

Clinical research of the future: optimized with artificial intelligence?

Clinical trials are complex. They present companies with challenges; this is especially true for up-and-coming biotechnical start-up companies with products that grow out of preclinics (clinical readiness). Very often, however, they do not have the necessary knowledge and experience to carry out clinical product development. But how can clinical trials be conducted more effectively and efficiently for the benefit of all?

Vaccine in record time

In a concerted orchestration of all stakeholders, the current pandemic has provided astonishing collaborative services: from the idea to the approved vaccine in just one year. But these concerted actions were absolute exceptions – and they will remain so. The radical optimization of clinical research and disruption of established ways of working must now be the top priority in order to permanently shorten the processes, accelerated by digital trends and artificial intelligence. For example, direct access to anonymized patient data makes it possible to shorten retrospective projects to days, reduce prospective studies in complexity and minimize risks.

The value chain is changing drastically due to the monetization of data points. This results in a considerable time saving in the organization and monitoring. In the future, universally applicable digital business models in clinical development and the elimination of analog business processes will thus become an advantage for patients and healthcare systems. Consequently, the pressure on business models is increasing, in which neither own products are developed nor own data are obtained. Funds and resources are being reallocated, clinical monitoring, data management and administration are hardly in demand anymore. Flexibility and digital competence will become important qualities for future employees in clinical research.

Significantly shortening development cycles and improving data quality in order to quickly bring the new generation of products that not only alleviate symptoms but also promise healing to patients requires a powerful joint effort to transfer analog processes into digital business models. The course for this must be set now so that the momentum is not lost. Consistent digitalization leads to more security by reducing dependencies and significantly saving time. This time, the entrepreneurs must be the pioneers and drivers so that the pressure on the regulators to accompany this development vigorously increases.

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