

A green apple is positioned in the upper left corner. A pink measuring tape is coiled around the apple and extends across the frame, with its end forming a large loop on the right side. The tape features white markings and red numbers. The background is a plain, light-colored surface.

Updated Evidence in Support of Diet and Exercise Interventions in Cancer Survivors

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Learning Objectives

- Acquire knowledge on the current diet and exercise guidelines for cancer prevention and control and evidence that supports them
 - During Active Treatment
 - Once Curative Treatment is Complete
- Appraise strategies to promote healthful lifestyle behaviors among patients and determine if they can be incorporated into your work flow
- Recognize available resources that can be useful in promoting healthful lifestyle behaviors among patients

During Active Treatment

Exercise, Diet, and Weight Management During Cancer Treatment: ASCO Guideline

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J Clin Oncol 40:2491-2507. © 2022 by American Society of Clinical Oncology

Reviewed 52 systemic reviews and 23 RCTs ~3/4 's of source documents were exercise related

1) Does exercise during cancer treatment safely improve outcomes related to QoL, treatment toxicity, or cancer control?

- Providers should Rx aerobic and resistance exercise (Strength of Rx: Strong)
 - Preserves cardiorespiratory fitness, physical function and strength
 - ↓ Fatigue, as well as anxiety, depression in some populations
 - ↑ QoL in some populations
- Providers may Rx preoperative exercise for lung cancer patients undergoing surgery (Strength of Recommendation: Weak)
 - ↓ Post-operative complications and length of hospital stay

During Active Treatment

2) Does consuming a particular dietary pattern or food(s) during cancer treatment safely improve outcomes related to QoL, treatment toxicity, or cancer control?

- Insufficient evidence to Rx for or against dietary interventions such as ketogenic or low-carbohydrate diets, low-fat diets, functional foods, or fasting to improve outcomes.
- Neutropenic diets (i.e., exclusion of raw fruits and vegetables) NOT Rx (Strength of Rx: Weak).

3) Do interventions to promote intentional weight loss or avoidance of weight gain during cancer treatment safely improve outcomes related to QoL, treatment toxicity, or cancer control?

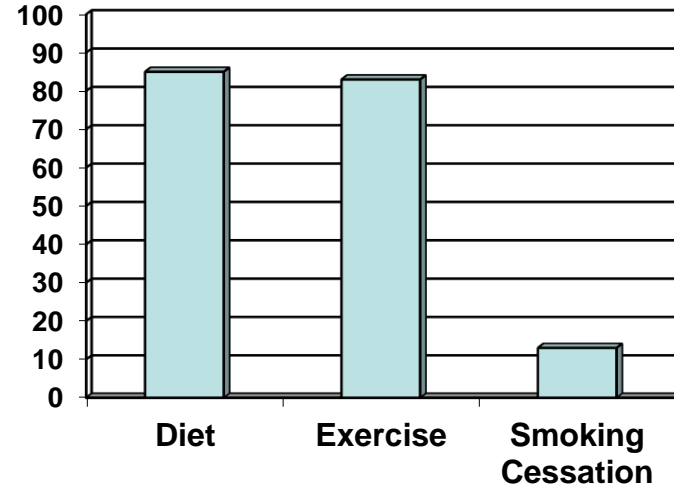
- Insufficient evidence to Rx for or against intentional weight loss or prevention of weight gain

Lack of evidence was a call to conduct more diet-related research – should not be interpreted as discouraging clinicians from discussing healthy diet and weight with their patients

Patients diagnosed with Cancer are interested in making Lifestyle Changes

988 Breast and Prostate Cancer Survivors

Demark-Wahnefried et al. *Cancer*. 88:674-84, 2000.



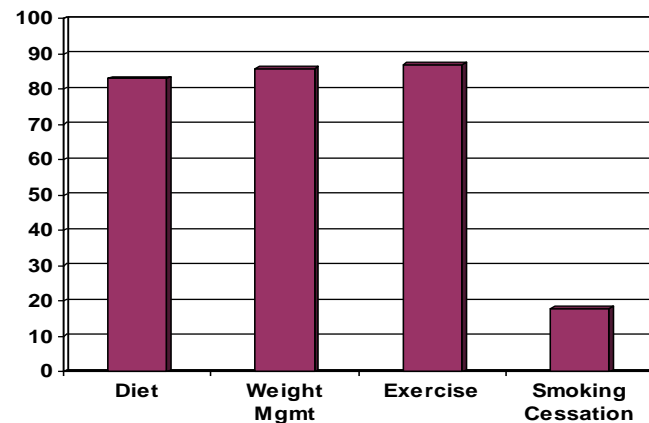
2022

Counseling should begin ASAP after diagnosis to...

- avoid nutrient deficiencies
- preserve muscle mass
- tolerate and respond to treatment
- manage side effects
- prevent chronic disease

216 Teenage and Young Adult Cancer Survivors

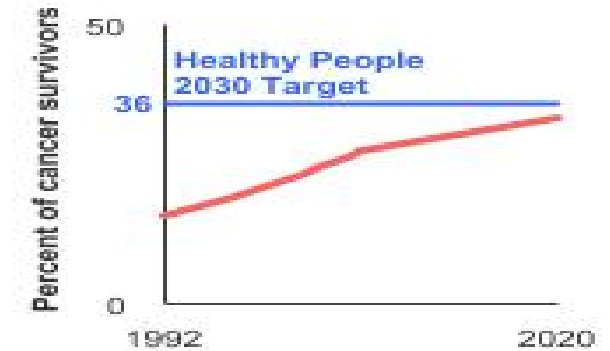
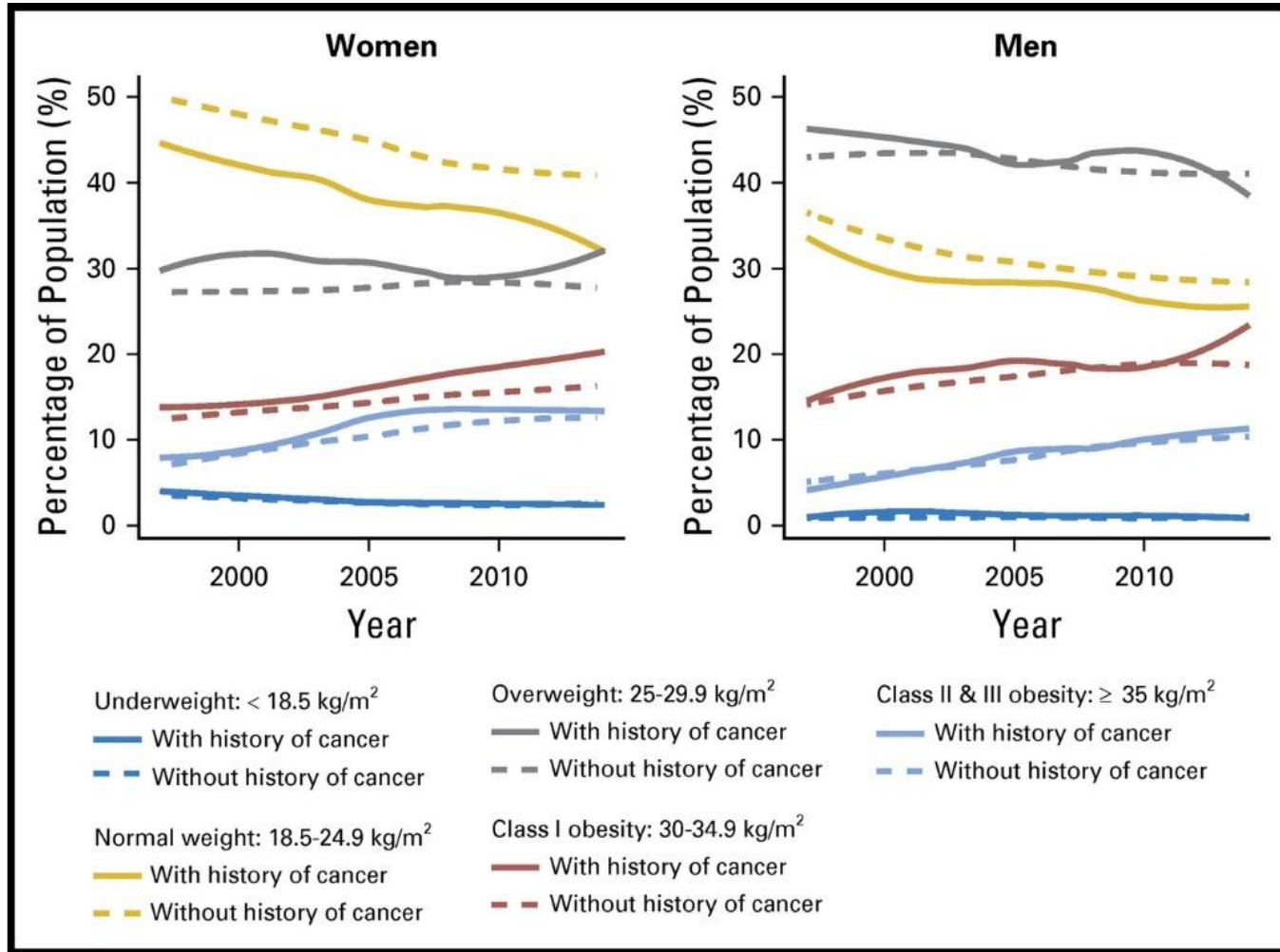
Pugh G et al. *J Adolesc Young Adult Oncol*. 6:318-26, 2017.



Guidelines for Diet & Physical Activity for Cancer Prevention & Control

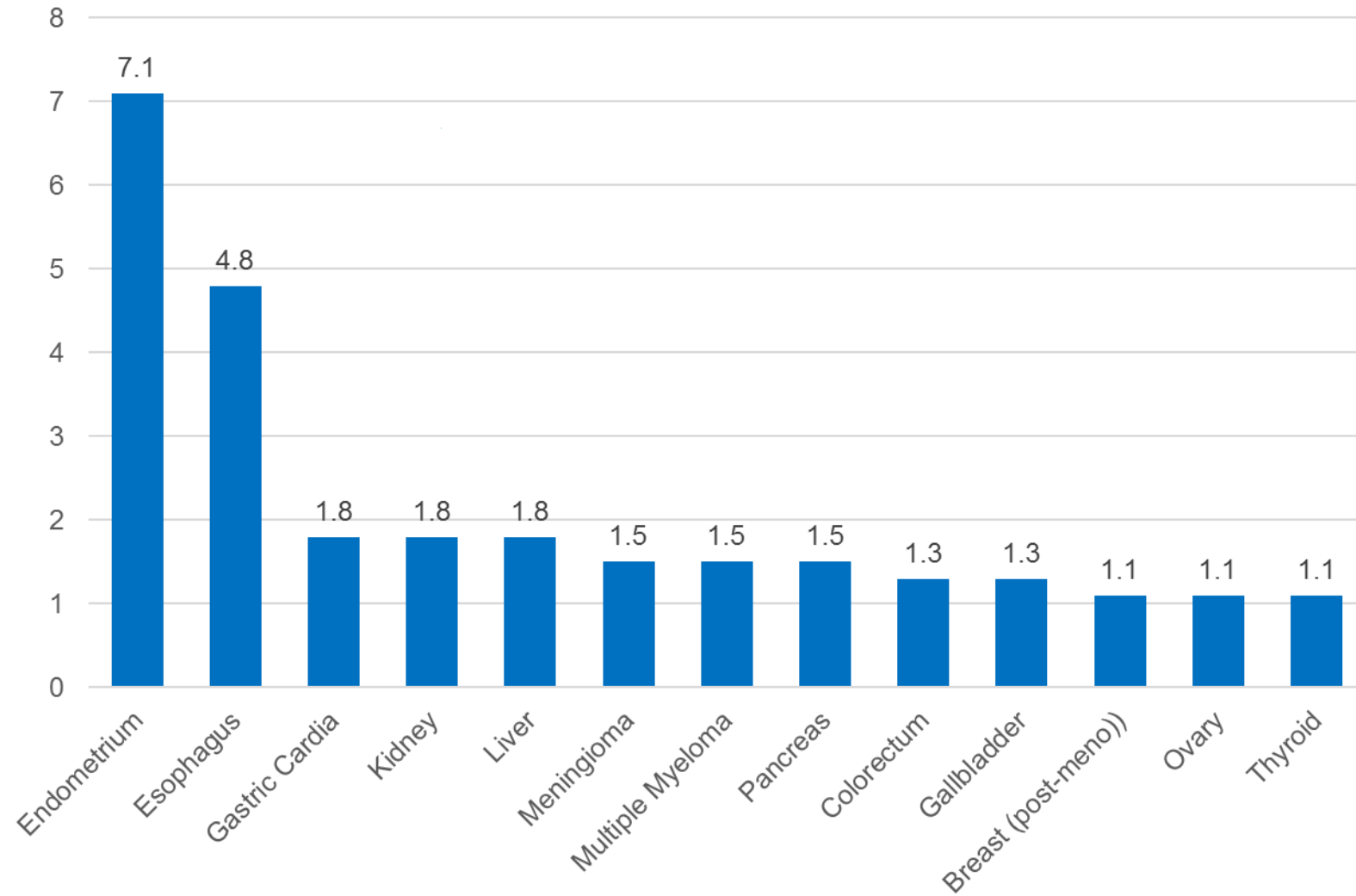
	WCRF- AICR (2018)	American Cancer Society (2020/2022)
Weight	Be a healthy weight (avoid weight gain in adulthood)	Achieve & maintain a healthy weight throughout life
Physical Activity (PA)	Be physically active	Be physically active (150-300 min w ⁻¹ moderate PA or 75-150 min w ⁻¹ vigorous PA). Limit sedentary behavior.
Dietary Pattern	<p>Eat a diet rich in whole grains, vegetables, fruits and beans (prudent diet)</p> <p>Limit</p> <ul style="list-style-type: none"> • Fast foods” and other processed foods high in fat, starches or sugars • Red & processed meats (12-18 oz/week) • Sugary drinks 	<p>Follow a healthy eating pattern at all ages</p> <ul style="list-style-type: none"> • High nutrient foods in amts to achieve a healthy wt; • A variety of dark green, orange or red vegetables, legumes (beans and peas), and others; • Fruits, especially whole fruits in a variety of colors; and • Whole grains. <p>Limit or avoid</p> <ul style="list-style-type: none"> • Red and processed meats; • Sugar-sweetened beverages; or • Highly processed foods & refined grains
Alcohol	Limit alcohol. If drink limit to 1-2 drinks/day	Best not to drink alcohol

Obesity Rates in Adult Cancer Survivors & General Population

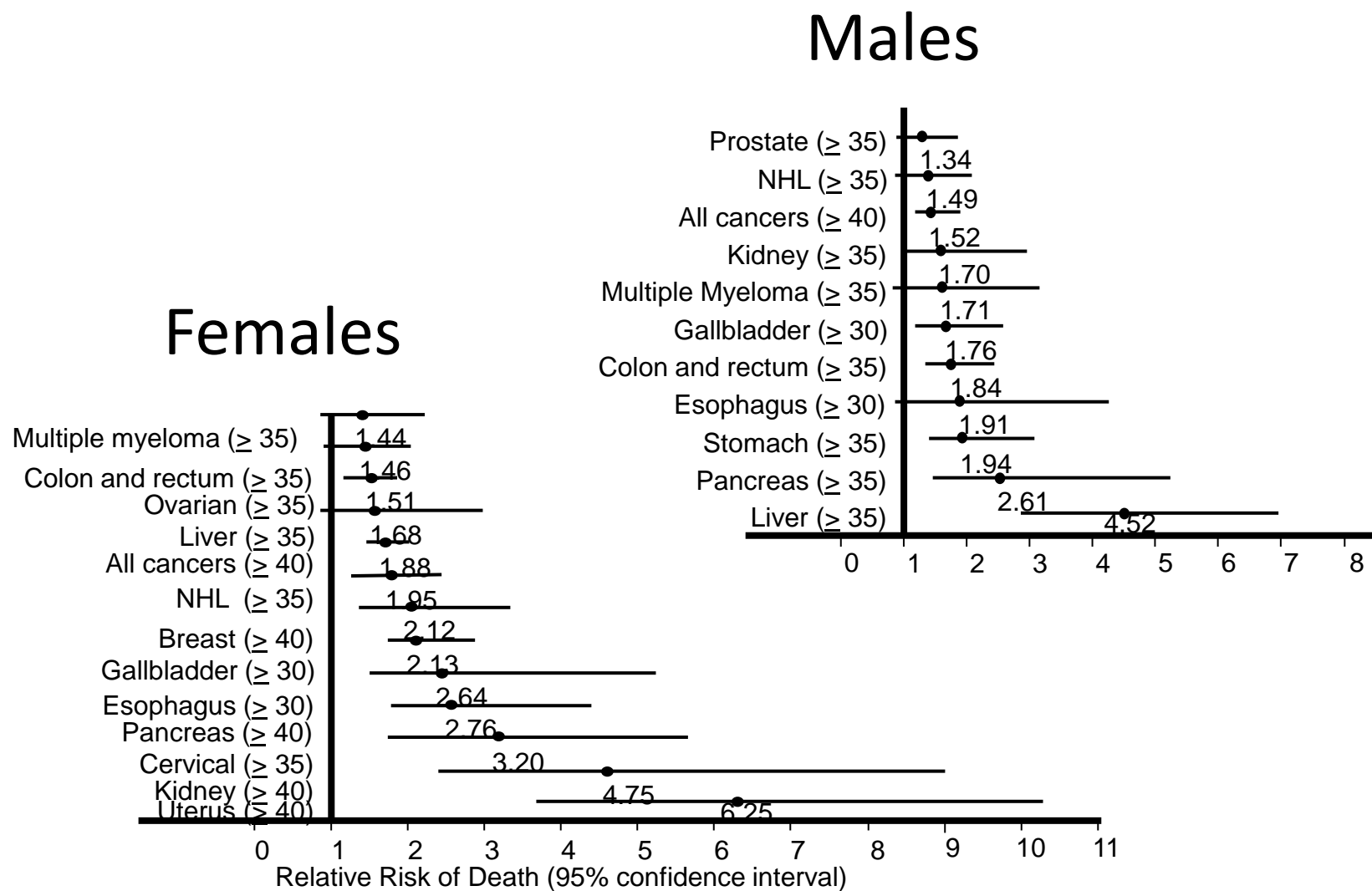


Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey, 1992–2015

Obesity and Relative Risk of Cancer



Obesity and Cancer-related Mortality



Prognostic Effects of Weight Gain Among Individuals with Breast and Prostate Cancer: Results of 2 Meta-Analyses

Group (year)	# of studies	Sample	RR (95% CI) for every 5 kg/m ² increase in BMI from pre- to post-dx
Chan et al. (2014)	82	213,075 women with breast cancer	<u>Breast CA Specific Mortality</u> 1.29 (0.97-1.72) <u>Total Mortality</u> 1.08 (1.01-1.15)
Cao & Ma (2011)	6 cohort	18,203 men with prostate cancer	<u>Biochemical Recurrence</u> 1.21 (1.11-1.31) <u>Prostate CA Specific Mortality</u> 1.20 (0.99-1.46)

Purposeful Weight Loss Improves Survival in the General Population

Group (year)	# of studies	Sample	Risk Ratio for All Cause Mortality
Ma et al. (2017)	54 RCTs	30,206 adults with obesity	0.82 (95% C.I. 0.71 – 0.95)

But...

Will purposeful weight loss improve cancer-related outcomes and survival in populations with cancer?

We DO know that large RCTs will yield survival outcomes soon

Lifestyle Intervention for oVarian cancer Enhanced Survival



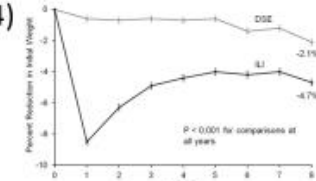
- NCI and NRG (GOG) Clinical Trial
- 1205 stage II-IV ovarian cancer survivors; 6 wk-6 mos post-primary therapy
- 24 month lifestyle intervention
- Centralized telephone-based intervention
- Low fat, high F&V, high fiber, +4000 step/day vs health information control
- Primary endpoint: Progression-free survival – results 2022

Thomson CA, et al. *Contemp Clin Trials* . 2016;49:181.

Breast Cancer Weight Loss Trial (BWE)



- NCI and Alliance for Clinical Trials in Oncology
- 3181 women with Stage II/III Breast Cancer from 49 US States and 7 Canadian provinces
- 2-year
- Telephone counseling with Fitbit/Aria scale tracking
- Apply Look AHEAD & telephone counseling of LISA trial
- Event driven analysis (results anticipated 2024)
- Interim analysis: Intervention arm experienced at least a 4% weight loss from baseline



Ligibel JA, et al. *NPJ Breast Cancer*. 2017;3:37.

Also may obtain insights from:

PREDICOP (n=2,108 pre/post-menopausal, Stage Ic-IIIa breast cancer within 3 months of primary treatment)

SUCCESS-C (n= 2,292 pre/post-menopausal breast cancer within 6 weeks post-surgery)

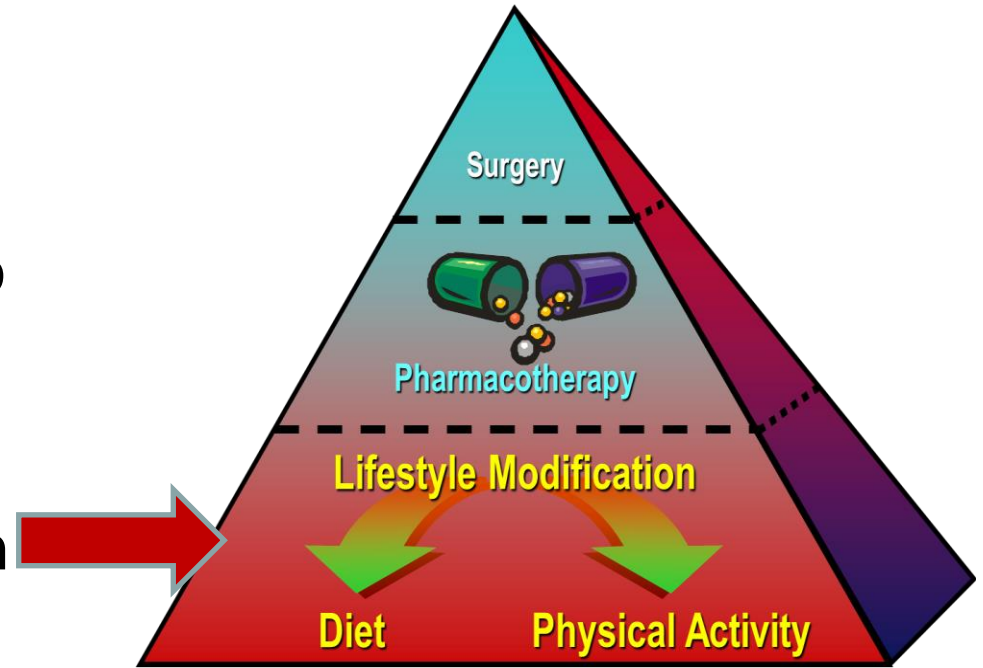


What DO we know from Cochrane Reviews of Weight Loss Interventions among Cancer Survivors

Group (year)	# of studies (sample)	Interventions	Findings
Shaikh et al. (2020)	20 RCTs in a total of 2,028 breast cancer survivors	Diet \pm exercise \pm behavior modification 6-24 months Follow-up 3-36 months	<ul style="list-style-type: none"> No increase in adverse events MD in weight -2.25 kg; 95% CI -3.19 to -1.3 MD in waist girth -1.73 cm; 95% CI -3.17 to -0.29 Multimodal interventions resulted in greater weight loss -2.88 kg; 95% CI -3.98 to -1.77 SMD in QoL 0.74; 95% CI 0.20 to 1.29 No effect on anxiety and depression TG MD -0.26 nmol L⁻¹ 95% CI -0.45 to -0.07 Leptin MD -14.67 ng mL⁻¹ 95% CI -26.36 to -2.98 No differences for insulin, glucose, cholesterol, HDL Insufficient data for E2, T, IGF1, adiponectin, IL6, CRP, TNFα
Kitson et al. (2018)	3 RCTs in a total of 161 endometrial cancer survivor	Diet + exercise + behavior mod. 6-12 months Follow-up 12 months	<ul style="list-style-type: none"> No increase in serious adverse events MD in weight -1.88 kg; 95% CI -5.98 to 2.21 MD in QoL 2.51; 95% CI -5.61 to 10.64 Musculoskeletal symptoms RR 19.03; 95% CI 1.17 to 310.52

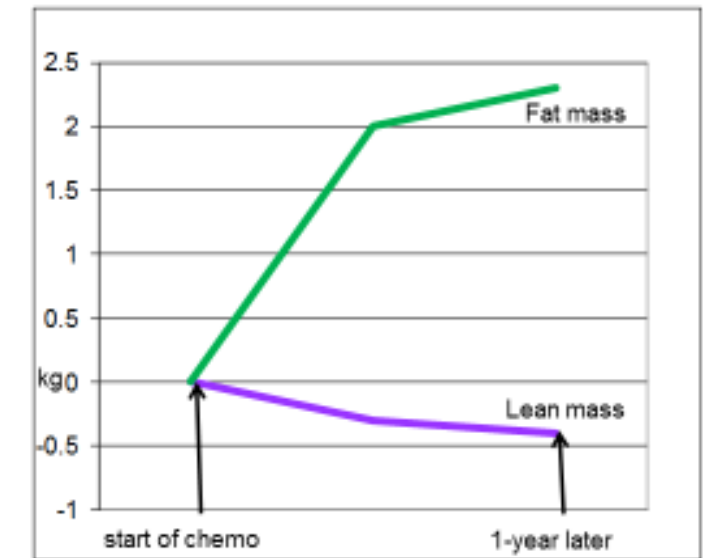
We DO know Guidelines for Management of Overweight and Obesity in the General Population

- Loss of as little as 3% of body weight associated with health benefit
- Weight loss of up to 2 pounds/week in adults (go slower in younger AND older populations)
- Energy restriction(1200–1800 kcal/day) increased physical activity, behavior modification
- No recommendation regarding distribution of carbohydrate, fat and protein
- Self-monitoring: Weighing everyday, keeping a food and exercise log/journal, electronic devices



But, we DO know that Weight Control differs for Cancer Survivors

- Weight gain common side effect with chemo- and hormonal therapy for breast cancer, hormonal therapy for prostate cancer, and among children treated for ALL and brain cancer (lower brain XRT)
- Retention rates significantly higher: 71-100% in survivors vs. 53-65% in general population
- Cancer survivors have significantly worse diets, i.e., higher empty calories, lower diet quality (high sodium, saturated fat, & lower calcium and fiber), yet heightened concerns re: foods, food additives, pesticides
- Survivors often receive negative feedback re: weight loss.
- Cancer survivors have additional concerns:
 - comorbidity
 - osteoporosis
 - fatigue
 - cardiotoxicity
 - neurotoxicity
 - GI/alimentary tract symptoms
 - adverse body change: sarcopenic obesity
- 10% Weight loss may be necessary to affect cancer pathways



Demark-Wahnefried W et al. J Clin Oncol. 19:2381 2001.

To Date, Diet Composition findings appear to track with General Guidelines

6-month Low fat (<24 g/d) vs Low Carb (<76 g/d) Weight Loss Diets

Thomson et al. (n=43)

- 93% retention
- Average loss: 7.3% BW
- No between-group differences in weight, glucose, insulin, HbA1c, HOMA, total or HDL cholesterol, BP or hsCRP
- TG significantly lower in low CHO group ($p=0.01$)

Thompson et al. (n=249)

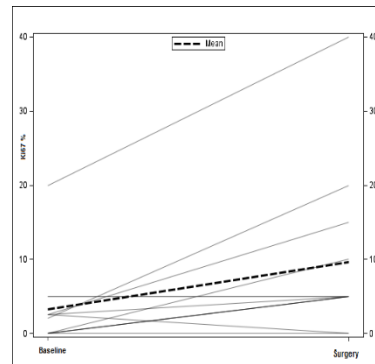
- 77% retention
- Average loss: 12.5% BW
- No between-group differences in weight, total, LDL or HDL cholesterol
- TG significantly lower in low CHO group ($p=0.01$)



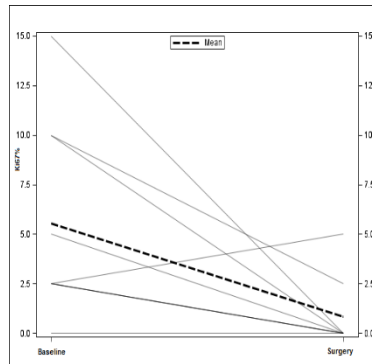
Thomson CA et al. *Nutr Cancer* 2010
Thompson HJ et al. *Breast Cancer Res* 2012
Thompson HJ et al. *PLOSOne* 2015

We DON'T know optimal rates of weight loss, but we DO see some unsettling data from presurgical trials in prostate cancer

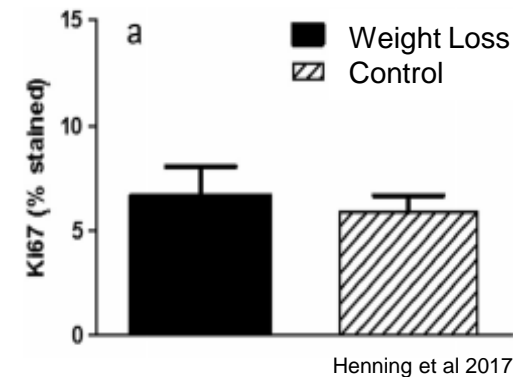
More rapid weight loss (1.5 vs. 0.69 pounds/week), especially with suboptimal physical activity is associated with higher tumor proliferation rate (Ki67) in 2 presurgical RCTs in men with prostate cancer



Weight Loss Arm
(weight loss 1.5 lb w⁻¹)



Control Arm
(weight loss 0.69 lb w⁻¹)



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Effects of Exercise on Health-Related Outcomes in Those with Cancer

What can exercise do?

- **Prevention of 7 common cancers***

Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise







- **Survival of 3 common cancers****

Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction

*bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers

**breast, colon and prostate cancers

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

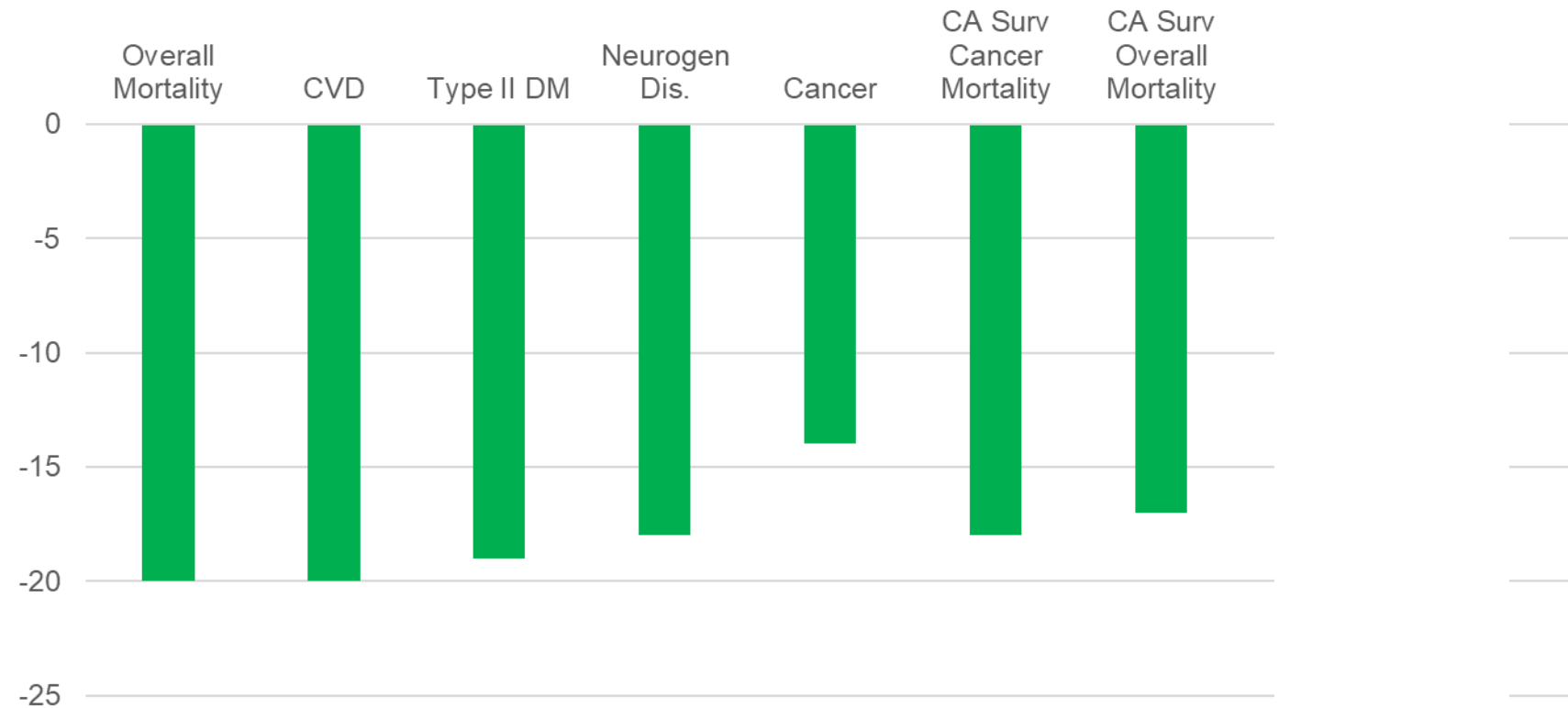
Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
Strong Evidence	Dose	Dose	Dose
 Cancer-related fatigue	3x/week for 30 min per session of moderate intensity	2x/week of 2 sets of 12-15 reps for major muscle groups at moderate intensity	3x/week for 30 min per session of moderate aerobic exercise, plus 2x/week of resistance training 2 sets of 12-15 reps for major muscle groups at moderate intensity
 Health-related quality of life	2-3x/week for 30-60 min per session of moderate to vigorous	2x/week of 2 sets of 8-15 reps for major muscle groups at a moderate to vigorous intensity	2-3x/week for 20-30 min per session of moderate aerobic exercise plus 2x/week of resistance training 2 sets of 8-15 reps for major muscle groups at moderate to vigorous intensity
 Physical Function	3x/week for 30-60 min per session of moderate to vigorous	2-3x/week of 2 sets of 8-12 reps for major muscle groups at moderate to vigorous intensity	3x/week for 20-40 min per session of moderate to vigorous aerobic exercise, plus 2-3x/week of resistance training 2 sets of 8-12 reps for major muscle group at moderate to vigorous intensity
 Anxiety	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
 Depression	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
 Lymphedema	Insufficient evidence	2-3x/week of progressive, supervised, program for major muscle groups does not exacerbate lymphedema	Insufficient evidence

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Supplements	Do not rely on supplements	

How Important is Diet Quality?

Meta-analysis of 113 studies including 3,277,684 people





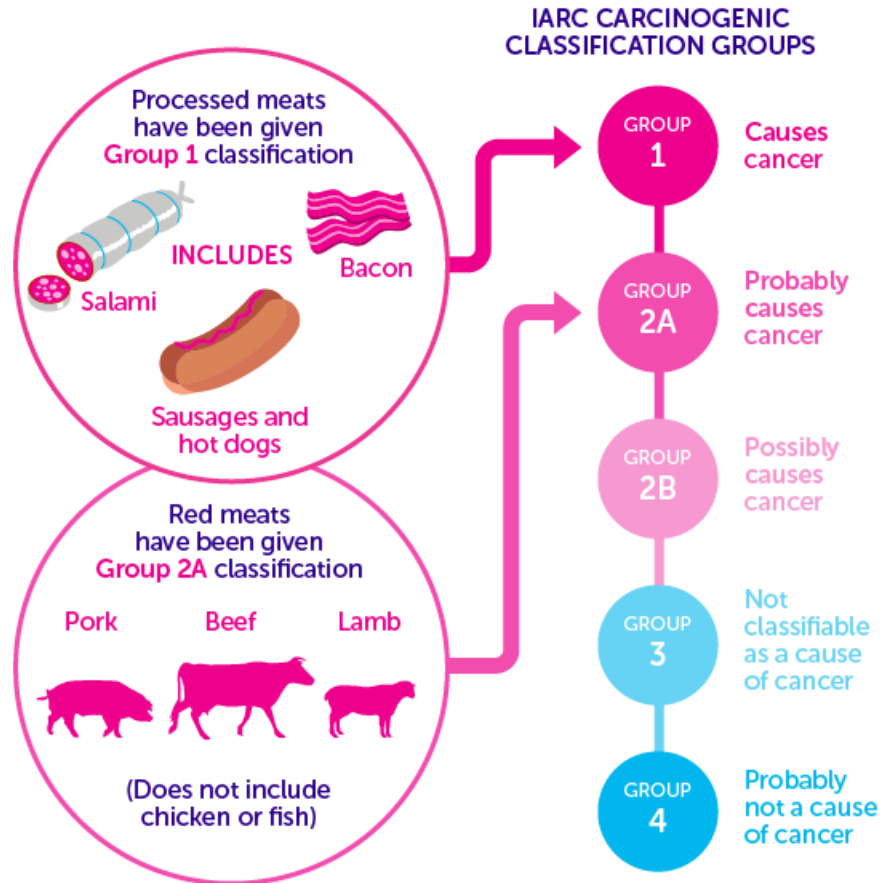
Dietary Patterns Prudent vs. Western



Team (year)	Sample	Diet	CA Mortality HR (95% CI)	All Cause Mortality HR (95% CI)
Kroenke (2005)	2619 Breast CA	Prudent	1.07 (0.66-1.73)	0.54 (0.31-0.95)
		Western	1.01 (0.60-1.70)	2.31 (1.23-4.32)
Kwan (2009)	1901 Breast CA	Prudent	0.79 (0.43-1.43)	0.35 (0.17-0.73)
		Western	1.20 (0.62-2.32)	2.15 (0.97-4.77)
Vrieling (2013)	2522 Breast CA (post)	Prudent	0.89 (0.59-1.35)	0.81 (0.40-1.61)
		Western	3.69 (1.66-8.17)	0.99 (0.64-1.52)
Meyerhardt (2007)	1009 Stage III CRC	Prudent	1.13 (0.77-1.67)	1.32 (0.86-2.04)
		Western	2.85 (1.75-4.63)	2.32 (1.36-3.96)
Schwedhelm (2016)	Meta-analysis	Prudent		0.77 (0.60-0.99)
		Western		1.51 (1.24-1.85)

MEAT AND CANCER

HOW STRONG IS THE EVIDENCE?



These categories represent how likely something is to cause cancer in humans, not how many cancers it causes.

*October 26, 2015 IARC declared:
“Red meat is a carcinogen”*

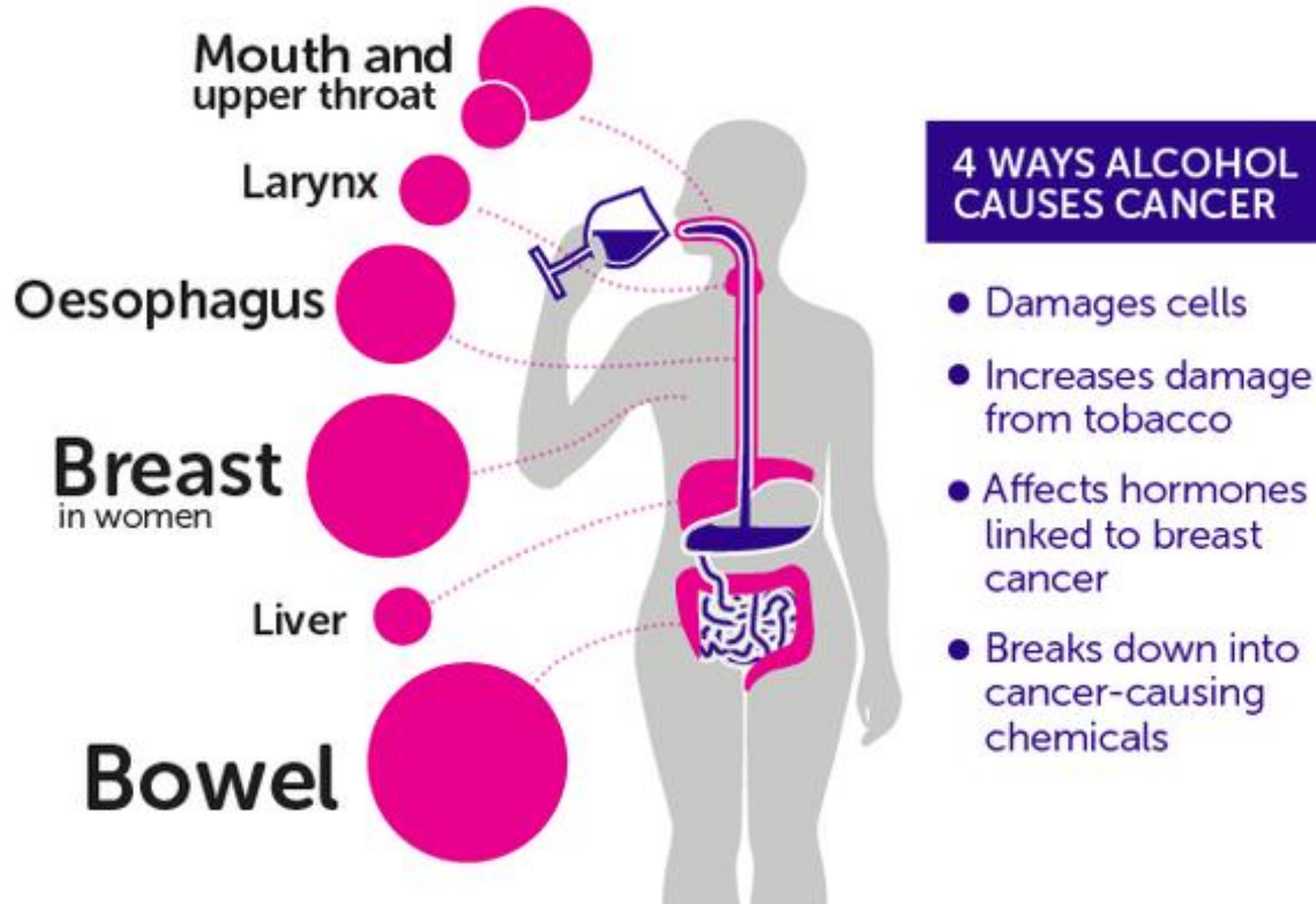
- Pooled analysis of 37,698 men from the Health Professionals Follow-up Study and 83,644 women from the Nurses' Health Study
- 9464 cancer deaths during 2.96 million person-years of follow-up.
- If substitute fish, poultry, nuts, legumes, low-fat dairy for red meat would equate with a 7% to 19% lower mortality risk.
- RX: No more than 14-18 oz/week

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Alcohol	Limit alcohol. If drink limit to 1-2 drinks/day	Best not to drink alcohol

Association between Alcohol and Cancer is Linear

no amount is “safe”



Lifestyle Practices of Cancer Survivors

Lifestyle Factor/Behavior

Prevalence

(Meta-analysis – pooled estimates from 51 studies Tollosa et al. *J Cancer Surv.* 13:327, 2019)

Overweight and Obesity

59-63%

Inactive

77% practice multiple “bad” behaviors

Low Vegetable & Fruit

58-75%

Low Fiber

60-89%

Excess Red/Processed Meat

26-80%

Excessive Alcohol

14-19%

Currently smoking

12-15%

Cancer provides a Teachable Moment for Lifestyle Change

Seize the Moment !

- Vast literature showing that the physician is a powerful influence on health behavior.
- 92% of cancer survivors prefer to receive guidance from their oncologist while receiving care at the cancer center *Philip E et al. Supp Care Cancer 2014*
- +3.4 MET hr/week ($p=.011$) in RCT of 450 breast cancer pts. in arm receiving MD Rx alone *Jones et al. Ann Behav Med 28:105-13, 2004*
- Smoking (USPSTF Ask, Advise, Assess, Assist, Arrange)



Getting Beyond the Stigma



June 18, 2013 AMA declared obesity a disease

5–A's

Ask:

- Have you heard about the relationship between body weight and cancer?
- Have you tried to lose weight recently?

Advise:

- Orient to BMI chart, show where they are currently, assess weight goals

Assess:

-

Assist:

-

Arrange:

-

	Normal Weight						Overweight					Obese					
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height	Body Weight (pounds)																
4'10	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
4'11	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5'0	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5'1	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
5'2	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
5'3	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
5'4	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
5'5	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
5'6	117	123	129	135	141	148	155	161	167	173	179	186	192	198	204	210	216
5'7	121	127	133	139	145	153	159	166	172	178	185	191	198	204	211	217	223
5'8	125	131	137	143	149	158	164	171	177	184	190	197	203	210	216	223	230
5'9	129	135	141	147	153	162	169	176	182	189	196	203	209	216	223	230	236
5'10	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
5'11	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250
6'0	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258
6'1	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265
6'2	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272

Patient 1:

35 y/o stage II BC

5'4" 140 lbs

	Normal Weight						Overweight					Obese					
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height	Body Weight (pounds)																
4'10	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
4'11	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5'0	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5'1	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
5'2	103	108	113	118	123	128	133	138	143	148	153	158	164	169	175	180	186
5'3	106	111	116	121	126	131	136	141	146	152	158	163	169	175	180	186	191
5'4	109	114	119	124	129	135	140	145	151	157	163	169	174	180	186	192	197
5'5	112	117	122	127	132	138	144	150	156	162	168	174	180	186	192	198	204
5'6	115	120	125	130	136	142	148	155	161	167	173	179	186	192	198	204	210
5'7	118	123	128	133	139	145	151	158	164	170	176	183	189	195	201	207	213
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5'9	124	129	134	139	145	151	157	164	170	176	182	189	195	201	207	213	219
6'0	127	132	137	142	148	154	160	167	173	179	185	192	198	204	210	216	222
6'1	130	135	140	145	151	157	163	170	176	182	188	195	201	207	213	219	225
6'2	133	138	143	148	154	160	166	173	179	185	191	198	204	210	216	222	228

Patient 2:
 65 y/o stage II BC
 5'2" 175 lbs

What's your lowest weight during adulthood?
 What's your lowest weight in the past 5-years?
 At what weight do you feel your best?
 Any weight loss would be good...you might see health benefits with a loss of 6 lbs (3%)

5–A's

Ask:

- Have you heard about the relationship between body weight and cancer?
- Have you tried to lose weight recently?

Advise:

- Orient to BMI chart, show where they are currently, assess weight goals

Assess:

- Readiness to pursue weight loss
- Have you ever tried losing weight before?
- How successful were you?
- How do you feel about working to get your weight down now, by watching what you eat and exercising more?
- If patient is not ready – plant message regarding importance – reassess during future appointments

Assist:

Arrange:

5–A's

Ask:

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- Have you tried to lose weight recently?

Advise:

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Assess:

- Readiness to pursue weight loss

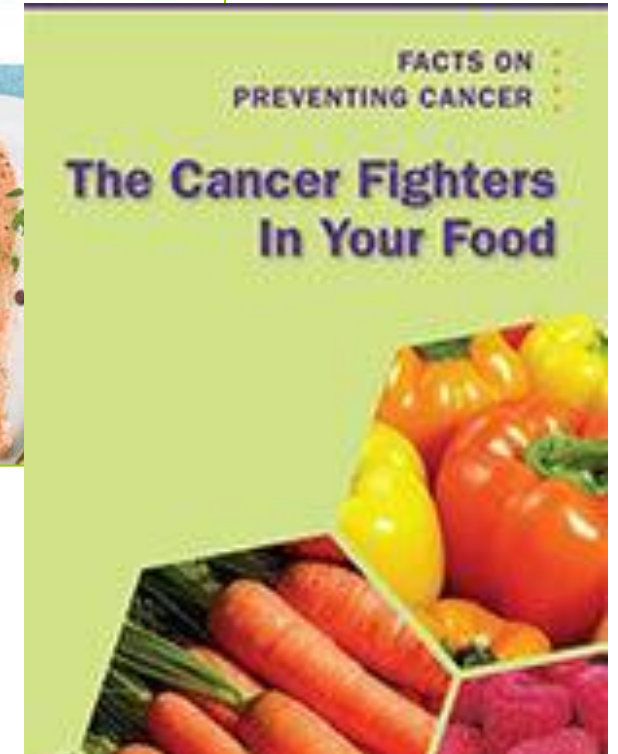
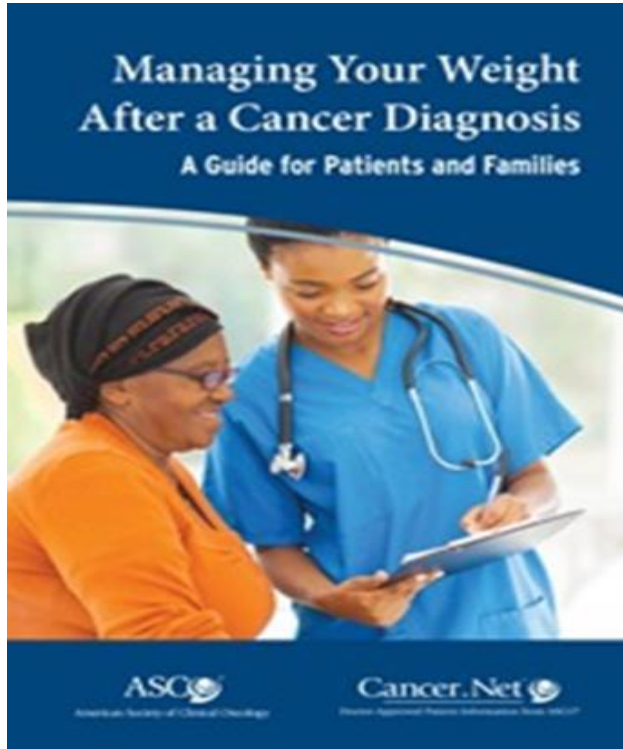
Assist:

- Set a start date and incremental goals
- Provide brochures, point to select websites
- Promote foods low in kcal and high in nutrients (raw vegetables); limit foods high in kcal and low in nutrients (high sugar or fat) - regular soft drinks, fried foods, added fats and sugars, chips, desserts.
- Environmental control/Behavioral modification: minimize food cues, purposeful eating, etc.

Arrange:

- Refer to registered dietitian, primary care physician, specialist (bariatric medicine) or ...

There are resources to help you: Brochures



Brochures can make an impact

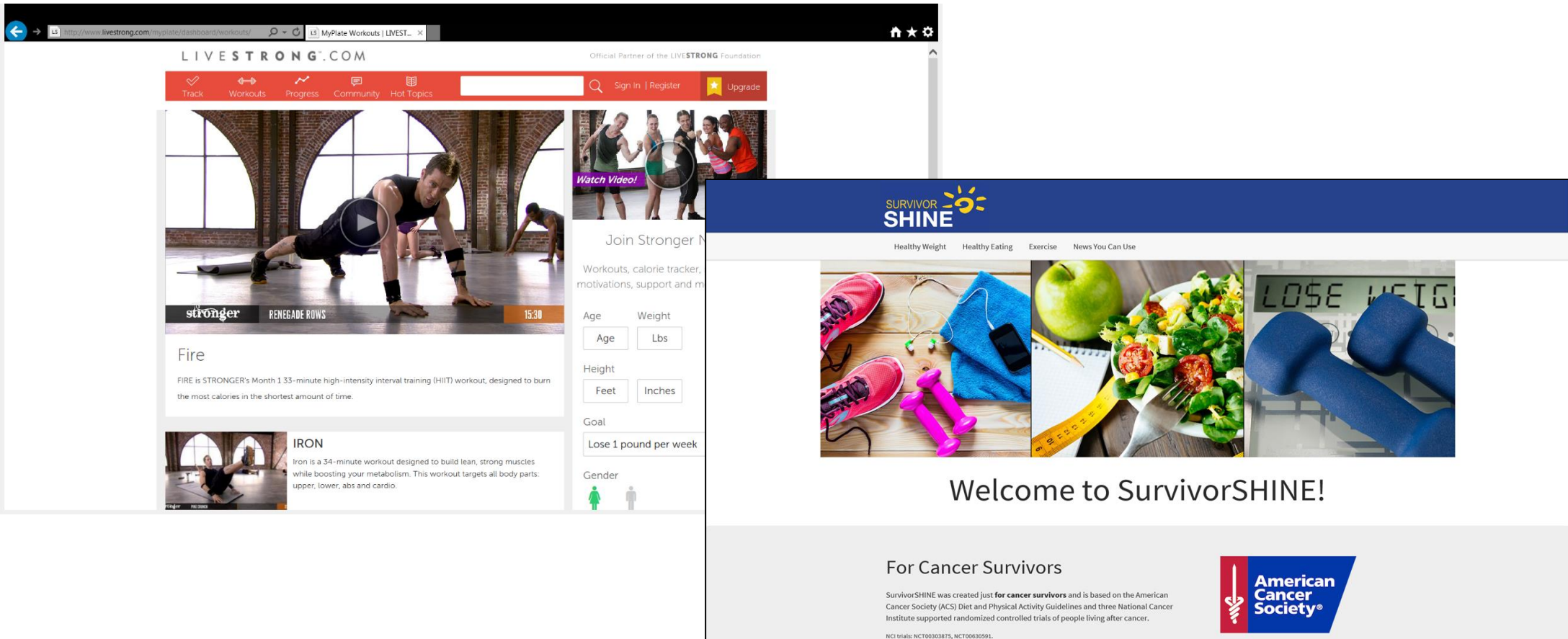


CA122143

Daughters And Mothers (DAMES) Trial shows controls who received 5 sets of brochures over one year

- 2 pound weight loss in mothers and 6 pound loss in daughters
- 1 cm loss in waist circumference for both
- Daughters increased their physical activity by 24.9 minutes per week.

There are online resources



<http://www.livestrong.com/myplate>

<https://survivorshine.org>

5–A's

Ask:

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Advise:

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Assess:

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Arrange:

- **Refer to registered dietitian, primary care MD, specialist (bariatric medicine) or refer to a study**



AiM Plan and act on LIFestYles: AMPLIFY Survivor Health

(Adapting MultiPLe behavior Interventions that eFfectively Improve (AMPLIFI) Cancer Survivor Health)

P01 CA229997, R01 CA246695, R01 CA242737, ACS (134169-CRP-19-175-06-COUN)

NCT04000880



WHAT IS AMPLIFY?

A web-based diet and exercise trial for cancer survivors who are committed to taking the next year to lose weight, eat healthier, and move towards better health. By logging in only 15-20 minutes each week and by interacting with the program, cancer survivors can begin their journey to better health through a lifestyle plan that is safe, evidenced based, and personalized just for them.

DETAILS ABOUT AMPLIFY

- Interventions done totally over the internet (accessed by computers, tablets or smartphones). Totally free – no special foods
- Weekly self-directed sessions with weekly challenges; one of 3 programs below:
 - 24 weeks of diet followed by 24 weeks of exercise; or
 - 24 weeks of exercise followed by 24 weeks of diet; or
 - 48 weeks of combined diet and exercise
- Optional Facebook group
- Scales, pedometers, exercise bands and portion plates provided
- Interventions are based on diet and exercise recommendations of the American Institute of Cancer Research and the American Cancer Society



What AMPLIFY participants are saying about the program?

Mrs. H

I'm a breast cancer survivor. The biggest thing I got out of AMPLIFY was being able to go online and answer the questions and put my weight in every day. I have never weighed myself daily, and that has really been a big help. AMPLIFY is a wonderful program. I've been very successful with it.

Ms. H has been in the program for about 6 months, and she lost 36 pounds (21% of her body weight), and dropped her waist size by 5.5 inches .

Mr. C

"I'm a 68 year old prostate cancer survivor. Before I started AMPLIFY, I was completely washed-out. I could barely walk a hundred feet without having to stop and catch my breath. I have enjoyed the program. I am eating and sleeping better, and have lost weight."

Over the course of the past 12 months, Mr. C lost 16 pounds (10% of his body weight) and improved his endurance by walking 27% more steps during a 2-minute testing period.

Ms. W

"I'm a breast cancer survivor. I would describe AMPLIFY as being very helpful to live a healthier and better life and be successful in your survivorship. Others should join AMPLIFY because they'll feel better about themselves. Their fight is not over. ... Life needs to get better and better, and I believe the AMPLIFY study can help that."

Over 12 months, Ms. W lost 26 pounds (14% of her body weight) and reduced her waist size from 37 inches to 33 inches (4 inches).

Home page – rotating content

The screenshot shows the AMPLIFY Survivor Health home page. At the top is a navigation bar with the AMPLIFY logo, a user profile dropdown (kjwaugaman), and links for Home, My Progress, Sessions, Tools, and Support. A search bar is also present. Below the navigation bar, the main content area features three sections: 1. 'Omar's Story' with a testimonial about a man's journey and a 'Watch this Story' button. 2. 'Tip of the Day!' with a lightbulb icon and a daily exercise tip. 3. Two side-by-side boxes: 'My Progress' with a calendar icon and a 'Go to My Progress' button, and 'Featured Session' titled 'Physical Activity, Exercise, and Your Health' with a 'Open this Session' button and a link to 'See All Sessions'.

AMPLIFY
SURVIVOR HEALTH

kjwaugaman

Home My Progress Sessions Tools Support Search AMPLIFY

Omar's Story

Omar knew what it was like to be physically fit, but he had left exercise routines in his youth. His doctor issued a challenge after treatment ended: could he change his walking habits to shed the pounds from his wife's comfort food cooking during treatment?

Watch this Story

Tip of the Day!

Exercise can be just as much a mental game as it is a physical one. Repeat positive messages like "I can do it and I will!"

My Progress

Start using the My Progress tool to show you how you are doing with the AMPLIFY lifestyle changes.

Go to My Progress

Featured Session

Physical Activity, Exercise, and Your Health

Exercise Session 1

Have you ever tried to become more physically active but found yourself wondering where to begin or even how much activity was right for you? In this session, you will be introduced to different ways you can be active throughout your day, the differences between physical activity and exercise and why they matter for your health, how much activity is recommended for people like you, and how to start your journey by becoming more mindful of your activity levels.

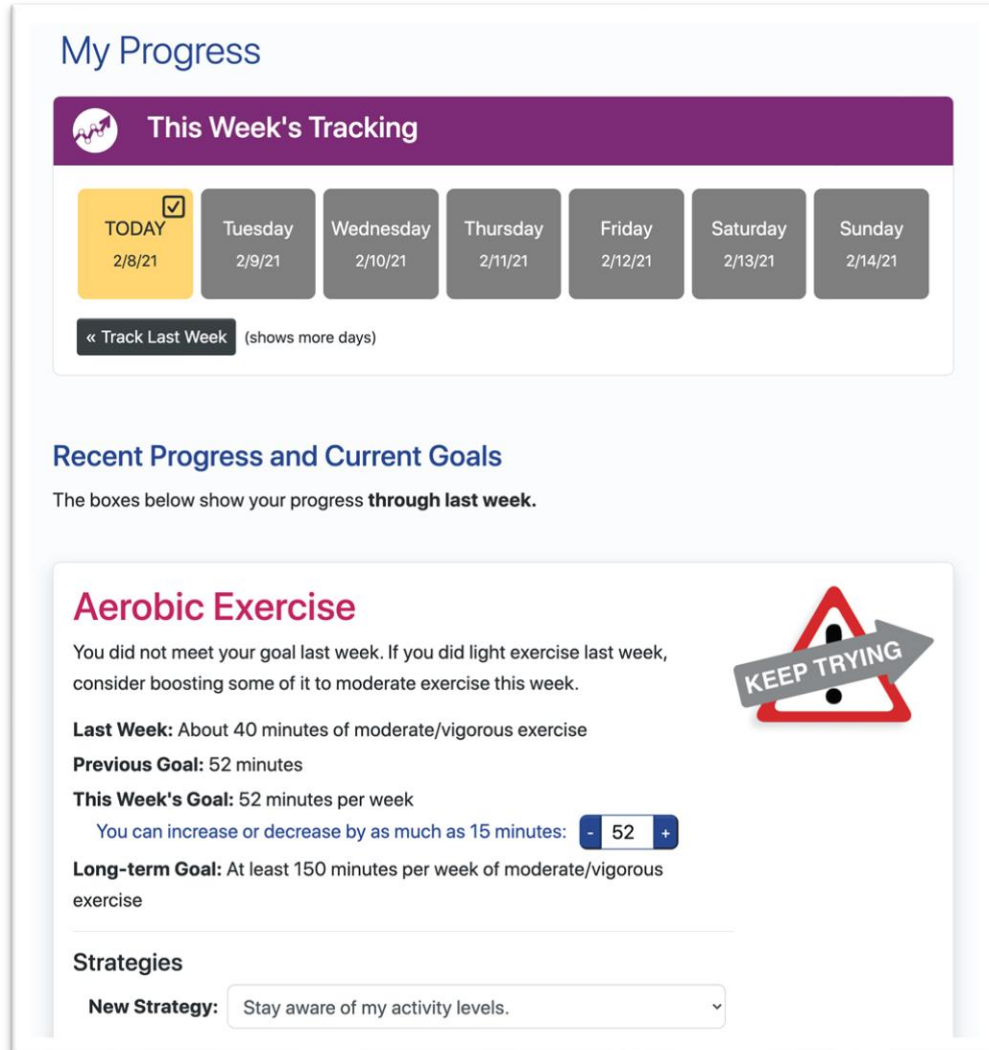
Open this Session See All Sessions »

Testimonial: Role modelling, Support, Engagement

Daily Tip: Offers content, Engagement

Key components: Weekly sessions and Progress

My progress – self-monitoring



Interactive Weekly sessions

Moving Better and Making Healthy Choices Easier

Exercise Session 5



In the program so far, we have talked about 2 of the 3 types of exercises we are encouraging you to do, aerobic and resistance exercises. The third type of exercise is functional exercise which improves flexibility and balance. In this session, we'll talk about functional exercise and how to fit aerobic, resistance, and functional exercises in your routine. We'll also discuss ways to take control of your environment to make the choice to exercise each day easier.

Learn About Functional Exercise



Session Summary

- Functional exercises improve flexibility and balance. Flexibility exercises stretch out your muscles. Balance exercises are exercises performed off balance.
- Functional exercise should be performed on at least two days per week, and each time you do aerobic and resistance exercises.
- There are many ways you can take control of your environment to make the choice to exercise easier.
- Use the videos and other materials in the Tools section of the website to help you organize your exercise routine.
- Weekly Challenge: Practice your functional exercises and taking control of your environment.

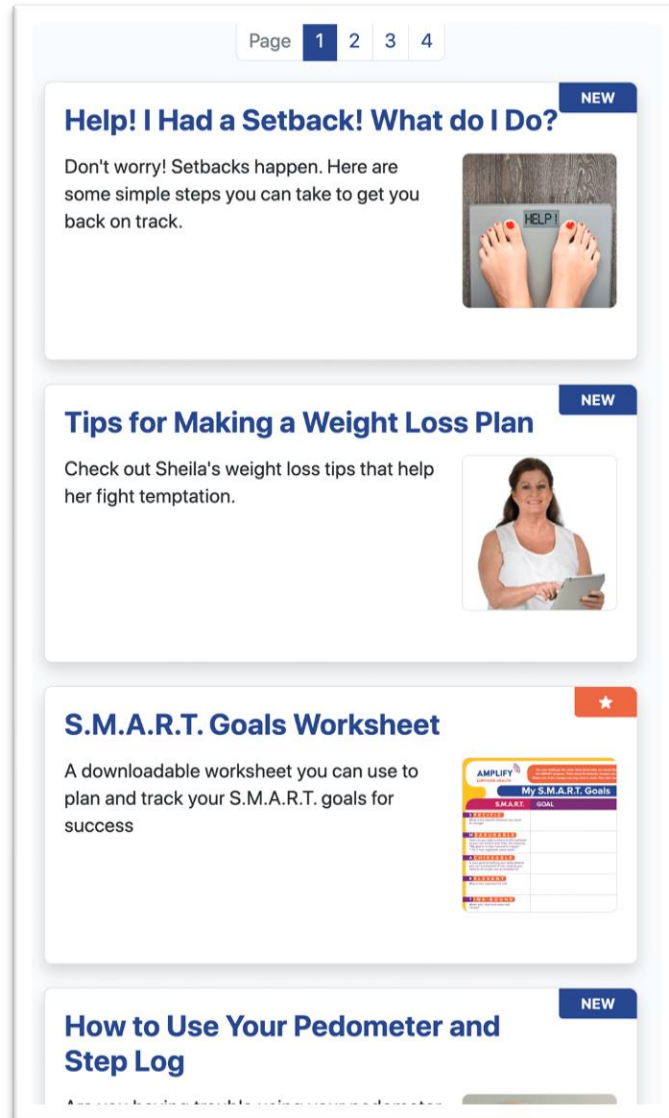
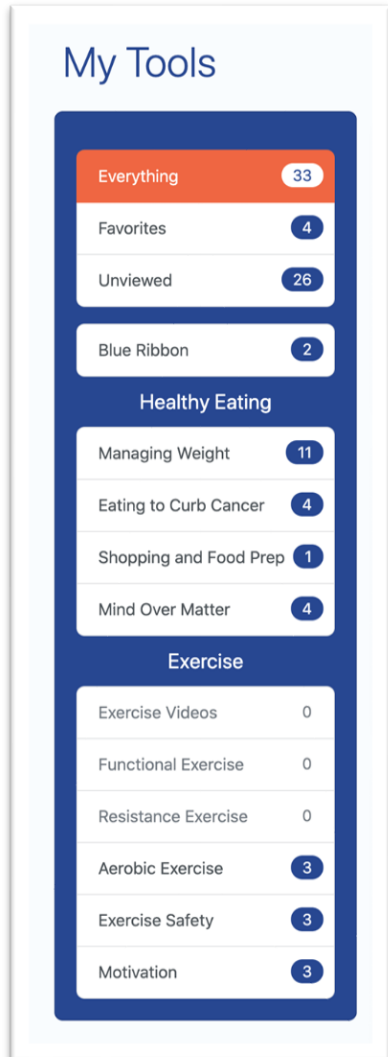
Check Out these Related AMPLIFY Tools

Description of Flexibility Exercises

One step in creating a personalized exercise plan is to incorporate stretching exercises! This tool contains pictures, tips, and a beginner stretching plan to help you easily understand how to add



Tools (> 100)



- Meal Plans/Menus (Basic, Foodie, Vegan)
- Exchange Lists
- Grocery Store Tours
- Grocery Lists
- Cooking videos
- Exercise Videos
- And more!

Support

My Support

Want to Learn How You Can Get More Social Support from Others?

AMPLIFY has a tool to help.

[Social Support Tool](#)



Have Questions About Making Changes?

Check out *Ask AMPLIFY*, a library of questions and answers about making healthful changes.

[Ask AMPLIFY](#)



Need Help Using the AMPLIFY Website?

The *Using AMPLIFY* page has instructions and frequently asked technical questions to help you get un-stuck.

[Using AMPLIFY](#)



AMPLIFY Facebook Group

The AMPLIFY Facebook group is a resource for support from other AMPLIFY participants and a place to see what other people are doing to improve their health.

[Open Facebook Group](#)

[Get help joining the group »](#)



Have you had a SETBACK?

[Click here if you think your progress is slipping backward »](#)

Main Outcomes

- Change over time in weight, physical activity, and diet quality

Comparison	Primary Hypotheses	Outcomes	Assessment mode
Project 1 DIET intervention vs. wait list at 6 months	Higher proportion of participants with $\geq 3\%$ weight loss	Weight	In person/Zoom visit
Project 2 EXERCISE intervention vs. wait list at 6 months	Higher proportion of participants with ≥ 150 weekly minutes of \geq moderate intensity physical activity	Physical activity (Accelerometry)	Accelerometer for 7 days during wake and sleep time
Project 3 SIMULTANEOUS vs. SEQUENCED at 12/18 months	Higher proportion of participants with $\geq 3\%$ weight loss, improved Diet Quality, ≥ 150 weekly minutes of \geq moderate intensity PA	Weight, Physical Activity, Diet Quality	Two dietary recalls via phone, week and weekend days

Secondary Outcomes - \$25 per timepoint

- During zoom visit
 - Weight/Waist circumference
 - Blood pressure/resting heart rate
 - Physical performance and Balance
 - 30 sec chair stand, chair sit & reach, back scratch, 8-ft up & go, 8-ft walk, 2 min step test
 - Balance side-by-side, semi-tandem, tandem stands
- Muscle mass (D3 creatine)
- Dry blood Spot
 - TSH (baseline), Insulin, Leptin, Adiponectin IL6, CRP, $TNF\alpha$
- Sleep (Actigraphy)



Eligibility criteria

- Age: 50+ years
- Survivors who completed primary treatment for the following cancers (with no recurrence or other second cancers):
 - Localized – Regional: Breast, Colorectum, Endometrium, Prostate, Thyroid
 - Localized: Kidney, Ovary
 - Multiple Myeloma, non-Hodgkin Lymphoma
- Overweight/Obese (BMI: 25–50 kg/m²)
- Moderate-to-Strenuous Physical Activity <150 minutes/week
- Not enrolled in a diet or exercise program
- English writing/speaking + completed 8th grade

Thank you! Questions?

Referrals:

<https://amplifymyhealth.org/info>

<https://www.facebook.com/AmplifySurvivorHealth>

NCT04000880

833-535-7934.

amplify@uabmc.edu

