



AI ADOPTION WITHIN CLINICAL TRIALS

A poll taken at CTTC Congress, London, May 2026

Introduction

The clinical trials landscape is accelerating into a new digital era with the convergence of cutting-edge technology and patient-first design transforming how trials are conducted, data is captured, and insights are delivered.

We conducted a poll at the Clinical Trials Technology Congress (CTTC) in London in May 2026 to understand the impact of AI on clinical trials and the value of real-world data in shaping clinical development operations. Participants were primarily clinical trials professionals leading and enabling this step change in the industry.

Key Findings

Key highlights from our poll include:

- Trust and regulatory uncertainty are the biggest barriers to AI adoption in clinical trials, cited by half of respondents (50%).
- AI is beginning to deliver value in clinical development, with 42% of respondents seeing early signs of Return on Investment (ROI) and a further 23% expecting ROI but not yet realizing it.
- Over the next 3-5 years, AI will have the most impact on cleaning data, data analysis, and insight generation (48%) and sourcing and engaging patients (22%).
- 60% of respondents are already using, piloting, or exploring patient-generated data to inform clinical development decisions beyond marketing.
- More than half (58%) say the primary benefit of social media listening is understanding patient needs, monitoring sentiment, and experience.

Key Takeaways

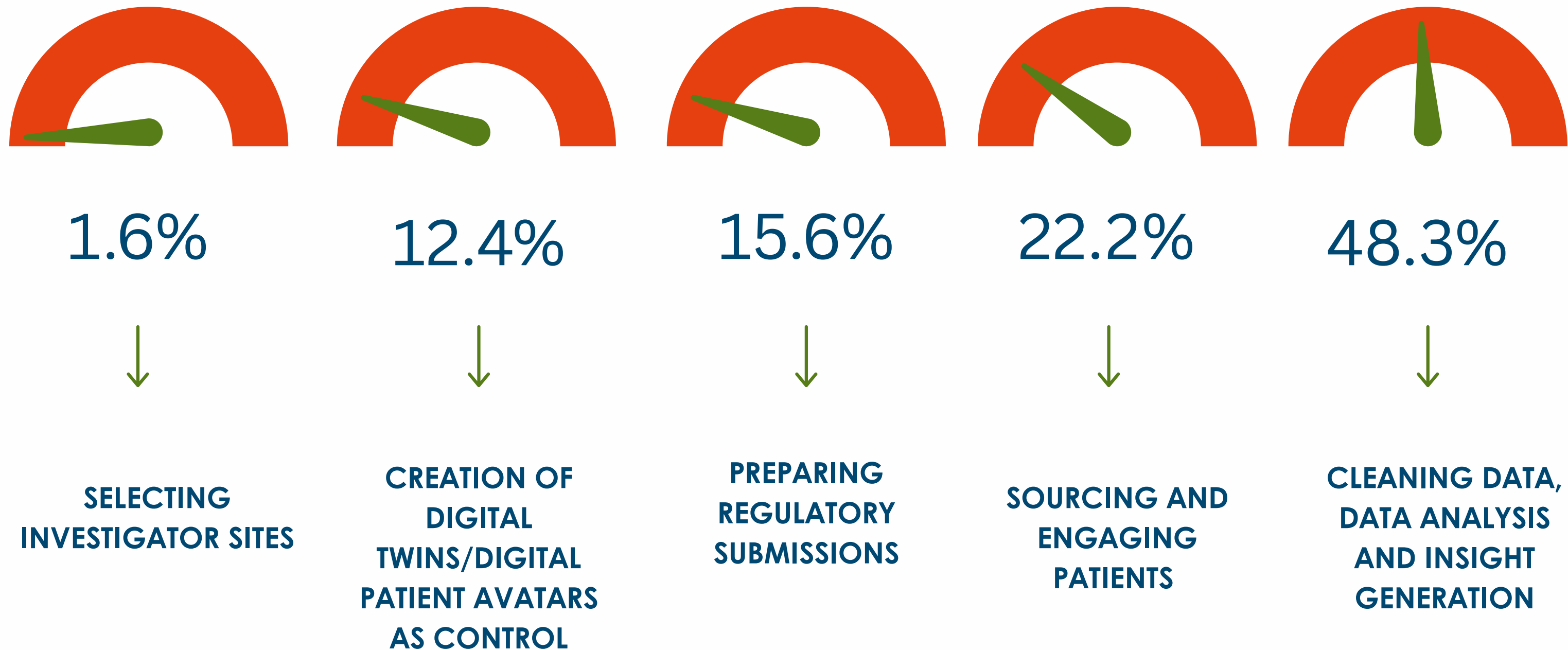
There is work to be done in addressing the barriers to AI adoption. A recurring message at the Congress was that regulators are ready to embrace AI and are keen for pharma companies to engage early to ensure adoption is safe and compliant. The Pistoia Alliance can help by convening pre-competitive working groups that bring pharma, technology providers and regulators together around common frameworks.

With so many potential new therapies emerging as more AI-discovered candidates successfully move downstream, more programs are competing for the same trial sites and patient populations. The poll shows clinical development professionals believe AI can help address some of these pressures, particularly in sourcing and engaging patients, which remains one of the industry's most persistent challenges.

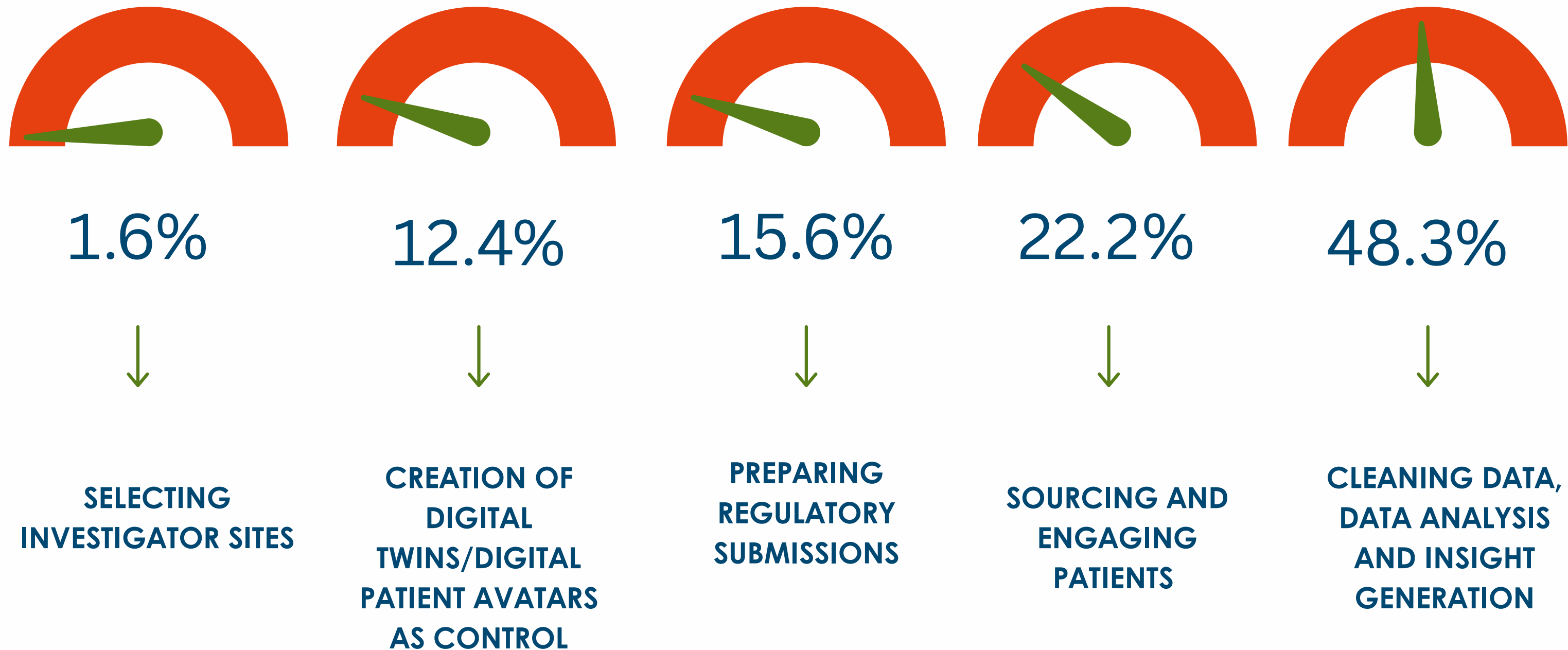
Encouragingly, pharma recognizes the value of social media as an opportunity to hear the unfiltered patient voice. Collecting data from outside of traditional trial settings is becoming increasingly important as drug development seeks to become more patient-centered. The next step is to ensure these data are collected in an ethical and standardized way. The Pistoia Alliance has already begun this work by developing a [best-practice framework](#) for the ethical use of social media data.

To get involved in the Pistoia Alliance's projects that are helping to accelerate late-stage R&D visit www.pistoiaalliance.org/strategic-priorities.

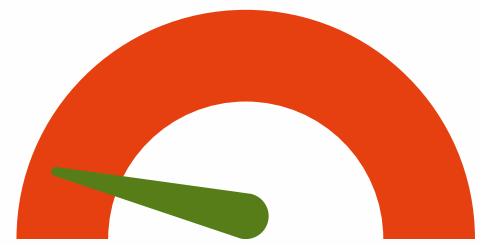
Q1. Where do you believe AI will have the greatest impact on clinical development in next 3-5 years?



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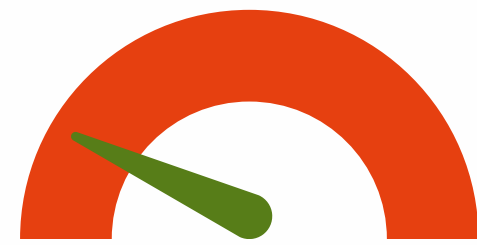
Q2. What is the biggest barrier preventing wider adoption of AI in clinical trials?



10.3%



**LACK OF
INTERNAL
SKILLS**



16.5%



**QUALITY AND
AVAILABILITY**



20.7%



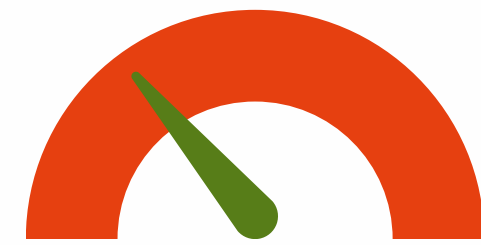
**REGULATORY
AND LEGAL
COMPLEXITIES**



23%



**INTEGRATION WITH
EXISTING
SYSTEMS/SYSTEM
INTEROPERABILITY**

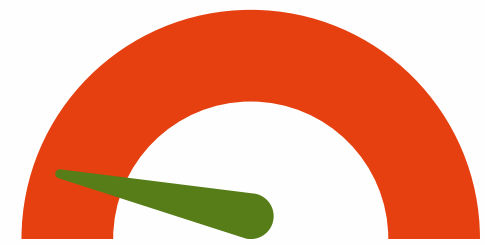


29.6%



**TRUST IN AI-
GENERATED
INSIGHTS**

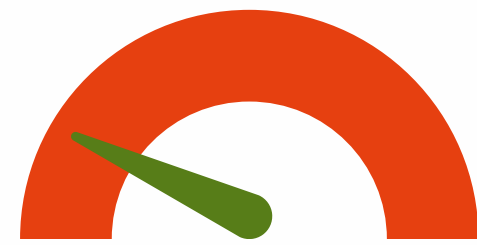
Q3. Beyond marketing, how prepared is your organization to use patient generated data to inform clinical development decisions (e.g. social media listening)



9.9%



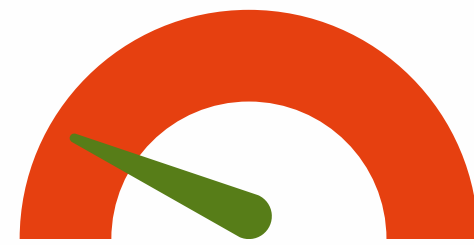
**NOT
CONSIDERING
IT AT ALL**



13.2%



**INTERESTED BUT
UNSURE HOW
TO APPLY IT**



16.2%



**AWARE OF
THE POTENTIAL
BUT NOT
PRIORITIZING**



23.3%



**PILOTING OR
EXPLORING USE
CASES**



37.5%



**ACTIVELY
USING IT
TODAY**

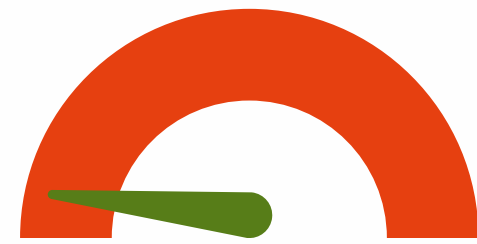
Q4. What do you see as the primary value of social media listening in patient-focused drug development?



2.5%



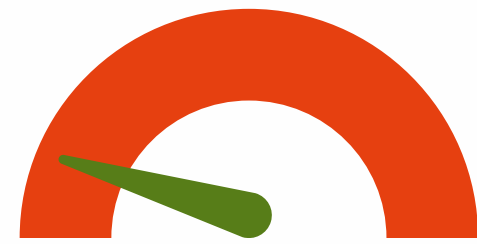
**AVAILABILITY
OF REAL-
WORLD DATA**



6.3%



**IDENTIFYING
ADVERSE
EFFECTS OR
NOVEL SIDE
EFFECTS**



12.2%



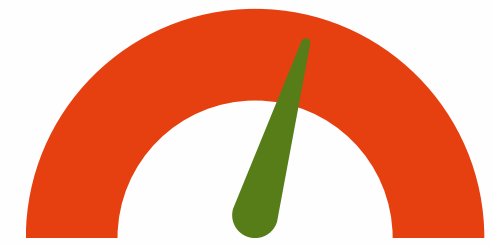
**INFORMING
TRIAL DESIGN
AND
ENDPOINTS**



20.9%



**IMPROVING
PATIENT
RECRUITMENT
STRATEGIES**

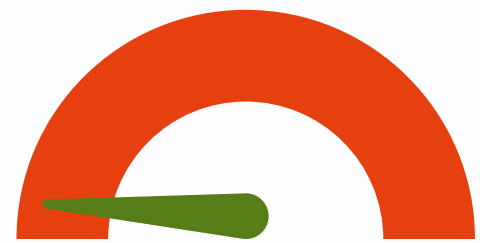


58.2%



**UNDERSTANDING
PATIENT NEEDS,
MONITORING
SENTIMENT AND
EXPERIENCE**

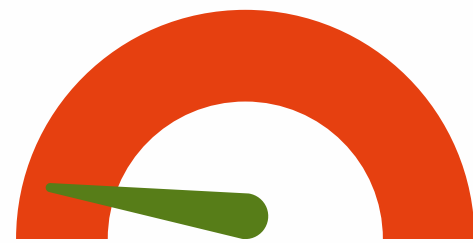
Q5. What best describes your organization's experience of ROI from AI in clinical development so far?



4.9%



**NOT USING AI
IN THIS AREA**



7.6%



**NO CLEAR ROI
TO DATE**



22.7%



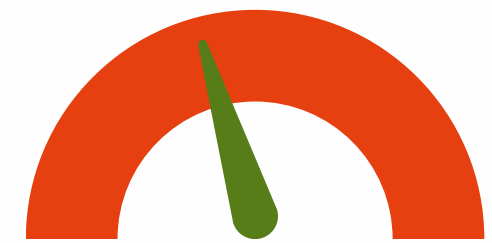
**CLEAR,
MEASURABLE
COST
SAVINGS**



23.4%



**ROI EXPECTED BUT
NOT YET REALISED**

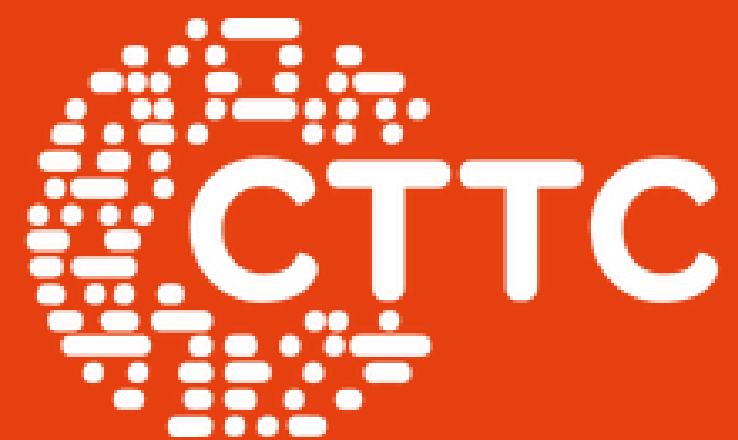


41.5%



**EARLY SIGNS OF
ROI BUT NOT YET
PROVEN**

PISTOIA
ALLIANCE



For more information on the Pistoia Alliance contact comms@pistoiaalliance.org or
for information on Clinical Trials Congress (CTTC) contact admin@openpharmaresearch.com