Counterfactual Reasoning in Clinical Context
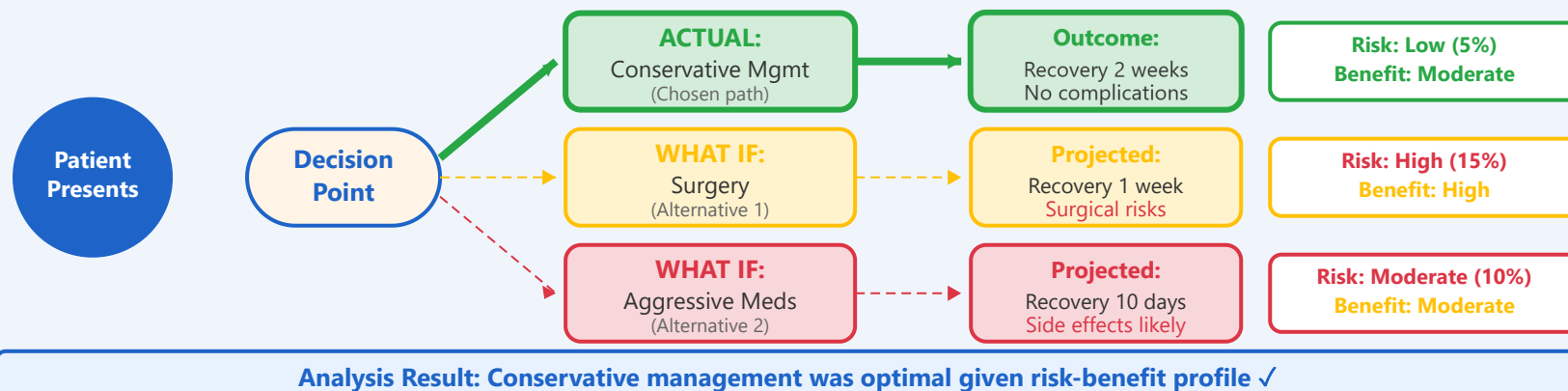
🤔 "What If" Scenarios

- Alternative treatments
- Timing variations
- Different diagnostic paths
- Modified risk profiles

📊 Analysis Benefits

- Validate decisions
- Identify improvements
- Risk-benefit clarity
- Learning from outcomes

Counterfactual Decision Analysis

Patient Presents

Decision Point

ACTUAL:
Conservative Mgmt
(Chosen path)

Outcome:
Recovery 2 weeks
No complications

Risk: Low (5%)
Benefit: Moderate

WHAT IF:
Surgery
(Alternative 1)

Projected:
Recovery 1 week
Surgical risks

Risk: High (15%)
Benefit: High

WHAT IF:
Aggressive Meds
(Alternative 2)

Projected:
Recovery 10 days
Side effects likely

Risk: Moderate (10%)
Benefit: Moderate

Analysis Result: Conservative management was optimal given risk-benefit profile ✓

Benefit: Exploring alternatives validates chosen approach and identifies improvements