

Cancer Survivorship - a new challenge in cancer care

Suman Rao, M.D.
Hematologist and Oncologist
Baltimore, MD

SURVIVORSHIP

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“Care givers and doctors are finally getting on the same page about cancer survivorship. Journey Forward has released a new computer based tool that can benefit anyone with cancer”.

“After I completed treatment , I received survivorship Care Plan which charted my follow up care. I can feel like I am taking charge of my health, my life again and it is very empowering” said a patient.

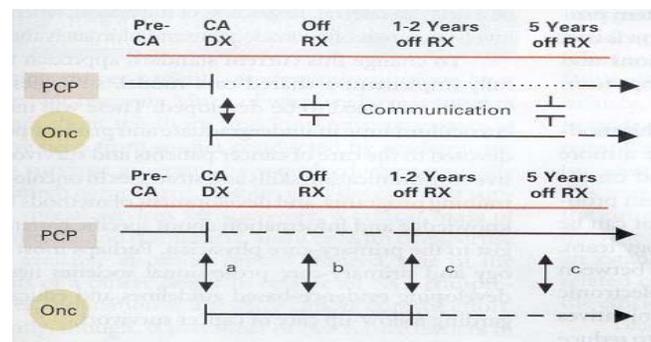
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Importance of Survivorship care

- Overall, 64% of patient diagnosed with cancer can be expected to live more than 5 years
- Preventive services are more reliably received if primary care is involved
- Screening services are more reliable if Onc is involved.

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Shared care models



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Barriers to Shared care

- Cancer patients are treated intensely for 1 year followed by 1-2 years of close monitoring for recurrence. Minimal attention to other medical issues (HTN, DM, Chol)
- Primary care feels Onc “ steals” patient, “keeps” patient, “takes over” patient
- Onc believes Primary care “not interested”, disengaged, “not comfortable, results in delays in diagnosis
- Increased Curriculum time, with emphasis on Survivorship care is important

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AIMS

- Prevention of new cancers and other late effects
- Surveillance for cancer and assessment of medical and psychosocial late effects
- Intervention for consequences of cancer and its treatment
- Coordination between specialists and primary care providers to ensure that all of the survivors health needs are met.

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SURVEILLANCE

- History : Personal
 - Weight loss
 - Bone pain/ low back pain
 - Headaches, new onset
 - Dyspnea
 - Any new lumps
 - New medications
- Family History
 - Update Family history with each visit
- Social History
 - Ask about smoking, alcohol intake

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SURVEILLANCE

- Physical exam
 - Focus on breast exams, testicular exams, lymph nodes and any sites of symptoms
 - Coordinate between specialist and Primary care. Typically 3-4 months in the first 2 years, every 6 months thereafter
- Lab Investigations
 - CBC, CMP, regular health maintenance

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General Principles

- Intensive Screening Protocols
 - Early detection with potential curative resection. Shown to be of value in colorectal Stage II/III patient based on 3 meta analyses
 - Patients should be healthy/ have a long enough survival
 - Downside is cost, anxiety, radiation exposure

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Less Intense Surveillance

- No clear cut benefit in terms of Overall Survival with intense screening protocols in most studies.
- Leads to anxiety, increased costs
- Radiation exposure has become a prominent issue
- Does not take in to consideration individual patients with potentially resectable asymptomatic disease picked up on imaging studies.

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Colorectal cancer surveillance

- ASCO
 - History/PE 3-6 months for 3 years, 6 months yr4,5, then annual
 - CEA q 3 months for 3 years after completion of adjuvant therapy
 - LFTs not recommended
 - CBC not recommended
 - Chest X-ray not recommended
 - Annual CT chest and abdomen for years recommended. Consider adding pelvic CT
 - Colonoscopy 1 year, then 3, followed by 5 years thereafter
- NCCN
 - H and P every 3-6 months for 2 years, then 6 months for 5 years
 - CEA 3-6 months for 2 years, 6 months for 5 years
 - LFTs not recommended
 - CBC not recommended
 - Chest X-ray not recommended
 - Consider annual CT chest, abdomen for patients with high risk of recurrence

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Surveillance Colonoscopy

- Perioperative colonoscopy to detect synchronous cancers and polyps
- Within 1 year of surgery- metachronous cancers occur in 1.5 – 3 occur in the first 5 years . Incidence slightly higher in younger patients
- Anastamotic cancers occur in 5-10 %, mostly in rectal cancers
- If the 1 yr colonoscopy is negative, then recommended at 3 and every 5 years thereafter

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Breast Cancer surveillance

- ASCO guidelines
 - H &P 3-6 months for 3 years, 6 months year 4,5, then annual
 - Specifically ask about new lumps, bone pain, chest pain, dyspnea, headache
 - Monthly breast self exam
 - Mammogram 1 year from previous , at least 6 months after radiation
 - Yearly pelvic exam, especially on Tamoxifen
 - Not recommended- blood tests, imaging studies or tumor markers
 - Breast MRI for patients at high risk/ BRCA mutations

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Testicular cancer

- Post orchiectomy surveillance if RPLND is not performed
 - Physical exam, chest X-ray, serum tumor markers every other month for 2 years, every 4 months in year 3, annual thereafter
 - Abdominal MRI / CT scans every 4 months for 2 years, then periodically

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Hodgkin's Disease

- Screening for lung cancer yearly in smokers
- Mammogram yearly in women treated with mantle radiation beginning 10 years after treatment or age 40.
- Colonoscopy? At an earlier age, there is increased risk of colon cancers in this population
- Post splenectomy/ asplenia, pneumococcal and H flu vaccine every 6 years
- Flu vaccine yearly
- Also consider screening for cardiovascular disease

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Other cancers

- Lung cancer
 - Stage I/ II resected lung cancer, chest X-ray every 3 months, H&P every 3 months for 3 years, 6 months for yr 4,5, yearly afterwards
 - CT scan every year
- Prostate
 - No clear cut recommendations. PSA, DRE, Physical exam

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Lymphomas

- Most guidelines are better defined for Hodgkin's disease.
- H&P , biochemical profile, ESR should be evaluated every 3 months for 3 years, every 6 months for yrs 3-5, annually afterwards
- CT / Pet scan one month after treatment with chemotherapy alone, 3 months after radiation therapy
- NCCN guidelines recommend follow up CT scan every 3 months for 3 years, not accepted by every group.

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Genetic counseling

- Family History should be obtained every few months
 - BRCA testing/ counseling- breast , ovarian cancer
 - HNPCC testing – colorectal, endometrial cancers
 - P53 mutations – sarcomas, brain tumors, clustering of other cancers

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Physical Symptoms

- Weight gain
 - Fatigue, persistent
 - Hypothyroidism
 - Depression
 - pain
- Ear problems
 - Hearing loss due to chemotherapy, antibiotics
- Dental problems
 - Radiation causing dryness
 - Osteonecrosis of the jaw due to bisphosphonates

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Physical symptoms

- Dyspnea
 - CHF (anthracyclines, Trastuzamab, Bevacizumab)
 - Lung toxicity due to radiation, chemotherapy
- GI symptoms
 - Chronic diarrhea, post surgery,
 - Abdominal pain
 - Rectal bleeding
- Arthralgias
 - Aromatase inhibitors, Tamoxifen

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Cardiotoxicity

- Anthracyclines
 - Adriamycin=doxorubicin,(epirubicin), Herceptin)
- Cardiomyopathy (heart muscle weakness, not coronary artery disease→ MI)
- Predisposing factors:
 - preexisting heart disease, longstanding hypertension, lifetime dose >500 mg/m², age > 70
 - 25%
- If no risk factors, <0.5%
- Monitor heart function with MUGA or ECHO
- Use noncardiotoxic regimens if necessary (TC)

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Summary of Cardiac Toxicity in Herceptin Studies

Study	Percent Congestive Heart Failure	
	Control	Trastuzumab arm
B-31	0.7	4.1
N9831	0	2.2-3.3
HERA	0	0.5

Herceptin cardiotoxicity often reversible

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Secondary malignancies

Leukemia/myelodysplastic syndromes:

- linked to higher doses of Cytosan (epirubicin) in some but not all studies
- occurs 3 to 7 years after treatment
- incidence < 0.5% with standard doses
- something to think about in second breast cancers

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Long term side effects

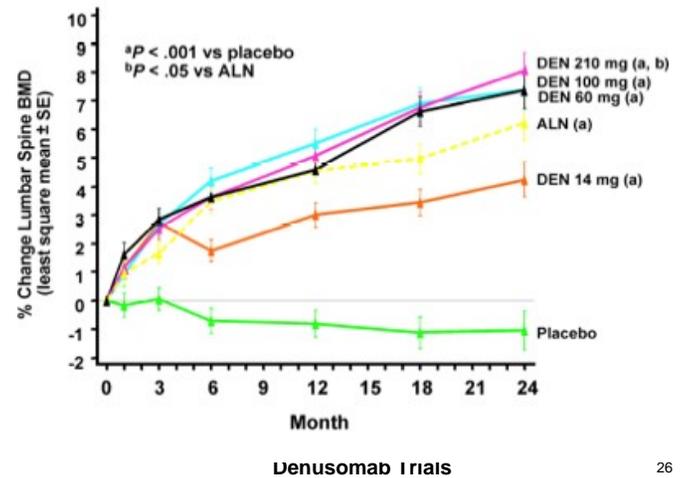
- Lymph edema
 - Early referral, sleeve, minimize trauma , prevent infections
- Bone health (especially on AI's in postmenopausal women)
 - Calcium and vitamin D
 - Weight bearing exercises
 - Stop tobacco
 - Bisphosphanates, Denosumab (monoclonal antibody to RANK Ligand)
 - DEXA scan every 2 years
- Thromboembolic disease
 - Increased incidence on tamoxifen
 - Education, stop smoking, activity, weight loss

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Osteoporosis Management

- Activity, regular exercise program
- Decreased alcohol, caffeine
- Stop smoking
- Calcium and vitamin D supplementation
- Bisphosphonates, IV indicated in patients intolerant of oral
- Denosomab, indicated in women with an osteoporotic fracture or osteoporosis with multiple risks for fractures

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Menopause/ premature ovarian failure

- Some chemotherapy, particularly alkylating agents like Cytoxan, are toxic to eggs.
- Effects are age- and dose-dependant
 - Younger women less affected presumably because have more eggs to start with.
 - Woman over 40 most likely to have permanent menopause.
 - Periods may stop, but can return up to 2 years later, particularly in women under 40 (use birth control even if not menstruating)

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I'm still hot,
it just comes in
flashes now!

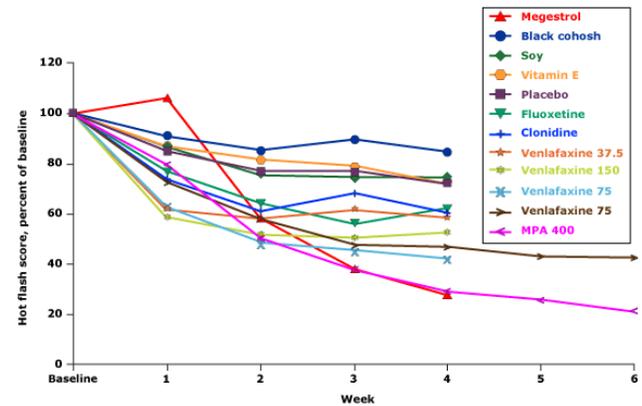
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Psychomotor symptoms

- Hot flashes
 - Venlafaxine – doses of 37.5 to 75 mg 60% reduction
 - Paxil – 10- 20 mg a day. Possible interaction with Tamoxifen
 - Gabapentin – 900 mg bid equally effective, but more drowsiness
 - Clonidine
 - Aspirin
 - Megace _ very effective, but concern in breast cancer
- Insomnia
 - Yoga, small , non randomized trials in all comers showed benefit
 - Acupuncture
 - Sleep therapy
 - Medications

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Hot flashes



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Gonadal/ Sexual effects

- Premature menopause
- Pelvic pain
 - radiation, surgery
- Decreased Libido
 - Fatigue, loss of body image, vaginal dryness with painful intercourse
 - Vaginal lubricants, testosterone can help
- Erectile Dysfunction
 - Surgery for prostate cancer, GnRH analogues, pelvic radiation
 - Medications, mechanical devices

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Physiological Side Effects

- Short term side effects:
 - Improved with better supportive care drugs
 - Antiemetics (emend, Aloxi, Kytril, Zofran)
 - Growth factors (Neupogen, Neulasta, Procrit, Aranesp)

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Physiological Side Effects

- Long term side effects
 - Fatigue: treat anemia, exercise, sleep, depression?
 - Weight gain: exercise to boost metabolism

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“Chemo brain”

- poorly understood, difficult to quantify
- neurocognitive testing before and after chemo
- may be tied to fatigue, depression, lack of sleep
- dementia drugs may help

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Cognitive dysfunction

Memory loss

- Trouble paying attention
- Trouble finding the right word
- Difficulty with new learning
- Difficulty managing daily activities

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Predictors of Cognitive Deficits

- Type of chemotherapy?
- Education level and IQ
- Depression
- Co-morbid illness
- History of traumatic brain injury
- History of learning disability
- Genetic variables
- Hormonal factors

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Cognitive defects

- Low blood counts
- Stress
- Depression
- Anxiety
- Fatigue and sleep disturbances
- Medication to treat side effects
- Hormonal changes resulting from some cancer treatments

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Interventions

Possible pharmacologic interventions

- Erythropoietin
- Methylphenidate (Ritalin)
- Statins – HMG-CoA reductase inhibitors
to preserve blood flow, decrease inflammatory cytokines, reduce oxidative stress
- Modafinil – wakefulness and cognitive enhancer
- Antidepressants
- Treat insomnia
- Herbal remedies
Ginkgo Biloba and Ginseng – no standardized formulation
- Cognitive rehabilitation (R. Ferguson, Dartmouth)
Exercise, memory tasks, puzzles, avoid fatigue

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Psychosocial Effects

- Immediate
 - after chemotherapy finishes
- Delayed
 - “Will I ever be normal again?”
 - fear of recurrence

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Psychosocial Effects

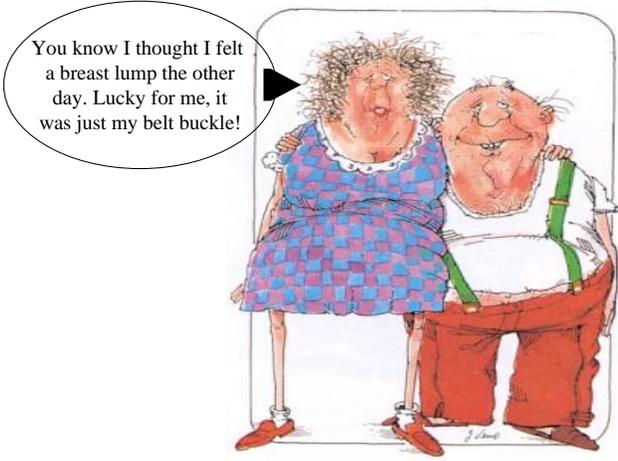
- After chemotherapy:
 - “Why aren’t I elated?”
 - After all, finishing treatments that make one bald and sick should be a joyous time.
 - Miss the support of the nurses, doctors and fellow patients in the treatment room.
 - The immediate “job/crisis” is over of getting through the chemo, and now it is time to “get on with the rest of one’s life” which is daunting.
 - People around you expect you to be back to normal.

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Psychosocial Effects

- Delayed: “Will I ever be normal again?”
 - life changing experience, one is never the same person
 - often a time of spiritual growth, redefinition of life goals
 - antidepressants
 - support groups

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You know I thought I felt a breast lump the other day. Lucky for me, it was just my belt buckle!

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Psychosocial

- Employment issues
 - Losing a job
 - Finding it harder to obtain another job
 - Coworkers often supportive, but sometimes may be resentful
 - Cognitive disturbances may affect performance

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Cancer Survivor statistics

- If you think there is a bias toward Breast Cancer– it is true!
- 11.1 million survivors
 - 23% breast, 16% prostate, 10% colorectal, 9% GYN
 - Average frequency of co morbidities is 25% for all cancers, 19% with breast cancers
 - Average age tends to be younger

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FAQs

- Wine and breast cancer risk
 - UK study (million women study) found increased risk with as little as 2 drinks a day
- Aspirin use
 - Nurse's health study. Observational. Found decrease in risk if taking 2-3 times a week. No specific dose mentioned

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FAQs

- Diet
 - WINS study suggested benefit with less than 15% fat intake
 - WHEL study did not show benefit
 - Reduced meat and increased vegetables reduce colon cancer risk
- Exercise
 - Nurses Health study showed an improvement in survival for both colorectal and breast cancer with regular exercise. Improved fatigue and quality of life

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Psychosocial Effects

- “Exit Interview” or debriefing
- being told what commonly happens is enormously reassuring, even if it doesn't prevent it
- don't be surprised if not elated, and if more depressed than ever.
- peaks over about 2-3 months and gradually fades.

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Treatment Summary

- Include:
 - Chemotherapy regimen , doses, toxicities experienced
 - Names and contact information for all treating physicians
 - Information regarding side effects, surveillance, plan of care and interval of follow up.
 - Use web sites such as Journey Forward to formulate individual plans
 - Gives a the patient a sense of control

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Prayer for Caregivers

Dear God,

Thank you for placing your trust in me and blessing me by calling me a care giver.

Thank you for these special gifts.

Keep me ever mindful of the words that issue from my mouth and the wordless messages I convey in other ways.

May I always be an instrument of peace and healing in this world.

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