1 Case Study

1.1 Synpic49914

Fig. 1: The image of sample Synpic49914 in dataset VQA-RAD.

Table 1: The question and corresponding model prediction of Synpic49914.

Questions	Predictions			
	MMQL	M-Mixup	MEVF-BAN-CR	MQL-AUG*
Where is the diffuse pleural thickening?	Right Lung	Right	Right Lung	Fat
Is the image study normal?	No	No	No	No
Which lung is abnormal?	Right Lung	Right Lung	Volume Loss	Left
Are the lungs normal?	No	No	No	No
Which plane is this image taken?	PA	PA	PA	Axial

Note: * stands for re-implementation, prediction in red means incorrect
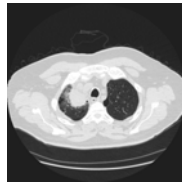
1.2 Xmlab105

Fig. 2: The image of sample Xmlab105 in dataset SLAKE.

Table 2: The question and corresponding model prediction of Xmlab105.

Questions	Predictions			
	MMQL	M-Mixup	MEVF-BAN-CR	MQL-AUG∗
What diseases are included in the picture?	Lung cancer	Lung cancer	Lung cancer	Lung cancer
What modality is used to take this image?	Ct	Ct	Ct	Ct
Where is/are the abnormality located?	Right lung, left	Right lung, left	Right lung, left	Liver#
Is the lung healthy?	No	No	No	No
Does the picture contain heart?	No	No	No	No
Does the picture contain liver?	No	No	No	Yes
Which part of the body does this image belong to?	Chest	Chest	Chest	Chest
What is the main organ in the image?	Lung	Lung	Spinal cord#	Lung
Does the picture contain lung?	Yes	Yes	Yes	Yes
What is the largest organ in the picture?	Lung	Lung	Lung	Lung

Note: ∗ stands for re-implementation, prediction in red means incorrect
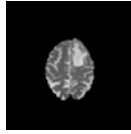
1.3 Xmlab469

Fig. 3: The image of sample Xmlab469 in dataset SLAKE.

Table 3: The question and corresponding model prediction of Xmlab469.

Questions	Predictions			
	MMQL	M-Mixup	MEVF-BAN-CR	MQL-AUG∗
Is this a study of the head?	Yes	Yes	Yes	No
How many kinds of abnormalities are there in this image?	Small bowel	1	Small bowel	Small bowel
Where are the abnormalities in this image?	Right lobe	Upper Left Lobe	Right lobe	Right lobe
What modality is shown in this image?	Mri	MRI	Mri	Mri
Is this a coronal section?	No	No	No	No
Is the abnormality hyperdense or hypodense?	Hyperdense	Hyperdense	Hyperdense	No
Is this a T1 weighted or T2 weighted MRI image?	T2	T2	T1	T2
Do the organs in the image exist in the abdomen?	No	No	No	No
How to treat the most severe disease in this image?	Medical treatment, supportive treatment, surgical treatment	Pharmacotherapy, rehabilitation	Medical treatment, supportive treatment, surgical treatment	Medical treatment, supportive treatment, surgical treatment
Is there evidence of a brain edema?	Yes	Yes	Yes	Yes

Note: ∗ stands for re-implementation, prediction in red means incorrect