SIOG
INTERNATIONAL SOCIETY OF GERIATRIC ONCOLOGY

APAC
SINGAPORE
12-13 JULY
2014

Integrating Geriatrics into Oncology Care

William Dale, MD, PhD

Chief, Geriatrics & Palliative Medicine

Director, Specialized Oncology Care & Research in the Elderly (SOCARE) Clinic

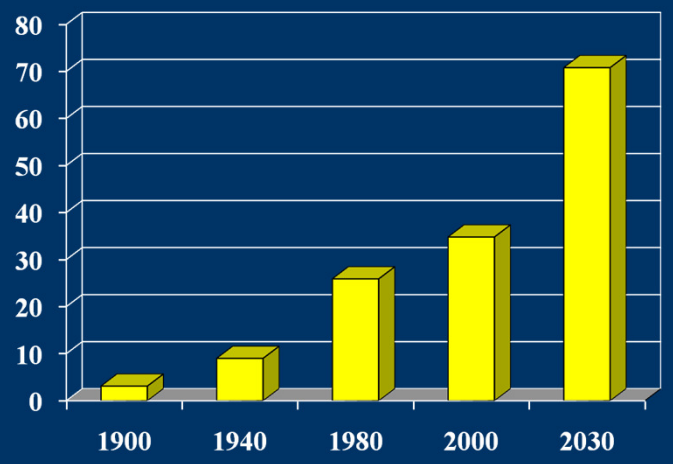
University of Chicago

No disclosures.

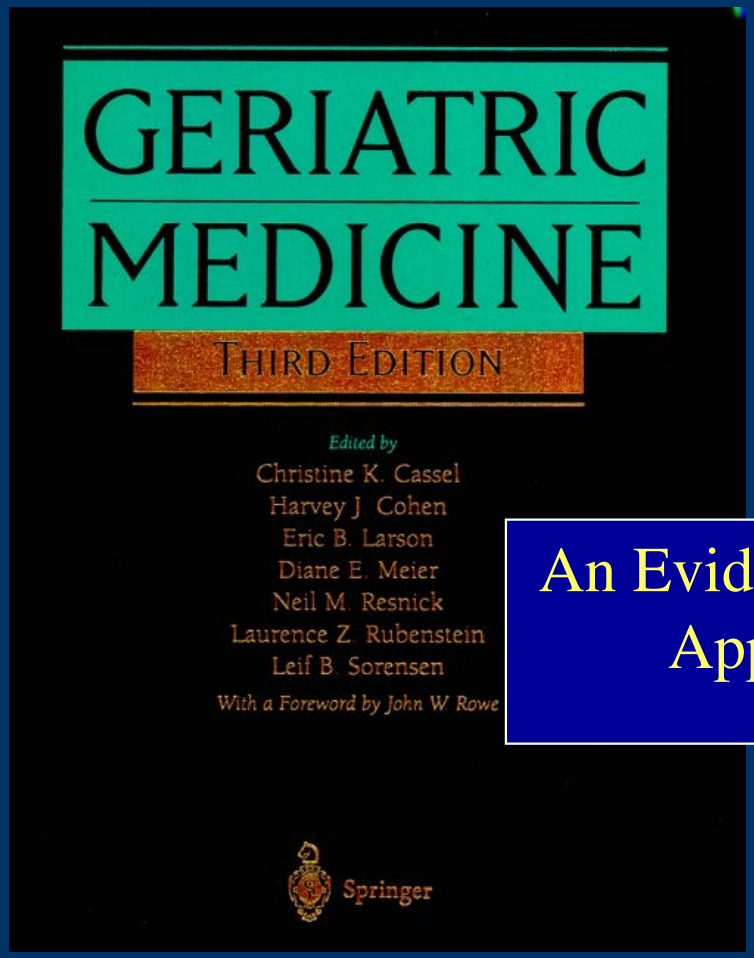
The Challenge for Geriatrics

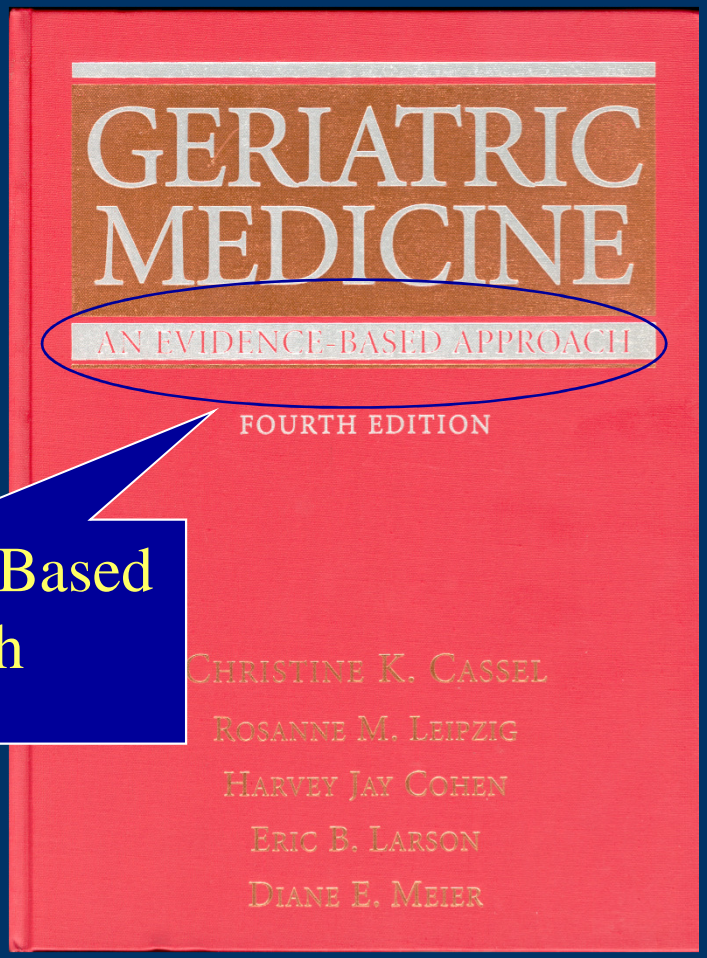
Why Treating Older Adults is Challenging

- High Prevalence
- Multimorbidity
- Age-Associated Problems
- “Evidence-Based Medicine” with Little Evidence
- Clinical Pressures



Emphasis on Evidence





An Evidence-Based Approach

3rd Edition

4th Edition

Enrollment of Older Adults in Cancer Trials

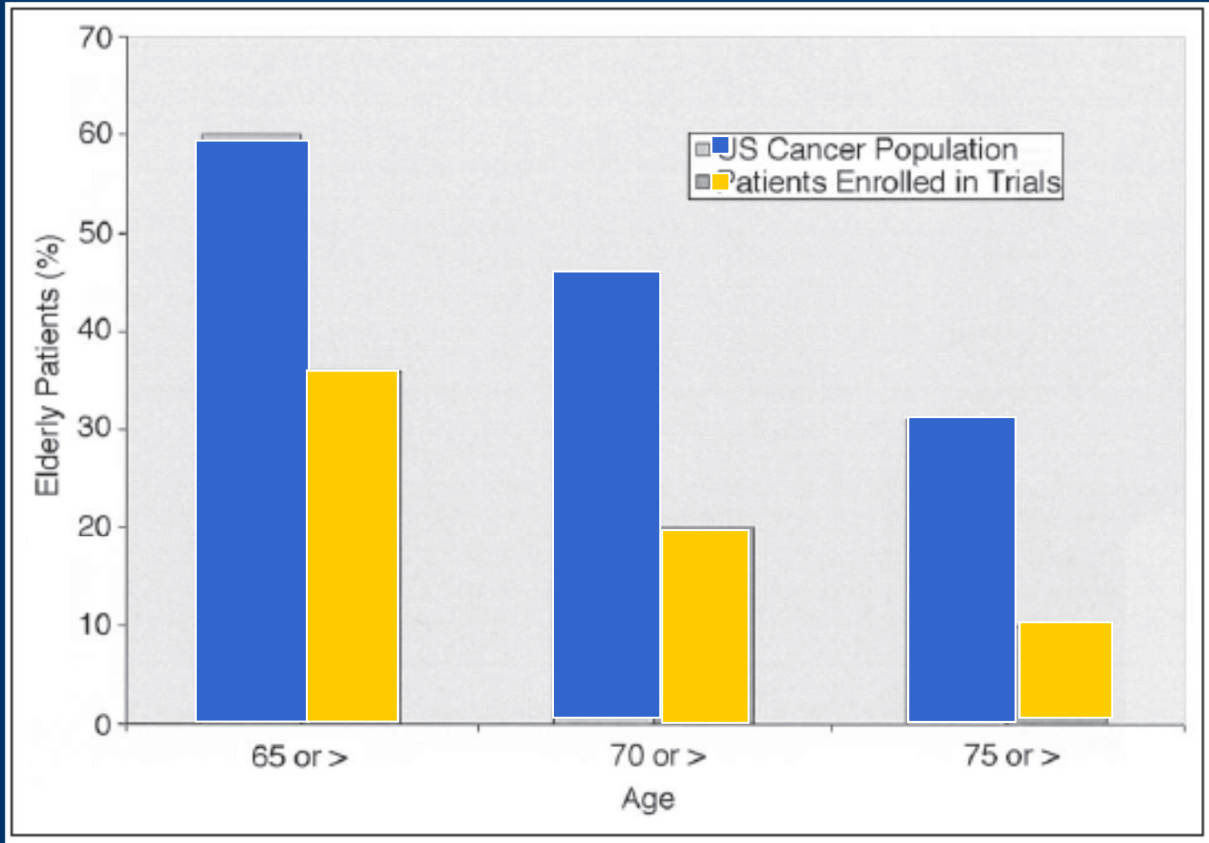


Fig 1. Proportion of elderly patients enrolled onto registration trials compared with the proportion of elderly patients in the US cancer population. The differences between the two groups were significant for all age groups ($P < .001$).

Smith, Hurria, JCO, 2011

Thinking Like a Geriatrician: Acting in a Sea of Uncertainty

Sailing Between Scylla and Charybdis

Ageism: Making disease management choices for a person solely based on (older) age

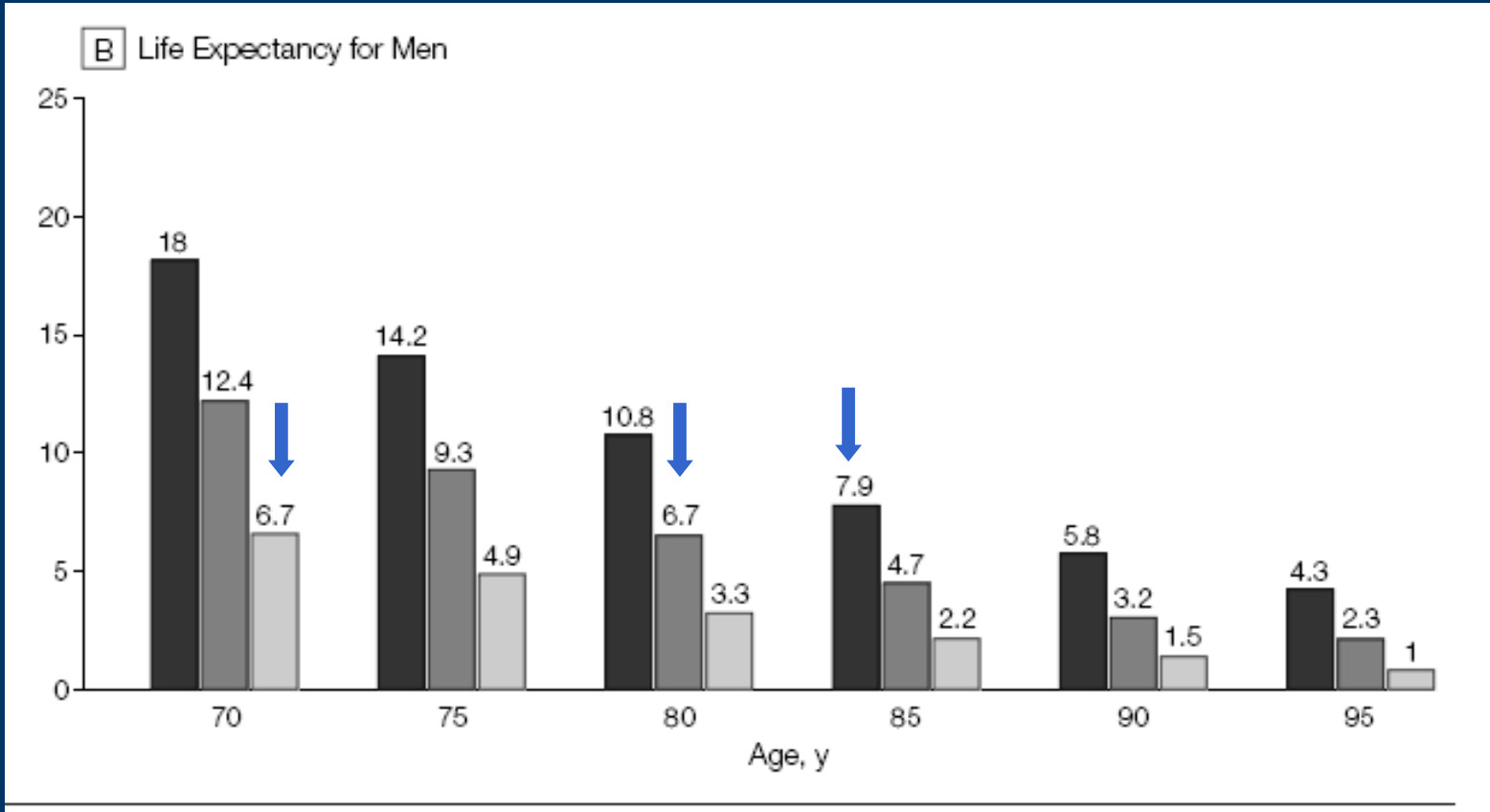
Overtreatment: Making management choices solely based on mortality and no other valued outcomes

Cognitive Biases: Committing (psychological) decision errors

Geriatric Treatment Strategy for Older Adults with Cancer

- Stage the Cancer: Disease Prognosis
  - Treat the Cancer as Aggressively as Possible
  - Minimize Toxicities
  - Consider Timelines
- Stage the Aging: Health Status Prognosis
  - Demographic Profile
  - Health status → Geriatric Assessment
- Make Shared Decisions
  - Preferences
  - Expectations
  - Communication

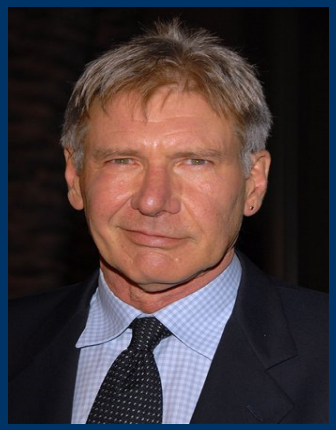
Age & Life Expectancy



Walter et al, JAMA, 2001, 285

Question to Answer

- **Which older patients with cancer are robust, frail, or "vulnerable"?**



Patient: H.F.
Age:70
Health status: Excellent
Life Expectancy: 18 yrs

Patient: J.N.
Age:76
Health status: Fair
RLE: 9 yrs

Patient: D.C.
Age:72
Health status: Poor
RLE: 4

Geriatrics Conceptual Domains

- Multimorbidity: *Number and severity of additional medical diagnoses.*
- Frailty: *Vulnerability to decline in the face of a stressor*
- Cognitive Impairment: *Acquired decline in memory and one other cognitive function sufficient to affect daily life.*
- Disability: *Dependency in carrying out activities essential to independent living.*
- Geriatric Syndromes: *Problems caused by a cluster of underlying sub-clinical physiological deficits*

Fried, J Geron, Biol Sci, 2004

Comprehensive Geriatric Assessment (CGA): Measuring & Categorizing Patients' Risk

- CGA: a way to measure risk in older cancer patients

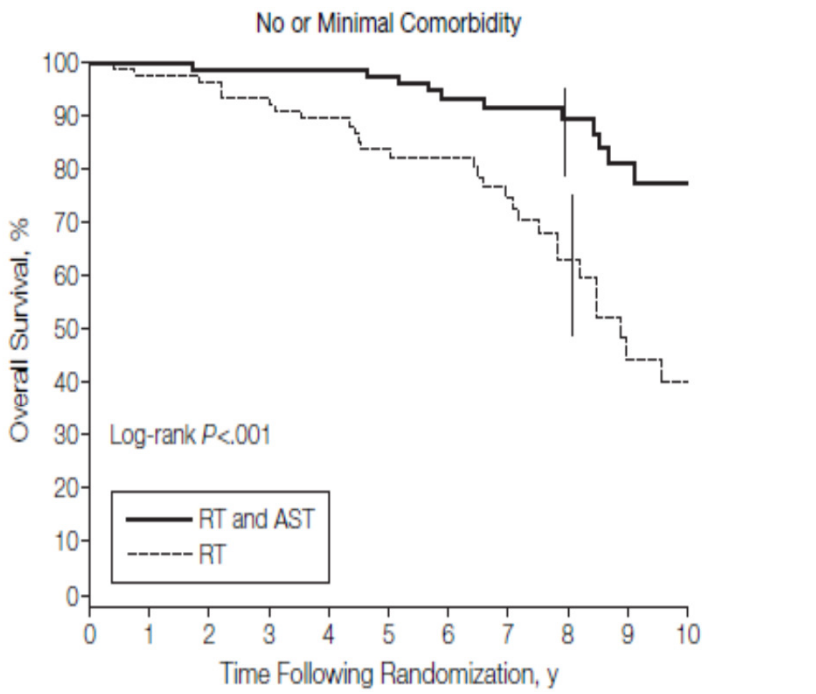
- Includes:
  1. Functional status (ADL/IADLs)
  2. Comorbidies (Charlson Index)
  3. Cognitive status (MMSE, BMOC, MoCA)
  4. Geriatric syndromes assessment (Falls)
  5. Nutritional status (MNA)
  6. Mood assessment (GDS, HADS)
  7. Social support

- Each domain independently predicts morbidity mortality in the older patient

SIOG
INTERNATIONAL SOCIETY OF GERIATRIC ONCOLOGY
APAC
SINGAPORE
12-13 JULY
2014

Are Evidence-Based Assessment Tools Available?

Comorbidities & Cancer Outcomes



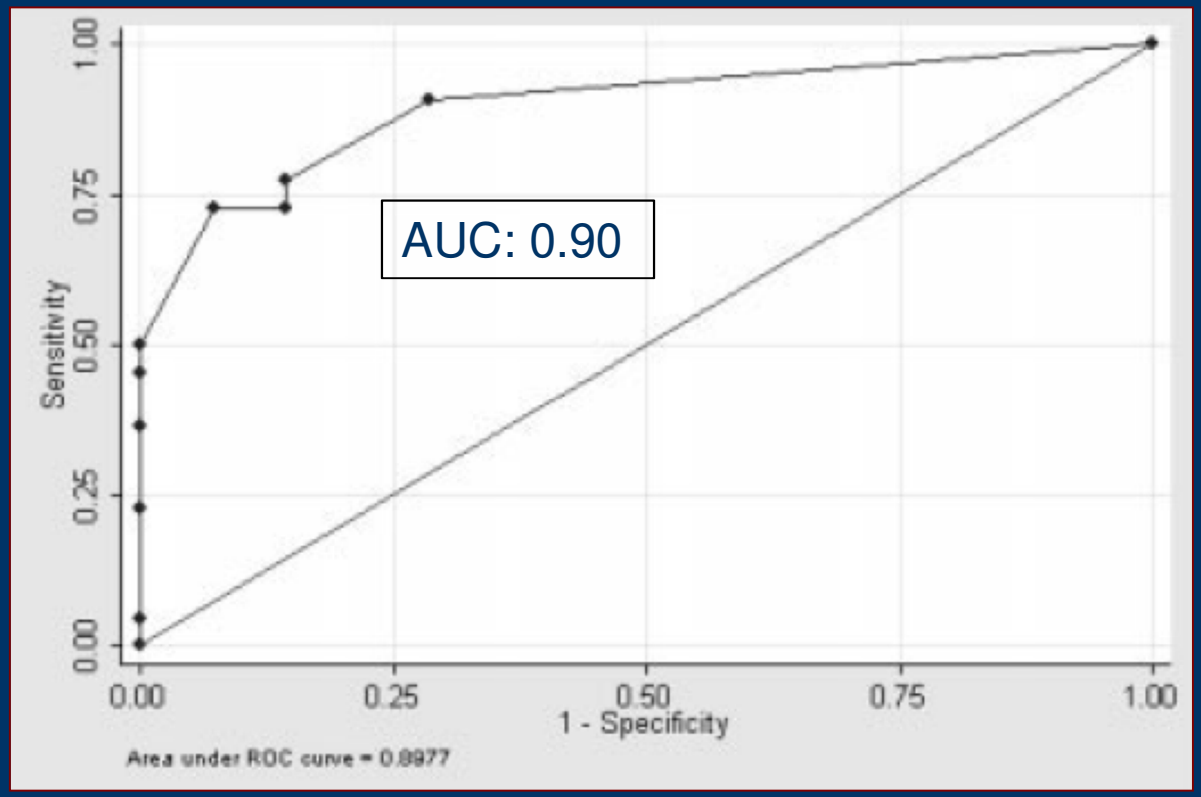
No. at Risk											
RT and AST	78	78	77	76	76	73	65	55	43	24	10
RT	79	76	74	72	63	57	50	39	23	12	8

D'amico et al, Androgen Suppression and RT vs RT Alone, JAMA, 2008.

Vulnerable Elders' Survey (VES-13)

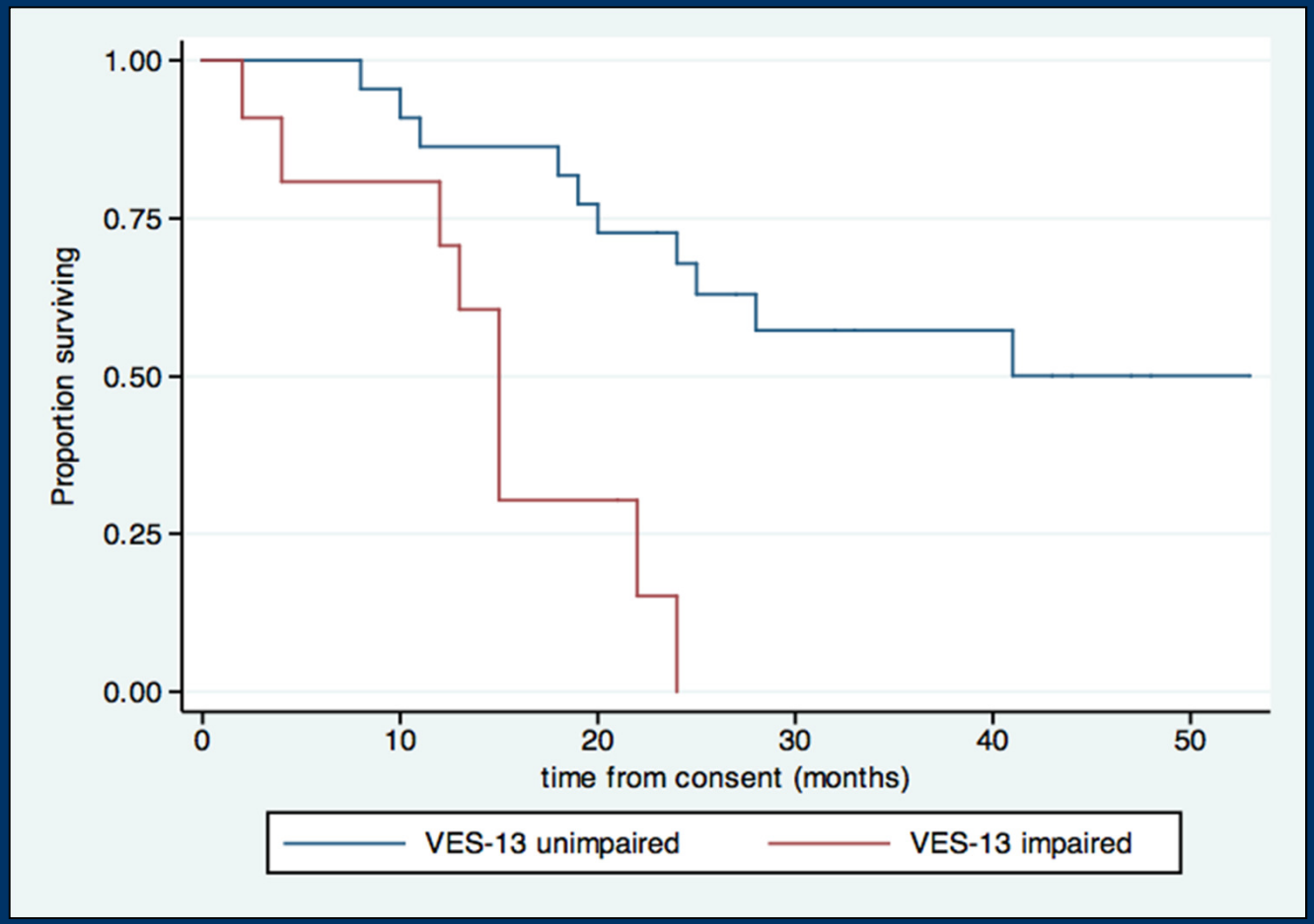
- **Age**
  - 75-84 years +1
  - ≥ 85 years +3
- **Self-rated health**
  - Fair or poor +1
- **Physical function limitation**
  - Count = 1 +1
  - Count ≥ 2 +2
- **Functional disability**
  - Any of 5 IADL/ADLS +4

VES-13 Identifies Need for CGA



Mohile S, Bylow K, Dale W, Cancer, 2006

VES-13 Predicts Overall Survival in Colon Cancer Patients on Chemotherapy



Ramsdale et al, JAGS, 2013

Short Physical Performance Battery (SPPB)

Score: 0 - 12

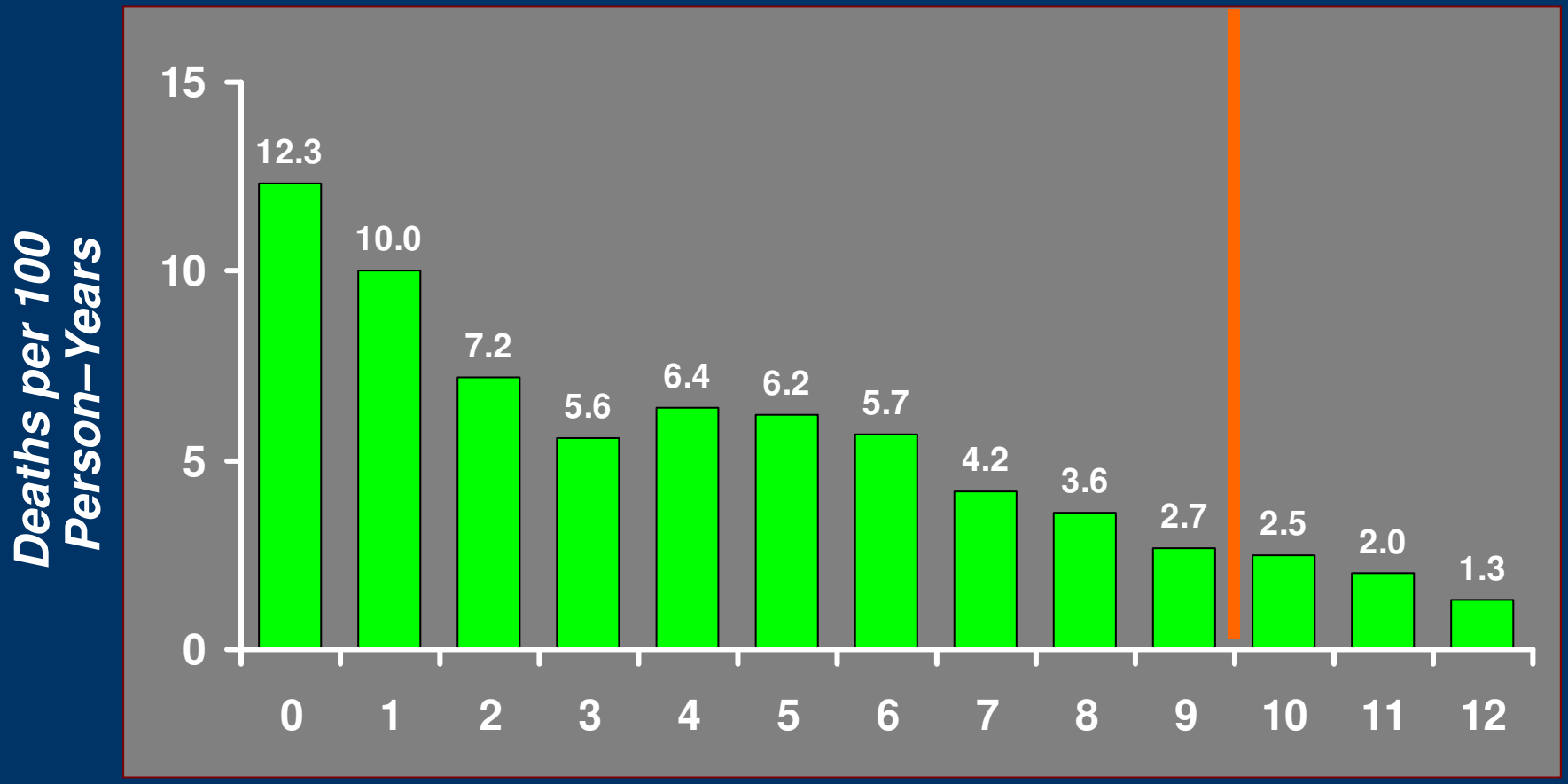
1. **Timed 4-meter walk → Gait Speed**

2. **Timed Repeat Chair Stand → LE Strength**

3. **Tandem Stand (10 seconds) → Balance**

Guralnik et al, J Gerontology, 1994.

Mortality Rates by SPPB Summary Score



Guralnik JM, et al. J Gerontol Med Sci. 1994

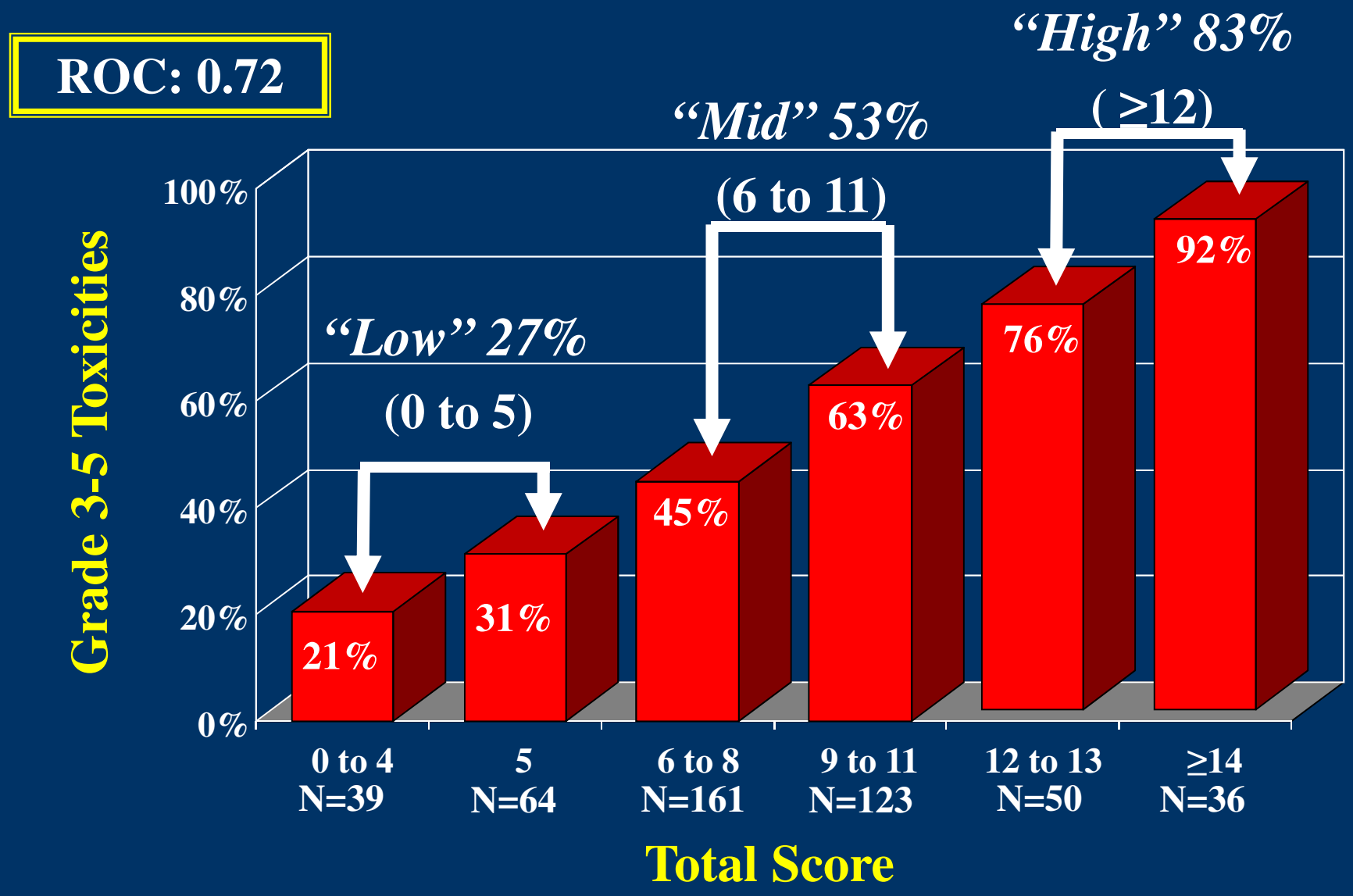
Base Model	Major Complications		Surgical ICU Admission		Days in Hospital		Non-Home Discharge		30 Day Readmission	
	OR	P-value	OR	P-value	β	P-value	OR	P-value	OR	P-value
Age	1.03	0.22	1.04	0.22	0.22	0.07	***1.10***	***0.04***	***0.94***	***0.02***
BMI	1.10	0.07	0.96	0.39	***0.30***	***0.01***	1.08	0.21	1.02	0.74
ASA	0.68	0.43	2.41	0.16	-0.10	0.41	1.53	0.70	1.78	0.28
Comorbidity	0.90	0.50	1.16	0.36	0.00	0.97	1.09	0.71	1.00	0.99
+										
Weight Loss	0.81	0.70	2.17	0.23	0.08	0.55	2.47	0.38	1.25	0.73
Exhaustion	***4.06***	***0.01***	***4.30***	***0.01***	***0.27***	***0.02***	2.39	0.32	1.98	0.25
Weakness	0.70	0.51	1.70	0.37	-0.09	0.50	0.92	0.93	1.45	0.56
Walk Time	-0.02	0.96	0.82	0.57	-0.07	0.95	1.33	0.59	1.06	0.90
Chair stands	0.82	0.34	0.74	0.20	-0.01	0.99	0.50	0.06	0.76	0.28
SPPB	1.06	0.62	0.93	0.55	0.12	0.43	***0.67***	***0.04***	1.02	0.87
VES-13	1.05	0.80	1.16	0.47	0.13	0.38	0.55	0.29	0.78	0.32
Memory Score	0.97	0.65	1.06	0.45	0.07	0.58	1.11	0.47	1.04	0.60

CARG ChemoTox Model

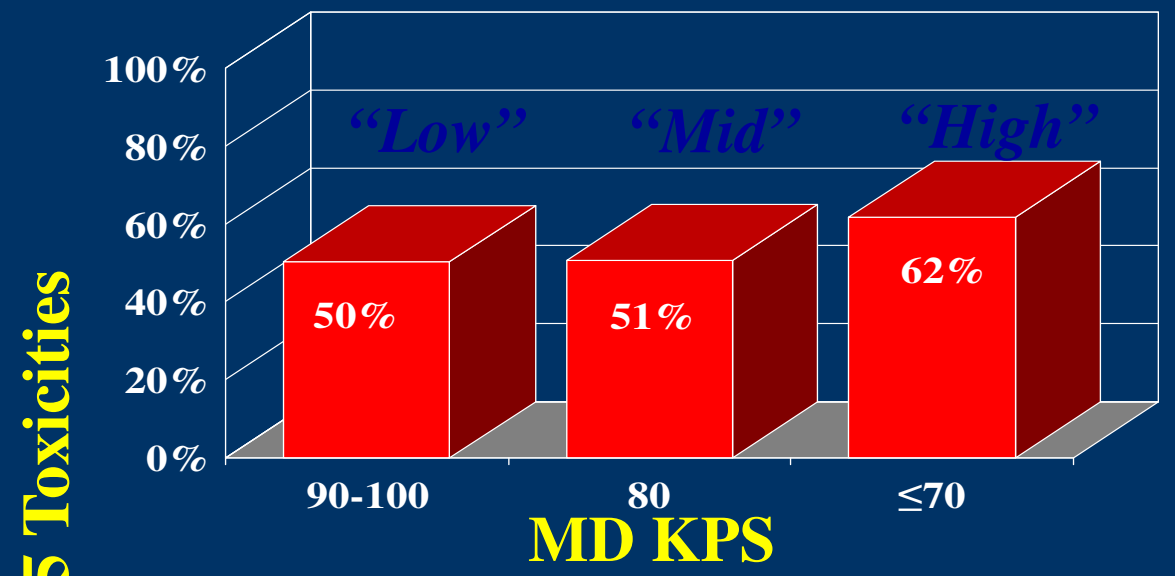
Risk factors for Gr. 3-5 Toxicity	OR (95% CI)	Score
Age ≥73 yrs	**1.8 (1.2-2.7)**	2
GI/GU cancer	**2.2 (1.4-3.3)**	3
Standard dose	**2.1 (1.3-3.5)**	3
Poly-chemotherapy	**1.8 (1.1-2.7)**	2
Hemoglobin (male: <11, female: <10)	**2.2 (1.1-4.3)**	3
Creatinine Clearance <34	**2.5 (1.2-5.6)**	3
1 or more falls in last 6 months	**2.3 (1.3-3.9)**	3
Hearing impairment (fair or worse)	**1.6 (1.0-2.6)**	2
Limited in walking 1 block (MOS)	**1.8 (1.1-3.1)**	2
Assistance required in medications	1.4 (0.6-3.1)	1
Decreased social activity (MOS)	1.3 (0.9-2.0)	1

Hurria et al, JCO, 2011

Model Performance:
Prevalence of Toxicity by Score

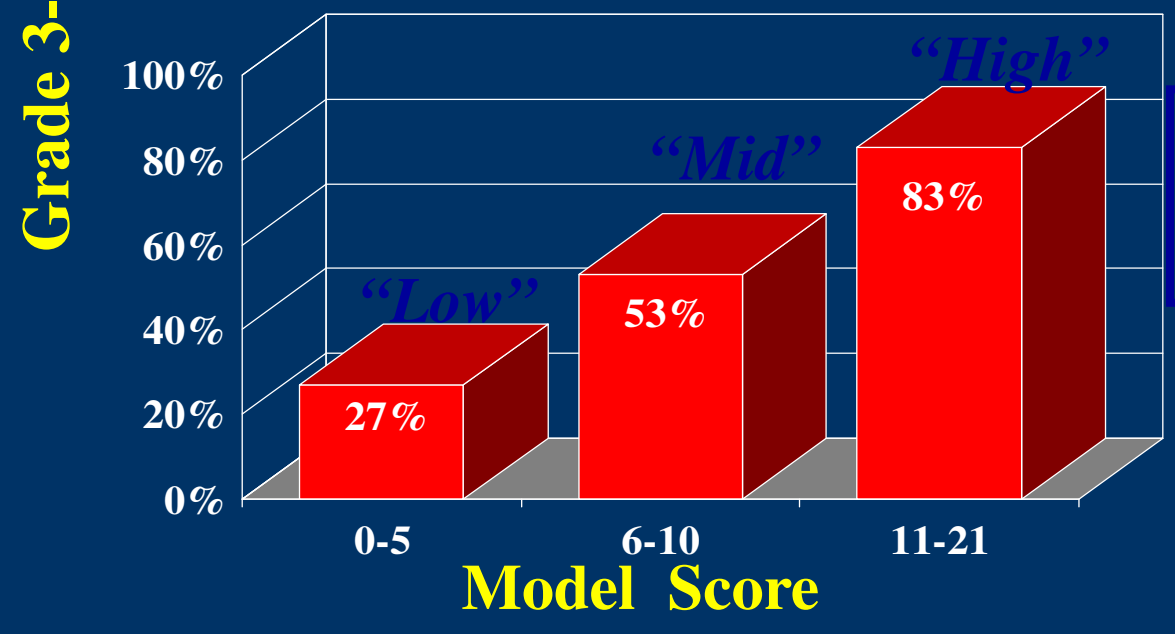


MD-rated KPS vs. Model



Chi-square test

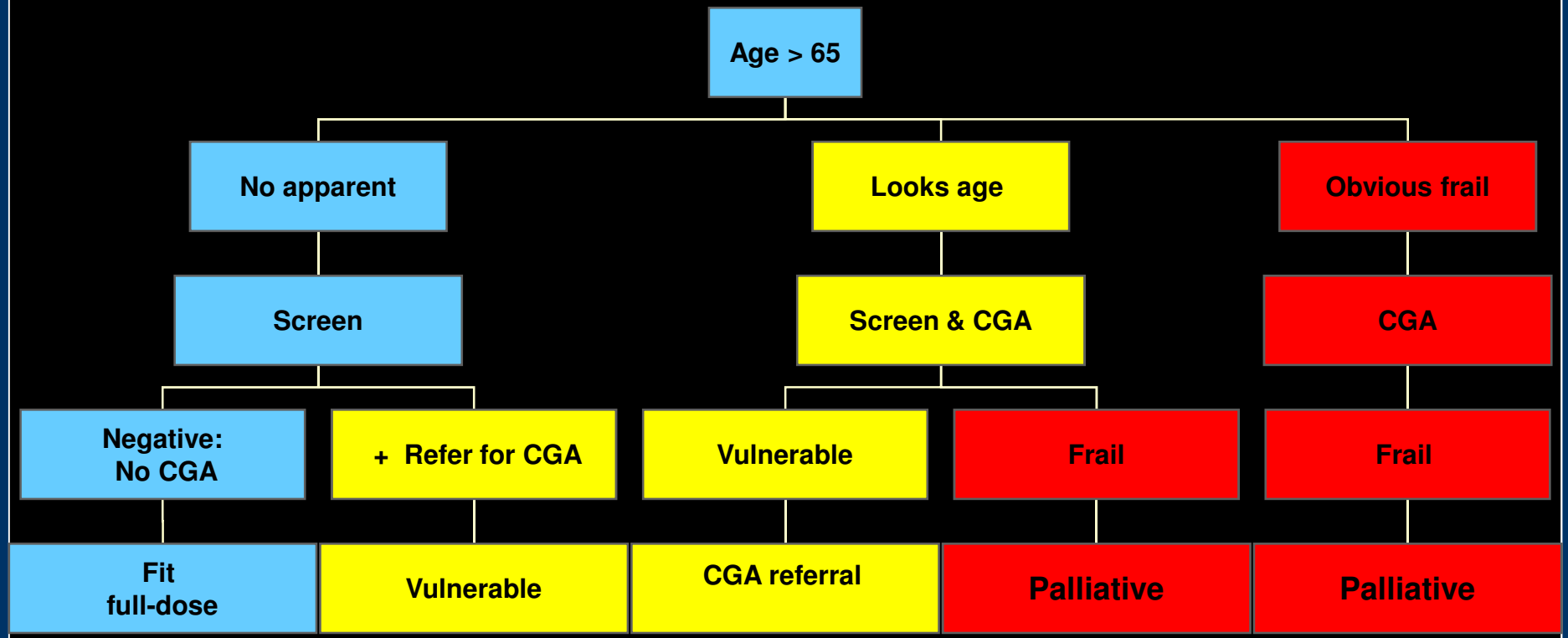
p=0.17



Chi-square test

p<.0001

Schema for Geriatric Assessment



SIOG
INTERNATIONAL SOCIETY
OF GERIATRIC ONCOLOGY

APAC
SINGAPORE
12-13 JULY
2014

Making Choices

Starting Cancer Therapy

- Men over 65
- Biochemical prostate cancer recurrence
- Hormone ablation therapy started by clinical decision

JOURNAL OF CLINICAL ONCOLOGY

Patient Anxiety About Prostate Cancer Independently Predicts Early Initiation of Androgen Deprivation Therapy for Biochemical Cancer Recurrence in Older Men: A Prospective Cohort Study

William Dale, Joshua Hemmerich, Kathryn Bylow, Supriya Mohile, Mary Mullaney, and Walter M. Stadler

Starting Hormone Therapy

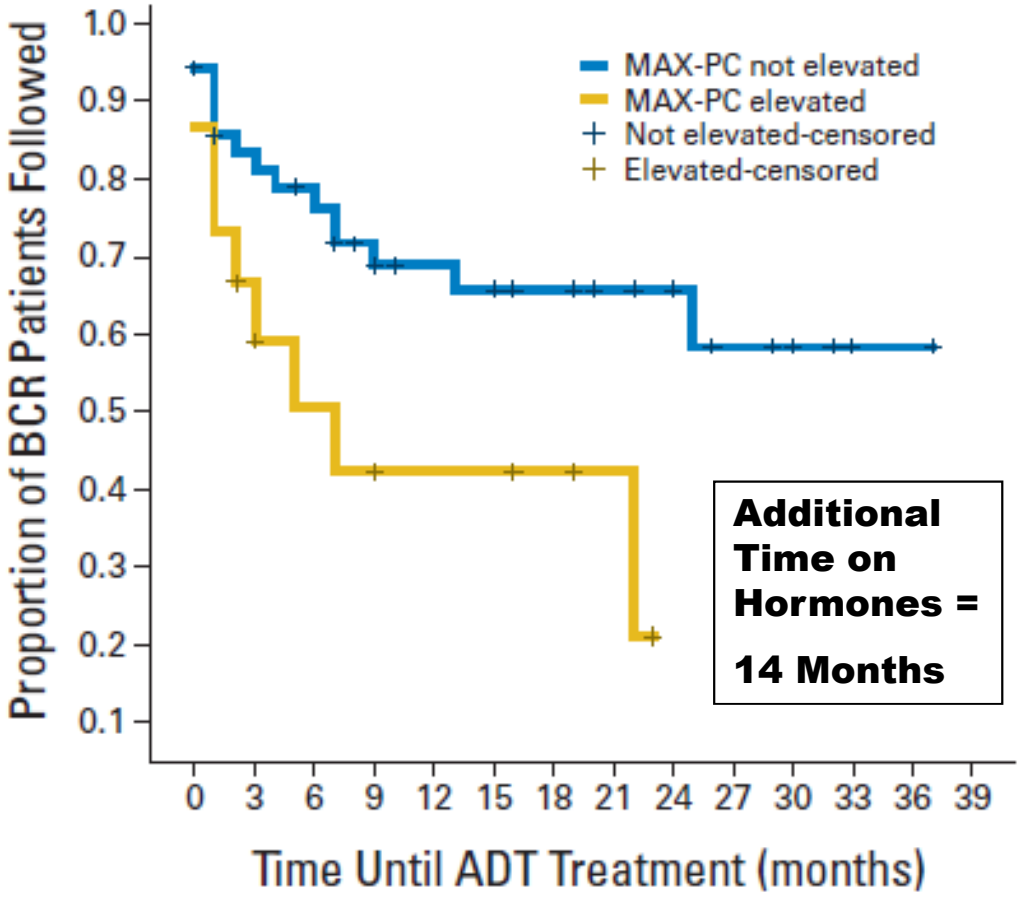
Table 2. Treat

Variable
PSA doubling time*
Patient preference
Time from primary treatment to PSA increase*
PSA level
Patient remaining life expectancy
Gleason grade*

Table 5. Log

	Significant Bivariate
Predictor Variable	OR	95% CI
Age	—	—
Current health	0.87	0.40 to 1.89
PSA doubling time	—	—
Time to recurrence	0.98	0.96 to 1.00
PSA	1.23	1.03 to 1.47
Gleason score ≥ 8	0.72	0.09 to 5.78
Elevated MAX-PC	7.11	1.33 to 37.8

Abbreviations: ADT, androgen deprivation therapy; C

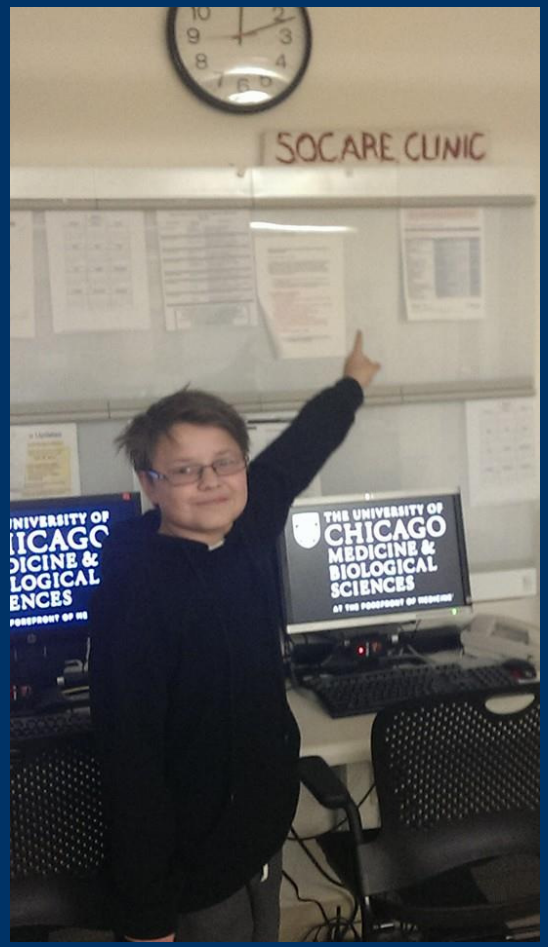


Additional Time on Hormones = 14 Months

No. of patients at risk

Elevated MAX-PC	15	7	6	4	4	4	3	2	0	0	0	0	0	0
Not Elevated	52	36	32	24	22	20	18	13	9	6	3	1	0	0

Practical Considerations: Building Infrastructure



Collaborative Model of Cancer Management for Older Adults

- Oncology: Stage the Cancer
  - Disease Burden
  - Gleason Scores
  - Cancer-based prognosis
- Geriatrics: Stage the Aging
  - Life Expectancy Estimation
  - Quality of Life Determination
  - “Host”-based prognosis

Geriatric Assessment

Care Coordination

Decision Making

Communication

Research

Dale W, “Staging the Aging”, J Clin Oncology, 2009

Elements

1. Sufficient time/space for Geriatric Assessments
2. Provide geriatrics-specific training to support staff
3. Exam rooms and equipment that accommodates older patients for assessments
4. Resources to facilitate/support caregivers and for transportation
5. Allow for information collection from remote areas with technology to facilitate evaluation

SOCARE Clinic: Oncology-Embedded Geriatrics

- Started in 2006
- Close Collaboration with Oncology
- Aging Assessment

- Clinical
- Teaching
- Research Hub

SOCARE Referral Reasons

Primary Referral Reason	Percentage of Patients (n=107)
Comprehensive Geriatric Assessment	15.9%
Recommendations Regarding Continuing Tx	10.3%
Recommendations Regarding Tx Initiation	38.3%
Initial Disease Management	29.9%
Questions Related to a Specific Problem	2.8%
Support Through Treatment	2.8%

Colleagues

Thanks!

wdale@medicine.bsd.uchicago.edu

@WilliamDale_MD

Academia.edu share research https://chicago.academia.edu/WilliamDale

https://www.researchgate.net/profile/William_Dale?ev=hdr_xprf