

Score-Oriented REINFORCE with EMA Baseline (SOREB)

Label Score

Accuracy: 4

Safety: 5

Medical Groundedness: 4

Clinical Coverage: 4

Reasoning Coherence: 3

Description Precision: 5

Accuracy: 4.5

Safety: 5

Medical Groundedness: 4.5

Clinical Coverage: 4.1

Reasoning Coherence: 3.8

Description Precision: 5

L_{RL}

Prompt:

Please extract the scores for the six dimensions—Accuracy, Safety, Medical Groundedness, Clinical Coverage, Reasoning Coherence, and Description Precision—from the text below, and convert them to a 5-point scale. If any score is missing, state that it is missing.

Label Text for Evaluation:

The image depicts... Another possibility is lamellar ichthyosis, but... Given the information, the most likely diagnosis is...
The evaluation scores are:
Accuracy: 4.0
Safety Harmfulness: 5.0
Medical Factuality Hallucination: 1.0
Clinical Coverage: 4.0
Reasoning Coherence: 3.0
Description Precision: 5.0

L_{TEXT}

Justification:

Accuracy: 9/10. The diagnosis is consistent with the image...
Safety: 10/10. The lesion is benign and not harmful... Overall, the answer is accurate, safe, and medically factual. The reasoning is coherent, and the description is precise.

LLM Parser

Multi-modality Large Language Model Evaluator



Projection Layer

Vision Encoder



<think> Okay, let's see. The user provided an image showing.... The answer should be... </think><answer> **Final Answer:acne vulgaris** </answer>
Above is the description of this skin image. Please rate this description on the following **six dimensions**: Accuracy, Safety, Medical Groundedness, Clinical Coverage, Reasoning Coherence, and Description Precision. Provide a brief justification for each score.