

## Operating on the Elderly



# In the Coming Years, Operating on the Elderly Will Become Increasingly Common

#### Number of people over age 65

 Will reach 70 million by 2030, up from 35 million in 2000

#### Number of people over age 85

 Will reach 8.5 million by 2030, up from 4 million in 2000

Sources: Richardson JD, Cocanour CS, Kern JA, et al. Perioperative risk assessment in elderly and high-risk patients. *J Am Coll Surg.* 2004;199:133-146.

Medical Never-Never Land: Ten Reasons Why America is Not Ready for the Coming Age Boom. Washington, D.C.: Alliance for Aging Research; 2002.

# Today's Seniors Are Familiar with the Operating Suite

#### People over 65 account for:

40% of surgical procedures

50% of emergency operations

75% of surgery-related deaths



### **Aging Carries Inherent Risks**

Aging and ...

Skin

Slower to heal; generates weaker scars

Heart

Changes in elasticity of walls, small vessels and large vessels

Lungs

Lose capacity with changes in upper and lower airways; weakening of muscles

Kidneys

Filtering ability drops 10% every decade after age 30

Sources: Lavker RM, Zheng PS, Dong G. Morphology of aged skin. *Clin Geriatr Med.* 1989;5:53-67. Cited in Richardson JD, Cocanour CS, Kern JA, et al. Lakatta EG. Cardiovascular aging research: the next horizons. *J Am Geriatr Soc.* 1999;47:613-625. Cited in Richardson JD, Cocanour CS, Kern JA, et al. Berry DT, Phillips BA, Cook YR, et al. Sleep disordered breathing in healthy aged persons: possible daytime sequelae. *J Gerontol.* 1987;42:620-626.

## Even with Progress in Surgery and Medicine, Surgery Remains Riskier for Older Patients

#### **Surgery-Related Deaths**

**Older patients** (> 65): 5% to 10%

**Younger patients:** 1.5%

Emergency surgery in the elderly: risk of death is 2 to 4 times greater than with elective, planned surgery

## Fear of Operating on the Elderly Is Common; Turns Some Cases into Emergencies

Eliminates the possibility of preparing for preexisting conditions

Cardiovascular problems

Respiratory problems

Kidney problems



Increasing the risk of complications

Source: Palmberg S, Hirsjarvi E. Mortality in geriatric surgery: with special reference to the type of surgery, anaesthesia, complicating diseases and prophylaxis of thrombosis. *Gerontology*. 1979;25:103-112.

## Surgery on the Elderly Requires Careful Evaluation; Decisions Will Be More Common

#### **Evaluation of Elderly for Surgery**

- Chronologic age
- Physiologic age
  - How old they look and feel
  - Level of vitality

- Functional status
- Degree of impairment
- Complexity of surgery
- Mutually agreed-upon goal

Assigning degree of risk augments the value of an experienced surgeon with good judgment.

- 1. "Treat the patient, not the disease."
- 2. "Elderly patients will tolerate an operation, but not the complication."

### **Choosing the Right Patient**

## The American Society of Anesthesiologists' Risk-Classification System

Class 1: Normal

Class 2: Controlled medical problem

Class 3: Medical problem resulting in some functional deficits

Class 4: Poorly controlled medical problem resulting in life-threatening dysfunction

Class 5: Critical medical condition that leaves little chance of survival

#### Study of patients over 80 years old shows:

Class 2 = < 1% death rate Class 4 = 25% death rate

#### What Does All This Mean?

- 1. Operating on the elderly will be increasingly common
- 2. It's better to operate on a stable elderly patient electively
  - Later, problem may explode, require emergency intervention
- 3. Careful, thorough evaluation of functional and mental status should be standard
  - Including realistic expectations and agreement among all concerned on the risks and benefits of surgery



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