Patients with cancer: Clinical features, screening, and diagnosis of anxiety disorders

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INTRODUCTION

Anxiety syndromes such as agoraphobia, panic attacks, and specific phobia appear to be more common in patients with cancer than the general population. Recognizing anxiety symptoms and diagnosing anxiety disorders in this population is important because treatment can mitigate their negative impact on quality of life [1].

This topic reviews the epidemiology, clinical features, screening, and diagnosis of anxiety disorders in patients with cancer. The clinical features and diagnosis of other psychiatric disorders in cancer patients are discussed separately, as are the clinical features and diagnosis of anxiety disorders in palliative care and the management of anxiety disorders in cancer patients. (See "Patients with cancer: Overview of the clinical features and diagnosis of psychiatric disorders" and "Overview of anxiety in palliative care" and "Management of psychiatric disorders in patients with cancer", section on 'Anxiety'.)

OVERVIEW

For patients who are initially diagnosed with cancer, feeling anxious is a common and normal reaction to the threat posed by a life-threatening illness; at that point, patients may anticipate or experience pain, as well as worry about becoming dependent and disabled [2]. Anxiety is usually transient and can help with adherence to assessments and treatment [1]. The patient's

anxiety during the illness tends to fluctuate in association with medical events and discussions of prognosis (eg, the uncertainty of recurrence). In addition, anxiety can represent a neuropsychiatric manifestation of a malignancy (eg, primary or metastatic brain tumor), a response to medical complications (eg, dyspnea or hyperthyroidism), or a side effect of medications such as corticosteroids or chemotherapy.

In a minority of patients with cancer, anxiety symptoms may be due to an exacerbation or recurrence of a pre-existing anxiety disorder, or the emergence of a new one [1]. Identification is important because untreated anxiety is associated with poor quality of care, and anxiety disorders in cancer patients are treatable, even in advanced-stage cancers [3,4].

Anxiety disorders in patients with cancer are characterized by excessive fear, anxiety, ruminations, somatic symptoms, and/or behavioral disturbances such as avoidance [1,2,5,6]. In addition, anxiety disorders can interfere with cancer treatment, and appear to be associated with increased psychiatric and nonpsychiatric health care utilization and costs [1,2,5-9]. Specific disorders include:

- Agoraphobia
- Generalized anxiety disorder
- Social anxiety disorder
- Specific phobias
- Panic disorder
- Other specified anxiety disorder

The subsections below discuss the epidemiology, clinical features, screening, and diagnosis of anxiety disorders that are specific to patients with cancer. Separate topics discuss the clinical manifestation, assessment, and diagnosis of anxiety disorders in the general population.

EPIDEMIOLOGY

Prevalence — Based upon multiple studies in which patients with cancer were interviewed, the point prevalence of anxiety disorders in cancer patients is approximately 10 percent [10]. As an example, in a meta-analysis of 16 studies (number of patients not reported), the estimated point prevalence of anxiety disorders was 10 percent [11]. However, heterogeneity across studies was high.

The prevalence of anxiety disorders is higher in patients with cancer than the general population [12,13]:

- Agoraphobia in cancer patients is three to seven times greater
- Panic attacks in cancer patients is two times greater
- Specific phobia in cancer patients is three times greater

Patients living with cancer frequently have anxiety symptoms that do not meet criteria for diagnosing an anxiety disorder. A self-report survey of patients receiving treatment for cancer (n >8000) found that clinically significant anxiety symptoms were present in 24 percent [14].

Clinically significant anxiety symptoms and anxiety disorders are also observed in cancer survivors. (See "Overview of psychosocial issues in the adult cancer survivor", section on 'Anxiety'.)

Risk factors — The risk of developing anxiety disorders following a diagnosis of cancer is elevated in patients with a prior history of anxiety disorders, because the experience of being afflicted by cancer may exacerbate a subclinical anxiety disorder or precipitate relapse of a pre-existing disorder [1]. As an example:

- A study of women with breast cancer (n = 247) found that the odds of developing generalized anxiety disorder were 16 times greater in patients with a prior history of the disorder than women with no previous history [15].

- A study of patients with head and neck cancer (n = 224) found that the likelihood of an anxiety disorder three months after the cancer diagnosis was 2.5 times greater in those with an anxiety disorder at the time of the cancer diagnosis [16].

Other factors that may cause or contribute to anxiety symptoms or disorders include comorbid depression and insomnia, as well as factors stemming from the cancer (eg, brain metastases, hypercalcemia, hypoxia, paraneoplastic syndromes, and thromboembolic disease) and its treatment (eg, glucocorticoid steroids) [1].

CLINICAL FEATURES

A common feature of anxiety disorders is that they cause clinically significant distress or impairment in social, occupational, or other important areas of functioning [6]. This distress and impairment can help distinguish an anxiety disorder from normal anxiety.

Although many clinical features of anxiety disorders are similar in patients with cancer and in the general population of patients with anxiety disorders, features that are particularly salient in cancer patients include the following [1,2]:

- Agoraphobia can prevent patients from leaving their homes and traveling to the clinic or hospital for their appointments.

- Generalized anxiety disorder – Excessive worry about cancer may lead patients to either repeatedly call clinicians to ask about test results or to avoid information about prognosis. In addition, patients may have difficulties with deciding upon a course of treatment and with focusing upon non-cancer-related tasks.

- Panic disorder – Somatic symptoms of panic disorder such as dyspnea or tachycardia may cause patients to stop exercising, which can lead to physical deconditioning. In addition, panic disorder may lead patients to avoid unfamiliar situations, which may interfere with changes in cancer treatment such as starting a course of radiation therapy. Avoidance behavior may also prompt patients to postpone invasive laboratory and radiologic investigations.

- Specific phobias to blood, injection, injury, and vomiting can interfere with procedures, and anticipation of procedures may lead to panic attacks. In addition, claustrophobia may lead to difficulty tolerating magnetic resonance imaging or radiation therapy.

- Social anxiety disorder may lead patients to avoid discussing personal issues with clinicians due to fear of embarrassment; patients may also avoid situations in which they are the center of attention.

- Among patients with cancer, fear that it will recur can be another manifestation of anxiety [17,18].

As in the general population of patients with anxiety disorders, depressive symptoms often occur in conjunction with anxiety disorders in patients with cancer [19]. As an example, a self-report survey of patients in treatment for cancer (n >8000) found that clinically significant symptoms of anxiety plus depression were present in 12 percent [14]. In addition, anxiety disorders are also associated with an increased risk for suicide [20]. (See "Patients with cancer: Overview of the clinical features and diagnosis of psychiatric disorders", section on 'Suicide'.)

General information about the clinical features of specific anxiety disorders is discussed in separate topics.

SCREENING

Anxiety disorders are common in both the general population and those with cancer. Thus, we suggest that clinicians screen all patients with cancer for anxiety disorders, including

generalized anxiety disorder, with the self-report, seven-item Generalized Anxiety Disorder (GAD-7) scale (table 1). Screening should be implemented with services in place to ensure follow-up for diagnosis and treatment of anxiety disorders, and should initially occur when the diagnosis of cancer is first made. Thereafter, patients are screened as clinically indicated, especially with changes in the cancer or treatment status (eg, posttreatment, progression, or recurrence), as well as transition to palliative care. A positive screen (total score ≥5) should be followed by a diagnostic interview.

Screening for anxiety disorders is consistent with guidelines from the American Society of Clinical Oncology, which are based upon practice guidelines from the Pan-Canadian Guideline on Screening, Assessment and Care of Psychosocial Distress (Depression, Anxiety) in Adults with Cancer [21]. The rationale for screening is that anxiety disorders are serious, prevalent, underrecognized, and treatable, and that standardized, valid screening tools are available. However, there are no high-quality studies that demonstrate routine screening of all cancer patients specifically for generalized anxiety disorder improves clinical outcomes. In addition, some clinicians may perceive screening as an undue burden.

Evidence supporting the use of the GAD-7 to screen for generalized anxiety disorder includes a study in more than 2100 patients with cancer, which found that the psychometric properties were adequate [22]. At a cutoff score ≥5, sensitivity was 84 percent and specificity 50 percent; however, the positive predictive value was only 5 percent.

A reasonable alternative to the GAD-7 is the 14-item, self-report Hospital Anxiety and Depression Scale [21]. This widely used scale includes a seven-item subscale that assesses anxiety symptoms. However, a study in more than 2100 patients with cancer found that the positive predictive value for the Hospital Anxiety and Depression Scale was only 7 percent [22].

Several tools with fewer than five questions are available to screen for anxiety, such as the single-item, self-report Distress Thermometer, or simply asking “How anxious have you felt this week?” Although these tools are appealing because of their brevity, their ability to detect possible cases of clinically significant anxiety is suboptimal. As an example, a pooled analysis of results from four studies (n >2200 patients with cancer) found that the pooled sensitivity was 77 percent and specificity 57 percent [23].

ASSESSMENT AND DIAGNOSIS

The assessment for and diagnosis of anxiety disorders in patients with cancer are the same as those used in other patient populations. However, somatic symptoms of cancer and side effects

of anticancer drugs such as corticosteroids can overlap with symptoms of anxiety disorders [1]. As an example, dyspnea or tachycardia may be a symptom stemming from cancer (eg, lung cancer) that requires a medical evaluation, or may be a symptom of panic disorder.

Separate topics discuss assessment and diagnosis of specific anxiety disorders in the general population:

- (See "Agoraphobia in adults: Epidemiology, pathogenesis, clinical manifestations, course, and diagnosis".)
- (See "Generalized anxiety disorder in adults: Epidemiology, pathogenesis, clinical manifestations, course, assessment, and diagnosis".)
- (See "Social anxiety disorder in adults: Epidemiology, clinical features, assessment, and diagnosis".)
- (See "Specific phobia in adults: Epidemiology, clinical manifestations, course, and diagnosis".)
- (See "Panic disorder in adults: Epidemiology, clinical manifestations, and diagnosis".)

In addition, diagnosis of anxiety disorders in the context of palliative care is discussed separately. (See "Overview of anxiety in palliative care", section on 'Diagnosis'.)

INFORMATION FOR PATIENTS

UpToDate offers two types of patient education materials, “The Basics” and “Beyond the Basics.” The Basics patient education pieces are written in plain language, at the 5th to 6th grade reading level, and they answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials. Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are written at the 10th to 12th grade reading level and are best for patients who want in-depth information and are comfortable with some medical jargon.

Here are the patient education articles that are relevant to this topic. We encourage you to print or e-mail these topics to your patients. (You can also locate patient education articles on a variety of subjects by searching on “patient info” and the keyword(s) of interest.)

- (See "Patient education: Generalized anxiety disorder (The Basics)".)
- (See "Patient education: Panic disorder (The Basics)".)
- (See "Patient education: Social anxiety disorder (The Basics)".)

SUMMARY

- Anxiety is a common response to the threat posed by cancer and waxes and wanes for most patients. Although anxiety is often a normal reaction to cancer, anxiety can represent a psychiatric disorder that is characterized by intense fear and anxiety, which result in behavioral disturbances that can benefit from treatment. Specific anxiety disorders include agoraphobia, generalized anxiety disorder, social anxiety disorder, specific phobias, and panic disorder. Anxiety can also be a neuropsychiatric manifestation of a malignancy, a somatic response to medical complications (eg, dyspnea), or can be induced by medication (such as corticosteroids or chemotherapy). (See 'Overview' above.)

- The point prevalence of anxiety disorders in patients with cancer is approximately 10 percent, and prominent anxiety symptoms that do not meet criteria for diagnosis of an anxiety disorder, but nevertheless require clinical attention, appear to be even more common. The risk of developing an anxiety disorder following a diagnosis of cancer is especially elevated in patients with a prior history of an anxiety disorder. (See 'Epidemiology' above.)

- Clinical features of anxiety disorders that are particularly salient in cancer patients include the following:

  - Agoraphobia can prevent patients from leaving their homes and travelling to the clinic or hospital.

  - Generalized anxiety disorder – Excessive worry about cancer may lead patients to either repeatedly call clinicians to ask about test results or to avoid information about prognosis.

  - Panic disorder – Somatic symptoms of panic disorder such as dyspnea or tachycardia may cause patients to stop exercising, which can lead to physical deconditioning.

  - Specific phobias to blood, injection, injury, and vomiting can interfere with diagnostic and treatment-related procedures.

  - Social anxiety disorder may lead patients to avoid discussing personal issues with clinicians due to fear of embarrassment.

(See 'Clinical features' above.)

- Clinicians are encouraged to screen all patients with cancer for anxiety disorders with the self-report, seven-item Generalized Anxiety Disorder scale (table 1). Screening should be implemented with services in place to ensure follow-up for diagnosis and treatment, and should occur when the initial diagnosis of cancer is made and periodically thereafter as clinically indicated. (See 'Screening' above.)

- The assessment for and diagnosis of anxiety disorders in patients with cancer are the same as those used in other patient populations. (See 'Assessment and diagnosis' above.)

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