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LECTURE

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Chat GPT and Literature Research: What we have learned so far



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Thursday
14.12.2023
13:00, Zoom

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Chat GPT and literature research

Aim for today's session

- What have we learned so far
- Ways our team can support you
- Illustrate Chat GPT inquiries (3.5 version)
- Final thoughts

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Chat GPT and literature research

What have we learned so far

ChatGPT is fun, but not an author

ChatGPT Performs Well as 'Partner' in Diagnosing Patients

ChatGPT: these are not hallucinations – they're fabrications and falsifications

How to use ChatGPT to do research for papers, presentations, studies, and more

New Version of ChatGPT Will Have Fewer "Hallucinations", Says Creators

A New Scientific Paper Credits ChatGPT AI as a Coauthor

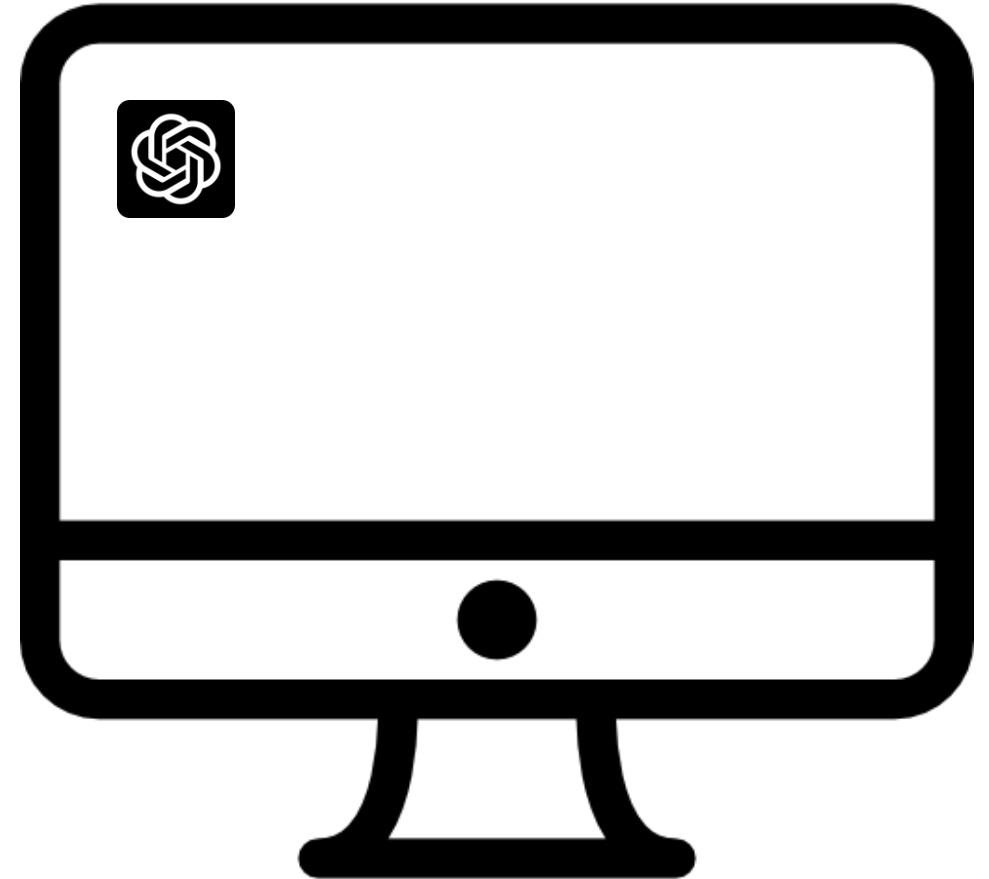


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Chat GPT and literature research

How we can help?

- Explore topic suggestions/ideas
- Peer review your initial search and guide you on how to optimize, translate and document
- Offer guidance and resources to support your research aims
- Much more



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Chat GPT and literature research

Exploring topics

TA

You

I am exploring a topic and need help refining it.

TA

ChatGPT

Certainly! I'd be happy to help you refine your topic. Please provide some details about your topic, including the general area or field it falls under and any specific aspects you are interested in. Additionally, let me know if you have any specific research questions or objectives in mind. This information will help me better understand your needs and offer more targeted assistance.

TA

You

The topic is on patient's experiences with diabetes care. How can I focus this topic?

TA

ChatGPT

Great! Exploring patients' experiences with diabetes care is a broad and important topic. To help you focus it, you might consider narrowing down the scope based on specific aspects or subtopics. Here are a few potential ways to refine the focus:

1. **Demographic Focus:**

- Narrow it down to a specific demographic, such as pediatric patients, elderly individuals, or a particular ethnic group.

2. **Type of Diabetes:**

- Focus on a particular type of diabetes, such as Type 1 diabetes or Type 2 diabetes.

3. **Geographic Focus:**

- Explore patient experiences in a specific region or country, which can be valuable due to cultural and healthcare system differences.

4. **Technology and Diabetes Care:**

- Investigate how patients perceive and interact with technologies in diabetes care, such as continuous glucose monitoring, telehealth.

5. **Psychosocial Aspects:**

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Exploring topics



- "How do elderly individuals experience diabetes care in rural communities?"
- "What are the perceptions of pediatric patients regarding technology-assisted diabetes management?"
- "How does healthcare provider-patient communication impact diabetes self-care behaviors?"

Feel free to let me know if you have a particular direction in mind or if you'd like further assistance refining your topic!

Patient perceptions and provider documentation of diabetes care in rural areas

Karen Zulkowski¹, Patricia Coon

Psychosocial Aspects of Diabetes Technology Use: The Child and Family Perspective

Jaclyn Lennon Papadakis PhD^a  , Lindsay M. Anderson PhD^a, Kimberly Garza MPH^b, Marissa A. Feldman PhD^c, Jenna B. Shapiro PhD^a, Meredyth Evans PhD^{a d}, Laurie Gayes Thompson PhD^{a d}, Jill Weissberg-Benchell PhD, CDE^{a d}

Interrelation between Patient Satisfaction and Patient-Provider Communication in Diabetes Management


Ayşe Basak Cinar¹ and Lone Schou²


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Chat GPT and literature research

Formulating a research question


PEO


 **You**
I have a research question can you help me break it down to a PEO framework?

 **ChatGPT**
Certainly! The PEO framework typically refers to the formulation of a research question using the PEO components, which stand for Population, Exposure, and Outcome. This framework helps structure a research question in a way that facilitates the development of a focused and answerable inquiry. Let's break down your research question into the PEO framework:


1. **Population (P):**
 - Who is the target population or group of individuals you are studying? Specify the characteristics of the participants.
2. **Exposure (E):**
 - What is the exposure or intervention that you are interested in studying? This could be a treatment, condition, or factor that is applied or present.
3. **Outcome (O):**
 - What is the expected outcome or result that you want to observe or measure? Clarify the endpoint or effect you are investigating.


PCC

 **You**
I have a research question, can you help me break it down to PCC concepts?

 **ChatGPT**
Certainly! Please provide your research question, and I'll help you break it down into PCC (Population, Concept, and Context) components.

SPIDER

 **You**
I have a research question, can you help me break it down to SPIDER framework?

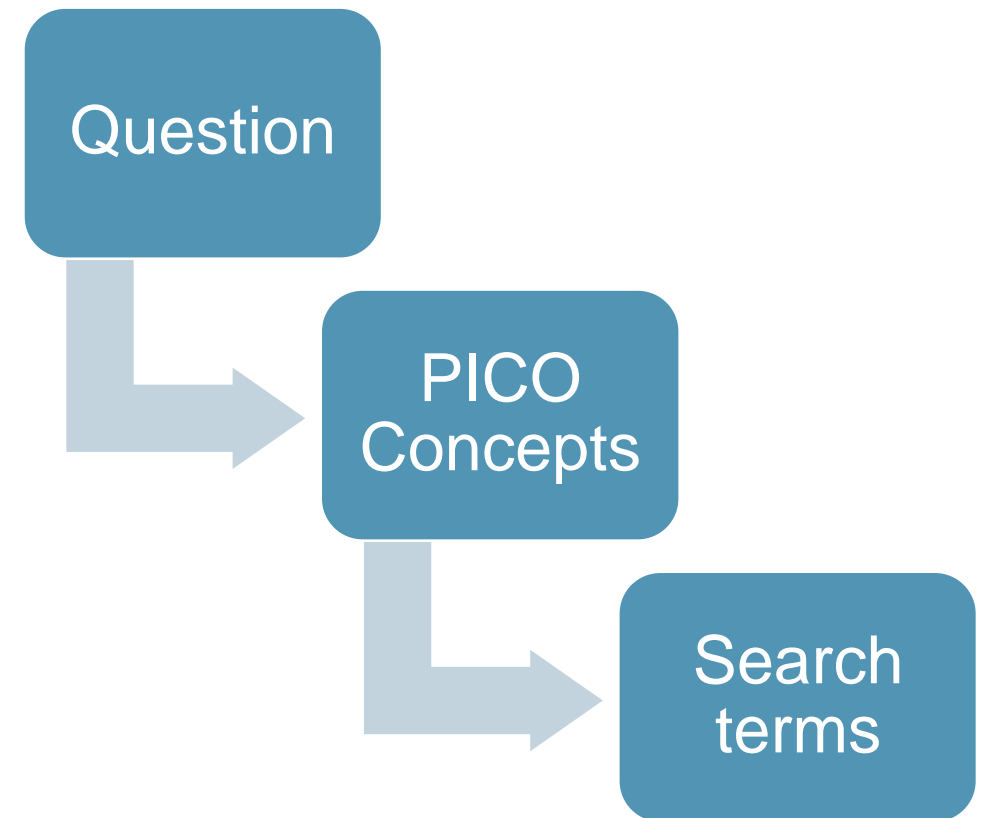
 **ChatGPT**
Certainly! The SPIDER framework is a tool used to structure and organize research questions. It stands for Sample, Phenomenon of Interest, Design, Evaluation, and Research Type. Let's break down your research question using the SPIDER framework. Please provide your research question, and we can go from there.

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Search strategy development

- Consider a step by step/building blocks approach if developing an initial search strategy with Chat GPT
- Feedback and prompting should be specific and detailed
- Consult with an information specialist to peer review and validate your search strategy



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Chat GPT and literature research

You
Greetings, I have a research question. Can you help me break it down into PICO concepts?

ChatGPT
Certainly! The PICO(T) framework is a structured method for formulating clinical research questions. It stands for:

1. **P - Patient, Population, or Problem:**
 - Who is the population of interest? (e.g., patients with a specific condition)
 - What are the characteristics of the patient or population?
2. **I - Intervention:**
 - What is the intervention or exposure being considered? (e.g., a drug, therapy, procedure, etc.)
3. **C - Comparison:**
 - Is there a comparison intervention or group? (This may not always be applicable, especially in observational studies.)
4. **O - Outcome:**
 - What are the expected outcomes of the intervention? (e.g., improvement in symptoms, reduction in mortality, etc.)
5. **T - Time (optional):**
 - Is there a specific timeframe you are considering?

Could you provide more details about your research question so that we can break it down into PICO concepts?



You
Can cranberries prevent urinary tract infections in older adults? I plan to include RCTs.

ChatGPT
Certainly! Let's break down your research question using the PICO framework:

1. **P - Patient, Population, or Problem:**
 - Population: Older adults
 - Problem: Urinary tract infections (UTIs)
2. **I - Intervention:**
 - Cranberries (or cranberry products)
3. **C - Comparison:**
 - Placebo or standard care (if applicable; not all questions have a comparison)
4. **O - Outcome:**
 - Prevention of urinary tract infections

So, your PICO question would be:

"In older adults (P), does the consumption of cranberries (I) compared to placebo or standard care (C) prevent urinary tract infections (O)?"

This question is structured to guide the search for randomized controlled trials (RCTs) that specifically investigate the effectiveness of cranberries in preventing UTIs in older adults.



You

Can you find synonyms for P and I concepts?

ChatGPT

Certainly! Let's find some synonyms for the Patient/Population/Problem (P) and Intervention (I) concepts in your research question:

1. **Synonyms for P (Population/Problem):**

- Elderly individuals
- Senior citizens
- Geriatric population
- Aging adults
- Older people

2. **Synonyms for I (Intervention):**

- Cranberry products
- Cranberry supplements
- Cranberry extract
- Cranberry juice
- Cranberry-based interventions

These synonyms can help you broaden your search terms when looking for relevant literature or studies related to the effects of cranberries on preventing urinary tract infections in older adults.



You

Great. For the Intervention, can you only include cranberry and cranberries, and remove the rest of the synonyms?

ChatGPT

Certainly! If you want to focus specifically on "cranberry" and "cranberries" for the Intervention concept, you can exclude the other synonyms. Here's the refined version:

1. **Synonyms for P (Population/Problem):**

- Elderly individuals
- Senior citizens
- Geriatric population
- Aging adults
- Older people

2. **Synonyms for I (Intervention):**

- Cranberry
- Cranberries

This narrowed list will help you target your search more specifically on the effects of cranberries on preventing urinary tract infections in the older adult population.



TA

You

For cranberry and cranberries, please put the PubMed syntax, the title and abstract with square brackets. I want cranberry and cranberries to be searched in the title and abstract. Please create a search string.



ChatGPT

Certainly! To create a PubMed search string for articles that include "cranberry" or "cranberries" in the title or abstract, you can use the following syntax:

arduino

Copy code

```
("cranberry"[Title/Abstract] OR "cranberries"[Title/Abstract])
```

TA

You

Is there a Mesh term for cranberry?



ChatGPT

As of my last knowledge update in January 2022, the MeSH (Medical Subject Headings) term for cranberry is "Vaccinium macrocarpon." MeSH terms are used for indexing articles in PubMed and other biomedical databases. Keep in mind that MeSH terms can be updated or changed over time, so it's always a good idea to check the latest MeSH database for the most current information.

To search for articles using the MeSH term for cranberry in PubMed, you can use the following search string:

mathematica

Copy code

```
("Vaccinium macrocarpon"[Mesh])
```

This will retrieve articles indexed with the MeSH term for cranberry. Always check for updates or changes in MeSH terms to ensure accuracy.



TA

You

Great. Can you add this to the search string?



ChatGPT

Certainly! If you want to include both the MeSH term and the search for "cranberry" or "cranberries" in the title or abstract, you can use the following combined search string:

mathematica

Copy code

```
("Vaccinium macrocarpon"[Mesh] OR "cranberry"[Title/Abstract] OR "cranberries"[Title/Abstract])
```


This search string will retrieve articles that are indexed with the MeSH term "Vaccinium macrocarpon" or have "cranberry" or "cranberries" in the title or abstract. You can use this combined search string in PubMed to find relevant articles on cranberries.



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```
plaintext Copy code

("Vaccinium macrocarpon"[Mesh] OR "cranberry"[Title/Abstract] OR "cranb
AND
("Aged"[Mesh] OR "elderly"[Title/Abstract] OR "seniors"[Title/Abstract])
```



("Vaccinium macrocarpon"[Mesh] OR "cranberry"[Title/Abstract] OR "cranber" X

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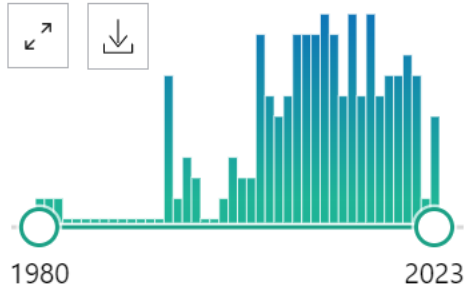
Sort by: Publication date

1

MY NCBI FILTERS

150 results

RESULTS BY YEAR



☐ **Cranberries** for preventing urinary tract infections.

1 Williams G, Stothart CI, Hahn D, Stephens JH, Craig JC, Hodson EM.

Cite Cochrane Database Syst Rev. 2023 Nov 10;11(11):CD001321. doi: 10.1002/14651858.CD

Share PMID: 37947276 Review.

Cranberry products have been used widely for several decades to prevent urinary tract ...Other comparisons were **cranberry** products with probiotics (three studies) or antibiotic **cranberry** tablets with **cranberry** liquid ...

Search	Actions	Details	Query	Results
#1	...	▼	Search: ("Vaccinium macrocarpon"[Mesh] OR "cranberry"[Title/Abstract] OR "cranberries"[Title/Abstract]) AND ("Aged"[Mesh] OR "elderly"[Title/Abstract] OR "seniors"[Title/Abstract] OR "geriatric population"[Title/Abstract] OR "aging adults"[Title/Abstract] OR "older people"[Title/Abstract]) Sort by: Publication Date ("Vaccinium macrocarpon"[MeSH Terms] OR "cranberry"[Title/Abstract] OR "cranberries"[Title/Abstract]) AND ("Aged"[MeSH Terms] OR "elderly"[Title/Abstract] OR "seniors"[Title/Abstract] OR "geriatric population"[Title/Abstract] OR "aging adults"[Title/Abstract] OR "older people"[Title/Abstract])	150

Peer review



New Search

("Vaccinium macrocarpon"[MeSH Terms] OR cranberr*[Title/Abstract] OR "Vaccinium macrocarpon*" [Title/Abstract]) AND ("Aged"[MeSH Terms] OR Aged[Title/Abstract] OR Centenarian*[Title/Abstract] OR Nonagenarian*[Title/Abstract] OR Octogenarians*[Title/Abstract] OR Elder*[Title/Abstract] OR Senior*[Title/Abstract] OR "Geriatric population*" [Title/Abstract] OR "Aging adults"[Title/Abstract] OR "Ageing adults"[Title/Abstract] OR "Aging population*" [Title/Abstract] OR "Ageing population*" [Title/Abstract] OR "Older people"[Title/Abstract] OR "Older adult*" [Title/Abstract] OR "Older person*" [Title/Abstract])

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Chat GPT and literature research

Project planning

TA You

I would like to create a systematic review protocol according to the PRISMA-P reporting guidelines. My systematic project is on the effectiveness of video calls to reduce loneliness among older adults in nursing or senior



ChatGPT

Creating a systematic review protocol according to the PRISMA-P reporting guidelines. My systematic project is on the effectiveness of video calls to reduce loneliness among older adults in nursing or senior homes:

1. Title:

Clearly state the title of your systematic review.

2. Registration:

Register your systematic review protocol with a relevant database (International Prospective Register of Systematic Reviews)

3. Background:

Provide a concise background of the research question, including the rationale for the study.

4. Objectives:

Clearly outline the primary and secondary objectives of your systematic review.

5. Eligibility Criteria:

Define the Population, Intervention, Comparison, Outcome, and Study design criteria for your review:

- **Population:** Older adults in nursing or senior homes.
- **Intervention:** Video calls.
- **Comparison:** Any relevant comparison group or condition.
- **Outcome:** Loneliness reduction.
- **Study Design:** Specify the types of studies to be included (e.g., randomized trials, observational studies).

6. Search Strategy:

Detail the search strategy, including the databases to be searched, keywords, and additional search methods.

7. Study Selection:

Define the process for study selection, including screening criteria, the number of reviewers involved, and methods to resolve disagreements.

8. Data Extraction:

Specify the data extraction process, including the variables to be extracted and the

TA You

Can you provide further input or ideas for 7, 8, 9, 10, 11, 12?



ChatGPT

Certainly! Let's delve deeper into sections 7 to 12 of your systematic review protocol:

7. Study Selection:

7.1 Screening Criteria:

Define specific inclusion and exclusion criteria for studies. For example:

- **Inclusion:** Studies with participants aged 65 and older, residing in nursing or senior homes, utilizing video calls for communication, and reporting outcomes related to loneliness.
- **Exclusion:** Studies with participants outside the specified age range, using interventions other than video calls, or not reporting relevant outcomes.

7.2 Study Selection Process:

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Project planning

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Welcome to PROSPERO

International prospective register of systematic reviews



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Chat GPT and literature research

References

- Chat GPT produces interesting and seemingly real results
- Request unique identifiers for sources
- Unique identifiers are easier to cross-check/verify
- Examples: Books ISBN, Journals ISSN

TA You

Are there any references for conducting a narrative review?

ChatGPT

While there may not be a single "go-to" reference for conducting a narrative review, several resources provide guidance on literature reviews and the principles of conducting narrative syntheses. Here are some general references that may be helpful:

1. "Systematic Approaches to a Successful Literature Review" by Booth, A., Papaioannou, D., & Sutton, A. (2012):
 - This book offers practical guidance on various types of literature reviews, including narrative reviews. It covers different review methodologies and provides tips on planning, conducting, and reporting a review.
2. "Conducting Research Literature Reviews: From the Internet to Paper" by Fink, A. (2019):
 - Fink's book provides comprehensive guidance on conducting literature reviews, covering various review types, including narrative reviews. It offers practical advice on search strategies, critical appraisal, and synthesis of literature.
3. "Doing a Literature Review in Health and Social Care" by Aveyard, H. (2014):
 - This book focuses on literature reviews in the context of health and social care. It provides step-by-step guidance on planning, conducting, and writing a review, with a focus on narrative approaches.

Do any of these references have a unique identifier, like an ISBN or ISSN?

Yes, the references mentioned earlier have unique identifiers, either ISBNs (International Standard Book Numbers) for books or ISSNs (International Serial Numbers) for journals:

1. "Systematic Approaches to a Successful Literature Review" by Booth, A., Papaioannou, D., & Sutton, A. (2012):
 - ISBN: 978-1446201435
2. "Conducting Research Literature Reviews: From the Internet to Paper" by Fink, A. (2019):
 - ISBN: 978-1506357754
3. "Doing a Literature Review in Health and Social Care" by Aveyard, H. (2014):
 - ISBN: 978-0335263073

978-0335263073



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1-1 von 1 Ergebnissen

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BUCH

Doing a literature review in health and social care : a practical guide

Aveyard, Helen

Maidenhead : McGraw-Hill Education

3rd edition; 2014

Verfügbar bei Bern UB Medizin Freihandbestand Medizin (MED_W_20.5 47 Ed3) >



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Chat GPT and literature research

Final thoughts

- Reflect on your Chat GPT workflow
- Detailed and specific prompting and feedback is key
- Supplement with other approaches and tools
- Consult with an information specialist on your research topics, protocol development, database selection, etc.

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Chat GPT and literature research

Want to learn more?



**AI Tools für
Reviews**



Tools for Academic Workflows

Useful databases, tools for statistical analysis, data visualization, citation management, and much more.

Show tools



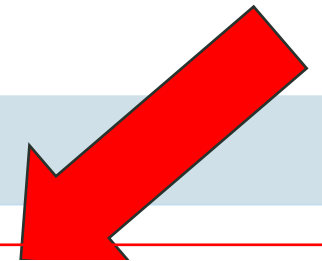
AI Tools



Useful databases in medicine



Useful databases in pharmacy



Thanks



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Slides and Screencast:

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Medical Library



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Now there is time for...

Questions & Discussion

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