Update in geriatrics

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geriatrician
No conflicts of interest
Validation and Normative Data for the Modified Telephone Interview for Cognitive Status: The Sydney Memory and Ageing Study

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Modified Telephone Interview for Cognitive status (TICS-M)

Administration time 5-10 minutes
13 items, 39 points

Cut-off ≤ 21 points for dementia, 22-24 points for mild cognitive impairment

Good correlation with MMSE, verbal memory, digit symbol coding and trail making tests

Incident dementia (one year): sensitivity 77% specificity 88%
Incident mild cognitive impairment: sensitivity 48% specificity 80%
Patient priorities based care
Decision Making for Older Adults With Multiple Chronic Conditions: Executive Summary for the American Geriatrics Society Guiding Principles on the Care of Older Adults With Multimorbidity

Cynthia Boyd, MD, MPH,* Cynthia Daisy Smith, MD,† Frederick A. Masoudi, MD, MSPH,‡ Caroline S. Blaum, MD, MS,§ John A. Dodson, MD, MPH,§ Ariel R. Green, MD, MPH,* Amy Kelley, MD, MSHS,‖ Daniel Matlock, MD, MPH,‖ Jennifer Ouellet, MD,*** Michael W. Rich, MD,‡‡ Nancy L. Schoenborn, MD,* and Mary E. Tinetti, MD**
Decision making and care for older adults with multiple chronic conditions

Are disease-specific evidence-based guidelines applicable

- Yes
  - >10 y life expectancy
  - Few conditions
  - Fit and functional
  - Disease-based guidelines as consistent with patient preferences

- Uncertain
  - 2-10 y life expectancy
  - Increasing number/severity of conditions
  - Impaired function
  - Health Priorities-Aligned Care: Current Care Planning

- No
  - <1-2 y life expectancy
  - Advanced/end-stage disease (eg, dementia, cancer, and heart failure)
  - Deescalate treatments
  - Palliative care
  - Symptom management
UPPER, MIDDLE, AND LOWER QUARTILES OF LIFE EXPECTANCY FOR WOMEN AND MEN AT SELECTED AGES

A. Life Expectancy for Women

B. Life Expectancy for Men

25%  50%  75%  100%

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.
Multiple Chronic Conditions (MCC) Action Steps

For tips and scripts: www.geriatricscareonline.org

**IDENTIFY and COMMUNICATE**
Patient’s health priorities  
(health outcome goals and healthcare preferences) AND  
Patient’s health trajectory

**ALIGN**
Decisions and care among patients, caregivers, and other clinicians with patient’s health priorities and health trajectory

**DECIDE**
Stop, start, or continue care based on health priorities, potential benefit vs harm and burden, and health trajectory
Association of Patient Priorities-Aligned Decision-Making With Patient Outcomes and Ambulatory Health Care Burden Among Older Adults With Multiple Chronic Conditions A Nonrandomized Clinical Trial

Mary E. Tinetti, MD; Aanand D. Naik, MD; Lilian Dindo, PhD; Darce M. Costello, EdD, MPH, MBA; Jessica Esterson, MPH; Mary Geda, BN, MSN, RN; Jonathan Rosen, MD; Kizzy Hernandez-Bigos, BA; Cynthia Daisy Smith, MD; Gregory M. Ouellet, MD; Gina Kang, MD; Yungah Lee, MD; Caroline Blaum, MD
Non-randomized clinical trial in a multisite primary care practice in Connecticut

163 intervention (PPC) vs. 203 control patients (UC)

Intervention:
- facilitators trained to discuss priorities with patients ☑ PPC conversation
- primary care physicians received training in patient priorities care

Results:
- Intervention resulted in greater decrease of treatment burden (~25% extra absolute difference)
- Health care priorities mentioned in notes: PPC in 66% vs. UC 0%
- Medications stopped: PPC 52% vs. UC 34%
- Diagnostic tests ordered: PPC 81% vs. UC 86%
- Self management tasks added: PPC 58% vs. UC 62%
Patient reported benefits of PPC

Reported benefits:
- Increased knowledge and insight in the disease process and treatment options
- Patient activation
- Enhanced communication with family and clinicians

Resilience
Functional Decline and Resilience in Older Women Receiving Adjuvant Chemotherapy for Breast Cancer

Arti Hurria, MD,*** Enrique Soto-Perez-de-Celis, MD,†††† Jacob B. Allred, MS,*
Harvey Jay Cohen, MD,§ Anait Arsenyan, MPH,* Karla Ballman, PhD,¶
Jennifer Le-Rademacher, PhD,‖ Aminah Jatoi, MD,‡ Julie Filo, BS,*
Jeanne Mandelblatt, MD, MPH,** Jacqueline M. Lafky, MS,‡ Gretchen Kimmick, MD, MS,§
Heidi D. Klepin, MD, MS,‡† Rachel A. Freedman, MD, MPH,‡‡ Harold Burstein, MD, PhD,‡‡
Julie Gralow, MD,§§ Antonio C. Wolff, MD,¶¶ Gustav Magrinat, MD,|||
Myra Barginear, MD,*** and Hyman Muss, MD†††
Mean age 71.5 (range 65-85 yrs)

Baseline

n = 256

End Chemotherapy

Decline from pre to post-chemotherapy**
Comparing function at <1 month post-chemotherapy to baseline

No decline
58%
n = 148

Decline
42%
n = 108

12 Months*

Resilience***
Comparing function at 12 month post-chemotherapy initiation to baseline

No decline
86%
n = 127

Decline
14%
n = 21

Resilient
47%
n = 51

Non-resilient
53%
n = 57
Resilience in Clinical Care: Getting a Grip on the Recovery Potential of Older Adults

Sanne M. W. Gijzel, MD, *† © Heather E. Whitson, MD, PhD, ‡§‖ Ingrid A. van de Leemput, PhD, †
Marten Scheffer, PhD, † Dienke van Asselt, MD, PhD, * Jerrald L. Rector, PhD, *
Marcel G. M. Olde Rikkert, MD, PhD, * † and René J. F. Melis, MD, PhD * †
(A) Prestressor Assessment
- Functional status
- Self-rated health
- Symptoms
- Frailty
- Hand grip strength
- Other predictors of a resilient response

Stressors
- Fall
- Hip fracture
- Surgery
- Infection
- Chemotherapy
- Psychosocial event

Variable Physiologic Responses

Outcomes
- Functional status
- Self-rated health
- Symptoms
- Frailty
- Hand grip strength

(B) Characteristics of the response
- S: stressor
- T_L: lag time before response begins
- T_P: interval from initial to maximal response
- T_S: interval from maximum response to stabilization
- A: amplitude
- P: persisting difference from baseline level
Resilience in clinical practice

- Life requires maintaining homeostasis 📊 microstressors and microrecoveries
- Dynamical indicators of resilience (DIORs): used in ecosystems and climate
- Natural variance (ups-and-downs) and recovery time as measures of resilience
- Recovery trajectories after recent stressors
- Stimulus-response tests?

Research:
- Resilience/frailty as a dynamic process vs. static situation
- Record recovery across multiple domains and repeated measurements
Maintaining health status and resilience
Association of Functional Impairment in Middle Age With Hospitalization, Nursing Home Admission, and Death

Rebecca T. Brown, MD, MPH; L. Grisell Diaz-Ramirez, MS; W. John Boscardin, PhD; Sei J. Lee, MD; Brie A. Williams, MD, MS; Michael A. Steinman, MD
Longitudinal Health and Retirement study
n=5540

19% of study participants developed ADL impairment between age 50 and 65
16% IADL impairment

ADL impairment was associated with an increased risk of:
- hospitalisation (HR 1.97, 95%CI 1.77-2.19)
- nursing home admission (HR 2.62, 95%CI 1.99-3.45)
- death (HR 2.06; 95%CI 1.74-2.45)

Risk factors: lower education level living in a poor neighbourhood, being uninsured, smoking, infrequent physical activity
Dose-response associations between accelerometry measured physical activity and sedentary time and all cause mortality: systematic review and harmonised meta-analysis

Ulf Ekelund,1,2 Jakob Tarp,1 Jostein Steene-Johannessen,1 Bjørge H Hansen,1 Barbara Jefferis,3 Morten W Fagerland,1,4 Peter Whincup,5 Keith M Diaz,6 Steven P Hooker,7 Ariel Chernofsky,8 Martin G Larson,8 Nicole Spartano,9 Ramachandran S Vasan,10 Ing-Mari Dohrn,11 Maria Hagströmer,11,12 Charlotte Edwardson,13,14 Thomas Yates,13,14 Eric Shiroma,15 Sigmund A Anderssen,1 I-Min Lee16,17

BMJ 2019;366:14570

Meta-analysis of eight studies including 36,383 patients, mean age 62.6 years, median follow-up 5.8 years
Reference: 140 minutes per week
Physical activity trajectories and mortality: population based cohort study

Alexander Mok,¹ Kay-Tee Khaw,² Robert Luben,² Nick Wareham,¹ Soren Brage¹
Study design

EPIC-Norfolk cohort
14599 men and women aged 40-79 years, recruited from community general practice

Baseline assessment: 1993-1997
Follow-up life style: up to 2004 physical activity energy expenditure
Follow-up mortality: 2016 (median 12.5 years)
Baseline physical activity in relation to mortality

<table>
<thead>
<tr>
<th>All cause mortality</th>
<th>Age group</th>
<th>Adjusted hazard ratio</th>
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<tbody>
<tr>
<td></td>
<td>&lt;65</td>
<td>0.78 (0.66 to 0.91)</td>
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<tr>
<td></td>
<td>≥65</td>
<td>0.65 (0.57 to 0.75)</td>
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<table>
<thead>
<tr>
<th>Cancer mortality</th>
<th>Age group</th>
<th>Adjusted hazard ratio</th>
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<tr>
<td></td>
<td>&lt;65</td>
<td>0.92 (0.74 to 1.15)</td>
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<tr>
<td></td>
<td>≥65</td>
<td>0.68 (0.52 to 0.90)</td>
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<tr>
<td>Physical activity trajectory</td>
<td>Hazard ratio (95% CI)</td>
<td>Hazard ratio (95% CI)</td>
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<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td><strong>Low</strong></td>
<td></td>
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</tr>
<tr>
<td>Maintain</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>Increase</td>
<td></td>
<td>0.76 (0.65 to 0.88)</td>
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<td><strong>Medium</strong></td>
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<tr>
<td>Decrease</td>
<td></td>
<td>0.90 (0.81 to 1.00)</td>
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<tr>
<td>Maintain</td>
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<td>0.72 (0.62 to 0.82)</td>
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<tr>
<td>Increase</td>
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<td>0.62 (0.53 to 0.72)</td>
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<tr>
<td><strong>High</strong></td>
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<tr>
<td>Decrease</td>
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<td>0.80 (0.71 to 0.91)</td>
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<tr>
<td>Maintain</td>
<td></td>
<td>0.67 (0.53 to 0.84)</td>
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<tr>
<td>Increase</td>
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<td>0.58 (0.43 to 0.78)</td>
</tr>
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</table>
PAEE = 5 kJ/kg/day
Meeting WHO minimum physical activity guidelines
(150 mins/week of moderate-intensity physical activity or equivalent)

- Brisk walk (5 km/h ~ 4.5 METs)
- Heavy cleaning or repair work (~ 3.5 METs)
- Walking dog (~ 3 METs)
- Light gardening (~ 2.5 METs)

PAEE = 10 kJ/kg/day
Meeting WHO recommendations for additional health benefits
(300 mins/week of moderate-intensity physical activity or equivalent)

- Run (15 km/h ~ 14 METs)
- Sports (eg, casual tennis ~ 8 METs)
- Light jog (6 km/h ~ 6 METs)
- Shoveling (moderate effort ~ 5 METs)
Effects of Multicomponent Exercise on Frailty in Long-Term Nursing Homes: A Randomized Controlled Trial

Haritz Arrieta, PhD,* Chloe Rezola-Pardo, MSc,* Susana M. Gil, PhD,* Janire Virgala, MSc,† Miren Iturburu, MSc,‡ Iván Antón, MD,§ Vanessa González-Templado, BSc,§ Jon Irazusta, PhD,* and Ana Rodríguez-Larrad, PhD*
RCT of a 6 month multicomponent moderate intensity exercise intervention in nursing home residents

n=112

After one year:
• Lower prevalence of frailty in intervention group
• Maintained level of ADL functioning
• Fewer falls
• Lower mortality
Conclusions

To optimize care for our older patients, we need to:
- Assess their priorities and align care
- Consider frailty as a dynamic process resilience
- Stimulate physical activity at all ages and irrespective of current activity level
Standing more at work

Favourable outcomes for:
• Job performance
• Work engagement
• Occupational fatigue
• Daily anxiety
• Quality of life

BMJ 2019;363:k3870