

Error Analysis in CoT Reasoning



Common Error Types

- Premature closure (stopping too early)
- Anchoring bias (fixation on initial diagnosis)
- Missing rare conditions
- Ignoring contradictory evidence



Improvement Strategies

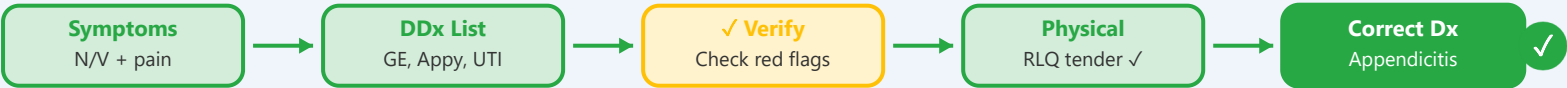
- Force consideration of alternatives
- Explicit verification steps
- Checklist integration
- Human-AI collaboration

Error Detection & Correction Flow

Error Example: Misdiagnosed Appendicitis



Corrected with CoT Enhancement



Root Cause: Premature closure after matching 3 symptoms **Fix:** Add mandatory "red flag check" step before finalizing diagnosis **Results:** 50% error reduction

Learning: Analyze failures to improve CoT prompting strategies