

Care of Cancer Survivors: The Role of the Family Physician

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Dr. Wilbur is a graduate of the Saint Louis University School of Medicine, Missouri. He completed his family medicine residency and a geriatric medicine fellowship at the University of Iowa Hospitals and Clinics, Iowa City. As a medical educator, he enjoys working with energetic young physicians and students who push him to ask more questions and keep up to date. His interests include patient safety, quality improvement, care transitions, and care of older patients. He is one of the authors of Family Practice Examination and Board Review (McGraw-Hill) and The Family Practice Handbook (Mosby), and the editor of Iowa Family Physician Magazine.

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Learning Objectives

1. Appraise and identify current guidelines and recommendations for cancer survivors.
2. Provide appropriate and current resources to survivors on the psychosocial effects of cancer.
3. Demonstrate increased self-efficacy and confidence in testing for recurrence of cancer using recommended tests and ancillary procedures.
4. Develop communication strategies to improve communication with sub-specialists treating cancer patients to improve coordination of care.

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Audience Engagement System

Step 1: Home screen of the CME app with a 'CME Activity' button highlighted.

Step 2: 'CME Activity' screen showing a list of activities, with 'CME01: Acute Coronary Syndromes: Unchain My Heart' highlighted.

Step 3: 'CME01: Acute Coronary Syndromes: Unchain My Heart' activity page with a 'Start Activity' button highlighted.

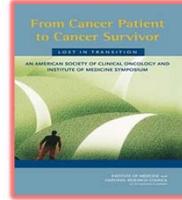
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Objectives

- Define cancer survivorship.
- Describe lead-time and length-time bias and how they might contribute to over-diagnosis.
- Recognize the 5 most common cancers with which adults in the U.S. live.
- Develop preventative care and health maintenance strategies for cancer survivors.
- Recognize the importance of a survivor care plan.
- Identify late effects of common cancers and cancer treatments.

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Lost in Transition



1. Awareness of Cancer Survivors Needs
2. Create a Survivorship Care Plan
3. Develop Guidelines
4. Measurable Quality Indicators
5. Care for Diverse Populations
6. Comprehensive Control Plans
7. Professional Education and Training for providers
8. Eliminate employment discrimination to survivors
9. Cancer Survivors - Access to Affordable Care
10. Research to Guide Survivorship care

(Institute of Medicine, 2005)

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Who's a "cancer survivor"?

- A little history...
- Anyone living with the diagnosis of cancer – from initial diagnosis through all phases of the illness.
- Families of those diagnosed with cancer.

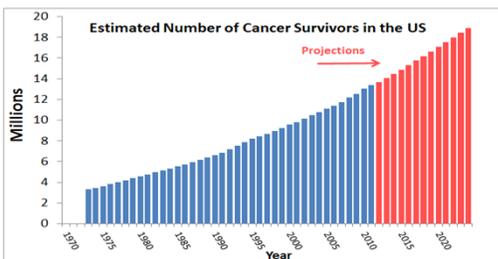


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Who will be diagnosed with cancer?

- About HALF of all men in the U.S.
- About ONE-THIRD of all women in the U.S.

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* DeSantis C, Chaturvedi L, Mariotto AB, et al. (2014). Cancer Treatment and Survivorship Statistics, 2014. CA: A Cancer Journal for Clinicians. In press.

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New Cases, Deaths and 5-Year Relative Survival



SEER 9 Incidence & U.S. Mortality 1975-2011, All Races, Both Sexes. Rates are Age-Adjusted.

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AES Question

Which of the following health care-related changes is(are) cause(s) of increased numbers of cancer survivors? (Choose all that apply)

- A. Increased use of screening tests
- B. Population aging
- C. Improved treatments
- D. ABFM Maintenance of Certification simulations

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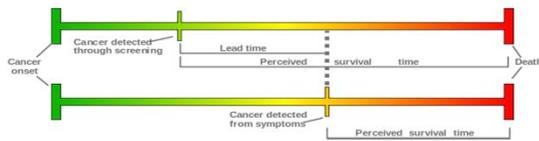
AES Question

How might increased use of screening tests improve the 5-year survival rate without actually affecting cancer survival? (Choose all that apply)

- A. By detecting cancers that would have otherwise been diagnosed clinically years later (lead time bias).
- B. By detecting slow-growing cancers at an early stage when treatment may be effective but unnecessary (length-time bias)
- C. By attributing more deaths to cancer due to increased detection (attribution bias).
- D. It probably can't. I don't know. I hate fractions (anti-math bias).

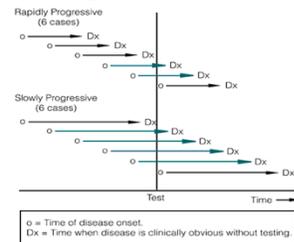
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Lead time bias



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Length time bias



o = Time of disease onset.
Dx = Time when disease is clinically obvious without testing

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AES Question

Which of the following cancers has the highest 5-year survival rate?

- A. Breast cancer
- B. Colon cancer
- C. Lung cancer
- D. Prostate cancer
- E. Lymphoma

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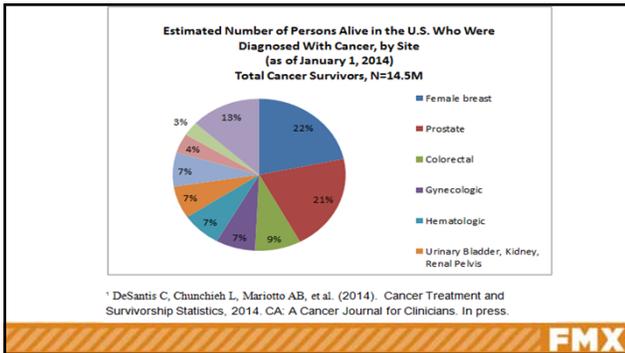
Table 1. Incidence, Prevalence, and Survival Rates for Selected Cancers in Adults

CANCER TYPE	INCIDENCE PER 100,000 PERSONS, AGE-ADJUSTED ¹	PREVALENCE ²	FIVE-YEAR SURVIVAL RATE (%) ³	CANCER-RELATED MORTALITY RATE PER 100,000 PERSONS PER YEAR
Breast (women)	123.8	2,829,041	89.2	22.6
Prostate (men)	152.0	2,617,682	99.2	23.0
Colorectal	45.0	1,154,481	64.9	16.4
Melanoma	21.1	521,780	91.3	2.7
Non-Hodgkin lymphoma	19.7	509,050	89.0	6.4
Acute leukemia (myeloid and lymphoblastic)	12.8	287,963	56.0	7.1
Hodgkin lymphoma	2.8	181,826	85.1	0.4

¹—Based on cases from 2006 to 2010.
²—Point prevalence of disease in 2013.
³—From 2003 to 2009.
Information from reference 2.

Wilbur, J. Am Fam Physician. 2015 Jan 1;91(1):29-36.

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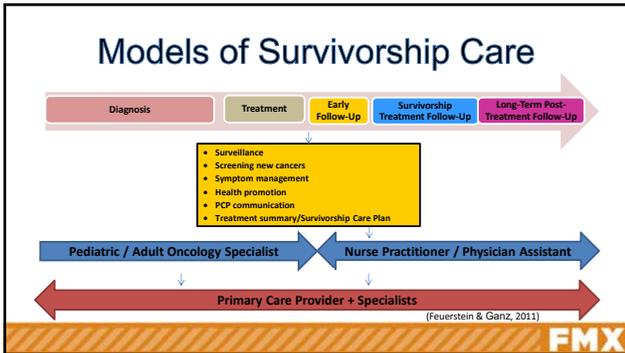


- ### AES Question
- Cancer survivors are (choose all that apply):
- A. More likely to receive influenza vaccination than the general population.
 - B. Less likely to receive smoking cessation counseling than the general population.
 - C. More likely to be up-to-date on cervical cancer screening than the general population.
 - D. More likely to rate their health-related quality-of-life as "poor" compared to the general population.

- ### General Prevention and Health Maintenance
- Evidence shows that cancer survivors receive less preventative care and meet fewer quality measures of chronic diseases compared to same-age non-cancer patients.
 - Why?
 - Fewer cancer survivors claim to have a PCP
 - Cancer survivors and their care providers may tend to focus on their cancer history to the detriment of their other health risks

- ### Care Coordination
- There is limited evidence that cancer survivors derive health benefits from care coordinated among specialties, including family medicine.
 - Increased rates of preventative services offered
 - Improved adherence to chronic disease guidelines
 - Patients express a preference for maintaining care with their cancer specialist after active treatment, but there is no evidence of benefit.

- ### Care Coordination
- With other diseases and specialties, there is ample evidence that patients fare better when physicians coordinate care.
 - Think of PCMH, chronic disease management, cardiovascular disease care, integrated mental health care, etc.



Core Elements of the Survivorship Care Plan for Adults Completing Cancer Treatment

Cancer treatment history
Potential long-term and late effects of treatment
Recommended surveillance for long-term and late effects
Recommended surveillance for recurrence and new cancers
Specific information about the timing and content of recommended follow-up
Recommendations on preventive practices, and how to maintain health and well-being
Information on legal protections regarding employment and access to health insurance
Availability of psychosocial services in the community



Causes of Late Effects

- Surgery
- Chemotherapy/Immunotherapy
- Hormone Therapy
- Radiation Therapy
- Psychological effect of the cancer experience

Late Effects of Cancer Treatments

- **Surgical sequelae**
 - Breast: lymphedema
 - Colon/bladder: ostomy
 - Prostate: incontinence, impotence
 - Pain
 - Nerve damage
 - Body image disturbance

Late Effects of Cancer Treatments

- **Avascular necrosis:** Steroids
- **Cardiomyopathy/CHF:** Anthracycline chemotherapy, Radiation to the chest
- **Infertility:** Alkylating agents, Radiation
- **Endocrine (Growth hormone deficiency, gonadotropin, thyroid):** Radiation
- **Renal:** Cisplatin, Ifosfamide, Radiation, Surgery
- **Lung damage:** Radiation, Bleomycin
- **Skin damage:** Radiation, GVHD

Late Effects of Cancer Treatments

- **Secondary malignancy:**
 - Skin cancer: Radiation
 - Breast cancer: Radiation
 - Bone tumors: Radiation
 - Thyroid cancer: Radiation
 - Secondary AML: Etoposide, Alkylating agents
- **Neuro/Neurocognitive:** Intrathecal chemotherapy, Cranioradiation, Chemotherapy (Vinca alkaloids, Oxaliplatin, Cisplatin, Velcade, Taxol)
- **Psychosocial:** Overall cancer experience
 - Depression, anxiety, limits in working and functional abilities, health insurance costs and access to care



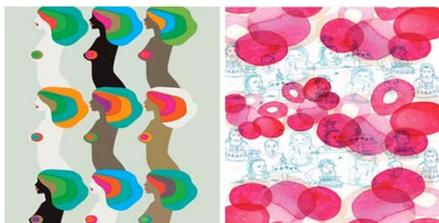
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Risk Factors for Adverse Effects of Cancer Treatments

- Type of cancer
- Location of cancer
- Age during treatment (both very young and very old)
- Type of treatment
- Side effects experienced during treatment

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Specific Cancers: Breast Cancer



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AES Question

Which of these follow-up recommendations has demonstrated benefit in the care of breast cancer survivors after curative-intent therapy?

- A. Annual breast self-exam
- B. Annual breast MRI
- C. Annual mammography
- D. Annual chest x-ray
- E. None of the above

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Breast Cancer

- No evidence that more intensive approaches are better than mammography for:
 - Detecting recurrences
 - Improving survival
 - Improving quality of life

Rojas MP et al. *Cochrane Database Syst Rev* 2005. CD001768.

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Breast Cancer Survivors

- Recommend:
 - achieving/maintaining normal range BMI
 - 150 minutes per week of aerobic exercise
 - Low-fat, plant-based diet
- Late effects of chemo:
 - Heart failure
 - Pulmonary toxicity
 - Leukemia

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Breast Cancer Survivors

- Anti-estrogen therapy is commonly employed for 5-10 years after curative-intent treatment and may cause:
 - Hot flashes
 - Sexual dysfunction
 - Uterine cancer
- Aromatase inhibitors, compared to SERM therapy:
 - Cause fewer VTE, fewer uterine cancers
 - More arthralgia and higher risk of fractures

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Breast Cancer Survivors

- Lymphedema occurs in up to 20% of women with axillary lymph node dissection.
- Treatments include compression and physical therapy.

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Specific Cancers: Prostate Cancer



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AES Question:

A 65 year old male undergoes radiotherapy for localized prostate cancer. Which of the following conditions is most likely to be the cause of his death?

- A. Recurrent prostate cancer
- B. Bladder cancer
- C. Rectal cancer
- D. Cardiovascular disease

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Prostate Cancer Survivors

- More likely to suffer consequences of treatment than to die of their disease.
- Need to have other disease prevention addressed.
- Should be counseled on CV risks as with any other same-age male.

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Prostate Cancer Survivors

- Curative-intent treatment for prostate cancer includes:
 - Surgery +/- androgen deprivation therapy (ADT) for high-grade
 - Radiation +/- ADT for high-grade
- Second-line therapy: ADT
 - Eventually, prostate cancer develops resistance to this.
- Metastatic disease: chemotherapy and radiation

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Prostate Cancer Survivors

- Common adverse effects of treatment:
 - Sexual dysfunction: radiation and surgery have about the same rates
 - Urinary incontinence: radiation and surgery have about the same rates
 - Incontinence and erectile dysfunction from radiation may begin months or years after treatment
 - Radiation may cause proctitis, hematuria, rectal bleeding, diarrhea and secondary cancers (bladder & rectum)

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Specific Cancers: Colon Cancer



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AES Question

A 50 year old male with rectal bleeding was found to have a large sigmoid cancer which the endoscope could not pass. He was treated with surgical resection and adjuvant chemotherapy and staged as IIB (no nodes involved, no distant mets). When should he have his next colonoscopy?

- A. As soon as possible
- B. In one year
- C. In 3-5 years
- D. In 10 years (return to routine screening)
- E. Never. He's cured.

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Colon Cancer Survivors

- Risk for recurrence depends on grade and stage of cancer
- 95% of recurrences are within the first 5-years after diagnosis and treatment
- Risk for second colon cancers is increased

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Colon Cancer Survivors

- Complications of disease and treatment include:
 - Adhesions
 - Ostomy care
 - Radiation proctitis
 - Diarrhea
 - Fecal incontinence
 - Abdominal pain
 - Sexual dysfunction
 - Fatigue

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Specific Cancers: Mystery to Solve!



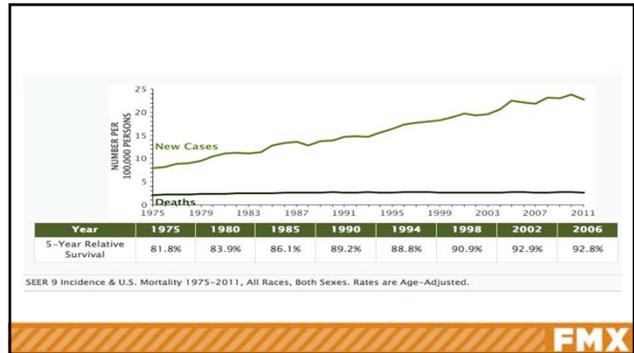
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AES Question

Which of the following cancer has seen the greatest percentage increase in new diagnoses in the last 20 years?

- A. Breast cancer
- B. Colon cancer
- C. Leukemia
- D. Melanoma
- E. Prostate cancer

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Melanoma Survivors

- Annual skin exam
- Patient education (“ABCDE”) and periodic skin self-exam
- Sun avoidance
 - Some evidence that sunscreens reduce risk
- Primary treatment results in predictable adverse effects – scarring, pain
- Treatment of advanced disease requires specialized care – immunotherapy, chemotherapy, etc.

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Specific Cancers: Blood/Lymph Cancers



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AES Question

In a woman with a history of chest or axillary radiation treatment for Hodgkin lymphoma 10 years ago, screening for which of one of the following cancers is recommended?

- A. Breast cancer
- B. Lung cancer
- C. Thyroid cancer
- D. Secondary blood cancers
- E. All of the above

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Hodgkin Survivors

- Consider cardiac stress testing and echocardiography at 10-year intervals
- If neck radiation, annual thyroid assessment (exam, TSH)
- If chest or axillary radiation, initiate annual breast screening at 8-10 years post-therapy or at 40 years of age (whichever comes first)
- Breast MRI in addition to mammography for women who received chest or axillary radiation between 10-30 years of age

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Nonhodgkin lymphoma survivors

- Late effects vary based on type of lymphoma and treatment, and could consist of:
 - Cardiomyopathy
 - Thyroid dysfunction
 - Myelodysplasia
 - Acute leukemia
 - Breast, bladder, lung, skin, thyroid, and head and neck cancers
 - Infertility, sexual dysfunction

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Leukemia survivors

- Late effects vary based on type of leukemia and treatment – similar to nonhodgkin lymphoma
- BMT survivors have increased risk of:
 - Nonmelanoma skin cancers
 - Second hematologic malignancies
 - Post-transplant lymphoproliferative disorders

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Practice Recommendations (1)

- In breast cancer survivors, surveillance with regular physical examinations and yearly mammography is as effective as more intensive approaches for detecting recurrences, and improving overall survival and quality of life. (SOR A)
- Phosphodiesterase-5 inhibitors are beneficial in the treatment of erectile dysfunction caused by prostate cancer treatment. (SOR A)

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Practice Recommendations (2)

- There is an overall survival benefit for intensive surveillance after colorectal cancer treatment, but the optimal combination of methods and frequency of visits is unknown. (SOR B)
- Melanoma survivors should receive annual clinical skin examinations and be counseled about using sun protection and recognizing potentially malignant skin lesions. (SOR C)

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Practice Recommendations (3)

- Females treated with chest or axillary radiation for lymphoma should undergo earlier and more intensive breast cancer screening, although the optimal combination of methods and frequency of visits is unknown. (SOR C)

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Resources for You and Your Patients

- <http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-042801.pdf> (ACS Report)
- <http://www.nap.edu/read/11468/chapter/1#xxv> (IOM report)
- <https://www.nccn.org> (National Cancer Care Network)
- <http://www.cancer.org> (American Cancer Society)
- <http://www.aafp.org/aafp/2015/0101/p29.pdf> (Wilbur's AFP article)



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The End: Questions?



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