AI as a Tool, Not a Replacement: Bracken's Judgment-Led Framework for Generative AI in the Life Sciences

The Bracken Group

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For many organizations in the life sciences, the pressure of expediency that artificial intelligence (AI) presents is undeniable. But the question is not *what* AI can do for you, but *where* it can perform productively without undermining the scientific, regulatory, and strategic integrity of your work.

In essence, the pressure is not to hand the reins of your expertise to generative AI, but rather to strategize and deploy AI as a tool, not a replacement. At Bracken, we excel as a judgement-led consulting organization, routinely advising clients facing high-stakes decisions in the realms of clinical development, medical imaging, radiopharmaceuticals, regulatory strategy, and commercialization.

Even in our marketing services division, our team regularly encounters clients who have used AI in life sciences marketing collateral but failed to produce anything valuable. So, they turn to agencies with reputations for producing high-quality work.

The value lies not in expedient results, but in genuine expertise embedded in collaboration with your team—shaping preparation and informing better decisions than automation alone can deliver. This is the foundation of Bracken's judgement-led advisory approach and our philosophy around the strategic use of AI.

Looking for a judgement-led approach for marketing? See the Marketing Services statement on AI use to learn how Bracken uses generative AI to support—not replace—sound judgment in creative digital marketing strategy initiatives for our clients.

What AI Can and Cannot Do in the Life Sciences

Certainly, some of the tasks AI can take on are astounding; some AI platforms are now capable of generating and optimizing molecular structures through iterative atomic configurations.

But perhaps one of the most productive uses we've discovered is that AI can compress months of research in a few hours, which is especially useful for ideation and early study design. However, in early-phase research, AI does not replace the necessity of live experimentation, where preclinical testing, animal models, and human trials remain essential.

Protocol and Clinical Design

We've also observed how AI can assist in early-stage protocol development by generating draft study frameworks, endpoint structures, and data collection methods aligned to defined objectives. Used in this manner, it can significantly reduce manual drafting time and accelerate trial setup.

However, these outputs still require expert interpretation to determine which endpoints are meaningful to avoid over-analysis, and to ensure that study design reflects real scientific and clinical priorities rather than optimization for convenience's sake.

Data Capture and Reporting

Right now, AI is more capable of supporting a full clinical data lifecycle, which includes:

- Data ingestion and organization
- Statistics
- Table, listing, and figure (TLF) generation
- Draft report assembly (such as CSRs, IND-supporting documentation)

Yes, AI can produce and organize large datasets efficiently, but correct interpretation, endpoint selection, and the nuances of regulatory requirements require a judgement-led consulting approach.

Literature and Industry Landscape Summarization

Just as efficient as organizing data sets, AI can also scan, synthesize, and summarize large volumes of scientific abstracts and publications. It can be helpful if you're familiarizing yourself with a particular subject or therapeutic area. However, they're not always reliable; summaries must be treated as provisional and carefully validated, as AI-generated summaries and resource gathering are often limited by gated publications, outdated sources, or they may even hallucinate interpretations.

Regulatory Documentation Support (with limits)

AI can assist with assembling or drafting components of INDs, NDAs, and regulatory submissions. However, it lacks the contextual understanding required for regulatory strategy, risk framing, and authority engagement—areas where human expertise can excel and a judgement-led advisory approach is indispensable.

Recap: Identified Limitations and Risks

AI may:

1. Over-generate endpoints, weakening statistical power
2. Confidently present outdated or incorrect regulatory "standards"
3. Without judgement-led advisory, AI can obscure, not clarify, scientific truth

Project Management & Operational Use Cases

Content Refinement & Transcript Synthesis
Beyond deploying generative AI in the life sciences, Bracken's Marketing Services team uses AI to refine their high-quality collateral while synthesizing important takeaways from meetings and conversations with subject matter experts (SMEs). However, just as generative AI in the life sciences cannot replace genuine expertise—in marketing—AI functions strictly as a supporting tool rather than a substitute for the kind of strategic thinking that marks any great creative services team.

In iterative content development, AI can be used to generate multiple variations of titles, summaries, and framing approaches, helping our writers test different narrative directions for blogs, white papers, and thought leadership pieces as necessary. This makes it a useful tool for refining messaging and exploring alternative angles once a core idea is established. At Bracken, AI is applied after human ideation, not as a substitute for first-pass thinking. This way, a strategic use of AI remains grounded in a genuine understanding of subject matter rather than predictive language modeling.

The Marketing Services team conducts a lot of meetings, many of which feature insightful conversations with SMEs working from many different areas of the life sciences. Here, AI can be helpful in transcript review and synthesis, serving to extract key takeaways, identify themes from conversations regarding content, and mark action items for ongoing projects.

Logistical Support

Our Project Managers often work with unfamiliar or highly specialized workflows, such as clinical sample shipping logistics, courier selection and comparison, and initial SOP framework development.

While navigating sample shipping, one of Bracken's Project Managers used AI to help navigate logistics and vendor options. Rather than knowing which courier services to approach or how to structure an account, she began by asking AI to outline the types of specialized couriers available and how to compare them. This helped her organize options by sample type and transport needs, producing a structured comparison that made the landscape more legible and less intimidating, particularly given the complexity of handling real human tissue samples and air transport requirements.

From there, AI was used to generate a preliminary SOP framework that could serve as a working draft. This scaffold provided a logical structure for the procedures involved, which was then adapted to internal templates and refined based on authoritative sources and direct verification with courier specialists. In this case, AI did not define operational practice but supported early understanding and organization, allowing the Project Manager to execute shipping with confidence, while ensuring that final decisions remained grounded.

Quality Control and Critique

In quality control and review, AI serves as a "second set of eyes," helping to check for clarity, completeness, and organizational coherence rather than acting as an authoritative source. Human oversight is mandatory, especially in a regulated environment where expert judgment and accountability are essential to ensure accuracy, compliance, and fitness for purpose.

Judgment-Based Decisions Drive the Best Outcomes

As the life sciences becomes oversaturated with unregulated automation, generic analytics, and outright bland content, Bracken will remain at the intersection of earned expertise, accountability, and invaluable judgement. We know our clients' trust is earned through expert decision-making, backed by disciplined methods, data transparency, and scientifically sound interpretation.

While AI inevitably means more information, it does not mean sound judgement. As generative AI in the Life Sciences market evolves, Bracken's commitment to judgement-led consulting ensures success is unlocked with better decisions, not just more data.