



Brussels Saint-Luc University Hospital (UCL)





Brussels Saint-Luc University Hospital

Just 10 minutes from the capital of Europe, the Brussels Saint-Luc University Hospital offers approximately 1,000 beds and a wide range of treatments. Thanks to its highly specialised teams and continuous investment in state-of-the-art medical equipment, Saint-Luc is able to treat even the most complex conditions.

Centres of Excellence

- **Cardiosurgery**
- **Gynaecology**
- **Neurosurgery**
- **Paediatric Surgery and Transplant Unit**



Cliniques Universitaires Saint-Luc (UCL)

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www.saintluc.be

Saint-Luc Foundation for Clinical and Scientific Research

www.fondationsaintluc.be

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Highlights

World Firsts

- First ever transplantation of ovarian tissue between genetically different sisters, with subsequent restoration of ovarian function and embryo development (2007). Professor Jacques Donnez, Head of the Department of Gynaecology and Andrology at the Cliniques Universitaires Saint-Luc, in partnership with his team, has also achieved other world firsts in the field of ovarian transplantation.
- World's first partial face transplant
A 38-year-old woman severely disfigured by a dog attack received a "partial" triangular graft, consisting of the chin, lips and nose. This operation was performed in November 2005 at the Amiens University Hospital Centre (CHU). Professor Benoît Lengelé, a specialist in microsurgery, reconstructive and plastic surgery at the Saint-Luc University Hospital was a member of the medical team led by Professor Jean-Michel Dubernard from the Hôpital Edouard-Herriot in Lyon and Professor Bernard Duvauchelle from CHU Amiens.

Investment

In January 2006 the Saint-Luc University Hospital acquired high-resolution 3.0-Tesla Magnetic Resonance Imaging operating equipment. This equipment is unique worldwide and has proven to be a valuable asset in procedures performed by Professor Christian Raftopoulos and his neurosurgical team.



High-resolution 3.0-Tesla Magnetic Resonance Imaging equipment



Cardiosurgery

The Cardiosurgery Department treats a wide range of pathologies. We offer a broad range of top-quality surgery, including full arterial revascularisations for coronary surgery (over 20 years' experience), systematic repair of aortic and mitral valves with degenerative disease (>95%), a full range of valve-replacement techniques (ross, homograft, stentless etc.), a heart-transplant programme (primarily artificial hearts), paediatric and congenital surgery and endovascular unit for stent graft...

Procedures Performed

- **Endovascular Treatment of Arterial Diseases:**
Our Department is one of Belgium's leading units in the endovascular treatment of aortic disease. We started the endovascular programme in 1996 and have since treated more than 200 abdominal aortic aneurysms and 50 thoracic aortic diseases using the endovascular method.
- **Percutaneous Aortic Valve Replacement:**
Our Department was one of the first in Belgium to launch a trans-catheter valve-replacement programme (January 2008).
- **Valve Surgery: Aortic, Mitral and Tricuspid Valve Reconstruction:**
At the Brussels Saint-Luc University Hospital, more than 450 aortic valve repairs have been performed since 1996. The UCL Cardiovascular Department is a real pioneer in this particular field and a world leader in this type of surgery. We have performed over 100 mitral-valve repairs annually since 1992 (over 1,500 in total). Our expertise in this field is internationally recognised and we have developed specific techniques for neo-chordae implantation (oretex) which are now used worldwide.
- **Coronary Surgery: Minimally Invasive Coronary Bypass Surgery (CABG):**
Since the launch of our Minimally Invasive Coronary Bypass Surgery programme in 2003, we have performed more than 100 surgical procedures.
- **Coronary Surgery: Multi-arterial Coronary Bypass Surgery:**
For more than two decades (since 1985), our group has been pioneering the multi-arterial coronary artery revascularisation technique which has now been recognised to promote long-term survival.
- **Surgical Treatment for Heart Failure Patients:**
Our artificial-heart programme was launched in 1992. In 1995 we were recognised as one of the European training centres for the implantation of the first-generation left ventricular assist device (LVAD) (Novacor).



Gebrine El Khoury, MD, PhD, is recognised as a pioneer in aortic-valve repair. He and his team run what has become a key centre in the treatment of valve disease; the centre is now considered a true authority on cardiac surgery, as illustrated by its many daily visitors, its active involvement in high-level international conferences (live surgery, lectures, postgraduate courses, etc.) and the organisation of three international meetings each year.



Gynaecology

The Gynaecology Department is a highly specialised centre for endoscopy (a minimally invasive diagnostic medical procedure) and, in particular, the treatment of endometriosis using a CO₂ laser. A pioneer for over 25 years in in-vitro fertilisation, the Department offers a full range of medically assisted reproductive treatments offering a success rate of 40% .

The Department achieved the world's first pregnancy resulting from a frozen ovarian tissue graft and also administers the largest ovarian tissue and ovary bank in the world in a bid to preserve fertility.

Professor Jacques Donnez and his team have achieved several world firsts in the field of ovarian transplants, for example the first ever transplant of ovarian tissue between genetically different sisters and subsequent restoration of ovarian function and embryo development (in 2007).

A special Breast Clinic, comprising gynaecologists, oncologists, radiotherapists and psychologists was set up in order to provide the best care possible for breast-cancer patients. In 2006, the multi-disciplinary board treated 629 new cancer cases, including 436 breast cancers and 193 pelvic tumours.



Jacques Donnez, MD, PhD, Head of the Gynaecology and Andrology Department: The pioneer behind several world firsts, Dr Jacques Donnez is currently the Scientific Director at the World Endometriosis Society (WES) and the President of the International Society for Preserving Fertility (ISPF).





Neurosurgery

The Department of Neurosurgery led by Professor Christian Raftopoulos regularly performs all neurosurgical procedures, the majority of them using full Neuronavigation. The main operating theatre is equipped with the most up-to-date systems, in particular a brand new intraoperative high-resolution MRI (3.0 Tesla). This system allows the neurosurgeon to check the progress of the surgery safely throughout the procedure.

Saint-Luc acquired high-resolution 3.0-Tesla Magnetic Resonance Imaging equipment for its operating theatre in January 2006. This equipment is unique worldwide and has proven to be a valuable asset in procedures performed by Professor Raftopoulos and his neurosurgical team.



Christian Raftopoulos, MD, PhD, has headed-up the Department of Neurosurgery at the Cliniques Universitaires Saint-Luc since 1996. During this time, the Department has expanded rapidly: in 1998 he performed the world's first implantation of an electrode around an optic nerve on a blind patient and has also become an international authority on brain and vascular surgery (intracranial aneurysms).



From left to right:
 Standing: Dr Truong (Neurosurgeon fellow), Dr Waterkeyn (MACS), Dr Vanhuyn (MACS), Dr Finet (MACS), Dr Astarsi (neurosurgery trainee)
 Seated: Dr Rooijackers (Specialist, consultant), Dr Fomekong (Specialist), Prof Raftopoulos (Head of the Department of Neurosurgery), Dr Vaz (Specialist).



Paediatric Surgery and Transplant Unit

The Paediatric Surgery and Transplant Unit deals with all aspects of the medical and surgical management of a wide range of hepatobiliary pathologies in children. All the facilities required for the medical work-up of such conditions and diseases are available, including digestive endoscopy, therapy for oesophageal varices, specialised nutritional support, investigational radiology and appropriate anatomopathology support for interpretation of liver biopsy specimens.

Paediatric Surgery and Transplant Unit at the Saint-Luc University Hospital, led by Professor Raymond Reding has been offering a full range of surgery for hepatobiliary diseases in children for 25 years.

The Unit enjoys international partnerships with various overseas centres in Russia, Macedonia, Algeria and Vietnam among others.

The main feature of the Paediatric Surgery and Transplant Unit at the Saint-Luc University Hospital is the multidisciplinary medical team involved, including senior paediatric surgeons (two), paediatric hepato-gastroenterologists (two), paediatric radiologists (two), paediatric intensivists (three), and paediatric anaesthesiologists (two). This team is supported by specialist multilingual staff including a clinical transplant coordinator, nurses, a medical secretary and a social worker.

Further information, including details of the Unit's scientific publications, is available at www.kidliver.org.

Surgery Performed

- Liver Transplant (total): 25-30 per year
- Living Donor Liver Transplant: 15-20 per year
- Hepatectomies and Shunt Surgery: 10-15 per year
- Over 700 paediatric liver transplants have been performed at the Unit since 1984.

Surgical procedures performed at our Unit include all types of paediatric liver surgery, including all types of partial hepatectomies, shunt surgery for portal hypertension, surgical procedures on the biliary tract (Kasai procedure, laparoscopic cholecystectomy, etc.), and liver transplants.

The three main procedures performed

- Living Donor Liver Transplant
- Partial Hepatectomy
- Meso-Rex Shunt



Raymond Reding, MD, PhD, is the head surgeon in charge of the Paediatric Surgery and Transplant Unit at the Saint-Luc University Hospital.

In 2000, he opened a specialist Paediatric Centre for anorectal pathology and surgery. He currently heads-up the Centre for Hepatobiliary Surgery for Children. He has authored or co-authored more than 150 scientific international publications, mainly in the fields of paediatric surgery, liver transplant and transplants immunology. He is member of the American Society of Transplantation and co-editor of the journal *Pediatric Transplantation*.





Brussels University Hospital (UZ Brussel)





Brussels University Hospital

Located in the heart of Europe, the Universitair Ziekenhuis Brussel (Brussels University Hospital) is one of Belgium's premier Centres of Excellence in healthcare, biomedical research and medical education. The hospital is closely associated with the Vrije Universiteit Brussel (Brussels University). As a top-rate hospital, the Universitair Ziekenhuis Brussel has gained recognition at both a national and an international level. With its 700 beds, close to 30,000 inpatients and 500,000 outpatients are treated every year.

Although the busy metropolitan centre of Brussels is only five minutes away, the hospital lies in a quiet and peaceful area next to the beautiful Parc Roi Baudouin and the Laarbeek forest. Brussels Airport is approximately 10 kilometres (seven miles) away, thereby guaranteeing fast and easy transfers from and to the hospital.

Legacy of Innovation

The origins of the UZ Brussel date back more than 30 years to the founding of the hospital in 1977. Since those days, UZ Brussel physicians and researchers have made countless contributions to the practice and science of healthcare.

The legacy of innovation continues today with state-of-the-art clinical programmes in virtually every medical speciality and subspeciality, including reference treatment centres such as the Fertility Clinic, the Cardiovascular Centre and the Oncology/Radiotherapy Department. As an integral part of academic medicine, UZ Brussel's clinical departments are always kept up-to-date through dozens of ongoing research projects. Laying the foundations for further advances in healthcare, our hospital ensures that laboratory discoveries are quickly implemented in medical practice at the patient's bedside.



UZ Brussel

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Our values and core principles

Your care is our concern

Openness

Open to everyone... Our primary concern is that quality medicine should be available to everyone and without undue financial impediment. Open to everyone... We respect all beliefs and creeds, every philosophy of life and religious conviction, as long as these are respectful of one's fellow man. Open to everyone... The official language at UZ Brussel is Dutch. In practice, however, we speak many languages (50% of our patients do not speak Dutch). Most importantly though, we speak the patient's language.

Science

Scientific practice by an integrated team of compassionate, multidisciplinary physicians, nurses and other allied health professionals who are focused on the true needs of the patient and scientific education of physicians, scientists and other healthcare professionals... This makes UZ Brussel a reliable source of knowledge for our patients and the public alike. We undertake research, both basic and clinical, to improve patient care.

Commitment

Commitment to Quality... We strive constantly to enhance all processes supporting patient care, education and science. Commitment to society... We want to benefit the public through our medical services and support the communities in which we work and live. Commitment to our employees... The work atmosphere we want to create for our staff revolves around keywords such as teamwork, responsibility, integrity, innovation, trust and communication. We endeavour to ensure all of this (and more) within the context of a physician-led institution.

Centres of Excellence

- **Cardiovascular Centre**
- **Centre for Reproductive Medicine**
- **Diabetes Centre Brussels**
- **Radiotherapy/Oncology Centre**





Cardiovascular Centre

Since 2007, no fewer than 10 new physicians have joined the team, making the UZ Brussel Cardiovascular Centre Belgium's fastest-growing centre. Two new catheterisation labs were opened during the last year, one of them equipped with a unique system for magnetic navigation. The total number of beds in the Centre recently doubled and we now perform more than 2,000 coronary examinations and operations and about 1,000 electrophysiological procedures every year. On top of this, the Centre is the only training centre in Belgium accredited by the European Heart Rhythm Association for Electrophysiology Training.

The Centre has grown in all subspecialities of cardiology (interventional cardiology, electrophysiology, non-invasive cardiac imaging, heart failure, cardiac rehabilitation and more) and is not only a Centre of Excellence within the UZ Brussels but is also a nationally and internationally renowned reference centre. In 2007, the departments of Cardiology, Electrophysiology (Ritmology) and Cardiac Surgery were amalgamated into the Cardiovascular Centre Brussels. The increased cooperation between these departments ensures a systematic multidisciplinary approach, benefiting the patient. www.chvz.be.

Surgery Performed

- Electrophysiologic Studies (EPS): 1,000 per year, 600 ablations (number one in Belgium)
- Internal Defibrillators: 150 per year; Biventricular Pacing: 70 per year; Normal Pacing: 250 per year (number one in Belgium)
- Percutaneous Coronary Interventions: 800 per year
- CABG, Valve Surgery and Rhythm Surgery: 600 per year

Procedures Performed

- Cardiology (Head: Guy Van Camp, MD, PhD)
 - Diagnostic Heart Catheterisation
 - Percutaneous Coronary Interventions (Stent Implantations)
 - Interventional Heart-Valve Therapy- Interventional Septal Defect Closures (PFO, ASD)
 - Myocardial Revascularisation after CTO (Chronic Total Occlusion)
- Heart Rhythm Management Centre (Head: Pedro Brugada, MD, PhD)
 - Electrophysiological Studies
 - Radiofrequency Ablations and Atrial Fibrillation, (Supra-) Ventricular Tachycardias
 - Pacemaker and Internal Defibrillator Implantations
 - Cardiac Resynchronisation Therapy
- Cardiac Surgery (Head: Francis Wellens, MD, PhD)
 - Cardiac pacing, Off-Pump Coronary Artery Surgery (Bypass Surgery)
 - Surgical Valve Repair and Valve Replacement
 - Heart-Rhythm Surgery



Guy Van Camp, MD, PhD, Head of Cardiology



Pedro Brugada, MD, PhD, Head of the Heart-Rhythm Management Centre



Francis Wellens, MD, PhD, Head of Cardiac Surgery





Centre for Reproductive Medicine

World Firsts

Largest and pioneering centre for reproductive medicine in Belgium: eight European and world firsts in 20 years.

In operation since 1983, in 2005 the Centre celebrated the birth of its 10,000th baby born from parents treated there. Performing over 4,000 IVF cycles each year, the Centre for Reproductive Medicine is by far the largest centre in Belgium, and the second largest in Europe.

Specialities:

- Fertility techniques and related reproductive complications
- ICSI technique: one sperm is injected into an egg
- Techniques to aid the conception of a healthy baby

The Centre plays a pioneering role in the development of new reproductive techniques.

On 5 April 2005, ISO Norm 15189 accreditation was awarded to the Laboratory for Clinical Biology and to the Reproductive Medicine Care Programme at UZ-Brussel.

www.brusselsivf.be

Surgery Performed

- Pioneer and primary practitioner of ICSI
- Treatment cycles for foreign patients: 1,200 per year.
- 1,300 new pregnancies per year.
- In Vitro Fertilisation with or without Intracytoplasmic Injection (ICSI): 3,600 cycles per year (also using epididymal or testicular sperm).
- Intrauterine inseminations (partner or donor sperm): 3,000 cycles per year.
- Preimplantation Genetic Diagnosis using PCR or FISH technologies: 500 cycles per year.

Procedures Performed

Female

- In Vitro Fertilisation
- In Vitro Fertilisation with Intracytoplasmic Injection (ICSI)
- Transfer of thawed embryos

Options

- Use of donor sperm
- Preimplantation Genetic Screening
- Preimplantation Genetic Diagnosis

Male

- MESA/TESE under general or local anaesthesia



Paul Devroey, MD, PhD, Head of the Centre for Reproductive Medicine: Dr Devroey has authored 448 international peer-reviewed articles (PubMed 8 August 2008); he has also received three national and four international research awards. He has written three books and some of his most outstanding research has been in the discovery of the intracytoplasmic sperm injection (ICSI) technique.





Diabetes Centre Brussels

The Diabetes Centre has built up extensive scientific and clinical expertise. The Head of the Medical Department, Professor Dr Bart Keymeulen and the Head of the Diabetes Research Centre, Professor Daniël Pipeleers, are key opinion leaders in Belgium and abroad. Professor Pipeleers is Director of the JDRF Centre for Beta Cell Therapy in Diabetes which is supported by the European Union and he and his team are developing and implementing strategies to preserve and restore insulin-producing beta cells.

The UZ Brussel Diabetes Centre has built up solid and renowned expertise in insulin treatment systems, diabetic foot therapies, gestational-diabetes follow-up and many other therapies.

- 5,000 Type I patients and 8,000 relatives
- 2,200 insulin-dependent patients in treatment
- 100 new cases of gestational diabetes per year

www.betacelltherapy.org
www.bdronline.be



Bart Keymeulen, MD, PhD,
Head of the Medical Department



Daniël Pipeleers, MD, PhD,
Head of the Diabetes Research Centre



Radiotherapy/Oncology

The Radiotherapy/Oncology Centre was set up in 1984 and specialises in radiotherapy, haematology, medical oncology and oncologic surgery. There is also a Breast Clinic and a professional palliative care team.

In 1995, the UZ Brussel was one of the first clinics worldwide to introduce IMRT in clinical practice and the first European centre to clinically implement sequential tomotherapy.



Guy Storme, MD, PhD,
Head of Department

State-of-the-art equipment

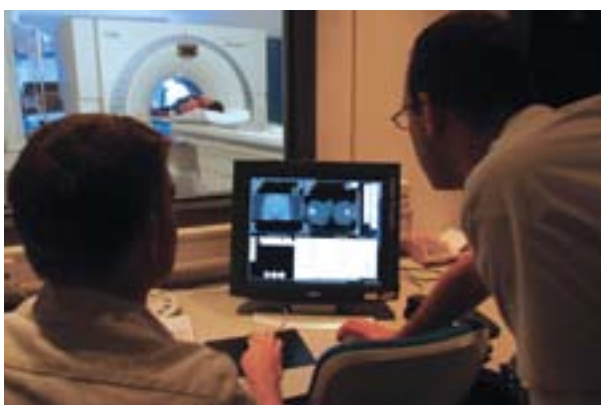
- Five Linear Accelerators
- Two Tomotherapy Hi-art Units
- One Novalis Brainlab
- Two Electa

Average number of procedures performed each year

- 7,000 treatments at the Oncology Day Clinic
- 2,000 inpatients
- 1,500 patients treated with radiotherapy
- 1,000 surgeries
- Brain Stereotactic Radiosurgery: 140 per year
- Stereotactic Body Radiotreatment: 700 per year

Treatment Techniques

- Conventional Radiation Therapy
- Conformal Radiation Therapy
- Stereotactic Radiosurgery, Stereotactic Body Radiation Therapy
- Intensity-Modulated Radiation Therapy
- Helical Tomotherapy
- Brachytherapy
- Total Body Irradiation
- Total Skin Electron Bath
- Contact Therapy





*Edith Cavell Interregional Hospital Group
(CHIREC)*



Edith Cavell Interregional Hospital Group

Edith Cavell Interregional Hospital Group, CHIREC, is a group of private hospitals, highly regarded both in Belgium and internationally for its hardworking teams of experienced specialists, all of whom are familiar with the very latest scientific developments. CHIREC is known for its excellence in orthopaedics, hand surgery, ophthalmology, gynaecology, obstetrics, medically assisted fertility treatment (IVF), bariatric surgery and oncology.

The group also provides medical imaging, nuclear medicine and radiotherapy, using state-of-the-art medical equipment.

CHIREC Hospitals
www.chirec.be



Edith Cavell Clinic
Rue Edith Cavell, 32
B-1180 Brussels



*Braine-l'Alleud
Waterloo Hospital*
Rue Wayez, 35
B-1420 Braine-l'Alleud



Parc Leopold Clinic
Rue Froissart, 38
B-1040 Brussels



Basilique Clinic
Rue Pangaert 37-47
B-1083 Brussels

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Highlights

State-of-the-art Equipment

CHIREC has acquired a new Somatom Definition Scanner (Parc Leopold Clinic), the first Dual-Source CT Scanner (2x64 slices) in Brussels and enabling high-precision diagnostics.

Three CT Somatom Emotion Scanners and two magnetic-resonance "MR Symphony TIM 1.5 T" devices have also been installed at the Cavell and Braine Clinics.

A latest-generation accelerator has also been ordered for the Radiotherapy Unit, and a second one is currently being upgraded.

Quality Labels

Maternity: Baby Friend Hospital.

Laboratory: ISO 9001.

Medical and Technical Services: Service Level Agreement (SLA)

Statistics

- Number of beds: 800
- Workforce: 3,000 including 650 well known doctors
- Admissions: 34,000 per year
- Hospitalisation days: 210,000 per year
- Surgical procedures: 20,150 admissions/year
- Over 4,300 births/year: the largest maternity programme in Belgium
- Day Clinic: over 39,000 patients/year

Centres of Excellence

- **Assisted Reproduction Centre**
- **Obesity Centre**
- **Ophthalmology Centre**
- **Orthopaedic Department**





Assisted Reproduction Centre

Opened in 1986, the CHIREC Assisted Reproduction Centre (ARC) covers all areas of medical reproductive assistance and offers a full range of sterility and infertility treatments.

CHIREC has 20 years' experience in assisted reproductive technology and some of our physicians were involved in Belgium's first successful use of assisted reproductive technology back in 1983.

CHIREC Assisted Reproduction Centre performs some of the most advanced treatment such as IVF, ICSI, IMSI, blastocyst culture, assisted hatching and vitrification of embryos and oocytes.

Individual care

Each patient's care is managed by an assisted-reproduction specialist who administers his or her patient's file, personally monitors the stimulation phase, collects gametes, reimplants embryos and oversees the luteal phase.

Consultation times can be arranged to fit in with patients' work commitments.

Optional support from a psychologist

Psychological support can be provided for couples, however, they are not obliged to see a psychologist before infertility treatment.

Surgery Performed Each Year

- 1,600 IUI (Intrauterine Insemination) Cycles
- 800 IVF and ICSI (In Vitro Fertilisation and Intracytoplasmic Sperm Injection) Cycles

Procedures Performed

- Full Examinations of Male and Female Reproductive Systems
- Ovulation Induction and Endocrinal Sterility Treatments
- Artificial Insemination (intrauterine and intracervical) and Sperm Capacitation
- In Vitro Fertilisation
- Microinsemination: Intracytoplasmic Sperm Injection (ICSI)

Options

- Oocyte donation
- Embryo donation
- Sperm bank



Bernard Lejeune, MD, PhD, is currently the Director of the Assisted Reproduction Unit and Chair of the Gynaecology Department at CHIREC in Brussels and has specialised in reproductive medicine since 1982.

He is member of the European Society for Human Reproduction and Embryology (ESHRE), the American Society for Reproductive Medicine (ASRM) and the Belgian Society for Reproductive Medicine (BSRM). He is currently President of the Belgian government's College of Physicians for Reproductive Medicine (responsible for monitoring and enhancing IVF procedures). Dr Lejeune has also published several papers on reproductive technologies in international peer-reviewed journals (Human Reproduction, Fertility and Sterility, RBM online among others).





Obesity Centre

In 2005, CHIREC opened the Cavell Obesity Centre (COC) offering treatment for morbid obesity.

Obesity surgery can cure (or at least curb) obesity and obesity-related disorders such as diabetes, arterial hypertension, sleep apnoea and dislipidemia and as such enhances the quality of life of sufferers and can boost their self-image.

Surgery is just one part of a general approach involving a selected team specialising in nutrition, psychology, internal medicine, gastroenterology and endocrinology. Such an integrated structure guarantees medical, paramedical and administrative continuity throughout the patient's treatment and follow-up.

At CHIREC, obesity surgery is performed by a team of five surgeons led by Dr J. Himpens, an internationally respected bariatric surgeon who has performed over 7,000 laparoscopic bariatric procedures.

The obesity centre treats some 200 new patients every year. Many come from abroad (the Netherlands, the UK and the USA) and are pleased with the multilingual and personal care provided by our staff. Our results meet international quality standards and the Cavell Obesity Centre has been nominated for recognition by the International Federation for the Surgery of Obesity (IFSO) as a Centre of Excellence.

Procedures available at the COC

(all performed laparoscopically to cut recovery time)

- Gastric Banding
- Gastric Bypass (Roux-and-Y and B II)
- Sleeve Gastrectomy
- Duodenal Switch
- BPD (Scopinaro procedure)
- REDO Procedures
- Endoscopic Procedures



Jacques Himpens, MD, Head of the Obesity Centre: Dr Himpens is the President of the Benelux Association of Bariatric Surgeons (BABS) and sits on the editorial board of several journals, including the *Journal of Obesity Surgery*, the *British Journal of Surgery* and the *Journal of Surgical Endoscopy*.

He currently performs laparoscopic obesity surgery in several well known hospitals worldwide.

- Has performed over 2,000 adjustable gastric band procedures.
- Has performed laparoscopic sleeve gastrectomy since 2001: over 700 procedures performed, sometimes as the first stage of a duodenal switch.
- Has performed laparoscopic Roux-and-Y gastric bypass routinely since 1999: over 1,250 procedures performed.
- Has performed laparoscopic duodenal switch procedures since 2001: over 400 procedures performed.
- Has performed repeat surgery laparoscopically following unsuccessful LAP-BAND and Mason VBG procedures, as well as other operations traditionally performed under open surgery: over 500 procedures since 2003.



Ophthalmology Centre

The CHIREC Ophthalmology Centre has a team of 41 highly skilled surgeons experienced in all the aspects of medical and surgical ophthalmology.

Since 1979, our innovative team has been involved in cataract surgery and intraocular lens implantation and performs over 5,500 operations every year. We are a key centre for surgical ophthalmology treatment in Belgium and the leading unit in Brussels.

The Centre has five phacoemulsificators, YAG and Argon lasers, a fluoroangiography unit, a Pentacam, OCT (Zeiss) equipment, biometry and echography-B technology, a computer campimeter and a laser-interferometry system for intraocular lenses calculation as well as a range of other modern devices and equipment.

Procedures Performed

The Ophthalmology Centre provides consultations and treatment for most eye diseases, focusing specifically on cataract and vitreo-retinal surgery.

CHIREC has four sites, the two main ones for ophthalmology being the Parc Leopold Clinic and the Edith Cavell Clinic.



M. Reiter, MD, Head of the Ophthalmology Department. Dr Reiter was one of Belgium's pioneers in implanting intraocular lenses and using phako-exeresis and has used these techniques since 1977 at the Brussels Surgical Institute and since 1979 at the Parc Leopold Clinic. He has practiced refractory surgery since 1980 (radial keratotomy) and also excimer and lasik surgery since 1998. He also performs surgery to correct glaucoma, strabismus and ptosis.

O.P.J. Kallay, MD, Head of Braine l'Alleud CHIREC Ophthalmology Clinic.





Orthopaedic Department

The CHIREC Orthopaedic Surgery Department comprises four teams of around 20 surgeons at each hospital.

Our surgeons have an international reputation and use the very latest technology and equipment to perform a wide range of treatment.

Our physicians have pioneered many of today's cutting-edge reconstructive surgery techniques.

Each year, the Department organises at least one major conference in Brussels, which is attended by an international panel of experts.

Procedures

More than 28,000 procedures a year

Our highly qualified team of surgeons specialises in:

- Shoulder Surgery: 500 procedures a year
- Knee Surgery: 4,000 procedures a year
- Hip Surgery: 1,200 procedures a year
- Back Surgery: 770 procedures a year
- Hand Surgery: 2,500 procedures a year

Performing 2,500 procedures every year, our Department is the leading centre for hand surgery in Belgium.

Major treatments

- Arthrosis Surgery
- Prosthesis Implants
- Congenital Sickness Treatments
- Post-Accident Surgery



Marc Clemens, MD, Head of the CHIREC Orthopaedic Department and Honorary Consultant at Brussels University Hospital.



Pascal Poilvache, MD, PhD, currently performs hip and knee surgery at the Hospital of Waterloo – Braine-l'Alleud. He trained in hip surgery with Professor Postel and Professor Kerboul in Paris, and completed a fellowship in knee surgery with John Insall at the Insall Scott Kelly Institute in New York. He has received several national and international grants and awards, including the prestigious John Insall Travelling Fellowship awarded by the Knee Society in 2002.

He has contributed to a number of key textbooks on knee surgery and has written several papers on knee replacement.

He has also helped to design highly successful hip and knee implants.

Dr Poilvache is a member of numerous professional societies and committees and was previously Clinical Professor of Orthopaedic Surgery at the University of Louvain.





Ghent University Hospital (UZ Gent)





Ghent University Hospital

The Ghent University Hospital is one of the largest healthcare providers in Flanders. It has a capacity of more than 1,000 beds for acute care and extensive services for ambulatory diagnosis, treatment and care.

Patients come to the hospital for a wide variety of treatments. Approximately 30,000 patients are admitted and 400,00 outpatients treated each year.

As a University Centre, the hospital offers a wide range of high-quality primary and specialised treatment for patients requiring both standard and intensive care. The Medical Department comprises about 48 different services and the hospital itself employs over 5,500 staff across medical, paramedical and support functions.

Scientific research

Patient treatment is supported by scientific research conducted in partnership with Ghent University's Faculty of Medicine and Health Sciences. Numerous research projects whose findings can later be applied in practical medicine are conducted in a number of well equipped laboratories, for example at the N. Goormaghtigh Institute of Pathology (normal and pathological anatomy), the Heymans Institute of Pharmacology (pharmacodynamics and therapy), the Laboratory of Bacteriology and Virology, the Centre for Medical Genetics, the Department of Family Medicine and Primary Healthcare and the Department of Hygiene and Social Medicine.

Education

The hospital promotes education and works closely with the University of Ghent's Faculty of Medicine.

Trainee medical specialists and dentists receive a high-quality education with an emphasis on practical experience. Every year the faculty grants diplomas to about 120 doctors and dentists.

The campus also houses a training centre for general practitioners. In addition, nurses, dieticians, speech therapists and physical therapists from various institutions undergo practical training in our hospital.

In 1938, Cornelis Heymans, a former professor at the Faculty of Medicine, received the prestigious Nobel Prize.



Ghent University Hospital - UZ Gent

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Services

Our top priority is providing our patients with the best possible care; every day our doctors, nurses and administrative staff do all they can to ensure that patients enjoy the very highest level of care, treatment and comfort.

Our highly skilled staff also provide social and scientific services. Hospital representatives sit on various national and international councils and committees providing expert advice and opinions; we also serve other hospitals in an advisory capacity and loan out our equipment.

The hospital over the years

Ever since it opened back in 1959, the hospital has constantly been expanding. Today, the Ghent University Hospital has become one of the leading teaching hospitals in the country and continually invests in its employees as well as in infrastructure, medical equipment and computer science.

Highlights

- The Centre for Medical Genetics in Ghent (CMGG) has acquired internationally recognised expertise in genetic research and diagnosis, particularly in the field of inherited connective tissue disorders, dysmorphology and cancer genetics. In addition to broad clinical experience, the CMGG is equipped with state-of-the-art technology for high-throughput sequencing and expression analysis of the human genome.
- The Renal Disaster Relief Task Force (RDRTF), coordinated and organised by the Ghent Department of Nephrology, treats patients suffering from acute renal problems in the wake of disasters all over the world. Successful surgery was carried out in Marmara, Turkey (1999), Bam, Iran (2003), Kashmir, Pakistan (2005), Yogyakarta, Indonesia (2006), Peru (2007) and Chengdu, China (2008).
- Top-level research into inflammatory diseases has led to the development of highly specialised treatment of inflammatory intestinal diseases (gastroenterology) and cartilage transplantation (rheumatology and orthopaedics).

Centres of Excellence

- **Centre for Reproductive Medicine**
- **Department of Radiation Oncology**
- **Interdisciplinary Competence Centre for Diseases of the Liver and Biliary Tract**
- **Paediatric Centre**



Centre for Reproductive Medicine

Over the last 20 years, the Centre for Reproductive Medicine (formerly known as the IVF Reference Centre) has become an important part of our Women’s Clinic.

Since Ghent was one of the first IVF centres in Europe, we started receiving patients from all over the world and 40% of our patients still come from countries such as the Netherlands, France, Great Britain, the United States, Slovenia, Croatia, Greece and Germany. We have also treated patients from India, Indonesia and several African countries.

The Centre specialises in artificial activation of oocytes, a technique used to achieve a pregnancy in cases where ICSI has failed.

The Centre’s leading specialists are Professors Petra De Sutter and Jan Gerris and together with two full-time gynaecologists and three part-time specialists they form the specialist fertility team.

They are supported by a nursing staff of twelve, two psychologists, seven secretaries, one ICT specialist, twelve lab specialists and seven research staff.

Our entire team strives constantly to provide the very highest level of medical care possible and use the very latest technology and in this context the Centre was awarded ISO-9001 certification in late 2007. Most of all, though, we take pride in the personal attention given to our patients.

The Ghent Centre is one of the top centres of its kind and wants to set an example of how a modern fertility centre should operate in today’s world.

Activity and procedures

- IVF (In Vitro Fertilisation): 2,200 cycles (including 1,500 SET) per year
- SET (Single Embryo Transfer)
- TESE (Testes Sperm Extraction) and MESA: 150 per year
- Assisted Oocyte Activation: 30 per year
- Preimplantation Genetic Diagnosis: 15 per year
- Laparoscopic Tubal Reanastomosis: 40 per year
- Intrauterine Insemination: 1,800 cycles per year
- Infertility Consultations: 16,000 per year

Procedures Performed

E-mail consultations are conducted prior to all treatment. Patients receiving IVF and ICSI treatment will be required to stay in Belgium for approximately one week for final ultrasound monitoring during the stimulation phase, oocyte retrieval, laboratory procedures (including ICSI and/or artificial oocyte activation if required) and embryo transfer. All procedures are carried out on an ambulatory basis except oocyte retrieval which is carried out at our Day Clinic. Where testicular (TESE) or epididymal sperm retrieval (MESA) is required, patients will undergo surgery under general anaesthesia and will be required to stay in hospital for a day.



Petra De Sutter, MD, PhD, gynaecologist: Professor De Sutter heads up the Centre for Reproductive Medicine and is responsible for the IVF and research laboratories. She works both at home and abroad in the fields of reproductive endocrinology (polycystic ovarian syndrome), assisted reproduction and stem cell technology.



Jan Gerris, MD, PhD, is a reproductive gynaecologist and andrologist. He has worked in reproductive medicine and IVF since 1982. He is one of the pioneers of Single Embryo Transfer and has published extensively on various topics.





Department of Radiation Oncology

Ground-breaking research and development at Ghent University Hospital resulted in development of Europe's first intensity-modulated radiation therapy (IMRT) treatment in 1995 and intensity-modulated arc therapy (IMAT) treatment in 1999 using standard multileaf collimators (MLC). This pioneering work has been followed by over a decade of continuous innovation.

Pioneering Work

It was researchers at Ghent University Hospital who first developed 'anatomy-based segmentation' (W. De Neve, 1996) and 'direct machine parameter optimisation' (W. De Gersem, 2001), now the basic principles of the Elekta Precise IMRT planning system and the Philips Pinnacle IMRT optimisation system. To ensure that treatment is delivered safely, dosimetric methods - including three-dimensional magnetic resonance imaging (MRI) gel dosimetry (Y. De Deene and C. De Wagter, 1998) - were devised. IMRT and IMAT developed rapidly at Ghent University Hospital thanks to a close collaboration between engineers, radiation physicists and radiation oncologists. Such teamwork between these various links in the chain ensures that from the outset technological developments are designed to be transferred easily to clinical applications. Over the 13 years of research so far, IMRT has evolved from 'avoidance IMRT' into 'regionally intensified' and 'biological image-guided' IMRT.

Avoidance IMRT: The earliest form of IMRT, designed to safeguard radiation-sensitive tissues. Ghent University Hospital was able to publish mature clinical data on various tumour sites showing decreasing levels of radiation-induced toxicity (De Meerleer, 2004; Duthoy, 2005).

The first development: Regionally intensified IMRT retains the tissue-sparing effect of avoidance IMRT but delivers an intensified dose in the largest tumour regions without increasing toxicity. Regionally intensified IMRT was launched at Ghent University Hospital in 1999 for prostate and head & neck cancer (Fonteyne, 2007; De Neve 2004).

The second development: Biological image-guided IMRT entails extracting radiosensitivity information from advanced imaging techniques, primarily functional MRI, MRI spectroscopy and positron-emission tomography (PET). Specific IMRT optimisation ensures that each elementary volume in the tumour receives the appropriate dose level based on its radiosensitivity.

The work of Ghent University Hospital in biological image-guided IMRT is ground-breaking and when details of the method were published by B. Vanderstraeten in 2006, they were given an editorial in *Radiotherapy and Oncology* (Tanderup 2006). The pioneering clinical study conducted by I. Madani in 2007 was awarded first prize at the ESTRO conference in 2007 and detailed research into refining biological image-guided IMRT continues to be conducted at our hospital.

Key Conditions and Therapies

- Performed under Cone-Beam-CT, Ultrasound or EPID guidance
- IMRT
- Paranasal Sinus Tumour
- Head & Neck Lymphnodes of Cancer of Unknown Primary (CUP)
- Other Head & Neck Cancers
- Lung Cancer
- Early Prostate Cancer
- IMAT
- Locoregionally Advanced Prostate Cancer
- Cancer of the Uterine Cervix
- Paraspinal Tumour



Wilfried De Neve, MD, PhD, Professor of radiation oncology: Professor De Neve is internationally recognised for his pioneering work in the field of intensity-modulated radiation therapy (IMRT). His main skills are in developing new techniques to improve the efficiency of radiation oncology against cancer and in translating these techniques to clinical applications. He is the President of the Belgian Society of Radiation Oncology.



Marc Van Eijkeren, MD, PhD: Dr Van Eijkeren has been a radiation oncologist since 1989. He specialises in brachytherapy and in integrating existing brachytherapy into new treatment techniques in external beam radiotherapy. He is a former President of the Belgian Association for Radiation Protection and an expert on the National Health Council.





Interdisciplinary Competence Centre for Diseases of the Liver and Biliary Tract

The University Hospital Ghent offers comprehensive modern and innovative care for hepatic and pancreatic disorders in children and adults.

Over the years, the various aspects of care offered have been steadily developed and now meet the very highest international standards.

Since the early 1990s the Ghent University Hospital has been at the forefront of developments in hepatic and pancreatic surgery in Belgium. Early on, a comprehensive liver-transplant programme was launched, making the Ghent University Hospital the first centre in Belgium to perform living donor liver transplants.

Other innovations included split-liver transplants, modern liver surgery for liver tumours and biliary cancers as well as laparoscopic liver surgery. Indeed it was at the Ghent University Hospital that procedures for performing liver transplants across blood groups were first developed and various treatments for small-for-size liver syndrome devised and applied.

The Department of Internal Medicine operates a specialist Hepatology and Pancreatology Unit offering all the latest diagnostic and therapeutic equipment, including diagnostic interventional ERCP, endoscopic ultrasound and fibroscan technology. Patients participating in clinical studies also have the opportunity to access the very latest medication available and our Gastrointestinal Oncology Unit coordinates interdisciplinary cancer management.

Diagnostic and interventional radiology offers some of the most advanced techniques available. TIPSS, chemo- and radionuclide embolisation of tumours, thermoablation, percutaneous bile-duct interventions and liver-volume modulation by selective portal embolisation are some of the procedures regularly performed.

Recently, extra emphasis has been focused on developing the paediatric hepatology programme and an experienced paediatric hepatologist and a transplant surgeon have been appointed. The Centre also has a long history of treating international patients.



Roberto Troisi, MD, PhD, is Head of the Department of Hepato-Biliary Surgery. He is an expert clinician and performs liver transplants and hepatobiliary and pancreatic surgery.

He teaches surgical fellows, residents and medical students and has a particular interest in laparoscopic liver surgery and living-related-donor liver transplantation. His research focuses on graft inflow modulation for flow adaptation in small-for-size grafts, immune modulation of liver transplant recipients using stem cells and tolerogenic protocols and in incompatible living-donor liver transplantation. He is Vice-President of the Belgian Transplant Society.



Bernard de Hemptinne, MD, PhD, is a hepatobiliary surgeon and head of the Department of Surgery. A former President of the European Society of Surgical Research and of the Belgian Transplantation Society, he is currently a board member of the European Liver Transplant Association (ELITA). He has had over 250 articles published in peer-reviewed journals in the field of HPB surgery and liver transplantation.



Xavier Rogiers, MD, PhD, is a hepatobiliary surgeon and Head of the Department of Organ Transplantation. He is an honorary doctor of the University of Goteborg and holds senior positions in several major international societies. He is the President of the HPB (Hepatobiliary Surgery) Division of the European Union of Medical Specialists (UEMS) Section of Surgery and has had over 280 articles published in peer-reviewed journals in the fields of transplantation and HPB surgery.



Paediatric Centre

The Paediatric Centre at the Ghent University Hospital has 72 beds and offers a full range of medical and surgical treatments for children.

The Centre's Paediatric Urology Unit and Paediatric Haemato-Oncology and Stem Cell Transplant Unit are renowned for their expertise.

Paediatric Urology

The Department of Paediatric Urology was established 15 years ago. Since then, it has built up top-class expertise in the treatment of paediatric incontinence and urogenital reconstruction. LUT (Low Urinary Tract) conditions in childhood have been the Department's central focus since the very beginning and today, it is the reference centre for treatment of incontinence and has established an excellent national and international reputation.

In addition to extensive experience in functional incontinence and enuresis, the Department has developed a state-of-the-art treatment for neurogenic and uropathic bladder dysfunction. The Centre is also skilled in the treatment of incontinence in mentally disabled children in particular.

Urogenital reconstruction is the most frequently performed major surgery at the Centre. Hypospadias, epispadias and exstrophy are treated on a regular basis and the Centre also has extensive experience in treating disorders of sex development (DSD). Through its experience with reconstruction in transsexual patients, the Department has achieved excellent results in penile reconstruction and phalloplasty. It is one of the few centres in Europe to offer phalloplasty as a treatment for boys and men without a penis. Minimally invasive endoscopic treatment is a new area in which experience is being built up all the time.

The Department has published more than 80 manuscripts in peer-reviewed journals on these topics.

Today, 7,000 patients are seen every year and more than 500 surgical procedures are performed.

Paediatric Haemato-Oncology and Stem Cell Transplant Unit

The Department of Paediatric Haemato-Oncology at the University Hospital Ghent is a leading centre for the treatment of childhood cancer and haematological diseases in Belgium. Children treated at the Centre receive the best possible care and support from our top-class medical team.

The Department of Paediatric Haemato-Oncology has extensive experience in providing a comprehensive range of treatments for children with cancer. More than 2,704 children have been diagnosed with a malignant disease over the past 70 years and the Department has treated children suffering from haematological diseases, immunodeficiencies, inborn errors of metabolism and congenital or acquired bone-marrow failure syndromes (where possible using stem cell transplant). Being a major referral centre in Belgium, approximately 120 newly diagnosed paediatric haemato-oncology patients are admitted each year.

The Department comprises a hospitalisation ward, a Day-Care Unit, an Outpatient Clinic and a Stem Cell Transplant Unit.



Piet Hoebeke, MD, PhD, is Head of the Department of Urology at the Ghent University Hospital, and is a full Professor of Paediatric Urology.

He is a member of various professional associations including the Belgian Society of Urology and the European Association of Urology. He is fellow of the European Board of Urology and of the European Society of Paediatric Urology.



Yves Benoit, MD, PhD, has been Head of the Haemato-Oncology and Stem Cell Transplant Unit at the Ghent University Hospital since 1985.

He has conducted research into leukaemia, neuroblastoma, drug resistance, minimal residual disease and late effects.

