Life After Breast Cancer Treatment: How To Help Your Patients Thrive

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No Disclosures
Breast Cancer Statistics

• Women:
  • 1 in 8 (~12%)
  • 250,000 new cases / year
  • 40,000 deaths/year – 2nd most common cause of cancer death

• Men:
  • 1 in 1000
  • 2600 new cases / year
  • 450 deaths / year

breastcancer.org
Survivorship

- Estimated 2.8 million women with history of breast cancer living in the US

- Patients are living longer after breast cancer treatment, including with metastatic disease
  - Early detection
  - More effective / targeted therapies
  - Effective side effect treatment (minimize dose reduction)

breastcancer.org
YOU’RE A SURVIVOR!!
Problems don’t end after treatment…

• Problems with physical function related to treatment
  • ~20% of childhood cancer survivors
  • ~53% adult-onset cancer survivors
• May be apparent immediately or many years after treatment

Semin Oncol 2013;40(6):784-95
Institute of Medicine 2005
www.IOM.edu
Cancer Treatment - Surgery

- Nerve pain, numbness
- Phantom breast symptoms
- Lymphedema
- Decreased arm mobility
- Poor cosmetic result
Cancer Treatment - Radiation Therapy

- Skin discoloration
- Fibrosis, progressive scarring
- Wound healing complications
- Reconstruction complications
- Poor cosmetic result
- Cardiac / Pulmonary toxicity
- Secondary cancer
Cancer Treatment - Systemic Therapy

- Chemobrain
- Neuropathy
- Cardiomyopathy
- Cataracts
- Weight gain
- Joint pain, osteoporosis
- Menopausal symptoms
- Decreased sexual function
- Loss of fertility
- Secondary cancer

10 YEARS
Cancer Treatment - Endocrine Therapy

- Approximately 80% breast cancers ER+
- Extended tamoxifen – ATLAS, aATOM
- Extended AI MA.17

- Survey of AEs: 452 (50% response) TAM vs AI%
  - Hot Flashes 35/30%
  - Weight gain 14/15%
  - Insomnia 17/17%
  - Joint aches 12/23%

39/46% taking other medications for symptoms

Am J Surg 2006;192:496-498
Other Effects of Treatment

• Anxiety, depression, PTSD, survivor guilt
• Sense of isolation, feeling “lost” after treatment
• Altered body image
• Alteration in family / friends / work role, relationships
• Spiritual changes
• Financial toxicity

• How to adjust to the ”new normal” – “I liked my old normal”
From the Patients…

• Life on hold during treatment, then told to live my life
• They took away my safety blanket
• It’s not like I just had a cold and am now “ok”
• Feel guilty about talking to my doctor about these problems, I’m not “sick”
• I should just be thankful I’m alive

#BCSM Community
From Cancer Patient to Cancer Survivor: Lost in Transition

- MDs not always familiar with consequences of cancer treatment
- Transition from when oncologist no longer PCP is challenging for patients and MDs
- Lack of clear evidence for best practices, wide variation in care

Institute of Medicine 2005
www.IOM.edu
Collateral Damage

- Info about side effects, toxicities given when most anxious, least able to absorb
- Side effects, toxicities spoken about in general terms without context of how they could / will affect quality of your life
- QoL / symptom management often not properly addressed
- “A cure is not good enough”

Definition of Survivorship

- The process of living with, through, and beyond cancer.
- Begins at diagnosis, includes ongoing treatment to reduce recurrence or treat metastatic disease
- Family, friends and caregivers also considered survivors ("co-survivors")
- Unique for each person

http://www.cancer.net/survivorship/about-survivorship
Phases of Survivorship

• **Acute survivorship** diagnosis to end of active treatment

• **Extended survivorship** end of initial treatment -> first months / years

• **Permanent survivorship** focus on long term effects of cancer and treatment (including metastatic patients)

http://www.cancer.net/survivorship/about-survivorship
IOM Standards for Survivorship Care

• **Surveillance** for cancer spread, recurrence, or second cancers
• **Assessment** of late medical and psychosocial effects
• **Intervention** for consequences of cancer treatment
• **Prevention** (Risk Reduction) of new and recurrent cancers and other late effects
• **Coordination of Care** between PCP and specialists to ensure that all of the survivor’s health needs are met

Institute of Medicine 2005
www.IOM.edu
Survivorship Stakeholders

- *Patient and family*
- Oncologic physicians
- Primary Care Physicians
- **Nursing** (NP, Nurse Navigator, Oncology Nurses)
- **Psycho-Social Support** (Social Work, Psycho-oncology, Therapist, Spiritual Care)
- **Other Clinicians** (NP / PA, Pharmacy, Research Staff, Palliative Care, Genetics, Nutrition, PT/OT, Rehabilitation, others)
Surveillance, Side Effects, Risk Reduction

- Surveillance for Recurrence
- Management of Side Effects
  - Bone density, Arthralgia / Myalgia
  - Fertility, Gynecologic / Climacteric / Sexual
  - Fatigue / Cognitive Dysfunction / PTSD / Depression
  - Lymphedema
- Risk Reduction
  - Medication Compliance
  - Obesity, Diet, Exercise, Alcohol
  - Stress Management
Surveillance for Recurrence

- Regular history, PE and mammography recommended
- Physical exam
  - q 3-6 months x 3 years
  - q 6-12 months years 4-5
  - Annual after year 5
- Breast conserving surgery
  - Post-treatment mammogram no earlier than 6 months after radiation, or at 1 year after initial study
  - Resume annual imaging unless otherwise indicated

J Clin Oncol 2013;31(7):961-965
NCCN.org
Surveillance for Recurrence

• **NOT RECOMMENDED** for asymptomatic patients:
  - CBC, chemistry panels, LFTs
  - Tumor markers CEA, CA 15.3, CA 27.29
  - Breast MRI
  - Chest x-ray
  - Liver ultrasound
  - Pelvic ultrasound
  - Chest / Abdomen / Pelvis CT, MRI, PET/CT

J Clin Oncol 2013;31(7):961-965
NCCN.org
Surveillance, Side Effects, Risk Reduction

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Bone Loss

• If on AI: Check DEXA baseline and annual

• Limitation of DEXA
  • BMD surrogate measure for fracture risk
  • Bisphosphonates prevent bone loss but may not translate to decreased risk of fractures

• No antiresorptive agents FDA approved specifically for prevention or treatment of AI-induced bone loss

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Bone Loss

- Encourage weight bearing exercise, smoking cessation, limitation of alcohol intake
- Calcium and Vitamin D widely recommended but not adequately studied
- Dietary calcium preferred: milk, yogurt, cheese, sardines, salmon, kale, dark leafy greens
- Discontinuation of AI often halts further loss of BMD
- Consider tamoxifen if taking an AI

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Arthralgia/Myalgia

- Often improves without intervention
- NSAIDs, heat, exercise, weight loss, physical therapy
- Anecdotal benefit to glucosamine and chondroitin
- Acupuncture (small studies)
- Change to different AI, or AI -> tamoxifen
- Stopping medication usually relieves symptoms within 8-10 weeks

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Fertility

• Only ~50% cancer patients of childbearing age receive timely information about risk of infertility, options to preserve or restore fertility
• Assess desire for childbearing at time of diagnosis
• Referral to fertility specialist prior to initiating treatment
• Usually there is time

J Natl Cancer Inst Monogr 2005;34:98-100
Pregnancy After Breast Cancer

- Retrospective, 1207 patients
- History of BC, became pregnant after diagnosis
- Matched for ER, nodal status, adjuvant therapy, age at diagnosis < or > 35

J Clin Oncol 2013;31(1): 73-79
Pregnancy after Breast Cancer - POSITIVE

- Pregnancy Outcome and Safety of Interrupting Therapy for Women with Endocrine Responsive Breast Cancer

- Evaluate safety, pregnancy outcomes of interrupting ET for young women with ER+ disease who desire pregnancy

- Target enrollment 512 women, <age 42, premenopausal, have completed 18-30 months of ET

- 3 month washout; stop ET for up to 2 years for pregnancy, delivery, breast feeding or failure to conceive, then restart

www.clinicaltrials.gov
ALLIANCE #A221405
Gynecologic - Tamoxifen

- Discharge, irregular bleeding, ovarian cysts, fibroids
- Routine pelvic US not recommended by ACOG
- Discharge – antibiotics, antifungal, avoid douching
- Vaginal bleeding – workup and evaluation
- Ovarian cysts, fibroids
- *Hysterectomy in ATAC 5% TAM vs 1% AI*

Ann Surg Oncol 2013 20:3188–3193
Breast Care 2009;4:155-161
http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/Tamoxifen-and-Uterine-Cancer
Hot Flashes

- SSRI’s, other antidepressants
- AE’s: dry mouth, headache, nausea, insomnia especially at high doses
- Caution with CYP2D6 Inhibitors:
  - Bupropion (Wellbutrin), Fluoxetine (Prozac), Paroxetine (Paxil)
- ASCO urges caution with use of CYP2D6 inhibitors although evidence linking interactions to breast cancer outcomes limited

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Hot Flashes

- Venlafaxane (Effexor)
- Gabapentin – some efficacy
- Clonidine - <50% efficacy in placebo controlled trials
- Estring, vaginal suppository – controversial
- Megace, DHEA – effective but no data on long term safety in women with breast cancer

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Hot Flashes Acupuncture vs Venlafaxine

- 50 patients, 12 weeks therapy, 1 year follow up
- Both groups: ↓ HF, depressive symptoms; ↑ QoL
- Venlafaxine group 18 adverse effects – nausea, dry mouth, dizziness, anxiety
- Acupuncture group no adverse effects
- Acupuncture group: most reported ↑ energy, clarity of thought, sense of well-being

Many women don’t want additional medication due to potential adverse effects but 50% feel they need treatment

J Clin Oncol 2010; 26(4)
Hot Flashes

• Dress in layers
• Weight loss, avoid alcohol, caffeine, exercise
• Acupuncture
• Recommended but not proven benefit:
  Smoking cessation, relaxation techniques, massage, reflexology, yoga
• No proven benefit:
  Vitamin E, black cohosh

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Sexual Side Effects

• 30+% persists after therapy
• Likely to be unreported or underreported
• Counseling, better physician-patient communication
• Antidepressant (if indicated)
• Dryness – lubricants, moisturizers, olive oil
• Estring, vaginal suppository (controversial)
• Transdermal testosterone (controversial)
• Pelvic floor relaxation exercises, physical therapy

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
Chemobrain

- May persist in 45% of patients
- Often under-reported
- Chemotherapy and endocrine therapy
- Compounded by effects of surgery/anesthesia, cancer-induced stress, aging process
  - Reduction in verbal or visual memory
  - Problems with attention and concentration
  - Reduced speed of processing information
  - Visual or spatial abnormalities

J Clin Oncol 22:2233-2239
Ann Surg Oncol 2013;20:3188–3193
http://news.cancerconnect.com/chemo-brain/#_edn1
Chemobrain

- Assess / treat contributing factors – thyroid, anemia, depression
- Acknowledge that this is a problem
- Relaxation techniques, set routine, simplify, memory aids
- Exercise
- Therapy, counseling
- Modafinil (provigil)

J Clin Oncol 22:2233-2239
Ann Surg Oncol 2013;20:3188–3193
http://news.cancerconnect.com/chemo-brain/#_edn1
PTSD

- IT EXISTS
- Patients and caregivers
- Contributes to anxiety, depression
- Acknowledge that this is a problem
- Therapy, counseling
- Antidepressants, anxiolytics
- Support groups

Cancer Related Fatigue

- Common during treatment
- ~30% persistent
- One of the most prevalent and distressing long term effects
- Significant effect on QoL
- Does not reflect level of activity, does not improve with rest
- Contributes to anxiety, depression

J Clin Oncol 2014;32(17):1840-1850
Cancer Related Fatigue

- Acknowledge that this is a problem
- Address medical / treatable conditions - pain, depression, anxiety, emotional distress, sleep disturbance, nutritional deficit, anemia, medication adverse effects
- Encourage moderate physical activity
- Referral to psychosocial service providers

J Clin Oncol 2014;32(17):1840-1850
Cancer Related Fatigue

• Some evidence that mindfulness based approaches, yoga and acupuncture can reduce fatigue

• Ongoing research: touch therapy, massage, music therapy, relaxation, reiki and qi gong

• Psychostimulants, wakefulness agents - limited evidence

• Small pilot studies Vitamin D, ginseng – no consistent evidence on effectiveness

J Clin Oncol 2014;32(17):1840-1850
Chemotherapy Related Fatigue

Acupuncture

- MSKCC, 31 patients, mean improvement 31%
- Serotonin pathways thought to have role in mediating chronic fatigue
- Changes in serotonin following acupuncture have been demonstrated
- Increasing age, depression scores independently associated with poorer outcome

J Clin Oncol 2004;22(9);1731-1735
Lymphedema

• BC patients report little knowledge about lymphedema before developing it
• MDs do not routinely counsel patients, provide educational material prior to treatment

Breast J. 2000;6(6):373-378
Lymphedema

- 5-10% after SNB, increased with radiation
- May develop at any time
- Irreversible once clinically evident

- Avoid sauna
- Being reassessed - BP, blood draws, injections, air travel
- Encourage exercise, reinforce healthy habits, BMI <25
- Protect skin, keep clean / moisturize, early antibiotics for cellulitis
- Early PT referral

J Clin Oncol 2016;34:691-698
Surveillance, Side Effects, Risk Reduction

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- Management of Side Effects
  - Bone density, Arthralgia / Myalgia
  - Fertility, Gynecologic / Climacteric / Sexual
  - Fatigue / Cognitive Dysfunction / PTSD / Depression
  - Lymphedema
- Risk Reduction (NOT Prevention)
  - Medication Compliance
  - Obesity, Diet, Exercise, Alcohol
  - Stress Management
Endocrine Therapy Compliance

- 20-50% discontinue therapy
- Many don’t start due to AE concerns
- May not inform MD – reluctant to disclose problems
- More likely to discontinue if not prepared for AEs
- Women who expressed worry about recurrence were more likely to complete therapy

Ann Surg Oncol 2013;20:3188–3193
Breast Care 2009;4:155-161
J Oncol Pract. 2012;8:e149–57
Br Can Res and Treat 2013;138:931–9
Patient Reported AEs

• Hot flashes – mild to “ungodly”
• Vaginal dryness / dyspareunia; excess discharge
• Bone / Joint pain (minimal / mild to “bone splitting”)
• Sleep disturbance, nightmares, severe anxiety / depression
• Severe mood swings “murderous rage”
• Cognitive decline affecting job performance, depression, anxiety, brain fog
• Anxiety / depression over treating one cancer but causing another, or at least needing multiple tests

#BCSM Community Personal Communication
http://drattai.com/endocrine-therapy-for-breast-cancer/
Patient Complaints

• Oncologist does not ask about side effects, especially sexual
• Oncologist acknowledges side effects, does not make any suggestions
• Potential benefit of drugs is overplayed
  • Risk reduction versus my recurrence risk / absolute risk reduction
• “Are side effects tolerable?” – loaded question – tolerable compared to recurrence…

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Patient Concerns

• “Damned if I do, if I don’t”
• “Felt like a failure because I couldn’t finish treatment”
• “When you go all guns blasting at cancer you have to accept some terrible barbaric compromises”

#BCSM Community Personal Communication
http://drattai.com/endocrine-therapy-for-breast-cancer/
Obesity

- 68.8% of US adults overweight (BMI 25-29.9) or obese
- 35.7% US adults obese (BMI >30)

https://www.niddk.nih.gov/health-information/health-statistics/Pages/overweight-obesity-statistics.aspx
Obesity

- Weight consistently associated with postmenopausal breast cancer
- Women who gain >20kg during adulthood double their risk of breast cancer
- ~30% increased risk of recurrence or death in obese women diagnosed with breast cancer
- Modest weight loss (5-10%) reduces risk

J Clin Oncol 2016 34: 7;646-648
http://meetinglibrary.asco.org/content/11500066-156
Obesity

- Postmenopausal estrogen production from adipose tissue conversion of androgen precursors (aromatase)
- Obesity associated with chronic systemic inflammation – elevated levels of circulating pro-inflammatory mediators
- Inflamed white adipose tissue within the breast associated with elevated levels of pro-inflammatory mediators, enhanced expression of aromatase, and increased ER-dependent gene expression

doi: 10.1200/EdBook_AM.2013.33.46
Diet

- Modest association with BC risk
- Overall mortality (not BC specific) improves with healthy choices after diagnosis and treatment
- Higher consumption of meat -> slightly increased risk - meat may be “innocent bystander”, marker of unhealthy lifestyle
- EPA and DHA associated with reduced risk
- No strong evidence for dairy
- 5 fruits, veggies / day does not specifically reduce risk

http://meetinglibrary.asco.org/content/11500066-156
Diet

- Nutrition insufficient by itself to treat cancer
- No magic diet or nutrient
- “Let food be thy medicine and medicine be thy food”
  - Hippocrates

- HOWEVER… ”life is too short to go without GOOD chocolate cake” - Deanna Attai
Alcohol

- Linear dose-response relation between alcohol consumption and BC risk
- Nurses Health Study (prospective observation)
  - Modest increased BC risk with equivalent to 3-6 drinks / week
  - Modest increased risk with binge drinking
  - No relation to alcohol type

JAMA 2011;306(17):1884-1890
Exercise

• 81.6 million inactive Americans, ~28% US population – do not participate in 120 sports and fitness activities

http://www.physicalactivitycouncil.com/PDFs/current.pdf

• Adult minimum:
  • 150 min (2 ½ hrs) moderate intensity
  -OR-
  • 75 min (1 ¼ hrs) vigorous intensity per week

Exercise

• Physical activity associated with reduced risk:
  • Pre / Post menopause, FH, ER+ / ER- breast cancer

• Potential anti cancer effects of activity:
  • Decreased estrogen levels
  • Improved insulin resistance
  • Decreased chronic low grade inflammation

• Other pathways:
  • Oxidative stress, telomere length, immune function, increased DNA repair gene expression

http://meetinglibrary.asco.org/content/11500066-156
Exercise

• Fat but Fit?
• Protective effects of exercise primarily in women who are healthy weight, not overweight or obese

• You cannot outrun a bad diet

http://meetinglibrary.asco.org/content/11500066-156
Stress Management

• Psychological stress common among BC patients
• Stress prone personality, unfavorable coping styles related to higher cancer incidence, mortality
• If stressed / depressed more likely to have poor health habits – sleep patterns, alcohol intake, nutrition, exercise
• Evidence from animal / human studies suggest stress, depression result in impairment of immune response, might promote initiation and progression of some types of cancer

Nature Reviews Clinical Oncology 2008;5:466-475
Stress Reduction

• Yoga vs waitlist
• Stage 0-III, 3 month trial
• 12 weeks 90 minutes twice per week vs wait list
• At 3 months – fatigue lower, vitality higher, inflammatory markers lower

J Clin Oncol 2014;32(10):1040-1049
Stress Reduction

- Early stage BC, 8 week mindfulness-based stress reduction
- Improved mood, breast and endocrine specific QoL
- Effects persisted at 3 months
- Can help alleviate long term emotional and physical adverse effects of treatment

J Clin Oncol 2012; 30(12):1335-1342
A word about words…

- “Survivor” not universally embraced
- Some can’t stand the pink
- Battle metaphors
- Pinkwashing
A word about words…

• “Celebrations cast the survivor in the role of hero and winner. Survivors of other devastating personal traumas (fires, flood) rarely use the celebratory hero language. Mostly they speak of themselves as being lucky.”

• “I’m not comfortable with that word, ‘survivor,’ which connotes some sort of superhero who has battled and defeated the demon known as cancer. The problem is that there’s a blame game going on: those who survive did something heroic; those who don’t survive just weren’t tough enough.”

• “Survivor, to me, sounds too triumphal, too final, like it’s finished – all over. But breast cancer is not like that – as I am finding – now approaching four years from diagnosis.”
Conclusions

• Cancer treatments result in significant short and long-term complications
• Survivorship starts at diagnosis
• Encourage patients to be active participants in their own health