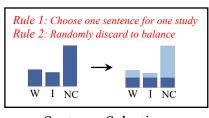


Stage I: Comparative Sentences Extraction



- Severe widening of the upper mediastinum continues to improve post-operatively and previous pulmonary edema has now cleared.  $(\sqrt{})$
- I do not see a significant pneumothorax and previous small right pleural effusion has virtually resolved. ( $\sqrt{}$ )
- An apical pleural tube is in place. (X)
- Heart is top normal size, exaggerated by low lung volumes. (X)
- Substantial bibasilar atelectasis left greater than right has not. (X)
- Tracheobronchial airway is virtually obscured, presumably by edema and secretions, but really not assessed. (X)

## Stage II: Comparative Targets Selection

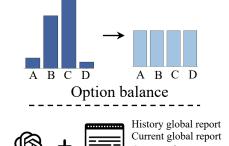


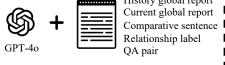
Sentence Selection

Rule 1: Discard regions lacking bboxs Rule 2: Discard regions lacking regional reports Rule 3: Select based on original distribution R1 R2 R3 R4

**Region Selection** 

## Stage IV: Post-Processing





QA validation

Question: What change is observed in the mediastinum region between the two sets of chest CXR images? Options: A: There is a new rightward mediastinal shift.

B: There is no mediastinal shift observed.

C: There is a new leftward mediastinal shift.

D: The mediastinal shift has improved. Answer: A



## Stage III: QA pairs Generation

History global report Current global report Comparative sentence Relationship label



Rule 1: Generated on comparative sentence Rule 2: Focus on the change in same area

Rule 6: Make questions diverse



