

rial growth has dramatically outpaced site capacity since 2015, at the same time the number of new investigators participating in clinical trials has decreased by 48%. Those are just two reasons sponsors miss 80% of critical clinical trial milestones, and for smaller biopharma sponsors one missed milestone alone can create significant issues for a study and the company itself.

Every biopharma sponsor faces the challenge of initiating, running and closing trials on time, but oncology studies pose several unique hurdles:1

- Competition for sites and site resources is particularly fierce: In the last 10 years, the number of oncology drugs in development grew at almost twice the pace of any other therapeutic area.
- Oncology phase 2-3 trials have a higher average number of substantial amendments and more protocol deviations.
- Oncology trials typically involve more countries and sites yet recruit fewer participants. This reflects their focus on precision medicine as well as the difficulties of recruitment and retention.
- Oncology protocol designs are more complex and associated with high screen- and completion-failure rates.
- Treatment duration is typically 30%-40% longer.

Staying competitive in the oncology trial arena demands protocol optimization and specialized statistical support. It also requires selection of optimal sites, site-friendly just-in-time training, and site support to reduce the pressure on sites and relieve bottlenecks.

INSIGHT

Trial Growth is Outpacing Site Capacity:

The total number of drugs in clinical trials worldwide has grown 4.1% annually between 2000 and 2020.1



The number of oncology drugs in development worldwide has grown 6.5% annually since the year 2000.1



Oncology drugs as a share of all in drugs in clinical development rose from **14.8%** in **2000 to 23.1% in 2020.**¹



New Principal Investigator Participation in clinical research has decreased by 48% over the last 5 years.²



DESIGNING ONCOLOGY STUDIES REQUIRES PARTICULAR ATTENTION TO STATISTICS AND CARDIOVASCULAR EFFECTS

Statistical Collaboration with an Experienced and Engaged Team

Careful evaluation of endpoints, sample sizes, statistical analysis plans, study procedures and inclusion/exclusion criteria can ensure that an oncology protocol reflects regulatory requirements.

WCG's Statistics Collaborative team has deep expertise in innovative trial design and regulatory requirements, plus considerable experience with all aspects of data monitoring committees (DMCs), serving on DMCs as well as acting as the independent statistical group reporting to DMCs in oncology. We have designed trials and helped develop protocols in many disease areas across all phases of drug development with special attention to smaller biopharma sponsors with minimal or no in-house statistical capabilities. For those clients, we become valued, integrated team members who can also address statistical topics at regulatory meetings.

Expert analysis, including writing and implementing statistical methods to address missing data, increases the regulatory confidence in trial endpoints. When past clinical data are limited, WCG Statistics Collaborative uses historical data and guidance from subject matter experts to make study design decisions. A dedicated WCG team will collaborate with the sponsor, key investigators,

and other members of the research team to improve the quality of study design, identify appropriate endpoints, and enhance the quality and interpretability of the study results. WCG statisticians support numerous clinical trials studying a variety of cancers, including hematologic malignancies and solid tumors. We have served as the independent statistical group for more than 100 oncology trials, including treatments for prostate, endometrial, breast, ovarian, cervical, pancreatic, thyroid, colorectal, bladder, urothelial, lung, brain, and head and neck cancers; leukemia, lymphoma, and myeloma; and hepatocellular carcinoma, renal cell carcinoma, chondrosarcoma, and melanoma. In terms of DMC support over the last 2 years, we have reported to DMCs for more than 30 different phase 2-3 oncology trials.

Cardiovascular Safety Considerations

Despite all the advances in oncology therapies, toxicities remain a problem, and cardiovascular adverse events make up more than 30% of those reported. With the advances in oncology outcomes and longer survival, we will need therapies with an improved long-term outcome, or improved strategies for early detection, management and/or prevention of cardiovascular-related adverse events.3 We can provide access to leading experts in the field of cardiac safety as it pertains to oncology clinical trials. Jonathan Seltzer, MD, FACC, the founder and president of WCG ACI Clinical says that: "Precise reporting of cardiovascular adverse events is a crucial component of the safety profile of chemotherapeutic agents. It's

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AMID THE COMPETITION, FIND YOUR BEST-FIT SITES

We understand that sponsors want the *best-fit* sites for their oncology trials. WCG is uniquely placed within the trial ecosystem to link sponsors, sites and patients together and we

have extensive experience in identifying the best-fit sites for oncology studies. In 2020 more than 43% of our site identification engagements were for oncology.

To find the best-fit sites, we tap into the WCG Knowledge Base[™], which includes more than 180,000 global investigators and contains proprietary information on 93% of industry-sponsored studies, benchmarks and competitive performance data. We can also access our database of the nearly 1,200 US hospitals and independent sites that perform oncology studies, with which we have close relationships.

To ensure that the sponsor can make the best site-selection decisions, we can provide:

- Data on sites presented by quartile, based on past trial performance, allowing the sponsor to see which sites are most likely, and least likely to perform
- Intelligence about competitor studies at sites, which enables a sponsor to make an informed decision about the likely competitive situation.

We can personally introduce sponsors to sites that have clear potential to enroll and are looking to expand their trial footprint.

WCG's dedicated site identification and feasibility team provides expert guidance and hands-on support sponsors need to find these sites. Our experts *interpret* the data and customize it to each client's specific needs, accelerating the study startup process.



PROVIDE EFFICIENT, CONVENIENT TRAINING

Oncology trials often present complex site-training challenges. Sites may be ready to start enrolling over a period of many months, but then encounter significant delays in enrolling the first patient. Frequent protocol amendments cause study delays and due to the duration of oncology research there can be many site staff changes over the course of the trial. In such situations, face-to-face investigator meetings followed by on-site, in-person training is impractical. Time that could be focused on recruitment is wasted, the process lacks consistency, and it becomes difficult to track training.

Sponsors, sites and investigators need site teams to be trained quickly, efficiently and

consistently. On-demand solutions cut training time, accelerate startup and provide consistent, compliant training. WCG Trifecta delivers, tracks and reports role-based and task-based training for sites and study teams. This streamlines the process for both sites and sponsors. In addition, the system is audit-ready 100% of the time, reducing preparation time for audits and inspections.

Compared to face-to-face training, WCG's Trifecta on-demand training reduces costs by 60%. It cuts site training time by 50%; on average, this means that sites have 55 more days to recruit for the trial than if they waited for face-to-face training. Much of this saving comes from reduced redundancy. Clinical site teams frequently need to complete training for a new trial that is identical to training they

previously completed for another project. This is not merely wasteful; it is frustrating to the investigators and site staff. Our system avoids this problem by exempting staff from training already completed.

On-demand training means site staff can complete training more efficiently at a time and place of their choosing. Sponsors can roll

out new training in a matter of days, which is especially important for amendment training. This saves time and money; moreover, being considerate of staff time increases site satisfaction.

Results from an exit survey for WCG Trifecta training are shown below:

INSIGHT

Exit Survey Leaves Trainees Highly Satisfied

Survey Question (rated 1-5, where 5 is excellent)	Average Score
Based on your experience of the training system, you would be likely to use a similar system in the future	4.03
I found it easy to log into the system using the instructions and information I received in my Welcome email	4.52
I found the on-line training system easy to use	4.36
I liked the fact that everyone at my site could be trained by the system	4.27
I was satisfied with the experience of using the training system	4.21
If you contacted customer service your problems were resolved to your complete satisfaction	4.00

FIND THE RIGHT SITES-BUT DON'T OVERBURDEN THEM

Sites, even the best ones, are overwhelmed. They face complex protocols, more sponsor demands, and decreased staff due to both internal pressures (e.g., the need to be more financially viable) and external pressures (e.g., the COVID-19 pandemic.)

Oncology sites may need assistance with

many aspects of the trial to meet sponsor timelines. These could include managing referrals, engaging in community outreach, and supporting participants through the multiple, complex trial procedures. Over the past decade, an average of three times more data are now collected in phase 3 trials, placing an additional burden on sites. We find that oncology sites most often need data entry support to meet sponsor timelines. Our

scalable Site Augmentation Services ensure sites have the resources they need exactly when they need them. Clinical Research Coordinators (CRCs) function as members of the study team, handing key administrative tasks, including data entry, query resolution, chart review and screening, and other trial-related administrative tasks.

Through the placement of on-site and/or remote CRCs, WCG ThreeWire has supported more than 43,000 hours of data entry at more than 200 oncology sites over the past three years. In one global oncology study our CRCs cleared backlogs and reduced open data entry queries by an average of 54%. That support has translated into avoidance of clinical development delays such as late data-base locks.

WCG assesses how far behind sites are and scales the service so the backlog is cleared on schedule. CRCs then move on to manage real-time data entry, freeing the site staff for other clinical activities.

NO TIME TO WASTE

Remaining competitive in oncology clinical research is challenging in face of the growth in oncology trials, their increasingly complex nature and the challenges of recruiting and retaining trial participants. Our experience shows that optimizing protocol design, site identification, investigator training and site support are all important components in ensuring success in oncology trials. Small and mid-size sponsors have additional challenges related limited internal resources and the competing demands that are made on those resources.

DATA POINT

Site Augmentation and the Clinical Research Coordinator Effect:

2.97

Queries per patient at sites receiving support from WCG CRCs

6.4

Queries per patient at sites not receiving support from WCG CRCs

54%

Reduction in queries per patient at WCG ThreeWire supported sites

No matter how complex the trial, a dedicated WCG team will work alongside you to bring your innovative therapies to the patients who need them. We listen. We respond. We are always available. Focusing on the critical trial inflection points, we help de-risk the development process and deliver value to patients and the sponsor company. We would be happy to discuss your oncology clinical trials and how we can help you apply the lessons discussed above to enable your success in this competitive space.

NEED SUPPORT FOR AN UPCOMING OR ONGOING ONCOLOGY STUDY?

Speak to an expert

REFERENCES

- ^{1.} Protocol complexity and patient enrollment intensify challenges in oncology trials. Tufts Center for the Study of Drug Development Impact Report Vol, 23 number 3 May/June 2021.
- $^{2.}$ WCG Knowledge BaseTM.
- ³ Seltzer, JH et al Assessing cardiac safety in oncology drug development, Cardiac Safety Research Consortium 2019.
- ⁴ Rising Protocol Design Complexity is Driving Rapid Growth in Clinical Trial Data Volume. Tufts Center for the Study of Drug Development Impact Report Vol, 23 number 1 January/February 2021.



WCG is the world's leading provider of solutions that measurably improve the quality and efficiency of clinical research. Comprised of two segments, Ethical Review and Clinical Trials Solutions, WCG enables biopharmaceutical companies, CROs, and institutions to advance the delivery of new treatments and therapies to patients, while maintaining the highest standards of human participant protection.

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