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EDUCATIONAL OBJECTIVES:
After reading the article “Psychiatric Considerations in the Oncology Setting,” the learner should be able to:
1. Describe opportunities for nonpsychiatrists to improve the identification and treatment of psychosocial distress and psychiatric syndromes and to request formal psychiatric consultation in appropriate situations.
2. Review the differential diagnoses common of behavioral symptoms arising during cancer treatment and survivorship.
3. Review psychopharmacologic and nonpharmacologic interventions for psychiatric conditions that commonly occur during cancer treatment and survivorship.

ACTIVITY DISCLOSURES
In this paper, there is discussion of off-label use of psychostimulants for depression and cancer-related fatigue as well as antipsychotics for anxiety.

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An aging population and advances in diagnostics and treatment have resulted in a rapidly growing population of people impacted by cancer. People live longer after a cancer diagnosis and tolerate more aggressive treatments than in the past. Younger patients struggle with diversions from the normal developmental milestones in career and relationships, while older patients deal with the dual challenges of aging and cancer. Cancer’s transition from likely death to survival has increased interest in its impact on psychosocial issues and quality of life, rather than just longevity. In this article, the authors review the psychiatric diagnosis and management of the mental health issues most often encountered in oncology. Oncology treatment teams, including oncologists, nurses, social workers, and other ancillary staff, are often on the front lines of addressing psychiatric distress and clinical syndromes when psychiatrists are not easily available. The purpose of this review article is to highlight opportunities for nonpsychiatrists to improve identification and treatment of psychosocial distress and psychiatric syndromes and to request formal psychiatric consultation in appropriate situations. Psychotherapeutic, psychopharmacologic, cognitive, and behavioral-oriented interventions, as well as supportive interventions, are discussed for treating patients who are facing challenges during active cancer treatment, survivorship, and at the end of life. This review is not exhaustive but highlights the more common psychosomatic medicine and palliative care scenarios that impact cancer patient care. The importance of recognizing and addressing burnout and compassion fatigue in multidisciplinary professionals who care for those treated for cancer is also discussed given the secondary impact this can have on patient care. CA Cancer J Clin 2015;65:299-314. © 2015 American Cancer Society.

Keywords: psycho-oncology, depression, anxiety, delirium, quality of life, psychotherapy, antidepressants, neuroleptics, anxiolytics, burnout

Introduction

Psychological Impact of Cancer

People with new cancer diagnoses experience characteristic responses. Initial disbelief, denial, and despair are common and can last from days to weeks. Dysphoric mood, anxiety, appetite changes, insomnia, or irritability often follow and can last weeks or even months. People typically adapt to and recuperate from treatment and return to a new baseline, sometimes referred to as a “new normal.” Initial psychological distress can be related to three main factors, including 1) medical factors 2) patient-related factors, and 3) societal and cultural factors. Understanding these factors enables general physicians, oncologists, and oncology nurses to better evaluate the patient and suggest more customized recommendations for support.

Families as well as patients are affected by a cancer diagnosis. Preexisting family difficulties may be aggravated. Patients often continue to meet usual school, work, and family obligations while undergoing treatment and may have to manage financial burdens. In the pediatric patient, additional attention is placed on potential developmental issues. Behavioral, school, and cognitive problems caused by chemotherapy and radiation therapy have been documented.

Prevalence of Psychiatric Disorders in Cancer Patients

The Psychosocial Collaborative Oncology Group in 1983 found that slightly more than one-half (53%) of hospitalized and ambulatory adult patients with cancer who were assessed adjusted normally to the crisis of illness. The remainder met diagnostic criteria for a psychiatric disorder. Adjustment disorder with depressed and/or anxious mood was by far the...
most common diagnosis (68%). More recent studies have observed that adjustment disorder, major depression, delirium, and anxiety disorders occur in between 10% and 34% of cancer patients.6-11 Many individual factors affect the risk of psychiatric disorders. For example, one study in men with prostate cancer indicated that older men reported less anxiety and distress than younger men12 and had better emotional quality of life, but they were also more likely to have depressive symptoms. Another study looked at similar constructs in older male and female cancer patients13 and observed that those patients had less anxiety, but their depression levels remained stable with increasing age.

Addressing Mental Health Care for Patients With Cancer

The Institute of Medicine made specific recommendations in 2008 for the psychological care of cancer patients: “Attending to psychosocial needs should be an integral part of quality cancer care. All components of the health care system involved in cancer care should explicitly incorporate attention to psychosocial needs into their policies, practices, and standards addressing clinical care.”14 The Institute of Medicine recommended facilitating effective communication between patients and care providers, identifying each patient’s psychosocial health needs, and designing and implementing a plan that links patients with needed psychosocial services and that coordinates and integrates a patient’s biomedical and psychosocial care. The American College of Surgeons’ Commission on Cancer is phasing in psychosocial distress screening for 2015.15 All approved cancer programs will need to demonstrate that they screen patients who are diagnosed with cancer for distress and identify the issues that can negatively impact treatment and outcome.

Psychosocial care for patients may depend on the setting and location of treatment. Although attention has increased on integrated mental health care16 in subspecialty medical clinics, there have been very few studies on the effectiveness of integrated care for patients with cancer. In recent years, the Symptom Management Research Trials (SMaRT) in the United Kingdom have shown positive results. Patients received screening and management of depressive symptoms in subspecialty oncology clinics by trained cancer nurses and psychiatrists. In the SMaRT Oncology 1 and 2 trials, this treatment was found to improve depression scale scores more than usual care.17,18 In addition, this method of delivering care was cost effective.17 These studies offer promising insights into addressing the psychosocial needs of people with cancer. The IMPACT trial (Improving Mood-Promoting Access to Collaborative Treatment) program, a stepped care/collaborative care management program for depression in primary care patients, was shown to be feasible and effective for older cancer patients.19 In the oncology setting, screening questionnaires can be helpful in identifying patients who may need additional support or mental health referrals. Clinical screening tools that help clinicians identify psychological distress in cancer patients include the Distress Thermometer,20 the Patient Health Questionnaire for Depression,21 and the Hospital Anxiety and Depression Scale.22

Psychotherapeutic Interventions for Cancer Patients

Psychotherapeutic interventions, including education, behavioral training, group interventions, and individual psychotherapy, show significant improvements in distress, anxiety, and quality of life in cancer patients.23 The cornerstone of psychotherapeutic interventions in cancer is emotional support.24 However, early claims that psychotherapy improves longevity have not been convincingly substantiated.25-27

Psychoeducational and supportive counseling focus on giving advice and information about illness and can be carried out by different members of the treatment team. Behavioral therapies emphasize self-regulatory interventions, which may include relaxation exercises, rehearsal of feared events, visual imagery for distraction, and self-hypnotic suggestions. These techniques reduce anticipatory nausea and vomiting in patients receiving chemotherapy, mobilize patients complaining of fatigue, and help relieve pain. Recent studies have also demonstrated the efficacy of mindfulness-based therapy to help anxiety and depressive symptoms.28 Religious or spiritual counseling is meaningful for many patients during the existential crisis created by cancer. Meaning-centered psychotherapy29 and dignity-conserving therapy30 have helped patients and families cope with advanced cancer and end-of-life issues.

Psychotherapy in the cancer setting is typically short-term, crisis-oriented, supportive therapy to assist patients in strengthening their adaptive defenses and coping better with the problems of illness. Often, including a partner or family in some sessions may enhance support at home. Supportive psychotherapy, crisis intervention, family therapy, group therapy, cognitive behaviorally oriented therapy, problem solving therapy, and interpersonal psychotherapy can all help patients manage the stressors at hand.9 Group therapy may have an educational function, orienting and teaching patients as well as relieving anxiety by allowing individuals to share similar problems and solutions and to reduce isolation.

Specific Disorders

Some psychiatric disorders in the cancer setting are direct responses to illness, whereas others are preexisting conditions that may be exacerbated by illness.

Adjustment disorders

Adjustment disorder is characterized by severe anxiety or depressive symptoms in response to a life stressor and
causes undue interference with occupational, social, or school functioning. Because an initial diagnosis of adjustment disorder may be the beginning stages of a more severe anxiety or depressive disorder, regular patient follow-up is needed to clarify diagnostic uncertainties.

Therapeutic interventions are directed toward patient adaptation and coping with the stresses of cancer. Individual psychotherapy helps clarify the medical situation, treatments, and complications as well as the meaning of illness for a particular person and family while introducing or reinforcing successful coping strategies. The decision to prescribe psychotropic medication is based on a consistent high level of distress or an inability to perform daily activities. A benzodiazepine, such as lorazepam, alprazolam, or clonazepam, on an as-needed basis may control symptoms such as intermittent worry or insomnia, helping patients tolerate uncomfortable or frightening treatments more easily.

**Anxiety disorders**

Anxiety syndromes can be acutely associated with the diagnosis and treatment of cancer or can be related to preexisting chronic anxiety exacerbated during treatment. Patients may have situational anxiety, such as nervousness around procedures or treatment, or anxiety awaiting results. As the course of a patient’s disease progresses, anxiety often worsens and can paradoxically increase after the conclusion of cancer treatment, because patients feel more vulnerable and fearful without active therapy or the ongoing presence of the oncology team.

The diagnosis of anxiety in cancer patients must be distinguished from medical problems that present with anxiety. For example, patients with inadequate pain control may appear to be agitated or anxious. Certain medications, such as steroids, can contribute to anxiety. Respiratory distress from hypoxia or pulmonary embolism may also be associated with anxiety and restlessness. In addition, patients in the intensive care unit who are being weaned off ventilation may also appear anxious and depressed. Providers should always consider withdrawal from alcohol, benzodiazepines, barbiturates, and narcotics in patients who develop acute, unexplained anxiety symptoms in the hospital setting. Anxiety can also be common with hyperthyroidism, hypoglycemia, hypocalcemia, and hormone-secreting tumors. Certain medications used to control nausea, such as prochlorperazine and metoclopramide, can cause akathisia, a feeling of inner restlessness, as well as anxiety. Benzodiazepines or beta blockers can alleviate these symptoms.

Panic disorders and certain medical phobias can worsen in the medical setting and can make medical treatment more difficult. People with advanced stages of cancer who have dependent children are at greater risk for experiencing panic. Those with claustrophobia may have extreme anxiety in the confined spaces of diagnostic scanning devices or radiotherapy treatment rooms. Careful attention to the preparation of children (eg, role playing) in advance of painful procedures may limit the incidence of anxiety. Behavioral interventions, including relaxation training, self-hypnosis, and distraction, may be indicated for specific symptoms.

Post-traumatic stress disorder (PTSD) is a specific type of anxiety disorder caused by the effects of traumatic experiences, including life-threatening illness like cancer. The prevalence of PTSD in cancer patients ranges from 5% to 19%. Common stimuli of PTSD symptoms can include reminders of prior frightening or painful treatments. A patient’s current illness can also exacerbate feelings about earlier unrelated traumas. Younger age, less education, and lower socioeconomic status are correlated with more significant PTSD.

In adults, the typical presenting symptoms of PTSD include periods of intrusive repetition of the stressful event (nightmares, flashbacks, re-experiencing old traumas, avoidance of situations, hyperarousal like restlessness and pacing, startle responses, and intrusive thoughts) along with avoidance, emotional numbness, and depression. The diagnosis of PTSD has been reported in children treated for cancer who have recurrent nightmares, separation anxiety, and emotional blunting. Generally, play therapy is indicated for children with PTSD, whereas adults benefit from relaxation and distraction techniques as well as psychopharmacologic treatments to prevent and alleviate symptoms.

**Treatment of anxiety disorders**

Relaxation and the behavioral interventions described above can improve anxiety and panic symptoms significantly. When not successful, pharmacologic interventions are appropriate, often in combination with psychotherapeutic techniques. Benzodiazepines are often the first drug of choice for acute anxiety and panic symptoms. Short-acting benzodiazepines, such as alprazolam, lorazepam, and oxazepam, may be helpful for procedures or panic attacks but can lead to rebound anxiety. Clonazepam and diazepam are longer acting. In patients with liver disease, oxazepam and lorazepam are preferred, because they are metabolized by conjugation and are excreted by the kidney. Lorazepam is often used to reduce vomiting in cancer patients who are receiving chemotherapeutic agents.

Many patients are concerned about whether they will become “addicted” when benzodiazepines are suggested; it is helpful to educate patients on the difference between physical tolerance, physical dependence, and addiction (Table 1). Physical dependence can lead to withdrawal symptoms if the medicine is abruptly stopped and is likely to occur in any patient who takes benzodiazepines daily for a month or more. Physical tolerance can also occur commonly in patients who take benzodiazepines daily and, eventually, they will find they need higher doses to achieve the same level of relief. The term “addiction” can be understood as the use of an agent despite harm. These patients may take substances in larger amounts than are indicated; there is a persistent desire.
TABLE 1. Medications Used to Treat Anxiety in Cancer Patients

| MEDICATION                | COMMENTS                                                                 |
|---------------------------|---------------------------------------------------------------------------|
| Benzodiazepines           | First-line medications for intermittent worry and panic attacks; also commonly used to treat sleep problems; can cause drowsiness, unsteadiness, forgetfulness, and lead to falls; they may cause physical dependence, tolerance, or addiction |
| Alprazolam                | Shorter acting; best used “as needed” for intermittent panic attacks; increased likelihood of rebound anxiety; quick, noticeable onset of action can lead to addiction; available in extended-release preparation |
| Lorazepam                 | Moderately long acting; also helps nausea; good for MRI/procedure-related anxiety |
| Diazepam                  | Long acting despite quick, noticeable onset of action; can lead to addiction |
| Clonazepam                | Long acting—avoids rebound anxiety; good for panic attacks and sleep; disintegrating wafer available; no swallowing needed |
| Antidepressants           | Useful for generalized anxiety and to prevent panic attacks; need to be taken daily; beneficial effects take 2-5 wk or longer with any dose change; common side effects include anxiety, restlessness, drowsiness, and gastric upset (bloating, diarrhea, or constipation) often get better over time; no life-threatening withdrawal effects, but should be tapered under physician supervision to avoid discontinuation syndrome; treatment range, 9-12 mo; suicidal ideation is rare but should be monitored for; may help with hot flashes for those on hormonal treatment |
| Mirtazapine               | Sedating; helps with sleep; no gastric upset; may increase appetite and cause weight gain |
| Nonbenzodiazepine, nonantidepressant |                                                                 |
| Buspirone                 | Onset of action/prescribing suggestions similar to antidepressants, but does not help depression; treats generalized anxiety; not helpful for panic or for those used to benzodiazepines |
| Antipsychotics            | Used when benzodiazepines are not tolerated, indicated, or effective (respiratory problems; weaning from a respirator; elderly); can cause sedation and unsteadiness; can cause metabolic syndrome and QTc prolongation; no risk of dependence or addiction; no need to taper |
| Quetiapine                |                                                                 |
| Olanzapine                |                                                                 |

Abbreviation: MRI, magnetic resonance imaging.

or unsuccessful efforts are made to cut down or control substance use; a great deal of time is spent in activities necessary to obtain or use the substance, such as visiting multiple physicians, or recovering from its effects; and important social, occupational, or recreational activities are given up or impeded because of substance use.

The most common side effects of benzodiazepines include drowsiness and potential falls, confusion, and motor incoordination. These side effects are dose-dependent. Sedation is most common and most severe in patients with impaired liver or renal function. When combining with other medications that have central nervous system (CNS)-depressant properties, such as opioids, it is important to consider the synergistic effects with benzodiazepines. Benzodiazepine withdrawal may closely resemble alcohol withdrawal and may include anxiety, restlessness, autonomic instability, and, rarely, seizures. Vital signs should be monitored regularly. An important consideration when evaluating and monitoring for withdrawal is that beta blockers may mask some of the autonomic dysregulation symptoms.

Patients with chronic anxiety states may require anxiolytics daily or intermittently for months or years. Consideration should be made to start buspirone or an antidepressant for chronic anxiety. These medications, when taken daily, help reduce overall levels of anxiety; they do not lead to tolerance or addiction. Low-dose, sedating antipsychotic medications, such as olanzapine and quetiapine, are effective in patients with severe anxiety that is not controlled with benzodiazepines or who cannot take benzodiazepines. Antipsychotic medications can also be useful for patients with respiratory complications, as they do not cause the respiratory depression that benzodiazepines can. Patients who have difficulty falling asleep may also benefit from sedating medications in the antidepressant family, such as mirtazapine, amitriptyline, trazodone, or doxepin.

**Depressive disorders**

The overlap of physical illness and symptoms of major depression is widely recognized in physically healthy adults based upon the presence of neurovegetative complaints, including insomnia, anorexia, fatigue, and weight loss in addition to depressed mood, hopelessness, guilt or worthlessness, and suicidal ideation. The diagnosis of depression in cancer patients can be difficult, because the physical symptoms of depression and cancer or cancer treatment often overlap. Identification of dysphoric mood, apathy, crying, loss of pleasure (rather than an inability to do pleasurable activities because of pain or fatigue), feelings of helplessness, hopelessness, decreased self-esteem, guilt, social withdrawal, and thoughts of “wishing for death” or suicidal ideation are important indicators of depression in the cancer population.

Various methods have been used to identify depression in adult and pediatric cancer patients, leading to variable rates of prevalence in different cancer populations. The prevalence of depression in cancer is similar to that seen in patients with other serious medical illnesses, suggesting that the level of illness, not the specific diagnosis, is a primary determinant. Levels of physical impairment, advanced stages of illness, inadequately controlled pain, prior history of depression, and the presence of other significant life stresses or losses are associated with a higher prevalence of depression in cancer patients. Patients with pancreatic,
oropharyngeal, gastric, and lung cancers have higher rates of depression, perhaps related to prognosis, the impact of cancer on quality of life, or coexisting substance use.

Previous depressive depressive episodes, a family history of depression or suicide, concurrent life stresses, recent losses, current substance use, and level of social support are all essential components of a thorough evaluation of depression. The contribution of pain and other quality-of-life parameters, such as fatigue and nausea, to depressive symptoms must be considered and addressed.

Various medications, including benzodiazepines; hormonal agents, including aromatase inhibitors, gonadotropin-releasing hormone analogs, and selective estrogen-receptor modulators; amphotericin B; opioids; statins; and varenicline for smoking cessation can produce symptoms of depression. Relatively few chemotherapeutic agents, such as prednisone, dexamethasone, vincristine, vinblatine, procarbazine, asparaginase, tamoxifen, interferon, and interleukin-2, produce depressive symptoms. Depressive symptoms can also be produced by metabolic, nutritional, and endocrine disorders, such as electrolyte abnormalities; deficiencies of folate or vitamin B12; and hypothyroidism, hyperthyroidism, or adrenal insufficiency.

In patients who have cancer, suicidal ideation, thoughts of dying, or thoughts about death in general may reflect depressive illness or a wish to have ultimate control over potentially intolerable symptoms. Although rare overall, one study found that cancer patients were two times more likely to commit suicide than individuals in the general populations. Cancer patients at higher risk for suicide are those with a poor prognosis, advanced stage of illness, a psychiatric history or a history of substance abuse, previous suicide attempts or a family history of suicide, and those with lung, stomach, pharyngeal, or laryngeal cancers. A careful suicide assessment, including risk factors and protective factors, should be performed in any patient who endorses suicidal ideations. Significant risk factors include the death of a friend or partner, few social supports, depression with extreme hopelessness, poorly controlled pain, delirium with poor impulse control, helplessness in the context of depression, or recent information of a grave prognosis. If a patient is expressing suicidal thoughts, then psychiatric consultation and possible inpatient psychiatric hospitalization should be considered. Taking action for a psychiatric hospitalization must be weighed against end-of-life and palliative care considerations. In addition to addressing acute safety issues for the suicidal patient, longer term management of a patient with cancer who is suicidal is based on developing and maintaining a supportive relationship and good communication and offering the patient a sense of autonomy by helping him/her focus on that which can be controlled. It is important to convey the attitude that improvement in quality, if not quantity, of life is a realistic goal by addressing symptoms of pain, nausea, insomnia, anxiety or restlessness, depression, confusion, and fatigue, possibly with the help of a palliative care team.

Another distinct syndrome to consider when evaluating for depression is demoralization. Demoralization has been described as a specific and distinct syndrome of existential distress in patients at the end of life. People describe feeling hopeless or helpless, often related to feeling a loss of meaning in life. Some symptoms may overlap with major depression. Prevalence rates of demoralization in the medically ill population range from 20.6% to 33.3%. Clinically, patients who have hopelessness and helplessness associated with demoralization may progress to having a desire for hastened death or suicide. Although this demoralization is not a diagnosis in the Diagnostic and Statistical Manual of Mental Disorders, fifth edition, it is important to consider when addressing mood complaints in medically ill patients.

Treatment of depressive disorders

Prolonged and severe depression requires combined supportive psychotherapeutic techniques with psychotropic medication. Table 2 lists medications frequently used to treat depression in adult cancer patients. All antidepressants are started at low doses and require at least 2 to 5 weeks at a particular dose to show efficacy. Patients who are not told this when beginning treatment may stop the medicine prematurely. The dose may need to be increased after this initial period.

The selective serotonin reuptake inhibitors (SSRIs) and the serotonin-norepinephrine reuptake inhibitors (SNRIs) are safer and more easily tolerated than the older antidepressants. The most common side effects of SSRIs and SNRIs are mild nausea and gastrointestinal disturbance, headache, a calm feeling that can exceed into daytime somnolence, or an energizing effect that can extend to anxiety, restlessness, or insomnia; hypotension and bleeding abnormalities are uncommon but problematic adverse effects. These drugs may cause appetite suppression in some cancer patients, leading to transient weight loss; however, weight usually returns to baseline level. There have been recent concerns about higher doses of citalopram and escitalopram prolonging cardiac QTc intervals. Therefore, electrocardiogram (EKG) recordings should be monitored at baseline and regularly thereafter. Antidepressants can potentially cause unacceptable sexual dysfunction in both men and women that often leads to stopping the drug. Abruptly stopping SSRIs and SNRIs can lead to a discontinuation syndrome (DS), which can be extremely uncomfortable but is not life threatening. DS can cause significant anxiety, restlessness, insomnia, irritability, dizziness, and flu-like symptoms. The half-life of antidepressants should be considered when choosing which one to start. The SSRIs paroxetine, sertraline, citalopram, and escitalopram have shorter half-lives than fluoxetine and may be more
likely to result in DS if suddenly stopped. Significant DS has also been observed with the SNRI venlafaxine, because it has a very short half-life. DS may be avoided by slow taper or by the addition of a longer acting SSRI, such as fluoxetine. On the contrary, the benefits of choosing a medication with a short half-life include avoiding accumulation of the drug and allowing for more precise titration.

Bupropion, an activating antidepressant that works primarily on the dopaminergic neurotransmitter system, is useful in fatigued or lethargic medically ill patients; it should be used cautiously in patients with anxiety and avoided in those with a history of seizures and those who are malnourished. It is less likely to cause sexual side effects. Slow-release bupropion may also be helpful for smoking cessation. Mirtazapine is a sedating antidepressant that works primarily on the serotonergic system. It is useful for people with anxiety, agitated depression, and insomnia. It has fewer gastrointestinal side effects than other antidepressants and, thus, may help those who have nausea; it also may increase appetite. Its soluble tablet formulation may be helpful for people who have difficulty swallowing. Mirtazapine also is less likely to cause sexual dysfunction than most other SSRIs and SNRIs.

Older antidepressants, such as tricyclic antidepressants and the monoamine oxidase inhibitors, are used less frequently in this population. SSRI and SNRI medications are preferred, because they have fewer sedating, cardiovascular, and autonomic side effects. In addition, the medication interactions and dietary modifications when using monoamine oxidase inhibitors may limit their use in this population.

### TABLE 2. Medications Frequently Used to Treat Depression in Cancer Patients

| MEDICATION | SIDE EFFECTS | COMMENTS |
|------------|--------------|----------|
| Serotonin reuptake inhibitors (SSRIs) | SSRIs are typically well tolerated; GI upset, including nausea or diarrhea, may occur; sedation or restlessness and anxiety may occur; the above typically improve if patients continue medication and can be avoided with low starting dose and slow titration; sexual side effects may occur | Off label uses include relieving hot flashes |
| Fluoxetine | Fluoxetine has a long half-life | |
| Sertraline | | |
| Paroxetine | | |
| Citalopram, escitalopram | Side-effect profile similar to that of SSRIs | SNRIs are commonly used to treat neuropathic pain syndromes |
| Serotonin-norepinephrine (SNRIs) | | Venlafaxine has a short half-life, and discontinuation syndrome can occur more commonly |
| Venlafaxine | | |
| Duloxetine | | |
| Mirtazapine | Mirtazapine may cause increased appetite, weight gain, and sleepiness, both of which can be used as advantages when prescribing to patients with poor appetite or insomnia; mirtazapine is not associated with GI side effects | Mirtazapine at higher doses has potential to be more activating |
| Bupropion | Bupropion may be stimulating and may worsen anxiety in some patients; it does not cause sexual dysfunction | Bupropion can be helpful for fatigue with its energizing properties; it is contraindicated in people with seizure history or bulimia; it is also used as a smoking-cessation aide |
| Psychostimulants | Can cause irritability, anxiety, and insomnia | Stimulants may elevate mood and energy more quickly than antidepressants; may improve concentration |
| Dextroamphetamine | | |
| Methylphenidate | | |
| Modafinil | Modafinil is milder than the typical stimulants and often easier to tolerate | It is believed that modafinil is safer for patients with a history of seizures or cardiac arrhythmias |

Abbreviation: GI, gastrointestinal. *Adapted from: Roth AJ, Massie M. Psychiatric complications in cancer patients. In: Lenhard RE Jr, Osteen RT, Gansler T, eds. Clinical Oncology. Atlanta, GA: American Cancer Society; 2001:837-851. 52*
Low doses of a psychostimulant (ie, dextroamphetamine, methylphenidate, modafinil, and armodafinil) may promote a sense of well-being in cancer patients; they also may improve focus and concentration, possibly decrease fatigue, and in low doses may stimulate appetite. Psychostimulants are useful for depressed patients at the end of life who cannot wait weeks for improvement, because these medications often offer a faster onset of mood elevation compared with traditional antidepressants. Psychostimulants can potentiate the analgesic effects of opioid analgesics and counteract opioid-induced sedation. Side effects at low doses include anxiety, insomnia, tachycardia, euphoria, and mood lability. High doses and long-term use may produce nightmares, insomnia, tics, and paranoia. Patients should be stable both cardiologically and neurologically without a history of arrhythmia or seizures before starting a stimulant like methylphenidate or dextroamphetamine.\(^54,55\) Commonly, a patient may be started on a stimulant and an antidepressant simultaneously, benefiting from the activating effect of the stimulant within days and from the longer acting benefits of the antidepressant effects in 2 to 5 weeks.

The choice of an antidepressant depends on the nature of the depressive symptoms, the medical problems present, side effects of the specific drug, and potential drug interactions. For instance, depressed patients who are agitated and have insomnia are more likely to benefit from a sedating antidepressant, such as mirtazapine. Patients with psychomotor and cognitive slowing may benefit from energizing medications, such as bupropion, fluoxetine, desipramine, or a psychostimulant. Patients who have stomatitis or dry mouth because of chemotherapy or radiotherapy or who have slowed intestinal motility or urinary retention should receive an antidepressant with the least anticholinergic effects, such as most SSRIs and SNRIs, or bupropion. SNRIs like duloxetine or tricyclic antidepressants can be useful in patients with neuropathic pain syndromes. People who are unable to swallow pills may be able to take an elixir form of an antidepressant or a soluble tablet formulation (mirtazapine). Patients who are taking tamoxifen should not also be prescribed strong inhibitors of CYP2D6 (cytochrome P450, family 2, subfamily D, polypeptide 6),\(^61\) including antidepressants like bupropion, paroxetine, sertraline, and fluoxetine. Venlafaxine and desvenlafaxine should be considered first; and citalopram, escitalopram, and mirtazapine should be considered next. In addition, when choosing an antidepressant, one should consider whether patients are on other serotoninergic medications that could contribute to serotonin syndrome.

**Treatment of mood lability, mania, and bipolar disorder**

For acute mood stabilization and acute agitation in the cancer setting, sedating atypical antipsychotics, such as olanzapine and quetiapine or a combination of haloperidol and benzodiazepines, are often used. These medications can relieve agitation and manic symptoms, whether related to bipolar disorder or medications like corticosteroids. Valproic acid, gabapentin, and lamotrigine in this population appear to be well tolerated for longer term use and mood stabilization. Patients who have been receiving lithium carbonate for bipolar affective disorder before developing cancer should be maintained as best as possible on the agent throughout cancer treatment. Close monitoring is necessary, especially when the intake of fluids and electrolytes is restricted, as is common in the hospital setting. The maintenance dose of lithium may have to be reduced in seriously ill patients. Caution should be used when prescribing lithium in patients receiving potentially nephrotoxic drugs, including cisplatin. Carbamazepine may not be an ideal mood stabilizer in cancer patients because of its bone marrow-suppressing properties.

Occasionally, electroconvulsive therapy (ECT) is considered for adult cancer patients whose depression or bipolar disorder is resistant to less invasive interventions and in whom it represents a life-threatening complication during cancer treatment, such as for catatonia. In addition, ECT should be considered in patients who are unable to tolerate medications because of unacceptable side effects. Referral to an ECT program or psychiatric consultation may be useful in determining whether ECT is appropriate. Apart from various case reports, literature is sparse about the benefits and complications of using ECT in cancer patients.

**Delirium**

Delirium is the most common neuropsychiatric diagnosis among cancer patients\(^10\) and is caused either by the direct effects of cancer on the CNS or by the indirect CNS complications of the disease and/or cancer treatment or other medical problems. The prevalence of delirium increases as cancer progresses, and up to 85\% of terminally ill patients are diagnosed with this syndrome. Patients with mild delirium can be misdiagnosed with anxiety or depression, with subsequent appropriate management being delayed. Patients should be evaluated for delirium if they exhibit acute onset of agitation, behavioral changes, impaired cognitive function, altered attention span, or fluctuating level of consciousness. Delirium may be caused by one or more medical factors, which can include medication, electrolyte imbalance, nutritional deficiencies, metabolic abnormalities, infections, hematologic abnormalities, vascular complications,\(^10\) hormone-producing tumors, or paraneoplastic syndromes.\(^62\) Older patients and patients with preexisting neurocognitive dysfunction, such as dementia, have increased risk for developing delirium.\(^63\)
Delirium has been associated with cancer–treating medications, such as methotrexate (by intrathecal or intravenous administration), 5-fluorouracil, vincristine, vinblastine, bleomycin, carbmustine (BCNU), cisplatin, asparaginase, procarbazine, cytosine arabinoside, ifosfamide, and corticosteroids. Other medications prescribed for cancer patients, such as interleukin-2, amphotericin, voriconazole, acyclovir, and especially benzodiazepines and opioid medications, can also cause confusional states.

Corticosteroids (ie, prednisone, dexamethasone) are frequent causes of delirium. In addition to causing delirium, these medications can cause psychiatric disturbances ranging from minor mood disturbances to psychosis, including paranoia, suspiciousness, delusions, irritability, and hallucinations. More severe symptoms can also develop while patients are on a maintenance dose or on intermittently high doses commonly prescribed for antiemetic therapy for chemotherapy. No relationship has been shown between the development of steroid-induced mental status changes and premorbid personality or psychiatric history.

The initial management of delirium requires correction of the underlying medical or physiological causes and a reevaluation of the necessity of all medications that can cause mental status changes mentioned above. Important nonpharmacologic interventions include providing a safe and supportive environment for patient, staff, and family; reassurance to family of the medical and likely transient nature of delirium, unless the patient is near the end of life; a well-lit room; visible clock, calendar, and frequent reorientation; familiar people, objects, and photos; early mobilization; and communicating with patient and family about the goals of care and desirable outcomes, ie, sedation versus awake but agitated, as well as hallucinations and their management or meaning. Interim symptomatic treatment with antipsychotics to control psychotic symptoms may be needed. Benzodiazepines should not be given alone to treat delirious patients, because they can worsen confusion and cause paradoxical agitation.

There is a black-box warning for all antipsychotic medications regarding the potential prolongation of EKG QTc intervals. EKGS should be monitored at baseline and followed regularly. The effects of prolonged QTc are more prominent with intravenous haloperidol and lower potency neuroleptics. A QTc of 450 msec or higher is concerning, and cardiological consultation should be considered. When QTc exceeds 500 msec or increases by 60 msec compared with baseline, providers may want to stop the offending medication and consider alternative treatments. All other medications that a delirious patient is receiving should also be reviewed for potential QTc-prolonging tendencies, including methadone and ondansetron, to determine what else can be manipulated should the neuroleptic be vital for control of dangerous agitation. Haloperidol is the antipsychotic medication prescribed most commonly given its safety record and because it has little effect on heart rate, blood pressure, respiration, or cardiac output. Haloperidol may be given orally in both tablet and concentration form or parenterally in intravenous or intramuscular forms if patients cannot take oral medication. Side effects of the traditional high–potency antipsychotics like haloperidol include parkinsonism with extrapyramidal symptoms and gait disturbance. Chlorpromazine, a lower potency, typical antipsychotic, is also used for the management of agitated delirium, given its sedating effects. However, when using chlorpromazine, orthostatic hypotension can be a problematic side effect. In addition, chlorpromazine has significant anticholinergic effects and can potentially worsen confusion.

The newer atypical antipsychotic medications may also be useful in treating delirium because of improved though different side-effect profiles (Table 3). Olanzapine and quetiapine dosed at nighttime are sedating and can be useful for agitated patients who have difficulty sleeping. However, they cannot be given intravenously. Although olanzapine does come in a wafer formulation that dissolves on the tongue and allows for monitored adherence, the medication must still be swallowed and absorbed in the gut to be effective. With prolonged use and higher doses, these medications can cause metabolic syndromes and increased glucose levels. Aripiprazole has fewer metabolic side effects but often causes akathisia. One recent study comparing haloperidol, risperidone, olanzapine, and aripiprazole

### TABLE 3. Antipsychotics Used for Delirium in Cancer Patients

| MEDICATION | COMMENTS |
|------------|----------|
| Antipsychotics | Often used in cancer populations for delirium, anxiety, and insomnia; can cause QTc prolongation; EKG monitoring recommended; monitor for extrapyramidal symptoms (EPS) and akathisia |
| Haloperidol | Can be administered orally, intravenously, or intramuscularly, thus often effective for acute agitation; may cause extrapyramidal side effects, akathisia, torsades de pointe |
| Chlorpromazine | Can be given orally, intravenously, or intramuscularly; more sedating; useful for hyperactive delirium; may cause hypotension; blood pressure should be monitored carefully |
| Olanzapine | Sedating effects can also be useful for anxiety, agitation, and insomnia; may be helpful for nausea and appetite; available in oral disintegrating tablet |
| Quetiapine | Sedating effects often useful for anxiety, agitation, and insomnia; less likely to cause EPS; only available orally |
| Aripiprazole | May cause akathisia; less evidence showing QTc prolongation; fewer metabolic side effects with long-term use; may not be as effective if patients are very agitated, because not very sedating; available orally and intramuscularly |
indicated that they all were effective for improving symptoms of delirium, but they had different side-effect profiles. Another study suggested that aripiprazole was effective and safe for the treatment of delirium and that it was most effective for patients with hypoactive delirium. Aripiprazole does come in an intramuscular formulation as well for acute agitation. There is a second black-box warning for all atypical antipsychotic medications regarding potential cause stroke in elderly patients with histories of dementia. As with their biochemical predecessors, prochlorperazine and metoclopramide, newer antipsychotics may help relieve nausea.

**Personality disorders**

The prevalence of personality disorders in the general population ranges from 10% to 14%. In patients with cancer, stress may exacerbate maladaptive coping patterns and possibly worsen disruptive behavior. Effective management includes clear communication. Problematic behavior should be managed with consistent limit setting applied in a quiet, firm, yet kindly manner. Treatment for personality disorders in the medical setting should focus on containing the maladaptive behaviors and symptoms, not addressing the underlying causes.

**Additional Considerations for Psychiatric Consultation**

Additional indications for the involvement of psychiatrists and other mental health staff are discussed below. Quality-of-life considerations, such as the psychiatric impact of pain in cancer, fatigue, insomnia, sexual dysfunction, cancer-related and cancer treatment-related cognitive dysfunction, the capacity to consent to or refuse treatment, coping with genetic challenges, survivorship, and grief, are discussed, in addition to the well-being and potential burnout of cancer caregivers.

**Psychiatric Impact of Pain in Cancer**

A higher prevalence of psychiatric symptoms is observed in people with uncontrolled pain, and their psychiatric distress may be ameliorated with optimized pain management. As depression improves, requests by patients with cancer pain for hastened death decrease. Unfortunately, underlying depression is often unrecognized in the context of pain. Acute anxiety, depression with despair, agitation, irritability, lack of treatment adherence, anger, and insomnia may be the emotional or behavioral concomitants of pain. In physically ill children, chronic pain may present with symptoms of apathy, withdrawal, and clinging behaviors. Under-treatment of pain is a major problem in both adult and pediatric settings. Patients’ mental state should be reassessed as pain is controlled to determine whether a lingering psychiatric symptom persists.

**Fatigue**

Cancer-related fatigue is extremely common. In evaluating fatigue, overlapping problems should be considered, including depression, anxiety, sleep disturbances, and pain as well as medical problems such as anemia and hormonal or electrolyte imbalances. The National Comprehensive Cancer Network practice guidelines for fatigue recommend screening for fatigue using a rating scale from 0 to 10. It is recommended that underlying causes of fatigue should be identified and treated if possible. Nonpharmacologic treatments of fatigue include increasing physical activity, increasing psychosocial support, addressing sleep, and addressing any nutritional deficiencies. Exercise and cognitive behavioral therapy have been identified as effective treatments against cancer-related fatigue.

Psychopharmacologic interventions have also been used. In clinical practice, although stimulants are often used to address sedation caused by opioid therapy, the evidence for their effectiveness in treating cancer-related fatigue is mixed. In a small randomized, double-blind, placebo-controlled design, methylphenidate appeared to be effective for fatigue in prostate cancer patients. In addition, several open-label studies have produced positive results, although a placebo-controlled trial suggested a large placebo effect. Side effects of psychostimulants may include irritability, insomnia, and agitation. There is limited evidence for the use of modafinil or armodafinil for cancer-related fatigue. One study reported a clinical benefit for modafinil in patients with severe fatigue, but not for those with mild or moderate fatigue. Another study investigating the use of modafinil versus placebo for fatigue in patients with nonsmall cell lung cancer found no significant difference between the two groups. A recent study using armodafinil for cancer-related fatigue in multiple myeloma patients found no significant difference over placebo. In summary, although evidence has not consistently supported the use of stimulants for cancer-related fatigue, we believe practitioners should consider their prudent use in patients whose fatigue is significantly interfering with their quality of life. Evidence regarding antidepressant medications for cancer-related fatigue has been mixed as well, highlighting the need for good scientific research for pharmacologic treatments in this area.

**Sleep Disturbances**

The prevalence of sleep disturbances in patients with cancer can range from 25% to 59%. Insomnia can be related to distress, activating medications like steroids, pain, sleep-wake cycle disturbances, and alterations of typical sleep schedules. Interventions to improve sleep include behavioral modifications, psychotherapy, and medications. Sleep hygiene is a good intervention to start with, focusing on regular sleep schedules and reducing habits that interfere with good-
quality sleep, although there is no significant evidence showing the benefits of sleep hygiene for insomnia specifically in the cancer population.\(^9^9\) Evidence is limited regarding the benefits of exercise to improve sleep in cancer patients. Cognitive behavioral therapy for insomnia has been identified as effective in the general population. A recent review in a cancer population suggested that cognitive behavioral therapy for insomnia is associated with statistically significant improvements in sleep outcomes.\(^9^0\)

Medications for sleep may also be helpful; however, pharmacologic interventions have not been adequately studied in this population (Table 4). Clinically, patients often are started on benzodiazepines or nonbenzodiazepine hypnotics, such as zolpidem, which are typically prescribed for short-term use. Long-term use can result in decreased effectiveness because of tolerance and possible dependence. In addition, there is risk for falls and delirium with these hypnotic medications as well as with over-the-counter, anti-histamine-containing sleep aids. Sedating antidepressants, such as mirtazapine and trazodone, are used clinically to aid sleep induction. Atypical antipsychotics are also used for insomnia, especially when induced by activating medications, such as steroids; however, side effects and long-term metabolic effects limit their routine use. Further research is needed to evaluate psychopharmacologic treatments for insomnia in patients with cancer.\(^8^9\)

### Sexual Dysfunction

Cancer treatment, including irradiation, surgery, and chemotherapy, can result in sexual dysfunction and infertility.\(^9^1\) Discussions about sexual activity early on between patients and the treatment team can help to establish a baseline of sexual interest, performance, relationships, and support status and to alert the patient that their medical team is interested and capable of participating in otherwise potentially embarrassing conversations. The knowledge that their treating physicians will be monitoring sexual concerns and consequences through their cancer treatment may be reassuring to many patients. Despite their importance, sexual issues are still not adequately screened for or treated in the cancer population.\(^9^2-\)\(^9^4\) Patients may have sexual side effects through survivorship. A recent study in a survivorship clinic found low rates of sexual health communication between patients and their oncologists but indicated that a majority of patients wanted at least one provider to address sexual health issues, most often their primary care physicians.\(^9^5\) Interventions often include combinations of psycho-education, medications, mechanical devices, sex therapy, and individual therapy.\(^9^6\) Couples interventions can also be beneficial.\(^9^7\) Several internet resources are available to patients about sexual health after cancer treatments, including resources on the American Cancer Society website (cancer.org; accessed April 16, 2015) as well as through the LIVESTRONG Foundation (livestrong.org; accessed April 16, 2015).

### Cancer Therapy-Related Cognitive Dysfunction

“Chemobrain” or “cancer therapy-associated cognitive change” is an entity that has been identified in patients with a variety of cancers who have received chemotherapy and hormonal therapy and have experienced difficulty in executive functions, multitasking, short-term memory recall, and attention.\(^9^8,9^9\) Impaired processing speed has also been noted.\(^1^0^0\) Up to 75% of patients may experience cognitive impairment.\(^1^0^1\) This neurotoxicity adversely impacts patients’ and survivors’ quality of life, including occupational and social functioning, and results in increased health care and societal costs. Cognitive changes in patients with cancer were initially thought to be related to treatment only, thus the term “chemobrain.” However, research studies have produced evidence of cognitive deficits in patients even before chemotherapy,\(^1^0^2,1^0^3\) suggesting additional factors that contribute to cognitive changes in patients with cancer. Pertinent factors may include chemotherapy dose, cognitive reserve, and the presence of an apolipoprotein e4 allele. Additional considerations include depression, stress, and anxiety; the side effects of chemotherapy, menopause, and hormonal treatments; and radiation and surgery in patients with brain lesions. Cognitive changes associated with chemotherapy seem to be dose-dependent, and certain chemotherapeutic agents are associated with worse cognitive effects.\(^1^0^0\)

### Table 4. Medications Used to Treat Insomnia in Cancer Patients

| MEDICATION                  | COMMENTS                                                                 |
|-----------------------------|--------------------------------------------------------------------------|
| Nonbenzodiazepine hypnotics | Rare physical dependence, tolerance, and addiction are possible; best taken for short-term use and as needed; may cause confusion and hallucinations |
| Zolpidem                    |                                                                          |
| Zaleplon                    |                                                                          |
| Eszopiclone                 | Metallic taste for some is problematic                                   |
| Melatonin-based             | Binds to melatonin receptors                                             |
| Ramelteon                   |                                                                          |
| Benzodiazepines             | Benzodiazepines are the most likely sleep medicines to lead to tolerance and dependence; if anxiety is a prominent deterrent to sleep, a benzodiazepine anxiolytic (ie, clonazepam, lorazepam) may help more than a hypnotic, which will only produce drowsiness; when used for sleep, these medications are also best used on an “as needed” basis for short periods of time |
| Temazepam                   | For sleep only                                                           |
| Clonazepam, lorazepam       |                                                                          |
Stimulants have been used clinically to counter cognitive slowing in this population, although rigorous evidence of efficacy is still lacking. Similarly, the evidence regarding the use of donepezil for cancer-related cognitive dysfunction remains unclear. Positive results have been reported with cognitive rehabilitation techniques in breast cancer patients, although these techniques are limited by the frequency of needed sessions or a lack of available trained therapists. Cognitive training programs, which focus on the practice of specific skills through the use of computers, have shown some benefit in preliminary studies. Some of these training programs can also be used at home and are less expensive than in-office cognitive rehabilitation programs.

Capacity to Consent To or Refuse Treatment
A psychiatric consultation is often requested to assess the capacity of a patient to give informed consent or to refuse a procedure critical to survival. Questions related to capacity are more common when a patient refuses recommendations than when a patient is agreeable, despite the degree to which their cognition and understanding may be compromised. Psychiatric consultation is commonly requested when a patient has symptoms that may dull or alter their cognitive processes or decision-making abilities, including depression, delirium, or dementia. Assessment of capacity takes into account a patient's understanding of pertinent medical issues and recommended treatment, the pros and cons of accepting or refusing the recommendations, and the ability of a patient to state a preference. The capacity to understand and participate in decision-making usually encompasses a particular situation and decision rather than an individual's global and general ability to make decisions.

Mental Health Considerations in Survivorship
As advances are made in diagnosis and treatment of cancer, patients are living longer. Different concerns arise in patients who have survived their disease. Although there are numerous definitions of who is considered a survivor, there are common issues patients face after treatment, remission, or cure, including difficulty adjusting to physical changes as a result of their disease or treatment, difficulty adjusting back to normal life, feelings of guilt, reduced confidence, a persistent sense vulnerability to illness, increased awareness of mortality, fear of second malignancies, and fear of discrimination. Fear of recurrence is a significant issue in survivorship. One study in breast cancer patients found that high fear of recurrence was associated with higher depression and lower quality of life, especially in younger women. In addition to difficulty adjusting emotionally, survivors may also have residual deficits with neuropsychological impairment, including compromised motor and cognitive test performance. Survivor clinics” can be found in increasing numbers to address the concerns of cured patients in a multidisciplinary model. There are also numerous online resources for patients addressing survivorship issues, including on the American Cancer Society website (cancer.org).

Psychological Problems in Genetically High-Risk Individuals
As information about genetic contributions to the development of cancer advances, people who are at higher risk of developing cancer because of their family history may have increasing awareness. Baseline distress seems to be a large risk factor for psychological distress associated with genetic testing, both immediately and longer term. Patients with known increased genetic risk are often making decisions around genetic testing, marriage, childbearing, prenatal testing, or risk-reducing surgeries (eg, prophylactic mastectomy or oophorectomy). Genetic and psychological counseling are essential.

Management of Grief
Grief is frequently encountered in the oncology setting. Anticipatory grief may present even before a patient dies. People diagnosed with cancer cope with many losses, including inability to do certain activities, the sense of health they knew before the cancer, or uncertainty about the future. In addition to patients' grief, family members also struggle to cope with loss. Once death has occurred, grieving has acute and chronic components. Often, parents and older spouses from a long union report that they are “never the same again”; and some truly never recover. Caregivers younger than 60 years who are caring for terminally ill cancer patients have demonstrated higher levels of “complicated grief” (characterized by intense yearning, difficulty accepting death, bitterness, and emptiness) than older caregivers. These grieving caregivers are at increased risk for a major depression, which can be as high as 40% 6 months postloss. Complicated grief is treated with both psychotherapeutic and psychopharmacologic interventions, similar to major depression.

Oncology Staff Stress: Compassion Fatigue and Burnout
In reviewing psychiatric considerations that the oncology staff should be aware of for patients, attention also should be drawn to the impact on providers caring for patients with cancer to identify and potentially intervene early and to avoid compassion fatigue and burnout. Compassion fatigue is described as debilitating exhaustion caused by repetitive, empathetic responses to patients' pain and suffering. Burnout has been defined as the presence of emotional exhaustion, depersonalization, and a sense of low personal accomplishment or as the chronic psychological syndrome of perceived demands from work outweighing...
perceived resources in the work environment. Burnout may affect a large percentage of professionals caring for cancer patients. These practitioners may be at increased risk for substance use, sleep problems, changes in appetite and weight, fatigue, somatic complaints, and detachment from patients. In addition, quality of care and professionalism may suffer as a result of physician burnout. Although younger physicians are at higher risk of experiencing burnout, the quality of care is often better when given by younger, more recently trained physicians. Nurses demonstrate higher quality of care is often better when given by younger, more recently trained physicians. One recent study on burnout in oncologists found that approximately 45% of oncologists had at least one symptom of burnout. Personal stressors outside of the workplace may further exacerbate workplace pressure. Recognizing limitations, developing a compatible perspective on self and work, accepting personal and medical inadequacies, using humor to lighten painful events, working a normal workday, stopping when others do, taking a long weekend off, regular exercise, and socializing outside of work are common survival tactics. Personal mental health treatment should be sought when symptoms do not remit.

### Summary

From initial cancer diagnosis through survivorship, meeting the psychiatric needs and addressing the palliative care requirements of patients are essential components of comprehensive cancer treatment. Although the most common psychiatric complications in patients with cancer are depression, anxiety, and delirium, patients may present with other quality-of-life considerations that set in motion psychiatric, mental health, or palliative care consultations, such as pain, fatigue, insomnia, sexual dysfunction, cognitive deficits, and the assessment of capacity to make medical decisions if cognition is compromised. Additional challenges that are managed with the help of mental health specialists include adjusting to survivorship after acute cancer treatment, coping with genetic vulnerabilities for entire families, and grief after a loved one has died. Improved identification, evaluation, and treatment of these problems that span the psychiatric-medical and palliative care spectrum are essential to promoting patient comfort, improved cancer treatment and compliance, and better quality of life for both patients and their families. The efficacy of psychotherapeutic and psychopharmacologic interventions is discussed to manage cancer patients’ needs; when mental health specialists are not readily available, this support may have to be carried out by the oncology team. Although research in psycho-oncology over the last decade has added to our understanding and amelioration of the psychiatric and palliative care needs of patients undergoing cancer treatment and survivors, more rigorous investigation is warranted to give cancer clinicians more reliable tools to further improve patient-reported outcomes regarding quality of life. Finally, we briefly address the psychological well-being and potential burnout of oncology staff, an area of increasing concern among practitioners. This work is rewarding yet demanding. Helping ourselves as we help our patients is not just common sense—it is essential to continue to reliably and effectively treat cancer.

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