

Welcome!

**Getting more from every  
engagement: practical applications  
for Generative AI to augment tried  
and true techniques**

# Presenters



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The views, information, or opinions expressed during this workshop are solely those of the individuals involved and do not necessarily represent those of their organizations

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- The following faculty and planning members do disclose financial relationships- (*Hill, Clark, Gorski, Simmons*)

# Agenda

1. Thinking about AI: The AI Landscape
2. Top Medical Affairs Challenges that AI can address
3. AI in the real world – How can we leverage its powers today?
  - Insights Management and Reporting
  - Insights Gathering
  - Presentation Creation
  - Image Creation

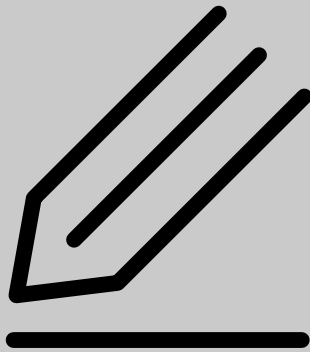
# Grounding in AI

**In your opinion, what is your organization's level of experience using AI?**

# Common challenges of tried and true techniques



Time constraints



Personalization



Consistency



# The promise of AI - Reduce “grunt work” AND enhance high-value work.

## The promise of AI:

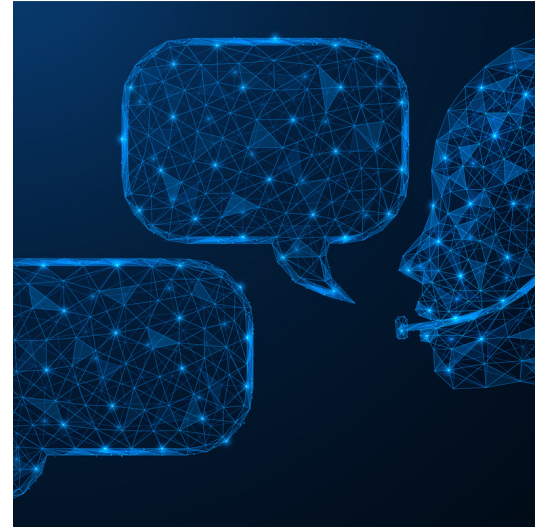
- Reduce repetitive, time-consuming parts of your day
- Reduce resource intensive, morale draining work
- Shorten business processes with long cycle times
- Reduce burden when communicating and/or creating content
- Lower the cost associated with all the above



# Traditional AI vs. Generative AI



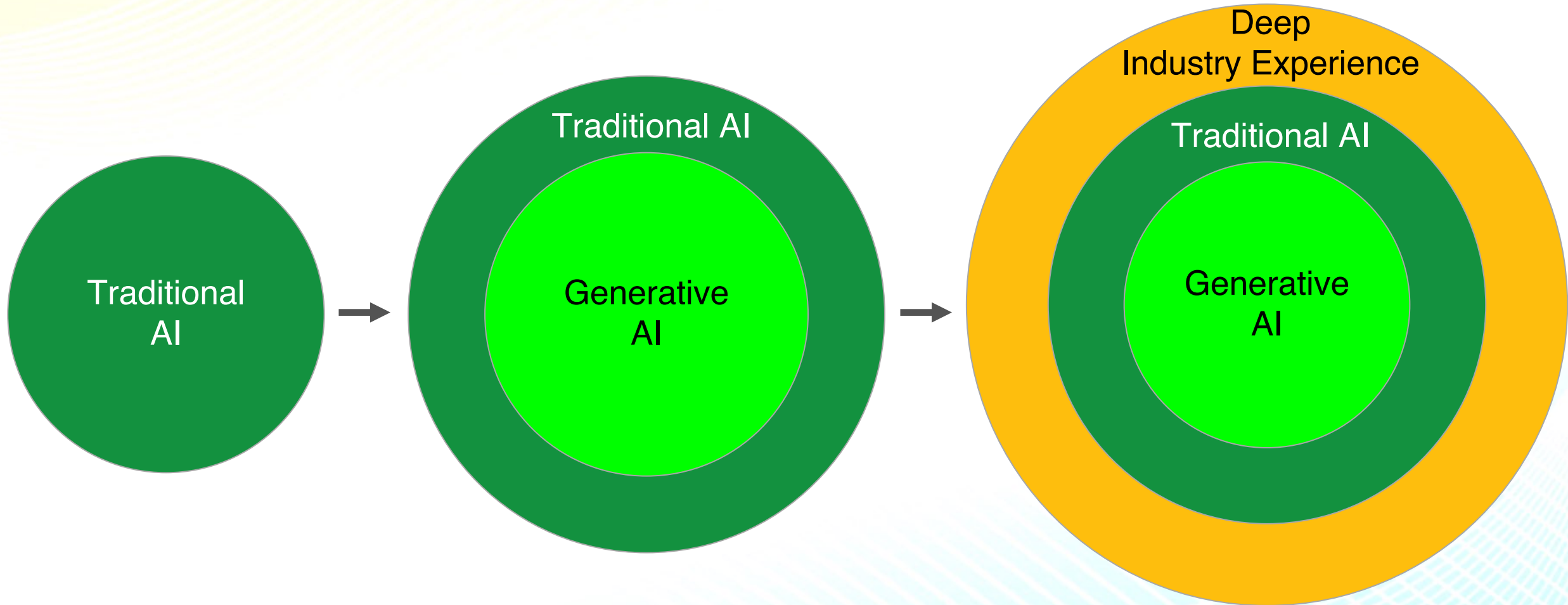
**Traditional artificial intelligence**, also known as Narrow AI or Weak AI, is a subset of artificial intelligence that focuses on performing preset tasks using predetermined algorithms and rules.



**Generative AI** is a branch of artificial intelligence concerned with the creation and development of new material. It is sometimes referred to as Creative AI or Strong AI.

- The primary difference between Generative AI and Traditional AI lies in their objectives and functioning. While Traditional AI aims to perform specific tasks based on predefined rules and patterns, Generative AI goes beyond this limitation and strives to create entirely new data that resembles human-created content.

# The tech industry is bringing solutions to market now



# When it comes to AI, how good is “good enough”?

## The 90% Rule.

Practical AI-based solutions should seek to:

- Save 90%+ of your time on repetitive or analytical tasks.
- Give you a starting point that’s close to 90% correct (vs. starting from scratch).
- Augment intelligence vs. replace it - assume that the last 10% (and most critical) of work is done by experienced professionals.



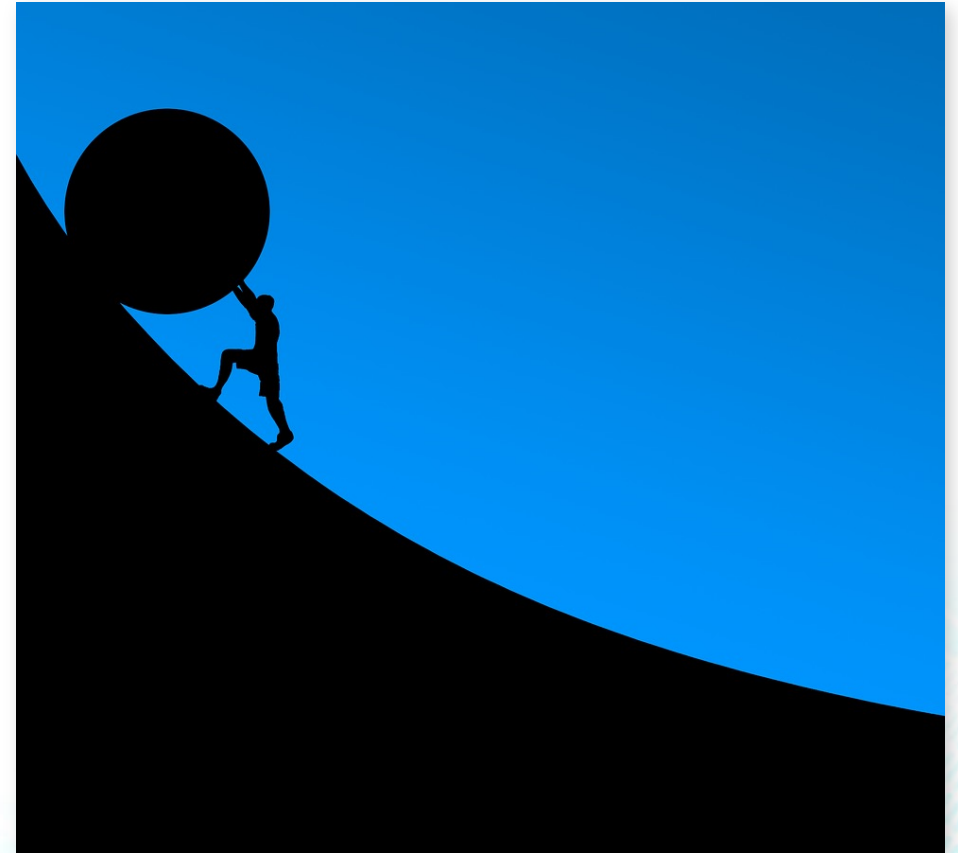
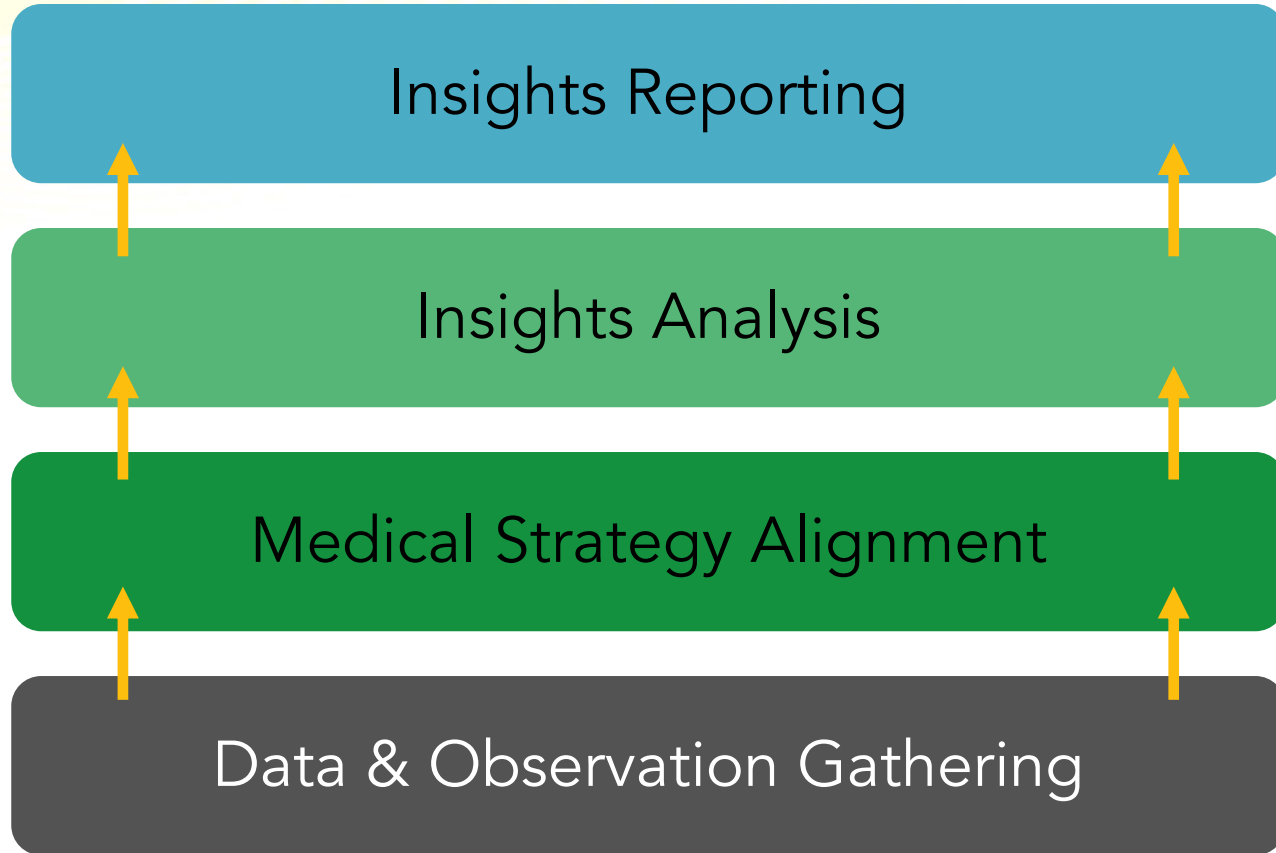
# These solutions are not fiction – they are real and in use today



**In your opinion, will your organization's usage of AI increase over the next 12 months?**

# Example 1: Applications in Insights Management

# Insights Management - how it works & why it has been so hard





# From MAPS Whitepapers



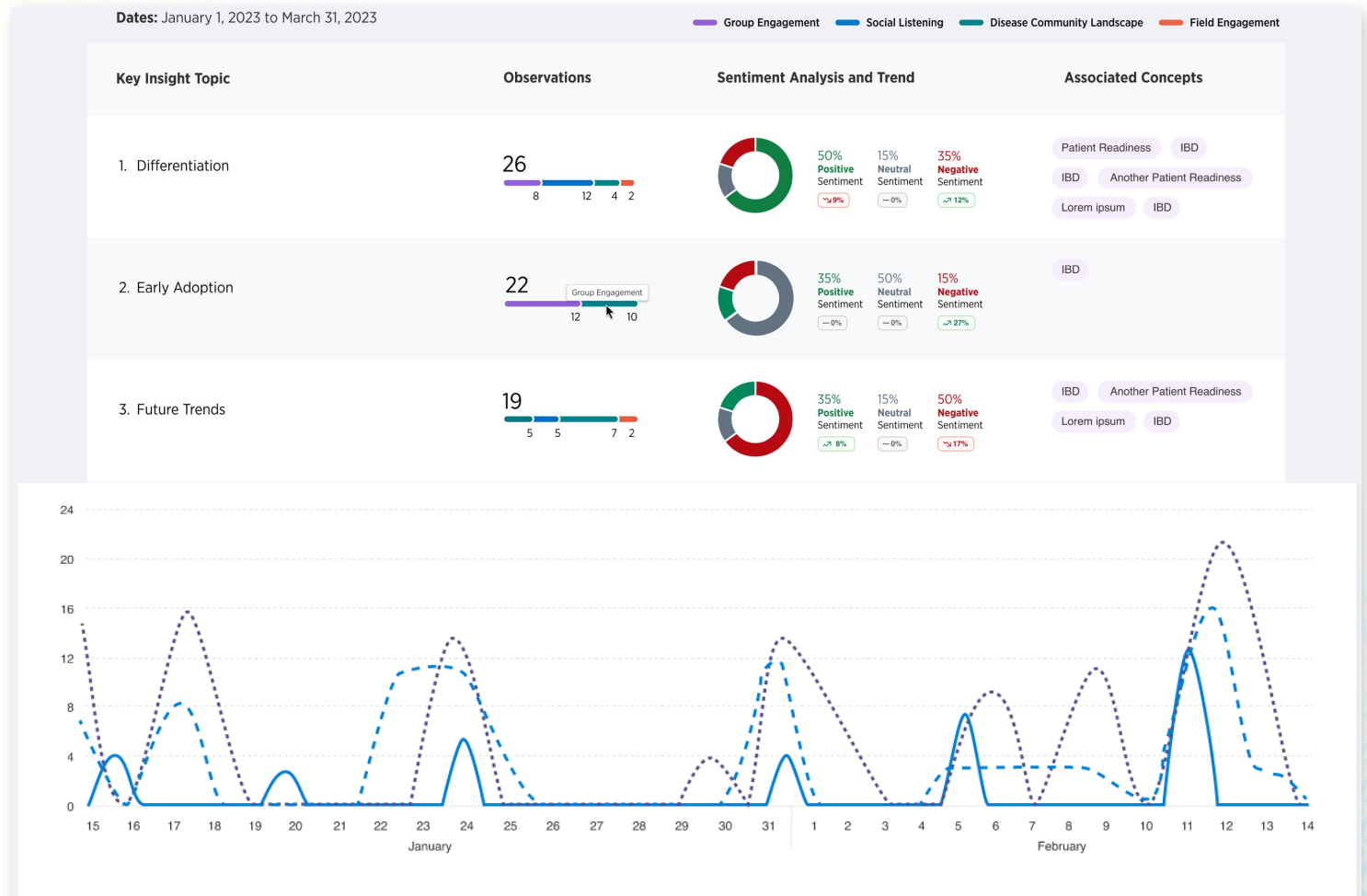
“The thought of **homogenizing data from traditional and emerging sources** into a standardized format that can be uploaded into the company data lake **is enough to make a junior database administrator consider going back to law school.**” - MAPS Insights 2.0 Whitepaper

“The challenge is resources: **It’s time intensive, it’s manual, your folks spend so much time doing it.** We need processes and technologies that help us prioritize and automate.” - MAPS 2.0 Whitepaper

“This gap between ideal and actual insights management results in **business leaders under-appreciating, deprioritizing and under-resourcing insights activities** until Insights teams become stuck in a Catch-22: Resourcing depends on success, and success depends on resourcing.” - MAPS 2.0 Whitepaper

# Traditional AI | Insights Analysis

- Traditional AI can be used to unveil some quantifiable trends across data
- Uses Natural Language Processing techniques to derive:
  - Concept Grouping
  - Sentiment Analysis
  - Trending over Time



# Combined AI | Medical Strategy Alignment

## Insights Report

Last updated January 24, 2023

### — 1. Advance innovative therapies for GI disease

Key Insight Topics	Observations
1.1 Unmet needs of patients and caregivers	<a href="#">View Observations</a> <sup>2</sup>
1.2 Gut microbiota and disease associations	<a href="#">View Observations</a>
1.3 Novel biomarkers for early diagnosis	<a href="#">View Observations</a>
1.4 Impact of stress on gastrointestinal health	<a href="#">View Observations</a>
1.5 Emerging therapies for inflammatory bowel disease	<a href="#">View Observations</a>

## Observations

### 1.1 Unmet needs of patients and caregivers

Group Engagement Observations 2 New Observations

#### Market Trends in Gastrointestinal Disease Diagnosis and Treatment Advisory Board +

Session Dates: January 5 - 25, 2023

- Patients and caregivers express unmet needs in various aspects of living with GI diseases.

- Long-term management of GI diseases for individuals living with chronic conditions requires lifestyle modifications, and...

- Early diagnosis and intervention should be made to manage symptoms of common GI diseases.

- Educating primary care physicians about different GI diseases is essential for early diagnosis.

- Dr. Ramirez: "Long-term management of GI diseases for individuals with chronic conditions requires lifestyle modifications, and..."

### Field Observations

#### Field Engagement File - Q1 2023 +


- Dr. Stevens: "During my interactions with patients and their caregivers, a significant unmet need we face in GI disease management is the limited availability of comprehensive psychosocial support programs. We need resources that address these needs and provide guidance for patients and their families."
- Dr. Patel: "One observation I've made is the lack of access to specialized care for patients residing in rural areas. Individuals with GI diseases struggle to receive timely and expert care. We need to improve access by implementing telemedicine options or establishing outreach clinics to bridge this gap."
- Physicians consistently emphasize the lack of comprehensive psychosocial support programs for both patients and caregivers, recognizing the significant impact of GI diseases on mental health and well-being.
- Primary care physicians often express a need for enhanced education and resources to aid in the early identification and referral of GI disease cases, aiming for prompt diagnosis and timely intervention.
- Some gastroenterologists voice the need for improved screening methods to effectively detect high-risk individuals susceptible to GI diseases, laying the foundation for targeted preventive strategies.

# Combined AI | Insights Analysis

## Insights Report

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1.5 Emerging therapies for inflammatory bowel disease	<a href="#">View Observations</a>
 Unprompted Findings	<a href="#">View Observations</a>

### Insights

Limited availability of comprehensive psychosocial support systems leads to inadequate emotional and practical assistance for patients and caregivers, hindering their overall well-being.

Insufficient access to specialized care, especially in rural areas, results in delayed diagnosis and suboptimal treatment, necessitating the improvement of healthcare access and implementation of innovative solutions such as telemedicine.

Improved awareness, early diagnosis, and timely interventions are essential to address the challenges faced by individuals with GI diseases, ensuring prompt treatment initiation and better management outcomes.

Limited patient and caregiver education on self-management techniques hinders effective disease management and quality of life in GI diseases.

# Combined AI | Insights Analysis



## Actions to Consider

1. Develop and implement comprehensive psychosocial support programs that address the emotional, financial, and practical aspects of living with GI diseases, ensuring guidance and resources for patients and their caregivers.
2. Improve access to specialized care, particularly for individuals residing in rural areas, by integrating telemedicine options or establishing outreach clinics to bridge the gap and provide timely and expert care.
3. Enhance education initiatives and resources for primary care physicians and general practitioners on diverse manifestations, diagnostic criteria, and early signs of GI diseases to facilitate early identification, prompt referral, and timely interventions.

## Insights Report

Last updated January 24, 2023

### 1. Advance innovative therapies for GI disease

Key Insight Topics	Observations	Insights 
1.1 Unmet needs of patients and caregivers	<a href="#">View Observations</a> <sup>2</sup>	Limited availability of comprehensive psychosocial support systems leads to...
1.2 Gut microbiota and disease associations	<a href="#">View Observations</a>	The concept that modulation of the gut microbiota through dietary interventions or...
1.3 Novel biomarkers for early diagnosis	<a href="#">View Observations</a>	<i>In progress. Check back soon.</i>
1.4 Impact of stress on gastrointestinal health	<a href="#">View Observations</a>	High levels of chronic stress have been consistently associated with gastrointesti...
1.5 Emerging therapies for inflammatory bowel disease	<a href="#">View Observations</a>	There is a lack of awareness and knowledge among physicians regarding the latest adv...
 Unprompted Findings	<a href="#">View Observations</a>	

# Combined AI | Insights Reporting

Insights Rep

Last updated January 24, 2023

1. Advance innovative the

Key Insight Topics

1.1 Unmet needs of patients

1.2 Gut microbiota and dise

1.3 Novel biomarkers for early diagnosis

1.4 Impact of stress on gastrointestinal health

1.5 Emerging therapies for inflammatory bowel disease

Unprompted Findings

View Observations

Benez | Jan

## Included Sources

- Benez has used 4 out of 5 data sources to date as shown below:
- Within trends, busines and the

## Unmet needs of GI patients and caregivers

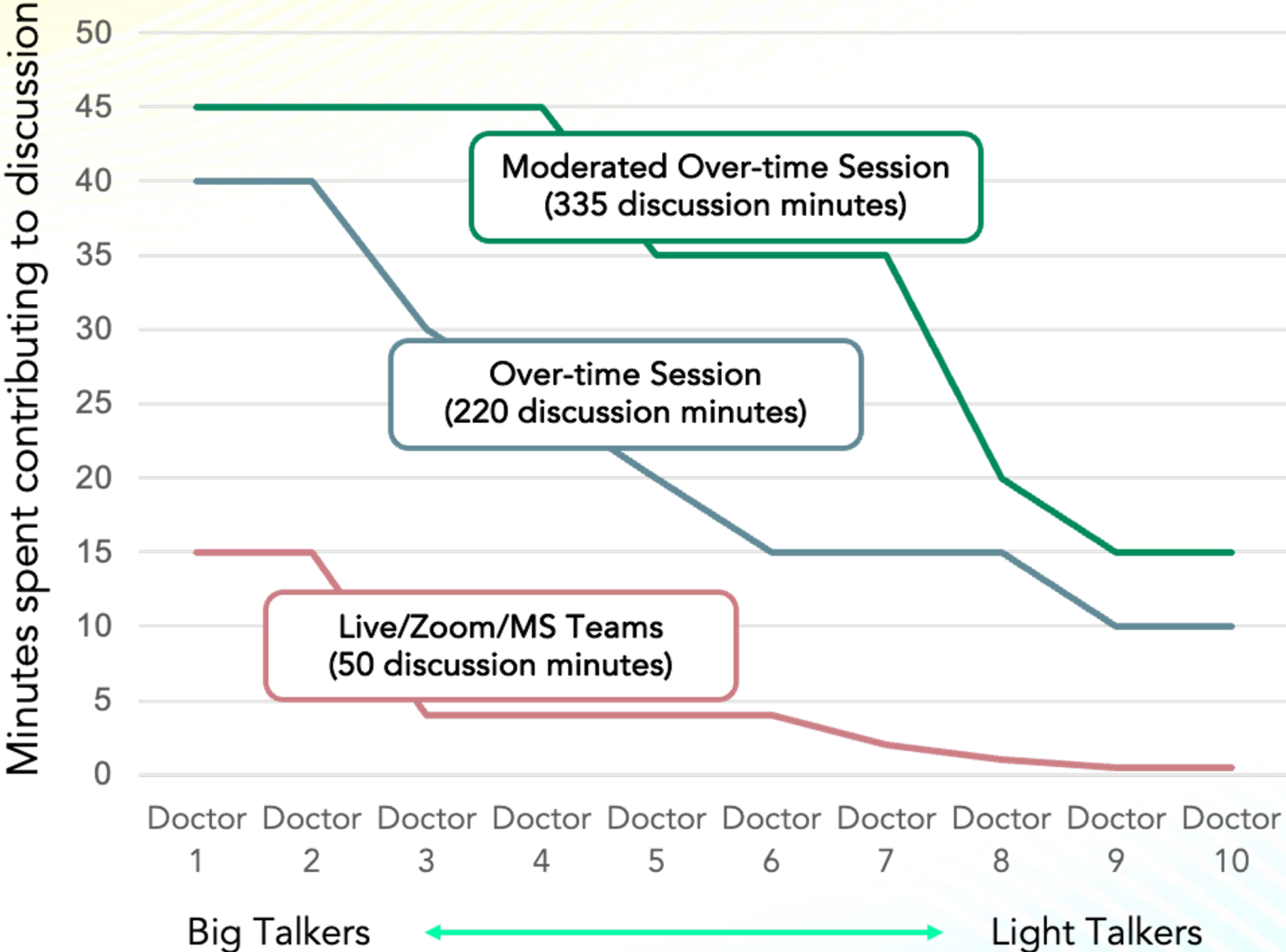
### Insights

- Improved awareness, early diagnosis, and timely interventions are essential to address the challenges faced by individuals with GI diseases, ensuring prompt treatment initiation and better management outcomes.
- Since many GI disorders are difficult to diagnose, improved, non-invasive diagnostic tools for early detection are needed such as biomarkers or imaging techniques.
- Many medications used to treat GI diseases can cause unwanted side effects such as nausea, vomiting, and abdominal pain, therefore negatively impacting patients' compliance with their treatment.
- Insufficient access to specialized care, especially in rural areas, results in delayed diagnosis and suboptimal treatment, necessitating the improvement of healthcare access and implementation of solutions such as telemedicine.

# Example 2: Applications in Insights Gathering

# Insights Gathering - Group Engagement

Discussion Minutes of Participation by Venue Type



## The Impact on Workload

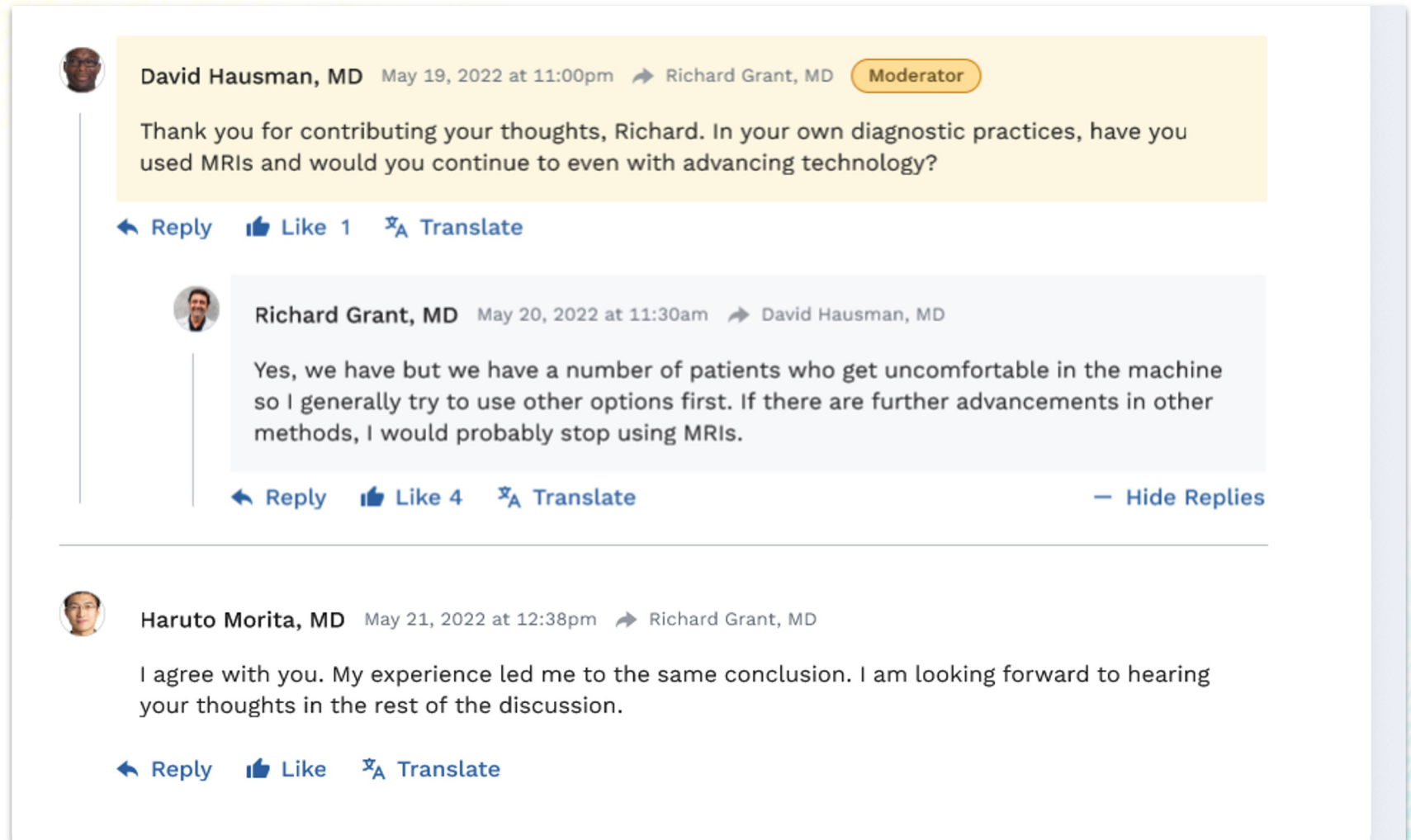
- More insights means more to analyze.
- Moderation and facilitation takes work and time.

\* Comparison of 1 hour of online activity  
 \*\* n=1000 virtual engagement sessions conducted in 2023



# Traditional AI | Insights Gathering

- Traditional AI  
Example: Language translation
- Solutions typically developed by large tech companies and made available to the industry via integration



The screenshot shows a discussion thread with three posts. The first post is from David Hausman, MD, dated May 19, 2022, at 11:00pm, directed to Richard Grant, MD, who is a Moderator. The post asks if Richard uses MRIs and if he would continue with advancing technology. The second post is a reply from Richard Grant, MD, dated May 20, 2022, at 11:30am, directed to David Hausman, MD. He explains that while they use MRIs, some patients are uncomfortable, so they use other options first, and he might stop using MRIs with further advancements. The third post is from Haruto Morita, MD, dated May 21, 2022, at 12:38pm, directed to Richard Grant, MD. He agrees with Richard's conclusion and looks forward to hearing more thoughts.

**David Hausman, MD** May 19, 2022 at 11:00pm → Richard Grant, MD **Moderator**

Thank you for contributing your thoughts, Richard. In your own diagnostic practices, have you used MRIs and would you continue to even with advancing technology?

← Reply Like 1 Translate

**Richard Grant, MD** May 20, 2022 at 11:30am → David Hausman, MD

Yes, we have but we have a number of patients who get uncomfortable in the machine so I generally try to use other options first. If there are further advancements in other methods, I would probably stop using MRIs.

← Reply Like 4 Translate — Hide Replies

**Haruto Morita, MD** May 21, 2022 at 12:38pm → Richard Grant, MD

I agree with you. My experience led me to the same conclusion. I am looking forward to hearing your thoughts in the rest of the discussion.

← Reply Like Translate

# Combined AI | Congresses and Ad Boards



Alyssa Jones, MD May 25, 2022 at 10:37am

I don't see diagnostic tools or methods advancing in as little as 3 years. I believe these advancements will take closer to 5-10 years and I do not plan to change my own practices in this time. Regardless of diagnosis though, I see opportunity for treatment to evolve over the next 3 years and include working directly with our dietetics colleague as well as exercise experts or PT to methods first. I believe there is opportunity in diagnostics with this hol

Reply Like 2



James Hillson, MD May 22, 2022 at 7:24am

I agree with Richard. I think there are some exciting advances that are not necessarily replacing the diagnostic tools and methods we

Reply Like 1



David Hausman, MD May 22, 2022 at 2:12am → James

Are there specific diagnostic tools you plan to start us

Reply Like 1 Translate



James Hillson, MD May 23, 2022 at 9:00pm → David

I would consider using ultrasound or other imaging t forward to advancements in scintigraphy.

Reply Like Translate



Richard Grant, MD May 19, 2022 at 4:12am

I see opportunity in the new technology that is getting developed like the SmartPill. Concerned through about the price point of some of these newer technologies. I think I will continue to rely



Based on participant contributions:

- Diagnostic tools or methods for GI diseases are not expected to advance significantly in the next 3 years.
- Opportunities for treatment are seen to evolve in the next 3 years, potentially integrating collaboration with dietetics colleagues and exercise experts for a holistic approach.
- Some participants see specific advancements in diagnostic tools such as ultrasound or other imaging techniques and SmartPill, indicating potential for more accurate diagnoses. However, concerns about the price point of newer technologies are raised.
- Gastric emptying tests and imaging methods like MRIs continue to be relied upon but alternative options may be preferred by some due to patient discomfort or the potential for further advancements in other methods.

Follow Up →

Gathered from 38 contributions as of July 10, 2023

# Combined AI | Congresses and Ad Boards

8 contributions



**Alyssa Jones, MD** May 25, 2022 at 10:37am

I don't see diagnostic tools or methods advancing in as little as 5-10 years and I do not plan to change my approach to diagnosis though, I see opportunity for treatment to evolve directly with our dietetics colleague as well as exercise and lifestyle methods first. I believe there is opportunity in diagnostic

[Reply](#) [Like 2](#)



**James Hillson, MD** May 22, 2022 at 7:24am

I agree with Richard. I think there are some exciting advances in AI that are not necessarily replacing the diagnostic tools and methods we use

[Reply](#) [Like 1](#)

[Follow Up](#)

@all Can you elaborate on the specific advancements you anticipate in diagnostic tools like ultrasound and Smartpill over the next 3 years? How do you envision these advancements enhancing accuracy and patient outcomes?

@all Considering the potential integration of dietetics colleagues and exercise experts in the treatment of GI diseases, how do you foresee this collaboration benefiting patients? Are there any particular GI conditions where this holistic approach may be more beneficial?

@all With concerns raised about the price point of newer diagnostic technologies, what strategies do you propose to ensure accessibility and affordability for patients while adopting these advancements in clinical practice? Are there any potential cost-effective alternatives that could be explored?

# Combined AI | Congresses and Ad Boards



Based on participant contributions:

- **Diagnostic tools or methods** for GI diseases are not expected to advance significantly in the next 3 years, potentially integrating collaboration with dietetics colleagues and exercise experts for a holistic approach.
- **Opportunities for treatment** are seen to evolve in the next 3 years, potentially integrating collaboration with dietetics colleagues and exercise experts for a holistic approach.
- Some participants see **specific advancements** in diagnostic tools such as SmartPill, indicating potential for more accurate diagnoses. However, concerns about the price point of newer technologies are raised.
- Gastric emptying tests and imaging methods like MRIs continue to be preferred by some due to patient discomfort or the potential for further advancements in other methods.

Follow Up →

Gathered from 38 contributions as of 1/5/23

## TASK 2

What non-pharmacological methods are you currently leveraging?



The following answers have been provided:

- 66.67% Behavioral Therapy
- 66.67% Diet Modification
- 33.33% Acupuncture
- 66.67% Endoscopic Procedures
- 0.0% Other (Describe)

Based on participant contributions:



## Executive Summary

Market Trends in Gastrointestinal (GI) Disease Diagnosis and Treatment  
Benez | December 21, 2022 – January 4, 2023

Date Exported: January 5, 2023

## Key Insights

### Diagnosis & Treatment | Task 1

How do you see diagnosis of GI diseases or advancing in the next 3 years? What are the most common forms of head and neck cancers that you are diagnosing? Please explain in detail.

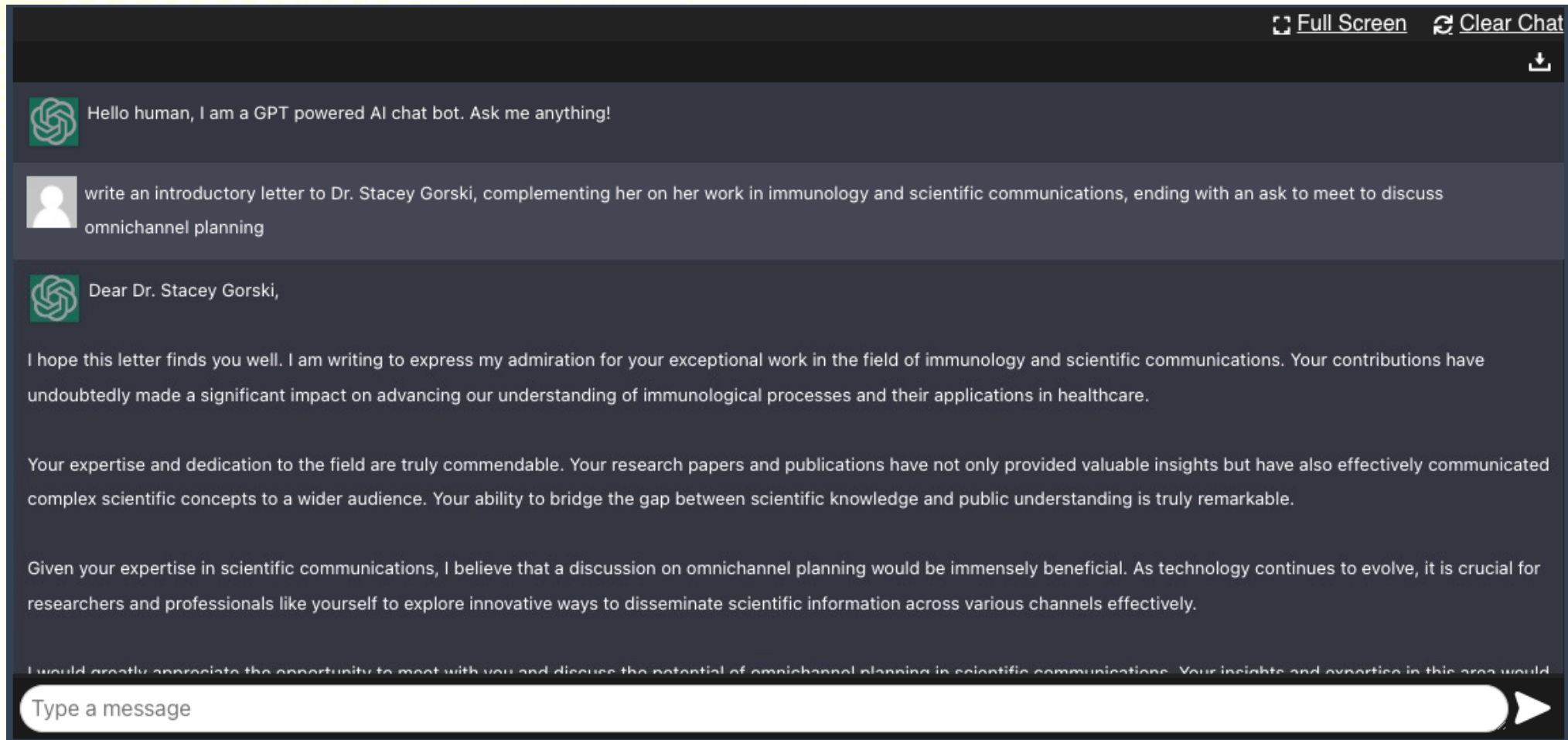
#### Summary

Based on participant contributions:

- Diagnostic tools or methods for GI diseases are not expected to advance significantly in the next 3 years.
- Opportunities for treatment are seen to evolve in the next 3 years, potentially integrating collaboration with dietetics colleagues and exercise experts for a holistic approach.
- Some participants see specific advancements in diagnostic tools such as ultrasound or other imaging techniques and SmartPill, indicating potential for more accurate diagnoses. However, concerns about the price point of newer technologies are raised.
- Gastric emptying tests and imaging methods like MRIs continue to be relied upon but alternative options may be preferred by some due to patient discomfort or the potential for further advancements in other methods.

# Other Example Applications for AI

# Gen AI can potentially be used to augment many common Medical Affairs activities\*



The screenshot shows a chat window with a dark background. At the top right, there are buttons for "Full Screen" and "Clear Chat", and a download icon. The chat history includes:

- AI:** Hello human, I am a GPT powered AI chat bot. Ask me anything!
- User:** write an introductory letter to Dr. Stacey Gorski, complementing her on her work in immunology and scientific communications, ending with an ask to meet to discuss omnichannel planning
- AI:** Dear Dr. Stacey Gorski,  
  
I hope this letter finds you well. I am writing to express my admiration for your exceptional work in the field of immunology and scientific communications. Your contributions have undoubtedly made a significant impact on advancing our understanding of immunological processes and their applications in healthcare.  
  
Your expertise and dedication to the field are truly commendable. Your research papers and publications have not only provided valuable insights but have also effectively communicated complex scientific concepts to a wider audience. Your ability to bridge the gap between scientific knowledge and public understanding is truly remarkable.  
  
Given your expertise in scientific communications, I believe that a discussion on omnichannel planning would be immensely beneficial. As technology continues to evolve, it is crucial for researchers and professionals like yourself to explore innovative ways to disseminate scientific information across various channels effectively.  
  
I would greatly appreciate the opportunity to meet with you and discuss the potential of omnichannel planning in scientific communications. Your insights and expertise in this area would

At the bottom, there is a text input field with the placeholder "Type a message" and a send button (arrow icon).

\* Be aware of limitations of both the AI tool itself and data privacy restrictions of your organization

However, understand that consumer Gen-AI tools may not be accurate.

Image AI tool asked:

“Show me a scientific council discussing medicine.”



# Key Takeaways for AI



**Thank you!**