

H NA HOMOLCE
HOSPITAL



2022

ANNUAL REPORT NA HOMOLCE HOSPITAL



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Program of general medical care	40
▪ Department of Internal Medicine	4%
▪ Department of Clinical Oncology	4(
▪ Department of General Surgery	4)
▪ Department of Gynecology and Minimally Invasive Therapy	5\$
▪ Department of ENT / Head and Neck Surgery	5%
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ABOUT US

A WORD FROM THE DIRECTOR

Dear friends,

Last year can certainly be assessed as a success, and not only on the basis of objective data. Our hospital achieved a record net profit of CZK 619 million with total revenues of CZK 4,9 billion. We are pleased that we have been able to continue our development and investment projects. Whether these are structural changes and modernization in the departments of internal medicine, cardiology, radiology, surgery, where we opened new inpatient rooms, reconstruction of the technical background of the building or investments in the purchase of medical technology. We also managed to build new parking spaces and make significant progress on the energy efficiency measures project.

We reconstructed the electrophysiology room, two catheterization operating rooms and purchased three new angielines for the Department of Cardiology. We installed a new analytical line in our laboratories. We also commissioned a new CT scanner, purchased new microscopes for neurosurgery, and started an extension for the PET/MRI device, which we will complete and commission this year. This unique hybrid PET/MRI device allows for further refinement of diagnostics in specific indications. We aim to equip the operating rooms for all disciplines and all departments with the state of the art technology, and last year we started by replacing the operating room lights and anaesthesia equipment.

In 2022, the total investment of Na Homolce Hospital amounted to CZK 395 million, of which CZK 200 million was invested in the modernization of medical equipment. Further investments were made in a number of reconstructions, modernization of premises and in IT, where we successfully completed the project of the new hospital information system HooD, thus unifying the information systems of all medical disciplines into a single one.

Preparing investments for the upcoming years is also of great importance. At the moment, we are planning to invest another CZK 2,4 billion in the development of the hospital in the upcoming years. The largest investment to be implemented in 2023 will be the implementation of energy-saving measures, including the replacement of windows, as well as the modernization of the data network of Na Homolce Hospital.

We strive to ensure that the development of the hospital takes place across all disciplines, which is why we are constantly working on dozens of development studies and projects. Na Homolce Hospital is an economically healthy and stable hospital, which is reflected not only in the implementation of development plans, but also in a stable staff environment with very low turnover. Last year, the hospital employed 1,785 workers with an average salary of more than CZK 67 thousand, making it one of the Czech hospitals with the highest salaries for its employees in all categories.

I would like to thank all my colleagues from Na Homolce Hospital for their high work commitment, which is one of the reasons why the hospital has such good economic results for the past year.

Petr Polouček, MD, MBA



Petr Polouček, MD, MBA
Director of the Hospital



Vladimír Mikulěnka, MD, MBA
Deputy Director for Treatment and Preventive Care



Tomáš Hadžega, MSc.
Deputy Director for Economic and Technical Administration



Ivana Kirchnerová, MS., MBA
Deputy Director for Nursing Care



Prof. Josef Vymazal, MD, Ph.D.
Deputy Director for Science and Research

Na Homolce Hospital

Comprehensive cardiovascular and cerebrovascular center

CARDIOPROGRAM

CARDIOLOGY

CARDIAC SURGERY

VASCULAR SURGERY

ADVANCED DIAGNOSTICS AND SPECIALIZED CENTERS

NEUROPROGRAM

NEUROSURGERY

NEUROLOGY

STEREOTACTIC
AND RADIATION
NEUROSURGERY
(GAMMA KNIFE)

GENERAL INPATIENT MEDICAL CARE – INTERNAL MEDICINE, SURGERY+ UROLOGY + ORTHOPEDICS, ANESTHESIOLOGY AND REANIMATION + HYPERBARIC OXYGENOTHERAPY, ENT, GYNECOLOGY, REHABILITATION

GENERAL OUTPATIENT MEDICAL CARE – OUTPATIENT UNITS OF WARDS, ONCOLOGY, OPHTHALMOLOGY, DEPARTMENT OF PEDIATRIC AND ADOLESCENT MEDICINE, DERMATOLOGY, PSYCHIATRY, PSYCHOLOGY, DENTISTRY, PHARMACY

COMPLEMENTARY SERVICES – CLINICAL BIOCHEMISTRY, HEMATOLOGY, IMMUNOLOGY, MOLECULAR GENETICS, MICROBIOLOGY AND ANTIBIOTIC CENTER, PATHOLOGY, IMMUNOANALYSIS, RADIODIAGNOSTICS, NUCLEAR MEDICINE, CLINICAL PHARMACY

CENTRAL STERILIZATION, HOSPITAL HYGIENE, MEDICAL PHYSICS, DEPARTMENT OF BIOMEDICAL ENGINEERING, TECHNICAL AND ADMINISTRATIVE SUPPORT

Basic data

Number of employees	Number of beds	Number of admissions	Number of surgeries	Number of outpatient examinations
1 785	357	19 324	16 558	959 846

Personnel and payroll data

	Physicians	Pharmacists	General nursing staff	Other auxiliary medical staff with professional competence	Auxiliary medical staff with professional and specialised competence
Total wages paid (in CZK)	419 986 697	14 955 705	533 819 203	106 296 455	45 513 217
Average recalculated number of employees	290,78	16,76	667,53	149,46	60,33
Average salary (in CZK)	120 362	74 362	66 641	59 267	62 867
	Auxiliary medical staff under specialised supervision or direct guidance	Technical and administrative staff	Workers	Total	
Total wages paid (in CZK)	99 563 410	170 081 058	44 918 186	1 435 133 931	
Average recalculated number of employees	212,34	275,35	108,70	1 781,25	
Average salary (in CZK)	39 074	51 474	34 436	67 141	

Auxiliary medical staff - medical staff excluding physicians
 Technical and administrative staff

ECONOMIC STABILITY

Costs and revenues

Medical costs	2021 (in CZK mil.)	2022 (in CZK mil.)	Increase/decrease 2022/2021 (in CZK mil.)	2022/2021
Drugs	92	92	0	100 %
Separately charged medical preparation (SCMP)	90	82	-8	91 %
Blood and blood derivatives purchase	35	37	2	106 %
Special medical materials (SMM)	220	223	3	101 %
Separately charged material (SCM)	764	933	169	122 %
Labour costs (in CZK mil.)	2021 (in CZK mil.)	2022 (in CZK mil.)	Increase/decrease 2022/2021 (in CZK mil.)	2022/2021
Wages	1 578	1 475	-103	93 %
Obligatory payments	525	490	-35	93 %
Other costs (in CZK mil.)	2021 (in CZK mil.)	2022 (in CZK mil.)	Increase/decrease 2022/2021 (in CZK mil.)	2022/2021
Other consumables (including low-value fixed assets)	72	82	10	114 %
Energy consumption	39	75	36	192 %
Sale of goods	123	126	3	102 %
Repairs and maintenance	71	74	3	104 %
Travel expenses and education	4	9	5	225 %
Services	100	106	6	106 %
Other costs	279	331	52	119 %
Depreciation	173	211	38	122 %
Total costs	4 163	4 345	182	104 %
Costs before taxes	4 040	4 188	148	104 %

ECONOMIC STABILITY

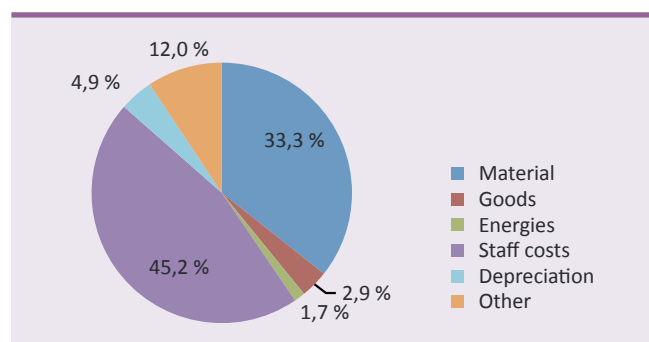
Revenues (in CZK mil.)	2021 (in CZK mil.)	2022 (in CZK mil.)	Increase/decrease 2022/2021 (in CZK mil.)	2022/2021
Revenues from own goods and services	4 186	4 548	362	109 %
- of which revenues from Health Insurance Companies	4 133	4 489	356	109 %
Sale of goods	154	163	9	106 %
Financial and other revenues	359	253	-106	70 %
Total revenues	4 699	4 963	264	106 %

Profit (loss) (in CZK mil.)	2021 (in CZK mil.)	2022 (in CZK mil.)	Increase/decrease 2022/2021 (in CZK mil.)	2022/2021
Profit before tax	659	775	116	118 %
Profit (loss) in the accounting period	536	619	83	115 %

Costs structure by types

	2021 (in CZK mil.)	2022 (in CZK mil.)	share in the total in 2022
NHH total	4 163	4 345	100 %
Material	1 259	1 449	33,3 %
Goods	123	126	2,9 %
Energies	39	75	1,7 %
Staff costs	2 102	1 965	45,2 %
Depreciation	173	211	4,9 %
Other	467	520	12,0 %

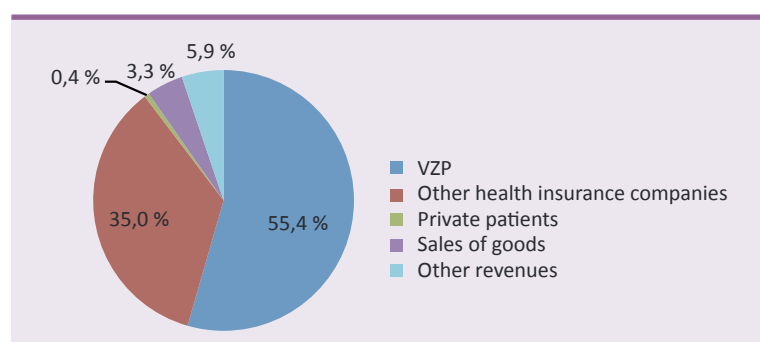
Costs structure 2022 by types



Structure of revenues

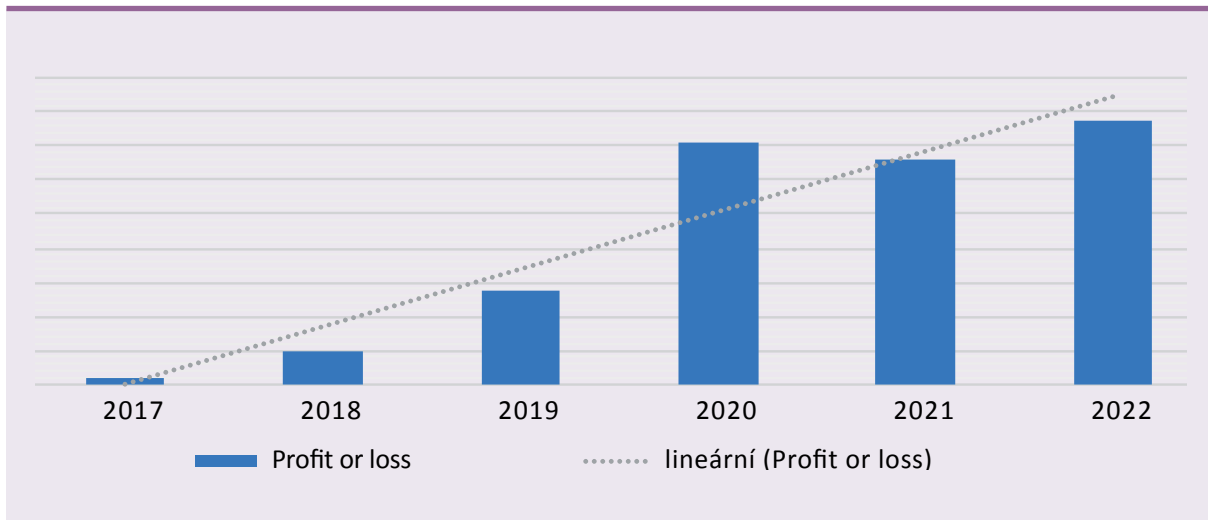
	2021 (in CZK mil.)	2022 (in CZK mil.)	share in the total in 2022
Total revenues	4 699	4 963	100 %
VZP	2 521	2 749	55,4 %
Other health insurance companies	1 612	1 737	35,0 %
Private patients	19	19	0,4 %
Sales of goods	154	163	3,3 %
Other revenues	393	295	5,9 %

Structure of revenues in 2022



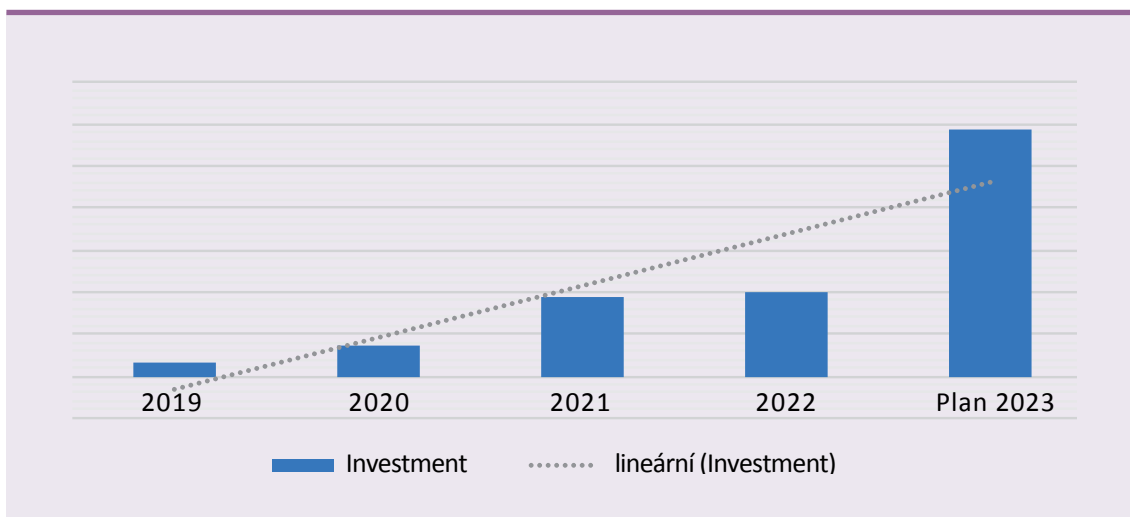
Profit before tax

in CZK mil.	2017	2018	2019	2020	2021	2022
Total costs	3 321	3 435	3 615	3 780	4 040	4 188
Total revenues	3 337	3 533	3 894	4 491	4 699	4 963
Profit or loss	17	98	279	710	659	775



Growth in investment volume

in CZK mil.	2 019	2 020	2 021	2 022	Plan 2023
Investment	64	144	374	395	1 170



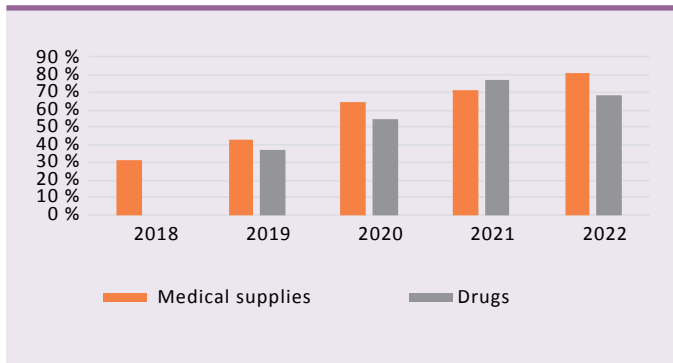
Percentage of material tendered

Percentage of material tendered	2018	2019	2020	2021	2022
Medical supplies	32 %	43 %	65 %	72 %	81 %
Drugs		37 %	55 %	77 %	69 %

Number of public contracts launched

Number of public contracts launched	2018	2019	2020	2021	2022
All contracts	44	75	289	477	432

Percentage of material tendered

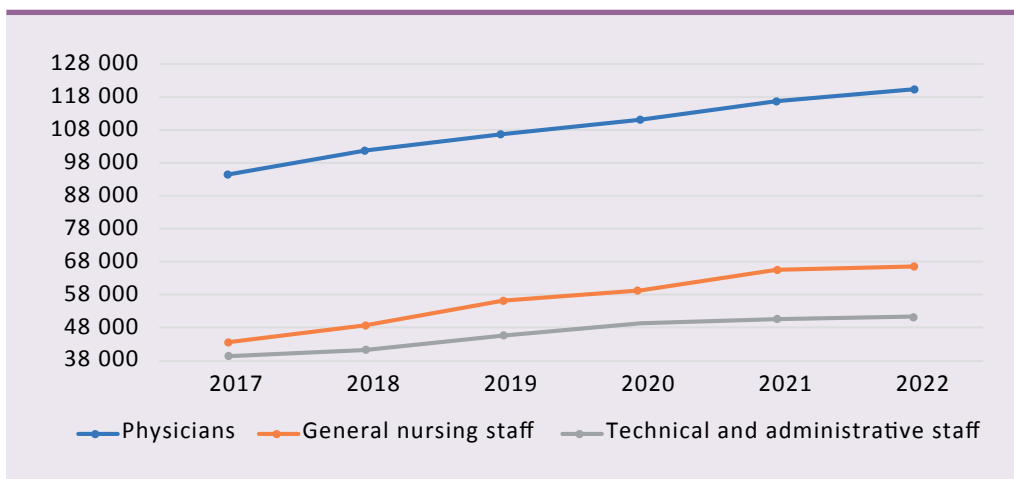


Number of public contracts launched



Average monthly salary for selected categories of NHH employees (2017-2022)

Monthly average salary	2017	2018	2019	2020	2021	2022	Increase in average monthly salary 2022 compared to 2017
Physicians	94 510	101 704	106 918	111 048	116 443	120 362	127 %
General nursing staff	43 680	49 051	56 572	59 552	65 796	66 641	153 %
Technical and administrative staff	39 447	41 636	45 514	49 431	50 649	51 474	130 %



Statutory audit of the annual financial report for 2022

9. Zpráva auditora

Při přezkoumání hospodaření a účetní závěrky organizace jsme zjistili závady tak, jak je výše uvedeno. Vzhledem k tomu, že tato zjištění nemají vliv na věrný a poctivý obraz aktiv, pasiv a finanční situace organizace k 31. 12. 2022 a nákladů, výnosů a výsledku jejího hospodaření a peněžních toků za rok 2022, je výrok auditora

bez výhrad.

Jsme připraveni Vám podat jakákoli vysvětlení, která se vztahují k výše uvedeným zjištěním nebo jakýmkoli záležitostem, které se týkají předmětného auditu.

S pozdravem

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Ficbauer

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David Ficbauer
auditor
FIZA, a.s.

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náměstek pro ekonomiku
a provoz
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MUDr.
Petr
Polouček

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ředitel organizace
MUDr. Petr Polouček, MBA

OUR ACTIVITIES

NEUROLOGICAL-NEUROSURGICAL PROGRAM

Department of Neurology

Head of Department, Martin Kovář, MD

Activities of the Department

- Emergency diagnostics and treatment of patients with acute ischemic stroke and other urgent neurological diseases - at the Neurological Intensive Care Unit (a key part of the Comprehensive Cerebrovascular Centre)
- Diagnostics and treatment of epilepsy both in the outpatient consulting clinic and in the Epilepsy Monitoring Unit (EMU), including a complete epilepsy surgery programme
- Inpatient diagnostic and therapeutic care for other neurological patients, including interventions for a range of vertebrogenic diseases
- Examination in the Centre for Sleep Disorders with two beds for polysomnography and consulting clinic
- Cerebrovascular consulting clinic with neurosonology
- Two electromyography laboratories performing, in addition to all methods of electromyography, also somatosensory and motor evoked potentials, in high annual numbers of patients and superconsular reach.
- Consulting centre for patients with movement disorders, especially Parkinson's disease, including indications for and implementation of deep brain stimulation
- Specialised examination room for visual and auditory evoked potentials
- Two electroencephalographic examination rooms and a mobile EEG device
- General neurological outpatient units

Organisational units of the Department

- Intensive Care Unit with 12 beds is a central part of the Centre of Specialised Cerebrovascular Care (formerly a Comprehensive Cerebrovascular Centre).
- Inpatient Unit: Unit with standard beds. It is followed up by the Epilepsy Monitoring Unit (EMU), which is together with a consulting clinic a basic part of the Centre for Pharmacoresistant Epilepsy with the status of a highly specialised care centre. The centre is one of three such centres in the Czech Republic. The inpatient unit also includes a fully accredited Centre for Sleep Disorders with a sleep laboratory where sleep polygraphy is performed on two monitored beds, indications for corrective ENT operations, and especially supportive aids (CPAP, BiPAP) helping patients with sleep apnoea syndrome.
- Outpatient unit: The outpatient section includes an extrapyramidal consulting unit, an outpatient unit focused on neuroimmunological diseases of the central nervous system, in particular multiple sclerosis, cerebrovascular consulting clinic, epilepsy outpatient unit, sleep outpatient unit and an outpatient unit for patients with neuromuscular diseases.

Basic data

Number of physicians	21 (18 FTEs)
Number of nurses	57 (45 FTEs)
Number of administrative staff	3
Number of standard beds	21
Number of intensive care beds	12
Number of EMU beds	4

Number of sleep laboratory beds	2
Average length of hospital stay (in days)	4,4
Number of admissions	1,792
Number of outpatient examinations in total	22,538 (in 10,012 patients)

Performance overview

Admissions

Number of admissions increased by 6% year-on-year. The length of admission remained unchanged. In 2022, 673 patients were admitted for CVA and transient ischemic attack in the NHH. Intervention radiologists performed 122 mechanical thrombectomies of closed cerebral arteries (one of the highest numbers in the Czech Republic and the highest in Prague). 143 patients underwent intravenous thrombolysis for CVA. All recanalized patients are admitted in the neurological ICU. The median time from patient arrival by ambulance to thrombolysis administration was further slightly reduced to an above-average 21 minutes. All patients with mechanical and intravenous recanalisation are entered in detail in the national registry ResQ. We make decisions about recanalization in some specific situations with the help of a software tool that evaluates cerebral perfusion on CT. In addition to the ambulance service, many patients are urgently sent to us by hospitals in Central Bohemia and Prague.

The Epilepsy Monitoring Unit treated 167 patients per year within typically weekly diagnostic admissions. Patients underwent a comprehensive diagnostics, in the case of pre-surgical examination, including the use of ictal SPECT in selected patients. Several patients had invasive EEG monitoring using intracerebral electrodes. The EEG from the electrodes is used to identify an epileptogenic zone that may be a candidate for surgical removal to cure epilepsy. 21 resection epilepsy surgery operations were indicated and performed, and 4 patients were implanted or reimplanted with a vagus nerve stimulator (VNS). Other patients were scheduled for implantation, but this did not take place until January 2023.

286 patients have been admitted to the Centre for Sleep Disorders, well over half of them were newly indicated for treatment with a device providing permanent airway overpressure (CPAP or BiPAP). The effectiveness of their treatment can be monitored remotely and the parameters readjusted, while we have many hundreds of patients monitored in this way.

Percutaneous cement vertebroplasty of a lumbar or thoracic vertebral fracture was performed in more than one hundred patients during a short admission. It is an effective minimally invasive method of treating vertebral fracture pain, mainly caused by osteoporosis. Na Homolce Hospital is traditionally one of the leading institutions in the use of this method.

Outpatient unit

The number of outpatient examinations increased slightly, and the number of remote consultations also increased. Most patients are examined in specialised outpatient units – epilepsy, sleep, cerebrovascular, neuroimmunological, neuromuscular and extrapyramidal. The outpatient unit cooperates with all disciplines within the hospital.

Changes / new events in the previous year

- We received the Diamond Status Award under the auspices of the European Stroke Organisation as a recognition of the quality and speed of care for patients with acute stroke.
- We deepened our cooperation in the Stroke Czech Research Network in the organisation of multicentre research. A Framework Agreement on Research Infrastructure Cooperation was signed with NHH.
- We developed an investigation of spasticity and botulinum toxin application in patients after stroke.

- Assoc. prof. Zdeněk Vojtěch has published the 3rd volume of his unique and highly acclaimed Atlas elektroencefalografie dospělých.
- Since the beginning of 2022, the Department of Neurology has been fully operational in a newly developed hospital information system, which we, as the first department in the hospital, tested and helped to modify.

Perspectives for the next year

The main task is to maintain a high standard of care even with a large number of treated patients – both the inpatients and outpatients. The core segment is the cerebrovascular programme, especially acute treatment of stroke. The already high number of mechanical thrombectomies performed in patients with acute stroke due to cerebral artery occlusion is likely to increase. This year, scientific evidence of the effectiveness of this treatment in a wider range of patients was demonstrated in the TENSION study and our hospital was one of the participants in this study. A large proportion of patients with acute stroke will continue to receive thrombolysis. We will continue to work with the Department of Neurosurgery in the care of patients with cerebral haemorrhage and inter-haemorrhage in ruptured aneurysms. We publish the results of patients operated on with cerebral bypass for chronic carotid artery closure and also the results of patients operated on for carotid artery stenosis and the beneficial effect of surgery on their mental function.

Ongoing cooperation with Motol University Hospital in the framework of the Centre of Highly Specialised Care for Pharmacoresistant Epilepsies.

Approval of the Centre for Movement Disorders is pending – a formal establishment of the highly specialised care provided here in the diagnosis and treatment of Parkinson's disease and other extrapyramidal disorders, including deep brain stimulation.

Several studies (OCEANIC Stroke, ACTISAVE, MCA-AF, Multimodal Imaging in Stroke, INTERCEPT) are under approval or approved, and we also collaborate with the Department of Cardiology in the programme of diagnostics of unclear disorders of consciousness, in the investigation and prognosis of patients after cardiopulmonary resuscitation, and in the non-pharmacological treatment of atrial fibrillation.

Educational and other specialised activities

- Lectures, educational activities: Lectures held at the Institute of Postgraduate Studies in Health Care, managing study visits in the field of neurointensive care (Panský), presentations at national webinars and congresses (Head of Department Kovář, MD, Assoc. prof. Vojtěch, Seltenreichová, MD, Peregrin, MD, dr. Součková, MD, Skovajsa, MD), presentation at the European Academy of Neurology (Jaroš, MD), teaching at the 1st and 3rd Faculty of Medicine Charles University (Assoc. prof. Vojtěch), conducting internships in epileptology and electroencephalography (Assoc. prof. Vojtěch), electromyographic internships (Jerie, MD), neurological internships of neurologists from other medical institutions and physicians of other disciplines within the framework of pre-certification training in our country (Head of Department Kovář).
- Principal investigators and co-investigators of NHH grants: Head of Department Kovář, Assoc. prof. Vojtěch, Jaroš, MD, Červenka, MD.
- The CHIP study – identifying risk factors for stroke – was ongoing and concluded, and the TENSION study – recanalization of patients with acute stroke from large artery occlusion in a prolonged time and tissue window – was ongoing. A study of the global impact of COVID on the treatment of strokes and subarachnoid haemorrhage (SAH) was published in a high-impact international journal, in which we participated.
- Membership of professional associations: Czech Neurological Society (Head of Department Kovář a member of the cerebrovascular section committee), Czech League Against Epilepsy (doc. Vojtěch a member of the committee), European Stroke Organisation, Epistop Civic Association.
- Active participation in the Stroke Czech Research Network, participation in a number of national studies and projects, (Head of Department Kovář is a member of the Scientific Council).

- Preparation of internal reviews in the field of Neurology in Courts.
- Publications (peer-reviewed articles and studies) for 2022:

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Department of Neurosurgery

Head of Department, Jan Klener, MD

Despite the difficult situation caused by the already subsiding COVID-19 pandemic in 2022, the Department of Neurosurgery continued to deal with comprehensive diagnostics, surgical treatment and follow-up care of patients suffering from diseases of the central and peripheral nervous system in order to provide comprehensive and safe services that improve patients' quality of life.

Activities of the Department

These activities mainly involve neurosurgical treatment of patients with diseases of the brain, base of the skull, spinal cord, spine and peripheral nervous system, including patient education, pre-operative diagnostics, the actual surgical treatment and post-operative neurointensive and follow-up care. In particular, emphasis has been put on the high quality of surgical and post-operative care, using modern methods and technology, minimizing stress and risks for patients, good communication with them, and observance of SAK accreditation standards.

Patient care was traditionally provided in four key areas - as part of the neuro-oncological, neurovascular, functional neurosurgical and spinal programmes. In 2022, a total of 2,421 surgeries were performed, 2,248 patients were admitted and 12,958 patients were treated in the outpatient unit.

The Department of Neurosurgery is a supra-regional, national or even international centre for a number of treated diagnoses. Morbidity of planned surgeries ranges at lower values than national data. These are mainly patients with serious diseases which can only be treated in a small number of centres in the Czech Republic. In 2022, surgical treatment was performed in a multifunctional complex of operating rooms equipped with state-of-the-art technology, including intra-operative magnetic resonance imaging and surgical navigation systems, surgical microscopes, and intra-operative electrophysiological monitoring. Integration of operating room technologies enables the Department to provide patients undergoing operations of the brain, spinal cord or spine with a higher standard of precisely targeted, highly efficient and safe treatment.

Neuro-Oncological Programme

Within the Neuro-Oncological Programme, operations on a wide range of brain tumours, including both intra-axial and extra-axial brain tumours, as well as tumours of the base of the skull are performed. In the surgical treatment: emphasis is put on mini-invasive approaches which reduce the burden on patients. Where appropriate, "keyhole" craniotomy and "non-retraction" neurosurgery, minimizing trauma to the brain, are preferred. The Department of Neurosurgery of Na Homolce Hospital is one of the pioneers in the use of this technique and is a leading facility in the Czech Republic. The surgical standard employs microsurgery techniques using neuronavigation and intra-operative imaging aided by intra-operative MRI and perioperative duplex ultrasonography. The safety and accuracy of surgical operations are increased by using functional neuronavigation, intra-operative fluorescent visualization of tumours or intra-operative electrophysiology monitoring. In the field of electrophysiological monitoring, we promote the use of subcortical stimulation integrated in the suction device that is permanently placed in the surgical field, leading to increased safety of the procedure. Resections of speech centres are routinely performed by means of so-called "awake craniotomy" which means that part of the procedure is performed on a patient who is fully conscious. We continued in the development of endoscopy surgical techniques, especially in surgeries of hypophysis adenomas, and rarely in surgeries of intradural tumours. In addition to its own surgical programme, the Department of Neurosurgery also promoted other treatment methods for patients with brain tumours in 2022, for instance in the form of regular interdisciplinary neuro-oncology workshops attended by a multidisciplinary team of specialists from Na Homolce Hospital and oncologists from Motol University Hospital and University Hospital Na Bulovce (fractionated radiotherapy, chemotherapy, radiosurgical treatment especially with the use of Leksell Gamma Knife or proton treatment).

Neurovascular Programme

With regard to the Neurovascular Programme, the Department of Neurosurgery is part of the Comprehensive Cerebrovascular Centre, whose status Na Homolce Hospital acquired in April 2010 and since then it has been regularly renewed.

The main task is to provide comprehensive care to patients with subarachnoid haemorrhage which includes both treatment of the most frequent cause of bleeding, i.e. cerebral aneurysm rupture, as well as neurocritical and other types of care. A wide range of microsurgical and endovascular treatment techniques are available. In 2022, microsurgical treatment included a broad range of currently used methods - standard clipping, clip reconstruction, temporary clipping and remodelling, trapping and indirect methods using vascular occlusion and revascularisation bypass techniques. Neurosurgeons have applied a mini-invasive approach to surgery and cerebral retraction, routinely used electrophysiological imaging, state-of-the-art intra-operative video-angiography and the selectively useful method of flowmetry. In individual cases, circulation was stopped by means of adenosine during cerebral aneurysm surgeries. In the field of endovascular treatment, interventional radiologists have at their disposal all currently available endovascular methods for aneurysm treatment. Microsurgery and endovascular treatments are available around the clock.

Even in 2022, we operated a large number of unruptured aneurysms, arteriovenous malformations and cavernomas, as well as numerous operations to stop spontaneous intracerebral haemorrhage. In cooperation with the Department of Neurology, procedures were performed in accordance with prepared indication criteria for decompression (pressure relief) craniotomy for some types of ischemic cerebral strokes, and bypass procedures between extra- and intracranial blood flow.

The safety of surgical procedures to treat vascular lesions can be increased by using microscope fluorescence mode which shows the patency of critical vessels and obstruction of pathological vessels after the application of a special fluorescent agent. Procedure safety is also increased by Dopplerometry or a flowmeter, measuring qualitatively or quantitatively blood flow in individual arteries. Monitoring of blood flow allows for a prompt response to hemodynamic changes and prevents a critical lack of blood supply to individual parts of the cerebral tissue. In 2022, we acquired two new state-of-the-art microscopes (Kinevo, Mitaka) enabling further refinement of fine microsurgical techniques.

Functional Neurosurgery Programme

The Functional Neurosurgery Programme mainly includes epilepsy surgery and neurosurgery aimed at reducing pain. The Centre for Epilepsy Treatment at Na Homolce Hospital is, together with a similar centre at Motol University Hospital, part of a large centre for the Czech Republic and has been granted European accreditation for the treatment of patients with epilepsy. The Centre includes several departments of Na Homolce Hospital (Department of Neurosurgery and Neurology, Leksell Gamma Knife Unit, Department of Radiodiagnosics and PET Centre) and around 30-40 patients undergo surgery for epilepsy treatment per year.

Resection operations were carried out both by standard microsurgery technique and by stimulation treatment (application of vagal stimulators). During the procedure, patients are examined by intra-operative MRI which provides instant feedback on the extent of the resection, thus increasing the safety and efficiency of surgical procedures.

The main procedures aimed at alleviating pain include a so-called microvascular decompression and partial sensory rhizotomy for intractable pain of the trigeminal nerve. The treatment of pain by neurostimulation and neuromodulation has been further developed in collaboration with the Department of Anaesthesiology and Reanimation.

Spinal Surgery Programme

The Department of Neurosurgery at Na Homolce Hospital has been for years one of the leading centres in the Czech Republic for its Spinal Surgery Programme. These operations are performed on the entire spine using all access routes to treat degenerative diseases, as well as trauma and oncological conditions. Preference is given to a microsurgical approach and safe minimally invasive techniques using electrophysiology.

siological monitoring where indicated. Spine surgery uses a complete range of spinal implants, including arthroplasty systems and percutaneously implanted stabilizers at its disposal. A minimally invasive character is also preferred for major fixation surgeries which can be performed by means of novel, safe techniques. Further, minimally invasive percutaneous vertebroplasty or kyphoplasty are used, which are most commonly performed to treat osteoporotic fractures of the vertebral column, in cooperation with intervention radiology. Since 2019, we have expanded our surgery portfolio to encompass an endoscopic approach, which allows us to completely minimize the access path and thus reduce the morbidity of intervention.

The range of spinal tumour operations included in 2022 all types of lesions, including intradural, extradural, intramedullary and extramedullary tumours

In 2022 our Department purchased a 3D exoscope, which in some cases replaces the standard microscope.

Operational data

Total number of beds	65
Number of standard beds	45
Number of intensive care beds	8
Number of intermediate beds	12
Number of physicians	18
Number of general nursing staff	88
Number of outpatient examinations	2,958
Number of admissions	2,248

Breakdown of interventions

Cerebral tumours	242
Vascular diseases	194
Functional procedures	62
Spinal diseases, including tumours	1,420
Craniocerebral injuries	119
Other	384
Total	2,107

Educational, research and other specialised activities

- The Department of Neurosurgery of Na Homolce Hospital is a training centre for physicians preparing for postgraduate examinations in neurosurgery, both in cranial neurosurgery and in spine surgery.
- In 2022, neurosurgeons of Na Homolce Hospital were involved in undergraduate training of medical students and postgraduate training of neurologists and surgeons for postgraduate certificate and were organising internships in neurosurgery for Czech and foreign physicians.
- In 2022, 5 internal grant projects were carried out in the Department of Neurosurgery. Furthermore, in cooperation with the Czechoslovak Academy of Sciences, research into glial cancer diseases is being carried out within the framework of the Grant Agency of the Czech Republic. The physicians actively participate in webinars of world and national congresses 4 papers were published in prestigious impact journals.

Department of Stereotactic and Radiation Neurosurgery

Head of Department, Assoc. Prof. Roman Liščák, MD, Ph.D.

Activities of the Department

Radiosurgical treatment using the Leksell Gamma Knife, stereotactic and functional neurosurgery. In addition to consulting and follow-up care provided to our neurosurgical patients, our outpatient unit provides also specialised ophthalmic and neurosurgical consulting care.

Organisational units of the Department

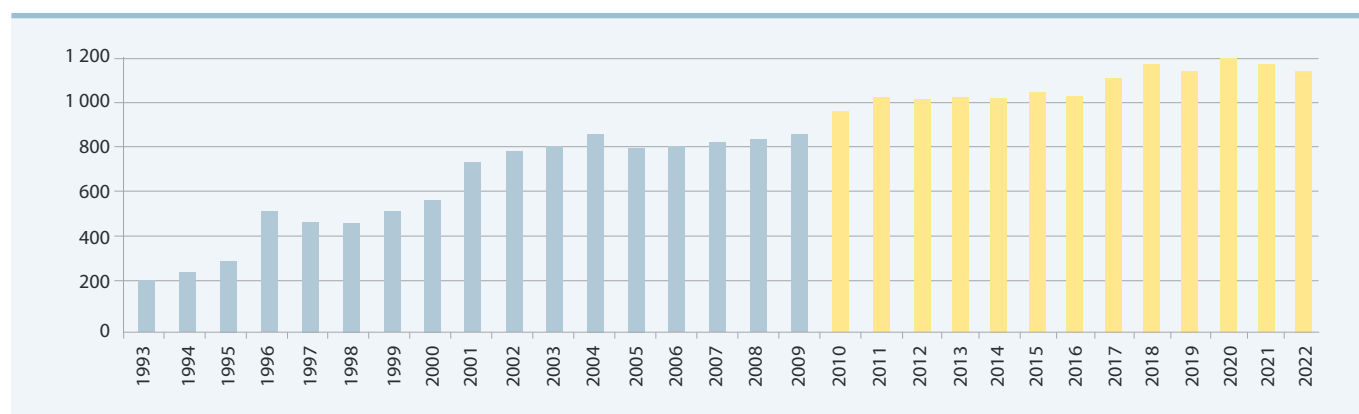
Outpatient Unit: Neurosurgical Outpatient Unit, Neurophysiological Outpatient Unit, Neurological Outpatient Unit, Ophthalmological Outpatient Unit.

Inpatient Unit: 8 beds day care centre (Monday-Friday), 1 operating room for stereotactic and functional neurosurgery, Leksell Gamma Knife Treatment Unit.

Operational data

Number of physicians	6 + 2 external ophthalmologists, 2 neurologists
Number of nurses	(FTE) 11 + 2 radiology assistant
Number of other staff	7 (3 assistants, 4 orderlies)
Number of beds	8 - day care centre (Monday-Friday)
Number of operations performed using Leksell Gamma Knife	1 151
- - of which	102 foreigners (8,9%) - Poland 5, Slovakia 95, Belarus 1, Switzerland 1
Number of other operating room surgeries	174
- - of which deep brain stimulation	52
Number of admissions	1 092
Number of outpatient examinations	1 747 patients

Number of Gamma Knife operations in each year (yellow - following installation of the Perfexion model)



Changes / new events in the previous year

- In 2022, a total of 1,151 patients were treated by the Gamma Knife. By upgrading the Gamma Knife itself and the planning station software in recent years, we have been able to maintain a high number of treated patients even though the treatment time has more than doubled compared to the baseline due to the age of the cobalt irradiators. The number of foreigners started to increase again after the end of the Covid restrictions and we treated 102 foreign patients, although the vast majority of them were from Slovakia.
- Consultation activities for patients with extrapyramidal movement disorders continued, provided by colleagues from the Department of Neurology at the First Faculty of Medicine Charles University in Prague, and the Centre for the Treatment of Movement Disorders was established by a joint memorandum with our hospital.
- The number of patients with eye cancer where an ophthalmologist participates in the treatment procedure has increased to 43.
- In 2022, we could resume the organisation of international radiosurgery courses together with the Department of Medical Physics after the Covid epidemic subsided. A total of 5 courses were organised, attended by 25 specialists (neurosurgeons, radiation oncologists and medical physicists, or other specialties) from 8 different countries.
- In January 2022, a certified neurosurgeon Jaromír May, MD, PhD., joined our Department, who together with Dušan Urgošik, MD, Ph.D. will focus on deep brain stimulation and deepen his specialisation in the field of algesciology and neurosurgical pain treatment.
- In October 2022, we celebrated 30 years of operation of the Leksell Gamma Knife, during which time 24,500 radiosurgical operations have been performed.

Perspectives for the next year

The replacement of the existing Co60 radiation sources is a major project for 2023 and is expected to take place in August this year. This will reduce the treatment time by more than half. At the same time, the operation of the Gamma Knife will be secured by a new service contract for the next 4 years. There will be a gradual transition to the new generation of stereotactic frames. The treatment of patients with movement extrapyramidal disorders will be provided by a contractually established Centre for the Treatment of Extrapyramidal Disorders.

Educational and other specialised activities

- In 2022, 7 trainees completed their pre-certification internship in neurosurgery at our Department.
- During 2022, the Gamma Knife was visited by 180 registered visitors in the controlled area.
- Within the framework of institutional support we are working on 4 grant projects
- Publications: 21 articles in impact journals.

CARDIOVASCULAR PROGRAM

Department of Cardiology

Head of Department, Prof. Petr Neuzil, MD, Ph.D., FESC

The clinical activities of the Department cover a wide range of preventive, diagnostic and therapeutic care provided to patients with diseases of the heart and blood vessels or who have an increased risk of these diseases. As in previous years, the Department continued to cover all individual specialised areas in 2022.

The year 2022 was a good year for the Department of Cardiology. In connection with the gradual retreat of the pandemic of Covid-19, the regulatory anti-infective measures were partially relaxed, thus simplifying the operation of the Department. The average length of hospital stay started to decrease again, with an average of 2,69 days in 2022.

Our Department is very active in organising and participating in many professional national and international cardiology conferences and symposia. Every year we organise the "Peter Niederle Cardiology Day", which is an independent professional one-day conference organised with the VZP headquarters, the State Institute for Drug Control and the Association of Outpatient Cardiologists.

The joint project of the experimental laboratory at the Institute of Physiology of the First Faculty of Medicine Charles University continues to develop and expand in an excellent way. Experiments with different types of cardiac support, new ablation technologies and treatment devices have been performed.

Multifunctional Catheterisation Unit

a) Halls for electrophysiological interventions

In 2022, we also implemented the planned reconstruction and modernization of one of the three catheterisation rooms, the de-installation of the original magnetic robotic navigation and changes to the layout of the room itself, including the control room. The new room is currently equipped with the latest Siemens angiography system, the purchase of which was supported by the EU development programme REACT, and other medical equipment.

We have continued to develop our two flagship programmes - catheter ablation of cardiac arrhythmias and cardiac implantable electronic devices (CIEDs).

In 2022, a total of 3,405 diagnostic and therapeutic medical procedures were performed in our three rooms. Catheter ablations account for the largest share - we performed 1,603 of them, which is almost 10% more than in 2021. Currently, so-called complex interventions (ablations of atrial fibrillation, atrial and ventricular tachycardias) account for almost 90% of all ablations. In most cases of complex ablations, it is an ablation for atrial fibrillation. In 2022, a total of 1,189 procedures were performed for this diagnosis (of which 50% ablations for the paroxysmal form and 50% for persistent or long-term persistent forms of atrial fibrillation). In the treatment of atrial fibrillation, we already use the latest pulsed electric field method as standard (the only certified system in the EU is the Farapulse system - Boston Scientific Inc. USA), which has been actively developed at our department in recent years and was only approved in Europe in 2021. Compared to other methods with thermal energy used so far, this treatment is significantly more effective and less burdensome and risky for the patient, the procedures are shorter (30-60 minutes) and simpler. Pulsed-field ablation was applied in 843 patients in 2022, i.e. 70% of all our patients treated with catheterisation for atrial fibrillation were treated with this method. We performed 126 catheter ablations for ventricular tachycardias (year-on-year increase of more than 20%), of which 60% were ablation of idiopathic ventricular tachycardia, 40% were ablation in structural heart disease (IHD, DCM, ARVC). The number of so-called cardioneuroablation procedures continues to grow, the indication for which is cardioinhibitory syncope, especially in young patients, which until recently were treated primarily by permanent cardiac pacing.

In terms of the number of implanted pacemakers and defibrillators (ICD - implantable cardioverter defibrillator), the Department has long been among the largest centres in the Czech Republic and Europe. The Department specialises in cardiac defibrillator implantations (470 procedures) and cardiac resynchronisation therapy (212 procedures). A clear trend in cardiac pacing and device treatment of heart failure is the so-called physiological stimulation from the septal area (left bundle of Tawara (LBBAP) or bundle of His). We continue to implant subcutaneous ICDs, of which a total of 50 were implanted in 2022. Implants are also associated with procedures where the pacing or defibrillation electrodes need to be extracted, especially for reasons of infection. A total of 59 such procedures were performed in 2022 (0% mortality).

Since 2012, the Department has been the world-wide recognized development centre for implantation of leadless pacemakers.

In 2022, leadless pacemakers designed for dual-cavity, i.e. atrial pacing, were implanted at our Department (as part of a clinical trial as the first in the world)! In 2022, the total number of implanted leadless pacemakers was 76.

Our electrophysiological laboratory closely cooperates with a syncope and Neurology Outpatient Unit in diagnosing cardiac arrhythmias, non-clarified disorders of consciousness or cryptogenic cerebral strokes. In 2022, a total of 116 patients were implanted with a subcutaneous heart rhythm monitor for these indications.

We have long been dealing with non-pharmacological prevention of ischemic stroke in patients with atrial fibrillation - and one of the options is catheterization occlusion of the left atrial appendage. In 2022, a total of 50 of these procedures were performed.

As part of our clinical research, in 2022 we were involved in the development and verification of the efficiency and effectiveness of new mapping and ablation technologies, especially focusing on the application of pulsed electric fields (even in combination with radiofrequency energy and cryothermia!).

b) Intervention cardiology rooms

A major event in 2022 was the commencement and near completion of the reconstruction of both catheterization rooms and the installation of new X-ray angiography machines. For the last 3 months of 2022, the operation was carried out in one room in the interventional electrophysiology complex, yet there was no reduction in the care provided. The installed devices are the most up-to-date available at the moment, their purchase was supported by the European Union's REACT development programme.

A total of 3,252 catheterization procedures were performed (242 more than in 2021), including 2,686 diagnostic coronary angiography procedures. 641 percutaneous coronary interventions (PCIs) were performed, of which 197 were primary PCIs (i.e. PCIs for ST-elevation myocardial infarction - the highest number from Prague cardiac centres). The programme of structural cardiac interventions such as foramen ovale patens closure, atrial septal defect, pulmonary stenosis, paravalvular leak closure continued. Some unique combined catheterization procedures for structural heart defects have also been performed. The total number of catheter closures of the atrial septal defect was 71, this number ranks us first in the Czech Republic.

The transcatheter aortic valve implantation (TAVI) programme also continued, in 2022, a total number of 103 procedures were performed (it was 95 procedures in 2021). In addition, 20 mitral insufficiency catheterization interventions were performed.

This programme is highly complex with regard to both the scope of diagnostic pre-operative examinations, interventions and post-operative care and the demanding multidisciplinary cooperation. TAVI is successfully performed in analgosedation in a large proportion of patients, allowing for earlier physiotherapy and mobilisation and subsequent discharge of these patients.

After the first transcatheter pulmonary valve implantation was newly performed in 2015 in a patient with a complex congenital heart defect, we performed this procedure in another 4 patients in 2021 and in a total of 9 patients in 2022. This has led to further development of the programme for these interventions which will be an integral part of care for patients with complex congenital heart defects who have been systematically treated on a long-term basis in our Cardiac Centre.

- The development of a percutaneous coronary intervention programme with circulatory support by different types of support continues. As part of the internal grant, we continued coronary interventions using the shockwave system. It is an intracoronary lithotripsy, which is a new and very effective method in patients with markedly calcified coronary arteries. The Centre was traditionally involved in the preparation of recommended procedures of the Czech Society of Cardiology and numerous professional programmes and presentations at professional conferences and meetings in the Czech Republic.

Acute Cardiology

Also in 2022, the Department of Acute Cardiology provided acute and intensive cardiac care to patients with severe cardiovascular disease and patients requiring circulatory support or organ support/replacement. A total of 590 patients were admitted to the Coronary Unit, 646 electrical cardioversions were performed, 18 patients were treated with extracorporeal membrane oxygenation (ECMO), 9 patients had cardiac support with the Impella CP/5.0 system, and 72 right-sided catheterisations/monitorings were performed using a pulmonary artery catheter. In 2022, admissions for severe Covid-19 patients declined and, probably related to this, inpatient mortality declined to 6,82%.

Scientific research activities with grant support (AZV, NHH) were also successfully carried out. At AHA 2022 (Chicago, IL), we presented and simultaneously published in Circulation the results of the randomized ECMO-CS trial (supported by AZV); several other papers were printed in IF journals.

Non-invasive cardiology

In 2022, the number of procedures and examinations in non-invasive cardiology, cardiology and angiology outpatient units increased. Even for echocardiography (TTE), we record the highest number of examinations in history. A similar result was observed in outpatient examinations in the cardiac pacing outpatient unit, heart failure outpatient unit and angiology outpatient unit.

Multifunctional Catheterisation Unit

Ablations - total	1,603
Ablations according to arrhythmias	
Atrial fibrillation	1,189
paroxysmal	606
persisting	515
long-term persisting	68
re-ablations	330
Atrial flutter	32
Atrial tachycardias	55
Non-selective RFA of AV node	19
Atrioventricular nodal reentry of tachycardia (AVNRT)	122
Wolff-Parkinson-White syndrome (WPW syndrome)	32
Ventricular tachycardia	126
structural	46
non-structural	80
ICD (implantable cardioverter defibrillators) - total	470
primary implantation	277
exchanges	193
CRTD (BIV/LBBAP)	212

VI ICD	64
DDD ICD	159
Subcutaneous ICD	35
Total pacemakers (VI, DDD, BiVKS, leadless)	810
Pacemakers: primary implantation	590
Pacemakers: replacements	220
Extraction procedures - total	59
Subcutaneous recorder implantation	116
Catheter management of left atrial appendage occlusion	50
Spinal cord stimulation	4

Intervention cardiology

Diagnostic catheterisation	2,878
Percutaneous coronary intervention (PCI)	687
Primary PCI (in acute myocardial infarction)	197
Catheter management of atrial septal defect (ASD) / patent (foramen ovale - PFO)	71
Transcatheter aortic valve implantation (TAVI)	103
Transcatheter mitral valve intervention (MitraClip)	20

Non-invasive cardiology

General and angiology outpatient unit	18,313
Stimulation outpatient unit	7,955
Transthoracic echocardiography	10,110
Oesophageal echocardiography	1,067
Outpatient monitoring: Holter ECG + Loop monitor + Omron ECG + BP monitor + ECG card	1,848
ECG stress test (ergometry)	503
Tilt test	101

Coronary Unit

Acute coronary syndrome	402
Extracorporeal membrane oxygenation (ECMO)	18

Operational data

Total number of beds	52
Number of standard beds	30
Number of intermediate beds	4
Number of intensive care beds	18
Number of physicians	42
Number of general nursing staff	125
Number of outpatient examinations	49,468
Number of admissions	4,926
Average treatment period (in days)	2,69

Department of Vascular Surgery

Head of Department, Prof. Petr Štádler, MD, Ph.D.

Activities of the Department

- Comprehensive surgical treatment of diseases of the vascular system, primarily the narrowing or occlusion of blood vessels caused by atherosclerotic changes or dilation (aneurysms) and also injuries of the arteriovenous system except for the coronary arteries, the ascending aorta and aortic arch. Focus on classical surgery in the region of the thoracoabdominal aorta and on new trends and techniques in vascular surgery (minimally invasive approaches, endovascular treatment, robot-assisted surgery, and laparoscopic surgery); treatment of infection of vascular prostheses using vascular grafts, xenografts or special vascular prostheses with high resistance to infection
- Since the beginning of 2009, the Department has also been performing minimally invasive operations on varicose veins using a radiofrequency method that reduces post-operative pain and facilitates early return to daily routine activities
- Referential clinic for surgical treatment of the thoracoabdominal aorta, robot-assisted and laparoscopic vascular surgeries, international training centre in the area of robot-assisted vascular surgery
- Outpatient care and follow-up of patients undergoing vascular surgery and patients indicated for conservative treatment
- Teaching workplace of the First and Second Faculty of Medicine Charles University in Prague

Organisational units of the Department

Outpatient units	6 examination rooms
Reception	1
Standard bed station (B)	17 beds
Standard bed septic station (A)	17 beds
Intermediate care unit	13 beds
Intensive care unit (6th floor)	5 beds
Intensive care unit (2nd floor)	7 beds

There are 2 operating rooms available daily, and in addition, a hybrid multidisciplinary operating room is available 1,5 times a week and a robot-assisted operating room is available once a week. An X-ray operating room is also used in cooperation with radiologists for some acute procedures. The Department provides continuous operation for urgent vascular surgery procedures and above-regional service for difficult specialised aorta surgeries.

Operational data

Number of physicians	18
Number of nursing staff	107
Number of auxiliary medical staff	24
Number of paramedic staff - attendants	1
Number of technical and administrative staff	6
Number of standard beds	34
Number of intermediate beds	13
Number of intensive care beds	12

Number of admissions	2,683
Number of admitted patients	2,093
Bed occupancy rate (in %)	70%
Average treatment period (in days)	6,0
Number of treatment days	15,945
Number of outpatient examinations / number of examined patients	18,013 / 7,897

Number of procedures

Total number of surgical procedures	1,632
Thoracic aneurysm - classical	32
Thoracic aneurysm - stent graft	28
Abdominal aneurysm - classical	60
Abdominal aneurysm - stent graft	53
Aneurysm of popliteal artery	16
Aortofemoral reconstructions	36
Pelvic reconstructions	12
Extra-anatomic reconstructions	15
Management of vascular prosthesis infections	13
Aortic arch branch surgeries - total	147
of which: carotids - endarterectomy	139
glomus tumour	0
carotid aneurysm	0
bypass or implantation of carotid/subclavian	4
bypass from ascending aorta (sternotomy)	0
Femoropopliteal proximal reconstructions	34
Reconstructions of arteries in the groin area	88
Crural reconstructions - total	118
Varicose vein surgeries	381
of which: classical	325
radiofrequency	56
AV shunts	12
TOS	0
Transplantation of vascular allografts	1
Xenografts	9
Hybrid surgeries	46
Robot-assisted vascular surgeries	34
Laparoscopic surgeries:	3
Thoracoscopic thoracic sympathectomy	3
Lumbar sympathectomy by laparoscopic method	0
Endoscopic sampling of vena saphena magna	0
Vascular Interventions in collaboration with the Department of Radiodiagnostics	861
Rec. inferior vena cava, malignancy	0

The course of 2022

- Since January 2008, the Department of Vascular Surgery has been managed by the Head of Department, Prof. Petr Štádler, Ph.D., who is also a member of the external educational staff of the First Faculty of Medicine Charles University, with which the Department actively cooperates. Since 2015, the Department has participated in the training of students from the Second Faculty of Medicine Charles University, managed by Petr Šedivý, MD, Ph.D.
- In 2022, there is some normalization after the adverse pandemic situation due to Covid-19 and there is a partial increase of 11% in the number of operations compared to 2021, but still almost 17% less compared to the pre-pandemic year 2019.
- Comprehensive diagnostics and surgical treatment of diseases of the vascular system are routinely performed, primarily the narrowing or occlusion of blood vessels caused by atherosclerotic changes, and also of injuries to the arteriovenous system except for the coronary arteries, the ascending aorta and aortic arch that are traditionally the responsibility of cardiac surgery. The range of surgical interventions included operations on branches of the aortic arch, thoracic and abdominal aorta, including aneurysms (the Department of Vascular Surgery has the highest number of aortic operations in the Czech Republic), reconstruction of arteries supplying abdominal and retroperitoneal organs, operations on arteries supplying the limbs, as well as varicose veins, and a relatively unique transplantation of vascular grafts to deal with the infection of vascular prostheses. One of the largest groups of patients includes those with ischemic disease of the lower limbs and with narrowing of the arteries supplying blood to the brain. Minimally invasive approaches are used in thoracoscopic thoracic sympathectomy or laparoscopic lumbar sympathectomy procedures, endoscopic operations of varicose veins, endoscopic sampling of veins for vascular reconstructions, operations of the abdominal aorta through reduced surgical approaches, the so-called mini-laparotomies, and in particular robot-assisted and laparoscopic vascular surgery (these procedures have been newly covered by public health insurance since 2018).
- The Department of Vascular Surgery continues to retain its unique position of a world leader in robot-assisted vascular surgery and a national leader in thoracoabdominal aortic surgery. The cooperation with the NÚSCH in Bratislava and now also with the hospital in Banská Bystrica continued in the field of surgical treatment of thoracoabdominal aorta. This year, for the first time in a long time, international training of two Japanese surgeons in robot-assisted vascular surgery took place.
- Another important area vascular surgery deals with is endovascular programme. It especially focuses on implanting stent grafts for treating abdominal or thoracic aortic aneurysms and hybrid procedures. Implantation of stent grafts, perioperative angiography and intra-operative angioplasty are routinely carried out in collaboration with the Department of Radiodiagnostics at Na Homolce Hospital. The created team of vascular surgeons and radiologists (P. Šedivý, MD, Ph.D., O. Stehno, MD, Ph.D., H. Přindišová, MD, A. Šnajdrová, MD), who are actively involved in endovascular procedures, continues successfully. One vascular physician has the required specialty certification and the other physician is actively preparing for it. We plan to train another vascular surgeon and a radiologist.
- The Department also performs challenging procedures to address vascular prostheses infections using vascular allografts, femoral veins or xenografts (vascular prostheses or patches made of bovine pericardium), which unfortunately have reached the end of their "CE" certification and will have to be replaced with alternative material. Together with the Institute of Clinical and Experimental Medicine, the General Teaching Hospital in Prague and the Tissue Bank of the General Teaching Hospital in Hradec Králové, the NHH Department of Vascular Surgery participates in the programme of vascular graft cryopreservation. A number of centres in the Czech Republic take advantage of the Department of Vascular Surgery as a consultancy centre for the treatment of a range of serious vascular problems.
- Since 2016 our Department has had a hybrid multidisciplinary operating room available at least 1.5 times a week, where robot-assisted surgeries, implantations of stent grafts and hybrid procedures are carried out.
- Gradually, national and international congresses have been released, where we regularly present our results and experience. In 2022, the annual congress of the Czech Society for Cardiovascular Surgery was held in Brno, where we presented our experience in various areas of vascular surgery in a series of lectures. Abroad, we gave presentations in the USA, Singapore, Slovakia, Croatia, Italy and Turkey, where most of the presentations were in the form of lectures upon invitation.

- The Department's publishing activity consisted of publications in the national professional journals.
- In the staffing area, two physicians left for the private sector and one physician has joined after completing basic specialisation, and the second physician will join on 01/01/2023.

Outlook for 2023

- Even in 2023, the Department of Vascular Surgery will carry out comprehensive diagnostics and surgical treatment of diseases of the arteries and veins in the entire range, focusing on new, modern trends. We plan to cooperate with the Department of Cardiac Surgery in addressing vascular conditions falling into both these specialisations. Thoracoabdominal aortic surgeries will be further developed. Minimally invasive approaches in operations with a focus on robot-assisted and endovascular surgery will be further developed. Since January 2018, robot-assisted vascular surgeries have been on the official list of procedures and thus it is not necessary to ask for approval for every surgery of this type at the relevant Health Insurance Company.
- We will continue to perform minimally invasive surgery using a 3D laparoscopic tower, in agreement with the Head of the Radiology Department, Prof. Vymazal, the successful cooperation of both departments in the endovascular programme will continue. In addition, the Department of Vascular Surgery will continue to deal with infections of vascular prostheses, the incidence of which grows nationwide. These procedures are technically and economically very demanding and it is necessary to resume negotiations with insurance companies on the reimbursement of these demanding procedures. The focus of the Department on the latest trends in the field of minimally invasive approaches in arteriovenous surgery is also of great importance.
- In 2023, we are planning international training activities in robotic vascular surgery and physician training in laparoscopic vascular surgery in the Aeskulap Academy project. Colleagues from Croatia are interested in closer cooperation in the field of thoracoabdominal aortic surgery.
- We are also planning to resume presentations at congresses at home and abroad.

Educational and other specialised activities

- The Department is also involved in undergraduate training of students of the Faculty of Medicine and postgraduate studies of physicians to obtain a postgraduate certificate in vascular surgery, as well as of physicians whose specialisation requires a study visit to in the Department of Vascular Surgery.
- Prof. Štádler is an external teacher and a member of the Board for Postgraduate Certificate in Vascular Surgery at the First Faculty of Medicine Charles University in Prague. He also works as a lecturer in robot-assisted vascular surgery at the European Institute of Telesurgery in Strasbourg and as a lecturer in Intuitive Surgical in the U.S.A. Prof. Štádler also holds the post of the president of subcommittee for robot-assisted vascular surgery MIRA in Los Angeles, U.S.A., is deputy president of a committee of the Czech Society for Cardiovascular Surgery and a member of the accreditation committee of the Czech and Slovak Ministry of Health for the specialty of vascular surgery. He is also the founding member of the International Endovascular & Laparoscopic Society, a member of ISMICS (International Society for Minimally Invasive Cardiothoracic Surgery) and a reviewer of the journal *Surgical Laparoscopy Endoscopy & Percutaneous Techniques*.
- Prof. Štádler also serves as a member of the examination board for specialisation examinations in vascular surgery at the Ministry of Health of the Slovak Republic.
- Dr. Šedivý, participates in the teaching of medical students of the Second Faculty of Medicine Charles University in Prague.
- Dr. Stehno continues his doctoral studies at the second Faculty of Medicine Charles University in Prague.
- The Department is also involved in undergraduate training of students of the second year of the Third Faculty of Medicine Charles University in Prague, in the "general nurse" specialisation.
- Courses in robot-assisted surgery, vascular surgery and surgery of varicose veins for both domestic and foreign physicians will be organised according to the interest and requirements of the trainees.

Department of Cardiac Surgery

Head of Department, Ivo Skalský, MD, MBA

Activities of the Department

- Comprehensive surgical treatment of heart and intrathoracic major blood vessels
- Follow-up of selected groups of patients in outpatient unit before and after cardiac surgery

Organisational units of the Department

Outpatient unit	3 examination rooms
Standard bed station	14 beds
Intermediate care unit	12 beds
Unit of post-operative and reanimation care	9 beds

2 classic cardiac surgery operating rooms are available for 5 working days a week. Moreover, surgeries are performed in the hybrid and robot-assisted operating rooms, one day a week at each. One operating room is open 24/7 for urgent procedures.

Operational data

Number of physicians	19
Number of perfusionists	7
Number of nursing staff	95
Number of auxiliary medical staff	22
Number of technical and administrative staff	2
Number of standard beds	14
Number of intermediate beds	10
Number of reanimation beds	10
Total number of beds	34
Average treatment period (in days)	10,79
Total number of treatment days	9,269

Number of procedures

Total number of surgical procedures	762
Isolated aortocoronary reconstructions	196
Combined procedures (valve, bypass, aorta)	322
Heart valve replacements / plastic surgeries	242
Isolated procedures on ascending aorta and aortic arch	35
Other (myxoma, pericardiectomy, PM extraction)	39
Implantation of epicardial stimulation electrodes	2
MAZE surgery (combination with ACB and valve procedures)	103
Total number of operations on the thoracic aorta (combined with other procedures)	128
Robot-assisted procedures	95
Number of outpatient examinations (visits)	13,925

Events of the past year

- The most significant change of the past year was the complete transition to the new hospital information system Hood
- The minimally invasive programme was expanded to include aortic valve procedures.
- We continue to maintain the trend in heart valve replacement surgeries, according to the available data we are among the top in the Czech Republic.
- TAVI programme - close collaboration with intervention cardiology in valve replacement implantation.
- Scientific activity - we are working on several internal grants and we have 2 students in the Ph.D. programme.
- Our 30-day mortality rate reached 1,57%, which is far below the average in the Czech Republic. This is the result of the excellent work of the entire team of the Department of Cardiac Surgery, especially in view of the complexity of our procedures.
- We continue to increase the number of robot-assisted procedures. A total of 95 procedures were performed, which is again more than the previous year. Reconstructions on the mitral valve and myocardial revascularization account for the largest share. Our Department is a European training centre for robotic cardiac surgery.

Plans for development in the next year

- Ensuring and stabilizing the number of general nursing staff.
- We will further develop four systematic programmes which form our foundation stones. They are: the treatment programme for aortic diseases (cooperation with Vascular Surgery and Radiology), the programme for surgical treatment of valve disorders, the programme for congenital heart defect treatment in adulthood (cooperation with the Children's Cardiac Centre of the Teaching Hospital in Motol) and robot-assisted surgery.
- In the field of minimally invasive procedures, we would like to remain a leading centre in the Czech Republic.

Department of Cardiac Anaesthesiology

Head of Department, Pavel Jehlička, MD, MBA

Activities of the Department

The Department covers two basic areas, namely anaesthesia care for cardiac surgery and cardiology and intensive care for the cardiac surgery post-operative unit.

Anaesthesia care

We provide anaesthesia care for patients undergoing either cardiac surgery, with or without extracorporeal circulation, or cardiac robot-assisted surgery with a minimally invasive approach. For cardiology patients, the Department ensures anaesthesia for complicated heart mapping in arrhythmology, anaesthesia for the extraction of pacemaking systems, anaesthesia for electrical cardioversions.

Intensive care

In the field of intensive care, the Department is responsible for running the cardiac surgery post-operative unit and also closely cooperates with the cardiac surgery intermediate care unit. Within our Cardiac Centre, it supports other units of intensive cardiology care by providing consultations. Together with the Department of Cardiology and the Department of Biomedical Engineering, we participate in the programme of extracorporeal support of circulation for patients in cardiogenic shock.

In 2004, the physicians of the Department of Cardiac Anaesthesiology were the first to introduce extracorporeal pulmonary support (the Novalung artificial lung) in the Czech Republic in a patient with a severe pulmonary failure that could not be managed by standard methods. As one of few facilities in the Czech Republic, the Department ensures anaesthesia in robot-assisted cardiac surgeries and anaesthesia for operations on adult patients with congenital heart defects.

Operational data

Number of physicians	10
Number of nursing staff	9

Administered anaesthesia for

Cardiac surgeries	1,169
Cardiology procedures	935
Procedures longer than 2 h	870
Procedures longer than 6 h	312

PROGRAM OF GENERAL MEDICAL CARE

Department of Internal Medicine

Head of Department, Pavel Hrouda, MD

Activities of the Department

The Department of Internal Medicine covers most fields of internal medicine with its activities and specialisation. It focuses mainly on gastroenterology, metabolic disorders and pulmonary issues, including bronchology. This activity is then fully linked to local surgical disciplines or oncology.

The Department of Internal Medicine also provides the background for the activities of the hospital's key disciplines (cardiovascular programme and neuroprogrammeme). Diagnostic admissions represent the largest part of admissions from all branches of internal medicine. In a number of cases, the Department also treats patients from other regions. The Department provides specific care for patients with short bowel syndrome and ensures their long-term parental nutrition, which includes treatment of any related complications.

Intensive Care Unit

The total capacity of the Unit is eight beds. On these beds, we provide comprehensive intensive care for often polymorbid patients with primarily internal issues. Due to the lack of beds at the Department of Oncology, we often provide the beds for the patients with complications of the oncology therapy and, last but not least, we also take over patients from surgical fields of Na Homolce Hospital – especially when the patient's surgical issues are solved while the need for the complex nutritional and internal therapy continues.

Two beds of the ICU of the Department of Internal Medicine are equipped for providing artificial lung ventilation, the cleansing methods are represented by the intermittent haemodialysis which is provided in cooperation with the haemodialysis centre B-Braun, s.r.o. Our ICU also provides the back-up for monitoring and observation of patients after gastroenterological surgical procedures and after surgical procedures performed at the Centre for Pulmonary Endoscopy.

Inpatient Unit

The standard inpatient unit provides comprehensive internal medical care both to patients with acute internal diseases referred by the acute internal medicine outpatient unit, and to patients with planned diagnostic and therapeutic treatments. Patients from the internal medicine outpatient units of Na Homolce Hospital, patients with internal issues from other departments of the hospital (including treated oncology and chronic haemodialysis patients with complications), and patients indicated for observation after invasive procedures (gastroenterology, Centre for Pulmonary Endoscopy, interventional radiology) are admitted to treatment. We admit patients for complications of oncological treatment due to the lack of our own inpatient facilities in the Department of Oncology.

In general, the Department provides care to a large number of patients from other regions, which is particularly noticeable in the pressure on the acute internal medicine outpatient unit, which is regularly addressed by patients themselves from districts outside Prague. Although the bed occupancy rate percentage is one of the highest in the entire hospital, the inpatient capacity cannot meet the demand. However, the stable average length of admission is mostly the result of long-term parenteral administration of antibiotic treatment and treatment of complicated conditions and therefore difficult to be influenced. In the past year, the total number of admissions increased by 10% compared to the reference period.

Internal medicine outpatient unit

The outpatient component is staffed by specialist physicians in specialised outpatient units. There is co-operation, interdependence and thus substitutability of physicians working in the outpatient and inpatient part. In addition to the classical general internal medicine outpatient unit, we also provide care in the pulmonary and gastroenterology outpatient units. An integral part of the unit is also a diabetology, endocrinology, lipid unit as well as a unit for home parenteral and enteral nutrition.

Acute internal medicine outpatient unit

In particular, the outpatient unit provides treatment and examinations to patients with acute non-surgical issues who have no special referral for a particular specialised examination. Other activities of the outpatient unit include implementation of planned diagnostic and therapeutic interventions and observations after these interventions to cover the needs of the Department of Internal Medicine.

The acute internal medicine outpatient unit operates 24 hours a day and is still the busiest outpatient unit of the Department. The number of patients treated is increasing every year.

Department of Gastroenterology

The Department of Gastroenterology provides top-quality gastroenterological care in the entire spectrum of endoscopic methods not only for the hospital but also for the surrounding area, especially Prague, Central and Northern Bohemia. In addition to routine endoscopies of the upper and lower digestive tract, including therapeutic procedures, we also perform highly specialised examinations such as ERCP or endosonography. The use of endosonographic methods has enabled us to perform unique interventional procedures, to which patients are referred to us from all over the country.

We are a centre for biological therapy of idiopathic intestinal inflammation, we have become a centre for colorectal cancer screening and we are striving for the status of a centre for digestive endoscopy.

Centre for Pulmonary Endoscopy

Centrum plicní endoskopie a s ním související plicní specializované ambulance umožňují komplexní The Centre for Pulmonary Endoscopy and related specialised pulmonary outpatient unit offer comprehensive bronchological diagnostics including autofluorescent bronchoscopy, NBI (Narrow Band Imaging) and endobronchial ultrasonography. The combination of new diagnostic methods with existing ones, already established at the Hospital Na Homolce (such as PET/CT), provides for an exceptional opportunity for early diagnostics and staging of bronchogenic carcinoma followed by pneumo-oncological treatment.

The capacity and the use of bronchologic care has been steadily growing, inter alia due to active co-operation with the Centre for Interstitial Pulmonary Processes, other field pneumologists and other hospitals. Our physicians are also actively involved in a preventive screening programme to detect bronchogenic carcinoma.

Educational activities

The Department of Internal Medicine is accredited by the Czech Medical Chamber to train and issue functional licenses in internal medicine, gastroenterology, general medicine, abdominal ultrasonography (F008) and endoscopic ultrasonography (F004), endocrinology and diabetology, pneumology and fiseology. Postgraduate and pre-certification study visits of younger colleagues from other disciplines

of Na Homolce Hospital are annually held in the Department. For a long time, the Department has organised postgraduate courses for physicians preparing for general medicine postgraduate examinations, in cooperation with the Institute of Postgraduate Healthcare Education. To a lesser extent, pre-graduate students of the First, Second and Third Faculty of Medicine Charles University, come within compulsory internships.

Operational data

Number of physicians	27 main employment + 4 agreement to complete work + 1 contract for work
Number of nursing staff	55
Number of orderlies	11
Number of standard beds	21
Number of intensive beds	8
Number of gastroenterological examinations	
fibroscopy	2,925
colonoscopy	2,569
endosonography	1,522
ERCP	513
Number of pulmonary examinations	
BRSK	650
Number of outpatient examinations within the polyclinics	
specialised outpatient units	14,667
AIA	4,938

Total inpatient unit performance 2022 (comparison with 2021)

Number of admissions	1,267
Average treatment period for the entire Department	6,2

Department of Clinical Oncology

Head Physician, Martin Šafanda, MD, Ph.D.

Responsibilities of the department

The Department of Clinical Oncology is an accredited department of the Ministry of Health of the Czech Republic, which focuses on the treatment of solid tumours in adult patients. We are part of the Motol University Hospital complex oncology centre together with the Military University Hospital Prague and the Proton Therapy Centre in Prague. Another collaborating institution is the Transplantation Surgery Department at IKEM. Symptomatic treatment of terminal stages is conducted in cooperation with the Na Pleši Hospital. Since 2009, the Department has been involved in multicentre randomised studies of phase II and III.

Activities of the Department

The oncology programme consists of four key areas:

I. Gastroenterology programme

- Tumours of small and large intestine
- Stomach and oesophageal tumours
- Pancreatic tumours
- Liver and bile duct tumours

II. Breast cancer programme

- Breast tumours

III. Urogynaecological programme

- Prostate tumours
- Renal tumours
- Urinary bladder tumours
- Ovarian tumours

IV. Pneumo-oncology programme

- Pulmonary and bronchial tumours

Operational data

Number of physicians	3
Number of general nurse	5
Number of newly admitted patients	516
Number of outpatient examinations	16,783
Number of chemotherapy administered	7,923

Department of General Surgery

Head of Department, Ronald Pospíšil, MD

Activities of the Department

The Department provides a clinical programme of general medical care, i.e. diagnostic and therapeutic care both outpatient and inpatient, including intensive care, comprehensively in the entire field of general surgery and urology and some specialised orthopaedic examinations and procedures. The Department of General Surgery treats patients from all over the country, including foreign patients. It provides a continuous consulting service for other hospital disciplines, including 24/7 emergency visceral operations. It provides training activities in undergraduate and postgraduate programmes for physicians and nurses in the field of surgery and urology.

General surgery programme

- Surgery of the gastrointestinal tract ranging from the oesophagus to the rectum, including the pancreas and biliary tract, thoracic surgery, thyroid and parathyroid surgery, hernia surgery, varix surgery, breast surgery for benign and malignant affections
- Minimally invasive approaches almost in all fields of laparoscopic interventions (including hernia surgery, appendectomy, cholecystectomy, diaphragmatic hernia surgery, laparoscopic surgery of the small, large intestine, rectum, pancreas and spleen and minimally invasive thoracic surgery)
- Surgical oncology in collaboration with other departments of the hospital. Each patient with an oncological diagnosis is indicated for surgery by a multidisciplinary workshop in the presence of experts from all cooperating departments within the Centre for Comprehensive Oncological Care. In the field of surgical oncology, the Department of General Surgery provides surgical treatment of the gastrointestinal tract encompassing the oesophagus – rectum, pancreas, biliary tree, spleen. As part of thoracic surgery, then operations on the lungs, mediastinum, pleura, thoracic wall and breast in its entirety, including examination of the sentinel node. Follow-up oncological care within the hospital is also a matter of course
- Extensive outpatient surgical activities for both on-duty and specialised consultancy units
- Minor outpatient interventions
- Robot-assisted surgeries of the rectum and large intestine

Urology programme

- Open, endoscopic and robot-assisted urinary tract surgeries, including laser prostate surgery
- Urology surgical oncology
- Renal surgery for malignant, benign and functional pathologies
- Minimally invasive laparoscopic, cystoscopic and ureterorenoscopic surgical procedures
- Ultrasound-guided puncture of the retroperitoneum
- Comprehensive diagnostics and treatment of erectile dysfunctions
- Wide range of outpatient orthopaedic treatments
- In cooperation with the hospital's Department of Radiology, invasive radiological procedures
- Robot-assisted renal and prostate surgery with the longest experience in the Czech Republic

Orthopaedic programme

- Extensive outpatient orthopaedic treatment
- Arthroscopy (mainly of knee and shoulder joints)
- Total replacement of hip and knee joints, including reimplantations
- Modern procedures in bunion surgery and other mini-invasive surgeries

Organisational parts of the Department

Inpatient Unit

- Diagnostic, pre-operative and post-operative care in all specialisations
- Care of patients admitted to intensive and standard beds within surgery
- Office of Urology and Orthopaedics
- Intensive Care Unit - A + B stations

Outpatient Unit

- On-Duty Outpatient Surgery: It provides daily surgical care for acute patients, including wound dressing changes in patients from other departments of the hospital. It also provides acute 24-hour surgical care.
- Specialisation Surgical Clinics: Consulting centre for diseases of the oesophagus and diaphragm, including reflux disease of the oesophagus and diaphragmatic hernias, consulting centre for diseases of the pancreas and biliary trees, coloproctology consulting centre, consulting centre for surgical oncology, hernia consulting centre. The Department performs diagnostics, assessment and ordering of planned operations, post-operative monitoring, follow-up health care.
- Thoracic Surgical Consulting Clinic: In cooperation with the Respiratory Consulting Clinic and Oncology Clinic, it provides assessment and ordering of thoracic operations of the lungs, pleura and mediastinum, post-operative monitoring and follow-up continuing care in patients with respiratory and thoracic diseases.
- Mammology Consulting Clinic: Provides examinations, comprehensive care, diagnostic services, pre-operative evaluation and follow-up care to patients with breast disease, in close cooperation with the Department of Radiology, pathologists and oncologists.
- Orthopaedic Outpatient Unit: For diseases of the musculoskeletal system, it provides diagnostics, therapy and indications for surgery in orthopaedic patients in a selected range of diagnoses. Also provides consultancy services to other departments of the hospital.
- Urology Outpatient Unit: Provides care to urological patients, performs diagnostics, including ultrasound and outpatient treatment. The Department also provides pre-operative assessment, post-operative monitoring, and comprehensive diagnostics and treatment of erectile dysfunction and a number of outpatient diagnostic and therapeutic procedures (cystoscopy, urethra probing for other departments, etc.).
- Outpatient Unit for Minor Surgical Procedures: Performs minor surgical procedures under local anaesthesia at the request of general practitioners and physicians of the hospital's Department of Dermatology, and on patients from specialist units the on-duty surgery.

Operating Rooms

- One room for orthopaedic surgery and aseptic surgery - Two rooms for open and laparoscopic surgery - Robot-assisted operating room with Da Vinci equipment - available for surgery 4 times a week - One room for urological surgery

Operational data

Total number of physicians	22
Number of surgeons	15
Number of urologists	4
Number of orthopaedists	3

Total number of paramedical staff	77
Total number of beds	34
Number of standard beds	25
Number of intensive care beds	9
Average treatment time (in days)	4,1
Number of admitted patients	2,413

Number of surgeries

Surgery	1,491
Urology	373
Orthopaedics	308
Minor surgical procedures	591
Total	2,763

Number of robot-assisted surgeries

Surgery	62
Urology	190
Total	252

Number of outpatient treatments

Surgery	15,253
Orthopaedics	6,243
Urology	5,402
Total	26,898

Number of consulting examinations

Surgery	1,229
Orthopaedics	91
Urology	233
Total	1,552

Changes / new events in the previous year

- Technical equipment: The new Hood information system was fully implemented in outpatient and inpatient operations. The laparoscopic and surgical instruments have been partially replaced. New devices for urological surgery were purchased. An additional operating room for surgical operations was opened within the wing of rooms on the 4th floor.
- Surgery: a multidisciplinary approach (surgery, oncology, gastroenterology, pneumology, radiodiagnos- tics, pathology) in patients with malign alimentary tract and thoracic organs diseases. Once again, we increased the volume of operated patients with malignant diagnosis in both thoracic and ab-

dominal cavity. The number of laparoscopic interventions has increased compared to the traditional method, particularly in coloproctology, where it is already clearly dominant, and pancreatic surgery. Robot-assisted surgery for distal colon and rectal tumours has been introduced into practice. New approaches have been introduced in addressing incisional hernias and diastasis recti by minimally invasive technique. Wound healing with V. A. C. (Vacuum-Assisted Closure) system is performed in routine practice with the possibility of applying the system in outpatient mode. Healing of anastomosis defects using the Endo SPOUCHE method. We performed procedures for anal prolapses and haemorrhoids as standard using the Long method.

- Urology: Endoscopic urethrotomy is used as a routine method, laparoscopic and robot-assisted procedures have been standardized in renal surgeries (pyeloplasty), ureterorenoscopy is used as a routine method. Robot-assisted techniques for prostate surgery are also being improved, and as one of few departments in the Czech Republic, we perform laser surgery for benign prostatic hyperplasia.

Evaluation of clinical activities

- Full functioning of general surgery, urology and orthopaedics with a focus on elective procedures is predominant. The plan is to further expand the range of laparoscopic procedures in abdominal surgery and thoracoscopic procedures in thoracic surgery. We are seeking to contract robot-assisted surgery for lung tumours in patients with the Health Insurance Company. Oesophageal and pancreatic surgery and biliary surgery are routinely performed.
- The Department closely cooperates with the Department of Internal Medicine, Departments of Radiodiagnosics, Pathology and Oncology in the care of oncological patients in regular joint workshops. We cooperate very closely with other surgical disciplines of the hospital in dealing with complicated patients - vascular surgery, neurosurgery, cardiac surgery, gynaecology. Operating rooms are used for surgical treatment of the most severe surgical conditions (including acute interventions).
- The Department was actively involved in the development of recommended accreditation standards and optimization of post-operative pain management.
- Patient satisfaction was continuously assessed by the Department and the outputs were used for further improvements. Particularly during the period of Covid-19 infection, there was an increased emphasis on maintaining hygiene from the units to the operating rooms, the condition was continuously monitored in cooperation with the Microbiological Department and the Infection Control Team.
- In urology segment, in cooperation with the Department of Gynaecology of the NHH and external Department of Urology and Department of Gynaecology, the project for the treatment of urinary incontinence in women and for the treatment of urinary incontinence in men after prostatectomies continued within the framework of post-operative physiotherapy. In cooperation with the Departments of Gastroenterology and neuro-disciplines, the stated project was expanded to include issues dealing with proctology and neurogenic sphincter dysfunctions.
- After surgeries and for the treatment of functional disorders of the musculoskeletal system, the Department of Physiotherapy under the leadership of the Head of Department Ivan Hadraba, MD took over surgery and orthopaedics patients.

Perspectives for the next year

- The inpatient unit is undergoing an extensive reconstruction with the aim of expansion of the inpatient unit of standard surgery by nine beds. The planned handover date is March 2023. We plan to modernize the intensive care unit and centralize it into one unit with a capacity of 8-9 beds.
- Due to a significant increase in the number of oncological patients in the Czech Republic, the Department's activities will focus more on the development of the latest surgical procedures using minimally invasive approaches - laparoscopic as well as robot-assisted - within comprehensive therapy for these patients.

- We will continue to cooperate with specialists – gastroenterologists, pneumologists, endocrinologists in Prague and the Central Bohemian Region and other places in the Czech Republic.
- In addition, certain physicians will continue to be involved in the teaching of medics from the 1st and 3rd Faculty of Medicine Charles University in Prague.
- There will also be a professional nursing practice in the Department.
- The training of physicians will continue in the form of regular educational seminars in the Department.

Educational and specialised activities

Educational and teaching activities

- Clinical educational seminars for the physicians regularly take place in the Department.
- In the field of undergraduate study, medical students (4th, 5th and 6th year) completed internships at our Department from all Prague and some non-Prague medical faculties.
- Within the postgraduate education, physicians from other departments of our hospital as well as general practitioners from the field have completed the pre-certification study visits at our Department.
- We participated in all-hospital seminars and regular common indication seminars together with oncologists, gastroenterologists, pathologists and radiologists.
- The general nursing staff from the Department of Surgery participated actively and passively in a number of training and lectures necessary to improve their professional knowledge and skills.
- We participated in lecturing at Czech and foreign congresses in surgery and urology.

Specialised activities and membership of professional associations

Physicians from the Department participated passively and actively in several domestic and international congresses, seminars and workshops.

Our physicians are also members of a number of professional societies, such as:

- Czech Medical Association of J. E. Purkyně
- The Czech Society of Hepatobiliary Surgery
- The Czech Surgical Society
- Czech Society for Endoscopy Section of Endoscopic and Minimally Invasive Surgery of the Czech Surgical Society
- The Czech Society of Coloproctology
- The Czech Society of Gastroenterology
- Czech Society for Orthopaedics, Thoracic Surgery Section, Czech Society for Pneumology
- Czech Urological Society European Urological Society
- The Czech Society for Robot-Assisted Surgery of the Czech Medical Association of J. E. Purkyně

Department of Gynaecology and Minimally Invasive Therapy

Head of Department, Petr Popelka, MD

The activity of the Department focused on the diagnostics and surgical treatment of gynaecological diseases, with emphasis on minimally invasive approaches. The complete range of pelvic surgery concentrated on three main clinical programmes in 2022: urogynaecological programme, comprehensive treatment of endometriosis, and general gynaecological surgery, including oncology. The Department has a specialised centre for each programme.

Urogynaecological programme covers diagnostics, surgical and conservative treatment of incontinence and pelvic floor disorders. In total, 215 female patients with the above problems were operated of which 32 interventions were performed with the use of implants.

Programme for comprehensive diagnostics and endometriosis surgery offers comprehensive treatment to patients from the whole Czech Republic, including radical laparoscopic surgery and subsequent hormonal therapy with final verification of the outcome. The Department of Gynaecology of Na Homolce Hospital is one of the most experienced centres in the Czech Republic in performing radical operations of retroperitoneal endometriosis. In 2022, the Department carried out 84 procedures, of which 15 procedures were radical surgeries for infiltrative retroperitoneal endometriosis.

General gynaecological surgery deals with the surgical treatment of sterility, myomatosis, adnexal tumours and cysts, problems with post-operative adhesions, chronic pelvic pain, inflammations and congenital development disorders. Hysteroscopy operations include diagnostic and surgical endoscopy of the uterine cavity. 33 oncological cases were newly detected, of which 25 were operated on.

In 2022, 1,172 gynaecological patients were admitted for treatment to the Department.

The total number of surgical procedures reached 1,158 surgeries in 2022, of which 92% were performed using minimally invasive methods.

Basic data

Number of beds gynaecology	20
- Standard	16
- ICU	4
Number of physicians	8
Number of nursing staff	22
Number of outpatient examinations	16,209
Number of admissions	1,172
Number of treatment days	3,234
Number of interventions	1,158
Bed occupancy rate (in %)	
Average treatment period (in days)	2,9

Department of ENT / Head and Neck Surgery

Head of Department, Petr Jiráč, MD.

Activities of the Department

The Department of ENT / Head and Neck Surgery specialises in diagnostics and conservative and surgical treatment of ear, nose and throat diseases.

After the restrictions ended during the COVID pandemic, the inpatient unit was transferred back to caring for ENT patients. Gradually, the original regime of the outpatient unit, rooms and the inpatient ward was started.

Similarly to previous years, surgical procedures carried out in 2022 covered a whole range of head and neck surgery – surgeries of the nose and paranasal cavities (mostly as endoscopic procedures), comprehensive surgery of the thyroid and parathyroid glands, microsurgery of the vocal cords and larynx, cophosurgical interventions (ear surgeries), surgeries to treat sleep apnoea syndrome and rhonchopathy, as well as corrective surgeries in the area of the head and neck, surgeries on the soft tissues of the head and neck, surgeries for injuries of facial bones and ENT surgical oncology. Skull base surgery was intensively developed in collaboration with the Department of Neurosurgery.

In Na Homolce Hospital, the Department cooperates with neurologists in the treatment of balance disorders and has at its disposal a unit with state-of-the-art equipment – the Leksell Gamma Knife – for the treatment of auditory nerve tumours. In cooperation with dental surgeons and neurosurgeons, it performs demanding operations on the facial skeleton and skull base. We cooperate inter alia with experts in allergology and immunology, especially when dealing with chronic rhinitis or chronic sinusitis. We also work closely with the Department of Rehabilitation and Physical Medicine in the diagnostics and treatment of patients with temporomandibular joint disease, vertigo and patients with laryngeal mobility disorders. One of the key areas is treatment of patients with cancer. The Department provides a detailed diagnostics, surgical treatment and follow-up care, in collaboration with oncologists.

The programme of temporomandibular joint treatment has further continued. In 2021, the treatment of diseases of the temporomandibular joint was conservative and minimally invasive (arthrocenteses under local anaesthesia, arthroscopic surgeries).

Surgical treatment of rhonchopathy and sleep apnoea syndrome is also very common, with the use of a radiofrequency method that reduces healing time and post-operative discomfort for patients. We have established very close cooperation with the Centre for Sleep Disorders which is part of the Department of Neurology of Na Homolce Hospital to treat patients with sleep breathing disorders.

In the field of thyroid surgery, the Harmonic scalpel has been increasingly used, which significantly reduces the length of surgical procedures. In indicated cases, minimally invasive procedures to remove thyroid tissue by the MIVAT method (minimally invasive video-assisted thyroidectomy) are used. At the same time, the Department carries out a whole range of surgeries, ranging from partial to extensive procedures, including removal of the entire gland and surrounding lymph nodes. It provides comprehensive post-operative care in cooperation with endocrinologists. In addition to that, the Department closely cooperates with the Department of Nuclear Medicine of the Teaching Hospital in Motol in the follow-up care of patients with thyroid cancer.

Close cooperation with dental surgery has continued. Together, we indicate and operate on patients for whom the combination procedure is an advantage.

In 2020, the outpatient unit of the Department of ENT / Head and Neck Surgery provided comprehensive services, including specialised consultancy services in oncology, otoneurology, cophosurgery and otoprothetics, outpatient unit for treatment of rhonchopathy, outpatient unit for corrective head and neck surgery, phoniatic outpatient unit, joint outpatient unit (temporomandibular joint), and a special-

ised outpatient unit for the treatment of salivary glands using endoscopic techniques for diagnostics of salivary gland ducts (sialoendoscopy).

The outpatient centre for sleep and snoring disorders (rhonchopathy) accounts for a large part of our outpatient care and cooperates with the Department of Neurology and the Laboratory for Sleep Disorders. The Department also has an ENT paediatric specialist working in the outpatient unit of the Department of Paediatrics. The Department continues to successfully develop an aesthetic programme of corrective surgery of the head and neck which primarily includes procedures on auricles, eyelids and the external nose, and laser operations.

As a standard, we use an NBI diagnostic method (narrow band imaging) which allows us, both in the outpatient setting and during surgeries under general anaesthesia, an earlier and more precise diagnostics of early stages of serious diseases of ENT mucosa, particularly disorders of the vocal cords and larynx.

For patients with swallowing disorders, we continue to perform the FEES (Fibreoptic endoscopic evaluation of swallowing) examination in cooperation with a speech therapist.

A novelty is the use of a sonograph in our ENT outpatient unit in the diagnostics and monitoring of diseases of the salivary glands, thyroid gland and soft tissues of neck. Under sonographic control, we perform needle biopsies of tumours in the soft tissues of the head and neck, which enables faster and especially minimally invasive diagnostics of certain diseases (FNAB/FNAC).

Since 2019, we also perform balloon tuboplasty (BET), which improves the patency of the Eustachian tube in indicated patients. This opens entirely new possibilities of treatment of impaired patency of the Eustachian tube, which is the cause of some types of hypoacusis.

Operational data

Number of beds	9
Number of physicians (as of 12/31/2021)	12
Number of general nursing staff	20
Number of outpatient examinations	37,488
Number of consultations	1,422
Number of admissions	985
Number of standard care treatment days	2,654
Bed occupancy rate (in %)	92
Average treatment period for standard care (in days) - ENT patients	2,6

Number of interventions

Surgeries under local anaesthesia	1,438
Surgeries under general anaesthesia	702
FESS surgeries	125
Thyroid gland surgeries	148
MLS (Microlaryngoscopy)	60
NBI	121
TMJ (temporomandibular joint) surgeries	165

Outlook for 2023

- The Department will continue to provide comprehensive ENT diagnostics and treatment. The aim is to further improve the professional standard and quality of the healthcare provided, with a focus on procedures necessitating shorter hospital stays.
- The programme of functional corrective surgery and rhonchopathy has an increasing trend.
- We continue to perform the newly introduced examination and surgical techniques - sleep endoscopy (DISE) in patients with sleep apnoea syndrome, fine-needle aspiration biopsy in some types of soft tissue diseases of neck (FNAB) using sonography.
- Grant support for research in thyroid gland surgery and grant support for research in the use of navigation in sinus surgery (FESS) continues.
- Within a grant we are working in research of the approach to patients with a combination of chronic rhinosinusitis of the odontogenic origin in cooperation with dental surgeons in combined ENT/dental surgical procedures.
- Within the neuroprogramme, close cooperation will continue with the Department of Neurosurgery, particularly with regard to the skull base surgery.
- Within the cardiac programme, the Department will continue to be involved in the preparation of patients for cardiac and vascular surgeries.

Department of Anaesthesiology and Reanimation

Head of Department, Viktor Kubricht, MD, Ph.D.

Activities of the Department

The Department of Anaesthesiology and Resuscitation provides the following types of care:

Anaesthetic care: comprehensive care of patients in the pre-operative, intra-operative and post-operative periods. Paramedics carry out pre-anaesthetic examinations and preparation for surgery, provide anaesthesia and other care during surgery and participate in post-operative care, both in the inpatient unit of the Department of Anaesthesiology and Reanimation and some intensive care units, and in the treatment of acute post-operative pain and any complications associated with anaesthesia.

Intensive care ("resuscitation" care) deals with the diagnostics and treatment of patients with failure of one or more basic life functions, patients with the need for intensive care of the highest degree, with the need for instrumental support of failing organs. The majority of patients are patients with disorders of consciousness, blood circulation, breathing, internal environment or disorders of other organs and organ systems and combinations of these disorders. Often these are patients after major surgery in the NHH or patients after cardiac or respiratory arrest with restoration of circulation after resuscitation. The unit is also equipped with a hyperbaric chamber with the possibility of artificial lung ventilation.

The hospital has a dedicated **acute pain management** team that systematically monitors and treats acute pain in patients admitted to the hospital, educates patients and staff, and develops advanced techniques in the treatment of acute pain.

Chronic Pain Outpatient Unit then deals with patients suffering from chronic pain.

Operational data

Basic data

Number of physicians	27 FTE
Number of general nursing staff	Anaesthesia: 24,4 FTE, Intensive care: 26,5 FTE
Number of beds	8
Average treatment period (days)	10,8

Organisational units of the Department

- 1 resuscitation station (8 beds)
- 2 post-operative units of vascular surgery (12 beds)
- 5 central operating rooms
- 3 surgical operating rooms
- 2 gynaecological operating rooms
- 1 operating room for robot-assisted surgery
- 8 other operating rooms and departments (ENT, Stereotactic and Radiation Surgery, X-ray, Dentistry, Ophthalmology, Department of Nuclear Medicine - PET, Gastroenterology, Pulmonology)
- 1 hyperbaric chamber

Performance overview, admissions and outpatient unit

Number of admitted	218
Number of anaesthesia and other procedures performed by anaesthesiologists outside the E/A inpatient station (total)	8,753
Of which anaesthesia alone	8,527
Total number of hours of anaesthesia	15,933
Numbers of other anaesthesiologist procedures outside the E/A inpatient stations (CPR, intubation, cannulation, ports, etc.)	269
Patients older than 65 years	3,308
Number of anaesthesias exceeding 2 hours	3,105
Average anaesthetic time/min.	109
Regional/combined anaesthesia	595
Number of procedures in the internal emergency service	1,248
Hyperbaric oxygen therapy - number of exposures	544
Number of acute CO poisonings	10
Number of patients in the chronic pain outpatient unit	832

Department of Rehabilitation and Physical Medicine

Head of Department, Ivan Haraba, MD

Activities of the Department

The Department provides comprehensive diagnostic and therapeutic care to restore the maximum physical abilities of disabled patients within its basic specialisation. Care is provided to inpatients of the Department, to inpatients of other specialised inpatient units and to outpatients.

Another specialised care provided in the Department is orthopaedic-prosthetic care. It is provided to all patients of the hospital by physicians of the Department in cooperation with external prosthetic and orthotic centres.

Organisational units of the Department

The Department is part of the therapeutic and preventive care section. It has an outpatient unit and an inpatient unit with 10 beds. These are provided to the Department by other departments - Neurosurgery, Vascular Surgery, Neurology and Gynaecology. The outpatient unit consists of surgeries of rehabilitation physicians, a hydrotherapy room, and rooms for physiotherapy and physical therapy.

Staff (in terms of FTEs)

Physicians	7
Head physiotherapist	1
Physiotherapists	31
Occupational therapists	2
Nursing staff	4
Orderly	2
Masseurs	4
Administrative staff	3

Operational data

Number of outpatient physician interventions	25,903
Number of other staff interventions	54,978
Number of other inpatient paramedical staff interventions	106,687
Total	187,568
Number of patients admitted to the inpatient unit of the Department of Rehabilitation and Physical Medicine	173

Events of the past year

- The Department continued long-term projects in cooperation with the Departments of ENT, Surgery, Urology and Gynaecology and with external departments:

- 1) Treatment of urinary incontinence in women and treatment of urinary incontinence in men after prostatectomy.
- 2) Comprehensive rehabilitation treatment of voice disorders - voice rehabilitation and reeducation. Examination of the voice field by a device developed in the R&D laboratory of the Academy of Performing Arts in Prague, electrostimulation treatment of vocal cord disorders.
- 3) In cooperation with the Department of ENT, we also continued to treat patients with temporomandibular joint disorders, vertigo and tinnitus.
 - Within the Centre of Specialised Cerebrovascular Care (formerly the Comprehensive Cerebrovascular Centre), cooperation with the Department Neurology in the treatment of spasticity in patients after stroke has been continuing.
 - To expand the therapeutic possibilities of the physical therapy of the Department, new devices were purchased - a unique high-performance robot-assisted laser MLS 8 and two electrotherapy devices Rebox. The investment funds were also used to purchase a SonoScape E2 ultrasound device for diagnostics within the musculoskeletal system, biofeedback of pelvic floor muscles.
 - The hydrotherapy baths (partial and full-body whirlpool baths) were replaced.
 - The provision of commercial services continued - yoga and preventive exercises Healthy Back.
 - There was also a postgraduate education of physicians of the Department, certification in the field.
 - As part of her postgraduate studies, she was certified as an occupational therapist.
 - The physiotherapists of the Department participated in specialist seminars and courses.
 - Physiotherapy students of various faculties were repeatedly enabled to complete the internship within the Department.

Development perspectives for 2023

- Long-term projects will be further developed in the framework of interdisciplinary cooperation. We plan to expand functional and morphological diagnostics of the musculoskeletal system, including examination of pelvic floor muscles by ultrasound examination and examination using ultrasound myofeedback.
- Other physicians, physiotherapists and occupational therapists will be trained in spastic paresis rehabilitation.
- We plan new educational events for physiotherapists, occupational therapists and physicians, as well as certification in the field of another physician of the Department.
- Physiotherapy students of individual faculties will participate in internship at the Department.
- We plan to expand the Department of Physiotherapy, Occupational Therapy and Physical Therapy in 2023. The second phase of the reconstruction of the hydrotherapy hall will be implemented.

Department of Clinical Pharmacy

Head of Department, Milada Halačová, PharmD., MD

Activities of the Department

The Department of Clinical Pharmacy was established at Na Homolce Hospital in August 2010 to ensure the safety of pharmacotherapy, which is one of the major priorities of the hospital management. In terms of its organisational structure, it falls within the competence of the Deputy Director for Therapeutic and Preventive Care. The working team of the Department consists of pharmacists specialised in clinical pharmacy or those who will be included in training for this specialisation. The work of the clinical pharmacist is governed by the needs of Na Homolce Hospital, safety standards set by JCI, concept of the Czech Professional Society of Clinical Pharmacy and by staff availability within the Department. The activities in which the clinical pharmacist takes part are divided into several areas.

The major areas include (1) the assessment of a newly admitted patient's medications. This is a so-called signal check, i.e. a gross assessment of the patient's medication with respect to indications, contraindications, dosages and chosen route of administration. It reveals any duplication of medication and evaluates the clinical importance and risks of drug and food interactions. In this way, future problematic medications for the patient or high-risk pharmacotherapeutic regimes are identified and continuously monitored.

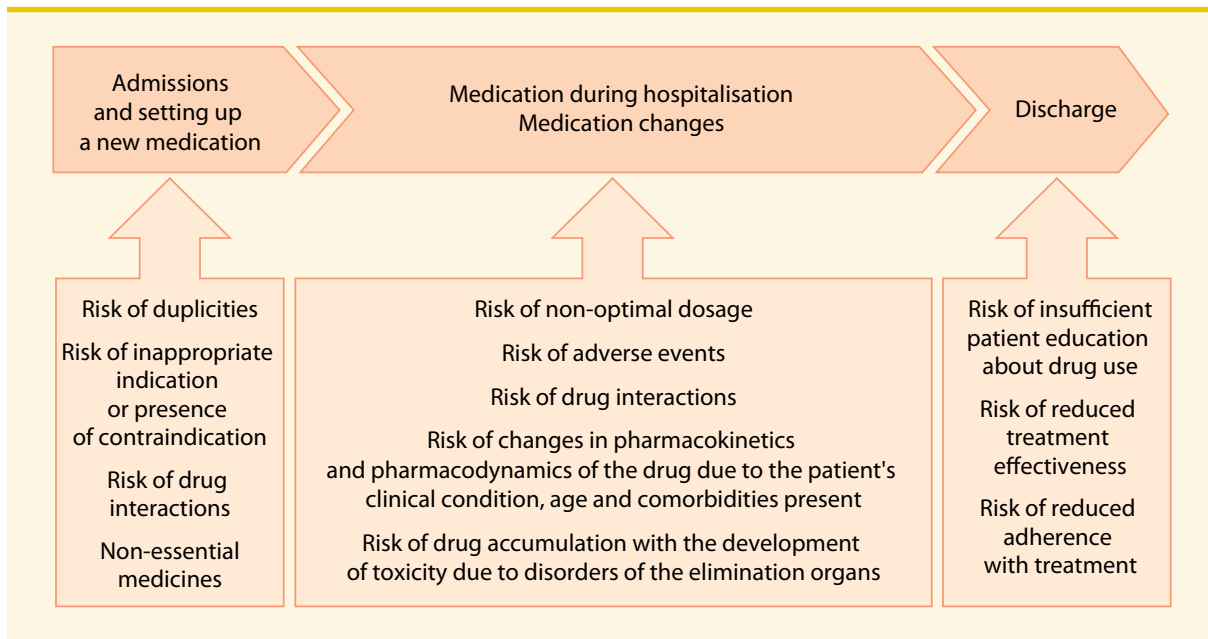
The key activity of a clinical pharmacist is (2) everyday work in the assigned clinical department and close cooperation with attending physicians and nurses. The clinical pharmacist monitors the patient's medication in a broad context and assesses the causal relationship between the patient's specific complaints, or changes in the course of disease or laboratory tests, and the current medication. He/she adjusts drug doses, addresses clinically significant drug interactions and adverse events. He/she works with nurses on drug incompatibilities and the crushing of drugs for nasogastric and jejunal probes.

The clinical pharmacist provides an on-demand (3) consulting service within the hospital, takes part in (4) the development of best practice, reports adverse events to the State Institute for Drug Control and is responsible for preparing expert reports on dealing with exceptional events in the hospital related to medications. The Department of Clinical Pharmacy is working on a list of high-risk drugs and LASA (look alike-sound alike) drugs and is involved in preparing so-called proactive procedures and storage systems to minimize the number of errors in handling these drugs and the impact such errors might have on patients. The Department of Clinical Pharmacy is the creator of the (5) generic positive sheet for the NHH inpatient unit.

Since 2012 the Department of Clinical Pharmacy has been involved in the national (6) Senior project implemented by Ústav lékového průvodce, z. ú. (Institute for Medical Drug Guidance). Clinical pharmacists at Na Homolce Hospital perform regular drug audits in social facilities throughout the Czech Republic. The project continues in the activities of outpatient Department of Clinical Pharmacy where, in 2017, we managed to open a clinical pharmacists consulting service for the needs of outpatient physicians and patients with the financial support of the Ministry of Health. In 2020, the Department entered a pilot project with 11 general practitioners in Prague. The goal is to gradually develop clinical pharmacy in the outpatient sector.

The project was followed by the official opening of the "Clinical Pharmacy Outpatient Unit" at NHH, which is available not only to patients from NHH, but also from various parts of the Czech Republic.

Analysis of the operational processes related to the activities of the Department of Clinical Pharmacy



Work records and activities of the Department

The Department provides care to all patients admitted in the hospital. The admission to our hospital represents the first screening point and separates young patients without medication who undergo a short-term, mostly ½-1 day hospital stay, and those who are treated in the Centre for Sleep Disorders, who are indicated for Gamma Knife treatment, etc. The remaining approximately 50% of inpatients require detailed revisions by the clinical pharmacist, as many as several times during the hospital stay. Medication is adjusted on the basis of a clinical pharmacist's intervention in about 3,000 patients annually (30%). The highest percentage of interventions includes adjustments of medical drug dosage in the case of impaired function of the organ of elimination (risk of accumulation), clinically significant medical drug interactions, severe adverse events, incompatibilities, contraindications, unnecessary medical drugs, etc.

Classification of drug problems in NHH (revision according to the International Classification of Drug-Related Problems)

A1	Inappropriate active ingredient
A2	Unclear indication
A3	Dose adjustment
A4	Contraindications
A5	Side effect
A6	Drug interaction
A7	Recommendations for TDM
A8	Recommendation of a new drug
B1	Duplicity
B2	Timing of administration
B3	Method and route of administration
B4	Medicinal form

B5	Length of infusions
B6	Duration of treatment
B7	Incompatibility
C	Formal errors
E	Pharmacoeconomics
F	Recommendations for perioperative management
G	Recommendations for laboratory testing
H	Patient education
I	Risk of falls
J	Other

Accreditation and specialist activities

- Status of an accredited facility of the Ministry of Health of the Czech Republic in the field of clinical pharmacy, membership of the Accreditation Commission of the Ministry of Health of the Czech Republic in the field of clinical pharmacy
- Membership of the Committee of the Society of Clinical Pharmacology (from 2022)
- Membership of the Board of the Clinical Pharmacy Section of the Czech Pharmaceutical Society of J. E. Purkyně
- Educational activities in the field of pharmacology at faculties of medicine and pharmacology in Prague and Brno
- Membership of the Scientific Council of the non-profit organisation Průvodce pacienta, z. ú.
- Guarantee of the national "Senior" pilot project implemented by the non-profit organisation Průvodce pacienta, z. ú.
- Close cooperation with the National Institute of Public Health (hospital antibiotic programme and infection prevention and control)
- Membership in the Subcommittee on Antibiotic Policy of the Czech Medical Association of J. E. Purkyně
- Publishing and lecturing in national and transnational professional activities
- Implementation of two grant projects

Staff data

Number of clinical pharmacists	6,0 FTE
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Conclusion

The clinical pharmaceutical care provided by the hospital is a common standard ensuring a high level and safety of pharmacotherapy for all its inpatients.

OUTPATIENT UNIT

Centre for Allergy and Clinical Immunology

Head Physician, Assoc. Prof. Petr Čáp, MD, Ph.D.

Activities of the Department

- The Centre provides therapeutic and preventive specialised outpatient care to adult and paediatric patients with allergic diseases, immunity disorders and recurrent respiratory infections.
- In 2022, the Centre for Allergy and Clinical Immunology performed comprehensive diagnostic and treatment procedures, including preventive and consulting care, to both child and adult patients from Na Homolce Hospital with allergies, asthma and other immunopathological conditions (immunodeficiency and autoimmune conditions).

Operational data

Outpatient units: 3 surgeries, 2 prep rooms and 1 functional diagnostics laboratory

Number of physicians: 4 (a total of 2,8 FTE)

Number of nursing staff: 4 (a total of 4,0 FTE)

Outpatient unit

Number of patients	3,280
Number of treatments	4,946
Number of skin tests	13,199
Number of spirometries	4,875
Number of bronchomotor tests	913
Number of rhinomanometries	59
Number of allergen-containing vaccine administrations (treatment initiation)	198

One outpatient unit is located in the polyclinics on the 6th floor (Petr Čáp, Associate professor MD, Ph.D.), other outpatient units moved only within the 1st floor closer to the Department of Pediatric and Adolescent Medicine of the hospital (Pončáková, MD, Dvorská, MD, Škopková, MD).

Educational and other specialised activities

- **Postgraduate training courses of the Centre for Allergy and Clinical Immunology** provided to physicians and nurses in the field of allergy and clinical immunology for which the Department has received an updated and valid official accreditation by the Czech Ministry of Health as a department of higher type (II)
- **Undergraduate courses** provided to students of the 2nd Faculty of Medicine Charles University, in cooperation with the Institute of Immunology at the University Hospital in Motol
- **Active participation in lectures and organisation of educational activities** of national character within the framework of continuing education of the Czech Medical Association of J. E. Purkyně and Czech Medical Chamber, conferences and annual congress of the Czech Society of Allergy and Clinical Immunology as well as virtual distance lectures in the postcovid period
- **Membership of the editorial board of the newspaper Zdravotnické noviny**
- **PR and educational activities** - radio and television programme, newspaper and journal articles
- **Membership of professional associations:** Czech Society for Allergy and Clinical Immunology of J. E. Purkyně (doc. Čáp is also for the fourth term a member of the committee of the professional society), Czech Pneumology and Phthysiology Society J. E. Purkyně (doc. Čáp), Czech Society of Internal Medicine of J. E. Purkyně (doc. Čáp), European Academy of Allergy and Clinical Immunology (doc. Čáp, MUDr. Pončáková), European Respiratory Society (doc. Čáp); **active participation in distant webinars, including international ones**, in the field of allergology and clinical immunology

Department of Paediatric and Adolescent Medicine

Head Physician, Tibor Savel, MD

Activities of the Department

- Therapeutic and preventive care provided to children and adolescents up to 19 years
- Professional care in the field of paediatric neurology, endocrinology, psychology, nephrology and speech therapy for children permanently registered at Na Homolce Hospital
- Therapeutic and preventive care provided to foreign nationals
- Consulting services provided to children of foreign nationals

Operational data

- Outpatient unit with 2 offices and 1 room for laboratory sample collection and also for emergency reanimation and possible isolation of infectious patients
- 4 paediatricians (1 full-time paediatrician, 2 part-time paediatricians, 1 paediatrician with contract for work)
- 1 non-medical university graduate with 0,8 FTE (clinical speech therapy)
- 4 consulting physicians with contract for work
- 2 paediatric nurses (1 paediatric nurse on maternity leave, 1 nurse with contract for work)

Changes in 2022

In 2022, our Department became involved in providing care to Ukrainian refugees, for whom we provide complete care even if they are not registered. A paediatric pneumologist and 1 full-time paediatric nurse have left our Department as our nurse is gradually returning from her maternity leave.

Development perspective for 2023

Economic activity will be carried out within the hospital flat rate and payment per capita for specialisation 002.

We continue to provide health services to Ukrainian refugees under the age of 18. The aim remains to maintain a good quality of care and economic results by registering new patients from Prague 5 and the surrounding area and children of hospital employees.

Department of Dermatology and Venerology

Head Physician, Richard Šuraň, MD

Activities of the Department

- The Department provides outpatient therapeutic and preventive care of clients of commercial services, the staff of embassies in the Czech Republic, the staff of Na Homolce Hospital, and consulting services for hospital outpatients and inpatients. Treatment of other patients from the Czech Republic and abroad is provided only based on the immediate availability of physicians in the Department.
- In case of suspected venereal diseases, the Department makes basic examinations. Patients with a confirmed diagnosis of gonorrhoea or lues are referred to the follow-up care of general consulting specialists in dermatovenerology.
- The Department performs examinations of suspected skin tumours and in the case of histological confirmation of the diagnosis, the patients are treated and followed up by the Department. Patients with malignant melanoma and lymphoma cutis are referred to the Department of Oncology of Na Homolce Hospital (and then the Department of Dermatology is then involved in their follow-up), or to the outpatient dermato-oncology units of other dermatology departments.
- In addition to the basic specialised examination, the Department performs electrocauterisation, cryotherapy, sclerotherapy of varicose veins, examination of pigment formations by manual and digital dermatoscope, epicutaneous tests.

Operational data

The Department has 1 head physician (1,0 FTE) and 1 nurse (1,0 FTE).

Development perspectives for 2023

The Department staff are involved in postgraduate training courses and regularly read professional journals. The task of the Department for 2023 is to maintain the quality of the provided therapeutic and preventive care, to expand epicutaneous testing and to improve the diagnostics of pigment manifestations.

Department of Ophthalmology

Head Physician, Petr Novák, MD

Activities of the Department

- Outpatient medical and preventive ophthalmological care, pre-operative examinations
- Consulting examinations provided to both outpatients and inpatients from different hospital departments (primarily Neurology, Neurosurgery, Cardiology, Anaesthesiology and Reanimation and Internal Medicine)
- Specialised examinations of patients referred from external ophthalmologists and other specialists
- Outpatient surgery - cataract surgery, anterior segment surgery and surgery of the eyelids and their surroundings
- Surgeries with admission are performed for corneal transplants and, exceptionally, for cataract surgeries in patients with more distant residence and in seriously ill patients

Organisational units of the Department

The Department of Ophthalmology consists of an outpatient unit and an operating room. The Department of Ophthalmology does not have an inpatient section and if necessary, patients are admitted in the Department of ENT or in the Department of Internal Medicine. As of 2019, the Department is staffed by a head physician and the independent physicians in only three offices.

Interventions

Outpatient examinations (represented by codes 75 021, 75 022 and 75 023)	6,568
Patient contacts other (represented by codes 09 511 and 09 513)	925
Total operations	1,279
Number of cataract surgeries	1,186
Number of corneal transplantations	33
Number of surgical corrections of astigmatism	19
Blepharoplasty (from October 2022)	27
Other blepharoplasty (from October 2022)	14

Staff data

Number of physicians	4, from September 5
Number of physician FTE	3,0, from September 3,3
Number of general nursing staff	6 (of which 1 maternity leave)
Number of general nursing staff (FTE)	4,6 from September 4,5
Number of auxiliary medical staff	1
Number of auxiliary medical staff (FTE)	1,0
Number of technical staff	1
Number of technical staff (FTE)	1,0
Total number of employees	12
Total FTE	9,8 (at the end of 2022)

Changes in 2022

- We have managed to maintain the trend of long-term stabilization of the number of cataract surgeries in our Department in 2022. In the case of corneal transplants, there has been an increase in the number of surgeries due to the relaxation of emergency hygiene measures.
- Commercial refractive surgeries - lens extraction and implantation of monofocal or multifocal implants - continue to be on the decrease. Patients continued to express interest in the possibility of paying for the implantation of a superior lens.
- Head of the Department Petr Novák, MD has reduced his FTE from 1,0 to 0,5 since September. In September 2022, a new physician, Jiří Záhlava, MD, with 0,8 FTE, started to work at the Department. In connection with this, surgical instruments for eyelid surgery were acquired and since its acquisition the number of these procedures has been increasing.
- The purchase of a visual field examination device and operating table was not implemented.

Educational and specialised activities

Physicians of the Department are members of the Czech Ophthalmological Society, Czech Society of Refractive and Cataract Surgery, Czech Glaucoma Society and Czech Society of Oculoplastic Surgery. They participate actively and passively in seminars, company working days and congresses. In 2022, in spite of the receding state health emergency measures, physicians presented their papers at ophthalmology conventions and ophthalmology seminars.

Development perspective for 2023

- To meet the needs of NHH and the Department of Ophthalmology itself as a surgical discipline, a partial, gradual and socially empathetic change in the spectrum of outpatients is appropriate.
- In order to fill the capacity of the operating room, it will be appropriate to resolve its staffing and/or specialisation. If the operation of the room is not fully secured by our own eye activities, it may be possible to make arrangements with another department.
- In order to fill the capacity of the room, we will popularize the procedures performed at the Department of Ophthalmology among the general public.
- We will continue to inform the professional public about the possibilities of treatment in the Department of Ophthalmology, both within the framework of treatment covered by the health insurance system and outside this framework.
- In connection with the loss of 2 rooms at the Department of Ophthalmology a few years ago, there is an effort to carry out structural modifications of the existing premises of the outpatient wing with the subsequent rationalization of work organisation and improvement of employees working conditions.
- Due to the increasing failure rate of the perimeter, its age, its importance for diagnosis and treatment not only in the Department of Ophthalmology but also in Neurology and Neurosurgery, and last but not least its relatively good return on investment, it is advisable to prepare for its forced sudden replacement. The request to purchase the device was made in 2019.
- Continued cooperation with clinical ophthalmological facilities in Prague continues to be maintained.
- We will participate in seminars and congresses under the auspices of the Czech Ophthalmological Society, the Czech Society of Refractive and Cataract Surgery and the Czech Society of Oculoplastic Surgery.

Department of Psychiatry

Head Physician, Petra Kleinová, MD

Activities of the Department

The Department provides diagnostic, therapeutic and preventive psychiatric care to the adult patients of the polyclinics, patients of the department for foreign nationals, patients using other hospital programmes, and consulting services in the hospital. It does not have an inpatient unit. The Department cooperates in an interdisciplinary manner with a company general practitioner, physicians in all other fields, inter alia within the programme of comprehensive pain management, assesses and refers patients with severe forms of obsessive-compulsive disorder to the Department of Stereotactic and Radiation Neurosurgery, which is the only facility that performs stereotactic neurosurgical procedures with such patients.

Operational data

- 1 outpatient unit
- 1 physician FTE, 2 physicians with 0,8 and 0,2 FTEs
- 1 nurse with 0,5 FTE
- total number of examinations 1,746 (of which 65 consulting examinations within NHH) + interviews with family 56

Evaluation of clinical activities

With respect to the limited capacity represented only by one psychiatric position, the extent of clinical activities of the Department remained without changes. The focus is on comprehensive diagnostic, therapeutic and preventive psychiatric care, respecting hospital priorities. The patients who cannot be admitted for treatment due to the lack of capacity are referred to the care of other departments of psychiatry. The physicians cooperate with other inpatient departments in Prague and outside Prague where patients indicated for admission are referred to, as well as with community service centres – mental health centres, which receive patients with severe mental disorders and impaired functional abilities. In some cases, the indicated patients are referred to the psychotherapeutic care.

Membership of professional associations and educational activities

The physicians are members of the Psychiatric Society of J. E. Purkyně, the Czech Neuropsychopharmacological Society and the Society for Biological Psychiatry, Skopova, MD is a member of the Czech Medical Association's Scientific Council for Psychiatry. Petra Kleinova, MD, a physician with 0,8 FTE, also works at the Department of Neurology at the first Faculty of Medicine Charles University in Prague and General University Hospital in Prague, where she focuses on neuropsychiatric problems of extrapyramidal disorders and is also certified in Gerontopsychiatry.

Development perspectives for 2023

Na Homolce Hospital is a highly specialised hospital where psychiatry, as one of the basic fields of current medicine, is only a complementary discipline ensuring a comprehensive range of provided healthcare services. No further development is possible under the current staffing conditions i.e. with only one physician FTE. There is no room for scientific work or teaching, given the staffing and the significant number of patients. Therefore, the aim is to maintain the current high quality of care provided and economic results, while the demands for psychiatric services and increase in the number of patients generally increase.

Department of Clinical Psychology

Head of Department, Lenka Krámská, Professor of Psychology, Ph.D.

Activities of the Department

The Department of Clinical Psychology has no inpatient unit. It has three offices - offices of psychologists who examine and provide psychodiagnostic and psychotherapeutic care on a daily basis in accordance with the specialisation in the given programme and in cooperation with the target department (mainly Neurosurgery, Neurology, Stereotactic and Radiation Neurosurgery, Internal Medicine, Surgery, Oncology, etc.) according to the requirements of the attending physicians. They also provide consulting services to other departments of Na Homolce hospital. The clinical psychologist provides psychodiagnostic and psychotherapeutic care for outpatient children at the children's department in the office of consultants.

Specialised psychological care includes pre-operative psychological preparation before complicated procedures, help in coping with the impact of serious diseases, and neuropsychological diagnostics aimed at the identification of intellectual and cognitive abilities or assessment of personality psychopathology. Neuropsychological diagnostics can rule out some medical interventions or refer the patient for special procedures, such as epilepsy surgery, neurostimulator implants, some bariatric surgery procedures, allocation of an electric wheelchair etc., for which special psychological or neuropsychological assessment is required by health insurance companies.

Main services

- **Neuroprogramme** - Specialised neuropsychological diagnostics and psychotherapy in patients with neurological diseases (epilepsy surgery programme, neurosurgical treatment of tumours, cerebrovascular diseases, cognitive rehabilitation, cooperation with the Department of Neurosurgery, e.g. in awake brain surgeries, cognitive rehabilitation of patients with neurocognitive deficit, cooperation with the Department of Stereotactic and Radiation Neurosurgery in the examination of patients with epilepsy, obsessive-compulsive disorder before and after interventions, etc.)
- **Cardiac programme** - Specialised psychological diagnostics and psychotherapy in patients with cardiovascular diseases (cardiac surgery, demanding vascular reconstructions, acute myocardial infarction, neurostimulator implantation for refractory angina pectoris, etc.)
- **Internal medicine programme** - Specialised psychodiagnostic and psychotherapeutic care in the field of obesitology and bariatrics, as well as diabetology, endocrinology, oncology, pneumology and gastroenterology; consultations, psychosomatic consulting centre
- **Crisis intervention** in acute responses to unfavourable diagnosis, psychological preparation for demanding procedures, assistance in coping with psychological impacts of diseases (Leksell Gamma Knife, oncology, etc.)
- **Cooperation with the NHH Palliative Care Team** - At the request of the attending physicians or nurses, we cooperate with a multidisciplinary team and help patients solve psychological problems and focus on improving their quality of life
- **Pain management consulting centre** - Psychological examination and subsequent supporting psychological care provided to patients with long-term or chronic pain before implant surgery
- **Psychosomatic consulting centre** - Psychological treatment of patients with psychosomatic disorders (e.g. high blood pressure, ulcer disease, diabetes, various functional disorders, etc.) requiring a professional psychological intervention
- **Psychodiagnosics and psychotherapy in children** with various psychosomatic and educational problems within comprehensive care provided to paediatric patients
- **Psychological examination of patients required by different directives and regulations of the Ministry of Health and General Health Insurance Company** - prior to implantation of neurostimulator, programmable pumps, before providing a patient with an electric wheelchair, C-leg prosthesis (microprocessor controlled knee joint), before returning back a driving license to patients, etc.

Complementary services

- Psychological examination of drivers pursuant to Act No. 361/2000 Coll. performed by a psychologist accredited by the Ministry of Transport, often required by the GPs or NHH employees
- Psychological examination of applicants for a firearms license

Research activities

- Research follow-up of patients (e.g. with epilepsy, PNES, after ischemic stroke, etc.) in cooperation with the Epilepsy Centre and Departments of Neurology, Neurosurgery and Vascular Surgery
- Cooperation with the Department of Radiodiagnostics in developing medical memory examination paradigm by means of functional MRI with a focus on higher mental functions (memory, speech, etc.)
- Cooperation with the Department of Stereotactic and Radiation Neurosurgery in examination of patients with epilepsy, obsessive-compulsive disorder, etc. before and after surgery
- Cooperation with the Department of Neurosurgery in awake brain surgeries, monitoring of patients with EC-IC bypasses, elective aneurysm, etc. before and after surgery
- Throughout 2022, cooperation with the Department of Otorhinolaryngology and Head and Neck Surgery at the First Faculty of Medicine, Motol University Hospital continued (Jan Bouček, Associate Professor, MD, Ph.D., as., Zdeněk Fík, MD, Ph.D.) on the psychological investigation of cochlear implant applicants. Following the preparation of the psychodiagnostic test battery, routine investigations of these applicants began in July 2021 and this cooperation will also continue in 2022. In fall 2022, the preparation for the investigation of patients after cochlear implantation began, which mainly concerns the determination of neuropsychological performance and quality of life one year after the surgery.
- Preparation of Neuropsychological Assessment Battery (NAB and (RBANS) in the Czech language for Testcentrum
- Development of research cooperation with the Faculty of Education Charles University and First Faculty of Medicine, Charles University - differential diagnostic and methodology research issues

Operational data

Number of Psychologists

With postgraduate certificate	3
Without postgraduate certificate	2

Number of psychological interventions performed in inpatients

Specific psychological intervention (30 min.)	646
Targeted psychological assessment (60 min.)	611
Follow-up psychological assessment (30 min.)	6
Crisis intervention (30 min.)	64
Psychotherapy with demanding psychotherapeutic intervention (90 min.)	10
Emergency psychotherapy (60 min.)	1

Number of outpatient interventions

Individual systemic psychotherapy (30 min.)	1,945
Comprehensive paediatric psychological assessment (60 min.)	48

Targeted paediatric psychological assessment (60 min.)	144
Comprehensive psychological assessment (60 min.)	4
Follow-up paediatric psychological assessment	11
Targeted psychological assessment (60 min.)	1,712
Follow-up psychological assessment (30 min.)	24
Specific psychological intervention (30 min.)	3
Psychodiagnostics with a complicated psychotherapeutic intervention (90 min.)	39
Crisis intervention (30 min.)	833
Family systematic psychotherapy (30 min.)	16

Number of points achieved

Total	3,175,523
of which outpatient patients	2,511,075

However, behind these figures, one must see specific human beings and fates that would, without the psychological intervention, tolerate admission, surgical procedures and other major life events with significantly more difficulties.

In addition to these reported interventions for health insurance companies, it is necessary to state the outpatient examination of 11 clients who were examined for the purpose of traffic psychological assessment of the skills to drive motor vehicles, and to hold and carry a firearm. Reimbursements of these procedures were made in cash according to the Decree of the Czech Ministry of Health No. 206/1997 Coll. through the NHH cash office. The total amount was CZK 20,500.

Educational activities and membership of professional associations

- By the decision of the Ministry of Health dated 20/10/2021, the accreditation Psychologist in Health Care - Clinical Psychology was extended to the Department of Clinical Psychology for 10 trainees (for the theoretical-practical part) with validity from 01/11/2021 to 31/10/2026.
- By the decision of the Ministry of Health of 18/03/2022, the accreditation for the field of Psychologist in Health Care - Psychotherapy was granted to the Department of Clinical Psychology with validity from 01/04/2022 (for the theoretical and practical part).
- There are specialised internships as part of the undergraduate study programmes organised in the Department (for the Faculty of Arts and Teaching School, Charles University - 20 students), supervision of diploma and master's degree theses, as well as postgraduate study (pre-certification internships in clinical psychology - a total of 4 pre-certification visiting students, 8 Ph.D. students). In 2022, training of psychologists in pre-certification preparation was carried out in the Department. Two internal trainees and five external trainees from other healthcare facilities were involved in pre-certification preparation at the Department in 2022.
- Prof. L. Krámská, Ph.D., develops research and pedagogical activities at the Department of Clinical Psychology and the activities of the Czech Neuropsychological Society which she founded with her colleagues in 2011 and obtained accreditation by the Czech Ministry of Health for a certified course in clinical neuropsychology. She is a member of the disciplinary board and supervisor of the doctoral programme of clinical psychology and medical psychology at the Faculty of Arts and the 1st Faculty of Medicine Charles University. She is a member of the Scientific Committee in the International Neuropsychological Society (INS) and the Federation of European Societies for Neuropsychology Committee for the Czech Republic. In 2015-2017, she was a member of the Clinical Neuropsychology Task Force of the European Federation of Psychological Societies in Brussels, to represent the Czech Republic. She participates in the translation of neuropsychological batteries NAB and RBANS and SIMS into the Czech language.
- In the summer of 2022, the Head of the Department of Clinical Psychology participated in an internship at a prestigious neuropsychology centre in New York City (Northeast Regional Epilepsy Group, NYU Langone Medical Centre a Presbyterian/Columbia University Irving Medical Centre).

- PhDr. M. Kořán, Ph.D., has long been a member of the Board of the Union of Psychological Societies of the Czech Republic and Vice-Chairman of the Association of Traffic Psychologists of the Czech Republic. M. Kořán, PhD, is a lecturer for postgraduate courses on transport psychology at the Faculty of Arts, Palacký University in Olomouc, Masaryk University Brno. Together with Prof. L. Krámská, Ph.D. he supervises interns within the framework of accredited studies. In fall 2022, he participated in the organisation of a national seminar for general practitioners "Assessment of competence to drive motor vehicles", which was held at the Faculty of Arts of Charles University in Prague. He provides lectures at workshops within specialised education in clinical psychology at Na Homolce Hospital. He is a media commenter in the field of transport psychology in the public media. In the summer and fall 2022, as a psychologist-volunteer, he took part in two-week recovery stays for oncology patients organised by the self-help organisation ARCUS - onko centrum, z. s
- Despite the limitations imposed by the epidemiological situation, PhDr. Lenka Chválová actively participated in the work of the Department in the field of psychodiagnostics and psychotherapy of NHH child clients. In 2021, she started the training "Relational psychotherapy in children and adolescents", continues in the supervision training of the CSPAP, continues in the CIP training (catatonic imaginative psychotherapy), participates in professional seminars and supervision of the child psychology clinic at the Institute for Postgraduate Medical Education.
- On 01/09/2022 a new colleague, Mgr. Marie Krejčová, a member of the Czech-Moravian Psychological Society, joined the Department of Clinical Psychology and became involved in diagnostic, therapeutic and research activities. In 2022, she started the course Psychologist in Health Care and the first year of the doctoral studies in Medical Psychology and Psychopathology at the first Faculty of Medicine Charles University.
- On 01/10/2022 another new colleague, Mgr. Ing. Sofia Diondet, joined the Department, also enrolled in the pre-certification training and was also actively involved in the diagnostic and therapeutic activities of the Department. In 2022 she continued her doctoral studies (Ph.D.) in Medical Psychology and Psychopathology at the First Faculty of Medicine Charles University and also participated in the KBT "Odyssey" psychotherapy training.
- In 2022, the staff of the Department presented a total of 3 lectures at congresses in the Czech Republic, 10 lectures at professional seminars of the Department of Clinical Psychology, 2 lectures at on-line seminars. In addition, they published 4 articles in foreign peer-reviewed journals with impact factor. They are actively involved in popularization activities in various media in the field of neuropsychology and traffic psychology.

Development perspectives for 2023

As in previous years, the Department will continue to provide high-quality psychodiagnostic and psychotherapeutic care to both inpatients and outpatients at Na Homolce Hospital and other healthcare facilities. Further, it will continue to participate in pre-certification training (theoretical-practical and practical programmes in clinical psychology and psychotherapy) and cooperate with the Faculty of Education of Charles University and other psychology departments in the Czech Republic in undergraduate and postgraduate training, to organise study visits within postgraduate training in clinical psychology. We will also continue to implement a specialised educational programme in clinical psychology in cooperation with the Accreditation Commission of the Ministry of Health in the further education of postgraduate students. The cooperation with the Department of Otorhinolaryngology and Head and Neck Surgery at the 1st Faculty of Medicine Charles University, Motol University Hospital will continue on the psychological investigation of applicants for cochlear implantation. The Department will continue to work on the standardisation of neuropsychological methods and procedures for the Na Homolce Hospital neuroprogramme (NHH grant for Diagnostics and treatment of patients with PNES diagnosis - psychogenic non-epileptic seizures) and develop psychotherapeutic care and cognitive rehabilitation in patients with neurocognitive deficits, including collaboration on the development of a psychoeducational handbook for PNES patients. We will continue to develop international cooperation and activities with professional associations and institutions in clinical psychology, health psychology, psychosomatics and neuropsychology.

Dental outpatient unit

Head Physician, Petr Kolčava, MD

Activities of the Department

- Provision of outpatient dental care
- Provision of preventive outpatient dental care
- Provision of acute outpatient dental care on duty
- Provision of consulting services to patients from other departments of the hospital

Operational data

- In 2022, the above given range of outpatient dental care was provided by one full-time physician and one 0,2 FTE physician with a contract for work. The care was provided to outpatients and inpatients of the polyclinics, foreign nationals, contractual partners of Na Homolce Hospital, and hospitalised patients.
- In 2022, the Department had two dental offices. One dental office is used by one physician and a nurse, the other by a physician with reduced working hours without a nurse.
- In 2022, a total of 2,412 patients were examined and treated.

Evaluation of clinical activities

The number of examined and treated patients decreased compared to 2021 due to physician's long-term illness with Covid-19. However, the number of interventions was still rather high which was achieved particularly due to highly efficient organisation of work, immediate phone contact with patients and filling of time slots vacated by absent or late patients and partly by extending office hours beyond working hours i.e. by treating painful conditions before the official working hours. In spite of this, comparable positive economic results were achieved as in the previous year.

Changes and events in 2022

In the field of therapeutic care, the Department continued to cooperate with the Department of Dental Surgery in the treatment of patients with dental implants. An increased number of patients with Class I defects according to Voldřich were treated with adhesive fixed replacements, the so-called Maryland bridge and inlay bridge. The number of patients treated with conditionally removable replacements and all-ceramic restorations increased as well. The use of so-called locators has been extended to increase the retention of lower total replacements.

In the field of education, the head physician has obtained a certificate for the performance of the professional representative and also a certificate for the person providing radiation protection for the registrant.

Development perspectives for 2023

The priority in 2023 will be to staff up and recruit a dental hygienist. The Department will continue to cooperate with the Department of Dental Surgery in the application of new types of dental bone implants. In cooperation with the prosthetic laboratory, the use of the Silensor anti-snoring system will be increased in selected patients, as well as dental guards to prevent bruxism. Indications will be extended for all-ceramic replacements of veneer-type and the capacity will be increased for the production of full artificial dentures using locators in order to increase their retention. The production of removable replacements made of flexible resin will be increased. The investment requirements for the renewal of the instruments will be renewed. Although dental care is a complementary service in the system of Na Homolce Hospital, the Department of Dentistry will make every effort to maintain the comprehensive range and high quality of the services provided as far as possible.

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Department of Radiodiagnostics

Head of Department, Prof. Josef Vymazal, MD, Ph.D.

Activities of the Department

Also in 2022, the Department of Radiodiagnostics provided services both to its own hospital and to other medical facilities, including 24-hour support, even for magnetic resonance imaging. It is the continuous availability of MRI examinations at weekends and at night that is often used by workplaces that are equipped with this technology but do not provide continuous service.

Our Department provides diagnostic examinations in the entire range of the field of radiodiagnostics with a special focus on diseases of the nervous, musculoskeletal and cardiovascular systems, as well as on vascular and non-vascular interventional therapeutic procedures. Diagnostics and interventions continue to be actively developed.

Vascular methods

Our Angiography Department is equipped with two modern biplane angiography devices with "flat-panel" detectors and rotational AG. We provide comprehensive diagnostic and therapeutic care for vascular diseases in the whole body, excluding cardiac issues. The Department operates on a 24/7 basis. In terms of the number and spectrum of performed procedures, we rank among the largest centres of a similar nature in the Czech Republic.

The core programme of our Department is interventional work within the Comprehensive Cerebrovascular Centre - here we provide a continuous service for endovascular treatment of ischemic strokes. The number of endovascularly treated patients with iCMP ranks us among the leading centres in the Czech Republic. The quality of care provided is interdisciplinary monitored both within the hospital and nationally, and is traditionally at a very high level. We also perform complicated and complex neuroendovascular procedures in the treatment of pathologies of the cerebral and spinal arteries, especially in the treatment of cerebral aneurysms and dural shunts; in collaboration with Neurosurgery and Leksell Gamma Knife we treat pial AVM. We use the latest methods and instrumentation available for all these procedures.

In a team with vascular surgeons, we endovascularly treat aortic and pelvic artery aneurysms by implanting stent grafts. We are the largest centre in the Czech Republic in terms of the number of SGs implanted.

Within the peripheral arteries, the main focus of our work is the treatment of patients with chronic lower limb ischemia, but we also deal with more complex and less common pathologies of the peripheral arteries such as aneurysms, malformations, shunts, etc. We also treat acute life-threatening bleeding from peripheral arteries by endovascular means if this procedure is indicated.

We regularly attend domestic and international training events, where our participation is often active. Our Department follows the latest technological trends in this field and reasonably chooses new technologies and materials for its own application.

CT scan and CT guided non-vascular intervention

This area is dominated by CT-guided nerve root injections and vertebroplasty. Interest in these procedures is growing and our hospital is traditionally the most active centre in the country in this segment of care. A unique hybrid CT-AG system is dedicated to interventional methods.

For diagnostic purposes, we equipped our Department with a new SOMATOM Force CT scanner in 2022, which meets the most demanding requirements for CT scans across medical disciplines, including demanding cardiac scans, the number of which is increasing every year. The new CT device also reduces the radiation burden on the patient in many of its indications. It is the CT scan that is the main source of radiation burden on the population of developed countries.

In agreement with global trends, we tend to replace a CT scan with MRI in indicated cases, where there is no radiation exposure at all. In this regard, we provide education both among the referring physicians of our hospital and at professional congresses and seminars for other referring specialists.

As already mentioned, cardiac CT scans, including CT coronary angiography, are an important part of our CT portfolio. The number of examined patients with a congenital heart defect using CT has also been increasing. We often combine CT scans with MRI scans in these patients as well. In acute strokes, we perform CT perfusion imaging of the entire brain in indicated cases, and we always perform CT angiography in suspected cases.

Magnetic resonance imaging (MRI) examination

Magnetic resonance imaging is one of the main pillars of our diagnostic programme. We are equipped with four MRI instruments, two with an external magnetic field strength of 1,5 Tesla, two with a field strength of 3 Tesla. We perform all types of MRI examinations, with the exception of fetal MRI. In addition to basic diagnostics, advanced MRI methods are still routinely used on MRI devices, namely MRI spectroscopic examination using SVS and CSI techniques, diffusion imaging, diffusion tensor imaging for white matter tractography. Functional MR BOLD imaging for pre-operative planning, neuronavigation and deep brain stimulation is quite routine; beyond clinical routine use, research using advanced MR techniques is ongoing, with a focus on quantification of scalar MR parameters with prestigious publications and active participation in local and international congresses in Europe and overseas. In recent years, MRI research has focused, among other things, on patients with cerebral glioblastoma, where quantification of scalar diffusion tensor and proton relaxation times appears to be a promising predictor of disease progression.

For several years now, examination by perioperative MRI has been performed on a regular basis, using the equipment installed in the neurosurgery operating room. Our hospital belongs to the very few in the Czech Republic which are able to perform such examinations. This significantly increases the radical nature of neurosurgery interventions and patient comfort.

The cardiac MRI programme continues to evolve significantly, already including phase contrast sequences as standard to image and quantify flow, as well as the aforementioned mapping. We expect a further increase in the number of patients with congenital and acquired heart disease. Thanks to the new software, we have significantly improved the speed and accuracy of quantification of the evaluated hearts and large vessels.

The MR department has traditionally been involved in research tasks supported by both internal grants and grants from the Agency for Health Research (AHR).

Mammography

Na Homolce Hospital is part of a network of accredited screening centres. It is equipped with a Planned Nuance Clarity mammography machine with direct digitalization and tomosynthesis capability. Every mammography examination undergoes a second reading. In addition to mammography, we perform sonographic examinations, both as part of screening and diagnostic. We perform biopsies and marking of lesions under ultrasound. Patients with unclear mammography and ultrasound findings are referred for an MRI breast examination in indicated cases, which are also performed in the Department.

All radioscopic image documentation is digitally stored in the hospital's information system and is immediately available to physicians. All operations of the Department of Radiodiagnostics have been fully digitalized, i.e. no films have been used since 2009. The hospital also uses a well-proven ePACS system, interconnecting imaging records of most hospitals in the country.

Since 2011, the Department has been using only electronic request forms on a regular basis and external request forms are also transferred to electronic format. The system of electronic request forms for all types of radiodiagnostic examinations has been in use in the hospital for several years now.

Operational data

Technical equipment

- Angiography unit: 1X Artis Q biplane, 1x Siemens Axiom Artis biplane
- CT unit: 1x Siemens Somatom Force, 1x Siemens Somatom Definition AS Plus
- MRI unit: 1x Magnetom Avanto 1.5 T, 1x Magnetom Vida 3 T, 1x Siemens Skyra 3 T, 1x GE Signa HDx 1.5 T (neurosurgery rooms)
- Ultrasound unit: 1x Toshiba Aplio, 1x GE Logiq E10R2, 1x GE Logiq E9, 1x Siemens Acuson Juniper, 1x Samsung RS85
- Mammography unit: 1x Planmed Nuance Clarity
- Basic equipment: 1 fluoroscopic and 2 fluorographic units, mobile X-ray equipment, OPG machine, PACS workstations, scanners, printers, data archives

Basic staff data

Number of physicians	30
Number of radiology assistants	31
Number of general nursing staff	10
Number of administrative staff	9
Number of auxiliary medical staff	2

Specialised intervention and treatment procedures

PTA (with or without stent implantation)	481 PTA, 127 stents
Endovascular treatment of cerebral aneurysms (coils, stents)	38
Recanalization of cerebral arteries in acute stroke	133
PTA/stent of extracranial brain-supplying arteries	56
PTA/stent of intracranial brain-supplying arteries	9
Embolisation in neurological area (cerebral, spinal AVM)	1
Tumour embolisation	10
Stent grafts	82
CT guided intervention in total	2,853
of which: targeted nerve root and facet injections	2,396
vertebroplasty + kyphoplasty	206
radiofrequency ablation	17
CT guided biopsies and drainages	234

Overview of selected radiodiagnostic examinations

Computed tomography	15,672
Magnetic resonance imaging	14,125
Angiographies	1,364
Ultrasound examinations	14,076
Mammography	11,825
of which screening	10,260
Ultrasound examination within mamma diagnostics	2,252
Sentinel node biopsy	155
Fluorography, fluoroscopy + dental X-ray	34,030
Total number of radiodiagnostic examinations	97,437

Plans for 2023

- Application of modern diagnostic procedures on the new Vida 3 Tesla MRI machine - e.g. MR fingerprinting.
- Application of other modern CT methods on the new Somatom Force machine.
- Continued active participation in the mammography screening and early lung cancer detection programme.
- Preparing for future prostate cancer screening with magnetic resonance imaging.
- The Department will actively participate in the planning and implementation of the new NIS and PACS systems for the hospital and interconnection with other workplaces.
- The Department will actively support the hospital's cyber security.
- The Department will continue to develop diagnostic, interventional and research activities.

Department of Nuclear Medicine - PET Centre

Head of Department, Assoc. Prof. Otakar Bělohlávek, MD, Ph.D.

Activities of the Department

- PET/CT diagnostics
- scintigraphic imaging including SPECT

Organisational units of the Department

- Nuclear Medicine outpatient unit
- Radiopharmaceutical laboratory

Basic data

The Department provides complementary services within the hospital, exclusively to outpatients.

Staff (as of 31 December 2023)

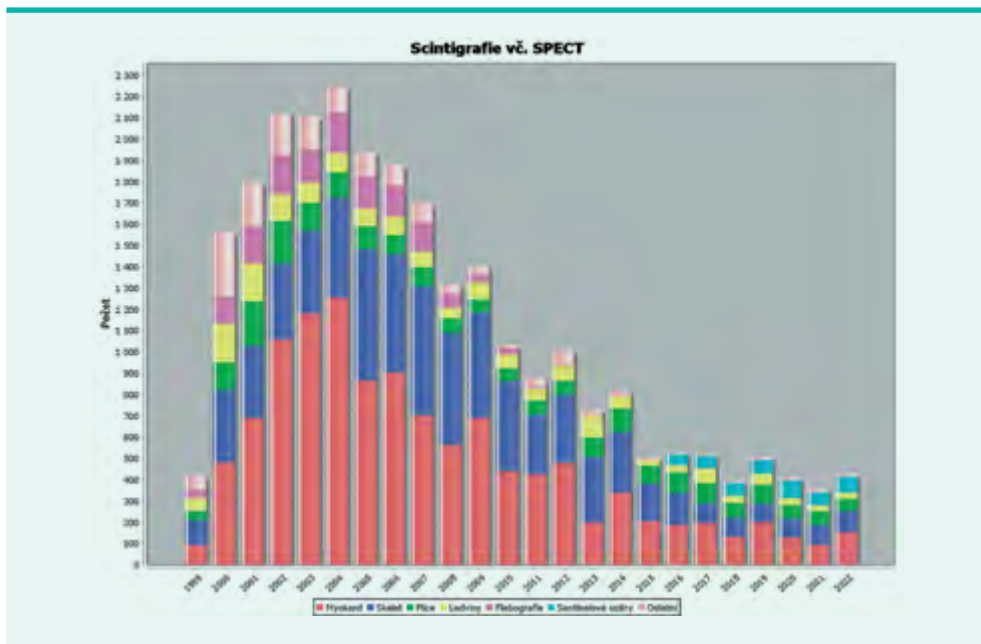
Position	Number of persons	No. of jobs
Assistant (technical-administrative employ-ee)	3	3,0
Pharmaceutical assistant	1	overtime work of an employee of the Department of Clinical Bio-chemistry, Haematology and Im-munology
Physician	10	9,0
Specialist laboratory technician, prepara-tion of medicines	1	Overtime work of an employee of the Department of Clinical Bio-chemistry, Haematology and Im-munology
Radiological assistant	9	9,0
Orderly	1	1,0
General nurse	4	4,0

The services of the radiological physicist are provided by the Department of Medical Physics.

Performance overview

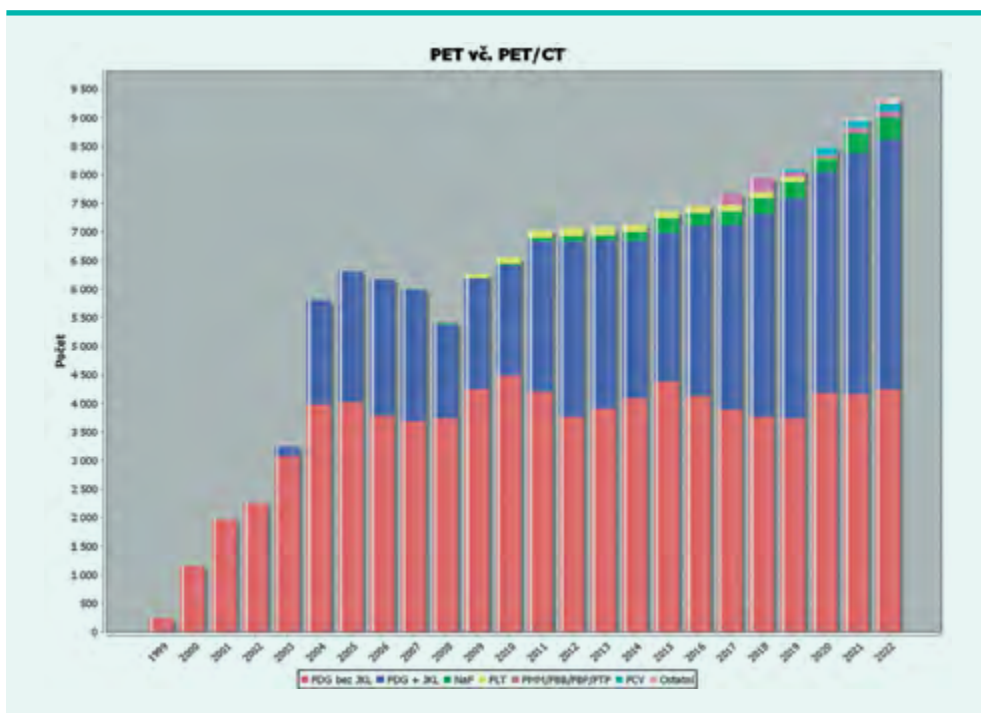
Scintigrafie

Number of examinations: 425 (increase by 18,1% compared to the previous year). All examinations are performed using a dual-detector camera Siemens E. CAM.



Positron emission tomography

Number of examinations: 9,340 (an increase of 3,9% compared to the previous year). All examinations were performed using state-of-the-art hybrid Siemens Biograph PET/CT scanners.



Activity evaluation

- During the first quarter of 2022, the operation of the newly installed high-performance PET/CT scanner was stabilized, which, combined with the stabilization of the healthcare system after the Covid-19 pandemic, allowed the facility to reach full capacity.
- PET/CT diagnostics managed to increase its already exceptionally high productivity by almost 4% year-on-year and again managed to slightly surpass the historical high of the previous year, with 9,340 examinations performed. Thanks to the good availability of the radiopharmaceutical fluorocholine from domestic production, the number of PET/CT examinations for prostate cancer in indications not covered by fluciclovine has increased 2,5 times and the examination of parathyroid adenoma has been introduced.
- In the field of conventional scintigraphic diagnostics, the anti-epidemic restriction on high-risk ergonomic examinations was relaxed, so that the number of myocardial perfusion scintigraphies increased by 63% year-on-year. The number of pre-operative sentinel node examinations increased by 15% due to the strengthening of the breast cancer surgery programme at NHH.
- Since September, the operation of the Department has been significantly hampered by the noisy works accompanying the reconstruction and extension of the building for the upcoming installation of the PET/MRI scanner. In connection with this, part of the Department was cleared out and the operation was carried out in cramped conditions.
- The staffing situation in the Department was stable; leaving one radiology assistant and a technical and administrative employee to the commercial sector and retiring a general nurse was compensated by the recruitment of new staff. An additional radiology assistant has been recruited since September to create space for secondment of radiology assistants for placements prior to the launch of PET/MRI scanner without negatively impacting on existing PET/CT production.
- In the past year, a PET/MRI scanner and a $^{68}\text{Ge}/^{68}\text{Ga}$ phantom for PET/CT were successfully tendered, and tenders were held for the supply of the radiopharmaceuticals flurocholine and flutemetamol.
- The syngo.via evaluation system has been upgraded and the number of licences for parallel work has been expanded by transferring licences from decommissioned depreciated workstations.
- The imaging system of the PET centre was finally connected to the new MariePACS hospital-wide archiving system.
- The share of the tendered items was 99,5% of the total financial volume of direct purchases at the Department of Nuclear Medicine; a negligible 0,5% of the remaining part consisted of price-regulated radiopharmaceuticals for scintigraphy that are unique on the market.
- The QuaMan radiology information system was partly integrated into the Hood hospital system. However, the planned transfer of its functionality to the Hood system has not yet been started due to capacity reasons on the ICT side.
- In accordance with the set quality indicators, patient and referring physician satisfaction surveys were conducted over a three-year period with results indicating a long-term stable very high level of satisfaction with the services provided.
- The Department has successfully passed the recertification audit of the quality management system according to ISO 9001:2015 and as part of the hospital followed the SAK accreditation standards. The inspection by the State Office for Nuclear Safety did not find any violation of legal regulations.

Educational and other specialised activities

- Study visits for a number of experts are organised in the Department and consultation services are provided as part of the model project of the International Atomic Energy Agency (AIEA).
- Regular practical training of radiological assistants for the Faculty of Biomedical Engineering CTU in Kladno takes place in the Department.
- 106 examinations were performed for 13 different clinical trials and several additional studies were contracted.

Development perspectives for 2023

- The plan is to make use of all technologies installed in the Department in the scope defined by the reimbursements received from healthcare insurance companies. In addition to this assignment, examinations for clinical trials will continue. Emphasis will be put on the quality and efficiency of the services provided.
- In the first half of the year, construction work on the reconstruction and extension of the building should be completed, and a new PET/MRI scanner should be installed and put into operation.
- A three-week shutdown is planned for the end of July and the beginning of August to replace windows as part of the building's insulation.
- Tenders for suppliers of radionuclide sources and FDG radiopharmaceuticals are planned.
- One radiology assistant is planned to be recruited and, in cooperation with the Department of Radiology, two medical specialists in MR diagnostics are to be recruited.
- We expect to continue the integration of the QuaMan system into the new Hood hospital system and, depending on the capacity of ICT, to start the gradual transfer of its functionality to Hood.

Department of Clinical Biochemistry, Haematology and Immunology

Head of Department, Assoc. Prof. Miroslav Průcha, MD, Ph.D.

Sections of the Department

- Biochemistry
- IA Laboratory
- Haematology
- Blood bank
- Immunology
- Laboratory of Molecular Diagnostics

Staff (as of 31/12/2022)

(incl. part-time and contracts for work)

Number of physicians	9
Number of university graduates – paramedical staff	10
Number of medical staff	
Laboratory technicians	32
Nursing staff	8
Orderlies	7
Number of other staff	4
Total number of employees	70

Activities of the Department

- The Department of Clinical Biochemistry, Haematology and Immunology performs routine and specialised examinations of laboratory parameters within Na Homolce Hospital and for contracted medical facilities in the following fields: clinical biochemistry and immunoassay, clinical haematology and blood transfusion service, clinical immunology and allergology, molecular genetic diagnostics and clinical pharmacology (including pharmacokinetic interpretation of measured drug concentrations). Collection of material from contracted healthcare facilities is secured.
- In critically ill patients, examination of selected parameters is performed directly at the bedside (POCT – point of care testing) and CRP examination in the company physician's surgery.
- The blood bank ensures the supply of blood and blood derivatives to hospital clinical departments.
- The laboratory participates in clinical research projects.
- Department of Clinical Biochemistry, Haematology and Immunology participates with great success in the control cycles of the External quality assessment programme.
- The laboratory obtained accreditation by Český institut pro akreditaci, o. p. s., in accordance with ČSN EN ISO 15189:2013.
- The physicians and university staff from the Department of Clinical Biochemistry, Haematology and Immunology provide advisory and consulting services in the relevant fields.
- The Department ensures the activities of the outpatient unit for disorders of lipid metabolism, haematological outpatient unit and the outpatient unit of immunology and allergology.

Changes in 2022

- In April 2022, a contract was signed with Beckman Coulter following the outcome of the tender for a new automated analytical line (AAS). According to the concluded contract, the time for installation and commissioning of the AAS was within 6 months of signing. In June 2022, the methods of the biochemistry section were transferred to biochemical and immunochemical analysers in stand-alone mode. In October 2022, an automatic line with a conveyor, an infeed and outfeed module and a refrigerated warehouse was put into operation. After verification of the functionality of the whole system in routine operation, elimination of initial deficiencies and checking the compliance with the response time of statim samples, the transfer of methods from the IA laboratory to the immunochemical modules in the AAS will follow in January 2023. As the AAS performs testing of accredited methods, an emergency surveillance visit to the Biochemistry and IA section is scheduled for March 2023 to assess and re-accredit these methods.
- At the end of 2022, the employment of 4 orderlies in the section of material receipt was terminated. A decision was made to replace their positions with qualified laboratory staff in order to comply with the legal requirements for sample review upon receipt into the laboratory, and also to reduce the error rate in sample receipt.
- New ACL TOP 550 CTS coagulometers were installed in the Department of Haematology as a result of a tender. In February 2023, an extraordinary surveillance visit of the Czech Accreditation Institute will take place to assess the accredited methods tested on these analysers.
- On 03/02/2022, an extraordinary surveillance visit to the Department of Immunology was conducted by the Czech Accreditation Institute on the basis of a reported change regarding the replacement of the Optilite analyser. A new Certificate of Accreditation including an updated Annex to the Certificate No. 125/2022 dated 10/03/2022 was issued.
- Accreditation from the Czech Accreditation Institute: In the period from January to December 2022, 9 internal audits out of 8 planned were performed at the Department of Clinical Biochemistry, Haematology and Immunology. One audit was included as an extraordinary audit, concerning compliance with the directive on the purchase and issue of goods in the individual sections of the Department of Clinical Biochemistry, Haematology and Immunology. From these audits, one card of non-conformities was issued, which was promptly resolved, and recommendations were defined, most of which have been accepted and fully or partially implemented in practice.
- In November 2022, the blood bank was inspected by the State Institute for Drug Control. Conclusion of the inspection: The inspected person meets the requirements of the GMP. The audit report included several audit findings and recommendations which were promptly acted upon. Some recommendations were addressed immediately, some will be incorporated into new versions of the Department of Clinical Biochemistry, Haematology and Immunology and KB documentation.
- In 2022, laboratories of the Department of Clinical Biochemistry, Haematology and Immunology participated in the External Quality Assessment Programme organised by SEKK and Instand. The Quality Assessment Programme covers the full range of methods applied for accreditation.
 - In the first half of 2022, the laboratory participated in the analysis of a total of 608 control samples with an overall success rate of 97,70%.
 - In the second half of 2022, the laboratory participated in the analysis of a total of 517 control samples with an overall success rate of 98,26%.
 - Unsuccessful results were addressed.
- Personnel changes in the Department of Clinical Biochemistry, Haematology and Immunology Management in 2022: There were no changes in the staffing of key functions in 2022. As of 01/01/2023, RNDr. Zdeněk Tokár has been appointed Deputy Quality Manager.
- During 2022, NHH departments were gradually transitioning to the new Hood hospital information system. The implementation of the new NIS has not yet been completed across the whole hospital. The original Labrequest requisition forms remain valid. The results of laboratory tests are traceable in the original and new NIS.

Biochemistry

- Changes in medical equipment, new methods
 - In April 2022, the tender VZ0111315 was closed: Reagents and consumables for biochemical and immunochemical tests, including free loan of a fully automated analytical line. The winner was Beckman Coulter, which began installing DxC 700 AU biochemical analysers and Dxl 800 immunochemical analysers.
 - Verification of the methods transferred from the Atellica line was performed.
 - Routine operation on the DxC 700 AU and Dxl 800 analysers started in June 2022.
 - At the same time, the statim laboratory was being reconstructed and other components of the line were being installed. After training of all staff, the fully automated analytical line was put into routine operation in October 2022.
 - Currently, the middleware of the line (Remisol) is being further adjusted according to the Department of Clinical Biochemistry, Haematology and Immunology workflow with the aim of shortening the TAT of statim samples.
 - In August 2022, a new Agilent chromatography setup was installed to determine antiepileptic drugs, antiarrhythmics and vitamin B6. None of the methods are accredited.
 - In November 2022, the Tosoh G7 analyser (Medesa) was replaced with a new Adams HA-8180V analyser (Medista). The change concerns the HbA1c method (glycated haemoglobin). The method is not accredited.
 - POCT: no changes in 2022.
- Staffing changes in the management
 - No changes.

IA Laboratory

- Changes in medical equipment, new methods
 - Since June 2022, PIGF and AFP testing has been introduced as part of the first and second trimester screening. The tests are performed on the Kryptor analyser together with other markers of congenital developmental defect screening. The methods are not accredited.
- Staffing changes in the management
 - No changes.

Haematology

- Changes in medical equipment
 - Since September 2022, the newly tendered ACL TOP 550 CTS analysers have been in operation instead of the Star Max3.
 - 15/08/2022 - CENTRIC 250 centrifuge installed for the preparation of cytological slides.
 - 27/09/2022 - New microscope Leice DM 1000 with phase contrast and digital camera installed.
 - 20/07/2022 - New centrifuge for coagulation testing M-Diagnostic.
- Staffing changes in the management
 - No changes.

Immunology

- Changes in medical equipment, new methods
 - ELISA processor Analyser I-2P from Euroimmun (supplied by Dynex) installed in October 2022.
 - New Olympus BX43 fluorescence microscope installed in November 2022 (supplied by Evident). The original Olympus AX70 serves as a backup fluorescence microscope.
 - New methods: Gastro blot, anti-hepatic blot, diaminooxydase (ELISA).
- Staffing changes in the management
 - On 31/12/2022, Květoslava Pallová resigned from her position as the head laboratory technician.
 - As of 01/01/2023, Mgr. Jarmila Kempeová was appointed as the head laboratory technician

Blood bank

- Changes in medical equipment
 - 26/05/2022 - Thromboagitator with thermostat for storage of thromboconcentrates.
 - 20/07/2022 - New M-Diagnostic centrifuge.
 - 01/11/2022 - New freezer box LAF 700 for plasma storage.
- Staffing changes in the management
 - No changes.

Laboratory of Molecular Diagnostics

- Changes in medical equipment
 - HybriSpot12 (Vitro group) - loan.
- New methods introduced:
 - Detection of genetic material of Bordetella pertussis/parapertussis.
 - Detection of genetic material of Mycoplasma hominis, Ureaplasma urealyticum, Ureaplasma parvum.
 - Detection of genetic material of SARS-CoV-2, influenza A virus (H1N1, H3N2, H5N1), influenza B virus and respiratory syncytial virus A and B (EliGene).
 - Detection of antibiotic resistance markers by multiplex PCR and reverse hybridization.
 - Identification of pathogens causing acute respiratory infections by multiplex PCR and reverse hybridization.
- Staffing changes in the management
 - No changes.

Outlook for 2023

- Transfer selected IA laboratory methods to the new automated analytical line (I/2023).
- Prepare for scheduled CIA surveillance visits.
- Continue fulfilling research projects within research and science support at Na Homolce Hospital.
- Expand the diagnostic spectrum of examinations with an emphasis on molecular genetics.

Educational and other specialised activities

- Nationwide training and reference activities: Training centre of the subdepartment of the Institute for Further Training in Healthcare for clinical immunology and allergy; training centre of the Department of Clinical Biochemistry of the Institute for Further Training in Healthcare for automated urine sediment analysis systems; centre for further training in the field of hereditary metabolic disorders and lipid metabolism disorders; Ph.D. training centre; participation in the training provided at the Immunology Institute of the second Faculty of Medicine, Charles University.
- Membership in specialist societies: The Czech Medical Association of J. E. Purkyně, Czech Society of Clinical Biochemistry, Czech Society of Haematology, Czech Society for Blood Transfusion Medicine, Czech Society for Thrombosis and Haemostasis, Czech Society for Atherosclerosis, Czech Society for Allergy and Clinical Immunology, Czech Immunological Society, Czech Paediatric Society, European Atherosclerotic Society, Immunocompromised Host Society, Society for Study of Inborn Errors of Metabolism, American Association of Clinical Chemistry, International Federation of Clinical Chemistry, International Society for Newborn Screening, European Society for Newborn Screening.
- Membership of editorial boards of peer-reviewed journals: Klinická biochemie a metabolismus (Prof. Josef Hyánek), Transfúze a hematologie dnes (Libuše Pagáčová, MD).

Department of Clinical Microbiology and Antibiotic Centre

Head of Department, Jan Kubele, MD

Staff

Physician with specialised competence in medical microbiology	3
Physician with specialised competence in infectious medicine	1 (until September 2022)
University professional in laboratory methods	1
Medical Laboratory Specialist	10
Medical Laboratory Technician	6
Orderly	3
Assistants	2

Clients

- Na Homolce Hospital
- External clients

Number of external healthcare facilities and surgeries

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of facilities	101	103	95	97	89	76	77	74	55	64	54	49

Laboratory diagnostics

Requests for microbiology examinations for Na Homolce Hospital

Year	Bacteriology	Serology	Number of serology methods performed	Genetic testing (extrahuman genome, COVID)	Smears from the environment	Total
2011	55,648	11,835		105	NA	67,586
2012	68,246	13,973		174	NA	82,393
2013	71,966	14,169		130	NA	86,265
2014	57,130	11,474		117	NA	68,721
2015	55,921	10,949		163	NA	67,033
2016	57,478	10,368		227	NA	68,070
2017	59,250	10,754		260	1,912	72,176
2018	59,358	13,031		273	2,586	75,248
2019	58,185	11,608		378	2,254	72,245
2020	50,823	10,885		13,720	1,947	77,375
2021	55,964	15,916		14,658	1,893	86,538
2022	60,705	11,957		45,565	22,904	1,947

Requests for microbiology examinations for external clients

Year	Bacteriology	Serology	Genetic testing (extrahuman genome, COVID)	Total
2011	17,804	3,409	0	21,213
2012	25,144	3,381	0	28,525
2013	23,218	3,261	0	26,479
2014	17,353	2,376	0	19,729
2015	15,738	2,447	0	18,185
2016	15,509	2,391	0	17,900
2017	13,012	2,216	0	15,228
2018	11,631	1,964	2	13,597
2019	10,819	1,684	7	12,510
2020	7,215	1,262	72	8,627
2021	6,190	1,792	35	8,017
2022	7,854	3,410	226	11,490

Requests for microbiological tests - total

Year	Bacteriology	Serology	Genetic testing (extrahuman genome, COVID)	Smears from the environment	Total
2011	73,453	15,257	105	NA	88,710
2012	93,396	17,373	174	NA	110,769
2013	95,189	17,451	130	NA	112,640
2014	74,502	13,935	117	NA	88,437
2015	71,659	13,403	163	NA	85,062
2016	72,994	12,770	227	NA	85,764
2017	72,263	12,772	260	1,912	87,144
2018	71,010	15,024	275	2,586	88,620
2019	69,382	13,292	385	2,254	84,928
2020	58,038	12,147	13,792	1,947	85,924
2021	62,154	17,708	14,693	1,893	96,448
2022	68,557	15,367	22,904	1,947	108,775

Antibiotic Centre

Consultations provided to inpatients of Na Homolce Hospital

Year	Number of consultations	Consultation at the bed / week (Ø selected ICU 3 times a week)	Number of patients consulted (total number)	Average number of consultations per patient
2011	8,837	49	2,266	3,9
2012	9,280	51	2,782	3,4
2013	10,021	55	3,004	3,4
2014	10,215	54	2,478	4,1
2015	10,599	54	2,654	4,0

2016	11,388	58	2,798	4,1
2017	10,885	55	2,879	3,8
2018	11,027	58	2,971	3,7
2019	11,038	56	3,146	3,5
2020	10,608	57	2,782	3,8
2021	10,113	64	2,659	3,8
2022	9,590	73	2,490	3,9

Public activities

- **National Reference Centre for Healthcare Associated Infections of the National Institute of Health:** the Department cooperates with the centre and plans to be a reference point for the antibiotic policy components of the hospital, especially surveillance of nosocomial infections.
- **Working group for antibiotic resistance monitoring:** the Department is part of the network of antibiotic resistance monitoring laboratories in the Czech Republic.
- **National Reference Laboratories of the NIPH:** the Department cooperates and participates in national surveillance.

Detailed information on activities and services of the Department of Clinical Microbiology and Antibiotic Centre

Laboratory diagnostics

- During 2022, with the ending of the Covid-19 pandemic and the war in Ukraine, the new Laboratory Information System (LIS) was further implemented and user-edited in collaboration with the IT Department and the follow-up to the NIS (Hood) implementation. Furthermore, the cooperation with the Department of Medical Genetics was deepened, including the recording of results in the new LIS.
- Improvement and development of LIS enables more effective use of data to assess trends and indicative behaviour in NHH. The aim is to improve quality, standardization and process control. Early identification of MALDI TOF and detection of resistance phenotypes can gradually improve and increase the effectiveness of antibiotic therapy for serious conditions. Thanks to the extended standard working hours on weekdays (until 6 pm) and the 24-hour telephone consultation service, the attending physician can receive essential information on patient therapy and infection prevention and control.
- Chromogenic agars have been introduced for earlier diagnosis and discrimination of agents in mixed culture findings.
- The diagnosis of respiratory diseases was further expanded with the addition of a respiratory agent detection panel and collaboration with a specialised mycology laboratory, which became the National Reference Laboratory for Antifungals.
- In collaboration with colleagues from NHH, an analysis of the indications for LRT examinations was carried out and the preparation of standardization and clear identification of the examination of the Clinical microbiology and antibiotic surveillance offer was started.
- In collaboration with the Infection Control Team, a comprehensive screening of vancomycin-resistant enterococci (VRE) and carbapenem-resistant gram-negative rods (CRE) was set up, including improved identification of carbapenemase-producing enterobacteria (CPE). As part of the rapid screening, direct PCR diagnostics of resistance genotypes was introduced to enable efficient early isolation of patients with epidemiologically high-risk resistance phenotypes. Screening for methicillin-resistant staphylococci (MRSA) was improved. Screening was introduced during the migration wave from Ukraine.
- The Department of Clinical Microbiology and Antibiotic Centre in collaboration with nurses for infection control, ensures the pre-analytical phase testing for SARS-CoV 2 and other genomic testing. In cooperation with the Molecular Genetics Laboratory, we perform the interpretation and subsequent distribution of the results.

- The new analyser was introduced for comprehensive serological diagnostics of EBV, CMV and measles antibodies. Testing for toxoplasmosis and rubella is in preparation.

Antibiotic Centre

- The number of consultations and patients consulted in 2021 was lower compared to the previous year, mainly due to a reduction in the prophylaxis consultation agenda following the introduction of the recommended procedures. Furthermore, the number of consultations in intensive care patients increased, and mixed and complicated infections were dealt with more frequently. The consulting service is also provided to external clients.
- The procedures of antibiotic prophylaxis in invasive cardiology were revised.
- As a result of the pandemic and the war in Ukraine, cases of multidrug-resistant pathogens, particularly carbapenem-resistant Enterobacteriaceae and vancomycin-resistant enterococci, had to be addressed. In collaboration with the Department of Hospital Pharmacy, unavailable reserve drugs were requested and the positive ATB list was updated.
- No significant epidemiological changes in the resistance of infectious agents arising in NHH were observed. The exception is the occurrence of vancomycin-resistant enterococci (VRE), where the number of colonised patients continued to increase compared to previous years. Most of these patients were imported from other health care facilities or from a community service centre. An analysis of suspected nosocomial transmissions in the NIPH was performed.
- Close collaboration with the Department of Clinical Pharmacy was supported by individualization and monitoring of ATB therapy. Rules for the use of reserve ATBs registered in the Czech Republic (fidaxomicin, ceftazidime/avibactam, fosfomicin and daptomycin) in the treatment of complicated infections were set. Preparation of recommendations for indications of betalactam ATBs was started.

Infection prevention and control

- In 2022, the hospital dealt with the consequences of the Covid-19 pandemic, including a wave of community viral illnesses and a year-end flu epidemic. Working with the Infection Control Team nurses, an expanded agenda of isolation and quarantine measures for NHH patients and staff was part of the process.
- Expert support is continuously provided for the pandemic and Infection Control Team meetings by monitoring the epidemiological situation, respiratory viral infections season and other community agents. Procedures associated with imported disease infections (e.g. diphtheria) have been updated.
- In 2022, there was an increased overall incidence of nosocomial bloodstream infections compared to 2015–2019. Compared to the peak years of the Covid-19 pandemic, there was a decline. The trend is further below 2 cases per 1,000 treatment days.
- The assessment of trends in each category is subject to ongoing analysis using the same methodology. Trends are regularly reported by the Infection Control Team to the appropriate departments and appropriate measures are taken.
- The number of primary catheter-related nosocomial infections of the bloodstream continues to increase, with secondary infections showing this trend, particularly in the segment of surgical site infections. This is partly related to expanded surgery and a higher number of higher-risk procedures in the Department of General Surgery.
- The number of patients colonised or infected by MRSA decreased compared to the previous year, the number of MRSA transmissions during admission at Na Homolce Hospital also decreased and is generally low. The number of infections caused by *Clostridioides difficile* was stable and dominated by imported cases. The incidence of intercepted colonization or infection caused by CPE is gradually increasing in line with the national trend, but continues to be sporadic in NHH. This is a testament to the quality implementation of infection control, nursing and barrier care processes.

Operational and economic parameters

- A certified infectologist left in 2022, but we managed to negotiate an agreement to consult. The assistant positions were reorganised and plans are underway to strengthen the position of laboratory diagnostics biologist. The aim is also to fill the position of senior physician in the field of infection prevention and control.

- The implementation of the LIS was accompanied by a gradual revision of reporting and the possibility of better control of the allocated funds. Progressive tenders further reduce costs.
- The audits and standardization of indications will enable a more efficient offer of examinations provided.

Certification and accreditation

- The Department received accreditation under the requirements of the ČSN EN ISO 15189:2013 standard and holds an accreditation certificate for examinations in the field of clinical microbiology.

External activities

- The Department cooperates with the National Reference Centre for Infections associated with health-care within the National Institute of Public Health (National Reference Centre for Healthcare-Associated Infections, National Institute of Public Health, NRC HAI NIPH). In 2022, this included collaboration on the development of the planned European Point Prevalence Study (PPS), recommended infection prevention and control practices, and with the local WHO office and national recommendations for surveillance of nosocomial bloodstream infections. The staff of the Department participates actively in professional courses and expert groups of the European Centre for Disease Control and Prevention (ECDC, ARHAI).
- The Department participates in the training of infection control nurses and physicians organised by the National Reference Centre for Healthcare-Associated Infections, National Institute of Public Health, NRC HAI NIPH.
- The Department cooperates with the National Reference Laboratory for Antibiotics of the National Institute of Public Health and in 2022 it again participated in the Respiratory Study.
- The Department participates in the EARS-Net (European Antimicrobial Resistance Surveillance Network) and HAI-Net (Healthcare-Associated Infections Surveillance Network) programmes, which are organised by the ECDC. The Department participates in the Euro-GASP programme, as well as in the surveillance programme for *Gonococcus* antimicrobial resistance organised by the European Centre for Disease Prevention and Control (ECDC, Stockholm).
- The Department cooperates with newly formed reference laboratories for mycotic agents.
- The Department cooperates with several higher vocational schools and a new cooperation with University of Chemistry and Technology Prague is prepared in providing teaching and supervising expert work.
- The staff of the Department is actively involved in lecturing activities of professional societies and teaching courses of undergraduate and postgraduate education.

Staff Publications for 2022

DLOUHÝ, Pavel, ŠTEFAN, Marek, CHRDLÉ, Aleš et al. COVID-19: Diagnostika, léčba a prevence. 1st edition Maxdorf: 2022, 272 p. ISBN: 978-80-7345-735-8.

NAAR, Jan, KRUGER, Andreas, VONDRAKOVA, Dagmar, JANOTKA, Marek, KUBELE, Jan, LISCHKE, Robert, KOLAROVA, Milena, NEUZIL, Petr, OSTADAL, Petr. A Total of 207 Days of Venovenous Extracorporeal Membrane Oxygenation Support for Severe COVID-19 Prior to Successful Lung Transplantation: A Case Report. *J Pers Med*. 2022 Dec 7;12(12):2028. doi: 10.3390/jpm12122028. PMID: 36556249; PMCID: PMC9787659.

KOHLBERG, Anke, MONNET, Dominique L., PLACHOURAS, Diamantis. *Candida auris* survey collaborative group; *Candida auris* survey collaborative group includes the following national experts. Increasing number of cases and outbreaks caused by *Candida auris* in the EU/EEA, 2020 to 2021. *Euro Surveill*. 2022 Nov; 27(46):2200846. doi: 10.2807/1560-7917.ES.2022.27.46.2200846. PMID: 36398575; PMCID: PMC9673237.

MIERESOVA, M., BALAZOVA, K., KUBELE, J., CERNY, D., HALACOVA, M. *Piperacillin/Tazobactam in critically ill morbidly obese patients: A case series: The first One-Centre experience with TDM*. *Clin Case Rep*. 2023 Mar 11;11(3):e7032. doi: 10.1002/ccr3.7032. PMID: 36919150; PMCID: PMC10008261.

Department of Pathology

Head of Department, Martin Syřůček, MD

Activities of the Department

The Department carries out all bioptic and cytological diagnostics within Na Homolce Hospital and, in cooperation with other laboratories providing complementary services, provides some bioptic and cytological diagnoses to selected private and state healthcare facilities in Prague. Recently, consultations (second reading) of diagnostically difficult neuropathological biopsies for the departments of pathology in the entire country have been provided. In addition, the Department is in charge of necropsy activity (autopsies), including organisational services when delivering bodies to the funeral service. The Department organises clinical pathology workshops with the analysis of selected autopsies and biopsies for individual clinical departments in order to increase the quality of the medical care provided.

Organisational units of the Department

The Department performs its activities as a whole and is not comprised of individual organisational units or cost centres. The newly reconstructed premises are, however, divided into a histology and cytology laboratory and a special methods laboratory (immunohistochemistry).

Basic data

Staff:

- 4 independently operating physicians working full-time and one physician with 0,5 FTE and one physician with 0,8 FTE
- 6 full-time and 2 part-time laboratory assistants
- 1 autopsy technician working full-time
- 2 secretaries (assistants) working full-time
- 1 quality manager in charge of the requirements of the Department in connection with JCI accreditation processes and ISO 15189

They include

The division and equipment of the Department of Pathology comply with the requirements of ISO 15189.

They include:

- administrative section with 6 offices for physicians, one office for the senior laboratory technician and quality manager, administrative offices, rooms for employees, changing rooms, storerooms for preparations and workshop rooms,
- the autopsy unit with a dissection room, preparation rooms and cooling equipment with 20 units for the deceased (these premises are separated by a sanitary filter),
- laboratory premises (also separated by a sanitary filter) with 6 rooms – histology laboratory, cytology laboratory, special methods laboratory, laboratory for cutting materials fixed in formol-saline, laboratory for cutting materials using microtomes, and a cytology screening room.

Performance overview

Biopsy diagnostics

	2009	2011	2012	2014	2015	2016	2017	2019	2020	2021	2022
Number of slides	58,429	61,631	65,890	63,972	65,489	61,401	64,155	62,244	57,366	57,415	55,993

Cytological diagnostics

	2009	2012	2014	2015	2016	2017	2019	2020	2021	2022
Number of examinations	2,738	2,205	1,993	1,992	2,249	2,152	2,155	2,091	1,687	2,287
Number of slides	6,214	4,932	4,365	4,392	5,191	4,589	4,044	4,158	2,596	2,688
BAL (bronchoalveolar lavage)	187	162	121	107	114	123	200	174	137	144

In 2022, the number of biopsy examinations remains almost at the same level, while the number of cytological examinations increased significantly compared to previous years. In 2022, the Department laboratory increased the number of immunohistochemistry examinations, due to the complicated diagnostics of the tested samples and the necessity to increase the accuracy of tumour lesion classification.

Autopsy activities

	2009	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of deceased	270	225	196	233	226	239	240	240	274	225
Number of autopsies	154	123	122	136	121	122	121	93	118	84

The autopsy rate for 2022 amounts to 38%.

Workshops

In 2022, the physicians of the Department attended 123 clinicopathologic conferences, where 11 autopsies and 908 biopsy cases were discussed.

	2005	2009	2015	2016	2017	2018	2019	2020	2021	2022
Number of workshops	127	85	95	94	114	139	126	120	141	123
Number of autopsy cases	65	20	21	19	26	18	17	12	17	11
Number of biopsy cases	377	684	753	701	692	901	775	887	880	908

For many years, in addition to clinical and pathological workshops, we organise regular weekly multidisciplinary mammology workshops with the attendance of a surgeon, radiologist and oncologist, focused on the analysis of biopsy examinations based on the clinical picture, together with analysis of therapeutic and prognostic outlooks. Workshops are also organised once a week or once every two weeks in cooperation with the Department of ENT and clinical and pathological oncology workshops with the Department of General Surgery take place once a week. Regularly once a week, the staff participate in neuro-oncological workshops with physicians from neurosciences, oncologists from the Motol University Hospital and physicians from the Department of Radiodiagnostics, to discuss all biopsy cases from the preceding period. Workshops with other specialisations are organised as needed, approximately twice a year, clinical pathological workshops together with the Department of Cardiac Surgery are organised once a month on a regular basis. These workshops are part of the further training programme of clinical departments, aimed at increasing the quality required under the accreditation standards.

Significant changes and events

- External quality assessment: Since 2011, the pathology laboratory has participated in external quality assessment in cooperation with the contractual company, SEKK spol. s.r.o. The Department of Pathology obtained the certificate. Further assessment is performed by means of sent consultations and interlaboratory comparisons.
- As part of the Centre for Neuro-Oncology section of the Czech Society for Oncology of the Czech Medical Association of J. E. Purkyně, the Department performs biobanking of brain tumours for research purposes.
- The Department of Pathology has the accreditation for the teaching programme of medical specialities in the field of pathology from the Czech Ministry of Health.
- The Department of Pathology considers the transition of the normal operations of the Department to the new information system in both biopsy and necropsy operations to be a relatively significant change.

Development perspectives for 2023

- We will maintain and further improve the standard of bioptic diagnostics and clinical and pathological workshops.
- The range of immunohistochemical antibodies has been extended according to the needs of individual hospital departments. We perform most of the immunohistochemical staining on a semi-automated device, which leads to improved and faster diagnosis of both tumour and non-tumour lesions.
- ČIA ISO accreditation: in February 2023, the Czech Accreditation Institute will conduct a monitoring visit as part of the extension of the accreditation, which is necessary to ensure the proper operation of the Department of Pathology.
- SAK accreditation: the Department of Pathology as part of the Na Homolce Hospital will participate in the SAK accreditation procedure in January 2023.
- The Department of Pathology of NHH participates in a number of grant projects.

Section for Nursing Care

The Section for Nursing Care focuses on the methodical management and professional management of nursing care. It includes the quality management department, nutritional therapy department, central sterilization, health and social care, documentation department, hospital hygiene and hospital chaplains.

Even in 2022, our hospital was ready for Covid-19, providing vaccinations to staff and the public. The Department of Infection Control played an important role in the epidemiological process by continuously coordinating the testing of patients and staff, ensuring the distribution of PPE and overseeing compliance with the hospital's hygiene regimes.

The priority of the nursing team is to provide effective, quality nursing and medical care and ensure patient safety.

Projects of 2022

- Cooperation on the development and implementation of a new hospital information system HooD, which includes electronic nursing documentation. Thanks to the new information system, we not only meet the requirements of national standards and legislation, but we can better obtain, process and evaluate data that serve as quality indicators for nursing research, statistics, etc.
- Cooperation with the Third Faculty of Medicine Charles University and other medical schools. We organise practical training of students with the aim of stabilizing the paramedical staff in the long term. For the quality preparation of students, we use the Teaching and Training Centre, which we have equipped with additional tools for training nursing performances during the year. The students' professional practice then continues in the departments where they are professionally guided by our trained mentors.
- Open days for medical school students.
- Support for education and qualification improvement of medical staff, introduction and improvement of new nursing procedures leading to improvement of the nursing process.
- Training events organised within our hospital:
 - Pharmacology in practice course for paramedical staff, where the issue of safe and appropriate drug administration was presented by Milada Halačová, PharmD, Ph.D., Head of the Department of Clinical Pharmacy, and Assoc. Prof. Petr Čáp, MD, Ph.D., Head of the polyclinics and Head of the Centre for Allergy and Clinical Immunology (CAKI).
 - Course for department heads Managerial skills for NHH nurse managers.
 - Pilot course on the attitude of a health professional towards an aggressive patient.

An important programme in our hospital is also the palliative care programme which is provided by the palliative care team. It is active across the hospital and collaboration with individual departments is increasingly broadening and deepening, bringing a new direction in medical and nursing care. Professional courses on legal and ethical issues in palliative care have been and continue to be held for physicians and nurses. Our goal is that all patients receive care that reflects their bio-psycho-social and spiritual needs.

We do not forget about the important part of the patient treatment in the field of nutritional therapy. Our hospital improves dietary meals thanks to the creativity of the nutrition team and great chefs. Our hospital food is often praised by patients.

We constantly strive to improve patient care, we motivate the paramedical staff not only through friendly communication, but also through employee bonuses, and we do not forget to thank them on the occasion of International Nurses' Day.

Our activities are also aimed at promoting public health, which is declared in the Health 2030 Strategic Framework and sets the direction for the development of health care in the Czech Republic for the next decade.

The thematic content of events for the public and our employees corresponds to this.

We organised events that focused, for example, on breast and prostate disease prevention, stroke prevention, Stop Decubitus and Hand Hygiene Day.

All of our steps and activities in nursing care are directed towards meeting nursing goals, maintaining quality standards and providing safe, quality care. In this spirit, we were preparing for the SAK accreditation audit in 2022.

Department of Biomedical Engineering

Head of Department, Miroslav Halíř, MSc.

Activities of the Department

The main task of the Department is to ensure the operation and servicing of medical equipment and measuring instruments at Na Homolce Hospital. Other activities include monitoring new trends in biomedicine and of technical documents for tenders for new medical device equipment. The Department also prepares applications to commission for the assessment of the deployment of medical instrument funds from the Czech Ministry of Health and applications for grants. The Department of Biomedical Engineering at Na Homolce Hospital is an accredited facility of the Czech Ministry of Health for postgraduate teaching of the Institute for Further Training in Healthcare, including specialisations in biomedical engineering in the Czech Republic. In 2022, the Department of Biomedical Engineering contributed significantly to the preparation of SAK accreditation (the Directive 05_SM_NNH_026 Medical Devices and In Vitro Diagnostic Medical Devices was updated).

Prevention and Maintenance Section

It provides preventive safety checks of medical equipment, as provided for by Act No. 89/2021 Coll., on Medical Devices and Act No. 268/2014 Coll., on In Vitro Diagnostic Medical Devices, as amended, as well as SAK standards. It carries out regular internal maintenance, ensures timely prevention and servicing by external equipment providers and keeps documentation on all medical devices. It also provides professional assistance in introduction of new medical technology, monitors progress in medical technology, provides navigation systems for neurosurgery and autotransfusion for vascular surgery. It also cooperates with clinical departments in the preparation of technical specifications for public contracts and checks the tender documentation and tenders for the Department of Procurement and Public Contracts. It takes over the gained medical equipment and provides instruction to the personnel operating the medical equipment.

Metrology Section

This section makes sure that the metrology standards at Na Homolce Hospital comply with Act No. 505/1990 Coll., on Metrology, as amended, and the related metrology regulations. The above legislation requirements are an essential part of the Metrology Order directive, which stipulates the responsibilities, rights and obligations of employees in the use of measuring instruments and metrology safety with regard to the accuracy and reliability of the measurements of all measuring instruments in all activities of the hospital. The Metrology Section carries out general maintenance and internal calibration of instruments measuring temperature, pressure, humidity and time and ensures the external calibration of etalons and working instruments measuring weight, length and time. It also organises external official verification of devices measuring temperature and weight and eye tonometers. The Authorized Metrology Centre is an essential part of the Metrology Section and provides official verification of the measuring instruments for indirect measurement of pressure - tonometers, within the scope of Decision No. 61/2000 and Authorisation Conditions, Ref. No. 930/00/20 of the Office for Standards, Metrology and Testing. The head of the section is Zdeněk Malý.

Changes / new events in the previous year

- Update of Directive 05_SM_NNH_026 Medical Devices and in Vitro Diagnostic Medical Devices.
- After leaving two employees of the Department of Preventive Service, intensive recruitment of new employees was underway. The Department was significantly involved in the implementation of investments from the IROP REACT-EU grant programme.

SCIENTIFIC AND RESEARCH ACTIVITIES OF THE HOSPITAL

Na Homolce Hospital (NHH) has fulfilled the definition of an organisation for research and knowledge dissemination according to Commission Regulation (EU) No. 651/2014, Art. 2(83), and has been included on the list of research organisations kept by the Ministry of Education, Youth and Sport on the basis of Section 33a of Act No. 130/2002 Coll., on Research and Development Support.

Research and development at Na Homolce Hospital are supported by means of combined financing – institutional support from the Czech Ministry of Health (MZ ČR) and targeted support grants which are carried out both by individual departments of the hospital and in cooperation with a number of excellent research facilities across the entire country. The majority of research teams have also been involved in clinical studies over a long period of time, with the Cardiac Centre having the largest share in these studies. Administrative support for grant projects and clinical studies is provided by the Department of Science and Research, which also includes the Medical Library.

Grant projects

In 2022, Na Homolce Hospital managed a total of 54 grant projects, of which 47 were supported by the institutional support of the Czech Ministry of Health, and 7 targeted support grants were supported by the Agency for Medical Research of the Czech Ministry of Health.

Grants from the Czech Ministry of Health

- In 2022, the hospital received institutional support for the long-term conceptual development of the research organisation, based on the decision of the Czech Ministry of Health (Decision No. 1 RVO-NNH/2022-I advance payment and Decision No. 2 RVO-NNH/2022- II additional payment). The support was used and distributed based on the functional system of internal grants, their assessment by a specialised commission and approval by the Scientific Board and the hospital Director.
- Of the supported projects, there were 2 projects started in 2015, 3 research projects in 2016, 4 research projects in 2017, 3 research projects in 2018, 9 research projects started in 2019, 16 research projects in 2020, 3 research projects in 2021 and 7 new projects. Na Homolce Hospital again supported a large spectrum of research projects in order to maintain the plan of a broader research basis for the coming years which fully corresponds with the method of evaluation by research institutions used for providing grants.

Special-purpose grants of the Agency for Medical Research

Department	Project title	Allocated number	Grant provider (main beneficiary)
Radiodiagnostics	Detection of gadolinium retention dynamics in the brain after application of contrast agents by altering T1 and T2 relaxation times	NV18-04-00457	AZV MZ ČR
(NHH)	Detection of gadolinium retention dynamics in the brain after application of contrast agents by altering T1 and T2 relaxation times	NV18-04-00457	AZV MZ ČR (NNH)
Radiodiagnostics	Primary progressive aphasia – clinical, MRI and structural correlations. Prospective multicentre study	NV18-04-00346	AZV MZ ČR 1ST FACULTY OF MEDICINE CHARLES UNIVERSITY
Vascular Surgery	Application of amniotic membrane in the treatment of long-term non-healing wounds	NV18-08-00106	AZV MZ ČR

Department	Project title	Allocated number	Grant provider (main beneficiary)
of Stereotactic and Radiation Neurosurgery	Clinical, imaging and biological predictors of the effects of deep brain stimulation in Parkinson's disease	NV19-04-00233	AZV MZ ČR
Cardiology	Evaluation of the significance of right-to-left shunt in patients with PFO after suffered systemic embolism	NU20-02-00310	AZV MZ ČR (University Hospital Hradec Králové)
Neurosurgery	Strategies to specifically target the microenvironment of brain metastases for diagnosis and treatment	NU22-03-00318	AZV MZ ČR 1ST FACULTY OF MEDICINE CHARLES UNIVERSITY

Clinical studies

In 2022, a total of 109 active clinical studies/partial health services were recorded, of which 16 clinical studies were completed during 2022.

Number of studies performed in 2022 - by subject and department

Clinical studies	Medical de-vices	Medicines	Partial health services	Total number	
Cardiology	57	0	0	57	52 %
Cardiac surgery	2	0	0	2	2 %
Neurology	3	1	0	4	4 %
Oncology	0	2	0	2	2 %
Radiodiagnosics	2	0	4	6	5 %
Nuclear medicine / PET	0	0	35	35	32 %
Neurosurgery	1	1	0	2	2 %
Pharmacy	0	1	0	1	1 %
Department of Clinical Biochemistry, Haematology and Immunology	65	5	39	109	100 %
Internal medicine	0	1	0	1	1 %
Total	65	7	40	112	100 %

Performed Audits of Clinical Studies

In 2022, there were no audits of the clinical studies by the State Institute for Drug Control - SÚKL.

Summary

Basic breakdown of research projects in Na Homolce Hospital in 2022

Scientific project type	Subject	Number
Clinical studies	Medical supplies	65
	Medicines	5
	Partial health services for external researcher	39
Research grants	Institutional support (internal grants)	47
	Special purpose support (external grants)	7
Research projects - total		163

PUBLICATIONS IN 2022

Report on publication activity for 2022

As of 23. 02. 2023, the following is recorded for 2022:

- 138 papers (by 15,9%) less than in 2021)
- 119 presentations at conferences (by 32,2% more than in 2021)
- Total 257 entries (by 6,5% less than in 2021)

Of the 138 papers, 77 papers come from journals with impact factor and 44 papers are published in journals without impact factor. There are also 5 books, 9 book chapters, 1 dissertation and 2 articles in popular periodicals. Of the 119 conference presentations, 56 records relate to international congresses, 60 records relate to national conferences and 3 records relate to seminars.

Papers	number of records
Articles from Journals with IF	77
Articles from peer-reviewed journals without IF	44
Books	5
Chapters from books	9
Articles in popular periodicals	2
Dissertation works	1
Total	138

Appearances at conferences	number of records
International congresses	56
National/local conferences	60
Workshops	3
Total	119

The list of the most successful authors according to their score is given in Table No. 1. Table No. 2 shows the ranking of the most successful departments. Table No. 3 lists the impact papers:

Table No. 1: Ranking of the 10 most successful authors in 2022

Autor	Oddělení	Podíl
Krámská Lenka, doc. PhDr. Ph.D.	KPSY	6,96 %
Ošťádal Petr, prof. MUDr. Ph.D.	KAR	6,34 %
Rubáčková Popelová Jana, doc. MUDr. CSc.	KCH	5,60 %
Liščák Roman, doc. MUDr. CSc.	Stereotactic and radiation surgery	5,20 %
Živná Renáta, MUDr.	KCH	5,09 %
Neužil Petr, prof. MUDr. CSc. FESC	KAR	5,09 %
Keller Jiří, MUDr. Ph.D.	RAD	5,06 %
May Jaromír, MUDr. Ph.D.	Stereotactic and radiation surgery	3,77 %
Petrů Jan, MUDr.	KAR	3,60 %
Málek Filip, prof. MUDr. Ph.D. MBA	KAR	3,54 %

Table No. 2: Ranking of the 10 most successful departments in 2022

Department	Share
Cardiology	29,27 %
Cardiac surgery	18,49 %
Department of Stereotactic and Radiation Neurosurgery	11,54 %
Department of Radiodiagnosics	7,12 %
Clinical psychology	7,04 %
Neurology	6,50 %
Medical Physics	5,54 %
Department of Clinical Biochemistry and Haematology	3,81 %
Vascular surgery	3,19 %
Internal medicine	1,91 %

Table No. 3: In 2022, 77 papers in journals with impact factor were identified in the database

IF	Citace článku
44.867	OŠTÁDAL, P. - STEG, P. - POULOUIN, Y. - BHATT, D. - BITTNER, V. - CHUA, T. - DIAZ, R. - GOODMAN, S. - HUO, Y. - JUKEMA, J. - KARPOV, Y. - PORDY, R. - SCEMAMA, M. - SZAREK, M. - WHITE, H. a SCHWARTZ, G. Metabolic risk factors and effect of alirocumab on cardiovascular events after acute coronary syndrome: a post-hoc analysis of the ODYSSEY OUTCOMES randomised controlled trial. <i>Lancet Diabetes & Endocrinology</i> . 2022, 10(5), s. 330-340. ISSN 2213-8587.
41.376	MAŤOŠKA, V. New insights into the genetic etiology of Alzheimer's disease and related dementias. <i>Nature Genetics</i> . 2022, 54(4), s. 412-436. ISSN 1546-1718.
39.918	REDDY, V. - PETRŮ, J. - FUNASAKO, M. - KOPŘIVA, K. - HÁLA, P. - CHOVANEC, M. - JANOTKA, M. - KRÁLOVEC, Š. a NEUŽIL, P. Coronary Arterial Spasm During Pulsed Field Ablation to Treat Atrial Fibrillation. <i>Circulation</i> . 2022, 146(24), s. 1808-1819. ISSN 0009-7322.
39.918	KNOPS, R. - VAN DER STUIJT, W. - DELNOY, P. - BOERSMAN, L. - KUSCHYK, J. - EL-CHAMI, M. - BONNEMEIER, H. - BEHR, E. - BROUWER, T. - KÄÄB, S. - MITTAL, S. - QUAST, A. - SMEDING, L. - TIJSSEN, J. - BIJSTERVELD, N. - RICHTER, S. - BROUWER, M. - GROOT, D. - KOOIMAN, K. - LAMBIASE, P. - NEUŽIL, P. - VERNOOY, K. - ALINGS, M. - BETTS, T. - BRACKE, F. - BURKE, M. - DE JONG, J. - WRIGHT, D. - JANSEN, W. - WHINNETT, Z. - NORDBECK, P. - KNAUT, M. - PHILBERT, B. - VAN OPSTAL, J. - CHICOS, A. - ALLAART, C. - BORGER VAN DER BURG, A. - CLANCY, J. - DIZON, J. - MILLER, M. - NEMIROVSKY, D. - SURBER, R. - UPADHYAY, G. - WEISS, R. - WEGER, D. - WILDE, A. a OLDE NORDKAMP, L. Efficacy and Safety of Appropriate Shocks and Antitachycardia Pacing in Transvenous and Subcutaneous Implantable Defibrillators: Analysis of All Appropriate Therapy in the PRAETORIAN Trial. <i>Circulation</i> . 2022, 145(5), s. 321-329. ISSN 0009-7322.
39.918	KOČKOVÁ, R. - LINKOVÁ, H. - HLUBOCKÁ, Z. - MEDILEK, K. - TUNA, M. - VOJÁČEK, J. - SKALSKÝ, I. - ČERNÝ, Š. - MALÝ, J. - HLUBOCKÝ, J. - MIZUKAMI, T. - DE COLLE, C. a PĚNIČKA, M. Multiparametric Strategy to Predict Early Disease Decompensation in Asymptomatic Severe Aortic Regurgitation. <i>Circulation</i> . 2022, 12(15), s. 899-909. ISSN 0009-7322.
35.855	KNOPS, R. - PEPPLINKHUIZEN, S. - DELNOY, P. - BOERSMAN, L. - KUSCHYK, J. - EL-CHAMI, M. - BONNEMEIER, H. - BEHR, E. - BROUWER, T. - KÄÄB, S. - MITTAL, S. - QUAST, A. - VAN DER STUIJT, W. - SMEDING, L. - DE VELD, J. - TIJSSEN, J. - BIJSTERVELD, N. - RICHTER, S. - BROUWER, M. - GROOT, D. - KOOIMAN, K. - LAMBIASE, P. - NEUŽIL, P. - VERNOOY, K. - ALINGS, M. - BETTS, T. - BRACKE, F. - BURKE, M. - DE JONG, J. - WRIGHT, D. - JANSEN, W. - WHINNETT, Z. - NORDBECK, P. - KNAUT, M. - PHILBERT, B. - VAN OPSTAL, J. - CHICOS, A. - ALLAART, C. - BORGER VAN DER BURG, A. - DIZON, J. - MILLER, M. - NEMIROVSKY, D. - SURBER, R. - UPADHYAY, G. - WEISS, R. - WEGER, D. - WILDE, A. a OLDE NORDKAMP, L. Device-related complications in subcutaneous versus transvenous ICD: a secondary analysis of the PRAETORIAN trial. <i>European Heart Journal</i> . 2022, 43(47), s. 4872-4883. ISSN 0195-668X.
35.855	JASTRZEBSKI, M. - KIELBASA, G. - CANO, O. - CURILA, K. - HECKMAN, L. - DE POOTER, J. - CHOVANEC, M. - RADEMAKERS, L. - HUYBRECHTS, W. - GRIECO, D. - WHINNETT, Z. - TIMMER, S. - ELVAN, A. - STROS, P. - MOSKAL, P. - BURRI, H. - ZANON, F. a VERNOOY, K. Left bundle branch area pacing outcomes: the multicentre European MELOS study. <i>European Heart Journal</i> . 2022, 43(40), s. 4161-4173. ISSN 0195-668X.
35.855	LAMBIASE, P. - THEUNS, D. - MURGATROYD, F. - BARR, C. - ECKARDT, L. - NEUŽIL, P. - SCHOLTEN, M. - HOOD, M. - KUSCHYK, J. - BRISBEN, A. - CARTER, N. - STIVLAND, T. - KNOPS, R. a BOERSMAN, L. Subcutaneous implantable cardioverter-defibrillators: long-term results of the EFFORTLESS study. <i>European Heart Journal</i> . 2022, 43(21), s. 2037-2050. ISSN 0195-668X.

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27.203	OSMANČÍK, P. - HERMAN, D. - NEUŽIL, P. - HÁLA, P. - TÁBORSKÝ, M. - KALA, P. - POLOCZEK, M. - STASEK, J. - HAMAN, L. - BRANNY, M. - CHOVANČÍK, J. - ČERVINKA, P. - HOLÝ, F. - KOVÁRNÍK, T. - ZEMANEK, D. - HAVRÁNEK, Š. - VANČURA, V. - PEICHL, P. - TOUSEK, P. - LEKEŠOVÁ, V. - JARKOVSKÝ, J. - NOVÁČKOVÁ, M. - BENESOVA, K. - WIDIMSKÝ, J. a REDDY, V. 4-Year Outcomes After Left Atrial Appendage Closure Versus Nonwarfarin Oral Anticoagulation for Atrial Fibrillation. <i>Journal of the American College of Cardiology</i> . 2022, 79(1), s. 1-14. ISSN 0735-1097.
21.286	KUBELE, J. Increasing number of cases and outbreaks caused by <i>Candida auris</i> in the EU/EEA, 2020 to 2021. <i>Eurosurveillance</i> . 2022, 27(46), 6 s. ISSN 1560-7917.
13.654	KOVÁŘ, M. Global impact of the COVID-19 pandemic on subarachnoid haemorrhage hospitalisations, aneurysm treatment and in-hospital mortality: 1-year follow-up. <i>Journal of Neurology Neurosurgery and Psychiatry</i> . 2022, 93(10), s. 1028-1038. ISSN 0022-3050.
10.17	CHEN, C. - DING, D. - KUMAR, J. - KEARNS, K. - IRONSIDE, N. - YANG, H. - OGINO, A. - KANO, H. - OGINO, A. - LIŠČÁK, R. - MAY, J. - WILLIAMS, B. - GIGLIOTTI, M. - COCKROFT, K. - MCINERNEY, J. - SIMON, S. - LEE, C. a SHEEHAN, J. Hemorrhage and Recurrence of Obliterated Brain Arteriovenous Malformations Treated With Stereotactic Radiosurgery. <i>Stroke</i> . 2022, 53(8), s. 363-368. ISSN 0039-2499.
9.184	FILIP, P. - JECH, R. - FECIKOVA, A. - HAVRÁNKOVÁ, P. - RŮŽIČKA, F. - MUELLER, M. a URGOŠÍK, D. Restoration of functional network state towards more physiological condition as the correlate of clinical effects of pallidal deep brain stimulation in dystonia. <i>Brain Stimulation</i> . 2022, 15(5), s. 1269-1278. ISSN 1935-861X.
8.961	SMAHELOVÁ, J. - HAMSIKOVA, E. - LUDVIKOVA, V. - VYDROVA, J. - TRABOULSI, J. - VENCELEK, O. - LUKES, P. a TACHEZY, R. Outcomes After Human Papillomavirus Vaccination in Patients With Recurrent Respiratory Papillomatosis A Nonrandomized Clinical Trial. <i>JAMA Otolaryngology-Head & Neck Surgery</i> . 2022, 148(7), s. 654-661. ISSN 2168-6181.
8.8	TABATA, E. - ITOIGAWA, A. - KOINUMA, T. - TAYAMA, H. - KASHIMURA, A. - SAKAGUCHI, M. - MAŤOŠKA, V. - BAUER, P. a OYAMA, F. Noninsect-Based Diet Leads to Structural and Functional Changes of Acidic Chitinase in Carnivora. <i>Molecular Biology and Evolution</i> . 2022, 39(1), 12 s. ISSN 0737-4038.
8.013	KOWALCHUK, R. - NIRANJAN, A. - LEE, C. - YANG, H. - LIŠČÁK, R. - GUSEJNOVA, C. - TRIPATHI, M. - KUMAR, N. - PEKER, S. - SAMANCI, Y. - HESS, J. - CHIANG, V. - IORIO-MORIN, C. - MATHIEU, D. - PIKIS, S. - WEI, Z. - LUNSFORD, D. - TRIFILETTI, D. a SHEEHAN, J. Reirradiation With Stereotactic Radiosurgery After Local or Marginal Recurrence of Brain Metastases From Previous Radiosurgery. <i>International Journal of Radiation Oncology, Biology, Physics</i> . 2022, 112(3), s. 726-734. ISSN 0360-3016.
7.718	CANTILLON, D. - GAMBHIR, A. - BANKER, R. - RASHTIAN, M. - DOSHI, R. - BADIE, N. - BOOTH, D. - WEIQUN, Y. - NEE, P. - FISHLER, M. - LIGON, D. - NEUŽIL, P. a KNOPS, R. Wireless Communication Between Paired Leadless Pacemakers for Dual-Chamber Synchrony. <i>Circulation-Arrhythmia and Electrophysiology</i> . 2022, 15(7), s. 456-463. ISSN 1941-3149.
7.398	ANTONOVÁ, P. - ROHN, V. - CHALOUPECKÝ, V. - ŠIMKOVÁ, I. - KALDARAROVA, M. - ZEMAN, J. - RUBÁČKOVÁ POPELOVÁ, J. - HAVOVA, M. a JANOUŠEK, J. Predictors of mortality after atrial correction of transposition of the great arteries. <i>Heart</i> . 2022, 108(23), 7 s. ISSN 1355-6037.
7.398	ANTONOVÁ, P. - ROHN, V. - CHALOUPECKÝ, V. - ŠIMKOVÁ, I. - KALDARAROVA, M. - ZEMAN, J. - RUBÁČKOVÁ POPELOVÁ, J. - HAVOVA, M. a JANOUŠEK, J. Predictors of mortality after atrial correction of transposition of the great arteries. <i>Heart</i> . 2022, 108(23), s. 1881-1886. ISSN 1355-6037.

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6.779	RASHTIAN, M. - BANKER, R. - NEUŽIL, P. - BREEMAN, K. - NEE, P. - BADIE, N. - VICTORINE, K. - LIGON, D. - RIPPY, M. - ELDADAH, Z. - RIPPY, M. - DOSHI, R. - CANTILLON, D. a KNOPS, R. Preclinical safety and electrical performance of novel atrial leadless pacemaker with dual-helix fixation. <i>Heart Rhythm</i> . 2022, 19(5), s. 776-781. ISSN 1547-5271.
6.575	SANTACROCE, A. - TULEASCA, C. - LIŠČÁK, R. - MOTTI, E. - LINDQUIST, C. - RADATZ, M. - GATTERBAUER, B. - LIPPITZ, B. - MARTINEZ-ALVAREZ, R. - MARTINEZ-MORENO, N. - KAMP, M. - SKEIE, B. - SCHIPMANN, S. - LONGHI, M. - UNGER, F. - SABIN, I. - MINDERMANN, T. - BUNDSCHUH, O. - HORSTMANN, G. - VAN ECK, A. - WALIER, M. - BERRES, M. - NAKAMURA, M. - STEIGER, H. - HANGGI, D. - FORTMANN, T. - ALSOFY, S. - RÉGIS, J. a EWELT, C. Stereotactic Radiosurgery for Benign Cavernous Sinus Meningiomas: A Multicentre Study and Review of the Literature. <i>Cancers</i> . 2022, 14(16), 19 s. ISSN 2072-6694.
6.575	ISLIM, A. - MANTZIARIS, G. - PIKIS, S. - CHEN, C. - BUNEVICIUS, A. - PEKER, S. - SAMANCI, Y. - NABEEL, A. - REDA, W. - TAWADROS, S. - EL-SHEHABY, A. - ABDELKARIM, K. - EL-DIN, R. - DELABAR, V. - MATHIEU, D. - LEE, C. - YANG, H. - LIŠČÁK, R. - MAY, J. - MARTINEZ-ALVAREZ, R. - MARTINEZ-MORENO, N. - TRIPATHI, M. - KONDZIOLKA, D. - SPECKTER, H. - ALBERT, C. a BOWDEN, G. Comparison of Active Surveillance to Stereotactic Radiosurgery for the Management of Patients with an Incidental Frontobasal Meningioma-A Sub-Analysis of the IMPASSE Study. <i>Cancers</i> . 2022, 14(5), 9 s. ISSN 2072-6694.
6.288	KELLER, J. - KAVKOVÁ, A. - MATĚJ, R. - CSÉFALVAY, Z. a RUSINA, R. Corpus callosum hypersignals and focal atrophy: Neuroimaging findings in globular glial tauopathy type I. <i>European Journal of Neurology</i> . 2022, 29(1), s. 324-328. ISSN 1351-5101.
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Conclusion

In 2022, there was a significant increase in conference presentations in the publications database. The higher attendance at the conferences (by 32.2% compared to last year) is due to the end of the pandemic of Covid-19. The number of recorded papers decreased by 15.69% year-on-year. Among the papers, more articles in impact journals are recorded than articles in non-impact journals. Overall, there has been a 6.5% decrease in the total number of entries compared to the previous year.

QUALITY AND SAFETY

International JCI accreditation



The long-term quality of healthcare, the safety of patients and the staff working at Na Homolce Hospital are the main pillars of its stability. From 2005 to 2020, Na Homolce Hospital held the Joint Commission International (JCI).

Since 2020, NHH has been accredited by SAK, o. p. s. In January 2020, it received a certificate of accreditation from this recognized company, valid until 28 January 2023.

National accreditation by SAK

Accreditation, i.e. the assessment of the set quality system of the hospital by an independent third party – SAK o.p.s, is completely voluntary in the Czech Republic and is the most demanding in our country. It consists of 97 assessed standards, which is much more than the legislative base of 17 standards.

Since 21 June 2012, Spojená akreditační komise, o. p. s., has been an authorized evaluator of the quality and safety of inpatient health care for types of health care in accordance with provisions of Section 5(2)(f) to (h) of Act No. 372/2011 Coll., according to the restrictions on granting authorisation pursuant to Decree No. 102/2012 Coll.

SAK accreditation standards cover all clinical areas of the activities of the facility: diagnostic care, anaesthesiology and surgery, drug management and, last but not least, coordination and continuity of care. However, requirements are also placed on non-clinical areas related to patient care: e.g. catering, hospital operation (repairs, services, technical wiring), cleaning, hygiene in the hospital environment, fire protection, management.

From 27 to 29 January 2020, an accreditation survey of Spojená akreditační komise, o.p.s., took place at NHH, including an assessment of the quality of care and patient safety in accordance with the relevant provision of Act No. 372/2011 Coll., on Health Services and the Conditions for Providing them, as amended, and Decree No. 102/2012 Coll., on Evaluation of Quality and Safety of Inpatient Health Care, as amended. Based on this survey, NHH obtained accreditation for the period of the following three years. The date of re-accreditation was set for 25-27 January 2023.



Quality systems at Na Homolce Hospital

ISO 15189

The following laboratories: Department of Clinical Biochemistry, Haematology and Immunology, Biopsy Laboratory of the Department of Pathology and Clinical Microbiology and Antibiotic Centre of Na Homolce Hospital have had a quality management system in place since 2011 (awarded by the Czech Institute for Accreditation) that was accredited in accordance with ISO 15189. ISO 15189 (Medical laboratories – special requirements for quality and competence) focusing on the professional management of laboratories such as the process flow of sample examination, conditions for blood taking, collection of biological material, interpretation and provision of results and the safety and ethics of laboratory work. The accreditation of the quality management system in laboratories in accordance with ISO 15189 implies an increased confidence in compliance with the required level of services provided.

ISO 9001

Since 2004, a system of quality management in accordance with ISO 9001 has been in place in the Department of Nuclear Medicine for the provision of diagnostic services using immunoanalysis laboratory methods and imaging methods such as scintigraphy, computing, single photon and positron emission tomography (CT, SPECT, and PET/CT), including the preparation of radiopharmaceutical drugs. All services are provided according to an approved quality policy. This type of certification covers work organisation, including process management, management of resources, monitoring, and assessment of procedure efficiency.

ISO 13485

Since 2014, the Department of Central Sterilisation has held certification for the system of quality management of medical devices in accordance with the international standard ISO 13485. The Department of Central Sterilisation is a workplace that ensures disinfection, preparation before sterilisation and material sterilisation for all facilities at Na Homolce Hospital, as well as the provision of contractual services for the offices of general and specialist practitioners.

Internal quality and safety audits

Year-round internal audits (process, targeted, consulting) are conducted to determine compliance with established systems/processes in common practice, for example regarding medical records, drug management, hygienic-epidemiological regime, occupational health and safety, environmental and information safety, storage and disposal of chemicals and waste, complement operation and other areas related to the provision of health services.

Approximately 730 internal audits were conducted in 2022, including audits of closed medical records. These audits provide feedback on the level of quality and safety settings in NHH, based on preventive and corrective measures or opportunities to improve ongoing processes. During 2022, NHH was preparing for the audit of SAK, o. p. s.

Patient satisfaction (NHSP)

The National Patient Satisfaction Assessment (NHSP) is the result of a long-term activity of the Ministry of Health, the main objective of which is to set up a unified system of monitoring and evaluation of patient satisfaction in the Czech Republic and to strengthen the voice of the patient in the system of providing inpatient health care.

Na Homolce Hospital was ranked 3rd-5th in the second year of the National Patient Satisfaction Assessment project, which ran from 1 to 31 May 2022.

It involved 19 Czech and Moravian hospitals, mostly directly managed, which have inpatient units.

The evaluation took the form of a detailed questionnaire survey involving several hundred patients admitted to standard inpatient units.

Patients rated the health care facilities in eight categories:

- Admission of the patient to the facility
- Respect and consideration given to the patient
- Patient care coordination and integration
- Information, education and communication with the patient
- Bodily comfort of the patient
- Emotional support of the patient
- Involvement of family and loved ones in the patient's care
- Discharge of the patient from the facility



Satisfaction in the individual dimensions influences overall satisfaction. The overall satisfaction for the whole NHH was rated as 1,17 = 95,76%. Patients particularly appreciate the attitude and behaviour of the staff and would recommend NHH to their family and friends.

Adverse event management (AE)

Monitoring and systematic evaluation of adverse events is one of the key approaches that enables NHH to increase the quality and safety of health services provided.

Nearly 273 reports were recorded in 2022. We did not observe any significant deviations in reporting, compared to 2021.

Adverse event reporting to the Institute of Health Information and Statistics

Na Homolce Hospital has been involved in the central Adverse Events Reporting System aiming at monitoring the incidence of adverse events in clinical practice, central reporting and provision of reporting guidelines in accordance with a single terminology and application of preventive measures, i.e. effective proactive protective strategies. Data are transferred once a year to the Czech Institute of Medical Information and Statistics. On the basis of data obtained from various health care facilities in the Czech Republic, the Institute of Health Information and Statistics makes comparisons in individual event categories (falls, pressure ulcers, etc.) and according to the type of facility. Na Homolce Hospital is included in category - S - specialised hospitals/centres.

In comparison with other medical facilities, we have been achieving very good results for a long time.

The Quality Department is a member of the working group for the creation of national methodologies for adverse event reporting systems, see <http://shnu.uzis.cz/>.

INFORMATION DISCLOSURE

Information disclosure pursuant to Act No. 106/1999 Coll., on Free Access to Information



Výroční zpráva za rok 2022 o poskytování informací podle zákona č. 106/1999 Sb., o svobodném přístupu k informacím

V souladu s ustanovením § 18 zákona č. 106/1999 Sb., o svobodném přístupu k informacím (dále jen „Zákon“), zveřejňuje Nemocnice Na Homolce, IČO: 00023884, se sídlem Roentgenova 37/2, 150 00, Praha 5 (dále jen „NNH“) tuto výroční zprávu za rok 2022.

V souvislosti s žádostmi o informace přijatými na základě Zákona (dále jen „žádost“) NNH tímto zveřejňuje následující:

- a. **Počet podaných žádostí o informace a počet vydaných rozhodnutí o odmítnutí žádosti**
V roce 2022 obdržela NNH deset (10) žádostí o informace. V uvedeném roce NNH vydala šest (6) rozhodnutí o odmítnutí žádosti. K uvedenému je třeba sdělit, že tři (3) rozhodnutí o odmítnutí vydala NNH pouze ve věci jedné žádosti.
- b. **Počet podaných odvolání proti rozhodnutí**
V roce 2022 obdržela NNH tři (3) odvolání proti rozhodnutí o žádosti. K uvedenému je třeba sdělit, že všechny tyto tři (3) odvolání byly podány pouze ve věci jedné žádosti.
- c. **Rozsudky ve věci přezkoumání zákonnosti rozhodnutí o žádosti a přehled výdajů vynaložených v souvislosti se soudními řízeními na základě Zákona**
V roce 2022 neobdržela NNH žádný rozsudek v uvedené věci. NNH neměla v souvislosti se soudními řízeními na základě Zákona v roce 2022 žádné výdaje.
- d. **Výčet poskytnutých výhradních licencí**
V souvislosti s žádostmi obdrženy v roce 2022 nebyly poskytnuty žádné výhradní licence.
- e. **Počet stížností podaných podle § 16a Zákona, důvody jejich podání a způsob vyřízení**
NNH neobdržela v roce 2022 žádnou stížnost podle § 16a Zákona.
- f. **Další informace vztahující se k uplatňování Zákona**
NNH nedisponuje žádnými dalšími informacemi, které se vztahují k uplatňování Zákona v průběhu roku 2022.

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