Titel CLONE: 
Clinical Trials in Oncology in the New Era of Omics, Big Data, and Modeling. 
A BMBF funded Summer School of the Krukenberg Cancer Center Halle (KKH) in Systems Medicine 
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Aim

Innovative data in cancer biology and bioinformatics are revolutionizing the understanding of cancer and have profound implications on the design of clinical trials with novel ethical and legal challenges. BMBF funded Summer Schools could be a platform facilitating interdisciplinary knowledge transmission from research to healthcare.

Methods

CLONE (a five-days program) was planned to bring physicians and researchers from various disciplines in Systems Medicine together to illuminate personalized oncology. The proposal of the KKH was accepted within the BMBF e:Med Summer school grant in September 2018. Participants from Germany and abroad were competitively selected by a panel of experts based on submitted abstracts. The faculty included thirty-eight national and international experts in their fields.

Results

CLONE took place from 24-28 June 2019 in Halle (Saale). A total of 23 participants from five countries qualified. The following topics were: Day 1: Stratified versus personalized cancer medicine; emerging developments in Omics and Big Data Analytics in Life Sciences. Day 2 (Omics): Genomics; Epigenetics; Proteomics. Day 3: (Big Data): Bioinformatics; Modeling and simulation; real world data including registries. Day 4: (Clinical Trials in the era of Big Data): Planning and designing a clinical trial; Preparing a trial; Science versus regulations. Day 5 (Engaging and communicating with patients): Ethical and legal considerations; Patients perspectives. Four workshops in molecular pathology, proteomics, epidemiology and clinical trials were held. Three poster walks provided insights into challenges in research, including different health care systems and standards of living. A daily evening program was offered.

Conclusions

BMBF funding allowed a scientific exchange across different disciplines relevant for cancer research and treatment. The need for collaborative programs to analyse the vast amount of research data and how to translate the results into prognostic biomarkers and tailored clinical studies with targeted therapies were emphasized. International summer schools can offer an incentive to look outside the box.