

# Preoperative Cognitive Screening in Elderly Surgical Patients: Feasibility and Utility for Predicting Morbidity

<https://www.neurodegenerationresearch.eu/survey/preoperative-cognitive-screening-in-elderly-surgical-patients-feasibility-and-utility-for-predicting-morbidity/>

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### Country

USA

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Preoperative Cognitive Screening in Elderly Surgical Patients: Feasibility and Utility for Predicting Morbidity

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### **Research Abstract**

? DESCRIPTION (provided by applicant): Approximately 1 in 3 surgical procedures nationally is performed on a patient = 65 years of age. These geriatric surgical patients have a high rate of perioperative complications and often do poorly, so there is intense interest in identifying predictors of adverse outcomes in this age group. Although preoperative assessment of major vital organs has been a routine part of preparation for surgery for decades, brain function is typically not evaluated. We propose that preexisting cognitive impairment is a strong predictor of poor medical-surgical and functional outcomes and that preoperative cognitive screening could identify those at risk. In a pilot study using the MiniCog, a brief, validated, structured cognitive screening tool with high inter-rater reliability and patient acceptance, we found that 20-33% of older elective geriatric surgical patients are likely to be cognitively impaired preoperatively, findings consistent with community surveys of older adults. The goals of this proposal are to demonstrate that there is marginal benefit to preoperative cognitive screening for identifying cognitively impaired seniors (Aim 1) and that preoperative cognitive impairment predicts the risk of postoperative medical- surgical complications and poor functional outcomes (Aim 2). To this end, we will conduct a prospective observational study in which the MiniCog will be administered in the Center for Preoperative Evaluation at Brigham & Women's Hospital (Preop Center) to cognitively screen 250 patients = 65 years of age during the routine preoperative visit prior to elective total knee or hip replacement surgery. These surgical procedures are selected because they are common in this age group, reasonably uniform procedurally, and the underlying disease has no association beyond that of advancing age with cognitive function. Aim 1 will test the hypothesis that systematic chart review and patient/informant report of seeking medical advice about cognition/memory will improve the sensitivity of the standard preop evaluation but that many cases of likely impairment, and even severe impairment, based on MiniCog scores will go undetected without structured screening. In Aim 2 we will test the hypothesis that poor preoperative cognitive function as assessed by the MiniCog predicts medical- surgical complications and poor functional outcomes, with delirium and suboptimal change in the SF36 as the primary endpoints, respectively. We anticipate preoperative cognitive screening of seniors will prove to be better than current standard or systematic clinical practices for identifying patients with evidence of likely cognitive impairment and that evidence of such will predict a poor outcome. The work has the potential for high clinical impact and is innovative because it brings together a cross disciplinary group to address new and important questions about the effect of cognition on surgical outcomes in seniors in a practical way that could transform the way we think about, evaluate, and manage the elderly brain and patient in a surgical setting.

**Further information available at:**

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