

Prompt Like a Pro

8 Power Moves for Better AI Results in Clinical Research

These methods work with any AI platform – Claude, ChatGPT, Gemini, Copilot, Perplexity, and whatever comes next. Small changes in how you prompt lead to significantly better, more relevant results – whether you're drafting regulatory documents, streamlining patient recruitment, or analyzing study data.

1 The Expert Hat

Assign a Persona

Tell the AI who it should be before you ask your question. Specify a role, years of experience, and domain. A response from "a CRC with 12 years managing Phase II-IV oncology trials at an academic medical center" is dramatically different from one by "a clinical research professional."

TRY THIS

"You are an experienced clinical research coordinator with 10 years managing Phase I-III trials at both academic medical centers and independent research sites. You have deep knowledge of ICH-GCP guidelines, FDA 21 CFR Part 11 requirements, and institutional IRB submission preferences. You've navigated complex multi-site studies and understand the realities of competing enrollment timelines. Help me draft an IRB application for a Phase II cardiovascular safety study with 40 participants across 8 sites."

2 The Full Brief

Structure with Context

Provide protocol background, regulatory constraints, patient population, timeline, and desired outcome upfront – like you're briefing a consultant. Use clear sections: Context, Task, Audience, Constraints, Format.

TRY THIS

"Context: We're running a Phase IIb randomized controlled trial for a Type 2 diabetes therapeutic. Our protocol requires 120 patients across 6 sites. Inclusion criteria: HbA1c 8-11%, age 45-75. We're 8 weeks into enrollment with only 18 patients and 6 weeks remaining. Task: Recommend 3-4 strategies to accelerate enrollment without protocol violations. Audience: The Sponsor's medical monitor and our IRB. Constraints: One dedicated recruiter, \$5K marketing budget, and three competing diabetes trials in our market."

3 The Outsider Lens

Cross-Pollinate Industries

Ask the AI to borrow proven solutions from other industries. Hospitality loyalty programs can inform patient retention. Airline crew scheduling can optimize visit management. Retail queue systems can improve clinic flow. The AI's strength is making connections your competitors aren't considering.

TRY THIS

"We're struggling with patient retention in our 48-week oncology trial – our dropout rate is 22% and climbing. How would the hospitality industry approach this problem? What specific techniques from luxury hotel loyalty programs, concierge services, or guest experience management could we adapt for keeping trial participants engaged through long treatment cycles and frequent site visits?"

4 The Reverse Interview

Invite Clarifying Questions

Before the AI answers, ask it to interview you first. This surfaces hidden assumptions about your trial phase, site type, regulatory environment, and risk areas – so the output actually fits your specific situation instead of giving you a generic response.

TRY THIS

"I need help preparing our site for an upcoming FDA inspection. Before you give me guidance, ask me 6-8 clarifying questions to make sure you fully understand our situation – things like our trial phase, whether we've had prior FDA interactions, which site system areas we're most concerned about, whether there have been previous findings, and how far along we are in the trial timeline. Then I'll answer, and you'll provide tailored preparation guidance."

5 The Chain Reaction

Think in Steps, Not Sprints

Break complex clinical tasks into sequential steps. Instead of jumping to conclusions, force the AI to work through each phase so you can verify the reasoning at every stage. This is especially critical for safety reporting and regulatory decisions.

TRY THIS

"A patient in our Phase III trial experienced a cardiac event during their Week 12 visit. Analyze this step by step: 1) Classify the event using ICH-GCP serious adverse event definitions. 2) Determine if it meets SAE criteria and explain why. 3) Assess potential causality to the investigational product using the WHO-UMC system. 4) Identify regulatory reporting timelines for the FDA and our IRB. 5) Recommend the documentation approach and which forms to complete. Show your reasoning at each step."

6 The Blueprint

Show, Don't Just Tell

Instead of describing what you want, paste an example. Share a previous informed consent, IRB response, or protocol amendment. The AI learns your site's voice, regulatory style, and formatting preferences from real documents - producing output that actually matches your standards.

TRY THIS

"I need to draft an amended informed consent for a new pharmacogenomic blood draw we're adding to our protocol. Here's our current ICF document [paste the document]. Match our existing tone, regulatory language, reading level, and formatting exactly. The new blood draw is a 10mL sample for CYP2D6 genotyping at Visit 3. Make the new section consistent with how we explain other study procedures in this document, and flag any additional risks I should address."

7 The Glass Box

Ask It to Think Out Loud

Request transparent reasoning, not just conclusions. In clinical research, the logic behind a recommendation matters as much as the recommendation itself - especially for patient safety and regulatory compliance decisions where you need an auditable rationale.

TRY THIS

"Our PI wants to know if we can conduct the Week 8 study visit remotely for a patient who relocated. Walk me through your reasoning. Consider: the specific assessments required by our protocol (vital signs, physical exam, ECG, and lab work), which of these require direct patient observation, ICH-GCP requirements for source data verification, and current FDA guidance on decentralized trial visits. I want to understand which elements require in-person assessment before you give a recommendation."

8 The Draft Ladder

Iterate and Refine

Treat every AI output as a first draft. Refine through specific, targeted rounds. Each iteration should name exactly what to change: tone, length, citations, regulatory language, audience level. Four rounds of focused refinement beats one attempt at perfection.

TRY THIS

Round 1: "Draft a response to the IRB's questions about informed consent complexity." Round 2: "Good start - make it under 2 pages and reorder so you address the safety concern before the procedural question. Use a collaborative, non-defensive tone." Round 3: "Now cite the specific ICF sections where we addressed their concern - they want to see what we changed and why." Round 4: "Simplify the language so an IRB member without oncology expertise can understand why this change improves patient comprehension."

Putting It All Together

Start with one practice in your next AI conversation and notice the difference. The strongest prompts combine 3-4 practices at once. For example, a solid IRB submission prompt might: assign a coordinator persona, provide protocol context, include a previous submission as a template, request step-by-step reasoning, and set up iterative refinement. These practices are platform-agnostic - they work equally well across Claude, ChatGPT, Gemini, Copilot, or any AI tool your site adopts.