on cell membrane fluidity.

An Attempt to Improve the Treatment for Malignant Tumours and to Moderate Sequels of Treatment; A Study of Some Prognostic Factors

1. *The probability of cancer cure by irradiation increases with the shortening of the treatment period and possibly, increasing the total tumour dose. The authors will irradiate the head and neck tumours with 3 x 0.9 Gy daily dose to the total tumour dose ≈75 Gy in 5.5 weeks instead of the conventional 70 Gy in 7 weeks.*
2. *The combination of hyperthermia and irradiation is effective for the treatment of advanced tumours, where the central parts are radioresistant due to hypoxia. The authors study the correlation between the size of irradiation dose per fraction delivered concomitantly with hyperthermia, and tumour response.*
3. *Proteolytic enzymes, cathepsins B, H, L, D, and their inhibitors stefins A and B, and cystatin C, are probably involved in metastases development. The authors study the correlation between the tumour concentration of the enzymes and their inhibitors, and the effect of treatment in head and neck carcinoma.*
4. *Xerostomia is a common side effect of irradiation treatment for head and neck tumours. The authors study the effect of salivary gland inhibition with Biperiden during radiotherapy in one group of patients, and stimulation with Pilocarpin in another group of patients.*

Uvedba stereotaktične kirurgije z linearnim pospeševalnikom v Sloveniji

Oznaka študije / Study code:
MZT - L3-8755-0302

Vodja projekta / Principal investigator: Marjan Budihna

Sodelavci / Co-investigators: Božidar Casar, Vlado Robar, Primož Strojan, Janez Škrk, Bogdan Umek, Alenka Vodnik-Cerar

Stereotaktična radiokirurgija (SRK) je neinvazivna tehnika zdravljenja raznih možganskih bolezni (tumorji, metastaze, arteriovenske malformacije) s pomočjo fokusiranega obsevanja s fotoni z linearnim pospeševalnikom. Projekt zajema meritve, izračune in optimizacijo vseh fizikalnih parametrov, ki so potrebni za uvedbo zdravljenja s stereotaktično radiokirurgijo v Sloveniji. Cilj projekta je doseči veliko prostorsko in numerično natančnost absorbirane doze v obsevalnem volumnu. V projekt sta vključena tudi načrtovanje in izdelava dodatnih delov opreme, ki jih potrebujemo pri tej tehniki.

Pozitronska emisijska tomografija

Oznaka študije / Study code:
MTZ - L3-8847-0302

Vodja projekta / Principal investigator: Nataša Budihna

Sodelavci / Co-investigators: Metka Milčinski, Aleš Stanovnik, Marko Starič, Dušan Brajnik, Borut Smodiš, Jože Novak, Boris Šket, Andrej Petrič

V slovensko nuklearno medicino nameravamo uvesti pozitronsko emisijsko tomografijo (PET). PET je raziskovalna in diagnostična metoda, ki omogoča ugotavljanje razporeditve pozitronskih sevalcev v trodimenzionalnem prostoru s pomočjo detekcije koincidenčnih anihilacijskih fotonov. PET z ^{18}F-fluorodeoksiglukozo (^{18}FDG) je v svetu trenutno med najuspešnejšimi metodami za odkrivanje metastaz raznih malignomov. Glavni oviri pri uveljavitvi PET v Sloveniji sta, da je oprema zelo draga in da v bližini nimamo vira oz. dobavitelja ^{18}FDG. V interdisciplinarnem projektu, v katerem sodelujejo fiziki pri proizvodnji ^{18}F in razvoju detektorjev, kemiki pri razvoju proizvodnje ^{18}FDG in zdravniki, nameravamo: usposobiti in izboljšati tomograf PET s posodobitvijo programske opreme za akvizicijo in analizo podatkov s PC ter izboljšati postopek za pridobivanje večjih aktivnosti ^{18}F; z ^{18}F, pridobljenim v reaktorju, izvesti sintezo ^{18}F-2-fluoro-deoksi-glukoze; sistem preskusiti na fantomih, da preverimo njegovo morebitno uporabnost pri poskusnih živalih in kasnejšo klinično uporabo.

Prognostični pomen uPA, PAI 1 in PAI 2 pri solidnih tumorjih

Oznaka študije / Study code:
MZT - J3-8746-0302

Vodja projekta / Principal investigator: Tanja Čufer

Sodelavci / Co-investigators: Matej Bračko, Olga Cerar, Jožica Červek, Rastislav Golouh, Tatjana Južnič, Borut Kragelj, Jurij Lindtner, Zvonimir Rudolf, Gregor Serša, Breda Škrbinc, Janez Škrk, Marija Us-Krašovec, Ivan Vrhovec, Branko Zakotnik, Andrej Mašera, Zdenka Ovčak, Ankica Babič

Potek rakaste bolezni pri posameznem bolniku je odvisen od sposobnosti tumorskih celic prodreti v okolno tkivo in tvoriti oddaljene zasevke. Na oba procesa značilno vpliva vsebnost proteaz v tumorskem tkivu, med katerimi so še posebej pomembne serinske proteaze in njihovi inhibitorji. Namen naše raziskave je določiti vsebnost urokinaznega plazminogenskega aktivatorja (uPA) in njegovih inhibitorjev (PAI 1, PAI 2) v primarnih tumorjih dojk in sečnega mehurja ter ugotoviti njihov vpliv na potek bolezni in preživetje bolnikov. Naše izsledke bo mogoče uporabiti za smotrnejše načrtovanje primarnega zdravljenja raka dojk in raka sečnega mehurja, z namenom izboljšati preživetje bolnikov.

Introduction of Stereotactic Radiosurgery with Linear Accelerator in Slovenia

Stereotactic radiosurgery is a noninvasive radiation treatment technique for a variety of brain diseases (tumours, metastases, arteriovenous malformations), using focused photon irradiation on a linear accelerator. Measurements, calculations, and optimization of all physical parameters needed for the introduction of stereotactic radiosurgery in Slovenia, are included in the project. The aim of the project is to achieve high spatial and numerical accuracy of the absorbed dose in the volume treated. A few additional parts of equipment needed for this technique have to be designed and built.

Positron Emission Tomography

The aim is to introduce PET on the national level in Slovenia. PET is a modern research and diagnostic method based on the detection of annihilation photons. This is currently a very promising method of detecting metastatic malignant disease by means of radiolabelled glucose – ^{18}FDG (^{18}F-fluorodeoxyglucose). The main obstacle to the application of this method in Slovenia is the prohibitive cost of equipment and the absence of a suitable FDG provider, considering the short life of ^{18}F. In the interdisciplinary project, the development of detection system based on used PET system is planned with specific aims: the PET is being upgraded and equipped with new software for acquisition and analysis of scintigraphic data, by physicists from Institute Jozef Stefan; the ^{18}FDG is synthesized from ^{18}F obtained in reactor Triga Mark IV; the system and radiopharmaceutical is evaluated for possible use in animal and human studies, regarding the PET effectiveness and radiochemical and sterility of ^{18}FDG.

Prognostic Value of uPA, PAI 1 and PAI 2 in Solid Tumors

The prognosis of cancer patients depends largely on the ability of cancer cells to invade the surrounding tissue and to metastasize. These processes are influenced by tumor-associated proteases among which serine proteases and their inhibitors may play a central role. The aim of our study is to determine the content of serine protease uPA and its inhibitors PAI 1 and PAI 2, in primary tumors of the breast and urinary bladder, and to establish their prognostic value. It is hoped that the results of our study could be used for a more rational treatment planning in patients with primary cancers of the breast and urinary bladder, thus improving their survival.

Konvencionalne in moderne kvantitativne metode pri oceni progresije sarkomov mehkih tkiv

Oznaka študije / Study code: MZT - J3-7953-0302

Vodja projekta / Principal investigator: Rastko Golouh

Sodelavci / Co-investigators: Alexey Doudkine, Janez Lamovec, Matej Bračko, Andreja Zidar, Janez Jančar, Marija Us-Krašovec, Živa Pohar-Marinšek, Saša Markovič, Janez Novak, Mojca Senčar, Jožica Červek, Marija Auersperg, Marko Špiler, Branko Zakotnik, Matjaž Zwitter

Pri tumorjih mehkih tkiv sta postavljanje diagnoze in ugotavljanje napovednih dejavnikov kompleksna in vsaj delno subjektivna postopka, saj zanju ni splošno sprejetih meril. V raziskavi s konvencionalnimi morfološkimi in modernimi citometričnimi metodami analiziramo značilnosti sarkomov mehkih tkiv, spremljamo njihovo intratumorsko variabilnost in spremembe, ki nastajajo v tumorskem tkivu med boleznijo, t.j. v lokalnih recidivih in/ali zasevkih. Pri skupini bolnikov s sarkomi mehkih tkiv, ki smo jim sledili dalj časa, raziskujemo v kiruško odstranjenih tumorskih vzorcih histološke in imunohistokemične lastnosti in značilnosti, ki jih lahko odkrijemo s pretočno in slikovno citometrijo. Ugotavljali bomo klinično-patološke korelacije ter z univariatno in multivariatno analizo skušali najti povezave s potekom bolezni in preživetjem bolnikov. Pričakujemo, da bomo s to raziskavo lahko ugotovili, katere so ključne značilnosti, ki omogočajo bolj specifično diagnozo sarkomov mehkih tkiv in ki obenem pripomorejo k natančnejšemu napovedovanju kliničnega poteka.

Analiza kasnih posledic zdravljenja raka pri otrocih

Oznaka študije / Study code: MZT - J3-8924-0302

Vodja projekta / Principal investigator: Berta Jereb

Sodelavci / Co-investigators: Gabrijela Petrič-Grabnar, Borut Kragelj, Lorna Zadravec-Zaletel, Ciril Kržišnik, Jožica Anžič, Roman Korenjak, Peter Rakovec, Martina Burger-Lazar, Marta Macedoni-Lukšič, Branka Stirn-Kranjc, Smilja Černelč

Rezultati zdravljenja malignih bolezni pri otrocih so se v zadnjih desetletjih dramatično izboljšali. Preživetje se je povečalo od povprečno okrog 10% na okrog 75%. Zato so v ospredju problemov otroške onkologije sedaj raziskave kasnih posledic zdravljenja v otroški dobi. Namen raziskave je opredeliti, katere skupine bolnikov so s temi okvarami bolj ogrožene, ugotoviti vzroke za te okvare (genetske okvare, spremljajoči klinični sindromi rakaste bolezni) in druge dejavnike, kot so zdravljenje z obsevanjem in citostatiki, za katere vemo, da delujejo toksično. Cilji projekta so: analizirati odvisnost kasnih posledic od kliničnih dejavnikov, kot so starost bolnika, način zdravljenja, vrsta bolezni idr., na osnovi ugotovitev pa preprečevati te posledice s spremenjenim načinom zdravljenja sedaj bolnih otrok, zdraviti ugotovljene kasne posledice in analizirati rezultate raziskave ter jih upoštevati pri pouku na Medicinski fakulteti.

Progression of Soft Tissue Sarcomas Assessed by Conventional and Modern Quantitative Methods

The assessment of diagnosis and prognostic factors in soft tissue tumors has always been complex, variable and somewhat subjective due to the lack of agreed upon standards. The purpose of this study is to analyze the features of soft tissue sarcomas by low-tech morphologic and high-tech cytometric methods and to assess their intratumoral variability and their changes during the course of the disease, i.e., in locally recurrent and/or metastatic tumors. In a long-term follow-up series of patients with soft tissue sarcomas, we investigate in detail the histologic and immunohistochemical as well as the flow and image cytometric characteristics of surgically removed tumor tissue. We evaluate clinico-pathological correlations and, using univariate and multivariate analyses, correlate the data with patients' outcome. This study is expected to identify acceptable key parameters which should be helpful in establishing specific diagnosis of these tumors and increasing the accuracy of the prediction of their clinical course.

Analysis of Late Sequelae of Cancer Treatment in Childhood

The results of treatment of malignant diseases in children have dramatically improved during the last decades, from about 10% to about 75% overall survival. Studies of late sequelae of treatment for childhood cancer are at present the major concern of pediatric oncology. The aim of the study is to identify groups of patients at risk for late sequelae, to define their causes (genetic damage) and analyze other variables, such as radiation and cytotoxic drugs, known for their toxic effect. The aims of the project are to find the somatic and psychological late sequelae of cancer treatment in childhood; to analyze their correlation with such clinical factors as patient's age, mode of treatment, diagnosis, etc. The following is possible on the basis of the findings: a) prevent these sequelae with treatment modifications of the children treated at present; b) treat late sequelae; c) incorporate the results of the study into the Medical School curriculum.

Dodatno zdravljenje bolnic z operabilnim rakom dojk

Oznaka študije / Study code:
MZT - L3-88754

Vodja projekta na OI / Principal investigator at OI:
Jurij Lindtner

Koordinator projekta / Project Co-ordinator: Aaron Goldhirsch, Scientific Committee, International Breast Cancer Study Group, Bern, Switzerland

Sodelavci / Co-investigators: Jožica Červek, Tanja Čufer, Darja Eržen, Rastislav Golouh, Janez Lamovec, Elga Majdič, Andrej Plesničar, Branko Zakotnik

Ob spoznanju, da je tudi operabilni rak dojk lahko že ob razpoznavi sistemska bolezen, je v zadnjih pet letih teklo v okviru skupin IBCSG sedem raziskav dodatnega sistemskega zdravljenja. Tekoče raziskave preverjajo, kakšen pomen ima pri bolnicah z negativnimi pazdušnimi bezgavkami dodatno citostatsko hormonsko in citostatsko-hormonsko (IBCS VIII) zdravljenje, kakšnega pa hormonsko in citostatsko-hormonsko zdravljenje (IBCS IX). Z raziskavo IBCS X iščemo odgovor na vprašanje, ali je izpraznitev pazduhe pri klinično negativnih bezgavkah smiselna pri bolnicah, starejših od 70 let, ki dobe adjuvantno tamoksifen. V raziskavah IBCS XI in IBCS XII želimo primerjati rezultate hormonskega zdravljenja samega z rezultati citostatsko-hormonskega zdravljenja pri bolnicah s hormonsko odvisnimi tumorji in s pozitivnimi pazdušnimi bezgavkami, pri hormonsko neodvisnih tumorjih pa vrednost antraciklinskega dodatnega zdravljenja (IBCS XIII in IBCS XIV).

Razvoj avtolognih tumorskih vakcin

Oznaka študije / Study code:
MZT - J3-7878-0302

Vodja projekta / Principal investigator: Srdjan Novaković

Sodelavci / Co-investigators: Zvonimir Rudolf, Marko Snoj, Jožica Červek, Saša Markovič, Franc Pompe, Bogdan Umek, Gregor Serša, Janez Jančar, Elga Majdič, Tadeja Movrin-Stanovnik, Barbara Jezeršek, Miomir Knežević, Branka Wraber, Alojz Ihan, Tatjana Avšič, Anton Štalc, Viktor Menart

Glavna pomanjkljivost konvencionalnih metod zdravljenja v onkologiji je, da je delovanje zdravilnih učinkovin premalo selektivno za tumorske celice. Ker ne delujejo le na tumorske celice, ampak tudi na normalna tkiva, hudo prizadenejo zdravljeni organizem. Delovanje imunske in še posebej genske terapije temelji na razlikah (morfoloških, genetskih) med tumorskimi in normalnimi celicami, tako da sta bolj selektivni za tumorske celice in le redko prizadeneta normalna tkiva in organizem v celoti. Ena najbolj privlačnih oblik sodobne genske terapije so tumorske vakcine. V okviru projekta poskušamo pripraviti avtologne tumorske vakcine, s katerimi bi lahko ojačili specifičen imunski odgovor in tako vplivali na rast tumorjev. Tumorske vakcine pripravljamo na dva načina: tako, da subletalno obsevanim avtolognim tumorskim celicam primešamo nespecifične imunomodulatorje, ali pa tako, da v avtologne tumorske celice prenesemo gen (transfekcija ex vivo) za kakšen citokin (IL-2, TNF-α ali GM-CSF), nato pa jih še subletalno obsevamo. Uspešnost protitumorskega delovanja vakcin ocenjujemo s spremljanjem hitrosti vznika in hitrosti rasti podkožnih tumorjev ali pa s spremljanjem preživetja živali z intraperitonealnimi tumorji.

Adjuvant Therapy of Patients with Operable Breast Cancer

In view of the fact that even an operable cancer can be regarded as a systemic disease at the time of diagnosis, seven studies of adjuvant systemic therapy have been carried out within the framework of IBCSG. Current studies are concerned with the role of adjuvant (cytostatic, hormonal and cytostatic-hormonal) treatment (IBCS VIII) as well as hormonal and cytostatic-hormonal treatment (IBCS IX) of patients with negative axillary lymph nodes. IBCS X Study intends to answer the question whether it makes sense to perform axillary lymphadenectomy in patients with clinically negative lymph nodes, who are older than 70 years and maintained on adjuvant chemotherapy with tamoxifen. In IBCS XI and IBCS XII studies, hormonal treatment alone is compared with a combination of cytostatic & hormonal treatment in patients with hormone-dependent tumors and positive axillary lymph nodes, whereas in other two studies (IBCS XIII and IBCS XIV) the value of anthracycline-based adjuvant therapy is evaluated in hormone independent tumors.

Development of Autologous Tumor Vaccines

Owing to nonspecific activities, conventional therapies against cancer are quite often accompanied by unrecoverable damage of the normal tissue. Immunotherapy, and especially gene therapy, are intended to be more selective and less aggressive, by triggering a specific immune response against tumor cells. The major approach to present-day gene therapy of cancer is the generation of tumor vaccines as a possible future category of cancer treatment. The aim of our project is to create autologous tumor vaccines capable of affecting tumor growth by intensifying the specific antitumor immune response. Therefore, the tumor vaccines are prepared by (i) simple mixing of sublethally irradiated autologues tumor cells with immunomodulators, (ii) or by sublethal irradiation of autologuos tumor cells after they have been transfected with genes for different cytokines (e.g. IL-2, TNF-α or GM-CSF). The influence of tumor vaccines on tumor development and tumor growth kinetics is followed in vivo on subcutaneous and intraperitoneal tumors in syngeneic mice.

Pooperativne intraabdominalne adhezije – etiologija in preprečevanje

Oznaka študije / Study code: MZT - J3-8744

Vodja projekta / Principal investigator: Vladimir Pegan

Vodja projekta na OI / Project leader at OI: Marko Snoj

Sodelavci / Co-invetigators: Stane Zalar, Rastislav Golouh, Igor Kadunc, Zvonko Hočevar

Intraabdominalne adhezije ostajajo eden največjih izzivov v kirurgiji. Največkrat so posledica poprejšnjega kirurškega posega. Doslej še ni sredstva ne kirurške metode, ki bi uspešno preprečevala tvorbo adhezij. V zadnjem času sta v veljavi dva pristopa. Prvi temelji na dodajanju aktivatorja plazminogena, drugi pa na uporabi površinsko aktivnih snovi. V naši raziskavi, ki smo jo zaključili leta 1996 smo hoteli videti, kako različni načini šivanja mediane laparotomije vplivajo na tvorbo adhezij. V raziskavi smo uporabili pse pasme beagle. Pri 24 psih smo mediano laparotomijo zašili v enem sloju s polidioksanonom. Uporabljali smo bodisi neprekinjeni ali prekinjeni način šivanja. Adhezije smo ocenjevali z odstotnim deležem zajetosti šivne linije. Pooperativne adhezije so se tvorile pri vseh psih. Najmanj jih je nastalo, kjer je bila laparotomija zašita z neprekinjenim načinom šivanja, brez šivanja peritoneja, več tam, kjer smo uporabili prekinjeni način šivanja (tudi peritoneja ali brez šivanja peritoneja), najbolj pa so bile izražene, če smo laparotomijo zaprli s tekočim šivom, ki je zajel tudi peritonej. Zaključimo lahko s trditvijo, da tekoče šivanje mediane laparotomije brez šivanja peritoneja povzroča najmanj adhezij.

Napoved incidence raka v Sloveniji do leta 2000 in 2010

Oznaka študije / Study code: MZT - J3-8752-0302-97

Vodja projekta / Principal investigator: Vera Pompe-Kirn

Sodelavci / Co-investigators: Barbara Japelj, Neva Volk, Maja Primic-Žakelj

Incidenco raka spremljamo v R Sloveniji od leta 1950 v Registru raka za Slovenijo. V sklopu programa Zdravje za vse do leta 2000 je več populacijskih registrov raka v Evropi pripravilo tudi napoved incidence za 10–20 let. Napovedati incidenco raka na podlagi preteklih podatkov ni preprosto, saj je treba upoštevati, da so na pretekli trend incidence vplivali najmanj trije neodvisni učinki: starost, obdobje in rojstna kohorta. Vpliv teh treh neodvisnih učinkov objektivizirajo posebni matematični modeli (age-period-cohort). Ti modeli so vgrajeni v programski paket GLIM, ki ga registri raka po svetu običajno uporabljajo tudi za napoved. Namen projekta je bil osvojiti metodo dela in jo s precejšno mero previdnosti uporabiti na podatkih Registra raka in že publiciranih podatkih projekcije prebivalstva Republike Slovenije. Izsledki bodo uporabni za oblikovanje in ocenjevanje nacionalnega programa nadzorovanja raka v Sloveniji.

Postoperative Intra-Abdominal Adhesions – Etiology and Prevention

Intra-abdominal adhesions remain one of the biggest challenges in surgery. Until now, there was no method or substance to prevent adhesion formation. Lately, however, two new approaches have become available: first, by adding plasminogen activator, and second, by adding surface active materials. In our study that was completed in 1996, we have shown how different suture techniques influence adhesion prevention. Twenty-four Beagle dogs were used. Median laparotomy was sutured with PDS in one layer by continuous (loop) or interrupted suture techniques. Adhesions were evaluated by the percentage of suture line involvement. Adhesions were present in all dogs. These were least developed when the laparotomy was sutured by continuous extraperitoneal suturing; more, when interrupted suturing either with or without peritoneal closure was used; and most, when laparotomy was closed continuously with peritoneal closure. It could be concluded that continuous suturing of median laparotomy without peritoneal closure develops the least adhesions.

Projection of Cancer Incidence Till the Year 2000 and 2010

In the Cancer Registry of Slovenia, cancer incidence has been monitored since 1950. Within the program "Health for All by the Year 2000", several population-based cancer registries have developed cancer incidence projection for a period of 10 to 20 years. Cancer incidence projection on the basis of the data gathered from the past is far from being a simple linear procedure; it has to be taken into account that the past incidence trends were influenced by at least three factors, i.e. age, period, and birth cohort. The "age-period-cohort" mathematical models help us to gain objectivity of the three factors and their impact. These models are built-in in the GLIM program package - the package that has been most often used for cancer incidence prediction in Europe. The aim of the project was to adapt the methodology and to apply it critically to the cancer registry data and to the population projection of the Republic of Slovenia. The results will be applied in outlining the national cancer control program, and subsequently, in evaluating this program.

Trendi preživetja bolnikov z rakom v Sloveniji

Oznaka študije / Study code:
MZT - J3-5253-0302

Vodja projekta / Principal investigator: Vera Pompe-Kirn

Sodelavci / Co-investigators: Branko Zakotnik, Neva Volk, Tomaž Benulič, Janez Škrk

Register raka za Slovenijo spremlja preživetje bolnikov z rakom od leta 1950. Spremljanje je v zadnjem času enostavno v povezavi s Centralnim registrom prebivalstva RS. Tako se iz evidence izgubi le en odstotek registriranih bolnikov. V to raziskavo je bilo vključenih 121.790 bolnikov, ki so jim bolezen odkrili v letih 1963–90. Zanimalo nas je opazovano, pričakovano in relativno 1-, 3-, 5- in 10-letno preživetje po spolu, primarni lokaciji in starosti za šest obdobij. Izsledke smo 1995 objavili v dvojezični, slovensko-angleški knjigi Preživetje bolnikov z rakom v Sloveniji 1963–1990. Pri vsakem raku so za primerjavo navedeni še objavljeni podatki za Škotsko in Dansko ter komentar 18 klinikov.

Elektrokemoterapija – nov pristop k zdravljenju raka

Oznaka študije / Study code:
MZT - J3-7843-0302

Vodja projekta / Principal investigator: Gregor Serša

Sodelavci / Co-investigators: Zvonimir Rudolf, Borut Štabuc, Boris Jančar, Maja Čemažar, Damijan Miklavčič, Lojze Vodovnik, Vladimir Kotnik, Marija Auersperg, Vera Čoroli, Tanja Čufer, Franc Guna, Franc Marolt, Gorazd Noč

Elektrokemoterapija je nov pristop k zdravljenju raka, ki združuje kemoterapijo in elektropermeabilizacijo. Elektropermeabilizacija tumorjev je postopek, ki s kratkimi električnimi pulzi visokih napetosti olajša prehod kemoterapevtikov prek celične membrane in tako poveča njihovo sicer premalo učinkovito protitumorsko delovanje. Čeprav je bila elektrokemoterapija z bleomicinom (BLM) predmet številni raziskav in je objavljena že tudi prva klinična študija, pa ostaja še mnogo nerešenih vprašanj. Narejene so tudi že prve predklinične raziskave o elektrokemoterapiji s cisplatinom (CDDP). Dokazale so, da je mogoče z električnimi pulzi izboljšati protitumorsko delovanje CDDP. V našem projektu smo si zastavili več vprašanj o optimizaciji elektrokemoterapije z BLM in CDDP glede na amplitudo električnih pulzov, odmerek kemoterapevtika in glede na porazdelitev električnega polja. Poleg tega bomo poskusili ugotoviti, ali elektrokemoterapija vpliva na imunski odziv organizma in ali spodbujanje imunskega odziva organizma z biološkim modifikatorjem TNF-α lahko izboljša protitumorsko delovanje elektrokemoterapije. Naš končni cilj pa je uporabiti znanje, pridobljeno v predkliničnih raziskavah, v klinični študiji na metastatskem malignem melanomu.

Trends of Cancer Patients Survival in Slovenia

The Cancer Registry of Slovenia has been monitoring cancer patients survival since 1950. Today, the follow-up is performed by a simple data linkage with the Population Registry of the RS, and only one percent of registered patients is lost to follow-up. 121.790 patients diagnosed in the period 1963–1990 were included in the study. 1-, 3-, 5-, and 10-year observed, expected and relative survivals were analysed by sex, site, and age for six time periods. The results were compared with the data published for Scotland and Denmark, and discussed by 18 clinicians. The findings have been published in 1995 in the bilingual Slovenian-English book Cancer Patients Survival in Slovenia 1963–1990.

Electrochemotherapy – A Novel Approach in the Treatment of Cancer

Electrochemotherapy is a novel approach to chemotherapeutic drug delivery into the tumors by electropermeabilization. Electropermeabilization of tumors by short intense electric pulses enables penetration of chemotherapeutic drugs into the cells in sufficient quantities to exert their anti-tumor effect. Although electrochemotherapy with bleomycin (BLM) has already been extensively elaborated and first results of the clinical trial have already been published, many questions remain unresolved. There is also the possibility to use electrochemotherapy with cisplatin (CDDP), since the first experimental results have demonstrated significant potentiation of the anti-tumor effectiveness of CDDP. The question that we address in this research is how to optimise electrochemotherapy with BLM or CDDP, in relation to electric pulse amplitude, dose of the chemotherapeutic drug, and electric field distribution. In addition, we attempt to determine if the treatment induces an immune response in the organism, and whether potentiation of the immune response by biological response modifier TNF-α can augment the anti-tumor effectiveness of electrochemotherapy. The final goal is to use the experience gained in preclinical work in a clinical study on metastatic malignant melanoma patients.

Fosfolipaza A_2 v tumorskem tkivu

Oznaka študije / Study code:
MZT: J3-8744-0302

Vodja projekta / Principal investigator: Marko Snoj

Sodelavci / Co-investigators: Franc Gubenšek, Alenka Pariš, Srdjan Novaković, Albert P. Fras, Andreja Zidar

Intraperitonealni metastatski razsoj tumorjev, ki je pogost pri raznih ginekoloških in gastrointestinalnih tumorjih, močno povečuje obolevnost in smrtnost teh bolnikov. Proces metastaziranja je kompleksen in samo deloma proučen. Pojasnjuje ga več teorij, najširše sprejeta pa je tristopenjska teorija zaporedja treh dogajanj: pritrjevanja tumorske celice, proteolize in migracije tumorske celice. Zdi se, da ima proces intraabdominalnega metastaziranja lastnosti, ki se nekoliko razlikujejo od splošne teorije, zlasti pred procesom pritrjevanja. Intraabdominalni organi so pokriti z mezotelijem peritonejam, ta pa je prekrit s tanko fosfolipidno plastjo. Proces pritrjevanja maligne celice ne more steči, če se fosfolipidni plašč ne hidrolizira. Njegovo hidrolizo najverjetneje povzroča aktivirana fosfolipaza A_2. Da bi dokazali, da je fosfolipaza A_2 pomembna v procesu intraabdominalnega metastaziranja, bi morali dokazati njeno vsebnost v tumorskem tkivu, ki bi ga dobili iz tumorskih implantatov pri karcinozi peritoneja.

Terapija na osnovi zajetja nevtronov v boru – uporaba sistemov za povečan vnos bora z namenom izboljšati protitumorski učinek

Oznaka študije / Study code:
MZT - J3-8748-0302

Vodja projekta / Principal investigator: Janez Škrk

Sodelavci / Co-investigators: Gregor Serša, Zvonimir Rudolf, Ivan Vrhovec, Jasna Sever, Matjaž Zwitter, Tomaž Benulič, France Marolt, Alenka Vodnik, Breda Jančar, Vlado Robar, Božo Casar, Maja Čemažar, Janko Kos, Franc Gubenšek, Vladimir Cotič, Nataša Kopitar-Jerala, Gabrijela Ivanovski, Alenka Pariš, Ana Schweiger, Bogdan Glumac, Matjaž Ravnik, Rado Ilić, Đurđa Novak-Despot

Terapijo na osnovi zajetja nevtronov v boru (BNCT) tvorita selektivno kopičenje spojin, ki vsebujejo ^{10}B, v tumorjih in obsevanje tumorjev s termičnimi nevtroni manjših energij. Zajetje termičnega nevtrona v stabilnem izotopu ^{10}B vodi v razpad tega jedra na delec α in jedro Li. Oba delca imata visoko energijo, a kratek doseg, tako da poškodujeta samo tiste celice, ki vsebujejo ^{10}B. Uspeh te zelo obetavne terapije je torej odvisen od zadostne količine za tumor specifičnih spojin z ^{10}B v tumorskih celicah ali od sistema za povečan vnos teh spojih v celice. V projektu testiramo dva sistema za povečanje vnosa ^{10}B v celice, ki naj bi izboljšala protitumorsko delovanje BNCT: monoklonska protitelesa, ki specifično prepoznajo tumorske celice, in elektroporacijo. Oba sistema, tako elektroporacija kot razvoj specifičnih konjugatov monoklonskih protiteles z BSH, obetata izboljšanje protitumorskega delovanja BNCT.

Phospholipase A_2 in Tumor Tissues

Intraperitoneal metastatic spread is frequent in different gynaecological and gastrointestinal tumours and contributes a major part to the mortality of these patients. The metastatic process is relatively complex and only partly revealed. Most widely accepted theory explains metastasising as a three-step process. It seems that the process of intra-abdominal metastasising has some common features which are not consistent with the above-mentioned theory. The intra-abdominal organs are covered with mesothelium which is covered with a thin phospholipid film. Intra-abdominal metastasising process cannot begin unless this film is hydrolysed by activated phospholipase A_2. In order to prove that phospholipase A_2 is important in the process of intraabdominal metastasing, we intend to demonstrate its activity in tumour tissues, harvested from peritoneal tumour implants.

Boron Neutron Capture Therapy – Employment of Drug Delivery Systems to Increase Anti-Tumor Effectiveness

The selective accumulation of ^{10}B-containing compounds in tumors and subsequent radiation with low-energy (thermal) neutrons form the basis for boron neutron capture therapy (BNCT). Thermal neutron captured in the stable isotope ^{10}B yields α particles and lithium nuclei, a radiation with short range high linear transfer (LET). Therefore, the successful implementation of this promising modality strongly depends on the availability of tumor-seeking substances or drug delivery system. In the proposed research project the following two drug delivery systems were selected to increase anti-tumor effectiveness of BNCT: (a) the production of monoclonal antibodies specific for tumor cells, and (b) electroporation. Both, electroporation and development of specific conjugates with monoclonal antibodies are proposed for further improvement of anti-tumor effectiveness of BNCT.

Biološke značilnosti raka glave in vratu in uspeh zdravljenja

Oznaka študije / Study code: MZT - J3-8743-0302

Vodja projekta / Principal investigator: Lojze Šmid

Vodja projekta na OI / Project leader at OI: Hotimir Lešničar

Sodelavci / Co-investigators: Marjan Budihna, Miha Žargi, Avgust Župevc, Igor Fajdiga, Branko Zakotnik, Erika Šoba

V Sloveniji je pri večini bolnikov s karcinomom glave in vratu ob času diagnoze bolezen že v napredovalem stadiju. Rezultati zdravljenja, čeprav agresivnega lokoregionalnega z operacijo in pooperativnim obsevanjem, zato niso zadovoljivi. Napredovali karcinom je pogosto povezan še z drugimi napovedno neugodnimi dejavniki, ki jih ugotovimo šele z mikroskopskim pregledom operativnega preparata. Na osnovi dobrih izkušenj, ki so rezultat večletne raziskave pri bolnikih z neoperabilnim karcinomom glave in vratu, zdravljenih z obsevanjem in sočasno z mitomicinom C in bleomicinom, menimo, da bo ta kombinacija učinkovita tudi pri pooperativnem zdravljenju. V prospektivni randomizirani klinični študiji želimo primerjati uspešnost pooperativnega obsevanja samega in v kombinaciji s kemoterapijo. Sočasno določamo tudi ploidijo in proliferativno aktivnost karcinomskih celic, ekspresijo onkogenov in ocenjujemo angiogenezo v tumorju. Preverili bomo, kakšna je morebitna prognostična vrednost teh dejavnikov v primerjavi z vrednostjo drugih, že uveljavljenih prognostičnih značilnosti karcinoma v področju glave in vratu.

Raziskave možnih implementacij dezmuramilnih analogov MDP in rekombinantnih analogov TNF-α v terapiji

Oznaka študije / Study code: MZT - L1-7379-0302

Vodja projekta / Principal investigator: Anton Štalc

Vodje projekta na OI / Project leaders at OI: Gregor Serša, Srdjan Novaković

Sodelavci / Co-investigators: Viktor Menart, Marija Anžur-Lasnik, Stjepan Miličič, Lučka Povšič, Rok Grahek, Anton Lavrič, Vladimir Kotnik, Branka Wraber, Alojz Ihan, Saša Simčič, Slavko Pečar, Danijel Kikelj, Uroš Urleb, Stane Srčič, Marija Sollner, Gašper Marc, Stanislav Gobec, Mateja Malešič, Vera Čoroli

Faktor tumorske nekroze (TNF-α) so sprva opisali pod tem imenom zaradi njegove izrazite toksičnosti za celice raznih tumorjev. Pozneje se je pokazalo, da zdravljenje s tem citokinom spremljajo hudi toksični sopojavi, ki omejujejo uporabo nativnega rekombinantnega humanega TNF-α (rhTNF-α) v klinični onkologiji. Eden od načinov, da se zmanjšajo neželeni toksični učinki in da se ohrani citotoksičnost za tumorske celice, je oblikovanje novih analogov. V naši študiji smo se lotili preoblikovanja molekule TNF-α na sami površini in na takšen način pridobili dva nova analoga, ki smo ju poimenovali LK 801 in LK 805. Testirali smo ju na celičnih linijah in na podkožnih tumorjih fibrosarkoma Sa-1 na miših A/J. Rezultati, ki smo jih dobili pri testiranju in vitro in še posebej in vivo na tumorskemu modelu, potrjujejo, da je bilo preoblikovanje molekule nativnega rhTNF-α uspešno, saj imata oba analoga statistično značilno manj toksičnih sopojavov, pri tem pa je protitumorsko delovanje ohranjeno in je (vsaj pri LK 805) primerljivo z delovanjem rhTNF-α.

Biological Characteristics of Head and Neck Tumors and Treatment Outcome

In a majority of patients the disease is diagnosed in an advanced stage, and therefore the treatment results are not satisfactory, despite the aggressive locoregional therapy with surgery and postoperative irradiation. Advanced carcinoma is frequently associated with other unfavourable prognostic factors which can be established only after histological examination of the surgical specimen. Based on our own favourable experience resulting from a several-year (prospective) study of patients with inoperable carcinomas of the head and neck, who were treated simultaneously by irradiation and by mitomycin C plus bleomycin based chemotherapy, we believe that the same combination could also prove effective as postoperative therapy. Our prospective randomized clinical trial is aimed at comparing the effectiveness of postoperative irradiation alone or in combination with chemotherapy. The DNA content (ploidy) in carcinoma cell nuclei is being determined along with the expression of oncogenes and/or their products, and the angiogenesis in tumors is assessed quantitatively. We shall attempt to find the possible correlation between these factors and other, already established characteristics of head and neck carcinomas.

Analogues of Desmuramyl MDP and TNF-α in Cancer Therapy

Tumour necrosis factor-((TNF-α) was originally defined as such for its ability to cause hemorrhagic necrosis of different tumours. Later on, however, it turned out that treatment with this cytokine was associated with severe toxicity which limits the use of native recombinant human TNF-α in clinical oncology. One of the strategies to reduce severe toxic side effects and maintain or increase the antitumour effect of native rhTNF-α is the modification of rhTNF-α molecule. Our approach to the modification of recombinant human TNF-α (rhTNF-α) molecule comprised changes in flexible loop-regions on the surface of TNF-α molecule. Using this approach, two different rhTNF-α analogues, LK 801 and LK 805, were synthesized and tested for their ability to affect the growth of Sa-1 tumour cells. The results on in vivo tumor model (subcutaneous fibrosarcoma tumors in A/J mice) confirm that the rhTNF-α molecule has been successfully modified resulting in two new analogues with a potent antitumour activity and much lower systemic toxicity.

Slikovna citometrija pri detekciji, prognozi in zdravljenju malignih tumorjev

Oznaka študije / Study code: MZT - J3-7956-0302

Vodja projekta / Principal investigator: Marija Us-Krašovec

Sodelavci / Co-investigators: Živa Pohar-Marinšek, Veronika Kloboves-Prevodnik, Ana Pogačnik, Tanja Čufer, Ljudmila Ruparčič-Oblak, Janez Lamovec, Matej Bračko, Marija Auersperg, Rajko Kavalar, Izidor Kern

Med maligno transformacijo nastajajo kvantitativne in kvalitativne spremembe celice, predvsem jedra in jedrnega kromatina. Te spremembe uporabljamo pri konvencionalnem ocenjevanju tumorjev, vendar s to metodo ne moremo oceniti vseh bioloških lastnosti tumorja. Nova kvantitativna metoda slikovne citometrije omogoča objektivno analizo več kot 100 lastnosti celičnega jedra. Raziskovalci menijo, da predvsem te lastnosti natančneje opredeljujejo biološki potencial prekanceroz in malignih tumorjev. V naši raziskavi želimo ugotoviti, ali je mogoče s kvantitativno analizo strukturnih lastnosti jedra odkriti zgodnje preinvazivne oblike raka, oceniti maligni potencial preinvazivne in invazivne oblike tumorja in oceniti učinek zdravljenja. Domnevamo, da bomo z uni- in multivariatno analizo lastnosti jeder in kliničnopatoloških spremenljivk našli želene diskriminacijske lastnosti jeder. S tem bi bistveno prispevali k zgodnji diagnozi raka in njegovemu racionalnemu zdravljenju.

Vseevropsko zagotavljanje kvalitete v radioterapiji – EURAQA

Oznaka študije / Study code: EC Copernicus DG-XII project (ERBCIPAT 940171)

Vodja projekta / Principal investigator: Andree Dutreix, Emmanuel van der Schueren

Vodja projekta na OI / Project leaders at OI: Božidar Casar, Janez Kuhelj

Sodelavci / Co-investigators: Janez Burger, Borut Kragelj, Vlado Robar, Bogdan Umek, Tomaž Verk

Prvenstveni cilj triletnega projekta je izboljšati odmerjanje doze, ki jo prejme pacient, da bi povečali ozdravljivost in kakovost življenja. Postopki pri tem naj bi bili preprosti, natančni in sorazmerno poceni. Nekatere specifične naloge projekta so:

1. Pregled in primerjava bazičnih protokolov za dozimetrijo ter promocija mednarodno priporočenih protokolov za dozimetrijo.
2. Razširitev primerjalnih meritev v fotonskih poljih, ki so bila izvedena v okviru mreže EC-QA za države Evropske zveze in projekta EROPAQ za Slovaško, Slovenijo, Romunijo in Litvo.
3. Razvoj vprašalnikov, navodil in postopkov za zagotavljanje kakovosti brahiterapevtske opreme, izvirov in postopkov.
4. Kvalitativno in kvantitativno preverjanje predpisane obsevalne doze in spremljanje priporočil za obsevalne volumne pri specifičnih tumorjih.
5. Pregled radioterapevtske opreme v centrih srednje in vzhodne Evrope in razvoj modela za minimalno potrebno opremljenost, določitev stroškovne metodologije in prioritet pri nadaljnjih investicijah.
6. Prenos znanja in tehnologije.
7. Meritve izhodov pri elektronskih poljih z uporabo dozimetrov TLD (external audit).

Image Cytometry in Detection, Prognosis and Therapy of Malignant Tumors

The course of malignant transformation is associated with quantitative and qualitative changes of cells, particularly of their nuclei and chromatin. These changes are used in conventional microscopic evaluation of tumors, however they cannot help identify all the important biological tumor characteristics. Quantitative image cytometry provides information on over 100 characteristics of cell nucleus. Investigators assume that the malignant potential of premalignant lesions and malignant tumors can be estimated by quantitative nuclear features. In our research project, we intend to test if nuclear texture features can be used to detect preinvasive lesions, to evaluate malignant potential of preinvasive and invasive forms of cancer, and to evaluate the effect of chemotherapy. We expect to find discriminating features analysing nuclear texture features and clinico-pathologic variables with uni and multivariate analysis. New discrimating features would increase the rate of early cancer detection and would enable a more rational treatment.

Pan-European Radiation Quality Assurance – EURAQA

The ultimate goal of the three-year project is to improve the accuracy in the dose delivery to the patient, in order to obtain an increased cure rate and better quality of life by means of simple, accurate, widely applicable and cost effective quality control procedures. Some specific items are:

1. *Survey and intercomparison of protocols for basic dosimetry in Central and Eastern Europe and promotion of internationally recommended dosimetry protocols.*
2. *The extension of the comparative measurement within photon beams as performed within the EC-QA network for EC countries, and within the EROPAQ network for Slovak Republic, Slovenia, Rumania and Lithuania.*
3. *Development of suitable questionnaires, instruction and quality control procedures for intercomparison of brachytherapy infrastructure, sources and procedures.*
4. *Qualitative and quantitative testing of radiation dose prescription and recording and irradiated volume recommendations (ICRU No 50) for specific tumour sites.*
5. *Survey of radiation therapy infrastructure in Central and Eastern Europe and development of a model for minimum infrastructure and cost-effective methodology for further investment priorities.*
6. *Transfer of know-how and technology.*
7. *Output measurements for electron beams (external audit) using mailed TLD.*

Evropska raziskava otroških levkemij in limfomov (ECLIS)

Oznaka študije / Study code: Radiation Protection Programme, Directorate General for Science, Research and Development, CEC, Bruselj - F13P-CT920062

Vodja projekta / Principal investigator: Max Donald Parkin, DEP, IARC, Lyon

Sodelavci / Co-investigators: populacijski registri raka 34 regij iz 18 držav / 34 population-based cancer registries from 18 countries

Odgovorna raziskovalka za Slovenijo / Responsible for Slovenia: Vera Pompe-Kirn

Zaradi nezgode v nuklearni elektrarni v Černobilu v Ukrajini 26. 4. 1986 je prišlo do raznosa radioaktivnih izotopov, predvsem ^{131}J in ^{137}Cs, na širšem območju Evrope, kar je vzbudilo skrb, da se bo povečalo zbolevanje za rakom. Zaradi tega se je že leta 1986 skupina evropskih registrov raka odločila, da bo spremljala časovno gibanje zbolevnosti za levkemijami in limfomi otrok v odvisnosti od ocene izpostavljenosti ionizirajočemu sevanju. Za spremljanje levkemije pri otrocih so se odločili, ker je za levkemije latenčna doba najkrajša, relativno tveganje najkrajše in ker je to tveganje pri otrocih večje kot pri odraslih.

EUROPREVAL – Prevalenca raka v Evropi

Oznaka študije / Study code: ES, PECO, BIOMED-2, PL 96899

Vodja projekta / Principal investigator: Riccardo Capocaccia, Istituto superiore di sanita, Laboratorio di epidemiologia e biostatistica, Roma, Italia

Sodelavci / Co-investigators: 53 registrov raka iz 17 držav / 53 cancer registries from 17 countries

Odgovorna za podatke za Slovenijo / Responsible for Slovenia: Vera Pompe-Kirn

Prevalenca je pomemben kazalec bremena raka v populaciji in obremenitve zdravstvene in socialne službe. Danes je zaradi izboljševanja preživetja bolnikov z rakom in zaradi podaljševanja pričakovane življenjske dobe ta kazalec še prav posebej pomemben. Prevalenca je kompleksen kazalec, ki je odvisen tako od incidence in preživetja kot tudi starostne strukture in konkurirajočih vzrokov smrti v proučevani populaciji. Zato je prevalenca za vsako populacijo specifična. Kjer imajo populacijski register raka že 40 let ali še dlje, prevalence ni težko izračunati. Metodološko zahtevnejše pa so ocene tam, kjer je obdobje registracije raka krajše, in še prav posebej tam, kjer registri ne pokrivajo vse populacije. Takšnih primerov je v Evropi največ. Cilj projekta je oceniti in napovedati prevalenco raka v Evropi, izboljšati kakovost in primerljivost statistike rakavih bolezni ter poenotiti metodologijo za obdelavo podatkov.

European Childhood Leukaemia - Lymphoma Incidence Study (ECLIS)

The accident at the Chernobyl nuclear plant in Ukraine on the 26th April 1986 resulted in a dissemination of radionuclides (mainly ^{131}J and ^{137}Cs) across a wide area of Europe. The concern which this generated, particularly regarding the risk of cancers induced as a consequence of excess radiation exposure, led to the establishment of the European Childhood Leukaemia – Lymphoma Incidence Study (ECLIS) to monitor trends in these diseases in relation to the estimated exposure. Leukaemia was chosen for monitoring purposes, since this malignancy shows the earliest and largest relative increase in risk following radiation exposure, and the risk associated with exposure in childhood is greater than that in adults.

EUROPREVAL – Cancer Prevalence in Europe

Prevalence is an important indicator of the impact of cancer on the population and on health and social services. The dramatic trend in population ageing and the expected progresses in cancer patients' survival make cancer prevalence an increasingly important indicator. Prevalence is a complex phenomenon, which depends on the combined effect of incidence and survival rates, age distribution of the considered population, and mortality for competing causes. Therefore, prevalence is population-specific. For populations covered by cancer registration since 40 years or more, the prevalence can be calculated directly. If the population has been covered by cancer registration for a shorter period or it is covered only partially, or not covered at all, more sophisticated methodology for prevalence estimation is needed. The great majority of large populations at the national level in Europe belongs to this last case. The project is aimed to estimate and predict the prevalence of cancer in Europe using different methods, as well as to improve the quality and comparability of cancer statistics, and to share a common methodology.

EUROCARE 2 – spremljanje preživetja bolnikov z rakom v Evropi in EUROCARE 3 – razumevanje vzrokov razlik v preživetju bolnikov z rakom v Evropi

Oznaka študij / Studie's code: EC, PECO-NIS Funds, ERBBMHICT931616 in/and EC, PECO, BIOMED-2, PL 963390

Vodja projekta / Principal investigator: Franco Berrino, Istituto nazionale tumori, Divisione di epidemiologia, Milano, Italia

Sodelavci / Co-investigators: 50 registrov raka iz 17 držav / 50 cancer registries from 17 countries

Odgovorna raziskovalka za podatke za Slovenijo / Responsible for Slovenia: Vera Pompe-Kirn

Oba projekta sta nadaljevanje prvega projekta EUROCARE, ki se je zaključil s knjigo Cancer Patients Survival in Europe. Vanju so pritegnili registre iz šest poprej nesodelujočih držav, med njimi tudi Register raka za Slovenijo. V okviru EUROCARE 2 smo za evropske bolnike, zbolele za rakom v letih 1985–89, oblikovali novo podatkovno bazo o preživetju. Knjiga Cancer Patients Survival in Europe, patients diagnosed in 1985-1989 je v pripravi za tisk. V okviru istega projekta so tekle tudi podrobnejše študije preživetja bolnikov z malignim melanomom, želodčnim rakom in rakom mod. Podatke obdelujejo odgovorni raziskovalci v Angliji (melanom), Franciji (želodčni rak) in Italiji (rak mod). Podatki, zbrani o želodčnem raku, pa so še posebej obdelani v doktorski nalogi mlade raziskovalke, mag. Neve Volk, dr. med. Cilji projekta EUROCARE 3 so: podrobnejše spremljanje varstva (diagnostičnih postopkov in zdravljenja) rakavih bolnikov Evropi, ažuriranje dosedanje podatkovne baze o preživetju bolnikov in študij deleža ozdravljenih bolnikov s pomočjo multivariatnih modelov. Delež ozdravljenih bolnikov naj bi bil najtrdnejši kazalec preživetja.

Mednarodna študija tveganja zbolevanja za rakom med rudarji živega srebra v Evropi

Oznaka študije / Study code: EC, PECO-ERBC1PD-CT93-0191

Vodja projekta / Principal investigator: Paolo Boffetta, IARC, Lyon

Odgovorna raziskovalka za Idrijo (Slovenijo) / Responsible for Idrija (Slovenia): Vera Pompe-Kirn

Epidemioloških študij umrljivosti za rakom in incidence raka v povezavi z izpostavljenostjo živemu srebru je malo. Za zdaj še ni dovolj epidemioloških izsledkov, da bi lahko opredelili morebitno karcinogenost živega srebra. Ne moremo pa izključiti možnosti povečanega tveganja zbolevanja za pljučnim ter ledvičnim rakom in rakom možganov. V to raziskavo smo vključili delavce štirih večjih rudnikov živega srebra v Evropi: Almaden, Monte Amiata, Idrija in Nikitovka. Populacija rudarjev je ustaljena, ker so bili rudniki v odročnih krajih in jih je bilo malo. Poleg živemu srebru so bili rudarji izpostavljeni še drugim znanim ali osumljenim karcinogenom, npr. kremenčevemu prahu, radonu, kajenju. Študija je historična kohortna in temelji na dokumentaciji in meritvah izpostavljenosti. Doslej smo obdelali umrljivost. Izsledki so pokazali zvečano umrljivost za pljučnim rakom, ki pa jo lahko pripišemo živemu srebru ali drugi sočasni izpostavljenosti (kremenčev prah, radon, kajenje). Analize glede na izpostavljenost so v teku.

EUROCARE 2 – Monitoring Cancer Patients Survival in Europe and EUROCARE 3 – Understanding the Reasons for Cancer Patinets' Survival Differences in Europe

The projects are a continuation of the previous EUROCARE project, which resulted in the book Cancer Patients Survival in Europe. New registries from six additional countries, among them also the Cancer Registry of Slovenia, were included. A new cancer patients survival data base for patients diagnosed in 1985-1989 was created, and the old one was updated. A new book: Cancer Patients Survival in Europe, patients diagnosed in 1985-1989 is being prepared for press. Some more detailed studies were also performed: survival on malignant melanoma, testicular cancer, and stomach cancer patients. The data are still being analysed by responsible investigators in England (melanoma), Italy (testicular cancer), and France (stomach cancer). The data on stomach cancer were also analysed independently in the doctor thesis of the junior research fellow Neva Volk, MSc. Specific aims of EUROCARE 3 are: monitoring patterns of cancer patients care in Europe (diagnostic procedures and treatment modalities), updating the existing Eurocare survival files, understanding the proportion of patients cured for cancer through multivariate mixture models, the proportion of cured patients being the most reliable survival indicator.

International Study on Cancer Risk Among Mercury Miners in Europe

Only a few epidemiological studies have analysed cancer mortality or incidence in relation to occupational exposure to mercury. Epidemiological results are not sufficient to be conclusive regarding the carcinogenicity of mercury and its compounds to humans. Generally speaking, the possibility of an increased risk of cancer of the lung, the kidney and the central nervous system cannot be ruled out. This investigation has been focused on the workers from four major mercury mines and mills in Europe: Almaden, Monte Amiata, Idrija and Nikitovka. Since mercury mines were few and were located in remote areas, the populations of miners have been traditionally stable. Apart from mercury, miners have been exposed to other known or suspected carcinogens such as radon, and crystalline silica. The study is a historic cohort study, based on the existing records of employment and exposure data. So far, mortality data have been analysed, and preliminary results show an increased risk for lung cancer. However, this risk may be attributable either to mercury or to co-exposures (silica, radon, smoking). Analyses of exposure are on-going.

Kopičenje otroških levkemij v Evropi (EUROCLUS)

Oznaka študije / Study code: EC, PECO No. PL93-1785

Vodja projekta / Principal investigator: Freda Alexander, University of Edinburgh, Scotland

Sodelavci / Co-investigators: registri raka iz 17 držav / cancer registries from 17 countries

Odgovorna raziskovalka za Slovenijo / Responsible for Slovenia: Vera Pompe-Kirn

V projekt je bilo vključenih 13.551 primerov otroške levkemije (OL), diagnosticiranih v letih 1980–89. Vsi primeri so bili porazdeljeni po 25.723 manjših geografskih območjih. Na celotnem naboru podatkov je bilo proučevano morebitno prostorsko kopičenje. Razvit in preverjen je bil algoritem za izbrana območja, ki so nakazovala največ prostorskega kopičenja. Za nadaljnje podrobnejše raziskovanje je bilo izbranih 248 malih območij kopičenja. V raziskovanem desetletnem obdobju ni bilo razvidno nikakršno močnejše prostorsko kopičenje OL; pokazalo se je le v majhnih območjih, kjer je sicer statistično značilno, vendar majhno. Kopičenje OL je bilo osredotočeno na območje s srednjo gostoto prebivalstva. Če so bili izključeni primeri bolezni pri dojenčkih, je bilo kopičenje manjše. Območja kopičenja imajo v primerjavi s kontrolnimi območji demografske značilnosti izolacije (v začetku) in mešanja populacije in ne kažejo povezave z nevarnostnimi dejavniki iz okolja. Izsledki podpirajo domnevo o povezavi OL z mikroepidemijami še neznanega kužnega povzročitelja.

Mednarodna metaanaliza hormonskih dejavnikov v etiologiji raka dojk

Oznaka študije / Study code: Kraljevi fond za raziskovanje raka / Imperial Cancer Research Fund, Oxford, GB

Vodja projekta / Principal investigator: Collaborative Group on Hormonal factors in Breast Cancer (Valerie Beral)

Vodja projekta na OI / Project leader at OI: Maja Primic-Žakelj

Sodelavci / Co-investsigators: Božena Ravnihar

Pregled raziskav o morebitni povezanosti raka dojk s hormonskimi sredstvi - bodisi z oralnimi kontraceptivi ali nadomestnim hormonskim zdravljenjem – kaže, kako težko je narediti na osnovi številnih objavljenih izsledkov enotne zaključke, saj podatki večinoma niso obdelani na enak način. Namen skupine za raziskovanje hormonskih dejavnikov in raka dojk je bil zbrati vse osnovne podatke iz večine raziskav in jih ponovno analizirati, da bi bili izskledki enotnejši. Zbrala je osnovne podatke o 53.297 bolnicah z rakom dojk in o 100.239 zdravih kontrolnih ženskah iz 54 študij, narejenih v 25 državah. Rezultati kažejo, da so ženske v času, ko jemljejo sredstva za preprečevanje zanositve, in tiste, ki so jih uporabljale v zadnjih deset letih, neznatno bolj ogrožene z rakom dojk. Analiza podatkov o 52.705 ženskah z rakom dojk in 108.411 kontrolnih ženskah pa kaže, da je ogroženost z rakom dojk neznatno povečana tudi v času jemanja hormonskih sredstev za lajšanje menopavznih težav in da se ogroženost povečuje s trajanjem jemanja. Načrtujemo še analizo drugih nevarnostnih dejavnikov raka dojk.

Clustering of Childhood Leukaemia in Europe (EUROCLUS)

The project involved the collection of incidence data for 13551 cases of childhood leukaemia (CL) diagnosed in the period 1980–1989. All cases have been geographically referenced to small census areas of which there are 25723 within the study areas. The entire data set has been examined for evidence of spatial clustering. An algorithm for selecting areas showing most evidence of clustering has been developed and validated. 248 small cluster areas have been selected for further detailed investigation. CL did not display strong spatial clustering in small areas over a ten-year period. CL showed evidence of spatial clustering in small areas, which is statistically significant but of small magnitude. Clustering of CL was focused in areas of intermediate population density. If infant cases are excluded the clustering has a reduced magnitude. Compared with control areas, cluster areas have demographic characteristics indicating isolation (initially) and population mixing, and they fail to demonstrate any unequivocal association with environmental hazards. The results support a hypothesis involving association of CL with micro-epidemics of yet unknown infectious agent(s).

Intarnational Meta-Analysis of Hormonal Factors in the Etiology of Breast Cancer

Reviews of the records on breast cancer and exogenous hormone use have emphasised the difficulty in combining published data, because the data of different studies were not processed in the same way. The Collaborative Group, therefore, brought together data from the majority of studies to re-analyse the world-wide epidemiological evidence on the relation between breast cancer risk and hormonal factors. Individual data on 53.297 women with breast cancer and 100.239 women without breast cancer from 54 studies conducted in 25 countries were collected and analysed centrally to evaluate the breast cancer and hormonal contraceptives (OC) association. The results show that women who are currently using combined OC or have used them in the past 10 years are at a slightly increased risk of having breast cancer diagnosed. The analysis of the individual data on 52.705 women with breast cancer and 108.411 women without it shows that the risk of having breast cancer diagnosed is slightly increased in women using hormone replacement therapy and increases by duration of use. Further analyses of other aspects of breast cancer etiology are planned.

Rezultati zdravljenja bolnic z ginekološkimi raki

Oznaka študije / Study code: FIGO, Mednarodna federacija za ginekologijo in porodništvo, Evropski onkološki inštitut / FIGO, European Institute of Oncology

Vodja projekta / Principal investigator: Sergio Pecorelli

Vodja projekta na OI / Project leader at OI: Maja Primic-Žakelj

Sodelavci / Co-investsigators: Vida Stržinar, Stelio Rakar, Vera Pompe Kirn

Oddelek za epidemiologijo že vrsto let sodeluje pri zbiranju podatkov o rezultatih zdravljenja bolnic z ginekološkimi raki, ki jih objavlja Mednarodna federacija ginekologov in porodničarjev. Seznam bolnic in del podatkov zberemo v Registru raka za Slovenjo, še dodatne pa iz popisov bolezni. V letu 1997 smo zbirali podatke o bolnicah, zdravljenih v letih 1990–92, in so bili objavljeni v 23. volumnu poročila Annual Report on the Results of Treatment in Gynaecological Cancer. Uredništvo se je iz Švedske preselilo na Evropski onkološki inštitut v Milanu. Pripravljamo še nadaljnje analize zbranih podatkov.

Lokalno in sistemsko povečanje učinkovitosti kemoterapije z električnimi pulzi visokih napetosti

Oznaka študije / Study code: Institut Gustave Roussy, CNRS URA 147 - MZT

Vodji projekta / Principal investigators: Gregor Serša in / and Lluis M. Mir

Sodelavci / Co-investigators: Damijan Miklavčič, Zvonimir Rudolf, Borut Štabuc, Maja Čemažar, Dejan Šemrov, Tadej Kotnik, Viktor Menart, Vladka Gaberc-Porekar

Namen skupnega projekta je razširiti sodelovanje med inštitucijami na področju elektrokemoterapije. Zastavljeni projekt je prijavljen na Ministrstvu za znanost in tehnologijo Republike Slovenije, vendar razširja tematiko na tehnike, ki nam v Sloveniji niso dosegljive. Cilji projekta so: povečati učinkovitost elektrokemoterapije s tumorskim nekroznim faktorjem (TNF-α), predvsem na ravni in vivo; za izdelavo novih elektrod, primernih za uporabo v kliniki, računalniško izmodelirati razporeditev električnega polja v tumorjih med elektrokemoterapijo; ugotoviti, kako deluje elektroporacija na rezistenco tumorjev za cisplatin; pripraviti protokol za klinične študije.

Results of Treatment of Gynaecological Cancer

In the Epidemiology Unit, data on the results of treatment of gynaecological cancers are gathered and published by the International Federation of Gynaecology and Obstetrics. The list of patients and a part of data are obtained from the Cancer Registry of Slovenia, while others are abstracted from patient records. In the year 1997, data on patients treated in the period 1990–1992 were gathered and were published in the 23rd volume of the Annual Report on the Results of Treatment in Gynaecological Cancer. The editorial office has moved from Sweden to European Institute of Oncology in Milan. Further analyses of our data are planned.

Local and Systemic Potentiation of Antitumor Effectiveness of Chemotherapeutic Drugs by Electric Pulses

The aim of the project is to broaden cooperation between the two institutions in the field of electrochemotherapy. The cooperation is based on the project that is funded by the Ministry of Science and Technology of the Republic of Slovenia, and also extends the topic into experimental approaches that are not available in Slovenia. The main goals of the project are increased antitumor effectiveness of electrochemotherapy with (TNF-α), predominantly in vivo; mathematical modeling of electric current distribution within tumors during electrochemotherapy, to develop new electrodes suitable for the use in clinics; influence of electrochemotherapy on resistance of tumors to cisplatin; and preparation of clinical protocol.

Mladi raziskovalci in njihovi mentorji (1993–97)

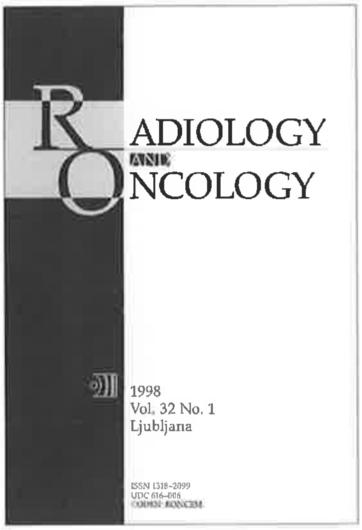
Plačnik magistrskega ali doktorskega študija je Ministrstvo za znanost in tehnologijo Republike Slovenije

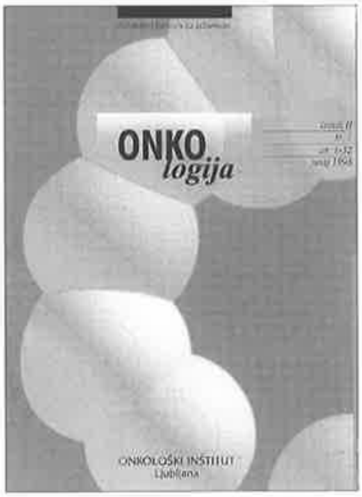
Junior Research Fellows and their Tutors (1993–97)

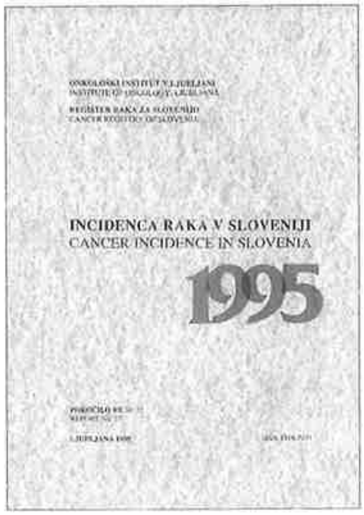
Postgraduate studies for MSc or PhD degrees financed by Ministry of Science and Technology of the Republic of Slovenia

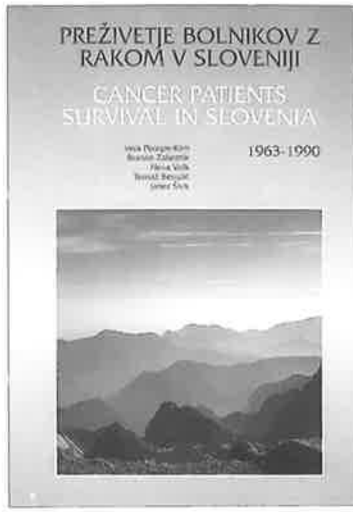
Mladi raziskovalec / *Junior Research Fellow*	Mentor / *Tutor*
dr. **Nikola Bešić,** dr. med. / *MD, PhD*	prof. dr. **Marija Auersperg,** dr. med. / *MD, PhD*
mag. **Simona Borštnar,** dr. med. / *MD, MSc*	prof. dr. **Zvonimir Rudolf,** dr. med. / *MD, PhD*
dr. **Matej Bračko,** dr. med. / *MD, PhD*	prof. dr. **Rastko Golouh,** dr. med. / *MD, PhD*
Erik Brecelj, dr. med. / *MD*	prof. dr. **Marija Auersperg,** dr. med. / *MD, PhD*
Urška Čegovnik, dipl. ing. Kemije / *BSc Chem*	znan. sod. dr. **Srdjan Novaković,** dipl. biol. / *BSc Biol, PhD*
mag. **Maja Čemažar,** dipl. biol. / *BSc Biol, MSc*	prof. dr. **Gregor Serša,** dipl. biol. / *BSc Biol, PhD*
Marta Dremelj, dr. med. / *MD*	prof. dr. **Berta Jereb,** dr. med. / *MD, PhD*
mag. **Margareta Fležar,** dr. med. / *MD, MSc*	prof. dr. **Marija Us-Krašovec,** dr. med. / *MD, PhD*
mag. **Snježana Frković-Grazio,** dr. med. / *MD, MSc*	prof. dr. **Rastislav Golouh,** dr. med. / *MD, PhD*
mag. **Zvezdana Hlebanja,** dr. med. / *MD, MSc*	doc. dr. **Saša Markovič,** dr. med. / *MD, PhD*
mag. **Marko Hočevar,** dr. med. / *MD, MSc*	prof. dr. **Marija Auersperg,** dr. med. / *MD, PhD*
mag. **Barbara Jezeršek,** dr. med. / *MD, MSc*	prof. dr. **Zvonimir Rudolf,** dr. med. / *MD, PhD*
Barbara Katarina Karner, dr. med. / *MD*	prof. dr. **Marjan Budihna,** dr. med. / *MD, PhD*
mag. **Jaka Lavrenčak,** dipl. biol. / *BSc Biol, MSc*	prof. dr. **Marija Us-Krašovec,** dr. med. / *MD, PhD*
mag. **Metka Miočić,** dr. med. / *MD, MSc*	prof. dr. **Vera Pompe-Kirn,** dr. med / *MD, PhD*
mag. **Janja Ocvirk,** dr. med. / *MD, MSc*	doc. dr. **Borut Štabuc,** dr. med. / *MD, PhD*
Aleksander Pečnik, dr. med. / *MD*	prof. dr. **Marija Auersperg,** dr. med. / *MD, PhD*
mag. **Andrej Franc Plesničar,** dr. med. / *MD, MSc*	doc. dr. **Borut Štabuc,** dr. med. / *MD, PhD*
mag. **Tanja Roš-Opaškar,** dr. med / *MD, MSc*	prof. dr. **Zvonimir Rudolf,** dr. med. / *MD, PhD*

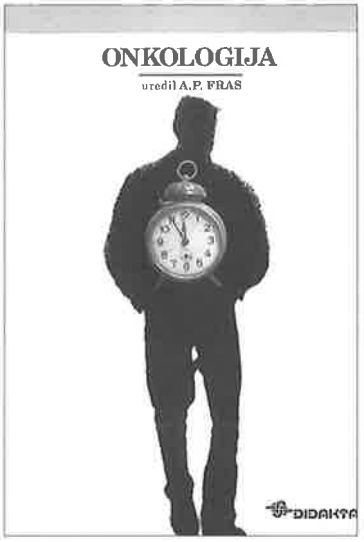
Mladi raziskovalec / *Junior Research Fellow*	Mentor / *Tutor*
mag. **Karmen Stanič,** dr. med / *MD, MSc*	prof. dr. **Marija Us-Krašovec,** dr. med. / *MD, PhD*
mag. **Primož Strojan,** dr. med. / *MD, MSc*	prof. dr. **Zvonimir Rudolf,** dr. med. / *MD, PhD*
mag. **Breda Škrbinc,** dr. med. / *MD, MSc*	prof. dr. **Marija Us-Krašovec,** dr. med. / *MD, PhD*
mag. **Neva Volk,** dr. med. / *MD, MSc*	prof. dr. **Vera Pompe-Kirn,** dr. med. / *MD, PhD*
mag. **Lorna Zadravec-Zaletel,** dr. med. / *MD, MSc*	prof. dr. **Berta Jereb,** dr. med. / *MD, PhD*
mag. **Janez Žgajnar,** dr. med. / *MD, MSc*	prof. dr. **Jurij Lindtner,** dr. med. / *MD, PhD*


RADIOLOGY AND ONCOLOGY
1998
Vol. 32 No. 1
Ljubljana


ONKO logija
ONKOLOŠKI INŠTITUT
Ljubljana


INCIDENCA RAKA V SLOVENIJI
CANCER INCIDENCE IN SLOVENIA
1995


PREŽIVETJE BOLNIKOV Z RAKOM V SLOVENIJI
CANCER PATIENTS SURVIVAL IN SLOVENIA
1963-1990


ONKOLOGIJA
uredil A.P. FRAS
DIDAKTA


Onkološki Institute
Inštitut of Oncology
v Ljubljani Ljubljana
55 let 55 years
1938-1993

Publicistična dejavnost

Radiology and Oncology

Glavni urednik:
Gregor Serša
Izvršilni urednik:
Viljem Kovač
Častni urednik:
Tomaž Benulič
Jezik: angleški, slovenski
Izhaja štirikrat letno v 750 izvodih

Radiology and Oncology je strokovna revija, ki objavlja pregledne, znanstvene in strokovne članke s področja diagnostične in intervencijske radiologije, nuklearne medicine, ultrazvočne diagnostike, radioterapije, klinične in eksperimentalne onkologije, radiobiologije, radiofizike in zaščite pred sevanjem. Sedež revije je na Onkološkem inštitutu v Ljubljani. Izdajatelji so združenja Slovenskega zdravniškega društva za radiologijo, nuklearno medicino, radioterapijo in onkologijo ter kancerologijo in Sekcija za radiologijo hrvaškega zdravniškega društva. Pridružena izdajatelja sta Madžarsko združenje radiologov in Italijansko združenje radiologov.

Radiology and Oncology izhaja že 31 let in obsega 31 volumnov s po štirimi številkami na leto. Z novim naslovom in v novi obliki izhaja revija od leta 1992. Od leta 1993 je bilo v njej objavljenih 281 člankov, več kot polovica od njih avtorjev iz tujine. Prinesla je tudi številna poročila s strokovnih srečanj in recenzije knjig. Od rednih številk sta bili dve posvečeni temam s strokovnih sestankov: v letu 1994 je izšla številka s prispevki 2nd European congress on lung cancer, v letu 1997 pa z mednarodnega simpozija Organ sparing treatment in oncology. Posebna številka (suplement) je bila posvečena diagnostiki in zdravljenju ščitnice. Izšla je v letu 1993 z naslovom Ščitnica in njene bolezni.

Članki, objavljeni v Radiology and Oncology, so redno indeksirani v Biomedicina Slovenica, Chemical abstracts in EMBASE/Excerpta Medica.

Onkologija

Glavni urednik:
Rastko Golouh

Urednik: Matej Bračko

Uredniški odbor: Tanja Čufer, Marko Hočevar, Hotimir Lešničar, Zvonimir Rudolf, Marko Snoj, Marija Us-Krašovec, Matjaž Zwitter

Jezik: slovenski

Izhaja dvakrat letno v 6500 izvodih

V letu 1997 je na Onkološkem inštitutu začel izhajati strokovni časopis Onkologija. Namenjen je hitremu pretoku znanja v vsakdanjo onkološko prakso. Kot multidisciplinaren časopis teoretično in praktično obravnava mnoge strani onkologije, posebej primarno in sekundarno preventivo malignih tumorjev, njihovo zgodnje odkrivanje ter zdravljenje, rehabilitacijo in paliacijo pri onkoloških bolnikih, pa tudi socialne in etične probleme.

Onkologija se – drugače kot mnogi drugi strokovni časopisi – izogiba suhoparnosti klasičnih strokovnih člankov. S prispevki strokovnjakov z raznih področij medicine in osnovnih znanosti bo v prijaznejši obliki prinašala pomembne informacije o razvoju in uporabnosti novih metod v praktični onkologiji.

Časopis prejemajo brezplačno vsi slovenski zdravniki in zobozdravniki.

Incidenca raka v Sloveniji 1995

Glavni urednik:
Vera Pompe-Kirn

Uredniki: Rastko Golouh, Jurij Lindtner, Maja Primic-Žakelj, Božena Ravnihar, Zvonimir Rudolf, Branko Zakotnik

Jezik: slovenski, angleški / Slovenian, English

Izdano v 700 izvodih

Register raka za Republiko Slovenijo (Register) je prva letna poročila izdal v letih 1953–57 za leta 1951 do 1955. Prva analiza podatkov Registra za leto 1950 pa je bila objavljena že leta 1951 v Zdravstvenem vestniku. Kasneje so bili podatki Registra objavljeni v periodičnih publikacijah Svetovne zdravstvene organizacije Epidemiological and Vital Statistics Report in v World Statistics Report. Od leta 1965 dalje izhajajo letna poročila z naslovom Rak v Sloveniji (1965–77) oz. Incidenca raka v Sloveniji (1978–95) kot redna dvojezična slovensko-angleška publikacija, ki je vsako leto dopolnjena glede na želje in pripombe uporabnikov. Zadnje poročilo za leto 1995 obsega 13 tabel in 9 slik. V 11 tabelah so

Publishing Activities

Radiology and Oncology

Editor-in-Chief:
Gregor Serša
Executive Editor:
Viljem Kovač
Editor-in-Chief Emeritus:
Tomaž Benulič
Language: English, Slovenian
Published quarterly in 750 copies

Radiology and Oncology is a journal devoted to the publication of original and high quality articles. It publishes original contributions in diagnostic and interventional radiology, computerized tomography, ultrasound, magnetic resonance, nuclear medicine, radiotherapy, clinical and experimental oncology, radiobiology, radiophysics and radiation protection. The publishers of Radiology and Oncology are Slovenian Medical Association – Slovenian Association of Radiology, Nuclear Medicine Society, Slovenian Society for Radiotherapy and Oncology, Slovenian Cancer Society, and Croatian Medical Association – Croatian Society of Radiology. Affiliated publishers are Societas Radiologorum Hungarorum and Friuli-Venezia Giulia regional groups of S.I.R.M. (Italian Society of Medical Radiology).

Radiology and Oncology was established in 1964 under the original title Radiologia Iugoslavica. Since then, 31 annual volumes have been published, each containing four issues and an index. Since 1993, the periodical featured 281 papers of which more than a half were contributed by international authors. Special Supplements, presenting the proceedings of the meetings, or groups of papers on topics of significant progress, are also included in the volume. These were "Thyroid and its Disease" in 1993, "2nd European Congress on Lung Cancer" in 1994, and "Organ Sparing Treatment in Oncology" in 1997.

Articles in Radiology and Oncology are regularly indexed in Biomedicina Slovenica, Chemical Abstract and EMBASE/Excerpta Medica.

Onkologija

Editor-in-Chief:
Rastko Golouh

Editor: Matej Bračko

Editorial Board: Tanja Čufer, Marko Hočevar, Hotimir Lešničar, Zvonimir Rudolf, Marko Snoj, Marija Us-Krašovec, Matjaž Zwitter

Language: Slovenian

Published twice a year in 6500 copies

In 1997, the Institute of Oncology began publication of a professional journal Onkologija, with the aim to stimulate the transfer of knowledge into daily clinical practice. As a multidisciplinary periodical, it covers various theoretical and practical aspects of oncology, with a particular emphasis on the primary and secondary cancer prevention, early detection, treatment, rehabilitation and palliative care in oncological patients. Social and ethical issues are covered as well.

In contrast to several other medical journals, contributions by experts in different fields of medicine and basic sciences, contributing important information on new advances in oncology and their use in clinical practice, are written in a more reader-friendly way, avoiding the dry style of conventional medical writing.

The journal is available to all Slovenian physicians and stomatologists free of charge.

Cancer Incidence in Slovenia 1995

Editor-in-Chief:
Vera Pompe-Kirn

Editors: Rastko Golouh, Jurij Lindtner, Maja Primic-Žakelj, Božena Ravnihar, Zvonimir Rudolf, Branko Zakotnik

Language: slovenski, angleški / Slovenian, English

Published in 700 copies

The first annual reports of the Cancer Registry of Slovenia (Registry) for the period 1951–1955 were published in the period 1953–57. The first analysis of the Registry's data for 1950 were published already in 1951 in Zdravstveni vestnik. Later on, the data appeared in the periodical publications of WHO, Epidemiological and Vital Statistics Report, and World Statistics Report. Since 1965, annual reports have been published regularly under the title Cancer in Slovenia (1965–77) and Cancer Incidence in Slovenia (1978–95). These bilingual Slovenian-English publications have been revised and updated yearly, with respect to the needs and comments of the users. The last report for 1995 comprises 13 tables and 9 figures.

podrobneje prikazani podatki o incidenci raka po spolu, starosti, primarni lokaciji, histološki vrsti in stadiju ter glede na regijo stalnega bivališča zbolelih. Tabela 12 prikazuje podatke o umrljivosti za rakom (izdelana na Inštitutu za varovanje zdravja RS), tabela 13 pa podatke o prevalenci bolnikov z rakom. Slikovno gradivo obsega 3 standardne slike o deležih najpogostnejših rakov v Sloveniji ter trendu vseh in izbranih rakov. Dodatnih 6 slik je tematskih. Podrobneje prikazujejo rastočo incidenco kožnega malignega melanoma in preživetje bolnikov s to boleznijo. V prejšnjih letih so bili tako prikazani pljučni rak (poročilo za leto 1991), preživetje bolnikov s sarkomi mehkih tkiv glede na histološko vrsto (poročilo za leto 1992), rak materničnega vratu (poročilo za leto 1993) in rak dojk in sarkomov mehkih tkiv (poročilo za leto 1994).

Avtorji: Vera Pompe-Kirn, Branko Zakotnik, Neva Volk Tomaž Benulič, Janez Škrk

Jezik: slovenski, angleški

Izdano v 1000 izvodih

Preživetje bolnikov z rakom v Sloveniji 1963–90

Knjiga je izšla leta 1995 kot odziv na podobni knjigi, izdani na Škotskem in Danskem leta 1993, in na dejstvo, da Slovenija ni bila povabljena v prvo raziskavo EUROCARE o preživetju bolnikov z rakom v Evropi. V knjigi je grafično in s komentarji klinikov predstavljeno 1-, 3-, 5- in 10-letno opazovano in relativno preživetje bolnikov, zbolelih v letih 1963–90 v Sloveniji, ločeno za 29 posameznih rakavih bolezni, za vse rakave bolezni skupaj pa za pet petletnih in zadnje triletno obdobje. V analizo je bilo zajetih 121.790 bolnikov iz vse Slovenije ne glede na vrsto in kraj zdravljenja. Prikazano je torej tako imenovano populacijsko preživetje bolnikov z rakom v Sloveniji, ki je bilo – kot drugod v Evropi – različno glede na posamezno vrsto raka. Različni so bili tudi trendi izboljševanja preživetja v času. Izoblikovale so se tri skupine: v prvi se je petletno preživetje v opazovanem obdobju zvečalo za več kot 20%, v drugi za 5–20%, v tretji pa povečanja preživetja skoraj ni bilo ali se je le nakazovalo.

Knjiga je namenjena v prvi vrsti zdravnikom kot objektivna informacija za pomoč pri pogovorih z bolniki ter za oceno, kam Slovenija sodi v primerjavi z drugimi evropskimi državami. Tovrstna primerjava je možna, ker je bila uporabljena standardna statistična metodologija.

Urednik: Albert Peter Fras

Jezik: slovenski

Izšlo v 1500 izvodih

Onkologija

Sodobni pouk medicine zahteva od študenta, da spozna obsežno pisno gradivo skoraj za vsako stroko v medicini. Tik preden se pri praktičnem pouku sreča s svojim prihodnjim vsakodnevnim delom, pa se mora navadno v najkrajšem možnem času seznaniti vsaj z osnovami stroke. Zato je bil namen izdaje slovenskega učbenika za onkologijo podati študentom kratek pregled onkologije kot samostojne, vendar multidisciplinarne stroke in jim s tem ponuditi znanje za boljše spremljanje praktičnega pouka. Za učbenik je svoje znanje prispevalo 46 strokovnjakov z Onkološkega inštituta in drugih ustanov v Sloveniji. Knjiga prinaša dovolj podatkov za spoznavanje te pomembne stroke. V 26 poglavjih predstavlja osnovna načela onkologije, v nadaljnjih 50 pa klinično onkologijo.

Eleven tables present a detailed overview of cancer incidence by sex, age, primary site, histological type and stage, as well as by region of patients' permanent residence. Table 12 (prepared by the Institute of Public Health of the Republic of Slovenia), shows the data on cancer mortality, and Table 13 shows the data on the prevalence of cancer patients. Graphic material comprises 3 standard presentations of the percentages of most frequent cancers in Slovenia, and trends in incidence rates of all and selected cancers. The other six figures are topic-related and present in detail the increasing problem of cutaneous malignant melanoma and the survival of patients with this disease. Previous reports were concerned with the following problems: lung cancer (report for 1991), the survival of patients with soft tissue sarcomas by histological type (report for 1992), cervical cancer (report for 1993), and breast cancer and soft tissue sarcomas (report for 1994).

Cancer Patients Survival in Slovenia 1963–90

Authors: Vera Pompe-Kirn, Branko Zakotnik, Neva Volk, Tomaž Benulič, Janez Škrk

Language: Slovenian, English

Published in 1000 copies

The book was published in 1995, in response to the challenge posed by the similar books that were published in Scotland and Denmark in 1993. Another reason was the fact that Slovenia was not invited to participate in the first EUROCARE study on the survival of cancer patients in Europe.

By means of graphs and comments of clinicians, the book presents 1-, 3-, 5- and 10-year observed and relative survival of patients diagnosed with 29 different cancers in the period 1963–90 in Slovenia, as well as the survival statistics for all cancers together, in five five-year periods and in the last three-year period. The analysis included 121.790 patients from every part of Slovenia, regardless of the type and venue of treatment. The book thus presents the population survival of cancer patients in Slovenia. As elsewhere in Europe, the survival differed with respect to individual cancer sites. Also, the trends of survival improvement in time were different. There were three groups identified: the first with more than 20% increase in the 5-year survival in the observed period; the second with 5–20% increase; and the third with practically no, or a negligible increase in the survival.

The book has been written primarily for physicians, to provide them with objective information that could be used in their discussions with patients, and to rank Slovenia in relation to other European countries. The use of standard statistic methodology made such a comparison possible.

Onkologija

Editor: Albert Peter Fras

Language: Slovenian

Published in 1500 copies

Modern medical studies require the students to peruse extensive written materials of almost every branch of medicine. It often happens that, just before the beginning of practical exercises, students have to get acquainted with the basics of a special field that they are going to need in their daily practical work. This Slovenian textbook on oncology was published with the aim to provide the students with a brief overview of oncology as an independent, though multidisciplinary, specialty, and thus enable them to attend practical exercises with certain knowledge of oncology. The textbook was prepared in collaboration with 46 specialists of the Institute of Oncology, and of other Slovenian institutions, who contributed their knowledge and experience. The compiled material offers sufficient information on this important branch of medicine. The first 26 chapters present the basic principles of oncology and the next 50 chapters are dedicated to clinical oncology.

Društvo onkoloških bolnikov in revija Okno

Predsednica: Marija Vegelj-Pirc

Glavna urednica: Marija Vegelj-Pirc

Tehnična urednica: Firdeusa Purić

Jezik: slovenski

Izhaja dvakrat letno v 7000 izvodih

Društvo onkoloških bolnikov Slovenije postaja od ustanovitve leta 1986 naprej z zdravstveno vzgojnimi in podpornimi programi nepogrešljivo pri obvladovanju raka. Leta 1997 je v skladu z novo zakonodajo dopolnilo svoj statut in pri Ministrstvu za zdravstvo pridobilo status društva, ki deluje v javnem interesu na področju zdravstvenega varstva.

Društvo postaja vse bolj podobno sodobnim gibanjem samopomoči, ki morajo zastopati in dokazovati najnujnejše potrebe bolnikov. V vsesplošni preobremenjenosti in krhkosti družine pa postaja druženje ljudi s podobnimi stiskami nujna oblika komuniciranja in zatekanja po pomoč. Društvo je vseskozi s svojo pojavnostjo in medijsko odzivnostjo prispevalo tudi k demistifikaciji bolezni rak.

V obdobju 1993–97 je nadaljevalo svojo osnovno dejavnost, t.j. pomoč bolnikom na poti k okrevanju. Bolniki so sodelovali pri številnih predavanjih in seminarjih, prostovoljka koordinatorka je nastopila z referatom na mednarodni zdravniški konferenci o kakovosti življenja na Bledu leta 1995.

V sodelovanju z Onkološkim inštitutom je društvo aprila 1993 organiziralo seminar o celostni rehabilitaciji bolnic z rakom dojke za zdravnike, medicinske sestre in fizioterapevtke. Leta 1995 je sodelovalo na mednarodni razstavi Vse o srcu v Ljubljani in leta 1996 na 1. slovenskem kongresu prostovoljcev in seminarju o prostovoljnem delu v bolnšnicah in socialnih zavodih.

Leta 1993 je društvo začelo redna letna vseslovenska srečanja žensk z rakom dojke pod geslom Nova pomlad življenja. Potekajo v Cankarjevem domu pod patronatom najvišjih političnih osebnosti in se jih udeležujejo tudi gosti iz tujine. Stotine žensk sprejemajo srečanje kot svojo zmago nad boleznijo, prikaz dostojanstva in enakovrednosti z zdravimi.

Pot k okrevanju, organizirana samopomoč žensk z rakom dojke, je razširila individualno samopomoč skoraj v vse bolnišnice v Sloveniji, ustanovljene pa so bile tudi nove skupine za samopomoč v Postojni, Celju (1994) in v Izoli (1997). Vse dejavnosti potekajo v skladu z mednarodnimi pravili in slovenska prostovoljka je članica mednarodnega komiteja UICC – Reach to Recovery v Ženevi. Posebno priznanje mednarodne organizacije je društvo dobilo, ko mu je bila v sodelovanju z Onkološkim inštitutom zaupana organizacija 10. konference Reach to Recovery International v Ljubljani v maju 1998.

Leta 1994 se je društvo pridružilo evropskemu ženskemu gibanju Europa Donna. V skladu s pravili mednarodne koalicije in domačo zakonodajo je bilo pobudnik za ustanovitev samostojnega društva – Europa Donna, Slovensko nacionalno združenje za boj proti raku dojke (oktober 1997), ki si bo prizadevalo za uresničevanje ciljev mednarodnega združenja tudi pri nas.

Med pomembnimi nalogami društva je tudi izdajanje publikacij in priročnikov za bolnike in njihove svojce. Poseben projekt v letu 1994 je bila izdaja kompleta treh avdiokaset Poti k zdravju in knjige Dober dan, življenje.

Glasilo društva Okno si je v letih izhajanja od julija 1987 pridobilo širok krog bralcev ne le med onkološkimi bolniki; želi širiti znanje o raku in o zdravem načinu življenja, s pričevanji bolnikov pa skuša pomagati pri preoblikovanju socialnega okolja, ki naj bi postalo bolj naklonjeno bolnikom na njihovi poti k celostni rehabilitaciji.

Cancer Patients Association of Slovenia and Their Bulletin Okno

President: Marija Vegelj-Pirc

Editor-in-Chief: Marija Vegelj-Pirc

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Ever since its establishment in 1986, the Cancer Patients Association of Slovenia with its public health education and supportive programs remains an indispensable and integral part of cancer control. In 1997, the Association had its Statute revised in keeping with the new legislation, and was acknowledged by the Ministry of Health as an association performing tasks of public interest in the field of health protection.

The Association resembles other modern self-support movements and organizations whose purpose is to represent and lobby for the interests and needs of patients. In view of the general overburdening and disintegration of family life, the associaiton of people with similar problems is becoming an indispensable form of communication and a source of support. By its very existence and recognition in the media, the Association has contributed significantly towards the demistification of cancer.

In the period of 1993–98, the Association proceeded with its basic task, i.e. providing support to patients in the process of rehabilitation. The patients participated in several lectures and seminars, and a volunteer- coordinator presented a paper at the International Conference on the Quality of Life, which was held in Bled in 1995.

In April 1993, the Association organized, in cooperation with the Institute of Oncology, a seminar on the comprehensive rehabilitation of breast cancer patients; the seminar was intended for physicians, nurses and physical therapists. In 1995, it took part in the international exhibition held in Ljubljana entitled "All about the Heart." In 1996, the Association took part in the 1st Slovenian Congress of Volunteers, and in the seminar on volunteer activities in hospitals and social institutions.

In 1993, the Association started with regular annual meetings of women with breast cancer under the slogan "The New Spring of Life". The meetings are held in the Congress Center "Cankarjev dom", under the auspices of the most prominent representatives of Slovenia's political life. The gatherings are attended by Slovenian as well as foreign participants. For hundreds of women, these meetings symbolize their victory over the disease, and the assertion of their dignity and equality to the rest of the population.

Reach to Recovery Movement, an organized self-support organization of women with breast cancer, has extended its individual support activity to almost all Slovenian hospitals. Three new self-support groups of this kind have been established in Postojna, Celje (1994) and Izola (1997). All the activities are carried out in keeping with the international regulations. There is also a Slovenian volunteer, functioning as a national representative in the UICC Reach to Recovery Committee in Geneva. The Association won international recognition in May 1989, when it was entrusted with the organization of the 10th Reach to Recovery International Conference in collaboration with the Institute of Oncology in Ljubljana.

In 1994, the Association joined the Europa Donna movement. In keeping with the regulations of the international coalition, as well as with the national legislation, the Association put forth the initiative to establish an independent Europa Donna – Slovenian Breast Cancer Association in October 1997. This association will strive to implement the internationally confirmed goals of Europa Donna also in Slovenia.

An important activity of the Association is also the publication of informative materials and manuals for patients and their relatives. Thus, in 1994, a set of three audio cassettes Ways to Health and a book Hello Life were published as an independent project.

Since the beginning of publication in July 1987, the Association's bulletin Okno has gained a wide circle of readers - not only among onocological patients. Its purpose is to spread knowledge about cancer and a healthy lifestyle. The periodical also carries the life stories of patients in order to help reform the social environment, so as to render it more aware of the patients' needs and bring about a more supportive attitude to their comprehensive rehabilitation.

Zveza slovenskih društev za boj proti raku

Predsednik: Borut Štabuc
do 1997 Andrej Kocijan

Slovensko društvo za boj proti raku deluje od ustanovitve leta 1970 dalje prvenstveno na področju zdravstvene vzgoje prebivalstva. Od leta 1984 povezuje devet regijskih društev. Je tudi polnopravna članica Mednarodne lige za boj proti raku UICC.

Po zgledu programa Evropa proti raku v Evropski skupnosti je Zveza leta 1991 sprejela program Slovenija 2000 in rak, ki ima za cilj do leta 2000 zmanjšati umrljivost za rakom za 15%. S podpisniki – Ministrstvom za zdravstvo, Onkološkim inštitutom, Inštitutom za varovanje zdravja RS, Rdečim križem Slovenije in Zvezo nekadilcev – se je lotila obsežnega dela na področju zdravstvene vzgoje, predvsem šolske mladine.

Ena od pomembnih dejavnosti Zveze je izdajanje publikacij (Kaj je treba vedeti o raku, Pravilna prehrana v boju proti raku, Diagnostične metode v onkologiji, priročnik Beseda o raku za učitelje) in zloženk. Poleg teh je izdala še videokaseto o raku (za šolarje), avdiokaseto o samopregledovanju dojk, prosojnice za usposabljanje pedagoških delavcev in za učence višjih razredov osnovnih šol, več publikacij za bolnike in tri plakate, dva z nasveti za preprečevanje in zgodnje odkrivanje raka, enega pa za preprečevanje kajenja med mladimi. Vse publikacije so izšle v več deset tisoč, nekatere pa že v več kot sto tisoč izvodih.

Zveza organizira tudi seminarje za zdravnike, ki v njeni organizaciji opravljajo preventivne preglede dojk in širijo zdravstveno osveščenost ljudi. Pregledi so brezplačno namenjeni članicam društev, obsegajo pa tudi učenje samopregledovanja in klinični pregled dojk. Seminarji v spomin dr. Dušana Reje so namenjeni predavateljem v organizacijah Rdečega križa. Zveza sodeluje tudi pri pripravi onkoloških vikendov, ki so namenjeni izobraževanju splošnih zdravnikov. Že več let pa organizira tudi kontaktne oddaje na rednem programu Vala 202 in na prvem programu radia Slovenije.

Preprečevanju kajenja med mladino je od leta 1994 namenjena akcija podpisovanja slovesne obljube, da v tekočem šolskem letu ne bodo prižgali cigarete. Poteka med učenci 6., 7. in 8. razredov osnovnih šol. Ob koncu šolskega leta izmed podpisnikov obljube izžrebamo 90 učencev 7. razredov in jih popeljemo na nagradni izlet v Gardaland; učenci osmih razredov dobijo majce z motivom proti kajenju.

Posebna dejavnost je izdajanje novoletnih čestitk in zbiranje denarja od njihove prodaje za opremo, namenjeno diagnostiki in zdravljenju rakavih bolnikov. Od leta 1993 je Zveza med drugim nabavila štiri mamografe za ambulante za bolezni dojk v Trbovljah, Ljubljani, Murski Soboti in Brežicah.

Vsakoletni teden boja proti raku v marcu je namenjen še dodatnemu opozarjanju na problematiko raka, pa tudi pregledu tekočega dela Zveze in uresničevanja programa. Na slavnostnih sejah so vsako leto podeljena tudi priznanja in plakete posebej zaslužnim posameznikom in organizacijam.

Ob 25-letnici delovanja Zveze slovenskih društev za boj proti raku je predsednik republike Milan Kučan odlikoval Zvezo s častnim znakom svobode Republike Slovenije. Enako priznanje sta dobila tudi tedanji predsednik, prof. dr. Andrej Kocijan, in sekretar Zveze, gospod Otmar Bergant.

The Association of Slovenian Cancer Societies

President: Borut Štabuc
till 1997 Andrej Kocijan

The Cancer Society of Slovenia was established in 1970, and since then it has been active mainly in the field of public health education. Since 1984, the Association of Slovenian Cancer Societies has been a joint organisation of nine regional cancer societies and is also a member of the UICC. The initiative "Europe against Cancer," launched by the European Community, was adopted by our Association in the program "Slovenia 2000 and Cancer" with the aim of decreasing cancer mortality by 15%. In 1991, a declaration to implement this program was signed by the Ministry of Health, the Institute of Oncology, the Institute of Health Protection of the Republic of Slovenia, the Red Cross of Slovenia and by the Association of Non-smokers of Slovenia. All the undersigned institutions pledged to carry out the adopted program by implementing the numerous activities in the field of public health education, particularly those intended for the school-age population.

Publishing is one of the most important parts of this project. So far a number of handbooks (What Do We Need to Know about Cancer?, Food against Cancer, Diagnostic Methods in Oncology, A Manual on Cancer for Teachers) and leaflets have been published. Other educational material includes a video cassette on cancer for school-children, an audio-cassette on breast self-examination, a set of overhead projection slides for training teachers and pupils in the higher grades of primary school, as well as several publications intended for patients. The Association also published three posters of guidelines for the prevention and early detection of cancer, as well as anti-smoking posters targeting the younger generation.

The Association also organizes seminars for physicians who perform preventive breast examinations and raise the public awareness of this medical issue. These free examinations are organized for society members in order to teach them breast self-examination and clinical examination of the breast. The seminars, organised in honor of Dr. Dušan Reja, are intended for lecturers of the regional Red Cross organizations. The Association also participates in the organization of "Oncology Weekends", intended for the training of general practitioners, and helps organize regular live radio broadcasts.

In 1994, an anti-smoking campaign aimed at the young generation was launched by the signing of a solemn declaration that the pupils of grade six, seven and eight of primary school would not light a single cigarette. At the end of the school year, 90 pupils from grade seven classes were randomly selected to receive the grand prize - a trip to Gardaland, while the pupils of the grade eight received T-shirts bearing an anti-smoking slogan. Another activity worth mentioning is fund raising by selling Christmas cards. The funds are then used to purchase diagnostic and therapeutic equipment, and since 1993, the Association has purchased 3 mammographs for the breast clinics of Trbovlje, Ljubljana and Murska Sobota.

The annual Anti-Cancer Week campaign, that takes place in March, is intended to bring to the public's attention the problems of cancer, as well as to review the Association's activities and accomplished program goals. Every year, special awards and diplomas are conferred upon individuals and organizations which have distinguished themselves in the fight against cancer.

On the 25th Anniversary of the Slovenian Anti-Cancer Society, the President of the Republic of Slovenia, Mr. Milan Kučan, bestowed on the Association the Honorary Medal of Freedom of the Republic of Slovenia. The same award was also presented to the then president, Prof. Andrej Kocijan and to the Secretary-General of the Association, Mr. Otmar Bergant.

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