

## Review Article

# Three AI-synthesized Mind-sets of Patients Talking to Their Surgeon about a Prospective Operation for Different Types of Diagnosed Cancer

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## Abstract

The study shows what can be done when AI is built into a platform that is easy to use, with the topic being how the surgeon should communicate with a person who is about to have an operation for cancer. The approach posits three mind-sets for each type of cancer patient. Embedded AI in the program (SCAS; Socrates as a Service) is then instructed to answer a set of seven standard questions for each of the three AI-suggested mind-sets for that specific cancer. The study shows the power of AI to simulate the interaction between surgeon and patient, with the approach showing promise as an easy-to-customize method for teaching how to become sensitive to the emotional needs of people.

## Introduction

Communicating with patients is a crucial aspect of a surgeon's role, helping build trust and alleviate any fears or concerns the patient may have. Patients want to know about the risks and benefits of the surgery, as well as alternative treatment options available. It is important for the surgeon to explain the procedure in a way that the patient can understand, using non-medical jargon and providing visual aids if necessary. Patients also want to know about the recovery process, including how long it will take and what restrictions they may have post-op. Additionally, patients appreciate surgeons who are upfront about the potential complications of the surgery, as this shows transparency and honesty. It is important for the surgeon to listen to the patient's concerns and address them in a compassionate and empathetic manner. Patients want to feel like their surgeon cares about their well-being and is invested in their successful outcome. Providing emotional support during the pre-op and post-op period can go a long way in helping the patient feel more at ease. Surgeons should also take the time to explain the anesthesia process to patients, as this can be a source of anxiety for many. Patients want to know what to expect during the surgery and how they will be monitored throughout the procedure. It is important for the surgeon to reassure the patient that they will be well cared for and that their safety is the top priority. Empathy and active listening are key components of effective communication with patients. Furthermore, patients

appreciate it when surgeons involve them in the decision-making process and take their preferences into account. This can help empower the patient and make them feel more in control of their healthcare. Surgeons should encourage patients to ask questions and express any concerns they may have, creating an open and transparent dialogue. A well-informed patient is more likely to have a positive outcome and adhere to post-operative instructions. Thus, effective communication between surgeons and patients is essential to build trust, alleviate fears, and ensure a successful surgical outcome. By addressing the patient's concerns, providing clear and concise information, and showing empathy and compassion, surgeons can establish a strong rapport with their patients. To summarize, a well-informed patient is a confident patient, and a confident patient is more likely to have a positive surgical experience [1-4].

## The Contribution of Mind Genomics to Understanding People, and In Turn Communicating with Patients

The field of mind genomics tries to explain how and why people act and make choices. It uses psychology, neuroscience, and marketing research to find out what people's unconscious thoughts are that make them make the choices and preferences they do. Mind Genomics can separate people into groups based on the way they think by using advanced data analysis methods [5-7]. One of the most important things that Mind Genomics has shown is that people have different

mental models. Within these mindsets are specific ways of thinking that affect how people see the world, decide what to do, and form opinions. Researchers can make products, services, and interventions that better meet the needs and preferences of different groups of people by finding and understanding these modes of thought. It's possible that this personalized approach will make customers happier, help patients do better, and help the business grow [8,9]. The implications of discovering mind-sets extend far beyond the realm of marketing and consumer behavior. Within the medical field, knowing how patients think and feel can help create more effective treatment plans that make patients happier and improve their health. By making healthcare interventions fit the way patients think, providers can get patients to follow through more often, get them more involved, and ultimately improve the quality of care overall. If this personalized approach works, it could completely change how healthcare is provided and experienced [10-12]. Mind Genomics can help doctors and nurses better understand their patients' unique behaviors and thoughts in clinics and hospitals. Finding the thought patterns that cause patients to act out can help doctors come up with better ways to talk to them, treat them, and help them in other ways. This individualized approach can help patients and providers trust each other more, work together better, and have a better relationship. Healthcare professionals can make a more supportive and empowering care environment for patients by recognizing and respecting their unique mental states [13-15]. In order to help patients in the clinic and hospital, healthcare professionals must first understand that people have different mental states. Clinical professionals can better meet the needs and preferences of each patient by recognizing and understanding the unique ways that each person thinks and acts. This personalized approach can help doctors and nurses get to know their patients, earn their trust, and provide better care overall. Health care professionals can make care more patient-centered and interesting by using Mind Genomics principles [16-19]. Mind Genomics' discovery of mindsets could change the way healthcare is provided and experienced in a big way. Healthcare providers can improve outcomes, make patients happier, and lead to better health results by understanding and adapting interventions to each patient's unique cognitive patterns. This personalized approach has the potential to change the relationship between the patient and the provider, get the patient more involved, and ultimately improve the quality of care as a whole. Healthcare professionals can make the care environment more caring, supportive, and effective by recognizing and embracing the different ways people think. To sum up, Mind Genomics is a revolutionary way to study how people act and make choices [20]. Researchers can make interventions, products, and services better fit the needs and wants of different groups of people by figuring out the different ways people think. The discovery of mindsets has huge implications for medicine, because tailoring care to each patient's unique ways of thinking can lead to better outcomes, higher patient engagement, and higher patient satisfaction. Healthcare professionals can make care more compassionate and patient-centered by using Mind Genomics principles in their work. This can lead to more collaboration, trust, and better health outcomes..

### How can AI Help Mind Genomics Discover Mind-Sets

Mind Genomics and AI can work together to learn about mindsets by combining them through data analysis and pattern recognition.

AI can find patterns and themes that are unique to each mind-set by gathering and analyzing data from people with those mindsets. Because of this method, the AI can give each mindset a name or label based on the most important traits found in the data. This process of giving people names helps to group and tell the difference between different ways of thinking, which makes it possible to use more targeted and personalized communication methods. AI can not only name the mindset, but also guess what kinds of people are in it by looking at things like age, gender, and socioeconomic status. AI can find trends and correlations in the data collected from people with similar mental states. These can help us understand the demographic profile of each mental state. This information can be used to make sure that communication and intervention strategies work better with people who are in a certain demographic group and have a certain mindset. When trying to guess what questions a cancer patient might have before surgery, AI can use what it knows about different mindsets to guess the most common worries and doubts that people with that mindset might have. AI can find common themes and topics that are usually talked about before surgery by looking at data from past interactions between surgeons and cancer patients. This ability to predict the future lets AI know ahead of time what questions and concerns are most likely to come up during pre-operation consultations and prepares to answer them. If everything goes well with the surgery, AI can use what it knows about how people think to send the patient personalized and caring messages. AI can figure out the best ways to share good news with people of different personalities by looking at data on successful outcomes and patient feedback. This personalized way of talking to the patient helps to build trust and a relationship with them, which makes the recovery process more positive and helpful. If, on the other hand, things don't go as planned and problems arise, AI can use its knowledge of how people think to send the patient messages that are both kind and helpful. AI can figure out the best and most understanding ways to share difficult information with people of all mentalities by looking at data on failed outcomes and patient experiences. This personalized way of talking to the patient helps to manage their expectations and support them during a tough and uncertain time.

### Putting AI to the Test

The original Mind Genomics approach was to require the user to state the problem and provide four questions which tell a story. To each question the user would be requested to provide four answers, the answers called 'elements,' and being stand-alone phrases which conveyed a single idea. While seeming straightforward to an experience user, the 'task' of providing questions, and then answers to the questions soon emerged as a roadblock. The consequence was that many prospective users 'froze; at the prospect of asking and answering questions, with the statement that they were not sufficiently conversant with the topic. The sad outcome was that many prospective users aborted their efforts as soon as they were requested to participate. The solution to the problems emerged from the introduction of Chat GPT by Open AI, Inc. The user simply had to ask the AI about the topic, and the AI would return a paragraph or two, from which the user would create the four questions. Later on, the system to create questions was codified into SCAS (Socrates as a Service). The strategy was to create 15 questions for each input 'squib' or background statement about the problem. The

user was able to select questions, edit them if desired, provide their own questions if desired, and then 'drop the questions' into the study. Once the four questions were selected after one or several iterations, the user would then move to the next section, where the 'squib' was the question previously selected. The process would return 15 answers to each question. The entire process allowed for iteration after iteration, each iteration taking 10-15 seconds. The 'hard part' evolved to editing and polishing the squib to introduce the topic, the questions that were selected so that they would generate the correct answers, and finally the answers so that they would be meaningful as well as simple. What took days and weeks now took less than an hour and required relatively little familiarity with the topic. The fortunate 'byway' leading to this

project on communication between surgeon and patient before the cancer operation occurred when the 'squib' to introduce the project was expanded, so that the squib contained within it statements to the effect that there were a certain number of (not-yet-named) mind-sets, and the answers to certain questions had to be created by AI once the mind-sets were established, also by AI. Table 1 shows the 'squib' or orientation to AI. The same squib was used for each of the nine cancers 'studied' using AI to provide the answers. Each table will present the three mind-sets for the particular cancer. It is important to keep in mind that the AI does not keep the information generated. Rather, each iteration is separate. The answers provided by AI attempt to conform to the format prescribed in Tables 1-9.

**Table 1:** Most of the time the answers do fall into the format. Occasionally, the introductory words might change, but the answer itself is appropriate to the question.

For each of the three mind-sets FOR EXPLORATION OF POSSIBLE (Name of cancer here) .....

What is the name of the mind-set

1. What is the gender composition of the mind-set
2. What does the mind-set want to ask the surgeon and what does the mind-set want to find out from the surgeon.
3. What is the likely behavior of this mind-set when they are starting the process of meeting the surgeon
4. What is the likely behavior of this mind-set when they are getting the day-before briefing from the surgeon
5. What are the best words that the surgeon can tell them when the surgery went fine
6. What are the best words that the surgeon can tell them when the surgery did not go well, for any reason

Please provide these answers for ALL THREE MIND-SETS

**Table 2:** AI exploration of three mind-sets for liver cancer.

**EXPLORATION OF POSSIBLE LIVER CANCER**

**Liver Cancer: Analytic Mind-Set**

1. Gender composition: Mostly male
2. Questions likely to ask:
  - What are the specific characteristics of the liver tumor?
  - What are the potential risks and complications associated with the surgery?
  - Can you explain the different treatment options available and their success rates?
  - What is your experience with treating liver cancer and performing this type of surgery?
  - How long is the recovery process expected to take?
3. Likely behavior when meeting the surgeon: Calm and focused, asking detailed questions and taking notes
4. Likely behavior during the day-before briefing: Seeking additional information and reassurance, possibly researching the surgeon's background
5. Best words after successful surgery: "The surgery went smoothly, and we were able to remove the tumor completely."
6. Best words after unsuccessful surgery: "Unfortunately, we encountered complications during the surgery, but we are exploring other treatment options."

**Liver Cancer: Emotional Mind-Set**

1. Gender composition: Mostly female
2. Questions likely to ask
  - How will the surgery impact my daily life and relationships?
  - Can you provide reassurance and emotional support throughout the process?
  - What are the chances of the cancer spreading or returning after surgery?
  - How can I cope with the anxiety and fear surrounding the surgery?
  - Can you explain the possible side effects of the treatment?
3. Likely behavior when meeting the surgeon: Emotional and seeking comfort, expressing fears and concerns
4. Likely behavior during the day-before briefing: Seeking emotional support and reassurance, possibly with a family member or friend present
5. Best words after successful surgery: "The surgery went well, and we were able to remove the tumor successfully."
6. Best words after unsuccessful surgery: "We encountered complications during the surgery, but we are here to support you through the next steps."

**Liver Cancer-Pragmatic Mind-Set**

1. Gender composition: Mixed
2. Questions likely to ask
  - What are the specific steps I need to take to prepare for the surgery?
  - Can you provide a detailed timeline of the surgical procedure and recovery process?
  - How will the surgery impact my work and daily responsibilities?
  - What are the financial implications of the surgery and treatment?
  - Can you provide information on support services available during and after the surgery?
3. Likely behavior when meeting the surgeon: Organized and focused on practical matters, taking copious notes and asking logistical questions
4. Likely behavior during the day-before briefing: Checking and rechecking information, ensuring all necessary arrangements are in place
5. Best words after successful surgery: "The surgery was successful, and we were able to remove the tumor completely."
6. Best words after unsuccessful surgery: "There were complications during the surgery, but we are exploring other treatment options moving forward."

Table 3: AI exploration of three mind-sets for Myeloma.

<p>EXPLORATION OF POSSIBLE MYELOMA</p> <p><b>Myeloma-Optimistic Mind-Set</b></p> <ol style="list-style-type: none"> <li>1. Gender composition: Mixed</li> <li>2. Questions likely to ask: The mind-set wants to ask the surgeon about the success rate of the surgery, potential complications, recovery time, alternative treatment options, and the surgeon's experience with similar cases. The mind-set wants to find out the potential outcomes of the surgery, steps to take for a successful recovery, expected timeline for recovery, possible side effects, and ways to prevent skin myeloma cancer recurrence.</li> <li>3. Likely behavior: Eager, hopeful, and optimistic about the potential successful outcome of the surgery.</li> <li>4. Likely behavior: Attentive, calm, and focused on absorbing all the information provided by the surgeon.</li> <li>5. Best words: "The surgery went smoothly and successfully."</li> <li>6. Best words: "Unfortunately, we encountered some unexpected complications during the surgery, but we are doing everything we can to address them."</li> </ol> <p><b>Myeloma: Anxious Mind-Set</b></p> <ol style="list-style-type: none"> <li>1. Gender composition: Predominantly female</li> <li>2. Questions likely to ask: The mind-set wants to ask the surgeon about potential risks and complications associated with the surgery, expected pain levels during recovery, likelihood of skin myeloma cancer recurrence, emotional support resources available, and the surgeon's plan for post-operative care. The mind-set wants to find out the details of the surgical procedure, potential side effects of anesthesia, expected level of discomfort during recovery, ways to manage pain, and how to cope with post-surgery emotions.</li> <li>3. Likely behavior: Nervous, worried, and seeking reassurance from the surgeon.</li> <li>4. Likely behavior: Anxious, emotional, and in need of a comforting and understanding approach from the surgeon.</li> <li>5. Best words: "The surgery was successful, and you are on the right path to recovery."</li> <li>6. Best words: "Unfortunately, the surgery did not go as planned, but we are exploring other treatment options to address the issue."</li> </ol> <p><b>Myeloma: Curious Mind-Set</b></p> <ol style="list-style-type: none"> <li>1. Gender composition: Predominantly male</li> <li>2. Question likely to ask: The mind-set wants to ask the surgeon about the technology used in the surgery, advancements in skin myeloma cancer treatment, potential future developments in the field, surgeon's research interests, and alternative treatment options being considered. The mind-set wants to find out about the precision of the surgical tools, potential benefits of innovative technology, expected advancements in skin myeloma cancer treatment, ways to participate in clinical trials, and potential breakthroughs in the field.</li> <li>3. Likely behavior: Inquisitive, analytical, and looking to deepen their understanding of the surgical process.</li> <li>4. Likely behavior: Engaged, attentive, and eager to discuss the technical details of the surgery with the surgeon.</li> <li>5. Best words: "The surgery was a success, and your proactive approach to understanding the procedure was commendable."</li> <li>6. Best words: "The surgery presented unexpected challenges, but your interest in exploring new treatment options is admirable."</li> </ol>
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Table 4: AI exploration of three mind-sets for stomach cancer.

<p>EXPLORATION OF POSSIBLE STOMACH CANCER</p> <p><b>Stomach Cancer: Proactive Mind-Set</b></p> <ol style="list-style-type: none"> <li>1. Gender composition: Equal mix of male and female</li> <li>2. Questions likely to ask: The mind-set wants to ask the surgeon about their experience with stomach cancer surgeries, the potential risks and complications of the surgery, the success rate of the surgery, the post-operative care and recovery process, and the long-term outcomes and prognosis. The mind-set wants to find out the surgeon's qualifications, experience, and success rate with stomach cancer surgeries, as well as any specific protocols or recommendations for their case.</li> <li>3. The likely behavior of this mind-set when they are starting the process of meeting the surgeon is to come prepared with a list of questions, to actively listen and take notes during the consultation, to ask for clarification on any medical jargon or procedures they don't understand, to express their concerns and fears openly, and to seek reassurance and guidance from the surgeon.</li> <li>4. The likely behavior of this mind-set when they are getting the day-before briefing from the surgeon is to carefully review any instructions or guidelines given by the surgeon, to follow any pre-operative preparations diligently, to communicate any last-minute questions or concerns to the surgical team, to mentally prepare themselves for the upcoming surgery, and to stay optimistic and focused on a positive outcome.</li> <li>5. The best words that the surgeon can tell them when the surgery went fine are "The surgery was successful, and we were able to remove all of the cancerous tissue. Your prognosis is good, and we will continue to monitor your recovery closely."</li> <li>6. The best words that the surgeon can tell them when the surgery did not go well, for any reason are "There were some unexpected complications during the surgery, but we are doing everything we can to stabilize your condition and optimize your recovery. We will discuss next steps and treatment options in detail with you and your loved ones."</li> </ol> <p><b>Stomach Cancer: Passive Mind-Set</b></p> <ol style="list-style-type: none"> <li>1. Gender composition: Mostly female</li> <li>2. Questions likely to ask: The mind-set wants to ask the surgeon about the basic details of the surgery, the expected timeline for the procedure, the general risks associated with the surgery, the expected recovery time, and the follow-up care plan. The mind-set wants to find out the surgeon's availability for follow-up appointments, any specific dietary or lifestyle changes required post-surgery, and the overall process for monitoring progress and addressing any concerns.</li> <li>3. The likely behavior of this mind-set when they are starting the process of meeting the surgeon is to rely on the surgeon's expertise and guidance, to disclose any relevant medical history or pre-existing conditions, to seek reassurance and comfort from the surgical team, to maintain a calm and composed demeanor, and to defer to the surgeon's recommendations without much questioning.</li> <li>4. The likely behavior of this mind-set when they are getting the day-before briefing from the surgeon is to passively accept the information given by the surgical team, to follow any pre-operative instructions without much inquiry, to rely on the expertise of the surgical team for guidance and support, to express any concerns or anxieties subtly, and to trust in the process and outcomes.</li> <li>5. The best words that the surgeon can tell them when the surgery went fine are "The surgery was successful, and we were able to remove the cancerous tissue. Your recovery is progressing well, and we will continue to monitor your condition closely to ensure optimal healing."</li> <li>6. The best words that the surgeon can tell them when the surgery did not go well, for any reason are "There were some unexpected challenges during the surgery, but we are doing everything possible to address them and support your recovery. We will provide you with detailed information on the next steps and work together to navigate this situation."</li> </ol>
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**Stomach Cancer: Anxious Mind-Set**

1. Gender composition: Mostly male
2. Questions likely to ask: The mind-set wants to ask the surgeon about the potential pain management during and after the surgery, the specific steps of the surgical procedure, the post-operative complications to watch out for, the support available for mental and emotional well-being during the recovery process, and the specific medications or treatments to be administered post-surgery. The mind-set wants to find out the surgical team's readiness and experience in handling unexpected complications, the resources available for managing anxiety and stress before and after the surgery, the communication plan for updates and progress reports, and the contingency plans for any adverse outcomes.
3. The likely behavior of this mind-set when they are starting the process of meeting the surgeon is to express their fears and worries openly, to seek detailed information and reassurance from the surgical team, to require frequent updates and communication from the surgical team, to be observant of any signs of discomfort or distress, and to seek support and guidance from family and loved ones.
4. The likely behavior of this mind-set when they are getting the day-before briefing from the surgeon is to feel overwhelmed and anxious, to ask numerous questions about the procedure and recovery process, to seek validation and empathy from the surgical team, to require additional support and emotional reassurance, and to struggle with managing their anxiety and stress levels.
5. The best words that the surgeon can tell them when the surgery went fine are "The surgery went smoothly, and we were able to successfully remove the cancerous tissue. Your recovery is progressing as expected, and we will continue to monitor your condition closely to ensure a full recovery."
6. The best words that the surgeon can tell them when the surgery did not go well, for any reason are "There were some challenges during the surgery, but we are working diligently to address them and provide you with the best possible care. We will keep you informed of any developments and collaborate with you on the next steps in your treatment plan."

Table 5: AI exploration of three mind-sets for breast cancer.

**EXPLORATION OF POSSIBLE BREAST CANCER**

**Breast Cancer: Analytical and Detail-Oriented Mind-Set**

1. Gender composition: Both men and women
2. Questions likely to ask:
  - Can you explain the specific surgical procedure you recommend for my situation?
  - What are the potential risks and complications associated with the surgery?
  - How long is the recovery process expected to be?
  - Are there any alternative treatment options that I should consider?
  - What is the success rate of this specific surgery in cases similar to mine?
3. Likely behavior when starting the process: Researching extensively and preparing a list of questions
4. Likely behavior during the day-before briefing: Asking for detailed explanations and seeking further clarification
5. Best words if surgery went fine: "The surgery was successful, and we were able to remove all the affected tissue."
6. Best words if surgery did not go well: "The surgery did not go as planned, but we will work together to explore other treatment options."

**Breast Cancer: Supportive and Emotional Mind-Set**

1. Name of the mind-set: Supportive and Emotional
2. Gender composition: Mostly women
3. Questions likely to ask:
  - Can you provide reassurance and emotional support throughout the surgical process?
  - How will my emotional well-being be taken care of during and after the surgery?
  - Can I have a support person with me during the surgery?
  - What are some coping mechanisms for dealing with the stress and anxiety of the surgery?
  - How will you communicate with me and my loved ones throughout the process?
4. Likely behavior when starting the process: Seeking emotional support from loved ones and medical staff
5. Likely behavior during the day-before briefing: Expressing emotions openly and seeking reassurance
- Best words if surgery went fine: "The surgery went smoothly, and we took good care of you throughout the process."
6. Best words if surgery did not go well: "We are here for you, and we will explore all options to ensure your well-being."

**Breast Cancer: Proactive and Action-Oriented Mind-Set**

1. Gender composition: Mostly men
2. Questions likely to ask:
  - What steps can I take to prepare myself physically for the surgery?
  - How soon can we schedule the surgery to start treatment as soon as possible?
  - Can we discuss the post-surgery rehabilitation and recovery plan?
  - Are there any lifestyle changes or precautions I should consider before and after the surgery?
  - Can we discuss the long-term prognosis and follow-up care after the surgery?
3. Likely behavior when starting the process: Taking charge of the situation and actively seeking solutions
4. Likely behavior during the day-before briefing: Wanting to finalize details and ensure everything is in place
5. Best words if surgery went fine: "You were proactive in your approach, and the surgery was successful as a result."
6. Best words if surgery did not go well: "Unfortunately, there were complications during the surgery, but we are committed to finding the best course of action moving forward."

**Table 6:** AI exploration of three mind-sets for colon cancer.

EXPLORATION OF POSSIBLE COLON CANCER	
<b>Colon Cancer: Proactive Mind-Set</b>	
1.	Gender composition: Equal representation of both males and females
2.	Questions likely to ask: The Proactive mind-set wants to ask the surgeon about the specific risks and benefits of the proposed treatment plan, the surgeon's experience with similar cases, the expected recovery time, potential long-term effects of the surgery, and any alternative treatment options available.
3.	Likely behavior when starting the process: The Proactive mind-set is likely to come prepared with a list of questions and research they have done on their own. They may also request additional information or seek second opinions before deciding.
4.	Likely behavior during the day-before briefing: The Proactive mind-set will likely ask clarifying questions, double-check details of the surgery plan, and ensure they fully understand the post-operative care instructions.
5.	The best words the surgeon can tell the Proactive mind-set when the surgery went fine: "The surgery was a success, and everything went as planned. You are on the road to recovery."
6.	Best words if surgery did not go well: "There were some unexpected complications during the surgery, but we are doing everything we can to address them and provide the best possible care for you."
<b>Colon Cancer: Reluctant Mind-Set</b>	
1.	Gender composition: Predominantly males
2.	Questions likely to ask: The Reluctant mind-set wants to ask the surgeon about the necessity of the surgery, the potential risks and complications, the expected outcome, the recovery process, and the availability of alternative treatment options.
3.	Likely behavior when starting the process: The Reluctant mind-set may be hesitant and unsure about the necessity of the surgery. They may express concerns and reluctance to undergo the procedure.
4.	Likely behavior during the day-before briefing: The Reluctant mind-set may need reassurance and more information to alleviate their fears and uncertainties about the surgery.
5.	The best words the surgeon can tell the Reluctant mind-set when the surgery went fine: "The surgery was successful, and you are now on the path to recovery. We will continue to monitor your progress closely."
6.	Best words if surgery did not go well: "Unfortunately, we encountered some complications during the surgery. We are working diligently to address them and provide you with the best care possible."
<b>Colon Cancer: Anxious Mind-Set</b>	
1.	Gender composition: Predominantly females
2.	Questions likely to ask: The Anxious mind-set wants to ask the surgeon about the surgical procedure in detail, potential pain management options, the expected recovery timeline, the likelihood of recurrence, and the emotional support available post-surgery.
3.	Likely behavior when starting the process: The Anxious mind-set may display signs of nervousness, worry, and fear about the upcoming surgery. They may seek reassurance and emotional support from the medical team.
4.	Likely behavior during the day-before briefing: The Anxious mind-set may have increased anxiety and may require additional support and information to help them cope with their emotions.
5.	The best words the surgeon can tell the Anxious mind-set when the surgery went fine: "The surgery went well, and you are now on the road to recovery. We are here to support you every step of the way."
6.	The best words the surgeon can tell the Anxious mind-set when the surgery did not go well: "Unfortunately, there were some unforeseen complications during the surgery. We are doing everything we can to provide you with the best care and support during this challenging time."

**Table 7:** AI exploration of three mind-sets for pancreatic cancer.

EXPLORATION OF POSSIBLE PANCREATIC CANCER	
<b>Pancreatic Cancer: Information-Seeking Mind-Set</b>	
1.	Gender composition: Both males and females
2.	Questions likely to ask: "Can you explain in detail the surgical procedure for removing the suspected tumor?" -"What are the potential risks and complications associated with this surgery?" -"How long will the recovery process be after the surgery?" -"Will I need any additional treatments or follow-up visits after the surgery?" -"Is there a possibility that the tumor may not be removed completely during the surgery?"
3.	Likely behavior when starting the process: Nervous, constantly seeking reassurance and information
4.	Likely behavior during the day-before briefing: Overwhelmed, trying to process information and mentally prepare for surgery
5.	Best words after successful surgery: "The surgery went smoothly, and we were able to successfully remove the tumor."
6.	Best words after unsuccessful surgery: "Unfortunately, we encountered some complications during the surgery, but we are working on a plan for further treatment."
<b>Pancreatic Cancer: Skeptical Mind-Set</b>	
1.	Gender composition: Primarily females
2.	Questions likely to ask: -"How confident are you in your ability to successfully remove the tumor?" -"Have you performed this specific surgery before on patients with similar conditions?" -"Are there any alternative treatments or options that I should consider before proceeding with surgery?" -"What is the success rate for this type of surgery in patients with suspected pancreatic cancer?" -"Can you provide me with any references or testimonials from previous patients who underwent similar surgeries?"
3.	Likely behavior when starting the process: Questioning, seeking second opinions, researching extensively
4.	Likely behavior during the day-before briefing: Analytical, evaluating information and weighing options
5.	Best words after successful surgery: "The surgery was a success, and we were able to remove the tumor completely."
6.	Best words after unsuccessful surgery: "We encountered some challenges during the surgery, but we are evaluating next steps for your treatment."

**Pancreatic Cancer: Anxious Expectations Mind-Set**

1. Gender composition: Primarily males
2. Questions likely to ask:
  - "What are the chances of complications or adverse outcomes during the surgery?"
  - "How much pain and discomfort can I expect after the surgery?"
  - "Will I require assistance or special care during my recovery period?"
  - "Are there any potential long-term effects or implications of the surgery that I should be aware of?"
  - "What is the plan for managing any symptoms or side effects that may arise after the surgery?"
3. Likely behavior when starting the process: Anxious, seeking emotional support and reassurance
4. Likely behavior during the day-before briefing: Nervous, seeking comfort and clarity on the procedure
5. Best words after successful surgery: "The surgery went well, and the tumor was successfully removed without complications."
6. Best words after unsuccessful surgery: "Unfortunately, we encountered some challenges during the surgery, but we are committed to finding the best treatment plan moving forward."

**Table 8:** AI exploration of three mind-sets for stomach cancer.

**EXPLORATION OF POSSIBLE STOMACH CANCER**

**Stomach Cancer: Proactive Mind-Set**

Gender composition: Equal mix of male and female

Questions likely to ask: The mind-set wants to ask the surgeon about their experience with stomach cancer surgeries, the potential risks and complications of the surgery, the success rate of the surgery, the post-operative care and recovery process, and the long-term outcomes and prognosis. The mind-set wants to find out the surgeon's qualifications, experience, and success rate with stomach cancer surgeries, as well as any specific protocols or recommendations for their case.

The likely behavior of this mind-set when they are starting the process of meeting the surgeon is to come prepared with a list of questions, to actively listen and take notes during the consultation, to ask for clarification on any medical jargon or procedures they don't understand, to express their concerns and fears openly, and to seek reassurance and guidance from the surgeon.

The likely behavior of this mind-set when they are getting the day-before briefing from the surgeon is to carefully review any instructions or guidelines given by the surgeon, to follow any pre-operative preparations diligently, to communicate any last-minute questions or concerns to the surgical team, to mentally prepare themselves for the upcoming surgery, and to stay optimistic and focused on a positive outcome.

The best words that the surgeon can tell them when the surgery went fine are "The surgery was successful, and we were able to remove all of the cancerous tissue. Your prognosis is good, and we will continue to monitor your recovery closely."

The best words that the surgeon can tell them when the surgery did not go well, for any reason are "There were some unexpected complications during the surgery, but we are doing everything we can to stabilize your condition and optimize your recovery. We will discuss next steps and treatment options in detail with you and your loved ones."

**Stomach Cancer: Passive Mind-Set**

Gender composition: Mostly female

Questions likely to ask: The mind-set wants to ask the surgeon about the basic details of the surgery, the expected timeline for the procedure, the general risks associated with the surgery, the expected recovery time, and the follow-up care plan. The mind-set wants to find out the surgeon's availability for follow-up appointments, any specific dietary or lifestyle changes required post-surgery, and the overall process for monitoring progress and addressing any concerns.

The likely behavior of this mind-set when they are starting the process of meeting the surgeon is to rely on the surgeon's expertise and guidance, to disclose any relevant medical history or pre-existing conditions, to seek reassurance and comfort from the surgical team, to maintain a calm and composed demeanor, and to defer to the surgeon's recommendations without much questioning.

The likely behavior of this mind-set when they are getting the day-before briefing from the surgeon is to passively accept the information given by the surgical team, to follow any pre-operative instructions without much inquiry, to rely on the expertise of the surgical team for guidance and support, to express any concerns or anxieties subtly, and to trust in the process and outcomes.

The best words that the surgeon can tell them when the surgery went fine are "The surgery was successful, and we were able to remove the cancerous tissue. Your recovery is progressing well, and we will continue to monitor your condition closely to ensure optimal healing."

The best words that the surgeon can tell them when the surgery did not go well, for any reason are "There were some unexpected challenges during the surgery, but we are doing everything possible to address them and support your recovery. We will provide you with detailed information on the next steps and work together to navigate this situation."

**Stomach Cancer: Anxious Mind-Set**

Gender composition: Mostly male

Questions likely to ask: The mind-set wants to ask the surgeon about the potential pain management during and after the surgery, the specific steps of the surgical procedure, the post-operative complications to watch out for, the support available for mental and emotional well-being during the recovery process, and the specific medications or treatments to be administered post-surgery. The mind-set wants to find out the surgical team's readiness and experience in handling unexpected complications, the resources available for managing anxiety and stress before and after the surgery, the communication plan for updates and progress reports, and the contingency plans for any adverse outcomes.

The likely behavior of this mind-set when they are starting the process of meeting the surgeon is to express their fears and worries openly, to seek detailed information and reassurance from the surgical team, to require frequent updates and communication from the surgical team, to be observant of any signs of discomfort or distress, and to seek support and guidance from family and loved ones.

The likely behavior of this mind-set when they are getting the day-before briefing from the surgeon is to feel overwhelmed and anxious, to ask numerous questions about the procedure and recovery process, to seek validation and empathy from the surgical team, to require additional support and emotional reassurance, and to struggle with managing their anxiety and stress levels.

The best words that the surgeon can tell them when the surgery went fine are "The surgery went smoothly, and we were able to successfully remove the cancerous tissue. Your recovery is progressing as expected, and we will continue to monitor your condition closely to ensure a full recovery."

The best words that the surgeon can tell them when the surgery did not go well, for any reason are "There were some challenges during the surgery, but we are working diligently to address them and provide you with the best possible care. We will keep you informed of any developments and collaborate with you on the next steps in your treatment plan."

Table 9: AI exploration of three mind-sets for breast cancer.

EXPLORATION OF POSSIBLE BREAST CANCER
<p><b>Breast Cancer: Analytical and Detail-Oriented Mind-Set</b></p> <ol style="list-style-type: none"><li>1. Gender composition: Both men and women</li><li>2. Questions likely to ask:<ul style="list-style-type: none"><li>-Can you explain the specific surgical procedure you recommend for my situation?</li><li>-What are the potential risks and complications associated with the surgery?</li><li>-How long is the recovery process expected to be?</li><li>-Are there any alternative treatment options that I should consider?</li><li>-What is the success rate of this specific surgery in cases similar to mine?</li></ul></li><li>3. Likely behavior when starting the process: Researching extensively and preparing a list of questions</li><li>4. Likely behavior during the day-before briefing: Asking for detailed explanations and seeking further clarification</li><li>5. Best words if surgery went fine: "The surgery was successful, and we were able to remove all the affected tissue."</li><li>6. Best words if surgery did not go well: "The surgery did not go as planned, but we will work together to explore other treatment options."</li></ol>
<p><b>Breast Cancer: Supportive and Emotional Mind-Set</b></p> <ol style="list-style-type: none"><li>1. Name of the mind-set: Supportive and Emotional</li><li>2. Gender composition: Mostly women</li><li>3. Questions likely to ask:<ul style="list-style-type: none"><li>-Can you provide reassurance and emotional support throughout the surgical process?</li><li>-How will my emotional well-being be taken care of during and after the surgery?</li><li>-Can I have a support person with me during the surgery?</li><li>-What are some coping mechanisms for dealing with the stress and anxiety of the surgery?</li><li>-How will you communicate with me and my loved ones throughout the process?</li></ul></li><li>4. Likely behavior when starting the process: Seeking emotional support from loved ones and medical staff</li><li>5. Likely behavior during the day-before briefing: Expressing emotions openly and seeking reassurance</li><li>Best words if surgery went fine: "The surgery went smoothly, and we took good care of you throughout the process."</li><li>6. Best words if surgery did not go well: "We are here for you, and we will explore all options to ensure your well-being."</li></ol>
<p><b>Breast Cancer: Proactive and Action-Oriented Mind-Set</b></p> <ol style="list-style-type: none"><li>1. Gender composition: Mostly men</li><li>2. Questions likely to ask:<ul style="list-style-type: none"><li>-What steps can I take to prepare myself physically for the surgery?</li><li>-How soon can we schedule the surgery to start treatment as soon as possible?</li><li>-Can we discuss the post-surgery rehabilitation and recovery plan?</li><li>-Are there any lifestyle changes or precautions I should consider before and after the surgery?</li><li>-Can we discuss the long-term prognosis and follow-up care after the surgery?</li></ul></li><li>3. Likely behavior when starting the process: Taking charge of the situation and actively seeking solutions</li><li>4. Likely behavior during the day-before briefing: Wanting to finalize details and ensure everything is in place</li><li>5. Best words if surgery went fine: "You were proactive in your approach, and the surgery was successful as a result."</li><li>6. Best words if surgery did not go well: "Unfortunately, there were complications during the surgery, but we are committed to finding the best course of action moving forward."</li></ol>

### Dealing with Different Results from AI-Implications, Problems, Hidden Benefits

When artificial intelligence generates various synthesized mindsets for a patient with lung cancer, it can be both a problem and a learning opportunity. The different mindsets could be the result of AI processing and interpreting information in different ways, leading to contradictory conclusions. This discrepancy can be confusing for healthcare providers, making it difficult to determine the best course of action for the patient. However, the presence of various mindsets can be viewed as a positive aspect of using AI in healthcare education. It enables a more thorough examination of various perspectives and approaches to patient care, potentially improving nurses' and doctors' knowledge and skills. By examining and considering various synthesized mindsets, healthcare providers can gain a better

understanding of the complexities involved in treating lung cancer patients. When using AI to teach nurses and doctors, encountering different mindsets for a patient with lung cancer emphasizes the value of critical thinking and evidence-based practice. It emphasizes the importance of healthcare providers critically evaluating AI-generated information and considering multiple perspectives when making clinical decisions. It also emphasizes the importance of continuing education and training to stay current on the latest advancements in healthcare technology and AI algorithms. Overall, the presence of various synthesized mindsets in AI-generated recommendations for patient care serves as a reminder that healthcare is a dynamic and ever-changing industry. It requires healthcare providers to think critically, be adaptable, and constantly seek new knowledge and insights in order to (Table 10)

Table 10: AI exploration of two iterations to create three mind-sets for lung cancer.

<p><b>EXPLORATION OF POSSIBLE LUNG CANCER-Iteration #1. of 2.</b></p> <p><b>Lung Cancer: Fearful Mind-Set-Iteration #1.</b></p> <ol style="list-style-type: none"><li>1. Gender composition: Mixed</li><li>2. Questions likely to ask<ul style="list-style-type: none"><li>-What are the potential risks involved in the surgery for lung cancer?</li><li>-What are the success rates for this type of surgery?</li><li>-How long is the recovery process expected to be?</li><li>-Are there any alternative treatments or options available?</li><li>-What are the chances of the cancer spreading after surgery?</li></ul></li><li>3. Likely behavior when meeting the surgeon: Nervous, anxious, seeking reassurance</li><li>4. Likely behavior during the day-before briefing: Seeking detailed information, feeling overwhelmed</li><li>5. Best words from surgeon after successful surgery: "The surgery was a success, and we were able to remove the cancer completely."</li><li>6. Best words from surgeon after unsuccessful surgery: "We encountered unexpected complications during the surgery, but we will explore other treatment options together."</li></ol> <p>Lung Cancer: Curious Mind-Set-Iteration #1.</p> <ol style="list-style-type: none"><li>1. Gender composition: Mainly male</li><li>2. Questions likely to ask<ul style="list-style-type: none"><li>-Can you explain the specific surgical procedure for lung cancer in detail?</li><li>-What are the potential long-term effects or complications of the surgery?</li><li>-How soon can normal activities be resumed after the surgery?</li><li>-Are there any additional tests or follow-up appointments required post-surgery?</li><li>-What are the chances of the cancer recurring after surgery?</li></ul></li><li>3. Likely behavior when meeting the surgeon: Inquisitive, attentive, seeking detailed information</li><li>4. Likely behavior during the day-before briefing: Taking notes, asking clarifying questions, feeling prepared</li><li>5. Best words from surgeon after successful surgery: "The surgery went smoothly, and we were able to remove the tumor completely."</li><li>6. Best words from surgeon after unsuccessful surgery: "Unfortunately, we encountered complications during the surgery, but we are exploring alternative treatment options."</li></ol> <p><b>Lung Cancer: Optimistic Mind-Set-Iteration #1.</b></p> <ol style="list-style-type: none"><li>1. Gender composition: Mainly female</li><li>2. Questions likely to ask<ul style="list-style-type: none"><li>-What are the factors that contribute to a successful outcome in this type of surgery?</li><li>-How soon can improvements in health be expected after the surgery?</li><li>-What are some lifestyle changes that can support recovery and prevent cancer recurrence?</li><li>-What are the potential benefits of undergoing surgery for lung cancer?</li><li>-How can support systems like family and friends help during the recovery process?</li></ul></li><li>3. Likely behavior when meeting the surgeon: Positive, hopeful, seeking guidance on post-surgery plans</li><li>4. Likely behavior during the day-before briefing: Expressing gratitude for the care received, feeling confident about the process</li><li>5. Best words from surgeon after successful surgery: "The surgery was successful, and we are optimistic about your recovery."</li><li>6. Best words from surgeon after unsuccessful surgery: "Despite our best efforts, we encountered complications during the surgery. We will work together to explore other options for your treatment."</li></ol> <p><b>EXPLORATION OF POSSIBLE LUNG CANCER-Iteration #2. of 2.</b></p> <p><b>Lung Cancer: Analytical Mind-Set-Iteration #2.</b></p> <p>Gender composition: Mostly male</p> <p>Questions likely to ask: The analytical mind-set wants to ask the surgeon about the success rate of the surgery, potential risks and complications, post-operative care plans, alternative treatment options, and long-term prognosis.</p> <p>Likely behavior when starting the process: Researching extensively on lung cancer, treatments, and surgeons, and preparing a list of detailed questions to ask the surgeon.</p> <p>Likely behavior during the day-before briefing: Arriving well-prepared with notes and questions, listening carefully, and seeking clarification on any uncertainties.</p> <p>Best words from the surgeon if surgery goes fine: "The surgery was successful, and we were able to remove the tumor completely."</p> <p>Best words from the surgeon if surgery did not go well: "We encountered some complications during the surgery, but we are exploring other treatment options to address them."</p> <p>Lung Cancer: Emotional Mind-Set-Iteration #2.</p> <p>Gender composition: Mostly female</p> <p>Questions likely to ask: The emotional mind-set wants to ask the surgeon about the potential impact on their quality of life, emotional support available during and after surgery, how their loved ones can help, expected recovery time, and how to stay positive during the process.</p> <p>Likely behavior when starting the process: Seeking emotional support from family and friends, expressing fears and concerns, and relying on personal anecdotes.</p> <p>Likely behavior during the day-before briefing: Seeking reassurance from the surgeon, expressing their emotions openly, and looking for comfort and empathy.</p> <p>Best words from the surgeon if surgery goes fine: "The surgery was successful, and we were able to remove the tumor completely. Your recovery should go smoothly."</p> <p>Best words from the surgeon if surgery did not go well: "We faced some unexpected challenges during the surgery, but we are dedicated to finding a solution to your current condition."</p>
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**Lung Cancer: Practical Mind-Set-Iteration #2.**

Gender composition: Both male and female

Questions likely to ask: The practical mind-set wants to ask the surgeon about the logistics of the surgery (such as hospital stay, transportation, and costs), timeline for recovery and return to usual activities, impact on work or daily routine, how to prepare physically and mentally for surgery, and potential assistance with home care.

Likely behavior when starting the process: Making practical arrangements for surgery and recovery, organizing schedules and responsibilities, and gathering information on logistics.

Likely behavior during the day-before briefing: Focusing on the practical aspects of the surgery, asking about specific details and instructions, and preparing for the post-operative period.

Best words from the surgeon if surgery goes fine: "The surgery was successful, and you should be able to resume your daily activities in a few weeks with the recommended care."

Best words from the surgeon if surgery did not go well: "We encountered some complications during the surgery that will require additional attention, but we are committed to ensuring your well-being."

**Table 11:** Additional 'insights' provided by AI as elaborations of information put to AI as 'facts.'

1. Surgeons play a crucial role in a patient's healthcare journey, from diagnosis to treatment and recovery. Effective communication between the surgeon and patient is essential for building trust, ensuring informed decision-making, and promoting overall well-being. Effective communication can build trust between the surgeon and patient, leading to increased patient compliance and understanding of treatment plans. Moreover, clear communication can help manage patient expectations and reduce anxiety, ultimately improving overall health outcomes.
2. Surgeons can create a safe and supportive environment for patients to express their concerns, ask questions, and openly discuss their fears. By showing empathy, providing accurate information, and addressing anxieties head-on, surgeons can help alleviate patient fears and build trust. Open communication can also help manage expectations and empower patients to be active participants in their care
3. Surgeons can benefit from training in communication skills, patient-centered care, and cultural competence to enhance their interactions with patients. Participating in workshops, seminars, and communication courses can help surgeons develop effective listening, empathy, and patient education skills. By receiving feedback, practicing communication techniques, and staying informed about best practices, surgeons can continually improve their ability to engage with patients, build trust, and deliver high-quality care.
4. Empathy is essential in fostering a strong patient-provider relationship, demonstrating understanding, and validating the emotional experiences of patients. Surgeons who show empathy can build trust, increase patient satisfaction, and enhance the overall quality of patient care. By connecting with patients on a human level, surgeons can create a more compassionate and supportive healthcare environment. Surgeons can establish rapport by being open, honest, and respectful, taking the time to listen to patients' concerns, and involving them in their care decisions.
5. Surgeons can practice active listening, provide opportunities for patients to ask questions, and summarize key information to ensure patients feel heard and understood. Taking the time to address patients' concerns, showing empathy, and validating emotions can help build trust and enhance the patient-provider relationship.
6. Active listening is key in building trust, demonstrating respect, and ensuring patient concerns are heard and addressed effectively. Surgeons who actively listen can gather important information, clarify patient misconceptions, and tailor their communication to meet individual patient needs. By fostering a collaborative dialogue, surgeons can empower patients to ask questions, voice their uncertainties, and actively participate in their care, leading to improved satisfaction and outcomes.
7. Surgeons can use plain language, visual aids, and patient education materials to simplify complex medical information and overcome language barriers. By verifying patient understanding, checking for misconceptions, and ensuring clarity in communication, surgeons can bridge the gap with patients who have limited health literacy or language proficiency. Consulting with interpreters, using translation services, and involving family members can also help facilitate effective communication with diverse patient populations. To accommodate diverse patient populations, a surgeon can use simple language, visual aids, and cultural sensitivity to ensure effective communication. Additionally, being mindful of non-verbal cues, actively listening, and asking open-ended questions can help bridge communication gaps and build rapport with patients from different backgrounds
8. Surgeons can involve family members or caregivers by sharing relevant information, answering questions, and engaging them as partners in the care process. By establishing open lines of communication, offering support, and including family members in discussions about the patient's condition and treatment plan, surgeons can create a collaborative care environment. Addressing family concerns, providing updates, and acknowledging their role as part of the care team can help build trust, improve outcomes, and ensure a positive experience for both patients and their loved ones
9. Before a surgical procedure, a surgeon should communicate important information. This information involves the risks and benefits of the surgery, alternative treatment options, and what to expect during the recovery process. Clear communication about pre-operative instructions, potential complications, and post-operative care can help patients make informed decisions and feel more prepared for the procedure.
10. Patients want to know about their diagnosis and treatment options in clear, understandable terms. Surgeons must be able to explain medical jargon in plain language, listen to patients' concerns, and address any questions or uncertainties that may arise. . Providing clear and comprehensive explanations of procedures and treatment options is crucial for informed decision-making and patient autonomy. Patients who understand their treatment plan are more likely to adhere to post-operative care instructions and have better health outcomes. Clarity in communication can also help reduce patient anxiety and uncertainty surrounding the surgery.
11. Effective communication can help patients understand the importance of post-operative care, the rationale behind specific instructions, and potential consequences of non-compliance. By fostering a collaborative relationship with patients, surgeons can address concerns, provide support, and motivate patients to follow through with their care plan, leading to better recovery outcomes. Surgeons can provide emotional support by acknowledging patient fears, validating emotions, and offering reassurance before, during, and after surgery. Showing empathy, being present, and listening to patient concerns can help alleviate anxiety and promote a sense of trust and confidence in the surgical team. Providing consistent updates, addressing uncertainties, and involving patients in decision-making can also enhance emotional support and ensure patients feel cared for and supported throughout the surgical process.
12. Patients also need to know about the potential risks and benefits of surgery, as well as what to expect during the recovery process. Surgeons should provide realistic expectations, set clear goals for recovery, and offer support throughout the healing process.
13. Patients benefit from emotional support and reassurance. Undergoing surgery can be a stressful, anxiety-inducing experience .Surgeons should be empathic, compassionate, and attentive to patients' emotional well-being
14. Patients appreciate receiving personalized care and attention from their surgeon. Surgeons should take the time to get to know their patients on a personal level, showing genuine interest in their well-being and treating them with dignity and respect.
15. Effective communication between surgeons and patients not only improves patient satisfaction but also leads to better health outcomes. Patients who feel informed, supported, and involved in their care are more likely to adhere to treatment plans, experience faster recovery times, and have a higher quality of life
16. Communication is a two-way street. Patients should feel empowered to ask questions, seek clarification, and express their concerns. Surgeons should create a safe and welcoming environment that encourages open communication and fosters a collaborative approach to healthcare.
17. Surgeons can leverage telemedicine, patient portals, and mobile applications to communicate with patients, provide educational resources, and manage follow-up care. Using technology, surgeons can offer virtual consultations, share pre-operative instructions, and remotely monitor patient progress. Digital tools can enhance patient engagement, facilitate communication, and streamline the healthcare delivery process, ultimately improving patient outcomes and satisfaction.

**Questions Posed by AI in the Output Stated as Facts, and Elaboration by AIs**

The standard output of SCAS (Socrates as a Service) comprises both questions/answers as well as additional questions that should be

answered. These are questions generated for every iteration, no matter what the input. That is, SCAS ends up creating additional 'questions for further thought and study.' Here the questions are, put to AI as statements of 'fact,' and with a request to AI to elaborate on the 'fact' (Table 11).

## Discussion and Conclusions

AI synthesis of patients' thoughts before surgery has the potential to completely change the medical field by giving personalized insights and suggestions based on patient data. With this technology, surgeons can better understand their patients' feelings, hopes, and fears, which leads to better communication and better surgical outcomes. AI can also help doctors understand the psychological aspects of surgery by making them smarter and more empathetic. AI synthesis can be used to find possible risks and complications before surgery. This can lead to better results and happier patients. There could be problems with relying only on AI to combine mindsets. It's possible that the algorithms used don't always understand how complicated human emotions and experiences are, which could lead to assessments that are too simple or wrong. Additionally, relying too much on AI in medical practice may take the place of human connection and empathy, which could make the relationship between the patient and surgeon less human. In addition, using AI in this way might make intuition and personal judgment less important when making medical decisions, which could stop medical professionals from developing these important skills. However, AI for mindset synthesis in medicine may have advanced significantly in ten years. New technologies and algorithms may help surgeons understand and interpret patient emotions more accurately and nuancedly. AI mind-set synthesis could transform patient care and decision-making in healthcare in the next decade. AI may become part of preoperative assessments and treatment planning as technology advances, providing more personalized and efficient care. However, a renewed emphasis on human intuition and compassion in patient care may counteract AI's overuse in medicine. Medicine may also face ethical issues related to AI use in sensitive medical settings, including privacy, consent, and technology limits. To ensure AI algorithms complement medical judgment and expertise, they must be constantly evaluated and refined. At the end of the day, the use of artificial intelligence (AI) in decision-making must be balanced with the need to provide patients with individualized attention. Over-reliance on AI synthesis could impede medical professionals' ability to develop intuition and empathy. Care quality and patient outcomes could be jeopardized if patients and healthcare providers become emotionally distant due to an over-reliance on AI.

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