ABOVE + BEYOND CANCER

Richard L. Deming, MD

ABOVE + BEYOND CANCER

ADOLESCENTS AND YOUNG ADULTS


I have no conflicts of interest to disclose.

CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

1. Incidence, Mortality, Demographics of AYA
2. Special Concerns for AYA
3. Survivorship Clinic
4. Integrative Oncology Clinic
5. Above + Beyond Cancer Survivorship Program
6. Case Studies

CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

Cancers diagnosed among AYAs, ages 15–39, **4.4%**.

CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

5-Year Relative Survival
85.8%
SEER 22 (Excluding IL/MA), 2013–2019

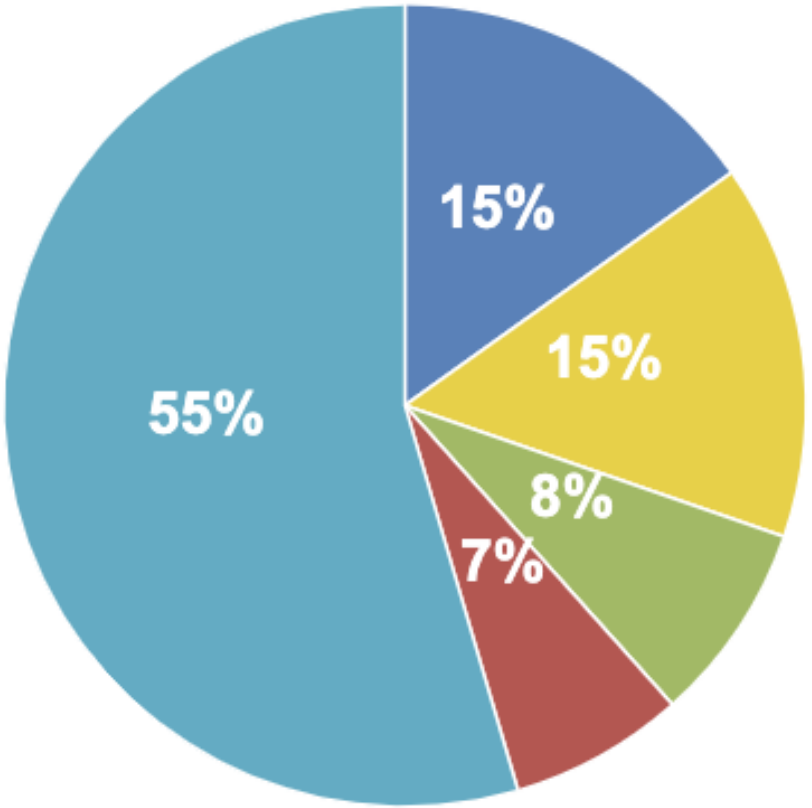
CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

New Cancer Cases, 2023

Estimated New Cancers Among Ayas in the U.S. in 2023	85,980
% of All New Cancer Cases at Any Age	4.4%

CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

Common Types of New Cancers Among Ayas



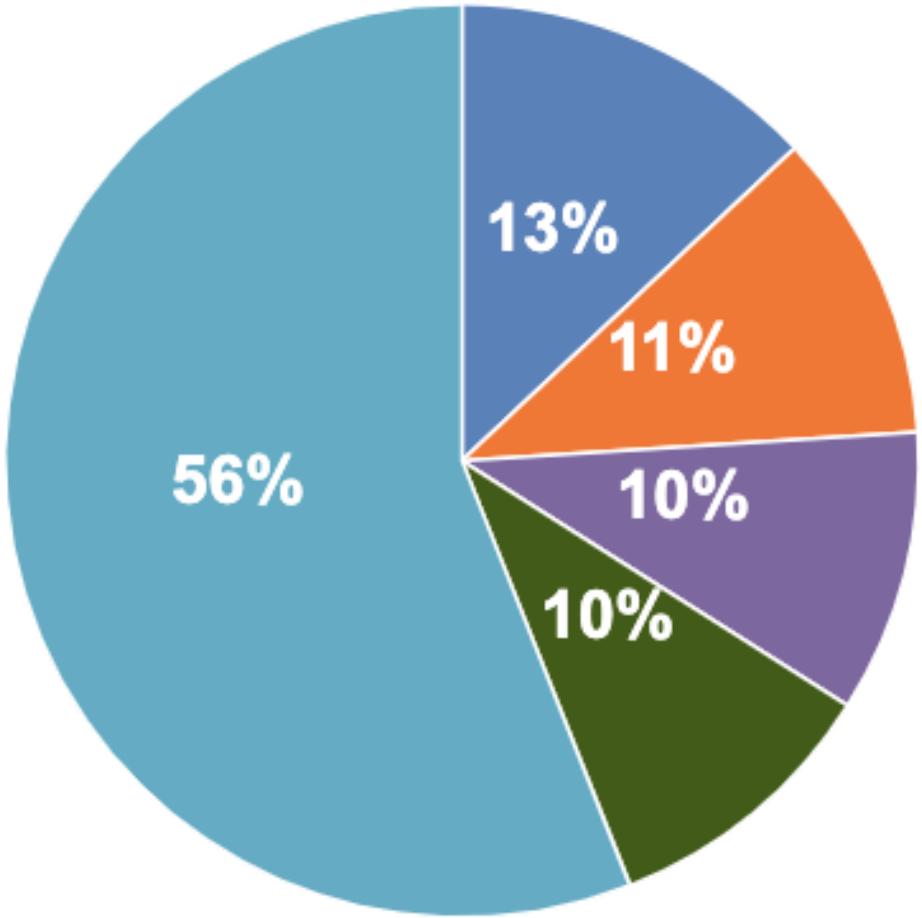
- Breast: 15%
- Thyroid: 15%
- Testis: 8%
- Melanoma of the skin: 7%
- Other: 54%

CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

Cancer Deaths, 2023

Estimated Cancer Deaths Among Ayas the U.S. in 2023	9,050
% of All Cancer Deaths at Any Age	1.5%

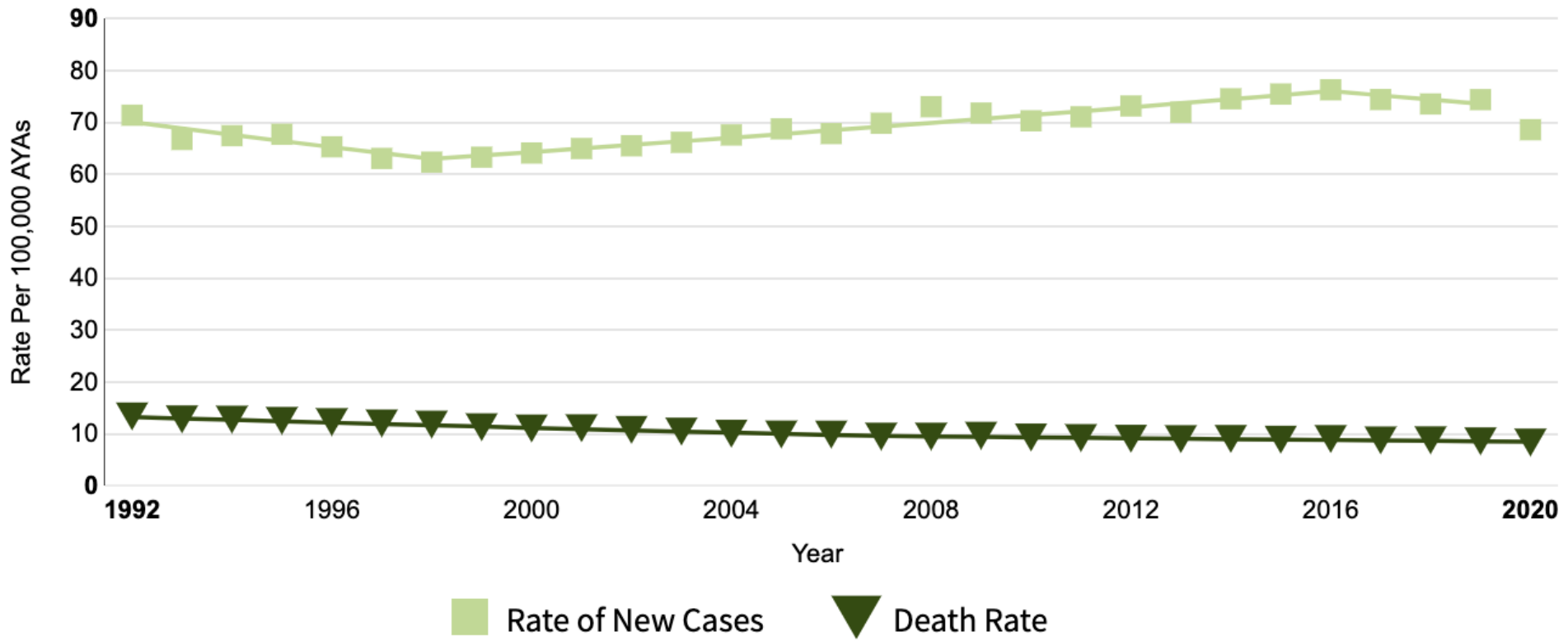
Common Cancer Types Causing Death Among Ayas



- Breast: 13%
- Brain & ONS: 11%
- Colon and rectum: 10%
- Leukemia: 10%
- Other: 56%

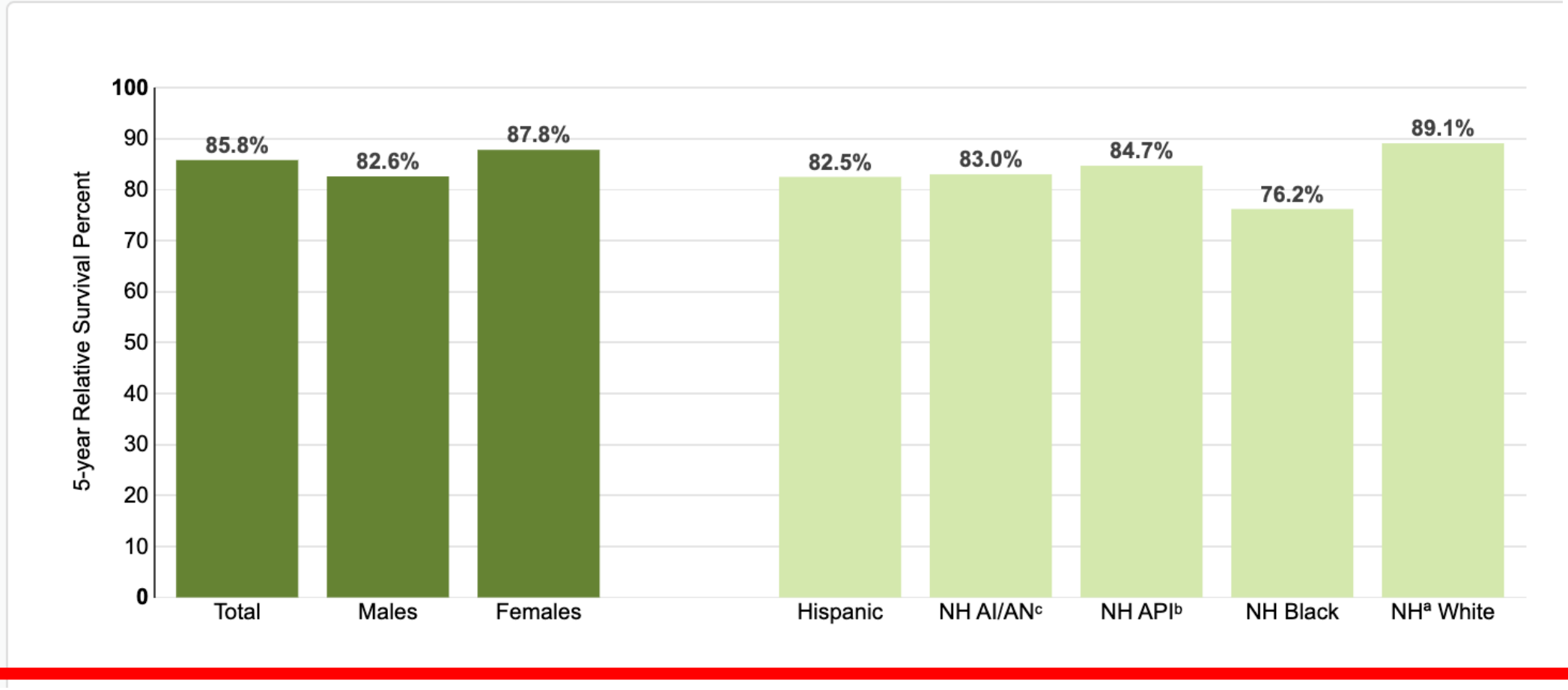
CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

Trends in Age-adjusted Incidence and Mortality Rates



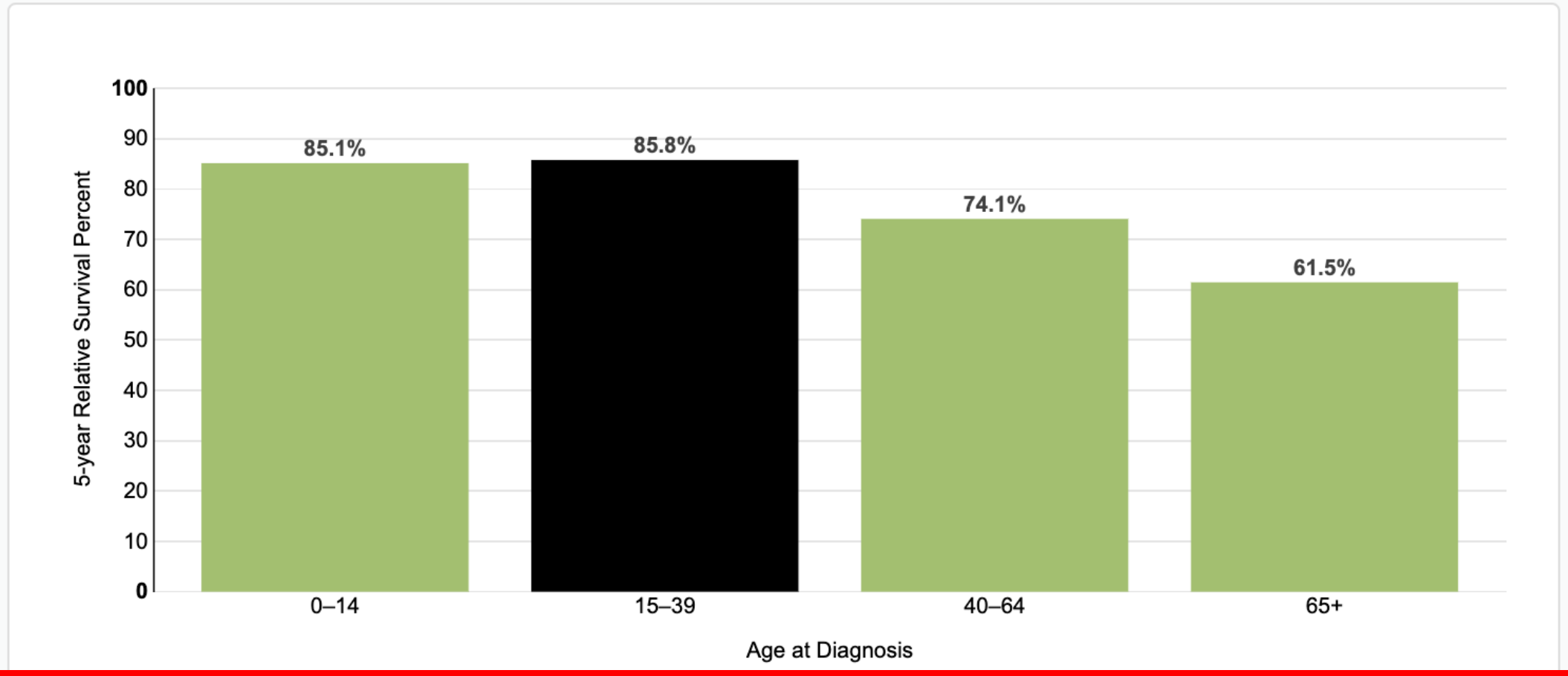
CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

5-year Relative Survival by Sex and Race



CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

How Does Cancer Survival Among AYAs Compare to Cancer Survival at Other Ages?



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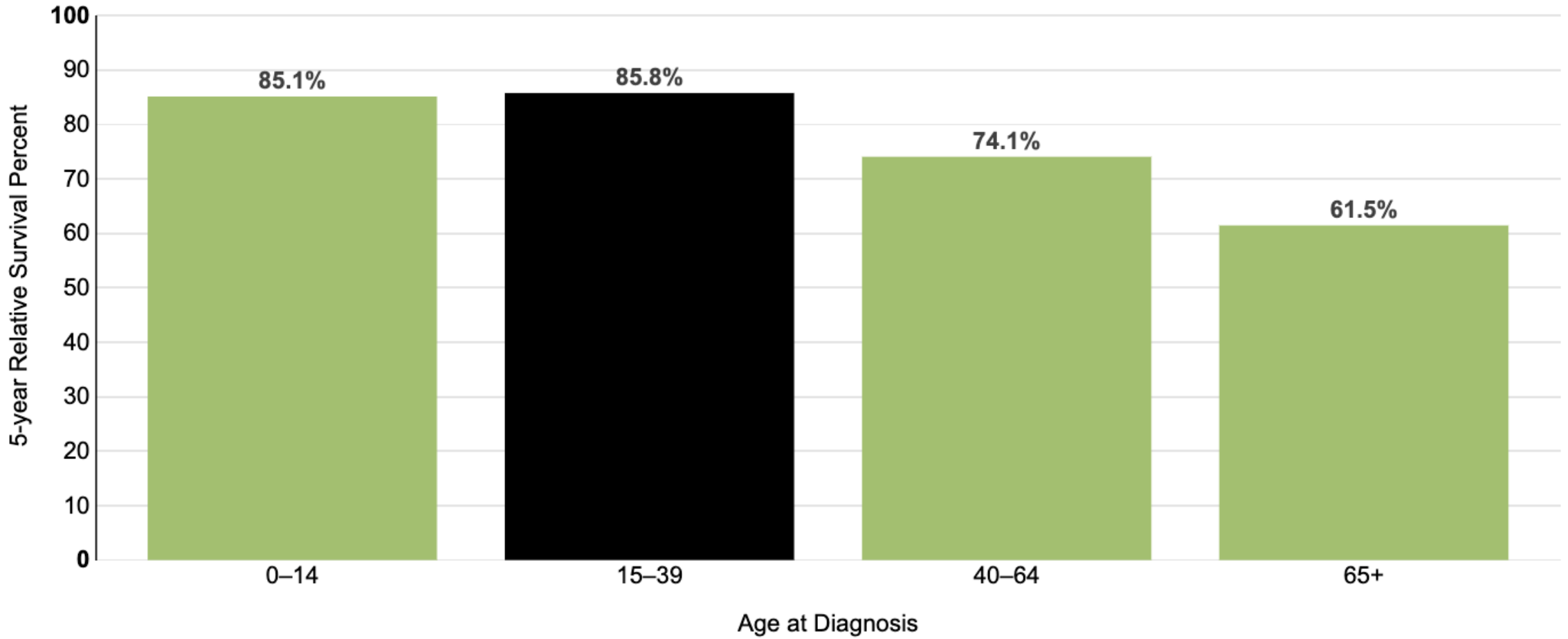
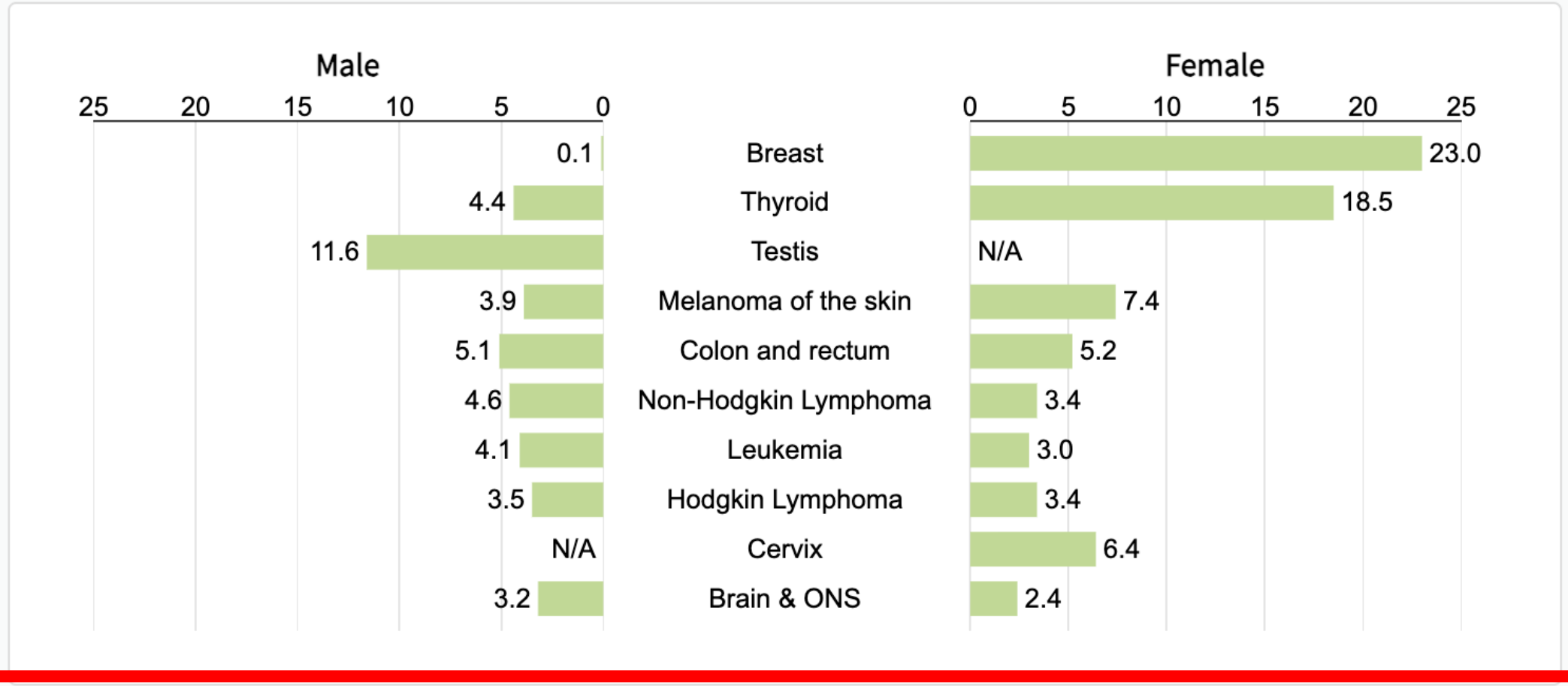


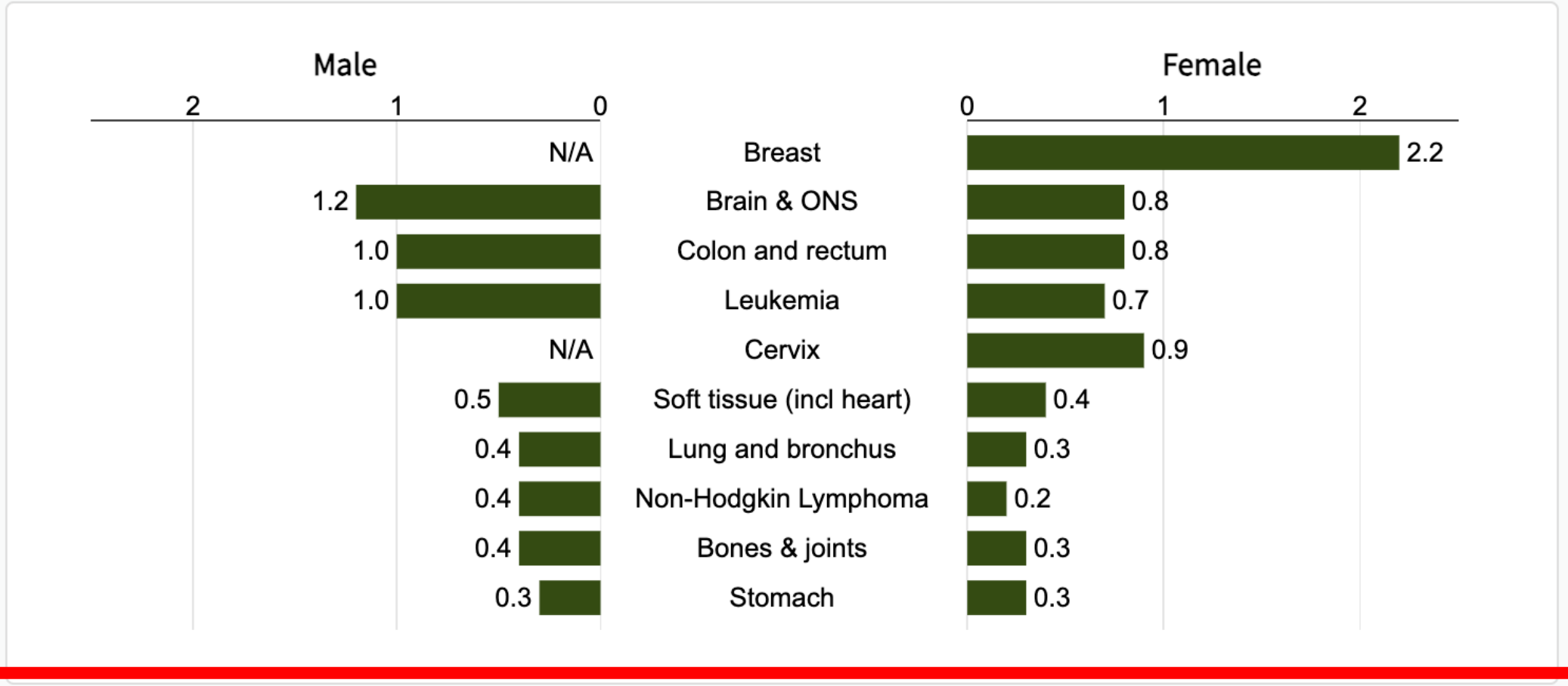
CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

Rates of New Cases by Cancer Type and Sex



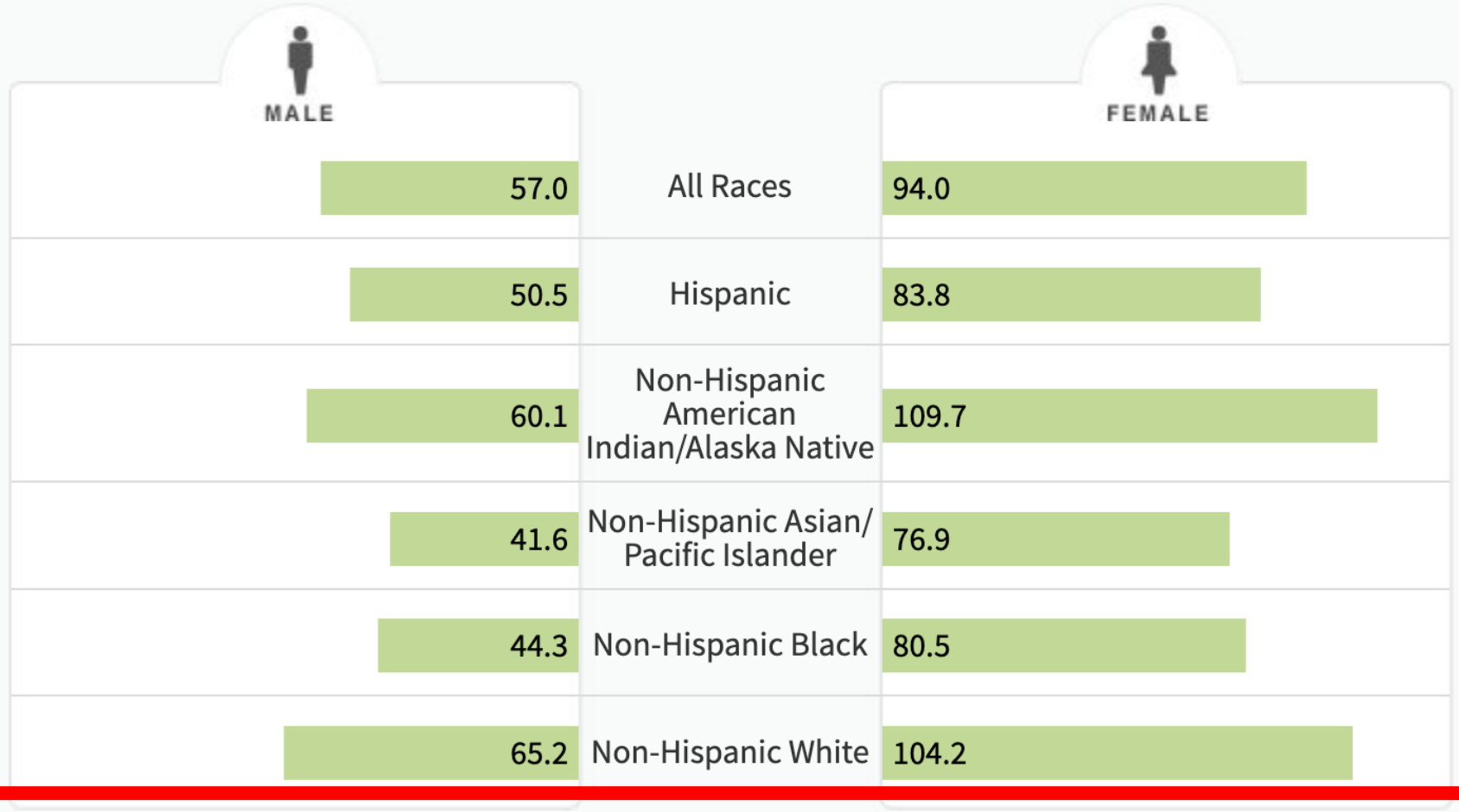
CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

Death Rates by Cancer Type and Sex

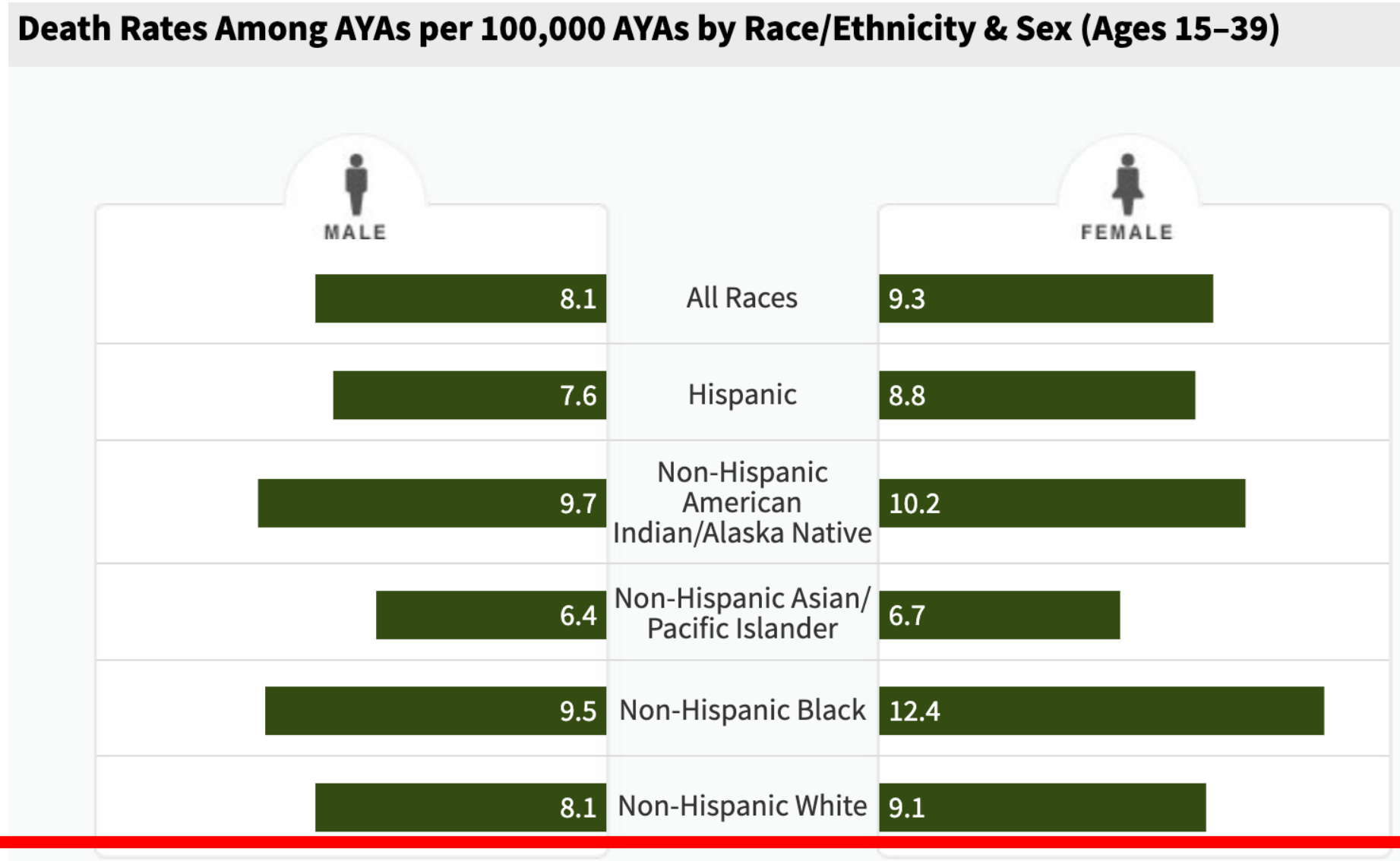


CANCER AMONG ADOLESCENTS AND YOUNG ADULTS

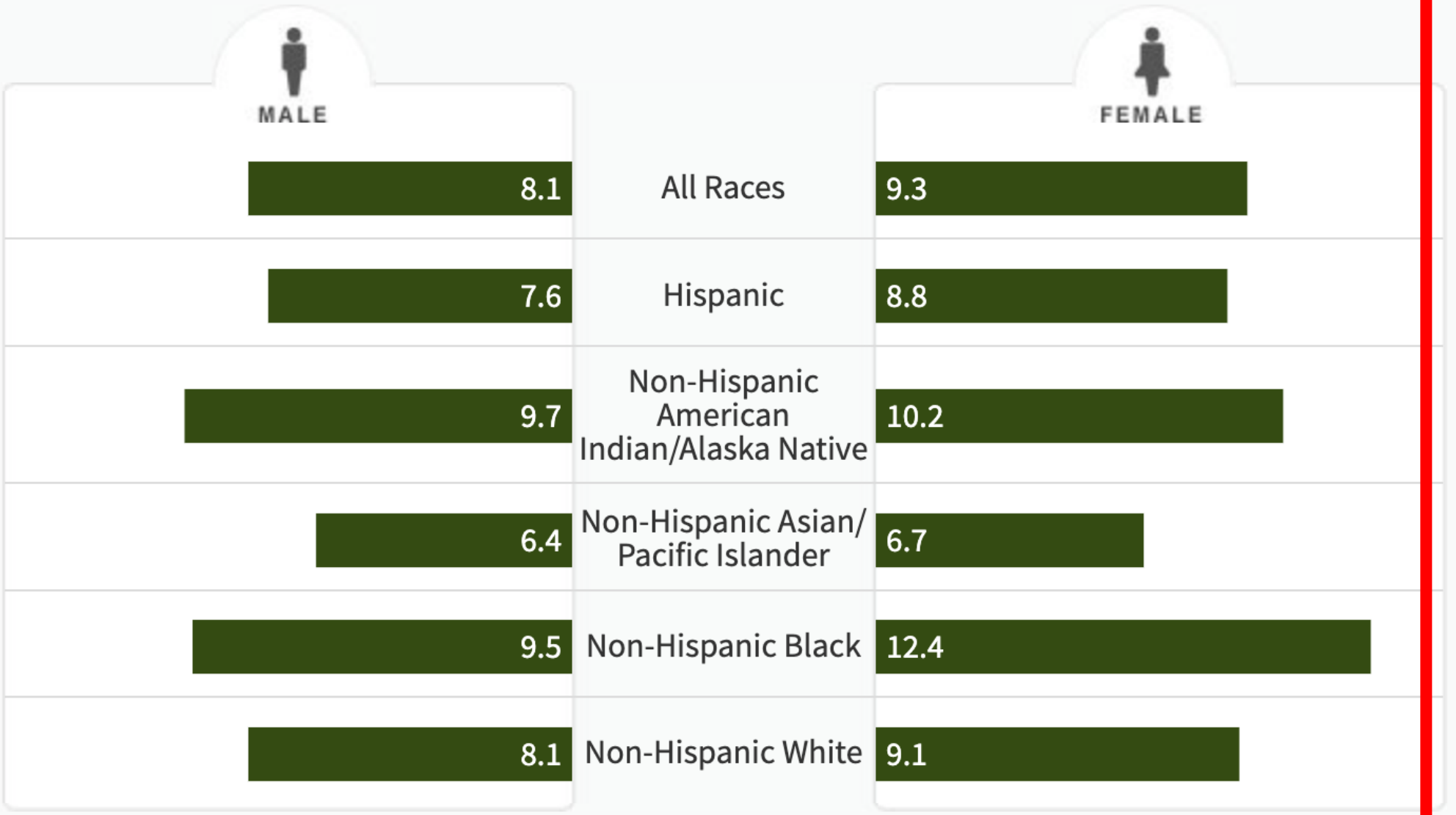
Rates of New Cancers Among AYAs per 100,000 AYAs by Race/Ethnicity & Sex (ages 15–39)



CANCER AMONG ADOLESCENTS AND YOUNG ADULTS



Death Rates Among AYAs per 100,000 AYAs by Race/Ethnicity & Sex (Ages 15–39)



MOST COMMON CANCERS BY AGE GROUP

Ages 15 to 19:

- Testicular cancer
- Hodgkin lymphoma
- Thyroid cancer
- Brain and central nervous system

Ages 20 to 29:

- Testicular cancer
- Thyroid cancer
- Breast cancer
- Melanoma

Ages 30 to 39:

- Breast cancer
- Thyroid cancer
- Testicular cancer
- Cervical cancer

Most common cancers by age group in adolescents and young adults

MOST COMMON CANCERS – AYA MALE

- Testicular cancer
- Colorectal cancer
- Non-Hodgkin lymphoma
- Thyroid cancer

MOST COMMON CANCERS – AYA FEMALE

- Breast cancer
- Thyroid cancer
- Melanoma
- Cervical cancer

CANCER AMONG YOUNG ADULTS

What is a young adult cancer?

There is no strict definition of what separates “childhood cancers” from cancers in young adults, or when exactly a person is no longer a young adult. But for statistics purposes, cancers in young adults are often thought of as those that start between the ages of 20 and 39.

CANCER AMONG YOUNG ADULTS

- Breast cancer
- Lymphomas (non-Hodgkin and Hodgkin)
- Melanoma
- Sarcomas (cancers of connective tissues like muscles and bones)
- Cancers of the female genital tract (cervix and ovary)
- Thyroid cancer
- Testicular cancer
- Colorectal cancer
- Brain and spinal cord tumors

CANCER AMONG YOUNG ADULTS

How common is cancer in young adults?

- About 80,000 young adults aged 20 to 39 are diagnosed with cancer each year in the United States. About 5% of all cancers are diagnosed in people in this age range.
- About 9,000 young adults die from cancer each year.

Cancer is the 4th leading cause of death in this age group, behind only accidents, suicide, and homicide. It's the leading cause of death from disease among females in this age group, and is second only to heart disease among males.

Risk Factors and Causes of Cancers in Young Adults

Inherited gene changes

Some people inherit gene mutations from a parent that increase their risk of certain cancers. In people who inherit such a mutation, this can sometimes lead to cancer earlier in life than would normally be expected. Examples include:

- ***BRCA* gene mutations,** which increase the risk of breast, ovarian, and some other cancers
- **Lynch syndrome** (caused by DNA mismatch repair gene mutations), which increases the risk of colorectal, ovarian, endometrial, and some other cancers
- **Familial adenomatous polyposis** (caused by *APC* gene mutations), which increases the risk of colorectal cancer
- **Li-Fraumeni syndrome** (most often caused by *TP53* mutations), which increases the risk of certain leukemias, sarcomas, and some other cancers

Risk Factors and Causes of Cancers in Young Adults

Acquired gene changes

- Exposure to ultraviolet (UV) light from the sun or from tanning beds can increase the risk of melanoma and other skin cancers.
- Infection with some types of human papillomavirus (HPV) can increase the risk of cervical and some other cancers.
- Infection with human immunodeficiency virus (HIV) can raise the risk of non-Hodgkin lymphoma, Kaposi sarcoma, and some other cancers.
- Treatment with chemotherapy or radiation therapy for a childhood cancer can increase the risk of getting a second cancer, especially leukemia, later on.

Can Cancers in Young Adults Be Prevented?

Limiting lifestyle-related and environmental risk factors

- Not smoking
- Getting to and staying at a healthy weight, and being active
- Limiting time spent in the sun and avoiding tanning salons
- Limiting sex partners and using safe sex practices, which can lower the risk of infection with human papillomavirus (HPV) and human immunodeficiency virus (HIV)

Screening to help prevent certain cancers

The risk of **cervical cancer** is very low in people under the age of 25. The risk rises with age. The American Cancer Society recommends that people with a cervix start being screened for cervical cancer at age 25. (See Can Cervical Cancer Be Found Early?)

Colorectal cancer is much more common in older adults, so screening is not recommended for people at average risk until age 45. But in people who are known to be at high risk, such as those with certain inherited conditions or a strong family history, screening might be recommended earlier – sometimes as early as the teen years. (See American Cancer Society Recommendations for Colorectal Cancer Early Detection for more details.)

Can Cancers in Young Adults Be Prevented?

Vaccines to help prevent cancer

Preventive surgery

Finding Cancer in Young Adults

Screening for cancers in young adults

Possible signs and symptoms of cancer in young adults

- An unusual lump or swelling, especially in the neck, breast, belly, or testicle
- Unexplained tiredness and loss of energy
- Easy bruising
- Abnormal bleeding
- Ongoing pain in one part of the body
- Unexplained fever or illness that doesn’t go away
- Frequent headaches, sometimes along with vomiting
- Sudden eye or vision changes
- Loss of appetite or unplanned weight loss
- A new mole or other spot on the skin, or one that changes in size, shape, or color

Treating Cancers in Young Adults

Late and Long-term Effects of Cancer Treatment in Young Adults

- Impaired fertility (ability to have children)
- Increased risk of developing another cancer later in life
- Heart or lung problems (from certain chemo drugs or radiation to the chest)
- Hearing or vision problems (from certain chemo drugs or radiation to the head)
- Problems with other organs, such as the kidneys or bones
- Pain or swelling in parts of the body
- Hormone deficiencies

NCCN GUIDELINES FOR PATIENTS®

2023

Adolescent and Young Adult Cancer

Special Issues for Young Adults With Cancer

Delays in diagnosis

Treatment issues

Financial concerns

Social and emotional issues

Special Issues for Young Adults With Cancer

- Fertility and fertility preservation
- Education and schooling
- Childcare
- Long-term side effects or late effects
- Health insurance and living expenses
- Transportation to appointments
- Psychosocial support
- Access to services

AYAs with cancer have unique medical, mental, emotional, and social concerns.

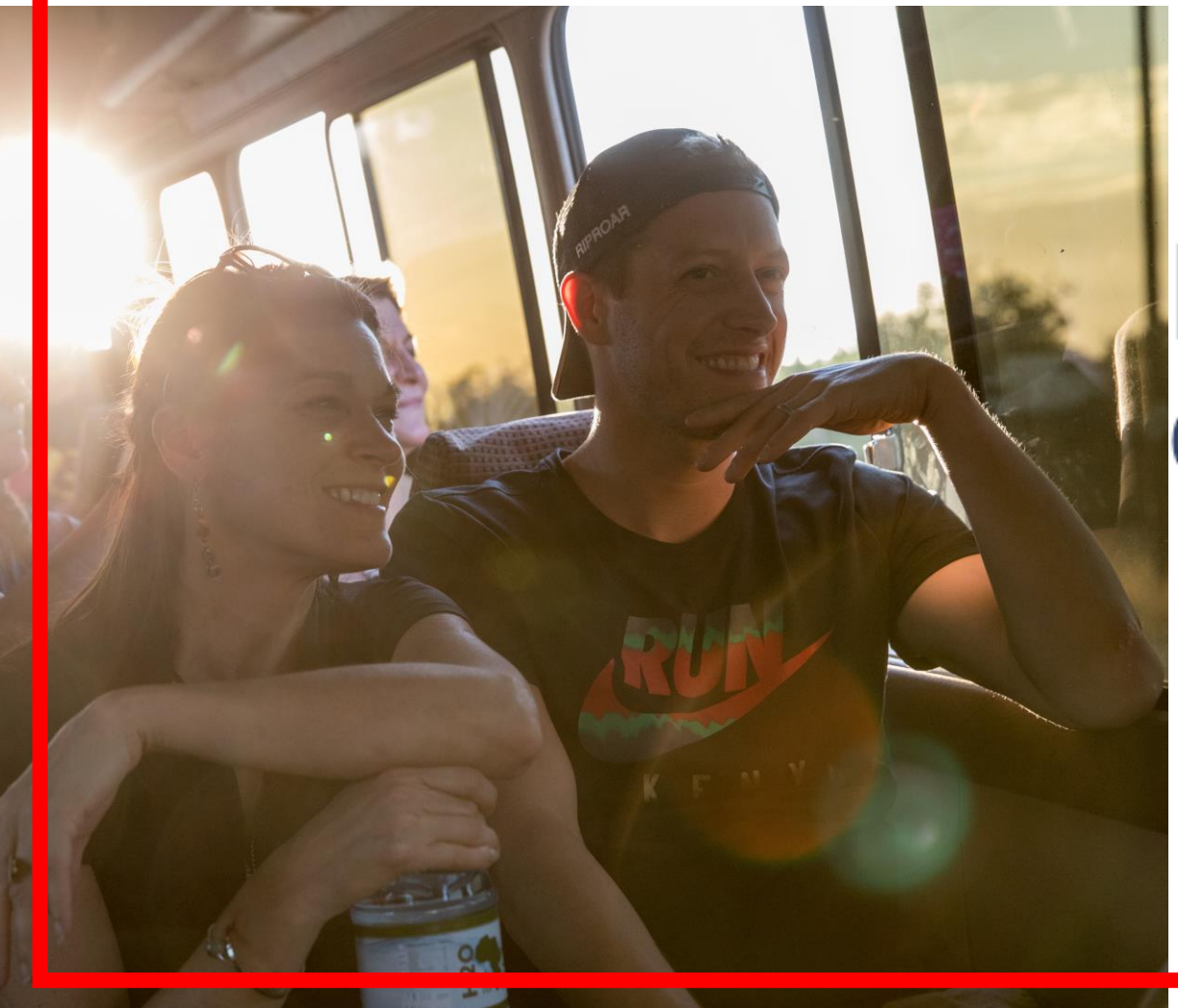
Special Issues for Young Adults With Cancer

Fertility

Those who want to have children in the future should be referred to a fertility specialist to discuss the options before starting treatment.

Guide 1 Fertility preservation options	
Egg freezing (oocyte cryopreservation)	A process in which eggs are removed from the ovaries and frozen.
Embryo freezing (embryo cryopreservation) after in vitro fertilization (IVF)	A process in which eggs are removed from the ovaries and fertilized by sperm in a lab to create an embryo. The embryo is frozen.
Ovarian transposition (oophoropexy)	A surgeon will move the healthy ovary (or ovaries) out of the radiation field and attach it to the wall of your abdomen.
Ovarian tissue freezing (cyropreservation)	A surgeon removes the ovary or part of it and freezes it. After cancer treatment, the ovary or tissue is put back. This option is not always available.
Sperm banking (sperm cryopreservation)	A procedure that collects and freezes one or more samples of semen. Sperm banking kits can be ordered online or you can make an appointment at a local urology office.
Testicular sperm extraction	A surgeon removes sperm cells directly from the testicle. The sperm cells are frozen.
Testicular tissue freezing (cryopreservation)	A surgeon removes a small portion of tissue from the testicle and freezes it to try to make sperm from it later. This option is not always available.

Special Issues for Young Adults With Cancer



Preventing pregnancy during treatment

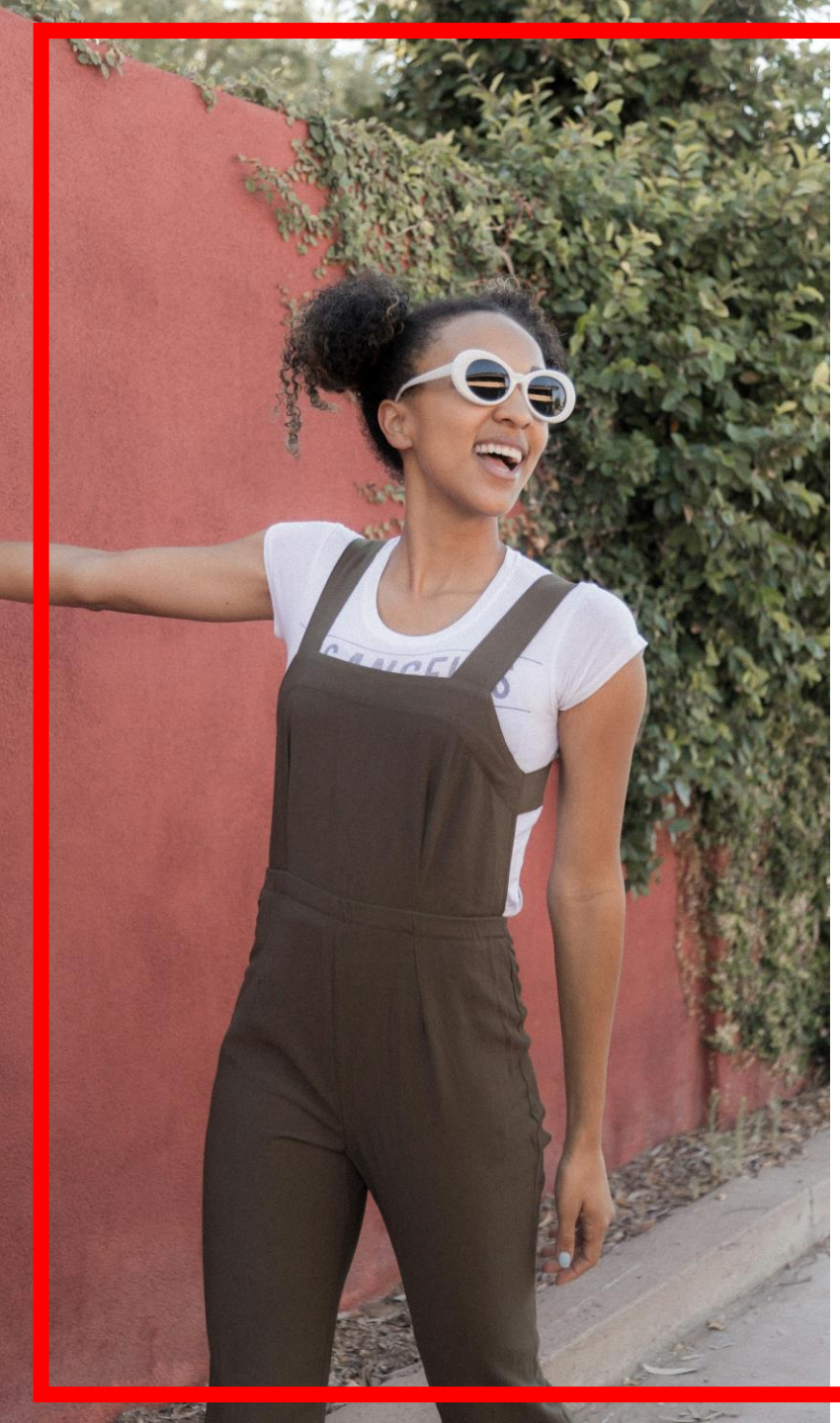
Special Issues for Young Adults With Cancer

Preventing pregnancy during treatment

Fertility after treatment

A follow-up with a fertility specialist after treatment may be helpful. If you noticed changes in your fertility, then consider the following possible options:

- **Donor eggs or embryos** – Donor eggs are removed from someone other than you. The donor goes through hormone treatment to produce multiple eggs. Donor eggs are fertilized through IVF using sperm chosen by you. Some people donate their frozen embryos for someone else to use.
- **Adoption or fostering** – Some adoption agencies may require that you be cancer-free (in remission) and off treatment for a certain amount of time before adopting a child. You could also become a foster parent. For more information, consider state, national, and federal organizations like ChildWelfare.gov or AdoptUsKids.org.
- **Surrogate pregnancy** – In a surrogate pregnancy, a frozen embryo is created from the egg and sperm from you and a designated partner. The embryo is implanted in the uterus of a surrogate chosen by you, who carries the baby until birth. Often, there is a legal agreement between the person who will become pregnant and the future parent(s).



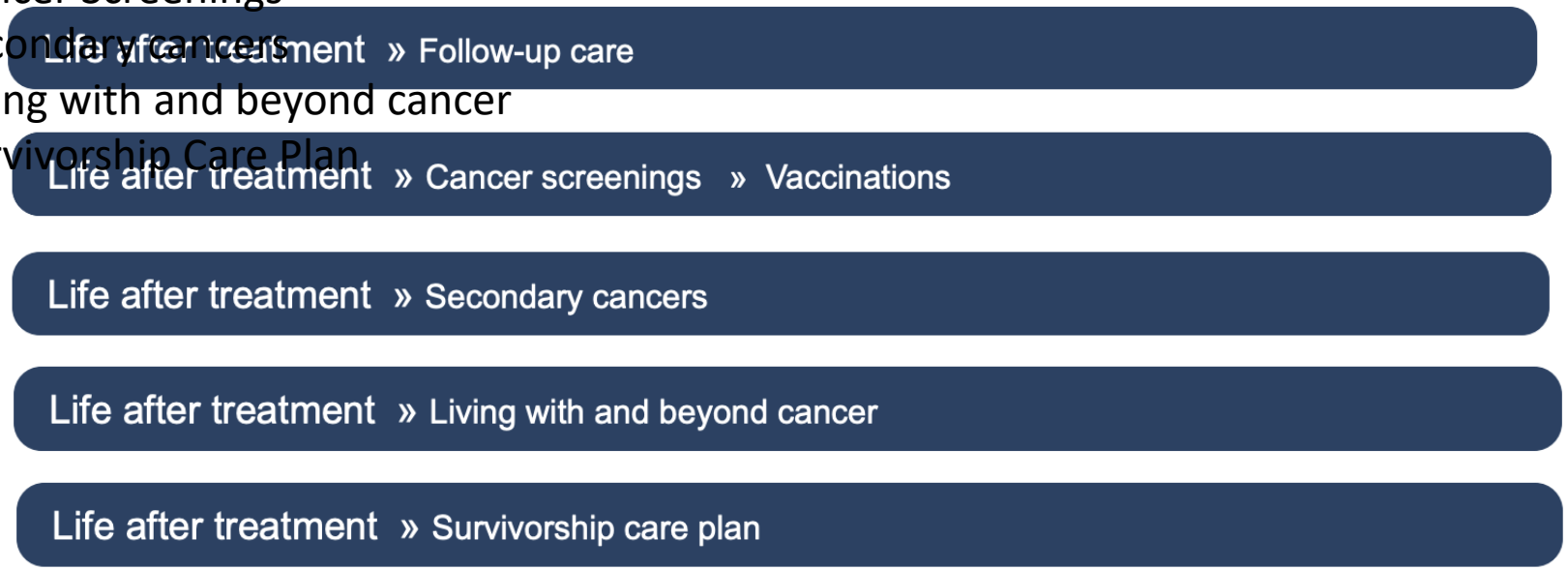
Key points

- Ask your care team how cancer and cancer treatment will change your fertility and sexual health now and in the future. Know the risks.
- Seek a referral for a fertility preservation specialist if treatment might impact your fertility and you want to take steps to protect your fertility. A medical professional, social worker, or counselor can help you decide on what is best for you.
- Your fertility preservation options will vary depending on your age, gender/sex assigned at birth, and type of cancer you have. If you think you might want children in the future, talk to your doctor now.
- Sperm banking and testicular sperm extraction are reliable and proven methods of fertility preservation.
- Embryo freezing, egg freezing, and ovarian transposition are reliable and proven methods of fertility preservation.
- Preventing pregnancy during treatment is important. Hormonal birth control may or may not be recommended, so ask your care team about options.

Special Issues for Young Adults With Cancer

Life after treatment

- Follow-up care
- Cancer Screenings
- Secondary cancers
- Living with and beyond cancer
- Survivorship Care Plan



Special Issues for Young Adults With Cancer

Life after treatment

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- Survivorship Care Plan

“Six months after beginning chemotherapy, I was ushered to go back to work. Despite a half-year hiatus, I felt unready to deal with the real world. My mental health tremendously declined after completing treatment; you always hear about how things will be better once you complete them, but nothing can prepare you for the changes and uncertainty you face once treatment is over.”

People assume that when treatment is finished, cancer is finished. It is not that simple. The people around you return to their normal routines, but your life is forever changed. Treatment might be over, but the doctors' appointments, the side effects, the medical expenses aren't over. It wasn't until I was finished with treatment that I could even process what had happened to me. It became difficult emotionally in a whole new way."

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Key points

- A person is considered a cancer survivor from the time of diagnosis and throughout life.
- After treatment, you will be monitored for any new or ongoing health issues.
- AYA cancer survivors have a high risk of developing a wide range of late effects. Your risk for late effects will depend on the type(s) and length of cancer treatment you had.
- Continue to see your primary care physician (PCP) on a regular basis and have preventive cancer screenings as recommended by your PCP.
- Maintain your weight, eat a mostly plant-based diet, exercise, limit alcohol, and if you smoke or vape, seek help to quit.
- A survivorship plan should spell out who you will be seeing to monitor your health, when you should be seeing them, and what they should be doing.

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Special Issues for Young Adults With Cancer

Questions to ask about fertility

1. Will the treatment affect my ability to have children?
2. Are there other ways to treat this cancer that will not affect my fertility?
3. How will I know if there are changes in my fertility from treatment?
4. What will be done to protect my fertility during treatment?
5. Where can I find support for coping with fertility changes?
6. After treatment ends, how long will it take for my periods to begin again?
7. If I am not having periods, should I still use contraception?
8. Is pregnancy safe for me after treatment? If so, how long should I wait after treatment to become pregnant?

Special Issues for Young Adults With Cancer

Questions to ask about fertility preservation

1. Is there anything I can do after treatment to preserve my fertility?
2. What are my fertility preservation options?
3. Will any of the options affect my cancer treatment?
4. Which options will delay cancer treatment? If so, for how long?
5. Will fertility treatments increase the risk that the cancer may return?
6. How much will these fertility preservation options cost?
7. Which fertility preservation options are covered by insurance?
8. Can you refer me to a specialist who can help preserve my fertility?

Special Issues for Young Adults With Cancer

Questions about survivorship

1. What happens after treatment?
2. What are the chances that my cancer will come back or that I will get another type of cancer?
3. Who do I see for follow-up care? How often?
4. What tests will I have to monitor my health?
5. What late effects are caused by this treatment? How will these be screened?
6. What do I do if I have trouble with work or school?
7. I am looking for a survivor support group. What support groups or other resources can you recommend?

Late effects

Some survivors have few or no health issues. Many have ongoing health challenges caused by cancer treatment and surgery. Some symptoms take time to show up, called late effects. Your risk for late effects will depend on the type(s) of cancer treatment you had, and the dose and the length of time you were treated. AYA cancer survivors have a high risk of developing a wide range of late effects. It is important to go to your follow-up appointments. The sooner late effects are treated the better. Ask your care team about what late effects could occur. This will help you know what to look for.

Possible late effects from cancer treatment:

- Secondary cancers
- Heart, lung, and kidney concerns
- Hearing and vision changes
- Fertility changes

Special Issues for Young Adults With Cancer

Possible late effects from cancer treatment:

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- Heart, lung, and kidney concerns
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- Fertility changes

Living with and beyond cancer

Most of us probably think of a survivor as someone who has been cured of cancer. However, a person is considered a cancer survivor from the time of diagnosis and throughout life. And so, defining survivorship can be a challenge not only for the person who has or had cancer, but also a challenge for their family, friends, caregivers, or coworkers. Some people don't like the word "survivor" because it doesn't accurately describe how they feel. If you don't like the word "survivor," then choose another word. Define for yourself what it means to be someone who is living with or beyond cancer. Share with others the words you choose to represent how you feel.

Survivorship focuses on the physical, social, emotional, and financial issues unique to cancer survivors. Managing the long-term side effects of cancer and its treatment, staying connected with your primary care doctor, and living a healthy lifestyle are important parts of survivorship. Cancer survivors may experience both short- and long-term health effects of cancer and its treatment. These effects are different for everyone and depend on the treatment(s) received.

Milestones

Many cancer survivors have mixed emotions about milestones and anniversaries of certain cancer-related dates. Not everyone wants to celebrate the end of treatment or the anniversary of being cancer-free. Your feelings might change over time or from year-to-year. Prepare yourself in advance for anniversary dates, consider ways to sort through complex emotions, and decide if you want to reflect on your experiences.

Support from others

Family, friends, and coworkers can find it difficult to know how and when to support a person who has or had cancer. Reach out to others when you need help. Healing and recovery from the experience will take time. Everyone is different. Be clear whether or not you want to celebrate a milestone or anniversary. It's okay to change your mind!

Distress

Distress, depression, and anxiety are common among AYA cancer survivors. Counseling and practical support will help you during and after cancer treatment. Seek out peer support groups. Talk to your care team. Ask for a referral to a specialist or other professional who can help.

Stress and coping

Coping skills are strategies a person uses to deal with stressful situations. These skills can be learned and each person has a different way of coping. Eating a balanced diet, exercise, quality sleep, and fun or relaxing activities can help. Reach out for support to manage stress and build coping strategies.

Life changes

Being a cancer survivor can add new layers of complexity to your personal life and relationships. You may question who to tell about your history, how much they need to know, and when you should tell them. It can take time to recover from the effects of cancer treatment. Survivors may take on too much. Friends and family may not realize you still need their support.

Special Issues for Young Adults With Cancer

LIVING ABOVE AND BEYOND CANCER

- Milestones
- Support from others
- Stress and coping
- Life changes.

MERCYONE

Richard Deming Cancer Center

- Multidisciplinary Cancer Clinic
- Survivorship Clinic
- Living With Cancer Clinic
- Integrative Oncology Clinic

MERCYONE

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- Multidisciplinary Cancer Clinic
  - Lung Cancer
  - Colon & Rectal Cancer
  - Breast Cancer
  - Melanoma
  - Gynecologic Cancer
  - Head & Neck Cancer

MERCYONE

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- Survivorship Clinic
  - For patients that have been treated for cancer and are cancer-free.
  - Any type of cancer treated by any center anywhere in the world.
  - Patients may refer themselves.

MERCYONE

Richard Deming Cancer Center

- Living With Cancer Clinic
  - For patients who have chronic incurable cancer
  - Any type of cancer
  - Patients may refer themselves.

MERCYONE

Richard Deming Cancer Center

- Integrative Oncology Clinic
  - For anyone who has been diagnosed with cancer regardless of where they are on the journey.
  - Any type of cancer
  - Patients may refer themselves.

MERCYONE

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- Integrative Oncology Services
  - Massage Therapy
  - Acupuncture
  - Chiropractic Care
  - Reiki
  - Reflexology
  - Physical therapy
  - Osteopathic Manipulative Therapy

MERCYONE

Richard Deming Cancer Center

- Integrative Oncology Services
  - Mental Health Counseling for patients
  - Mental Health Counseling for family
  - Mindfulness Coaching
  - Nurse Navigation
  - Genetic Counseling
  - Social Work
  - Financial Counseling

MERCYONE

Richard Deming Cancer Center

- Integrative Oncology Services
  - Dieticians/Nutritional Counseling
  - Pastor Care/Spiritual Counseling
  - Art as Therapy
  - Music Therapy
  - Sexual Health Counseling
  - Pet Therapy
  - Support Groups

MERCYONE

Richard Deming Cancer Center

- Patients may self-refer
- Office phone: 515-358-6606
- Dr. Deming Cell Phone: 515-480-2717
- Email: rdeming@mercydesmoines.org

ABOVE + BEYOND CANCER

Above + Beyond Cancer is a public charity with a mission to elevate the lives of those touched by cancer, to create a healthier world.

ABOVE+BEYOND CANCER

ABOVE + BEYOND CANCER

Meditation
Yoga
Water aerobics
Land aerobics
Weightlifting
Cross training
Outdoor cycling
Indoor Spin cycling
Tai chi
Hiking
Pole walking
Forest bathing
Paddle boarding
Ballroom dancing
Cooking classes
Book club

Above and beyond cancer: a novel approach to growth and resilience in cancer survivors

Vélez-Bermúdez, Miriam[a]; Norton, Aleisha[a]; Ament, Natalie[a]; Armer, Jessica[a]; Davis, Lauren Z.[a,f]; Deming, Richard L.[b]; Lutgendorf, Susan K.[a,c,d,e,*]

Conclusions:

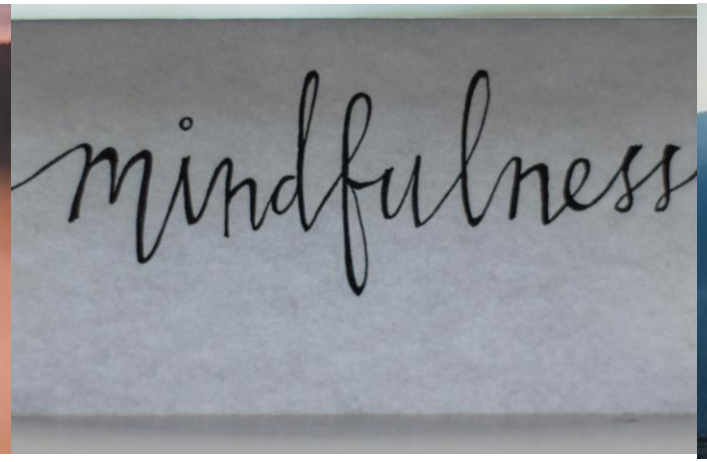
This study points to lifestyle undertakings that can support personal growth in cancer survivors.

Evidence for the Role of Mindfulness in Cancer: Benefits and Techniques

Monitoring Editor: Alexander Muacevic and John R Adler

Ria Mehta,[1] Kirti Sharma,[1] Louis Potters,[2] A. Gabriella Wernicke,[3] and Bhupesh Parashar[1]

Mindfulness is being used increasingly in various aspects of cancer management. Benefits of mindfulness practices are being observed to manage the adverse effects of treatment, symptoms from cancer progression, and the cost-effectiveness compared to conventional contemporary management strategies. In this review article, we present clinical trial data showing the benefits of mindfulness in various aspects of cancer management as well as techniques that have been commonly used in this practice.



Physical Activity and Cancer Care—A Review

Weronika Misiąg,[1] Anna Piszczyk,[1] Anna Szymańska-Chabowska,[2] and Mariusz Chabowski[3,4,*]

Sebastiano Mercadante, Academic Editor and Cataldo Doria, Academic Editor

In 2020, 19.3 million new cancer cases were diagnosed, and almost 10 million deaths from cancer were recorded. Cancer patients may experience fatigue, depression, anxiety, reduced quality of life and sleep problems. Cancer treatments cause numerous side effects and have a negative impact on all body systems. Physical activity is important for cancer patients. The aim of this review is to analyse recent studies on the role of physical activity in cancer patients and emphasize its importance. The review included 36 papers published in English between 2017 and 2021. The findings from these studies show that physical activity decreases the severity of side effects of cancer treatment, reduces fatigue, improves quality of life, has a positive impact on mental health and improves aerobic fitness in cancer patients. Moreover, it reduces the risk of cancer recurrence and death. Physical activity is recommended for patients with any type of cancer and at all stages of treatment. The type of physical activity should depend on the condition of the individual patient. It is extremely difficult to determine what type, intensity and duration of physical activity is likely to have the greatest effect.

Touch can reduce pain, depression and anxiety, say researchers

More consensual touch helps ease or buffer against mental and physical complaints, meta-analysis shows

nature human behaviour

Article

https://doi.org/10.1038/s41562-024-01841-8

A systematic review and multivariate meta-analysis of the physical and mental health benefits of touch interventions

Whether it is a hug from a friend or the caress of a weighted blanket, the sensation of touch appears to bring benefits for the body and mind, researchers say.

The sense of touch is the first to develop in babies and is crucial in allowing us to experience the environment around us as well as communicate. Indeed, the loss of touch from others during the Covid pandemic hit many hard.

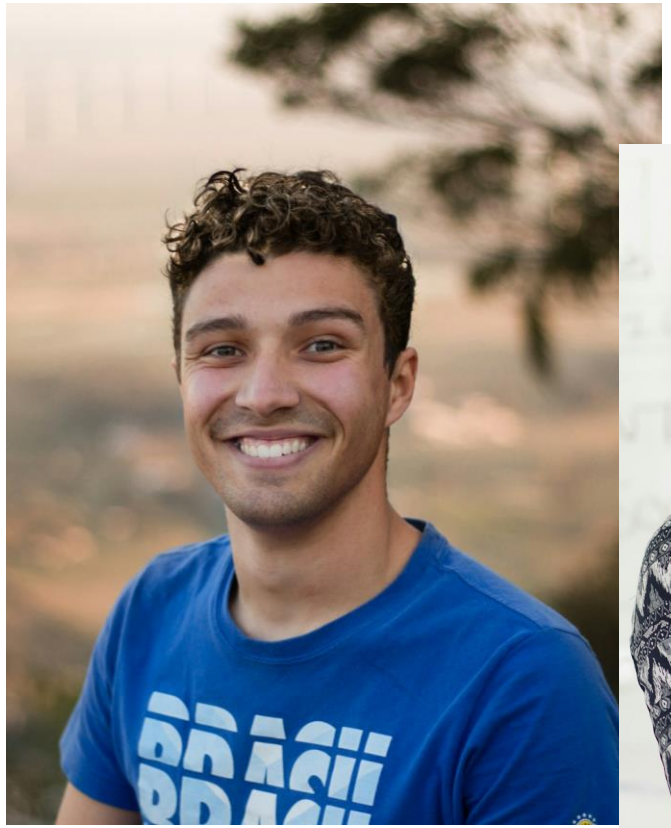
However, while myriad studies have suggested touch is beneficial for our health, few have attempted to draw the vast field of research together.

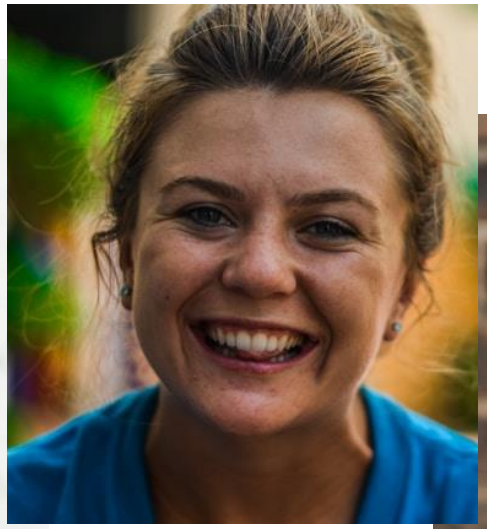
Now experts have done just that, revealing a simple message: touch helps.

Dr Helena Hartmann, a co-author of the research from University Hospital Essen, said: “More consensual touch events throughout our day can help alleviate or potentially buffer against mental and physical complaints.”

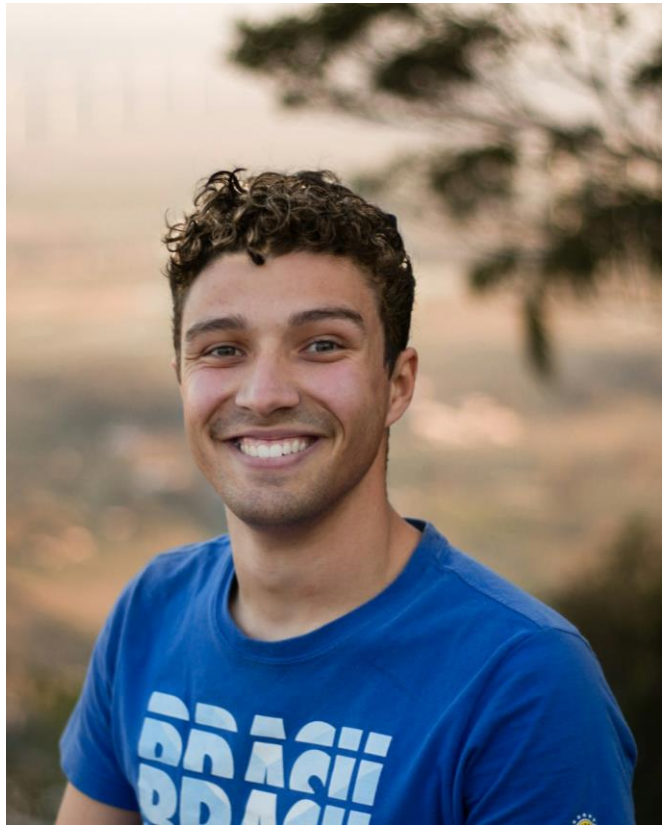
CANCER AMONG YOUNG ADULTS

CASE STUDIES



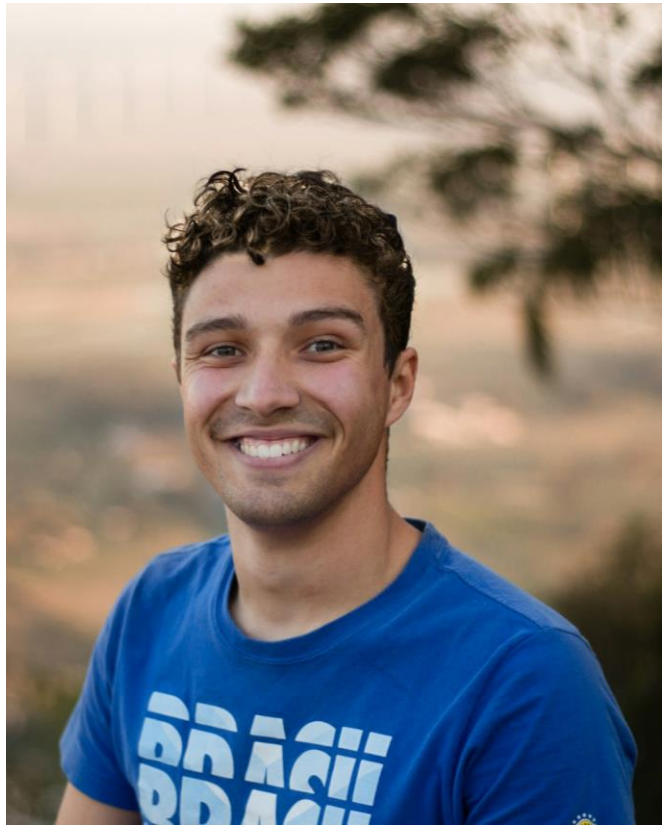


CANCER AMONG YOUNG ADULTS



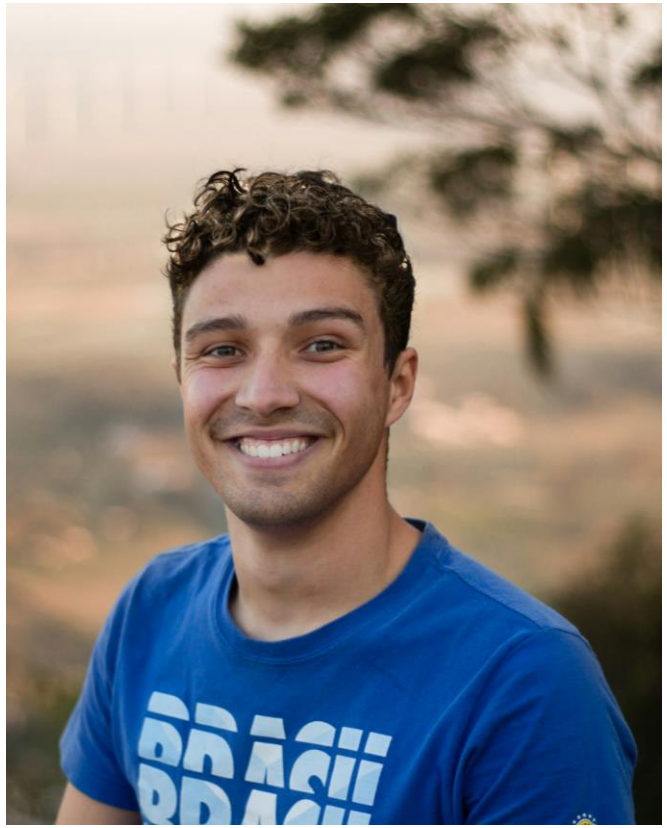
Justin is 29 year-old nurse who was diagnosed with Stage III Hodgkin's Lymphoma at the age of 16 in 2010. He had mediastinal, supraclavicular and axillary adenopathy along with involvement of his spleen. He received BEACOPP-ABVD chemotherapy from Oct 2010 through Feb 2011. He then received consolidation radiation therapy to a "mantle" field followed by radiation therapy to abdominal nodes and spleen. Radiation was completed in April 2011. He has been NED since then. I first met Justin in Feb 2024.

CANCER AMONG YOUNG ADULTS



Justin grew up in southeast Iowa. His “claim to fame” in high school was that he was “the kid with cancer”. He had mild ADD as a child. He has very loving and supportive family. He went to college right out of high school and received a bachelors degree in nursing. He works in a university hospital on a pediatric oncology floor. He is a never smoker. He is engaged to be married to Beth, a social worker.

CANCER AMONG YOUNG ADULTS

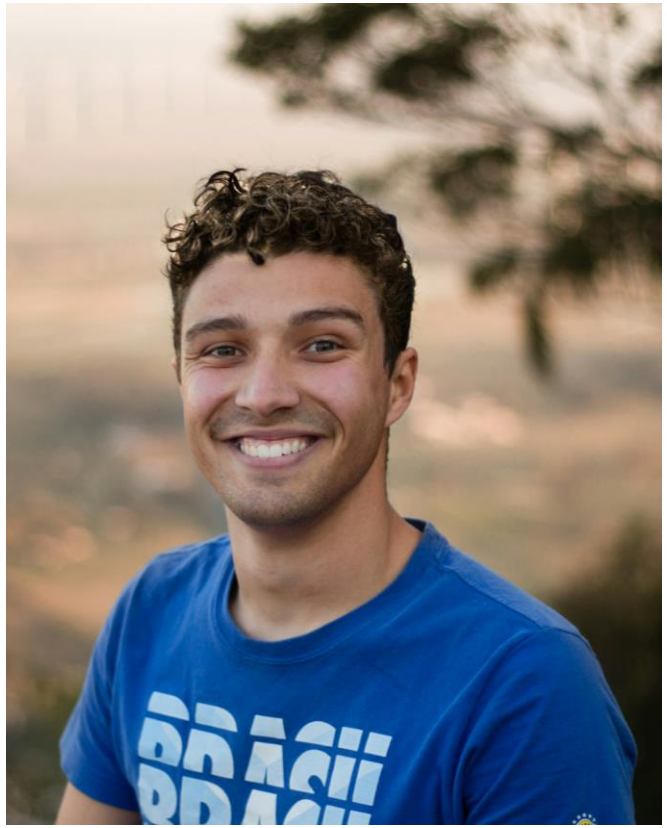


Surveillance for Hodgkin's Lymphoma
Surveillance for other cancers
Surveillance for late toxicity
Physical issues
Psychosocial issues
Emotional Issues
Financial Issues
Spiritual Issues
Philosophical Issues

FOLLOW-UP AFTER COMPLETION OF TREATMENT AND MONITORING FOR LATE EFFECTS

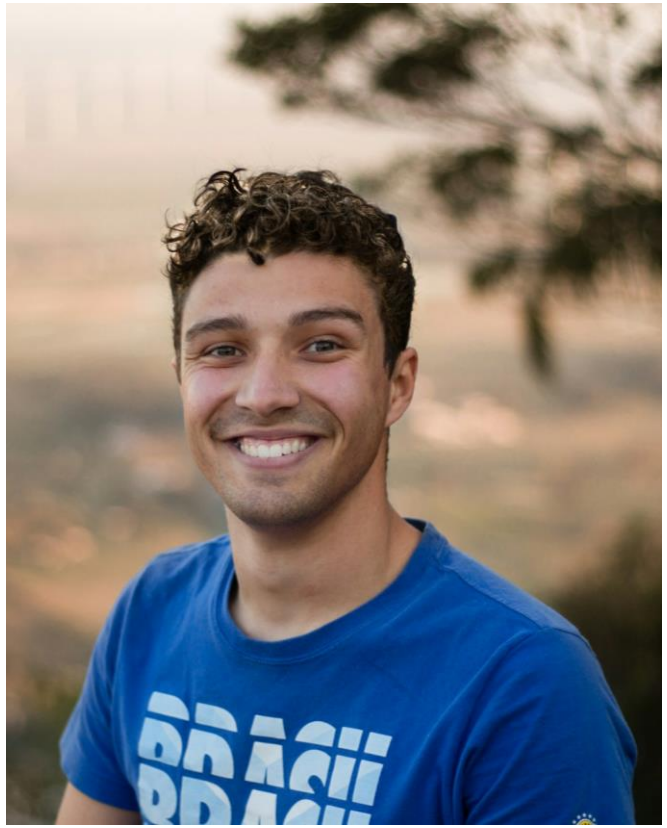
Pediatric CHL		
Disease Surveillance/ Follow-up After Completion of Treatment	• Interim H&P: ▸ Every 3–4 mo for 1–2 y, then every 6–12 mo until year 3, then annually until 5 y • Laboratory studies: ▸ CBC with differential, ESR or CRP, chemistry profile as clinically indicated. ▸ Thyroid-stimulating hormone (TSH) at least annually if RT to neck. • Consider PFTs (if bleomycin, pulmonary RT, significant pulmonary involvement, or other clinical concerns) • Immunizations ▸ Annual influenza vaccine is recommended, even during therapy. ▸ Other vaccines as per CDC Guidelines, typically starting 6 mo after completion of therapy (See Children's Oncology Group Survivorship Guidelines). • If spleen is irradiated, vaccines should be given prior to or after RT (ie, pneumococcal, haemophilus influenzae type b, meningococcal). See Principles of Radiation Therapy (PHL-F). • Psychosocial assessment (For AYA, see NCCN Guidelines for AYA Oncology)	• Imaging ▸ Consider end of therapy ECHO. ▸ Imaging studies are only recommended when relapse is suspected, because most patients will clinically declare themselves and there is no survival advantage in pre-emptive imaging. ▸ If clinical concern, chest x-ray PA and lateral views, CT with contrast, or MRI of original sites of disease may be performed and followed at 3- to 6-mo intervals up to 2 y following completion of therapy. ▸ MRI is acceptable in place of CT scan for neck/ abdomen/pelvis, but not for chest; diagnostic CT of chest is needed to evaluate lung parenchyma. ▸ FDG-PET/CT or FDG-PET/MRI if previous FDG-PET was positive (Deauville 4–5), to confirm CR at the end of all prescribed therapy including RT. Once negative, repeat FDG-PET should not be done unless evaluating suspicious findings on H&P or CT or MRI. ◊ Wait at least 8–12 wk after end of RT to perform FDG-PET to minimize false-positive results. ◊ Surveillance FDG-PET is not recommended due to risk for false positives. ▸ If concern for relapse, management decisions should not be based on FDG-PET scan alone; clinical and pathologic correlation is needed. See Principles of Pathology (PHL-B) and see Therapy for Relapsed or Refractory Disease (PHL-9).
Monitoring for Late Effects (≥2 years after completion of systemic therapy)	• Appropriate screening and counseling related to: thyroid, cardiac, pulmonary, bone, fertility and reproductive health; subsequent cancers (with special attention to thyroid and breast cancer), and other treatment-associated late effects (See Children's Oncology Group Survivorship Guidelines)	

CANCER AMONG YOUNG ADULTS



Physical examination – enlarged right thyroid
CT scan of the neck
US of the thyroid
Massage therapy
Acupuncture
Chiropractor
Mindfulness Coach
Above + Beyond Cancer Young Adult program

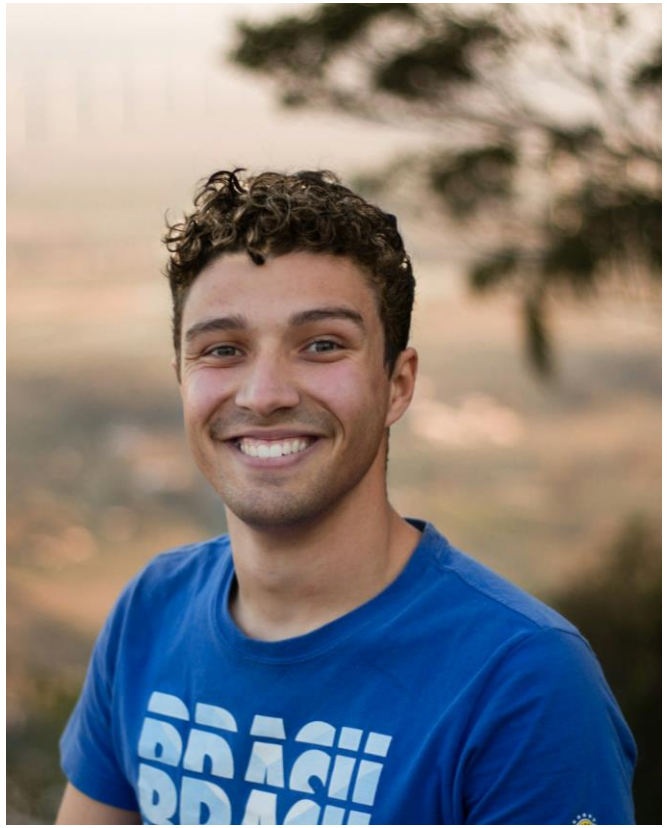
CANCER AMONG YOUNG ADULTS



Thyroid US on 3/12/2024 demonstrated nodule in the right lobe of the thyroid gland that measures 2.6 x 2.0 x 1.4 cm.

CT of the neck without contrast on 3/20/2024 demonstrated the 2.2 x 2.6 cm nodule in the right thyroid gland. Prominent but not pathologic lymph nodes were noted in the bilateral necks and upper anterior mediastinum.

CANCER AMONG YOUNG ADULTS



Thyroid US-directed biopsy of the right thyroid gland on 3/28/2024 demonstrated follicular lesion of undetermined significance. Comment: The specimen shows mildly increased microfollicles along with few larger clusters of follicular epithelial cells. Background minimal colloid with rare macrophages noted. The overall features are atypical but not entirely specific. The differential includes benign adenomatoid thyroid nodule as well as follicular lesion/neoplasm. Features of papillary thyroid carcinoma are **not** identified.

CANCER AMONG YOUNG ADULTS

Tyler is a 31 year-old software engineer who presented in June 2023 with abdominal pain and blood in the stools. Work-up demonstrated a large tumor in the sigmoid colon and widespread liver metastases. Biopsy showed Stage IV adenocarcinoma of the colon. He was started on FOLFOX + Avastin chemotherapy. I first met Tyler in Oct 2023.

CANCER AMONG YOUNG ADULTS

Tyler grew up in Missouri. He lives in Iowa and works as a software engineer. He is single but has a life partner, Julie, who lives near his home. His parents are fundamental Christians with suspicions regarding conventional medical treatments. They are encouraging him to take ivermectin and consider alternative treatments.

CANCER AMONG YOUNG ADULTS

Living with Cancer. Treatable but not curable

Physical issues

Psychosocial issues

Emotional Issues

Financial Issues

Spiritual Issues

Philosophical Issues

CANCER AMONG YOUNG ADULTS

Mental health counselor for Tyler
Mental health counselor of his parents
Massage therapy
Acupuncture
Mindfulness
Palliative care
Osteopathic manipulative treatment
Brain Fog program
Dietician
Living with Cancer Support Group

CANCER AMONG YOUNG ADULTS

Aiysha is a 28-year-old college student who noted a mass in her left breast on self-examination in 2021. Work-up demonstrated Clinical stage T1N1M0 grade 2 invasive ductal breast cancer, ER+, PR+, Her2-negative. She received neoadjuvant chemotherapy, left nipple-sparing mastectomy + left axillary dissection + reconstruction, post-op adjuvant radiation therapy and on-going adjuvant endocrine therapy. I first met Aiysha in Mar 2024.

CANCER AMONG YOUNG ADULTS

Aiysha is a single parent of a 7-year-old daughter. She has a partner, James, who is the father of their daughter. Aiysha obtained an associate degree at a community college and is now enrolled in nursing school.

CANCER AMONG YOUNG ADULTS

Surveillance for breast cancer
Surveillance for other cancers
Surveillance for late toxicity
Physical issues
Psychosocial issues
Emotional Issues
Financial Issues
Spiritual Issues
Philosophical Issues

CANCER AMONG YOUNG ADULTS

Mammogram
Mental health counselor
Child Life Specialist
Social worker
Lymphedema therapist
Massage therapy, Chiropractor, Reflexology
Reiki, Osteopathic manipulation
Spiritual counselor
Above + Beyond Cancer Young Adult program
Survivorship Clinical Trials for sexual function and cognitive impairment.

CANCER AMONG YOUNG ADULTS

Sherrie was diagnosed with Stage IIB invasive ductal right breast cancer in 2015 at the age of 33. Her tumor was grade 2, ER+, PR+, HER2 +. She received neoadjuvant TPH x 4 cycles, followed by bilateral skin sparing mastectomies, right sentinel node procedure, and reconstruction with tissue expanders. She received post-op adjuvant FEC chemotherapy plus Herceptin and adjuvant radiation therapy to the chest wall + regional nodes. She was received Tamoxifen for three years until she was discovered she was pregnant in 2019.

CANCER AMONG YOUNG ADULTS

Sherrie has a healthy baby girl in 2020. She restarted Tamoxifen in June 2020 along with Lupron. I initially met with Sherrie in Feb 2023. She is married to Craig. They have a 9-year-old son and a 2-year-old daughter. Sherrie works in advertising.

CANCER AMONG YOUNG ADULTS

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CANCER AMONG YOUNG ADULTS

PET scans for surveillance
Mental health counselor
Mindfulness coach
Massage therapy
Chiropractor
Menopause/Sexual health provider
Child Life specialist
Brain fog program

CANCER AMONG YOUNG ADULTS

In March 2023 she had a follow up PET scan. It demonstrated wides pread bone metastases, liver metastases and mediastinal adenopathy. CT-guided biopsy of the liver confirmed metastatic breast cancer, still ER+, PR+, HER2+.
She was started on Verzenio, Enhertu, Faslodex and Lupron.

CANCER AMONG YOUNG ADULTS

I most recently met with Sherrie in April 2024. When I first met Sherrie in 2023, she was NED and was a patient in my Survivorship Clinic. Now she is a patient in my Living with Cancer Clinic. She has stage IV breast cancer which is treatable, but not curable. She is experiencing fear of progression, mood swings, night sweats, anxiety about fear of recurrence, insomnia, right chest wall tightness, and brain fog.

CANCER AMONG YOUNG ADULTS

Mental health counselor
Mindfulness
Massage therapy
Chiropractor
Menopause/Sexual Health provider
Child Life specialist
Brain fog program
Acupuncture
Palliative Care
Living with Cancer Support Group

Life Begins Again


Unsplash
SAMSUNG

FIT FOR A KING
AMERICAN
METALCORE


LOGO


DRINKS
RODADA DUPLA
DAIKIRI


XVII
POLO CLUB


YETI


KILI TEAM
ABOVE + BEYOND
American Cancer Society
REI


ABOVE+BEYOND
CANCER


CANCER

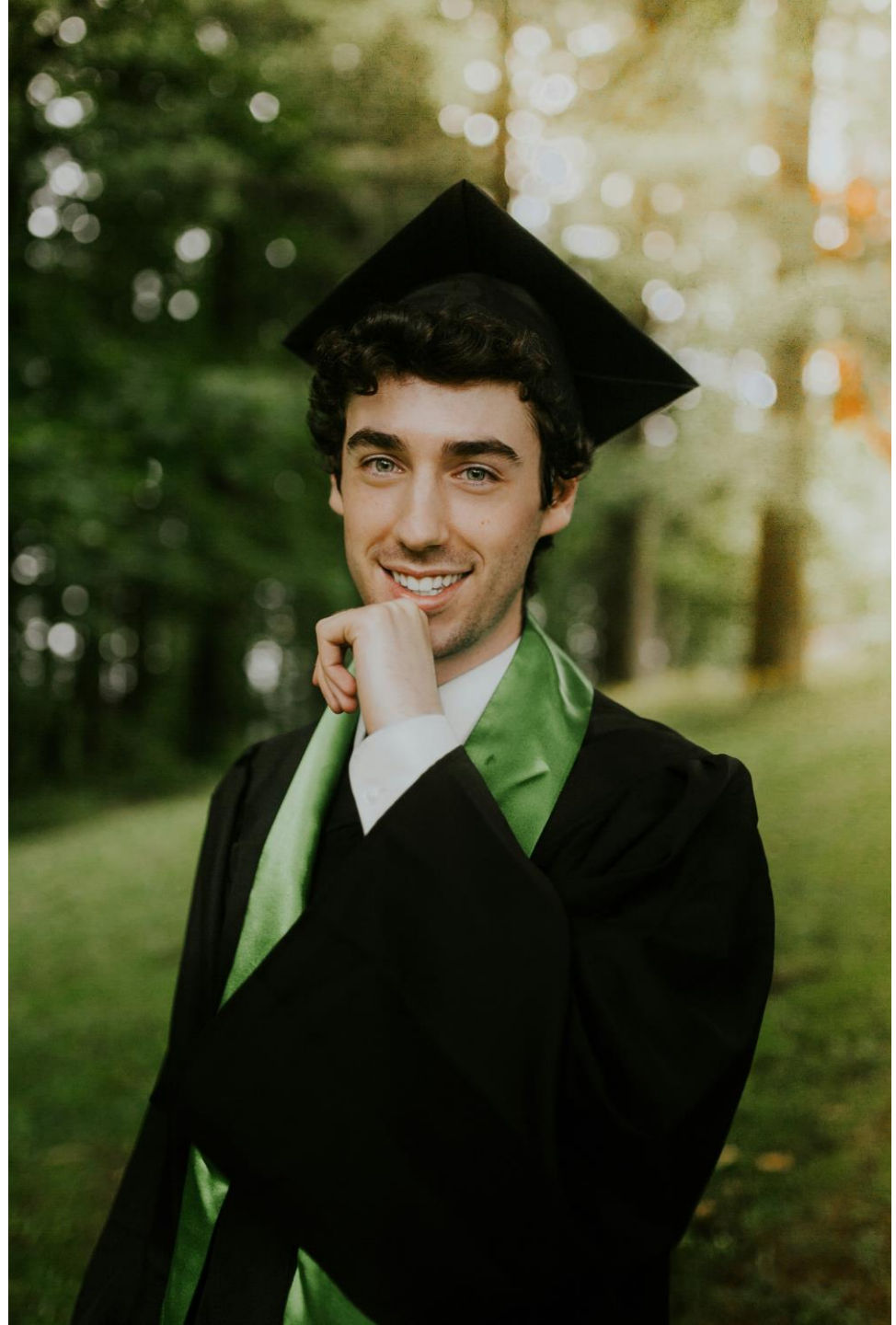

ABOVE+BEYOND
CANCER
ABOVE+BEYOND
CANCER

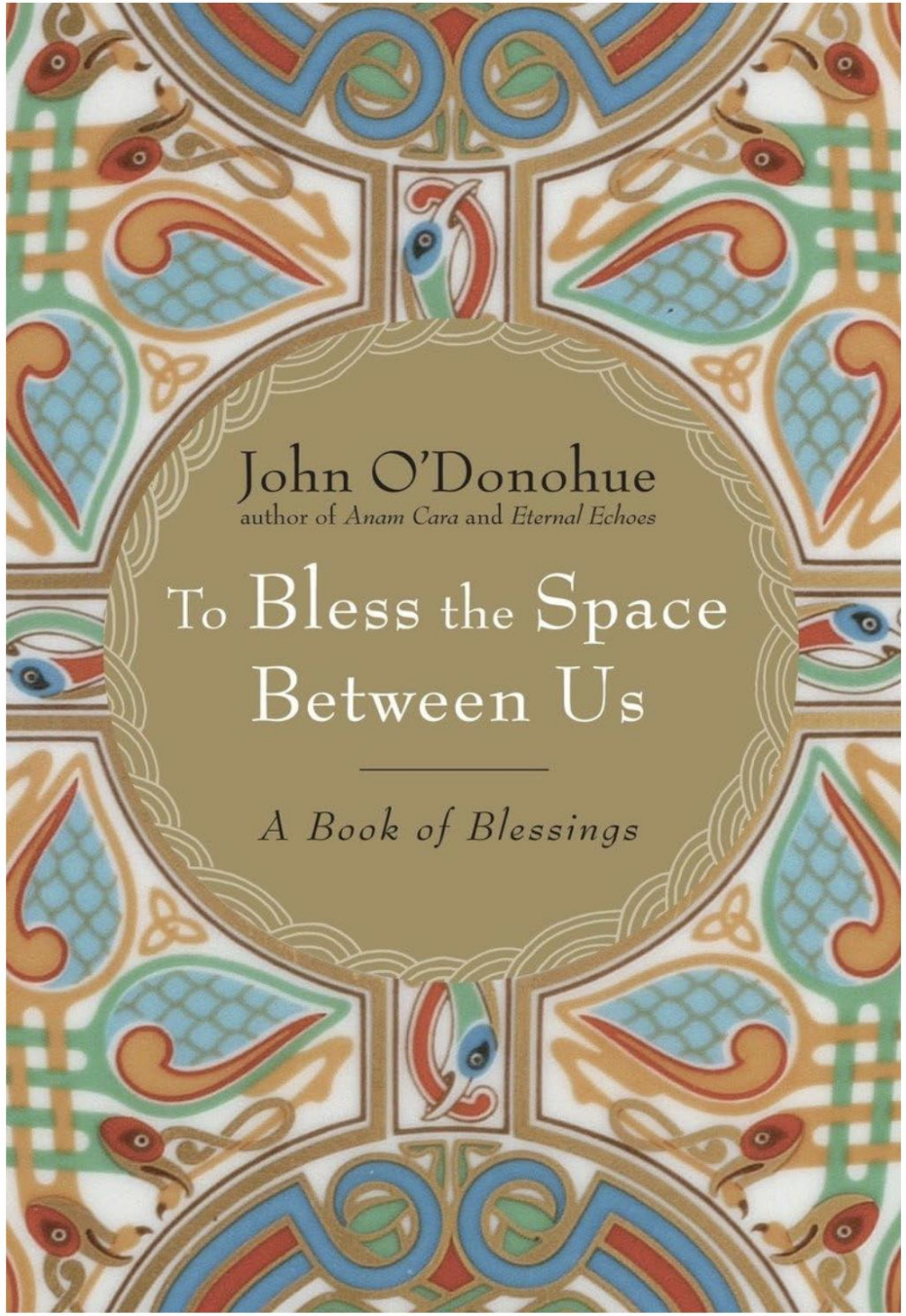

Mercy
CANCER CENTER


RIPROAR
RUN
H2O


HOT SAUCE
GIANT
HOT SAUCE


QUIKSILVER




John O'Donohue
author of *Anam Cara* and *Eternal Echoes*
To Bless the Space Between Us
A Book of Blessings

ABOVE + BEYOND CANCER

Richard L. Deming, MD

ABOVE+BEYOND

CANCER