1 Supplymentary

Table 1: Comparison of SOTA methods against AnoMed on varying amount of labeled data on VinDr-CXR dataset. Upper, middle and lower half of the table represents 2-stage anchor based, single-stage anchor free and single-stage anchor based methods, respectively. From this table it is notable that with gradual decrease in labeled data the gain in $AP_{50:95}$ increases for AnoMed over other methods. This shows AnoMed's efficacy in extreme data scarcity scenarios.

Method	20% label		15% label		10% label		5% label	
	AP_{50}	$AP_{50:95}$	AP_{50}	$AP_{50:95}$	AP_{50} 8	$AP_{50:95}$	AP_{50}	$AP_{50:95}$
Unbiased Teacher	50.1	24.4	39.6	17.5	28.9	11.8	22.9	11.6
Soft Teacher	47.0	31.7	36.3	16.1	22.8	10.4	18.4	13.2
Dense Teacher	49.5	33.6	38.1	17.7	26.1	16.7	24.7	11.5
Semi-DETR	52.4	35.9	41.0	30.4	28.6	19.2	22.4	10.1
Efficient Teacher	**75.5**	46.5	62.2	27.7	**43.9**	18.4	28.5	14.1
Mean Teacher	73.6	45.9	**64.4**	28.9	39.3	19.5	29.8	12.4
AnoMed	**76.8**	**51.4**	**68.6**	**32.9**	**45.1**	**23.9**	**31.2**	**16.4**

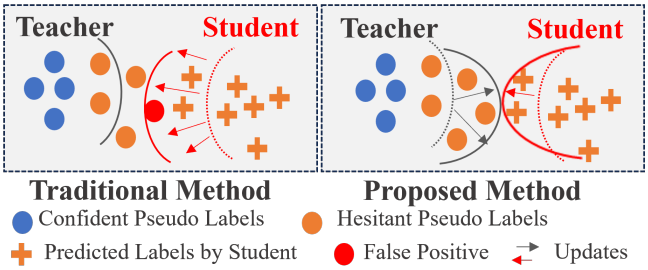

Fig. 1: **Illustration of AnoMed's flexible decision making**. In existing methods the decision boundary is so rigid that teacher module cannot go above or below the threshold for PL filtration. But in AnoMed the checkpoint based guidance of unsupervised loss calculation softens the hard refinement and allows hesitant PLs to re-learn the poor confidence offset (classification/ b-box/ objectness score) and detect minor lesions in following iterations. This makes the mutual learning more adaptive to distribution shifts as well and reduces false positives in disease detection tasks.

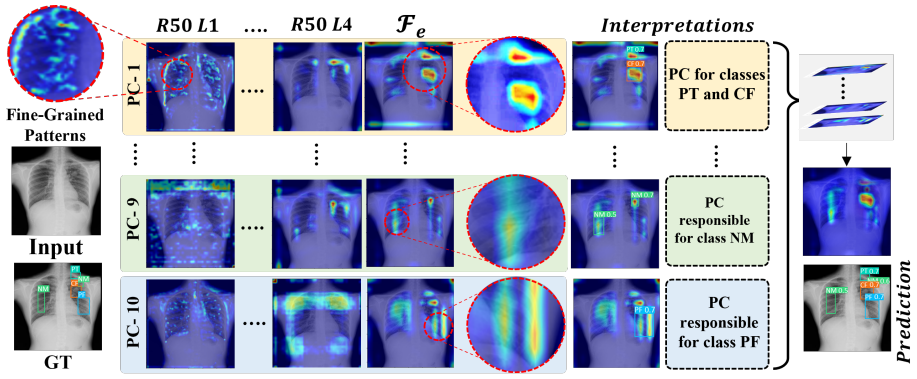

Fig. 2: **A detailed interpretable visualization of AnoMed's decision making on a TBX11K test image.** Through principle component analysis EigenCAM shows which salient features aligns with the principle components (PCs) of the acquired representations. As we can see, PC-1 is responsible for the classes Plural Thickening (PT) and Calcification (CF). Whereas, PC-10 is more aligned with the salient features associated to Pulmonary Fibrosis (PF).