

## Physician - Coronary Artery Diseases and Surgery

[MSB-40]

### Near-Infrared Spectroscopy and Lactate Measurements in Coronary Artery Bypass Grafting: A Retrospective Study

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**Objective:** This study aimed to investigate the potential correlation between lactate levels and near-infrared spectroscopy (NIRS) measurements during coronary artery bypass grafting.

**Methods:** In this retrospective study, 48 patients who underwent coronary artery bypass grafting were examined. The relationship between lactate levels recorded during the operation and the simultaneously measured right and left NIRS values were statistically analyzed.

**Results:** A moderate positive correlation was found between six different lactate measurements obtained at specific time intervals during coronary bypass surgery and the concurrently recorded NIRS values. The correlation coefficients were  $r=0.484$  and  $p=0.004$  for right NIRS and  $r=0.4364$  and  $p=0.010$  for left NIRS.

**Conclusion:** The findings suggest that NIRS could be a potential tool for assessing metabolic status. While most studies focus on comparing postoperative clinical outcomes between patients with and without NIRS, research specifically targeting changes in NIRS values during cardiopulmonary bypass is limited. Further studies with larger sample sizes are needed to elucidate the clinical benefits of NIRS during cardiopulmonary bypass.

**Keywords:** Coronary bypass, lactate, near-infrared spectroscopy.

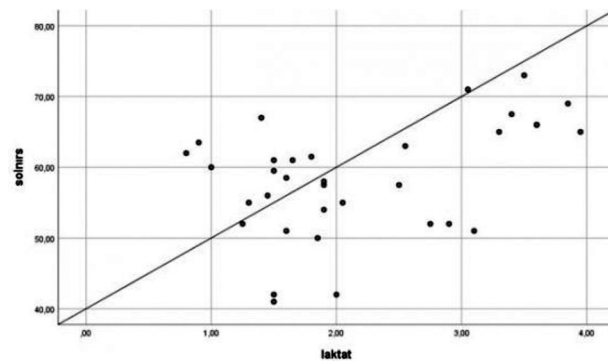


Figure 1. Left NIRS.

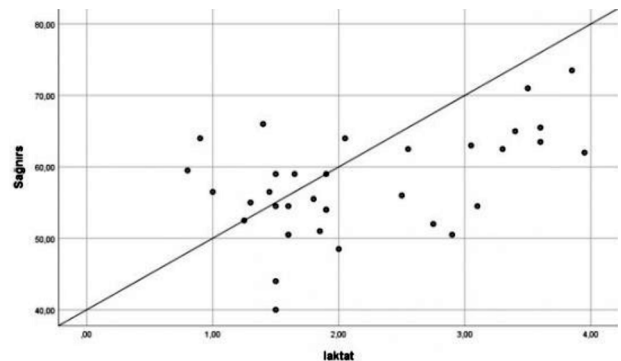


Figure 2. Right NIRS.