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Navigating the Generative AI Landscape in Health Care and Life Sciences

An Industry Expert Roundtable

December 12, 2023



Agenda & Panelists

AGENDA

Intro on AI in Health Care and Life Sciences

Data Governance, Privacy and Security

Discrimination and Bias in Al

Quality and Accuracy

Contracting Considerations

Q&A



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Definitions of AI and Types of AI Technologies and Benefits

OECD AI Principles Overview (2018)

"An Al system is a machine-based system that is capable of influencing the environment by producing an output (predictions, recommendations or decisions) for a given set of objectives."

Robotic Process Automation (RPA)

Natural Language Processing (NLP)

Machine Learning (ML)

Deep Learning (DL)

Generative AI (GAI)

Cost Reduction

Increased Efficiency

Personalization

Improved Decision Making and Analysis

Enhanced Capabilities



Al Use Cases in Health Care and Life Sciences





Al Risks – Non-Trustworthy, Valid or Reliable Al Systems

ΑI **Lack of Resiliency** Hallucination and Dependence **Safety Risks Security Risks** on Technology Deepfakes Lack of Bias and **Privacy Concerns** Transparency and **Voice Cloning Discrimination Accountability** Al Failure Job Displacement & Fraud troutman¹ Based on NIST AI Risk Management Framework pepper 6

Laws, Regulations & Frameworks for Al Governance, Including Bias

Laws & Regulations

Sectoral Laws

 Financial Services, Health Care, Housing, Education, Insurance, Employment

Certain State Privacy Laws

NYC AI Bias Law

FTC Act

Executive Orders and Acts

- National Al Initiative Act of 2020 (NAIIA)
- Executive Order on the Safe,
 Secure, and Trustworthy
 Development and Use of
 Artificial Intelligence

Proposed & Pending Laws

US Federal Laws

 US Algorithmic Accountability Act

More US State Privacy Laws with AI in Mind

- CA AB-311
- CT SB 1103

Guidance

United States

- FTC Guidance
- White House Blueprint for Al Bill of Rights
- Health WHO, FDA, HHS

AMA

 Principles for Augmented Intelligence Development, Deployment, and Use

Academic Research

 A normative framework for artificial intelligence as a sociotechnical system in healthcare

Self-Regulation

Technical Standards

- NIST AI Risk Management
 Framework
- ISO/IEC 23053:2022 -Framework for AI Systems Using ML
- IBM Trust & Transparency Principles

Private Industry "Responsible AI" Frameworks, including:

- Microsoft
- Google Al
- Meta
- Open Al
- <u>Mastercard</u>

Implementation of Gen Al

Use of Commercially Available Al Tools

Use of
Commercially
Available Al Tools
in a Private Cloud

Development of Internal IA Tools in a Private Cloud







Data Governance, Security and Privacy

Leverage existing data governance and IT polices to evaluate an implementation or development of new AI tools

Generative AI is democratizing power across employees

Develop an Al governance counsel to evaluate new use cases





Regulatory Concerns About Discrimination Through Algorithms

- Media outlets and regulators have consistently expressed the concern that Al or machine learning algorithms can lead to biased or discriminatory outcomes
- For example, the current Chair of the FTC stated that the use of Al can "automate discrimination," and the Director of the CFPB has frequently referred to "discriminatory black-box algorithms."
- In healthcare, there are specific federal and state anti-discrimination laws that form the basis for regulatory scrutiny of this issue
- In reality, machine learning algorithms have no greater tendency to produce discriminatory outcomes than older-technology models, but companies who use machine learning nevertheless need to prepare for enhanced regulatory scrutiny of their models



10 Practices to Prevent, Detect and Mitigate Discrimination and Bias in Al

Diversity in Bias **Evaluation Transparency Detection Development Metrics SDLC AI** Regular **Ethical External Impact Guidelines** Reviews **Audits Assessments** Education Redress and Training Mechanisms





Assessing Quality and Accuracy of Information

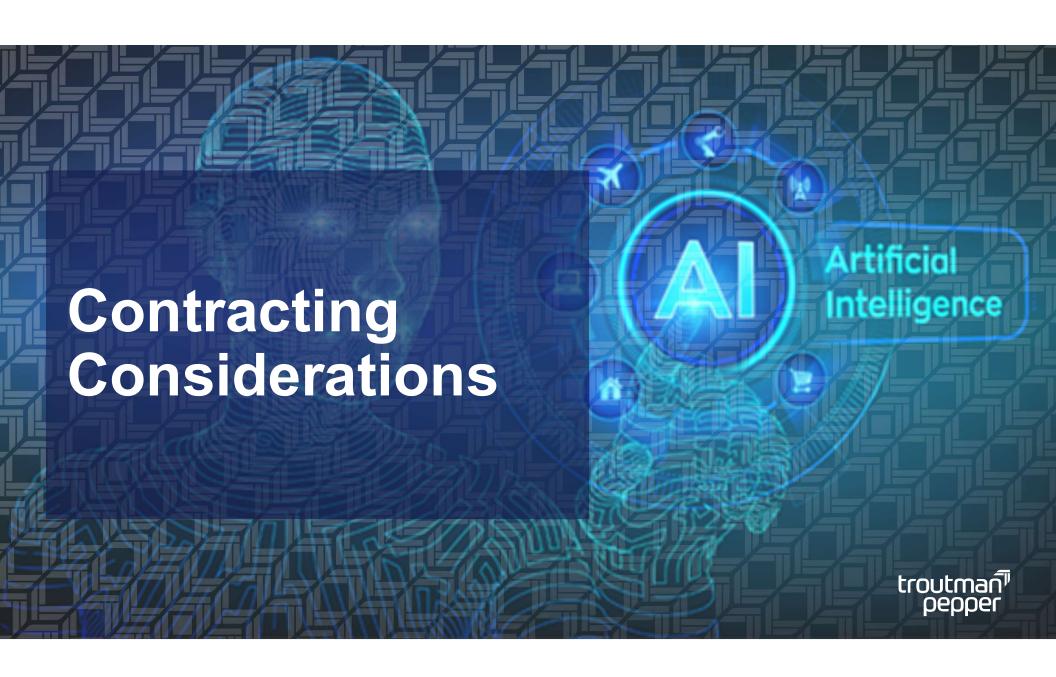
Quality and accuracy of information is critical in the pharmaceutical R&D space

Standards of accuracy
Human output vs Al output vs. perceived statistical accuracy

Performing Quality and Accuracy Studies







Issues in Contracting

State Law Complications

 DIPAs and additional questions for AI

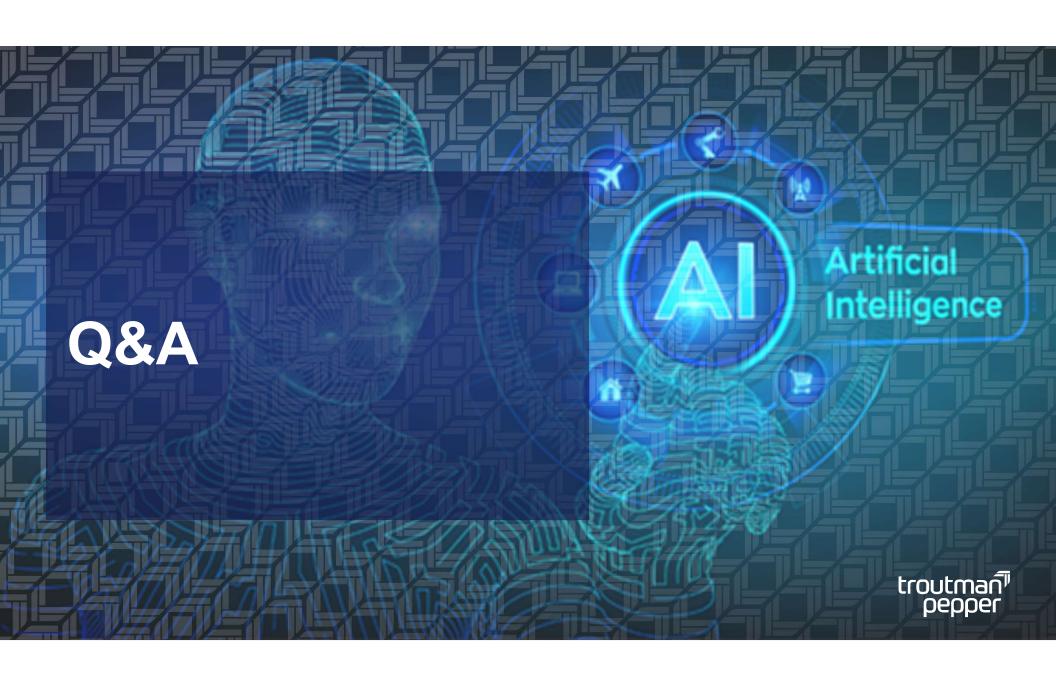
Vendor Contracts

- Limitations of liability and disclaimers
- One sidedness
- Approach to reviews and negotiations

Privacy and IP Considerations

Ownership of data







Thank you

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