

# Annual report 2011 FN Motol





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## Introductory word

Dear friends,

you are holding in your hands The Annual report of the University Hospital Motol for the year 2011. I guess you all will agree with me that this year was one of the most dramatic years in the post-revolutionary history of the Czech health care. We can characterize the year 2011 by three major events - two of them were related to the whole Czech health care system and the third one was an issue only for our hospital.

The beginning of the year was marked by the campaign „Thank you, we are leaving.“ It was the strongest protest of doctors in the history of the Czech medical health care and it was also one of the most significant events in the European context. It should be noted that the University Hospital Motol coped with this event with honor. It is supported by the fact that the total number of dismissals of doctors, which should have been the consequence of this action, did not exceed 2.5% of all doctors working in the hospital. This number corresponds to the usual annual fluctuations. There were no restrictions on the activities of any medical field and the hospital was even ready to assist other health care facilities in Prague, where the impact of this campaign was much worse.

The June 2011 was for the history of our hospital very significant. The ceremonial opening of the newly renovated children's department took place in the hospital, including the commissioning of a heliport, a new children's urgent admission and operating theaters. It is no exaggeration to say that the dream of many generations of Motol physicians came true. These medical employees knew that Motol was one of the top European pediatric medicine centres, but their working conditions did not meet their requirements. Nowadays, thanks to the care of the state The Children's Hospital of the UHM is one of the most modern and high-equipped hospitals this type in the world.

The third important aspect in the health care, which was characteristic for the year 2011, was the transit to a new type of fixed payments of medical procedures - so called DRG system (Diagnosis Related Groups) unusual for the Czech republic. In comparison with conventional types of payments, which was the main payment guideline for the Czech republic, it is a completely different philosophical approach to payments by health insurances. It puts high demands on all the physicians and non-medical employees of the hospital because of the change in habitual practices and thinking. I firmly believe that in The Annual report for the year 2012, I will say that this system ran in our hospital successfully and it helped to maintain The University Hospital Motol on the cutting edge of the Czech medicine.

The fact that our hospital provides the highest standard of health care in the Czech republic is demonstrated by another fact that at the end of the year 2011, The University Hospital Motol defended the quality certificate from The United Accreditation Commission of the Czech republic for the next 3 years.

Dear friends, the year 2011 was a year of good as well as less good news. Let us wish each other that the preface of our hospital's annual report for the current year will be full of successful messages.



A handwritten signature in black ink, consisting of stylized, cursive letters that appear to read 'M. Ludvík'.

JUDr. Ing. Miloslav Ludvík, MBA

## Management of the UHM

Director of the Hospital	Miloslav Ludvík, LLD, MBA
Deputy Manager for Medical Preventive Care	Martin Holcát, MD, MBA
Deputy Manager for Nursing Care – Staff Nurse	Jana Nováková, MBA
Deputy Manager for Economy	Jiří Čihař
Personnel Deputy Manager	Jindřiška Feldmanová
Deputy Manager for Engineering and Technology	Pavel Budinský, MD, MBA
Deputy Manager for Science and Research	prof. Anna Šedivá, MD
Deputy Manager for Quality and Organization	Petr Kolouch, MD, MBA
Deputy Business Manager	Luděk Navara

## Scientific board

**prof. Marek Babjuk, MD**

*Head of Department of Urology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Jan Betka, MD**

*Head of Department of ENT, Head and Neck Surgery, 1<sup>st</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**Ondřej Cinek, MD, Ph.D.**

*Department of Paediatrics, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Karel Cvachovec, MD, MBA**

*Head of Department of Anaesthesiology and ICM, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Tomáš Eckschlager, MD**

*Department of Paediatric Haematology and Oncology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**Markéta Havlovicová, MD**

*Senior consultant of Department of Biology and Medical Genetics, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Jiří Hoch, MD**

*Head of Department of Surgery, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**Martin Holcát, MD, MBA**

*Deputy Manager for Medical Preventive Care of University Hospital Motol*

**prof. Václav Chaloupecký, MD**

*Paediatric Cardiocentre of University Hospital Motol*

**assoc. prof. Zdeněk Kabelka, MD**

*Head of Department of ENT, 2<sup>nd</sup> Faculty of Medicine and University Hospital Motol*

**prof. Josef Koutecký, MD**

*Department of Paediatric Haematology and Oncology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Milan Kvapil, MD, MBA**

*Head of Department of Internal Medicine, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**assoc. prof. Robert Lischke, MD, Ph.D.**

*Head of Department of Surgery, 1<sup>st</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**assoc. prof. Milan Macek, MD**

*Department of Biology and Medical Genetics, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**Jana Prausová, MD, Ph.D.**

*Head of Department for Radiation Therapy and Oncology*

**prof. Lukáš Rob, MD**

*Head of Department of Obstetrics and Gynaecology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**assoc. prof. Miloslav Roček, MD**

*Head of Department of Radiology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Anna Šedivá, MD**

*Senior Consultant of Department of Immunology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol, Deputy manager for Science and Research*

**assoc. prof. Radek Špišek, MD, Ph.D.**

*Department of Immunology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**assoc. prof. Zdeněk Šumník, MD, Ph.D.**

*Department of Paediatrics, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**assoc. prof. Josef Zámečník, MD, Ph.D.**

*Department of Pathology and Molecular Medicine, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

## Director´s consulting committee

**prof. Jiřina Bartůňková, MD, MBA**

*Head of Department of Immunology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Jan Betka, MD**

*Head of Department of ENT, Head and Neck Surgery, 1<sup>st</sup> Faculty of Medicine, Charles University and University Hospital in Motol*

**prof. Karel Cvachovec, MD, MBA**

*Head of Department of Anaesthesiology and ICM, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Jiří Hoch, MD**

*Head of Department of Surgery, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**assoc. prof. Pavel Kolář, Dr., Ph.D.**

*Head of Department of Rehabilitation and Sport Medicine, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Milan Kvapil, MD, MBA**

*Head of Department of Internal Medicine, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

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*Head of Department of Radiology, 2<sup>st</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**Jana Prausová, MD, Ph.D. MBA**

*Head of Department of Radiation Therapy and Oncology of University Hospital Motol*

**prof. Lukáš Rob, MD**

*Head of Department of Obstetrics and Gynaecology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*



**prof. Antonín Sosna, MD**

*Head of Department of Orthopaedics, 1<sup>st</sup> Faculty of Medicine, Charles University and University Hospital Motol*

**prof. Jan Starý, MD**

*Head of Department of Paediatric Haematology and Oncology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

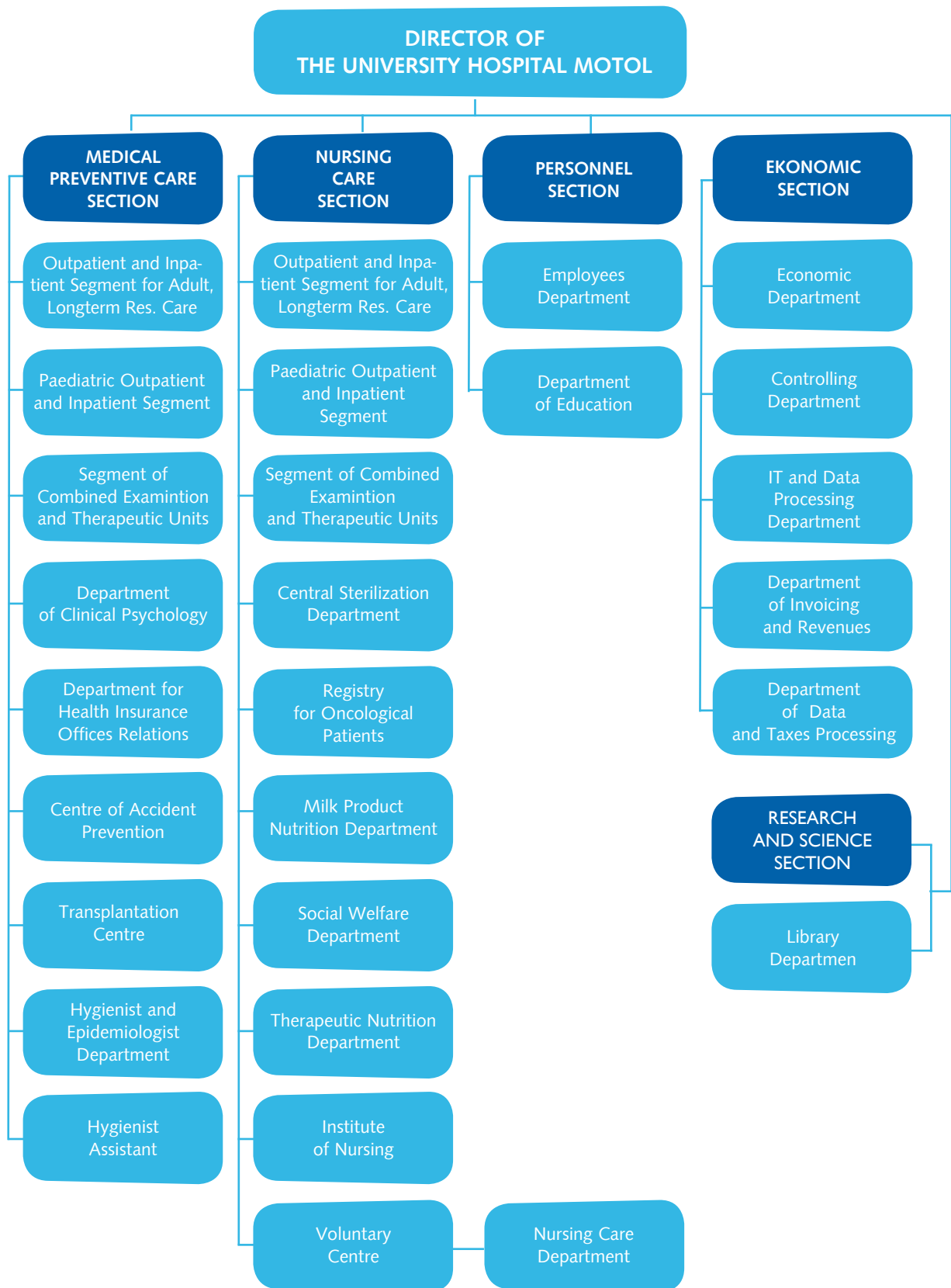
**prof. Jiří Šnajdauf, MD, FEBPS**

*Head of Department of Paediatric Surgery, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

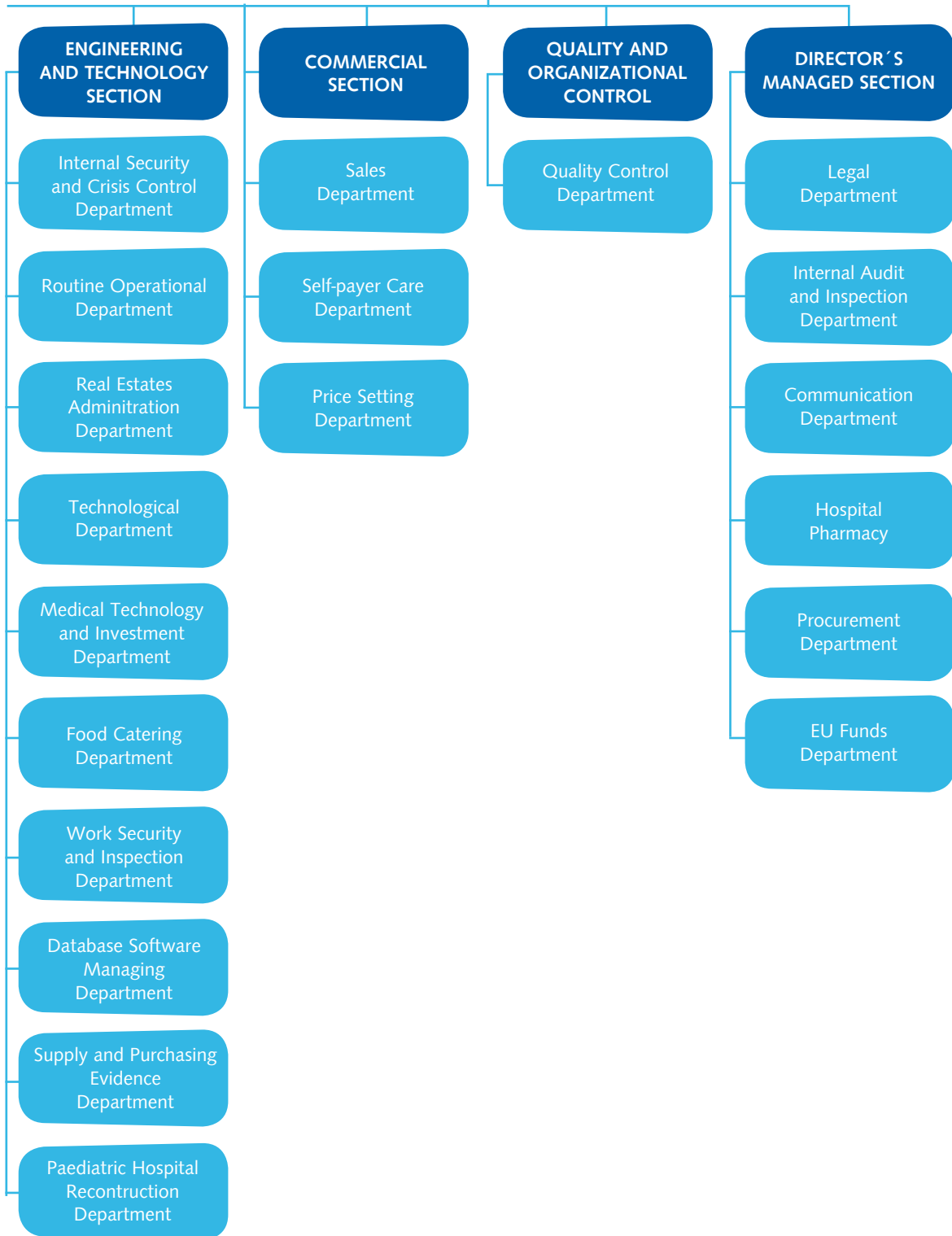
**assoc. prof. Tomáš Trč, MD, MBA**

*Head of Department of Orthopaedics, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol*

# Basic organizational structure



**DIRECTOR OF  
THE UNIVERSITY HOSPITAL MOTOL**



## Basic data to 31. 12. 2011

Hospital Estate Area (m <sup>2</sup> )	348 000
Assets (in thousand CZK)	12 011 918
Total turnover	6 830 039
Employees (natural persons)	5 501
Employees (employment)	4 911

### Beds

- Of which:	Children	Adults	Total
Standard	511	1056	1567
Intensive Care Unit	143	225	368
Acute in Total	654	1281	1935
Longterm Residential	-	381	381
Total Beds		1662	2316

Number of Hospitalisations	73 328
Number of Outpatient treatments	697 475
Number of Treatment Days (excepted Longterm Residential)	470 328
Number of Anaesthesia treatments	37 466
Number of Childbirths	3 250
Death Rate	1,5

# List of Medical Departments

## Paediatric Inpatient Part

### Department of Paediatrics

Head: *prof. MUDr. Jan Lebl, CSc.*

### Paediatric Cardiocentre

Head: *prof. MUDr. Jan Janoušek, Ph.D.*

### Department of Paediatric Psychiatry

Head: *prof. MUDr. Michal Hrdlička, CSc.*

### Department of Paediatric Stomatology

Head: *prof. MUDr. Taťjana Dostálová, DrSc., MBA*

### Department of Paediatric Surgery

Head: *prof. MUDr. Jiří Šnajdauf, DrSc.*

### Department of Paediatric Haematology and Oncology

Head: *prof. MUDr. Jan Starý, DrSc.*

### - Bone Marrow Transplant Unit

Head: *prof. MUDr. Petr Sedláček, CSc.*

### Department of Paediatric Neurology

Head: *prof. MUDr. Vladimír Komárek, CSc.*

### Department of ENT

Head: *doc. MUDr. Zdeněk Kabelka, Ph.D.*

### - Department of Phoniatrics

Head: *PhDr. Eva Vymlátlová*

## Adult Inpatient Part

### Department of Gynaecology and Obstetrics and Gynaecology

Head: *prof. MUDr. Lukáš Rob, CSc.*

### - Department of Neonatology with IRCU

Head: *lékař doc. MUDr. Petr Zoban, CSc.*

### Department of Surgery (2<sup>nd</sup> Faculty of Med., Charles University)

Head: *prof. MUDr. Jiří Hoch, CSc.*

### Department of Surgery (1<sup>st</sup> Faculty of Med., Charles University)

Head: *doc. MUDr. Robert Lischke, Ph.D.*

**Department of Infectious Diseases**

*Head: MUDr. Jiřina Hobstová, CSc.*

**Department of Internal medicine**

*Head: prof. MUDr. Milan Kvapil, CSc., MBA*

**Department of Cardiosurgery**

*Head: doc. MUDr. Marek Šetina, CSc.*

**Department of Cardiology**

*Head: prof. MUDr. Josef Veselka, CSc.*

**Department of ENT, Head and Neck surgery**

*Head: prof. MUDr. Jan Betka, DrSc.*

**Department of Nuclear Medicine and Endocrinology**

*Head: doc. MUDr. Petr Vlček, CSc.*

**Longterm Residential Care Hospital for Elderly I, III**

*Head: MUDr. Blanka Mašková*

**Longterm Residential Care Hospital for Elderly II**

*Head: MUDr. Jan Štěpán*

**Department of Neurology**

*Head: doc. MUDr. Martin Bojar, CSc.*

**Department of Spondylosurgery**

*Head: prof. MUDr. Jan Štulík, CSc.*

**Department of Orthopaedics (1<sup>st</sup> Faculty of Med., Charles Uninversity)**

*Head: prof. MUDr. Antonín Sosna, DrSc.*

**Department of Pneumology**

*Head: prof. MUDr. Miloslav Marel, CSc.*

**Department of Radiation Therapy and Oncology**

*Head: MUDr. Jana Prausová, Ph.D., MBA*

**Department of Urology**

*Head: prof. MUDr. Marek Babjuk, CSc.*

## Common Inpatient Sites of Paediatric and Adult Parts

### Department of Anaesthesiology and ICM

*přednosta prof. MUDr. Karel Cvachovec, CSc., MBA*

### Department of Chronic Resuscitation and Intensive Care

*Head: MUDr. Jiří Procházka*

### Department of Rehabilitation and Sport Medicine

*Head: doc. PaedDr. Pavel Kolář, Ph.D.*

#### - Department of Rehabilitation

*Head: MUDr. Martina Kövári*

#### - Department of Pain Research and Treatment

*Head: MUDr. Jiří Kozák, Ph.D.*

#### - Spinal Unit

*Head: MUDr. Jiří Kříž*

#### - Department of Sport Medicine

*Head: doc. MUDr. Jiří Radvanský, CSc.*

### Department of Ophthalmology

*Head: prof. MUDr. Dagmar Dotřelová, CSc.*

### Department of Neurosurgery

*Head: doc. MUDr. Michal Tichý, CSc.*

### Department of Orthopaedics (2<sup>nd</sup> Faculty of Med., Charles University)

*Head: doc. MUDr. Tomáš Trč, CSc., MBA*

## Common Examination and Therapeutic Units

### Department of Radiology

*Head: doc. MUDr. Miloslav Roček, CSc.*

### Department of Clinical Haematology

*Head: MUDr. Ivana Hochová*

### Blood Bank Department

*Head: MUDr. Květoslava Petrtýlová*

### Central Operating Theatres – paediatric part

*Head: MUDr. Karel Klíma*

**Central Operating Theatres – adult part**

*Head: MUDr. Petr Příklad*

**Department of Biology and Medical Genetics**

*Head: prof. MUDr. Milan Macek, DrSc.*

**Department of Immunology**

*Head: prof. MUDr. Jiřina Bartůňková, DrSc., MBA*

**Department of Clinical Biochemistry**

*Head: prof. MUDr. Richard Průša, CSc.*

**Department of Medical Microbiology**

*Head: MUDr. Otakar Nyč*

**Department of Pathology and Molecular Medicine**

*Head: prof. MUDr. Roman Kodet, CSc.*

**Transplantation Centre**

*Head: lékař MUDr. Jaroslav Špatenka, CSc.*

**Outpatient Sector****Paediatric Outpatient Department**

*Head: MUDr. Petr Tláškal, CSc.*

**Department of Dermatovenerology**

*Head: MUDr. Alena Machovcová, MBA*

**Emergency Department for Children**

*Head: MUDr. Marie Mikulecká, CSc., MBA*

**Emergency Department for Adults**

*Head: MUDr. Jiří Zika*

**Department of Psychology**

*Head: PhDr. Jaroslava Raudenská, Ph.D.*

**Department of Primary Care**

*Head: MUDr. Jaroslava Kulhánková*



# Medical preventive care

## Paediatric inpatient part

**Department of Paediatrics, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Jan Lebl , MD*

*Senior consultant: Jana Tejnická, MD, MBA*

*Head nurse: Bc. Jitka Kaplická*

### **Basic characteristics:**

The department provides diagnostics, treatment and dispensary care for paediatric patients from the whole Czech Republic in almost all branches of internal medicine. In the course of 2011, a total of 3 654 patients were hospitalised there and the outpatient treatment was provided for 21 213 clients. Five patients underwent the kidney transplantation and another seven were prepared for the liver transplantation in the IKEM (Institute for Clinical and Experimental Medicine). At the endoscopic operating theatre were performed 816 interventions and the department of elimination methods achieved 4 313 operations.

The number of 87 infant patients with hemangiomas were successfully treated by beta-blockers.

### **Specialised outpatient centers:**

- Nephrology, including the department for children after TX of the kidneys
- Elimination methods
- Gastroenterology and hepatology including the facility for children after TX of the liver
- Centre for patients with home parenteral and enteral nutrition
- Allergology and pneumology including the department for patients with cystic fibrosis
- Diabetology and endocrinology
- Cardiology including echocardiologic outpatient center
- Rheumatology
- Anthropology

### **New methods and procedures:**

- Nephrology group, as the only workplace in the Czech republic, continues with a unique elimination method – immunoabsorption in children. The treatment with monoclonal antibody Eculizumab was initiated in a patient with recurrence of atypical Hemolytic Uremic Syndrome (HUS) after kidney transplantation. The Body Composition Monitor device was put into operation. It is a special device for determination of optimal weight of dialysis patient on the principle of bioimpedance.
- Pneumology team continues to diagnose patients with primary ciliary dyskinesia. The CF- working group (working group for cystic fibrosis) initiated an action for inclusion the department into the national network of treatment centres for the treatment of CF.

- Gastroenterology team significantly increased the amount of endoscopic examinations. The department continues with using of IDB-biological treatment and it also took care of nine patients on a long-term home parenteral nutrition.
- Diabetology team continued in the prediction of type 1 diabetes and in examination of new DM-associated autoantibodies - against zinc transporter.
- Endocrinology group successfully developed a program for diagnosis of musculoskeletal diseases. The peripheral quantitative computed tomography (CT) for densitometry was purchased for the needs of chronically ill children. There was also introduced a new method of testing muscle strength and performance in 2011.

#### **Unique technological equipment:**

- peripheral quantitative computed tomography (CT) for densitometry, Stratec XCT – 2000
- Mechanograph Stratec Leonardo
- Body Composition Monitor- unique device for determination of the optimal weight of dialysis patients

#### **Important event in 2011:**

- Diabetology was awarded by the title „Centre of Excellence for Pediatric Diabetes“ and this placed the working group into the group of the first 11 world centers. Laboratory part of this working group achieved the prize for a creative initiative of the year 2011 for work in the field of monogenic diabetes of from the director of the hospital.
- The (working group for cystic fibrosis was included in the Clinical Trials Network under the auspices of the European Society for CF. The Motol center is the sole representative of the states of Eastern Europe.

### **Paediatric Cardiocentre of University Hospital Motol**

*Head physician: Prof. Jan Janoušek, MD*

*Senior consultant of the dept. of Cardiology: Prof. Václav Chaloupecký, MD*

*Senior consultant of the dept. of Cardiosurgery: Prof. Tomáš Tláškal, MD*

*Senior consultant of the dept. Functional Diagnostics: Petr Tax, MD*

*Head nurse: Mgr. Dana Křivská*

#### **Basic characteristics:**

Paediatric cardiocentre is the only Complex cardiological and cardiosurgical centre for children with a nationwide competence. It is concerned mainly with diagnostics and treatment of congenital cardiac defects in children and it also collaborates with other departments in the treatment of adult patients with congenital cardiac disease. Preference of non-invasive diagnostic procedures (ECHO, MRI, Ct) and primary corrections of defects at an early age are characteristic features of this workplace. In the year 2011 the Paediatric Cardiocentre performed 465 surgeries (+ 27 open arterial duct ligation in low birth weight newborns at other workplaces), 320 catheterisations (including 218 interventional (therapeutic) catheterisations), 797 patients were hospitalized and outpatient treatment was provided for 4553 patients. In 2011, the department also provided medical care for foreign patients in the humanitarian program Medevac.

**Specialised outpatient facilities:**

- Clinical cardiology
- Electrophysiology and cardiostimulation
- Prenatal cardiology

**New methods and procedures:**

- 3D echocardiography
- percutaneous pulmonary valve implantation
- interventional treatment of native coarctation of the aorta
- Nikaidoh operation for general transposition of the great arteries
- catheter cryoablation for arrhythmogenic substrates
- standard non-fluoroscopic navigation for catheter ablation of arrhythmias by Localisa system
- intracardiac ultrasound (ICE)

**Unique technological equipment:**

- Toshiba bipolar sciascopic device
- 3D transesophageal echocardiography Philips
- three-dimensional electroanatomic mapping system of arrhythmias CARTO

**Important event in 2011:**

- 80th birthday of prof. Milan Šamánek, the founder of the Paediatric Cardiocentre
- Paediatric Cardiocentre moved into the newly renovated children's department of University Hospital Motol (9/2011)
- Organization of the international AEPC Arrhythmia Teaching Course Prague, April 1-2, 2011 for the Association for European Paediatric Cardiology (AEPC)
- Organization of the international Prague Symposium on Congenital Heart Disease, December 5-6, 2011
- Participation in the global database of quality in pediatric cardiac care, organized by the European Association for Cardio-thoracic Surgery, with the certification of results for the year 2010

**Department of Paediatric Psychiatry, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Michal Hrdlička, MD*

*Senior consultant: Jiří Koutek, MD*

*Head nurse: Hana Palkovská*

**Basic characteristics:**

This department is the only independent clinical department in this field in the CR. It is concerned with diagnostics, treatment and prevention of mental disorders in paediatric and adolescent patients, it is directed mainly at autism in children, food intake disorders, hyperkinetic syndrome, psychotic conditions and suicidal tendencies in children and adolescents. Another part of the department is the Family centre, specialising in family therapy. The department is also both pregraduate and postgraduate teaching facility. Specialisation in Paediatric and adolescent psychiatry and Adult psychiatry are accredited for the postgraduate course of studies. In 2011, a total of

6 100 interventions were performed on the outpatient basis, 1 867 consultancies together with 425 hospitalised patients.

**Specialised outpatient facilities:**

- Family centre, specialising in family therapy of paedopsychiatric patients

**New methods and procedures:**

- The department further developed especially diagnostics of infantile autism in a form of short-term hospitalisations of pre-school children with their parents in cooperation with other workplaces of the Motol Hospital; In 2010 the department joined the international scientific research consortium COST surveying early diagnostics of disruptions of autistic spectrum. The paediatric psychology acquired for the project financial subvention from The Ministry of education, youth and sport for years 2011-2014.
- At the end of the year 2011 a new diagnostic method for autism spectrum disorders - Autism Diagnostic Observation Schedule (ADOS) - was put into use with the support of The Ministry of education, youth and sport. Three employees of the department attended an international specialized training for this method at Trinity College in Dublin. The Autism Diagnostic Observation Schedule (ADOS) is further improving the diagnostic procedures in the field of autism spectrum disorders.
- Complex therapy of food intake disorders; the importance of the department in this field is nationwide and participates in the research with other workplaces;
- Diagnostics and full therapy of psychotic conditions is of supra-regional importance;
- Research on suicidal behaviour and self-harm in children and adolescents is still under way
- Continuing of research on cerebellar functions in hyperkinetic syndrome

**Department of Paediatric Stomatology, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Tatjana Dostálová, MD, MBA*

*Senior consultant: Milan Hubáček, MD*

*Head nurse: Mgr. Václava Jirků*

**Basic characteristics:**

Paediatric and adolescent stomatology directed at both healthy and handicapped patients – a multidisciplinary cooperation of practical dentist, paedostomatologist, parodontologist, prosthetist, orthodontist, dentoalveolar as well as craniomaxillofacial surgeons in treatment of congenital and acquired developmental defects, injuries and tumors. The centre for distraction osteogenesis of the facial skeleton with congenital defects and articular central for total endoprostheses of the jaw articulation. With cooperation of neurosurgery the department of paediatric stomatology provided treatment of inborn and additional defects of splanchno-neurocranium.

A total of 25 761 patients were treated at the outpatient part of the department in 2011 and 666 one-day surgical interventions were performed. At the inpatient section there were hospitalised 683 patients and 714 surgeries performed.

**Specialised outpatient facilities:**

- Maxillofacial surgery /with specification on distractions of congenital defects/
- Diseases of the jaw articulation

- Oncology
- Diseases of the salivary glands in children
- Prosthetics
- Implantology
- Parodontology
- Orthodontics

**New methods and procedures:**

- use of resorbable osteosynthetic materials for injuries and in reconstructive operations in children
- use of new augmentation materials (MEDPOR)
- care for patients with clefts (general stomatological care)
- orthognathic surgical methods including special counselling and 3D reconstruction
- dental implantology and guided bone regeneration with a special reference to young handicapped patients
- treatment of the teeth of handicapped patients in general anaesthesia and analgosedation
- surgery of the jaw articulation including subtotal and total endoprosthesis (TEP TMK)
- distraction of the facial skeleton in children with congenital defects

**Unique technological equipment:**

- Piezosurgery II Professional (ultrasound drill)
- KAVO KEY Laser III 1234
- Wide range of distractors
- Sonic Weld Rx (ultrasound fixing device of absorbable osteosynthetic materials)

**Important event in 2011:**

- The 40th anniversary of the founding of Paediatric Stomatology of University Hospital Motol – Conference on 10.6.2011

**Department of Paediatric Haematology and Oncology,  
2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Prof. Jan Starý, MD, PhD.*

*Senior consultant: Vladimír Komrská, MD*

*Senior consultant: Vratislav Šmelhaus, MD*

*Head nurse: Bc. Jitka Wintnerová*

**Basic characteristics:**

The work of the department is focused on diagnostics, treatment and research of oncological diseases in childhood, benign diseases such as anaemia, haemorrhagic conditions and congenital coagulation disorders (haemophilia). Further there are treated diseases requiring bone marrow transplantation such as congenital disorders of the immune system or metabolic defects.

In 2011, a total of 14 032 examinations and treatments were performed at the specialised outpatient facilities, 2 553 patients with oncological diseases and 1 150 patients with benign diseases were treated. Newly were diagnosed: 152 children with malignant solid tumors, 43 children with leucaemia, 173 patients with benign tumors, 478 children with non-oncological disease. The total number of hospitalised

patients was 2 136 plus 1 289 relatives who accompanied them. Totally, 46 operations of bone marrow were performed - 20 from donors not related to the patient, 2 bone marrow were offered from family members and 24 operations were autologous.

**Specialised outpatient facilities:**

- Oncology
- Dispenzarisation after treatment of solid tumors
- Bone tumor centre
- Clinic for hemangiomas
- Haematology outpatient clinic
- Haematology stationary ward
- Congenital disorders of blood coagulation and haemorrhagic conditions
- Care for patients after bone marrow transplantation

Unique technological equipment:

- FACS Aria cytometric cell sorter

**Important event in 2011:**

- E. Mejstříková, MD, PhD with a team of co-authors received The Prize for the best publication of the year 2010 from The Czech Society of Hematology; Assist. Prof. Jan Zuna, MD, Ph.D. received the award „Neuron 2011“ from Karel Janecek Endowment Fund; the team of doc. Tomas Kalina, MD, PhD was awarded by the prizes of Dr. Joseph Fox (Czech Society of Allergology and Clinical Immunology) and the prize of Czech Society for Analytical Cytology.
- Publishing Activity of the employees of the department in 2011: 48 publications about the overall IF = 264.66 were published
- The department organized an international conference for young paediatric hematologist and oncologists „3rd Midsummer Meeting of Pediatric Hematology and Oncology „ in Liberec, also the conference with international participation „Analytical Cytology VI „ in Prague, the 7th Motol cytometric tutorial and the 7th EuroFlow Educational Symposium & Workshop in Prague.
- Organization and staffing of five summer and two winter recondition camps for children after treatment of malignant tumor, children with hemophilia and patients after bone marrow transplantation. A total of 146 children attended these camps and 20 employees of the clinic (doctors, nurses and psychosocial workers) participated on its preparation.

**Department of Paediatric Surgery, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Jiří Šnajdauf, MD, FEBPS*

*Senior consultant: Richard Fryč, MD*

*Head nurse: Mgr. Ilona Mayerová*

**Basic characteristics:**

In the frame of specialised skills – neonatal surgery, thoracic surgery, oncosurgery, proctology, urology, surgery of the liver, portal hypertension, biliary tract, extrophy



of the urinary bladder and polytraumas in children – the department provides care for paediatric patients from the whole country and super-counselling also for foreign patients.

In 2011, 2 630 patients were hospitalised there in total, of which 2 110 were operated. The total number of outpatient children was 17 731 (including 5 740 children in constitutional emergency service).

**Specialised outpatient facilities:**

- Thoracic surgery
- Oncosurgery
- Surgery of the liver, biliary tract and pancreas
- Neonatal surgery
- Urology
- Proctology
- Traumatology
- Burns
- Paediatrics
- Consultation for home parenteral nutrition
- Psychological consultation centre

**New methods and procedures:**

- Introduction of new innovative method of esophageal lengthening in congenital esophageal atresia (successfully performed in 5 patients). The stubs are being extended outside the thoracic cavity. Doctors managed to extend and maintain patient's own esophagus instead of replacing the rests of esophagus by stomach.
- In the intersex surgery was in two patients used a technique of complete contraction of urogenital sinus, i.e. the urethra and vagina in vaginoplastice (external vaginal opening) instead of a lengthy separation of both structures

**Unique technological equipment:**

- Duet Encompass – a modern video device for urology and the EMG of the pelvic floor
- Thoracoscope
- CUSA
- New harmonic scalpel
- Ligasure coagulation

**Important event in 2011:**

- Lucie Kavalcová, MD achieved the 2nd place in the Aesculap Prize at The 24<sup>th</sup> International Symposium of Surgical Research Paediatric for her work: „Hirschsprung's disease and medullary thyroid carcinoma – 15 year experience with molecular genetic screening of the RET proto-oncogene“. The work will be published in the February issue of the journal Pediatric Surgery International 2012
- Petra Kuklová, MD. presented two lectures at The 12th European Congress of Pediatric Surgery in Barcelona, Spain, 15. – 18. June, 2011 (30-year single center experience in 74 children with hepatoblastoma; Quality of life and long-term morbidity in 57 children after repair of congenital diaphragmatic hernia)

**Department of Paediatric Neurology of 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital in Motol**

*Head physician: Prof. Vladimír Komárek, MD*

*Senior consultant : Věra Sebroňová, MD*

*Head nurse: Zlatica Pitoňáková*

**Basic characteristics:**

The department provides diagnostics and treatment of paediatric patients from the whole Czech Republic in all branches of paediatric neurology and it functions as both a pregraduate and postgraduate teaching workplace. Another part of the department are, besides two standard wards and the ICU of a lower type, also laboratories for electrophysiology, sleep disorders and DNA. In 2011, a total of 1 680 admissions were performed, of which 1 057 were children's hospitalizations. In electrophysiology laboratory were performed 5 216 examinations, including 350 long-term video-EEGs and at the outpatient facilities 16 247 clinical investigations were provided.

**Specialised outpatient facilities:**

- Centre for epilepsy and epilepsy surgery
- Centre for hereditary neuropathy
- Center for hereditary ataxias
- Neuromuscular consulting centre
- Centre for neurocutaneous diseases
- Demyelination consulting unit
- Centre for botulotoxin application
- Clinic for sleep disorders in children

**New methods and procedures:**

- In cooperation with the Department of Imaging Methods, there was elaborated a recommended diagnostic standard for the MR investigation of the brain in children with pharmaco-resistant focal epilepsy and methodology of co-registration results from more independent neuroimaging methods in neuronavigation device. A new procedure for intraoperative mapping of cortical activity in epilepsy surgery was designed and tested.
- In the laboratory for sleep disorders there was introduced the video EEG monitoring with a full number of electrodes together with on-line esophageal pH measurement. The first titration of CPAP was performed in patients with a serious obstructive sleep apnea syndrome, and a polygraphic investigation of swallowing in children with dysphagia began in collaboration with ENT (Otolaryngology).
- In the DNA laboratory was introduced the MLPA method with the 2nd generation kit from MRC Holland for diagnosing CMT1A and HNPP. We started the investigation of the SH3TC2 gene. (2009)
- In cooperation with the Department of Imaging Methods began the investigation of MRI diffusion tractography (DTI) in children with dysphasia and refractory epilepsy.

**Unique technological equipment:**

- Video-EEG system for the pre-operation monitoring of 128 channels in children with refractory epilepsy, polysomnography system with on-line esophageal pH measurement;
- System for the transcranial repetitive brain stimulation.



**Important event in 2011:**

- 4. - 5. 11. 2011 Prague Symposium of Paediatric Neurology was organized with cooperation of the ICNA (International Child Neurology Association). At the Symposium, 150 experts from 30 countries took part and it was organized at the occasion of the 40th anniversary of the founding of the Department of Paediatric Neurology.
- 17.6.2011 was the department awarded the accreditation certificate „Center for Sleep disorders in children.“

**Department of ENT, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Assist. Prof. Zdeněk Kabelka, MD*

*Senior consultant: Michal Jurovčík, MD*

*Head nurse: Adriana Roškaňuková*

**Basic characteristics:**

The department is concerned with diagnostics and both surgical and conservative treatment of the E.N.T.- related diseases in children from birth up to 18 years of age. As a super-consulting workplace, it provides medical care to children with diseases difficult to diagnose and treat from the whole country. The Centre for cochlear implants in children is a part of the phoniatic section of the department. The department is still the only place in the Czech Republic that performs the cochlear implant surgeries in children.

In 2011, there were performed 1 950 surgeries, 2 102 patients were hospitalised and outpatient treatment was provided for 16 298 patients.

The Phoniatic section and rehabilitation centre for cochlear implants in children is another part of the E.N.T. department. This workplace is focused mainly on selection of candidates for cochlear implants in children and on pre-operative and longterm postoperative care for patients with cochlear implants for who it provides full phoniatic, logopedic and psychological care including programming of speech processors. Further it actively ensures supplementary logopedic rehabilitation in the place of their residence throughout the whole Czech Republic. The head of this removed workplace is Eva Vymlátilová, Ph.D.

**Specialised outpatient facilities:**

- Otology – in the Centre for cochlear implants
- Clinic for solution of developmental defects of the neck and the head
- Monitoring of glandular swelling
- Phoniatic outpatient clinic
- Logopedic (speech therapy) unit
- Clinic for examination and rehabilitation of swallowing disorders
- Thyreology

**New methods and procedures:**

- A new methodology for measuring of esophageal impedance, which extends options the the current pH-metry;

- Application of the BAHA system in clinical practice, it is a unique application of bone hearing aid, a part of it is imbedded into the skull behind the ear. After its incorporation (osseointegration) a special external hearing aid can be connected, it provides significantly better auditory perception for indicated patients than conventional bone hearing aids.
- The introduction of high-frequency tympanometry in routine treatment of the tympanic cavity in the youngest children, where conventional devices show false negative results;
- Launching of sleep monitoring in apnoics / PSG /;
- Custom Sound Suite 1.0 - a new type of processor tuning and recording of the implant functions- was introduced. A new version of Custom Sound Suite 1.3 with extended functions was used.
- A new diagnostic method on the basis of DPOAE – CochleaScan and the use of bone (BC) module in technology of the SSEP measurement were introduced. Both methods significantly contribute to refined acoustic diagnostics in youngest children.
- Screening examination on the AABR basis as a complementary method to OAE was implemented.
- The program of early detection of secretory otitis in newborns with cleft defect; it is a study with multi-branch participation. The first results confirm a hypothesis of presence of middle secretion in patients with cleft defects in early postpartum period.

#### **Unique technological equipment:**

- Impedancemetry device
- Polysomnograph
- Maico MI 34, a high frequency tympanometer
- CO2 Laser, the newest type of Bienair drill
- The M.A.S.T.E.R SSEP system including BC module – a new objective audiometric method;
- CochleaScann on the DPOAE basis – a new technology of objective audiometry;
- BioMarker device – possibility of objective measurement of cognitive abilities in paediatric patients;
- New module NRT/Neural Response Telemetry/ in pre-operative measurement of the C1 function;
- Screening AABR device;
- Ultra-thin flexible endoscope OlympusXP

#### **Important event in 2011:**

- In 2011, the 450th deaf child patient was given an implant
- The adoption of the codes for nationwide hearing screening and rescreening in newborns was pushed through. The Ministry of Health of the Czech republic admitted „The Methodological guideline for neonatal hearing screening and aftercare for the hearing impaired“ into the approval process.

## Common inpatient departments of paediatric and adult parts

### Department of Anaesthesiology and ICM, 2<sup>nd</sup> faculty of Medicine, Charles University and University Hospital Motol

*Head physician: Prof. Karel Cvachovec, MD, MBA*

*Senior consultant: Tomáš Vymazal, MD*

*Head nurse: Mgr. Taťána Maňasová*

#### **Basic characteristics:**

The department provides anaesthesiological and resuscitation care for both paediatric and adult patients in accordance with the needs and requirements of the UHM. With its number of physicians, other nursing staff as well as the range of its activities it is the biggest workplace in the CR. This workplace provides a specialized care requested by health centres of a lower type in the whole republic. It is a leading and coordinating centre for the postgraduate education of doctors and nurses, it provides training for anaesthesiologists and other specialists. It also ensures teaching of students in the Master degree programme and the Bachelor course at 2nd Faculty of Medicine and in international educational projects.

In 2011, a total of 1 345 patients were hospitalised there, of which 809 patients were adults, 477 children and 59 patients (both children and adults) needed chronic intensive care. There were performed a total of 37 466 anaesthesiological interventions, including 11 071 interventions in children.

#### **Specialised outpatient facilities:**

- In the paediatric part there is a pre-anaesthesiological unit, that examined 5 129 patients.

#### **New methods and procedures:**

- Wide-range use of echocardiography in patients undergoing cardiosurgical operation;
- Introduction of new procedures for maintaining body temperature during surgery in children and adults
- Introduction of ECMO support in conditions of serious pulmonary failure
- Continuous replacement of the renal function together with haemoabsorbtion (CPFA);
- Extensive use of citrate dialysis on the latest elimination devices;
- Using of VAC system in cover of laparotomic wounds
- Monitoring of the intraabdominal pressure;
- Use of videolaryngoscope method in case of difficult intubation, including one-use intubation instruments and subserviences;
- Use of combined neuroaxial blockades in replacements of major joints (hip, knee), including education for employees in specialized workplaces;
- Use of mild hypothermia after coping with sudden cardiac arrest;
- Routine use of neuromuscular blockade reversal options after anesthesia
- Use of non-invasive ventilation techniques for the treatment of breathing insufficiency both in children and adults;
- Using of 10% solution of natrium chloride in the therapeutic protocol in the brain edema;

- Routine monitoring of cerebral oxymetry during surgeries in extracorporeal circulation and using of deep hypothermia;
- Pre-operative preventive administration of Levosimendan to manage the perioperative heart failure;
- Comprehensive therapeutic protocol to manage the diastolic heart failure;

#### **Important event in 2011:**

- Six beds in The Children's Hospital were taken over and got into operation in the direct relation to the children emergency department
- Operating rooms in a renovated building of The Children's Hospital were taken over and got into operation
- Successful change of both adult intensive and resuscitation care departments to „paperless documentary stations“ of ICIP system

Department of Chronic Resuscitation and Intensive Care is a part of the department of Anaesthology and ICM, 2nd faculty of Medicine, Charles University and University Hospital Motol, since 1.4.2010

#### **Department of Chronic Resuscitation and Intensive Care**

*Senior consultant: Jiří Procházka, MD*

*Head nurse: Blanka Eliášová*

#### **Basic characteristics:**

Intensive care for patients with longterm ventilation, disconnecting from the ventilator, stabilisation of haemodynamics, restoring of the internal environment, neurorehabilitation, physio- and ergotherapy, recondition with mobilisation; artificial nutrition, basal stimulation.

#### **Specific features:**

- Consulting services for patients and their families in crisis, training of alternative communication, development of a programm for domestic artificial lung ventilation (DALV) and dispensary supervision in outpatients with DALV,;
- Training for domestic enteral nutrition – PEG, training of patients for the care for chronic tracheostoma and tracheostomal cannula;
- Acute consulting service for emergencies in the building 21; training of physiotherapists in the Bachelor course specialised in patients who need chronic resuscitation and intensive care.

#### **Unique technological equipment:**

- Miniature capnometer for monitoring of the training of spontaneous breathing and outpatient monitoring of patients with DALV;
- Electrolarynx for the training of alternative voice in tracheostomy.

## **Department of Rehabilitation and Sport Medicine, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Ass. Prof. Pavel Kolář, PhD.*

*Senior rehabilitation physiotherapist: Mgr. Kateřina Míková*

### **1. Department of Rehabilitation**

*Head physician: Martina Kövári, MD*

*Head nurse: Bc. Hana Jirků*

#### **Basic characteristics:**

The department is concerned with rehabilitation for adult and paediatric patients with vertebrogenic disorders, neurological and internal diseases, after orthopaedic surgeries and injuries of the locomotor apparatus and spinal surgeries. It also provides some special rehabilitation programmes. In 2011, 584 patients were hospitalised at the inpatient section of the department and its outpatient part examined 2 643 new patients. The total number of medical examinations performed by physicians was 7 230 and 5 913 by physiotherapists and ergotherapists.

#### **Specific features of the workplace:**

Some physicians and physiotherapists participate in interdisciplinary super-consulting programmes for patients with cystic fibrosis, for patients with DMO (poliomyelitis) and patients with hereditary motoric-sensitive neuropathy. Specialised prosthetic care and prescription of suitable aids for patients after amputations in the frame of the whole UHM, super-consulting activity. Some physiotherapists are a part of the multidisciplinary team of the Department of Neurootology, specialized in patients with dizziness and disorders of stability.

#### **New methods and procedures:**

- The evaluation of autonomous neuropathy and physical condition of patients with hereditary neuropathy in cooperation with the Department of Neurology,
- Measurement of changes in the activity of the oesophagus with consequent changes in afferentia in the locomotor system (in cooperation with the Department of Surgery of 1st Faculty of Medicine and Bohunice hospital, a part of University Hospital in Brno).
- Use of biofeedback (elektro-tactil language stimulation) in patients with cerebellar impairment.
- Research of etiologic factors of idiopathic scoliosis, use of biofeedback in patients with defecation disorders (in cooperation with the Department of Gastroenterology)

#### **Unique technological equipment:**

- Use of spirometer for measurement of occlusal pressures;
- „Brain port“ device for diagnostic of vertiginous conditions;
- „Balance master“ device for the therapy of stability disorders and vertiginous conditions;

- In cooperation with The Spinal unit, launching of a new electrophysiology laboratory - EMG, SEP and MEP

#### **Important event in 2011:**

- Active participation of the employees of the department in the national congress of neurology and rehabilitation
- Active participation in international symposia (e.g. the 6th International Posture Symposium and Gait Research)
- Significant publications in scientific international magazines such as: American Journal of Respiratory Critical Care, Journal of vestibular research

## **2. Spinal unit**

*Head physician: Jiří Kříž, MD.*

*Head nurse: Bc. Hana Jirků*

#### **Basic characteristics:**

Spinal unit provides therapeutic and rehabilitation care for patients in the subacute stage after spinal injuries and also for patients in the chronic stage after the injury of the spinal cord with health complications. In 2011, 82 patients after acute spinal lesion were hospitalised here and another 47 spinal patients in the chronic stage and with acute complications, and 200 patients were treated on the outpatient basis.

#### **New methods and procedures:**

- Standardization of pain assessment in patients after spinal injury in the European project EMSCI
- Receiving of the NT 12381 grant „Respiratory system dysfunctions in patients after spinal cord injury.“
- In cooperation with the Department of Urology, launching of the project „Taking sperm from spinal patients by the method of vibrostimulation.“

#### **Unique technological equipment:**

- The vibrostimulation device (a donation from the Foundation “Pohyb bez pomoci”), used in cooperation with the Department of Urology
- The Medelec Synergy EMG / EP device (a financial gift from the Foundation fund J and T) for electrophysiological laboratory and the departments of sport medicine and rehabilitation.

## **3. Department of Sport Medicine**

*Head physician: Ass. Prof. Jiří Radvanský, MD*

*Head nurse: Bc. Hana Jirků*

#### **Basic characteristics:**

It provides consulting and counselling activities in patients with an excessive or inadequate physical exercise regimen, functional ballast diagnostics in paediatric patients after heart defects surgeries and in adults before elective surgeries. It provides special sport investigations and superconsiliary activities in course of licensing for racing sports.

It also provides superconsiliary activities in the field of comprehensive lifestyle changes including nutrition counseling and physical exercise program in patients with civilisation diseases (metabolic syndrome, obesity, diabetes mellitus) and pediatric patients with chronic diseases, restricting sport activities.

The department performs specialized load testing before the movement therapy, under the leadership of physiotherapists.

There were performed 2 100 outpatient examinations and 1 850 sport examinations.

**New methods and procedures:**

- Diagnosis of safe load intensity in individualized physical activity and determination of energetic strain of motion for motor-disabled persons
- Analysis of body composition by the bioimpedance method

**Unique technological equipment:**

- Analyser of breathing gases exchange with differential paramagnetic sensor

#### **4. Centre for Pain Treatment and Research**

*Head physician: Jiří Kozák, MD., PhD.*

*Head nurse: Lenka Gavendová*

**Basic characteristics:**

A comprehensive therapy mainly of chronic pain, using from psychological to highly sophisticated

instrumental methods, super-consulting services in the frame of the UHM as well as the whole country.

In 2011, a total of 6 902 patients were treated, including 16 using of neuromodulation techniques and 11 radiofrequency methods.

**Specific features of the workplace and specialised outpatient facilities:**

- The workplace has a multidisciplinary character in care of chronic pain, it is one of the six neuromodulation centres in the frame of the Czech republic, it is also an educational workplace of The Institute of Postgraduate Medical Education. This centre runs a consulting telephone service „Line against pain“.

**Important event in 2011:**

- Active participation in the Czech – Slovak dialogues on pain – Košice, organization of the event „Prague neuromodulation day“ in the University Hospital Motol
- Publications – Pain treatment - current approaches to the treatment of pain and pain syndromes
- Scientific articles published in medical journals, 4 articles in Czech and other 2 in foreign journals



**Department of Ophthalmology, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Dagmar Dotřelová, MD, CSc., FEBO*

*Senior consultant: Milan Odehnal, MD, MBA*

*Head nurse: Bc. Jana Králíčková*

**Basic characteristics:**

Department of Ophthalmology provides preventive, diagnostic, conservative and surgical care for patients from the birth till an old age. In the field of paediatric ophthalmology, the department serves as a superconsiliary centre in the region of the CR. In the field of adult ophthalmology it provides a wide spectrum of up-to-date modern diagnostic-therapeutic interventions. Top level is represented by cataract and vitreo-retinal surgery. An integral part of the ophthalmology are scientific - research and educational activities and also many lecture and publication activities. The clinic is an accredited institution in the field of specialized medical education.

In 2011, there were performed 1030 surgeries and 480 examinations in hospitalised children, in hospitalised adult patients were performed 410 surgeries. In total, there were treated or more than 30 000 patients and over 1995 patients were cured for the injuries of the eye and its vicinity. The most frequent surgical interventions were cataract operations in adults, operations of strabism and examinations of children in general anaesthesia.

**Specialised outpatient facilities:**

- Paediatric ophthalmology
- Centre for immature babies with retinopathy
- Centres for strabology, glaucoma, cataract and oncology
- Adult ophthalmology
- Vitreo-retinal centre, Centre for diabetology, cataracts, glaucoma and for plastic surgery
- Orthopedic outpatient centre

**New methods and procedures:**

- Confocal microscopy for observations of structures of cornea
- Combination of cryopexy and laser photocoagulation of retina is a new form of treatment for atypical forms of retinopathy in immature infants
- Application of multifocal toric lens is the latest procedure of cataract and refractive surgery in adult patients
- Modern outpatient treatment of glaucoma by selective laser trabeculoplasty

**Unique technological equipment:**

- „Retcam 3“ - the latest digital imaging system designed for retinal screening especially in pediatric patients, it allows to take a 3D photo and video documentation and it preserves and reproduces a three-dimensional image of the retina
- „Confoscan“ - confocal microscope, which allows monitoring and studying of corneal endothelial cells „ in vivo“



**Important event in 2011:**

- Finishing the project "Comprehensive care for prematurely born children with retinopathy", a part of University Hospital Motol research intention, being solved in years 2005-2011.
- Department of Ophthalmology received a permanent license to ophthalmology training at the national level in the field of strabismus and binocular vision. The licence was awarded by The Czech Medical Chamber and the presidency of the committee for pediatric ophthalmology.

**Department of Orthopaedics, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Ass. Prof. Tomáš Trč, MD, CSc., MBA*

*Senior consultant: Daniel Rybka, MD*

*Head nurse: Helena Hlásková*

**Basic characteristics:**

The department provides diagnostic and therapeutic care in terms of orthopaedics and traumatology for both paediatric and adult patients not only in the catchment area, but also superconsiliary and consulting services in the whole Czech Republic. The workplace participates in the development and implementation of new methods in orthopaedics, traumatology, sport medicine and new biotechnologies used in the treatment of the locomotor apparatus (cartilages, ligaments, tendons and bones). At the present time, the employees of the department are investigators of several grant projects on the national as well as international level.

In 2011, the total of 1 240 children and 2 443 adult patients were hospitalised. There were performed 1 069 interventions in paediatric patients and 2 434 interventions in adults, in total the department of Orthopaedics performed 3 503 operations. Treatment on an outpatient basis was provided for 18 540 children and 15 391 adult patients, in total the department of orthopaedics examined 33 931 outpatient patients.

**Specialised outpatient facilities:**

- Onco-orthopaedics
- Scoliosis
- Sport traumatology for both children and adults
- Specialised arthroscopic interventions
- Neurogenic defects
- Congenital skeletal defects
- Primary and revise endoprosthetics
- Complex surgery of the humeral joint

**New methods and procedures:**

- Replacement of the hip bone and humerus (shoulder) of the „resurfacing“ type – the so called „sparing operation“ in which only the damaged part of the joint surface is replaced;
- Surgery of the hip bone and the knee by means of the so called „mini-invasive approaches towards the hip joint;

- Use of the navigation if endoprosthetic surgery of the knee joint;
- Prolongation of long bones by using of the self-adjustable intramedullary ISKD nail;
- Modelling of the head with the navigated hip luxation;
- Transplantation of cartilages
- Anterior cruciate ligament replacement with hamstring tendons, using the double BTB graft method;
- Use of mesenchymal stem cells in the treatment of diseases of articular cartilages, combination of the ASK intervention of microfractures and application of joint blockade;
- Use of autologous blood plasma (growth factors obtained by the thrombocyte centrifugation in the treatment of bone cartilage degeneration (PRGF);
- Use of the PRGF cell method in the treatment of enthesopathies;
- Rupture of the rotator cuff of the humerus treated with help of PRGF;
- Arthroscopic surgery of hip, ankle and wrist joint
- Complex therapy of foot deformities in children and adults

#### **Unique technological equipment:**

- footplate – a device for diagnosis of foot arch injury
- modern surgical instrumentation for navigated surgery of large joints
- the latest type of arthroscopic device
- sonograph for diagnostics of congenital hip dysplasia and other bone diseases
- centrifugation system of blood plasma in order to obtain the PRGF

#### **Important event in 2011:**

- Department of Orthopaedics organized the World congress of SICOT (Société Internationale de Chirurgie Orthopédique et de Traumatologie) in September 2011. The president of the congress was Ass.Prof. Tomáš Trč, MD, CSc., MBA., the head of the department.
- Ass. Prof. Tomáš Trč, MD, CSc., MBA. was appointed professor at the Scientific Council of the 1st Faculty of Medicine, Charles University and also at the Scientific Board of Charles University Rectorate.
- Vojtech Havlas, MD, PhD. successfully completed the habilitation at the Scientific Council of the 2nd Faculty of Medicine, Charles University.
- Inclusion of regular events of the department in the calendar of the Czech Society for Orthopaedics and Traumatology: „Christmas Orthopaedic Symposium in Teplice „ and „Spring Orthopaedic Symposium.“

#### **Department of Neurosurgery**

*Head physician: Ass. Prof. Michal Tichý, MD*

*Head nurse: Gabriela Šuláková*

#### **Basic characteristics:**

The department is focused on specialised neuro-surgical acute or planned care for paediatric and adult patients, it provides consulting services in the full range of its specialisation. It also provides education for pre- and postgraduate study courses and scientific and research activities. In 2011, a total of 1 449 patients were hospitalised in both paediatric and adult parts, 1 054 patients were operated and the outpatient treatment was provided for 5 129 patients.

**Specialised outpatient facilities:**

- Neurosurgery for children
- Neurosurgery for adult patients including pain treatment

**New methods and procedures:**

- Measurement of neurophysiological functions in surgeries of brain and spinal cord with help of a multimodal device, intraoperative stimulation of brain centers in young children;
- Continuing of programmes in solution of age-limited tumors and congenital defects of the CNS;
- Continuing of implantation of baclofen pump for treatment of generalised spasticity;
- Continuing of the treatment program for refractory epilepsy – resection epileptological surgeries and interventions with vagal nerve stimulators;
- Orientation towards mini-invasive methods in the treatment of degenerative diseases;
- Vertebroplasty and stentoplasty in the therapy of osteoporotic spinal fractures in cooperation with the Department of Imaging methods and the Department of Rehabilitation and Sport Medicine;
- Radiofrequency neuromodulation used in painful conditions (vertebral, peripheral nerves);
- Using of highly specialized multimodal monitoring in patients with craniocerebral injury in the field of neuro-traumatology;
- Within the neurovascular program, the surgical program and endovascular techniques are both developed in cooperation with the Department of Imaging methods. Also decompressive craniectomy in patients with ischemic diseases is performed in collaboration with the Department of Neurology.

**Unique technological equipment:**

- Electromagnetic neuronavigation without fixation of the head is provided in new central operating rooms for children;
- Cerebral neuronavigation BrainLab, integrated with the Pentero microscope (Zeiss). The SW equipment enables the fusions of functional brain monitoring (MRI, SPECT, tractography etc.);
- Neuro-monitoring device Nicolet Endeavor for the intra-operative follow up of neurophysiological functions;
- Ultrasound applicator of the fixation of absorbable osteosynthesis SonicWeld.
- Stereotactic frame device Radionics

## Adult inpatient part

### Department of Obstetrics and Gynaecology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol

*Head physician: Prof. Lukáš Rob, MD*

*Senior consultant: Roman Chmel, MD*

*Head nurse: Bc. Libuše Hofmannová*

#### **Basic characteristics:**

The clinical department provides care in the full range of its specialisation – gynaecology and obstetrics – including methods of assisted reproduction and specialised interventions in the field of oncological gynaecology, senology and uro-gynaecological interventions. The department serves as perinatology centre -including complete care for extremely immature neonates- with a regional and nationwide competence. In 2011, 9 689 patients were hospitalised there and a total number of surgeries was 6 181. On the department 3 323 babies were born from 3 233 deliveries.

#### **Specialized outpatient facilities for:**

- Oncogynaecology and Colposcopy;
- Urogynaecology;
- Senology;
- Endoscopy;
- Centre for assisted reproduction;
- Ultrasound diagnostics and Fetal Medicine
- Prenatal Diabetology;
- Cardiopathies in Pregnancy
- Infertility treatment

#### **New methods and procedures:**

- In the therapy of vulvar carcinoma, in the standard therapeutic procedure there has been introduced the preoperative detection and extirpation of the sentinel lymphatic node, which will significantly reduce postoperative morbidity in patients.
- In the treatment of carcinoma of the cervix, there have been introduced conservative methods consisting in detection of the sentinel node with a considerable decrease in morbidity
- Fertility sparing interventions in carcinoma of the cervix with the introduction of neoadjuvant chemotherapy prior to surgery itself.

#### **Unique technological equipment:**

- Therapeutic CO2 laser for the treatment of pre-cancerous changes in the vulva and vagina

#### **Important event in 2011:**

- Organization of the International Conference for Oncogynaecology - 15<sup>th</sup> Bauer day.

Department of Neonatology with ICRU (intensive care and resuscitation unit) is a part of the department of Gynaecology and Obstetrics.

## **Department of Neonatology with ICRU**

*Head physician: Ass. Prof. Petr Zoban, MD*

*Head nurse: Dana Šmídlová*

### **Basic characteristics:**

Department of neonatology is part of the Perinatology Centre with regional and nationwide activity. This workplace provides care for neonates in the rooming-in regimen and further, a specialised intensive resuscitation care to immature babies including extremely immature and pathological neonates regardless their gestation age.

In cooperation with paediatric surgical disciplines, it ensures the care for neonates with congenital developmental defects (CDD).

The department belongs to medical centres with the nearest specific mortality of neonates below 1000 g in the Czech republic.

In 2011, the total of 3 314 liveborn infants were born there, of which 291 with low birth weight (78 infants had birth weight below 1500 g) - it is 26% more than last year. At the ICRU/ICU were treated 440 neonates in 2011. A total of 98 infants had congenital developmental defects - nearly 1/4 more than last year. Outpatient treatment was provided for 180 children and overall 344 examinations were performed.

Specialized outpatient facilities:

- Clinic for children at risk

### **New methods and procedures:**

- In cooperation with the Department of Paediatric Stomatology and the Department of Plastic Surgery of University Hospital in Královské Vinohrady (Prague 10), there continues a programme of an early correction of clefts of the lip and palate in neonates (up to 7th day post partum). In 2011, a total of 32 corrections were performed (from the year 2010 there is an increase of 40%).
- Continuation of the programme of non-invasive support of breathing in neonates, with reduction of the length of mechanical pulmonary ventilation to a minimum (INSURE).
- Department performs the whole-body hypothermia in treatment of neonates with perinatal asphyxia. In 2011, 5 neonates were treated by this method.

### **Unique technological equipment:**

- EEG monitor for continuous monitoring of electrophysiological activity of the CNS
- Therapeutic unit for comprehensive controlled treatment of whole-body hypothermia in neonates with asphyxia
- New „bed-side“ ABL Radiometr with enhanced software for extended range of biochemical analytes.

### **Important event in 2011:**

- XXVII. Neonatological days with international participation, Pilsen 2011 (P. Zoban – the chairman of the thematic block „Cerebral hemorrhage in neonates and posthemorrhagic hydrocephalus“)
- M. Černý: Current view on the issue of posthemorrhagic hydrocephalus - requested lecture.

- XXVII. Conference of the Perinatal Medicine Section of the Czech Gynecological and Obstetrical Society, Pilsen 6.- 8. 4. 2011 (P. Zoban: Current problems of late morbidity in newborns at risk in the Czech republic - requested lecture)
- Congress of pediatricians and pediatric nurses / XXIX. days of practical and hospital pediatrics, Olomouc, 27. – 28. 5. 2011 (P. Zoban: Results of long-term monitoring of children with birth weight below 1500 g in the Czech republic - requested lecture)

**Department of Internal Medicine, 2<sup>nd</sup> Faculty Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Milan Kvapil, MD, MBA*

*Senior consultant: Vladimír Srnský, MD*

*Head nurse: Jarmila Schmittová*

**Basic characteristics:**

Department of Internal medicine provides full diagnostic and therapeutic care in almost the whole range of its specialisation, for hospitalised patients from the catchment area and super consulting services for patients from the whole Bohemia. It offers pregraduate education for Czech and foreign students of 2nd Faculty of Medicine in the 3rd to 6th year of their studies as well postgraduate course in the frame of the discipline.

In 2011, the department provided outpatient treatment for 54 817 patients, 4 541 patients were hospitalised.

**Specialised outpatient facilities for:**

- General internal medicine (including consulting services)
- Gastroenterology (including endoscopy and sonography)
- Diabetology
- Nephrology (including peritoneal dialysis)
- Cardiology (incl. ECHO)
- Angiology (incl. DUS examination of arteries and veins)
- Podology
- Nutrition
- Lipidology
- Rheumatology

**New methods and procedures:**

- High-resolution manometry of esophagus and rectum was put into practice. It is used in the diagnosis of gastroesophageal reflux disease, achalasia and fecal incontinence.
- Method of transnasal cholangioscopy
- Measurement of transcutaneous oxygen tension (Tc PO<sub>2</sub>) by the TCM Radiometer.
- Continuous measurement of blood glucose in diabetics with the help of Medtronic system (CGMS) was put into operation;
- Investigations of claudication distance by treadmill test;
- Implantation of so-called power ports which allows not only administration of medicine as well as contrast agents in repeated CT examinations in oncology patients;



- Measurement of the minute cardiac output by means of the Picco system – in patients at the ICU

#### **Unique technological equipment:**

- Devices for subcutaneous glucose levels measurements (CGMS): IPRO II, IPRO I, Realtime, DexCom
- Device for the indirect calorimetry investigations Vmax Series 2130. It is used for determination of energy needs in critically ill patients on artificial ventilation.

#### **Important event in 2011:**

- Prof. Kölbl, MD. with his team published a medical textbook „Practical Cardiology“.
- Prof. Kölbl, MD. is the author of the chapter „Congenital heart diseases in adulthood“ in the book „Internal Medicine“, 4th edition (author: P. Klener).
- Prof. Perušičová, MD. published a monograph „Type 2 Diabetes mellitus“.
- Prof. Perušičová, MD. is the author of the chapter „Incretin-Based Treatment Strategy - GLP-1 receptor agonists or so called Incretin Mimetics“ in the book „Topics in the prevention, treatment and complications of Type 2 Diabetes“ (author: M.B. Zimering).
- Organization of the „5th Symposium Kardiabetes“ in Prague.
- Organization of a two-day seminar „12th Diabetes graduate seminar“ in Trebon.
- Organization of a three-day seminar „17th Graduate seminar - News in diabetology.“ in Poděbrady.
- Department of Internal Medicine is a teaching center for abdominal ultrasound courses organized by the Postgraduate Medical Institute.
- A course in order to obtain a nutritional license F016, accredited by the Medical Chamber was realised;
- Systematic project of postgraduate education for the so far unspecialised doctors of the department has been continuing. The program is accessible on the website of the Internal Clinic.

### **Department of Surgery, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Prof. Jiří Hoch, MD*

*Senior consultant: Zbyněk Jech, MD*

*Head nurse: Bc. Růžena Macháčková*

#### **Basic characteristics:**

In 2011, the Department of Surgery, 2nd Faculty of Medicine, Charles University and University Hospital Motol provided a complete surgical, outpatient, consulting and hospital care for its patients in the whole range of its specialisation – i.e. general and abdominal surgery, abdominal and thoracic traumatology. The department participated in the pregraduate and postgraduate education, and in the solution of research projects. In 2011, outpatient treatment was provided for 18 954 patients, 2 694 patients were hospitalised and 2 236 patients underwent a surgery.

#### **Specialised consulting centres for:**

- Proctology

- Patients with colostomy – an educational and training centre
- Diseases of the pancreas and the biliary tract
- Endocrine surgery
- Mammology
- Lymphology

#### **New methods and procedures:**

- Regular seminar indicating multimodal treatment of solid tumors – onkoboard, it has already discussed 460 medical cases

#### **Unique technological equipment:**

- A new endoscopic system was bought.
- LigaSure – the unit for electrocoagulation and dissection - is used in operating theaters. The device has improved and extended laparoscopic and conventional surgery.
- A scintillation detector is used for identifying the sentinel lymph node during breast and malignant melanoma surgeries.

#### **Important event in 2011:**

- Working day of the Section for Coloproctology of the Czech Surgical Society /of the Czech Medical Society of Jan Evangelista Purkyně/ held also in previous years in the University Hospital Motol was in 2011 organized as a part of the 1st National Congress of colorectal cancer of the Society for Gastrointestinal Oncology /of the Czech Medical Society of Jan Evangelista Purkyně/
- Medical textbook: Jiří Hoch, John Leffler and team - Special Surgery- the third enlarged and revised edition
- Course of endosutures; Certificate-granting educational course „Complete care for patients with breast cancer“; ConvaTec Academy – certificate-granting educational course for nurses working with patients with colostomy.

### **3<sup>rd</sup> Department of Surgery, 1<sup>st</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Ass. prof. Robert Lischke, MD, PhD.*

*Senior consultant: Jiří Tvrdoň, MD*

*Head nurse: Mgr. Ida Lecnarová*

#### **Basic characteristics:**

This department is the biggest workplace of abdominal surgery in the Czech republic - the center of excellence, it provides comprehensive care in many fields of thoracic surgery (surgery of lung, trachea and respiratory tract, chest wall and chest deformities, oesophagus, mediastinum, myasthenia gravis, diaphragm), including the Pulmonary transplantation programme – the unique one in the Czech republic. The department is the only accredited medical center for thoracic surgery of second degree. It provides medical care in the whole range of abdominal surgery, thoracic and abdominal traumatology and endocrinosurgery.

In 2011, there were performed 2 784 surgeries, 809 gastrofibroscopies, 3 093 patients were hospitalized and outpatient treatment was provided for 21 516 patients.

#### **Specialised outpatient centres for:**

- Lung transplantation



- One-day surgery
- Diseases of intestines and rectum
- Endocrinosurgery
- Diseases of veins and lower extremities
- Diseases of livers, biliary tract and pancreas
- Diseases of oesophagus and stomach
- Diseases of lungs, mediastinum and chest wall
- Diseases of mammary gland
- Internal clinic

#### **New methods and procedures:**

- Preparation of the program „ex vivo lung perfusion“, a method to increase the number of suitable grafts for lung transplantation;
- Introduction of a surgical rectoscope for the mini-invasive surgery in the rectal region;
- Introduction of an endoscopic application of absorbable stents in diseases of oesophagus, stomach and respiratory tract;
- Introduction of the use of radio-frequency ablation Habib in hepatic surgery and surgery of parenchymatous organs;
- Introduction of surgery of varixes with help of radio-frequency ablation (RFA).

#### **Unique technological equipment:**

- Cardiohelp- centrifugal pump for extracorporeal membrane oxygenation
- Videobronchoscopy, gastroscopy
- Surgical rectoscope for mini-invasive interventions in the rectal region;
- Hemron – a device for the outpatient treatment of hemorrhoids;
- Device for radio-frequency ablation Habib, together with the department of imaging methods
- harmonic scalpel

#### **Important event in 2011:**

- Meeting of thoracic surgeons of the Czech Republic (1. 11. 2011). Prof. Enrico Ruffini, Torino, Italy was invited to the meeting. He is an expert of the European Society of thoracic surgeons on issues of thymus and he had a lecture on the topic „Myasthenia gravis and diseases of thymus.“

#### **Department of Cardiology 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Prof. Josef Veselka, MD, FESC*

*Senior consultant: Jana Páleníčková, MD*

*Head nurse: Bc. Jana Kovalčíková*

#### **Basic characteristics:**

The department provides comprehensive cardiological care for hospitalised and outpatient patients. It is directly related to the department of cardiosurgery and angiocardiosurgery.

In 2011, an outpatient treatment was provided for 22 000 patients, almost 4 000 patients were hospitalised.

Cardiologists of the department performed 3 176 diagnostic catheterisations, 984 percutaneous coronal interventions, 450 peripheral arterial angioplasties, 7 250 echocardiographic examinations, 1 200 ergometric or spiroergometric examinations, 200 pacemaker implantations, 200 electrophysiological examinations and catheter ablation, 30 ICD implantations and 2 400 duplex ultrasound examinations of the peripheral vessels.

**Specialised outpatient facilities for:**

- Congenital and acquired cardiac defects,
- Cardiac failure
- Hypertrophic cardiomyopathy
- Electrophysiology and cardiac pacing
- Angiology

**New methods and procedures:**

- catheterisation implantation of biological valve in the aortic position /12 patients/
- direct transarterial aortic valve implantation – first performance in the Czech republic
- valvuloplasties of all cardiac valves
- alcohol septal ablation - the largest set in the CR
- carotid stenting – the largest set in the CR
- catheterisation occlusion of atrial septal defect and patent foramen ovale (PFO)
- catheterisation occlusion of para-valvular leak and aortic valve
- method of controlled hypothermia in resuscitated patients
- imaging of the heart by 3D echocardiography
- program of endomyocardial biopsy
- treatment of rhythm disorders with help of 3D electroanatomical mapping

**Unique technological equipment:**

- CARTO - a device for three-dimensional electroanatomic mapping
- echocardiographical device with 3D transesophageal echocardiography

**Important event in 2011:**

- Publications: 7 abstracts and 11 articles in international journals.
- Organization of the annual symposium Prague Intervention V. with international participation.
- Organization of the seminar „Diagnosis and treatment of arrhythmias“.
- Chapter in the book: Cardiac resynchronization therapy

*Head physician: Ass .Prof. Marek Šetina, MD*

*Senior consultant: Milan Horn, MD*

*Head nurse: Drahomíra Vrbová*

**Basic characteristics:**

Department of cardiosurgery is concerned with two independent disciplines: cardio-surgery and vascular surgery. It is equally devoted to both specialisations and provides care in the full extent. It ensures 24 hours surgical services for all emergencies of the cardiovascular system including traumas.

In 2011, the outpatient care was provided for 4 731 patients and 813 major surgeries were performed, of which 405 were cardiac and 408 vascular interventions.

**Specialised outpatient facilities for:**

- Cardiology
- Cardiosurgery
- Vascular diseases
- Congenital heart defects in adults
- Arrhythmology – after surgical treatment of atrial fibrillation
- Treatment of ischaemic defects of lower extremities
- Clinic for patients after surgical treatment of infective endocarditis

**New methods and procedures:**

- Video-assisted mini-invasive surgery of valvular diseases
- Video-assisted mini-invasive surgery of some congenital cardiac defects (e.g. defect of the atrial septum)
- Surgical treatment of infectious endocarditis, including the treatment of drug addicts in cooperation with the Department of Infectious Diseases of UHM and the Department of Infectious Diseases of University Hospital at Bulovka
- Hybrid mini-invasive solution of polymorbid patients with ICHS (PCI – stent + MIDCAB – monobypass from the minithoracotomy without the extracorporeal circulation)
- Development of methods of mechanical cardiac support
- Video-assisted introduction of the left ventricular cardiac electrode in patients with a severe dysfunction of the left ventricle from minithoracotomy
- Reconstructive (sparing) operations of the aortic valve
- Revascularisation of the myocardium without using the extracorporeal circulation

**Unique technological equipment:**

- Maquet Cardiohelp - a portable device for mechanical cardiac support on the principle of centrifugal pumps
- Toshiba ECHO - echo device with 3D imaging

**Important event in 2011:**

- Doctor Janský was the main organizer of the 9th conference of the Working Group of Acute Cardiology of the Czech Society of Cardiology in Karlovy Vary.
- Ass. Prof. Marek Šetina, MD is a co-author of the third extended edition of the medical textbook "Special surgery".

- Active participation of physicians from the department on many medical events: Joint Meeting of The Society for Heart Valve Disease & Heart Valve Society of America; Annual Congress of the Czech Society of Cardiology; Prague Symposium on Congenital Heart Disease; Days of Cardioanesthesiology with international participation; Annual conference of the Working Group of Acute Cardiology of the Czech Society of Cardiology; Annual Symposium of the Working group on Congenital Heart Disease in adulthood of the Czech Society of Cardiology; Annual Symposium of the Working Group on Interventional Cardiology of the Czech Society of Cardiology; The day of the South Bohemian Cardiac Centre; Prague Intervention.

## **Department of ENT, Head and Neck Surgery, 1<sup>st</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Prof. Jan Betka, MD*

*Senior consultant: Pavol Jablonický, MD*

*Head nurse: Jana Jandová*

### **Basic characteristics:**

The clinical department provides a complete spectrum of examinations and treatment of diseases in the ENT field. Surgical methods are performed in the full extent including super-specialised interventions, in most cases for the whole Czech Republic. In the year 2011, 3 333 patients were hospitalised, of which 1 484 at the ICU. The department performed 58 273 outpatient medical services for 15 926 patients. In our operating rooms, 3 101 surgeries were performed and next 218 patients of University Hospital Motol underwent the operation outside the clinic. In 2 556 patients there were performed further specialised audiometric examinations, and a total of 8 442 operations were undertaken. Objective audiometry was performed in 320 patients and otoacoustic emissions in 350 patients. The examination of the statoacoustic apparatus was performed in 798 cases and the ENG examination in 145 patients.

### **Specialised outpatient facilities for:**

- Oncology
- Kophosurgery
- Rhinology
- Endocrinosurgery
- Otoneurology
- Hearing aids
- Laryngo-phonosurgery
- Voice prostheses
- Snoring-related problems and sleep disorders
- Sonography
- Salivary glands disorders
- Neurosurgery and cranial base
- Center for lasersurgery
- Center for surgery of the thyroid and parathyroid glands
- Center for cochlear implant

- Center for head and neck oncosurgery
- Center for rehabilitation in patients after total laryngectomy

#### **New methods and procedures:**

- Radio-navigation in surgeries of the thyroid glands and parathyroid glands;
- Mini-invasive endoscopic surgeries of the thyroid gland (MIVAT);
- Endoscopic methods in the removal of tumors of the inner auditory meatus;
- Perioperative neuromonitoring;
- Doppler sonography;
- Fibroendoscopy of swallowing paths (FEEST);
- Radio-frequency surgeries in apnea and chronic tonsillitis;
- Operation of the sentinel node in carcinoma of the oropharynx and the oral cavity with help of the gamma probe detection;
- Investigation by means videostroboscopy in patients prior to microlaryngoscopy and phonosurgical interventions;
- Identification of the target structure in the course of cochlear implantation by means of EABR.
- endoscopic resection of esophageal diverticula
- endoscopic diagnostics of respiratory tract tumors and tumors of swallowing pathways, with the help of MBI
- Pilar implantation in patients with insufficient sleep syndrome

#### **Unique technological equipment:**

- CO2 Laser, Dioxi Laser
- Harmonic scalpel, radio-frequency scalpel;
- Endoscopic equipment for the mini-invasive interventions of the thyroid gland and in the operation of the cranial base and the inner auditory meatus;
- Videostroboscope, ENG Video
- Neuronavigation, radionavigation

#### **Important event in 2011:**

- Kutwirt's Price of Society for Otolaryngology and Head and Neck Surgery for The best book written by author under 35 years: Bouček, J. T. Mrkvan, M. Chovanec, M. Kuchar, J. Betka, V. Bouček, M. Hladikova, J. Betka, T. Eckschlager, B. Rihova, J. Regulatory T cells and their prognostic value for patients with squamous cell carcinoma of the head and neck. Cell. Mol. Med. 2010, 14(1-2): 426-433
- 2. - 7. 7. – Participation of the clinic delegation on the 1st Congress of the Confederation of European ORL-HNS, Barcelona
- Within the Congress passed the Presidential Council meeting of the Confederation of European ORL-HNS (prof. Betka participated in for Czech Society ENT and Head and Neck Surgery JEP). The local clinic won an opportunity to organize prestigious Congress of Confederation in 2015).
- 14.10. - Lecture of prof. Betka at the ceremonial session of the University of Freiburg on the anniversary of Professor Lasziga

**Department of Nuclear Medicine and Endocrinology,  
2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Ass. Prof. Petr Vlček, PhD.*

*Head nurse: Jana Richterová*

**Basic characteristics:**

The interdisciplinary workplace of Nuclear medicine and Endocrinology which is, besides standard diagnostics by means of radioisotope methods, focused on diagnostics, treatment and dispensary care of patients with differentiated carcinoma of the thyroid gland and severe forms of thyroid orbitopathy and on therapy of <sup>131</sup>I-MIBG from the whole Czech Republic. The department also serves as an educational centre, it is accredited in specialisation of Endocrinology and Nuclear Medicine. Last year it provided care for 19 000 patients, 1 000 of which were hospitalised. The outpatient facilities provided 4 000 investigations and therapeutic applications of radioactive pharmaceuticals.

**Specialised outpatient facilities for:**

- Endocrinology and diagnostics of differentiated carcinoma of thyroid gland (DTC); the dispensary has over 11 700 patients (this is one of the greatest ensembles in the world)
- Clinic for thyroid microcarcinoma
- Consulting for medullary thyroid carcinoma (MTC)
- clinic for thyroid ophthalmopathy (TAO)
- nuclear medicine clinic

The department is a center for the treatment with TAO inhibitors of the growth hormone, diagnostics and therapy of DTC using human recombinant THS (as the only in the CR) and the treatment of tumors of neuroectodermal origin MIBG (the only in the CR).

**New methods and procedures:**

- Diagnostics and treatment of differentiated carcinoma of the thyroid gland using human recombinant thyreostimulation hormone;
- Diagnostics using a hybrid combination of X-ray (CT) scanning and isotope (SPECT) imaging;
- Use of Somatuline and combined immunosuppression in the treatment of most severe forms of thyroid orbitopathy.
- Introduction of new radiopharmaceuticals in clinical practice Tectrotyd-99m;
- Clinical testing of new pharmaceutical for the therapy of medullary carcinoma (Astra-Zeneca).
- Providing of genetic testing in patients with familial forms of medullary thyroid carcinoma.

**Unique technological equipment:**

- Symbia TruePoint SPECT/CT T

**Department of Neurology, 2<sup>nd</sup> Faculty of Medicine and University Hospital Motol**

*Head physician: Ass. Prof. Martin Bojar, MD*

*Senior consultant: Aleš Tomek, MD*

*Head nurse: Hana Havlíčková*

**Basic characteristics:**

Department of Neurology provides a full range of diagnostic, therapeutic and preventive care for patients with diseases of the nervous and musculoskeletal systems in cooperation with a number of clinical and laboratory workplaces of both adult and paediatric part of the Motol Hospital and 2nd Faculty of Medicine.

The clinic has 12 beds ICU, 52 standard beds and 2 single beds with video-EEG monitoring.

In 2011, the department provided outpatient examination for 35 666 patients. A total of 2230 patients were hospitalised, 515 at the ICU for neurology.

**Specialised outpatient facilities:**

- Center for diagnostics and treatment of demyelination diseases;
- Center for epilepsy (adult part);
- Neuromuscular Center and EMG and EP lab;
- Laboratory examination of the autonomic nervous system;
- Centre for Neuro-otology of Charles University, 1st and 2nd Faculty of Medicine, UHM
- Ictus Center of Motol Hospital and Neurosonological laboratory
- Cerebrovascular consulting clinic and Laboratory for Neurosonology;
- ConCenter for disorders of cognitive functions.
- Center for Parkinson´s disease and othe extrapyramidal disorders;
- Center for headaches;
- Consulting for neurocutaneous diseases;
- Consulting for neuroAIDS;
- Consulting for myoskeletal medicine;
- Laboratory for Liquorology

**New methods and procedures:**

- Examination of autoimmune encephalitis - a unique methodology in the CR
- Testing of antibodies against well characterized onconeural antigens (Hu, Yo, Ri, MA2 (Ta), CV2 (CRMP5), amphiphysin) by Western blot with subsequent automated semi-quantitative assessment;
- Testing of antibodies against membrane and synaptic antigens (NMDAR, AMPA1R, AMPA2R, GABABR, caspr-2, LGI-1) by indirect immunofluorescence on cells of transfected genes for the antigen;
- Introduction of investigative protocol for patients with suspicion of normotensive hydrocephalus, including implementation of a standardized lumbar infusion test;
- Introduction of routine liquor diagnosis of neurodegenerative diseases;
- Examination of measure of atrophy of critical brain structures with MRI volumometry and the introduction of examination integrity of white matter diffusion tensor imaging (DTI) in cooperation with the University Hospital Motol KZM
- Establishing a methodology for computer based testing spatial memory, including-virtual reality
- Implementation of pupilometry method - expansion of possibilities for the examination of existing equipment videooculography - VOG;
- Expansion of the personalized medicine in the secondary prevention of cerebro-



- vascular disease, including the identification and titration of dabigatran exposure;
- Stem cell transplantation in patients with spinal cord lesion and amyotrophic lateral sclerosis;
- Creation of programs for the rehabilitation of strabismus, amblyopia and functional programming Hess screen version in cooperation with the Department of Cybernetics, CTU in Prague and Motol Hospital Eye Clinic;
- Cooperation with the Mayo Clinic in the U.S. in the field of Alzheimer's disease;
- Introduction of diagnostics of neutralising antibodies against beta interferon and the level of MxA protein into routine practice in patients with multiple sclerosis, treated with interferon in cooperation with the Department of Medical Microbiology and Laboratory of Molecular Diagnostics of the Hospital Na Homolce;

**Unique technological equipment:**

- Unit for examination of spatial memory and orientation – Blue Arena;
- Rotating armchair NYDIAK, for ENG testing;
- Two systems for videoEEG monitoring Schwarzer/BrainLab and Schwarzer/Stellate;
- FAN Study system for a complete evaluation of functioning of the autonomous nervous system including the test on an inclined plain.

**Important event in 2011:**

Commencement of the University Hospital Motol Ictus Center accredited by the Ministry of Health since January 1st, 2011;

Organization of international training days in neuro-otology for neurologists from Kazakhstan and Slovakia and a range of postgraduate training programs for neurologists from the entire country

**1st Department of Orthopaedics, 1<sup>st</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Antonín Sosna, MD, PhD*

*Senior consultant: Assoc. Stanislav Popelka, MD. PhD.*

*Head nurse: Bc. Jana Sládková*

**Basic characteristics:**

- 1<sup>st</sup> Department of Orthopaedics provides both conservative and surgical care for adult patients in the full spectrum of orthopaedic interventions and traumatology of the locomotor apparatus with the exception of the spine and paediatric orthopaedics.

The department has 142 beds of which 14 at the ICU, 30 for traumatology and 20 are septic. A total of 5 389 patients were hospitalised in 2011 and the outpatient care was provided

for 55 529 patients. Total number of operations made was 5 179.

**Specialised outpatient facilities:**

- Joint replacement
- Surgery of major joints
- Surgery of the hand and the leg
- Arthroscopy of the shoulder, wrist, hip, knee and ankle joint
- Sport traumatology



- Septic orthopaedics
- Rheumatology
- Oncology
- General traumatology

**New methods and procedures:**

- Research and development of new joints implants in cooperation not only with domestic but also foreign partners;
- Introduction of routine use of reverse shoulder arthroplasty
- New techniques in wrist surgery Septic orthopaedics especially focused on failures of the joint replacements after an infection;

**Important event in 2011:**

Department organized the XV. ČSOT National Congress with international participation, and evaluation of the course was very successful

**Department of Pneumology, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: prof. Miloslav Marel, MD. PhD.*

*Senior consultant: František Petřík, MD*

*Head nurse: Mgr. Jana Zelenková*

**Basic characteristics:**

Department of Pneumology is concerned with diagnostics, treatment, evaluation and research of diseases of the lower respiratory tract with orientation to intensive pneumological care, interventional bronchology, comprehensive care for patients with CHOPD, treatment of patients with cystic fibrosis, oncology including biological therapy, sleep medicine, examination of patients prior to lung transplantation and the treatment of tobacco addiction. In 2011, 1 637 patients were hospitalized, outpatient treatment was given to 7 000 patients, bronchoscopy was performed 1 196 times and 1 145 times was given chemotherapy.

**Specialised outpatient facilities for:**

- Diseases with bronchial obstruction
- Cystic fibrosis
- Interstitial pulmonary disease
- Oncology
- Transplantations
- Treatment of tobacco addiction
- Patients with sleep breathing disorders

**New methods and procedures:**

- Measurement of exhaled nitrous oxide (FENO) which monitors the inflammatory activity in asthmatic patients;
- Biological therapy of bronchogenic carcinoma which improves prognosis of patients with advanced stages of the disease;
- Introduction of expandable nitinol stents coated with Y in patients with critical

- stenosis of the lower respiratory tract;
- Endo-bronchial ultrasonography (EBUS) which facilitates puncturing of the mediastinal nodes under the ultrasonographic monitoring in the real time.

**Unique technological equipment:**

- Niox MINO – device for measurement of the exhaled nitrous oxide
- Ultrasound bronchovideoscope Olympus BF-UC 160F-OL8

**Important event in 2011:**

- Multiple active participation at the World Congress on Lung Cancer in Amsterdam (L. Koubková, M. Marel).
- Doctor from our clinic Valentova Lucie won the award for best work in the field of pneumology for authors under 35 years.
- In November 2011 a workshop was held at the clinic with a practical example of implementation of bronchoscopy of endobronchial ultrasound (EBUS) for bronchologists from the entire country
- Doctor L. Valentova became the President of newly founded Section for lung transplantation under The Czech Pneumofisiology Company
- We purchased bronchological model of the head and torso, which can be used for training by bronchologists of Motol Hospital and doctors involved in bronchoscopic Postgraduate courses organized by IPVZ.

**Department of Urology, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Marek Babjuk, MD, PhD*

*Senior consultant: Jan Jerie, MD*

*Head nurse: Bc. Alena Kašajová*

**Basic characteristics:**

Department of Urology provides therapeutic and preventive care in the full range of adult urology. It is specialised in surgical treatment of malignancies of the uropoetic tract including the subsequent oncological treatment. It belongs among top workplaces in the treatment of lithiasis and is a unique workplace for surgical conversion of the sex. In 2011, the treatment was provided for 30 021 outpatient clients, 3 820 patients were hospitalised of which number 1 576 were operated.

**Specialised outpatient facilities for:**

- Oncology
- Treatment of lithiasis and chronic infection
- Andrology
- Dysfunction of the lower urinary tract
- center for research and treatment of prostate cancer (in collaboration with the Department of Radiotherapy-Oncology and Institute of Immunology)
- Centre for the surgical treatment of transsexualism

**New methods and procedures:**

- nephrectomy performed by using the single-port approach (LESS nephrectomy);
- laparoscopic radical prostatectomy;

- Laparoscopic resection of the kidney tumor;
- Refined method of radical prostatectomy;
- improvement of shunt operations after cystectomy;
- Use of new imaging methods for diagnostics of the urinary bladder tumors („narrow band imaging“);
- neuromodulation in the treatment of urge urinary bladder symptoms;
- Introduction of microsurgical method in surgeries of varicocele;
- Use of Ho:YAG laser in surgical interventions;

**Unique technological equipment:**

- Ho:YAG laser
- devices for NBI (narrow band imaging), fluorescence cystoscopy

**Important event in 2011:**

- Prof. Babjuk elected chairman of the Czech Urological Society JEP
- Prof. Babjuk elected chairman of the Group for the development of recommended practices in the treatment of bladder cancer European Association of Urology

**Longterm Residential Hospitals for the Elderly I., II. and III.**

*Senior consultant: Blanka Mašková, MD*

*Head nurse: Květoslava Simmerová*

*Senior consultant: Jan Štěpán, MD*

*Head nurse: Katarína Naušová*

**Basic characteristics:**

The workplace provides therapeutic, rehabilitation, diagnostic and nursing care mainly for geriatric patients or patients who require a longer or permanent medical and nursing care.

**Specific features:**

Continued treatment of chronic lesions with help of modern materials and nutritional support, fotodocumentation available. In cooperation with volunteers there are activities such as „training of memory“ in selected patients or canistherapy, cooperation with medical clowns, volunteers bought garden furniture and parasols for the department. The patients also use the help of specialists for spiritual care of the Motol Hospital.

We conducted a study on the effect antidekubitním Biosynchron 1000 Antidekubit-mattresses, adjustable beds have been tested Eleganza 3XC by Linet. Thanks to the sponsors and the contributions of workers of the clinic the lobby and adjacent areas LDN have been modified and decorated.

**Important event in 2011:**

J. Krupková, MD. - Lecture: Nutrition of geriatric patients for Society for Nutrition in Pardubice.

**Department of Infectious Diseases of University Hospital Motol**

*Senior consultant: Jiřina Hobstová, MD, PhD.*

*Head nurse: Hana Černá*

**Basic characteristics:**

The department provides hospitalisation and outpatient care for children and adults with a wide range of infectious diseases other than AIDS. Department has an insulating box for TB diagnosis, although it is not treated there. In 2011, 679 patients were hospitalized, including 97 drug addicts. Outpatient basis in that period were examined and treated in 2 084 patients during 12 124 visits.

**Specialised consulting centres:**

- Infectious centre for drug addicts provides replacement therapy for all users of opiates during hospitalization.
- Centre for treatment of chronic hepatitis which has a certificate of the guaranteed workplace for the treatment of hepatitis.
- Centre for Travel Medicine provides consulting and it is a place for vaccination before travelling abroad

**Important event in 2011:**

Publications - Hobstová J. Vitous A.: Viral Hepatitis at the beginning of the 21st century

**Department of Spondylosurgery of University Hospital Motol**

*Senior consultant: Ass. Prof. Jan Štulík, MD*

*Head nurse: Dagmar Šeborová*

Basic characteristics:

Specialized department has been treating injuries and diseases of the spine, including the consequences. In a year 2011 total of 1 261 patients were operated, 1 288 patients were hospitalised and outpatient care was provided for 11034 patients.

**Specialised outpatient facilities:**

Treatment of injuries and diseases of the spine.

**New methods and procedures:**

- Mobile total replacement of the cervical and lumbar intravertebral disc (Prodisc, Maverick, Activ L, Bryan, Prodisc C, Prestige, Activ C, Mobi-C);
- Dorsal dynamic stabilisation of the lumbar spine (Agile Horizon, Dynesys, DSS);
- Occipitocervical fixation (Vertex, Vertex max, S4C, Peak Summit SI);
- Total spondylectomy C2;
- Mini-invasive approaches to the thoracic and lumbar spine, translaminar fixation (TLP Signus);
- Transsacral spondylodesis AxiaLIF;
- SI desis of the joint DIANA.
- The navigation O-ARM

**Unique technological equipment:**

- O – ARM – device for 3D imaging of the spine in the course of surgical intervention and a navigation spinal systém

- NIM – ECLIPSE – device for peroperative monitoring of neurological functions
- Surgical microscope

**Important event in 2011:**

- Edition of the book Cervical spine injury – Štulík et al.

**Department of Radiation Therapy and Oncology of University Hospital Motol**

*Senior consultant: Jana Prausová, PhD., MBA, MD*

*Head nurse: Eva Slavičková*

*Senior laboratory technician: Alena Čuprová*

**Basic characteristics:**

This department provides a complete care for oncological patients in the field of antitumorigenic medicamentous therapy and radiation therapy. It belongs to Complex oncological centres in the CR that provide a highly specialised care. It participates in a number of scientific projects and clinical studies with an international participation, in both pre- and postgraduate education of students. Department received accreditation in the field of medical oncology and radiation oncology.

In 2011, a total of 186 926 patients were treated on the outpatient basis, 2 722 patients were hospitalised, the number of irradiated fields was 124 624, number of brachytherapy applications 646, number of applied cycles of chemotherapy was 8 607.

**Specialised outpatient facilities for:**

- Dispensary care for patients after the treatment was completed
- Checking of patients during chemotherapy
- Checking of patients during teletherapy
- Chemotherapy application
- Checking of patients during brachytherapy

**New methods and procedures:**

- Periodic adjustment of protocols of the treatment of malignancies specifically for Radiotherapy - Cancer clinic with introduction of new molecules of cytostatics and biological therapy so that they correspond with the most advanced therapeutic procedures.
- Refined treatment of pain, monitoring of the patients' nutrition, the use of growth factors for the treatment and prevention against the decrease in number of blood elements in the course of oncological treatment
- Cooperation in clinical studies and grants with an international participation which solve new therapeutic methods in solid tumors and hemoblastomas.
- Participation in the patented project of an application of directed antracyclines together with the Institute for Microbiology of the Czech Academy of Science, the Institute of Macromolecular Chemistry.
- Participation in the research project together with genetic workplaces in the search for families with a genetic risk of malignancies.
- Participation in grants and planned eight clinical studies with the Institute of Immu-

nology and Department of Urology at preparation SNP01. It was ordained with the same workplaces Center for the treatment of prostate cancer.

- Introduction of the IMRT method (intensity modulated radiotherapy) which allows for a higher dose in the target volume, sparing healthy tissues
- IGRT method (image guided radiotherapy) – checking of the present position of the patient during radiotherapy and possible correction according to reference position during the radiation simulation. Use of the function of dynamic wedges in linear accelerators allows for a better 3D (three dimensional) planning. Possibility of fusion of the scans from MRI and CT examination with the planning CT scans to develop a more precise radiation plan.
- Department implements a new method for prostate brachytherapy.

#### **Unique technological equipment:**

- Two linear accelerators Clinac 2100 C/D, Varian medical Systems (photon beams 6MV, 18MV, electron beams 6, 9, 12, 20 MeV) with a multilamellar collimator (MLC) Millennium MLC-120 and with an electronic imaging system (EPID – electronic portal imaging device) for the check of correct position of the patient during therapy. One of these accelerators is equipped with an additional kV source for exact imaging of the patient's positioning during therapy (OBI -on-boarding imaging).
- Linear accelerator Clinac 600 C/D, Varian Medical systems (photon beams 4MV) with a multilamellar collimator (MLC) Millennium MLC-120 and an electronic imaging system (EPID). This accelerator is equipped with a micromultilamellar collimator (m3 micro-MLC) and accessories for stereotactic radiation.
- Radiotherapeutic simulator Acuity EX, Varian Medical Systems for preparation of radiation therapy.
- CT device Brilliance Big Bore, Philips for the therapy planning.
- Verification system Aria through which are interconnected linear accelerators, simulator, planning systems for external radiotherapy (Eclipse), stereotactic radiation (iPlan) and brachytherapy (Brachyvision).
- Brachytherapeutic device for HDR brachytherapy with an automatic afterloading Gammamed Plus iX. Ultrasonograph ProFocus 2202, B-K Medical and pacing device EXII Tracked Stepper for prostatic brachytherapy. Mobile X-ray machine with C arm BV Pulsera, Philips for localisation of applicators in brachytherapy.

#### **Important event in 2011:**

- Department participated on the organization and lectures on the 2nd PragueOncology colloquium.
- In 2011, the department has organized the XIII. annual of Motolské Dny, an annual symposium radiotherapists, oncologists, medical physicists and analysts - the topic of colorectal cancer.
- The department participated in organization of Urooncological symposium along with the Oncological Department of Thomayer Hospital and also was involved in the first National Congress of colorectal cancer

### **Common examination and therapeutic units**

**Department of Radiology of 2<sup>nd</sup> Faculty of Medicine,**



## **Charles University and University Hospital Motol**

*Head physician: Ass. Prof. Miloslav Roček, MD*

*Senior consultant: Radek Pádr, MS*

*Head of RA: Mgr. Tomáš Schilla*

### **Basic characteristics:**

In 2011, this clinical department carried out 274 960 examinations in total, which represents a further increase in testing compared to 2010. This number includes the conventional examination, examination of the digestive tube, mammography, screening in the paediatric radiology, ultrasound examination, CT scan, MRI and vascular examinations, as well as interventional radiology procedures.

### **Specialised workplaces:**

- Magnetic resonance – three devices: testing the whole range except spectroscopy
- CT – three machines with 64 rows of detectors (of which one is „Dual source“)
- New modern angiography Toshiba's Infinix
- Mammography, mammary sonography, stereotax, vacuum bioptome
- Sonography of both children and adults, Doppler sonography
- 6x fully digitized skiagraphy

### **New methods and procedures – unique technological equipment:**

- CT angiography, 3D VR visualization
- CT cardio – imaging of the heart, CT coronarography
- CT creating Vol data for neuronavigation, ENT and stomatology
- MR new opportunities for examination of blood vessels, heart function tests, tractography, T2 relaxometry, examination of uncooperative patients, spectroscopy
- Prenatal US and MR diagnostics
- MAMO SONO workplace - ductography, cyst puncture and cut core biopsy under ultrasound control, puncture by device Vacora, preoperative localization by ultrasound and stereotactic navigation
- Radio-frequency ablation and chemo-embolisation of metastases in the liver and lungs
- Implantation of aortal stentgrafts, subintimal recanalisation of peripheral arteries in the lower extremities, treatment of acute and chronic deep venous thrombosis, treatment of vascular accesses to haemodialysis, introduction of translumbar catheters
- Treatment of cerebral malformations in both children and adults
- Ultrasound equipment Toshiba Aplio software, which enables the use of diagnostic contrast agents, especially for dynamic diagnosis of focal liver lesions in particular. This examination plays an important role in children, which avoids radiation load on CT
- Extended use of dictation systems

### **Important event in 2011:**

In the middle of the year we opened a modern children's diagnostic center. The department is equipped with the latest diagnostic equipment: four ultrasonic devices, 64 detectors CT and 1.5t MRI. The modern paediatric imaging protocols include

detailed Doppler examination of blood vessels, vascular ultrasound examination with the application of intravenous contrast medium, in MR imaging is becoming standard spectroscopy, tractography and functional tests. Also the lighting system is unique in the MR: Ambiente light system.

**Department of Biology and Medical Genetics of 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Milan Macek, MD, PhD*

*Senior consultant: Markéta Havlovicová, MD*

*Senior laboratory technician: Hana Strouhalová*

**Basic characteristics:**

This department provides a wide range of preventive and diagnostic medical care in the field of genetics. It determines diagnostics of selected congenital developmental disorders, hereditary tumors, neurodegenerative diseases in children and adults, including disorders of mental development in both prenatal and postnatal periods. The department solves projects in the field of biomedicine research, participates in the pregradual, postgradual and specialising education of doctors and health care professionals, cooperates with a number of foreign workplaces. It also solves a number of projects of the EC in the field of medical genetics. In 2011, the outpatient's of our department provided care for 7329 patients /4632 families and we have terminated 23 pregnancies from the genetic indications.

Department received authorization to operate the device from the tissue of the State Institute for Drug Control (SIDC) in the range:

- Procurement, processing, testing, release, storage, distribution of sperm, oocytes, embryos, including testicular and ovarian tissue for use between partners and non-partner donation;
- Genetic laboratory testing of donors of reproductive cells, according to Decree No.422/2008 Coll., Annex 5, point 3.7.

**Specialised outpatient facilities:**

- Prenatal genetic consulting
- Neurogenetic consulting
- Genetic consulting for sensoric disorders and non-syndromic deafness
- Genetic consulting for microdeletion syndromes
- Genetic consulting dealing with dysmorphology
- Genetic consulting for infertile and dysfertile couples
- Genetic consulting for mental retardation and autism
- Genetic consulting for thrombophilic conditions
- Genetic consulting for gastroenterology and hereditary pancreatitis
- Genetic consulting for cystic fibrosis – solved in the section of the Centre for CF

**New methods and procedures:**

- There is still a new extended diagnostics by FISH microdeletion syndrome (15q13.3, - several on chr. X, 17q21.3, Alagille syndrome, Langer-Gideon syndrome, deletions of the gene COL1A1 on 17q21.33.). Microdeletion syndromes - a set of probes is conti-



- nuously expanding and we are able to hybridize all important loci of human genome.
- Refining diagnosis of submicroscopic aberrations using array CGH different types of oligonucleotide chips Bluegenome fy, fy Agilent oligo chips tested. Diagnosis of new micro deletion and micro duplication syndromes based on the results of array CGH: Genomicthe 1q21.1, 15q26, 16p11.2, 16p12.1, 17q21.31. (Note: Micro deletion and CGH array are performed for other departments and some laboratories in agreement occasionally use a scanner).
  - In 2011 we introduced in Czech Republic a new molecular genetic diagnosis of groups of dysmorphic syndromes at increased risk of cancer: Noonan syndrome, Costello syndrome, CFC syndrome. This is a group of diseases with mutations in genes PTPN11, SOS1, RAF1, KRAS, BRAF protein-coding RAS / MAPK signalling pathway.
  - New in Czech Republic in 2011, we performed DNA analysis of the gene in a patient with EFN1B1 craniofrontonasal syndrome and confirmed this diagnosis at the molecular level. New in Czech Republic we performed DNA analysis of the SLC26A2 gene in diastrophic dysplasia.
  - We have extended the spectrum of the investigated loci responsible for autosomal dominant spinocerebellar ataxia from the original SCA1, 3, 3, 6, 7 and SCA8, 12,17 and DRPLA.
  - from december of 2011 new kit QFPCR DEVYSER Complete - in 2, a mixture of 1.2;
  - Molecular genetic analysis of polymorphisms in the gene for FSH-receptor;
  - vitrification of embryos after in vitro fertilization system Vitrolife Rapid-i.

#### **Unique technological equipment:**

- Special software of MetaSystems company for the caryotype evaluation and FISH;
- HYBEX – hybridisation device not only for CGH array evaluation;
- Special software for CGH array evaluation;
- Bioanalyser 2100
- Inverted microscope Leica AM6000 with Eppendorf micromanipulator Transferman and equipment to visualize the spindle on the basis of birefringence (CRI Oosight system) and for analysis of sperm with high magnification (method MSOME - Motile Sperm Morphology organelle Examination)
- Laminar box LABOX FBB 120 to ensure the highest grade in the environment of micromanipulation techniques in assisted reproduction

#### **Important event in 2011:**

- National Congress of the Society of Medical Genetics JEP and 44 cytogenetic annual conference, Trebon, 7 - 9 September 2011, Aurora Spa;
- Prof. MD. M.Macek, MD. In 2009 he was elected president of the Genetic Society -ESHG (in 2010 as president elect, the acting president in 2011 and 2012, as Vice-President)
- Professor. Macek is one of the coordinators of working groups for rare diseases in the Ministry of Health, Cystic Fibrosis Unit will be established a coordination center for rare disease.

#### **Department of Clinical Biochemistry, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol**

*Head physician: Prof. Richard Průša, MD*

*Senior consultant: Jana Čepová, MD, MBA*

*Senior laboratory technician: Mgr. Martina Bunešová*

**Basic characteristics:**

The department's laboratory provides over 220 different laboratory examinations. A daily average is about 2150 biological samples, i. e. 580 000 examinations per month in a 24 hour three shift operation. A number of examinations (MTX, cyclosporine A, tacrolimus, sirolimus, lead, platinum, antimycotics, busulfan, IGF-1 etc.) is performed also for other health institutions. A total number of outputs in 2011 amounted to 6 880 000, which is, by 8% than in 2010. Another section of the department are specialised outpatient facilities focused on hyperlipoproteinemia-related problems, disorders of bone metabolism, nutrition disorders in terms of obesity and malnutrition. In 2011 we treated 6650 patients in outpatient clinics.

**Specialised outpatient facilities:**

- ambulance dealing with treatment of hyperlipoproteinemia
- ambulance dealing with bone metabolism
- ambulance dealing with nutrition

**New methods and procedures:**

- Examination of cyclosporine on the device Abbott Architect i4000 CMIA method (2009)
- Homocysteine tests on the device Abbott Architect 4000 by CMIA (2009)
- Determination of posaconazole and voriconazole determination in plasma (2009)
- Deployment of HBsAg Qualitative substitute for quantitative determination (2009)
- Radioimmunoassay of anti insulin antibody (anti-IAA)
- Introduction of new parameters in the chemical and microscopic analysis of urine
- Introduction of mutations and examination of risk polymorphisms of atherosclerosis and cardiovascular events by PCR with reverse hybridization
- Determination of chloride in sweat
- Determine polymorphisms in the genes CYP2C9 and VKORC1
- Determining SAA (serum amyloid A)

**Unique technological equipment:**

- Analyzer Nova CRT 8 + (ionized calcium, ionized magnesium)
- ADVANCED osmometer 2020 (replacement for osmometer FISK 2400)
- Ultrapure water production plant 2 TKA SMART PURE
- Capillary electrophoresis of proteins Zibiah

**Important event in 2011:**

- Successful certification audit according to ISO 9001/2009 with regard to ISO 15189(Certification Body TUV International)
- Certificate of compliance audits and the conditions, expertise 801, NASKL, Prague 2011
- Successful completion of the audit as „SAK“ - the acquisition of Certificate No.00274
- Internal audit needs to Blood Bank (hepatitis, HIV) - SIDC, Prague 12/2011
- ČSKB Awards - Award for education - bioanalytical chemistry in the examples and exercises, Carolinum, ISBN 978-80-246-1853-1, Prague, 2010, 1 issue
- Installation of new POCT analyzers Nova SP CCX (6x) in departments KCJ1,KCS8, KCXX, ARO 2 children, children receiving urgent FN Motol

- Organisation of national workshops importance of laboratory testing of vitamin D
- Professional conferences for physicians, medical technicians, nurses and university-non-physicians lipoprotein examination and diagnosis lipoproteinemií
- Professional seminar Acute damage and kidney failure and its diagnosis

**Department of Immunology, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Jiřina Bartůňková, MD, MBA*

*Senior consultant: Prof. Anna Šedivá, MD*

*Senior laboratory technician: Bc. Anna Skalická*

**Basic characteristics:**

Department of immunology provides full care for both paediatric and adult patients with immunopathological conditions including clinical and laboratory examination as well as dispensary care. Besides the outpatient examination and treatment in the full extent of allergology and clinical immunology, the department provides also a regular therapy and infusion application of the indicated drugs in serious immune disorders at the ward for both paediatric and adult patients. It serves as a basis for pre- and postgraduate education of immunology and is also concerned with research in the same discipline.

The outpatient facilities in 2011 examined 7,512 patients and the laboratories carried out 255,638 examinations of 36,641 patients.

**Specialised outpatient facilities for:**

- Immunodeficiencies
- Allergies and autoimmune diseases
- Short stay ward for the therapy of immunopathological conditions
- Super-clean premises for the production of antitumorigenic vaccines and specialized outpatient clinic for their application in clinical studies

**New methods and procedures:**

- Extended possibilities of diagnostics of severe immune disorders mainly in examination methods of cellular immunity (T regulatory lymphocytes determination, cytotoxic tests, Functional tests of cytokine production)
- production of cancer vaccines (active cellular immunotherapy) and its application in clinical phase I / II
- extension of home-care supervision in subcutaneous immunoglobulin substitution in primary immunodeficiency states
- Center for the treatment of difficult asthma treatable Preparation Xolair (anti-IgE antibody), a center for the treatment of hereditary angioedema Preparation Firazyr (bradykinin receptor inhibitor), a center for the treatment of subcutaneous immunoglobulins

**Unique technological equipment:**

- Completely equipped laboratory for flow cytometry
- Microscopic workplace including confocal microscope and scanning cytometer (procured from the Research project of the Dept. of Immunology, solved in the

frame of the Czech Ministry of Education and Sports)

- Automatic device for processing of autoantibodies examination

**Important event in 2011:**

- Takeover of liquorological laboratoř
- Continuation phase I / II clinical trials for prostate cancer immunotherapy using vaccines based on dendritic cells in patients with two stages of prostate cancer Eudra-CT 2009-017295-24 and 2009-017259-91 Eudra-CT
- Approval of Phase I clinical study of immunotherapy of ovarian cancer vaccination using dendritic cells Eudra CT-2010 -021462-30
- Achieving of status of the immunodeficient center of the worldwide network of centers Jeffrey Modell Foundation, USA

**Department of Medical Microbiology, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Otakar Nyč, MD, PhD*

*Senior Consultant: Eliška Běbrová, MD*

*Senior laboratory technician: Bc. Vilma Klemensová*

**Basic characteristics:**

Department carries out laboratory diagnosis of bacterial, viral, fungal, parasitic infections, consulting services in the antibiotic therapy, differential diagnosis and indication. Monitoring the occurrence of NI and antibiotic resistance profiles of emergency, including links to the European system surveillance. The virology was reported points 34 982 299, 72 164 699 points for bacteriology.

**New methods and procedures:**

- RT PCR human metapneumovirus
- RT PCR RS virus
- Norovirus – demonstration of antigen
- Chlamydia trachomatis and pneumonia WB
- Opening of independent mycological laboratory and the deepening of mycological mycological Diagnostics

**Unique technological equipment:**

- Insulator NK PCR diagnostics Qiacube
- Anaerostat JOUAN
- IF BX 53 Olympus microscope equipped for photographic documentation

**Important event in 2011:**

Test operation using mass spectrometry in bacteriology 802 Laboratory of Molecular Genetics, Led by MD. Cink, to the Department of Medical Microbiology

**Department of Pathology and Molecular Medicine, 2<sup>nd</sup> Faculty of Medicine,  
Charles University and University Hospital Motol**

*Head physician: Prof. Roman Kodet, MD*

*Senior consultant: Daniela Kodetová, MD*

*Senior laboratory technician: Vladimíra Kratinová*

**Basic characteristics:**

The department is concerned with diagnostics of various types of diseases. It employs methods of classical histology and cytology combined with other special laboratory methods. In 2011, a total of 21 736 patients were examined which represents 434 720 histological slides. The department is both pregraduate and postgraduate teaching workplace. The autopsy section of the department has educational and supervisory functions in the frame of the hospital.

**Specialised laboratories for:**

- Electrone microscopy
- Immunohistochemistry
- Diagnostics of neuromuscular diseases
- In situ hybridisation
- DNA and RNA analysis
- cytology
- Biopsy
- Necropsy
- pulmonary cytology

**New methods and procedures:**

- Since 2008, the Institute is part of the so-called predictive pathology laboratory, which is to deal with the investigation of patients with mammary carcinomas and colorectal carcinoma with regard to the indication for biological treatment.
- Complex screening of the GIST tumors, morphological and molecular diagnostics
- Launching a diagnosis of lung cancer by PCR mutations of EGFR gene and ALK gene faults.
- We have introduced clonality analysis, which uses STR locus in the HUMARA gene and Methylation sensitive enzymes restriction

**Unique technological equipment:**

- Cyclery for real-time PCR

**Important event in 2011:**

Ministry of Health Research Plan continued this year at a good level; the total IF for 2011 was 35.6. The Institute was rated among the approximately 70 investigator teams to 4 site.

The workplace has been associated with pulmonary cytology laboratories.

**Department of Clinical Haematology University Hospital Motol**

*Senior consultant: Ivana Hochová, MD*

*Senior laboratory technician: Naděžda Hanusová*

**Basic characteristics:**

Department performs routine and special hematology tests to Motol Hospital with supra-regional powers. In 2011, the laboratory conducted 750,984 performances. The laboratory is the reference laboratory for the diagnostics of paediatric acute myeloid leukaemia and myeloproliferative conditions in children.

The clinical part of the workplace includes an outpatient section for paediatric and adult part and provides therapeutic and preventive care for patients with haematological diseases. The clinic is part of the adult day care centre serving the application of blood products and chemotherapy. A total of 10,500 patients were examined in 2011. The Department is teaching medical students and undergraduate students study-field technician.

**New methods and procedures:**

- Diagnostics of v. Willebrand disease;
- Checking of antiaggregation treatment of patients by means of the platelet aggregation screening;
- Morphological laboratory of the department participates in the International Study of the treatment of paediatric acute lymphoid leukemias Protocol – Interim ALL-BFM 2000.
- Grant IGA 9905-4 Changes in coagulation parameters monitored during pregnancy - OKH participating in the project of the European register of patients with myelodysplastic syndrome (EUMDS), which is organized by European LeukemiaNet in cooperation with the European Hematology Association. The department is actively involved in activities CZECH MDS GROUP 2 times a year and holds morphology seminars nationwide.

Unique technological equipment:

The new Sysmex XE hematology-line Alfa N for automated hematology blood analysis of picture with a digital system for evaluation of smear of blood and other body fluids CELLAVISION 96th DM. This software allows unique connections with other users with help of Advanced systém.

**Blood Bank Department of University Hospital Motol**

*Senior consultant: Květoslava Petrtýlová, MD*

*Senior laboratory technician: Mgr. Martin Matějček*

**Basic characteristics:**

The department of Blood Bank is one of SVLS in Motol. It provides purchasing, storing and expedition of all types of transfusion preparations for patients of UH Motol. In 2011 there was dispatched a total of 43 955 T.U. of all types of transfusion preparations, of which 20 648 erythrocytic preparations, 19 671 of plasma T.U., 3 170 thrombocytic preparations T.U. and granulocytic TP 56 T.U. Consumption of blood products decreased in the RBC TP consumption, while the consumption of plasma slightly increased.

The blood bank department carries out basic and special immunohaematological investigations according to requirements of clinics and departments, prenatal examinations for pregnancy counseling Gynecol-obstetric clinic and if needed, it procures transfusion preparations for the intrauterine and replaceable transfusion.

In 2011 was carried out a total of 8 995 pretransfusion basic tests (blood group), 17 453 antibody screening and 35,615 compatibility tests. The number of specialized



immunohematological tests increased compared to 2010 by nearly 20% to 841 (684 previous year). Prenatal examinations are without significant changes compared to 2010. Number of irradiation of blood components is similar to that in 2010 - 6888 bombardment.

In the field of autologous donations are carried out mostly blood taking of autologous full blood for patients of orthopedic clinics of Motol Hospital, Urological dep. Of the 2nd Faculty and UHM, but also for patients of hospital na Homolce. In 2011 were carried out a total of 602 autologous donations.

Compared with 2008, the number of basic pre-transfusion examinations increased by 9%. There were performed 578 autologous collections of the full blood, and a total of 115 572 laboratory examinations.

The department also provides education in the field of transfusiology.

#### **Specific features of the department:**

- Laboratory section
- Autotransfusion section
- Irradiation device for irradiation of transfusion preparations

### **Department of Central Operating Theatres for Paediatric Patients of University Hospital Motol**

*Head physician: Karel Klíma, MD, PhD.*

*Head nurse: Drahomíra Fryčová*

#### **Basic characteristics:**

The department concentrates all surgical interventions of all surgical as well as non-surgical disciplines from the paediatric part of the hospital with the exception of cardiosurgery, in the field of ophthalmology it ensures also surgeries of adult patients. A total number of interventions in 2011 was 6 935.

#### **New methods and procedures:**

- Department of COS for children in accordance with Act 123 performs a thorough documentation of all devices used for individual operations and is recorded in the patient' medical records, including documentation of sterile materials and instruments. COS department for children is central to fully follow sterilization. We resolved sister operating protocol transition into electronic form. Also we carried out disposable surgical masks for all types of operations, without exception. The rigorous safety preoperative procedure was introduced in writing to preclude confusion- side or the patient.
- In paediatric surgery was introduced surgery esophageal atresia outer elongation beyond the thoracic esophagus.
- In children's neurosurgery were improved procedures perioperative fusions of imaging in the context of neurosurgical operations. We have developed methods of perioperative neuromonitoring.
- In paediatric orthopedics are carried out sculptures of cruciate ligament with replacement from hamstrings, prolongations of long bones by self-adjustable intramedullary nail ISKD and shaping the head with controlled hip dislocation.
- In the field of children's ENT was introduced the latest monitoring of the facial and

other cranial nerves. Monitoring methodology was introduced during the adeno-  
idectomy using optics

- In ophthalmology was introduced a new procedure during surgery of congenital eyelid ptosis. There were implemented new and safer surgical approaches to surgery of senile cataracts. We started to implement new types of retinal laser photocoagulation treatment.

#### **Unique technological equipment:**

- Neuronavigation, devices for miniinvasive laparoscopic, arthroscopic and endoscopic techniques, ultrasonic aspirator crusher and tumor masses, harmonic scalpel, surgical microscopes, special ultrasonic crusher and extractor lens materials for ophthalmology.

#### **Important event in 2011:**

- In February was held the symposium of Nurse Society at the University Hospital Motol under the auspices of Department of COS for children with active participation of senior consultant.
- Since July 2011 were gradually passed a new, high-tech equipped facilities department COS renovated section of the hospital.
- Training was organized around the use of new medical technology, which was also inventoried. 09.05.2011 started work on these operating theatres.
- In the fall reported at the Conference Head ČSARIM.

### **Department of Central Operating Theatres for Adult Patients of University Hospital Motol**

*Senior consultant: Petr Příklad, MD*

*Head nurse: Petra Šebestová*

#### **Basic characteristics:**

The department provides a background for 9 of 11 surgical workplaces of the adult part of University Hospital Motol; it supplies about two thirds of the personnel. In 2011, 17 725 interventions were performed. The department also organises further study of nurses in the specialisation of perioperative care.

#### **New methods and procedures:**

- The introduction of barrier devices to reduce the risk of nosocomial infections
- Preparations for the standardization of network operating

#### **Important event in 2011:**

- 2 halls have been set aside for acute surgical and trauma interventions..
- Under the auspices of Nurse we organized Society in February a training event called „Patient safety in the operating room.“
- Mgr. J.Wichsová created e-learning course „Infection in the surgical site.“ She also sits in committee of Nurse Society and represents the Society in the European main-frame Nurses Association

### **Transplant Centre of University Hospital Motol**

*Head physician: Jaroslav Špatenka, MD*

#### **Basic characteristics:**



The centre forms an organisational background for individual workplaces so that they can carry out collections of organs and tissues, transplantations of the kidneys in children and lung transplantations. It cooperates with a Coordination transplant centre (CTC), with all regional TC in the CR and with the Czech Ministry of Health. It is responsible for the specialised tissue bank (STB 85) which is concerned with collection, processing, storing and distribution of cardiovascular tissue from dead donors and bone tissue from living donors. The programmes of kidney transplantations in children, collection and lung transplantations and the bank of cardiovascular tissue work with a national competence. In 2011, 6 multiorgan collections from dead donors and 5 kidney transplantations in children were performed (of which one from a living donor) and 18 lung transplants further 56 samples for the preparation of valvular heart grafts and 9 donations of vascular grafts.

**Important event in 2011:**

- In November 2011 STB won 85 in Motol Hospital permission to organize tissue establishment from SIDC.
- Department participated in the 50th Symposium anniversary of the first transplant kidneys in Czechoslovakia and 30th anniversary of the kidney transplant recipients of child at the University Hospital Motol, held in Hradec Králové.

## Outpatient section

### **Paediatric Outpatient Department of University Hospital Motol**

*Head physician: Petr Tláška, MD*

*Head nurse: Bc. Štěpánka Tyburcová*

**Basic characteristics:**

Department of Paediatrics is a multifunctional outpatient facility which provides a routine as well as highly specialised health care for paediatric patients with acute or chronic illnesses. In 2011, workplaces of this department provided care for 139 404 children.

**Specialised outpatient facilities for:**

- The following outpatient facilities belong to the Dept. of Paediatrics: Paediatrics, obesitology, rheumatology, dermatovenerology, vaccination centre of general care, orthoptics, stomatological laboratory further partly allergology, haematology, gastroenterology and nutrition consulting.
- Other outpatient facilities are ensured in cooperation with paediatric departments (physicians from clinical departments): immunology, allergology, surgery, orthopaedics, neurology, ophthalmology, psychiatry and psychology, dentistry, haematology, endocrinology, gastroenterology, gynaecology, ENT and phoniatics.

**New methods and procedures:**

- Within the update of recommended procedures of the vaccination of risk patients, was treated the issue of preterm infants, as well as transplant patients, hematopoietic stem cells and patients with neurological diseases. They are ready for publica-

tion and presentation of the website [www.ockovanideti.cz](http://www.ockovanideti.cz)

- Children's dermatology department has prepared a detailed brochure for parents called How to care for a child with atopic eczema. This brochure has been received in the office every new patient with atopic eczema free. Publication supported MEDIFORUM - education and training activities of GlaxoSmithKline. There is also preparing complete multi-part video tutorials for patients with atopic eczema and their parents-the Online Clinic for atopic (OKA). The patient - a parent must register ([www.atopickyekzem.org](http://www.atopickyekzem.org)). Always read the next lesson gradually from theory to practice and treat and let him farther than can handle a new topic. The motivation for the project is numerous disinformations, which can be found on the Internet. Responses are very positive.
- Comprehensive Care Center for children with development disorders continues its work on health care for children with disabilities at the University Hospital in Motol. In 2011 the department received a grant of the City Hall Prague, which covered the activities of occupational therapy from May to the end of 2011.

#### **Important event in 2011:**

Environment has improved some outpatient waiting rooms - thanks to the Foundation of Arts for Health was installed by another collection of pictures of animals and natural motifs.

### **Emergency Department for Children of University Hospital Motol**

*Head physician: Marie Mikulecká, MD, MBA*

*Head nurse: Zdena Čechová*

#### **Basic characteristics:**

The department provides a comprehensive evaluation and treatment of acute conditions of children in an unfinished 19th year of life. Powered by ambulance here and outpatient paediatric surgery, ENT, orthopedic, dental, neurological, ocular and neurologic emergency during the hours of the morning shift in the paediatric outpatient clinic, including foreigners.

In the year 2011 has been carried out 10 668 examinations paediatrician in the morning shift and 16 112 in First Aid. Examination of the other fields were 18 190. Total number of tests was 44 970.

#### **Unique technological equipment:**

New laboratory equipment enabling rapid diagnosis of diseases indicative directly in the emergency intake.

#### **Important event in 2011:**

There was a launch of new ED children in renovated premises monoblock. The department is well equipped to provide acute care for children, including a link to the heliport. In this separation, on 4 beds can be realized short expectational and medical-care stays.

### **Department of Dermatovenerology of University Hospital Motol**

*Head physician: Alena Machovcová, MD, MBA*

*Head nurse: Bc. Helena Janoušková*

**Basic characteristics:**

This is an outpatient department with no connection to the inpatient department of University hospital Motol. The department provides basic and specialised outpatient and consulting care in the field of dermatovenerology focused on dermatology and allergology and profession-related skin diseases, prevention and treatment of skin cancer and treatment of psoriasis. In a year 2011, 6 900 patients were treated on an outpatient basis and 24 300 treatments were performed. The most common diagnoses were erysipelas, psoriasis, atopic dermatitis, sexually transmitted diseases and skin tumours.

**Specialised outpatient facilities for:**

- Venerology
- Pigmentary nevi and skin tumors
- Dermatoallergology and professional dermatoses
- Corrective dermatology
- Lymphology
- Acne consulting
- clinic for patients after organ transplantation
- Short stay ward for lymphology
- Short stay ward for phototherapy
- Flebological ambulance
- Digital dermatoscope
- Clinic for diagnosis and treatment of diseases of nail

**New methods and procedures:**

- Examination of pigmented lesions by digital dermoscope
- Capillaroscopic examination
- Examination of the skin perfusion with the PeriScan PIM II device
- Laser treatment

**Unique technological equipment:**

- Digital dermoscope, Digital videocapillaroscope PeriScan PIM II, high-performance laser photons XS Erb: YAG and Nd: YAG.

**Important event in 2011:**

- Active participation in 8thEADV Spring Symposium, Contact allergies in patients with oral diseases, 14-17 April 2011, Spa Hotel Thermal in Karlovy Vary.
- Active participation in the IV. The course of modern dermatology and cosmetology for residents and young physicians in the field, „Skin Allergies - a clear and concise“ (3rd-4th 6th 2011), 3 University Hospital.

**Department of Clinical Psychology of University Hospital Motol**

*Head physician: Jaroslava Raudenská, Ph.D.*

**Basic characteristics:**

The department consists of 29 psychologists with various workloads in both adult and paediatric parts who provide preventive, diagnostic, psychotherapeutic and rehabilitation care for paediatric and adult patients, in- and outpatients and their families in UH Motol. They deal with specific mental health problems of both acute and chronically ill and dying patients; they apply in the preoperative preparation of children and adults, helping to overcome post-operative conditions. They are involved in cognitive and social rehabilitation after injuries, etc. This workplace treats monthly 1050 patients, and annually 13 000. It is accredited by the Czech Ministry of Health in the field of Clinical Psychology and Paediatric Clinical Psychology. The department provides supervision and practice for psychologists who are included into pre-attestation preparation in these specialisations and also organises scientific seminars, accredited by the Association of Clinical Psychologists of the CR in the system of lifelong learning in the field of registered clinical psychologist in accordance with the Act. No. 96/2004 Coll. and the related Decree 321/2008 Coll. and Decree 4/2010 Coll.

### **Emergency Department for Adults of University Hospital Motol**

*Head physician: Jiří Zika, MD*

*Head nurse: Bc. Renáta Všetěčková*

#### **Basic characteristics:**

The department provides emergency medical care to patients with sudden health disorder, forms a link between prehospital and acute hospital definitive care.

The main feature of the work is the sorting patients according to the acuteness and urgency of care and according to the nature of ill health so as to effectively ensure the provision of additional care in the hospital. Patients who were not accepted on a hospital bed in the emergency intake are definitely treated and discharged to outpatient care. During 2011, 14 255 patients were treated there.

#### **New methods and procedures:**

Ultrasonic device for urgent diagnosis and its introduction into the methods of examination carried out on the bed ED.

### **Department of First aid for Adults of University Hospital Motol**

*Head physician: Jiří Zika, MD*

*Head nurse: Bc. Dana Černá*

#### **Basic characteristics:**

The Department provides an outpatient treatment of acute patients with sudden health disorder after regular working time, to the extent of general practitioner care medicine. On weekdays, one doctor and one nurse have office hours, on weekend shifts are reinforced by another doctor.

When it is necessary, patients are referred for further treatment at the emergency department or specialized outpatient ambulances of the hospital. During 2011, 13 466 patients were treated there.

## **Department of Primary Care of University Hospital Motol**

*Head physician: Jaroslava Kulhánková, MD*

*Head nurse: Dana Černá*

### **Basic characteristics:**

The department provides both acute and longterm preventive care for the employees, patients registered under capitation from other hospitals, foreigners insured as well without health insurance with the Czech insurance companies and over-standard care for with Czech insurance. The department is a pregraduate and postgraduate educational workplace; it is accredited in the field of General medicine.

In 2011, the Dept. of Primary Care had 24 699 clients.

## **Department of Hygiene and Epidemiology of University Hospital Motol**

*Head physician – epidemiologist: Vilma Benešová, MD*

*Senior hygiene technician: Mgr. Klára Derflerová*

### **Basic characteristics:**

Activities of the department lie in the application of hygiene and anti-epidemiological care in the specific conditions of the UHM. The priority is the prevention of hospital infections, measures to reduce their incidence, control of the local surveillance and privacy of health in health care.

### **Specifics of the department**

The total number of nosocomial infections (NI) of all Division 849, ie 1,07 % of total NI released from hospital treatment. It is two-fold increase (from 2010), even if not reality, this indicates an improvement in communication with clinicians and contact physicians for NI and the positive impact of the educational program in general. In 2011 we registered 154 new seizures of MRSA both colonization and with symptoms of infection, which corresponds to 1,93 per 1 000 patients and indicates a slight decline.

According to current legislation was controlled sterilization technique, made tests against sanitary code of workplace clinics and departments (217) and 739 control handprints were collected for microbiological examination and 3 895 swab to control bacterial environmental cleanliness. Particular attention was paid to the clear spaces, which are regularly monitored by Air Sampler (724 samples). In connection with the prevention of Legionella has been carried out 272 water samples. 306 investigations were performed for diagnosis of infection, 238 declarations of community infections to public health authorities. Spatial ensure disinfection disinfector 373rd Constitutional It was compiled and updated a number of internal rules and regulations in preparation for accreditation surveys and conducted 343 audits of hygiene.

### **New methods and procedures:**

- Introduction of initial training recruits employees as part of the adaptation process. Prepared two video tutorials on the theme of hand hygiene.
- Cooperation with the Department of Preventive Medicine, 2nd Faculty of Medicine - 4th participation of medical students year at the WHO questionnaire survey - evaluation of hand hygiene compliance.

### **Important events in 2011:**

- In 2011, at the Faculty Hospital Motol took place the second World Day of hand hygiene. With its organization our Hospital got among health care facilities participating in the activities of WHO and European companies specialized in the field of hospital epidemiology and hygiene.
- We retrofitted a training site HEPoint and a practice was of accredited course work was held in the field of hospital hygiene and epidemiology in two cycles. Successfully been accredited course disinfector.
- In the team of auditors in the re-accreditation of the hospital also participated representatives of a hospital department of hygiene and epidemiology.

### **Pharmacy of University Hospital Motol**

*Head pharmacist: PharmDr. Petr Horák*

*Deputy: Mgr. Sylva Klovřová*

*Head pharmaceutical assistant: Jaromíra Mariašová*

### **Basic characteristics:**

The Pharmacy's priority is to provide effective, quality and safe pharmaceuticals for both hospitalised patients and outpatient clients of University Hospital Motol (UHM). The hospital pharmacy provides medicament distribution and individual and collective preparation of sterile medicaments (from the group of cytostatic agents, parenteral medicines without antimicrobial agents and others) and non-sterile (in particular the preparations for paediatric patients), the acquisition of unregistered medicines and provision of medicines for clinical trials.

Pharmacy provides consulting services for patients and health professionals and educational activities, incl. providing internships for students pre and post-graduate.

The hospital pharmacy is involved in formulating medicament policy of UHM - the establishment of a positive list of medicines, ensuring the most cost-effective medicines, etc. It also creates the internal regulations of the University Hospital Motol in the handling of medicaments.

Hospital pharmacy in the ordinary everyday issues about 10,000 packages of medicaments and prepare several hundred individually prepared medicines, including about 150 of cytostatic infusions and 30 individual parenteral nutrition.

In the year 2011 has been received 220 000 prescriptions, 13 000 vouchers for medical devices, 50 new clinical trials has started with the participation of hospital pharmacy and were handled more than 90,000 requests (requisitions) from the clinical departments.

### **Important event in 2011:**

- Successful re-accreditation of our hospital.
- Introduction of the drug consultation center for patients – problems drug therapy, lifestyle modifications, drug interactions, etc.
- Improved HVAC boxes aseptic preparation of sterile pharmaceuticals department.
- Expansion of activities of hospital pharmacy preparation guarantee medical gases.



## Nursing care

In the field of *nursing care* in 2011 we continued in improving the quality of provided care and patients' safety. The accreditation awarded by The United Accreditation Commission is the proof. Also non-medical disciplines significantly contributed to the fulfillment of the requirements for constant improvement of the quality of care. We also focused on teamwork of general and pediatric nurses, midwives, physical therapists and nutritional therapists for the progress in patient care.

We have been monitoring the quality of provided nursing care by the quality indicators /falls, pressure ulcers/. We have implemented a comprehensive electronic reporting, which has simplified not only the monitoring of these incidents, but it also allowed to get more detailed output. We evaluated the quality index in individual workplaces / the number of risks to the occurrences of falls and pressure ulcers in patients/. We continued in nursing audits that have been proven as a tool for improving the quality of care.

The projects within the OPPA (Prague adaptability operational programme) The basics of the communication with clients and The management focused on increasing of the patients' satisfaction, were launched during the first half of the year. The program focused on The basics of the communication with clients put a particular emphasis on the factors that influence the interaction "nurse – patient", on preventing and overcoming misunderstandings and on solutions of conflict situations. In 2011, 466 non-medical employees were trained. The management focused on increasing of the patients' satisfaction is designed for head nurses and non-medical staff of their level. The program aims to create conditions for further improving of the current situation in this area. Last year, 52 employees were trained.

In the hospital, 60 seminars for non-medical professions were organized, focused on e.g. enteral nutrition, patients' safety, applications of transfusion equipment, prevention of nosocomial infections etc. In 2011 the XIII. Conference „Towards modern nursing“ was hosted by the University Hospital Motol.

## Social care

In 2011, we focused primarily on improving of the cooperation with new institutions or agencies that offer health and social services. The social department provided social care for 3,000 adult and pediatric patients. The total of 1260 patients were hospitalized in the subsequent rehabilitation care department. Also, 134 patients from the hospital long-term patients were placed in residential facilities that provide social services.

## Volunteers

In 2011, the total of 340 volunteers were registered in the department and they helped 5,000 children and adult patients hospitalized in the hospital. On the occasion of the European Year of Volunteering, „The Prague Five Hospitals „ was established. Its aim was

to promote volunteering in health facilities. The University Hospital Motol was one of its members and it significantly helped with the promotion.

## **Spiritual care**

The interest in spiritual care still continues to grow and in some departments it becomes gradually a natural part of nursing care and support for the staff. In the year 2011, the total of 2000 patients were treated.

## **Healthy hospital**

The University Hospital Motol is actively involved in the international program Healthy Hospital - Health Promoting Hospitals. In 2011, the project „Prevention of smoking in health care“ and the campaign - „Ex-smokers are unstoppable“ were launched.



## Quality management

Last week in November 2011 held an accreditation audit by United Accreditation Commission (UAC). UAC is a member of the International Society for Quality in Health Care (ISQua). Its standards, audits and certificates are guaranteed by supranational authority, just as any other organization dealing with the evaluation of quality and safety of health services. The three-year period since the first accreditation in January 2009 to the second accreditation audit in November 2011 was aimed at consolidating the system of quality control, accreditation of laboratories and improving the information service of quality and safety of care for senior executives. The aim was to demonstrate that we are able to evaluate the quality of the important processes, and communicate the results so that they can be the basis for managing the work of the hospital and individual departments. The file includes collected data of patient satisfaction survey, internal audit departments focused on the knowledge of internal measures, control of closed medical records and analysis of serious adverse events.

An important part of quality control program is prevention of hospital infections. Attention has gained the procedure for determining the competence of workers in the provision of hospital care. The hospital has met all departmental safety objectives. All laboratories have been accredited by NASKL I, Department of Clinical Biochemistry and Pathobiochemistry also gained ISO 9001, Department of Biology and Medical Genetics is certified by ISO 15189 Czech Institute for Accreditation. Working in the hospital was very difficult due to the ongoing reconstruction of half the hospital. Improvisation and cramped conditions were often the cause of anxiety in situations that are in normal operation resolved peacefully. The audit, which we call re-accreditation, by which we indicate that this is an event that is repeated, examined quality management system and verified the performance of individual standards. On its recommendation, the UAC CR admitted the accreditation certificate to our hospital without conditions. We consider it as a success. It is recognition from a reputable organization where quality care and safe means a lot. It tells us that we have under control the quality of care and safety adjusted from the effects of various shortcomings. We proved that we have corrected past mistakes, that we can find any flaws, identify their causes, prevent their recurrence and reduce the risks associated with providing health services. This is good news for patients, founders and medical insurances.

## Scientific research activity

University Hospital Motol (UHM) strongly emphasises on scientific research activities. In this respect, it is using its long traditions. In accordance with the progress in medical science University Hospital Motol particularly supports innovative direction of research and is trying to apply the results of the clinical research in practice.

Promotion of science, research and innovation in UHM is realised by combined financing through institutional resources and assigned resources, which are mostly realised in form of grants and research projects.

### Research projects and grants:

- Since 2005, UHM is the coordinator of the research project (RP), managed by the Ministry of Health. The 2011 was the last year of the solution of the RP and also preparative year for a new phase of institutional support for research organizations. This new arrangement is reflected in the structure of funds dedicated to research activities, as described in the attached summary.
- In 2011, UHM dealt with 23 projects of Internal Grant Agency (IGA) Ministry of Health, as the principal investigator and 57 projects as a co-investigator.
- In 2011, the financial means (in CZK) for science and research in UH Motol were distributed as follows:

Scientific research activity	21 104 000,-
IGA co-investigator:	18 189 000,-
AS CR	28 500 000,-
Research projects in total	Instit. preparation: 9 000 000,- CZK

The obtained support of scientific and research activities was **77 679 000,- CZK** in total.

- Especially now, at the time of the reform of RDI, University Hospital Motol devotes a great care to outputs of RDI into national database of the Council of Research, Development and Innovation (Council). In 2011, we have used the outputs from the Council in the allocation of resources devoted to institutional support. By supporting the best teams we want to achieve an overall improvement in the quality of scientific research and its applications.
- From the facts above follow priorities of RDI for the next period. University Hospital Motol traditionally develops the whole area of paediatrics. We will support the work of strong research groups in priority areas of genetics, tumors of childhood and adulthood, cardiology, pathology, neurology and immunology, all in line with global trends and the presence of great collectives in the University Hospital. We focus on the development of innovative therapeutic and diagnostic procedures based on modern technologies, where we provide space for the development and clinical testing.

## **Combined programme of education of doctors, MD And PhD Programme**

In 2010, the combined MD/PhD programme was listed only for a profile field, with plans to expand in the next period, which will clarify the future institutional support our organization in the science, research and innovation reform in the Czech Republic.

## **International activities**

Scientific and research activity in UHM is widely involved in the international activities that are reflected in majority of the mentioned grant projects and subprojects of Scientific research. UHM participates with 2<sup>nd</sup> Faculty of Medicine Charles University in research projects of seventh EU Framework Programme and on other international programs.

## **Creative initiative**

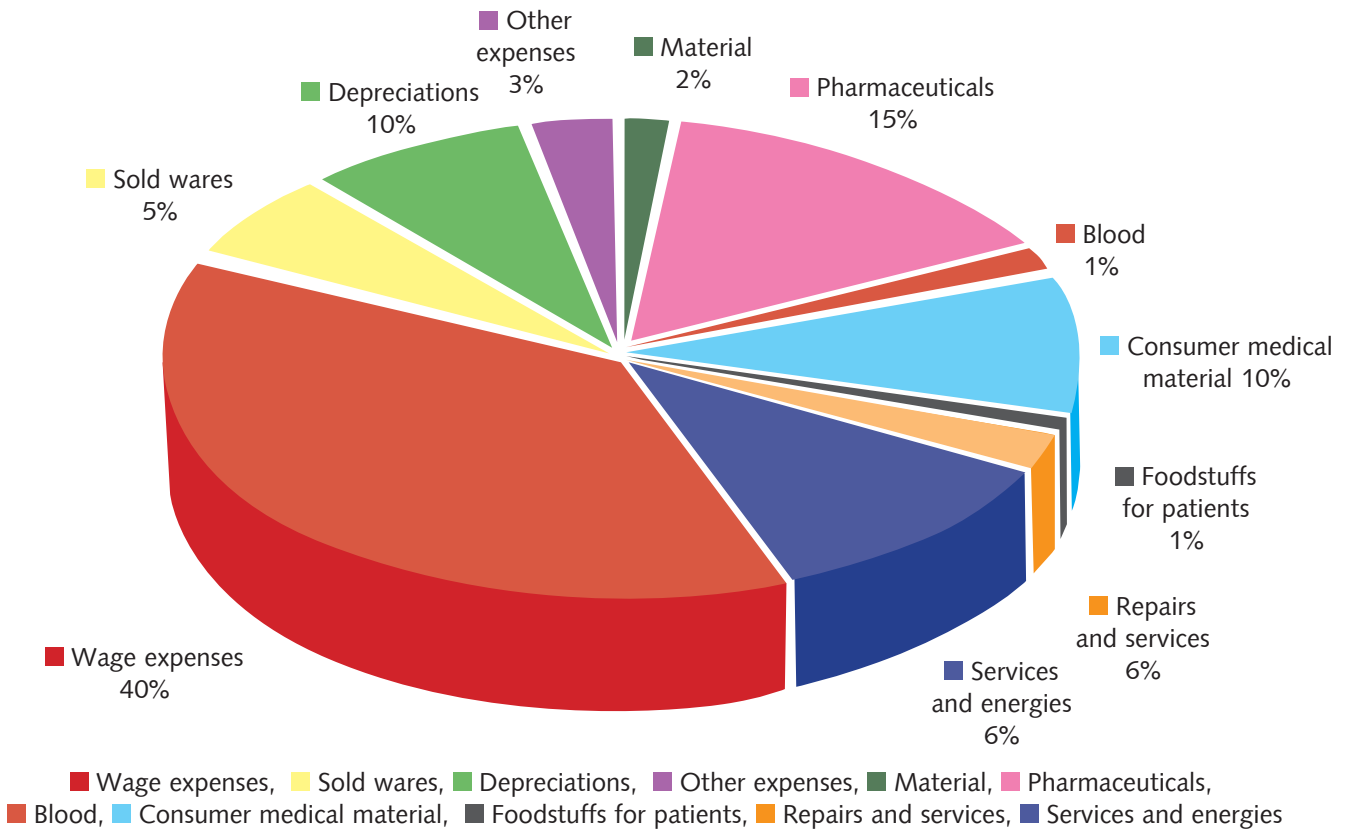
The University Hospital Motol follows and appreciates the quality and successes in the field of medicine and scientific and research progress. In 2010, the best creative initiative was evaluated for the third time and this time the team of the Department of Pediatric for research in the field of diabetes.

## Economic activities

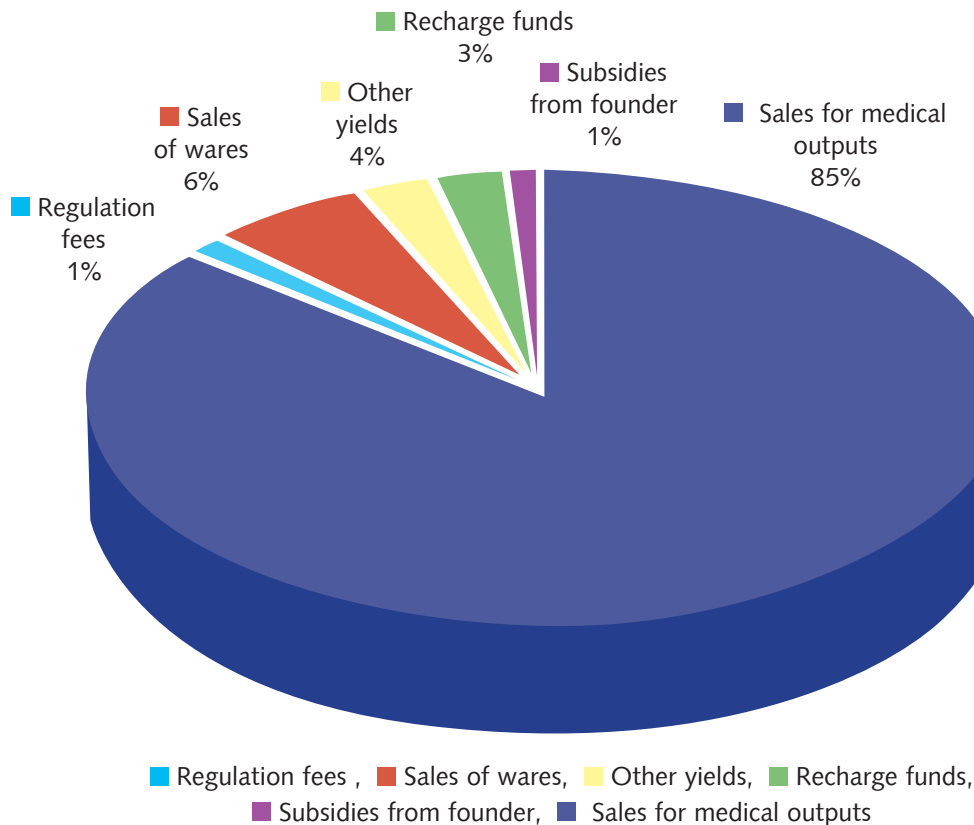
<b>BALANCE SHEET</b> (in thousands CZK)	Stav k 1. 1. 2011	Stav k 31. 12. 2011
<b>ASSETS</b>	<b>11 274 617,77</b>	<b>12 011 918,63</b>
<b>Permanent assets</b>	<b>9 309 752,80</b>	<b>9 814 524,54</b>
Long-term intangible assets	19 204,70	14 625,04
Long-term tangible assets	9 286 739,07	9 795 815,29
Long-term financial assets	11,84	11,84
Long-term claims	3 797,18	4 072,37
<b>Current assets</b>	<b>1 964 864,97</b>	<b>2 197 394,09</b>
Reserves	104 144,06	156 258,63
Claims	854 597,74	833 321,61
Financial assets	1 006 123,17	1 207 813,85
<b>LIABILITIES</b>	<b>11 274 617,77</b>	<b>12 011 918,63</b>
<b>Own Resources</b>	<b>10 592 274,37</b>	<b>11 192 879,86</b>
Property funds	9 314 563,64	9 826 449,36
Financial and monetary funds	2 718 201,39	2 803 477,02
Economic reset for current accounting period	3 855,17	3 444,14
Accumulated loss from previous years	-1 444 345,83	-1 440 490,66
Economic result in licensing procedure (trading income)		
<b>Foreign sources</b>	<b>682 343,40</b>	<b>816 038,77</b>
Reserves	0,00	245,53
Long-term liabilities	1 950,14	781,25
Current liabilities	680 393,26	818 011,99
Bank accommodations and loans	0,00	0,00

<b>PROFIT AND LOSS STATEMENT (in thousands CZK)</b>	<b>situation on 31. 12. 2011</b>
Material costs	2 552 851,48
Repair and service expences	670 166,48
Wage expenses	2 699 240,85
Taxes and charges	369,33
Other costs	168 984,51
Depreciations, sold property, reserves and adjusting items	712 566,75
Financial costs	2 415,51
Cost of indisputable rights (the state budget, local governments, state funds)	
<b>Total costs</b>	<b>6 806 594,91</b>
Revenues for medical outputs and wares	6 401 651,39
Activation	1 395,01
Other revenues	322 816,23
Financial income	12 274,37
Income of indisputable rights (the state budget, local governments, state funds)	91 902,05
<b>Total revenues</b>	<b>6 830 039,05</b>
Economic result before taxation	23 444,14
Income tax	20 000,00
Additional income tax payments	
<b>Economic result after taxation</b>	<b>3 444,14</b>

## Survey of Expenses for 2011



## Survey of Yields in 2011



Survey of economic indexes				in thous. CZK
Index	2009	2010	2011	11/10 v %
Yields	6 416 203	6 443 567	6 830 039	106,00
Expenses	6 409 827	6 439 712	6 826 595	106,01
Economic result	6 376	3 855	3 444	89,34
Accumulated loss from previous years	-1 450 721	-1 444 346	-1 440 491	99,73
Tangible investment assets	8 747 647	9 286 739	9 795 815	105,48
Reserves	108 837	104 144	156 259	150,04
Claims	1 020 472	854 598	833 322	97,51
Obligations	703 282	680 393	818 012	120,23
Cultural and social services fund	0	0	0	
Payroll fund	51 495	44 641	19 124	42,84
Reserve fund	53 279	54 147	48 907	90,32
Reproduction fund of inv. Assets	2 338 752	2 619 412	2 735 446	104,43

## I. Liabilities and claims

Liabilities	<b>818 011 992,05 CZK</b>
Claims	<b>833 321 608,45 CZK</b>
Long-term liabilities	<b>781 253,00 CZK</b>
Long-term claims	<b>4 072 371,80 CZK</b>
Liabilities after the due date	<b>464 663,21 CZK</b>
Claims after the due date	<b>52 962 084,32 CZK</b>

For a long time, liabilities of the hospital are refunded within 90 – 120 days after the arrival of the invoice. Payments are covered in accordance with the term of maturity and only the invoices that have to be solved due to material and time discrepancies, become liabilities after the due date. Long-term liabilities are continuously paid according to repayment plan and they will be completely paid in 2012.

The total state of the claims is stable, payments from health insurance companies are scheduled and paid within the term of maturity, with a maximum delay of 5 days. Claims after the due date are mostly the claims after foreigners that are difficult to collect and these are therefore continuously written off during the reporting period. The number of claims from trade relations increased in 2011, because also the number of health performances and their payments had risen.



Financial flows of the University Hospital Motol were balanced for the whole year 2011 and the hospital was able to meet its obligations in due date. During the year, the hospital participated in the payment of the reconstruction of the University Children's Hospital, which will be also abundantly paid in 2012, because of the reconstruction of the wing B of the University Children's Hospital. The reconstruction doesn't include the subsidy from the state budget. The payment discipline belongs among priorities of the University Hospital Motol and the records of both obligations and claims have been thoroughly monitored. In accordance with the law No 563/1991 Coll. on accounting, the final balances of obligations and claims were approved including their factual correctness and their inventory was realized by the decree No. 270/2010 Coll. on inventory of assets and liabilities.

## II. Inventories

The situation on inventories of the UHM

- material and low value tangible fixed assets	<b>33 767 542.36 CZK</b>
- medicaments	<b>71 930 475.62 CZK</b>

The number of inventories of material and low value tangible fixed assets increased by 32% compared to the same period of the year 2010. The increase occurred mainly at the low value tangible fixed assets. It is due to the equipment of the University Children's Hospital, which has been continuously put into operation. The increased volume of inventories appeared also in the warehouse of hospital linen, which bought new linen for the University Children's Hospital in 2011.

In the area of the inventories of medicaments and consumer medical material, there was an increase by 27.6% compared to the year 2010. At the end of the year, a stockpiling of the medicaments and consumer medical material occurred, because of the expected increase of the VAT rate from 1.2.2012. Otherwise, the inventory of medicaments and low value tangible fixed assets are kept on the minimum, because the distribution of these items is very quick and high stocks are economically disadvantageous. During the year 2011 there was also an effect of the overestimation of some medicaments and the hospital managed to secure the purchases of material and low value tangible fixed assets at substantially lower prices due to the electronic auctions. In 2012, the use of the electronic auctions will continue, and through this, the direct costs per patient will be reduced.

## III. Assets

acquisition of fixed assets:	<b>1 198 280 655.57 CZK</b>
acquisition of low value fixed assets:	<b>89 934 415.73 CZK</b>
fixed assets implementation:	<b>3 274 694 852.26 CZK</b>
low value fixed assets implementation:	<b>36 633 924.38 CZK</b>
disposal of fixed assets:	<b>200 854 067.49 CZK</b>
disposal of low value fixed assets:	<b>27 726 737.32 CZK</b>

In 2011 the land of the inheritance was sold for **85 250, - CZK**.

## IV. Situation on accounts

### IV. Situation on accounts

Current account	1 162 329 628.08 CZK
Deposit Account	66 733 321.75 CZK
Account of cultural and social services fund	2 584 448.98 CZK

The balance of the the current account on 31.12. 2011 was mainly affected by the payments received from health insurance companies in the last days of the year 2011. At the same time the financial resources for the reconstruction of the University Children´s Hospital were reserved on the account. These financial resources will be paid continually during the reconstruction of the wing B.

The balance of the deposit account is mainly created from donations in the amount of 40.56 million CZK, the rest of the account are the deposits of hospital and long-term hospital patients.

Account of Cultural and social services fund is influenced by its income and output. In 2011, according to the valid law, the fund was formed only from 1% of gross wages and therefore the new agreement on the utilization of the Cultural and social services fund was signed. Into the Cultural and social services fund is now included also 1% of the costs for sickness covering paid by the employer, instructed by the Ministry of Health.

## V. Expenses and yields in 2010 and 2011

### Costs connected directly with a patient

Item	year 2010 in thous. CZK	year 2011 in thous. CZK	growth in thous. CZK	growth in %
Pharmaceuticals	989 869,99	1 032 196,80	42 326,81	1,04
Blood	87 002,97	85 141,38	-1 861,59	0,98
Consumer medicine material	651 490,42	660 016,87	8 526,45	1,01
Foodstuffs for Patients	44 499,98	45 195,40	695,42	1,02
Total	1 772 863,36	1 822 550,45	49 687,09	1,03

### Expenses for electricity, water, gas

Item	year 2010 in thous. CZK	year 2011 in thous. CZK	growth in thous. CZK	growth in %
Water	21 832.63	24 740.43	2 907.80	1.13
gas (heat energy)	101 608.81	61 959.60	-39 649.21	0.61
Electricity	82 957.61	84 420.92	1 463.31	1.02
Total	206 399.05	171 120.95	-35 278.10	0.83

### Other indexes

Item	year 2010 in thous. CZK	year 2011 in thous. CZK	growth in thous. CZK	growth in %
material in general	68 539,64	73 892,43	5 350,79	1,08
material for maintenance	9 882,11	4 004,61	-5 877,50	0,41
Linen	6 904,49	10 989,19	4 084,70	1,59
Repairs and maintenance	178 809,35	232 942,78	54 133,43	1,30
Services	684 450,16	427 678,91	-256 771,25	0,62
Total	948 585,75	749 507,92	-199 077,83	0,79

### Wages and salaries

Item	year 2010 in thous. CZK	year 2011 in thous. CZK	growth in thous. CZK	growth in %
Wages and salaries	1 838 896,28	1 999 426,01	160 529,73	1,09
Health insurance	163 710,82	178 210,23	14 499,41	1,09
Social security	454 835,91	496 123,33	40 287,42	1,09
Creation of the Cultural and social services fund	33 202,70	19 723,05	-13 479,66	0,59
Total	2 490 645,71	2 692 482,62	201 836,91	1,08

### Revenues for medical outputs

Item	year 2010 in thous. CZK	year 2011 in thous. CZK	growth in thous. CZK	growth in %
Revenues for medical outputs – General Health Insurance	5 478 147,33	5 807 374,44	329 227,11	1,06
Other medical outputs	102 929,04	111 714,29	8 785,25	1,09
Total	5 581 076,37	5 919 088,73	338 012,36	1,06

## VI. Changes in accounting

In the year 2011, the accounting methods were in accordance to the valid legislation for contributory organizations. On the basis of the amendment of the decree No. 410/2009 (which is an instrument for Act No. 563/1991 Coll., on accounting), the accounting of transfers has been changed and subsidies from the state budget and from local governments has merged. There was a partial change in the chart of accounts and also the accounting procedures have changed in the year 2011 according to the approved legislation.

The emission allowances, introduced by the EPC company, were established in assets. They were put into accounting on the basis of the listing of the Emission Allowances Exchange. During the year 2011, they were not used in trade and at the end of the year they were valued again by the market price.

All final accounts of the accounting of the year 2011 were carried out by guidelines of the Ministry of Health of the Czech republic and in compliance with applicable laws, relevant decrees and regulations.

In accordance with the Act No. 218/2000 Coll., on budgetary rules, pursuant to the § 58 of the Act, the changes in accounting of the Regeneration Fund were realised in the amount of 162.37 million CZK.

In 2011, the Ministry of Health granted an investment subsidy for the reconstruction of the University Children's hospital. Accounting was performed on the established analytical evidence of investment purchase in this event. During the reconstruction, also costs of hospital's own resources are monitored. The acquired assets are continually added to the register. In 2012, the wing B of the University Children's hospital will be reconstructed, and the action will be financed from hospital's own resources. The accounting will be further held on established analytical accounts. In 2011, new assets valued at about 3 billion CZK were put into operation and it will increase the depreciation of the hospital next year.

The University Hospital Motol drew the EU subsidies for projects, that were charged separately in the accounting and the accounting was performed according to the rules of individual projects. In accordance with the guideline from 17. 12. 2008 (Creation and use of the reserve fund of the state contributory organizations), the unspent operating grants from the European Union were transferred to the account 914/60, according to the law No. 26/2008 mColl. Individual EU subsidies are kept in separated items. At the end of the year, reserves of sustainability of projects of the EU were created, in accordance with the EU subsidy contracts - The Norwegian funds. These reserves will be created annually and it will be used to cover repairs and services costs of provided medical devices.

Throughout the year 2011, the economy in the economic activity centers was observed and the costs of these activities were accounted to each quarter of the year. The economic activity of hostels was in loss for the year 2011, because a part of the hostels was used as medical rooms because of the reconstruction of the University Children's hospital. The pharmacy, laundry, catering and parking department have a positive economic result.

When processing the financial statements for the year 2011 to the central system of the state accounting information, the cash flow statement and the statement of changes in equity were also created. At the same time all attachments of the annual statements were prepared in accordance with the decree No. 410/2009 Coll. (which is used for certain provisions of the Act No. 563/1991 Coll.) and in accordance with the decree No. 383/2009 Coll. on accounting records in the technical form of selected accounting units and their transfer to the central system of the state accounting information and on requirements for technical and mixed forms of accounting records (technical decree on accounting records).

## **VI. Conclusion**

The economy of the University Hospital Motol to 31.12.2011 ended with a profit of 3.44 million CZK of which the main activities of the hospital ended in red numbers – 29.35 thousand CZK while the profit from the economic sphere mounted to 32.79 million CZK. The economic result was negatively influenced by the increased expenses of VAT of 69.60 million CZK and also by the increase in personnel costs according to the regulation from the Ministry of Health and by the increase of depreciation of assets. The hospital managed to obtain a positive economic result mainly thanks to the goal-directed observation of the set limits and the introduction of systemic regulation measures during the whole year 2011. The economy of the University Hospital Motol is balanced and it has no back tax.

In 2011, the health care was paid by health insurance companies in accordance with the decree No.464/2008 Coll. of the Czech Ministry of Health. The health care was paid via DRG (as a regulatory mechanism) and by individual payments from exceptionally costly patients.

Throughout the year 2011, the reconstruction of the University Children's hospital took place at the UHM. It brought more difficult working conditions not only for employees, as well for children and some adults patients. Hospital managed to maintain the high efficiency of the hospital and to respect the safety and hygiene regulations. Although there was a slight reduction of some disciplines, but none of them had to interrupt their activities and the hospital provided complete health care for children and adults during the whole year.

The grant of investment subsidies for the University Hospital Motol enables to improve care for patients, to equip medical facilities by a high-quality medical technology and to ensure a comprehensive care, provided in accordance with the national accreditation standards. At the end of the year 2011, the hospital regained the accreditation according to the standards of accreditation commission SAK o.p.s. and it obtained the certificate valid until the December 2014.

The compliance of established standards is regularly monitored and evaluated.

In 2011, the UHM used 387.55 million CZK from its own resources into reproduction of asset. From donations, 15.18 million CZK were received and used for extension of an investment property in 2011.

In 31.12. 2011 a research project of the Ministry of Health, which has been conducted since 2005 was finished. Many scientific achievements, that were successfully published and are

prepared for use in practice, came from the financial support of the research project. At the end of the year, the hospital received a status of a significant research organization, and therefore it will be able to apply for the institutional and implementation targeted support of the Ministry of Health.

The management of the University Hospital Motol puts the stress mainly on the observation of provisions to keep the balanced economy for the whole year and to maintain the top quality of the hospital and to provide a comprehensive preventive medical care for patients from the whole Czech republic even with a limited amount of financial resources.

## Personnel activity

University Hospital Motol employed to December 31, 2011:

*in revised numbers (RN): 4 911 employees, of which 4 002 medical professionals*

*in natural persons (NP): 5 501 employees, of which 4 538 medical professionals*

## Profession structure

(NP) natural persons

(RN) revised numbers

	2009	2010	2011	2009	2010	2011	INDEX 11/10	
	FO	FO	FO	PP	PP	PP	FO	PP
Total	5 433	5 448	5 501	4 891	4 881	4 911	1,00	1,01
PHYSICIANS	1 130	1 105	1 138	816	808	824	1,03	1,02
PHARMACISTS	26	26	26	24	25	25	1,00	1,00
NURSES	2 174	2 136	2 094	2 036	1 992	1 962	0,98	0,98
MP WITH PROF. QUALIFIC	327	340	357	316	321	330	1,05	1,03
MP WITH SPEC. SKILLS	174	199	206	147	161	169	1,04	1,05
MP UNDER SUPERVISION	481	636	655	466	611	641	1,03	1,05
JOP WITH PROF. QUALIFIC	80	68	62	63	53	49	0,91	0,92
ADMINISTRATION	656	636	657	630	602	604	1,03	1,00
WORKERS	365	302	306	370	308	304	1,01	0,99

## Employees according to age and sex – situation to December 31, 2011

Age	Man	Woman	Total	%
to 20 years	18	27	45	0,82
21 - 30 years	315	990	1305	23,72
31 - 40 years	404	1018	1422	25,85
41 - 50 years	246	921	1167	21,21
51 - 60 years	300	860	1160	21,09
61 years and older	152	250	402	7,31
<b>total</b>	<b>1 435</b>	<b>4 066</b>	<b>5501</b>	<b>100</b>
<b>%</b>	<b>26,09</b>	<b>73,91</b>	<b>100</b>	

## Employees segmentation by education and sex - situation to December 31, 2011

Reached education	Men	Women	Total	%
Elementary	102	136	238	4,33
Trained	116	141	257	4,67
Secondary vocational	163	148	311	5,65
Full secondary vocational	287	2231	2518	45,77
Higher vocational	46	218	264	4,80
University	721	1192	1913	34,78
<b>of which</b>	33	296	329	
<b>Bachelor degree course</b>	688	896	1584	
<b>Master degree course</b>	<b>1435</b>	<b>4066</b>	<b>5501</b>	<b>100</b>

## Qualification Structure – situation to December 31, 2011

1) Health care professionals according to Law 95/2004 Coll. = physicians and pharmacists: in total 1164

Of 1138 physicians, 41 are doctors – graduates before introduction and 277 already introduced into the field of specialization (with certificates), i.e. 27,94 % physicians have got only professional qualification. A total of 820 (72,05 %) have a specialized qualification (i.e. medical certificate of the 2nd degree, extension course, licence from the Czech medical Chamber, certification from the Czech Ministry of Health).

2) Health care professionals according to Law 96/2004 Coll. = non doctoral health care professions: in total 3374 of which 2094 are general nurses and midwives.

Reached education of nurses and midwives	Total	%	with specialisation	%
Secondary health care	1619	77,32	590	36,44
Higher health care	166	7,93	54	32,53
University – Bachelor degree	234	11,17	73	31,20
University – Master degree	75	3,58	26	34,67
<b>Total</b>	<b>2094</b>	<b>100,00</b>	<b>743</b>	<b>35,48</b>



## Wages area

A total of **1.965.825.202 CZK** were spent on wages in 2011 (without payments for work done out of employment). Compared with 2010, there has been an increase by **160.252.527 CZK**, i.e. **8,9 %**.

The increase in the volume of wage funds compared with 2010 is caused by the elevation of standard wages with proper procedures from 5 to 8 thousand CZK from 1 March 2011, wage and an amendment to the catalogue of works (Government Regulation No. 222/2010 Coll.).

The average gross salary in the hospital to 31.12.2011 was 33 356 CZK. Compared with 2010, it was increased by 8,2 %.

## Development of average salary

	2002	2003	2004	2005	2006
Total	19 019	20 938	21 026	21 989	24 625
Physicians	34 840	38 199	38 188	39 951	44 972
Nurses	17 797	19 430	19 447	20 369	22 946

	2007	2008	2009	2010	2011
	26 835	27 711	29 925	30 824	33 356
	48 906	49 199	50 565	51 373	61 510
	24 860	26 724	29 171	30 206	31 307

## Donors and Foundations 100 000,- CZK

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The University Hospital Motol thanks all donors who in 2011 contributed with their gifts, financial or material to the improved level of care for patients in our hospital. At the same time we wish to express our thanks to those donors whose names have not been included for technical reasons, however they are listed at [www.fnmotol.cz](http://www.fnmotol.cz).

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the generations!



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