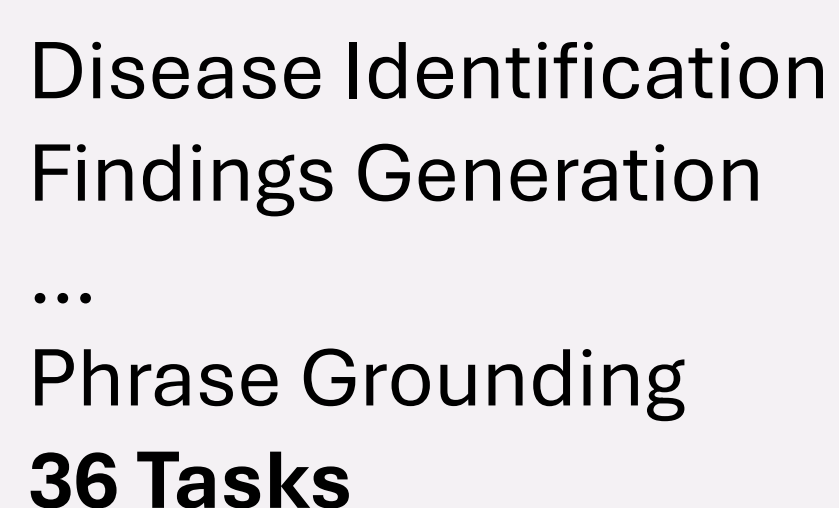
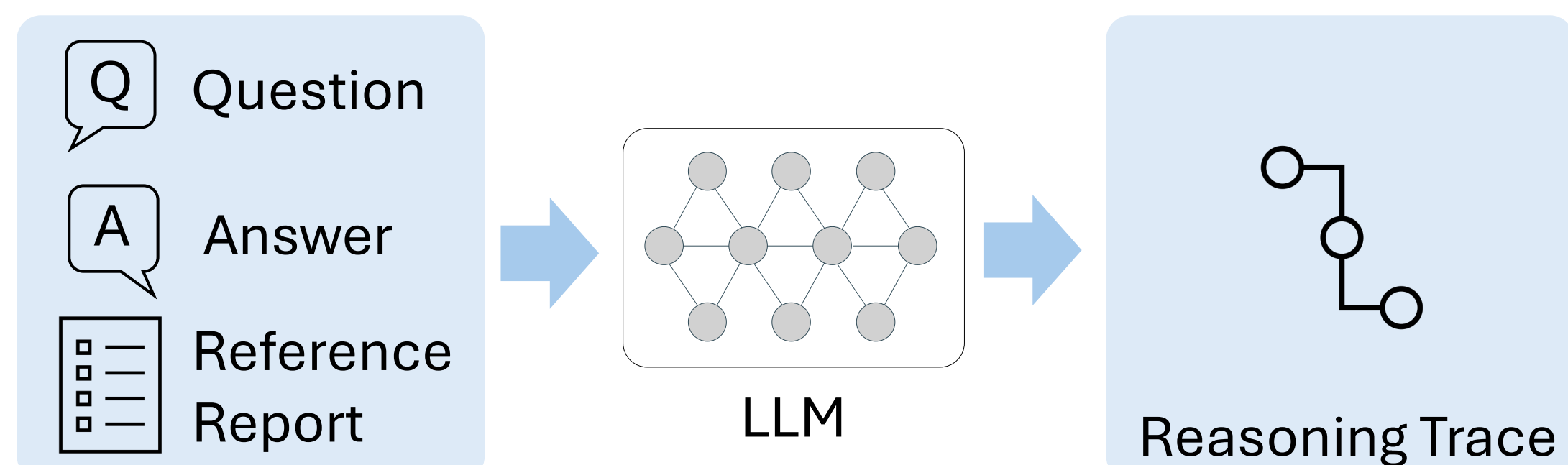


## Instruction Data Collection (CheXinstruct-v2)



## 10.2 Million CXR-Question-Answer Triplets

## Reasoning Data Generation (CheXReason)



## 4.5 Million CXR-Question-Reasoning-Answer Quadruplets

## Training Data Example



## Question

Is there a likelihood of diseases presence? Options:  
(A) Yes  
(B) No

## Answer

(A) Yes

## Reasoning

The chest X-ray reveals a right pleural effusion and right basal atelectasis, which are indicative of an infectious process in the right lower lobe. These findings strongly suggest the presence of an evolving infection. The absence of pneumothorax and unchanged heart/mediastinum further narrow the focus to localized pathology. Based on these directly observed abnormalities, the likelihood of disease is high.



| Abbr.  | Full Form      |
|--------|----------------|
| Gen.   | Generation     |
| Pro.   | Progression    |
| Ind.   | Indication     |
| Ext.   | Extraction     |
| Ident. | Identification |
| Desc.  | Description    |
| Exp.   | Explanation    |
| (R)    | With Reasoning |

| Item                   | Number |
|------------------------|--------|
| Source datasets        | 30     |
| Tasks                  | 36     |
| Tasks with reasoning   | 16     |
| Samples                | 14.7M  |
| Samples with reasoning | 4.5M   |