



Elderly Surviving Cancer – What’s Next?

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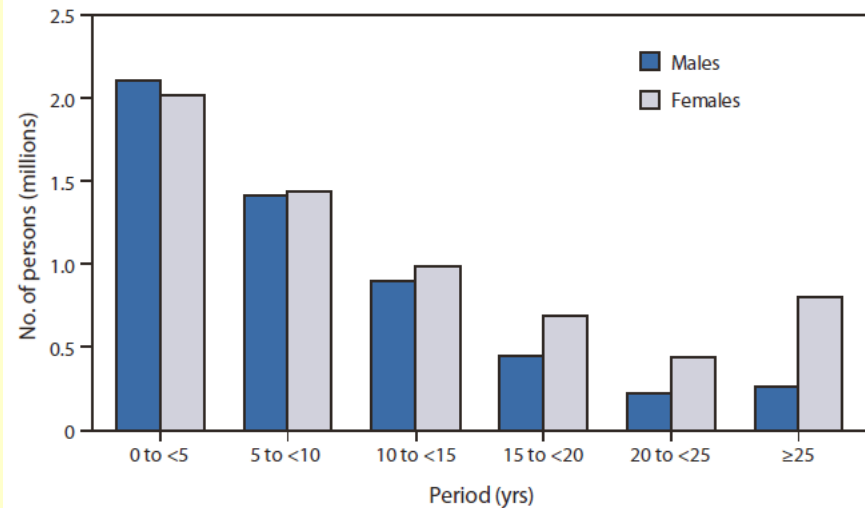
No financial conflicts of interest

Content – Elderly Cancer Survivorship

- Introduction
- Morbidity:
 - Characteristics
 - Self-reported receipt of care
- Cancer Survivorship Care
 - USA
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- Summary

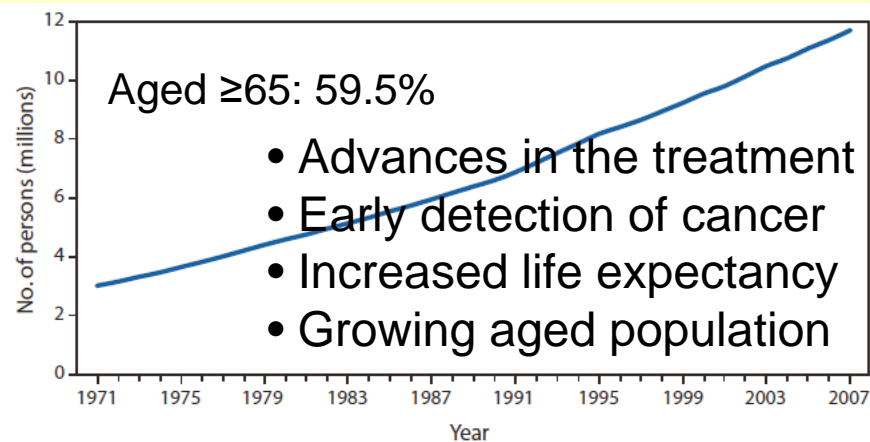


Estimated Number of Cancer Survivors



CDC Morbidity and Mortality Weekly Report (MMWR) – March 11, 2011

Estimated Number of Cancer Survivors



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<http://www.cdc.gov/cancer/survivorship/>

What Are the Implications for Public Health Practice?

“The increasing number of cancer survivors underscores the need for medical and public health professionals to:

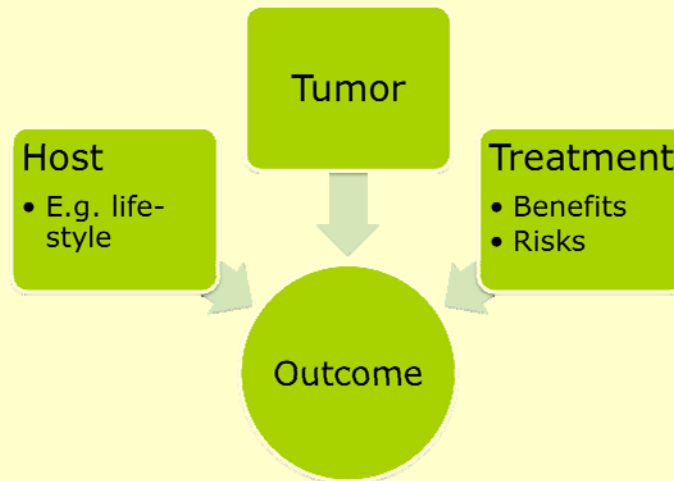
- Address the potential long-term and late effects of cancer on survivors' physical and psychosocial well-being,
- Provide survivors with coordinated care,
- Promote the importance of:
 - Healthy behaviors (e.g., smoking cessation and physical activity) to reduce the risk for new or recurrent cancer
 - Early detection to increase the likelihood of survival with new or recurrent cancer”

CDC Morbidity and Mortality Weekly Report (MMWR) – March 11, 2011

Cancer Survivorship Awareness

- Started only a few years ago
- Momentum maintained by united effort of:
 - American Cancer Society
 - American College of Surgeons
 - Institute of Medicine
 - Legislature
 - **LIVESTRONG**
 - NIH-NCI Survivorship Office
 - Many more.....

Determinants of Cancer Survivor's Outcomes



Goodwin et al. JCO 2010; 28:4019

Morbidity - Characteristics



Treatment to Reduce Risk of Cancer Recurrence

- Local therapy:
 - Surgery
 - Radiation
- Adjuvant systemic therapy:
 - Chemo
 - Endocrine/hormonal
 - Targeted or biological, e.g.
 - Breast: trastuzumab (Herceptin®)
 - GIST/CML: imatinib (Gleevec®)
 - Lung cancer: pemetrexed (Alimta®)
 - Melanoma: interferon alpha



www.nccn.org

<http://www.livestrong.org/What-We-Do/Our-Approach/Reports-Findings>



HOW CANCER HAS AFFECTED POST-TREATMENT SURVIVORS: A LIVESTRONG REPORT
FINAL REPORT

LIVESTRONG

LIVESTRONG 2010 Survey

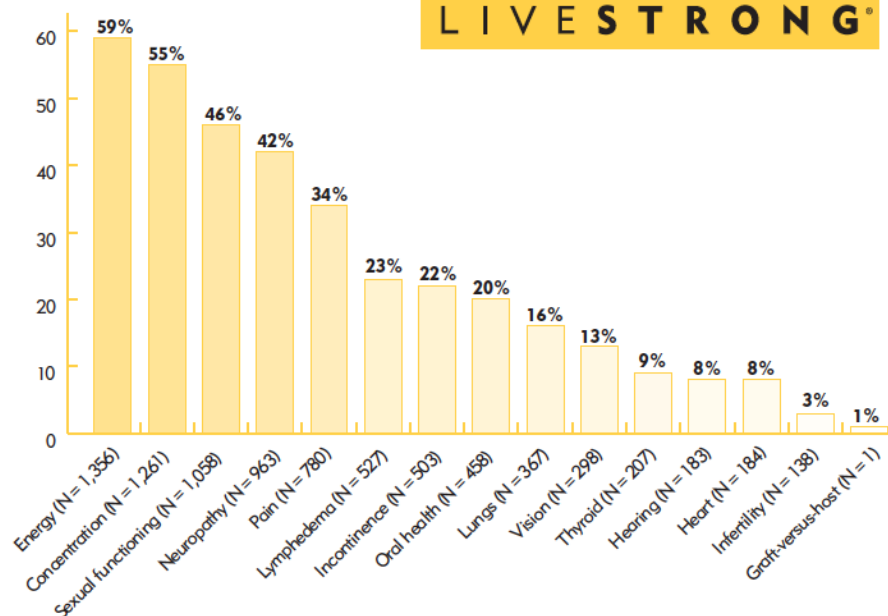
□ N=2307

- Female: 67%
- White: 92%
- Top 6 cancers: breast, prostate, colorectal, gynecologic, hematologic, urinary tract
- Treatment:
 - Surgery: 76%
 - Chemotherapy: 69%
 - Radiation: 56%

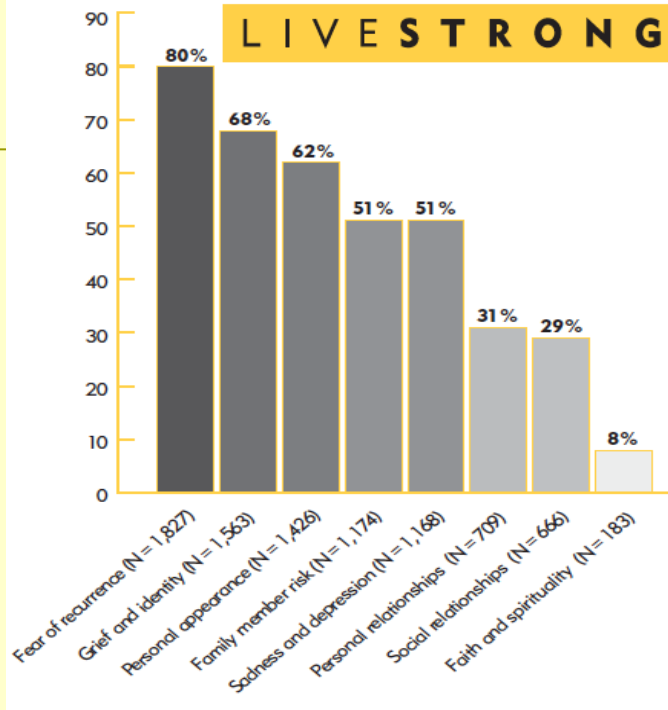
Age Categories	%
<20	5
20-34	20
35-44	30
45-54	30
55-64	12
65-74	3
75-84	0.2
85+	0
Total	100

□ Reported 14 physical and 8 emotional concerns (new onset after cancer dx)

Physical Symptoms



Emotional Symptoms



LIVESTRONG® 2010 Survey Breast Cancer Survivors on AET

- 1098 breast cancer survivors:
 - 42% taking adjuvant endocrine therapy (AET)

- Women on AET (vs. not) significantly more concerns:
 - Physical ($\beta=0.37$, $SE=0.15$; $p=0.01$)
 - Emotional ($\beta=0.33$, $SE=0.14$; $p=0.02$)
 - Sexual dysfunction, fatigue, physical appearance (all $p<0.01$)
 - Emotional distress, recurrence fears (both $p<0.05$)

- Less than ½ of survivors on AET with concerns received help

G van Londen et al., preliminary data

Symptoms Among Elderly Cancer Survivors (ECS)

□ Differences:

- ECS vs. age-matched controls:

Self-Rated Health (OR)	Comorbidity	Symptoms (emotional & + physical)	Functional Problems (OR)
↓ (~2) ^{1, 2, 6}	=1 / ↑ ⁵	=1 / ↑ ^{2, 3, 7}	↑ (~1.5) ^{1, 4}

- Short- (< 5 yrs) vs. long-term (≥ 5 yrs) ECS:
 - Prolonged sx consistently present (regardless of tumor type/treatment)^{1, 8}

□ Why inconsistencies in symptom-reporting?

- Few data, population-based, wide age-range
- Possible confounders: comorbidity, multifactorial and time-dependent etiologies, rapid adaptation, time since diagnosis vs. treatment, measurement error

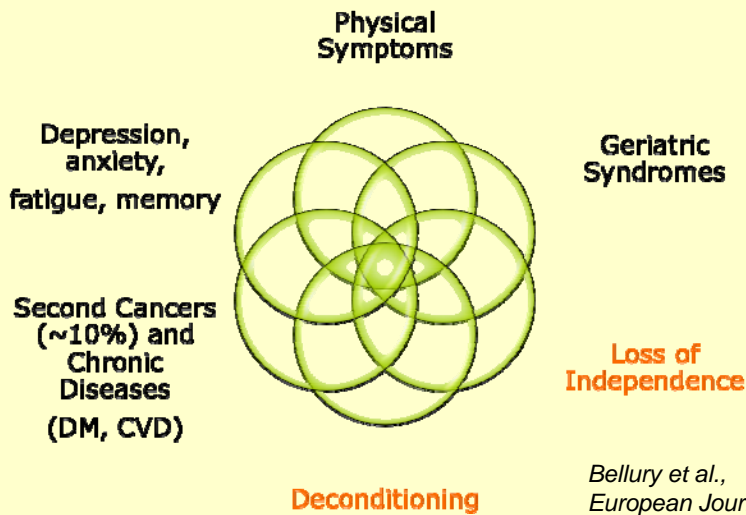
¹Grov,'11, ²Mehnert,'08, ³Beck,'09, ⁴Sweeney,'06, ⁵Smith,'08, ⁶Yabroff,'04, ⁷Roy,'09, ⁸Harrington,'10

Prevalence of Geriatric Syndromes

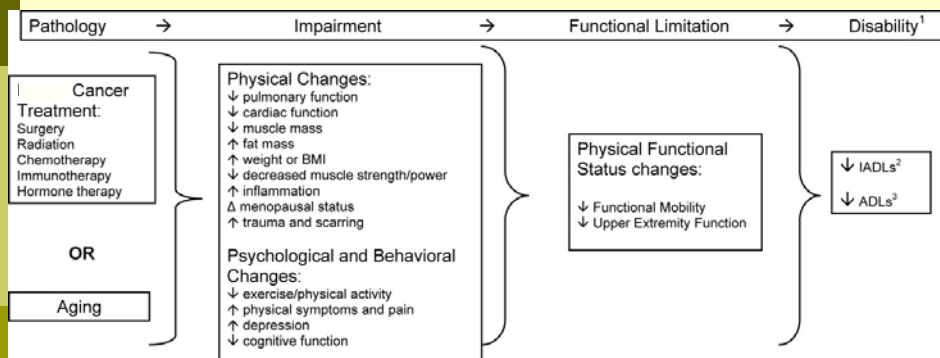
Syndrome	Cancer (n = 2,349)		No Cancer (n = 10,131)		P
	No.	%	No.	%	
Sight trouble	187	7.37	706	6.17	.0585
Hearing trouble	205	7.81	682	6.05	< .001
Eating problem	277	11.24	1,102	10.38	.1970
Memory loss/dementia	288	11.55	1,190	10.56	.1773
Incontinence	375	15.57	1,220	11.10	< .001
Osteoporosis	593	24.33	2,103	19.84	< .001
Depression	614	26.10	2,481	23.80	.039
Falls	643	26.37	2,318	21.91	< .001

*Weighted prevalence, χ^2 tests.

The Many Challenges of Elderly Cancer Survivors



Intersection of Cancer and Aging



1. Conceptual model originally presented by Nagi et al.
2. IADLs, instrumental activities of daily living.
3. ADLs, activities of daily living.

Physical Activity

L I V E S T R O N G[®]

- 25% of respondents indicated a decrease

- Reasons:
 - Fatigue: 21%
 - Pain: 13%
 - No time: 5%
 - Unsure what exercise level is appropriate: 4%
 - Worried about possible injury: 4%

<http://www.cancer.gov/cancertopics/factsheet/Risk/obesity>
Calle et al., NEJM 2003; Goodwin et al., ASCO 2004; McTiernan et al., JCO 2010
www.acsm.org

Health Limitations Among Cancer Survivors \geq 11 Yrs Since Dx

	Cancer Survivor Subjects (% , CI)	Matched Control Subjects (% , CI)
Age \geq 65	50.8	49.8
Needs help with activities of daily living*	5.7 (3.5 to 7.9)	3.0 (2.0 to 3.9)
Needs help with instrumental activities of daily living*	11.8 (8.8 to 14.7)	7.0 (5.4 to 8.5)
Any limitation in any way*	36.3 (31.4 to 41.1)	23.5 (21.0 to 26.0)

National Health Interview Survey - Yabroff et al., JNCI 2004;96:1322

Age-, gender-, and educational attainment-matched controls by time since diagnosis

* All $p < 0.05$

Summary

Elderly Cancer Survivors & Morbidity Characteristics



Elderly Cancer Survivors (ECS) Summary – Morbidity Characteristics

- ❑ ~ 2/3 of all cancer survivors are aged 65+
- ❑ Impending increase of ECS
- ❑ ECS may be at increased risk of comorbidities, multiple cancers, geriatric syndromes, deconditioning, loss of independence
- ❑ Idem ditto for (a subset of) younger cancer survivors
- ❑ May benefit from pro-active, patient-centered, comprehensive, 'geriatric medicine' approach

Morbidity – Self-Reported Receipt of Care



L I V E S T R O N G

Care for Physical Symptoms

- 65% reported that:
 - All/many of their needs were met
 - Most frequently selected providers: medical specialists, primary care physicians, oncologists

- Lack of care:
 - Top-5 concerns: concentration, sexual functioning, incontinence, neuropathy, energy
 - Most common reasons:
 1. 'I have learned to live with this concern'
 2. 'I was told it was a side effect that would go away with time'
 3. 'I have addressed this on my own'

Care for Emotional Symptoms

- 68% reported that:
 - All/many of their needs were met
 - Most frequently selected providers: friends, family members, psychiatrists

- Lack of care:
 - Top-5 concerns: faith & spirituality, social and personal relationships, grief, and identity
 - Most common reasons:
 1. 'I have learned to live with this concern'
 2. 'I have addressed this on my own'
 3. 'I did not want to receive help'

RELIEF Study - Part I

Breast Cancer Survivors on AET

- Focus groups - commonly identified themes:
 - Both survivors and providers expressed the need for an increase and improvement of educational and clinical resources to support survivors' needs
 - Survivors, aged >50, noted that they:
 - Did not always know which of their providers would be suitable to address their symptoms
 - Often felt that their providers did not have sufficient time to address their needs or know how to manage their symptoms efficiently and appropriately

RELIEF Study, Parts II/III

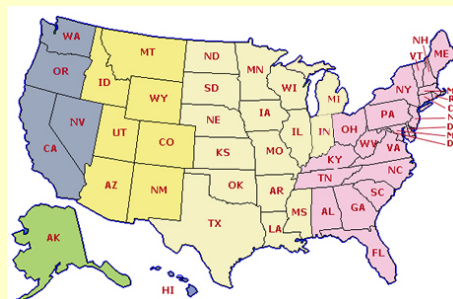
Breast Cancer Survivors on AET

- To develop and evaluate the feasibility and preliminary effectiveness of a remotely, nurse administered intervention
 - Who: symptomatic breast cancer survivors on AET
 - What:
 - Improve self-management
 - Facilitate problem identification
 - Provide:
 - Education about symptoms/treatment options
 - Coaching to allow selection of individualized tx
 - Referral/navigation services

G van Londen et al., data-collection ongoing

Cancer Survivorship Care

USA



Benefits - Cancer Survivorship Program

- Patients:
 - Timely, evidence-based, comprehensive, multidisciplinary, integrated, accessible care to promote high quality, long-term survivorship
- The Health Plan:
 - More appropriate (+ reduced) health utilization
 - Implementation of non-physician providers
- Oncologists and primary care physicians:
 - Help manage growing # of survivors
 - Future wRVU based on quality/team work
- Scientists:
 - Easier access to survivors to facilitate recruitment

Models of Survivorship Programs

- Many options given lack of evidence:
 - Method: face-to-face, telemedicine, automated, ...
 - Health care provider(s):
 - General internal medicine, hematology/oncology, ...
 - MD, nurse practitioner, physician assistant, nurse, ...
 - Multidisciplinary: psychologist, dietitian, PT, ...
 - Timing: consultative, integrated/shared-care, transition visit, ongoing care, ...
 - Focus: prevention (health-behavior/maintenance), intervention, surveillance, coordination

Grunfeld et al., JCO '06, JNCIM '10, JOP '10; Shulman et al., JOP '09; O'Toole et al., JAGS '09; Earle et al., JCO '03; Snyder et al., JGIM '09, JCO '09; Erikson et al., JOP '09; Shapiro et al., J Cancer Surviv '09.

Five Essential Elements of Care September 2011 Washington DC

- TIER 1: CONSENSUS ELEMENTS
- All medical settings **MUST** provide direct access to or referral to the following elements of care:
 - Survivorship care plan, psychosocial care plan & treatment summary
 - Screening for new cancers, surveillance for recurrence
 - Care coordination strategy
 - Health promotion education
 - Symptom management & palliative care

Manuscript in preparation

L I V E S T R O N G[®]



Cancer Survivorship Program

Univ. of Pittsburgh



Cancer LiveWell Survivorship Clinical Efforts

- What?
 - Prevention (health-maintenance/behaviors), intervention, coordination
- How?
 - Consultative, one-stop principle: dietitian, medical oncologist, physical therapist, psychologist
 - Referral to specialists (MD and non-MD)
- Who?
 - Non-metastatic cancer survivors who have completed active therapy (except for long-term therapies) and their providers

Cancer LiveWell Survivorship Educational and Research Efforts

- | | |
|--|---|
| <ul style="list-style-type: none">□ Education - examples:<ul style="list-style-type: none">■ One-on-one■ Peer support groups■ Lectures, conferences | <ul style="list-style-type: none">□ Research - examples:<ul style="list-style-type: none">■ Biobehavioral■ Complementary medicine■ Exercise■ Health-informatics■ Metabolism■ Symptom management |
|--|---|



Summary

Elderly Cancer Survivorship Care

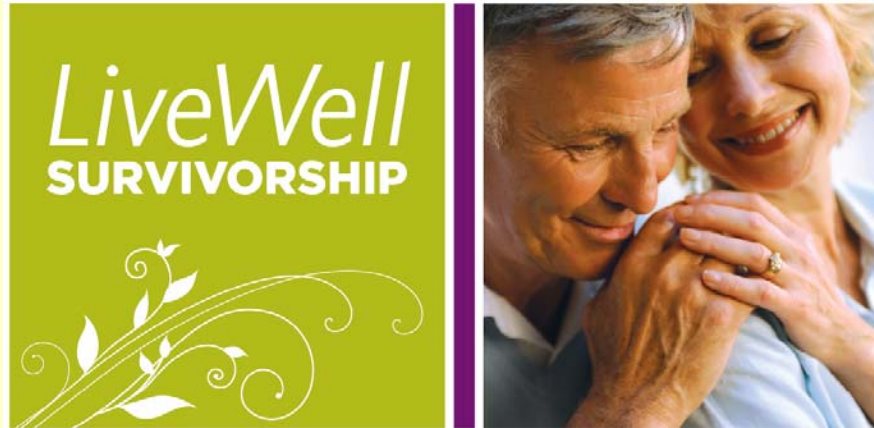


Elderly Cancer Survivorship Care Summary

- Not one perfect model
 - Care components: prevention (health-maintenance/behaviors), surveillance, (multi-disciplinary) intervention, coordination

- Need for more evidence, e.g.:
 - Descriptive: time-dependent changes of symptoms and their multifactorial etiologies
 - Comparative/cost effectiveness: care models and elements that will allow patient-centeredness, community outreach, financial sustainability
 - Therapy ↔ prevention
 - Elderly (and young at risk)

Cancer LiveWell Survivorship Program
Hillman Cancer Center



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