

Working group – Molecular Diagnostics and Therapy

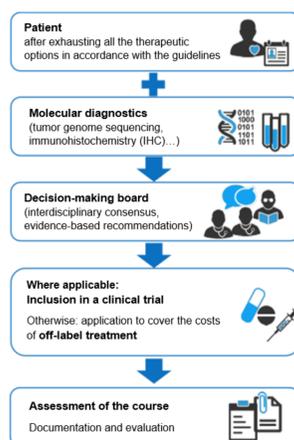
The Molecular Diagnostics and Therapy working group within the BZKF is tasked with the further development and implementation of personalized therapy approaches in oncology and is grouped around the central infrastructure of the molecular tumor board.

Speaker: Prof. Dr. Wilko Weichert, Munich

Concept & Achievements

Personalized therapy strategies in oncology

Modern molecular diagnostics generate highly complex datasets that are linked to highly differentiated treatment options. Especially for patients with advanced tumor disease, concepts of personalized therapy tailored to the individual are indispensable from a certain point in time onwards. In the light of such developments, established tumor boards are stretched to their limits. For this reason, major oncology centers have created molecular tumor boards (MTBs). On these boards, physicians specifically trained in molecular oncology recommend personalized therapy concepts based on advanced molecular diagnostics to patients with clinically and biologically complex constellations of findings.



MTBs have already been implemented at all the BZKF sites. At the BZKF, the structures of all sites, which have grown independently of each other up to now, are currently being networked and standardized.

The situation at the outset

The working group was founded in 2020. At that point in time, significant structural differences existed in the field of personalized oncology at the individual sites. The MTBs in Munich, Würzburg, and Erlangen had already been established for several years, while those in Regensburg and Augsburg were still in the process of being set up. There was no networking between the sites. Moreover, there was a lack of structures enabling digital communication and data exchange for diagnostic, quality assurance, and scientific purposes.

Achievements so far

Integration of Regensburg and Augsburg:

Over the last two years, the MTBs in Regensburg and Augsburg have come ever closer to the level of the other sites, benefiting from their experience in the process.

Miracum and cBioPortal:

The Miracum Consortium of the Medical Informatics Initiative (MII) is driving the integration of clinical and molecular data into harmonized IT infrastructure forward with the implementation of cBioPortal technology.

Data exchange:

Furthermore, a strategy encompassing secure data exchange and cross-site data retrieval is currently being developed in cooperation with the IT groups of the BZKF and the MII.

BZKF-MTB:

A concept for discussing controversial cases (common, genetic constellations with conflicting data) in a multi-site MTB forum has also been developed. This was combined with the BZKF / early clinical trial unit (ECTU) board, owing to the clinical proximity of the MTBs to the ECTUs. The first cross-site BZKF MTB/ECTU boards have already taken place. Initial joint clinical recommendation guidelines in particular molecular constellations are under development.

Long-term goals

- » Establishment of the joint BZKF-MTB data infrastructure covering clinical parameters, molecular profiles, and structural information.
- » Harmonization of procedures for clinical recommendations and follow-up for BZKF-MTBs and thus Bavarian cancer patients in general.
- » Development of joint study concepts with the ECTU working group.
- » Harmonization of BZKF-MTB infrastructures with other German initiatives such as DKTK, ZPM, NCT.
- » Implementation of strategies for comprehensive BZKF access to MTB datasets for use for healthcare, research, and clinical trial purposes.

Authors: Wilko Weichert, Simon Heidegger, Sebastian Lange (Technical University Munich), Ralf Bargou, Andreas Rosenwald (University of Würzburg), Matthias Beckmann, Arndt Hartmann (University of Erlangen), Benedikt Westphalen, Frederick Klauschen (Ludwig-Maximilians-University), Bruno Märkl, Martin Trepel (University of Augsburg), Florian Lüke, Tobias Pukrop, Matthias Evert (University of Regensburg)