PREDICTIVE VALUE OF RESTING ECHOCARDIOGRAPHIC GLOBAL LONGITUDINAL STRAIN FOR SIGNIFICANT CORONARY ARTERY STENOSIS IN PATIENTS WITH NON ST-SEGMENT ELEVATION ACUTE CORONARY SYNDROME

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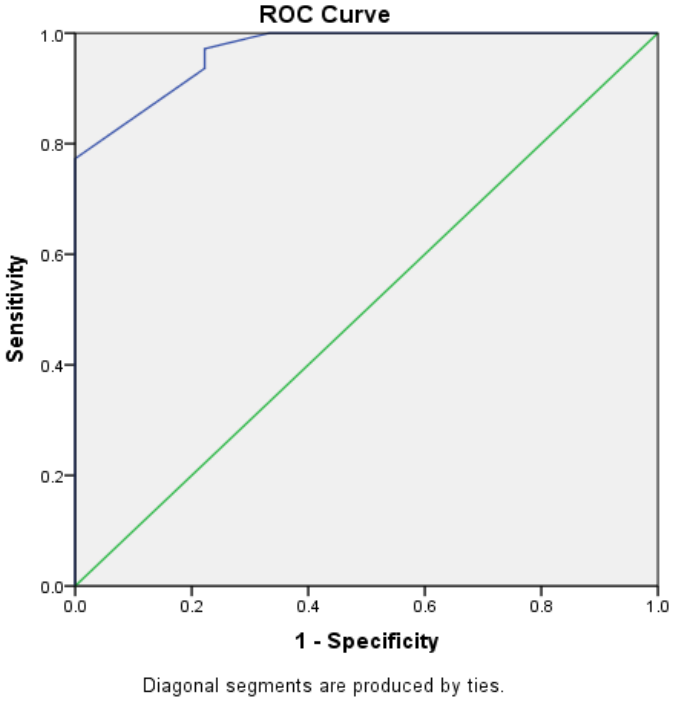
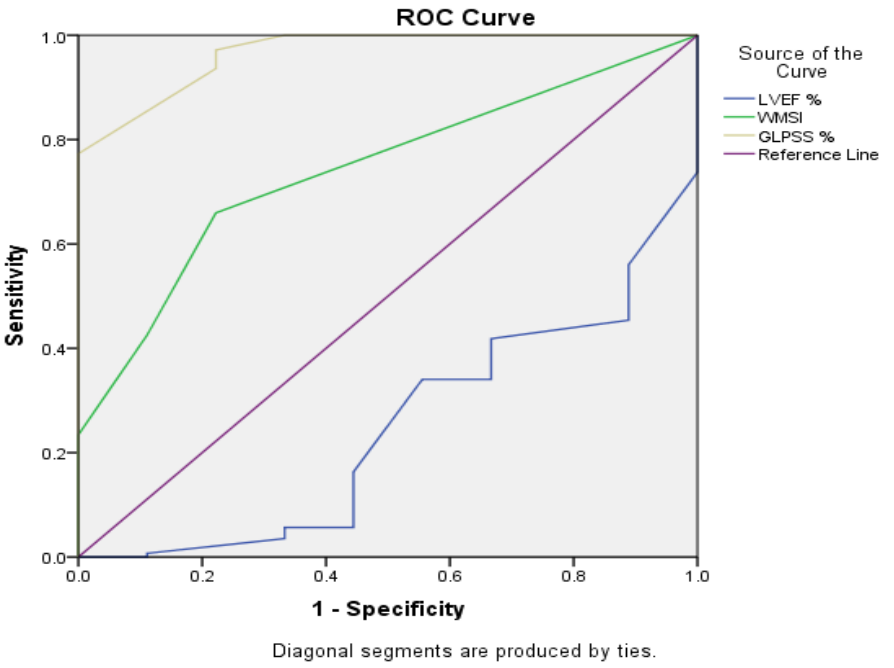
Background : Reperfusion therapy by thrombolysis or percutaneous coronary intervention (PCI) salvages viable myocardium and preserves left ventricular (LV) function. Myocardial strain especially GLPSS is a sensitive tool for detection of ischemia such as significant coronary artery disease and LV systolic function.

Aims: The aim of this study was to determine the accuracy of GLS by 2D STE as a non-invasive predictor for the presence of significant coronary artery disease in patients with non ST-segment elevation acute coronary syndrome.

Methods : It was the hospital based cross-sectional analytical study conducted in Cardiology Department of Yangon General Hospital from January 2019 to March 2020. Total one hundred and fifty patients of NSTE-ACS were included in this study.

Findings : Regarding angiographic finding, 141 patients (94%) had significant CAD and 9 (6%) patients had non-significant CAD. In diagnostic accuracy of GLS for predicting of significant coronary artery disease, the optimal cutoff value of GLS was (-17.5%) with AUC 0.96, 95% CI 0.92-1.00, p<0.001 and sensitivity of 77%, specificity of 100%, positive predictive value of 100%, negative predictive value of 22% and accuracy of 80%.





	Cutoff	AUC	P value	Sensitivity	Specificity	PPV	NPV	Accuracy
GLS	-17.5%	0.96	≤0.02	77%	100%	100%	22%	80%
WMSI	1.1	0.74	≤0.05	66%	78%	98%	13%	67%
LVEF	54%	0.25	≤0.02	45%	11%	88%	1%	43%

In conclusion, GLPSS assessed by 2D-STE at rest is an independent predictor of significant coronary artery stenosis in NSTE-ACS patients who are benefit from early revascularization therapy.