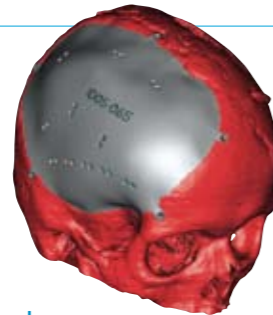


Introduction

The Department of Cranio-Maxillofacial Surgery at the University Hospital Maastricht (azM) is specialized in cranio-maxillofacial reconstruction. This technology offers skull reconstruction in patients with severe malformations and defects of the skull and facial region. Based on techniques from both plastic and reconstructive surgery, cranio-maxillofacial reconstruction is often a solution for good functional and aesthetic rehabilitation in patients suffering from severe skull damage, trauma, tumour removal or genetically determined malformations. Using the latest technology and materials, custom-made implants can be applied to reconstruct the skull.

The solution

In recent years, computer-aided design and manufacturing (CAD/CAM) has made tremendous progress. Today, visualisation of complex three-dimensional objects is a routine procedure. For a long time, however, reconstructive technology was limited to conventional surgical solutions. The development step from visualisation to an exact individual implant (CAD/CAM) has brought new solutions even for extremely difficult situations. A team of medical and engineering experts work hand in hand in one clinic to achieve rapid prototyping and manufacturing with optimal precision. This results in fewer complications and better outcomes.



The result

Functional reconstruction of the skull and facial region.

Cranio-maxillofacial reconstruction is based on:

- computer-aided design
- computer-aided manufacturing
- laser-melted titanium implants
- milled implants
- rapid prototyping
- validation of end products
- research on new solutions

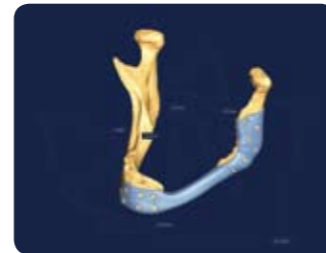
Cranio-Maxillofacial Reconstruction Centre

3D reconstruction of cranio-maxillofacial defects applying rapid prototyping and manufacturing techniques.

In cooperation with:
The European Research Funding
Custom-FIT
Custom-IMD

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“Innovative in care and learning”

“The Netherlands currently accommodates several millions of patients. I expect the number of medical customers to increase to 16 million in the future. As doctors become better at predicting diseases and preventing disorders, everyone will wish to visit them. Prevention is our challenge for the future.”

In addition, patients will increasingly travel the world in search of the best healthcare services. Globalization of the healthcare industry has turned medical tourism into a trend. Subsequently, healthcare institutions no longer need to provide every kind of available care. Instead, they can focus on their strengths – which is, indeed, azM’s strategy. Situated in the South Limburg region, it has two other important university hospitals as neighbours. We are taking advantage of this proximity by joining forces.”

Guy Peeters, President of the
Board of Directors,
University Hospital Maastricht
(azM)

University Hospital Maastricht

Healthcare and healthcare research are highly dynamic fields. Medical doctors, paramedics and scientists constantly face changes – both in terms of organisation and financing of care, as well as the growing demand for high-quality care products. In addition to developments in curative health care, there is an increased focus on prediction and prevention.

The University Hospital Maastricht (azM) and the Faculty of Health, Medicine and Life Sciences of Maastricht University (UM) are in the midst of these developments and are continually looking for effective and ambitious solutions to the challenges they face.

The main tasks of the azM are patient care, education and research, all of which are closely interrelated. In addition to standard patient care,

top referral care and advanced clinical care play an important role at azM, requiring fine-tuning and close cooperation with the theoretical research carried out at the Faculty of Health, Medicine and Life Sciences of Maastricht University and (experimental) clinical research at azM.

azM’s key research areas include cardiovascular diseases, oncology, chronic diseases, mental health care and neurosciences.



Facts and figures

In 2006, azM achieved an increase in productivity and a reduction of absence and waiting time. azM intends to consolidate this positive trend.

Beds available	715 (including day care)
Occupancy	80.4%
Operating rooms	22, including: Central operating rooms 15 Anaesthesia operating rooms 4 Day care operating rooms 3
Number of patients	25,768
Average length of stay	7.66 days
Visits to outpatient clinics	394,632
Budget	€345 million, including: €295 million for patient care €50 million for education and research
Employees	4,730

Maastricht University

Since its foundation in 1976, Maastricht University has left its mark on higher education, both in the Netherlands and Europe at large. Building on its unique system of Problem-Based Learning, the university has evolved in a European research university with a strong international outlook. Its languages of instruction are Dutch and English. In the winter semester 2007–08 the university hosted 12,000 students, half of

them from abroad. For more information, please visit www.unimaas.nl.

Location

Located in the southernmost part of the Netherlands, the capital of the Limburg province Maastricht is home to 125,000 inhabitants. It is easily accessible by air, train or car. Maastricht Aachen airport offers excellent connecting flights to all main capitals in the region and abroad.



Cranio-maxillofacial reconstruction

Reconstructions for patients with severe malformations of the skull



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