Leading Cancer Charity Embraces New Model for Trial Master File Management

Cancer Research UK Modernises Clinical Operations for Improved Trial Efficiency and Compliance

Operational efficiency is critical for an organisation that develops pioneering new cancer treatments for patients. Relying on manual processes and legacy systems to manage the vast amounts of documentation generated by early-phase clinical trials consumes significant time and effort, which gets in the way of our mission. Embracing new technology and modernising clinical operations is one way to increase efficiency, maximise patient benefit, and ultimately accelerate progress towards the day when all cancers are cured.

At Cancer Research UK, we work with investigators in the Experimental Cancer Medicine Centres (ECMC) Network and commercial partners from around the globe to sponsor and manage a portfolio of early-phase oncology trials. To streamline processes, improve collaboration, and maintain inspection readiness while managing our trial master file (TMF), we transitioned away from our passive TMF operating model that was dependent on paper documentation and file shares. Our goal was to increase efficiency by moving to a cloud-based eTMF designed for active TMF management, which ensures all documents, related information, and processes are managed in the same system, at the same time as they are being executed.

The Case for Change

Cancer Research UK plays a unique role in oncology drug development. We deliver pre-clinical, Phase I, and Phase II trials through our Centre for Drug Development (CDD), and partner with industry and academia to turn research ideas into novel therapies. The aim is not to compete with life sciences companies, but to complement them. We work with biotech and pharmaceutical companies using an innovative commercial development partnership model. The CDD undertakes pre-clinical development activities and the clinical trial. If the trial results are encouraging, then sponsors have the option to license the data and progress the agents in late-phase trials. In return, Cancer Research UK receives milestone payments and royalties to reinvest in the discovery and development of new therapeutics.

The model has been successful. Over the past 25 years, Cancer Research UK has supported the development of six marketed drugs. Most recently, we helped to develop Rucaparib (Rubraca®), which gained accelerated approval from the US FDA in December 2016 for the treatment of patients with BRCA+ advanced ovarian cancer after two or more lines of chemotherapy. Efficient drug development is key to accelerating research and fulfilling our vision that three in four patients survive cancer by 2034.

With up to 30 projects in our portfolio at any one time – including 12 currently in trial phase – managing the volume of clinical trial documentation was challenging. In addition, we have 120 employees throughout two manufacturing facilities and remote offices, as well as partners from universities and National Health Service (NHS) trusts. Collaboration was difficult with our previous, paper-based TMF system and we had limited visibility of real-time progress across the organisation. Since a typical TMF consists of thousands of documents spanning numerous parties and multiple locations, preparing for routine inspection and archiving information to comply with industry regulations was also consuming too many resources. It took at least 12 days every six to nine months to manually review TMF documentation in preparation for inspections. We would then need 40 days to archive that documentation. This process was too cumbersome and inefficient.

Our department, led by Dr Nigel Blackburn, Cancer Research UK director of drug development, decided it was time for a change. We wanted to modernise processes across the organisation and upgrade multiple systems. The first priority was implementing a new eTMF system. With flexibility and scalability high on our list of requirements, we identified the need for a cloud-based solution. We conducted a thorough evaluation of market options, and then selected Veeva Vault eTMF to enable active TMF management across the organisation. Veeva Vault eTMF is part of a unified suite of clinical applications.

"Shifting to an active TMF model is a more effective way to reconstruct how a trial is run because the TMF is maintained in a constant state of inspection readiness," explains Jim Reilly, vice president of clinical strategy at Veeva Systems. "TMF composition is an automatic result of an executed clinical process so compliance is continuous and operational metrics are easy to collect and monitor in real time. Active TMF management is a relatively new concept and is a direct result of the evolution of technology supporting TMF operations. Systems and processes are indistinguishable in this model because they work in tandem to reach the end state."

A Single Source of Truth

Adopting a system for active TMF management provides our users with a single source of truth for trial documentation. Our previous method of TMF management, which required our dispersed workforce to maintain a paper TMF and store documents in file shares, meant we had parallel systems that were not validated. It did not provide an accurate reflection of trial progress, left us vulnerable to mistakes, and required a great deal of effort to prepare for inspections. Shifting to active TMF management ensures all users can access accurate information no matter where they are, and keeps our TMF in compliance continuously.

The benefits of moving to a modern, cloud-based eTMF were just as compelling to our users. Ease of use was a huge deciding factor for us. All of our users – clinical research associates, clinical study co-ordinators, clinical study managers, QA managers, and IT business analysts – were coming from paper and file shares. None of them had used an electronic TMF system before, yet they found the new system intuitive and easy to use.

The eTMF is now being piloted across a number of studies managed before being rolled out across our entire portfolio. The impact of active TMF management is already being felt and we are seeing numerous process efficiencies. With everyone working on the same platform, where they can log, access, and share real-time information, each of these steps is significantly quicker.

Process efficiencies inevitably lead to cost savings. For Cancer Research UK, reducing costs in one area allows for reinvestment elsewhere. A large number of trial proposals come to our new agents committee every year. Sometimes, we are forced to turn them away due to the staff constraints. Reducing the burden of manual processes and paperwork by leveraging modern cloud technology such as Veeva Vault eTMF means our limited team can manage a larger portfolio of trials.

Modernising clinical operations through active TMF management is just one step toward our mission to beat cancer sooner, but it's an important one. As Blackburn explains, "By increasing our efficiency, we increase our capacity to take on more of the early-phase trials that might otherwise not happen. Active TMF management is helping us to not only improve clinical operations, but also strengthen our commercial partnerships through better collaboration. That means we can provide even more support to the life sciences industry and help to accelerate the delivery of the next generation of treatments to patients."

Stephen Nabarro

Head of Clinical Operations and Data Management Cancer Research UK, Stephen Nabarro has 15 years' experience in oncology research and drug development.
He completed a PhD in paediatric oncology at University College London, followed by a Postdoctoral Fellowship at the Medical Research Council Laboratory of Molecular Biology in Cambridge. In 2007, Nabarro joined Cancer Research UK, the largest funder of cancer research in Europe. In his role as Head of Clinical Operations and Data Management in the Cancer Research Center for Drug Development, he and his team have successfully adopted a risk-based monitoring approach that was positively reviewed by the MHRA, implemented new EDC and eTMF systems to improve quality and operational efficiency, and are exploring novel approaches to patient involvement in clinical trials.