Optimal Preoperative Evaluation and Perioperative Care of the Geriatric Patient: A Surgeon's Perspective

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KEYWORDS

• Elderly • Geriatric • Frailty • Cognition • Preoperative • Screening

KEY POINTS

- The "Optimal Preoperative Assessment of the Geriatric Surgical Patient: A Best Practices Guideline," is a comprehensive assessment addressing domains most likely to affect the elderly: cognition, functionality, frailty, polypharmacy, nutrition, and social support.
- Even though a comprehensive "geriatric screening" may not be possible in a small clinical setting, options exist for a more limited geriatric preoperative assessment.
- Even when performing a more limited preoperative assessment, it will allow surgeons to improve surgical optimization and tailor planned procedures to individual patient needs.
- A geriatric preoperative assessment allows one to preemptively understand more clearly at what level to involve physical therapy, occupational therapy, social work, and other critical members of the operative care team.

INTRODUCTION

The aging of the population is rapidly changing the "landscape" of health care practice. This is particularly seen with the growth in numbers of the "oldest old," those older than 85 years. Surgeons encounter the "oldest old" on at least a monthly basis in their clinical practice. Conditions like atherosclerosis, cancer, degenerative joint disease, cataracts, and prostatism, common to the geriatric population, increase with increasing age.

Some centers have shown excellent results for surgery in the elderly, results equal to those in the general population. This even goes for complex operations

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such as pancreaticoduodenectomy,[1–3] hepatectomy,[4–6] aortic arch replacement,[7] gastrectomy,[8,9] and esophagectomy[10–12] (**Fig. 1**). More importantly, it also has been shown that the quality of life in the elderly can be maintained or improved after surgery.[13–17]

Across the United States and around the world, age remains a risk factor for postoperative morbidity[18,19] and mortality.[20–23] Finlayson and colleagues[21] reported increased operative mortality in septuagenarians and octogenarians undergoing high-risk cancer operations (**Fig. 2**), a result mirrored in a study of 30,900 colorectal resections in the National Surgery Quality Improvement Program (NSQIP) database.[24] Aortoiliac aneurysm repair, whether open or endovascular, embodied increased risk of mortality for each 5 years older than 64 years in a recent study of 20,095 patients.[25] Postoperative length of stay is often longer than that in younger patients.[26,27] It bids the question as to how to match those centers that obtain excellent surgical results in the elderly? And, how can we all do better?

Improvement recommendations can be categorized into comprehensive preoperative evaluation and improved perioperative care. The former, the focus of this article, allows for more informed selection or denial of individual patients for surgery, encourages modifying the operation to each individual patient, and best informs the entire team caring for the individual patient. The repeated word "individual" is key, with decisions based on functional age rather than chronologic age.

A clear preoperative evaluation in the elderly, the Holy Grail of Geriatric Surgery,[28] is a simple, reliable test to assess perioperative risk. It must be fundamentally based on evidence and consensus, and if simple, it would be universally adopted in surgeons' offices and preoperative testing areas. This "Holy Grail" has not yet been found. Until then, we will continue establishing well-vetted best practice guidelines to optimize preoperative geriatric care.

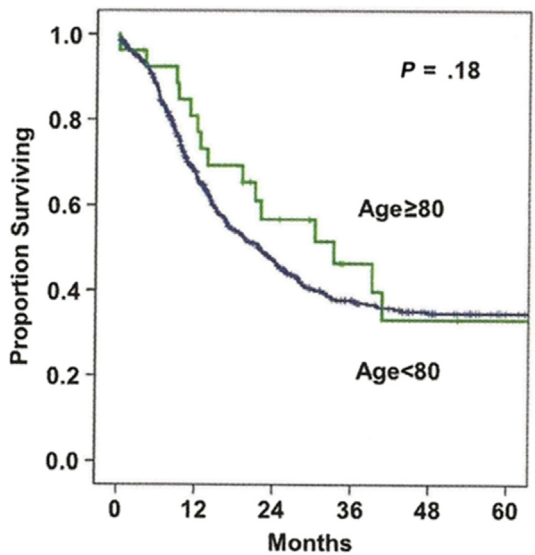

Fig. 1. Some centers obtain excellent operative results in elderly patients: pancreatectomy for cancer. (*From* Hatzaras I, Schmidt C, Klemanski D, et al. Pancreatic resection in the octogenarian: a safe option for pancreatic malignancy. J Am Coll Surg 2011;212(3):375; with permission.)