

## Nurse Perspectives on Difficult Conversations: How Do I Tell My Kids That I Am Dying?

by Lindsay Fischer

Oncology nurses may frequently find themselves in emotional conversations with their patients within a moment's notice, which can be overwhelming at times. However, learning to take a pause before responding, showing a willingness to understand, and trying to make the patient feel supported are the best steps a nurse can take in any situation, according to Anna Skwira-Brown, APRN, AOCNP.

Brown, a nurse practitioner at Essentia Health Duluth Clinic in Minnesota, recently co-authored an article in the *Clinical Journal of Oncology Nursing* about best practices in palliative and end-of-life nursing conversations.<sup>1</sup> In a case-study format, Brown outlined an instance in which "Mary," a 63-year-old bookkeeper who underwent surgery and chemotherapy for colon cancer, confides to her nurse that she does not know how to tell her kids that she is dying after a CT scan shows ascites and liver metastases.

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## Oncology Nurses Delve Into The Relationship Between Positive Psychology and Symptom Burden in CRC Survivorship

by Lindsay Fischer

Positive psychology, or the ability to provide an optimistic outlook to one's life, is intertwined with how colorectal cancer (CRC) survivors view their symptom burden, according to a cross-sectional study published in the *Oncology Nursing Forum*.<sup>1</sup>

Survivors who demonstrated high levels of positive psychology, which includes benefit finding and posttraumatic growth, showed the greatest capacity to positively cope with their cancer diagnosis and treatment during acute cancer survivorship. Although positive psychology levels vary depending on sex, age, and history of prior trauma, investigators observed that men and younger adults appear to exhibit the greatest levels of positive psychology.

Moreover, patients who experience symptoms that occur daily or almost daily, have decreased positive psychology levels, and may benefit from positive psychology intervention from their oncology nurse.

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## Nurse Perspectives on Difficult Conversations: How Do I Tell My Kids That I Am Dying?

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Mary, who was in the midst for filing for disability when she developed pain, nausea, and weight loss, had 3 adult children. In a family discussion with the medical oncology team, all 3 children agreed that “Mary is a fighter,” because of her past cancer treatments and her life as a single mother. Yet, when the children leave the room, Mary confides in the RN, “Ella,” that she felt too tired and sick to “fight” anymore.

Brown explained that this case study was based on a real-life experience.

“This happened to me when a patient said, ‘How am I going to tell my kids I’m dying?’” Brown told *Oncology Nursing News*®. “I had 2 young kids at home [at the time] and the first thing I thought of [was] that would be the most awful thing in the whole wide world, but that’s not what this patient needed to hear.”

### Take A Pause

As Brown highlighted in the case study, and noted in the interview, an RN who finds themselves in this situation can always benefit from taking a short pause before responding—although it may seem awkward or uncomfortable, a brief silence can permit the RN to take a moment to gather their thoughts.

“One of the most powerful things the nurse in this case study does is pause,” Brown said. “As nurses, we are inclined to try and answer questions. We try and answer the content at the surface level. Pausing gives everybody a break. When a patient asks a question that can be really emotionally impactful, that’s just a moment [where] more than anything, we all have to take a breath.”

In terms of addressing the patient’s question, Brown noted that it can be intimidating, and that the RN may feel pressured to say the “right thing.” However, in this instance, a great place to begin the conversation is to try and name the emotion that the patient seems to be feeling. In this example, Ella, the RN,

made the following statement in her desire to be empathetic: “That sounds like a really hard thing to be thinking about.” She then stated, “You seem sad.” Pause. “And maybe scared?”

Brown noted that Ella does not to be correct about the emotions of the patient. The important part is that she is open and inviting the patient to communicate with her.

“Attempting to understand what that must feel like is the important part. And then listen. We could say, ‘This helps me understand what you’re thinking,’” Brown explained. “If I said to the patient, ‘That sounds really hard,’ or, ‘That must be a really hard thing to be thinking about.’ She might say, ‘No, I’m angry,’” Brown said, adding that follow-up response could address that gained understanding of their emotions. “Whatever the patient says, it’s [important] to make sure that they know that you’re listening, not reflecting on your own angst about what a hard question that might be,” she underscored.

In the case-study example, Mary cried and explained her fear and anger about her cancer recurrence. Ella asked Mary what her concerns are about talking to her children and Mary shared that she felt guilty that she would not be able to provide for the family, and she is heartbroken that she would not be able to see her grandchildren grow.

### Respect and Support

At this point, the initial conversation had ended. Ella helped Mary feel both heard and supported. In future visits, when the nurse practitioner asked if Mary is OK with being asked some questions about the familial understanding of the illness, Mary admitted that she shielded them from bad news. The team encouraged her to consider ways to talk to them on an individual basis.

According to Brown, nurses may often be caught off guard by surprising or hard ques-

tions from patients and caregivers. However, this case study illustrates how the power of pausing and finding a way to make an empathic statement can be more important than an immediate attempt to find a right answer.

“We don’t have to know how to say the right thing at the right time,” Brown said. “I think a lot of us didn’t learn how to do this—some of our families might have helped us duck away or use some humor, or change the subject. But this is about seeing these situations as opportunities to really try and center ourselves on what the patient is saying.”

### Integration Into Practice

When building communication skills, nurses should not be hard on themselves, Brown noted. She said to recognize that nurses are all always learning and to see new and difficult situations as an opportunity to improve. She also noted that there are many free resources available to help nurses prepare themselves to handle difficult conversations.<sup>2</sup>

“Knowing where the resources are can be really important,” Brown said. “I’m seeing more and more clinical guides on websites, there are groups that are really working toward improving communication [for health care providers].”

She concluded by noting that communication skills are similar to technical skills, such as starting an IV or changing a dressing: both need to be practiced.

“Communication is 1 skill that all of us are always improving,” she said. ■

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## Oncology Nurses Delve Into The Relationship Between Positive Psychology and Symptom Burden in CRC Survivorship

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“Understanding the importance of relationships between positive psychology, symptoms, and health outcomes is important for nurses because nurses are poised to evaluate and monitor for changes in positive psychology and symptoms during acute cancer survivorship,” wrote Sameena F. Sheikh-Wu, PhD, BA, BSN, RN-BC, of the School of Nursing and Health Studies at the University of Miami in Coral Gables, Florida, and co-investigators, in the study. “A better understanding of these relationships can provide the foundation for interventions that increase positive psychology and improve symptom management among CRC survivors across cancer survivorship.”

Investigators conducted a cross-sectional study of 117 CRC survivors who were being treated at the University of Miami between April and August of 2021. Prior to data collection, the investigators collected informed consent and Health Insurance Portability and Accountability Act waivers. Patients who were included in the analysis needed to be age 18 years or older, understand English, have a diagnosis of colon, rectal, or CRC, and be undergoing active treatment. They were not eligible to participate if they had severe mental illness, completed their cancer treatment and were terminally ill or beginning hospice, or if they were unable to give informed consent.<sup>1</sup>

Overall, 117 survivors completed the study, 77 of whom had colon cancer, 12 of whom had rectal cancer, and 28 of whom had CRC, with cancer stages ranged from I to IV. The mean age was 55.31 years and 44% of participants were female. Prior to their cancer diagnosis, 41% of survivors had experienced a traumatic event; however, there were no differences in demographics or health-related characteristics between

those who had or had not experienced prior trauma.

Survivors were asked to complete a demographic questionnaire, the Carver Benefit Finding Scale, and Posttraumatic Growth Inventory to assess positive psychology. A Therapy-Related Symptom Checklist, was also used and considered 49 symptoms using measures such as occurrence, frequency, and severity. When adjusted for the analysis, age was to not be a significant factor symptom burden ( $P > .05$ ). Sex was a significant factor for hair loss symptoms and abdominal bloating, with women reporting a higher occurrence rate of hair loss ( $P = .003$ ), and abdominal bloating being more prevalent among men ( $P = .042$ ).<sup>1</sup>

Cancer stage played a role in sore vein symptom burden ( $P = .012$ ) and gastrointestinal pressure ( $P = .019$ ), higher rates of each were associated with stage III cancer. Moreover, compared with patients undergoing different treatment types, patients who were undergoing chemotherapy reported higher rates of the following symptoms difficulty swallowing, dizziness/lightheadedness, headache, and anal pain ( $P < .001$ ).

Among patients who experienced a traumatic event prior to their cancer diagnosis ( $n = 48$ ), the most common symptoms were neuropathy of the hands/feet, feelings of sluggishness, generalized weakness, anxiety, and generalized pain. For those who had never experienced a traumatic event ( $n = 69$ ), the most common symptoms were neuropathy of the hands/feet, feeling sluggish/fatigue, skin changes (sensitivity, discoloration, texture, and dryness), sleep disturbances, and weight loss. Survivors who had prior traumatic experience reported a higher rate of anxiety (54% vs 31%;  $P = .011$ ), stress (52% vs 38%;  $P = .159$ ), and depression (40% vs

22%;  $P = .047$ ). Of note, 49% of the survivors with prior trauma experience all 3 of these psychological distress symptoms compared with 30% of those who had not experienced prior trauma.

In other cancer populations, patients who demonstrate higher levels of positive psychology have also been observed to experience a reduced burden of psychological distress symptoms, including stress, anxiety, and depression. However, in this study, investigators did not report a relationship between benefit finding, posttraumatic growth, or positive psychology levels, and psychological distress symptoms among the study aggregate.<sup>2</sup>

Survivors between the ages of 20 and 29 years experienced the highest levels of benefit finding (mean, 4.88), posttraumatic growth (mean, 4.57), and positive psychology (mean = 4.73), while those who were between the ages of 80 and 89 derived the least benefit from benefit finding (mean, 2), posttraumatic growth (mean, 1.76), and positive psychology (mean, 1.88).<sup>1</sup>

Study authors also observed a relationship between sex and posttraumatic growth levels ( $P = .023$ ) among those with a prior traumatic event. The mean posttraumatic growth level was 3.09 among men and 2.1 among women. However, among those without a prior traumatic event, the authors observed a significant relationship between sex and benefit finding ( $P = .031$ ), as well as with posttraumatic growth levels ( $P = .023$ ) and positive psychology levels ( $P = .015$ ).

Moreover, an analysis between positive psychology and symptoms characteristics, and psychological distress symptoms, showed that only sportive psychology and symptom frequency were significant. Symptoms that occurred daily were linked with

significant decreases in positive psychology levels and symptoms and symptoms that occurred randomly weekly, and almost daily, were not linked to positive psychology levels among survivors without a prior traumatic event. ■

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## Discussions Around Palliative Radiation Are Key To Improving Both Patient and Provider Understanding

by Lindsay Fischer

**R**adiation therapy remains a pillar of oncology treatment, yet palliative radiotherapy is often misunderstood, according to Reanne Booker, MN, NP.<sup>1</sup> However, nurses can play an important role in educating patients about this treatment and determining if it is appropriate for patients.

“Oncology nurses play a huge role in helping to address misperceptions and educating patients about the goals of palliative care,” said Booker, who is a nurse practitioner with the palliative and end of life care services program at the Foothills Medical Centre at Alberta Health Services in Calgary, Alberta, as well as a PhD candidate at the University of Victoria in British Columbia, in an interview with *Oncology Nursing News*®.

“Nurses already are fantastic at providing or adopting a palliative approach to care,” she added. “[When it comes to palliative radiation], it’s all about listening to the patient, and making sure that the treatments we’re offering are aligning with patient’s goals and wishes.”

Booker recently performed a literature review on palliative radiation. The findings from her research, which were published in the *Clinical Journal of Oncology Nursing*, provide foundational information for nurses on indications for palliative radiation therapy, possible adverse effects and toxicities associ-

ated with treatment, and potential accessibility barriers patients may face.<sup>1</sup>

In an interview with *Oncology Nursing News*®, Booker highlighted the key takeaways from this research and the broader implications for oncology nursing practice.

#### **Oncology Nursing News®: Are all patients eligible for palliative radiotherapy?**

**BOOKER:** We know that approximately half of all patients will receive radiation therapy at some point in their disease and treatment trajectories. Approximately half of all prescribed radiotherapy is with palliative intent. But there are some patients who are better suited to receive palliative intent radiation therapy compared with others.

It’s really important that we consider a patient’s goals and wishes and to make sure that our treatment aligns with [that]. When it comes to radiation therapy, it can take between 1 to 4 weeks for patients to realize the full benefit of the treatment. So, if their prognosis is thought to be quite short—in the neighborhood of days or weeks—then that might not be the best option for them, because they wouldn’t potentially be able to realize the benefit of the treatment. Patients [also] need to be able to tolerate laying still on a hardtop table for at least 15 minutes.

Depending on their physical condition, they may not be able to tolerate that. Some patients don’t like to have masks or things placed over their face, and, depending on the treatment sites, they may have to have that. [This] can cause anxiety and claustrophobia for some patients. Additionally, patients have to travel to and from the cancer center. If they live quite a distance, you have to really weigh those risks and benefits in terms of what’s the best option for the patient.

#### **Can you differentiate between radiation therapy for curative intent vs palliative radiation therapy?**

The biggest difference is the intent or the goals of the treatment. Palliative-intent radiation is meant to alleviate symptoms rather than cure the disease.

We really need to talk about the risks and benefit: what are the possible adverse effects that might happen? If the intent is to alleviate symptoms, but not necessarily cure the disease, then we need to make sure that those adverse effects of treatment don’t outweigh the benefits, especially in the palliative context. We have studies to show that patients are very often willing to deal with diminished quality of [life] if the treatment is meant to be curative. It’s a bit different [when] we know that the treatment won’t be curing the under-

lying cancer. Many patients would really argue that their quality of life is key, [so we] want to really think about that balance.

**In your article, you present 2 very different case studies about patients and their decision to pursue or not pursue radiation therapy. What were the key concerns that these patients expressed and what advice might you have for nurses who find themselves in real-world situations similar to these?**

These cases were based on real-[world] experiences I've had with details changed to preserve anonymity and confidentiality.

One patient is a 38-year-old nurse with history of metastatic breast cancer, who has undergone multiple lines of therapy. The other patient is a 78-year-old gentleman with many symptoms and a new diagnosis of multiple myeloma. In both cases, radiation was being offered as a palliative measure. So again, the goal was to alleviate symptoms to help improve quality of life.

It is imperative in the context of any palliative-intent treatment to ensure that the treatment harms don't outweigh the benefits. So, for Abigail, the nurse, we knew her prognosis was estimated to be [approximately a few] short weeks. She'd already told us that she didn't want to have any more disease directed treatment for breast cancer. Her goals were really to spend more time with her family and have good quality of life [and] she didn't want to be spending her remaining time in the hospital or traveling to and from the cancer center. So, there are other options that we can pursue in terms of symptom management that were a better fit for her.

In contrast, for Justin, the gentleman, although the radiation therapy was also palliative, and not meant to cure the multiple myeloma, there was an expectation that the treatment would result in significant alleviation of his symptoms, as well as to help preserve function and prevent any further neurologic deterioration.

Both these cases highlight the importance of educating the patient first, and [define the] intent of the palliative treatment or any treatment. And then really making sure that we explore the goals and wishes of the patient to make sure that treatment aligns.

Nurses are well-suited to have these discussions with patients. We get to spend quite a bit of time with our patients, and we get to explore their situation comprehensively. For nurses who find these conversations challenging, [discuss the patient's] goals and wishes and use that as a bit of a scaffolding or guide.

[Consider:] What does the patient hope to get out of treatment? Is their goal to live longer? Is it to live better? What are they willing to trade for the prospect of more time, what would be something that they would consider unacceptable in terms of a tradeoff? That might be adverse effects and might be time at the cancer center at the expense of time with their families, or loss of function.

**What are some common barriers to receiving palliative radiation?**

Access and equity can be a problematic challenge for many patients. I'm in Canada, but in both the United States and Canada, we know that patients who reside in very rural and remote areas have reduced access to some of these treatments and services, or, if they are able to access them, they are required to travel long distances and be away from family, and it is often a significant expense to be able to make those trips and travel.

I also think [there are] additional barriers in our language. For some patients, and even for some doctors and nurses and clinicians, hearing that word palliative can be very frightening. There are a lot of misperceptions that persist about palliative care where people still equate palliative care with end-of-life or hospice care. Sometimes, when we look at referring patients to palliative services, there can be reluctance because the clinicians don't want to take away hope or they don't want to cause undue distress to the patients. On the

patient side, they can harbor those misperceptions about palliative care. They may not want to pursue any palliative treatments of any kind, because they might think that it means they're dying.

Our language and explanations can be really helpful, and as nurses, this is a place where we can provide that education to patients and their loved ones—to help them understand that palliative doesn't mean the end or hospice, it just means we want to help make that experience as good as it possibly can be.

Globally, lack of access is a major problem, [with] 80% of the world's patients with cancer [geographically residing] in low- and middle-income countries [and] having approximately 5% of global radiotherapy resources. So, access is a huge issue worldwide.

I often feel [that] when a patient decides to forego or move away from disease-directed or disease-modifying treatments there's a sense that we're giving up or there's nothing more that can be done. In the palliative care world, we like to tell patients, there's always more we can do. It may be that the goal has shifted a little bit and may not be cure anymore, but there's still other goals we can work towards, and we can help patients achieve [them]. I feel there's always so much we can do in terms of alleviating symptoms and helping to optimize quality of life.

**Is there anything else that I didn't ask you that you wanted to highlight?**

It would be ideal if cancer centers routinely integrated palliative care into standard patient care. That might just mean that we have triggers for when to refer patients. But embedding palliative care services right alongside even curative intent treatment can be really helpful. ■

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# Talking With Patients About Potential Cancer Misinformation

by Mary Hanley, LMSW

In the age of social media, misinformation of all kinds is now more easily spread than ever, whether it is intentionally spread or not. Unfortunately, misinformation about cancer is no exception. Although most false information may seem obviously fake to those in the health care industry, it can be hard for the average person to discern fact from fiction. For patients who are scared of their cancer growing or recurring, taking matters of research into their own hands is often an intuitive choice. Therefore, conversations about misinformation are becoming increasingly relevant.

There are many different myths and unproven claims related to cancer—causes, ways to prevent it, and alleged cures alike. A few of the most common specific claims include the following:

1. Aluminum-based antiperspirants cause breast cancer.<sup>1</sup>
2. Eating sugar “feeds” cancer and causes it to grow.<sup>2</sup>
3. Cancer can be cured by eating a particular diet (e.g., Gerson therapy<sup>3</sup>, ketogenic diet<sup>4</sup>) or cured by consuming particular herbs or supplements (e.g., Vitamin C infusions alone.<sup>6</sup>).

All of the above claims, along with many others, have either been proven false, oversimplify a complex or unclear cause-effect or, in most cases, have insufficient information to establish as either true or false. Ambiguity and misleading personal anecdotes can make it easier for misinformation to spread.

There are a few important things providers can do to better support patients who have concerns about lifestyle, environmental risks, or potential alternative therapies.

**Validate and provide emotional support.** It is imperative to appreciate the per-

spective of a patient who is concerned about their cancer risks. Many patients do not know how or why their cancer developed. This lack of known cause and effect can often be emotionally destabilizing, as the trust they had in their bodies is now broken. Those worried about future cancer risk are often motivated to maximize their chances either of curing their present cancer or preventing a future diagnosis. Oncology workers can create a safe, nonjudgmental space for patients to voice their questions or concerns about potentially false cancer information they’ve learned through social media or well-meaning loved ones. These professionals can empathize with the fear and confusion that contradicting information can create, especially for the cancer patient with a course of treatment already underway. Building this rapport will allow the patient to feel more comfortable bringing up additional concerns in the future, both relating to popular cancer claims and in general.

**Provide any available, accurate information.** When health care providers come from a place of empathy and understanding, they are able to empower clients with accurate health information. The National Cancer Institute, American Cancer Society, and Cancer.Net all have excellent online resources that discuss the truthfulness of many common myths and claims. Create time to compare treatment methods that are already fully evidence-based and FDA-approved vs other methods that may have the potential to be helpful but are not yet adequately researched. This can help patients fully understand if, how, or why a treatment may work. Although it is important to empower patients to make their own choices, it would be negligent for any health care professional to allow patients to make uninformed decisions.

When helping patients learn how to better identify potential misinformation, there are a few questions for patients to ask when assessing a claim for validity, whether a social media post, article, or other means of communication.

- **Who is presenting this information?** Does the individual presenting this information have any professional background in cancer or cancer research? If the post was not written by a specific person, is there an organization connected to the post? Is this organization known within the cancer community to be a reputable source of information?
- **Is the individual or online post appealing to your emotions?** Appealing to emotions is a common tactic among those who purposely spread misinformation. Research suggests that those who rely on emotion over reason are more likely to believe false information.
- **Does the individual or post cite a source, or do they rely on personal anecdote?** When a loved one offers a suggestion, it may be easier to take them at their word due to established trust. But even outside of that personal relationship, it’s important to know where they learned such information as they too may have picked up false information.
- **What motivation does the source have to share this information with you?** Although most individuals share information in good faith, others may have a more selfish reason to convince you of certain information. Unfortunately, there are those that use sickness of all kinds, including cancer, for personal financial gain or to collect personal information.

Additional information on deciphering cancer information online or through social media can be found on National Cancer Institute's website. CancerCare also offers a library of resources about how a person can talk to their medical team about various issues. A CancerCare social worker can also help break down information patients are seeing online and navigate them to verified information outlets. ■

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## Survivorship Clinic Visits Hold Answer to Questions About Post-Cancer Pregnancies

by Megan Hollasch

**A**lthough the frequency of cancer survivorship visits may vary on an individual patient basis, their role in cancer care remains crucial as long-term follow-up often reveals unique complications not seen during active treatment, according to Ellen Miller, MSN, FNP-BC.

Miller, who is a nurse practitioner at Vanderbilt University Medical Center, conducts routine follow-up and survivorship visits in the radiation oncology department. These appointments occur approximately 3 months after the completion of radiation therapy and cover content such as the long-term toxicities associated with treatments, the need for continued routine screenings (such as PAP and mammograms), and other additional resources.

Survivorship visits, however, may be even more nuanced, as patient needs continue to evolve on an individual basis. These visits usually begin a year posttreatment and can, according to Miller, include anything from “discussing the psychosocial ramifications of a cancer diagnosis and treatment to anxiety, fear of recurrence, [or] financial concerns.”

In one instance, Miller encountered a patient who had chosen to pursue pregnancy after electing not to undergo fertility preservation as a teenager. Although Miller herself is not a fertility specialist, she found this patient case interesting, and decided to delve into what fertility and pregnancy conversations between a provider and a patient may need to look like in the survivorship setting.

In an interview with *Oncology Nursing News*®, Miller discussed this unique patient case, and what her major takeaways from the experience were, highlighting resources that other nurse practitioners working in survivorship clinics might find useful.

### A Personal Experience in Survivorship Treatment

In a survivorship visit, Miller met a 26-year-old woman who had undergone treatment at 19 for stage II natural killer/T-cell lymphoma of the nasal cavity.

This patient's treatment included the SMILE chemotherapy regimen of dexamethasone, methotrexate, ifosfamide, asparaginase, and etoposide plus adjuvant radiation therapy of 50 Gy in 25 fractions. She completed treat-

ment in April of 2017, but in December 2018 and August 2020 was given 4 weekly doses of rituximab (Rituxan) for a rising EBV titer. Miller explained that in this patient's case, the chemotherapy ifosfamide could have had an impact on fertility.

Although she did not initially treat this patient after therapy, Miller noted that “this patient stated that her health care team discussed fertility preservation with her, but that she declined as she was 19 and thought she would not want to have children, but then as she got into her mid-20s and got married, her thoughts changed.”

Currently, this patient continues in survivorship care and was able to get pregnant without any medical intervention. Her daughter is doing well, and Miller advised her patient to consult with an OB/GYN or a fertility specialist in the future if she wants to pursue additional pregnancies.

### The Process of Fertility Preservation

According to the Alliance for Fertility Preservation, the standard fertility preservation method for males is sperm

banking. Other options included sperm extraction, electroejaculation, and testicular shielding from radiation—however, this is not always possible. Testicular tissue freezing is an experimental method of fertility preservation and includes freezing sperm to use for in vitro fertilization, testicular sperm extraction, and testicular shielding during radiation therapy. Females can freeze embryos (fertilized eggs) or oocytes (unfertilized eggs)—these are considered standard treatments. In certain cases, ovarian tissue may be frozen, and ovarian shielding and ovarian transposition may be options as well. Hormonal treatments for women are currently under investigation.<sup>1</sup>

## Treatments That Can Cause Infertility

Radiation therapy, chemotherapy with alkylators and surgery may all effect fertility in males and females. The age of the patient, as well as the dose they receive, can impact the extent to which their fertility is impacted.<sup>2</sup>

Moreover, it can be difficult to assess fertility sometimes, according to Miller, because many treatments can cause temporary infertility. Additionally, certain treatments can cause premature menopause in women (mid to late 30s) and this can be an important factor to consider as well. Because women are born with all the eggs their bodies will produce, when treatments reduce egg supply, ovarian failure is a possibility. Chemotherapy can also severely damage those egg and surgeries such as hysterectomies affect fertility by limiting the ability to carry.

“Not only can chemotherapy damage existing eggs, but it can also lead patients to have early or premature menopause,” Miller emphasized.

## Financial Aspects of Fertility Preservation

Unfortunately, cancer care costs may be high and paired with fertility preservation,

can be difficult to manage as there are no federal laws requiring insurance companies to cover fertility preservation. States that have passed laws requiring coverage from insurance companies as of September 28, 2022, are California, Utah, Colorado, Illinois, New York, Maine, New Hampshire, Connecticut, New Jersey, Delaware, Maryland, and Rhode Island. Aside from these 12 states, the approximate cost of egg, embryo, and tissue freezing range from \$10,000 to \$15,000 plus storage fees and sperm banking costs between \$500 to \$1000 plus storage fees.<sup>1,3</sup>

“The out-of-pocket [cost] for fertility preservation is \$10,000 to \$15,000, on average. That’s hard for [anyone], not to mention a young male or female,” Miller said.

## Discussing Pregnancy in Survivorship

Fortunately, this young woman was able to become pregnant naturally; however, the experience caused Miller to reflect on what pregnancy conversations should look like in the survivorship setting.

“[The] trajectory for her experience was standard, and we were thankful for that. But there are some reasons why some women would need further monitoring,” she noted.

For instance, for patients who received anthracycline chemotherapies, or left-sided chest radiation, cardiac monitoring is recommended, as both of these treatments can potentially damage the heart, and pregnancy can make the heart work harder.

“We’ve all probably heard of women who experience cardiomyopathy, even women [in the general population], because carrying a child can make your heart work harder,” Miller noted.

Moreover, certain doses of radiation therapy to the pelvis and abdomen can cause scar tissue and decrease the elasticity that allows the female body to stretch during pregnancy, while radiation therapy to the brain can also effect hormones such as follicle-stimulating

hormone and luteinizing hormone. She added that “research indicates that sometimes [radiation] can impact the blood flow to the uterus, which could cause a risk of preterm birth or some of that growth restriction.” Consequently, these are all may be important to monitor in this setting.

But luckily, some research suggests that many women can safely have children after cancer treatment with minimal complications.

“Something I found in doing a little bit of research was a study that included several thousand offspring of female cancer survivors and male cancer survivors who were treated for cancers in their younger years,” she said. “They didn’t have an increased risk of any congenital abnormalities.”<sup>4</sup>

“Another piece of data that I found to be encouraging and helpful was that there was not a higher incidence of cancer in the children that were born of cancer survivors, unless the patient’s tumor was inherited, [such as] *BRCA*, lynch syndrome, etc.”

According to Miller, that data should be really encouraging for survivors, and nurses and nurse practitioners can reassure patients that there is hope for childbearing following cancer. She recommends informing the patients to involve an OB/GYN or fertility specialist if they do choose to pursue pregnancy. ■

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