

From Data to Decisions: How AI and Expert Insight Advanced Tumor Type Prioritization Strategy



Core Challenges

- **Define focus areas.** Identify which solid tumors and segments to prioritize over the next 5–10 years.
- **Make data-driven decisions.** Use explainable PTRS and transparent business rationales to build confidence and trust.
- **Scale analysis, not effort.** Explore current pipelines and emerging targets or modalities while minimizing manual data mining, curation, and quality assurance.



Key Outcomes

- **Sharper focus and strategy.** Prioritized solid tumors and target segments for medium- to long-term investment analyses using Intelligencia AI data.
- **Faster, more confident decisions.** Leveraged well-structured, harmonized data and explainable PTRS to reduce manual work, deepen analysis under tight timelines, and increase confidence while mitigating bias.
- **Broader organizational impact.** Drove strong internal engagement, with growing interest from Medical and R&D teams; AI-driven PTRS is now recognized as a distinctive enterprise capability.

A global pharmaceutical company's new product planning team set out to shape a long-term strategy for its solid tumor portfolio—clarifying where to play over the next 5–10 years and how to win within priority patient segments.

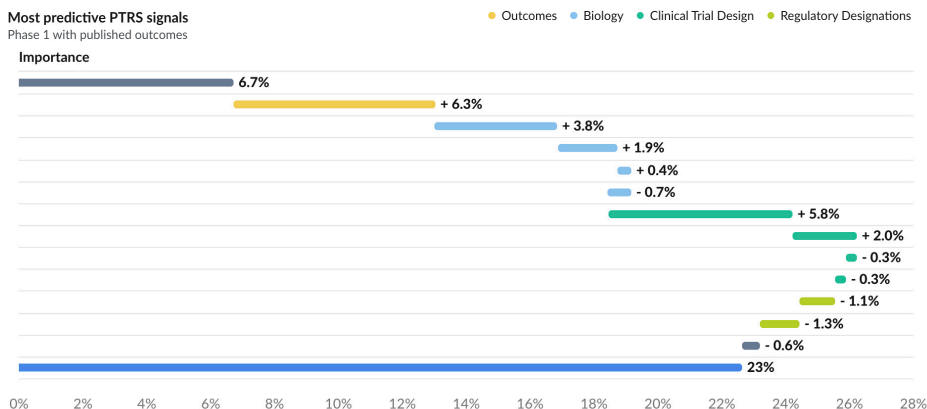
Moving beyond a traditionally science-led approach, the organization sought a systematic, commercially informed view of today's oncology landscape, its likely evolution, and which tumor areas and segments merit investment. This engagement expanded on a previous high-level white-space assessment, moving into a deeper, section-level analysis to inform strategic choices across solid tumors.

"The result and impact were achieved by applying and bringing a data-backed perspective to counter some of the internal pharma organizational biases," shared Nan Wang, advisory manager of portfolio, pipeline and business development strategy at ZS.

Streamlined and Minimized Labor-Intensive Process With Harmonized and Well-Orchestrated Clinical Data

ZS anchored the engagement on Intelligencia AI's Portfolio Optimizer solution, using it as the primary source of truth for the customer's clinical pipeline across solid tumors. The team ingested the full solid-tumor view and then applied relevant, systematic tagging (e.g., targets and modalities) to enable consistent, apples-to-apples comparisons across tumors and segments. Portfolio Optimizer leverages proprietary data and AI to assess the probability of technical and regulatory success (PTRS) and phase transition probabilities, enabling confident asset, portfolio and licensing decisions.

The platform's AI-driven PTRS provided a transparent, explainable signal that increased confidence in risk assessments. The explainability features provide side-by-side comparisons to address common concerns about the "black box" of AI by making underlying drivers more interpretable for stakeholders. This transparency builds trust by highlighting the most predictive signals across outcomes, biology, trial design, and regulatory designations. It clarifies that these drivers indicate correlation and predictive weight, not direct causality.



For this publication, driver names and values are not disclosed; they remain available within the Intelligencia AI platform

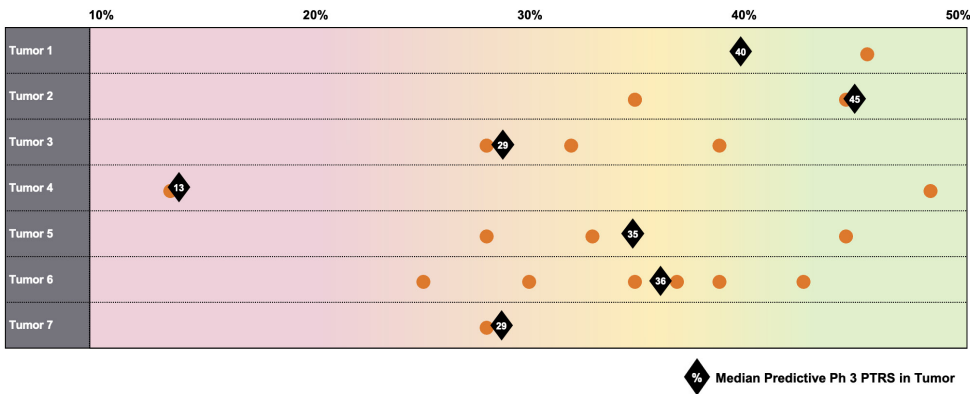
The visual above highlights the program-level explainability that brings full transparency to the AI-driven PTRS assessment. This visualization in Portfolio Optimizer is customized for each program to inform users on the drivers that lead to a program's PTRS.

"We've made tremendous progress removing that AI black box, as the explainability that is offered in Portfolio Optimizer really does help. It especially shines when potential skeptics try to grasp what they can't see going on behind the scenes with AI algorithms," noted Wang.

Portfolio Optimizer's clean labeling, consistent tagging, and direct access to trial identifiers reduced manual curation and quality-control tasks. Timely clinical data updates, coupled with an expert-in-the-loop approach led by in-house domain experts in biology, ensure a rigorous standard for data curation.

This accelerated workflows and made it easier to isolate emerging targets and modalities within each tumor, enabling robust landscape characterizations to inform evolutions and opportunity areas.

Median Phase 3 Predictive PTRS by Tumor and Priority Segment (Ongoing Programs)



“What stood out was the ease of using Portfolio Optimizer and the clarity of its data tagging. The AI-driven PTRS component instills strong confidence in the resulting scores,” shared Nate Mayo, business advisory consultant at ZS.

Although the overall project timeline was tight, the platform's data and friendly UX enabled significantly greater depth of analysis. It went at least twice as deep as would have been feasible with alternative tools or manual approaches. Because of this, ZS could pursue additional analyses and alternative views without compromising the timeline and deliverables.

The visualization built with Intelligencia AI data helped inform the final patient segments to target, considering the development risk of these segments compared to the median Phase 3 PTRS within the given tumor.

The Impact: A Transparent, Data Driven Path to Sound Business Decisions

ZS delivered a clear recommendation on which solid tumors the global pharma organization should prioritize over the next decade and which patient segments within those tumors to target. These recommendations were based on analyses conducted using Intelligencia AI data and AI-driven probabilities.

“Intelligencia AI provides a database that collates the data in a straightforward way providing cleaner data and better tagging than other solutions I have worked with. Anytime you can accelerate or eliminate manual effort, I think it’s always valuable,” shared Mayo.

The approach brought a rigorous, data-driven perspective that helped paint the competitive landscape, accelerate decision cycles, and counter organizational bias by grounding choices in transparent evidence.

Feedback from the global pharma organization has been very positive. The engagement has even sparked broader internal interest—including from Medical and R&D divisions — particularly when it comes to the PTRS methodology and how it could inform future projects.

Mayo reinforced, “The PTRS component is a core differentiated capability that we can bring to our engagements by leveraging Intelligencia AI, which tends to be the aspect that we get the most interest and positive feedback on.”

While multiple sources can describe pipelines, stakeholders viewed PTRS as a distinct differentiator that added tangible decision value when combined with the platform's clean, harmonized, AI-ready data and ease of use.

Let’s Talk About Your Portfolio Strategy Today

About Intelligencia AI

Intelligencia AI™ leads the way in leveraging proprietary data, biomedical expertise and artificial intelligence (AI) with its patented technology to address significant challenges in the pharmaceutical industry. These challenges include lengthy drug development timelines, excessive costs, and unsustainable return on investment (ROI). Its suite of AI-powered solutions delivers actionable insights crucial in mitigating risks and enhancing decision-making associated with drug development by providing an accurate, unbiased assessment of a drug’s probability of success.

Founded in 2017, Intelligencia AI is headquartered in New York, NY, with offices in Athens, Greece. To learn more, visit intelligencia.ai and follow on [LinkedIn](https://www.linkedin.com/company/intelligencia-ai).

About ZS

ZS is a management consulting and technology firm that partners with companies to improve life and how we live it. We transform ideas into impact by bringing together data, science, technology and human ingenuity to deliver better outcomes for all. Founded in 1983, ZS has more than 13,000 employees in over 35 offices worldwide. To learn more, visit www.zs.com or follow us on [LinkedIn](https://www.linkedin.com/company/zs).