Class imbalance arises from the fact that detectors need to evaluate a huge number of candidate regions, but only a few contain objects of interest. In other words, class balance is severely skewed toward negative examples (e.g., background regions), most of which are easy negatives. The presence of large amounts of easy negatives can overwhelm the training process, leading to bad detection results. Two-stage detectors can handle this class imbalance issue much better than one-stage detectors, because most negative proposals are filtered out at the region proposal stage.

* 2단계 필터링이 효과가 좋을 것이다.
* 2단계 검출기에 대한 연구가 있었는 듯! 좀 더 파봅시다!
* CenterNet: Keypoint Triplets for Object Detection [1단계 검출기]
  + Detection 딴에서는 이미 연구가 되고 있었던 분야인가 보다.

distribution mismatch is a common problem when semi-supervised methods are applied for medical image analysis. Exiting studies suggest this will cause the performance of semi-supervised methods to degrade drastically, sometimes even worse than that of a simple supervised baseline ([Oliver et al., 2018](https://www.sciencedirect.com/science/article/pii/S1361841522000913" \l "bib0294); [Guo et al., 2020](https://www.sciencedirect.com/science/article/pii/S1361841522000913" \l "bib0295)). Therefore, it is necessary to adapt semi-supervised algorithms to be tolerant of the distribution mismatch between labeled and unlabeled medical data. As a related field, “domain adaption” may provide insights for achieving this goal.

* Distribution mismatch로 인한 성능 감소 연구 있음