

ABSTRACT**Comparative Analysis Image Results of Pancreas in Portal Vein Phase on CT Scan Abdomen Contrast Without and With Minimum Intensity Projection in CT Scan 64 Slice.**

Maria Ramandita¹, Lailatul Muqmiroh, dr., Sp.Rad(K)², Pramono, SST³.

Background: Minimum Intensity Projection is a post-processing technique on CT Scan that useful for showing structures with low Hounsfield Unit (HU) values such as pancreas. To demonstrate the anatomy and pathology of the pancreatic organs, a contrast CT scan was performed on pancreatic phase but pancreatic phase was rarely used, so it was replaced by the portal venous phase, but this technique is still rarely used among the radiographers. **Objective:** This study aimed to prove the image of the portal venous pancreatic vein on contrast contrast CT scan by using minimum intensity projection (MinIP) on CT scan 64 slices will produce a more optimal image than without the minimum intensity projection (MinIP). **Methods:** This study is a retrospective study with an observational analytic method to assess differences of pancreatic image in contrasting contrast CT scans with and with MinIP reforms on CT 64 slice modalities Philips Briliance. 30 images as samples, with the criteria set by the researchers. The image will be post processing without and by using MinIP reformat. Image results will be evaluated by two radiologist, then the data obtained will be tabulated and processed using SPSS software version 17. **Result:** From this research obtained the result that MinIP reformat able to produce pancreas image more optimal than image without MinIP reformat on CT scan 64 slice and shows a significant difference. The assessed images are the pancreatic duct, the pancreatic density boundary with the superior mesenteric veins, the pancreatic border with the duodenum, the pancreatic image homogeneity level and the overall result of pancreatic borders and edges. Overall assessment of the image has an improvement with the MinIP but for the homogeneity of pancreatic images decreased, this is because MinIP will make the density in the CT scan image will be reduced so it will look darker so the image is more homogeneous. **Conclusions:** There was a significant difference between pancreatic venous porta port results in contrasting CT scans of the abdomen without and with MinIP reformat.

Keywords : Minimum Intensity Projection (MinIP), CT scan abdomen contrast and portal vein phase.

¹ Student of D4 Radiologic Imaging Technology Faculty of Vocation Airlangga University, Surabaya

² Coordinator of D4 Radiologic Imaging Technology Faculty of Vocation Airlangga University, Surabaya

³ Radiographer in Radiology Installation General Hospital dr. Soetomo, Surabaya