**Factors to consider when interrogating Companion AI:**

1. Clarifying questions to continue to go deeper and create follow up questions
2. Cross-Examine and correlate with external sources
3. Test with different questions to arrive at the same answer – test logic
4. Challenge assumptions for evidence of reasoning – facts vs opinions
5. Probe for Context if response is out of context or incomplete
6. Critical Thinking questions to assess global comprehension and analyze responses to identify potential biases or inaccuracies
7. Feedback provided to algorithm to help improve responses over time

**Questions needed to test:**

* TEPEZZA Compendia
* Uploaded Studies
* General Questions about TED
* Organic Questions

**Specific Questions from the compendia: Companion should be able to provide a reference from the compendia**

1. What were the patient characteristics of the population in the OPTIC-X Study?
2. What were the different study arms of the phase 3 study population?
3. Summarize the results of TEPEZZA on chronic TED.
4. Summarize the phase 2 and 3 studies of TEPEZZA.
5. Summarize the discussion from the infusion guideline study by Kang et al.
6. Explain the effects of TEPEZZA on orbital fat volume.
7. What is the MOA of TEPEZZA?
8. What were the outcomes of patients who were partially treated with TEPEZZA?
9. What is the use of glucocorticoids in TED?
10. What effect does TEPEZZA have on dysthyroid optic neuropathy?

**Questions to test Companion based on information uploaded to Companion AI:**

1. Summarize the primary objective of the clinical trial.
2. Provide an overview of the study design, including the type of trial (e.g., randomized controlled trial, observational study) and the allocation of participants to study arms.
3. Outline the inclusion and exclusion criteria used to select participants for the trial.
4. Summarize the demographics and baseline characteristics of the study population, including age, gender, and relevant medical history.
5. Condense the interventions or treatments being compared in the trial, including dosages, frequencies, and durations.
6. Outline the primary and secondary outcomes measured in the trial, including any surrogate endpoints.
7. Summarize the statistical methods used to analyze the trial data, including any adjustments for confounding variables and methods for handling missing data.
8. Provide an overview of the results, including any statistically significant findings and effect sizes.
9. Summarize any adverse events or side effects reported during the trial, including their frequency and severity.
10. Discuss the implications of the trial findings for clinical practice and future research in the field.
11. Summarize the introduction, methods, results, and discussion sections with 5 bullet points.
12. Provide a brief critique of the trial's methodology and interpretation of results, highlighting strengths and limitations.
13. Summarize the discussion section of these 3 different studies.

**Generic Questions / Organic generalized questions:**

1. Thyroid disease and TED
2. Graves Disease and TED
3. Any data prior to teprotumumab on patient outcomes
4. Any data on steroids and TED
5. What is the incidence of TED
6. What are the characteristics of TED

**Organic Questions:**

**Definition and Basics:**  
What is thyroid eye disease (TED)?  
Can you explain the pathophysiology of TED?  
What are the typical symptoms and signs of TED?  
Diagnosis:  
  
**How is thyroid eye disease diagnosed?**  
What are the key clinical features that differentiate TED from other eye conditions?  
Can you identify the diagnostic criteria used for TED?  
Risk Factors and Associations:  
  
**What are the common risk factors associated with TED?**  
Are there any specific medical conditions that often coexist with TED?  
Can you discuss the relationship between TED and thyroid dysfunction?  
Complications and Prognosis:  
  
**What are the potential complications of untreated TED?**  
How does TED prognosis vary among patients?  
Are there any predictive factors for severe TED outcomes?  
Treatment Options:  
  
**What treatment modalities are available for managing TED?**  
Can you describe the approach to treating mild, moderate, and severe TED?  
What are the goals of TED treatment?  
Monitoring and Follow-up:  
  
**How should patients with TED be monitored over time?**  
What are the key parameters to assess during follow-up appointments?  
Can you outline the frequency of follow-up visits based on disease severity?  
Emerging Therapies and Research:  
  
**Are there any recent advances or emerging therapies in the management of TED?**  
What ongoing research efforts are focused on understanding or treating TED?

**Patient Education and Support:**  
  
**How can patients with TED manage their symptoms at home?**  
Are there any support groups or resources available for individuals with TED?  
What lifestyle modifications might benefit patients with TED?  
Accuracy and Sources:  
  
**How was the AI system trained to provide information about TED?**  
What are the primary sources of medical information used by the AI?  
*Can you provide examples of cases or scenarios where the AI has successfully assisted in diagnosing or managing TED?*

**Limitations and Uncertainties:**  
  
What are the limitations of the AI system's knowledge or understanding of TED?  
How does the AI handle uncertainty or ambiguous cases related to TED?  
Are there any situations where human intervention or further evaluation is necessary despite AI recommendations?