

**“Functional recovery after cardiac surgery for older patients: does delirium and calorie intake matter?”**

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In Taiwan, 54.2% of cardiac surgical procedures in 2010 were performed on older patients ( $\geq 65$  years) with higher rates of surgical complications, functional decline, and even death reported. Despite the large number of older patients undergoing cardiac surgery with the goal of improving functional capacity, the literature in this area is limited. Specifically, there is little information about the functional outcomes 1 year after cardiac surgery for older patients.

A prospective, longitudinal cohort study will be conducted to assess and follow patients aged 65 years and older who undergoing elective or non-elective cardiac surgery for one year after surgery. All patients on the cardio-surgical wards of 5A, 5B, and 5CVI at National Taiwan University Hospital will be screened for eligibility. Every patient  $\geq 65$  years admitted for cardiac surgery will be approached and invited to participate. This cohort study aims to 1) describe the rates of 30-day surgical complication, functional decline, frailty, and one-year mortality for older patients underwent cardiac surgery; 2) delineate the trajectory of functional capacity 1 year after surgery for these patients; 3) test whether the trajectory of functional capacity varied significantly according to delirium status and its type over the one-year follow-up period; 4) examine patients' postsurgical actual caloric/protein/fluid intake in relation to the functional capacity within 3 months after surgery; and 5) evaluate whether activity levels, dietary diversity, and depressive symptoms at 3, 6, and 12 months affect patient outcomes. Estimated 236 participants will be enrolled to ensure the power of study.

Data will be analyzed using the SAS package. The Generalized Estimating Equation (GEE) will be performed to identify the risk factors and to delineate the trajectory of functional capacity 1 year after cardiac surgery for older patients. The findings will add to the development of nursing intervention program to promote functional recovery for older patients after cardiac surgery.