
European Radiosurgery
Center Munich
International Reference Site for Cyberknife® & ZAP-X®
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European Radiosurgery Center Munich

Combining extensive medical experience with scientific excellence

Professor Alexander Muacevic, MD
Director

Alfred Haidenberger, MD
Radiation Oncologist

Markus Kufeld, MD
Radiosurgeon – Neurosurgeon

Antonio Santacroce, MD
Neurosurgeon – Radiation Oncologist

Michael Fedorov, MD
International Patients

Christoph Fürweger, PhD
Chief Physicist

High-tech. Gentle. Effective.

Unmatched accuracy since 2005

Welcome to the European Radiosurgery Center Munich (ERCM), the most advanced center for radiosurgery in Germany. Patients receive the optimal therapy for their disease at our center.. Our success is primarily based on careful assessment and selection of patients and the use of dedicated, advanced treatment plaforms. Treatments are performed promptly, gently and benefit from our extensive network of specialists and coworkers.

If you are interested in discovering our treatment options, you can contact us either directly or through your treating physician.

„We have been successfully treating national and international patients for 25 years and know how essential and valuable time is for you. That‘s why we clarify within 24 hours whether a threatment can be successfully delivered by us.“

Professor Alexander Muacevic, MD
Director

Technology

Timely and gentle treatments in an outpatient setting

Radiosurgical treatments with the Cyberknife or ZAP-X performed in an outpatient setting. It is possible to divide the usually single radiation dose into 2 to 5 treatment sessions in order to safely treat lesions in very sensitive areas of the body - while preserving the patient‘s quality of life. Patients can usually return to their normal activities and jobs shortly after treatment.

Cyberknife treatment: For an optimal therapy

Our patients expect an effective and safe therapy for their medical problem. We fulfill this expectation by carefully assessing the patients’ medical history, imaging, and current condition and by utilizing the most advanced treatment modalities available. The treatment is swift, painless and gentle, has few side effects and does not require rehabilitation. You will be accompanied by our first-class team of experts and specialists before, during and after the treatment.

1. Advanced Robotics

The Cyberknife first innovation consists of a particularly light-weight and compact linear accelerator device attached to a movable robotic arm. This allows delivery of radiation of all body-regions to be achieved for optimal treatment.

2. Tracking

The patient will be continuously tracked during the treatment. This allows the Cyberknife system to locate the target and to compen-sate for patient‘s organ movements automatically.

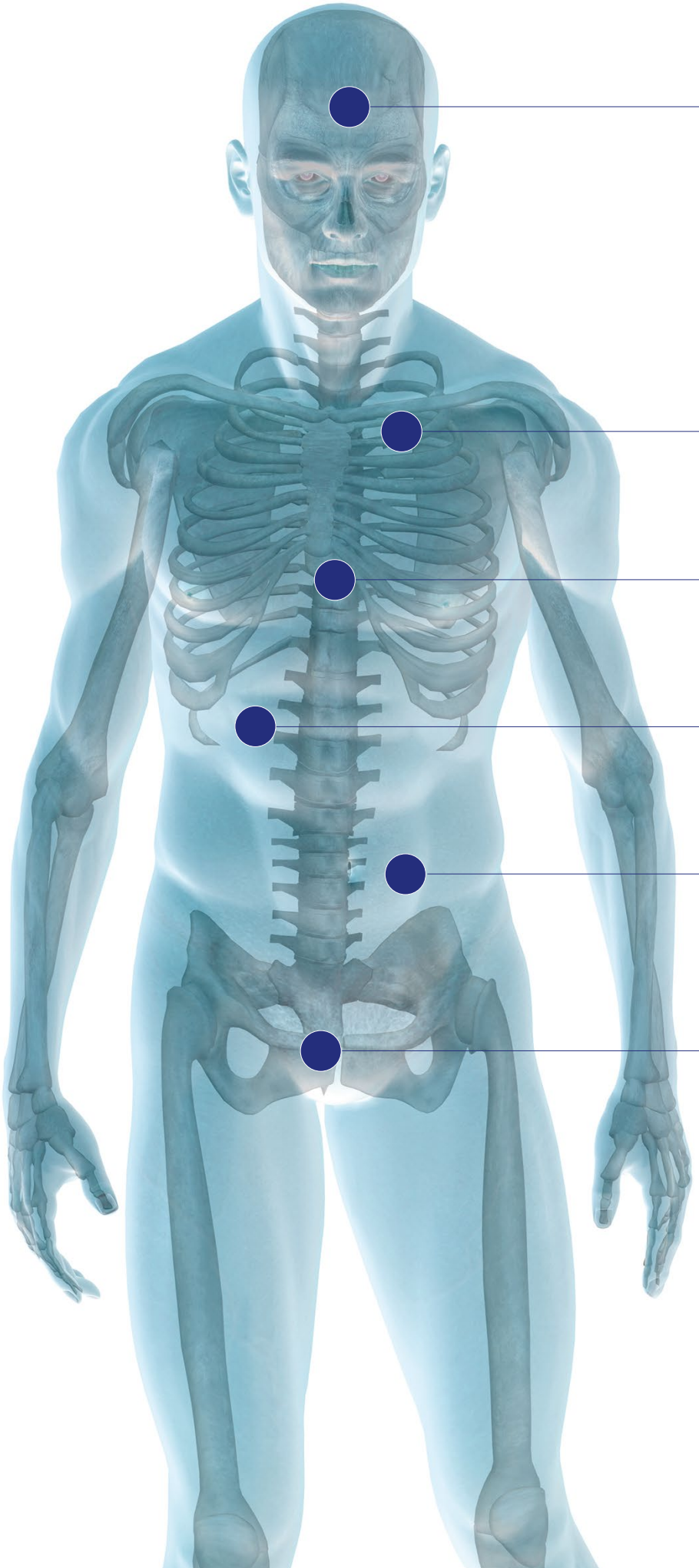
3. physiological organs‘ motion compensation

The third technical feature is the ability to follow tumors with the treatment beam with pinpoint accuracy. Lung, liver and kidney tumors can thus often be elimina-ted in just one session.

ZAP-X Technology

New Frontier in the World of Radiosurgery

ZAP-X is a pioneering device designed to optimize the treatment of brain tumors. With its unique gyroscopic based movement, the ZAP-X breaks new ground in modern radiosurgery. It combines a selfbased movement setup with excellent precision and is the next step in non-invasive tumor treatment.



Brain
Uveal melanomas
Acoustic neuromas/Vestibular schwannomas
Meningiomas
Arteriovenous malformations (AVM)
Brain metastases
Trigeminal neuralgia

Lung diseases
Lung cancer (NSCLCL, stage I/II)
Lung metastases

Spine
Spine metastases
Neurinomas
Meningiomas

Liver
Hepatocellular carcinoma
Metastases

Kidney
Renal cell carcinoma

Prostate
Prostate Cancer (Gleason 6 and 7,
PSA up to 20 ng/ml)
Prostate cancer recurrence

Numerous advantages for our patients

Suitable for numerous diseases and conditions

Benign and malignant tumors can be treated well with the Cyberknife and ZAP-X if the strict treatment criteria for radiosurgery are fullfield. For example, tumors must be clearly demarcated and and not be too large. If this is the case, Cyberknife or ZAP-X treatments are often much more convenient in comparison with surgery or fractionated radiation therapy lasting several weeks.

While Cyberknife can treat the entire body, the ZAP-X is specifically designed to treat brain tumors.

„The technical precision and safety of both the Cyberknife and the ZAP-X System are checked daily by specialized medical physicists.“

Christoph Fürweger, PhD
Chief Physicist

Planning, Treatment, Follow-up

Planning

Specialized and dedicated physicians jointly evaluate the available medical history as well as imaging and transfer the imaging studies or imaging scans (CT, MRI) to the treatment planning software for the Cyberknife or ZAP-X. After the target delineation of the tumor and the surrounding structures, the dose and direction of the radiation beams for the treatment are calculated and optimized. Depending on the location and size of the lesion, this can take up to 24 hours.

Treatment

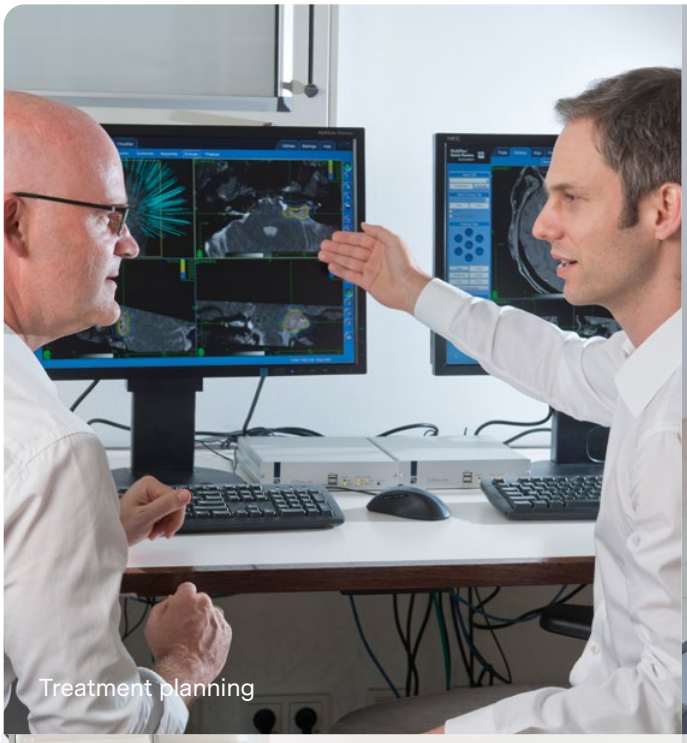
Your treatment day begins with your usual breakfast. Medications can be taken normally. You will be welcomed by our team of doctors and staff and prepared for the treatment. In a comfortable lying position (with your favorite music in the background if you wish). You will remain in contact with our treatment team through several cameras and microphone during the treatment. The Cyberknife or ZAP-X treatment is usually a single session treatment. However, it might be repeated if new treatable tumors appear during the course of the disease. Treatment lasts an average of 20 to 30 minutes, depending on the diagnosis. The patient may stop the treatment at any time, for example, to go to the toilet or have a drink.The treatment will be continued then. There will be a final consultation to discuss the use of medication and the intervals for follow-up appointments. Afterwards, you can proceed with your usual daily activities. An inpatient stay after the treatment is not necessary.

Follow-up

Regular clinical and imaging checks will document your healing progress. A first presentation is scheduled 3 to 6 months after treatment, depending on the diagnosis. As a rule, a new CT or MRI examination is then required. It can be performed on our premises or at home and transmitted to us.

„The procedures at the center are based on the needs of the patients. We provide individual and personalized care.“

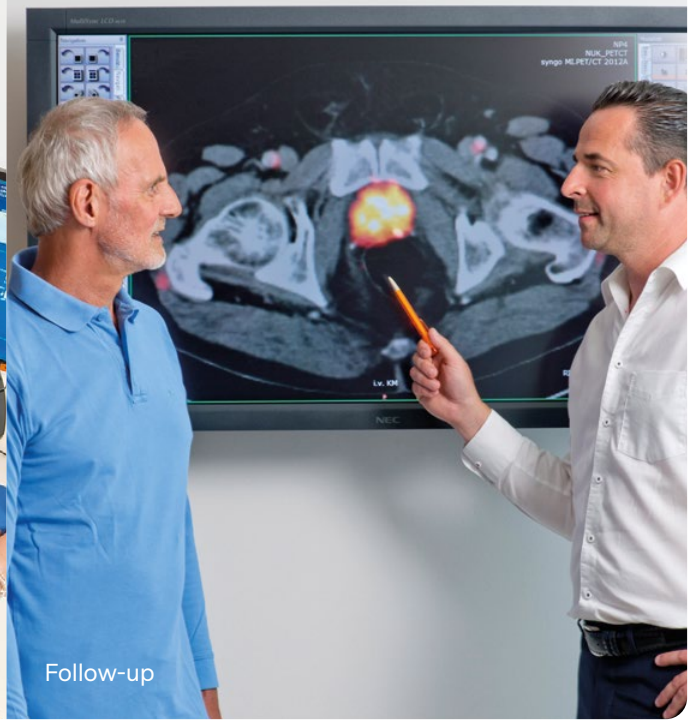
Nadja Chiotis
Front Office



Treatment planning

Treatment room

Treatment control room



Follow-up

Patient testimonials

What our Patients say

„In 2012, I was diagnosed with Gleason 7 prostate cancer and the doctors recommended ‚Active Surveillance'. Over the years, the PSA level has slowly increased, and the size of the carcinoma remained constant. I decided to undergo the Cyberknife treatment in Munich in 2020.

I met a highly professional team around Dr. Muacevic and Dr. Haidenberger in Munich in September 2020, the outpatient treatment (duration per session 30 minutes) took place on 5 consecutive days, and apart from a stronger urge to urinate in the first week, I experienced no side effects.

Today, 24 months after the Cyberknife treatment, the tumor is no longer detectable in sonography, and the PSA level has decreased to less than 1.0 ng/ml. Cyberknife treatment was absolutely the right answer for me to choose between further uncertainty and the risks of surgery."

Walter P.
Prostate cancer patient

More patient testimonials

„The Cyberknife treatment didn’t hurt at all, and it only took one session, which was over after 25 minutes. The ‚radiation robot‘ saved my eye. It’s borderline miraculous what modern technology can do in health care.“

Karl-Heinz E.
Ocular melanoma patient

„My brain is my personality! Therefore, I wanted a safe and effective treatment without side effects as they would have been possible with surgery. I was even able to leave the Cyberknife Center directly after my treatment and enjoy sightseeing in Munich“

Natasha H. McD
Meningeoma patient, London, UK

„The treatment of my prostate cancer with the Cyberknife system has preserved my quality of life. Most of my worries and fears at the time were caused by the thought of suffering serious and stressful complications as a result of tumor treatment. However, immediately after the Cyberknife therapy, I could resume my usual everyday life. Today - a few years after the treatment - my PSA values are lower than 1 ng/ml and my physical condition is good.“

Ronald H.
Prostate cancer patient

Your disease deserves the best specialists and best treatment

Radiosurgery experts

Our patients can rely on being treated by internationally recognized radiosurgery experts. As pioneers of radiosurgery in Germany, we have more than 25 years of experience and treat more than 1,000 patients per year.

Professor Alexander Muacevic, MD
Neurosurgeon, Radiosurgeon
Director

1990
Fellowship from Boehringer Ingelheim KG, Department of Pharmacology, Ridgefield, Connecticut, USA (Dr. Wegner)

1991 – 1995
Elective period in Los Angeles (USC), Charlottesville, Virginia and London (Institute of Neurology and Neurosurgery)

1996 – 2003
Surgical intern, resident and then attending physician in Neurosurgery, Neurosurgical Department, Klinikum Großhadern, Ludwig-Maximilians-University Munich, Munich, Germany

2003
Aesculap award of the european assiociation of neursurgical societies

2013
Appointment as Professor at the Ludwig-Maximilians-University in Munich, Germany

2011-2013
President of The Radiosurgery Society

Memberships
ASTRO (American Society of Radiation Oncology), ISRS (International Stereotactic Radiosurgery Society), DEGRO (German Society for Radiation Oncology), Working Group on Stereotaxy, EANS (European Association for european association of neurosurgical societies)

Scientific engagement
Over 100 publications, numerous lectures at international and national scientific congresses, founding member of the innovative publication platform „cureus.com“ in 2012 with Dr. John R. Adler, Stanford School of Medicine, USA

Alfred Haidenberger, MD
Radiation Oncologist

2005
EU-certified board examination for „Specialist in Radiation Therapy and Radiation Oncology“

2010 – 2013
Chief Physician and Head of Clinic I, Rinecker Proton Therapy Center Munich, Germany

Since 10/2015
Dr. med. Alfred Haidenberger joins the team of physicians at the Cyberknife Center in Munich-Großhadern

Memberships
Austrian Society for Radiotherapy and Radiooncology (ÖGRO), Tyrolean Experimental Oncology Working Group (TEXO), Member of the Board of Future-Oriented Radiooncology (ZORO)

Scientific engagement

2002 – 2003
ÖGRO Price

2004 – 2006
Research Award of the Austrian Cancer Aid Tyrol

2009
Research award of the company „Roche“ (Neuro-oncology)

2010
Research award of the company „Roche“ (NSCLC)

Markus Kufeld, MD
Radiosurgeon – Neurosurgeon

2000 – 2005
Resident and research associate, Department of Neurosurgery, Charité - Universitätsmedizin Berlin

2005 – 2007
Postgraduate studies at the Technische Fachhochschule Berlin, MSc Medical Informatics

2007 – 2010
Attending physician at the European Radiosurgery Center Munich

2011 – 2017
Charité Cyberknife Center, Charité – Universitätsmedizin Berlin

Since 2018
Markus Kufeld joins the team at the European Radiosurgery Center Munich

Professional societies

DGNC (German Society for Neurosurgery), EANS (European Association for Neurosurgical Societies), GMDS (German Society for Medical Informatics, Biometry and Epidemiology), RSS (The Radiosurgery Society)

Scientific engagement

More than 80 presentations at national and international conferences on a variety of topics related to Cyberknife and radiosurgery. Over 25 publications scientific papers.

Antonio Santacroce, MD
Neurosurgeon – Radiation Oncologist

February 2006
Medical license „Ordine dei medici e chirurghi della Provincia di Bari“, Italy

2007 – 2009
Research Fellowship (Scholarship) under supervision of the European Leksell Gamma-Knife Society (ELGKS) in cooperation with the Department of Neurosurgery of the Heinrich-Heine-University Düsseldorf: „Gamma-Knife radiosurgery for intracranial meningiomas“

March 2015
Board-certified radiation oncologist

July 2021
Board certified neurosurgeon

Since 2022
Dr. Antonio Santacroce joins the European Radiosurgery Center Munich

Professional societies
DEGRO - German Society for Radiation Oncology
DGNC - German Society for Neurosurgery
SINCH - Italian Society for Neurosurgery
EANS - European Society for Neurosurgery
ILGKS - International Leksell Gamma Knife Society
ISRS - International Stereotactic Radiosurgery Society
ELGKS - European Leksell Gamma-Knife Society

Scientific engagement
More than 100 presentations at national and international level on a wide variety of topics related to Gamma Knife, Cyberknife linac based radiosurgery. Over 10 publications and 2 book chapters.

Partnerships

A strong network for our patients

The ERCM maintains intensive partnerships and cooperations with medical institutions and research organizations.

A commitment that benefits our patients.

The close partnership and associated scientific exchange with the University Hospital of Munich (LMU) promotes further development of radiosurgery and its efficacy as well as safety.

LMU
University Hospital Munich

Other scientific and clinical partnerships:

Stanford University

the Radiosurgery Society

Charité
Universitätsmedizin Berlin

TUHH Technische University of Technology

University of Lübeck

Questions & Answers

What is radiosurgery?

Radiosurgery is the use of a high radiation dose which is precisely delivered to a defined target volume. The treatment is usually done in one to five sessions. The high dose of radiation kills tumor cells preventing further tumors growth.

How exactly is the tumor destroyed?

Typically, 100-150 beams are used during treatment. The beams cross each other in the target volume, i.e.,tumor, in such a way that a high cell-killing effect is achieved. The high precision spares healthy surrounding tissues from radiation to the maximum extent possible.

What are the treatment benefits for patients?

- No operation
- No pain
- No head frame
- No anesthesia
- Low side effects
- No hospitalization

Is the treatment always „non-invasive“

Before treating in areas of the body that may move, e.g., lung, kidney, fiducials may need to be placed in the tumor tissue under local anesthesia. These gold markers are used for targeting during the treatment.

Will my treatment costs be covered by the Insurance?

There are agreements with a large number of health insurance companies to cover the treatment costs. These include, for example, AOK Bavaria, Barmer GEK, LKK, Deutsche BKK, KKH and most Bavarian BKKs. There are also corresponding agreements for privately insured patients.

Are there any side effects?

Most patients do not experience significant side effects. If they do, they are usually mild and transitory. Details are discussed according to the individual situation in a personal conversation before the treatment.

How safe is the therapy?

The treatment is very safe and well-tolerated. The Cyberknife and ZAP-X hit the tumor with an accuracy of less than 1 mm - healthy tissue is spared to the maximum.

What are the advantages of the technique?

The systems combine maximum precision with flexibility. The beam can be shaped using different aperture systems (round, variable iris and multi-leaf collimators). We select the appropriate system depending on the size, location, and position of the tumor. This allows us to achieve an even higher treatment quality with shorter treatment times, everything for the benefit of the patient.

Outstanding treatment success

Germany‘s most prolific center for radiosurgery

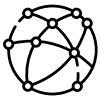
We have been successfully treating national and international patients for 25 years and we know how important time is for you. That is why we will clarify for you within 24 hours whether a treatment can be successfully carried out at our clinic.

Outpatient and without surgery

Our treatments are performed in an outpatient setting and are therefore very comfortable for the patient.

Tailored to the patients’ needs

Swift and effective treatments - few side effects and no need for rehabilitation.



High level networking

ERCM is an international reference center for the Cyberknife and ZAP-X and collaboration partner of various medical institutions and scientific organizations.

First-class service

Exclusive care by experienced experts in a pleasant and personal atmosphere.

Extensive experience

Internationally recognized radiosurgery experts with over 25 years of experience and more than 1.000 patients treated per year.

Most advanced technologies

Always the latest technology for our patients - in one of the leading radiosurgery centers worldwide.

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Center Munich
International Reference Site for Cyberknife® & ZAP-X®

Contact us

European Radiosurgery Center Munich

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Fax: +49 89-452336 -16
info@erc-munich.com

Our opening hours

The office is available for you seven days a week:

Monday - Friday: 7:30 - 20:00
Saturday, Sunday: 9:00 -18:00

www.erc-munich.com

European Radiosurgery
Center Munich

International Reference Site for Cyberknife® & ZAP-X®

Extensive experience. Over 10.000 patients treated since 2005.