The Critical Path Institute Podcast: Connecting the Dots with DCC

This newest Critical Path Institute® (C-Path) podcast episode provides an in-depth exploration of one of C-Path's core teams: the Data Collaboration Center (DCC). C-Path DCC Director Ramona Walls and Chief Technology Officer Rick Liwski join CEO Klaus Romero to discuss how data functions as one of the organization's five core competencies. In addition to biomarker, modelang and analytics, regulatory science, and clinical outcome assessment, our data management and standards provided by the DCC are integral pieces that keep the C-Path machine driving forward.

The podcast explains the types of data integrated by DCC — including clinical trial data, electronic health records, imaging, digital device data, and preclinical findings—and how the team successfully manages complex processes for data acquisition, standardization, privacy, and accessibility. DCC emphasizes Findable, Accessible, Interoperable, and Reusable (FAIR) data principles and implements rigorous curation to ensure data quality and regulatory compliance. The episode highlights DCC's pivotal role in assembling large, integrated datasets crucial for developing drug development tools, especially in challenging areas such as rare and orphan diseases where patient populations are limited. The conversation also outlines the distinctions and interplay between data management, data engineering, and data science within C-Path, as well as the evolution of the organization's Data and Analytics Platform (DAP), which securely hosts and facilitates collaborative research in over 700,000 patient datasets spanning 450+ studies. Looking to the future, the leaders share a vision emphasizing federated data access across multiple platforms and the integration of artificial intelligence and machine learning to enhance data processing, curation, and analytical efficiencies.

The episode wraps up by reinforcing the DCC's critical mission to convert complex data into actionable insights that move drug development forward and facilitate regulatory review.

Listen now:

In this episode, you'll discover how:

- Data types include clinical trials, electronic health records, imaging, digital devices, preclinical data, omics, and patient registries.
- Ensuring data privacy and regulatory compliance with standards like General Data Protection Regulation is central to C-Path's data stewardship.

- Integration of sparse and diverse data sources enables modeling for rare diseases with limited patient populations.

- The Data and Analytics Platform is not only capable of integrating data directly but also supports secure federated access and collaborative data analysis.

- Future data science efforts will leverage AI, machine learning, and large language models to enhance data processing and insight generation.
- The podcast provides a comprehensive, forward-looking overview of how C-Path's Data Collaboration Center is a linchpin for transforming complex data into actionable knowledge that drives innovation in drug development and regulatory science. pin for transforming complex data into actionable knowledge that drives innovation in drug development and regulatory science.