



# **The West German Cancer Centre**

Interdisciplinarity is our strength





## Dear Reader,

Cancer is an experience that confronts patients, their families and friends with new challenges. And it's no rare occurrence: In Germany, over 490,000 people are diagnosed with cancer each year, including 1,800 children and young people under the age of 15. Given the increasing numbers of older people in society, the number of cancer patients may be expected to continue to rise.

But there is reason for optimism: Almost half of all cancer patients are currently able to be cured. Added to this is a large section of patients where progress of the disease can be slowed, giving them precious time with a good quality of life. This is made possible by advances in cancer medicine, in particular thanks to new-style anti-tumour drugs. The doctors and scientists at the West German Cancer Centre (WTZ) of the University Hospital of Essen (UH Essen) are also playing an important part – as demonstrated by the “Oncology

Centre of Excellence” award they received in 2009, and again in 2013, from German Cancer Aid.

WTZ is Germany's largest cancer centre. It pulls together 14 specialised treatment programmes for cancers affecting a variety of organ systems. However, treatment of cancer patients involves more than just medical and technical expertise. At our interdisciplinary specialist consultation surgeries we inform patients individually, specifically and in detail about the disorders affecting them. We want them to feel they're in safe hands during treatment – in fact, this is our main priority. Personal care and attention is one of the most important elements of any successful cancer treatment.

Top medical care with a human touch – that's our aim at the University Hospital of Essen. And this is a claim we, at the West German Cancer Centre, are happy to stand by.

**Professor Dr Dirk Schadendorf (M.D.)**  
Director of the WTZ



The West German  
Cancer Centre: Cancer Treatment  
at its best



**At the West German Cancer Centre (WTZ), 370 doctors and scientists contribute their experience and skills to treating nearly 30,000 patients with cancer annually. Experienced oncologists, radiotherapists and surgeons work together to give each and every patient the precise diagnosis and treatment that promises the best outcome for the type of cancer in question.**

#### **Excellent inpatient care**

The building that houses the WTZ wards for inpatients undergoing drug-based treatment was opened in January 2012. Wards WTZ 1 to WTZ 4 are used by the Department of Haematology and the Department of Internal Medicine (Tumour Research).

The palliative care unit is located in the same building. Spacious single rooms are available to accommodate patients' relatives, with a large roof garden as a place of relaxation. A recreation room offers patients and their families the opportunity to cook for themselves. There are also

facilities for painting and art therapy. A dedicated "Quiet Room" is available as a place for reflection and retreat.

In close proximity to the new WTZ ward building are the radiotherapy, nuclear medicine and bone marrow transplant departments, the WTZ research building, the oncology intensive care unit and the WTZ outpatient unit.

#### **WTZ Outpatient Unit: everything under one roof**

With its 70 treatment places, the central cancer outpatient unit – which commenced operation in 2009 – is tailored excellently to the needs and requirements of the patient. Our well controlled procedures ensure short waiting times in an atmosphere of peace and quiet. The treatments themselves take place in comfortable recliner chairs. The treatment stations are equipped with telephones and a nurse call system, and some of them have TV facilities. Short distances facilitate communication between medical staff, patients and relatives.



In the outpatient unit, experts from various disciplines work together under one roof. They conduct over 20,000 chemotherapies, over 5,000 blood transfusions and over 7,500 other treatments each year. The doctors pool their expertise in multidisciplinary case conferences to develop treatment plans that meet the individual needs of each patient. Interdisciplinarity, i.e. collaboration involving all the necessary specialists, is an important foundation for consistently high quality of treatment.

#### **Research helps heal**

Cancer is the oldest centre of emphasis in the research work undertaken by the University Hospital of Essen. Decades of experience enable close collaboration between patient-oriented research and clinical care. This is what defines the special quality of oncology at WTZ and what creates the foundation for best-possible diagnosis and treatment. The research work conducted at WTZ guarantees patients access to the very latest treatment methods.

The doctors and scientists at WTZ also devote effort to studying the causes and biological characteristics of various different cancers. The findings are used to help to pinpoint cancers at an early stage – and, where possible, to prevent them occurring – and to develop new treatments. At the WTZ research facilities, doc-

tors and scientists evaluate the progress of patients' illnesses, identify risk factors favouring the development of cancer and explore the mechanisms of cancer development and proliferation. To combat cancer effectively it is essential to understand how it grows.

#### **Cancer research improves patient care**

WTZ's decades of research activity have contributed significantly to improvements in cancer care. In recognition of these achievements, WTZ was selected in 2010 as the location of the "German Consortium for Translational Cancer Research" (DKTK). Within this network, eight university centres have joined forces with the German Cancer Research Centre. Its aim is to transfer the latest research output more quickly into patient care.

#### **WTZ: an Oncology Centre of Excellence**

On the merits of its comprehensive services in the research and treatment of cancer, German Cancer Aid has selected WTZ for the second time now as one of twelve "Oncology Centres of Excellence" in Germany. It is the only Oncology Centre of Excellence in the Ruhr conurbation. Extensive collaborations with national and international partners underscore its importance to progress in the field of oncology.




For the WTZ Director, Prof Dr Dirk Schadendorf, the inclusion of WTZ as part of the German Consortium for Translational Cancer Research is a major success: “We want not just to provide the very best in medical care, but also to move towards being a major player in research. In this respect, we’re particularly proud of our success, in late 2010, in anchoring the West German Cancer Centre, together with Düsseldorf, as the sole location of the German Consortium for Translational Cancer Research (DKTK) in North-Rhine Westphalia.”

#### **State-of-the-art diagnostics**

Screening for early detection is the best weapon against cancer. While conventional imaging techniques only detect cancer once the tumour has reached a certain size, early mutations can be tracked down with the aid of “molecular imaging”. Indeed, positron emission tomography (PET) scans, which detect cancer cells by their increased metabolism, have been used successfully at WTZ for over ten years. A further development is the PET-CT which combines PET and computerised tomography (CT) information.





Even more up-to-date is the PET-MRI which is performed in a single operation, producing a magnetic resonance imaging (MRI) scan along with the PET scan. These methods improve the ability to detect cancers at an early stage and to define their proliferation. This is important in order to be in a position to create a personal treatment plan for each patient.

**State-of-the-art treatment methods**

WTZ offers all oncological surgery, radiotherapy, chemotherapy and immunotherapy treatments. New insights into the mechanisms of how cancers arise (carcinogenesis) allow the use, in many cases, of highly specific drugs that destroy cancer cells without significant effects on the rest of the organism. One special feature is cell therapy which uses blood or bone marrow cells from the patient or a histocompatible donor for cancer treatment purposes.

WTZ has extensive experience of this form of treatment: The department of bone marrow transplantation is the largest of its kind in Europe. The newest treatment facility is the West German Proton Therapy Centre Essen (WPE): Here, tumours can be irradiated with millimetre precision while sparing the surrounding tissue.





The correct use of available treatments at the right time calls for close coordination among the various disciplines involved in treating the patient. To this end, there is an ongoing sharing of information by way of weekly tumour case conferences and ad-hoc discussions with the patient. Comprehensive palliative medical care capabilities ensure that patients remain in good hands in cases where even the best efforts prove unable to hold the disease in check.

#### **Our Foreign Patient Service**

UH Essen offers a special Foreign Patient Service for patients who come from abroad. Staff in this unit work with participating departments to plan the hospital stay – all the way from admission to treatment and discharge. Patients from abroad may also make use of the Foreign Patient Service as a point of contact for advice and guidance during their stay with us.

#### **University Hospital of Essen Foreign Patient Service**

Hufelandstrasse 55

45147 Essen

Tel. +49 (0) 201/7 23-16 40

E-Mail:

[foreign-patient-service@uk-essen.de](mailto:foreign-patient-service@uk-essen.de)



Specialist  
treatment programmes



## Certified medical care

**WTZ brings together 14 specialist treatment programmes for cancers of various organ systems. In order to improve the quality of medical care continuously, WTZ is undergoing a complex certification process: Being certified to “OncoCert” standards by the German Cancer Society is an attestation of high-quality treatment and constant effort to improve what is already being achieved.**

### **At a glance: the treatment programmes available at the West German Cancer Centre**

#### **Gastrointestinal tumours**

At the West German Gastrointestinal Centre we treat all tumour disorders of the gastrointestinal tract, in particular cancers of the esophagus, stomach, intestine, biliary tract and pancreas.

Specialists in oncology, gastroenterology, general surgery, radiotherapy and pathology work together in a single interdisciplinary treatment team.

#### **Contact:**

##### **West German Gastrointestinal Centre**

- **Department of General, Abdominal & Transplant Surgery:**  
Tel. +49 (0) 201/7 23-11 01
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-34 49
- **Department of Gastroenterology & Hepatology:**  
Tel. +49 (0) 201/7 23-36 11
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39

[www.wmdz.de](http://www.wmdz.de)



### Lung and thoracic tumours

Patients with lung cancer or other tumours of the thoracic cavity are treated at the WTZ Lung Cancer Centre. This, the largest certified lung cancer centre in Germany, is a joint operation between the University Hospital of Essen and the Ruhrlandklinik, a UH Essen subsidiary.

The treatment team consists of experts from UH Essen in the fields of oncology, radiotherapy, radiology and pathology, and the Ruhrlandklinik Departments of Pulmonology, Anaesthesiology and Thoracic Endoscopy & Thoracic Surgery in the Essen district of Heidhausen.

### Blood cancer – leukaemia, lymphoma & myeloma

Blood cancer is an umbrella term for various cancers of the bone marrow and immune systems, in particular leukaemia, lymphomas (cancer of the lymph glands) and myeloma (bone cancer).

Under the West German Cancer Centre's haematological oncology treatment programme, specialists in haematology, bone marrow transplantation, radiotherapy, nuclear medicine and transfusion treat patients with all forms of blood cancer.

#### Contact:

##### WTZ Lung Cancer Centre

Locations: Ruhrlandklinik and University Hospital of Essen

- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-31 44 or -20 11
- **Ruhrlandklinik Department of Thoracic Oncology (West German Lung Centre at the University Hospital of Essen):**  
Tel. +49 (0) 201/433-111 33
- **Ruhrlandklinik Department of Pulmonology:**  
Tel. +49 (0) 201/433-111 33
- **Ruhrlandklinik Department of Thoracic Surgery:**  
Tel. +49 (0) 201/433-111 33
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39

[www.lwtz.de](http://www.lwtz.de)

#### Contact:

##### WTZ Haematological Oncology Treatment Programme

- **Department of Haematology, WTZ Outpatient Unit:**  
Tel. +49 (0) 201/7 23-51 36
- **Department of Bone Marrow Transplantation:**  
Tel. +49 (0) 201/7 23-31 36
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Central Laboratory:** Tel. +49 (0) 201/7 23-23 01
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Department of Transfusion Medicine:** Tel. +49 (0) 201/7 23-15 50
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Institute of Medical Microbiology:** Tel. +49 (0) 201/7 23-35 00
- **Institute of Virology:** Tel. +49 (0) 201/7 23-35 50

[www.haematologie-uni-essen.de/klinik-struktur/ambulanzen-und-stationen.html](http://www.haematologie-uni-essen.de/klinik-struktur/ambulanzen-und-stationen.html)



### Gynaecological tumours

The University Breast Centre is a centre for treating benign and malignant breast disorders. Belonging to this are not just UH Essen but also the Catholic Hospital of Essen, St. Mary's Hospital in Bottrop and the Niederberg hospital in Velbert.

The WTZ Gynaecological Cancer Centre treats malignancies in the female reproductive organs, in particular ovarian cancer and cancer of the fallopian tubes. Here, patients are treated by an interdisciplinary team of gynaecologists, oncologists, radiologists and pathologists.

### Neuro-oncology – neurological tumours

The neuro-oncology unit at the West German Cancer Centre treats benign and malignant tumours of the brain and its membranes and brain metastases from other types of cancer.

The interdisciplinary treatment team is made up of specialists in neurosurgery, radiotherapy, oncology, paediatric oncology, neurology, endocrinology, radiology and pathology.

#### Contact:

##### University Breast Centre

- **Department of Obstetrics and Gynaecology:**  
Tel. +49 (0) 201/7 23-23 46
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-20 11
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Nuclear Medicine:** Tel. +49 (0) 201/7 23-20 32

[www.uni-brustzentrum-essen.de](http://www.uni-brustzentrum-essen.de)

##### WTZ Gynaecological Cancer Centre

- **Gynaecological Outpatient Unit:** Tel. +49 (0) 201/7 23-35 70
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-20 11
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Nuclear Medicine:** Tel. +49 (0) 201/7 23-20 32

[www.uk-essen.de/frauenklinik/?id=11](http://www.uk-essen.de/frauenklinik/?id=11)

#### Contact:

##### WTZ Neuro-oncology Treatment Programme

- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Neurosurgery:** Tel. +49 (0) 201/7 23-12 01
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-20 11
- **Department of Neurology:** Tel. +49 (0) 201/7 23-8 53 13
- **Department of Paediatrics:** Tel. +49 (0) 201/7 23-37 84

[www.uk-essen.de/tumorforschung/tumorthherapie/spezialsprechstunden/gehirnnerven/](http://www.uk-essen.de/tumorforschung/tumorthherapie/spezialsprechstunden/gehirnnerven/)

[www.uk-essen.de/neurochirurgie/die-klinik/ambulanz/](http://www.uk-essen.de/neurochirurgie/die-klinik/ambulanz/)



### Urogenital tumours

Diagnosis and treatment of tumours of the urinary and reproductive organs, such as kidneys or prostate, are conducted in the urogenital tumour treatment programme at the West German Cancer Centre.

The interdisciplinary treatment team is made up of urology, oncology, radiotherapy, radiology and pathology staff.

#### Contact:

##### WTZ Urogenital Tumour Treatment Programme

- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-31 59
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Urology and the General Urology Surgery:**  
Tel. +49 (0) 201/7 23-32 10 or -32 16

[www.wtz-essen.de/fuer-patienten/spezialshysprechstunden.html](http://www.wtz-essen.de/fuer-patienten/spezialshysprechstunden.html)

[www.uk-essen.de/tumorforschung/tumorthherapie/spezialprechstunden/urogenitale-tumore/](http://www.uk-essen.de/tumorforschung/tumorthherapie/spezialprechstunden/urogenitale-tumore/)

### Paediatric haematology & oncology – cancer in children and adolescents

Children and adolescents with cancer are treated under the paediatric haematology & oncology treatment programme at the West German Cancer Centre.

As well as paediatricians, the treatment team also includes experts in other disciplines – radiotherapy, bone marrow transplantation, neurosurgery, ophthalmology, urology, traumatology, orthopedics, general surgery, radiology, pathology and human genetics.

#### Contact:

##### WTZ Paediatric Haematology & Oncology Treatment Programme

- **Paediatric Oncology Outpatient Unit:** Tel. +49 (0) 201/7 23-27 68
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Neurosurgery:** Tel. +49 (0) 201/7 23-12 01
- **Department of Disorders of the Posterior Segment of the Eye (metastatised ocular tumours):** Tel. +49 (0) 201/7 23-20 20
- **Department of Bone Marrow Transplantation:**  
Tel. +49 (0) 201/7 23-31 36

[www.uni-kinderklinik3.de/haemato-onkologie.html](http://www.uni-kinderklinik3.de/haemato-onkologie.html)

### Skin tumours

The range of diagnostic and treatment services at the WTZ Skin Tumour Centre is aimed at patients with skin cancer.

Experts at the Skin Tumour Centre work closely with colleagues specialising in radiotherapy, psychosomatic medicine, general surgery, gynaecology, bone marrow transplantation, haematology and oncology.

#### Contact:

##### WTZ Skin Tumour Centre

- **Department of Dermatology, Central Appointments:**  
Tel. +49 (0) 201/7 23-23 32
- **Department of General, Abdominal & Transplant Surgery:**  
Tel. +49 (0) 201/7 23-11 01
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-20 20

[www.uk-essen.de/?id=hauttumorzentrum](http://www.uk-essen.de/?id=hauttumorzentrum)



### Endocrine tumours

Doctors at the West German Cancer Centre's Endocrine Tumour Centre treat cancers and tumours of the endocrine system, such as thyroid cancer and pituitary, parathyroid and adrenal tumours. A further specialism is neuroendocrine tumours of the gastrointestinal tract (GEP-NET). The centre is a certified eNets Center of Excellence.

The interdisciplinary treatment team is made up of specialists in endocrinology, nuclear medicine, general surgery, neurosurgery, pathology, oncology, gastroenterology and radiotherapy.

#### Contact:

##### WTZ Endocrine Tumour Centre

- **WTZ coordination point for endocrine tumours:**  
Tel. +49 (0) 201/7 23-64 05
- **Department of Nuclear Medicine:** Tel. +49 (0) 201/7 23-20 32
- **Department of General, Abdominal & Transplant Surgery:**  
Tel. +49 (0) 201/7 23-11 01
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Department of Gastroenterology & Hepatology:**  
Tel. +49 (0) 201/7 23-36 11
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-20 11
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21

[www.endokrinologie.de](http://www.endokrinologie.de)

### Head and neck cancer

Staff at the WTZ Head & Neck Cancer Centre treat tumours of the nasopharynx, oral cavity, oropharynx, the lower throat area, the larynx, sinuses and adjacent skull base and the salivary glands.

The interdisciplinary treatment team includes experts in the fields of oto-rhino-laryngology (ENT), radiotherapy, oncology, radiology and pathology at the University Hospital of Essen and the University Hospital Department of Oral and Maxillofacial Surgery at the Essen Central Hospitals.

#### Contact:

##### WTZ Head & Neck Cancer Centre

- **Department of Oto-Rhino-Laryngology:** Tel. +49 (0) 201/7 23-24 81
- **Department of Oral and Maxillofacial Surgery (Essen Central Hospitals & Lutheran Huysens Foundation):**  
Tel. +49 (0) 201/74-280 61
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-34 49
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90

[www.uk-essen.de/hno/](http://www.uk-essen.de/hno/)

[www.uk-essen.de/tumorforschung/tumorthherapie/spezialsprechstunden/kopfhals/](http://www.uk-essen.de/tumorforschung/tumorthherapie/spezialsprechstunden/kopfhals/)



### Eye tumours

The treatment programme for eye tumours (ocular tumours) at the West German Cancer Centre is the largest ocular cancer treatment centre in Germany and treats both children and adults.

Centre staff work closely with the paediatrics, oncology, radiotherapy, pathology and human genetics disciplines.

#### Contact:

##### WTZ Ocular Tumour Treatment Programme

- Department of Disorders of the Posterior Segment of the Eye (metastasised ocular tumours): Tel. +49 (0) 201/7 23-20 20
- Department of Radiotherapy: Tel. +49 (0) 201/7 23-23 21

[www.augenklinik-essen.de](http://www.augenklinik-essen.de)

Patients with metastasize uveal melanomas can contact the special consultation hour of the Department of Internal Medicine (Tumour Research): Tel. +49 (0) 2 01/7 23-20 20

### Bone and soft tissue tumours

The focus of the WTZ Sarcoma Centre is the treatment of cancers of the musculo-skeletal system, especially of bone and soft tissue tumours.

The interdisciplinary team is made up of oncology, traumatology, radiotherapy, paediatric oncology, orthopedics, radiology and pathology staff.

#### Contact:

##### WTZ Sarcoma Centre

- Department of General, Abdominal & Transplant Surgery, Sarcoma Surgery Section: Tel. +49 (0) 201/7 23-8 35 35
- Department of Internal Medicine (Tumour Research), Interdisciplinary Sarcoma Centre: Tel. +49 (0) 201/7 23-8 35 35
- Department of General, Abdominal & Transplant Surgery: Tel. +49 (0) 201/7 23-11 01
- Department of Radiotherapy: Tel. +49 (0) 201/7 23-23 21

[www.uk-essen.de/tumorforschung/tumorthherapie/spezialsprechstunden/sarkomegist/](http://www.uk-essen.de/tumorforschung/tumorthherapie/spezialsprechstunden/sarkomegist/)





### **Bone marrow transplantation**

At what is Europe's largest specialist centre for stem cell transplants, doctors treat children and adults with malignant blood cancers, including acute leukaemias.

The interdisciplinary staff team includes staff from the fields of haematology, oncology, radiotherapy, transfusion medicine, immunology, radiology, microbiology, virology and pathology.

#### **Contact:**

##### **WTZ Bone Marrow Transplantation Treatment Programme**

- **Department of Bone Marrow Transplantation:**  
Tel. +49 (0) 201/7 23-31 36
- **Department of Radiotherapy:** Tel. +49 (0) 201/7 23-23 21
- **Department of Haematology:** Tel. +49 (0) 201/7 23-24 17

[www.uk-essen.de/kmt/kmt-leistungsspektrum/  
kmt-allogene-stammzelltransplant](http://www.uk-essen.de/kmt/kmt-leistungsspektrum/kmt-allogene-stammzelltransplant)

### **Liver tumours**

Doctors at the WTZ Liver Tumour Centre treat cancers that develop in the liver itself, in particular hepatocellular carcinomas.

The interdisciplinary treatment team is made up of specialists in the fields of gastroenterology, nuclear medicine, radiology, general surgery and pathology.

#### **Contact:**

##### **WTZ Liver Tumour Centre**

- **Specialist Liver Tumour Outpatient Unit:**  
Tel. +49 (0) 201/7 23-8 36 15
- **Department of General, Abdominal & Transplant Surgery:**  
Tel. +49 (0) 201/7 23-11 01
- **Department of Internal Medicine (Tumour Research):**  
Tel. +49 (0) 201/7 23-20 11
- **Institute of Pathology:** Tel. +49 (0) 201/7 23-28 90
- **Institute of Diagnostic and Interventional Radiology & Neuroradiology:** Tel. +49 (0) 201/7 23-15 39
- **Department of Gastroenterology & Hepatology:**  
Tel. +49 (0) 201/7 23-36 11
- **Department of Nuclear Medicine:** Tel. +49 (0) 201/7 23-20 32

[www.livercancer-center.com/fuer-patienten/hcc-sprechstunde.html](http://www.livercancer-center.com/fuer-patienten/hcc-sprechstunde.html)

The West German  
Proton Therapy Centre  
Essen





## A vision becomes reality.

**The West German Proton Therapy Centre Essen (WPE) is one of the largest centres of its kind in Germany and has been treating patients since early 2013. The first two of a total of four proton therapy cancer treatment stations have commenced operation.**

Proton therapy is an innovative and promising way of treating cancer. It is particularly suitable for treating patients with tumours in sensitive areas such as the brain, spinal cord or the eye: Use of a high-precision proton beam protects the surrounding tissue, minimising side effects. As a result, this technology offers particular benefits when it comes to treating children and adolescents, whose bodies are at a sensitive stage of development.

### **Cancer therapy in four treatment rooms**

The centrepiece at WPE is the proton accelerator, a 220-tonne cyclotron (circular accelerator) which releases high-precision proton beams into the area to be treated. In three of the four treatment rooms, a rotatable gantry allows the directional beam release unit to be rotated through 360° around the patient, enabling us to get the best possible angle. The fourth treatment room is equipped with a horizontal beam release unit, which has

proven particularly useful in treating eye tumours. This enables proton therapy to be used for a particularly wide range of indications. WPE's size and equipment levels are its "unique selling proposition" and make it one of a kind, worldwide.

### **Research to develop proton therapy further**

At WPE, our core activity includes not just providing patient care, but actively working to develop proton therapy and evaluate it scientifically. Ongoing scientific assessment is especially important for new treatment methods to test their effectiveness. Embedding WPE as part of the West German Cancer Centre provides us with an excellent environment for achieving this goal.



Prof Dr Martin Schuler

## Treating cancers effectively and specifically

**Different patients respond differently to the same treatment – personalised medical care aims to pinpoint the most suitable medications for each patient, taking account of their needs on a case-by-case basis. Huge strides are currently being made in the development of patient-specific treatment strategies, especially in the world of cancer treatment: The results of new clinical research at UH Essen are offering hope to patients who, up to now, have had few treatment options open to them.**

Ten years ago, for example, in the case of lung cancer which has already spread to other parts of the body, chemotherapy was more or less the only option. Today, we're able to offer a wider range of treatment options – all based on detailed molecular examination of tissue samples taken at the diagnosis stage. "Cancer tissue undergoes a large number of genetic mutations, stimulating cell growth and

causing it to slip out of control. New medications are homing in on this, targeting the results of specific genetic mutations", explains Prof Dr Martin Schuler, Director of the Department of Internal Medicine (Tumour Research) at UH Essen. Approved drugs already exist for some known genetic mutations, with others in the research pipeline undergoing clinical study.

### **Medication also effective in treating other cancers**

In 2015, an international research team involving WTZ and UH Essen succeeded in demonstrating for the first time that a new cancer medication can be applied successfully to a variety of different types of tumour all demonstrating the same genetic mutation. Currently, the medication Vemurafenib (Zelboraf®) is approved in Germany for patients with melanomas (dark skin cancers) which have spread, in cases where the tumour has undergone



what is known as a “BRAFV600 mutation”. This is the case in around 40% of all melanomas. Mutation of the same gene is, however, also found to a lesser degree in other types of cancer such as cancer of the bowel or lung. Patients with, in particular, these two common forms of cancer, but also with a range of other, rarer, cancers such as sarcomas, myelomas and histiocytosis, the morbid accumulation of specific white blood cells, have responded well to the treatment. This was the subject of a report by the research team in the respected “New England Journal of Medicine”.

“The results of our study show that patients with metastatic cancers can benefit directly from extensive molecular analysis of their tumours”, says Prof Martin Schuler who is in charge of the study at UH Essen. “At WTZ, we’ve been offering these examinations to metastatic cancer patients since 2010 as part of our ‘WTZ Precision Oncology Program’. This way, we

increase the likelihood of finding a suitable approved drug for the individual patient, or a promising new medication undergoing controlled clinical study trials at WTZ.”

#### **Improved survival outlook and better quality of life**

Even now, many patients are benefitting from biological classification of their tumour tissue and the specifically tailored cancer treatment this enables. Such treatment offers many patients higher chances of survival and a better quality of life. Another example are patients with lung cancer which has undergone what is known as an EGFR mutation. Here, doctors and researchers at WTZ have shown that early treatment using highly specific medication (as opposed to chemotherapy) prolongs patient life-expectancy by an average of one year – no mean feat. Moreover, the new medication is taken in tablet form, giving patients greater freedom and better quality of life.



## Outlook

Interdisciplinarity at work to achieve the very best in cancer care – this is what WTZ is all about, both today and as we move forward. Experts from a total of 36 departments and institutes are jointly working to achieve this. As a recognized “Oncology Centre of Excellence”, WTZ is looking to entrench even further the close coordination, at an international level, between research and clinical care over the next few years.

Cancer research is worthwhile and soon finds its way through to patient treatment: This is evident in the example of chronic myeloid leukaemia. Even 20 years ago, this rare cancer was mainly terminal – today it can be treated well by taking tablets. Moreover, with regular medication, patients diagnosed with chronic myeloid leukaemia today enjoy near-normal life expectancy. Such examples justify the hope of being able to improve the lot of a growing number of cancer patients in the

years ahead. It will be crucial to understand the mechanisms leading to cancer and then develop tailor-made drugs.

The goal of WTZ to ensure the best possible treatment for every cancer patient can only be made a long-term reality if we succeed in living out real-life interdisciplinary collaboration, if we develop research programmes focussed on the needs of the patient, and if we prioritise the training and encouragement of high-calibre junior medical and scientific professionals. The course has been set – we have a team of doctors and scientists on hand, able to apply their medical knowledge in a superb environment.

We will do everything we can to ensure that this remains the case, and that the progress achieved at home and abroad for the benefit of patients is applied quickly to practical settings here in Essen.



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## Editorial Details

### Publisher

University Hospital of Essen  
Hufelandstraße 55  
45147 Essen

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Office of Marketing and Communications  
Project management: Lisa Binse  
Tel. +49 (0) 201 / 7 23-31 07

### Design

designlevel 2, Meerbusch

### Translation

Paul McNutt B.A. (Hons.) MCIPS, Meerbusch

### Photography

zelck – fotografie, Essen

### Printing

Print office of UH Essen

### Date

October 2015



University Hospital of Essen  
Hufelandstraße 55  
45147 Essen