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TITLE: From Reactive to Proactive: Scaling AI for Product Health

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ABSTRACT: Scaling AI/ML insights across complex global networks is challenging. This session presents a matured case study: an AI-enabled Product Health strategy transitioned to a customized digital platform. The innovation is a "Co-Pilot" model merging classic Statistical Process Control and cutting-edge AI/ML/GenAI with SME expertise. Moving beyond periodic reviews, the platform provides AI enhanced monitoring and configurable alerts for process deviations. Critically, it enables data-driven process output optimization, shifting from descriptive monitoring to predictive control, currently deployed for key products. This framework aims to scale proactive risk management at the product and portfolio level. Complex issues trigger Statistics and Data Science deep-dives. With the foundational platform live, we demonstrate a scalable framework for Decision Integrity. Attendees will learn to operationalize expert knowledge with AI/ML lifecycle controls, ensuring product quality and supply reliability for patients.

BRIEF SPEAKER BIO: Yiming Peng is the Global Head of Statistics and Data Science for Pharma Technical Operations at Roche. He leads a team of statisticians and data scientists making extensive contributions to CMC process development, manufacturing, quality and supply chain across small and large molecules, as well as cell and gene therapies. His areas of expertise include statistical process control, design of experiment, machine learning and AI. Prior to joining Genentech, he worked at Novartis and specialized in assay development and companion diagnostics. He earned his PhD in Statistics at Virginia Tech.