**With over 3,000 patients daily and more than 6,500 employees, Ghent University Hospital (UZ Gent) is one of the largest and most specialised hospitals in Flanders. Patients have access to a full spectrum of high-quality, specialised care. The hospital offers extensive facilities, including more than 1,000 beds for both day and multi-day admissions.**

Patient-centred, high-quality care is at the heart of UZ Gent's services. As a university hospital, UZ Gent also invests heavily in scientific research and education. The hospital works closely with the Faculty of Medicine and Health Sciences of Ghent University, training doctors and specialist physicians while supporting researchers in developing new diagnostic and treatment techniques.

Currently, the hospital campus is undergoing a major transformation. By 2029, UZ Gent aims to become a modern, accessible, and sustainable health campus tailored to the needs of all users.

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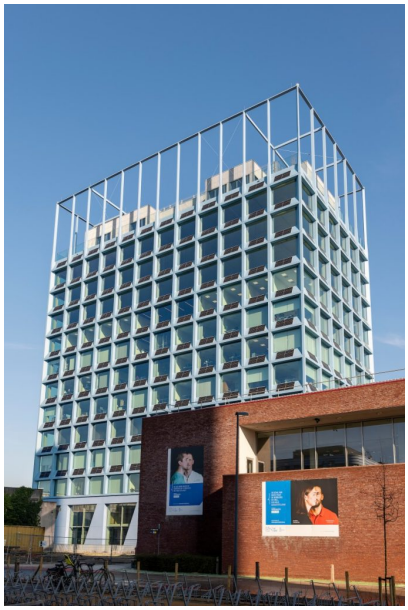
## Scientific spearheads

Since 2009, UZ Gent has followed a scientific spearhead strategy. In collaboration with the Faculty of Medicine and Health Sciences, four research domains have been designated for priority investment: oncology, genetics, immunology, and neuroscience.

These domains were selected based on objective criteria, including international peer recognition, the number of A1 publications, trends in epidemiology, and healthcare demands. The translational nature of the research and its potential for societal impact were also key factors. This spearhead policy ensures research quickly translates into improved patient care. UZ Gent currently holds a leading position in each of these four fields.

Research activities are organised through the Ghent Healthcare Knowledge Centre (KCGG) and the Health, Innovation and Research Institute (HIRUZ), which comprises five

specialised units: Clinical Trials, Data Management, Contracting, Innovation & Valorisation, and the Biobank.



Building Nobel I. © Christophe Vander Eecken

## New building: Nobel I

In April 2025, UZ Gent opened the Nobel I building, part of its extensive campus renovation Project U. Nobel I currently houses the outpatient clinics for Dermatology, Nephrology, and Plastic Surgery, as well as the Drug Research Department and ICT services. According to Managing Director Professor Dr. Frank Vermassen, “Nobel I will eventually become a hub for healthcare education, research, and innovation.”

The building has thirteen floors above ground and a basement level. “Nobel I enables us to trial innovative materials and systems for future hospital construction,” explains project leader Geert De Waele. Features include abundant natural light through large windows and a green roof with trees and plants, offering panoramic views of Ghent. The building’s exterior integrates an energy-efficient facade, with solar panels on the south side and design elements to reduce heat gain.

## New cleanroom for drug preparation

Starting in 2026, every hospital pharmacy must comply with the strict PIC/S standard for pharmaceutical preparations. Despite the large scale of Ghent University Hospital's pharmacy, the hospital didn't wait for that deadline. Opening of the new cleanroom in the spring of 2024, the pharmacy became the first in a Flemish university hospital to meet the new standard.

"We produce 80,000 sterile preparations annually, including 40,000 for cancer treatments," says Pieter Ramaut, deputy chief pharmacist of Production. "This infrastructure allows us to expand and optimise our services for clinical trials," adds Els Kestens, deputy chief pharmacist of Clinical Studies. UZ Gent supports approximately 600 clinical trials, involving 3,500 drug preparations annually.

The new cleanroom for pharmaceutical preparations. © Christophe Vander Eecken

The new cleanroom offers advanced facilities for sterile and non-sterile medicine preparation, equipped with nine isolators, three laminar airflow cabinets, and two powder extraction cabinets. Hospitals that do not wish to invest in their own cleanroom can eventually enter into partnerships for this infrastructure.

## Good Manufacturing Practices

An additional GMP-certified cleanroom allows for the production of non-sterile medicines for clinical studies. UZ Gent's pharmacy is the only hospital pharmacy in Belgium with this this permit. It produces medicines for clinical studies for internal and external partners. There is also sufficient space for storing and labelling study medication. This infrastructure enables obtaining a GDP (Good Distribution Practices) permit for clinical studies.

"The combination of these facilities on campus, close to researchers, makes our Clinical Studies department a preferred partner for researchers and pharmaceutical companies," explains Els Kestens. "We offer end-to-end services, GMP services, hospital exemption services, small batch production, and express services."

The first Belgian baby born after uterus transplant. © Christophe Vander Eecken

## First Belgian baby born after uterus transplant

In early 2025, UZ Gent celebrated the birth of Belgium's first baby born after a uterus transplant. The transplant, part of a 2018 pilot study, was performed on a woman with Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome, a condition involving an underdeveloped or absent uterus but one of both ovaries containing eggs.

Prof. Dr. Steven Weyers, head of the Women's Clinic and principal investigator, outlines the process: "After thorough medical and psychological screening in 2016, and after receiving approval to participate in the study we proceeded with IVF treatment. The patients eggs were combined with her partner's sperm in the IVF laboratory. Following embryo freezing, the uterus transplant took place in late 2018. A year later, when it turned out that the uterus was not rejected and there were no complications, embryo transfer commenced." Ghent University Hospital was the tenth center worldwide to perform a uterine transplant.

## Continuous psychological support

The pregnancy was closely monitored with biweekly ultrasounds with Doppler measurements, regular blood tests, and a strict medication schedule. The baby was born via planned caesarean delivery at 37 weeks. Some time after the birth, the uterus was removed again because the medication to prevent rejection of the transplanted uterus poses long-term risks. Both the parents and the child continue to receive comprehensive medical and psychological support. A dedicated team of UZ Gent pediatricians will monitor the child's development during the first few years of life.

A total of twenty patients were able to participate in the pilot study. However, no suitable donors have been found for the remaining participants. Prof. Dr. Eric Hoste, coordinator of the Transplant Center, explains: "In the study, we work only with brain-dead donors and according to very strict criteria. As a result, few donors are eligible. With a new technique that mechanically flushes the organs, we hope to be able to

expand the program in the coming years to include donors who died after cardiac arrest.”

## Living donations

In addition, the University Hospital will apply to the Medical Ethics Committee for an extension to include living donation. Centres in Germany, Sweden, and the United States have already delivered several babies after such a uterus transplant. The transplant itself appears to be logistically simpler and more successful, but the physical and psychological risks for the donor are somewhat greater. The procedure is, after all, much more complex than a traditional hysterectomy.