

UVM Project ECHO

Cancer Survivorship for Primary Care

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Rebecca Hewson-Steller, RN

Didactic presentation is recorded. Registered participants will receive the link.

Session Agenda

- Welcome
- Objectives
- Didactic Presentation (35-40 min)
 - Q&A
- Case presentation
 - Clarifying questions
 - Discussion
- Closing Announcements
 - Topic and cases for next session
 - Feedback and evaluation



ECHO Model: All Teach, All Learn



Cohort-based learning on ZOOM

- Have your camera on as much as possible, especially when joining the meeting and during discussions
- Questions and comments are welcome – use the “raise hand” feature or put them in the chat
- This is not a webinar! Participation is key

Case-based learning

- 1-2 participant cases each session using provided template
- Contact Mark Pasanen to present a case

Series Objectives

Learning objectives for this ECHO series include the ability to:

1. Describe the medical and psychosocial issues cancer survivors may face and strategies to address common challenges
2. Identify the range of resources and support available to cancer survivors, with a focus on rural settings
3. Apply current evidence to improve care provided for cancer survivors
4. Develop care plans, including coordination strategies, to deliver patient-centered care for cancer survivors

CMIE Disclosures

The Robert Larner College of Medicine at The University of Vermont is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME), to provide continuing medical education for the healthcare team.

The University of Vermont has approved your application and designates each session a maximum of **1.0 AMA PRA Category 1 credit(s)**[™].

This program has been reviewed and is acceptable for up to **1.0 Nursing Contact Hours**.

The Robert Larner College of Medicine University of Vermont has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for **1.0 AAPA Category 1 CME credits**.

As a Jointly Accredited Organization, The Robert Larner College of Medicine at the University of Vermont is approved to offer social work continuing education by the Association of Social Work Boards (ASWB) Approved Continuing Education (ACE) program. Organizations, not individual courses, are approved under this program. State and provincial regulatory boards have the final authority to determine whether an individual course may be accepted for continuing education credit. The University of Vermont maintains responsibility for this course. Social workers completing this course receive 1.0 continuing education credits.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to **1.0 MOC points** in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program; It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM or ABP MOC credit.

This activity was planned by and for the healthcare team, and learners will receive 1.0 Interprofessional Continuing Education (IPCE) credit for learning and change.

Participants should claim only the credit commensurate with the extent of their participation in the activity.

CMIE Disclosures

Interest Disclosures: As an organization accredited by the ACCME to sponsor continuing medical education activities, UVMCMIE is required to disclose any real or apparent conflicts of interest (COI) that any speakers may have related to the content of their presentations.

Meeting Disclaimer: Regarding materials and information received during this educational event, the views, statements, and recommendations expressed during this activity represent those of the authors and speakers and do not necessarily represent the views of the University of Vermont.

Prevention for Cancer Survivors: Managing Co-Morbidities

Jennifer J. Kelly DO, FACE, CCD

UVMHN Dept of Medicine; Division Chief of Endocrinology

Director of Metabolic Bone Clinic

Mark Pasanen, MD, FACP

UVMHN Dept of Medicine; Vice Chair of Education

April 29, 2025

Session Objectives

Learning objectives for this ECHO session include the ability to:

1. Recognize the essential components of survivorship care in primary care
2. Provide appropriate preventive care in cancer survivors
3. Identify resources available for the health care team in providing evidence-based care for cancer survivors
4. Manage bone health in cancer survivors

Cancer Survivorship and Bone Health

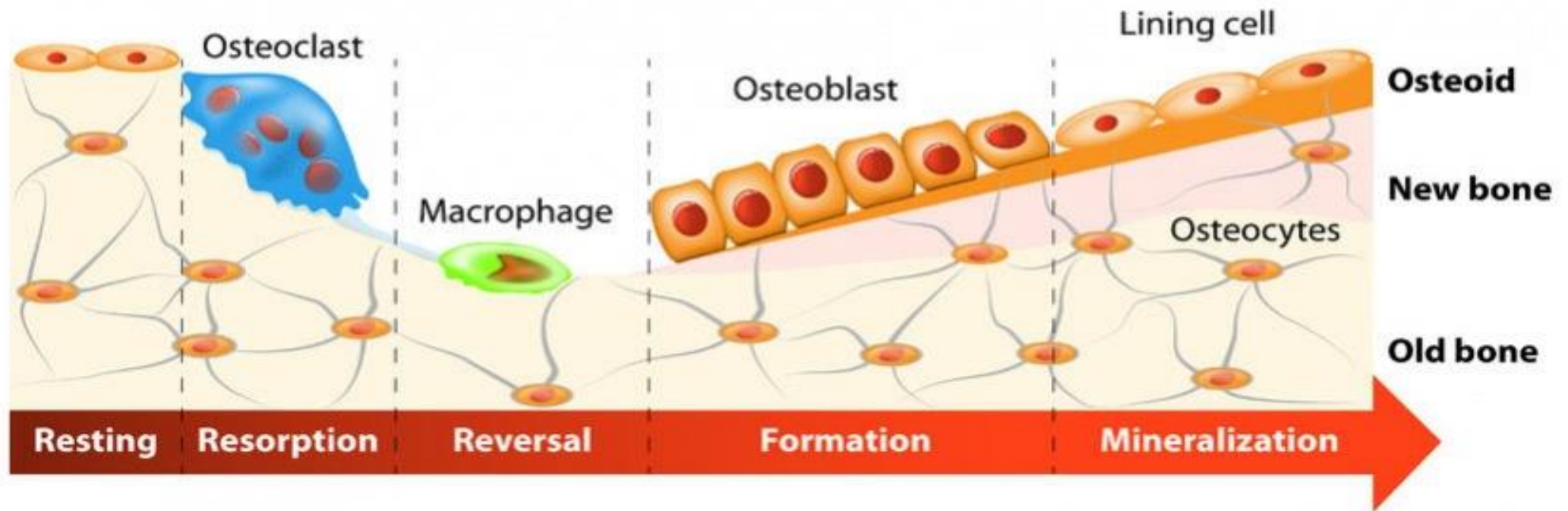
Jennifer J. Kelly DO, FACE, CCD
Director, Metabolic Bone Program
Professor of Medicine, Larner College of Medicine
Chief, Division of Endocrinology and Diabetes
University of Vermont Medical Center

Our bones

- Bone is a **living tissue**, which is constantly being broken down and rebuilt, a process called remodeling
- The loss of living bone tissue makes bones **fragile** and more likely to fracture



The bone remodelling process



Bone function

- The major **functions** of bones are to:
 - Provide **structural** support for the body
 - Provide **protection** of vital organs
 - Provide an environment for **marrow** (where blood cells are produced)
 - Act as a **storage** area for minerals (such as calcium)



Cancer and bone: friendly and hostile relationship

Bone is a storehouse of cancer-stimulating growth factors, cytokines, and chemokines released into the bone marrow cavity due to physiological bone remodeling.

This unique and dynamic environment makes bone a preferential target site for the dissemination of cancers such as breast, prostate and lung cancer, along with multiple myeloma.

Cancer Survivorship and Bone Health

- Cancer is unfortunately a common condition. Rapid advances in cancer treatment have markedly improved cancer prognosis.
- However, improved cancer survivorship means these patients might experience chronic issues, such as poor bone health (osteopenia or osteoporosis) and fracture.
- As cancer tends to affect older individuals, this burden is compounded by age related bone loss.
- Aside of fracture related pain and incapacity, fragility fractures are associated with increased mortality for up to 10 years after fracture.

Different mechanisms involved in bone loss

Endocrine therapies to treat cancer.

Use of high dose potent corticosteroids, such as dexamethasone in CNS cancers, can have a deleterious effect on bone health.

Focal bone damage from radiotherapy and bone metastases.

Cancer itself, due to local cellular activation, can affect bone density-particularly in hematopoietic malignancies.

The general effect of reduced mobility and lack of exercise resulting in sarcopenia and deconditioning afflicts many cancer survivors and increases falls and fracture risk.

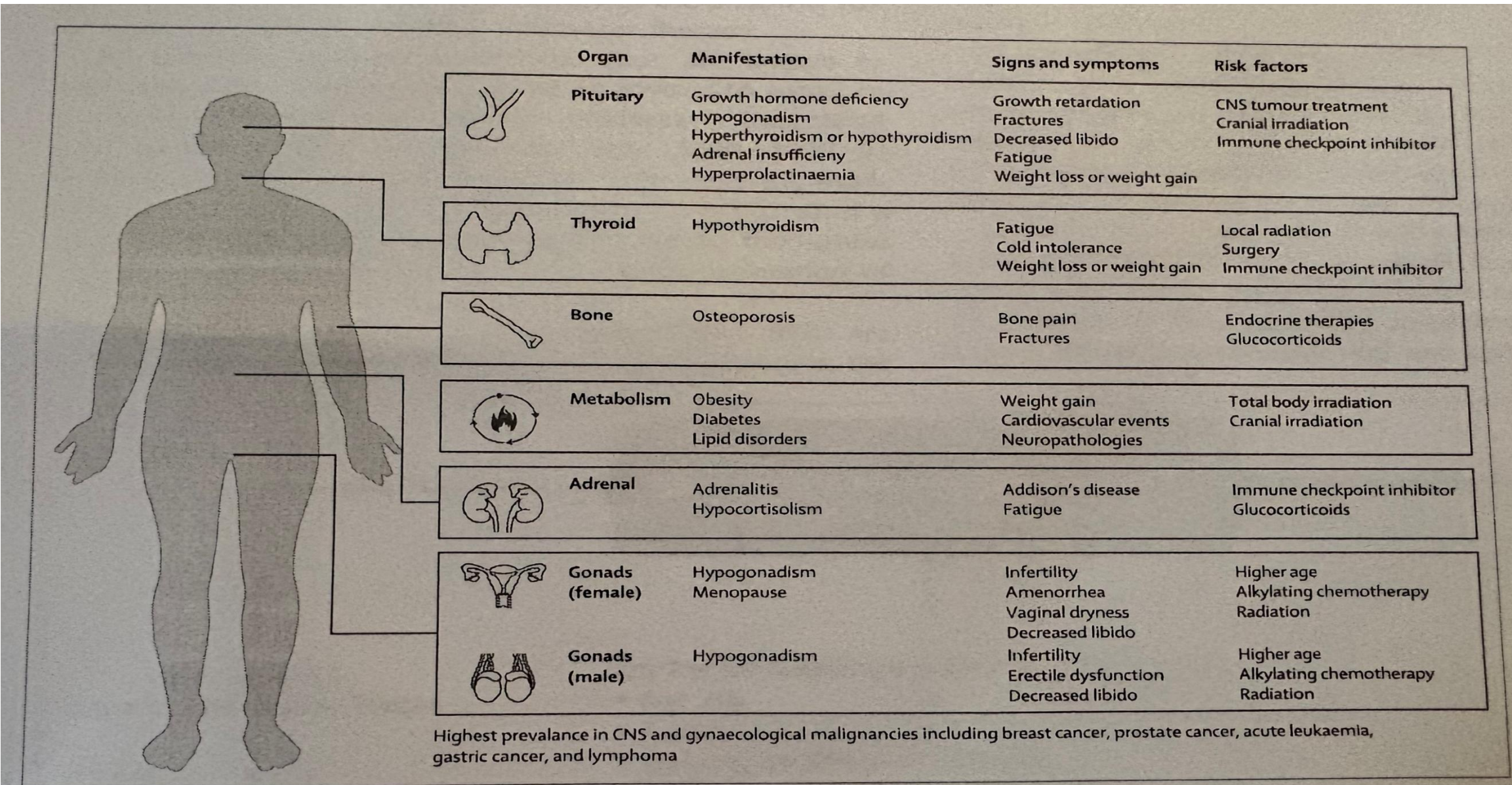


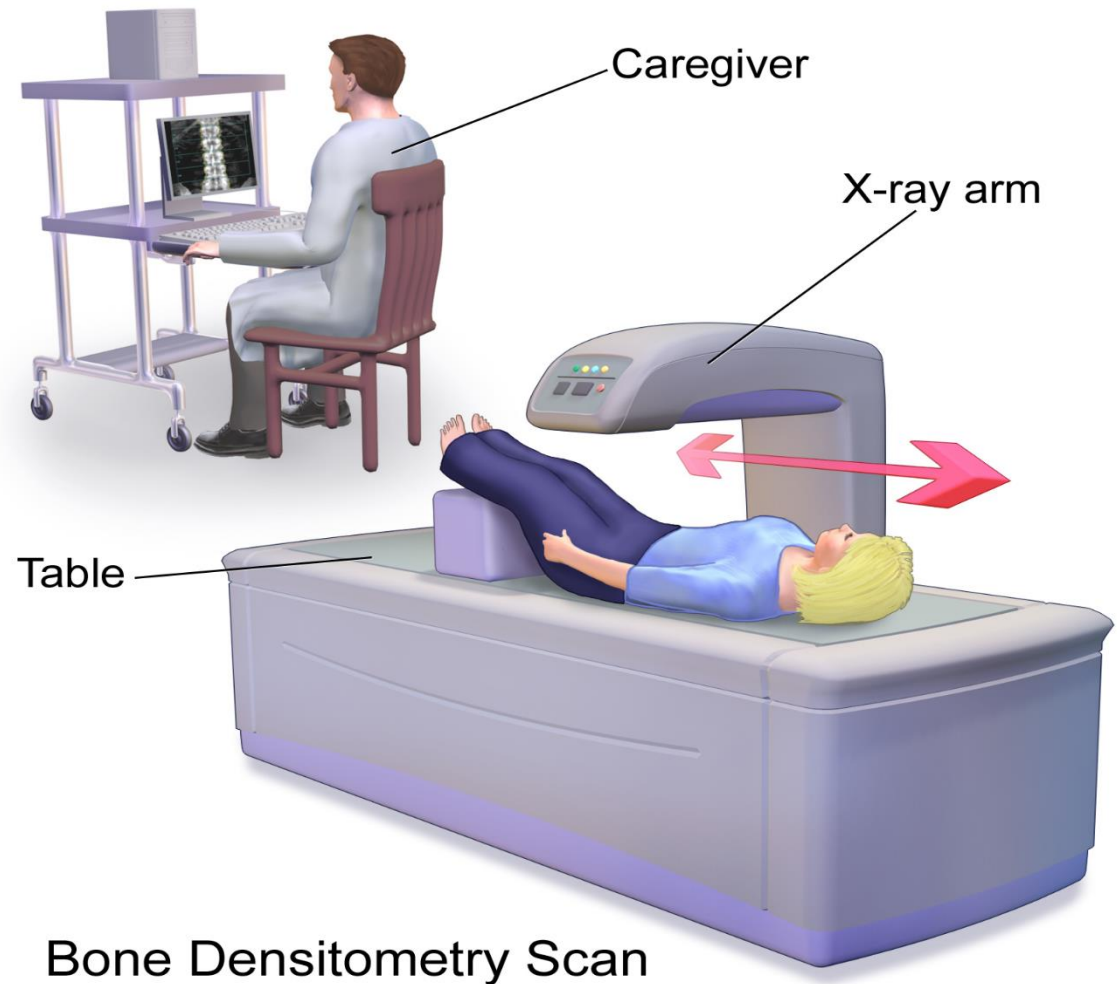
Figure 1: Common endocrine complications in long-term cancer survivors

Bone density test (DXA)

Very easy to perform

Minimal radiation

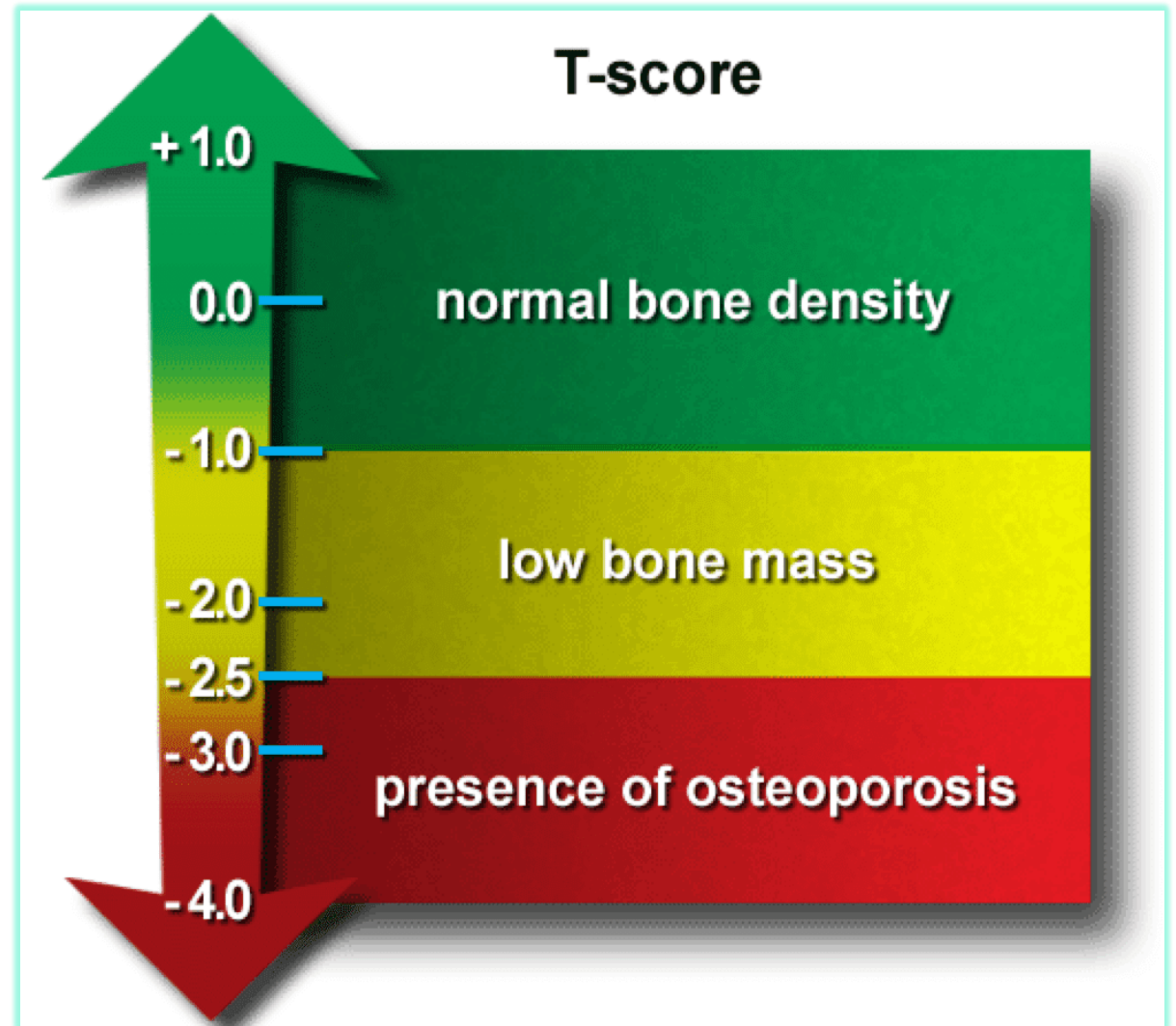
Typically assess spine and hip, sometimes the wrist



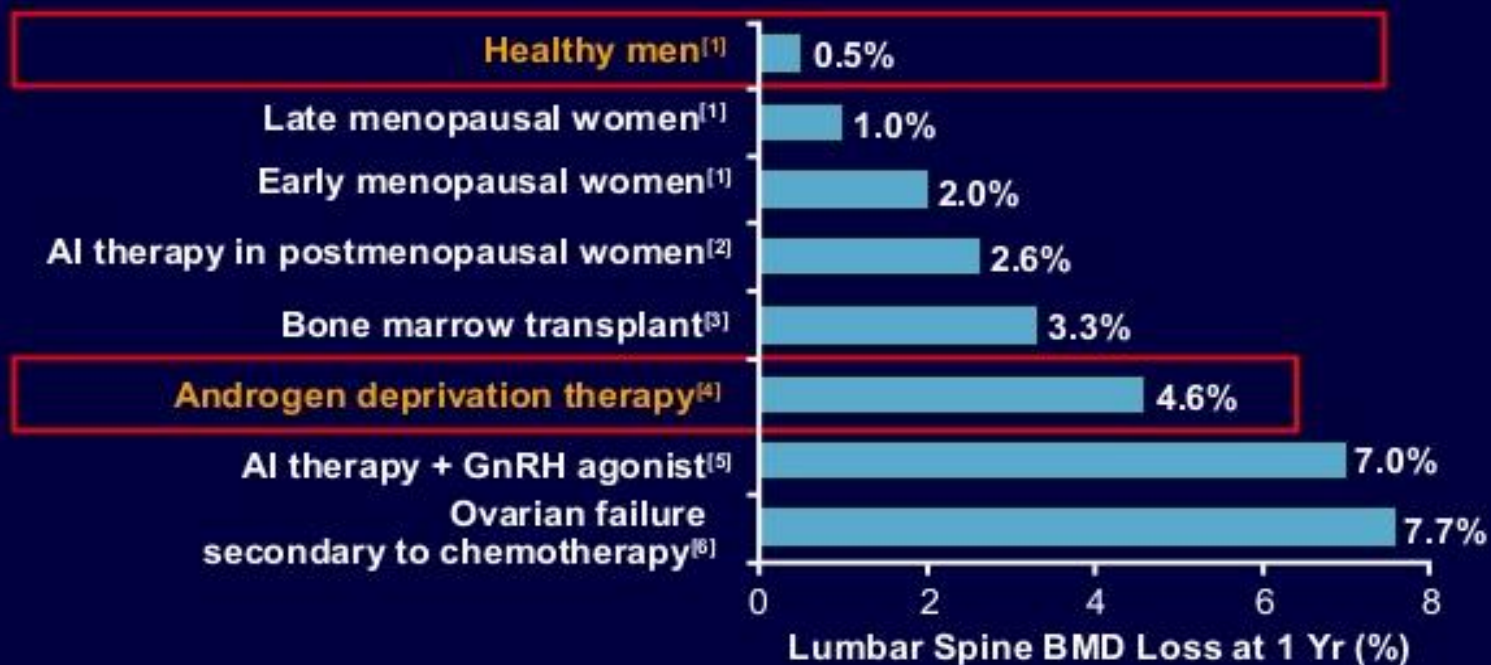
DXA exams

Give us T-scores that tell us about fracture risk

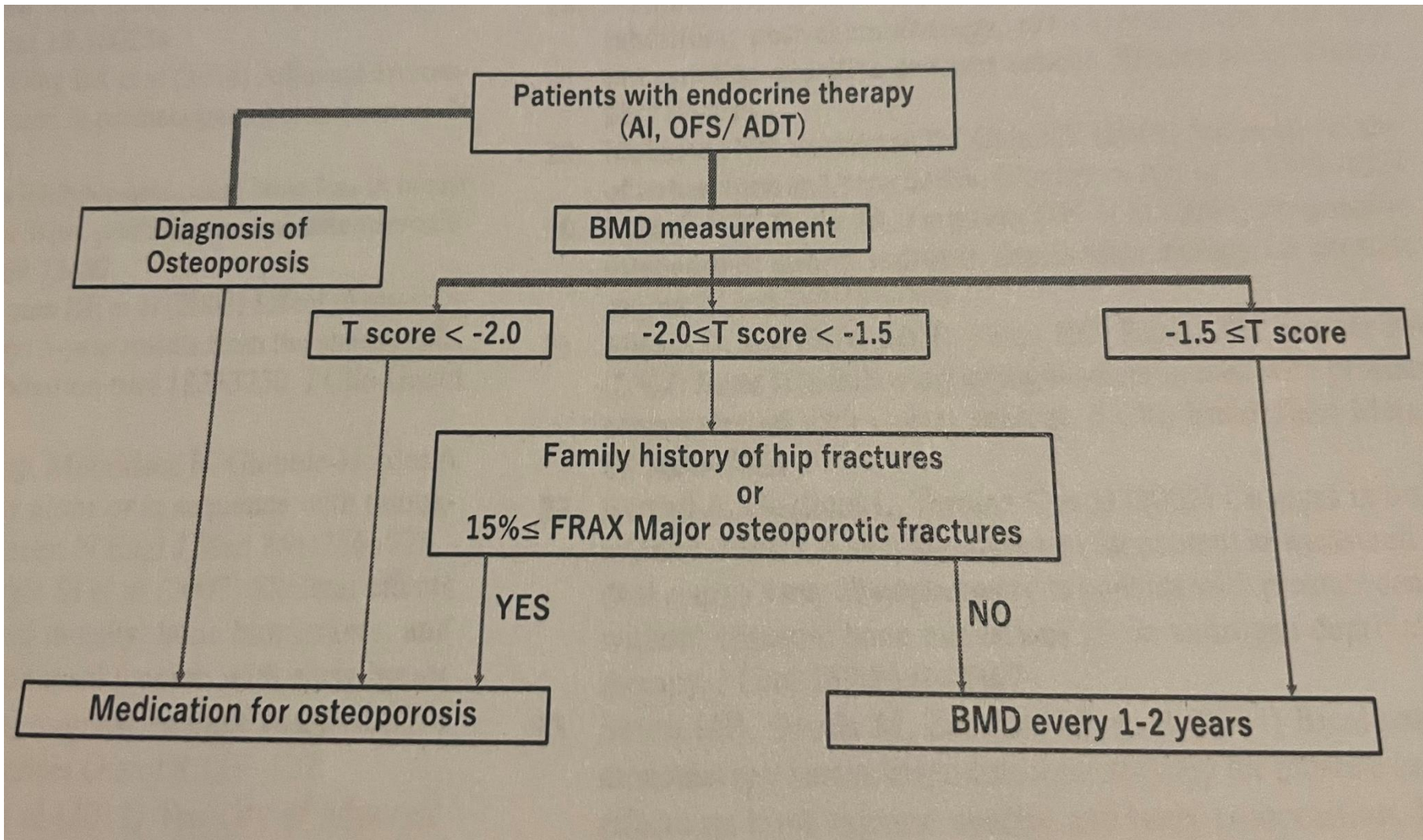
Another assessment called FRAX performed at the same time of the DXA that takes into account other risk factors for fracture

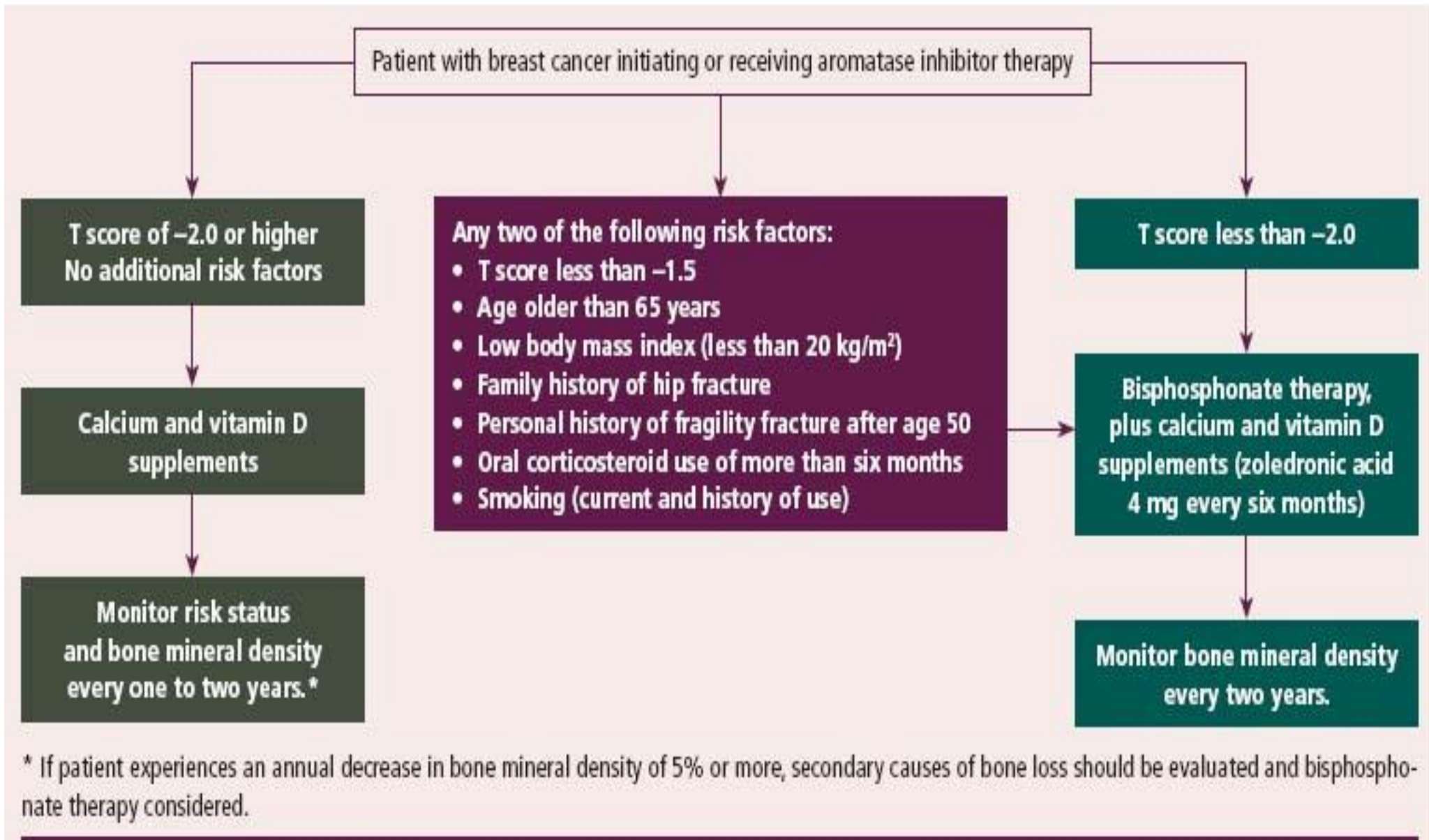


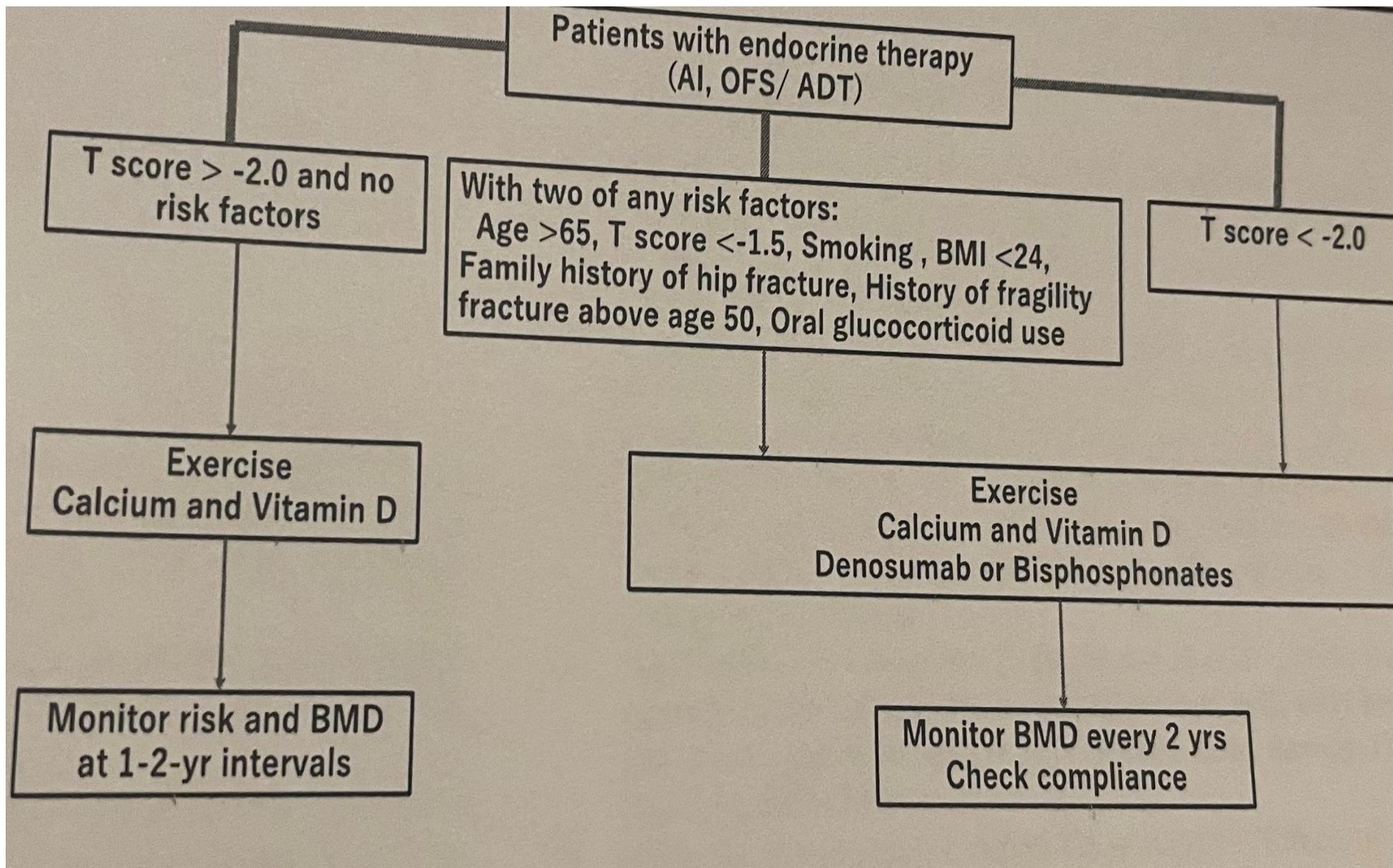
ADT-Associated Bone Loss



1. Kanis JA. Osteoporosis. Blackwell Healthcare Communications Ltd; 1997. 2. Eastell R, et al. J Bone Mineral Res. 2002;17(suppl 2). Abstract 1170. 3. Lee WY, et al. J Clin Endocrinol Metab. 2002;87:329-335. 4. Maillefert JF, et al. J Urol. 1999;161:1219-1222. 5. Gnant M. Breast Cancer Res Treat. 2002;76(suppl 1):S31. Abstract 12. 6. Shapiro CL, et al. J Clin Oncol. 2001;19:3306-3311.







Recommendations

- In at-risk patients, an assessment of clinical risk factors and measurement of BMD by dual X-Ray absorptiometry is recommended [V, A]
- Weight-bearing exercise, smoking cessation, reduced alcohol intake and vitamin D supplements (and calcium) should be encouraged [I, B]
- Antiresorptive therapy is recommended in women receiving either an AI or OFS and men on ADT for >6 months with either a BMD T score of <-2 or with ≥ 2 risk factors for fracture [I, A]
- Denosumab 60 mg every 6 months is the treatment of choice to prevent fractures in men on ADT and postmenopausal women with early breast cancer at low risk for disease recurrence [I, B]

Patient with cancer receiving chronic endocrine treatment known to accelerate bone loss^a

T score >-2.0 and no additional risk factors

- Any 2 of the following risk factors:**
- Age >65
 - T score <-1.5
 - Smoking (current and history of)
 - BMI <24
 - Family history of hip fracture
 - Personal history of fragility fracture above age 50
 - Oral glucocorticoid use for >6 months

T score <-2.0

**Exercise
Calcium and vitamin D**

**Exercise
Calcium and vitamin D
Denosumab or bisphosphonate therapy^{c,d}**

Monitor risk and BMD at 1-2-year intervals^b

**Monitor BMD every 2 years
Check compliance with oral therapy^e**



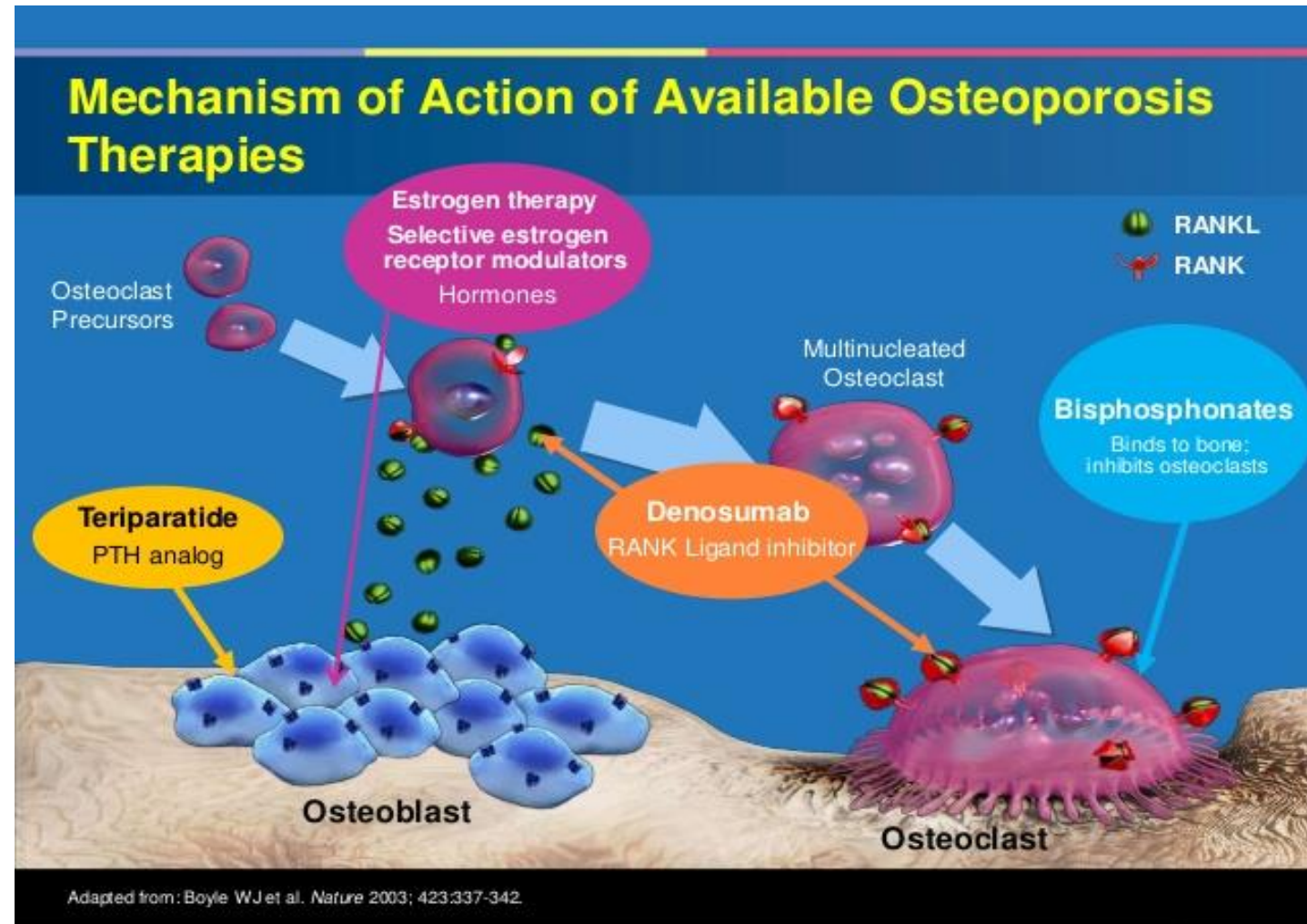
Medications to prevent bone loss and fracture

Bisphosphonates are first line treatment for most people

Denosumab also works as an anti-resorptive medication

There are some medications that help build bone

These are for high-risk patients, cannot be used if a person has been treated with radiation. Also concerns with cancer history.



SHORT REPORT

JBMR®

Clinical Features of 24 Patients With Rebound-Associated Vertebral Fractures After Denosumab Discontinuation: Systematic Review and Additional Cases

Athanasios D Anastasilakis,¹ Sterghios A Polyzos,² Polyzois Makras,³ Berengere Aubry-Rozier,⁴ Stella Kaori,⁵ and Olivier Lamy⁶

¹Department of Endocrinology, 424 General Military Hospital, Thessaloniki, Greece
²Department of Medicine, Aristotle University of Thessaloniki, Ippokraton Hospital, Thessaloniki, Greece
³Department of Endocrinology and Diabetes, 201 Hellas Air Force & VA General Hospital, Athens, Greece
⁴Center for Bone Diseases, Lausanne University Hospital, Lausanne, Switzerland
⁵Endo Center, Limassol, Cyprus

MULTIPLE VERTEBRAL FRACTURES AFTER DISCONTINUATION OF D'MAB

- 112 fractures in 24 women
- 92% with >1 fracture
- 8-16 months after last dose of d'mab



Anastasilakis AD et al *J Bone Miner Res* 2017;32:1291-1296

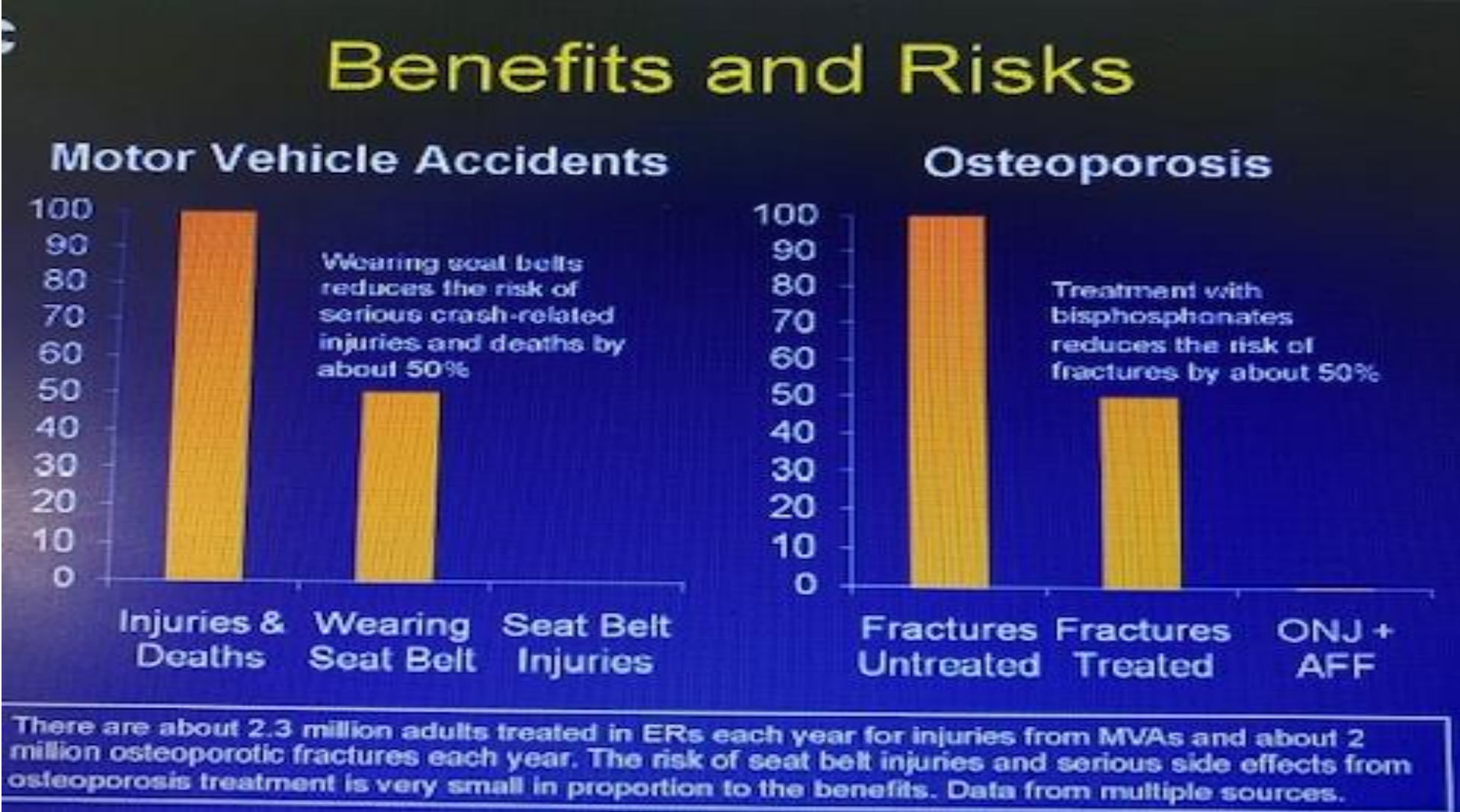
Limitations of currently available drugs

- Use of Bisphosphonates, particularly for long periods of time (5-7 years), is associated with an **increased risk of atypical femoral fracture (AFF)**

J Bone Metab 2015; 22:183-189

- Osteonecrosis of Jaw (ONJ) is a rare complication that may occur in patients receiving **high dose intravenous bisphosphate or denosumab therapy**

Benefits vs risks of medications



Special considerations in the elderly

Despite an increased risk for fracture and increased tendency to fall, BTAs are typically underutilised in the elderly to prevent skeletal morbidity.⁴² In addition to preventing SREs in the oncology setting, BTAs are indicated for fracture risk reduction in elderly patients with osteoporosis.³⁶ Although oral bisphosphonates such as risedronate and alendronate have demonstrated efficacy in the post-menopausal osteoporosis setting, the complex dosing regimen can lead to poor patient compliance. Parenteral agents such as a single annual infusion of zoledronate or 6-monthly denosumab are highly effective and will improve adherence to treatment.³⁶

Particular care during treatment with BTAs is needed for elderly patients who may have renal impairment and other comorbid conditions requiring concomitant medications that can increase the risk for AEs.⁴²

Recommendations

- Structurally significant lesions in the spine should be evaluated by an orthopaedic/spinal surgeon to provide advice on suitability for surgery [IV, A].
- Vertebroplasty and kyphoplasty are minimally-invasive therapeutic options that should be discussed within the multidisciplinary team [I, B].
- Elderly patients are at increased risk for fracture and are more likely to require pharmacological treatment to prevent CTIBL [III, A].
- Enhanced monitoring for the effects of comorbidities on treatment safety should be followed in the elderly [V, A].

Conclusions

- Bone health is important long term.
- Fracture risk increases with age. Fractures are painful and limit mobility and independence.
- Some medications increase bone loss even further.
- Medications that prevent fractures and bone loss are very safe and effective.
- Regular calcium and vitamin D intake is important along with fall prevention and weight bearing exercise for bone health.



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- Shapiro CL, Van Poznak C, Lacchetti C, Kirshner J, Eastell R, Gagel R, Smith S, Edwards BJ, Frank E, Lyman GH, Smith MR, Mhaskar R, Henderson T, Neuner J. Management of Osteoporosis in Survivors of Adult Cancers With Nonmetastatic Disease: ASCO Clinical Practice Guideline. *J Clin Oncol.* 2019 Nov 1;37(31):2916-2946. doi: 10.1200/JCO.19.01696. Epub 2019 Sep 18. PMID: 31532726.

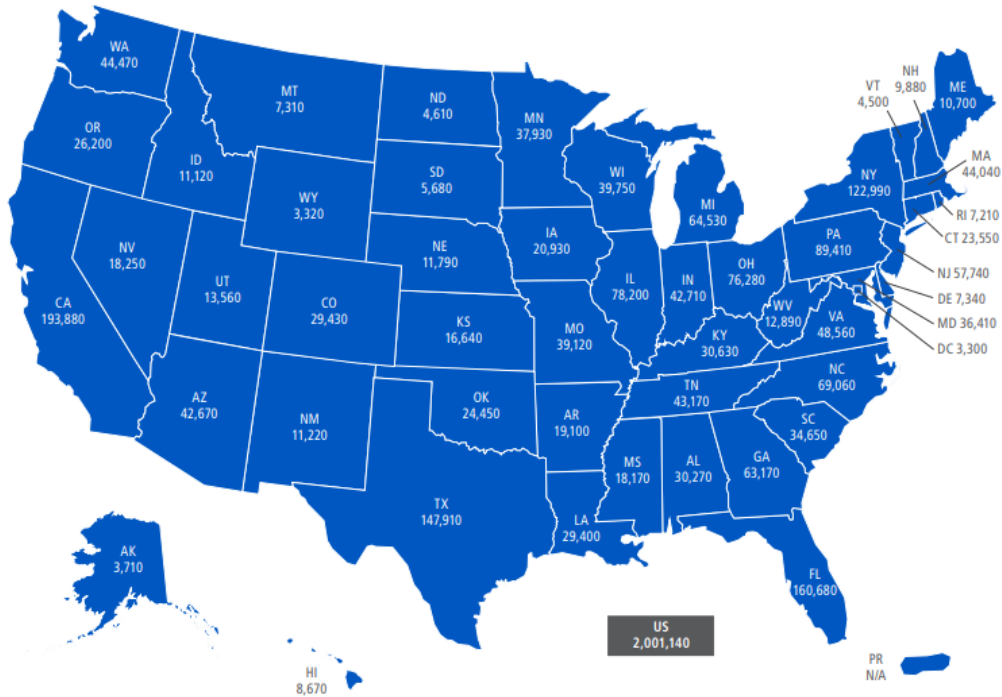
Ongoing Care in Cancer Survivors

Mark E. Pasanen, MD, FACP

Associate Professor of Medicine

Vice Chair of Education, UVMHN Dept of Medicine

Cancer Facts & Figures 2024



Estimated number of new cancer cases for 2024, excluding basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder. Estimates are not available for Puerto Rico.

Note: Incidence counts are model-based projections and should be interpreted with caution. State estimates may not equal US total due to rounding.

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Figure 2. Trends in Age-adjusted Cancer Death Rates by Site, Females, US, 1930-2021

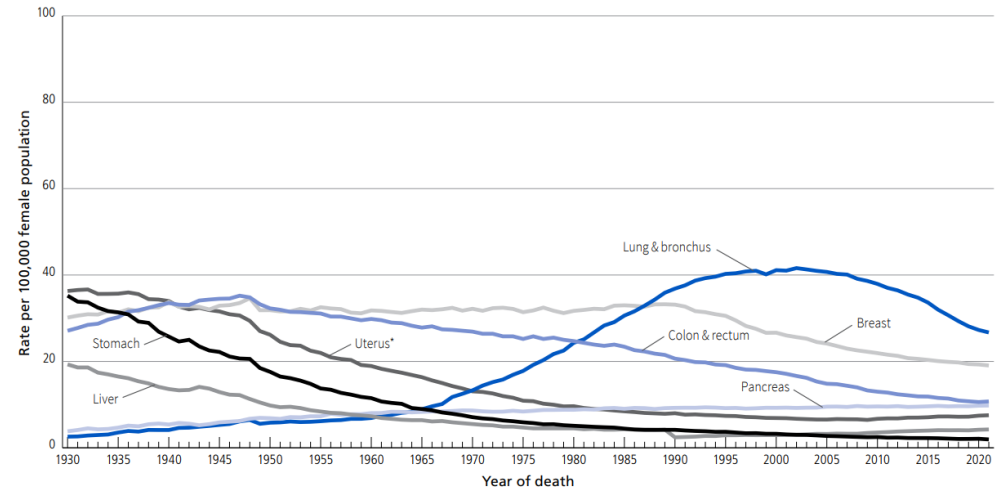
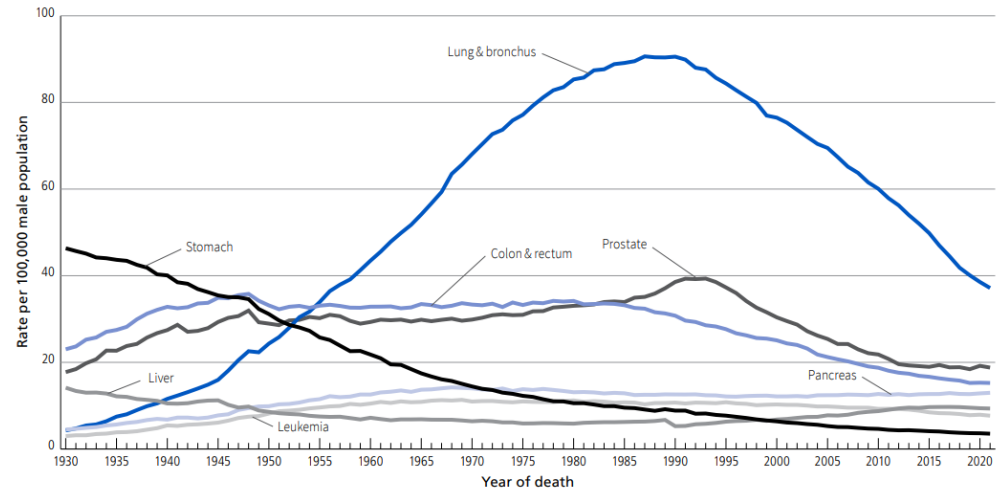


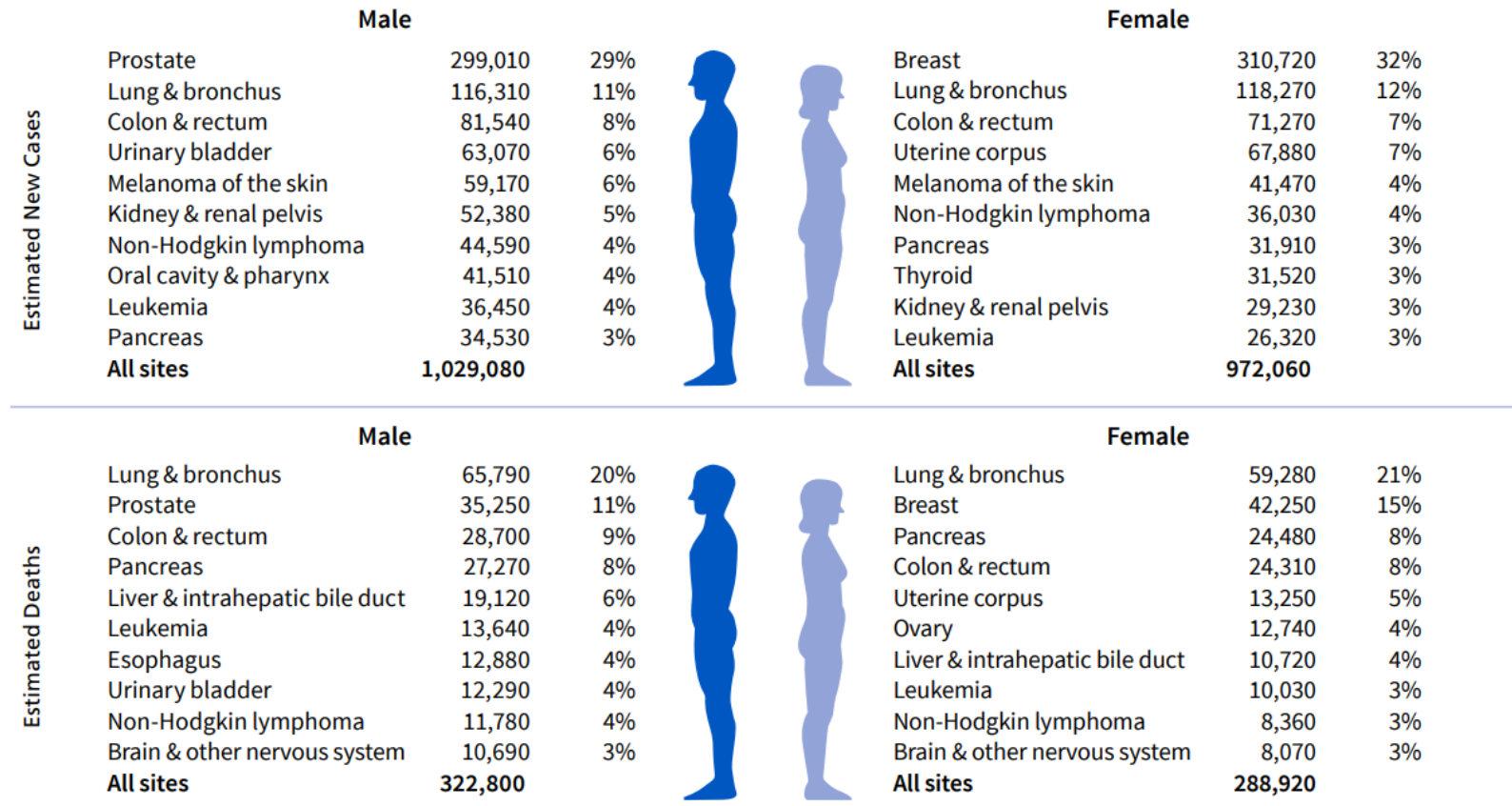
Figure 1. Trends in Age-adjusted Cancer Death Rates by Site, Males, US, 1930-2021



Rates are age adjusted to the 2000 US standard and exclude deaths in Puerto Rico and other US territories. Note: Due to changes in ICD coding, numerator information differs from contemporary data for cancers of the liver, lung and bronchus, and colon and rectum.

Source: US Mortality Volumes 1930 to 1959, US Mortality Data 1960 to 2021, National Center for Health Statistics, Centers for Disease Control and Prevention.

Figure 3. Leading Sites of New Cancer Cases and Deaths – 2024 Estimates



Estimates are rounded to the nearest 10, and cases exclude basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder. Estimates do not include Puerto Rico or other US territories. Ranking is based on modeled projections and may differ from the most recent observed data.

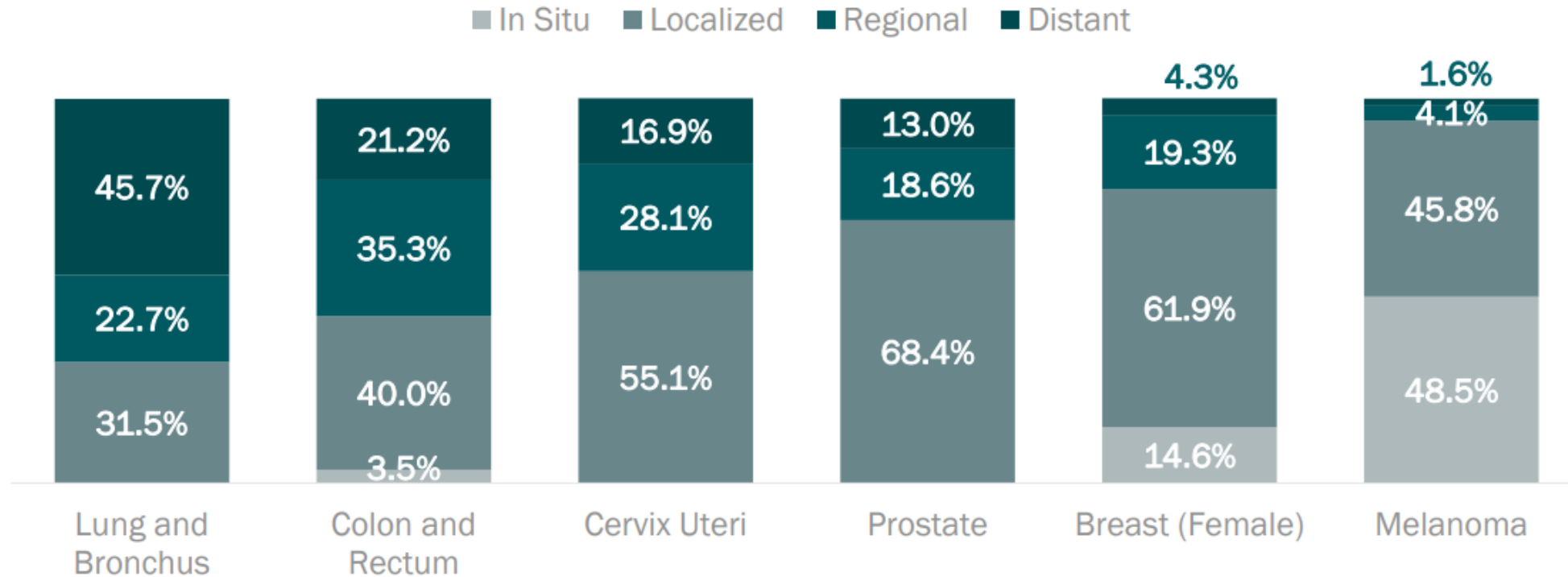
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Table 6. Probability (%) of Developing Invasive Cancer During Selected Age Intervals by Sex, US, 2017-2019*

Site	Sex	0-49	50-64	65-84	85+	Birth to death
All sites†	Male	3.5 (1 in 29)	11.8 (1 in 8)	31.9 (1 in 3)	19.1 (1 in 5)	41.6 (1 in 2)
	Female	5.9 (1 in 17)	10.8 (1 in 9)	24.3 (1 in 4)	14.4 (1 in 7)	39.6 (1 in 3)

Lung and colorectal cancers are the cancers most likely to be diagnosed at a distant stage.

Cancers by Stage at Diagnosis



Note: Cervical cancers diagnosed as in situ are not reported to the Cancer Registry and are therefore not included in this chart.

Vermont Department of Health Source: Vermont Cancer Registry 2016-2020

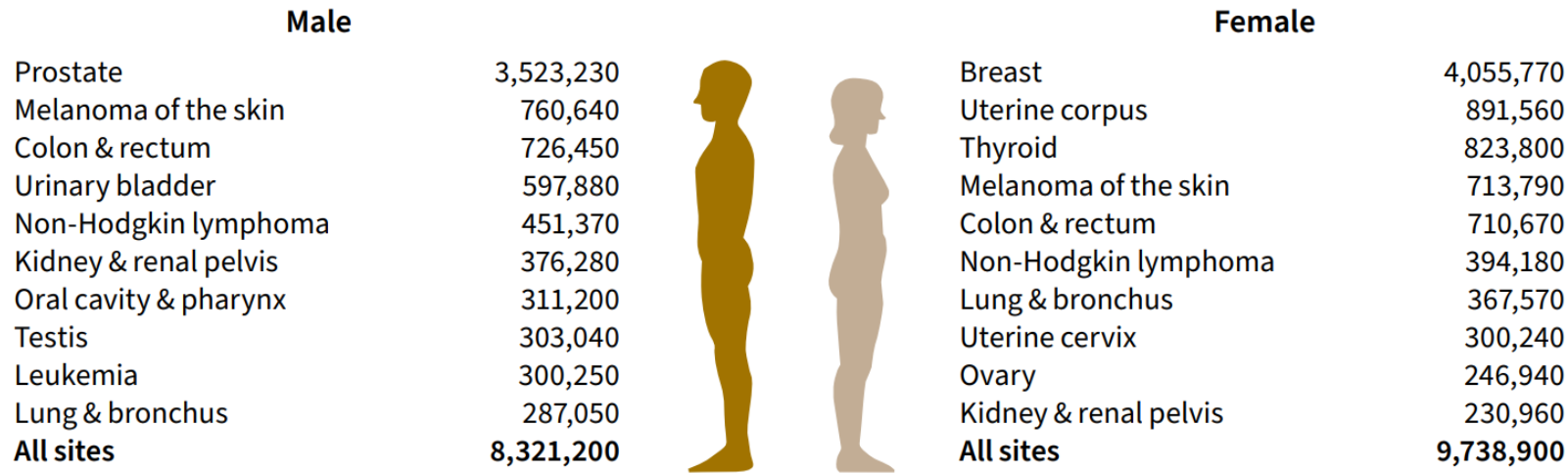
All estimates are age-adjusted to the 2000 U.S. standard population.



Cancer Treatment & Survivorship

Facts & Figures 2022-2024

Figure 1. Estimated Number of US Cancer Survivors by Site as of January 1, 2022



Estimates do not include in situ carcinoma of any site except urinary bladder and do not include basal cell or squamous cell skin cancers. Estimates should not be compared to previous years because they are model-based projections. (See Sources of Statistics, page 36).

Table 1. Estimated Number of US Cancer Survivors by Sex and Years Since Diagnosis as of January 1, 2022

Years since diagnosis	Male and Female			Male			Female		
	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
0 to <5 years	5,540,240	31%	31%	2,737,850	33%	33%	2,802,390	29%	29%
5 to <10 years	3,996,380	22%	53%	1,932,820	23%	56%	2,063,560	21%	50%
10 to <15 years	3,045,330	17%	70%	1,446,540	17%	74%	1,598,790	16%	66%
15 to <20 years	2,170,060	12%	82%	996,590	12%	85%	1,173,480	12%	78%
20 to <25 years	1,405,250	8%	89%	598,880	7%	93%	806,370	8%	87%
25 to <30 years	841,830	5%	94%	314,560	4%	96%	527,280	5%	92%
30+ years	1,061,010	6%	100%	293,970	4%	100%	767,040	8%	100%

Note: Percentages may not sum to 100% due to rounding.

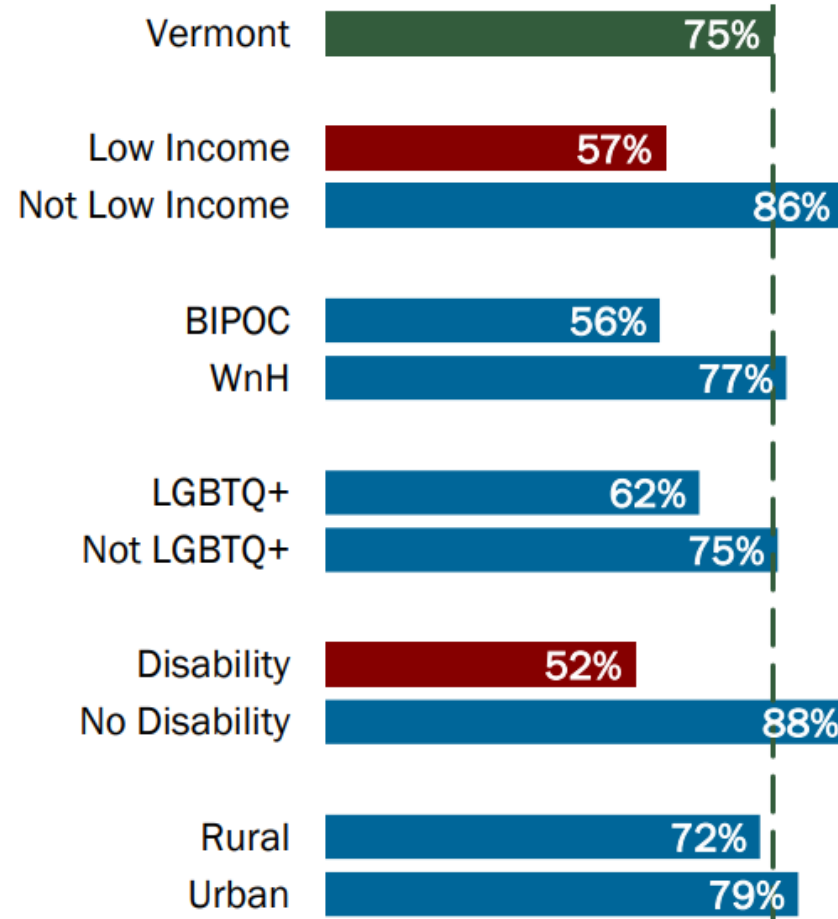
Source: Surveillance Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute.

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General Health Among Survivors

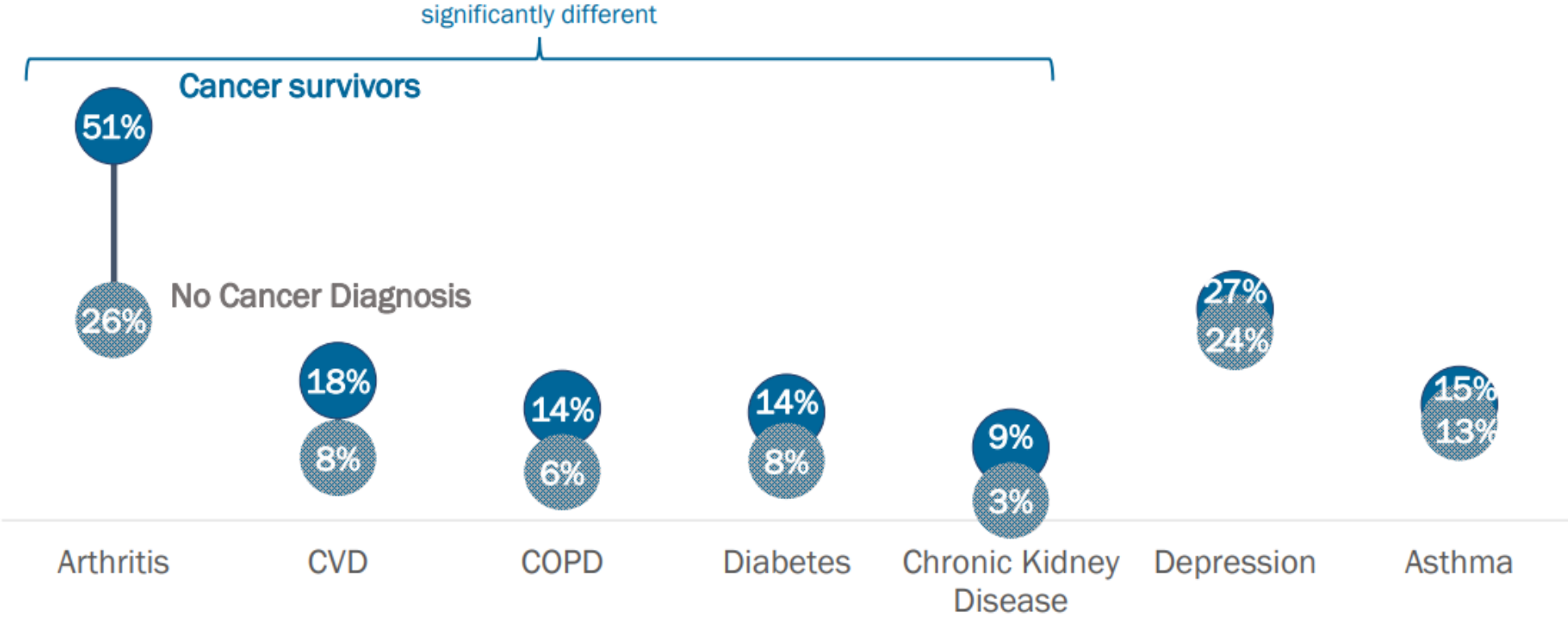
Adults with a low income and those with a disability are less likely to report good to excellent general health than a group of comparison.

All other groups have similar rates to a group of comparison.



Vermont Department of Health Source: BRFSS 2022

Cancer survivors are more likely to report arthritis, cardiovascular disease, COPD, diabetes and chronic kidney disease than those with no cancer diagnosis.



Primary Care for Cancer Survivors

Per the NCCN Standards:

- Surveillance for cancer spread or recurrence
- Screening for new primary cancers
- **Monitoring and management of long-term effects of cancer, including physical and psychosocial effects**
- Prevention and detection of late effects of cancer and therapy
- Coordination of care (entire team)

-
- **Planning for ongoing survivorship care**
 - Delivering great primary care
 - Prevention, chronic disease management, acute care, etc

Primary Care of Adult Cancer Survivors

Stephen Carek, MD, CAQSM; John F. Emerson, MD; and Jatin Patel, MD

By 2040, there will be an estimated 26 million cancer survivors in the United States. The essential components of survivorship care are (1) surveillance for cancer recurrence, (2) surveillance for new primary cancers, (3) management of physical and psychological long-term effects of treatment, (4) prevention or mitigation of late treatment effects, and (5) coordination of care between the oncology team and primary care clinicians. Recommendations for surveillance to detect recurrence vary with cancer type and stage at diagnosis. Screening for new primary cancers is the same as for the general population. Although many cancer survivors do not undergo recommended surveillance or screening, family physicians can encourage and facilitate adherence. Family physicians should also monitor and manage the physical and psychological effects of cancer diagnosis and treatment, such as depression, lymphedema, pain, and sexual dysfunction. Cardiovascular disease is a leading cause of death for cancer survivors, often as a long-term effect of cancer treatments. Clinicians should counsel patients on cessation of tobacco and alcohol use, participation in recommended levels of physical activity, and adherence to optimal nutrition recommendations. Finally, family physicians should work with the cancer care team to coordinate the care plan and assure that all recommended components are achieved. Written survivorship care plans should be provided to cancer survivors to help them transition from active treatment to posttreatment monitoring.

Am Fam Physician. 2024;110(1):37-44. Copyright © 2024 American Academy of Family Physicians.

ASCVD Co-Morbidities

- There is an overlap in risk factors for cancer and ASCVD
 - Smoking, obesity, inflammation, etc
- Heart disease is a common cause of death in cancer survivors
- Cancer survivors are at risk for decreased attention to ASCVD risk factors, such as lipids
 - Data in patients with breast cancer with less monitoring and control of risk factors
 - As we discussed, healthy eating and being active are especially important!

TABLE 4

ABCDEs to Promote Cardiovascular Wellness in Cancer Survivors

A	Awareness of risks and presentation of heart disease Assessment of cardiovascular disease and cardiovascular risk Aspirin use as appropriate (indicated for secondary prevention; clinician-survivor discussion required for primary prevention with careful weighing of benefits and risks)
B	Blood pressure monitoring/management (with clinician-survivor discussion regarding the use of antihypertension treatment and blood pressure goals)
C	Cholesterol assessment/management (with clinician-survivor discussion regarding use of statin therapy for primary prevention and lipid profile goals) Cigarette/tobacco cessation
D	Diet and weight management Dose (cumulative) of anthracyclines, and/or radiation to the heart Diabetes mellitus prevention/treatment
E	Exercise Echocardiogram or EKG based on risk

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National Comprehensive
Cancer Network®

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Survivorship

Version 1.2025 — April 8, 2025

NCCN.org

NCCN recognizes the importance of clinical trials and encourages participation when applicable and available.
Trials should be designed to maximize inclusiveness and broad representative enrollment.

NCCN Guidelines for Patients® available at www.nccn.org/patients



General Survivorship Principles

- [Definition of Survivorship \(SURV-1\)](#)
- [Standards for Survivorship Care \(SURV-2\)](#)
- [General Principles of the Survivorship Guidelines \(SURV-3\)](#)
- [Screening for Subsequent New Primary Cancers \(SURV-4\)](#)
- [Principles of Screening for Treatment-Related Subsequent Primary Cancers \(SURV-4A\)](#)
- [Principles of Cancer Risk Assessment and Counseling \(SURV-5\)](#)
- [Assessment by Health Care Provider at Regular Intervals \(SURV-6\)](#)
- [Survivorship Assessment \(SURV-A\)](#)
- [Survivorship Resources for Health Care Professionals and Survivors \(SURV-B\)](#)

Preventive Health

- [Healthy Lifestyles \(HL-1\)](#)
 - ▶ [Physical Activity \(SPA-1\)](#)
 - ▶ [Nutrition and Weight Management \(SNWM-1\)](#)
 - ▶ [Supplement Use \(SSUP-1\)](#)
- [Immunizations and Infections \(SIMIN-1\)](#)

Late Effects/Long-Term Psychosocial and Physical Problems

- [Cardiovascular Disease Risk Assessment \(SCVD-1\)](#)
- [Anthracycline-Induced Cardiac Toxicity \(SCARDIO-1\)](#)
- [Anxiety, Depression, Trauma, and Distress \(SANXDE-1\)](#)
- [Cognitive Function \(SCF-1\)](#)
- [Fatigue \(SFAT-1\)](#)
- [Lymphedema \(SLYMPH-1\)](#)
- [Pain \(SPAIN-1\)](#)
- [Hormone-Related Symptoms \(SHRS-1\)](#)
- [Sexual Health \(SSH-1\)](#)
- [Fertility \(SF-1\)](#)
- [Sleep Disorders \(SSD-1\)](#)
- [Employment and Return to Work \(SWORK-1\)](#)

Screening for new primary cancer

- Nearly 1 in 12 survivors develop a new primary cancer (lung cancer most common)
- Increasing use of genetics testing can make this extremely confusing and complex

SCREENING FOR SUBSEQUENT NEW PRIMARY CANCERS

- **Subsequent new primary malignant neoplasms may occur in survivors years after treatment when the survivor's oncologist may no longer be involved in the survivor's care and may also occur at younger ages than in the general population.**
- **The overall cancer rate in survivors is higher than in the general population. This increased risk is due to genetic susceptibilities (eg, hereditary cancer syndromes) and/or family history, shared etiologic exposures (eg, smoking, environmental exposures, health behaviors, human papillomavirus [HPV]), and mutagenic effects of cancer treatment.**
- **Treatment-related subsequent primary cancers vary with the type and intensity of cancer treatment and are associated in particular with RT and specific chemotherapeutic agents. For recommendations for screening considerations, see [Principles of Screening for Treatment-Related Subsequent Primary Cancers \(SURV-4A\)](#).**
- **Screening for subsequent primary cancers should be a shared responsibility between primary and oncology care physicians. For survivors living with metastatic disease, recommendations for screening should be tailored to the survivor's individualized risk and disease status (see the [NCCN Guidelines for Detection, Prevention, and Risk Reduction Table of Contents](#)).**
- **Evidence suggests that excess lifetime radiation exposure from CT imaging may be associated with a mildly increased risk of developing a radiation-associated cancer. Use of radiologic studies to screen for recurrent cancer should be based on diagnosis and evidence that early detection of recurrence will improve cancer-related outcomes. Recommendations for surveillance imaging modality and frequency can be found in the [NCCN Guidelines for Treatment by Cancer Type](#).**
- **For familial assessment considerations that impact screening, see [SURV-5](#).**

ASSESSMENT BY HEALTH CARE PROVIDER (ONCOLOGY OR PRIMARY CARE) AT REGULAR INTERVALS

- A periodic assessment at least annually is recommended for all survivors to determine any needs and necessary interventions. For sample assessment, see [SURV-A](#).
- Shared coordinated care between the oncology, primary care, and subspecialty care providers is encouraged. Depending on the cancer type and stage of disease, transition of care to a PCP may be done when deemed clinically appropriate with referral back to oncologic care as needed.
- Care providers are also encouraged to assess the following at regular intervals:
 1. Current disease status
 2. Functional/performance status
 3. Medication use (including over-the-counter [OTC] medications and supplements)
 4. Comorbidities
 5. Prior cancer treatment history and modalities used
 6. Family history
 7. Psychosocial factors
 8. Weight and health behaviors that can modify cancer and comorbidity risk (including tobacco/alcohol use)
 9. Fertility concerns for adults of reproductive age
 10. See the [NCCN Guidelines for Treatment by Cancer Type](#) for disease-specific recommendations for surveillance/follow-up

SURVIVORSHIP ASSESSMENT (Patient Version)

Please answer the following questions:

<u>Survivorship Concerns</u>	<u>Survivorship Care Survey</u>
Cardiac Health	1. Do you have shortness of breath or chest pain after physical activities (eg, climbing stairs) or exercise? Yes/No 2. Do you have shortness of breath when lying flat, wake up at night needing to get air, or have persistent leg swelling? Yes/No
Anxiety, Depression, Trauma, and Distress	3. In the past two weeks, have you been bothered more than half the days by little interest or pleasure in doing things? Yes/No 4. In the past two weeks, have you been bothered more than half the days by feeling down, depressed, or hopeless? Yes/No 5. Has stress, worry, anger, fear of recurrence, or distress about effects of cancer treatment interfered with your life? Yes/No
Cognitive Function	6. Do you have difficulties with multitasking or paying attention? Yes/No 7. Do you have difficulties with remembering things? Yes/No 8. Does your thinking seem slow? Yes/No
Fatigue	9. Do you feel persistent fatigue despite a good night's sleep? Yes/No 10. Does fatigue interfere with your usual activities? Yes/No 11. How would you rate your fatigue on a scale of 0 (none) to 10 (extreme) over the past week? 0–10
Lymphedema	12. Since your cancer treatment, have you had any swelling, fatigue, heaviness, or fullness on the same side as your treatment that has not gone away? Yes/No
Pain	13. Have you had any pain in the past week? Yes/No 14. How would you rate your pain on a scale of 0 (none) to 10 (extreme) over the past week? 0–10
Hormone-Related Symptoms	15. Have you been bothered by hot flashes/night sweats? Yes/No 16. Have you been bothered by other hormone-related symptoms (ex, vaginal dryness, erectile dysfunction, urinary incontinence)? Yes/No
Sexual Health	17. Do you have any concerns regarding your sexual function, sexual activity, sexual relationships, or sex life? Yes/No 18. Are these concerns causing you distress? Yes/No
Fertility	19. Do you have concerns about fertility or family planning? Yes/No
Sleep Disorder	20. Are you having problems falling asleep, staying asleep, or waking up too early? Yes/No 21. Are you experiencing excessive sleepiness (ie, sleepiness or falling asleep in inappropriate situations or sleeping more during a 24-hour period than in the past)? Yes/No 22. Have you been told that you snore frequently or that you stop breathing during sleep? Yes/No
Healthy Lifestyle	23. Do you engage in regular physical activity or exercise, such as brisk walking, jogging, weight/resistance training, bicycling, swimming, etc.? Yes/No > 23a. If you answered "Yes," how often? 24. Excluding white potatoes, do you eat at least 2½ cups of fruits and/or vegetables each day? Yes/No 25. Do you have concerns about your weight? Yes/No 26. Do you take vitamins or other supplements? Yes/No
Immunizations and Infections	27. Have you received your flu vaccine this flu season? Yes/No 28. Are you up to date on your vaccines? Yes/No/Don't know
Employment/ Return to Work	29. Do you have concerns about how cancer and/or cancer therapy has affected your ability to work? Yes/No



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Immunizations



GENERAL PRINCIPLES OF IMMUNIZATIONS

- These principles apply to cancer survivors, including those with hematologic or solid tumor malignancies and those post transplant.
- Clinicians should consider and encourage the administration of inactivated vaccines (eg, influenza) or vaccines made of purified antigens (eg, pneumococcus), bacterial components (eg, diphtheria-tetanus-pertussis), or genetically engineered recombinant antigens (eg, hepatitis B [HepB]) in all cancer and transplant survivors. In the absence of known harm, administration of inactivated vaccines with the hope of achieving some protection may be worthwhile. The usual doses and schedules are recommended.^{a,b,c}
 - ▶ Recommended Immunizations for Adults Aged 19 Years or Older, United States, 2025: <https://www.cdc.gov/vaccines/imz-schedules/adult-easyread.html>
- Vaccines as a strategy to prevent infection represents a unique challenge in cancer and transplant survivors. Vaccines may not trigger protective immune responses in actively immunocompromised^d individuals or in survivors with residual immune deficits. In addition, certain vaccines such as those that are live attenuated (eg, measles, mumps, rubella [MMR]) are contraindicated in actively immunosuppressed individuals because of a proven or theoretical increased risk of prolonged shedding and disease from the live organism present in the vaccine; other live attenuated vaccines might also be contraindicated in survivors' close contacts. When other vaccine options exist, they should be preferred over live attenuated vaccines in survivors (eg, recombinant zoster vaccine [RZV]).
- Ideally, clinicians should have administered all indicated vaccines to patients before initiation of cancer treatment (if possible, at least 2 weeks before cancer treatment).^e
 - ▶ Inactivated or recombinant vaccines should be administered ≥ 2 weeks before cancer treatment and ≥ 3 months after cancer chemotherapy. While this schedule is preferred, the inactivated influenza vaccine (IIV) can be administered during cancer treatment.
 - ▶ Live viral vaccines^f can be administered ≥ 4 weeks before cancer treatment or ≥ 3 months after cancer chemotherapy, but consultation with an infectious disease specialist or physician familiar with vaccination in survivors and/or patients with cancer is strongly recommended.
 - ▶ COVID-19 vaccine is recommended as appropriate. See <https://www.cdc.gov/covid/vaccines/stay-up-to-date.html>.
- In survivors who received anti-B-cell antibody therapy, vaccination should be delayed for at least 6 months after chemotherapy and the last dose of such therapy.



NCCN Guidelines Version 1.2025 Survivorship

General Survivorship Principles

- [Definition of Survivorship \(SURV-1\)](#)
- [Standards for Survivorship Care \(SURV-2\)](#)
- [General Principles of the Survivorship Guidelines \(SURV-3\)](#)
- [Screening for Subsequent New Primary Cancers \(SURV-4\)](#)
- [Principles of Screening for Treatment-Related Subsequent Primary Cancers \(SURV-4A\)](#)
- [Principles of Cancer Risk Assessment and Counseling \(SURV-5\)](#)
- [Assessment by Health Care Provider at Regular Intervals \(SURV-6\)](#)
- [Survivorship Assessment \(SURV-A\)](#)
- [Survivorship Resources for Health Care Professionals and Survivors \(SURV-B\)](#)

Preventive Health

- [Healthy Lifestyles \(HL-1\)](#)
 - [Physical Activity \(SPA-1\)](#)
 - [Nutrition and Weight Management \(SNWM-1\)](#)
 - [Supplement Use \(SSUP-1\)](#)
- [Immunizations and Infections \(SIMIN-1\)](#)

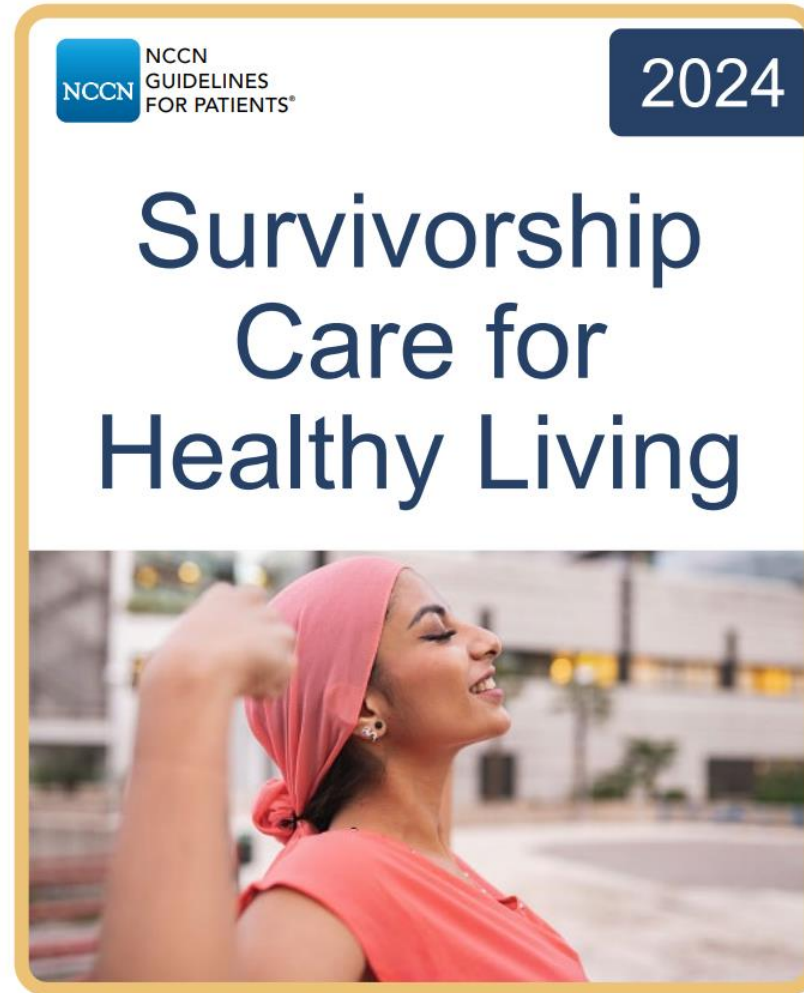
Late Effects/Long-Term Psychosocial and Physical Problems

- [Cardiovascular Disease Risk Assessment \(SCVD-1\)](#)
- [Anthracycline-Induced Cardiac Toxicity \(SCARDIO-1\)](#)
- [Anxiety, Depression, Trauma, and Distress \(SANXDE-1\)](#)
- [Cognitive Function \(SCF-1\)](#)
- [Fatigue \(SFAT-1\)](#)
- [Lymphedema \(SLYMPH-1\)](#)
- [Pain \(SPAIN-1\)](#)
- [Hormone-Related Symptoms \(SHRS-1\)](#)
- [Sexual Health \(SSH-1\)](#)
- [Fertility \(SF-1\)](#)
- [Sleep Disorders \(SSD-1\)](#)
- [Employment and Return to Work \(SWORK-1\)](#)



Deeper dive in 2 weeks


Patient Information



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Survivorship care for cancer patients in primary versus secondary care: a systematic review

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Abstract

Background Cancer survivorship care is traditionally performed in secondary care. Primary care is often involved in cancer management and could therefore play a more prominent role.

Purpose To assess outcomes of cancer survivorship care in primary versus secondary care.

Methods A systematic search of MEDLINE and EMBASE was performed. All original studies on cancer survivorship care in primary versus secondary care were included. A narrative synthesis was used for three distinctive outcomes: (1) clinical, (2) patient-reported, and (3) costs.

Results Sixteen studies were included: 7 randomized trials and 9 observational studies. Meta-analyses were not feasible due to heterogeneity. Most studies reported on solid tumors, like breast ($N = 7$) and colorectal cancers ($N = 3$). Clinical outcomes were reported by 10 studies, patient-reported by 11, and costs by 4. No important differences were found on clinical and patient-reported outcomes when comparing primary- with secondary-based care. Some differences were seen relating to the content and quality of survivorship care, such as guideline adherence and follow-up tests, but there was no favorite strategy. Survivorship care in primary care was associated with lower societal costs.

Conclusions Overall, cancer survivorship care in primary care had similar effects on clinical and patient-reported outcomes compared with secondary care, while resulting in lower costs.

Implications for cancer survivors Survivorship care in primary care seems feasible. However, since the design and outcomes of studies differed, conclusive evidence for the equivalence of survivorship care in primary care is still lacking. Ongoing studies will help provide better insights.

Questions???

Comments???

Case Presentation

Bringing Knowledge to Action through interactive, case-based discussions

Speaker presents the case and poses the question(s) for the group



Clarifying questions about the case from group to case presenter



Ideas, suggestions, recommendations from participants



Ideas, suggestions, recommendations from ECHO faculty team



Full group discussion



Summary and wrap-up by facilitator



Case Presentation



DO NOT INCLUDE:

Names, Address, DOB, Phone/Fax #, Email address, Social Security #, Medical Record #

Consider the level of detail necessary. Go with less when possible.

The discussion and materials included in this conference are confidential and privileged pursuant to 26VSA Section 1441-1443. This material is intended for use in improving patient care. It is privileged and strictly confidential and is to be used only for the evaluation and improvement of patient care.

Case Presentation

UVM Office of Primary Care and AHEC Program

University of Vermont Project ECHO Cancer Survivorship for Primary Care

2025 SPRING SERIES – Tuesdays from 12:00 to 1:00PM

WHO SHOULD ATTEND?	SCHEDULE
Primary care providers and teams, including nurses, social workers/ case managers and other roles that interface with primary care to care for the physical and psychosocial needs of cancer survivors.	Mar 18 Cancer Survivorship: An Introduction , <i>Kathy McBeth Psych-MA, Penny Gibson PA-C, Jess Okrant NP, Jane Bensimhon MSW</i>
	Apr 1 Support for Cancer Survivors: Psychosocial Needs and Community Resources , <i>Kathy McBeth Psych-MA, Michele Mosley MSW, Jen Franzoni MSW</i>
	Apr 15 Living Well with Cancer and Beyond , <i>Alison Jones RD, Rebecca Reynolds CPT, Jessica Coleman NBC-HWC</i>
	Apr 29 Prevention for Cancer Survivors: Managing Co-morbidities , <i>Jennifer Kelly DO, Mark Pasanen MD</i>
	May 13 Late Effects of Cancer and Cancer Treatment , <i>Mark Pasanen MD, Jess Okrant NP</i>
	May 27 Care Coordination for Cancer Survivors: Models of Care and Best Practices , <i>Rebecca Hewson-Steller RN, Jess Okrant NP</i>

Closing Announcements

- Slides are posted at www.vtahec.org
- Recording of didactic portion will be sent by email to the full cohort
 - **All recordings are for the use of registered participants only**
- Please complete the evaluation survey
- CMIE information and session QR code auto-send after evaluation
- Please contact us with any questions, concerns, or suggestions:
 - Mark.Pasanen@uvm.edu
 - Patti.Smith-Urie@uvm.edu