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ANNUAL
REPORT

2010



CONTENTS

ABOUT US.....	5
Managing Director’s Opening Statement Hospital Management and Bodies Organizational Structure Na Homolce Hospital Profile Highlights of 2010 Personnel and Social Policy	
OUR ACTIVITIES.....	15
Clinical programs – Summary of activities Neuroprogram / Cardiovascular program General medical care program Summary of activities of departments providing complementary services Patient clubs Grants under way in 2010 Publications in 2010	
QUALITY AND SAFETY	83
Na Homolce Hospital - JCI accredited hospital	
ECONOMIC STABILITY	91
Auditor’s Report Economic data	



ABOUT US

- We provide healthcare in all areas of medicine
- We specialise in disorders of the cardiovascular and nervous systems
- We offer state-of-the-art diagnostic and therapeutic procedures some of which are unique in the Czech Republic
- We use fast and minimally invasive methods to diagnose and treat the patient's condition
- Our specialists are professionals in their fields

MANAGING DIRECTOR'S OPENING STATEMENT

Dear Friends,

In 2010, the Na Homolce Hospital ranked first among the Czech hospitals in the Health Care Institute contest and became an absolute winner from the viewpoint of both patients and employees. It was an impressive present on the occasion of the twentieth anniversary of the Hospital's existence that we celebrated last year.

Since the beginning of the nineties, the Na Homolce Hospital has strived to develop a top-quality and a high in demand healthcare facility, that would be an integral part of the public healthcare in the Czech Republic. At the beginning of the nineties, new specializations were implemented in the original structure of a state run sanatorium by the governmental decision, that were at that time scarcely available in the region of Prague. They included mainly vascular surgery, cardiology, neurology and neurosurgery, particularly in their intensive and surgical form. However, it was necessary to fit this portfolio of specializations into a viable structure, to establish teams of specialists, reorganize the whole institution both physically and in terms of personnel and to ensure the clientele. In the first half of the nineties, three specialized programs had been developed, characterized by a high-quality and comprehensive care: Cardiovascular program, Neurological-neurosurgical program and General medical care program. On this basis a well functioning healthcare facility was built during the past twenty years, using its own investment funds and several modest state subsidies. Its medical technology, devices and material as well as its teams of specialists are fully comparable with prominent healthcare institutes in Europe and USA.

The long-term development of the Hospital consistently follows three principles: providing a highly specialized and professional care, providing high quality and safe services and building of an economically stable company. The result of a well-balanced coexistence of these three factors must be a patient who is adequately treated and satisfied.

In 2009, the Na Homolce Hospital gained the status of a Comprehensive cardiovascular center and in 2010 the status of a Comprehensive cerebrovascular center. This clearly documents the wide range of diagnostic and therapeutic care provided by the Hospital in these fields in the multiregional scope, on a top level complying with the world standards of advanced medicine.

Also this year we look forward to new interesting professional challenges. Using this occasion I wish to thank all employees of the Na Homolce Hospital for excellent achievements in 2010.

Vladimír Dbalý, MD, MBA
Managing Director of the Na Homolce Hospital



HOSPITAL MANAGEMENT AND BODIES



Vladimír Dbalý, MD, MBA
Managing Director



Michal Toběrný, MD, MBA
Director for Treatment
And Preventive Care



Eva Holá, MSc, MBA
Director of Nursing Care



Stanislav Adam, MSc
Director of Hospital
Operations



Barbora Vaculíková, MSc
Director of Dept.
for Quality and Safety

ORGANIZATIONAL STRUCTURE

MANAGING DIRECTOR				EXTERNAL AUDIT
Division of Managing Director	Treatment and Preventive Care Division	Technical Operations Division	Nursing Division	Economic Administration of the Hospital
Secretariat of Managing Director	Deputy Director of TPC	Deputy Director of Techn. Operations	Deputy Director of Nursing Care	Bialešová s.r.o.
Hospital Pharmacy	Balneological Care Dept.	Departments	Commercial Services and Documents Department	Departments
Human Resources Division	Biomedical Engineering Department	Housekeeping	Marketing Department	Budget Administrator
Staff Matters	Medical Physics Department	Material and Tech. Supplies and Stores	Central Operation Theatres and Central Sterilization	Financial Accountancy
Training and Development Department	Staff Doctor	Catering	Head of Non Medical Healthcare Staff	Operative Files
Salaries Specialist	Contacts and Revisions Department	Car Fleet	Public Health Protection Assistant	Controlling
Lawyer	Healthcare Economics	Automated Transportation System	Casualty Service Ambulance Attendants	Managerial Accountancy
PR and Press Officer		Energy		Medical Legal Services
Quality Control		Maintenance		Roman Žďárek, J.D., M.D., Ph.D., MBA
		Technical and Inspection Activities and Revision		
		Technical Control of Operations		
		Leases		
		IT		
		Secretariat, filing room		
		Waste Management and Environment Services Investments		
		Fire Protection and Emergency		
		Planning		
		Health and safety at Work		
	Cardiovascular Centre	Wards of specialized depts. that are not part of the Centres	Out-patient parts of spec. depts. that are not parts of the Centres	Common Examination and Therapeutic Units
	Cardiology	Vascular Surgery	Vascular Surgery	Clinical Biochemistry, Haematology and Immunology
	Cardiac Surgery	General Surgery	General Surgery	Clinical Microbiology and Antibiotic Unit
	Cardiac Anesthesiology	Gynaecology	Gynaecology	Radiodiagnostics
		Internal Medicine	Internal Medicine	Nuclear Medicine/PET Centre
	Cerebrovascular Centre	ENT	ENT	Pathology
	Neurosurgery	Anaesthesiology and Resuscitation	Ophthalmology	Rehabilitation and Rheumatology
	Neurology		Pediatric and Adolescent Dept.	Hospital Hygiene
	Stereotactic and Radiation Neurosurgery	Centres	Dentistry	Clinical Pharmacy
		Robotic Surgery Centre	Dermatology	
		Centre of Allergology and Clinical Immunology	Psychiatry	
		Transplantation Centre	Clinical Psychology	
			Clinical Oncology	

NA HOMOLCE HOSPITAL

A specialized healthcare center providing cardiovascular and neurosurgical treatment nationwide

Neurological-neurosurgical program

Comprehensive care for patients suffering from diseases of, or injuries to, the central and peripheral nervous system, as well as diseases of, or injuries to, the spine. The three independent program units provide a full range of care, from diagnostic services and therapy by conservative methods, through complex neurosurgical operations, including radiosurgery and stereotactic surgery, to the latest methods of interventional neuroradiology. Part of the treatment process also covers related physiotherapy and long-term follow-up of patients.

- ✓ Department of Neurology
- ✓ Department of Neurosurgery
- ✓ Department of Stereotactic and Radiation Neurosurgery

Cardiovascular program

Comprehensive care for patients suffering from diseases of the cardiovascular system, i.e. the heart and blood vessels. The three independent program units focus on complex diagnostics and treatment by conservative methods, as well as surgical treatment of cardiac and vascular diseases including interventional radiology. Medical care includes special physiotherapy for patients with diseases of the circulatory system and follow-up of selected groups of patients.

- ✓ Department of Cardiology
- ✓ Department of Vascular Surgery
- ✓ Department of Cardiac surgery
- ✓ Department of Cardioanaesthesiology

General medical care program

A comprehensive range of general healthcare treatment, supported by a large outpatient department and related wards. The four independent hospital wards within this program offer patients a complete range of modern diagnostic and therapeutic methods for diseases related to internal medicine and general surgery, with a focus on minimally invasive surgery. These are closely linked to the extensive outpatient services provided by individual departments.

- ✓ Department of Internal Medicine
- ✓ Department of Surgery
- ✓ Department of Gynecology and Minimally Invasive Surgery
- ✓ Department of ENT/Head and Neck Surgery

PROFILE OF THE NA HOMOLCE HOSPITAL

Tables

Number of beds as of December 31, 2010

	ICU beds	Total	Share in %
Neurological-Neurosurgical Program	26	106	30%
Cardiovascular Program	63	147	41%
General Medical Care	39	104	29%
Total	128	357	100%

Basic Information

	Year 2010
Number of employees	1 803
Number of beds	357
Number of hospital admissions	19 311
Number of surgeries	14 117
Number of examinations of outpatient clinics	1 115 330

Mortality 2010

Name	Mortality
Vascular Surgery	1,70%
Cardiac Surgery	1,16%
Cardiology	1,02%
Neurosurgery	1,02%
Stereotactic and Radiation Neurosurgery	0,0%
Neurology	1,87%
Surgeryry	0,33%
Gynaecology	0,15%
ENT	0,17%
Internal Medicine	3,40%
Anaesthesiology and Resuscitation	29,71%
NHH	1,25%

Average duration of care

Name	Days
Vascular Surgery	7,81
Cardiac Surgery	12,01
Cardiology	3,12
Neurosurgery	8,19
Stereotactic and Radiation Neurosurgery	1,38
Neurology	5,43
Surgeryry	3,85
Gynaecology	2,80
ENT	2,66
Internal Medicine	8,02
Anaesthesiology and Resuscitation	18,28
NHH Total	5,46

PROFILE OF THE NA HOMOLCE HOSPITAL

Tables

Number of days of care

Name	Days
Vascular Surgery	17 446
Cardiac Surgery	10 427
Cardiology	14 770
Neurosurgery	19 321
Stereotactic and Radiation Neurosurgery	1 056
Neurology	7 868
Surgeryry	9 307
Gynaecology	5 612
ENT	9 481
Internal Medicine	8 481
Anaesthesiology and Resuscitation	2 505
NHH Total	100 975

Bed capacity utilisation in %

Name	Bed capacity utilisation in %
Vascular Surgery	83,11
Cardiac Surgery	85,30
Cardiology	79,63
Neurosurgery	88,23
Stereotactic and Radiation Neurosurgery	64,63
Neurology	74,14
Surgeryry	89,15
Gynaecology	67,70
ENT	80,29
Internal Medicine	90,75
Anaesthesiology and Resuscitation	88,20
NHH	82,84

Overview of diagnoses for hospital admissions in 2010

	2010
Diseases of the nervous system	15%
Diseases of the airways	2%
Diseases of the circulatory system	39%
Diseases of the digestive tract	6%
Diseases of the muscular and osseous system and connective tissues	13%
Diseases of the urogenital system	12%
Other diagnoses not included in the options	14%

HIGHLIGHTS OF 2010

JANUARY

| Holte Medical, a.s., the Na Homolce Hospital subsidiary, sent one hundred thousand Czech crowns to people suffering from earthquake in Haiti.

MARCH

| The Na Homolce Hospital was among one hundred most admired Czech companies. In 12th annual contest organized by the Czech Top 100 Association, it ranked third in the category of personal, public and social services.

APRIL

| Official putting of a new Perfexion Leksell gamma into the routine clinical operation in the presence of the Prague Archbishop, representatives of the Ministry of Health CR, State Office for Nuclear Safety and the manufacturer Elekta.

| Based on the audit of the Ministry of Health CR, the Na Homolce Hospital was granted the statute of Cerebrovascular center of Ist grade.

AUGUST

| The Na Homolce Hospital won a prestigious ČEKIA Stability Award for 2009. Based on the evaluated criteria, it ranked amount one hundred most stable Czech companies.

SEPTEMBER

| Department of Neurosurgery of the Na Homolce Hospital, which is one of the biggest centers of its type in the Czech Republic, celebrated 20 years of its foundation.

| Opening of Homolka kindergarten for children of the Hospital staff.

NOVEMBER

| Within the Health Care Institute competition, the Na Homolce Hospital ranked first among the Czech hospitals from the viewpoint of patients, employees and financial health.

| Radiologists of the Na Homolce Hospital carried out CT examination of the skeletal remains of the famous Danish astronomer Tycho Brahe (1546-1601) for Danish scientists.

DECEMBER

| Department of Radiodiagnostics put into operation a new device CT Siemens Somatom Flash.

PERSONNEL AND SOCIAL POLICY

In terms of the personnel policy, the year 2010 was for Na Homolce Hospital very successful. After a long time The Hospital succeeded in filling all the planned positions in all employee categories.

In 2010, the Na Homolce Hospital employed 1803,50 employees (average FTE) and the average salary increased to CZK 35 668. Staff salaries totalled CZK 772 millions.

Personnel and salary data for individual employee categories is shown in the table below.

Personnel and salary data by individual categories

	Physicians	Pharmacists	General nursing staff	Non-physician healthcare staff § 7 – 21	Non-physician healthcare staff § 22 -28	Non-physician healthcare staff § 29 - 42	Other specialized staff non-physician	Technicians	Workers	Total
Total salaries paid (CZK)	223 996 123	4 880 640	295 674 036	45 259 311	20 570 916	53 127 993	3 612 800	88 198 299	36 550 838	771 870 956
average number of employees (FTE)	265,31	8,36	763,21	109,21	47,63	206,11	7,27	239,81	156,29	1 803,20
Average salary	70 357	48 651	32 284	34 535	35 991	22 148	41 412	30 649	19 489	

OUR ACTIVITIES



CLINICAL PROGRAMS – SUMMARY OF ACTIVITIES

NEUROLOGICAL-NEUROSURGICAL PROGRAM (NEUROPROGRAM)



It offers comprehensive care to patients with diseases of or injuries to the central and peripheral nervous system and with diseases of or injuries to the spine.

DEPARTMENT OF NEUROLOGY

Head of Department Miroslav Kalina, MD

The department focuses on diagnostics and non-surgical treatment of diseases of the brain, spinal cord, peripheral nerves and muscular apparatus, using special electrophysiological and ultrasonic diagnostic methods. It also provides complex outpatient and ward care in these specialized areas.

The department includes an **Epilepsy Center**, providing specialized outpatient and ward care for patients suffering from epilepsy. This comprises two epilepsy counseling units and an epilepsy monitoring unit (EMU) which, in addition to its other activities, conducts long-term monitoring and selection of patients for epileptosurgical treatment and provides consultancy for neurological centers throughout the Czech Republic. In 2010, 226 patients were admitted to the EMU, of whom 14 were monitored by surgical implantation of electrodes and 38 were indicated for epileptosurgical treatment – open surgery, implantation of vagus nerve stimulator or stereotactic thermolesion. The method of stereotactic thermolesion was used to treat 14 patients and the Na Homolce Hospital is the only center in the world that performs this treatment of temporal epilepsy in such a scope and with the results comparable with those of open epileptosurgery. Characteristic for the treatment of epileptic patients is a close interdisciplinary cooperation between the Hospital's neuroscience departments. Alongside the Department of Neurology, the following departments traditionally participated in their treatment: the Department of Neurosurgery, the Department of Stereotactic and Radiation Neurosurgery, the Department of Radiodiagnostics and the Department of Nuclear Medicine/PET Center. Na Homolce Hospital is one of the three largest epilepsy and epileptosurgical centers in the Czech Republic, with the highest number of operated on patients.

The **Specialized Intensive Care Unit** for the treatment of acute and critical neurological cases also serves as a postgraduate training center for neurological intensive care. In the course of 2010, 12 intra-arterial thrombolyses and 25 intravenous thrombolyses were performed on intensive care patients, which is a slight increase as compared to 2009.

In addition to the outpatient clinic for the treatment of general neurological disorders, the outpatient care includes the **neurovascular clinic and the spinal counseling unit**, which also refers patients for surgical interventions to the spinal canal, and the **counseling unit for extrapyramidal disorders and for neuroimmunological CNS diseases**. The diagnostics section comprises the **evoked potentials laboratory, the EEG laboratory, the electromyographic laboratory and the transcranial Doppler ultrasound unit**.

Developing its activities in the past period was also the **Sleep Disorder Center** which includes a sleep laboratory with two monitored beds enabling monitoring by sleep polygraphy. In 2010, 197 patients were admitted to the Center due to sleep disorders.

Department of Neurology is part of the **Comprehensive Cerebrovascular Center** the status of which the Na Homolce Hospital gained in April 2010. Head of Department of Neurology is also Head of this Center.

In 2010, physicians of the Department of Neurology were involved in undergraduate teaching for 1st and 3rd Faculties of Medicine of Charles University in the field of acute neurology, neurointensive care, epileptology and electroencephalography, and in postgraduate teaching within the Institute for Postgraduate Studies.

NEUROLOGICAL-NEUROSURGICAL PROGRAM (NEUROPROGRAM)

The department focuses on diagnostics and non-surgical treatment of diseases of the brain, spinal cord, peripheral nerves and muscular apparatus, using special electrophysiological and ultrasonic diagnostic methods. It also provides complex outpatient and ward care in these specialized areas.

Basic data

Number of physicians	15
Number of general nursing staff	62
Administrative staff	2
Number of beds	33
- Standard	21
- Intensive	6
- EMU	4
- Sleep laboratory	2
Bed occupancy rate (as a %)	
- Standard	76.4
- Intensive	94.3
Average length of stay (in days)	5.2
- Standard	4.2
- Intensive	10.3
Number of outpatient examinations	18 744
Number of admissions	1287

DEPARTMENT OF NEUROSURGERY

Head of Department Michal Šetlík, MD

In 2010, the Department of Neurosurgery focused on further developing its complex diagnostic, surgical and follow-up care for patients suffering from diseases of the central and peripheral nervous system in order to provide a comprehensive and safe treatment to improve the quality of life of its patients.

The four standard key areas of patient therapy, namely the **neurooncological, neurovascular, epileptosurgical and spinal programs**, were complemented by a new specialization in **neurointensive care**. The total number of operations performed during 2010 was 2,437. In total, 2,358 patients were admitted to the Department's wards and 12,008 patients were treated in the outpatient departments. Department of Neurosurgery is a center with a distinct above-regional coverage in the treatment of a number of diagnoses, both in national and international terms. Morbidity in the planned operations corresponds to both the national and international indicators and concerns as a rule patients with severe diseases that cannot be managed in other facilities in the Czech Republic.

In 2010, routine operations were performed in the reconstructed multifunctional complex of operating theaters equipped with intraoperative magnetic resonance imaging and intraoperative electrophysiological monitoring. Integration of operating theater technologies allows providing patients undergoing operations of the brain, spinal cord or spine with a high standard of a precisely targeted, most efficient and safe treatment.

In the **Neurooncological program**, in addition to a standard and usually combined treatment of patients, the cooperation within the TTF project (the treatment of malignant primary cerebral tumors by magnetic pole) further continued.

Inter-sectoral neurooncological seminars attended by a multidisciplinary team of specialists from Na Homolce Hospital and oncologists from the Motol Teaching Hospital, who recommend suitable follow-up oncological treatment, were held regularly in the period under review.

Under the **Neurovascular Program**, the Department of Neurosurgery continued to centralize patients with diseases of the intracranial vessels at the Na Homolce Hospital during 2010, offering the option of combined treatment of these diseases by open surgery or endovascular intervention. A team of experienced specialists provide patients suffering from these potentially life-threatening diseases with 24-hour care.

A significant event for the Na Homolce Hospital in 2010 was gaining the status of a Comprehensive Cerebrovascular Center, where neurosurgery is a core department.

In cooperation with the Department of Neurology, criteria for indicating patients for decompression craniectomy were set for certain types of strokes due to ischemia and for bypass surgeries between extra- and intracranial blood vessels.

If these conditions are treated with open surgeries, the perioperative dopplerography of intracranial arteries is uniquely used. With a new surgical microscope it was possible to introduce into routine

NEUROLOGICAL-NEUROSURGICAL PROGRAM (NEUROPROGRAM)

In 2010, the Department of Neurosurgery focused on further developing its complex diagnostic, surgical and follow-up care for patients suffering from diseases of the central and peripheral nervous system in order to provide a comprehensive and safe treatment to improve the quality of life of its patients.

practice the intraoperative infrared fluoroscopic angiography allowing intraoperative checking of patency of vessels during surgery and particularly after clipping of cerebral aneurysms. In 2010, the Department of Neurosurgery of the Na Homolce Hospital finished the international double blind randomized multicentric study CONSCIOUS-2 focused on treatment of vasospasms after operations of bleeding brain aneurysms.

Within the **Epileptosurgical Program**, Department of Neurosurgery of the Na Homolce Hospital is one of the largest centers in the Czech Republic. Working together with the Department of Neurology, the Leksell Gamma Knife unit, the Department of Radiodiagnostics and the PET Center, the total number of indicated and operated on patients stabilized at between thirty and forty annually and the total number of patients with drug resistant epilepsy operated on here has already reached around 300. Resections were performed on patients using standard navigation techniques and stimulation treatment (the application of vagal nerve stimulators) was also applied. Treatment of chronic pain was further developed in cooperation with the Anesthesiology and Resuscitation Department (neurostimulation of the spinal cord).

Within the framework of the **Spinal Program**, the Department of Neurosurgery has ranked for several years now as one of the most successful and active centers in the Czech Republic. The surgeries are performed on the whole length of the spine using all access paths to treat degenerative diseases as well as trauma and oncological patients. The preferred method is so called "minimally invasive"

spondylosurgery, using navigational or transcutaneous techniques. A significant contribution of the last year is routine use of screw augmentation allowing to perform fixation also in patients with osteoporosis where these procedures could not be used until then.

The Department of Neurosurgery of the Na Homolce Hospital is a **Center of Excellence in navigated neurosurgery and neurosurgery for the dynamic stabilization of the cervical spine** (Bryan, Prestige, Prospace, Discover) **for the Czech Republic and countries in the East European region.**

In 2010, the team of the Department of Neurosurgery was involved in postgraduate teaching within the Institute for Postgraduate Studies.

In 2010, the Department of Neurosurgery participated in 2 grant projects, 2 clinical studies, namely Prodisc C Nova study and L-Active FDA Study, and 2 world multicentric randomized studies, namely ABC x CSLP Study a Conscious-3.

NEUROLOGICAL-NEUROSURGICAL PROGRAM (NEUROPROGRAM)

Basic data

Number of beds	65
- Standard	45
- Intensive	8
- Intermediate	12
Number of physicians	18
Number of general nursing staff	110
Number of outpatient examinations	12 008
Number of admissions	2 358
Number of days of treatment	19 324
Bed occupancy rate (as a %)	88,2 %
Average length of stay (in days)	8,19

Breakdown of surgical interventions

Cerebral tumors	264
Cerebro-vascular diseases	86
Spinal diseases including tumors	1 331
Injuries	90
Epileptosurgery	24
Other	627
Total	2 437

Number of surgical interventions

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1837	1930	1 974	2 203	2 107	2 115	2 226	2 152	2 495	2 437

DEPARTMENT OF STEREOTACTIC AND RADIATION NEUROSURGERY

Head of Department Ass. Prof. Roman Liščák, MD, PhD

The clinical activity of the Department is focused on the non-invasive radiosurgical treatment promarily of certain types of cerebral tumors, cerebral vascular malformations and functional diseases of the brain using the Leksell gamma knife as well as on stereotactic and functional neurosurgery. The outpatient clinic, in addition to providing consultation and follow-up care for the department’s neurosurgical patients, also offers specialized ophthalmologic, neurophysiological and neurological care.

At the end of 2009, a new Leksell gamma knife Perfexion was put into operation and since the beginning of 2010 it has been in full use for the benefit of patients. The latest model of the Leksell gamma knife, Perfexion, extends the range of the treated indications and allows radiosurgical interventions in the region of the head and neck which is important particularly in the treatment of metastatic cancer. It provides patients with a much higher safety, accuracy and comfort of the treatment. Its part is the Extend system which complements the range of use of the gamma knife by a fractionated radiotherapy without the use of stereotactic frame, i.e. non-invasive method. The Na Homolce Hospital was the first in the world to introduce fractioned radiotherapy with the Leksell gamma knife. The Leksell gamma knife Perfexion equipped with the mentioned system is currently the most sophisticated radiosurgical device in the world.

The number of patients treated in the department reached 960 in 2010. The total number of surgical interventions performed in the department was 1,146 (including 960 Leksell gamma knife irradiations and 186 other surgical interventions). Neurostimulators to treat movement disorders were implanted and re-implanted in 27 patients. As concerns the patient composition, the share of patients from abroad, from Poland in particular, significantly increased and accounted for the total of 12% of patients.

The Department of Stereotactic and Radiation Neurosurgery is the only center of its kind in the Czech Republic and the East European region. The quality of its work and the range of its experience have ranked it among the prominent centers of its type worldwide.

In 2010, physicians of the Department were involved in undergraduate teaching for 1st and 3rd Faculties of Medicine of Charles University and in postgraduate teaching within the Institute for Postgraduate Studies.

Basic data

Number of beds	0
- Day care	8
Number of physicians	6
Number of supervised medical staff, technical and administrative staff and X-ray assistants	6
Number of general nursing staff	13
Inpatient ward	
Number of admissions	766
Number of surgeries by Leksell gamma knife	960
Number of other stereotactic operations	186
Average length of stay (in days)	1,38
Outpatient clinic	
Number of outpatient consultations	912
Number of EMG examinations	52
Eye clinic	64
Follow-up examinations	2 153

Number of patients treated by Leksell gamma knife

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
735	781	803	856	798	802	819	832	856	960

CARDIOVASCULAR PROGRAM



It covers the full range of preventive, diagnostic and therapeutic methods for patients with diseases of the heart and blood vessels, or with a high risk of incurring these diseases.

DEPARTMENT OF CARDIOLOGY

Head of Department Ass. Prof. Petr Neužil, MD, PhD, FESC

The clinical activities of the Department cover the full range of preventive, diagnostic and therapeutic methods for patients with diseases of the heart and blood vessels, or with a high risk of incurring these diseases. Similarly as in previous years, the Department provided full coverage of several individual specialized areas in 2010.

Acute cardiology along with its coronary unit provides full cardi-ological intensive care to patients suffering from acute diseases of the heart in the whole range of this specialization. The Department has adequate equipment for monitoring, support or substitution of essential vital functions. In the course of 2010, the puncture tracheostomy program was further developed; the method of endovascular monitoring of body temperature was extended, and the unique program continued of a short-time use of percutaneous and miniinvasive extracorporeal support of circulation for patients in cardiogenic shock, as a support in coronary and non-coronary interventions associated with certain risk continued and as a life-saving procedure in patients who could not be resuscitated from cardiac arrest by standard methods. New procedures were introduced in the period under review, including continuous monitoring of tissue perfusion and cardiac output by the Vigilance and Vigileo methods.

Intervention cardiology includes the catheterization laboratory that deals with diagnostics of diseases of the coronary arteries, including therapeutic interventions, and the multifunctional catheterization center. In 2010, the catheterization laboratory performed 3,072 catheterizations and 1,292 implantations of stents, which is the historically highest number of these procedures performed. In close cooperation with the Department of Cardiac Surgery, the Department introduced a new procedure, namely trans-catheter aortic valve im-

plantation in patients with a significant aortic stenosis which is contraindicated for conventional cardiac surgery. In the same year, the Department started to apply a completely new diagnostic method in the form of routine examination of fractional flow reserve of the myocardium. It is an invasive examination used to determine the functional significance of stenosis of the coronary artery. The dominating procedure in the clinical practice of performance of left-sided cardiac catheterizations and coronary interventions became the radial artery approach. For coronary interventions, a special stent was introduced to treat stenoses in the ramifications of coronary arteries.

Intervention cardiology also covers **cardiac electrophysiology**, and in particular the diagnostics and treatment of cardiac rhythm disorders. For some time now, the Na Homolce Hospital has been one of the largest European centers specializing in this field. As compared to 2009, additional increase (by about 10%) was recorded in the number of ablations - 847, as a result of which the Na Homolce Hospital still ranks first in the Czech Republic. The increase was recorded particularly in ablations for atrial fibrillation - in total 355 interventions (i.e. increase by 34%). Complex interventions (electroanatomical mapping, robot-assisted ablations) accounted for approx. 50% of all ablations. Cardiologists of the Na Homolce Hospital were the first in the world to perform ablation for atrial fibrillation by means of a laser balloon (CardioFocus). Within the study, a special RF ablation catheter (Voyge) with direct visualization of endocarditis-induced lesion was used to treat flutter and atrial fibrillation. In patients with atrial fibrillation, the program of implantation of occluders of the auricle of the left ventricle continued with a focus on prevention of thromboembolism, and the range of the occluders used was expanded.

The clinical activities of the Department cover the full range of preventive, diagnostic and therapeutic methods for patients with diseases of the heart and blood vessels, or with a high risk of incurring these diseases. Similarly as in previous years, the Department provided full coverage of several individual specialized areas in 2010.

In terms of the number of implantations of cardiostimulators and defibrillators, the Department is among the biggest centers in Europe and within the Czech Republic it is the center with the highest number of these implantations (1223 in the last year). The Department specializes in implantation of defibrillators (ICD) and cardiac resynchronization therapy. In 2010, cardiologists of the Na Homolce Hospital were the first in the Czech Republic to implant subcutaneous ICD (S-ICD) in the total of 6 patients.

In 2010, the Department of Cardiology of the Na Homolce Hospital became **a training center for robot assisted navigation (Hansen Medical) for the Central and East Europe.**

Non-invasive cardiology continued to offer patients a wide range of diagnostics of cardiovascular diseases during this period, including ultrasound, electrocardiography stress tests and echocardiograms, as well as long-term monitoring of cardiac rhythm and blood pressure, among others. In 2010, the number of echocardiographic examinations again increased. To reflect this tendency, a new echocardiographic device was acquired, meeting the requirements for the whole range of the respective examinations and introducing 3D echocardiography into practice. Its benefits are used particularly in cooperation with invasive cardiology and cardiac surgery. In the period under review the Department also applied for accreditation in echocardiography granted by EAE (European Association of Echocardiography).

Clinical cardiology traditionally covered diagnostics and treatment of cardiovascular diseases both in hospital wards as well as in specialized outpatient clinics, and participated in providing the final treatment and physiotherapy for acute conditions and in the treatment of chronic diseases of the circulatory system. The total number of 12 000 patients were treated in the outpatient clinics in 2010.

Outpatient care was complemented by **outpatient clinic specialized in treatment of chronically anticoagulated patients.**

The specialized **Heart Failure Unit**, which offers continuous follow-up of patients with heart failure and care for patients at a less advanced stage of the disease, examined a total of 1,534 patients during 2010. In addition, a program of multidisciplinary care for patients with heart failure was further developed, in cooperation with all departments and clinics of different specialization.

The specialized unit for treatment of arterial hypertension examined in total 1,877 patients.

In 2010, physicians of the Department were involved in undergraduate teaching for 1st Faculty of Medicine of Charles University.

In 2010, the Department of Cardiology continued its activities within the international multicentric study FREEDOM. In the same year the Department of Cardiology participated in another 20 clinical studies.

CARDIOVASCULAR PROGRAM

Basic data

Number of beds	52
- Standard	30
- Intermediate	4
- Intensive	18
Daycare clinic	5
Number of physicians	29
Number of general nursing staff	117
Number of outpatient examinations	39 260
Number of hospitalization	4 737
Number of days of treatment	14 770
- Standard	9 474
- intensive	5 296
Bed occupancy rate (as a %)	79,63
- Standard	78,27
- intensive	82,18
Average length of stay (in days)	3,12

Non-invasive cardiology

General outpatient clinic	14069
Angiology	4045
Arrhythmology	7414
Transthoracic echocardiography	6975
Transesophageal echocardiography	732
Dobutamine stress test	6
Holter ECG+Recollect	1593
Exercise ECG/stress test	944
Spiroergometry	12
Blood pressure monitoring	1346
Loop monitoring	290
Tilt test	47
Anticoagulation outpatient clinic	1450

CARDIOVASCULAR PROGRAM

Angiography Unit - Specialized procedures

Diagnostic catheterization	3072
Ventriculography	984
Bilateral cardiac catheterization	253
Percutaneous Coronary Intervention (PCI)	1027
Primary PCI (in AIM)	257
Stents:	
Number of patients	975
Number of stents	1295
Fraction flow reserve (FFR)	157
Intravascular ultrasound	52
Alcohol septal ablation	10
DSS/PFO occlusion	25
Immediate complications after PCI:	
Emergency bypass surgery (CABG)	0
Mortality associated with PCI	1

Coronary Unit

Total admissions	791
Clinically significant ventricular arrhythmias	216
Acute coronary syndrome	435
Acute heart failure	216
Infectious endocarditis	16
Hypothermia following cardiopulmonary reanimation	22
Pulmonary embolism	21
Average length of stay (in days)	2
Total mortality (as a %)	5,05

Multifunctional Catheterization Unit

Electrophysiology	
Total ablations	847
AVNRT	110
WPW	64
Atrial flutter	147
Atrial fibrillation	355
- Paroxysmal	247
- Persistent	108
Atrial tachycardia	44
Ventricular tachycardia	110
- Structural	59
- Idiopathic	51
Other	17
Left atrial appendage occlusion	21
Pacemaking	
Total	1223
Primary pacemaker implantations	425
Pacemaker reimplantations	265
Primary ICD implantations	300 (of which 1x Cameron)
ICD reimplantations	82
Total CRT	200 (primary + reimplantations)
Pacemaker and ICD lead extractions	52

DEPARTMENT OF VASCULAR SURGERY

Head of Department Ass. Prof. Petr Štádler, MD, PhD

The Department deals with surgical and angioradiological invasive diagnostics and treatment of diseases of the vascular system, primarily the narrowing or complete occlusion of the blood vessels as a result of atherosclerosis, and also with the injuries of arterial and vascular system except for coronary arteries, ascending aorta and the aortic arch. It is the only center of its type, with nationwide coverage of complex vasculo-surgical problems, ranging from radical replacement of the thoraco-abdominal aorta to palliative interventions such as radiofrequency sympathectomy. The surgery is focused on minimally invasive approaches using endovascular and robot-assisted methods. The department provides 24-hour emergency surgical care for all acute vasculo-surgical conditions.

In 2010, the range of surgical interventions covered **operations on branch arteries of the aortic arch, operations on the thoracic and abdominal aorta including aneurysms, reconstruction of arteries supplying abdominal and retroperitoneal organs, arteries serving the limbs, as well as surgery to treat varicose veins and unique transplantations of vascular grafts in the treatment of infection of vascular prostheses.** A significant growth was recorded in 2010 in the number of operations on the thoracic and abdominal aorta where the surgical strategy of the treatment of thoracic and thoracoabdominal aneurysms was adjusted. One of the most numerous groups was traditionally the group of patients with ischemic disease of the lower limbs and the patients with narrowing of arteries supplying blood to the brain. Miniinvasive medical interventions performed in the Department included thoracic sympathectomies

by thoracoscopic method, laparoscopic lumbar sympathectomies, endoscopic operations of the varicose veins, operations of abdominal aorta from reduced surgical approaches, so-called minilaparotomies, and particularly robot-assisted vascular surgery.

In 2010, the vascular surgery at Na Homolce Hospital further fostered its **worldwide leading position in the area of robot-assisted vascular surgery.** Robot-assisted operation of aortoiliac aneurysm and operation of double splenic artery aneurysm performed in this Department had a world premiere here. Within cooperation of the Na Homolce Hospital and the Methodist Hospital, Texas, USA, a robot-assisted vascular surgery program is planned to be launched in the Methodist Hospital. Head of Department was granted the status of Visiting Professor by the Texas Medical Board. By the end of 2010, the Department performed 202 robotic vascular interventions which is an outstanding achievement in this field. A number of robotic operations performed in the Department of Vascular Surgery of the Na Homolce Hospital had a world premiere here, and the Hospital's experience with robot-assisted vascular surgery has been well received by the professional public at home, as well as abroad, particularly in the USA and Asia. The Department of Vascular surgery of the Na Homolce Hospital is an international training center for robot-assisted vascular surgery.

Endovascular surgery represents another significant area of the Department's activities that focuses on implantations of stentgrafts in the treatment of abdominal aneurysms or thoracic aorta. Implan-

CARDIOVASCULAR PROGRAM

tation of stentgrafts, intraoperative angiography or intraoperative angioplasties are performed as a standard in cooperation with the Department of Radiodiagnostics of the Na Homolce Hospital. A specialized team of physicians was established for this purpose.

The Department of Vascular Surgery serves as a training center in vascular surgery for postgraduate studies at the Institute for Postgraduate Studies. It also functions as a specialized consultancy for serious and complicated angiosurgical cases.

In 2010, physicians of the Department were involved in undergraduate teaching for 1st Faculty of Medicine of Charles University and in postgraduate teaching in the field of vascular surgery for the Institute for Postgraduate Studies and robot-assisted surgery for the European Institute of Telesurgery.

Basic data

Number of physicians	17
Number of general nursing staff	105
Number of nursing and paramedical staff	17
Number of hospital porters	1
Technicians	3
Number of outpatient examinations	12 431
Number of beds	61
- Standard	36
- Intermediate	13
- Intensive	12
Number of admissions	2231
Bed occupancy rate (as a %)	83,11
Average length of stay (in days)	7,81
Number of days of treatment	17 446
Mortality (as a %)	1,7

Total number of operations

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1 349	1 552	1 573	1 625	1 410	1 585	936	906	906	1 390

Breakdown of vascular and general surgical interventions

Thoracic aneurysm	33
Abdominal aneurysm	139
Aneurysms of pelvic arteries	4
Aneurysms of popliteal artery	12
Aortofemoral reconstructions	34
Penvic reconstructions	28
Extraanatomic reconstruction in aortoiliac area	17
Solution of infection of vascular prothesis	27
Operations on branches of the aortic arch	208
Femoropopliteal proximal reconstruction	62
Total crural reconstructions	136
Operation on varicose veins	150
Minimal invasive surgery	
Robotic operations	35
Laparoscopic operations	12
Thoracic sympathectomy thorascopic method	11
Lumbar sympathectomy laparoscopic method	8
Endoscopic sampling of VSM for reconstruction	6

DEPARTMENT OF CARDIAC SURGERY

Head of Department Štěpán Černý, MD, PhD, MBA

Department of Cardiac Surgery of the Na Homolce Hospital is among the largest centers of cardiac surgery in the Czech Republic. It deals with complex surgical treatment of diseases affecting the heart and the major endothoracic vessels. Its activities also cover outpatient monitoring of selected groups of patients before and after cardiac surgery. In the course of 2010, 763 cardiosurgical interventions were performed in the Department. Despite further shift towards more demanding types of operations, the Department succeeded in achieving excellent results. The average mortality in individual groups of diagnoses shows better values as compared to the national average.

In 2010, the range of cardiosurgical operations reflected a clear tendency of the Department to specialize in **valvular surgery** that accounted for 56.1% of the total number of operations. The program of surgical maintenance of the mitral valves and reconstruction of the left ventricle was further developed, while the ratio of mitral valvuloplasty in the total number of mitral interventions again exceeded 70%. The Department continued to develop also the program of miniinvasive operations of valves within which 130 patients were operated on from 2008.

The number of operations for **ischemic heart disease** accounted for 31.5% of the total number of operations performed in the period under review.

In the period under review, the Department worked in collaboration with the Department of Cardiology on the successful development of **intraoperative cryoablations in patients with chronic atrial fibrillation (MAZE)** program, when 185 patients were treated using this method. As a result, the Na Homolce Hospital remains the center performing the highest number of these interventions in the Czech

Republic. In 2010, the Na Homolce Hospital was further developing the program of these interventions in isolated atrial fibrillation, using minimally invasive approach.

Working together with the Department of Vascular Surgery and the Department of Radiodiagnostics, the **interdisciplinary program of care for patients with complex disorders of the aortic arch**, primarily focusing on the endovascular treatment of these diseases, continued in 2010. Na Homolce Hospital is a center with the highest number of interventions performed on thoracic aorta in the Czech Republic.

In 2010, **the program of care for adult patients with congenital heart conditions** was further systematically developed. The program consists of a specialized outpatient clinic for adult congenital heart conditions and of operative and post-operative care, which is provided in the Department of Cardiac Surgery of Na Homolce Hospital, in collaboration with the pediatric Cardiocenter at Motol Teaching Hospital. In 2010, there were almost 500 of these patients operated on at the Na Homolce Hospital.

In 2010, **the da Vinci robotic operating system** continued to be used for cardiosurgical interventions. Certain procedures, for example the robot-assisted closure of the septum defect, became a routine intervention and the method of choice for the surgical treatment of diagnosed heart disorders. In the period under review, cardiac surgeons of the Na Homolce Hospital successfully developed program of a completely robotized mini MAZE cryoablation.

Department of Cardiac Surgery of the Na Homolce Hospital is among the largest centers of cardiac surgery in the Czech Republic. It deals with complex surgical treatment of diseases affecting the heart and the major endothoracic vessels. Its activities also cover outpatient monitoring of selected groups of patients before and after cardiac surgery.

Basic data

Number of physicians	15
Number of general nursing staff	94
Number of nursing and paramedical staff	11
Technicians	2
Number of outpatient examinations	4 457
Number of beds	34
- Standard	14
- Intermediate	10
- Intensive	10
Number of admissions	868
Bed occupancy rate (as a %)	85,3
Average length of stay (in days)	12,1
Number of days of treatment total	10 427

Surgical interventions

Isolated aortocoronary reconstructions	241
Combined aortocoronary reconstructions (EACI, MAZE etc.)	37
Coronary valve replacement/reconstructions	428
Isolated operations on the ascending aorta and the aortic arch	26
Other (myxoma, pericardectomy, PM extraction)	19
Epicardial stimulator electrode implants	12
Total	763
MAZE operations (combined with ACB and valvular surgery)	185
Total thoracic aorta operations (combined with other interventions)	66
Robot-assisted interventions	9
Acute and emergency operations	145
Planned operations	618

DEPARTMENT OF CARDIOANESTHESIOLOGY

Head of Department Pavel Jehlička, MD

Department of Cardioanesthesiology was established as a separate unit in 2008 as part of the Cardiocenter of the Na Homolce Hospital.

Its core activities include two basic fields, namely anesthesiologic care for the departments of cardiosurgery and cardiology and intensive care for the cardiosurgical Unit of postoperative and resuscitation care.

In the field of anesthesia, it provides care of patients who undergo cardiosurgical operations with or without extracorporeal support of circulation, cardiosurgical robot-assisted operations or cardiosurgical operations with minimally invasive approach. In cardiological patients, it ensures anesthesia in complicated mapping of the heart in arrhythmology, anesthesia in extraction of stimulation systems and anesthesia for electrical cardioversions.

In the field of intensive care it ensures operation of the cardiosurgical Unit of postoperative and resuscitation care, closely cooperates also with the cardiosurgical Unit of intermediate care. At the same time it provides consultancy within the Cardiocenter scope in other units of intensive cardiological care. Together with the Department of Cardiology and Department of Biomedical Engineering it is involved in the program of extracorporeal support of circulation in patients in cardiogenic shock.

As the only department in the Czech Republic, the Department of Cardioanesthesiology ensures anesthesia in robot-assisted operations within cardiosurgery and anesthesia in operations of adult patients with congenital heart conditions.

CARDIOVASCULAR PROGRAM

Department of Cardioanesthesiology was established as a separate unit in 2008 as part of the Cardiocenter of the Na Homolce Hospital. **Its core activities include two basic fields, namely anesthesiologic care for the departments of cardiosurgery and cardiology and intensive care for the cardiosurgical Unit of postoperative and resuscitation care.**

Basic data

Number of physicians	8
Number of general nurses	7

Total number of anesthetics administered

cardiosurgery	836
cardiology	600
operations lasting more than 2 hours	1304
patients over 65 years	1344

GENERAL MEDICAL CARE PROGRAM



This program offer a complete range of modern diagnostic and therapeutic methods for deceases related to internal medicine and general surgery, with a focus on minimally invasive surgery.

DEPARTMENT OF INTERNAL MEDICINE

Head of Department Robert Wohl, MD

The Department's activities include ensuring preventive, diagnostic and conservative treatment for diseases of internal nature, with distinct above-regional sub-specializations in gastroenterology and pneumology.

One of the traditional activities of the Department includes care for patients with the short bowel syndrome and ensuring long-term parenteral nutrition, including treatment of complications (septic, thrombotic) inevitably associated with this therapy. The Department uses routinely bedside sonography and interventions under the ultrasound control (central cannulation, dg/ evacuation puncture etc.).

In addition to the services of general internal medicine, the **outpatient services also comprise diabetology, endocrinology, domestic parenteral nutrition consultancy, obesitology, lipid-focused consultancy, quit smoking consultancy and acute treatment clinics** that serve for the treatment of outpatients requiring acute treatment, administration of infusions, including planned hemosubstitutions, and diagnostic and therapeutic interventions.

In 2010, the Department continued to provide the necessary clinical back-up to the key parts of the Na Homolce Hospital's Cardiovascular program and Neuroprogram. The **intensive care unit** focused on

internally polymorbid patients, and particularly on patients suffering from complicated infections.

In the area of gastroenterology, the double balloon enteroscopy was introduced into routine practice in the period under review. The unit was equipped with a gastroscope and a colonoscope with NBI (narrow band imaging) allowing more precise diagnostics of diseases of the digestive tract, and with an endosonograph with a surgical channel. The **Gastroenterologic Unit** serves as a center for biological treatment of unspecified intestinal inflammations and for screening of colorectal carcinoma.

The Department of Internal Medicine includes the **Pulmonary Endoscopy Center** with a nationwide coverage. It offers comprehensive bronchologic diagnostics including autofluorescent bronchoscopy, NBI (narrow band imaging) and endobronchial ultrasonography – unique in the Czech Republic. The range of Center's services also features rigid bronchoscopy under general anesthesia, endobronchial rechannelling, electrocauterization and implantations of endobronchial stents. The pleuroscopy using semirigid videopleuroscope is also performed in the Department, a unique method in the Czech Republic, which allows precise diagnostics and therapy of the pleural syndrome. The new diagnostic methods combined with the existing

The Department's activities include ensuring preventive, diagnostic and conservative treatment for diseases of internal nature, with distinct above-regional sub-specializations in gastroenterology and pneumology.

ones (such as PET-Center at the Department of Nuclear Medicine) provide exceptional opportunity for early diagnosis and staging of carcinoma of the bronchi in the Czech Republic. In 2010, the Center developed the program of bronchoscopic lung volume reduction in patients with severe emphysema by means of insertion of valves into bronchi.

In 2010, physicians of the Department of Internal Medicine were involved in undergraduate teaching for 1st and 3rd Faculties of Medicine of Charles University as well as in postgraduate teaching. Also in 2010, the Department acted as a training center in the specialized field of "Artificial Nutrition and Metabolic Care".

Specialized interventions

Gastroscopy	2 386
Colonoscopy	2 436
Endoscopic sonography	609
ERCP	482
Endoscopic papilosphincterotomy	245
PEG	14

Basic data

Number of beds	29
- Standard	21
- Intensive	8
Number of physicians	24
Number of general nursing staff	54
Number of outpatients examinations	35 713
- Internal medicine clinic	26 915
- Gastroenterological examinations	8 798
Flexible and autofluorescent bronchoscopy	2 357
Functional examination of lungs	4 015
Number of admissions	1 182
Number of days of treatment	9 481
Bed occupancy rate (as a %)	
- Standard	89,71
- Intensive	93,6
Average length of stay (in days)	
- Standard	6,18
- Intensive	6,45

DEPARTMENT OF ONCOLOGY

Head physician Martin Šafanda, MD

The Department of Clinical Oncology specializes in the **treatment of adult patients with malignant tumors**. Oncological treatment is divided into 4 key areas: gastroenterological program, mammological program, urogynecological program and pneumooncological program.

With the exception of therapy by irradiation, antitumor therapies in all indications are performed in the Department – adjuvant, neoadjuvant and palliative. A team of specialists in the fields of radio-diagnostics, surgery, internal medicine, gynecology and pathology participate in the diagnostic process of the most frequent malignant tumors. The radiotherapy is performed in collaboration with Motol Teaching Hospital.

Na Homolce's Department of Oncology closely cooperates with the Comprehensive Oncological Center of the Motol Teaching Hospital.

Basic data

Number of physicians	4
Number of general nursing staff	5
Number of outpatient examinations	11 125
Number of cycles of chemotherapy	7 280

DEPARTMENT OF GENERAL SURGERY

Head of Department Michal Toběrný, MD, MBA

The Department provides a wide range of services covering diagnostics and surgical treatment in the areas of **general surgery, orthopedics and urology**, while the outpatient clinic also includes **counseling centers for abdominal, gastroenterological and lung surgery and oncosurgery, as well as a counseling center for mammology, phlebology and bariatrics, an orthopedic outpatient clinic, a urological outpatient clinic and a clinic for minor surgical interventions**. The intensive care unit provides post-operative care for complicated and life-threatening conditions.

In the field of **general surgery**, similarly as in previous years, abdominal and thoracic surgery was performed using minimally invasive methods in all areas of laparoscopic surgery, with emphasis on one-day surgery. Intensive cooperation was developed with the hospital in Liberec mainly in the field of lung surgery. Care continued to be provided in oncological surgery of the digestive tract, mammology and bariatric surgery (for morbid obesity). In 2010, the **surgical team** performed the standard range of interventions, primarily using the intraoperative radiofrequency ablation method for the treatment of liver metastasis in colorectal carcinoma, as well as laparoscopic reconstructions of inguinal and frontal hernias, laparoscopic bariatric surgery, operations for anal prolapse and hemorrhoids using the Long method, and laparoscopic surgical interventions to treat the gastro-esophageal reflux disease. During the period under review, further development was achieved in the most demanding laparoscopic procedures on the colon, rectum and gastrointestinal tract using the harmonic scalpel. Robot-assisted interventions were permitted by health insurance companies only for urological operations.

Na Homolce Hospital's Department of Surgery is a **national training center for anal prolapse surgery and the Long method of treatment of hemorrhoids**.

Orthopedic operations performed in 2010 comprised the total replacement of joints, including shoulder and ankle joints, as well as reimplantation of joints and osteotomies in foot surgery. The orthopedic navigational system was routinely used for surgery on large joints. Na Homolce Hospital's Department of Surgery is a reference center for the Orthopilot navigation system used in total joint replacement.

Urological operations included, similarly as in previous years, open and endoscopic surgery on the urinary system, including urological oncosurgery, using minimally invasive laparoscopic, cystoscopic and ureterorenoscopic surgical techniques. In 2010, **da Vinci robotic operation system** was routinely used during urologic surgical procedures (in particular for radical prostatectomies, pyeloplasty and kidney resections).

In 2010, physicians of the Department of Surgery were involved in undergraduate teaching for 3rd Faculty of Medicine as well as in postgraduate teaching within the Institute for Postgraduate Studies.

GENERAL MEDICAL CARE PROGRAM

The Department provides a wide range of services covering diagnostics and surgical treatment in the areas of general surgery, orthopedics and urology, while the outpatient clinic also includes counseling centers for abdominal, gastroenterological and lung surgery and oncosurgery, as well as a counseling center for mammology, phlebology and bariatrics, an orthopedic outpatient clinic, a urological outpatient clinic and a clinic for minor surgical interventions. The intensive care unit provides post-operative care for complicated and life-threatening conditions.

Basic data

Number of beds	31
- Standard	16
- Intensive	15
Number of physicians	22
Number of general nursing staff	58
Number of outpatient examinations	40 271
Number of admissions	2 421
Number of surgical interventions	2 582
Number of days of treatment	9 307
Bed occupancy rate (as a %)	89,15
Average length of stay (in days)	3,85
Mortality (number of patients)	8

Number of outpatient examinations

Surgery	16 881
Orthopedics	11 829
Urology	11 561
Total	40 271

Number of admissions by diagnosis

Neoplasms	382
Deceases of the digestive system	881
Orthopedic disorders	652
Urological disorders	122
Benign tumors	88
Morbid obesity	40
Other deceases	256
Total	2 421

Number of surgical interventions

Surgery	1 389
Urology	210
Orthopedics	625
Robotic operations surgery	32
Robotic operations urology	89
Other outpatient interventions	237
Total	2 582

DEPARTMENT OF GYNECOLOGY AND MINIMALLY INVASIVE SURGERY

Head of Department Petr Popelka, MD

The Department's activities cover diagnosis and surgical treatment of gynecological diseases with a focus on minimally invasive operations. The complete spectrum of pelvic and gynecological surgery was concentrated in four clinical programs in 2010: **oncogynecological surgery, urogynecological surgery, complex diagnostics and endometriosis surgery and general gynecologic surgery.**

Oncological and oncolaparoscopic surgery includes classical, laparoscopic, laparoscopically assisted and laparovaginal surgery for tumors of the vulva, cervix, endometrium and ovaries and a follow-up care for patients operated on and receiving oncological treatment in specialized centers. The Department's modern operating methods and state-of-the-art equipment have significantly contributed to improvements in the precision and speed of oncolaparoscopic interventions. Part of the Department's activities is a unique program of complex laparoscopic operation of cervical carcinoma introduced in the Department (and the Czech Republic) in 2007.

Urogynecologic surgery covers both diagnostics and surgical and conservative treatment of incontinence and pelvic floor disorders, where emphasis is placed on laparoscopic solution to these pro-

blems. Surgical procedures include the latest trends in the use of special reticulate implants and put emphasis on comprehensive solution of the given problems while observing the rules of minimally invasive interventions. In total 356 patients with the above mentioned problems were operated on in the Department.

Complex diagnostics and endometriosis surgery program offers patients from the whole Czech Republic a comprehensive treatment comprising radical laparoscopic operations, a predictive histological diagnosis of growth factors and subsequent hormonal therapy with a final check-up to verify its success. Na Homolce Hospital's Department of Gynecology is one of the most experienced centers in the Czech Republic to perform radical operations of retroperitoneal endometriosis. In 2010, the Department performed 28 interventions.

General gynecological surgery offers surgical treatment of infertility, myomatosis, adnexal tumors and cysts; it deals with postoperative adhesions, chronic pelvic pain, inflammation and congenital development disorders of the uterus, particularly syndromes of uterine and vaginal aplasia. Hysteroscopic surgery includes diagnostic and surgical endoscopies of the uterine cavity.

GENERAL MEDICAL CARE PROGRAM

The Department’s activities cover diagnosis and surgical treatment of gynecological diseases with a focus on minimally invasive operations. The complete spectrum of pelvic and gynecological surgery was concentrated in four clinical programs in 2010: **oncogynecological surgery, urogynecological surgery, complex diagnostics and endometriosis surgery and general gynecologic surgery.**

Overall, the number of surgical interventions totaled 1, 966 operations in 2010, of this **96%**, including oncological interventions, were **performed by minimally invasive methods.**

The Department of Gynecology and Minimally Invasive Surgery is one of the twelve centers in the Czech Republic and the seat of the Secretariat and Board of Trustees of the Czech Association of Gynecological Endoscopy and Pelvic Surgery (CSGE).

Basic data

Number of beds	26
- Standard	20
- Intensive	6
Number of physicians	8
Number of general nursing staff	23
Number of outpatient examinations	15 995
Number of admissions	2 007
Number of surgical interventions	1 996
Number of days of treatment	5 612
Bed occupancy rate (as a %)	67,7
Average length of stay (in days)	2,8

DEPARTMENT OF ENT / HEAD AND NECK SURGERY

Head of Department Jan Paska, MD

The Department specializes in diagnostics, and conservative and surgical treatment of diseases of the ears, nose and throat. Surgical interventions in 2010 included so called **one-day surgery**, as well as a **complete range of head and neck surgery**, concentrating on comprehensive oncological ENT surgery, cophosurgical interventions, surgery to the nose and paranasal cavities including endoscopic interventions, complex surgery on the thyroid gland, adenotomy, as well as reconstructive surgery in the area of head and neck, micro-surgery on the larynx, operations to the soft tissues of the head and neck and surgery for injuries to the facial bones. Surgery to the base skull was developed in collaboration with the Department of Neurosurgery.

The **Program of comprehensive treatment of the lower jaw** continued in 2010 and a jaw clinic began routine operations. The therapy for diseases of the lower jaw requires the widest possible range of treatment options – from conservative treatment methods, through minimally invasive methods (arthrocentesis under local anesthesia, initial arthroscopic surgery) to traditional surgery of the jaw (temporomandibular) joint including its total replacement.

In the field of **thyroid surgery** the Department follows the world trend and uses a miniinvasive form of removal of thyroid by the MIVAT method.

The Department's outpatient clinic again provided a comprehensive range of services throughout 2010, including specialized counseling in the fields of **oncology, otoneurology, cophosurgery, otoprosthesis, a rhinopathy clinic, a clinic for thyroid disorders, a**

clinic for corrective nose surgery, a foniatic outpatient clinic, clinic of care for salivary glands and a joint clinic. There was a significant expansion of the services provided by the **sleep and snoring disorders clinic**, particularly in collaboration with the Department of Neurology and sleep disorders laboratories. The department also has a **specialized pediatric practice**. Part of the care is also **aesthetic program** which includes primarily interventions on external ears, external nose and laser operations.

In 2010, the Department of ENT/ Head and Neck Surgery organized a traditional specialized international workshop on diseases of thyroid.

In 2010, physicians of the Department of ENT /Head and Neck Surgery were involved in undergraduate teaching for 3rd Faculty of Medicine and College of Education of Charles University.

GENERAL MEDICAL CARE PROGRAM

Basic data

Number of beds	11
- Standard	8
- Intensive	3
Number of physicians	11
Number of general nursing staff	19
Number of outpatient examinations	30 907
Number of consultations	1 711
Number of admissions	1 194
Number of days of treatment	3 182
- standard	2 263
- Intensive	919
Bed occupancy rate (as a %)	80,29
- Standard	78,58
- Intensive	84,86
Average length of stay (in days)	2,66
- Standard	1,27
- Intensive	1,54

Number of surgical interventions

Operations under local anesthesia	368
Operations under general anesthesia	832
Operations FESS	162
Operations of thyroid gland	163
Ears operations	64

EYE DEPARTMENT

Head physician Petr Novák, MD

The eye department provides a wide range of interventions, both basic and special outpatient ophthalmologic examinations, all **surgical interventions on the anterior eye segment, primarily cataract surgery and cornea transplantation**. The range of the care includes also **glaucoma surgery, surgical treatment of post-injury conditions and operations of eyelids and the surrounding region**. Most operations are performed in the outpatient section, in case of cataract surgery more than 97% interventions. Surgical procedures are based on the advanced methods of eye microsurgery.

Special examinations include computer perimetry, autorefractometry, ultrasound examination and contactless tonometry. Special examinations are provided to outpatients and inpatients of the Na Homolce Hospital, as well as to patients from other hospitals, based on recommendations of ophthalmologists and neurologists.

In 2010, the Department's offer included also **commercial refractory interventions** – extraction of the lens with replacement by monofocal or multifocal implant and implantation of toric and recently also phacic lenses.

Basic data

Number of physicians	6
Number of general nursing staff	6
Number of outpatient examinations	13 420
Total number of patients treated	6 455
Total number surgeries	1 315
Cataract surgery	1 131
Commercial refraction interventions	93
Cornea transplantation	38
Surgical correction of astigmatism	53

DEPARTMENT OF ANESTHESIOLOGY
AND RESUSCITATION (AR)

Head of Department Michael Stern, MD

The Department of Anesthesiology and Resuscitation provides comprehensive care for patients during surgery as well as in the periods prior to and following their operations, the administration of general anesthesia and the more demanding types of local anesthesia. The Resuscitation unit provides comprehensive diagnostics and treatment of patients whose general state of health is affected by disorders to their basic vital functions, so severe as to be life-threatening, and who require the highest level of medical care. The overwhelming majority of cases are patients with injuries to the brain and cranium. The facilities provided by the center include a hyperbaric chamber offering the possibility of artificial pulmonary ventilation and other specialized methods of reanimation treatment. The Department has also a specialized team for treatment of acute pain, that deals with systematic study and treatment of acute pain in inpatients. The pain management clinic deals with problems experienced by patients in chronic pain.

Basic data

Number of physicians	28
Number of general nursing staff	55
Number of hospital porters	6
Administrative staff	1
Number of beds	8
Bed occupancy rate (as a %)	88,2
Average length of stay (in days)	18

Structure of units

- 1 resuscitation unit (8 beds)
- 2 postoperative unit of vascular surgery (20 beds)
- 5 central operating theatres
- 3 operating theatres for general surgery
- 2 operating theatres for gynecology
- 1 operating theatre for robotic surgery
- 8 other operating theatres and unites (ENT, stereotaxis, x-ray, dentistry, eye clinic, NM-PET, gastro, bronchology)
- 1 hyperbaric chamber

Operating activity, hospitalization
and out-patient clinic

Number of hospitalizations	143
Mortality (as a %)	20,7
Total number of anesthetics administered	8998
- Patients over 65 years	3761
- Acute interventions	1321
- Interventions longer than 2 hours	7146
- Regional anesthesia	993
Interventions in the pain clinic	640

CENTER OF ALLERGOLOGY AND CLINICAL IMMUNOLOGY

Head physician Ass. Prof. Vít Petrů, MD, PhD

Center of Allergology and Clinical Immunology of the Na Homolce Hospital provides **complex therapeutic and preventive care to patients with asthma, allergy, immunity defects and other types of immunopathological disorders, including a wide range of clinical and laboratory examinations.** Closely cooperating with the Department is the laboratory of allergology and clinical immunology which is an organizational unit of Department of Clinical Biochemistry, Hematology and Immunology.

Center of Allergology and Clinical Immunology provides complex outpatient services:

-Pediatric outpatient section focuses primarily on children suffering from bronchial asthma, allergic rhinitis, atopic eczema and repeated respiratory diseases.

-Adult outpatient section treats in addition to patients with bronchial asthma and allergies, also patients with primary and secondary immunodeficiencies. Physicians of this section provide consultancy also to other wards of the Na Homolce Hospital, with a focus on patients in intensive care units and patients with systemic autoimmune diseases.

Club of Patients with Allergy and Asthma (AA Homolka Club) continued to carry out its activities also in 2010. The Club is a member of the Association for the Assistance of Chronically Ill Children and has more than 100 members (families). For twelve years now, it has been associating families of allergic children, organizing educational lectures, publishing the bulletin "Motýlek" (Butterfly), distributing the journal "Allergy, asthma, bronchitis". Through its activities, the Club conduces to improvement of the quality of care for children suffering from allergy and asthma.

As part of the Sub-department of Allergology and Clinical Immunology of the Institute for Postgraduate Studies, the Center of Allergology and Clinical Immunology is also an accredited educational center for in-service training of physicians and other medical staff in the field of allergology and clinical immunology and is involved in undergraduate and postgraduate education. Specialists of the Center are also involved in research and development and publication activities.

Basic data

Number of physicians	4
Number of general nursing staff	5
Number of outpatient examinations	19 211
Total number of patients treated	7 544

Number of examinations

Year	Number of patients	Number of examinations	Dermatological tests	Spirometry	Allergen. vaccines
2005	2 733	10 086	24 991	3 925	534
2006	3 011	10 689	27 953	4 166	631
2007	3 208	11 753	26 573	4 268	738
2008	3 198	12 465	31 133	4 148	757
2009	3 455	12 153	31 018	4 908	530
2010	7 544	19 211	39 299	7 807	695

GENERAL MEDICAL CARE PROGRAM

Other outpatients departments

PEDIATRIC DEPARTMENT

Head physician Zuzana Hejtmánková, MD

The Department focuses on diagnostics and treatment of children's diseases, postnatal care and provides services of a general practitioner for children and adolescents up to the age of 19 years. Specialized outpatient units offer pediatric endocrinology, gastroenterology, logopedics, nephrology, neurology, orthopaedics, pneumology and psychology.

In 2010, the neurological and orthopaedic outpatient unit further developed the already established program of neuroorthopaedic screening focused on neurological and orthopaedic observance of patients, primarily on early detection, diagnostics and treatment of musculoskeletal disorders – disorders of gait coordination, postural and neurologically conditioned defects. In cooperation with other pediatric units, the endocrinology center deals with early detection of children with the diagnosis of intrauterine growth retardation and early diagnostics of juvenile thyreopathy. The psychological unit provided diagnostics consultancy of a clinical psychologist, crisis intervention and a long-term follow-up of the respective child. The logopedics unit deals with diagnostics and treatment of speech disorders. The range of specialized services includes also activities of the Pediatric gastroenterological center.

Basic data

Number of physicians	3
Consultants and specialists	14
Number of general nursing staff	5
Number of outpatient examinations	20 601

Other outpatients departments

DEPARTMENT OF DERMATOLOGY

Head physician Richard Šuraň, MD

The Department provides therapeutic and preventive care in the field of dermatovenerology, including diagnostics and long-term follow-up of suspected tumor diseases.

In addition to the basic examination scope, the range of examinations includes also phototherapy by a SUP lamp, electrocauterization, cryotherapy, sclerotherapy for varices, dermatoscopic examination of pigment formations, Doppler and photoplethysmographic examination of the vascular system of the limbs.

Basic data

Number of physicians	1
Number of general nursing staff	1
Number of outpatient examinations	6 603

GENERAL MEDICAL CARE PROGRAM

Other outpatients departments

DEPARTMENT OF DENTISTRY

Head physician Petr Kolčava, MD

Stomatological care covers a full range of outpatient dental care, including prevention, treatment of acute cases and providing consultancy to other Hospital departments.

Basic data

Number of physicians	2
Number of general nurses	1
Number of outpatient examinations	10 593

GENERAL MEDICAL CARE PROGRAM

Other outpatients departments

DEPARTMENT OF PSYCHIATRY

Head physician Jaroslava Skopová, MD

Department of Psychiatry is a specialized outpatient unit that is focused on diagnostics and therapeutic and preventive psychiatric care. It closely cooperates with a number of both outpatient and inpatient departments of psychiatry in Prague, indicated patients are referred to hospitalization.

Basic data

Number of physicians	1
Number of general nursing staff	1
Number of outpatient examinations	2 610

GENERAL MEDICAL CARE PROGRAM

Other outpatients departments

DEPARTMENT OF CLINICAL PSYCHOLOGY

Head physician Martin Kořán, MA, PhD

The Department provides a wide range of diagnostic, psychotherapeutic and consulting services to inpatients and outpatients of the Na Homolce Hospital. Specialized psychological care includes pre-operative psychological preparation of patients before complicated interventions, help in coping with psychological impact of the patients' diseases, psychological diagnostics focused on identification of intellect and mnestic abilities or identification of personality psychopathology that rules out certain medical interventions.

In compliance with the clinical profile of the Na Homolce Hospital, the Department provides **specialized neuropsychological diagnostics and psychotherapeutic care to patients with neurological diseases, specialized psychological diagnostics and psychotherapeutic care to patients with cardiac and vascular diseases** and within internal medicine, it offers **psychotherapeutic care to bariatric patients, including obesitology consultancy and psychosomatic care, psychotherapeutic care to oncological and other patients, including quit smoking consultancy.**

Additional services include **crisis intervention** in acute reactions to unfavorable diagnosis, **psychodiagnostics and psychotherapy of children** with different psychosomatic, behavioural and study problems or **psychological examination** of patients required by various directives and regulations of the Ministry of Health and the General Health Insurance Company. Part of the care is also **psychosomatic and pain treatment consultancy.**

In 2010, the specialists of the Department were involved in undergraduate teaching at the College of Education and Philosophical Faculty of Charles University and postgraduate teaching for the Institute for Postgraduate Studies in the field of clinical psychology.

Basic data

Number of psychologists	4
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Number of outpatient examinations

Psychotherapy individual systematic by 30 minutes	370
Target psychological examination by 60 minutes	355
Control psychological examination by 30 minutes	67
Specific psychological intervention by 30 minutes	179
Crisis intervention by 30 minutes	3
Conversation with family by 30 minutes	37
Telephonic consultation by 10 minutes	28
Psychodiagnosis include challenging psychotherapeutic intervention by 90 minutes	5
Group therapy by 90 minutes	62

DEPARTMENT OF PHYSIOTHERAPY
AND PHYSICAL MEDICINE

Head of Department Ivan Hadraba, MD

The Department provides a comprehensive diagnostic and therapeutic care to restore the physical abilities of patients. Diagnostic-therapeutic services are part of the clinical programs of the Na Homolce Hospital – the Neuroprogram, the Cardiovascular program and the General medical care program. The team of the Department comprises specialized physicians, physiotherapists, nurses and masseurs offering care to both the patients of the Hospital and other patients referred from other medical care facilities.

The range of services provided by the Department includes **diagnostics and treatment of functional disorders of the musculoskeletal apparatus, care after injuries and operations of the musculoskeletal apparatus, preoperative and postoperative care in spinal surgery, care after vascular surgery, orthopaedic-prosthetic care, physiotherapy in the treatment of incontinence in women and men, diagnostics and treatment by computer kinesiology.** Traditional procedures include physiotherapy, hydrotherapy, electrotherapy, massages, lymphatic massages, peat wraps and gas injections.

Basic data

Number of physicians	5
Number of physiotherapists	28
Number of general nursing staff	5
Number of outpatient examinations	20 582
Number of therapeutic procedures	230 816

DEPARTMENT OF RADIODIAGNOSTICS

Head of Department Professor Josef Vymazal, MD, DSc

During 2010, the Department continued to provide services to the Na Homolce Hospital, as well as to other healthcare facilities including those available around-the-clock. The scope of its activities included diagnostic examinations in all areas of radiodiagnostics with emphasis on diseases of the nervous, musculoskeletal and cardiovascular systems, as well as on vascular and non-vascular interventions.

The Department continued to apply **vascular techniques** during the year under review, working closely with the vascular and cardiac surgery departments on a program to implant stents in aneurysms of the abdominal and thoracic aorta and the pelvic circulatory system. The Na Homolce Hospital is thus ranked first in the Czech Republic for the number of implants performed. The Department also further developed the program of endovascular neuroradiological interventions, namely the treatment of brain aneurysms by means of removable coils, where necessary, with the use of remodelling technique by means of stents. The Department started to use new types of remodelling stents and stents with a denser weave that helps the blood to clot and to seal off the aneurysm. Also routinely used was a new two-component adhesive which offers more possibilities in the treatment of intracranial arteriovenous malformations as well as malformations in the region of the spinal canal.

The revascularization treatment for acute ischemic cerebrovascular diseases, based on acute occlusion of one of the main cerebral arteries, was extended by adding the technique involving mechanical removal of the thrombus with the help of MERCI equipment and a new type of extraction device Penumbra, to the intraarterial thrombolysis. The two instrumentation sets are the only ones that acquired the FDA approval for clinical use. Another progress in rechanneling methods is the use of a special fully retractable stent for cerebral arte-

ries allowing capturing of the blood clot and its removal in the stent. During the year under review, the team of the Department of Radiodiagnostics introduced a procedure unique in the world, namely treatment of cerebrovascular diseases, based on acute occlusion of the deep venous system and sinuses by superselective catheterization directly in the deep cerebral veins with a subsequent local thrombolysis, ensuring patency of deep veins and sinuses.

A double-projection angiograph Axiom Artis serving, thanks to superior postprocessing and sophisticated road-mapping, especially for neuroradiological examinations, expands the therapeutic possibilities of vascular interventions in the area of head, spine and other parts of the body.

In the area of **non-vascular methods** the number further grew of performed percutaneous vertebroplasty and kyphoplasty procedures in the treatment of compression fractures of the vertebrae due to osteoporosis or from other causes, in 2010. In this segment of interventional radiology, Na Homolce Hospital is the leading Czech medical facility. A new method was introduced, namely kyphoplasty with insertion of a stent into the vertebra.

The most significant investment in 2010 was replacement of the more obsolete of the two CT devices. Since December 2010 the Department has used the latest dual-source CT Siemens Somatom Flash that is one of the most advanced technologies in the world and that has significantly improved CT diagnostics. This device allows introducing into routine operation CT examination of the heart, including CT coronarography, in a much better quality and with a significantly reduced radiation exposure for patients. In acute cerebrovascular diseases, the Department now performs as a standard a CT perfusion examination of the whole brain.

During 2010, the Department continued to provide services to the Na Homolce Hospital, as well as to other healthcare facilities including those available around-the-clock. The scope of its activities included diagnostic examinations in all areas of radiodiagnostics with emphasis on diseases of the nervous, musculoskeletal and cardiovascular systems, as well as on vascular and non-vascular interventions

In the area of magnetic resonance imaging, the Department launched in 2009 the program of intraoperative MR imaging using a device newly installed in the complex of operating theaters for neurosurgery. In 2010, the number of MRI examinations kept growing. The use of the device also for routine examinations during periods when it is not used in the operating theaters reduced the waiting times for examinations and increased their number.

In the period under review, the Department applied routinely MRI spectroscopic examinations by means of both SVS and CSI in the region of the brain as well as in other parts of the body (prostate, in particular), diffusion imaging and the technique of diffusion tensor and tractography of white matter. At the same time it extended the program of cardiac MRI examination where the newly implemented phase-contrast sequences allow imaging and quantification of the blood flow which is important mainly in examinations of valvular and cardiac shunt defects. During the year it further developed the BOLD functional MR imaging for neuronavigation and deep brain stimulation. The newly acquired breast coil allowed launching a breast MRI examination program in 2010. In cooperation with the Mammography clinic, the first 50 patients were examined by this method during this year.

Mammography clinic is part of the network of accredited clinics and is equipped with a mammography apparatus Planmed Nuance Excel with direct digitalization. The new system offers a much higher quality of imaging, reduces the general dose of radiation and is cost efficient. In the nationwide evaluation of indicators of the quality of mammography screening the mammography clinic of the Na Homolce Hospital ranked in 2010 again among the 5 best clinics of the 60 evaluated centers in the Czech Republic.

All radiography and radioscopy images are filed in digital form in the Hospital information system, where they are immediately available to physicians from the entire Hospital. Thus, starting from 2009, the operation of the Radiodiagnostic Department is fully digitalized, i.e. no films are used. Since 2010, the Department has used electronic requests for all types of examinations. External requests for examinations are converted into electronic form.

In 2010, the Department of Radiodiagnostics participated in two grant projects.

Technical equipment

Angiography center:	1x Multistar Siemens 1x Siemens Axiom Artis biplane 1x OEC 9700 for operating theater
CT unit:	1x Siemens Somatom Flash 1x Siemens Sensation 16
MR unit:	1x Magnetom Avanto 1,5 T 1x Magnetom Symphony 1,5 T 1x GE Signa HDx (neurosurgical operating theaters) 1,5 T
US unit:	3x Toshiba Aplio 1x Toshiba Eccocee 1x GE Logiq 9
Mammography:	1x Planmed Nuance Excel
Basic equipment:	3 radioscopy and radiographic units, mobile x-ray units, PACS work stations, laser cameras.

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Basic data

Number of physicians	22
Number of laboratory technicians	28
Number of general nursing staff	8
Number of administrative staff	9
Photographer	1
Hospital porter	2

Specialized therapeutic interventions in 2010

PTA (with or without implantation of stent)	466
Endovascular treatment of cerebral aneurysms using GDC	37
Local thrombolysis and PTA/stent in the intra-cranial area	15
Other endovascular interventions on cerebral arteries	32
CT-guided interventions	1 646
- of this CT-guided nerve root/joint facet injections	1 248
- Vertebroplasty + Kyphoplasty	104+6
- Radiofrequency ablations	26
- CT-guided biopsies and drainages	62
- Breast node biopsies	200

Selected radiodiagnostic examinations in 2010

Computer tomography	10 474
Magnetic resonance	12 417
Angiography	8 220
Ultrasound examinations	17 242
Mammography	13 500
- of this screening	12 500
Total number of radiodiagnostic examination	113 519

DEPARTMENT OF NUCLEAR MEDICINE / PET CENTER

Head of Department Ass. Prof. Otakar Bělohávek, MD, PhD

The services provided by the center include **scintigraphic functional imaging**, which includes PET/CT (combination of positron emission tomography and computer tomography), mainly used to diagnose oncological, neurological and cardiovascular disorders. Further services of the center include **immunoanalytic laboratory testing techniques** including RSA – radiosaturation analysis and chemiluminescence.

During 2010, the Department of Nuclear Medicine / PET Center continued to serve patients in the Na Homolce Hospital as well as those from other healthcare facilities throughout the Czech Republic (primarily **PET/CT examinations**). In 2010, the number of PET interventions and examinations reached 6,582 which is a 5.3% increase as compared to 2009. All the examinations were performed using two hybrid PET/CT Siemens Biograph scanners. Throughout the year, the Department succeeded in maintaining a high standard of productivity of labor in the PET diagnostics, comparable with other European clinics. It also introduced into routine practice procedures for high-resolution scanning in diagnostics of head and neck tumors and a special procedure for scanning of lung tumors.

Scintigraphic diagnostics including SPECT continued to experience the long-term trend of a global decline of interest in scintigraphic examinations that are increasingly replaced by other imaging methods, including PET/CT. Examination of bones and myocard accounted for the biggest share in scintigraphic examinations, other methods were used only in specific cases. During 1st half of 2010, the Department consistently revised and, where necessary, modified all standard operative procedures used in PET/CT and SPECT diagnostics in order to harmonize them with the National Radiological Standards (NRS) being prepared.

The **immunoanalytic laboratory** reported a slight increase in the number of assays performed in all the groups, except for the congenital development disorders markers. Throughout the year, the laboratory intensively prepared for accreditation according to the standard ISO 15189.

The Department of Nuclear Medicine/PET Center has been awarded ISO 9001 certification on the basis of a certification audit carried out by the Det Norske Veritas firm of auditors. In 2010, the Department successfully completed a recertification audit, for the first time according to the new version of 2008.

In 2010, the physicians of the Department were involved in postgraduate teaching within the Institute for Postgraduate Studies and carried out expert activities for the European Commission.

In 2010, the Department participated in two grant projects.

Basic data

Assistant (technician)	1
Pharmaceutical assistant	2
Number of physicians	8
Specialist in laboratory methods and in preparation of medical products	2
Radiological assistant	7
Hospital porter	1
Number of general nursing staff	5
Laboratory technician	4

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Number of interventions/examinations in 2010

Radiography	
number of examinations	1 049
Positron emission tomography	
number of examinations	6 582
Laboratory tests	
number of interventions	146 157
number of assays	112 459

DEPARTMENT OF CLINICAL BIOCHEMISTRY, HEMATOLOGY AND IMMUNOLOGY

Head of Department Luděk Táborský, MD

In the field of **clinical biochemistry** the Department provides a routine biochemical service for both hospital wards and outpatient clinics in Na Homolce Hospital, and focuses on the diagnosis and treatment of critically ill patients admitted to the hospital. In the case of inpatients in a critical state, tests of acidobasic balance, selected mineral levels and glycaemia are carried out directly by the bedside (POCT diagnostics), and all patients are screened for mineral levels, enzyme activities, substrate concentrations, cardiomarker levels, amino acids, selected prohormones, vitamins, the full range of lipids and drug levels and their metabolites, including pharmacokinetic analyses of concentrations measured.

In 2010, the clinical biochemistry continued to provide services to general practitioners, pediatricians and other specialists working in the field. The Department's efforts to continually expand and improve the quality of its services resulted in a wider range of examinations offered and introduction of certain new parameters.

The analysis of lipid metabolism diagnosis is an important part of the work carried out by the biochemical unit. In the previous year, the **Club of Parents of Children Suffering from Lipid Disorders** continued to provide a metabolic counseling service in the area of rehabilitation, reconditioning and educational activities for Club members.

The **hematology** laboratory provides a routine service for clinical units and conducts both basic and specialized coagulation tests, including screening for thrombophilia, particularly for departments involved in the Cardiovascular program. The hematology laboratory is equipped with the Sysmex XE 5000 hematological line for analysis of the blood count, body fluids, specimen staining and hematological differential analysis.

The Transfusion Center ensures a supply of blood and blood derivatives.

The Immunology Laboratory performs a wide range of examinations of both humoral and cellular immunity, autoimmunity conditions of systems and organs and allergies. Specialized activity of the laboratory is focused on diagnostics of septic conditions in critically ill patients. The outpatient department of allergology and clinical immunology provides care to patients with allergies, immunodeficiencies and immunopathological conditions. In patients suffering from the bronchial asthma, it uses the latest outpatient examination diagnostics by non-invasive examination of the exhaled air, using and functional tests of bronchial hyperreactivity.

The DNA Diagnostic Laboratory carries out molecular genetic diagnostics of hereditary diseases and genetic predispositions for diseases frequently occurring in the population and serious diseases. Within the hospital, the Laboratory focuses primarily on specific cases depending on the needs of individual units. In 2010, the laboratory added to the range of examination methods the examination for thromboembolic disorders and colorectal carcinoma.

In the field of clinical biochemistry the Department provides a routine biochemical service for both hospital wards and outpatient clinics in Na Homolce Hospital, and focuses on the diagnosis and treatment of critically ill patients admitted to the hospital.

The Department of Clinical Biochemistry, Hematology and Immunology was included in the system of external quality control in the Czech Republic (SEKK), in Germany (INSTAND), in the Netherlands (SKZL) and in Great Britain (NEQAS). It has earned an ISO 9001-2000 quality certificate, that was awarded to it on the basis of a certification audit carried out by the Det Norske Veritas auditing firm.

In 2010, the Department of Clinical Biochemistry, Hematology and Immunology participated in 3 grant projects.

Basic data

Number of physicians	12
Number of college graduates/other medical staff	5
Number of nursing and paramedical staff	47
Number of general nursing staff	6
Other staff	3
Total	65
Number of examinations total	2 271 857

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Breakdown of laboratory tests in 2010

DCBHI	Number
Total Biochemistry (including POCT)	1 847 414
Hematology	252 322
Immunology	101 429
DNA diagnostics laboratory	30 427
Blood bank	40 265
Total laboratory tests	2 271 857

Breacdown of DCBHI outpatient numbers in 2010

Type of outpatient clinic	Number
Metabolic	4 855
Hematologic	2 550
Total	7 405

DEPARTMENT OF CLINICAL MICROBIOLOGY AND ANTIBIOTIC CENTER

Head of Department Vlastimil Jindrák, MD

The Department of Clinical Microbiology provides **laboratory diagnostics of community and nosocomial infectious diseases or complications** in hospitalized patients, as well as consultative work dealing with their diagnosis, treatment and prevention. The Department's consultants participate in routine interdisciplinary work in a team of specialists to provide the highest possible level of treatment for both inpatients and outpatients. The laboratory diagnostic services have traditionally been provided both to the Na Homolce Hospital, as well as to primary care general practitioners and specialists working in the field.

In 2010, the demand for **laboratory microbiological examinations** recorded a relative decline both from the Na Homolce Hospital and the external clientele. The Department put into practice a new system for diagnostics of ventilator-associated pneumonia and developed diagnostics of fungal infections, including quantitative examination of sensitivity. A system of electronic delivery of examination results to external healthcare facilities is routinely used in clients interested in this service.

An important part of the department's activities comprises the work of the **Antibiotic Center**, which deals with antibiotic practices in the Na Homolce Hospital, as well as in primary outpatient care. Parameters of consumption of antibiotics as well as incidence of antibiotic resistance were comparable with the figures from the previous period, without any significant changes. The number of consultations was about the same as in 2009. An audit was performed of antibiotic

prophylaxis in surgical specializations, the results of which serve as a basis for innovation of recommended procedures and for gradual improvement of practice. No substantial increase in antibiotic resistance was recorded in key pathogens.

In the area of prevention and control of infection, the Department includes an **infection control unit**. In 2010, the incidence of nosocomial infections of the blood circulatory system further declined to 1.6 cases per 1000 treatment days. Decline was recorded in all the monitored subgroups and almost in all departments. The Department of Anesthesiology and Resuscitation succeeded in substantial reduction of the incidence of catheter associated blood stream infection. The share of patients who acquired MRSA colonization during hospitalization was reduced in the Na Homolce Hospital below 15%, as compared to 60% four years ago. In 2nd half of 2010, an audit was performed of surgical units of the Na Homolce Hospital, with a focus on risk factors of incidence of infections on the surgical site and the possibilities of their control.

In the field of **expert external activities**, Head of the Department was also in 2010 involved in the activities carried out within ECDC (European Center for Disease Prevention and Control – antibiotic resistance and nosocomial infections agenda). Head of the Department was appointed a member of the Central coordination group of the

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National Antibiotic Program. He was also designated by the Ministry of Health for the position of National contact point for ICU component of the European surveillance of infections associated with healthcare in the Czech Republic. In February 2010, Head of Department was elected chairman of the Subcommittee for antibiotic policy of the Czech Medical Association of J.E. Purkyně (ČLS JEP).

The Department of Clinical Microbiology has been awarded ISO 9001-2000 certification on the basis of a certification audit carried out by the Det Norske Veritas firm of auditors. In May 2010, the Department successfully passed a recertification audit and started to prepare for transfer to ISO 15 189, the audit is scheduled for 2011. In the course of 2010, the Department continued to cooperate in the Hospital program of quality and safety improvement, particularly in the field of a good diagnostic practice, rational use of antibiotics and infection control (within the Team for infection control).

In 2010, the Department was involved in the undergraduate teaching for 1st, 2nd and 3rd Faculties of Medicine of Charles University as well as postgraduate teaching within the Institute for Postgraduate Studies.

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Basic data

Number of physicians	4
Number of college graduated/other medical staff	1
Number of laboratory technicians	17

Consultation activity of Antibiotic centre

Year	Number of consultations	Number of patients consulted (total)
2000	4 287	905
2001	5 069	1 024
2002	6 076	1 266
2003	6 960	1 559
2004	7 291	1 622
2005	8 493	1 833
2006	7 922	1 870
2007	8 122	1 964
2008	7 847	2 006
2009	8 026	1 936
2010	8 049	2 051

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Number of examinations performed Na Homolce Hospital

Year	Bacteriology	Serology	Total
2000	35 251	11 330	46 906
2001	39 018	12 157	51 175
2002	41 473	14 282	55 755
2003	45 952	15 194	61 146
2004	54 306	17 238	71 544
2005	51 582	15 506	67 088
2006	54 726	16 511	71 237
2007	65 033	18 485	83 518
2008	68 559	18 014	86 573
2009	58 770	10 884	69 654
2010	55 507	10 507	66 014

Number of examinations performed External clients

Year	Bacteriology	Serology	Total	Number of practical sessions
2000	44 809	8 727	53 722	180
2001	47 387	8 343	55 730	178
2002	48 985	9 380	58 355	218
2003	47 969	9 989	57 958	187
2004	54 209	11 889	66 098	185
2005	49 001	10 290	59 291	217
2006	35 680	6 460	42 140	177
2007	36 687	6 631	43 318	163
2008	40 086	7 595	47 681	141
2009	33 564	4 705	38 296	132
2010	18 876	3 624	22 500	107

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Total number of microbiological examinations

Year	Bacteriology	Serology	Total
2000	80 100	20 084	100 695
2001	86 405	20 500	106 905
2002	90 458	23 652	114 110
2003	93 921	25 183	119 104
2004	108 517	29 133	137 650
2005	100 583	25 796	126 379
2006	90 406	22 971	113 377
2007	101 722	25 122	126 844
2008	108 646	25 613	134 259
2009	92 341	15 591	107 932
2010	74 387	14 141	88 528

DEPARTMENT OF PATHOLOGY

Head of Department Martin Syřůček, MD

The Department covers the entire scope of bioptical and cytological diagnostics within the Na Homolce Hospital, and in cooperation with the laboratories of the hospital departments providing complementary services, also part of the bioptical and cytological diagnostics for external physicians and healthcare facilities in Prague. In addition, it is responsible within the Hospital, for examination of necroptic materials (autopsies) including the organizational service. Within improvement of the quality of the provided medical care, the Department organizes clinical-pathology seminars for individual departments focused on analysis of selected necroptic and bioptical cases.

Bioptical diagnostics constitutes the core of the Department’s activities. In addition to routine diagnostic biopsies, it comprises also highly specialized bioptical diagnostics focused on tumors of the central nervous system. For departments of surgery of the Na Homolce Hospital, the Department carries out urgent intraoperative examinations and based on their result, further procedure and scope of the operation is modified. The Department makes demanding intraoperative bioptical examinations, including the entire range of special methods, mainly immunohistochemical examinations that increase the accuracy of bioptical diagnostics and detection of selected tumor markers.

In 2010, the Department of Pathology of the Na Homolce Hospital processed about 23 256 bioptical cases.

Cytological diagnostics is focused primarily on gynecology issues. Non-gynecology cytology deals with examination of aspirates or samples from other locations, including the brain. Annually the Department of Pathology of the Na Homolce Hospital processes about 2 500 thousand cytological examinations.

Necroptic diagnostics deals mainly with autopsies and histological processing of tissues of the deceased patients. The information acquired is important to detect the immediate cause of the death and helps obtain more information about the nature and diagnostics of individual diseases. Annually the Department of Pathology of the Na Homolce Hospital performs about 150 autopsies.

In 2010, pathologists of the Na Homolce Hospital were involved in postgraduate teaching within the Institute for Postgraduate Studies.

Basic data

Number of physicians	5
Number of laboratory technicians	8
Assistant	3
Manager of quality	1

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

The Department covers the entire scope of bioptical and cytological diagnostics within the Na Homolce Hospital, and in cooperation with the laboratories of the hospital departments providing complementary services, also part of the bioptical and cytological diagnostics for external physicians and healthcare facilities in Prague.

Bioptical diagnostics

Year	Number of examinations	Number of specimens
2005	19 546	49 290
2006	19 730	47 866
2007	21 769	51 846
2008	22 269	56 390
2009	21 831	58 429
2010	23 256	63 915

Necroptic activity

Year	Number of patients who died in the hospital	Number of autopsies
2005	286	248
2006	261	199
2007	273	193
2008	240	131
2009	270	154
2010	241	143

Cytological diagnostics

Year	Number of examinations	Number of specimens
2005	5 349	11 744
2006	5 495	11 643
2007	6 813	14 082
2008	2 525	5 590
2009	2 738	6 214
2010	2 178	4 731

DEPARTMENT OF BIOMEDICAL ENGINEERING

Head of Department Martin Mayer, MSc

The Department of Biomedical Engineering of the Na Homolce Hospital is in charge of the operation and servicing of medical apparatuses in the Hospital, including the Health-resort Mánes in Karlovy Vary. Other activities of the Department include also monitoring of the new trends in biomedicine. Division of the Department into three sections is fully compatible with the prominent centers of biomedical engineering in other countries.

Preventive service section carries out preventive checks of medical apparatuses and technology stipulated by Act no. 123/2000 Coll., and the JCI standards, performs specialized internal servicing, where necessary, ensures outsourcing of the services and keeps the respective documentation on the medical apparatuses.

Clinical engineering section is in charge of the use and preparation for use of the diagnostic, therapeutic and laboratory apparatuses, expert assistance in introduction of new medical technology, monitoring of the progress in medical technology, preparation of public procurement, investments in apparatuses, other ways of funding – subsidies and gifts, cardiological electrophysiology, perfusiology, navigation systems in neurosurgery and other disciplines, autotransfusion for the Department of Cardiac Surgery and the Department of Vascular Surgery and calibration of apparatuses for anesthesia.

Metrology section is responsible for keeping the metrology standards in the Hospital in compliance with the valid metrological legislation in the scope of internal regulations of the Na Homolce

Hospital and for ensuring the activity of the laboratory of the Authorized metrological center K 92 in the scope of the decision of the Office for Standards, Metrology and Testing no. 61/2000.

In addition to the above mentioned activities, the Department of Biomedical Engineering provides specialized assistance in acquisition of new medical devices in the form of preparation and organization of public tenders and investments related to new technologies and other ways of financing, including subsidies and gifts.

Department of Biomedical Engineering of the Na Homolce Hospital is an accredited center of the Ministry of Health CR for postgraduate teaching within the Institute for Postgraduate Studies, including specializations in biomedical disciplines in the Czech Republic. The Department has its representative in the Accreditation Commission of the Ministry of Health CR. In 2010, the Department was involved in undergraduate teaching for Faculty of Electronics and Faculty of Biomedical Engineering of the Czech Technical University and 1st Faculty of Medicine of Charles University.

HEALTH-RESORT MÁNES, Karlovy Vary

Manager of the health-resort care section Miroslav Wimmer, PhD

Head physician Jaroslav Vobořil, MD

Health-resort Mánes Karlovy Vary and all the related state-owned assets that it was entrusted to manage, was in April 2006 transferred by the Ministry of Health CR to a state contributory organization of the Na Homolce Hospital, including all liabilities and receivables.

Health-resort Mánes provides complex and contributory health-resort care for adults and children with diseases of the digestive tract, and metabolic diseases (diseases of liver, gallbladder, and biliary tract, stomach, intestinal diseases, diabetes, obesity).

In 2010, the services included relaxation and reconditioning stays, overweight reduction programs and family stays where control over and programs for the children on treatment stays is provided for free.

Comprehensive and contributory care is offered both to clients under health insurance programs and to domestic and foreign self-payers.

PATIENT CLUBS

Club for patients and children suffering from lipid disorders

The Club was established by the Metabolic Disorders Clinic in the Na Homolce Hospital as early as in 1995. Its membership is represented by families with children suffering from inherited disorders related to the metabolism of lipids, called hypercholesterolaemia. Patients with this disorder have an increased cholesterol level in their blood, which gives rise to a high risk of cardiovascular diseases. Basic treatment for children suffering from this disorder involves keeping a controlled low-calorie diet, with medication prescribed for those patients who are worst affected. The Club is affiliated with the association for the assistance of chronically ill children. The Club is run primarily by medical volunteers and parents. Parents, doctors and dietary nurses work closely together to form proper eating habits in families at risk, to provide information on healthy nutrition and suitable types of food products, as well as on new discoveries concerning the treatment of hypercholesterolaemia. The Club's traditional and popular activities include the publication of the club magazine Cholesterol, organised water therapy exercises in the Na Homolce Hospital pool, day or weekend trips and, most of all, the summer fitness camp, focusing on a low cholesterol diet and exercise. In the summer of 2010, the children and their parents met at the 13th one-week therapeutic camp with a low-calorie diet this time in Maxov, Sloup in Bohemia. The Club for Parents and Children Suffering from Lipid Disorders plays an important part in preventing cardiovascular diseases by encouraging healthy nutrition and eating habits, as well as increased physical activity.

Contact details: Club for Parents and Children Suffering from Lipid Disorders Clinic for Metabolic Disorders
Na Homolce Hospital
Roentgenova 2, 150 30 Prague 5
Tel.: +420 257 273 229
E-mail: jana.privarova@homolka.cz

AA Homolka Club

AA Homolka Club was established by the Department of Paediatric Allergology and Clinical Immunology in the Na Homolce Hospital in 1998. It brings together families with children suffering from allergies and asthma. The membership (families) does not only consist of patients treated at Na Homolce but is also made up of those from other facilities in Prague and elsewhere. The Club's activities are diverse, ranging from the retrieval and circulation of information concerning individual allergic diseases, through the organisation of discussion with experts for the parents, to the publication of the club magazine, Motýlek (Butterfly), which includes contributions from the children themselves, or organising entertaining and educational activities for the young patients. The most popular club event is the annual three-week trip to the sea for children with allergies, where they are accompanied by medical professionals. This is for school-age children suffering from atopic eczema, bronchial asthma, allergic rhinitis, immune disorders or repeated respiratory infections. Last year the children spent their therapeutic holiday in Messagala, Greece. AAA Homolka Club is a member of the Association for the Assistance of Chronically Ill Children.

Contact details: AA Homolka Club
Department of Paediatric Allergology
and Clinical Immunology
Na Homolce Hospital
Roentgenova 2, 150 30 Prague 5
Tel.: +420 257 272 017
E-mail: jaroslava.simonickova@homolka.cz

GRANTS



GRANTS UNDER WAY IN 2010

GRANTS UNDER WAY IN 2010

Grant from the National Institute of Health, USA

Name: International Multicentric Study - Freedom (Future Revascularisation Patients with Diabetes mellitus: Optimal Management of Multivessel Disease).

Period: 2007 - 2015

Researchers: Mount Sinai School of Medicine, New York, USA
120 medical centers in the USA, 50 outside of the USA

Co-researchers for Na Homolce Hospital:
Ass. Prof. Petr Neužil, MD, PhD, FESC, Head of Department of Cardiology, Na Homolce Hospital
Petr Kmoníček, MD, Department of Cardiology, Na Homolce Hospital

Members of the Na Homolce Hospital team:
Štěpán Černý, MD, PhD, Head of Cardiocenter, Na Homolce Hospital, Head of Department of Cardiosurgery, Na Homolce Hospital
Tomáš Procházka, MD
Petr Pavel, MD
Dalibor Ticháček, MD
Karel Kopřiva, MD
Lenka Pavličková, MD
Dagmar Vondráková, MD
Monika De Pasquale,
Jitka Komárková,
Liz Coling,
Karolina Smolíková

Grant NR 8937-4

Name: Extrapyramidal diseases – correlations between morphological, functional and clinical findings

Period: 2006 - 2010

Researcher: Prof. Josef Vymazal, MD, DSc, Department of Radiodiagnostics, Na Homolce Hospital

Grant NS 9654-4

Name: Quantitative magnetic resonance imaging in the diagnosis and differential diagnosis of cerebral tumors

Period: 2008 - 2011

Researcher: Monika Dezortová, MSc, IKEM – Institute of Clinical and Experimental Medicine, Prague
Co-researcher for Na Homolce Hospital:
Prof. Josef Vymazal, MD, DSc, Department of Radiodiagnostics, Na Homolce Hospital

Grant NS 10587-3

Name: Diagnostics of vascular prosthesis infection using 18F-FDG PET/CT

Period: 2009 – 2011

Researcher: Miroslav Špaček, MD, General University Hospital, Prague

Co-researcher for Na Homolce Hospital:
Jana Votrubová, MD, PhD, Department of Radiodiagnostics, Na Homolce Hospital

Grant GAČR 309/091145

Name: Mechanisms of deep cerebral stimulation: the task of subthalamus in motor, visual and affective processes
Period: 2009 - 2012
Researcher: Ass. Prof. Robert Jech, MD, PhD, First Faculty of Medicine of Charles University
Co-researcher for Na Homolce Hospital: Dušan Urgošík, MD, PhD, Department of Stereotactic and Radiation Neurosurgery, Na Homolce Hospital

Grant NT11328-4/2010

Name: Trigeminal neuralgia in experimental MR imaging: effect of treatment modalities on trigeminal nerve atrophy
Period: 2010 - 2013
Researcher: Dušan Urgošík, MD, PhD, Department of Stereotactic and Radiation Neurosurgery, Na Homolce Hospital
Co-researcher: Central Military Hospital

Research Center established by the Ministry of Education, Youth and Sports: 1M0517

Name: Center of Neuropsychiatric Studies - neurobiology in clinical practice. Na Homolce Hospital's part of the project:
Using positron emission tomography to study neuropsychiatric disorders
Period: 2005 - 2011
Researcher: Prof. Cyril Höschl, MD, DSc, Psychiatric Center Prague
Co-researcher for Na Homolce Hospital: Ass. Prof. Otakar Bělohlávek, MD, PhD, Department of Nuclear Medicine/ PET Center, Na Homolce Hospital

Grant IGA MZ ČR NS 10420-3

Name: Positron emission tomography for diagnosis and follow-up of testicular terminal tumors
Period: 2009 - 2011
Researcher: Tomáš Büchler, MD, Thomayer University Hospital, Prague
Co-researcher for Na Homolce Hospital: Kateřina Šimonová, MD, Department of Nuclear Medicine/ PET Center, Na Homolce Hospital

Grant FT-TA3/053

Ministry of Industry and Trade CR
TANDEM Program
Name: Development of a new generation of diagnostic sets for in vitro diagnostics of cardiovascular diseases - based on molecular biotechnology methods
Period: 2006 - 2010
Researcher: Josef Fišer, MD - GeneTiCA s.r.o.
Co-researcher for Na Homolce Hospital: Václav Maťoška, MD, Department of Clinical Biochemistry, Hematology and Immunology, Na Homolce Hospital

Grant FR - TI 1/399

Ministry of Industry and Trade
Name: Development of pharmacogenetic diagnostic kit for determination of the Warfarin dose
Period: 2009 - 2012
Researcher: RNDr. Radek Horváth, PhD - GeneProof, a.s.
Co-researcher for Na Homolce Hospital: Václav Maťoška, MD, Department of Clinical Biochemistry, Hematology and Immunology, Na Homolce Hospital

Grant NS9651-4/2008

Name: Role of internal tandem duplication of the FLT3 gene in deregulated signaling pathways in acute myeloid leukemia pathogenesis

Period: 2008 - 2011

Researcher: Soňa Peková, MD, Department of Clinical Biochemistry, Hematology and Immunology, Na Homolce Hospital

Grant NS9652-4/2008

Name: Identification of new molecular signaling pathways in the process of allelic exclusion; chronic lymphocytic leukemia as a model system

Period: 2008 - 2011

Researcher: Peková Soňa, MD, Department of Clinical Biochemistry, Hematology and Immunology, Na Homolce Hospital

Grant GAČR 202/09/H086

Name: Use of ionizing radiation in dosimetry and radiological physics

Period: 2009 – 2011

Researcher: Prof. Ing. Tomáš Čechák, PhD, Czech Technical University, Prague

Co-researcher for Na Homolce Hospital: Ass. Prof. Ing. Josef Novotný, PhD, Medical Physics Department, Na Homolce Hospital

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QUALITY AND SAFETY IN 2010



QUALITY AND SAFETY IN 2010

QUALITY OF THE SERVICES
PROVIDED BY THE NA HOMOLCE HOSPITAL
IS ONE OF THE BASIC PILLARS OF
THE HOSPITAL'S LONG-TERM STABILITY.

NA HOMOLCE HOSPITAL ACCREDITED BY JCI



Quality and safety of the services provided by the Na Homolce Hospital is one of the basic pillars of the Hospital's long-term stability. Endeavoring to provide top-quality healthcare in compliance with clearly defined standards, the Na Homolce Hospital was encouraged to apply for the Joint Commission International (JCI) accreditation, which is the global benchmark accreditation for healthcare organizations. In June 2005, the Na Homolce Hospital successfully passed the first accreditation audit and, on JCI auditors' recommendation, it received the "global badge of quality" – the globally recognized JCI accreditation.

In June 2008, the Na Homolce Hospital successfully passed a JCI re-accreditation audit, carried out by a panel of auditors and obtained JCI certificate for the period of 2008-2011.



JCI Accreditation

Joint Commission International is a global organization with more than one hundred years of history, which focuses on accreditation of healthcare organizations. Accredited hospitals guarantee their patients safety and top-quality care by continuously tracking, analyzing

and improving quality indicators in all areas of the hospital operations. For JCI accreditation, the hospital must meet more than 1500 indicators, which have a direct impact on the patient's safety and the reliability of medical procedures. These indicators are incorporated in precisely defined accreditation standards that cover all areas of healthcare management and provision and that must be complied with if the hospital is to obtain JCI accreditation. JCI accreditation is awarded for three years: when this period elapses the healthcare organization must apply for a new accreditation.

JCI Standards

3rd edition of JCI international accreditation standards valid until 31 December 2010 comprises the following parts:

JCI safety objectives:

1. Proper identification of the patient
2. Effective communication
3. Improvement of safety of high-alert medications
4. Compliance with procedure to ensure the correct patient, procedure, site and side
5. Reduction of the risk of nosocomial infections
6. Reduction of the risk of patient harm from falls

Safety objectives focus on situations with a high risk of patient harm due to failure to observe the respective procedure or failure of the procedure. The standards require of the healthcare facility to define, monitor and evaluate the procedures conducting to their fulfillment.

Standards are divided into the following chapters:

1. Availability and continuity of care
2. Rights of patients and their families
3. Diagnostic care
4. Therapeutic care
5. Anesthetic and surgical care
6. Storage, prescription and administration of medications
7. Education of patients and their families
8. Improving the quality of care and safety of patients
9. Prevention and control of hospital infections
10. Management and governance
11. Safety of the hospital environment
12. Staff qualification and education
13. Information management

Safety objectives set by the Ministry of Health CR in the field of quality and safety of healthcare services for 2010

In 2010, the Na Homolce Hospital focused also on implementation of the safety objectives set by the Ministry of Health CR that are binding upon organizations directly managed by the Ministry and aim at reduction of the most frequent risks associated with providing healthcare.

Safety objectives set by the Ministry of Health CR:

1. Safe identification of patients
2. Safety in handling of high-alert medications
3. Compliance with the procedure to ensure the correct patient, procedure, site and side
4. Patient fall prevention
5. Introduction of optimal procedures of hand hygiene during providing healthcare

Procedures to comply with the safety objectives set by the Ministry of Health CR and International Safety Objectives are stipulated by binding internal regulations of the Hospital

1. Safe identification of patients

Prior to each contact, the staff verifies the patient's identity by checking the patient's name and surname and information on the identification armband (name, surname, birth registration number, identification number) and comparing the data with the patient's medical record or personal documents.

2. Safety in handling of high-alert medications

High-risk drugs

High-risk drugs area associated with a high risk of harming a patient due to their incorrect administration. In 2010, a list of high-risk drugs was developed and recommendations set for prescribing and administration of these drugs.

Medications requiring special attention in administration include so called LASA (look-alike, sound-alike) medications. They have a similar packaging design, or similar names that may cause their confusing. In 2010, a list of these medications was developed together with rules of their safe handling, in order to reduce maximally the mentioned risk.

In 2010, a new Department of Clinical Pharmacy was established.

The role of clinical pharmacists in ensuring safe medication consists mainly in revision of medications prescribed to the patient upon admission to the hospital, work in selected clinical departments, counseling services for physicians and organization of specialized workshops in this field.

QUALITY AND SAFETY IN 2010

3. Procedure to ensure the correct patient, procedure, site and side

The Hospital follows its established procedure to ensure the correct patient, procedure, site and side. The procedure specifies responsibilities of individual members of the medical staff and is performed just before starting the respective operation.

4. Patient fall prevention

Reduction of the risk of fall in a fall-risk patient has been achieved by a system of standardized preventive measures that have been producing good results on a long-term basis. The number of severe injuries caused by a fall was reduced by 3% on a year-on-year basis.

5. Introduction of optimal hand hygiene procedures in providing healthcare

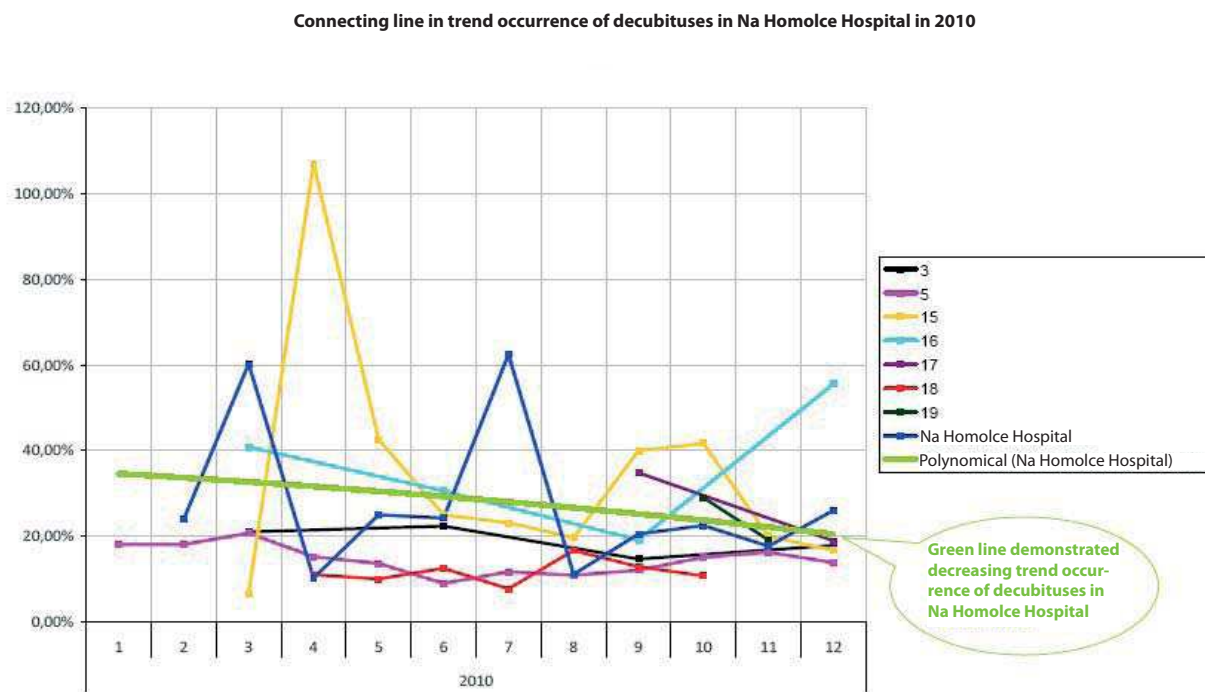
The Na Homolce Hospital has integrated a comprehensive process of infection prevention and control into the general program of improvement of quality and patient safety in a way complying with the criteria of JCI international accreditation. In 2010, the Hospital focused on hand hygiene of the healthcare staff.

Project "National survey of incidence of pressure sores".

In 2010, the Hospital joined a project "National survey of incidence of pressure sores" of the Ministry of Health CR and the National Reference Center. Participation in this project provides the Hospital primarily with the possibility to compare incidence of pressure sores in patients in various healthcare facilities in the Czech Republic and evaluate the trend of development of pressure sores in the Hospital. The graph shows comparison of incidence of pressure sores in patients at risk in different healthcare facilities in individual months of 2010. The green curve illustrates the declining trend of incidence of pressure sores in patients admitted to the Hospital in 2010.

QUALITY AND SAFETY IN 2010

Connecting line in trend occurrence of decubituses in Na Homolce Hospital in 2010



Na Homolce Hospital –an ISO 9001:2008 certified facility

Department of Clinical Biochemistry, Hematology and Immunology, Department of Clinical Microbiology/Antibiotic Station and Department of Nuclear Medicine/PET Center – are bearers of quality management system certificates for their laboratory and diagnostic services under the ISO 9001:2008 Standard. ISO certification requires continuous quality improvement of results of the departments in relation to patients as well as in relation to staff safety.

In 2010, a recertification audit was carried out and the certificate was successfully defended at all the certified Departments.

QUALITY AND SAFETY IN 2010

Preparation of certification according to ISO 15189

In the course of 2010, four departments providing complementary services (RIA laboratory, Department of Clinical Biochemistry, Hematology and Immunology, Department of Clinical Microbiology /Antibiotic Center and Department of Pathology) continued to prepare for certification according to ISO 15 189. The ISO 15 189 standard is intended for medical laboratories and stipulates special requirements mainly as concerns the quality and professional qualification of laboratories. It is focused on the pre-analytical, analytical and post-analytical phases. For a medical laboratory it is a suitable way to declare the quality of its services.



Certificate DCBHI

Certificate DNM

Certificate DCM/AC

Quality through the patients' eyes

The Na Homolce Hospital participates on a regular basis in the Ministry of Health project "Quality through the patients' eyes". The project measures quality of healthcare by means of experience / satisfaction of patients in healthcare facilities directly managed by the Ministry of Health.

In the form of a questionnaire, patients evaluate eight fields of the quality of inpatient healthcare:

1. Admission to the Hospital
2. Respect and consideration for patients
3. Coordination and integration of care for patients
4. Standard of providing information to and communication with patients

5. Patients' physical comfort
6. Patients' emotional support
7. Involvement of the family in the patient's treatment
8. Discharge from the Hospital

Results of the latest survey of patients' satisfaction have proved that the healthcare in the Na Homolce Hospital is provided on a high quality standard. General satisfaction with healthcare amounted to 83.8% and the Hospital ranked second in the general evaluation. The highest satisfaction is reported by patients in relation to the Department of Internal Medicine, Gynecology and Neurosurgery B. General average satisfaction with nurses was 81%, satisfaction with the work of physicians 82% and with general services 75%. In terms of satisfaction with physicians and services, the Na Homolce Hospital ranks first in the evaluation of hospitals.

The factors that have contributed most to the general satisfaction of the Hospital patients include:

- Prevention of falls out of bed (98.47%)
- Schedule of serving meals (97.22%)
- Evaluation of the attitude of the whole staff of the Hospital (98.02%)
- Information about the care and administration of medications after discharge from the Hospital (96.82%)
- Frequency of visits of the attending physician (96.73%)

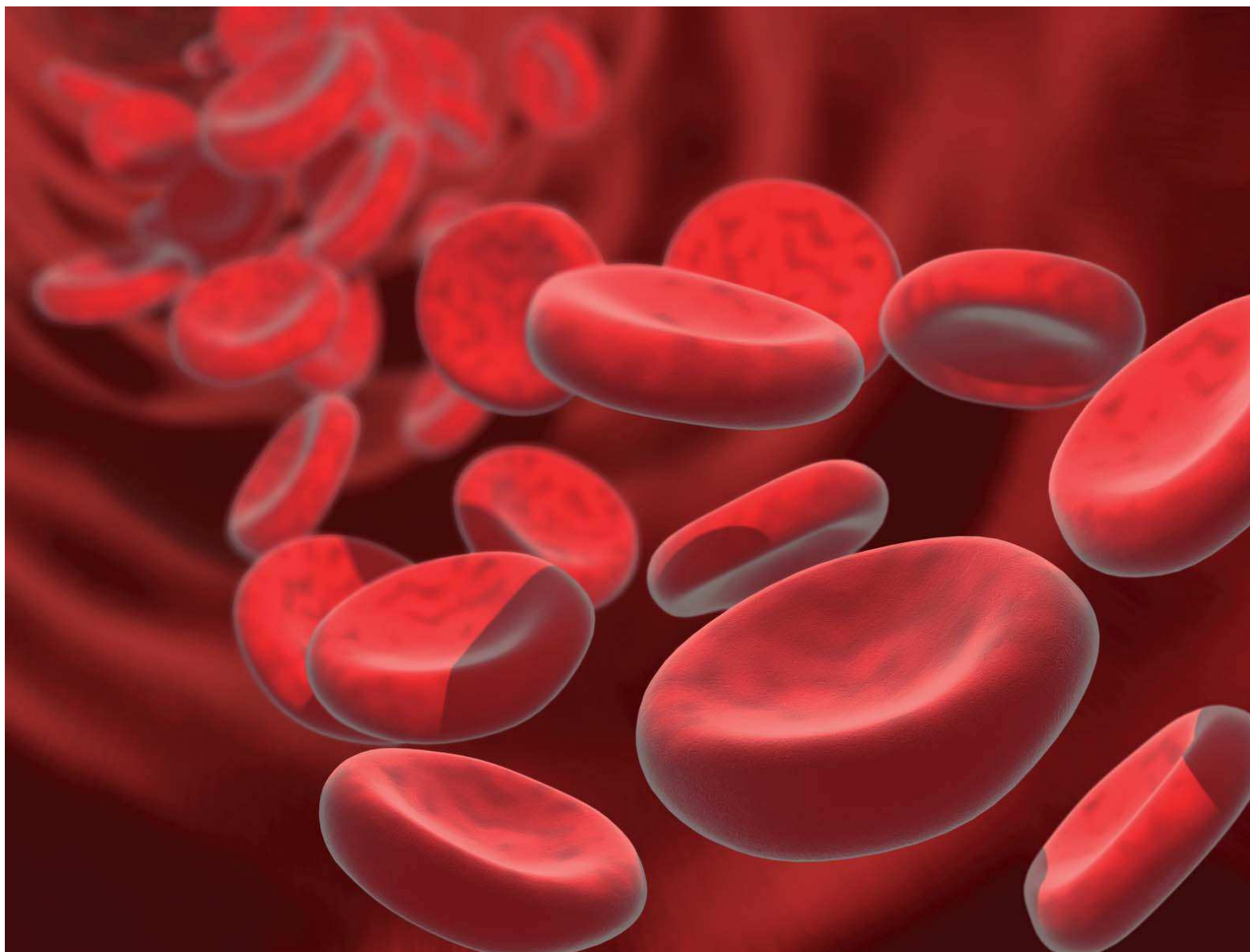
Hospital of the Czech Republic in 2010

In 2010, the Hospital participated in the national competition "Hospital of the Czech Republic in 2010". The output of the project is a ranking list of the Czech hospitals based on the results of the questionnaire survey made in the hospital patients and staff.

Hospitals were evaluated in terms of three key aspects: Patient satisfaction, Hospital staff satisfaction and Financial health.

Based on the aggregate results in all the three mentioned aspects, the Hospital ranked the best among the hospitals, with 73.33%.

QUALITY AND SAFETY IN 2010



ECONOMIC STABILITY



NA HOMOLCE HOSPITAL STRIVES
FOR MAXIMAL COST EFFICIENCY
WHILE ENSURING WIDELY AVAILABLE
SPECIALIZED MEDICAL CARE

AUDITOR'S REPORT

We have audited the accompanying financial statements of the Na Homolce Hospital state-owned semi-budgetary organization with the seat in Prague 5, Roentgenova 2, Postal Code 150 30, Company registration number 00023884, i.e. the balance sheet as of 31 December 2010, and the income statement for the period between 1 January 2010 and 31 December 2010 and notes to these financial statements, containing description of the significant accounting policies used and other explanatory notes. Data on the Na Homolce Hospital state-owned semi-budgetary organization are included in Annex to these financial statements.

Statutory Body's Responsibility for the Financial Statements

The Statutory Body of the Na Homolce Hospital is responsible for the preparation and fair presentation of these financial statements, giving a true and fair view, in accordance with Czech accounting regulations. This responsibility includes designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with the Act on Auditors and International Standards on Auditing and the related application guidelines issued by the Chamber of Auditors of the Czech Republic. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance that the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment and evaluation of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control systems. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Auditor's Opinion

In our opinion, the financial statements give a true and fair view of the assets and liabilities of the Na Homolce Hospital state-owned semi-budgetary organization as of 31 December 2010, and of its financial performance for the period between 1 January 2010 and 31 December 2010 in accordance with Czech accounting regulations.

In Prague, 2 June 2011



Report prepared on behalf of the Company by
Ing. Jan Jindřich - auditor
Registration in the list
of audit firms of the Chamber
of Auditors no. 1133

PFK Audit s. r. o.
Karlova 455/48, 110 00, Prague 1
Registration in the list
of audit firms of the Chamber
of Auditors CR no. 502

ECONOMIC DATA

BALANCE SHEET (IN THOUSANDS OF CZK)

ASSETS	31. 12. 2009	31. 12. 2010
A. Fixed assets	1 860 703	1 811 825
1. Intangible fixed assets	52 840	62 061
2. Accumulated depreciation of intangible fixed assets	-47 820	-51 214
3. Tangible fixed assets	3 584 502	3 683 977
4. Accumulated depreciation of tangible fixed assets	-1 729 719	-1 883 898
5. Financial investments	900	900
B. Current assets	872 298	787 927
1. Inventory	36 986	28 696
2. Receivables	522 191	251 871
3. Financial assets	240 492	468 724
5. Temporary asset accounts	72 629	38 636
TOTAL ASSETS	2 733 001	2 599 753

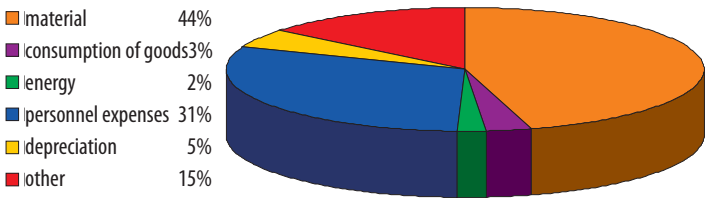
LIABILITIES	31. 12. 2009	31. 12. 2010
C. Own resources	2 076 826	1 952 267
1. Property funds	1 832 985	1 801 434
2. Financial and cash funds	190 301	122 355
5. Net income	53 540	28 478
D. Other resources	656 175	647 486
1. Reserves	80 000	75 330
2. Long-term liabilities	25 396	15 009
3. Short-term liabilities	366 529	358 414
4. Bank loans and borrowings	160 000	160 000
5. Temporary debit accounts	24 250	38 732
TOTAL LIABILITIES	2 733 001	2 599 753

ECONOMIC DATA

PROFIT AND LOSS ACCOUNT (IN THOUSANDS OF CZK)

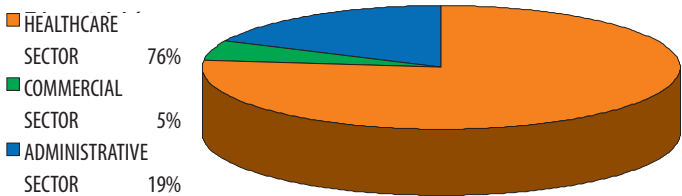
	31. 12. 2009	31. 12. 2010
Costs		
Raw material	1 590 005	1 476 752
Energy used	60 337	62 171
Goods sold	115 028	108 968
Account.adjust., travel exp., services	315 387	306 732
Personnel expenses	1 065 744	1 073 106
Other and financial expenses	174 800	173 868
Depreciation of fixed assets	178 422	174 907
Total costs	3 499 724	3 376 504
Revenues		
Revenues from own products and services	3 234 003	3 023 870
Revenues from goods	143 062	130 177
Change in inventory of own production + capitalization	0	0
Other and financial revenues	176 198	250 935
Total revenues	3 553 264	3 404 982
Profit (loss) for the current accounting period	53 540	28 478

breakdown of costs by type

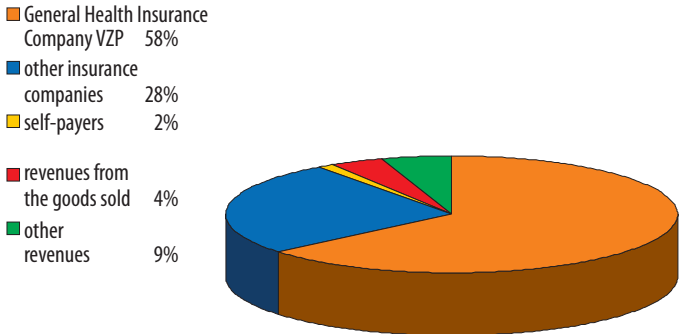


ECONOMIC DATA

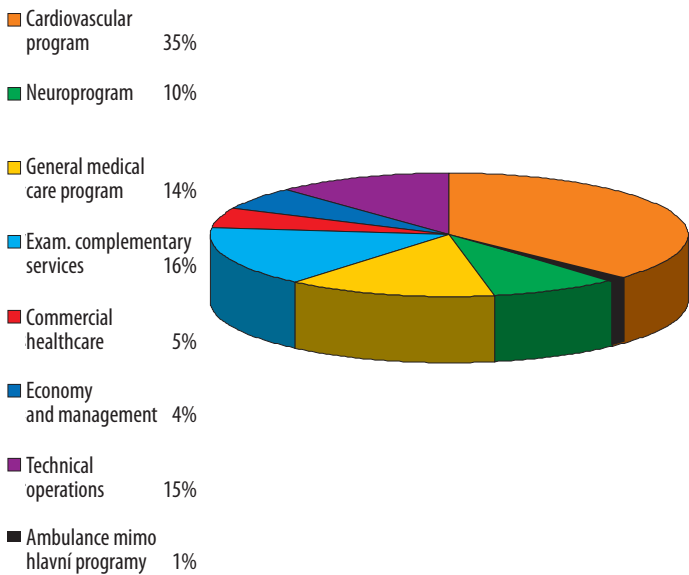
breakdown of costs by type



breakdown by revenues



breakdown of costs by programs



počet bodů na 1 lékaře.....6 418 919
počet ambulantních bodů na 1 lékaře2 121 557

ECONOMIC DATA

total costs and revenues

	2010	in CZK million
revenues	3 404 982 455	3 405
costs	3 376 504 431	3 377
profit/ loss	28 478 024	28
consumption of material	1 476 751 293	1 477
personnel expenses	1 073 104 412	1 073
depreciation	174 906 515	175

IDENTIFICATION DATA

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