

Strengthen excellence—Share knowledge BZKF Short Brochure 2025

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## **Working groups**

are establishing a standardized infrastructure across all six university hospitals to ensure, among other things, consistent conditions for conducting clinical trials and studies at each of the six BZKF sites.



## **Lighthouse structures**

form the foundation for the complex advancement of each BZKF site's specific strengths in its respective area and provide service functions for the whole center.



### **Trials and studies groups**

conduct clinical trials and studies with the aim of conveying the results of basic research into new forms of therapy and thus into clinical application (translation).



# Translational research groups

develop preclinical models from experimental results to prepare clinical trials and studies, and validate basic science. One focus lies on the development of predictive markers.



#### **PublicCancerHotline**

free, Bavaria-wide phone service on cancer, providing information and support to patients, their families and acquaintances, healthcare professionals, and anyone interested.



# **Foreword**

The B7KF is a coalition of the six universities and university hospitals of Augsburg, Erlangen, the two sites in Munich, Regensburg, and Würzburg.

Our aim is to provide cancer patients throughout the Free State of Bavaria with local access to cutting-edge oncology care, offering the best possible cancer treatment based on the latest scientific knowledge. At BZKF, translating cancer research findings into clinical practice is given absolute priority. A key focus is on conducting early clinical trials and studies collectively. To achieve this, close cooperation with the Bavarian medical technology and pharmaceutical industry is also of great importance to strengthening Bavaria as a center of business and innovation.

In addition to developing new methods of treatment for cancer, we are also the point of contact for all citizens with the free telephone service "PublicCancerHotline".

the entire B7KF team for their commitment Sincere thanks also go to the Bavarian State so that we can continue with the development of the BZKF in 2025. I hope that this brochure can give all interested readers an insight into our work.



# Welcome

Bayaria is excellently positioned in the fields of cancer research and therapy. The Bayarian Center for Cancer Research (BZKF) makes a significant contribution to this by combining outstanding oncological research with state-of-the-art clinical care An important goal of the BZKF is the rapid translation of basic research findings into broad clinical practice. At the same time, BZKF stands for patient-centered cancer care, providings direct access to the latest research findings as well as diagnostic and therapeutic options.

Despite constant advances in medical research, being diagnosed with cancer has lost only little of its horror to this day. Therefore, we are committed to offering patients and their families across Bavaria the highest level of medical support.

Working closely together and following the motto "Strengthening excellence—sharing knowledge," the BZKF locations at the six Bavarian university hospitals and their universities are establishing specialized research infrastructure that are visible far beyond Bavaria, focusing on a range of issues relating to the development and treatment of cancer. This gives our scientists the ideal conditions to set new standards in the fight against cancer.

I would like to take this opportunity to express my sincere thanks to all the staff at the B7KF and assure them that the Free State of Bavaria will continue to support the BZKF to the best of its ability.

#### Markus Blume

Bayarian State Minister of Science and the Arts

# The Bavarian Cancer Research Center (BZKF)













With the six university hospitals and the centers of research and healthcare supported by the universities, the Comprehensive Cancer Centers (CCC), Bavaria is excellently positioned in the fields of cancer research and therapy.

# Comprehensive healthcare for the whole of Bavaria

The Bavarian Cancer Research Center (BZKF) ensures that novel methods in the diagnosis and treatment of cancer are implemented throughout Bavaria and that the findings of cutting-edge oncological medicine are rapidly integrated into healthcare structures.



The distribution of the sites across Bavaria guarantees comprehensive and interdisciplinary care for cancer patients, regardless of where they live.

# Tasks of the BZKF

- » Improve the care of cancer patients in Bavaria significantly
- » Enable access to the best possible, latest, and innovative therapies
- » Drive preclinical cancer research forward
- » Translate findings into clinical application rapidly
- » Place the focus on cancer prevention, diagnostics, therapy, and informing citizens
- » Conduct clinical trials spread across all six locations
- Provide a free cancer information service through our PublicCancerHotline





# **Working groups**

Through the working groups (WG), standardized infrastructure is to be established at all six university hospitals, in order to create the same conditions to conduct clinical trials and studies at all the BZKF sites.

- » Medicinal Products Act (AMG)
- » Medical device regulation (MDR)
- » Biobanking
- Information technology
  (IT)
- » Interdisciplinary unit for early clinical trials (ECTU)

- Molecular tumor board/ molecular medicine (MOLTB)
- Cancer registry/LGL
- » Public relations work
- Patient focus





## **Medicinal Products Act (AMG)**

The AMG working group is the first point of contact for inquiries from the pharmaceutical industry and coordinates exchanges with the study groups and lighthouses in the BZKF. One of the core tasks of the AMG working group is to coordinate the uniform contract template for clinical trials and studies in order to accelerate the conclusion of contracts to conduct such studies and thus further increase the competitiveness of Bavaria as a research location. This gives the BZKF study groups the opportunity to conduct clinical phase-I studies, among other things, in collaboration with the pharmaceutical industry. The working group thus ensures optimal cooperation between industry and the BZKF research groups.



**Prof. Dr. Julia Mayerle**Director of Medical Clinic I and II,
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### **Medical Device Regulation (MDR)**

The MDR working group aims to support the further development of medical devices into innovative diagnostic solutions in collaboration with stakeholders from the BZKF and industry. One of its goals is the future harmonization of the regulatory environment in Bavaria. By sharing expertise and experience, the regulatory processes governing medical devices are to be made more efficient and optimized, not least in order to accelerate the approval of medical devices. The MDR working group contributes to further improving cooperation between non-university institutions and Bavarian companies in the field of medical technology.

### **Biobanking**

Biobanks store large quantities of biological material, such as blood or tissue samples. The availability of biomaterials is a prerequisite for application-oriented cancer research. In order to optimally utilize the valuable biomaterials for cancer research and make them available to all BZKF sites for research purposes, the Biobanking Working Group within the BZKF has set, among others, the following objectives: establishing uniform quality standards for the collection and archiving of biomaterials, and creating interfaces that enable the exchange of sample-related information creating the foundation for future, innovative research initiatives.



Prof. Dr. Wolfgang Weber Director of the Department of Nuclear Medicine, TUM University Hospital Munich



Prof. Dr. Martin Trepel Director of Medical Clinic II. Director of the Comprehensive Cancer Center Augsburg, University Hospital Augsburg

## Information technology (IT)

The IT working group plays a central role in the BZKF network. It contributes significantly to the establishment and further development of a uniform IT infrastructure and acts as a central point of contact for all IT-related issues concerning the lighthouses, study, and research groups. It drives crosssite projects such as the joint BZKF studies and trials registry (https://studien.bzkf.de/), interfaces, and a portal for the smooth exchange of clinical and molecular biological data, and the integration of real-world data. The aim is to make the extensive data sets available for cross-site, comprehensive clinical and bioinformatic analyses.



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# **Interdisciplinary unit for** early clinical trials and studies (ECTU)

In order to develop drugs and therapies for cancer, preclinical research must be supplemented with testing in early clinical trials and studies. In a so-called Early Clinical Trial Unit (ECTU), patients with various types of cancer are treated in such early clinical trials, in which innovative and new therapeutic approaches are tested for the first time (first-in-human). The primary goal of the ECTU network and the ECTU tumor board at the BZKF is to improve patient access to innovative tumor therapies, to develop a joint study portfolio, and to harmonize and improve recruitment activities for such trials and studies.



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# Molecular tumor board/ molecular medicine (MOLTB)

Tumor boards bring together physicians from various disciplines. The goal of the cross-cancer molecular tumor board is to support patients with advanced cancer, as they often no longer have access to promising standard therapies. The tumor board gives those affected access to a comprehensive molecular characterization of their tumor. Tailor-made therapy strategies can thus be developed. The working group aims to standardize procedures within the MTBs. This includes patient consent, the definition of a uniform molecular analysis, the harmonization of data evaluation and documentation, and the development of uniform treatment pathways.

### Cancer registry/LGL

The Cancer Registry / LGL working group is tasked with establishing joint structures between the BZKF and the Bavarian Cancer Registry. In accordance with the Bavarian Cancer Registry Act (BayKRegG), which came into force in 2017, the Bavarian State Office for Health and Food Safety (LGL) is responsible for maintaining the clinical-epidemiological registry throughout the State. With the establishment of the Cancer Registry / LGL working group the exchange of information aimed at improving data quality is continuously enhanced. Among other things, the group is working on standardized monitoring reports to improve quality and on facilitating the use of data by treating physicians at the BZKF. This active cooperation between the BZKF and the Bavarian Cancer Registry will further strengthen research in the epidemiology and care of cancer for both partners.

#### **Public relations**

The BZKF serves as an information hub for patients, their relatives, and for all professional groups in cancer medicine and research. The WG is committed to improving the BZKF's visibility in public. It provides up-to-date information on developments and offers on the subject of cancer. The latest findings in cancer research are published regularly via various channels and formats for interested parties. All queries on the topic of cancer are answered via the free telephone service "Public Cancer Hotline". Patients and interested parties can find out about the latest developments during information events including presentations held by experts.

#### **Patient orientation**

The working group acts as an overarching platform for exchange between the project groups, which include the Patient Expert Pool. This pool enables patient representatives to be actively involved in cancer research. The Shared Decision Making group aims to promote joint decision-making between physicians and patients. The Cancer Survivor Network, which supports those affected during and after cancer in finding support services, also falls under the umbrella of patient orientation. The working group also includes the PROMs project group, which focuses on tools that make the patient-reported health status measurable and comparable over the course of treatment.



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# **Lighthouse projects**



The lighthouse structures are a prerequisite for complex further developments in the respective area and perform service functions for the entire center.

The permanent establishment of basic and lighthouse structures is one of the specific goals to be achieved within the network of the Bavarian Cancer Research Center (BZKF). The constant expansion as well as provision of service functions from lighthouse structures at each individual BZKF location is being carried out step by step and is being rolled out continuously to all six locations.

- » Theranostics
- » Al and bioinformatics
- » Local therapies
- » Omics, genomics, liquid biopsy
- » Preclinical models
- » Cellular immunotherapy





#### **Theranostics**

Bavarian universities are international leaders in novel imaging technologies that not only make tumor diseases visible at early stages, but also visualize the molecular properties of cancer cells. These innovative methods are used to plan treatment on an individual basis. The close link between therapy and diagnostics is referred to as "theranostic" and has already been implemented in patient care at Bavarian university hospitals successfully. In order to continue the successful establishment of these new methods in clinical care, a central office has been set up via the BZKF to assist with applications to the relevant authorities.

#### Al and bioinformatics

The digitization of care and research processes at the BZKF generates clinical data, image data, biological sample information, and molecular data that can be used for innovative bioinformatics and distributed machine learning methods, as well as for AI projects. To this end, it is important to integrate these data sets on a location-specific basis and harmonize them across locations in accordance with international standards. In order to use these data subsequently in pseudonymized form for BZKF-wide evaluations in compliance with data protection regulations, internationally established IT infrastructures are being adapted to the requirements of the BZKF and established at all locations.



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### **Local therapies**

The local therapies lighthouse aims to develop Al-assisted imaging solutions to optimize local cancer treatments and improve patient outcomes. Experts from the fields of radiology, radiation therapy, surgery, and computer science are collaborating to overcome challenges in medical imaging and develop advanced image analysis for tumor detection and treatment planning. In addition, work is underway to improve real-time imaging technologies and create uniform imaging data at the BZKF sites.

### Omics, genomics, liquid biopsy

The omics, genomics, liquid biopsy lighthouse project aims to bundle the molecular biology methods available in a decentralized manner within the BZKF network, develop them further in translational research projects, and serve as a central resource for all network members at the various locations. The goal of the lighthouse project is to integrate as many of the omics data as possible from different molecular levels (e.g., genome, transcriptome, proteome, metabolome) in order to improve the effectiveness of targeted therapies. This will create a new generation of molecular tumor boards (MTBs) in Bavaria, at which therapeutic decisions are based on the latest research findings.



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#### **Preclinical models**

The lighthouse develops resources (cell systems, *in vivo* models) and methods, technologies, and standard operating procedures (SOPs) to make preclinical models available to all partners in the BZKF. The aim is to promote translational research by creating various (infra)structural measures. In parallel, the lighthouse will facilitate contact with regulatory authorities. Furthermore, a stable platform will be created that can be used both for the development of new concepts and for the feedback of existing concepts, with the focus placed on testing new approaches.



In this lighthouse, novel immune cell therapeutics are being developed for clinical application in cancer patients. Special attention is given to T cells genetically modified with chimeric antigen receptors (CARs) and T-cell receptors (TCRs). As these are complex pharmaceutical products, the requirements for preparation, manufacturing, and clinical application are particularly stringent. To achieve rapid and effective development, all six Bavarian university hospitals in the BZKF are collaborating by dividing responsibilities in the cellular immunotherapies lighthouse.



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# Trials and studies groups



Clinical trials groups are responsible for conducting clinical trials in patients with specific characteristics of a cancer. Clinical trials groups may be grouped around a particular methodology or find their focus on treating disease at a specific stage. However, clinical trials groups often comprise a mixture of both aspects.







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#### **Tasks**

- » Clinical trials groups
- » conduct phase I/II clinical trials
- validate promising approaches from phase I/II study designs in specific Medicinal Products Act (AMG) or Medical Devices Act (MPG) trials/studies, also in cooperation with industrial partners
- » focus either on a disease or method, or both
- » interact with translational research groups
- » build cross-site disease registries through the collection of clinical, genomic, radiological, and other data (depending on study design)
- » investigate the quality of life of cancer patients, with the aim of improving holistic care

#### Goal

- » Translation of results from basic research into clinical application (translation).
- » Improvement of patient access through a structured and modern patient-doctor concept of care adopting personalized and innovative therapeutic approaches

## Oncological Real-World-Data Platform

1. Data resulting from cancer treatment (e.g., laboratory values, diagnoses) are processed and pseudonymized in data integration centers at Bavarian university hospitals—without any direct references to the individual.

The original data remain at the hospitals, and the evaluation is carried out by the BZKF site itself based on a joint research question.

The pseudonymized results are collected and merged centrally so that they can be analyzed together.

This allows researchers to use real healthcare data across locations without viewing identifying patient data.

A feasibility portal can be used to check in advance whether the desired question can be investigated with the available data.

# Topics, among others:

- » Acute myeloid leukemia (AML)
- » Cancer of unknown primary (CUP)
- » Endocrine und neuroendocrine tumors
- » Liver cancer
- » Lung tumors
- » Malignant melanoma
- » Breast cancer
- » Multiple myeloma
- » Ovarian cancer

- » Pancreatic cancer
- » Primary and secondary malignant brain tumors
- » Prostate cancer
- » R/R ALL
- » Urothelial cancer
- » Soft-tissue sarcomas
- CNS tumors in children and adolescents

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# Translational research groups



Translational research groups aim to translate rapidly innovative therapeutic approaches from cancer research into clinical application. These research groups develop preclinical models based on experimental results in order to prepare for clinical trials or to validate hypotheses from basic science findings using patient samples and patient data.

Particular attention is paid to the development of predictive markers (biomarkers). With such new biomarkers, it will be possible to predict the response to therapies much better than currently. As a result, unnecessary therapies and side effects may be avoided and resources can be used more efficiently.

Further information is available here:



Translational research groups

**Bedside to Bench** Understand Develop Clinical requirements Confirm **Bench to Bedside Treat** 

**Bedside to bench** describes the movement of patients to research laboratories in order to gain new insights, while **bench to bedside** describes the translation of laboratory results into clinical practice. Together, these concepts promote the development of new treatments and diagnostic procedures for cancer patients.

# The PublicCancerHotline



The PublicCancerHotline is a Bavaria-wide free telephone service on the subject of cancer for patients, relatives, physicians, and the interested general public. The PublicCancer-Hotline team is a direct point of contact for anyone seeking advice; translates medical terms in an understandable way; and advises patients and their relatives individually and in accordance with their needs.

Diagnosed with cancer?— 1000s of questions?

For more information, please visit www.bzkf.de





# What can the PublicCancerHotline achieve?

- » Facilitate conversations on the topic of cancer
- » Provide personal advice, geared to the needs of those seeking advice
- » Listen and encourage callers to ask questions
- » Explain medical terminology and guide people through the healthcare system
- Refer callers specifically to a specialist center close to their home and to experts

- » Air the possibilities of seeking a second opinion on diagnoses and therapies
- Answer fundamental questions on screening / early detection, diagnosis, therapy, and aftercare of tumor disease
- » Send information brochures
- » Provide contact information on support groups and further support services

# **Highlights**



**HPV Vaccination campaign**So that you can keep smiling

Together with the Bavarian State Consortium for Vaccination (LA-GI) and the Bavarian State Ministry of Health, Care, and Prevention (StMGP), the BZKF has launched a targeted campaign to raise the awareness of vaccination against HPV—an important step in cancer prevention. The focus lies on the fields of ear, nose, and throat (ENT) medicine, oral and maxillofacial surgery (OMF), and dentistry. According to the mottos, "Everyone goes to the dentist" and "Earaches are also common," dentists and ENT doctors are to be recruited as important partners in raising awareness of the importance of vaccinating against HPV.



Wilko Weichert Young Scientist Academy

A central goal of the Wilko Weichert Academy is to promote and connect young scientists from various Bavarian BZKF locations and research areas. Intensive interaction with existing BZKF groups also brings together several generations of researchers. In addition to existing scholarships awarded for projects in the field of oncological research, an annual retreat is held with targeted training courses and opportunities for direct exchange. Another element of the academy is the mentoring program, in which experienced researchers from university hospitals and universities contribute their expertise in counseling and career discussions, for example, in the form of advanced training on applying for third-party funding in cancer research.



BZKF AYA-Study

Adolescents and young adults (aged 15 to 39) with malignant brain tumors often have poor prospects of recovery and frequently suffer from the long-term effects of both disease and treatment. Pediatricians and physicians specializing in adult medicine at six Bavarian university hospitals are working closely together to improve their treatment significantly. As part of this cooperation, methodological components to consolidate and analyze a wide variety of data and biomaterials have been developed, enabling well-founded scientific evaluations. Another important aspect is the cooperation with the company Mint Medical GmbH, with which an existing cloud-based data integration platform has been extended to consolidate and evaluate the extensive data sets.



# BZKF Oncological Real-World-Data Platform (oRWDP)

Real-world data (RWD) reveal how treatments really work in practice in the field of oncology. They help to evaluate therapies, identify complications, and reduce healthcare costs. Specific patient groups that benefit from particular treatments can also be identified. The oRWD platform enables the six BZKF sites to perform federated analyses based on basic oncological data (oBDS) and facilitates the development of AI algorithms. To ensure a high standard of data protection, the data are pseudonymized and processed locally at the respective BZKF sites. A feasibility portal has been set up to enable BZKF researchers to access real-world data more easily. Even during the initial planning phase, researchers can specifically check whether their study design is feasible with the available real-world data.

Do you have any questions about a research project, or would you like to collaborate on a project? Then please do not hesitate to contact us at geschaeftsstelle@bzkf.de

Are you interested in using the standard BZKF study contract template? If so, please contact the central coordination office directly at studien@bzkf.de

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#### **Support Cancer Research**

#### Bank account for donations

Universitätsklinikum Erlangen:

Stadt- und Kreissparkasse

Erlangen Höchstadt Herzogenaurach IBAN: DF 84 7635 0000 00000 46404

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## Imprint

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