

LMU University Hospital as an employer



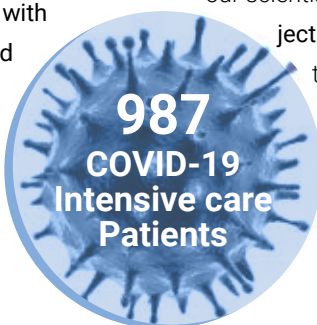
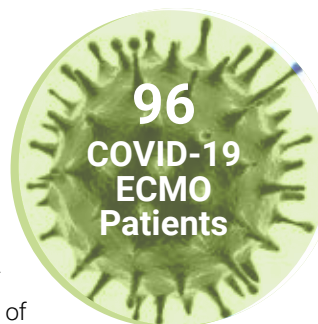
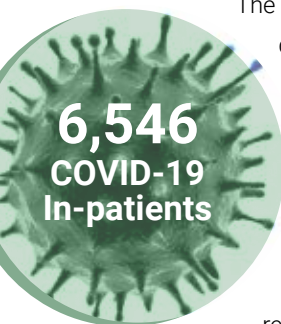
With around **11,300 employees**, LMU University Hospital is one of the three largest employers in Munich. In addition to **3,363 nurses** and **1,968 medical staff**, 90 other professional groups work for us - from linguists and computer scientists to dental technicians. We are training **876 students in twelve healthcare professions**. Diversity is an important goal at LMU University Hospital. Employees from Egypt and India to the UK and the USA work in our teams. Among the nursing staff, the percentage of **colleagues who come from abroad is 32%** and, in addition to German, **121 languages** from other nations are spoken - most frequently Serbo-Croatian, Italian and Turkish. In addition to **1,500 studios**, LMU University Hospital provides **125 multi-room apartments on campus** for employees and has negotiated the first right of refusal for apartments from five major cooperation partners in the Munich area. There are a total of **215 childcare slots in three kindergartens and four day-nurseries**, and there is a separate school at the hospital for sick children. In addition to **1.7 million meals** for patients, the catering team at LMU University Hospital also provides employees and students with 211,000 subsidized meals a year.

The Corona Pandemic at LMU University Hospital

The corona pandemic posed an unprecedented challenge to the entire staff. On January 27th 2020, the first COVID-19 case in Germany was diagnosed at LMU University Hospital. By February 2020, the hospital admitted its first COVID-19 patient, and the Corona-Task-Force began to meet regularly, ultimately for almost 200 sessions. In order to cope with the onslaught of COVID-19 patients and to protect employees and regular patients from infection, up to **twelve wards were rededicated** in their function at peak times. Nurses and doctors were dynamically assembled into interdisciplinary Corona teams. As of March 2023, more than **6,500 patients have been hospitalized with COVID-19 infection**, of whom nearly 1,000 required **intensive care** and **96 required extracorporeal heart-lung-circulation (ECMO) treatment**. During the Omikron wave in July and October 2022, more than 500 employees were simultaneously

absent due to a Corona infection. A total of over **550,000 PCR tests for SARS-CoV2** have been carried out in the laboratory to date. When it became apparent that many of those infected were suffering from long-term consequences of the infection, the **post-COVID outpatient clinic of LMU University Hospital** was opened on September 14th 2021 as one of the first such clinics in Germany. Since then, more than 1,400 patients with the complex post-COVID syndrome have received interdisciplinary treatment.

In addition to the massive dedication of resources to patient care, our scientists participated in **24 nationally funded research projects aimed at understanding COVID-19 infection**. From this work, they published more than **1,080 publications** on this new disease and have drafted important guidelines for its treatment.



LMU University Hospital and Environmental Sustainability

LMU University Hospital not only has as many employees as there are residents in many towns, it also requires a similar infrastructure - from a **volunteer fire department of employees**, to gardeners for almost eight acres of parkland and a construction department for around **90 of our own and 21 rented buildings**. Two combined heat and power plants and six steam boilers, one of which runs on wood chips, are used to generate electricity and heat. Through consistent energy management, **energy demands since 2016 have decreased by 7%**. Since 2010 the proportion of photovoltaic energy has increased tenfold from 15,000 kWh to 149,000 kWh and will be increase one hundredfold by 2030. An employee campaign with coaching, online videos and a promotional competition led to a **3% reduction in electricity consumption** between October 2022 and March 2023. LMU University Hospital aims to be climate-neutral by 2040.



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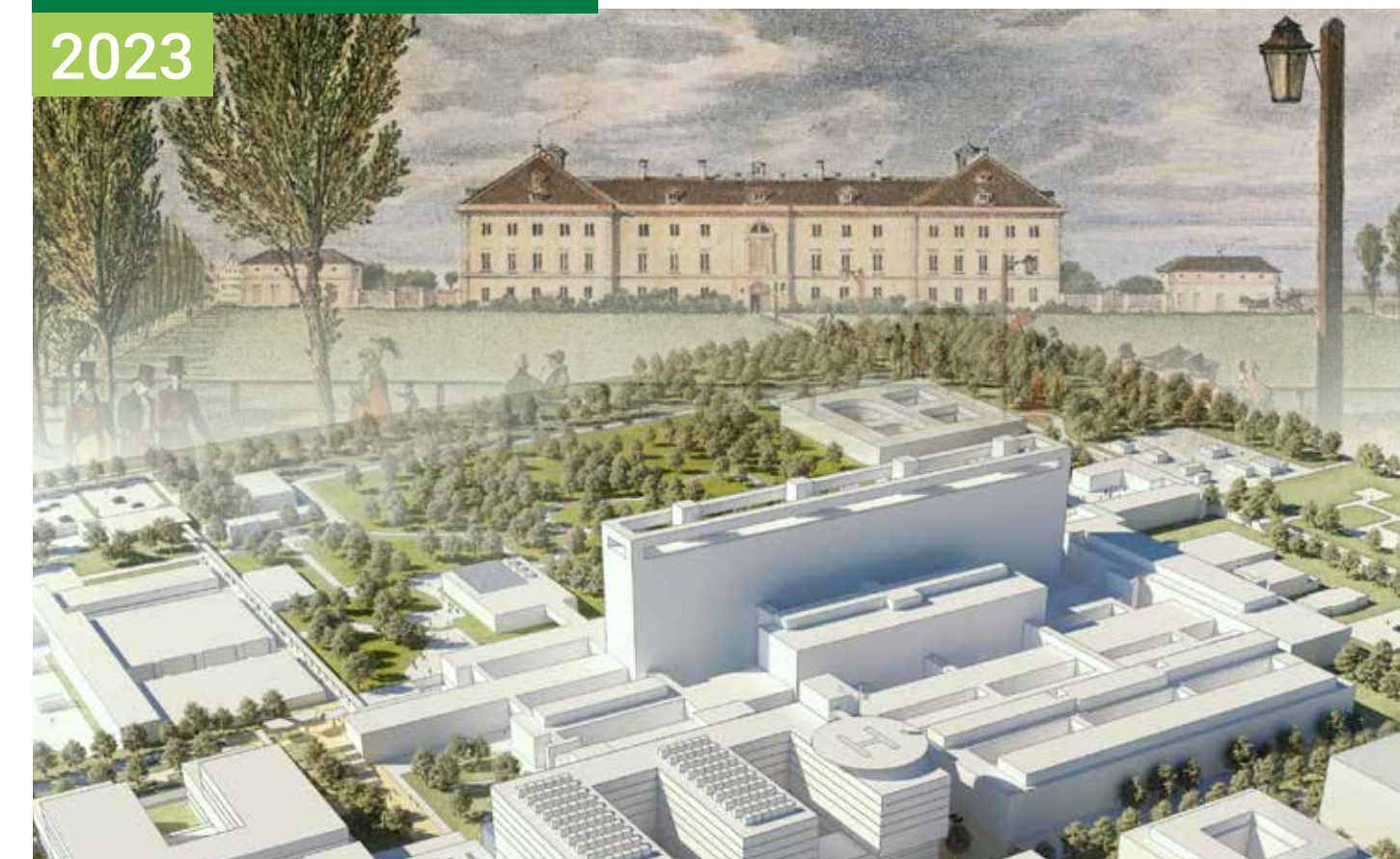
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Fact Sheet Clinical 2023



Sharing. Caring. Pioneering.

The LMU University Hospital Munich was founded in 1826 by King Ludwig I as the **first Bavarian university hospital** and is today one of the most eminent institutions for patient care, the training of medical students and life science research in Europe. It is one of the largest and most broadly specialized hospitals in Germany with **48 departments, divisions and institutes**, 53 interdisciplinary centers with **2,062 patient-care beds**. The spectrum of care in the 284 outpatient clinics ranges from e.g. post-surgical care following heart transplants in children to rare immunological skin diseases. Almost **500,000 patients** are treated as in- or out-patients at LMU University Hospital every year, more than **4,000 babies are delivered** and around **50,000 surgical procedures** performed. With **247 organ transplantations** in 2022, including 71 liver, 55 lung and 27 heart transplants, LMU University Hospital Munich is the second largest transplant center in Germany. It is the only university hospital whose clinicians participate in all eight nationally funded **Health Research Centers** of the Federal Ministry of Education and Research,

which demonstrates the breadth of excellence. The **Comprehensive Cancer Center (CCC)** is certified for **23 different organ cancer entities** and operates a joint patient counseling center on the LMU city center campus with the Klinikum Rechts der Isar of the Technical University of Munich. LMU University Hospital spans two locations for clinical research, teaching and patient care: a city center campus and the Großhadern campus in western Munich. Both hospital locations feature an Emergency Unit with the highest level of care, in which more than **60,500 emergencies** are treated annually. In addition, there are almost 21,000 emergency admissions in the **von-Hauner-Children's Hospital**. The departments work across locations under joint leadership and a single department chair. LMU University Hospital offers the most extensive range of residency programs in Bavaria for physicians and the widest spectrum of specialist training for nurses.

LMU University Hospital has an annual budget of 1.4 billion Euros.

Graduate, postgraduate and professional training

Every semester around 7,000 medical and dental students are trained in the clinical facilities of LMU University Hospital. 21.7% of students come from abroad. This indicates how attractive medical school training at LMU is internationally. For medical staff after graduation and licensing, the clinical departments, divisions and institutes of LMU University Hospital offer **64 different residency programs** and 44 advanced professional qualifications, more than any other university hospital. For the past ten years, the **Munich Medical & Clinician Scientist Program (MCSP)** has supported qualified physicians and scientists with a research focus.

7,000
Students of
Medicine and
Dentistry

64
Residency
Programs

Colleagues in residency training and those who have habilitated (DSc, Advanced Clinician Scientists) as well as basic scientists (medical scientists) are awarded protected research time, individualised training, mentoring and interdisciplinary networking. Physicians with a leave of absence for research supported through competitive

MCSP
MEDICAL &
CLINICIAN
SCIENTIST
PROGRAM

third-party funding can also join the MCSP and benefit from the program. In 2022, the MCSP had **60 early career participants** and thus 6% of all staff in residency training were supported by this research track.

68
MCSP Program
Participants

Nursing and healthcare professions at LMU University Hospital

The State Vocational School Center for Health Care Professions on the Großhadern campus unites **eight state-certified vocational schools** at LMU University Hospital. The next generation of experts for nursing, nursing assistants, physiotherapy, speech therapy, massage, medical technical radiology (MTRA) and laboratory assistants (MTLA) is trained here. The hospital itself also offers orthoptist training and the clinical part of midwifery studies. After graduation and licensing, LMU University Hospital offers **23 professional training programs** for specializations ranging from nurse-anesthetist and intensive care nursing, to pain therapy, breastfeeding assistance and lactation counselling. These courses come with attractive leave of absence programs and an **up-to-date incentive program**. A separate **Institute for Nursing Science** and the **Department for Clinical Nursing Research and Quality Management** are extremely successful in raising third-party funding for their research projects.



Historical milestones at LMU University Hospital Munich



1847 Christoph von Rothmund performs the first operation in Germany under ether anesthesia.



1874 Johann Nepomuk von Nußbaum introduces Lister's antiseptic treatment of wounds in Germany.



1882 Hugo von Ziemssen uses electric shock to change a patient's heart rate for the first time, the basis of today's cardiac pacemakers and defibrillators.



1886 From the Children's Hospital, Theodor Escherich publishes the discovery of the intestinal bacterium that now carries his name 'Escherichia coli'.



1906 Alois Alzheimer describes the form of dementia that was later named after him.



1943 Hans Scholl, Christoph Probst and Alexander Schmorell, medical students at the LMU, are executed together with Sophie Scholl for their resistance against the Nazi regime.



1968 Walter Brendel and Rudolph Pichlmayr develop the first anti-lymphocyte serum that prevents rejection of transplanted organs.



1969 Rudolf Klinner, Fritz Sebening and Rudolf Zenker perform the first heart transplant in Germany.



1980 Christian Chaussy and Ferdinand Eisenberger are the first to dissolve kidney stones from outside the body using shock wave lithotripsy developed with Dornier.



1983 Bruno Reichart performs the first heart-lung transplantation in Germany.



1986 Rolf Issels establishes hyperthermia with chemotherapy for cancer treatment.



1995 Gert Riethmüller develops the first therapy with bispecific antibodies against cancer in the department of immunology.

Figures (2022)

83,406
In-patients

81,244
Emergency room
visits

11,300
Employees

400,883
Out-patients

2,062
Hospital beds

1,968
Medical
Personell

3,363
Nursing staff

Clinical trials at LMU University Hospital

In 46 of the clinical facilities and institutes of LMU University Hospital a total of **2,322 ongoing clinical studies** were carried out last year, of which 710 were interventional trials. Of these, 458 investigated the therapy with new drugs according to the Clinical Trial Regulation/AMG, and 33 studied the safety and efficacy of new medical devices according to the Medical Device Regulation /MPDG. 156 studies examined particularly innovative therapeutic concepts in an early phase (phase 1 and 2; first in human and safety trials). Doctors and scientists at LMU University Hospital initiated 57% of these clinical studies. The **Clinical Study Center (CSC)** ensures the legal sponsorship of LMU University Hospital and specialists in the legal and financial departments assume the drafting of contracts and financial processing with (inter-)national project partners, service providers, third-party funders and external sponsors.



Research at LMU University Hospital Munich

Clinicians and Scientists of LMU University Hospital are involved in the **Cluster of Excellence 2145** (Munich Cluster for Systems Neurology), two are **Leibniz-Prize awardees** of the DFG, two are spokespersons for **Collaborative Research Centers of the DFG**, three for **Federal Ministry of Science and Education (BMBF)** projects, four in **European Union consortia**, four for a **DFG graduate school**. Eight scientists are spokespersons in **Innovation Fund Projects** of the Federal Joint Committee, and eleven are funded by various **European Research Council (ERC)** grants.

The third-party funding budget in 2022 amounted to €135 million. 3,468 scientific papers with a cumulative journal impact factor of 27,380 were published in 2021. A **data integration center** funded by the **BMBF (Mii)** has meanwhile integrated the data from 3.9 million patients and more than 50 million data sets for research projects and quality management. A broad, informed consent for research using patient data was introduced in 2021. Since 2016, 116 inventions and patent-notifications have been filed by hospital academic staff and **19 biotech companies have been spun off** in the last ten years. In the last two editions of the **DFG Funding Atlas for Germany** (2018 and 2021), the LMU ranked **first in successful funding applications for the field of medicine**. In international rankings such as **EduRank and Research.com**, our faculty is ranked in **1st place in Germany, 7th place in Europe and 39th place worldwide**.

