

Zero-Shot Chain-of-Thought in Medical Context

Standard Medical Query:

Patient presents with fever (39°C), productive cough, and pleuritic chest pain.
What is the most likely diagnosis?

"Let's think step by step"

Zero-Shot CoT Medical Prompt:

Patient presents with fever (39°C), productive cough, and pleuritic chest pain.
What is the most likely diagnosis? **Let's think step by step.**

✓ Success Case

Query: Fever + cough + pleuritic pain

With CoT: Systematic evaluation of symptoms → ruled out alternatives → pneumonia diagnosis

Accuracy: 85% → 92%

✗ Limitation Case

Query: Rare genetic syndrome

With CoT: Detailed reasoning but incorrect conclusion

Issue: Limited knowledge, not reasoning problem