

## ABSTRAK

**Latar Belakang:** Ukuran diameter dari arteri koroner target telah ditelaah berhubungan dengan patensi dari graft pasca operasi pintas jantung koroner (CABG). Penelitian ini dilakukan untuk menentukan hubungan antara diameter dari arteri koroner dan patensi graft cabang dari arteri koroner kanan.

**Metode:** Empat ratus dua pasien yang menjalani operasi CABG tahun 2005 - 2016 menggunakan arteri mamaria interna kanan yang di cangkok menuju cabang arteri koroner kanan. angiografi koroner digunakan untuk mengevaluasi diameter target. Evaluasi pasca operasi dilakukan menggunakan *computed tomography scan* pada bulan ke enam sampai duabelas. Analisis menggunakan regresi logistik biner dan kurva *Receiver Operating Characteristic* (ROC).

**Hasil:** Tiga puluh pasien didapatkan memiliki graft oklusi pada evaluasi pasca operasi. Dalam analisis regresi, semakin besar diameter target berhubungan dengan menurunnya risiko penurunan kejadian oklusi graft. Kurva ROC menunjukkan angka 1.93 mm sebagai ambang batas prediksi patensi dan oklusi graft.

**Kesimpulan:** Patensi dari arteri mamaria kanan ke cabang arteri koroner kanan dipengaruhi besarnya diameter arteri target. Strategi yang baik dalam melakukan pintas koroner di rekomendasikan berdasarkan pemeriksaan angiografi koroner preoperatif.

**Kata kunci:** CABG, Mammary Artery, Coronary Artery Disease, Graft Failure, Coronary Angiography

**ABSTRACT**

**Background:** There is evidence suggesting that the size of target vessels is associated with graft patency in coronary artery bypass grafting (CABG). We sought to evaluate the association between target vessel size and graft patency.

**Methods:** Four hundred two of CABG patients between 2005 and 2016 using the typical configuration were analyzed. Coronary angiography was used to measure the size of the vessel anastomosed. Follow-up angiography and computed tomography were used to observe the patency status at six to twelve months postoperatively. Statistical analyses are employed using binary logistic regression and Receiver Operating Characteristic (ROC) curve.

**Results:** Thirty patients had occluded graft. In regression analysis, larger target vessel size was associated with lower risk of graft occlusion as well as the higher degree of stenosis. ROC curve showed that the cut-off-value of 1.93 mm was found to have the maximum sum of sensitivity and specificity for graft patency.

**Conclusion:** In the setting of our typical CABG configuration using composite grafting, the patency of right IMA to right coronary territory was influenced by the size of the target coronary artery. Meticulous strategic planning on grafting the right coronary territory has to be undertaken based on multiple factors.

**Keywords:** CABG, Mammary Artery, Coronary Artery Disease, Graft Failure, Coronary Angiography